

OIL SPILL PUBLIC INFO. CENTER



3 6653 00006426 5

EVOS
GC
1552
.P75
S42
1991
v.29

[Shoreline evaluations, 1991].

Prince William Sound DI-66 to EB-08

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REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/DI-66

SUBDIVISIONS: A (1 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ DI-66 SUBDIVISION A (1 OF 2) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

No specific constraints identified.

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 10 m: Narrow 81 m: V.Light 151 m: No Oil 0 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 5 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: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ DI-66 SUBDIVISION: A DATE 4/19/90

USCG

NAME William E. White SIGNATURE William E. White

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

NATURAL CLEANING OF BEACHES TO CONTINUE

ADEC

NAME Peter Montesano SIGNATURE Peter Montesano

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

High recreational value and tent site for lagoon.
- Remove Tar balls, Mousse patches, + soft Asphalt formation; easily done by hand
- Removal to include the Asphalt in supratidal grasses - This should be executed by few individuals with extreme care to best preserve the grasses
- The oiling is spot washable, but not easily accessed due to bedrocks at shoreline

LAND MANAGER U.S.D.A. Forest Service

NAME Don J. Breitinger SIGNATURE Don J. Breitinger

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Natural cleaning of beaches to continue.

SHORELINE OILING SUMMARY

REVISION NO. 04-15-90

OG C. DILLON USCG PS1 E. WHITE SEGMENT ST/ DI-66
 BIO J. BARRY LAND REP D. BRIGHTENGER (NES) SUBDIVISION A (1 OF 2)
 AXON G. STILES ADEC D. MONTESANO TIME 14:45 to 15:45
 AM NO. 6 TIDE LEVEL +2 to +2 DATE 04/19/90
 EST. SUBDIVISION LENGTH: 300 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock Grass on beach area only
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 80 % B 5 % C 10 % P 5 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 15 % Hang 5 % Vert 80 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 5 m N 120 m VL 175 m NO 0 m

SURFACE OIL

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

PAVEMENT H F 26 sq. m by 3 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

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

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE 0#BAGS 0

Photographs:

Roll No. ST-6-6Frames 1, 2

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	SU	U	M	L				
1	20	X					0-5	X					X		X					N	—	CP-P/G/Peat
							.															
							.															
							.															
							.															
							.															

COMMENTS MAJORITY OF SUBDIVISION IS VERT. ROCK WITH A 1 m WIDE BAND OF ST/B AND CT/P OR CT/B AT THE HIGH TIDE LINE.

THERE IS A LANG COBBLE / PEBBLE / BOULDER BEACH IN THE CENTER OF THE SUBDIVISION. IT HAS A GRASSY SITZ AND UPLANDS LEADING INTO FOREST. THE WEST HALF OF THE BEACH HAS A 2-3 m WIDE BY 20 m LONG CT/B AND CV/S ACROSS THE UTLZ. PIT 1 DUG HERE. THE FRACTURED ROCK AT THE W. SHOULDER

REVIEWED 7W DATE 4/21/90

00 C. DILL TEAM 6
 SEGMENT ST-6-66
 SUBDIVISION A
 DATE 04/19/90

CHECKLIST

☐ N Arrow
☐ Approx. Scale
☐ Seg/Sub Study
☐ 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

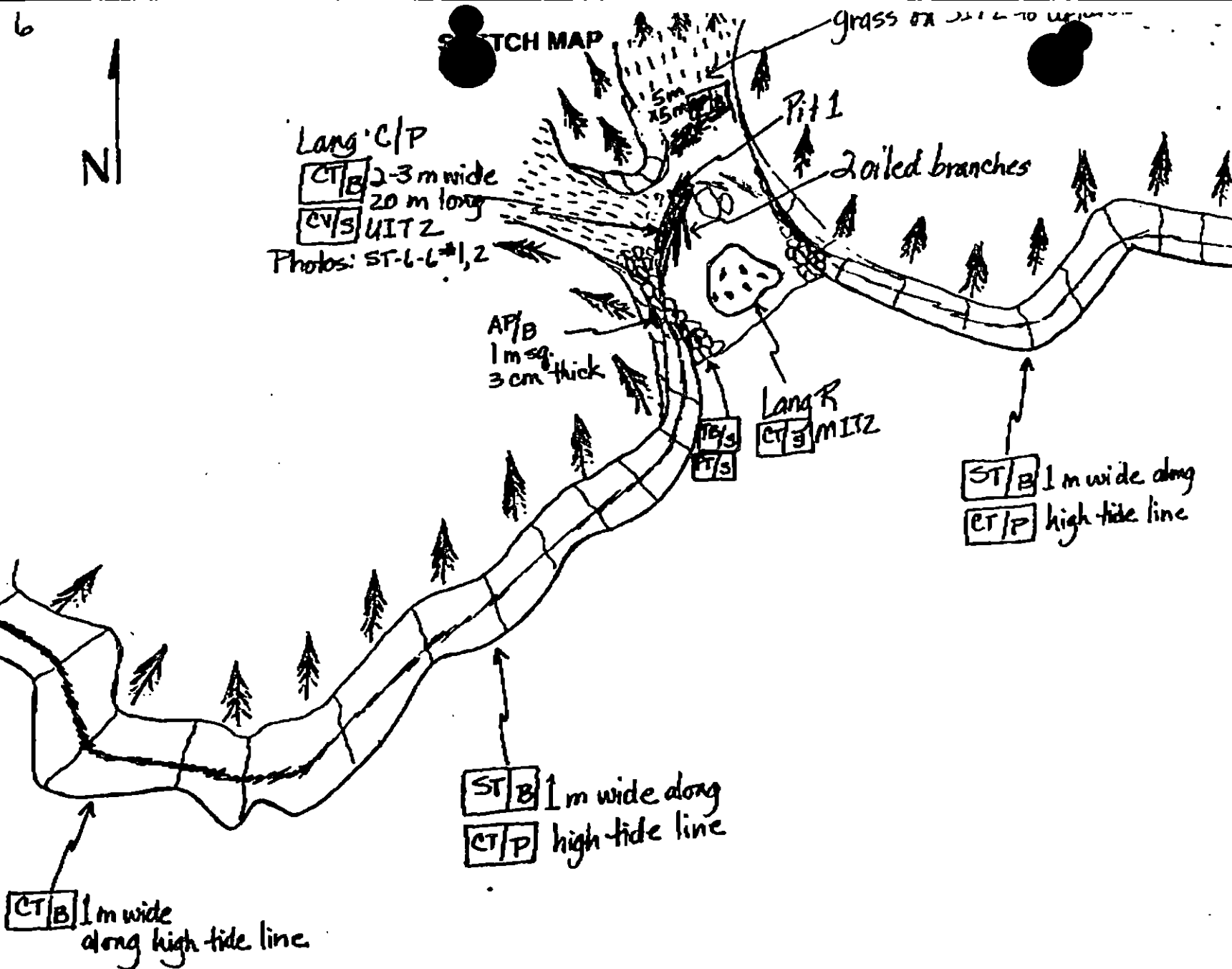
CT/B
 Broken Distribution

CT/P
 Patchy Distribution

CT/S
 Splashed Distribution

eee
 Oiled Vegetation

1 →
 Photo location, direction,
 and number



Oil Character Length (m): AP 6 PO 0 CV 2 CT 170 ST 120 MS 0 PT 1 TB 1 FL 0 NO 0

REVISED 04/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/ DI 66 Subdivision A Date (mo / day / yr) 19 APRIL 1990

Time (24 hr) 1500-1530 Biologist Jim Barry Length = 300m 1/2

- (A) Substrate type and % of segments:
 (1) Bedrock 80 (2) Boulder 5 (3) Cobble 10 (4) Pebble 5 (5) Sand (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 10 Moderate 80 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.
 Frames

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

Ecological Considerations:

NONE

I General Comments.

- A. This site is an outlet channel for the inside lagoon (bay of) Disk Island and is a transition zone from the more diverse fauna and flora; outside the bay is the restricted biota within the bay.

Vertical bedrock and a cobble beach are the only 2 intertidal habitats.

B. Oil-Related Comments.

- a) An oil coat is present on the vertical bedrock in the high zone, and has a minor impact on the biota of the segment.

II Recruitment and Mortality.

This short segment shows no strong evidence of either recruitment or mortality.

DI-66

DI=

DI-66-B
1307mDI-66-A
300m

XXXX Wide

//// Medium

---- Narrow

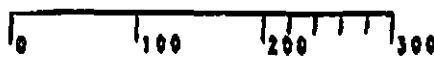
TTTT Very Light

0000 No Oil

DI-66

EXXON SEGMENT LENGTH: 1607m

ADEC Segment Length: 1261m



0 100 200 300
METERS

Map Key: PWS-98

Name: C. DILLONDate: 4/19/90

Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/DI-66

SUBDIVISIONS: B (2 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ DI-66 SUBDIVISION B (2 OF 2) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 342 m: V.Light 680 m: No Oil 0 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 Removal	☐ Beach Cleaner
	☐ Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

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

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / DI-66 SUBDIVISION: B DATE 4-19-90

USCG

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME Peter Montesano SIGNATURE Peter Montesano

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

NO concentrations of significant oiling found in Subdivision. The
"CT/B" designations on map ~~indicate~~ represent the presence of boulder
shadow oiling, Not heavy and not workable by hand.

LAND MANAGER USDA Forest Service

NAME Don J. Bretinger SIGNATURE Don J. Bretinger

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Natural clearing to continue.

SHORELINE OILING SUMMARY

REVISION NO. 06/13/88

OG C. DILLON USCG PS1 E. WHITE SEGMENT STI DI-66
 BIO J. BARRY LAND REP D. BRIGHTENGER (NCS) SUBDIVISION B (2 OF 2)
 EXXON G. STILES ADEC D. MONTESANO TIME 15:45 to 16:45
 TEAM NO. 6 TIDE LEVEL +2 to +2.5 DATE 04/19/90
 SUBDIVISION LENGTH: 1304 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 ISLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 90 % B 5 % C 2 % P 3 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 5 % Hang 15 % Vert 80 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 350 m VL 957 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	R	B	C	P	W	M	N	VL	W	U	M	V
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT		X	X		X				X			
STAIN		X				X			X			
MOUSSE												
PATTIES												
TARBALLS												
NO OIL	Show on pocket beaches only								S		X	X

PAVEMENT H F S 0 sq. m by 0 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? ☒ BR ☐ RW ☐ SL ☐ TL

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

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE 0#BAGS 0

Photographs:

Roll No. NONEFrames 0

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR				PIT ZONE				AN	DEPTH (m)	SURFACE - SUBSURFACE SEDIMENTS
		OF	OR	OL	OP	NO		UO	UC	W	M	N	VL	W	U	M	V			
1	30					X	0-0	X						X				N	-	C-C
2	15					X	0-0	X							X			Y	10	CP-CP/G
3	30	X					19-20	X		X				X				Y	15	P-P/G/Pent
4	15					X	0-0	X							X			Y	10	CP-P
5	8					X	0-0	X						X				N	5	P-P/G
6	40					X	0-0	X								X		N	40	P-P

COMMENTS MAJORITY OF SUBDIVISION IS VERT AND HANG ROCK WITH ST/B AND CT/B OR CT/P 1 m WIDE ALONG THE HIGH TIDE LINE. THERE ARE 5 LANG CP POCKET BEACHES (EACH ABOUT 5 m LONG) WHOSE TOP SEDS SHOW TRACES OF VL STAIN ONLY. SEVERAL PITS WERE DUG IN EACH BEACH HOWEVER, ONLY REPRESENTATIVE AND OILED PITS WERE DOCUMENTED.
 DUE TO THE LACK OF VARIATION IN OILING REVIEWED 7W DATE 4/21/90
 X.M. REMEDIATION LOG. NO SKETCH WAS DONE.

SHORELINE OILING SUMMARY (PAGE 2)

SEGMENT ST/ DI-66 SUBDIVISION B (2 OF 2)

REVISION 04/13/90

OG C. DILLON
TEAM 6

SUBSURFACE OIL (CONTINUED)

[illegible]

COMMENTS

COMMENTS

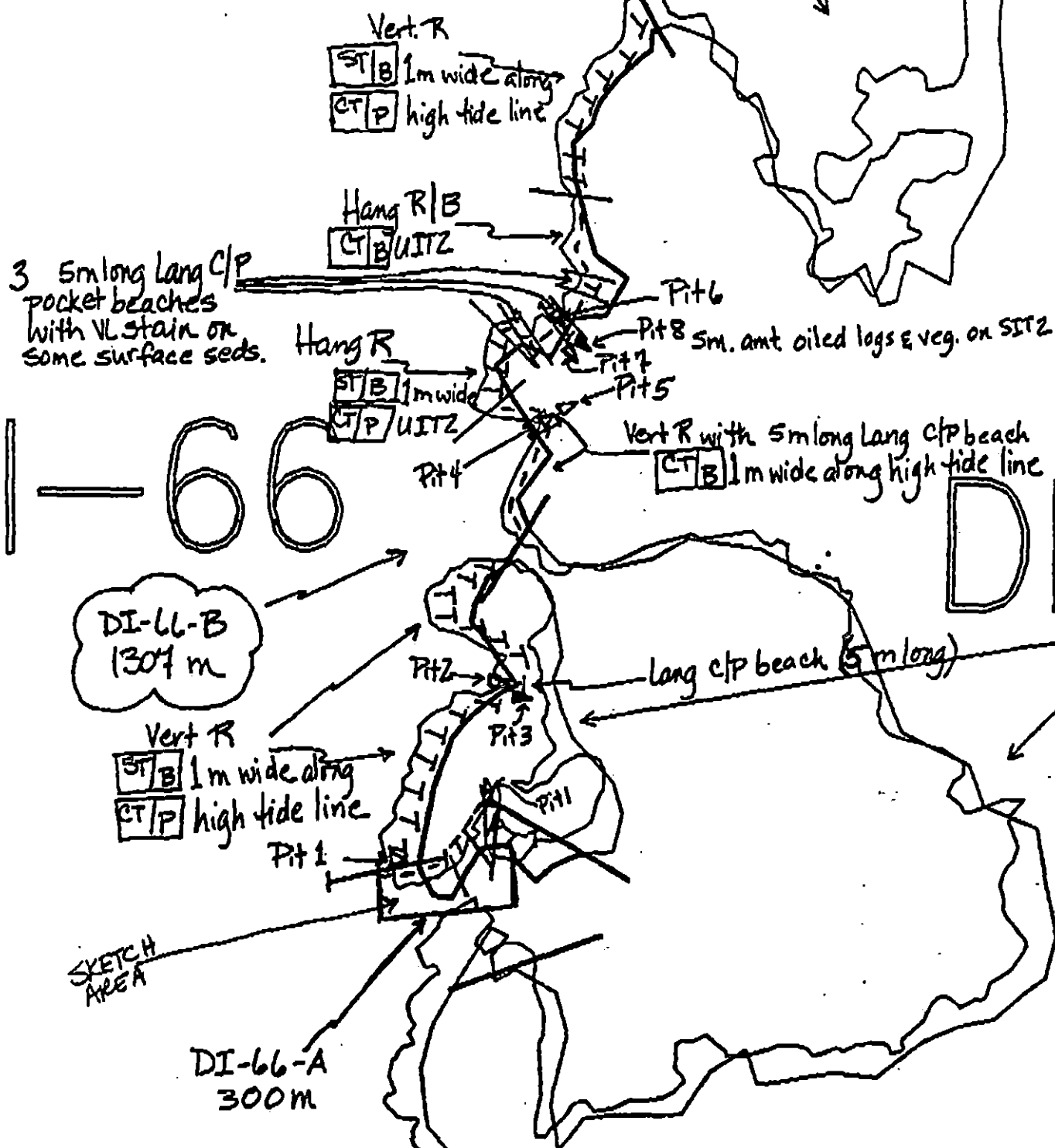
PIT 2: SURFACE AND SUBSURFACE SEDS WERE UNOILED. AFTER THE PIT FILLED WITH WATER, SMALL BROWN OIL GLOBULES SLOWLY ACCUMULATED ON THE SURFACE.

PIT 3: SURFACE AND SUBSURFACE SEDS (EXCEPT 19-20 CM INTERVAL) ARE UNOILED. AFTER THE PIT FILLED WITH WATER, A VL SILVER. SHEEN SLOWLY FORMED.

PIT 4: SURFACE AND SUBSURFACE SEDS WERE UNOILED.
AFTER THE PIT FILLED WITH WATER, A TRANSLUCENT
SHEEN SLOWLY FORMED.

REVIEWED 7w DATE 4/21/90

OIL CHARACTER LENGTHS (m)

CT 957 ST 650

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

DI-66

EXXON SEGMENT LENGTH: 1607m

ADEC Segment Length: 1261m



Map Key: PWS-98

Name: C. DILLON

Date: 4/19/90

Data Entered:

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/80

Segment ST / DI 66 Subdivision B Date (mo / day / yr) 19 APRIL 1990

Time (24 hr) 1530-1650 Biologist JIM BARRY

Length 1307 m 4/6

(A) Substrate type and % of segments:
(1) Bedrock 90 (2) Boulder 5 (3) Cobble 5 (4) Pebble (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense 10 Moderate 80 Low 10

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

Photographs: Roll No. NONE

Frames

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

PIGEON GUILLEMOT -3 DEER CARCASS ON BEACH - UNOILED

BALD EAGLE -2

Ecological Considerations:

NONE

I General Comments

- A. HABITATS - 1) High Angle Bedrock / Boulder / Cobble ,
2) Low angle Cobble / pebble beaches .

B. Exposure - Moderate exposure to waves

C. MAJOR SPECIES

- 1) Barnacles - 3 species of barnacles are present, with spat or juveniles of at least 2
- 2) Mytilus - generally sparse on headlands, with occasional moderate densities.
- 3) Gastropods -
Littorines moderate to dense - egg masses frequent in middle zone
Limpets - moderate to sparse
Whelks - moderate to dense in mid to low zone.
- 4) Fucus - Abundant in patches on bedrock & boulders, but ~~but~~ less dense on cobble.

II. Oil-related comments - Although portions of this subdivision were moderately to heavily oiled, mortality is difficult to discern, except where barnacles were covered by a coat of oil in the upper zone.

Cleanup operations should have no negative impacts

DI 66 B.

APRIL 8 1990

4/6
24

IV Species List

A. MARINE PLANTS

- 1) DIATOMS / BLUE GREEN ALGAE M-D 123
- 2) GREEN ALGAE - CHLOROPHYTA

ACROSIPHONIA MD123
CLADOPHORA S12
ENTEROMORPHA M123
~~GREEN CRUST.~~
ULVA S123
ULROSPORA MD23

- 3) RED ALGAE - RHODOPHYTA

~~BASSIDIA~~
~~CALCIARTHROD~~
-CORALLINA R12
CRYPTOSIPHONIA S12
-ENDOLADIA MURICATA R12
HALOSACCION GLANDIFORMIS S123
IRIDABA R12
~~MASTOCARPUS~~
MEMBRANOPTERA S123
MICROCLADIA SM123
LITHOTHAMNION PALPICUM S12
PETROCELIS MIONENDORFFII S12
PORPHYRA spp. SM12
RHODOMELA LAMIN S12
~~RHODOMELA~~ PALMATA SM12
PALMATA

- 4) BROWN ALGAE - PHAEOPHYTA

ALARIA MARGINATA U
AGARUM spp. U
COSTARIA U
FUCUS DISTICHUS SM12
HEDOPHYLLUM SESSILE U
HILCOMBRANDIA SM12
LAMINARIA U
NEROCYSTIS U
RALPSIA S12
SCYTOSIPHON COMENTARIA SM123
ECTOCARPUS D23.

* SPAT OR JUVENILES
PRESENT

D DENSE
M MODERATE
S SPARSE
R RARE
1 BEDROCK
2 BOULDER
3 COBBLE
4 PEBBLE
U. SUBTIDAL

B MARINE INVERTEBRATES

1) ANEMONES

~~SPHARTIS RITZEL?~~
~~UPTERUS CASSIOPEUS~~
~~ANTHOPLUTEA ELEGANS~~
 A. artemisia R12
~~A. kammagammica~~

2) Annelid Worms

Polychaetes
 Nereidae
 Nephtyidae
 Serpulidae
~~Serpula~~
 Eteobrocha
 Spirorbidae
 Spirorbis MS23A

3) Peanut Worms - Sipunculid

~~PARACOLASOMA HERBERTI~~

4) MOLLUSCS

a) CHITONS

~~CHITONIA TONICATA~~
 TONICELLA LINEATA R12
~~CHITONIA~~ spp.

b) Snails - Gastropods

Littorina scutulata BMDA123
 L. sitkana MD123
 Nucella lamellosa MD23A
 N. emarginata MD23A
 Scutissa dora S23A
 Amphissa columbiana R23A
 Tachyrrhynchus spp. R23

c) Nudibranchs

~~LAMELLIDORIS FUSCA~~

d) Limpers

Lottia digitalis S12A
 Aemaea mitra R12A
 Lottia persena S12A

d) Limpers (cont)

Tectura scutum S13A
~~T. persena~~
~~Siphonaria thersites~~
~~Diadema aspera~~

e) Mussels -

Mytilus edulis SM123A

f) Clams

Single - PODOCYSMUS CEP10R12
~~Hyadella~~ spp. S23A
~~Protothaca staminea~~
~~Arcton~~ spp.

g) Crustaceans

1) Barnacles

Semibalanus cariosus S12A
 Balanus glandula SM123A
 Chthamalus dalli S13A

2) Crabs

Haplogaster spp.
 Hemigrapsus oregonensis S23
 Pagurus spp.
 Hermit Crabs - Paguridae MD

3) Beach Hopper

ISOPODA - S23A
 AMPHIPODA
 Orchestra? SM23A

h) Bryozoans

Schizoporella spp? S12

i. Echinoderms

1) Sea Stars
 S23A Pycnopoda helianthoides
 S23A Dermasterias imbricata
 R23A Leptasterias hexactis
 Echinaster hutchingsi
 Orthostigma foxtorti
 Pteraster ochraceus.

5/6

SPECIES LIST (cont)

6/6

2 Echinoderms (cont)

2) Brittle Stars

~~Ophiodon~~ spp?

3) Sea Cucumbers

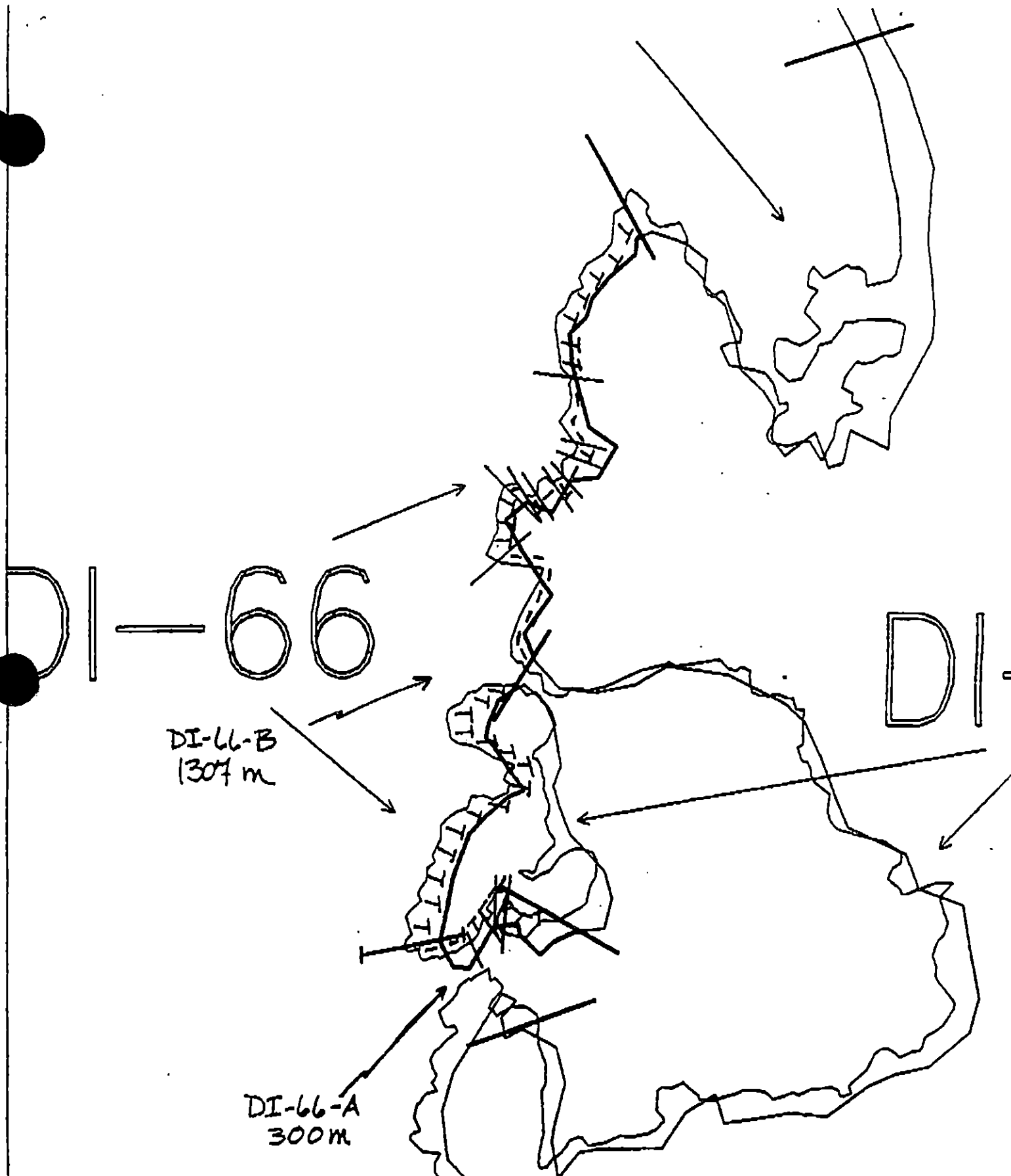
~~Cucumaria~~ ~~minuta~~

3) Sea Urchins

~~Strongylocentrotus droebachiensis~~

C. Marine Vertebrates

1) Fish: PNOUIDAE - M 23A
COTTIDAE S 23A



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

DI-66

Exxon Segment Length: 1607m

ADEC Segment Length: 1261m

0 100 200 300
METERS

Map Key: PWS-98

Name: C. DILLONDate: 4/19/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT DI-66 SUBDIVISION A (1 of 2)

WORK WINDOW	
Manual Pickup Tarmat Removal	CLOSED
Bioremediation	CLOSED

ARCHAEOLOGICAL MONITOR REQUIRED ON SITE.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to manual pickup, tarmat removal, and bioremediation within 400m of active nest. No constraint to manual pickup, tarmat removal, and bioremediation more than 400m from active nest.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

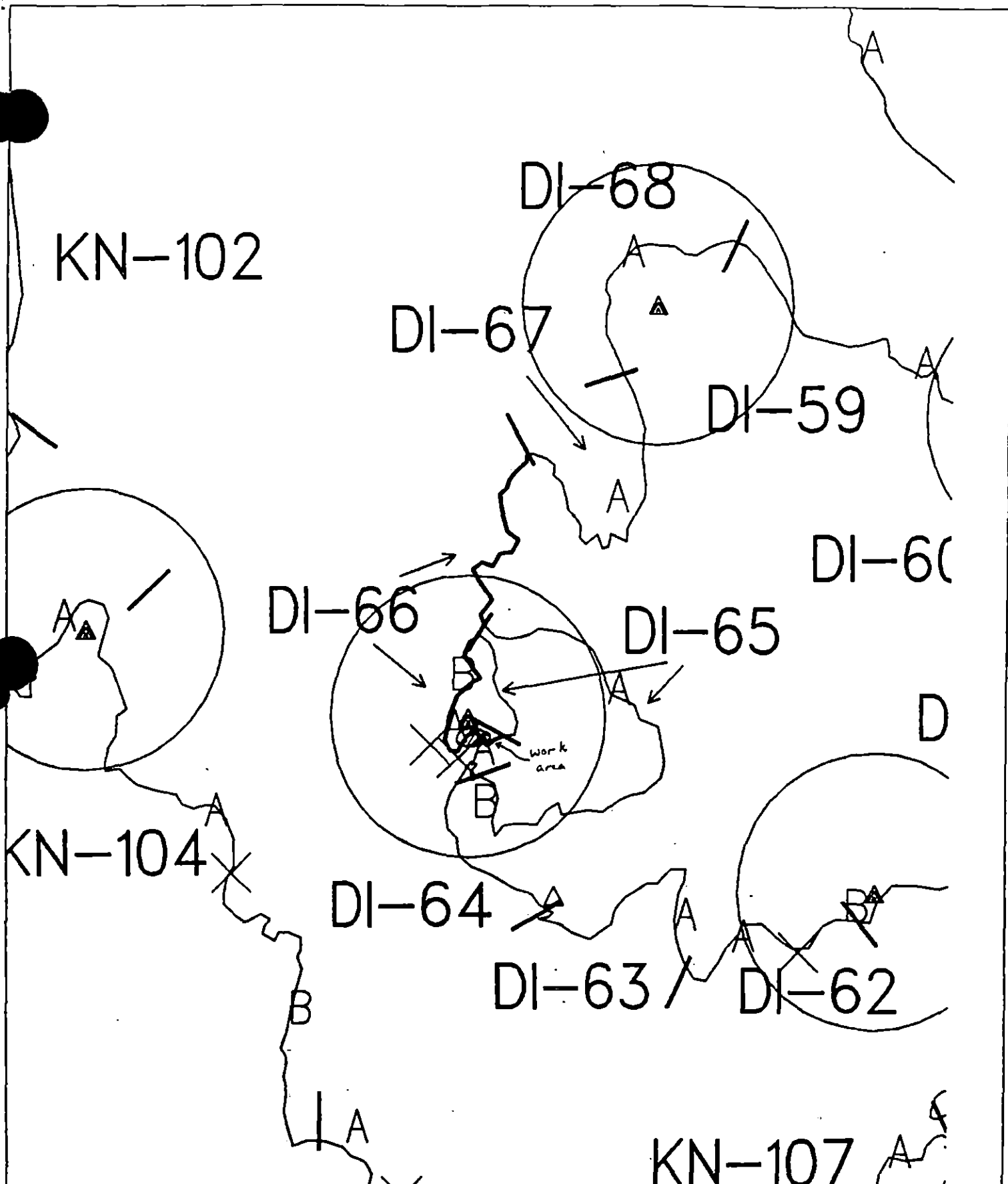
Date

Prepared by

Date

[Signature] 7 Jul 90

W. Kelley 7/5/90



Exxon Company, USA
Map Key: PMS-DI-66
June 08, 1990



ECOLOGY MAP
SEGMENT DI-66
SUBDIVISION --- (--- of ---)
METERS
0 381 762

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

1 inch = 1250 feet

SHORELINE EVALUATION

SEGMENT ST/ DI-66 SUBDIVISION A (1 OF 2) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

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

100

Evaluation Form.

SHPO SIGNATURE: Rachel Jean Dorn DATE: 6/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 10 m: Narrow 81 m: V.Light 151 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 5 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 Removal	☐ Beach Cleaner
	☐ Other (see comments)

COMMENTS: MANUAL PICKUP OF TARMATS / TARBALLS AND BIOREMEDIATE
AREA INDICATED ON SKETCH.

See Constraint Addendum dated 7/5/90 wmc

TAG COMMENTS:

TAG APPROVAL DATE: 5/1/90
ADEC Art Weimer
EXXON Ann Galt
NOAA Gary Petrus
USCG Kenneth Keene

FOSC: [Signature] DATE: 7/3/90

1991 MAYSAP EVALUATION

SEGMENT: DI 066 SUB: A REGION: PWS SURVEY DATE: 5/17/91

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.

MATSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT DI-066 SUBDIVISION A DATE 5/17/91

ADEC

NAME Peter Montesano

SIGNATURE [Signature]

☒ NTR ☐ TREATMENT RECOMMENDED

High use, Low Energy area at the mouth of the Disk Island lagoon. The Sops tends to be elusive in marshy fine sediments, Not treatable. Area B is extremely unsightly but the oil is thin and natural degradation in the grasses is the best option without overkill.

Overall there is very little change from my ASAP Visit.

EXXON

NAME C.M. KATSIMPAUS

SIGNATURE [Signature]

☒ NTR REMAINING OIL DOES NOT REQUIRE TREATMENT.

LANDMANAGER

NAME DENNIS S KENNEDY OF USFS

SIGNATURE [Signature]

☒ NTR

The more visible oil is in area 'B'; the oil is being invaded by grass. The area should be left alone and let the natural processes take place.

Disk Island lagoon is a high recreation use area.

USCG/NOAA D. Simecek-Boatly NOAA

NAME BMI H. P. ZENONE USCG

SIGNATURE [Signature]

☐ NTR

The more significant concentrations of oil were observed in beach grass and flat areas. New beach grass appears to be growing through the flat areas, however, the growth is very patchy. The oil is in a shell and sediment area, as a result, no treatment was recommended. - DS-B

- No TREATMENT RECOMMENDED. 3

Revised 5.21.94
Reviewed: F.W. 5/22/94

OG SKETCH
DI-66A
MAY 17, 1991
13:13 - 13:45
Doug Reimer

J
VERTICAL ROCK
1-3% CT/ST
1 X 100m

DISK
Island

SKETCH MAP
AREA

D
oiled grass,
interstitial Peat
between C/B
CT 10%
SOR 5%
2 X 8m

C
CT 20%
1 X 6m Rock

grass/peat
Supratidal

B
SOR 10%
3 X 10m
oiled Peat/grass

G
2 X 8m
CT/ST 2%
TB 1% (Likely Not
Erion Valdez - very
B.I.H.)

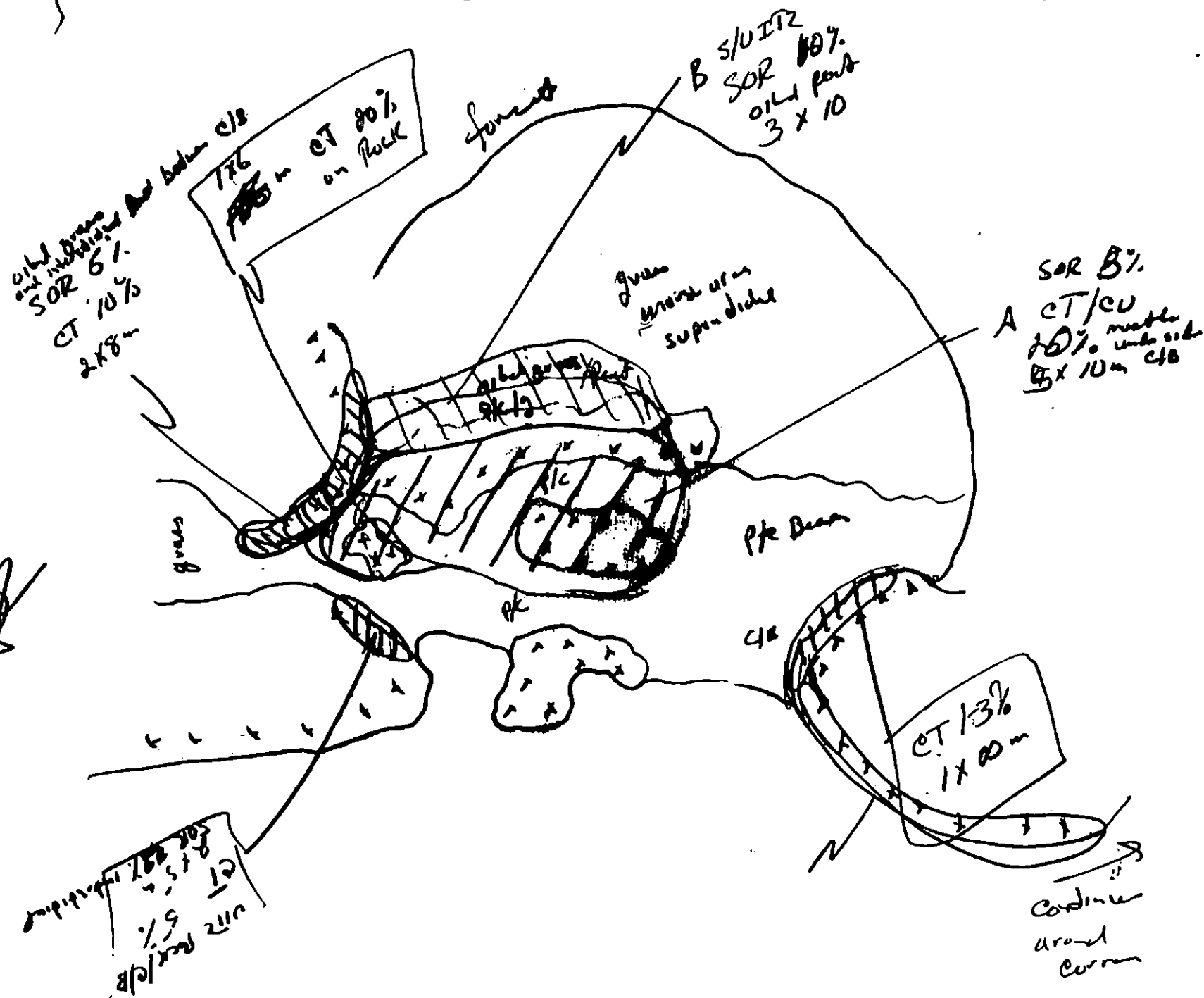
E
CT 5%
SOR 2%
Rock/BLD
2 X 5m

A
CT/CV 20%
mostly undersides
cobbles/boulders
SOR 5%
5 X 10m

F
CT 1-3%
discontinuous
1 X 50m

H
2 X 6m
CT 2% BLD/CB
SOR 5% patchy
(heavy)

I
CT 1-3%
1 X 30m
Rock, BLD/cob lag
deposits NITZ



DI-66A
S.17.91
D. Reimer

REVIEWED: F.W. S/22/91
reviewed: 21 44

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 17 May 91
 SEGMENT # DI-66 TIDAL HEIGHT(Range) 3 to 4 ft
 SUBDIVISION A BIOLOGIST Smban
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

- A: oil on undersides of boulders - sparse Fucus on boulder tops, grass in fine sediments adjacent to boulders. Algae barnacles & limpets on rock out crop seaward of oiled zone.
- B: oil is in upper intertidal, oiled grass & peat encountered. New shoots of grass are pushing through oiled peat layer.
- D: Similar to "B" but boulders present. Oiled peat is between & beneath boulders.
- EPI+J: Oil is CT or ST high in ITZ. Lower zones on rock faces support dense algae, barnacles and moderately dense mussels.
- G: CT/ST in lichen and green algae zone. A few Littorina were found at the lower edge of oiling.
- H: This area is lower in the intertidal than "G". Oiled barnacles (alive) were observed in the zone. Small mussels and dense Littorina were found under rocks.

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	hummingbirds	2	

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

Shoreline subdivision map showing important biological features attached.

J Lichen in
OT/ST ZONE
Fucus + Barnacles
in lower ITZ

DISC
Island

OG SKETCH
DI-66A
MAY 17, 1991
13:13 - 13:45
Doug Reimer

SMB 14 May 91

SKETCH MAP
AREA

D Lichen +
moss on
boulders
or led grass
part between
boulders

C Lichen
on rock

grass/part.
Supratidal

A oiled
grass +
peat moss
grass growing
within oiled
peat patch.

G Lichen,
green algae
sparse.
Li Horner's

Li Horner's
Algae

Mussels

E Lichen
Algae
Dense in
lower ITZ

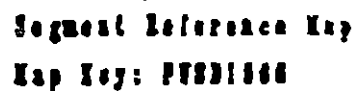
H Fucus and
grass: Rhodome-
barnacles +
limpets on
outcrop

F Lichen
Algae +
Barnacles in
lower ITZ

H Oiled barnacles
Mussels and
Dense Li Horner's
under rocks

I Lichen
Algae +
Barnacles
in lower
ITZ

01-66-1 OCCUPIED



EAGLE NEST

+

+

B

66

A

Exxon OILING
SHORELINE
MAP

+

+



D1066 A



METERS
0 100 200

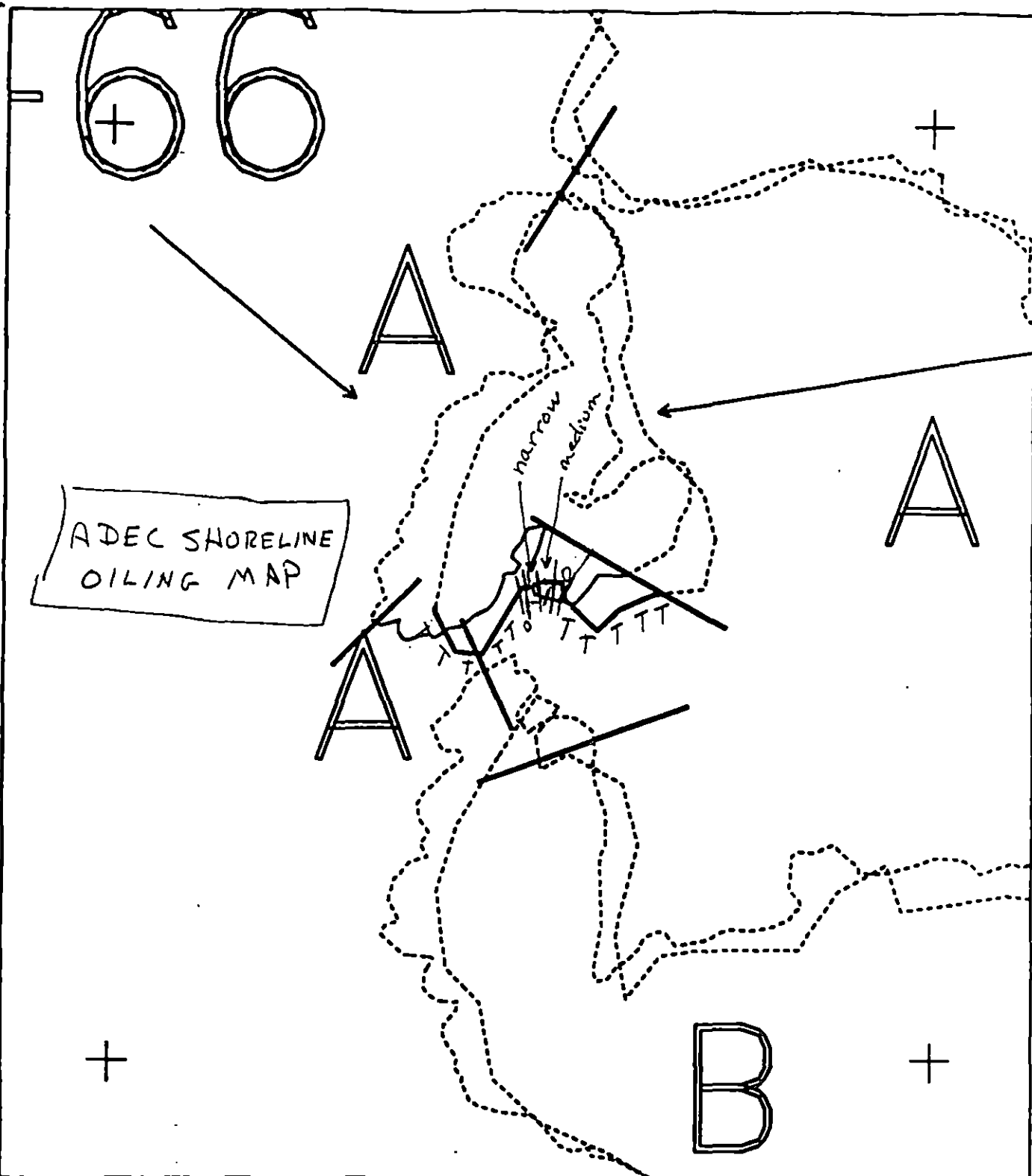
AK State Plane Zone 4
641000m

Subdivision Field Map

Map Key: KNID1066Aa

Name: Keimer (JY)

Date: 5.17.91



XXXX	Wide	D1066 A	Subdivision Field Map
////	Medium	ADEC Subsegment Length: 242m	Map Key: KNID1000A
----	Narrow	METERS	Name: <u>Reimer</u>
TTTT	Very Light	5 100 200	Date: <u>5/17/91</u>
0000	No Oil	AK State Plane Zone 4	Date Entered:
		6410000	

Revised 5.21 91
REVIEWED: F.W. 5/22/91

SHORELINE EVALUATION

SEGMENT ST/ DI-66 SUBDIVISION A (1 OF 2) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

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

iso

evaluation form.

SHPO SIGNATURE: Rachel Dan Dan DATE: 6/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 10 m: Narrow 81 m: V.Light 151 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 5 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 Removal	☐ Beach Cleaner
	☐ Other (see comments)

COMMENTS: MANUAL PICKUP OF TARMATS / TARBALLS AND BIOREMEDIATE
AREA INDICATED ON SKETCH.

TAG COMMENTS:

TAG APPROVAL DATE: 5/1/90
ADEC ART WEINER
EXXON AMY TATE
NOAA GARY PETRO
USCG KENNETH KEANE

FOSC: *[Signature]* DATE: 7/3/90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ DI-66 SUBDIVISION: A DATE 4/19/90

USCG

NAME W. William E. White SIGNATURE W. William E. White

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

NATURAL CLEANING OF BEACHES TO CONTINUE

ADEC

NAME Peter Montesano SIGNATURE Peter Montesano

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

High recreational value and tent site for logan.

- Remove Tar balls, Mousse patches, + soft Asphalt formation; easily done by hand
- Removal to include the Asphalt in supratidal grasses - This should be executed by few individuals with extreme care to best preserve the grass
- The oiling is spot washable, but not easily accessed due to bedrocks at shore.

LAND MANAGER U.S.D.A. Forest Service

NAME Don J. Breitinger SIGNATURE Don J. Breitinger

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Natural cleaning of beaches to continue.

SHORELINE OILING SUMMARY

REVISION NO. 04-13-89

OG C. DILLON USCG PS1 E. WHITE SEGMENT STI DI-66
 BIO J. BARRY LAND REP D. BRIGHTNER (NESS) SUBDIVISION A (1 OF 2)
 EXON G. STILES ADEC P. MONTESANO TIME 14:45 to 15:45
 AM NO. 6 TIDE LEVEL +2 to +2 DATE 04/19/90
 EST. SUBDIVISION LENGTH: 300 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock Grass on beach area only
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 80 % B 5 % C 10 % P 5 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 15 % Hang 5 % Vert 80 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 5 m N 120 m VL 175 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	IC	IS	IP	IR	1	2	3	4	5	SU	U	M	U
ASPHALT PAVEMENT		X							X	X	X		
POOLED													
COVER				X					X		X		
COAT		X	X	✓	1/2					X	✓		
STAIN		X							X		X		
MOUSSE													
PATTIES				X					X		X		
TARBALLS				X	X						X		
FILM													
NO OIL													✓

PAVEMENT H F (S) 26 sq. m by 3 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT			DID YOU COLLECT DEBRIS?
	SM	MD	LG	
Logs	X			YES ☐ NO ☒
Vegetation	X			
Trash				
Debris				
				TYPE <u>0</u>
				#BAGS <u>0</u>

Photographs:

Roll No. ST-6-6Frames 1, 2

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SHEEN (Y/N)	▽	SURFACE - SUBSURFACE SEDIMENTS		
		OP	OR	OL	OF	NO		VO	UC	1 2 3 4 5 6	7 8 9 10 11 12	13 14 15 16 17 18	19 20 21 22 23 24	SU	U	M	LI								
1	20	X					0-5		X						X			X					N	—	CP-P/G/Reat
							.																		
							.																		
							.																		
							.																		
							.																		

COMMENTS MAJORITY OF SUBDIVISION IS VERT. ROCK WITH A 1 m WIDE BAND OF ST/B AND CT/P OR CT/B AT THE HIGH TIDE LINE.

THERE IS A LONG COBBLE/PEBBLE/BOULDER BEACH IN THE CENTER OF THE SUBDIVISION. IT HAS A GRASSY SITZ AND UPLANDS LEADING INTO FOREST. THE WEST HALF OF THE BEACH HAS A 2-3 m WIDE BY 20 m LONG CT/B AND C/S ACROSS THE UITS. PIT 1 DUG HERE. THE FRACTURED ROCK AT THE W. SHOULDER

REVIEWED 7W DATE 4/21/90

AD PATTIL NA SUBSURFACE OIL.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / DI 66 Subdivision A Date (mo / day / yr) 19 APRIL 1990

Time (24 hr) 1500-1530 Biologist JIM BARRY Length = 300m 1/2

- (A) Substrate type and % of segments:
 (1) Bedrock 80 (2) Boulder 5 (3) Cobble 10 (4) Pebble 5 (5) Sand (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 10 Moderate 80 Low 10
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X) , new settlement (⊙)

Photographs:
 Roll No.
 Frames

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

Ecological Considerations:

NONE

I General Comments.

- A. This site is an outlet channel for the inside lagoon (bay of Disk Island and is a transition zone from the more diverse fauna and flora; outside the bay is the restricted biota within the bay.

Vertical bedrock and a cobble beach are the only 2 intertidal habitats.

B. Oil-Related Comments.

- 1) An oil coat is present on the vertical bedrock in the high zone, and has a minor impact on the biota of the segment.

II Recruitment and Mortality.

This short segment shows no strong evidence of either recruitment or mortality.

00 C. D. TEAM 6

SEGMENT ST-66

SUBDIVISION A

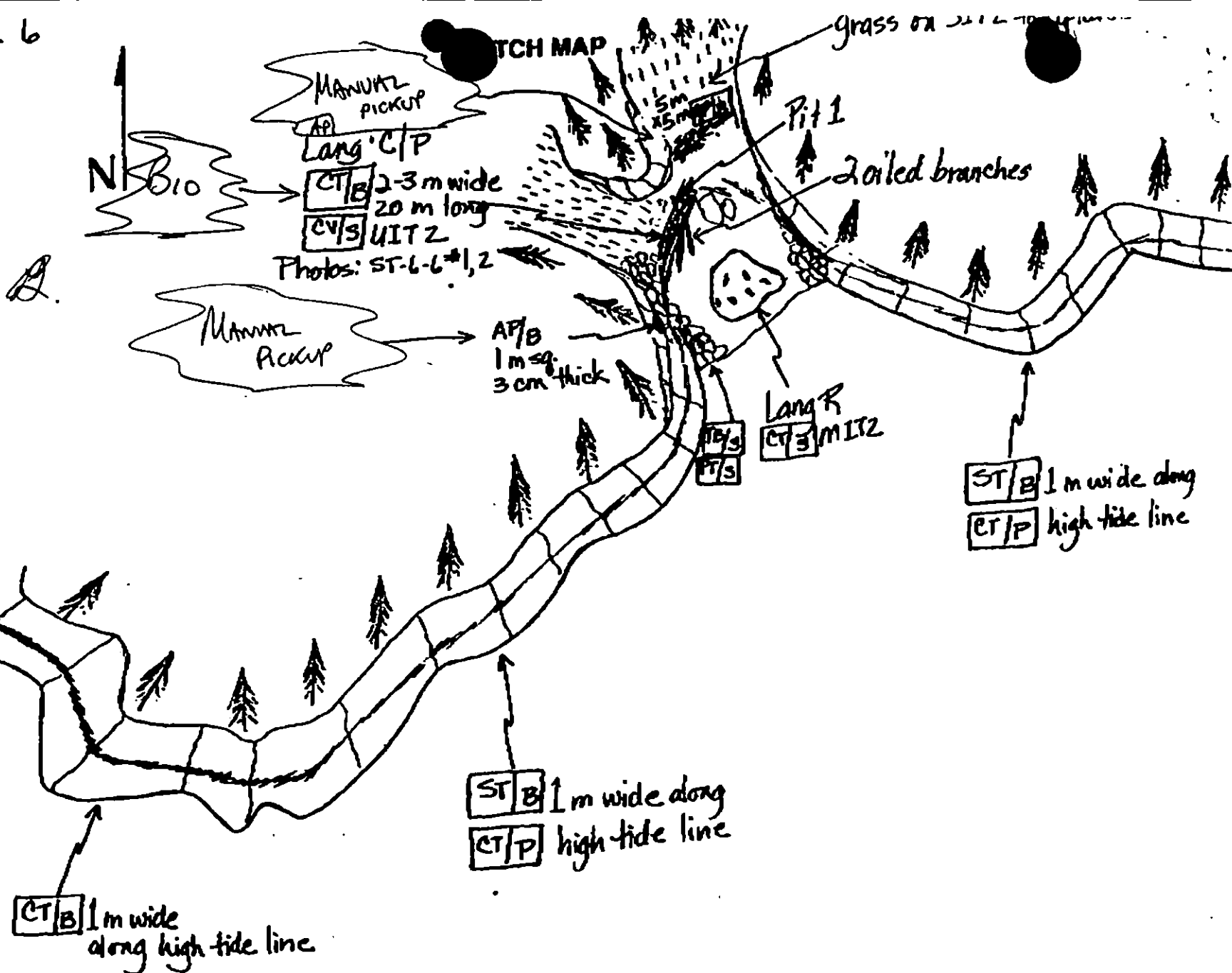
DATE 04, 19 90

CHECKLIST

- ☐ N Area
- ☐ 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)

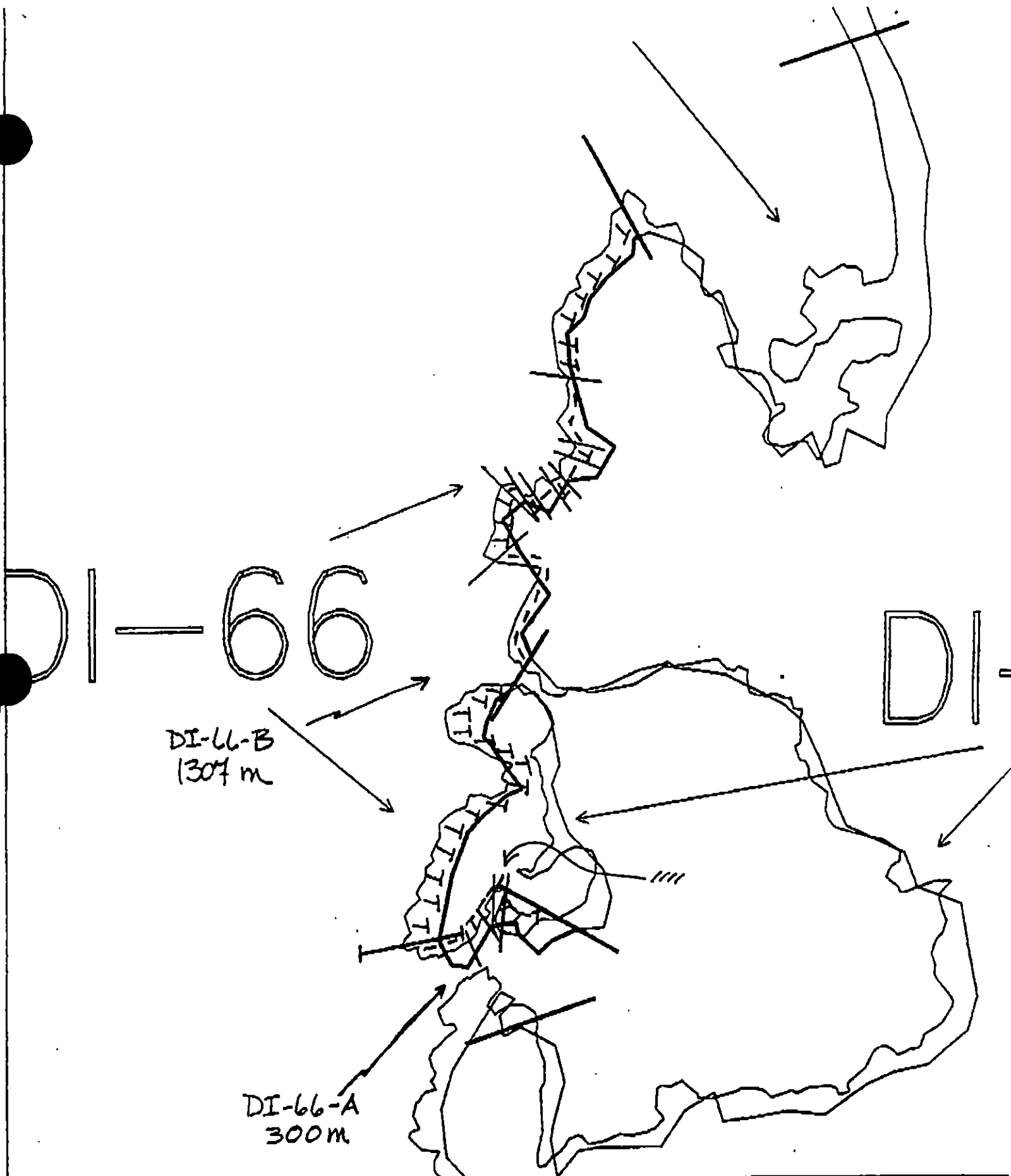
LEGEND

- 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
- eee
Oiled Vegetation
- 1 →
Photo location, direction, and number



Oil Character Length (m): AP 6 PO 0 CV 2 CT 170 ST 120 MS 0 PT 1 TB 1 FL 0 NO 0

REVISIONS



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

DI-66

Exxon Segment Length: 1607m

ADEC Segment Length: 1261m

0 100 200 300
meters

Map Key: PWS-98

Name: C. DILLON

Date: 4/19/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ DI-66 SUBDIVISION B (2 OF 2) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
No specific constraints identified.

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: J. Daniel McManus DATE: 5/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 342 m: V.Light 680 m: No Oil 0 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: <u> </u> Wands
☐ Tarmat Removal	☐ Beach Cleaner
	☐ Other (see comments)

COMMENTS:

TAG COMMENTS: MONITORS TO CHECK SUITZ AT POCKET BEACH.
SNOW COVERED DURING SEPT.

TAG APPROVAL DATE: 5/1/90
ADEC ART WEINER
EXXON ANDY TEAL
NOAA GARY PETRAE
USCG KENNETH KEANE

FOSC: W L DATE: 5-9-90

OIL CHARACTER LENGTHS (m)

CT 957 ST 650

MONITORS
TO CHECK
SUITZ

3 5m long lang C/P
pocket beaches
with VL stain on
some surface sed.

Vert. R
ST/B 1m wide along
CT/P high tide line

Hang R/B
CT/B SUITZ

Hang R

ST/B 1m wide
CT/P SUITZ

Pit 6

Pit 8 Sm. amt. oiled logs & veg. on SUITZ

Vert R with 5m long lang C/P beach
CT/B 1m wide along high tide line

DI-LL-B
1307 m

Vert R
ST/B 1m wide along
CT/P high tide line

lang C/P beach (5 m long)

Pit 1

SKETCH
AREA

DI-66-A
300m

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

DI-66
EXXON SEGMENT LENGTH: 1607m
ADEC Segment Length: 1261m

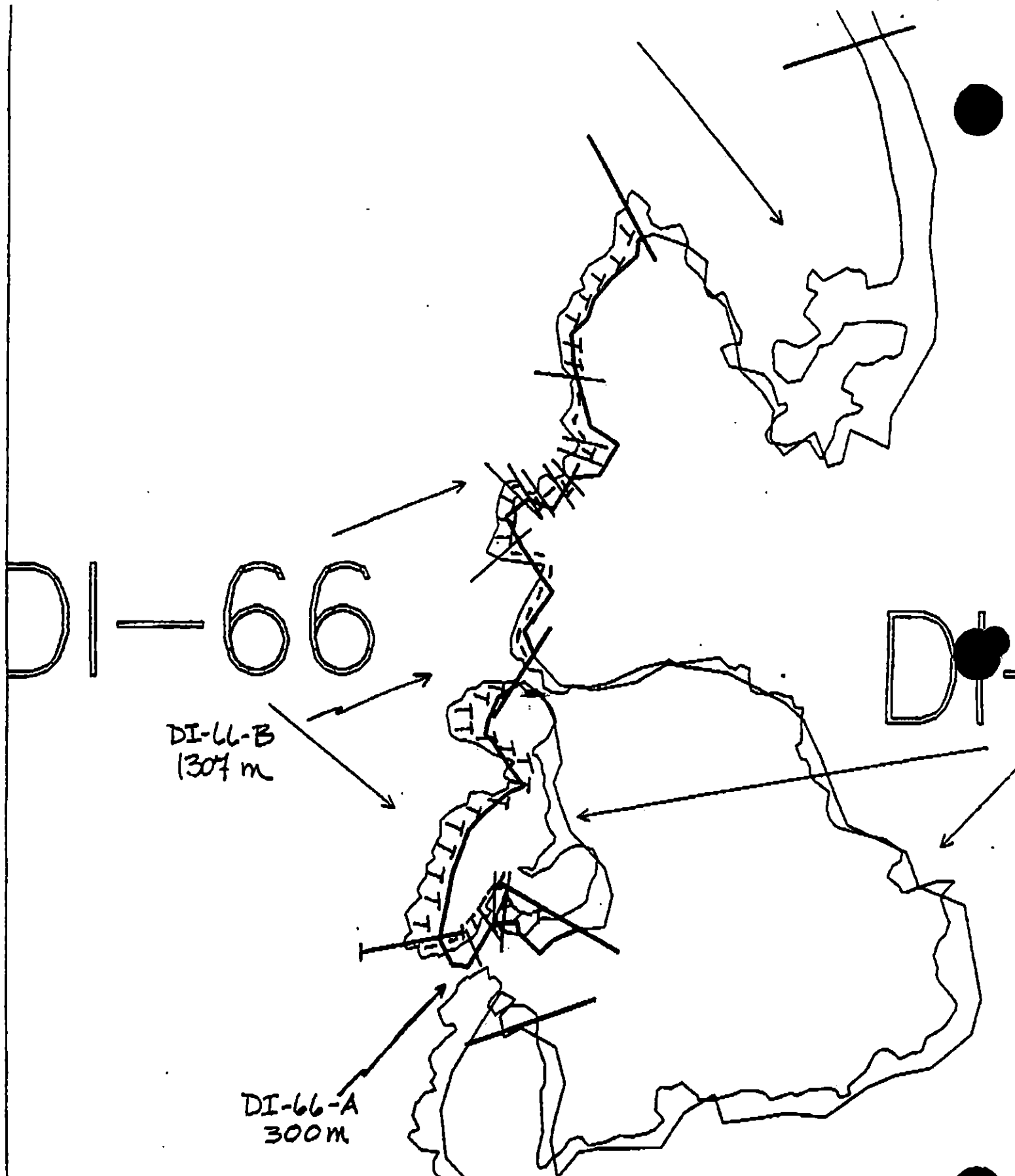


Map Key: PWS-98

Name: C. DILLON

Date: 4/19/90

Date Entered: _____



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

DI-66

EXXON Segment Length: 1607m

ADEC Segment Length: 1261m

0 100 200 300
METERS

Map Key: PWS-98

Name: C. DILLONDate: 4/19/90

Data Entered: _____

SEGMENT: DI 066 SUB: A REGION: PWS SURVEY DATE: 5/17/91

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

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

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

SHPO Signature: [Signature] Date: 6/04/91

FOSC\

N

2

2

Other

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: JUNE 4 1991

FOSC APPROVAL DATE: 6/8/91

ADEC

FOSC

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

TEAM NO. 2 SEGMENT DI-066 SUBDIVISION A DATE 5/17/91

ADEC

NAME Peter MontesanoSIGNATURE [Signature]☒ NTR ☐ TREATMENT RECOMMENDED

High use, Low Energy area at the mouth of the Disk Island lagoon. The Sops tends to be elusive in marshy fine sediments, Not treatable. Area B is extremely unsightly but the oil is thin and natural degradation in the grasses is the best option without overkill.

Overall there is very little change from my ASAP visit.

EXXON

NAME C.M. LATSIMPAUSSIGNATURE [Signature]☒ NTR REMAINING OIL DOES NOT REQUIRE TREATMENT.

LANDMANAGER

NAME DENNIS S. KENNEDY OF USFSSIGNATURE [Signature]☒ NTR

The more visible oil is in area 'B'; the oil is being invaded by grass. The area should be left alone and let the natural processes take place.

Disk Island lagoon is a high recreation use area.

USCG/NOAA

D. Simecek-Beatty

NOAA

D. Simecek-Beatty

NOAA

NAME BMI H. P. ZENONE

USCG

SIGNATURE [Signature]☐ NTR

The more significant concentrations of oil were observed in the beach grass/flat area. New beach grass appears to be growing through the flat showing the growth is visible. The oil is in a sheltered and subsaline area, as a result, no treatment was recommended. - DS-B

CG - No TREATMENT RECOMMENDED. 3

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 1

TEAM NO. 2OG ReimerBIO S. BANSEGMENT D166ADEC P. MontesanoLANDMANAGER P. Kennedy for USFS
BMI ZENONESUBDIVISION AEXXON C. KatsimpalisUSCG/NOAA D. SIMECEK - BEATTY NOAADATE 5/17/91TIME 13:13 to 13:42TIDE LEVEL 2.83 ft. to 4.30 ft.ENERGY LEVEL: ☐ H ☐ M ☒ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☒ SUN ☒ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 242 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☐ NONEEST. OIL CATEGORY LENGTH: W — m M 14 m N 10 m VL 190 m NC 28 m US — 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				S	P	P					PCBR	M	5	10		X			
B				S							GO	L	3	10	X	X			mostly Peat
C						P					R	H	1	6		X			
D				S		S					CBRO	M	2	8		X			Peat around C/B
E				S		S					RB	H	2	5		X			
F						S					R	V	1	50		X			
G			T			S	S				RCB	M	2	8		X			
H				S		S					BC	M	2	6		X			
I						S					RBC	H	1	30		X			
J						S	S				R	V	1	100		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- 2-19 FRAMES 10-15

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			
									-										
									-										
									-										
									-										
									-										
									-										
									-										
									-										
									-										

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

OG COMMENTS: Predominantly sheltered Rocky shoreline. With two pocket coves, The western cove extends inland for $\approx$ 50 meters as a low lying (supradidal) grass/Peat area. The eastern cove is predominantly a lag boulder/cobble beach. Oiling consists of discontinuous/sporadic tar bands (CT) on rock faces and across boulder lag. The western cove has an area along the UITZ where heavier concentrations of CT and SOR have been dropped behind rock outcrops inside a narrow cove entrance. The surface sediments were scraped in several leadings and No subsurface was found.

revised 5.21.91
REVIEWED: C.W. 5/22/91

OG SKETCH
DI-66A
MAY 17, 1991
13:13 - 13:45
Doug Reimer

J
VERTICAL ROCK
1-3% CT/ST
1 X 100m

DISK
Island

SKETCH MAP
AREA

D
oiled grass,
interstitial Peat
between C/B
CT 10%
SOR 5%
2 X 8m

C
CT 20%
1 X 6m Rock

grass/Peat
Supratidal

B
SOR 10%
3 X 10m
oiled Peat/grass

G
2 X 8m
CT/ST 2%
TB 1% (Likely Not
Exxon Valdez - very
B.1 H6

E
CT 5%
SOR 2%
Rock/BLD
2 X 5m

A
CT/CV 20%
mostly undersides
cobbles/boulders
SOR 5%
5 X 10m

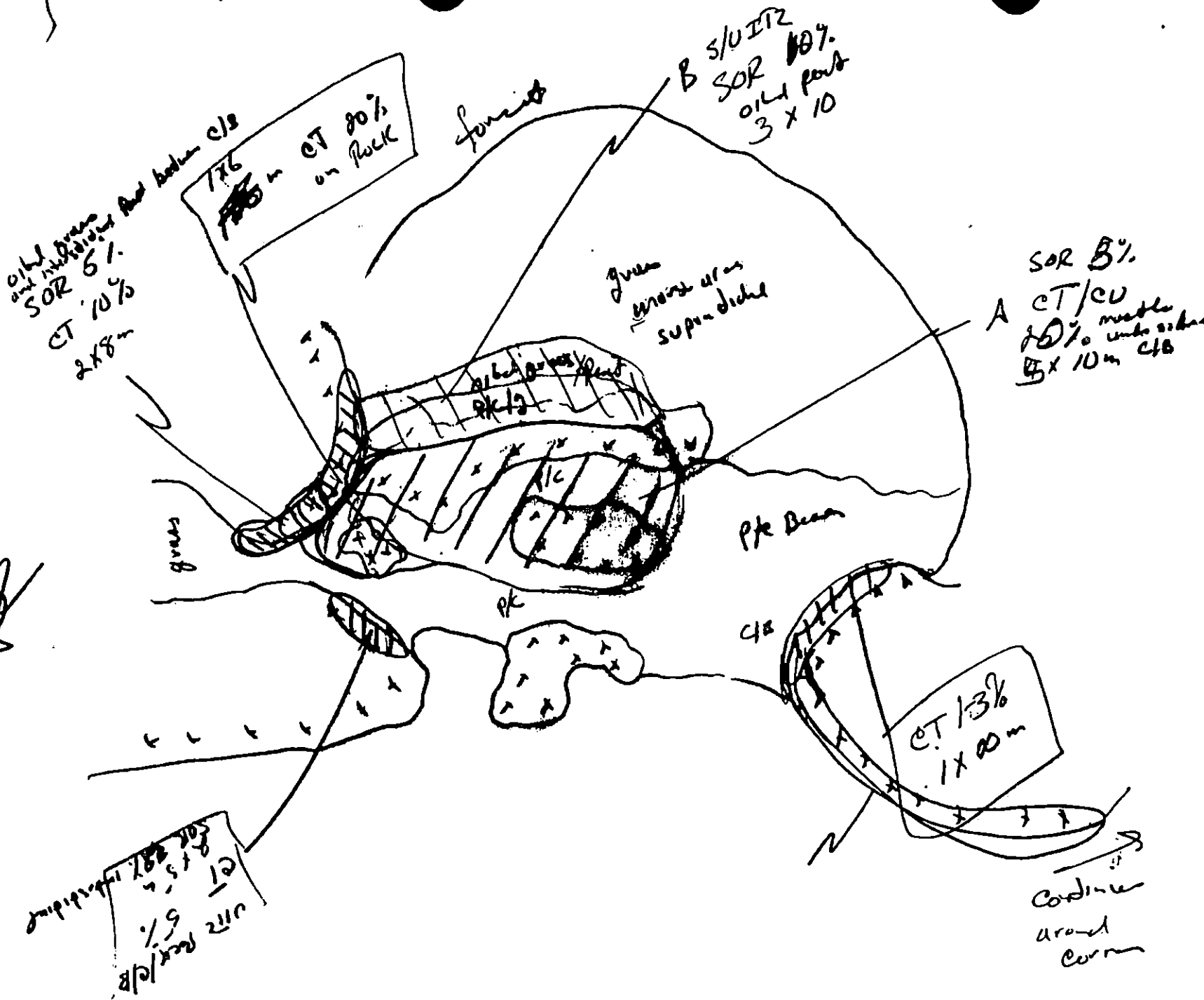
F
CT 1-3%
discontinuous
1 X 50m

H
2 X 6m
CT 2% BLD/cb
SOR 5% patchy
(heavy)

I
CT 1-3%
1 X 30m
Rock, BLD/cob lag
deposits NITZ

reviewed 5.21 94
REVIEWED: F.W. 5/22/94

Field
Sketches



DI-66A
S.17.91
D. Reimer

REVIEWED: F.W. 5/22/91
reviewed S.21 94

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 17 May 91
 SEGMENT # DI-66 TIDAL HEIGHT (Range) 3 to 4 ft
 SUBDIVISION A BIOLOGIST Sm BAN
 SEA STATE Calm WIND SPEED/DIRECTION Calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

- A: oil on undersides of boulders - sparse *Fucus* on boulder tops grass in fine sediments adjacent to boulders. Algae barnacles & limpets on rock outcrop seaward of oiled zone.
- B: Oil is in upper intertidal, oiled grass & peat encountered. New shoots of grass are pushing through oiled peat layer.
- D: Similar to "B" but boulders present. Oil & peat is between & beneath boulders.
- EFI+J: Oil is CT/ST high in ITZ. Lower zones on rock faces support dense algae, barnacles and moderately dense mussels.
- G: CT/ST in lichen and green algae zone. A few littorines were found at the lower edge of oiling.
- H: This area is lower in the intertidal than "G". Oiled barnacles (alive) were observed in the zone. Small mussels and dense littorines were found under rocks.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

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

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

Shoreline subdivision map showing important biological features attached.

REVIEWED: F.W. 5/22/91
 REVIEWED: M.B. 5/22/91

OG SKETCH
 DI-66A
 MAY 17, 1991
 13:13 - 13:45
 Doug Reimer

SMB 17 May 91

J Lichen in
 CT/ST ZONE
 Fucus + Barnacles
 in lower ITZ

DISK
 Island

SKETCH MAP
 AREA

D Lichen +
 moss on
 boulders,
 oiler grass &
 peat between
 boulders

C Lichen
 on rock

grass/peat,
 Supratidal

B oiler
 grass +
 peat moss
 grass growing
 within oiler
 peat patch.

G Lichen,
 green algae
 sparse
 L. HONNIG

E Lichen
 Algae
 Dense in
 lower ITZ

A Fucus and
 grass: Rhodanthe
 barnacles +
 limpets on
 outcrop

F Lichen
 Algae +
 Barnacles in
 lower ITZ

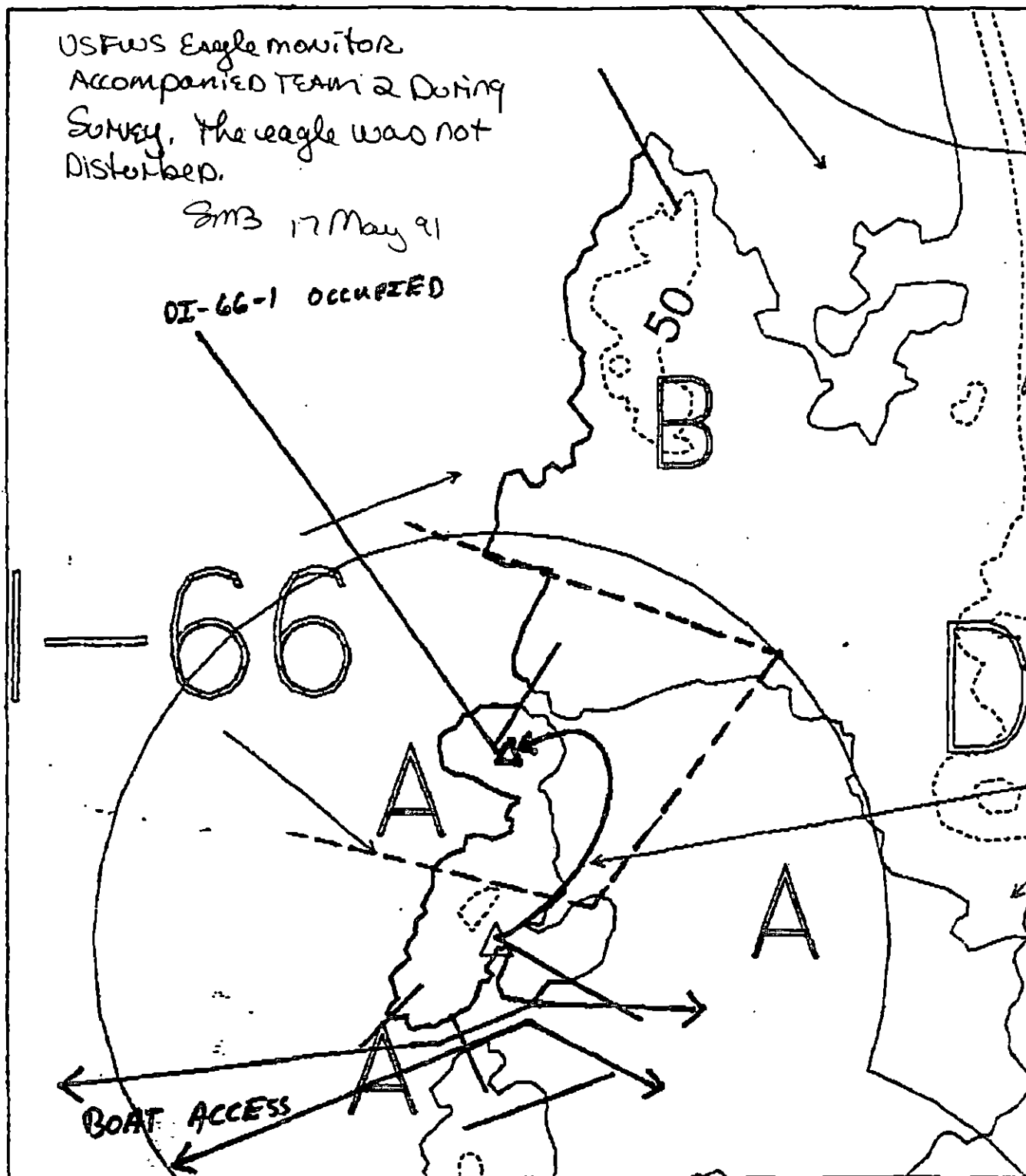
H Oiler barnacles
 mussels and
 dense L. HONNIG
 under rocks

I Lichen
 Algae +
 Barnacles
 in lower
 ITZ

USFWS Eagle monitor
Accompanied TEAM 2 During
Survey. The eagle was not
Disturbed.

SMB 17 May 91

DI-66-1 OCCUPIED



DI 066

METERS

120 250

AK State Planning Zone 4
p1900

Segment Reference Map
Map Key: PUSDI066



EAGLE NEST

REVIEWED: F.W. 5/22/91
Reviewed M.B. 5/24/91

+

+

B

66

A

Exxon OILING
SHORELINE
MAP

+

+

A

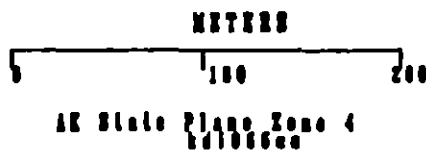
D1066 A

Subdivision Field Map

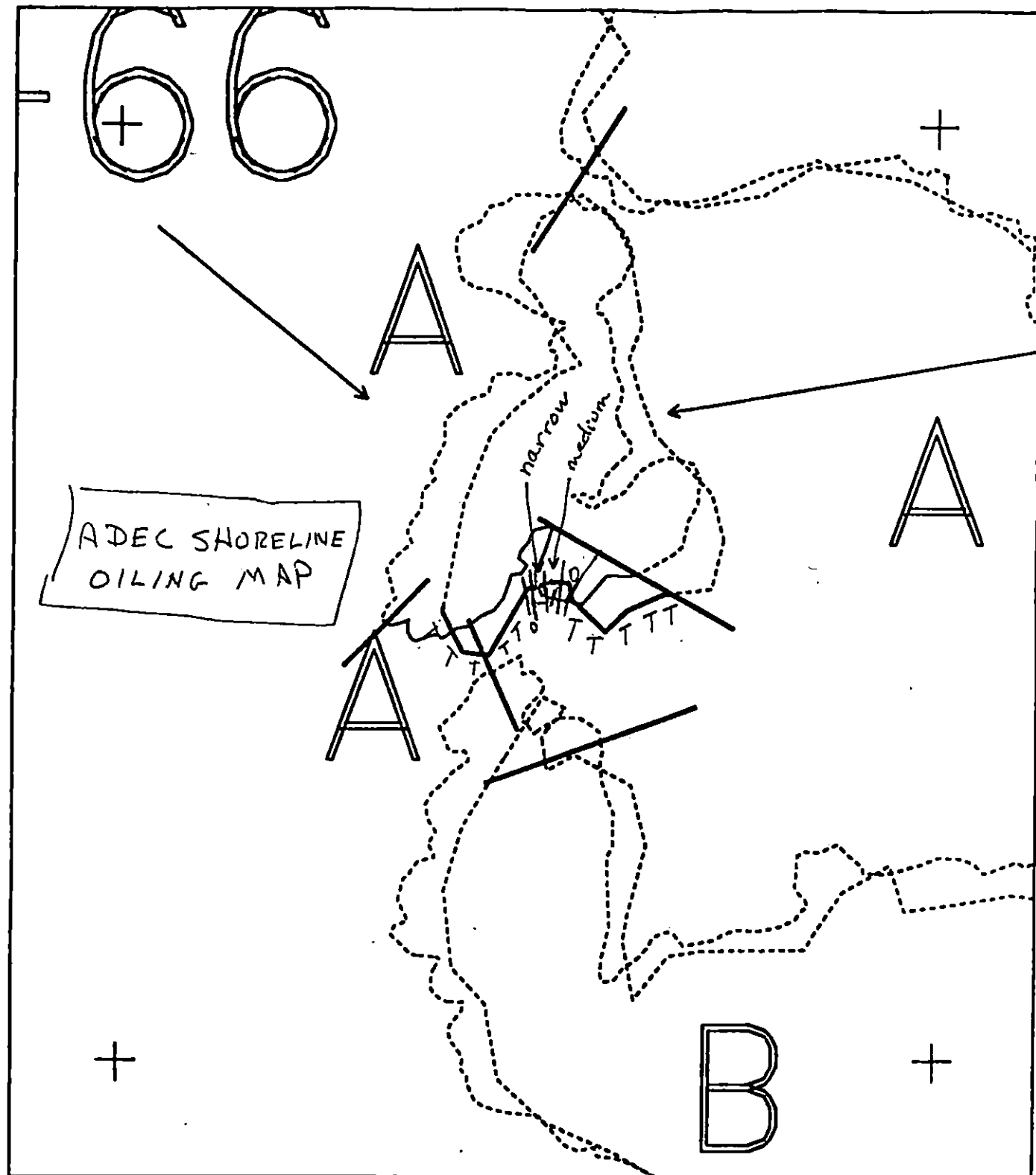
Map Key: KNID1066Aa

Name: Keimer (JY)

Date: 5.17.91



(redone) revised 5.21 91
REVIEWED BY: F.W. 5/22/91



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

D1066 A
 ADEC Subsegment Length: 242m
 METERS
 0 100 200
 AK State Plane Zone 4
 821000

Subdivision Field Map
 Map Key: KNID1066A
 Name: Reimer
 Date: 5/17/91
 Date Entered:

revised 5.21 91
 REVIEWED: F.W. 5/22/91

1991 MAYSAP EVALUATION

SEGMENT: DI 067 SUB: A REGION: PWS SURVEY DATE: 5/14/91

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 DI - 67 SUBDIVISION A DATE 5/14/91

ADEC

NAME

Peter Montesano

SIGNATURE

[Signature]

☐ NTR

TREATMENT RECOMMENDED

THE BIO MAP FOR THIS SUBDIVISION IS ~~FLAWED~~ ^{AND} IT SHOULD NOT BE USED BY TAG. PITS 2,3,4 WERE NOT WELL PLACED ON MAP VERTICALLY SO AS TO SUGGEST THE HMMOR ENDS. THE OG WOULD NOT GET OUT OF THE SKIFF TO SEE HMMOR PIT/S NEAR NORTH OF #4. THE AREA NORTH OF #4 WAS SURVEY SEVERAL HOURS AFTER THE REST, THE EXXON CG REPS WOULD NOT INCLUDE IT IN THE FEAST PASS SINCE IT WAS NOT PART OF AN ASAP SITE. WHILE SURVEYING THIS SECTION, THE CG REP NEVER LEFT THE SKIFF. OIL REMAINS UNDER MUSSELS AT PIT #10, PITS 619 WERE DEFINITELY HOR, AREA A WAS A NOT SOR, THERE IS NO

CONTIN'D

EXXON

NAME

Mr. Kutsurialis

SIGNATURE

[Signature]

☐ NTR

IF MR. MONTESANO FEELS FURTHER EVALUATION IS DUE, MAYBE HE SHOULD SUGGEST "FURTHER EVALUATION IS DUE."

LANDMANAGER

NAME

DENNIS S KENNEDY OF USFS

SIGNATURE

[Signature]

☐ NTR

Handwork is the option to clean-up HVY SOR between the two Tombolos [location DI & D2] The remaining areas should be left as is due to sensitivity of biota & Great layers.

USCG/NOAA D. SIMONEK-BEATTY NOAA

NAME

BRI M. P. ZENONE USCG

SIGNATURE

[Signature]

☐ NTR

Most of the observed subsurface oil was in a low energy environment with abundant and diverse biota. Characterizing the subsurface oil was very difficult due to an underlying silt layer. Areas of, and O2 contain, about 20-30% SOR coverage and could be manually worked, however, these are small areas. OS-B

TEAM BENT OVER BACKWARDS TO TRY TO SATISFY ADEC'S EVERY DESIRE. AREA WAS RETURNED TO ENLIGHTENED TIDE CYCLE TO ENABLE TEAM TO COMPLETE OTHER SEGMENTS. BECAUSE OF A HIGHER TIDE I DO NOT FEEL IS REASON TO CRAMPEN AN EXCELLENT SURVEY. ADEC'S COMMENT DO NOT ACCURATELY DEPECT FINDINGS IN THIS SURVEY NOR DO THEY ACCURATELY DEPECT THE FASTIDIOUS WORK OF O&BIO. (CONT)

MAYSAP FIELD SHORELINE COMMENT SHEET

CONTINUED

TEAM NO. 2 SEGMENT DI 67 SUBDIVISION A DATE 5/4/91

DEC

NAME

PETER MONTESANO

SIGNATURE

~CONTINUED~

PEAT ASSOCIATED WITH AREAS REQUIRING REMOVAL (A, E, C, + D), AND THE %'S FOR THE ABOVE REMOVAL AREAS ARE ALL UNDER CHARACTERIZED THE HMOR, WHICH EXTENDS OVER A MUCH LARGER AREA THAN MAPPED, IS NOT A GOOD CANDIDATE FOR REMOVAL, TILLING, ETC. DUE TO ITS PROXIMITY TO MUSSELS + OTHER BIOTA. AREA A: PICK UP + ACCESSIBLE AROUND BOULDERS, AREA C: RAKE, AREA D: PICK UP + RAKE, AREA E: PICK UP + RAKE. ONLY AREA A WILL REQUIRE MORE THAN SEVERAL HOURS OF WORK. THE MUSSELS ON THE BIO MAP ARE MISPLACED, THEY ARE AROUND IT 10, NOT WITH THE SOR.

EXXON

NAME

SIGNATURE



NTR

LANDMANAGER

NAME

OF

SIGNATURE



NTR

USCG/NOAA

NAME

BRI ZENONE USCG

SIGNATURE

BRI ZENONE



NTR

CG - COOPER W/ NOAA + USFS ON SECTION D2. OIL IN AREAS OF PETS 1 & 2 - BEAR CONSIDERATION FOR MANUAL WORK. 3

DATE MAY 14 191

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N m VL m NO m US 330 m

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

revised 5.18.91 94

PAGE - OF

DATE May, 14, 191

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

revised 5.18.91 gyz

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2
 DATE 14 May 91
 SEGMENT # DI-67
 TIDAL HEIGHT (Range) 0 to -3 ft
 SUBDIVISION A
 BIOLOGIST SM BAN
 SEA STATE calm
 WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # FRAME #

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

- A: Green algae (Ulva sp.) in vicinity of oil. Lower zones with Fucus recruits and mussels.
 B: Only biota in oiled area is Ulva sp. and sparse barnacles. Littering egg masses were found below rocks seaward of the oiled zone. Also mussels, spat, Littering and limpets.
 C: Amphipods and green algae in oiled zone. Barnacles and Littering egg masses under rocks seaward of Pit #9.
 E: Very dense mussel beds interbedded with finer sediments. Oil was found below one mussel bed. Fucus beds and recruits also dense in area around stream.
 F: Green algae in oiled zone. Also sparse barnacles. Fucus clumps. Few mussels and Littering immersed seaward. Dense Fucus recruits closer to water.
 G: Lichen in oiled zone. Fucus nearby. Many empty Protothaca x Saxidomus shells indicative of nearby clam beds. Five seeds closer to water exhibit clam siphon holes.
 H: No biota. Beach grass above oiled zone show evidence of cropping by deer.
 I: Organisms under boulders in area of oiled patches include small fish (Menidia), polychaetes (Nereis), annelid worm (Sipunculus), Littering and limpets (spat).

WILDLIFE OBSERVATIONS

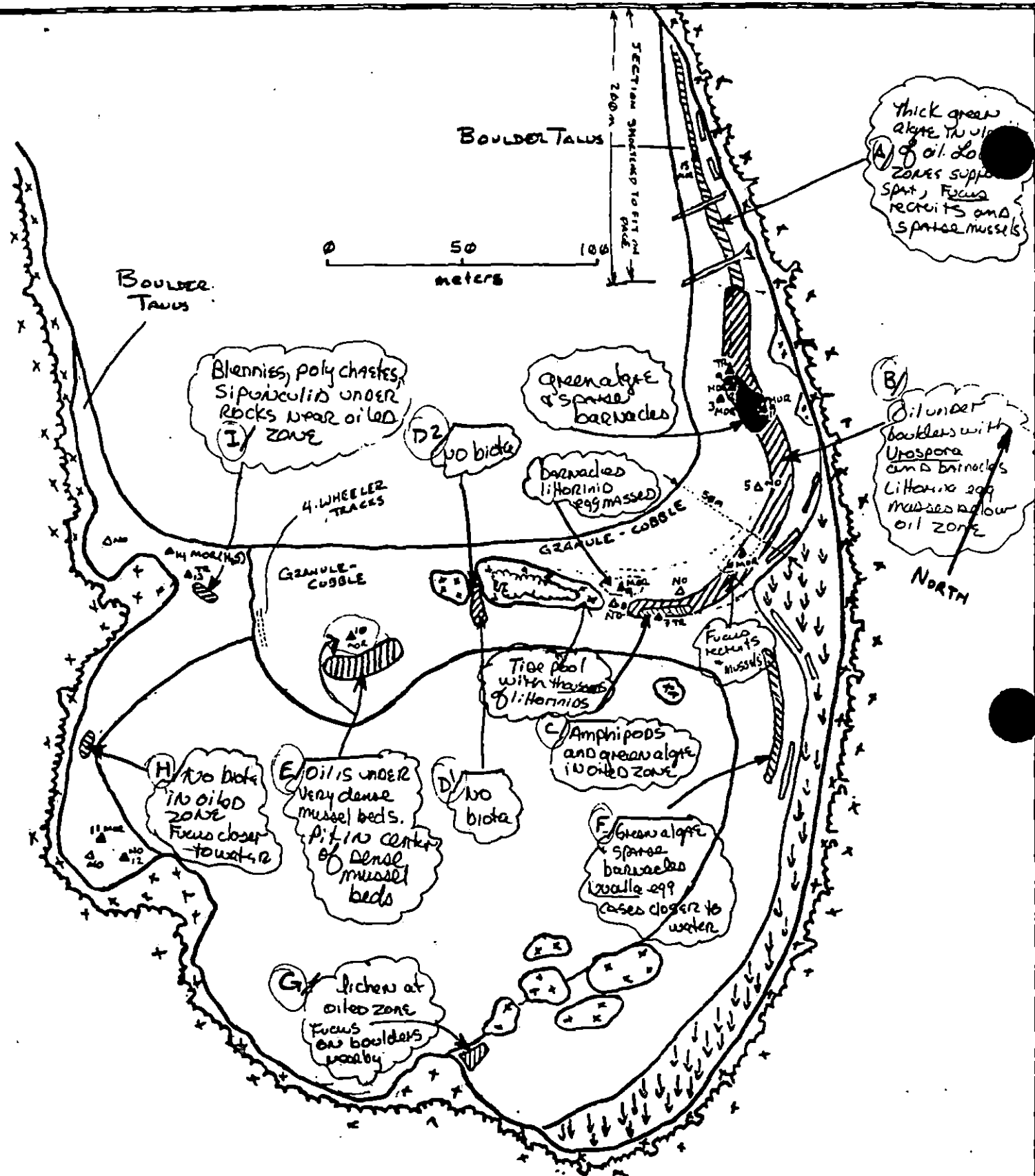
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	not on nest - not disturbed	1	blennies - 1
Seabirds			
Waterfowl			
Gulls/kittiwakes	1	2	
Shorebirds	sandpipers	2	
Corvids			
Other Birds	teen	1	

LAND MAMMALS

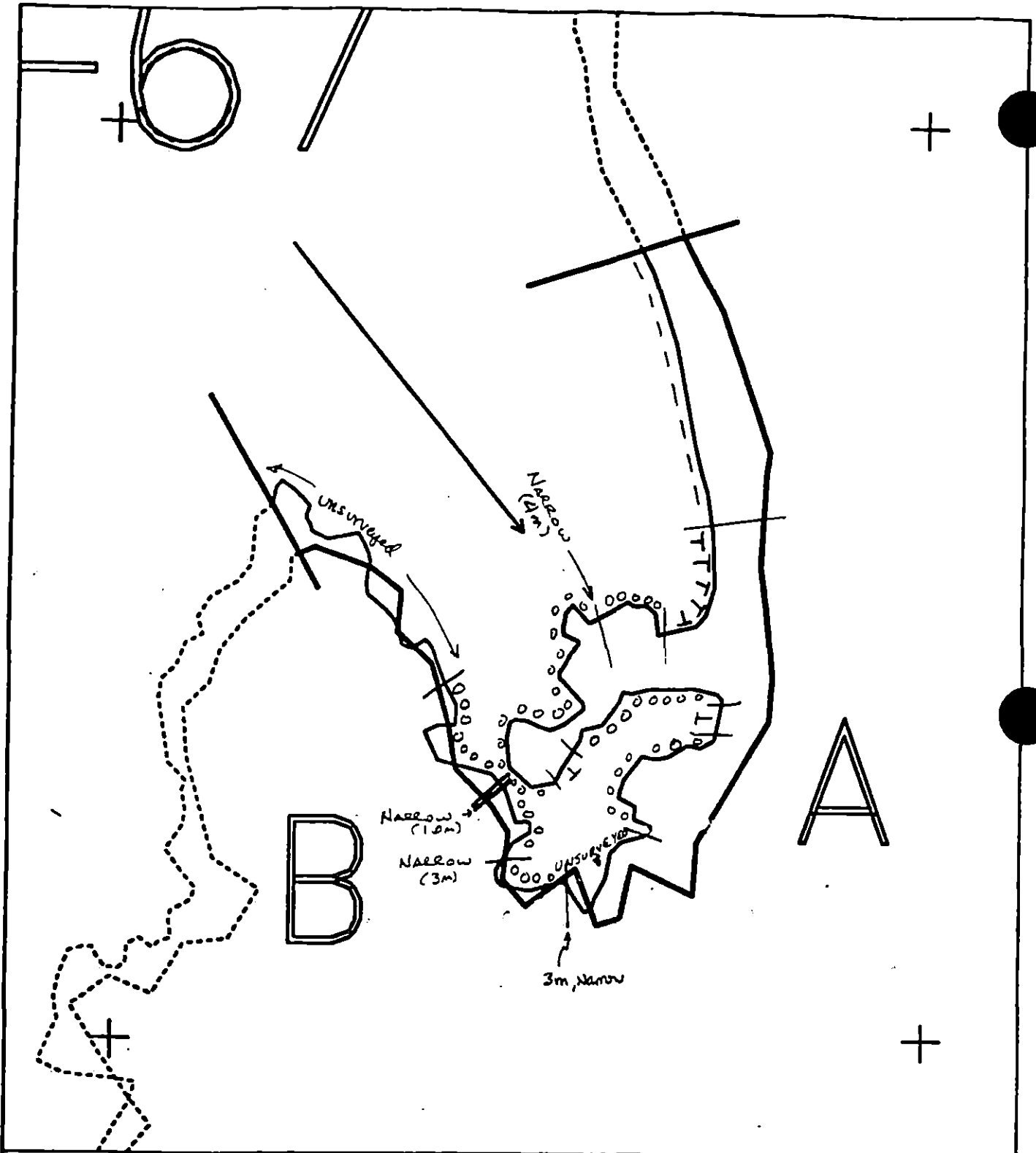
MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
Whales (specify)			

Shoreline subdivision map showing important biological features attached.



SKETCH MAP
DI 067-A
14-MAY-91
0627-0830
1132-1152

SMB 14 May 91

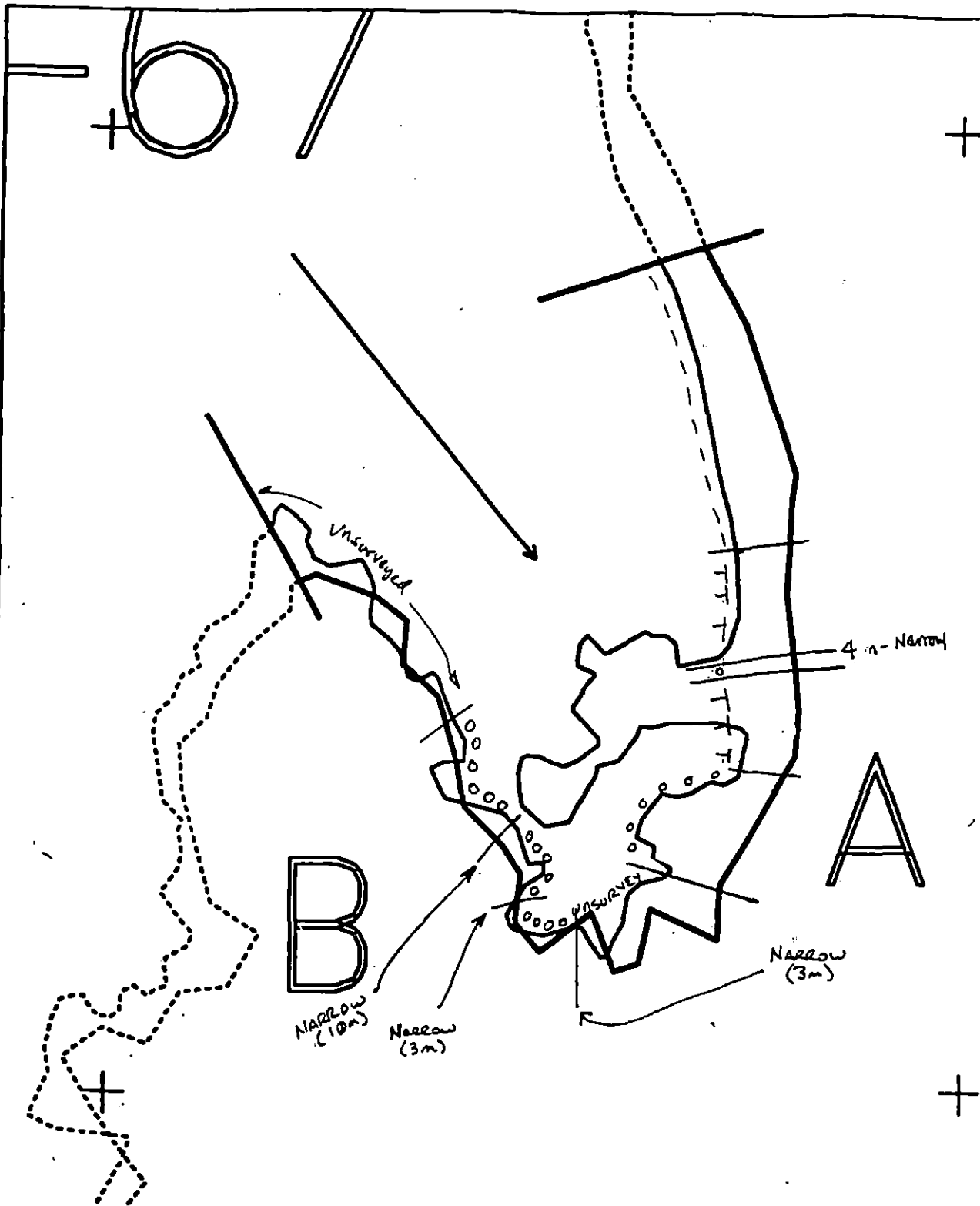


XXXX	Wide	D1067 A ADEC Subsegment Length: 1040m METERS AK State Plane Zone 4 141007a	 	Subdivision Field Map
////	Medium			Map Key: KNID1007A
----	Narrow			Name: <u>TRIMM</u>
TTTT	Very Light			Date: <u>14 May-91</u>
0000	No Oil			Date Entered:

EXXON SURFACE OIL CATEGORY MAP.

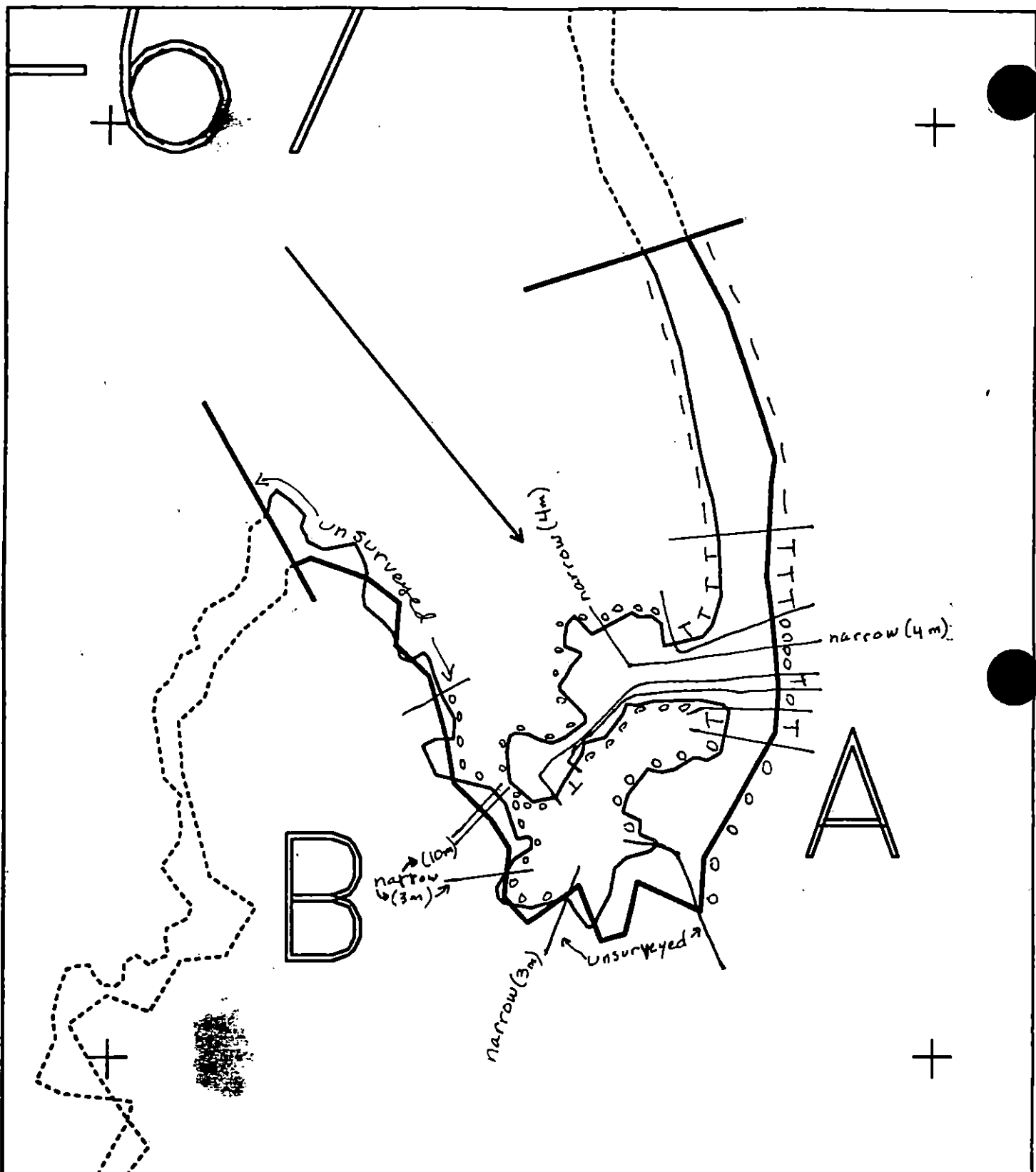
revised 5.18.91 94
 25 revised 5/19

... 1 14.1



XXXX	Wide	DI067 A ADEC Subsegment Length: 1040m METERS AK State Plane Zone 4 ed1007a	Subdivision Field Map Map Key: KN101007A Name: <u>TRIMM</u> Date: <u>14 MAY-91</u> Date Entered:
////	Medium		
----	Narrow		
TTTT	Very Light		
0000	No Oil		

ADEC • SURFACE OIL CATEGORY MAP.



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

DI067 A

ADEC Subsegment Length: 1048m

METERS

0 100 200

AK State Plane Zone 4
641067a

Subdivision Field Map

Map Key: KNIDI067A

Name: Trim (JY)

Date: 14-May-91

Date Entered:



REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/DI-67

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ DI-67 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Possible uncatalogued anadromous stream entering lagoon.

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

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

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 183 m: Medium 76 m: Narrow 193 m: V.Light 515 m: No Oil 85 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes manual removal of tarmats in three areas indicated on sketch map. No specific time sensitive ecological constraints identified.

TAG COMMENTS: _____

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

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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

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

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

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

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

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

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

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

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

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

1H Remote release site

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

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

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

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

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

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

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

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

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

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

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

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

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

30, 3Q Harbor seal and sea lion molting (8/15 to 9/15)

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

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

ADF&G Don Calkins 267-2403

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Roth 267-2206

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

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation:

Tent sites (6/1 to 9/15)

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

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

6X Lodge (6/1 to 9/15)

6Y Special use destination

7Z Subsistence area: Salmon harvesting (5/1 to 9/30)

Finfish harvesting

Deer harvesting (8/15 to 2/28)

Invertebrate harvesting

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

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

FIELD SHORELINE COMMENT SHEET

DRAFTSEGMENT ST / DI-67 SUBDIVISION: A DATE 4/19/90**USCG**NAME William E. White SIGNATURE William E. White☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Manual pick of ASPHALT PAVEMENT.

ADECNAME Peter Montezano SIGNATURE Peter Montezano☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS I disagree with the sketch map characterization of the lagoon. At the time of visit the lagoon was completely separated from the open salt water. The opening on the map is better thought of as interstitial runoff. The lagoon is relatively stagnant, ~~and~~ consequently, Biologist Barry, Exxon Stiles, and I agreed that Bioremediation is inappropriate for this segment.

- Remove Asphalt while ~~avoiding~~ avoiding traffic on marshy organics IN SE Corner.

- Area by Pit 4 was washed numerous times in 1989, and the penetration tapers off rapidly heading north.

Note: The deepest southern end of segment was inaccessible and NOT surveyed.

LAND MANAGER USDA Forest ServiceNAME Don J. Breitzinger SIGNATURE Don J. Breitzinger☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Spot pick up and/or breakup of fat patches along

DI-67.

SHORELINE OILING SUMMARY

REVISION NO. 06-13-90

OG C. DILLON USCG PS1 E. WHITE SEGMENT ST/ DI-67
 BIO J. BARRY LAND REP D. BRIGHTENGER (NES) SUBDIVISION A (LOFT)
 EXXON G. STILES ADEC P. MONTESANO TIME 16:50/18:30
 TEAM NO. 6 TIDE LEVEL +2.5 to +4.5 DATE 04/19/90
 ST. SUBDIVISION LENGTH: 1594 m ☒ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: SW to NE
 SURFACE SEDIMENTS: R 15 % B 5 % C 35 % P 45 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 90 % Hang 5 % Vert 5 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 250 m M 75 m N 300 m VL 794 m NO 175 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	1	2	3	4	1	2	3	4	5	SW	U	M	N
ASPHALT PAVEMENT	X	✓	X			✓		X		✓	X		
POOLED													
COVER													
COAT		X	X	0	X					X	X	X	X
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM		X			X	X				X			
NO OIL										X			

PAVEMENT ☒ F 425 sq. m by 2 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? ☒ NO BR RW SL TL

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

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE Oiled vest#BAGS 1

Photographs:

Roll No. ST-6-6Frames 3

SUBSURFACE OIL * oiled interval < 5cm in pit 3 does not constitute subsurface oil.

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEER (Y/N)	T	SURFACE-SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	SW	U	M	N				
1	30					X	0-0	X									X		N	-		P-P/G
2	25	X					7-10	X			X					X			Y	10		P-P/G
* 3	30	X					0-2	X			X						X		N	-		P/G-G/S
4	12	X					0-6	X			X					X			N	-		CP-P/G
							.															
							.															

COMMENTS MAIN PORTION OF SUBDIVISION IS A LONG, WIDE LOW ANGLE LAGOON AND INTERTIDAL ZONE.

REVIEWED YwDATE 4/21/90

OG C.D.

SEGMENT ST/ DL-67

SUBDIVISION A

DATE 04 / 19 90

CHECKLIST

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

LEGEND

1 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

lll

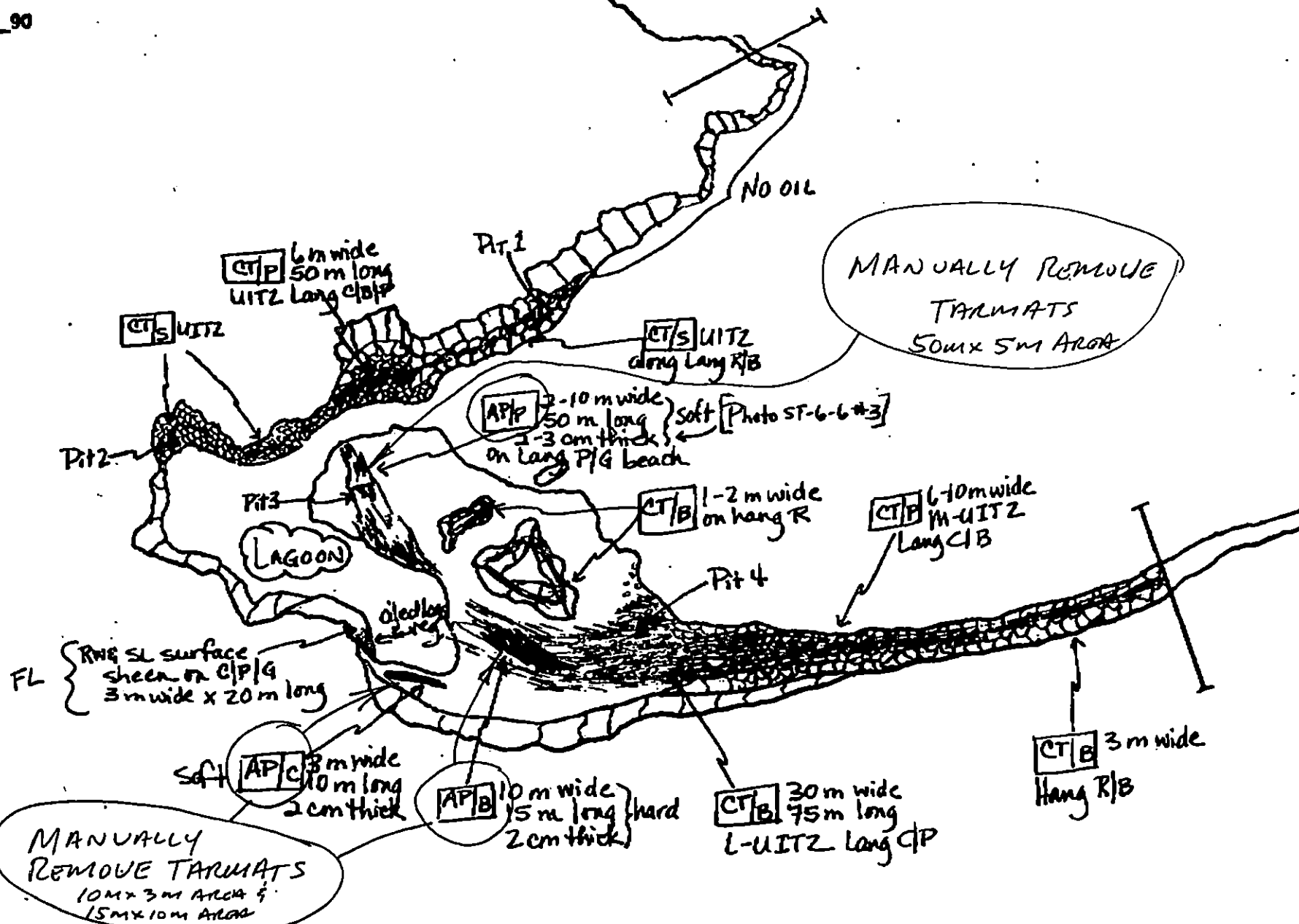
Oiled Vegetation

1 Δ

Photo location, direction, and number

SKETCH MAP

N



Oil Character Length (m): AP 75 PO 0 CV 0 CT 1324 ST 0 MS 0 PT 0 TB 0 FL 20 NO 175

REVISION 3/2000

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/80

Segment ST / DI 67-A Subdivision A Date (mo / day / yr) APRIL 19 1990

Time (24 hr) 1650-1850 Biologist JIM BARRY Length - 1594m

1/9

(A) Substrate type and % of segments:
(1) Bedrock 15 (2) Boulder 5 (3) Cobble 35 (4) Pebble 45 (5) Sand 0 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 30 Moderate 65 Low 5

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

Photographs: 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

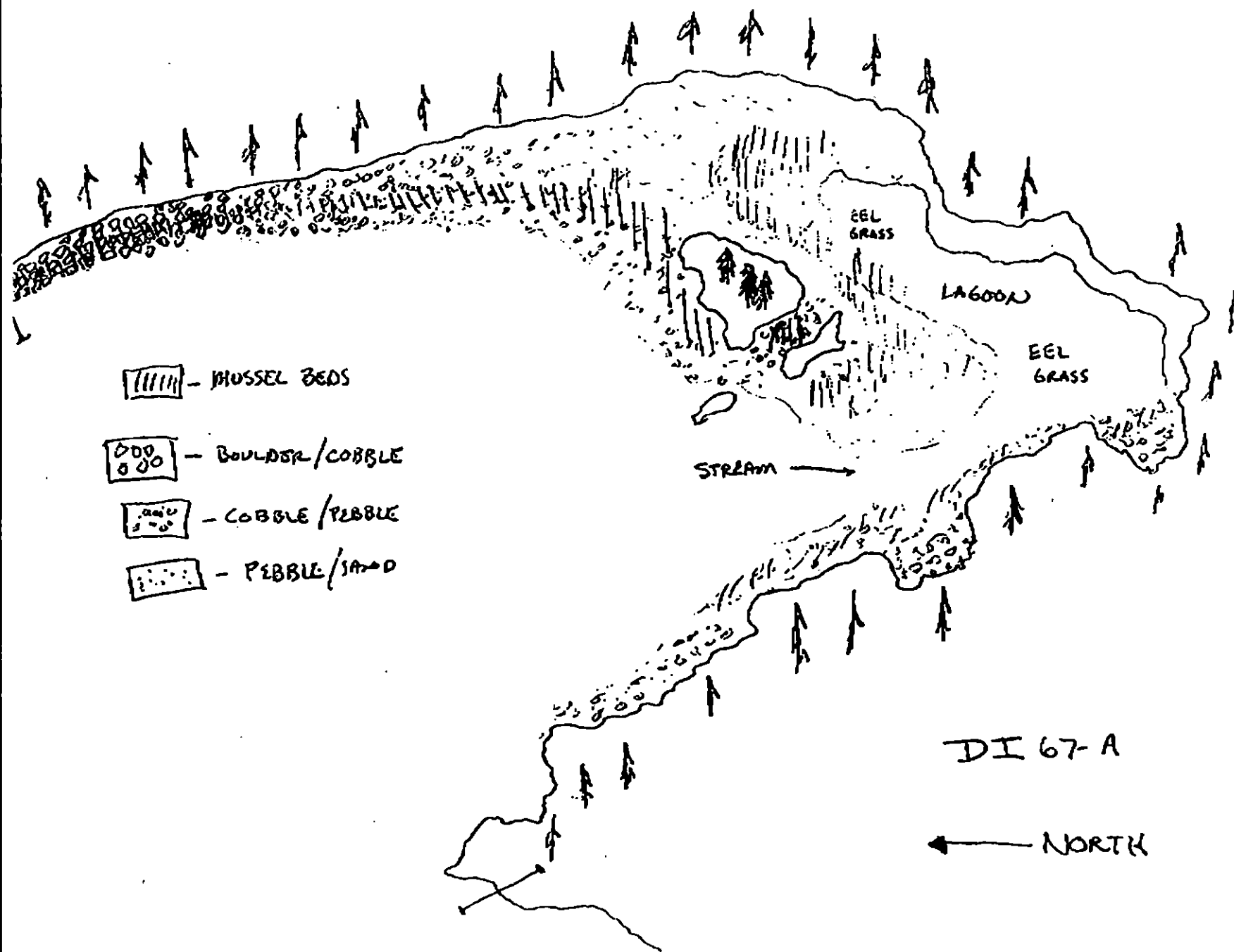
Wildlife Observations/ General Comments:

Great Blue Heron - 1 Common Merganser - 2
Common Goldeneye - 3 Bald Eagle - 2

Ecological Considerations:

ALTHOUGH NONE WERE LISTED, THE MUSSEL, CLAM, AND EEL GRASS BEDS
SHOULD NOT BE DISTURBED.

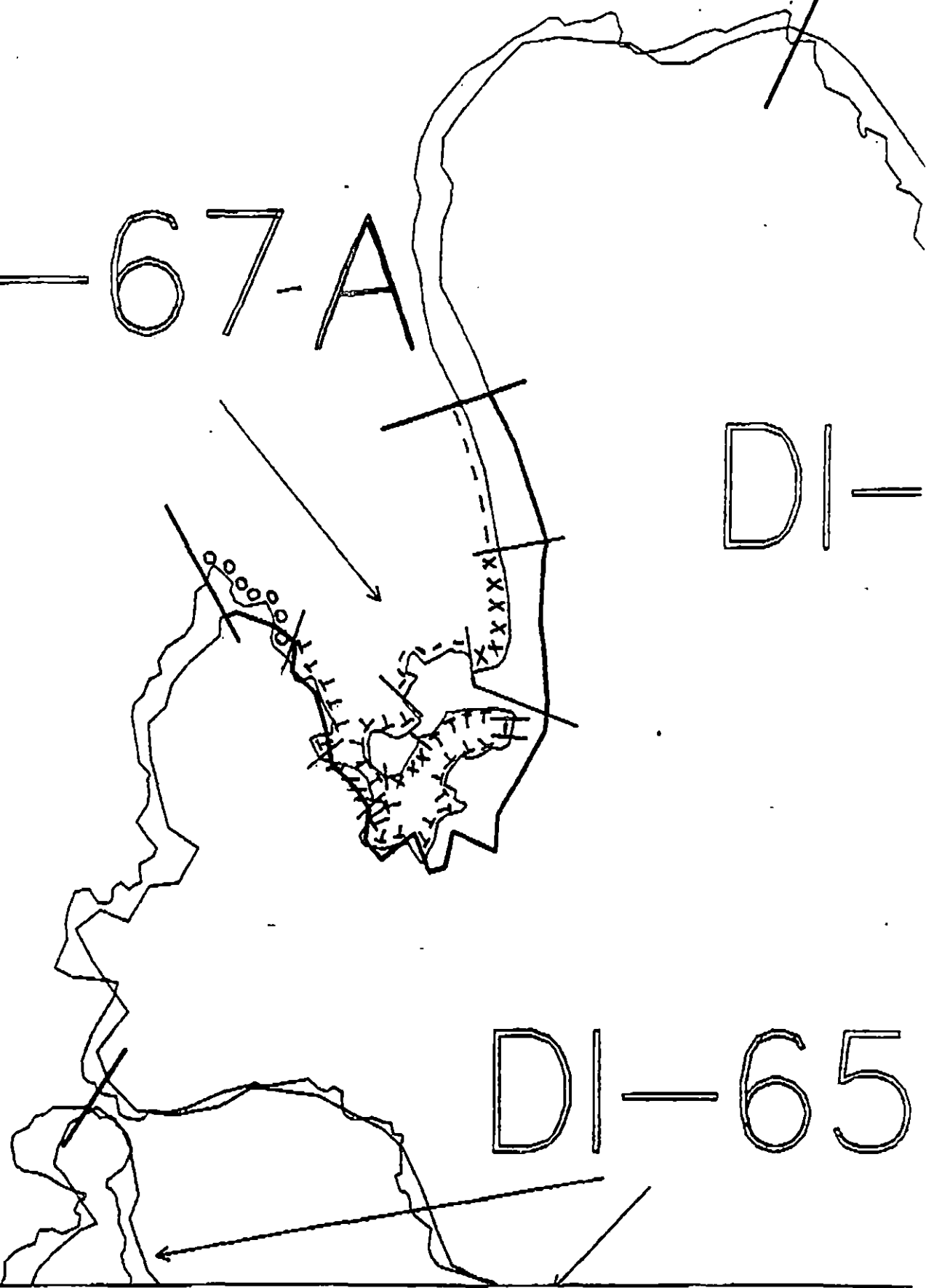
249



DI-67-A

DI-

DI-65



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

DI-67-A
Exxon Segment Length: 1594m
ADEC Segment Length: 1047m



Map Key: PWS-99

Name: C. DILLON

Date: 4/19/90

Date Entered:

SUPPLEMENTAL

1991 MAYSAP EVALUATION

SEGMENT: DI-67 SUB: A REGION: PWS SURVEY DATE: FIELD REQUEST

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) _____

RECEIVED

JUL 18 1991

Ecological/Constraints (see page two for details) _____

ANCHORAGE-ADD/A

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find, and contact Exxon's Cultural Resource Program immediately: 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.). *ee4*

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: _____

TAG: ADD BIO

FOSC: _____

TAG APPROVAL DATE: June 26 1991

FOSC APPROVAL DATE: 7/8/91

ADEC

EXXON

USCG

NOAA

FOSC

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

CENTRAL FILE

OFFICIAL COPY

WORK PLAN MODIFICATION

On the evening of 20 June 1991 and the morning of 21 June 1991 the BAT Team went to DI-87-A to assess the oiling conditions and to delineate the work areas for the manual work effort. This segment is located in a cove along the northwest side of Disk Island. After flagging each of the sites, the work crew broke up some highly friable AP/SOR at MAYSAP Sites C and D. At Site B HOR/MOR was found beneath a surface layer of boulders and 5 to 10 cm of finer gravel (C-P-G-S). Although the State work order recommended only manual tilling of the region, the extent of the HOR, which was 5 to 10 cm thick, dictated more intrusive clean up measures. In a field meeting at the site it was unanimously decided by the Exxon Representative, the U.S. Coast Guard Representative, the ADEC Representative, and the Geologist that the oiled sediment be removed from the beach (see Maps 1-3).

To accomplish this the work crew removed the top layer of boulders from the site and placed them on the seaward side of the work area. Some attempt was made by the workers to prevent building a boulder wall which would cordon off the trench and prevent the site from being exposed to wave action and flushed by the tides. Despite spreading the boulders out along the beach, there is a low boulder accumulation in front of the trench. A total of 285 bags of oiled sediment was removed this area. As the tide rose it became apparent that the area would produce extensive sheens and therefore, a snare boom was deployed around the entire work site.

Presently the site has a 3 to 4 m wide by 20 m long shallow trench area containing SOR/CT/FL which is fronted by a mound of oily boulders. Due to the extent and freshness of the oiled sediments and the moderately protected nature of the area from wave energy, the BAT Team recommends that this site receive bioremediation including both Inipol and Customblen application. It is concurred by the team members that bioremediation would enhance recovery and be highly beneficial at this beach.

Frank Box, Exxon Representative

Frank A. Box

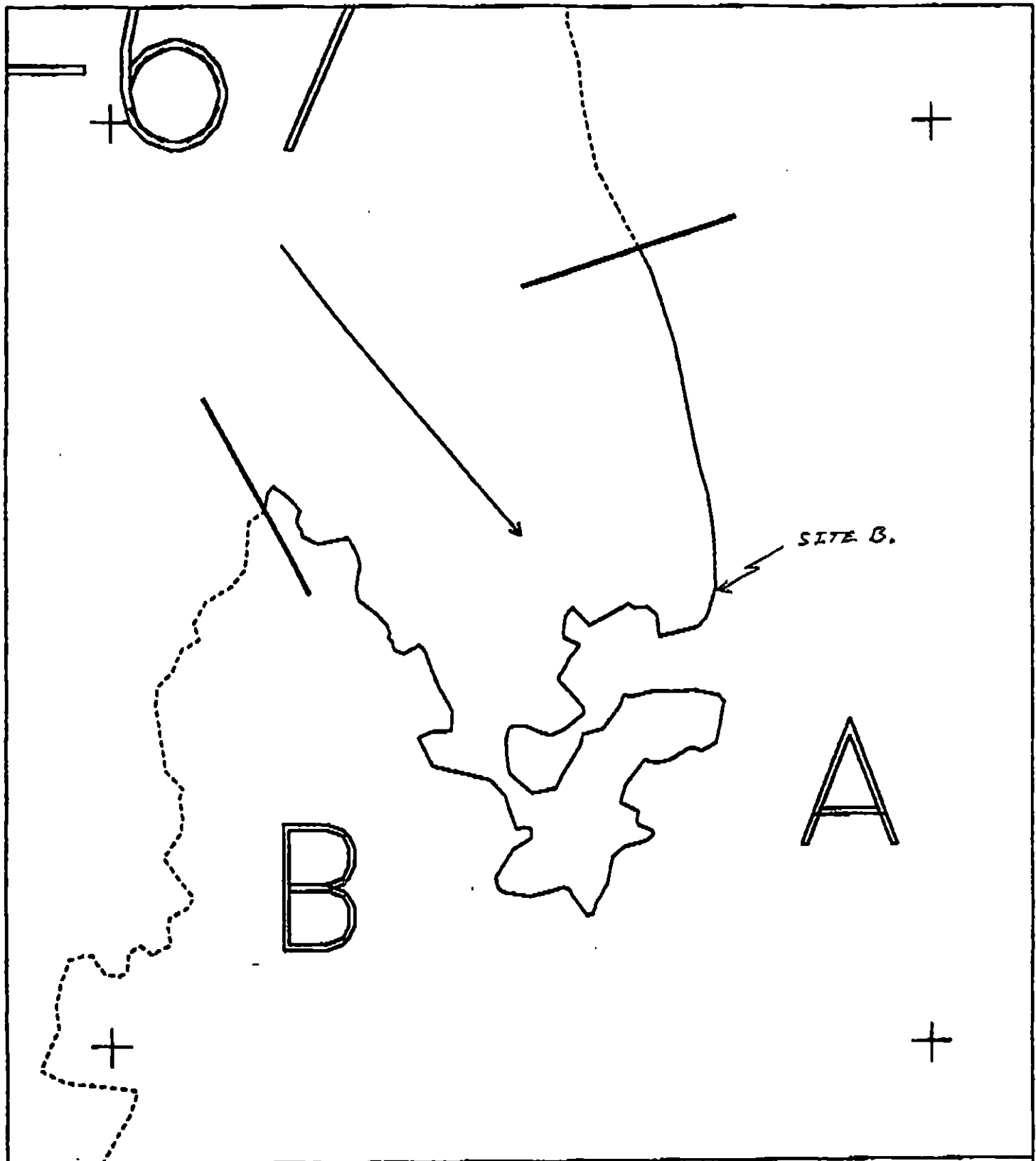
CWO Dreher, U.S.C.G. Representative

CWO K. L. Dreher

Mariann Profita, ADEC Representative

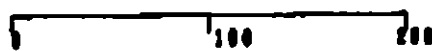
Duncan M. FitzGerald, Geologist

D - Mr. FitzGerald



D1067 A

METERS



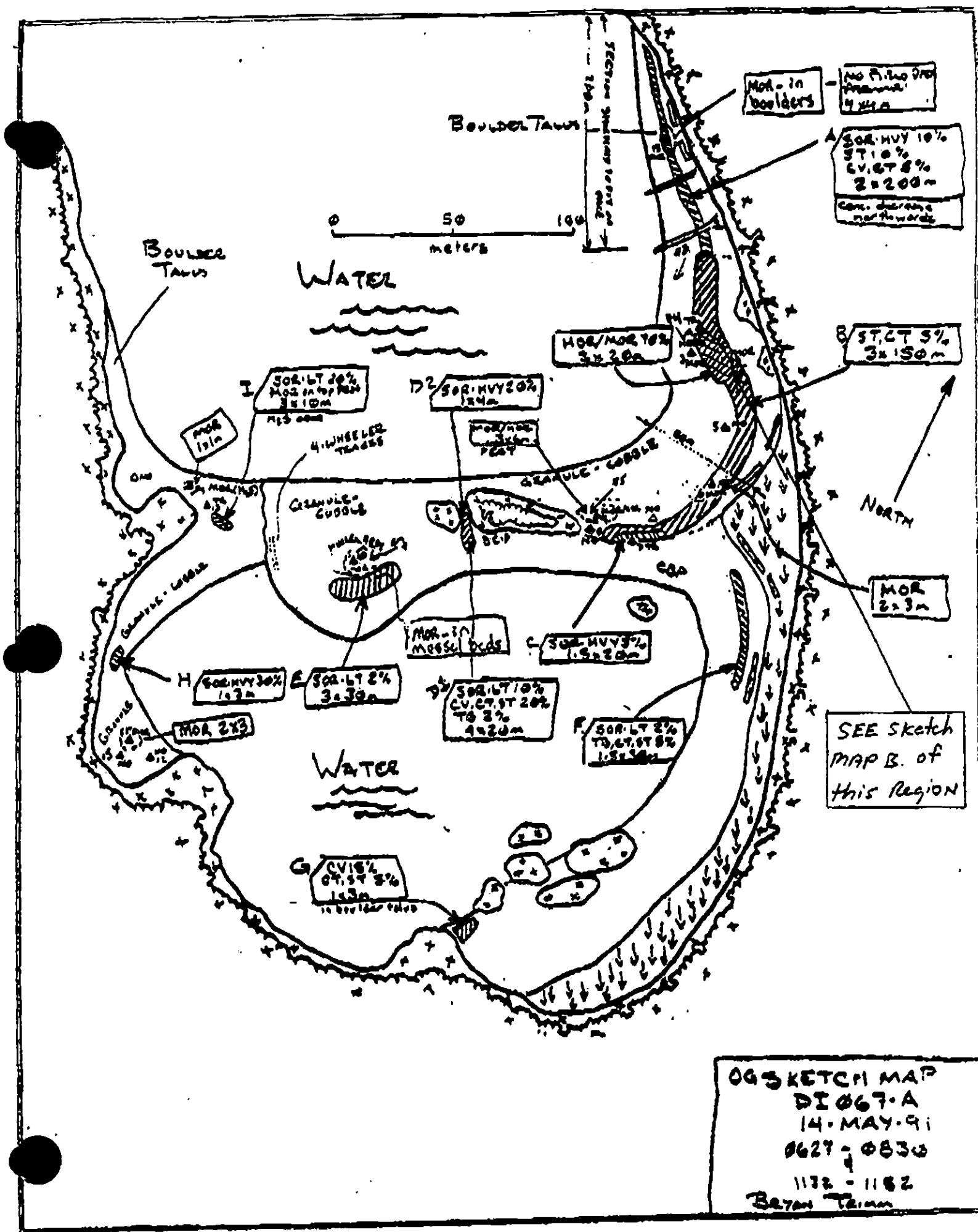
AK State Plane Zone 4
2210070

Subdivision Field Map

Map Key: KN101007A

Name: D.M. Fite-Gerald

Date: 21 June 1991

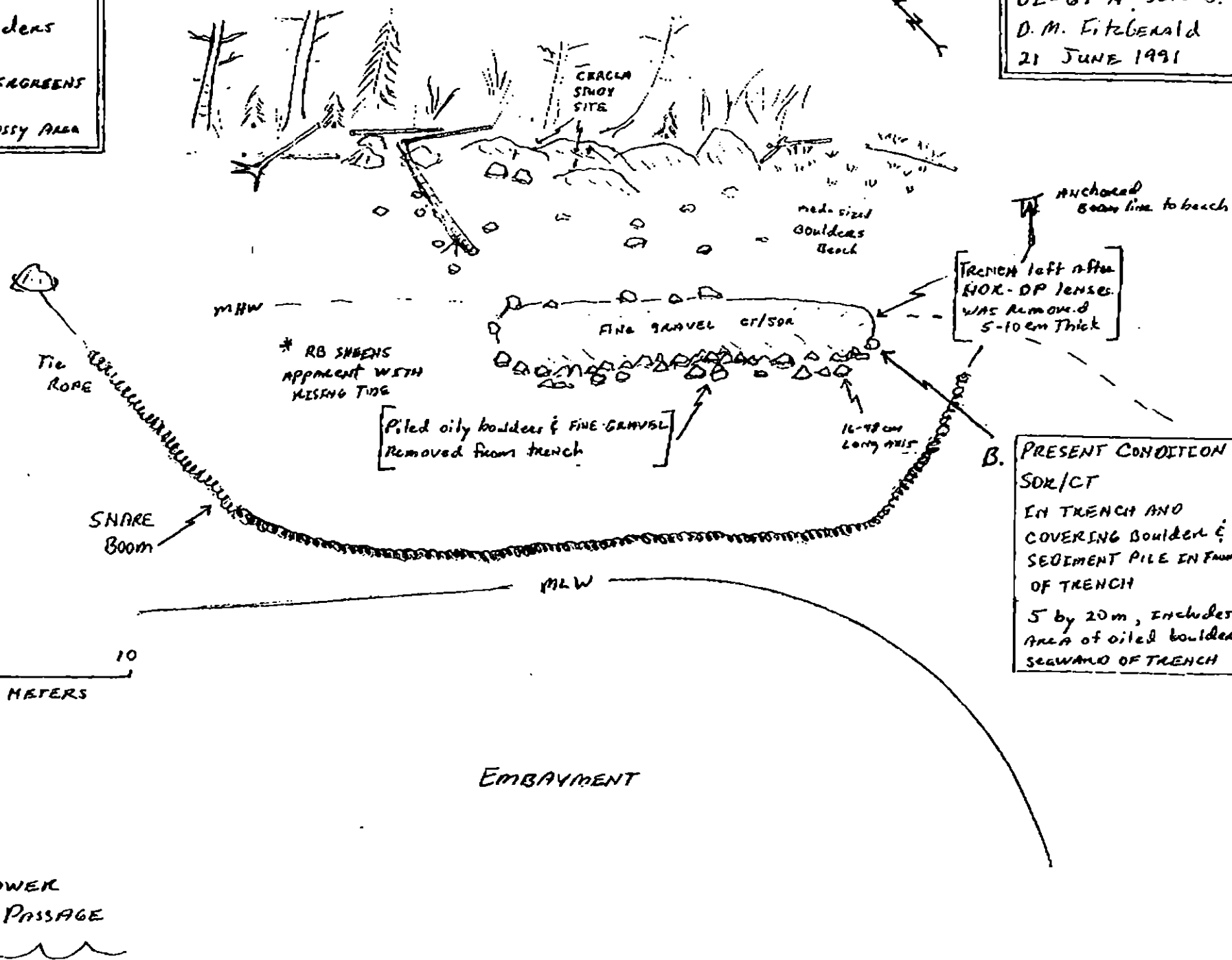


OG SKETCH MAP
 DI 067-A
 14 MAY 91
 0627 - 0830
 1132 - 1152
 Bryan Teim

-  Bedrock & Boulders
 Alders
 EVERGREENS
 GRASSY AREA

DISK ISLAND

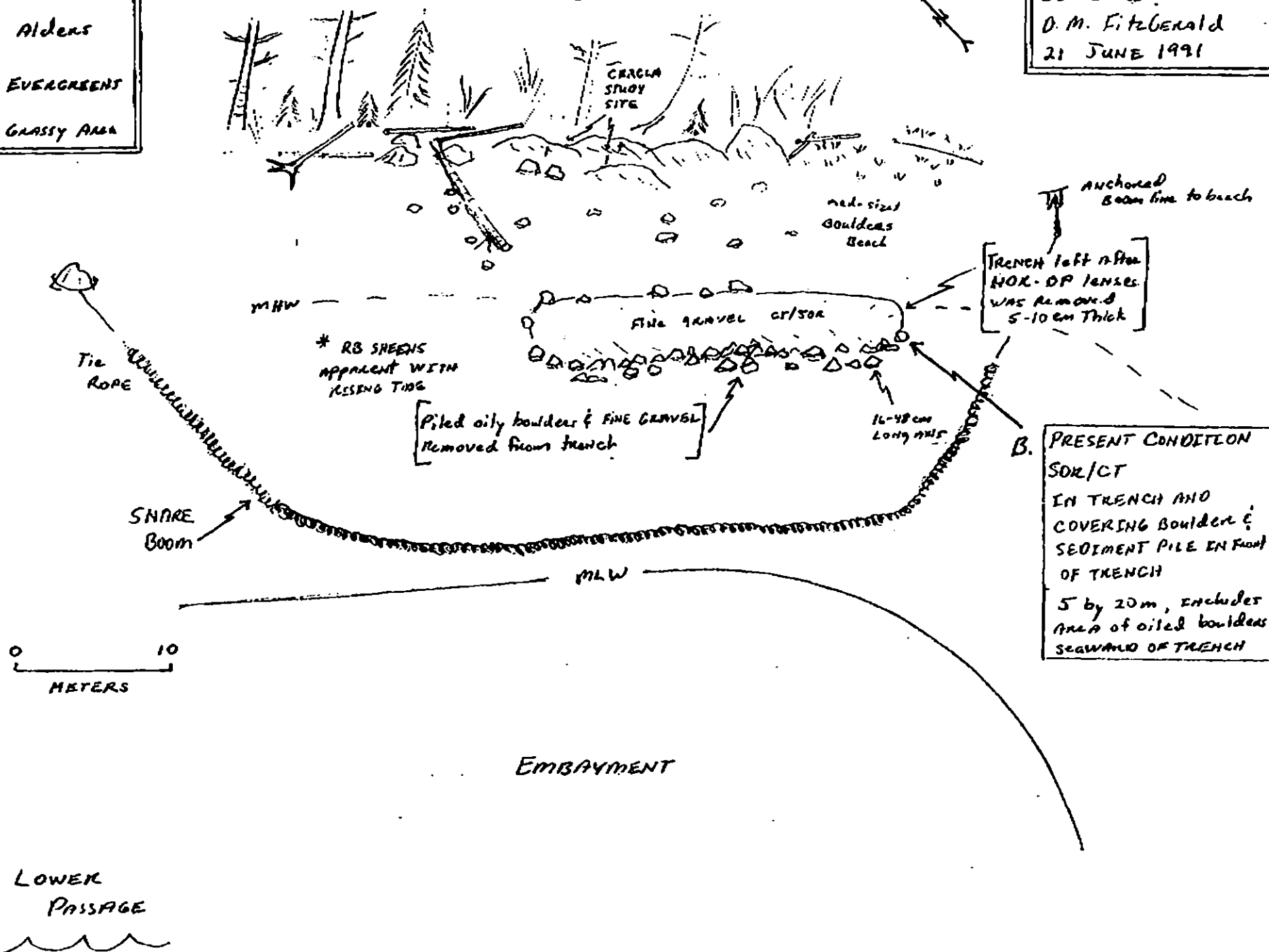
BAT SURVEY MAP
 DE-67-A, SITE D.
 D. M. FITZGERALD
 21 JUNE 1991

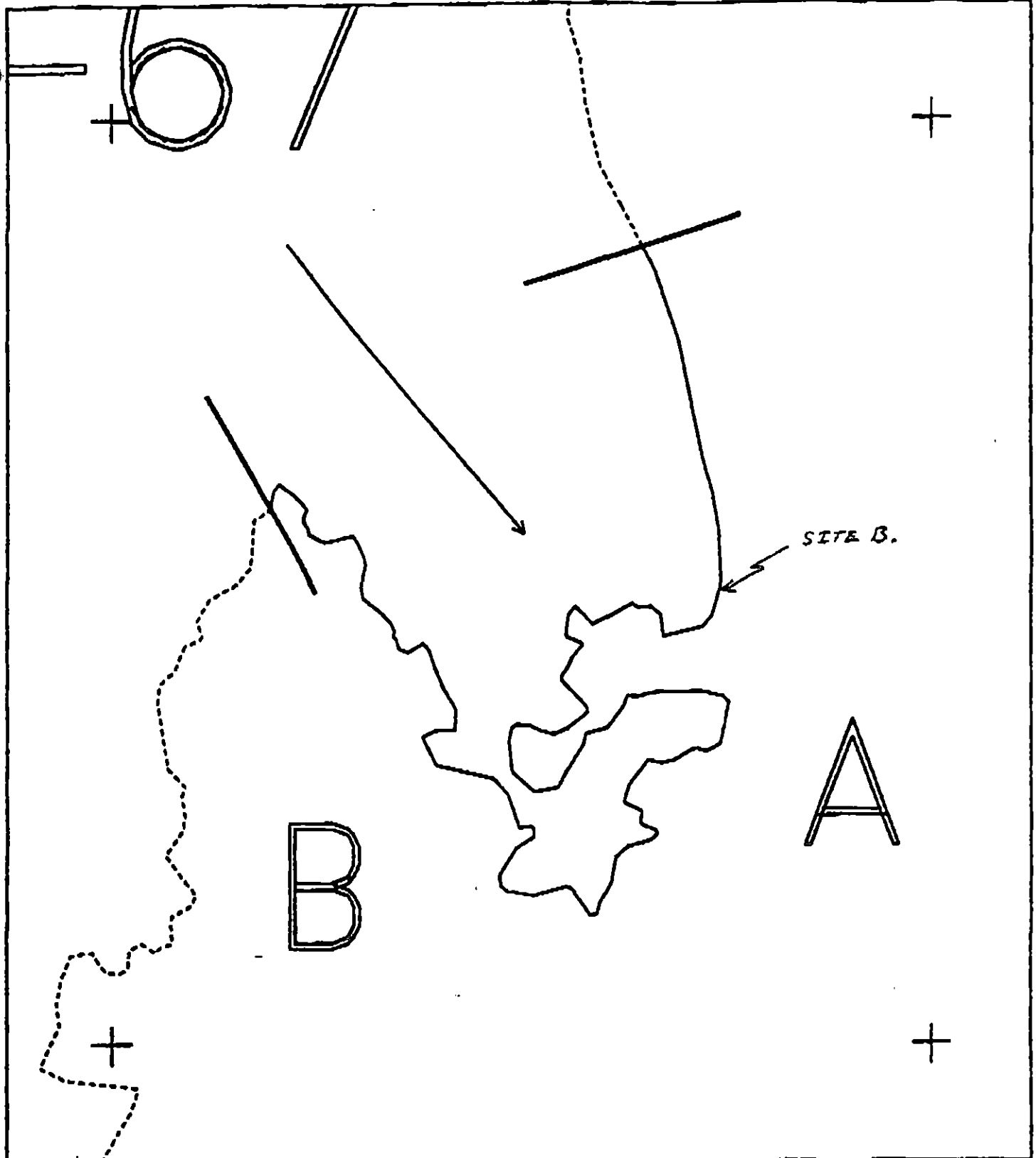


- Redrock & Boulders
- Alders
- EVERGREENS
- GRASSY AREA

DISK ISLAND

BAT SURVEY MAP
DE-67 SITE 0.
D. M. FITZGERALD
21 JUNE 1991

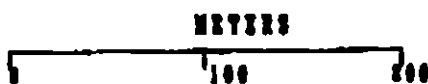




D1067 A

Subdivision Field Map

Map Key: ENID1067A

Name: D.M. FitzgeraldDate: 21 June 1991AK State Plans, Zone 4
ENID1067A

SHORELINE EVALUATION

SEGMENT ST/ DI-67 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Possible uncatalogued anadromous stream entering lagoon.

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

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

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: 5/1/90

OILING CATEGORIZATION:

Wide 183 m: Medium 76 m: Narrow 193 m: V.Light 515 m: No Oil 85 m
Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes manual removal of tarmats in three areas indicated on sketch map. No specific time sensitive ecological constraints identified.

TAG COMMENTS:

TAG APPROVAL DATE: 5/1/90
ADEC [Signature]
EXXON ANDY TETZ
NOAA GARY PATRAN
USCG KENNETH KEANE

FOSC: [Signature] DATE: 5-8-90

00 C.D. 12

SEGMENT ST/ DI-67

SUBDIVISION A

DATE 04 / 19 90

CHECKLIST

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

LEGEND

1 ▲
 Pit - No Subsurface Oil

2 ▲
 Pit - Subsurface Oil

CT/C
 Continuous Distribution

CT/B
 Broken Distribution

CT/P
 Patchy Distribution

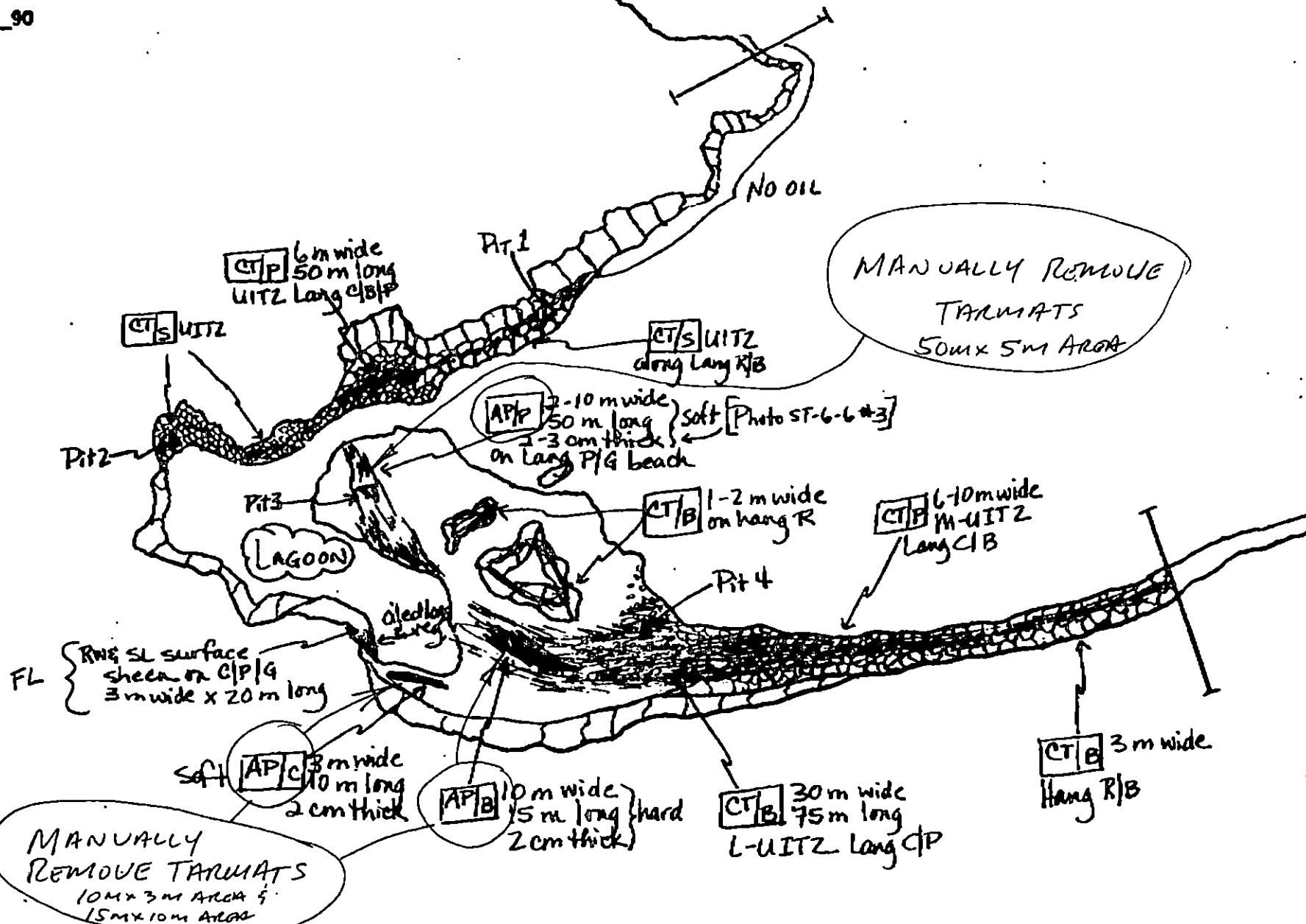
CT/S
 Splashed Distribution

eee
 Oiled Vegetation

1 ●●●
 Photo location, direction, and number

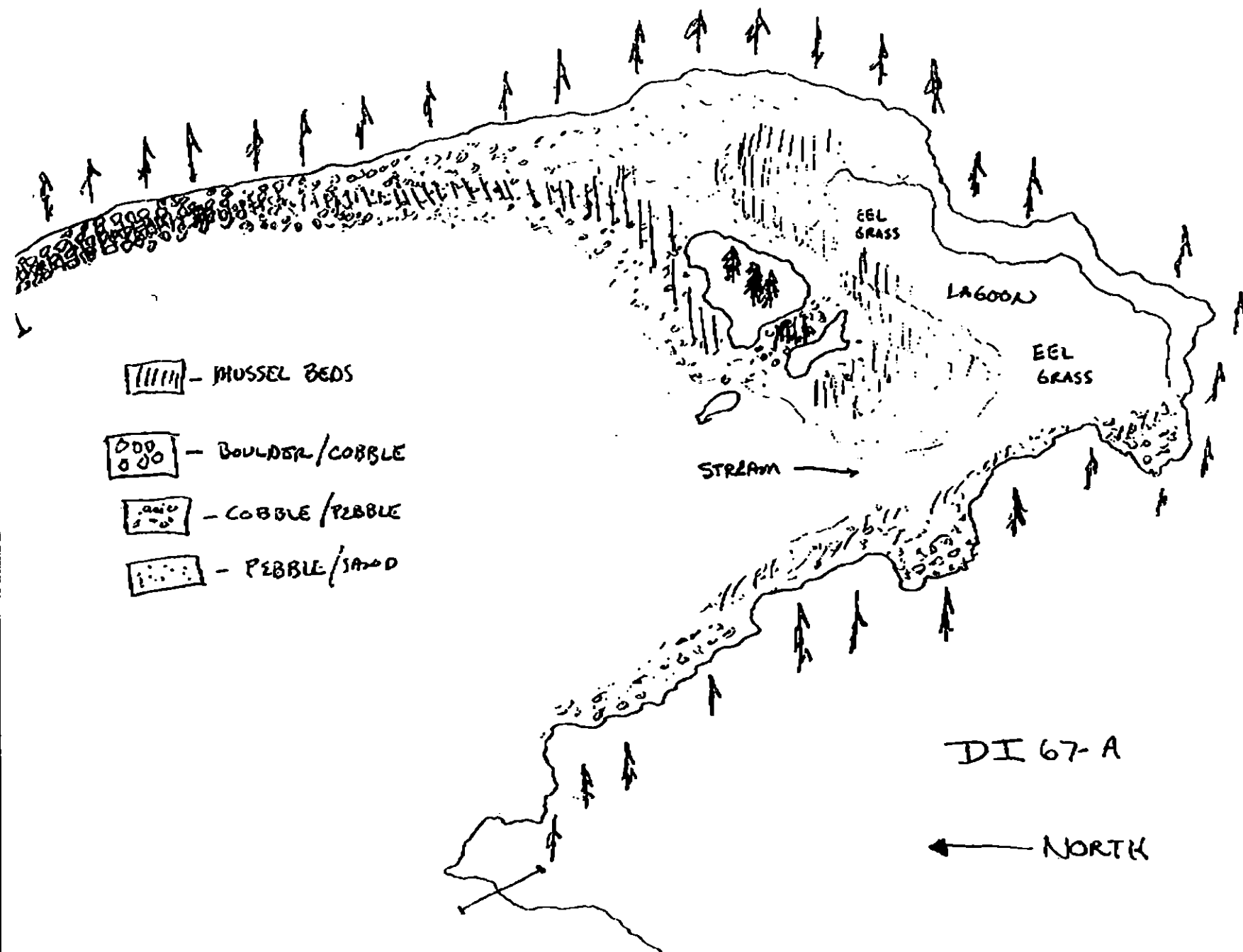
SKETCH MAP

N



Oil Character Length (m): AP 75 PO 0 CV 0 CT 1324 ST 0 MS 0 PT 0 TB 0 FL 20 NO 175

2/9



DI-67-A

DI-

DI-65

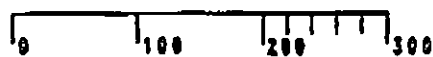
XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

DI-67-A
EXXON Segment Length: 1594m
ADEC Segment Length: 1047m
METERS

Map Key: PWS-99

Name: C. DILLONDate: 4/19/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT DI-67 SUBDIVISION A (1 of 1)

WORK WINDOW	
Tarmat Removal	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B

Salmon Stream

Stream present in Subdivision A is not on record as an ADF&G catalogued or uncatalogued anadromous stream. No constraint to tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

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

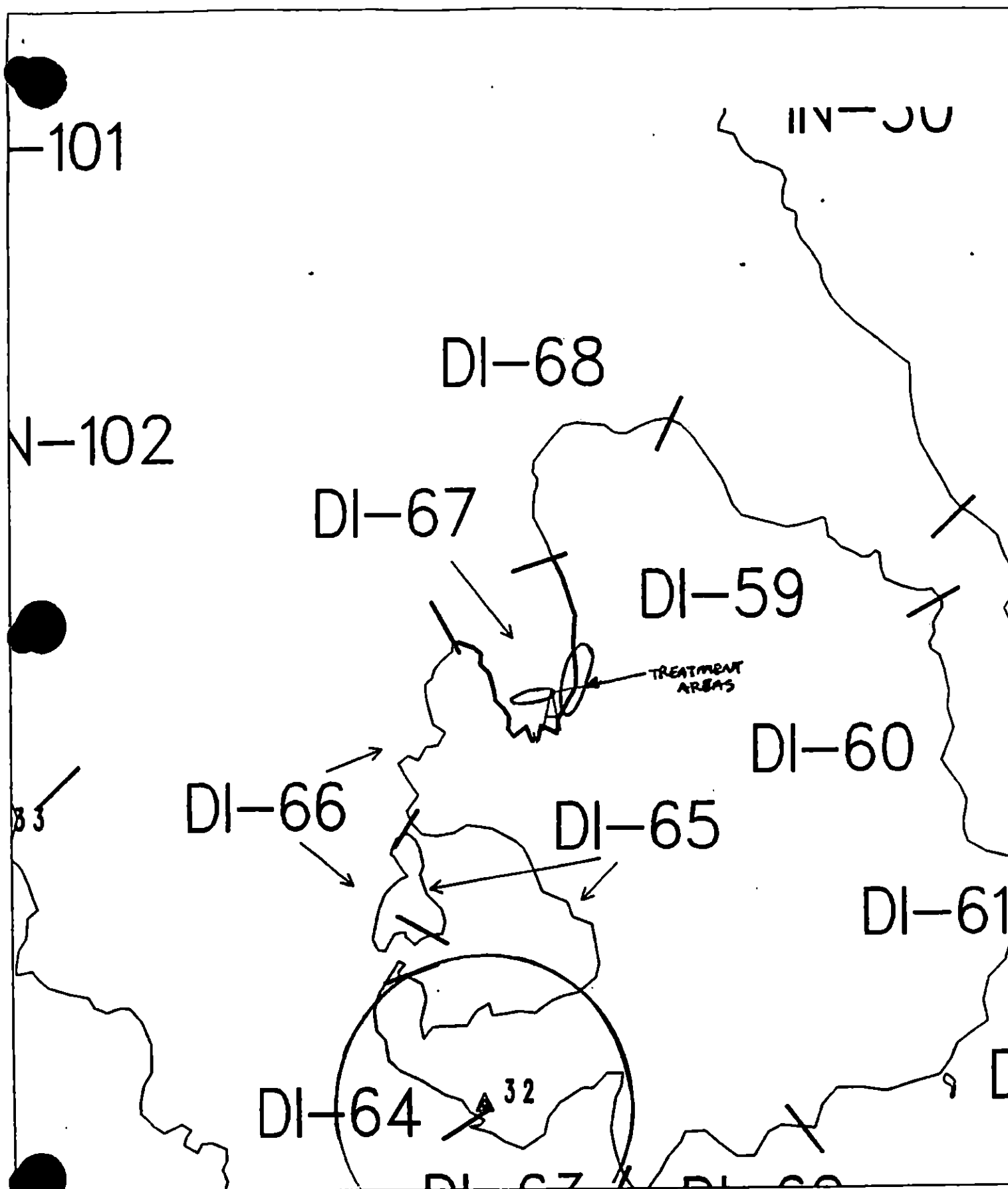
TAG ADDENDUM DATE 5/18/90.
ADEC Art Weimer Dith Weimer
EXXON Andy Gar Paul
NOAA Gary Pefosse Andy Pefosse
USCG C.A. Reiter

FOSC WJL

DATE 5-18-90

Prepared by: Andrea Meyer WJK

Date: 5/17/90



Exxon Company, USA



ECOLOGY MAP
SEGMENT DI-67
SUBDIVISION A (A of A)

- ★ Seabird Colony
- ▲ Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ DI-67 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Possible uncatalogued anadromous stream entering lagoon.

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

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

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: 5/1/90

OILING CATEGORIZATION:

Wide 183 m: Medium 76 m: Narrow 193 m: V.Light 515 m: No Oil 85 m
Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

 No Treatment Recommended
X Treatment Recommended
 Manual Pickup
 Bioremediation
X Tarmat Removal

 Snare/Absorbent Booms
 Oil Snares (pom poms)
 Absorbents (pads, rolls, etc)
 Spot Washing: Wands
 Beach Cleaner
 Other (see comments)

COMMENTS: Recommended treatment includes manual removal of tarmats in
three areas indicated on sketch map. No specific time sensitive eco-
logical constraints identified.

TAG COMMENTS:

TAG APPROVAL DATE: 5/1/90

ADEC [Signature]
EXXON [Signature]
NOAA [Signature]
USCG [Signature]

FOSC: [Signature]

DATE: 5-8-90

SEGMENT: DI 067 SUB: A REGION: PWS SURVEY DATE: 5/14/91

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

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

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

SHPO Signature: Timothy A Smith Date: 5/31/91

FOSC

2

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 31 1991

FOSC APPROVAL DATE: 6/8/91

ADEC

FOSC

~~EE PAGE SDR USCG~~

EXXON

CHIEF OF STAFF, FOSC

USCG

NOAA

→ The state will access the need for further treatment.

**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 DI - 67 SUBDIVISION A DATE 5/14/91

ADEC Peter Montesano SIGNATURE [Signature]

☐ NTR ☒ TREATMENT RECOMMENDED
 THE BIO MAP FOR THIS SUBDIVISION IS ~~FLAWED~~ ^{AND} IT SHOULD NOT BE USED BY TAG. PITS 2,3,4 WERE NOT WELL PLACED ON MAP VERTICALLY SO AS TO SUGGEST THE HMMOR ENDS. THE OG WOULD NOT GET OUT OF THE SKIFF TO SEE HMMOR PIT/S NEAR NORTH OF #4. THE AREA NORTH OF #4 WAS SURVEY SEVERAL HOURS AFTER THE REST, THE EXHON CG REPS WOULD NOT INCLUDE IT IN THE FIRST PASS SINCE IT WAS NOT PART OF AN ASAP SITE. WHILE SURVEYING THIS SECTION, THE CG REP NEVER LEFT THE SKIFF. OIL REMAINS UNDER MUSSELS AT PIT #10, PITS 6+9 WERE DEFINITELY HOR, AREA A WAS A NOT SOR, THERE IS NO CONTIN'D

EXXON NAME C.M. KITSIMINIS SIGNATURE [Signature]

☐ NTR IF MR. MONTESANO FEELS FURTHER EVALUATION IS DUE, MAYBE HE SHOULD SUGGEST "FURTHER EVALUATION IS DUE."

LANDMANAGER NAME DENNIS S KENNEDY OF USFS SIGNATURE D S Kennedy

☐ NTR Handwork is the option to clean-up HVY SOR between the two Tombolos [location DI & D2] The remaining areas should be left as is due to sensitivity of biota & great layers.

USCG/NOAA NAME Bini M.P. ZENONE USCG SIGNATURE [Signature]

☐ NTR Most of the observed subsurface oil was in a low energy environment with abundant and diverse biota. Characterizing the subsurface oil was very difficult due to an underlying silt layer. Arecopl, and Oz contain about 20-30% SOR coverage and could be manually worked, however, these are small areas. OS-B

TEAM WENT OVER BACKWARDS TO TRY TO SATISFY ADEC'S EVERY DESIRE. AREA WAS RETURNED TO ENLATER TIDE CYCLE TO ENABLE TEAM TO COMPLETE OTHER SEGMENTS. BECAUSE OF A HIGHER TIDE I DO NOT FEEL IS REASON TO CRAMPEN AN EXCELENT SURVEY. ADEC'S COMMENCE DO NOT ACCURATELY DEPECT FINDINGS IN THIS SURVEY NOR DO THEY ACCURATELY DEPECT THE FASTIDIOUS WORK OF OBI & BIO. (CONT)

MAYSAP FIELD SHORELINE COMMENT SHEET

CONTINUED

TEAM NO. 2 SEGMENT DI 67 SUBDIVISION A DATE 5/4/91ADEC PETER MONTESANO

SIGNATURE

~CONTINUED~

PEAT ASSOCIATED WITH AREAS REQUIRING REMOVAL (A, E, C, + D), AND THE %'S FOR THE ABOVE REMOVAL AREAS ARE ALL UNDER CHARACTERIZED. THE H/MOR, WHICH EXTENDS OVER A MUCH LARGER AREA THAN MAPPED, IS NOT A GOOD CANDIDATE FOR REMOVAL, TILLING, ETC. DUE TO ITS PROXIMITY TO MUSSELS + OTHER BIOTA. AREA A: PICK UP + RAKE ACCESSIBLE AROUND BOULDERS, AREA C: RAKE, AREA D: PICK UP + RAKE, AREA E: PICK UP + RAKE. ONLY AREA A WILL REQUIRE MORE THAN SEVERAL HOURS OF WORK. THE MUSSELS ON THE BIO MAP ARE MISPLACED, THEY ARE AROUND TIT 10, NOT WITH THE SOR.

EXXON

NAME _____ SIGNATURE _____

☐ NTR

LANDMANAGER

NAME _____ OF _____ SIGNATURE _____

☐ NTR

USCG/NOAA

NAME BMI ZENONE USCGSIGNATURE Bmi. MR. Zenone☐ NTR

CG - CONCUR W/NOAA + USFS ON SECTION D2. OIL IN AREAS OF PETS 1 & 2 - BEAR CONSIDERATION FOR MANUAL WORK. 3

SEGMENT DI067

SUBDIVISION A

DATE MAY 14 / 191

ENERGY LEVEL: ☐ H ☒ M ☒ L

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

220

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 3-7 (?)

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

COMMENTS:
'SMALL INTERTIDAL SPIT WITH MANY DISTINCT OILING LOCATIONS.

• MUCH OF SPIT IS UNDERLAIN WITH PEAT.

- MUCH OF SPIT IS UNDERLAIN WITH PEAT.
- PITS 6 & 9 HAVE OIL ADJACENT TO PEAT LAYER, THE FINE-GRAINED, HIGH ORGANIC CONTENT MAKES IT DIFFICULT TO DELINEATE MOR & MOR.

- PIT #10 IN MUSSEL BED. COULD NOT DELINEATE MOR WITHOUT DISTURBING MUSSELS - BATZOMAY 91

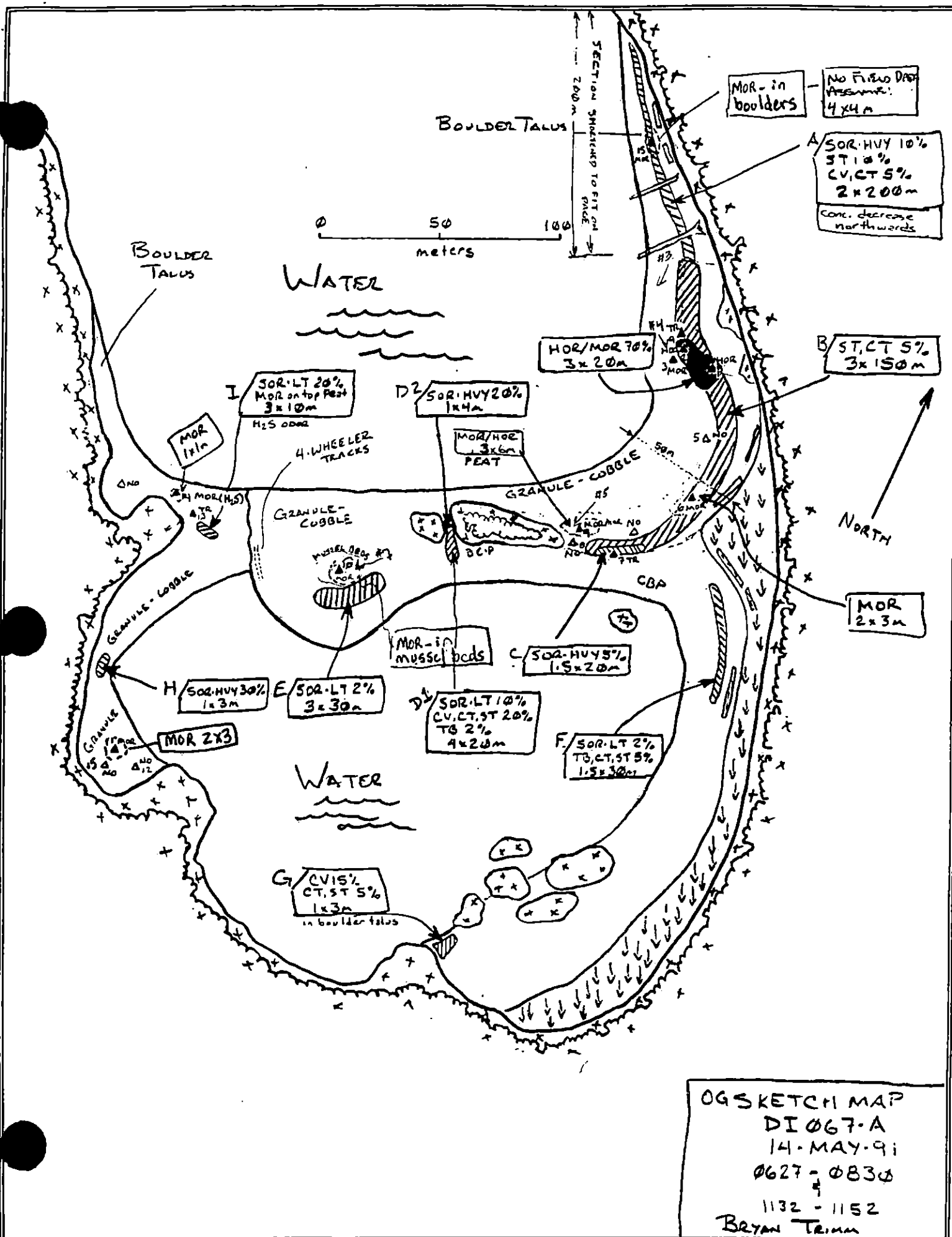
- PIT#15 under soil and between boulders - could not delineate.

revised 5.18.91 94
revised 5/19

DATE May, 14 / 91

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

revised 5.18.91 gyz
revised 5/19



OG SKETCH MAP
DI 067-A
14-MAY-91
0627 - 0830
1132 - 1152
Bryan Trimm

revised 5.18.91 98
46 notes & 5/19

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 14 May 91
 SEGMENT # DI-67 TIDAL HEIGHT (Range) 0 to -3 ft
 SUBDIVISION A BIOLOGIST SM BAN
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # FRAME #

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

- A: Green algae (Ulva sp.) in vicinity of oil. Lower zones with Fucus recruits and mussels.
- B: Only biota in oiled area is Ulva sp. and sparse barnacles. Littorina egg masses were found below rocks seaward of the oiled zone. Also mussels, spat, Littorina and limpets.
- C: Amphipods and green algae in oiled zone. Barnacles and Littorina egg masses under rocks seaward of Pit #9.
- E: Very dense mussel beds interbedded with finer sediments. Oil was found below one mussel bed. Fucus beds and recruits also dense in area around stream.
- F: Green algae in oiled zone also sparse barnacles. Fucus clumps. Few mussels and Littorina immersed seaward. Dense Fucus recruits closer to water.
- G: Lichen in oiled zone. Fucus nearby. Many empty Ptochota x Saxicoma shells indicative of nearby clam beds. Five seeds closer to water exhibit clam siphon holes.
- H: No biota. Beach grass above oiled zone show evidence of cropping by deer.
- I: Organisms under boulders in area of oiled patches include small Gsh (Glenis) polychaetes (Loreis) peanut worm (sipunculid), Littorina and limpets (sparse).

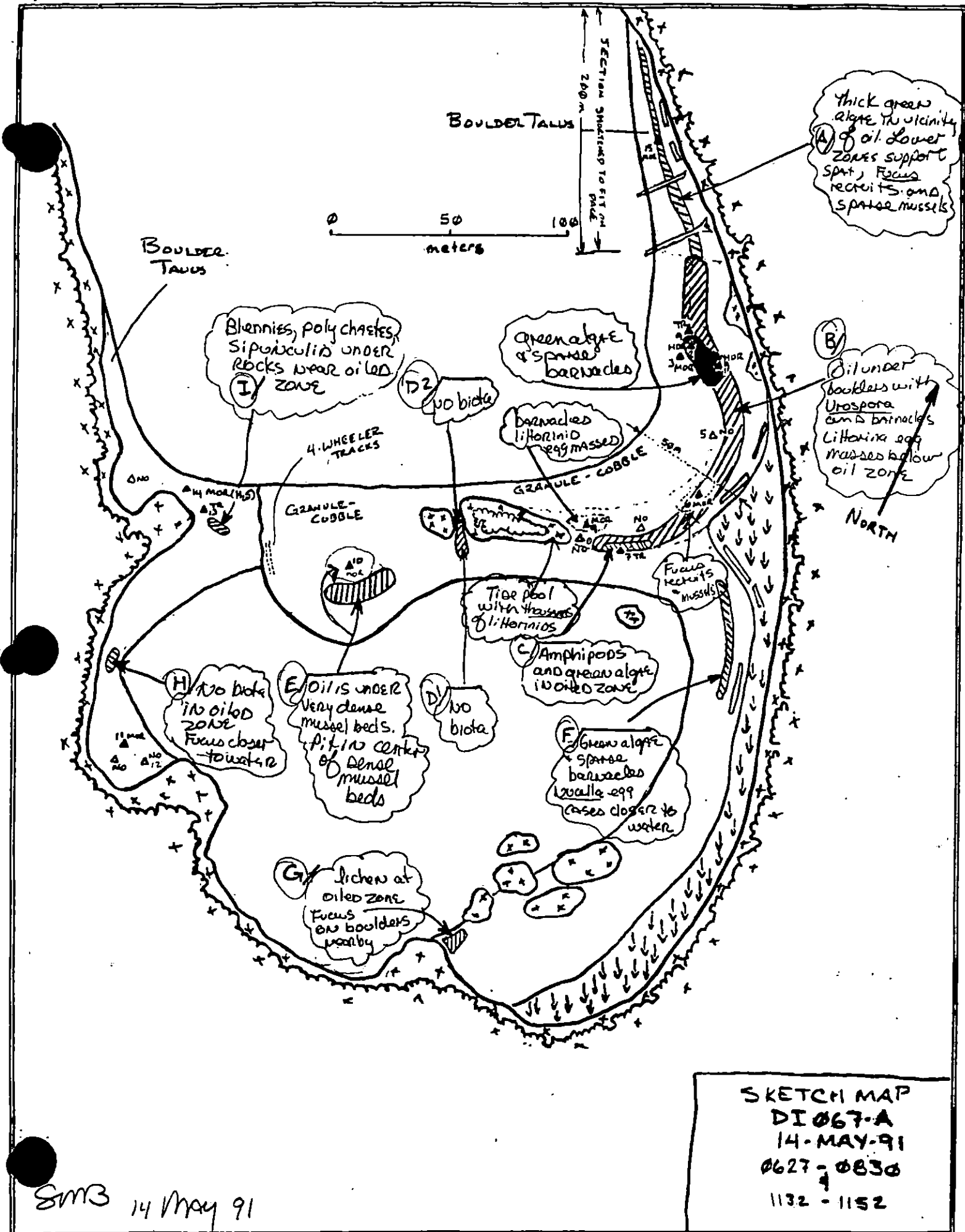
WILDLIFE OBSERVATIONS

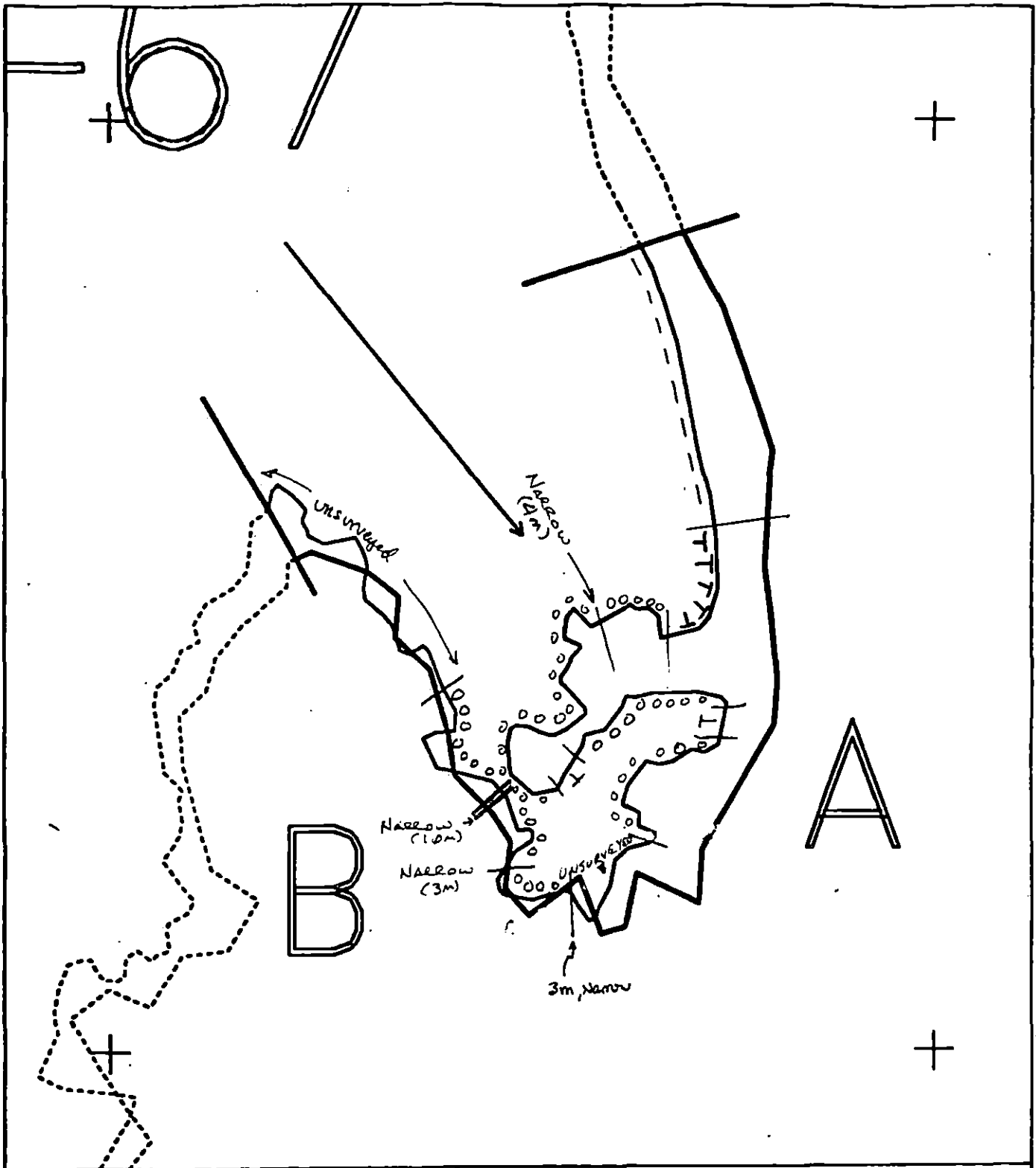
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	not on nest - not disturbed	1	blennies - 1
Seabirds			
Waterfowl			
Gulls/Kittiwakes	1	2	
Shorebirds	SANDPIPERs	2	
Corvids			
Other Birds	TEEN	1	

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

Shoreline subdivision map showing important biological features attached.





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

D1067 A
 ADEC Subsegment Length: 1040m
 METERS
 0 100 200
 AK State Plane Zone 4
 6d1067a

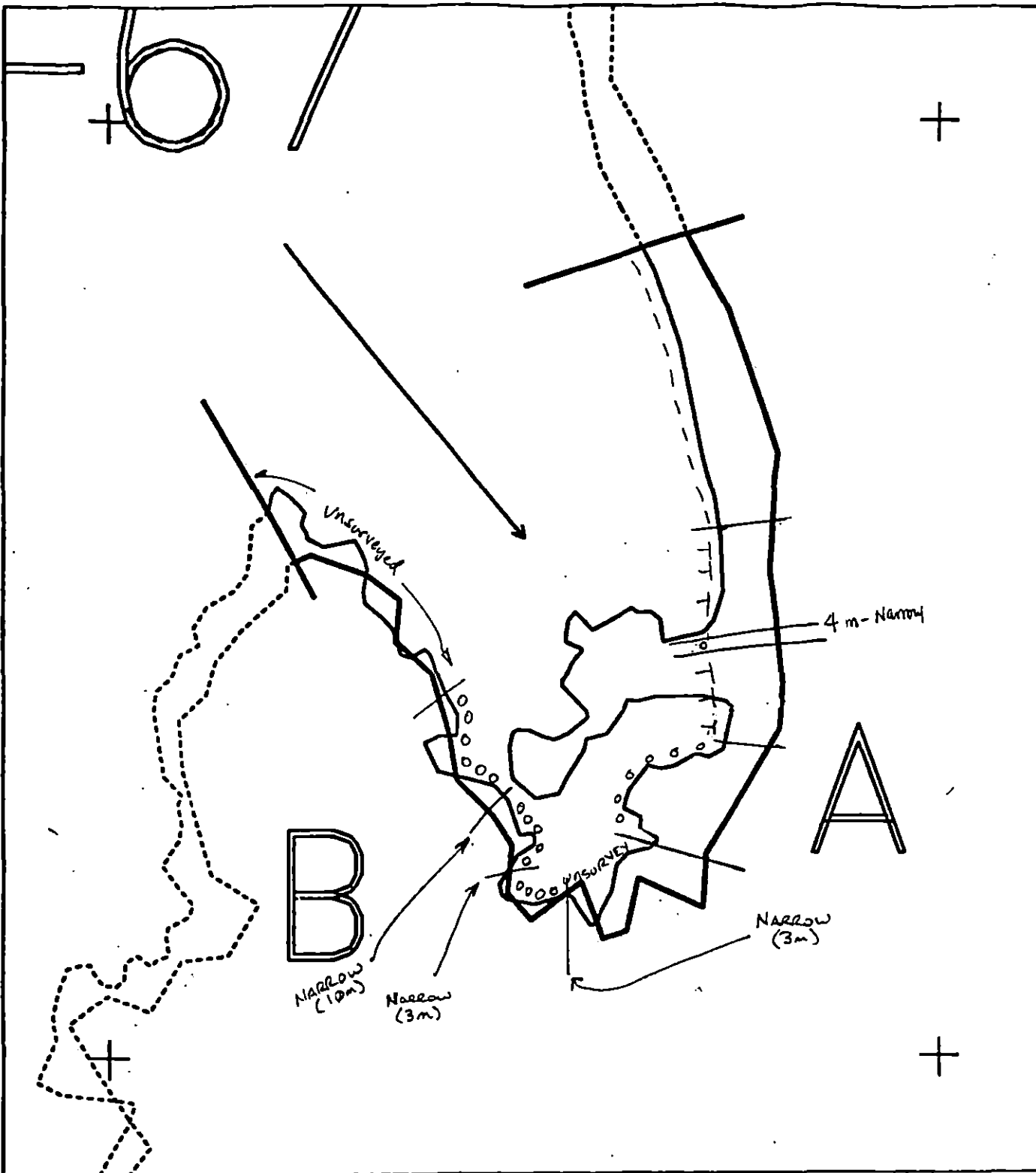


Subdivision Field Map
 Map Key: KNID1067A
 Name: TRIMM
 Date: 14-MAY-91
 Date Entered:

EXXON SURFACE OIL CATEGORY MAP

revised 5.18.91 94
 26 revised 5/19

re-revised 5.21 (attached)



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

DI067 A
 ADEC Subsegment Length: 1040m
 METERS
 0 100 200
 AK State Plane Zone 4
 601007a

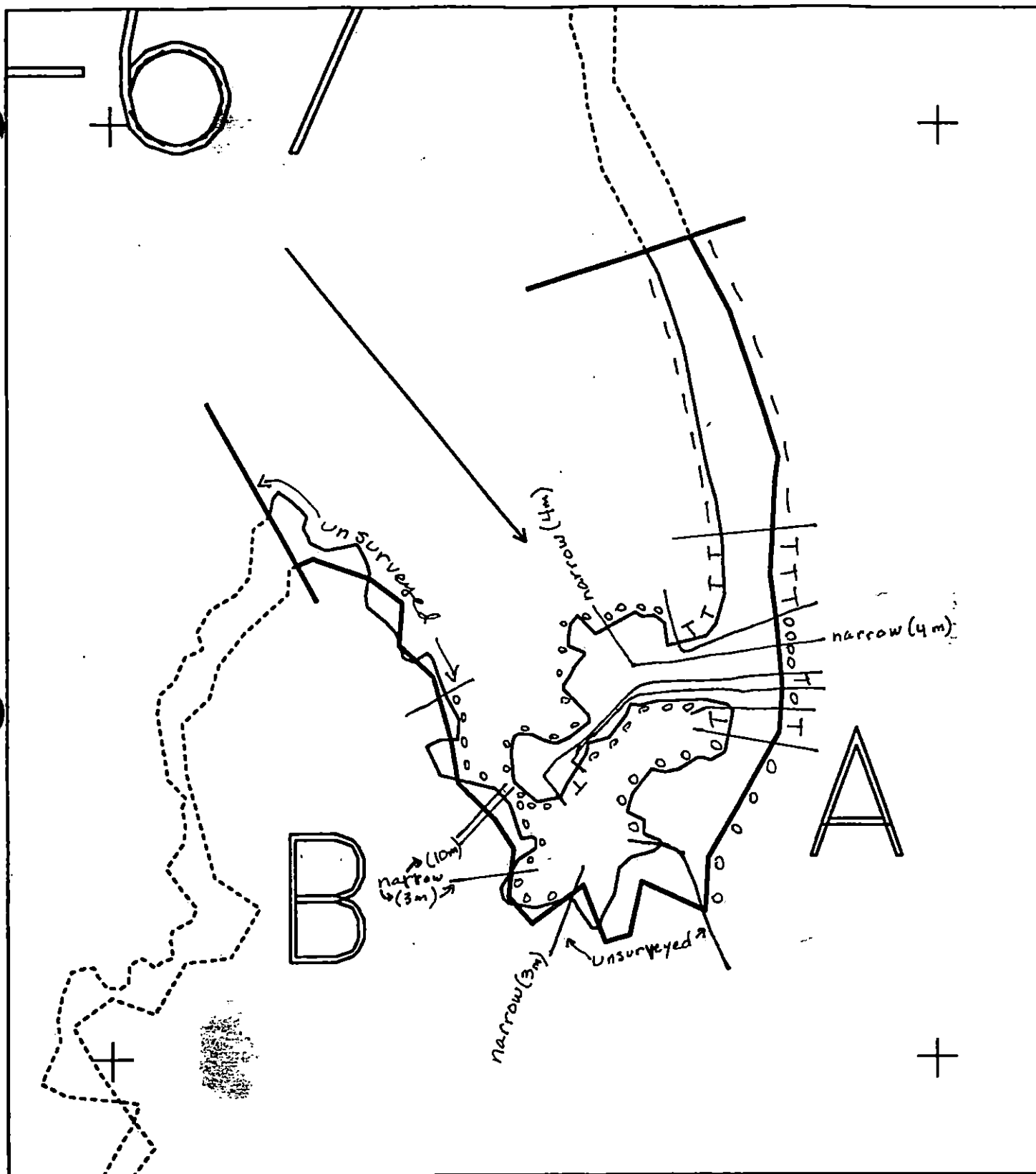
Subdivision Field Map
 Map Key: KNID1007A
 Name: TIZIMM
 Date: 14-MAY-91
 Date Entered:



- ADEC - SURFACE OIL CATEGORY MAP -

SC Revised 5/19

re-revised 5.21 Cattocher



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

DI067 A
 ADEC Subsegment Length: 1046m
 METERS

100 200
 AK State Plane Zone 4
 141067a



Subdivision Field Map
 Map Key: KHDI067A
 Name: Trim (JY)
 Date: 14-May-91
 Date Entered:

re - revised 5.21.91 GY

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/DI-68

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ DI-68 SUBDIVISION A (1 OF 1) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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 55 m: Narrow 57 m: V.Light 223 m: No Oil 399 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>4</u> Wands
☐ Tarmat Removal	☐ Beach Cleaner
	☐ Other (see comments)

COMMENTS: Recommend treatment includes spot hot water washing in three areas indicated on sketch map. No specific time sensitive ecological constraints identified.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/15)
 1E Main Bay Hatchery release (4/20 to 6/15)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncultivated intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 Finfish harvesting
 Deer harvesting (8/15 to 2/28)
 Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ DI-68 SUBDIVISION: A DATE 4/20/90

USCG

NAME William E. White SIGNATURE William E. White☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTEDSHOW NO SUBSURFACE OIL

ADEC

NAME Peter Montesano SIGNATURE Peter Montesano☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

The First 2 "Hang B" benches from DI67 are spot washable. CV/Ct can be peeled off with steam wands. Shore is easily accessible with LCU. Recovery would be minimal and would require 2 CWHP hoses to flush removed oil from under boulders. Boulders too large and resting too far above smaller sediments for bioremediation.

LAND MANAGER USDA - Forest Service

NAME Don J. Breitzinger SIGNATURE Don J. Breitzinger☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

DI-68 serves as a recreation anchorage, for the period of 6/1-9-15.

The first two Hang B benches on DI-68 - need some form of treatment - the form of treatment to be determined by the treatment specialists.

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

OG C. DILLON USCG PS1 E. WHITE SEGMENT ST/ DI-68
 BIO J. BARRY LAND REP D. BRIGHTENGER (NFS) SUBDIVISION A (1 OF 1)
 EXXON G. STILES ADEC P. MONTESANO TIME 13:45 to 15:15
 TEAM NO. 6 TIDE LEVEL +4.5 to +2.25 DATE 04/20/90
 T. SUBDIVISION LENGTH: 241 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 10 % C 7 % P 3 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 15 % Hang 10 % Vert 75 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 35 m N 75 m VL 346 m NO 385 m

SURFACE OIL

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

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	X		
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE 3#BAGS 0

Photographs:

Roll No. ST-6-6Frames 4

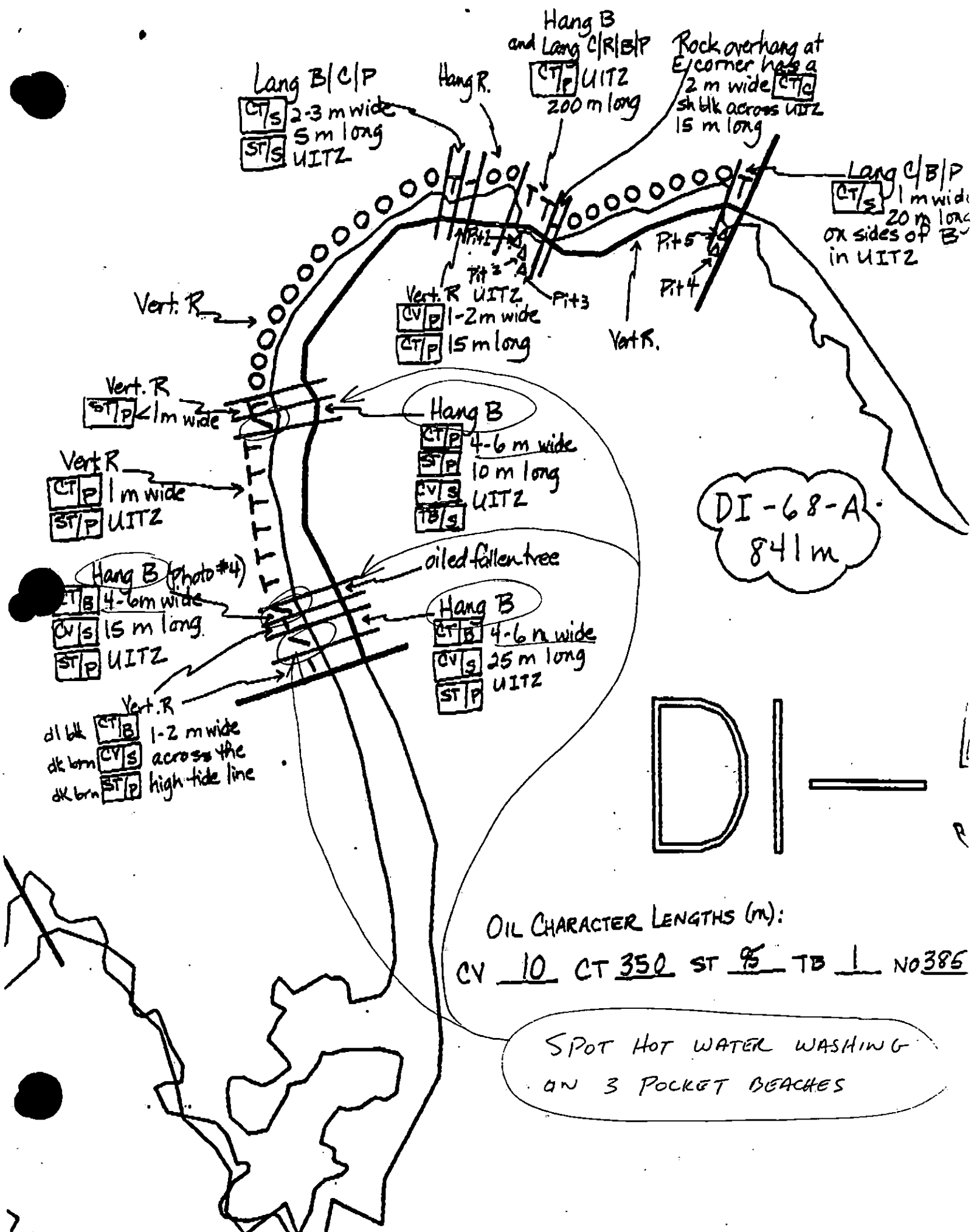
SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (V/M)	DEPTH (m)	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UG	1	2	3	4	5	SU	U	M	L				
1	30					X	-		X								X			N	25	C/P - P/G
2	35					X	-		X							X				N	30	P - P/G/R
3	25					X	-		X						X					N	-	C/P - P/G/R
4	30					X	-		X							X				N	30	P - P/C/G
5	25					X	-		X								X			N	25	C/P - P/C/G
							-															

COMMENTS SUBDIVISION IS ALMOST ENTIRELY VERY HIGH VERTICAL ROCK WITH A FEW HANG BOULDER POCKETS AND A COUPLE OF LANG COBBLE/BOULDER/PEBBLE POCKETS.

THERE IS ONE LANG C/R/B/P BEACH ABOUT 150 m LONG. THE R/B HAVE C/P BUT 3 PITS SHOW NO SUBSURFACE OIL. SAME IS TRUE FOR THE 20 m LONG C/B/P BEACH AT THE NE END OF DI-68-A. DUE TO LACK OF VARIATION IN OILING AND GEOMORPHOLOGY, NO SKETCH MAP DONE.

REVIEWED YWDATE 4/21/90



SHORELINE ECOLOGICAL SUMMARY

REVISION: 0022170

Segment ST / DI 68 Subdivision A Date (mo / day / yr) 4/20/90
 Time (24 hr) 1350 - 1915 Biologist Jim Barry 1011 m length

- (A) Substrate type and % of segments:
 (1) Bedrock 80 (2) Boulder 10 (3) Cobble 7 (4) Pebble 3 (5) Sand 0 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 0 Moderate 95 Low 5
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
 Roll No. ST-6-6

Frames 5

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:

GLAUCOUS-WINGED GULL - 19 Common Merganser - 2
 Raven - 2 Pigeon Guillemot - 2
 Bald Eagle - 2

Ecological Considerations: 6V - Anchorage sites - no impact

APRIL 1990

IV Species List

A. MARINE PLANTS

1) DIATOMS / BLUE GREEN ALGAE MD 123

2) GREEN ALGAE - CHLOROPHYTES

ACROSIPHONIA MD 123

CLADOPHORA SIZ

ENTEROMORPHA MIZ

GREEN CRUST. SIZ

ULVA SIZ

UROSPORA - MD 23

3) RED ALGAE - RHODOPHYTES

BOSSIELLA RIZ

CALLIARTHRON RIZ

CORALLINA RIZ

CRYPTOSIPHONIA MD 123

ENDOCLADIA MURICATA S1

HALOSACCION GLANDIFORME MIZ.

IRIDAEA S1 ?

MASTOCARPUS RIZ?

MEMBRANOPTERA SM 12

MICROCLADIA ? SM 12

LITHOTHAMNION PALPICUM SR1

PETROCELIS MIDENDORFFII S1

PORPHYRA spp. SIZ

RHODOMELA LAMIN MIZ

PALMARIA PALMATA MIZ

4) BROWN ALGAE - PHAEOPHYTES

ALARIA MARGINATA U

AGARUM spp. U

COSTARIA U

FUCUS DISTICHUS M 123

HEDOPHYLLUM SESSILE U

HILCOMBRANDIA S1

LAMINARIA U

NEREOCYSTIS UR

RALPSIA S1

SCYTOSIPHONIA COMENTARIA SIZ

ECTOCARPUS MD 123

A SPAT OR JUVENILES
PRESENT

D DENSE

M MODERATE

S SPARSE

R RARE

1 BEDROCK

2 BOULDER

3 COBBLE

4 PEBBLE

U. SUBTIDAL

X PROBABLY PRESENT

B MARINE INVERTEBRATES

1) ANEMONES

- EPIACTIS RITTERI ? S12*
- URTICINA CRASSICORNIS R12
- Anthopleura elegantissima R1
- A. artimisa S12
- ~~A. kono~~

2) Annelid Worms

- Polychaetes
- Nereidae X
- Nephtyidae X
- Serpulidae
- Serpula S12
- Crucigera S12 X
- Spirorbidae
- Spirorbis m23*

3) Peanut Worms - Sipunculid

- Phascolosoma thersites ?

MOLLUSCS

a) CHITONS

- CATHARINA TUNICATA S1*
- TOXICELLA LINEATA R1*
- ~~MORRIS~~ spp.

b) Snails - Gastropods

- Littorina scutulata M0123*
- L. sitkana M0123*
- Nucella lamellosa m123*
- N. emarginata m123*
- Scarlissa dira S23
- Amphissa columbiana R23*
- Tachyrhynchus spp. R23

c) Nudibranchs

- Lamellidoris fusca S12*

d) LIMPS

- Lottia digitalis S1*
- Acmaea mitra X
- Lottia persena m12*

d) Limpets (cont)

- Tectura scutum m23*
- T. persena ?
- Siphonaria thersites S12*
- Diadora aspera X

e) Murels -

- Mytilus edulis R5123*

f) Clams

- Single - Pectenopus cepio X
- Hiatella spp. R23*
- ~~Protocardia~~ staminea
- ~~Macoma~~ spp.

g) Crustaceans

1) BRYOZOANS

- Semibalanus cariosus m-012A
- Balanus glandula SMD12*
- Chthamalus dalli m123*

2) Crabs

- Haplogaster spp. X
- Hemigrapsus oregonensis S23/
- Pugetia spp. ?
- Hermit Crabs - Paguridae MD23

3) Beach Hopper

- ISOPODA S23*
- AMPHIPODA
- Orchestra? m23*

h) Bryozoans

- Schizoporella spp? S23*

i) Echinoderms

- 1) Sea Stars
- R23* Pycnopoda helianthoides
- R23* Dermasterias imbricata
- S3* Leptasterias hexactis
- R3 Eustheria trachelii
- ~~Actinostrea~~ koehleri
- S12 Pisaster ochraceus.

SPECIES LIST (cont)

2 Echinoderms (cont)

2) Brittle Stars

Ophiurus spp? X

3) Sea Cucumbers

Cucumera miniata X

3) Sea Urchins

~~*Strongylocentrotus droehachiensis*~~

C. Marine Invertebrates

1) Fish: Stichaeidae 11; Xiphister spp. 5234
LOTTIDAE 5124

DI 68-A

APRIL 20 1990

4

START 1350 TIDE +4 → +2
STOP 1413 WINDOWN

I General Comments

DI 68-A is comprized by a series of vertical bedrock cliffs separated by cobble/boulder or pebble beaches. Most of the segment is exposed to moderate sized waves.

- 1) Vertical Bedrock cliffs are covered by a moderately dense cover of 3 species of barnacles (*Semibalanus*, *Chthamalus*, *Balanus*), ~~and~~ sparse *Mytilus* cover, a moderate to dense *Fucus* cover, and several other species of algae and ~~in~~ invertebrates. Several species typical of healthy, moderately exposed beaches.

- 2) Cobble/Boulder and Pebble beaches. These habitats have sparser densities of biota in general, but are fairly typical of similar beaches in the area. Barnacles are moderate to sparse, with sparse *Mytilus* densities.

II Oil Related Comments.

- 1) *Mytilus* is generally sparse in the segment, particularly the adults. Mussel spat and small juveniles are more abundant than adults. It is not clear whether low *Mytilus* density is related to oiling or cleanup activities, I suspect that it is not related. Regardless, mussels appear to be recruiting in the segment.

April 20 1990

3/

- 2) Except for the coat in the upper intertidal at pocket beaches with boulder & cobble, oiling effects are minimal. Barnacles are beginning to settle on highly weathered oil, but have not yet been seen on oil coats thick enough to have embedded organics.
- 3) ~~2~~ Clean up operations will have minor negative effects in this segment.

II Recruitment and Mortality.

A. Barnacles -

Balanus sp. are sparse to moderate on the segment & present on highly weathered oil (rarely). Semibalanus recruits are sparse on headlands. Mortality from oil coats (presumably) is highly variable. The greatest source of mortality in lower zone appears to be from *Uncellus* predation.

- B. Mussels - Juveniles < 10 mm are present in crevices and other protected throughout the segment. Dead mussel were rare and the source of mortality unknown. One cobble/pebble beach has moderate mytilus densities.

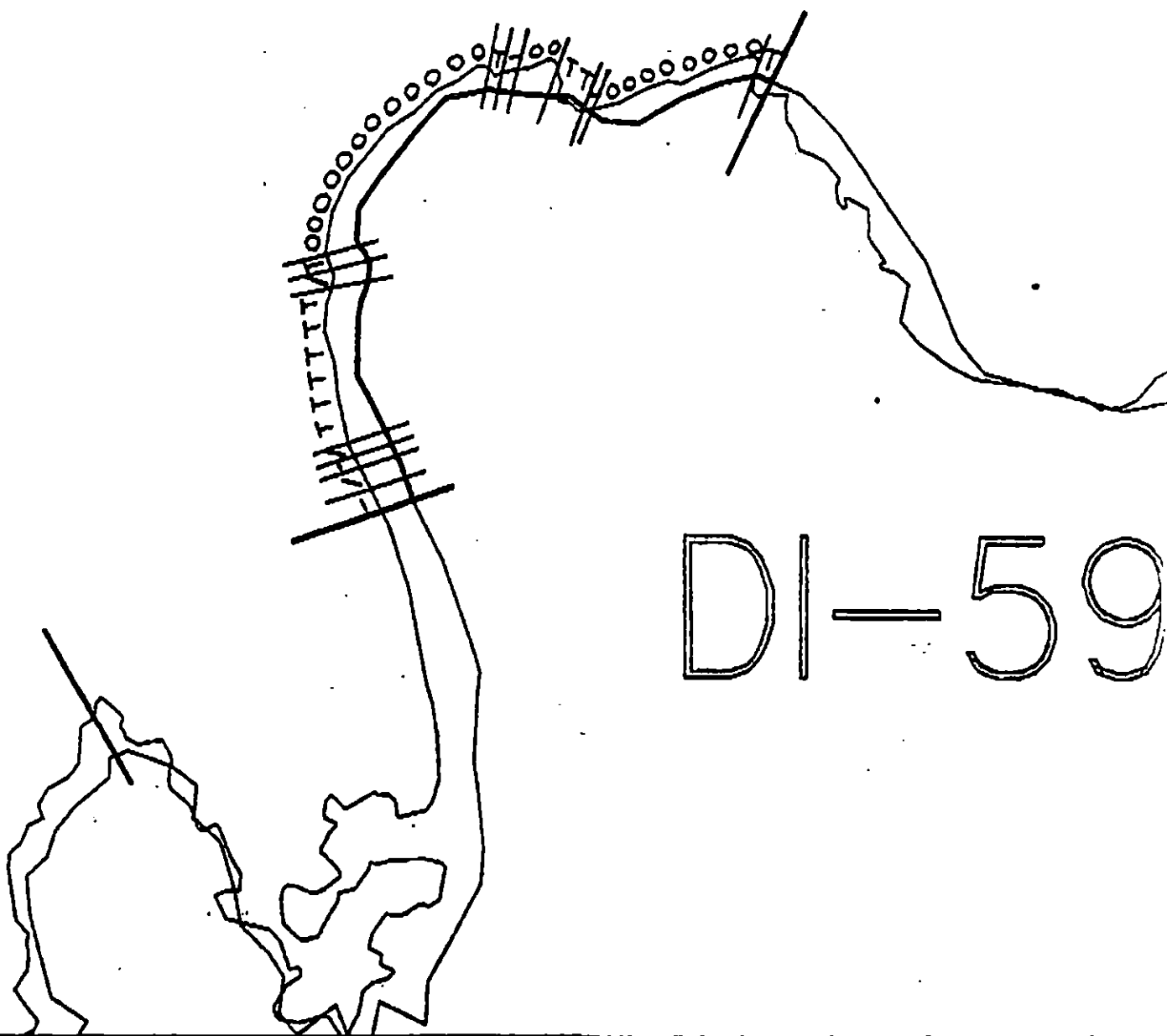
C. Gastropods

Littorina and *Nucella* are patchy, but generally moderate in density. Both are presently reproducing, as shown by the numerous egg masses.

- D. Fucus. Juveniles present throughout the intertidal zone from the lower edge of the upper zone to the lower zone.

- E. Other species. Chiton juveniles (*Katharina*) are present rarely through the segment.

DI-68



DI-59

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

DI-68

Exxon Segment Length: 841m

ADEC Segment Length: 734m



Map Key: PWS-100

Name: C. DILLON

Date: 4/20/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT DI-68 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN
Spot Washing Other Approved Treatment	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

No ecological time constraints.

OTHER ECOLOGICAL CONSIDERATIONS

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

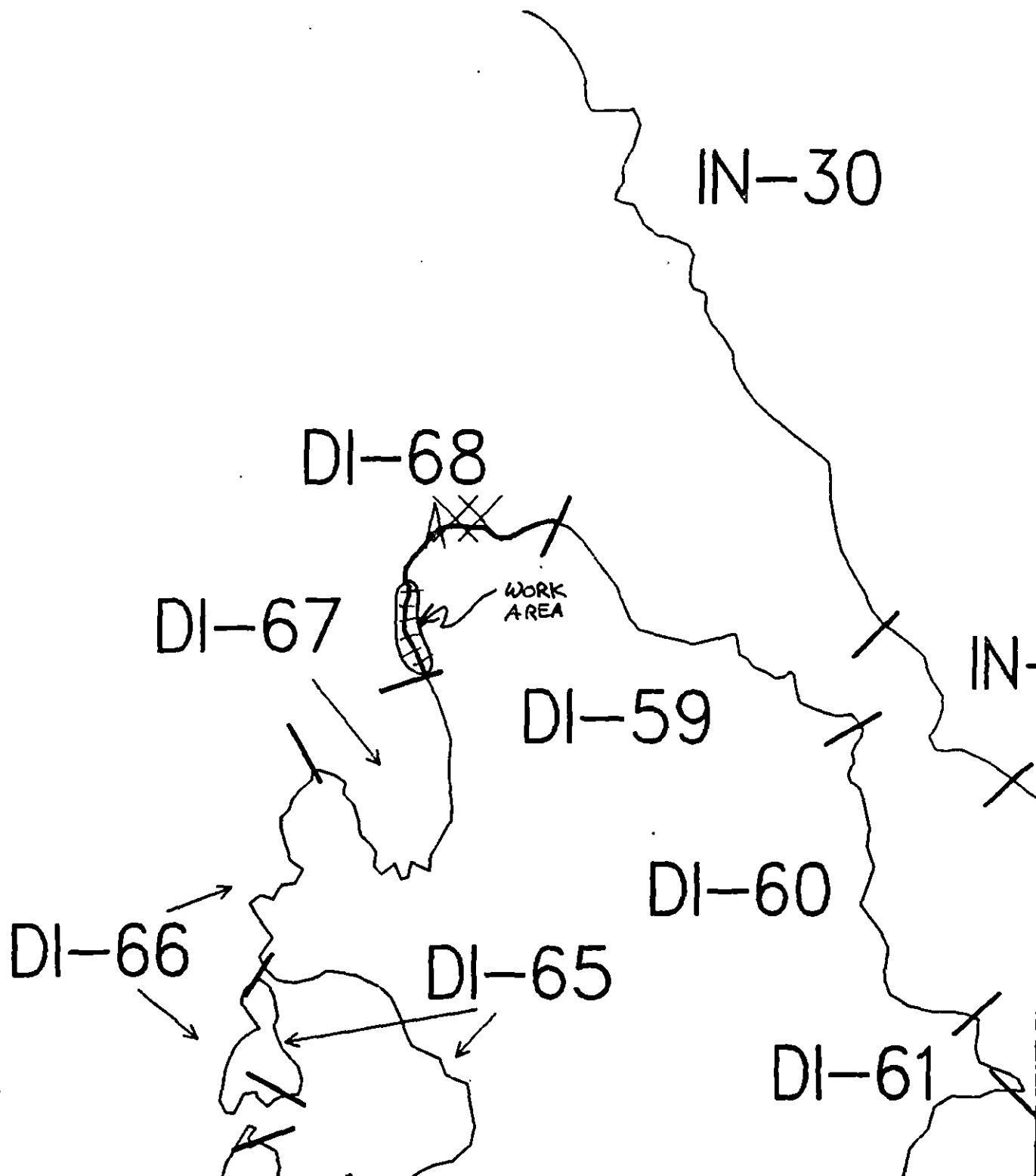
TAG ADDENDUM DATE 5/16/90.
ADEC Art Wenzel Art Wenzel
EXXON Ann Tom Neal
NOAA Gary Petroe Gary Petroe
USCG G.A. REITER G.A. Reiter

FOSC ✓

DATE 5-17-90

Prepared by: Anda May

Date: 5/14/90



Exxon Company, USA
Map Key: KNI-DI-68
11 1000



ECOLOGY MAP
SEGMENT DI-68
SUBDIVISION A (1 of 1)
METERS
0 370 740



Seabird Colony



Eagle Nest

1 Inch = 1215 feet

SHORELINE EVALUATION

SEGMENT ST/ DI-68 SUBDIVISION A (1 OF 1) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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: J. David McManis

DATE: 5/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 55 m: Narrow 57 m: V.Light 223 m: No Oil 399 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

 No Treatment Recommended
X Treatment Recommended
X Manual Pickup
 Bioremediation
 Tarmat Removal

 Snare/Absorbent Booms
X Oil Snares (pom poms)
 Absorbents (pads, rolls, etc)
X Spot Washing: 4 Wands
 Beach Cleaner
 Other (see comments)

COMMENTS: Recommend treatment includes spot hot water washing in three areas indicated on sketch map. No specific time sensitive ecological constraints identified. Manual pickup of TARBATS prior to spot wash.

TAG COMMENTS:

TAG APPROVAL DATE: 4/30/90

ADEC ART WEAVER

EXXON ART WEAVER

NOAA GARY PATRICK

USCG KENNETH KIRBY

FOSC: W/L

DATE: 5-9-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT DI-68 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	CLOSED
Spot Washing Other Approved Treatment	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

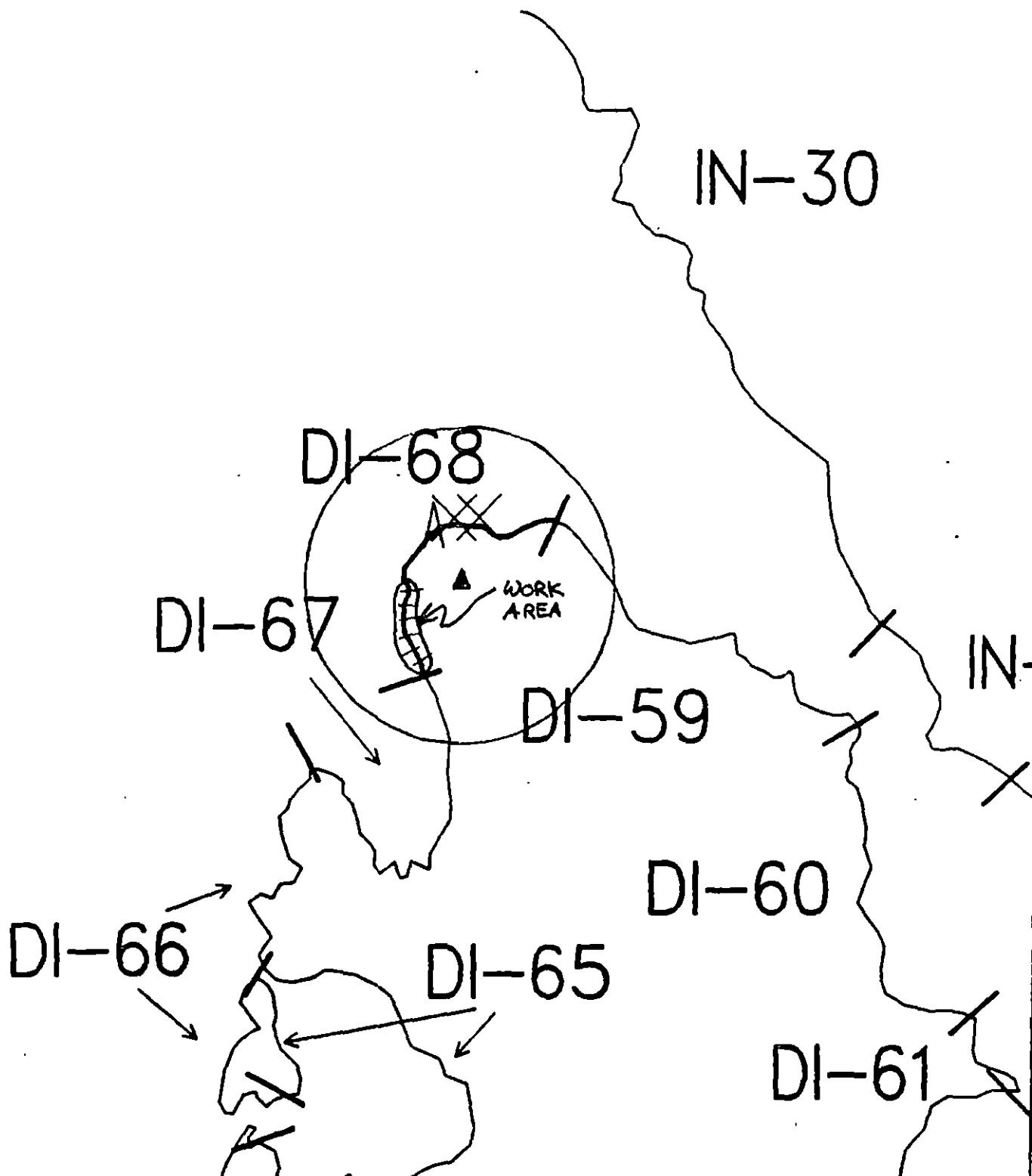
5T Bald Eagle Nest USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to manual pickup, spot washing, and other approved treatment within 400m of active nest.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC _____ Date 6-10-90
Prepared by J. P. Phillip ^{6/14/90} Date 6/10/90

1. ADD 7/1/68
 2. USES SURVEIL TRIPS
 3. 6/1/68



Exxon Company, USA
 M. V. 100-101-68



ECOLOGY MAP
SEGMENT DI-68
SUBDIVISION A (1 of 1)
METERS

★	Seabird Colony
▲	Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ DI-68 SUBDIVISION A (1 OF 1) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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: 5/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 55 m: Narrow 57 m: V.Light 223 m: No Oil 399 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>X</u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u> </u> Bioremediation	<u>X</u> Spot Washing: <u>4</u> Wands
<u> </u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommend treatment includes spot hot water washing in three areas indicated on sketch map. No specific time sensitive ecological constraints identified. Manual pickup of tarballs prior to spot wash.

SIZE CONSTRAINTS ADDRESS DATED 6/16/90
[Signature]

TAG COMMENTS:

TAG APPROVAL DATE: 4/30/90
ADEC [Signature]
EXXON [Signature]
NOAA [Signature]
USCG [Signature]

FOSC: [Signature] DATE: 5-9-90

SHORELINE EVALUATION

SEGMENT ST/ DI-68 SUBDIVISION A (1 OF 1) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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: J. David McManis DATE: 5/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 55 m: Narrow 57 m: V.Light 223 m: No Oil 399 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>X</u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u> </u> Bioremediation	<u>X</u> Spot Washing: <u>4</u> Wands
<u> </u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

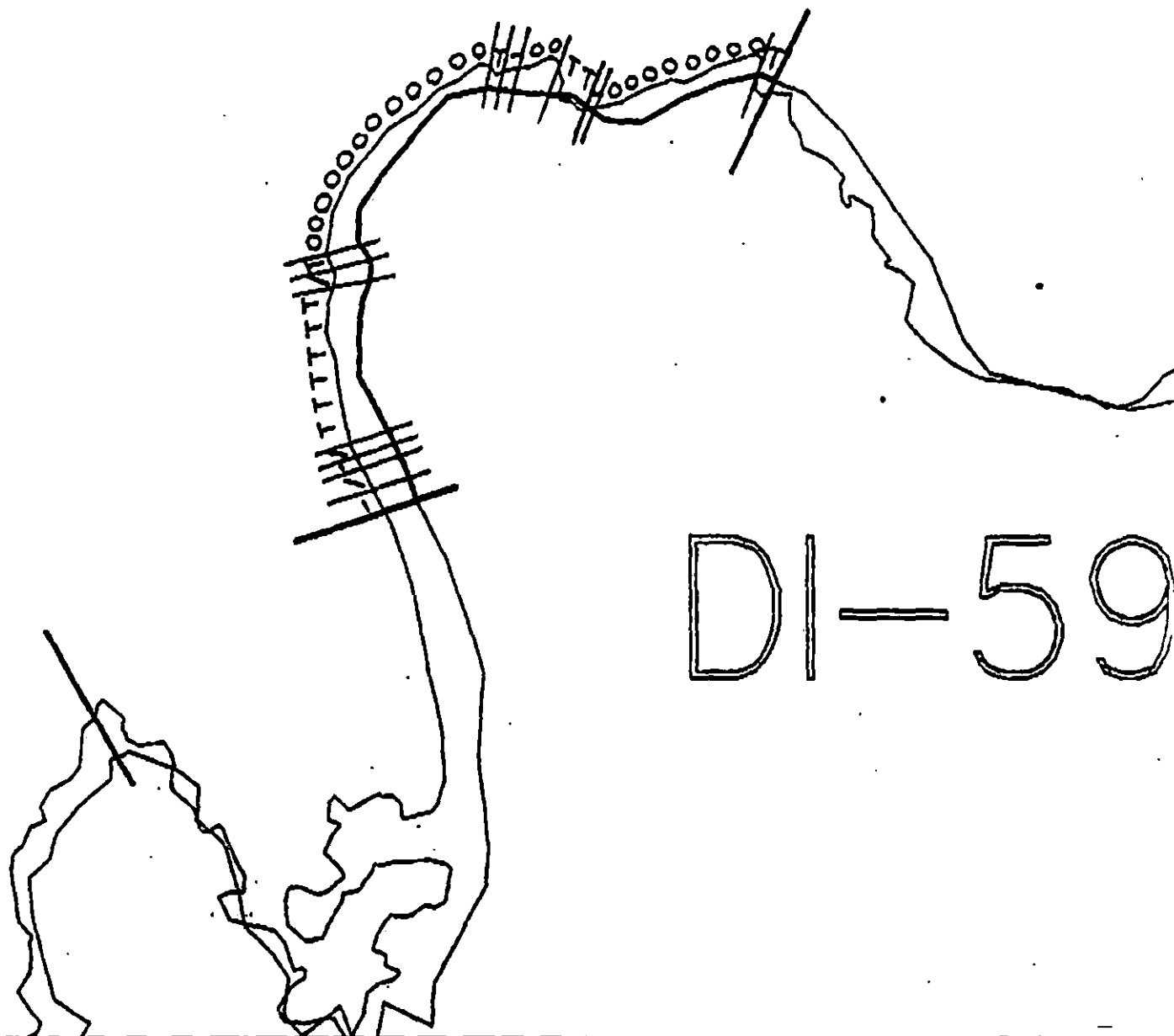
COMMENTS: Recommend treatment includes spot hot water washing in three
areas indicated on sketch map. No specific time sensitive ecological
constraints identified. Manual pickup of tarballs prior to spot wash.

TAG COMMENTS:

TAG APPROVAL DATE: 4/30/90
ADEC ART WEAVER
EXXON ART WEAVER
NOAA Ken Petros
USCG KENNETH KEANE

FOSC: W/L DATE: 5-9-90

DI-68



DI-59

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

DI-68

Exxon Segment Length: 841m

ADEC Segment Length: 734m



Map Key: PWS-100

Name: C. DILLON

Date: 4/20/90

Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/DI-69

SUBDIVISIONS: A (1 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ DI-69 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

No specific constraints identified.

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 24 m: Narrow 187 m: V.Light 229 m: No Oil 16 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: Recommend bioremediation of pocket beaches shown on sketch map. No ecological time constraints identified.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 DI-69 SUBDIVISION: A DATE 4/21/90

USCG

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

MANUALLY REMOVAL - oil of pockets in AREA-
OF pits 1, 2, AND 3 (SUB SURFACE OIL) - bioremediation
SHOULD BE CONSIDERED.

ADEC

NAME Peter Montesano SIGNATURE Peter Montesano☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

The double faced URTZ where pits 2+3 were dug holds the
heaviest subsurface oil that I have observed this Spring. Surface of
PITS is only stained or coated with P/C becoming cementlike with
weathered crude to trap the subsurface oil.
- Pits 1, 2, 3; not effectively washable due to locations on unique beach.
manually remove oiled subsurface sediments after which consider bioremediation
of all applicable oiled areas on beach.

The remainder of Subdivision contains light and moderate pockets
of Boulder shadow oiling.

LAND MANAGER USDA - Forest Service

NAME Don J. Bortner SIGNATURE Don J. Bortner☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Manually remove oil with patent
material in the area of pits 1, 2 and 3. Additional treatment
should then be considered, i.e. bioremediation or fertilization

SHORELINE OILING SUMMARY

REVISION NO. 04/12/88

OG C. DILLON USCG PS1 E. WHITE SEGMENT ST/ D1-69
 BIO J. BARRY LAND REP D. BRIGHTENGER (NES) SUBDIVISION A (1 OF 2)
 EXXON G. STILES ADEC P. MONTESANO TIME 15:50 10/17/15
 AM NO. 6 TIDE LEVEL +2.5 +2 +1 DATE 04/21/90
 T. SUBDIVISION LENGTH: 700 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: NE to SW
 SURFACE SEDIMENTS: R 85 % B 10 % C 4 % P 1 % 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 90 m N 200 m VL 435 m NO 25 m

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒

TYPE 0

#BAGS 0

Photographs:

Roll No. ST-6-6

Frames 9-15

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	F	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OP	NO		UO	UC	1	2	3	4	5	SU	U	M	U				
1	20		X				0-4		X				X				X			N	15	B/C - P/G/m
2	25	X					0-8	X					X			X				N	20	C/P - P/G
2	25				X		8-20		X				X			X				N	20	P/G - P/G
3	35	X					0-8	X					X			X				N	-	C/P - P/G/m
3	35				X		8-10		X				X			X				N	-	P/G - G/m
4	50					X	-		X								X			N	-	P - P/G
5	15	X					0-1		X				X			X				N	-	R/B - C/P/m

REVIEWED YW

DATE 4/23/90

OGC.DIL TEAM 6

SEGMENT ST/ DI-69

SUBDIVISION A

DATE 4/21/90

CHECKLIST

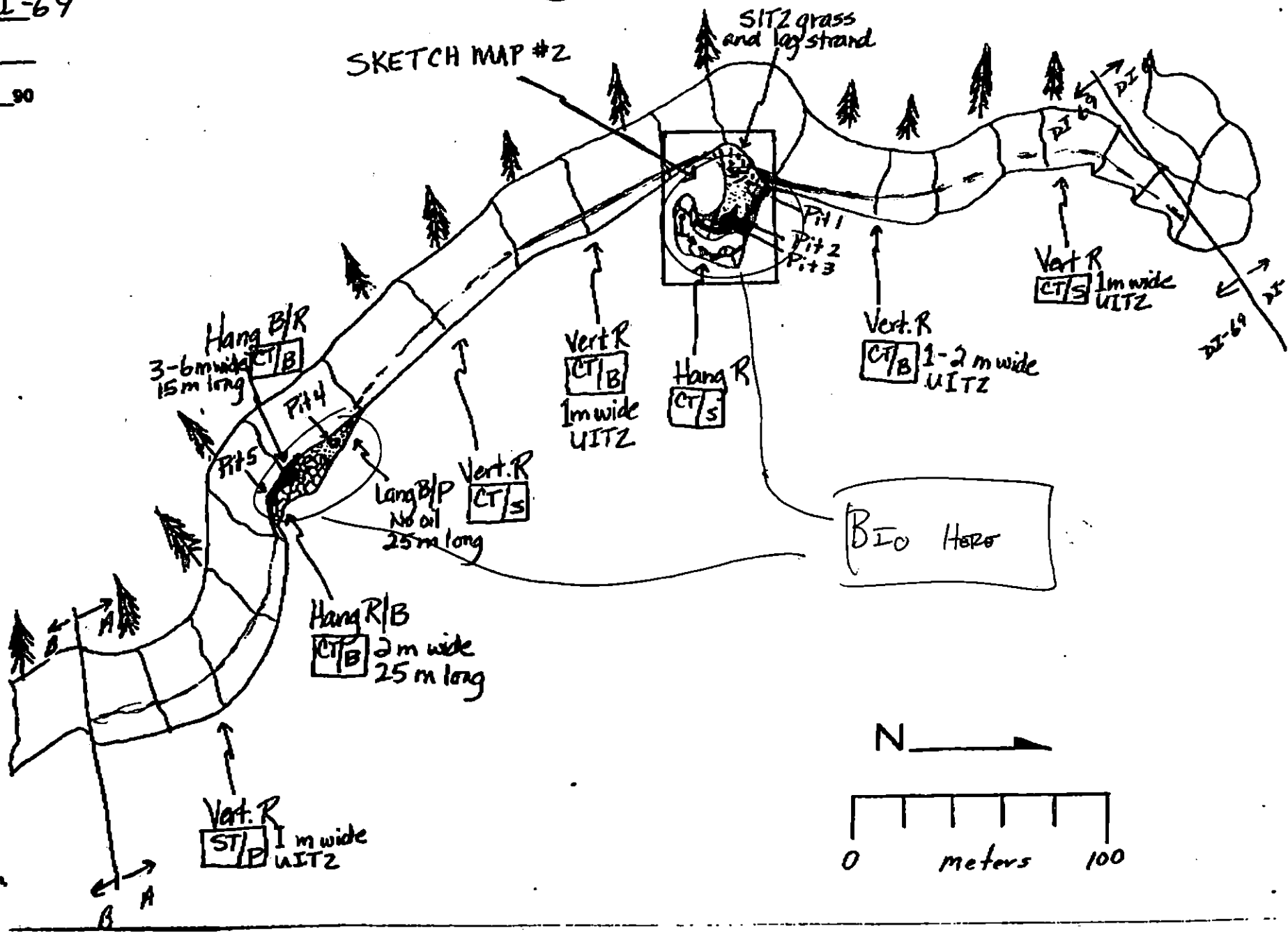
- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Out
- ☐ Wash
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HNL/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

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
- eee
- Old Vegetation
- 1.00
- Photo location, direction, and number

SKETCH MAP #1

SKETCH MAP #2



Oil Character Length (m): AP 0 PO 0 CV 20 CT 595 ST 60 MS 0 PT 0 TB 0 FL 0 NO 25

REVISIONS

OG C. DILLAN TEAM 6

SEGMENT ST-E-69

SUBDIVISION A

DATE 4/21/90

CHECKLIST

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

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

$\boxed{CT/C}$
Continuous Distribution

$\boxed{CT/B}$
Broken Distribution

$\boxed{CT/P}$
Patched Distribution

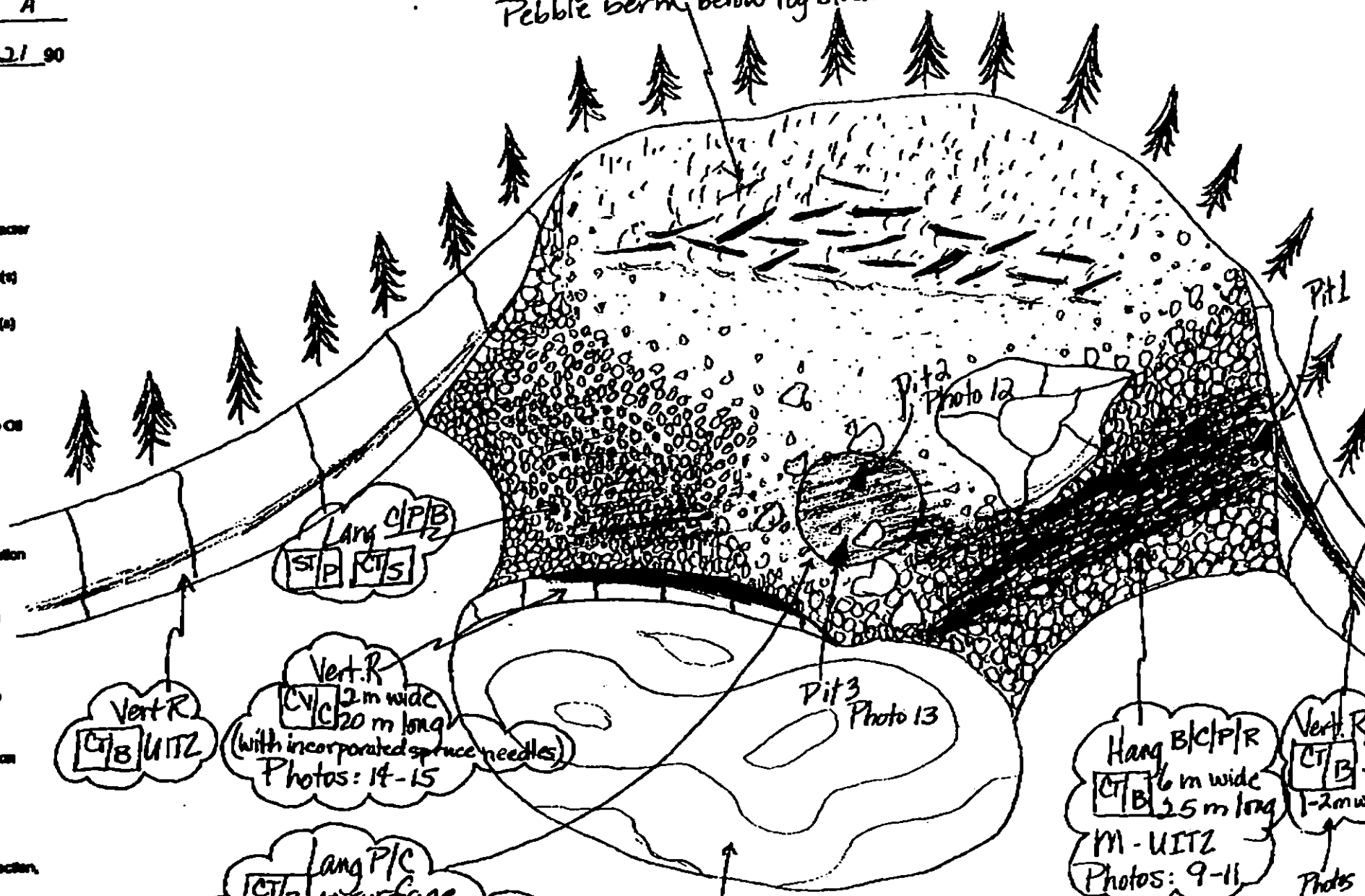
$\boxed{CT/S}$
Splashed Distribution

eee
Oiled Vegetation

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

SKETCH MAP #2

SITZ : grass, log strand, algae strand
Pebble berm below log strand



Oil Character length for beach only

Oil Character Length (m): AP 0 PO 0 CV 20 CT 30 ST 15 MS 0 PT 0 TB 0 FL 0 NO 0

REVISIONS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/ DI 69 Subdivision A Date (mo / day / yr) 4/21/90
 Time (24 hr) 1550 - 1645 Biologist Jim Barry Length = 700 m 1/7

- (A) Substrate type and % of segments:
 (1) Bedrock 85 (2) Boulder 10 (3) Cobble 4 (4) Pebble 1 (5) Sand 0 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 55 Moderate 30 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-6-6
 Roll No. 16
 Frames 16

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:

Sea otter - 3
 Bald Eagle - 2
 Merganser - 2
 Glaucous-winged Gulls - 3

Ecological Considerations: NONE LISTED

DI 69 - A

APRIL 21, 1990

2/7

TIME 1550-1645

TIDE +2 → +1

I General Comments

This segment is composed by highly exposed vertical cliffs, high angle boulder beaches and some small pocket beaches w/ cobble & pebbles.

A. HABITATS

- 1) Vertical Cliffs: These bedrock cliffs often are sheer to fairly deep water, thus allowing large swells to directly impact intertidal biota. Barnacles are frequently dense, particularly the large acorn barnacle Semibalanus cariosus in the middle to low zones. In the high zone, Balanus glandula and Chthamalus are moderately to densely abundant. These species also are present in lower zones, but at lower densities. Mussels are sparse on these cliffs for much of the segment. Small juveniles and spat are more common than are adults. Gastropods, including periwinkles (Littorines), limpets, and whelks, are moderate to dense. The most exposed faces have slightly lower densities of gastropods. Nucella, the predatory whelk, is frequently present in high densities.

Algae are abundant in the middle to low zones. Fucus is generally moderate, with many other blade-like red and green algae dense in cover in the low zone. These rapidly growing species may be disturbed & removed by large storms.

- 2) High angle boulder and cobble shores have similar species compositions ^{to vertical cliffs}, but due to their higher structural complexity, provide a wider variety of microhabitat types. As such, species diversity is somewhat higher in these habitats. In addition to high cover of barnacles

DI 69-A

April 20, 1990

3/7

I (cont)

as found on vertical cliffs, mussels are slightly more abundant, as are some gastropods. Small pools have sea anemones, scallops, chitons, shore crabs, hermit crabs, and sea cucumbers, as well as several species of coralline algae. Urchins also are found under cobble and in some isolated pools.

3) Cobble/Pebble Beaches.

These beaches are mostly exposed to high waves during storms. Thus, biota are scoured from cobble surfaces. Algae cover was low, except in low zones where filamentous green and brown algae (and diatoms) cover the rocks. Littorines, hermit crabs, and limpets (*Tectura tectum*) are ~~sp~~ patchy, but generally moderate in density. *Mytilus* spat or small juveniles are occasionally found under cobble.

B. Oil Related Comments

- 1) Oil seems to have collected in the upper zone of 1 beach. This oil may be affecting the biota in the cobble as it runs or seeps into the low zone. Other oiling shows as a coat or cover over sections of the upper zone. Barnacle mortality associated with this oil is variable depending upon its thickness. Recruitment of barnacles and algae is highly limited, usually with no new organisms present on the oil, even though new individuals are found immediately adjacent to it. Highly weathered oil has ~~seen~~ a few ~~new~~ barnacles on it.

- 2) No ecological sensitivities exist to restrict clean up operations.

APRIL 21 1990 0169A

5/7

IV Species List

A. MARINE PLANTS

1) DIATOMS / BLUE GREEN ALGAE M-D 123

2) GREEN ALGAE - CHLOROPHYTA

ACROSIPHONIA M 123 C

CLADOPHORA S 12 BC

ENTEROMORPHA B SM 123 BC

GREEN CRUST S 1 AB

ULVA M 123 BC

UROSPORA M-D 123 C

3) RED ALGAE - RHODOPHYTA

BOSSIOLA S 1 BC

CALLIARTHRON S 1 BC

CORALLINA S 1 BC

CRYPTOSIPHONIA M 123 C

ENDOLLADIA MURICATA S 12 AB

HALOSACCION GLANDIFORME SM 123 BC

IRIDAEA ?

MASTOCARPUS ?

MEMBRANOPTERA M 123 BC

MICROCLADIA ?

LITHOTHAMNION PACIFICUM S 1 BC

PETROCELLIS MIDDENDORFFII S 12 AB

PORPHYRA spp. S 12 BC

RHODOMELA LARIX SM 12 BC

PALMARIA PALMATA M 123 BC

4) BROWN ALGAE - PHAEOPHYTA

ALARIA MARGINATA U

AGARUM spp. U

COSTARIA U

FUCUS DISTICHUS M 123 BC

HEDOPHYLLUM SESSILE U

HILDEBRANDIA S 12 A

LAMINARIA U

NEREOCYSTIS RU

RALPSIA S 12 AB

SCYTOSIPHON COMENTARIA S 12 BC

A SPAT OR JUVENILES
PRESENT

D DENSE

M MODERATE

S SPARSE

R RARE

1 BEDROCK

2 BOULDER

3 COBBLE

4 PEBBLE

U. SUBTIDAL

X Probably Present

A High Zone

B Middle Zone

C Low Zone

B MARINE INVERTEBRATES

DI 69 A

6/7

1) ANEMONES

EPIACTIS RITTERI ? X

URTICINA CRASSICORNIS R12 BC

Anthopleura elegantissima S12 BC

A. artemesia S12 BC

A. xanthogrammica ?

2) Annelid Worms

Polychaetes

Nereidae S123 BC

Nephtyidae S123 BC

Serpulidae

Serpula S12 * BC

Crucifera X

Spirorbidae

Spirorbis S123 * BC

3) Peanut Worms - Sipunculid

Phascolosoma thersites X

4) MOLLUSCS

a) CHITONS

CATHARINA TUNICATA S12 * BC

TONICELLA LINZATA S12 * BC

MOPALIA spp. X

b) Snails - GASTROPODS

Littorina scutulata MD S123 ABC

L. sitkana MD S123 ABC

Nucella lamellosa SMD12 BC

N. emarginata SMD12 BC

Scutillaea dirca S23 BC

Amphissa columbiana R23 * BC

Tachyrhynchus spp. X

c) Nudibranchs

Lamellidorsis fusca S12 * AB

d) Limpets

Lottia digitalis S12 * A

Aemaea mitra S12 * BC

Lottia pumila S12 * 23

d) Limpets (cont)

Tectura scutellum S23 * BC

T. pumila S23 * AB

Biphanera thersites S12 * A

Diadora aspera X

e) Mussels -

Mytilus edulis SMD123 * ABC

f) Clams

Single - PODOBOLUS SEP10 S2 *

Hiatella spp. R23 * BC

~~Prothaca staminea~~~~Macoma spp.~~

g) Crustaceans

1) BARNACLES

Semibalanus cariosus D12 * BC

Balanus glandula MD S2 * AB

Chthamalus dallii MD12 * A

2) Crabs

Haplogaster spp S23 BC

Hemigrapsus oregonensis S123

Pugilitia spp. RS23 * BC

Hermit Crabs - Paguridae MD23 *

3) Beach Hopper

ISOPODA X

AMPHIPODA

Orchestra? MD3 * BC

h) Bryozoans

Schizoporella spp? S23 * BC

i) Echinoderms

1) Sea Stars

S123 * C Pycnopoda helianthoides

S123 * C Dermasterias imbricata

S123 * ABC Leptasterias hexactis

S123 * C Eusasterias truscelii

R123 C Orthostreus koehleri

M12 C Pisaster ochraceus.

SPECIES LIST (cont)

DI 69-A

4/20/90

7/7

Brittle Stars

Ophiurus spp. X

Sea Cucumbers

Cucumaria minicata

Sea urchins

Strongylocentrotus droebachiensis X

Sponges

yellow sponge ? SZ3 C

Vertebrates

Fishes

Xiphister spp. M 3* BC

DI-61

DI-69

DI-69-A
700m

DI-69-B
579m

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

DI-69

EXXON SEGMENT LENGTH: 1279m
 ADEC Segment Length: 1125m

0 100 200 300
 METERS

Map Key: PWS-101

Name: C. DILLON

Date: 4/21/90

Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/DI-69

SUBDIVISIONS: B (2 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ DI-69 SUBDIVISION B (2 OF 2) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

No specific time constraints identified.

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 0 m: Narrow 59 m: V.Light 528 m: No Oil 82 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: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ DI-69 SUBDIVISION: B DATE 4/21/90

USCG

NAME William E. White SIGNATURE William E. White

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

MAJORITY OF THE SUBDIVISION IS VERT-HANG-
ROCK AND BOULDER - BROKEN STAIN TO PATENT COAT, ALSO
SOME OF THE SUBDIVISION HAS NO SURFACE OIL OR SUB-
SURFACE OIL. NATURAL CLEANING CONTINUOUS.

ADEC

NAME Peter Montesano SIGNATURE Peter Montesano

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Subdivision has Pockets of boulder shadow oiling DBL+UBL under
and around Sometimes mixed into smaller sediments trapped between
Boulder. By and large inaccessible.

LAND MANAGER USDA - Forest Service

NAME Don J. Breitvogel SIGNATURE Don J. Breitvogel

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Natural wave action cleaning appears to be the
best method of cleaning.

OG C. DILLON USCG PS1 E. WHITE SEGMENT ST/ DI-69
BIO J. BARRY LAND REP D. BRIGHTENGER (ADEC) SUBDIVISION B (2 OF 2)
EXXON G. STILES ADEC P. MONTESANO TIME 17:15 to 18:30
TEAM NO. 6 TIDE LEVEL +1 to +1.75 DATE 04/21/90
EST. SUBDIVISION LENGTH: 579 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 5 % G 0 % S 0 % M 0 % V 0 %
SLOPE: Lang 15 % Hang 50 % Vert 35 % WAVE EXPOSURE: ☐ Low ☒ Med ☒ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 30 m VL 474 m NO 75 m

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒

TYPE G

#BAGS 0

Photographs:

Roll No. NONE

Frames 1

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	!	SURFACE - SUBSURFACE SEDIMENTS	
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	SW	S	M	N					
1	60					X	.		X							X				N	-	C/P-P/G/C	
2	65					X	.		X								X			N	-	P-P/G/C	
3	30					X	.		X									X		N	-	P-P/G	
4	35					X	.		X							X				N	-	P-G	
							.																
							.																

COMMENTS MAJORITY OF SUBDIVISION IS VERT/HANG ROCK & BOULDER WITH A SPORADIC TO BROKEN STAIN AND SPORADIC TO PATCHY COAT UP TO 1 m WIDE ALONG THE HIGH TIDE LINE. A 30 m LONG HANG BOULDER AREA IN THE CENTER OF THE SUBDIVISION HAS A 1 m WIDE BROKEN COAT (NARROW). 2 SMALL LANG C/P BEACHES (AT THE NE AND SW ENDS OF SUBDIVISION) HAVE NO SURFACE OR SUB-SURFACE OIL. THE OFFSHORE ROCK (UNOILED) IS NOT INCLUDED IN THE OIL CATEGORY/CHARACTER LENGTHS OR THE SUB-DIVISIONAL LENGTH. REVIEWED 7/00 DATE 4/23/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22

Segment ST/ DI 69 Subdivision B Date (mo / day / yr) 4/21/90Time (24 hr) 1645-1845 Biologist JIM BARRY 579 m(A) Substrate type and % of segments:
(1) Bedrock 45 (2) Boulder 40 (3) Cobble 10 (4) Pebble 5 (5) Sand 0 (6) Silt 0(B) Overall % cover of biota (% of segment): Dense 70 Moderate 25 Low 5

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

Photographs:
Roll No. ST-6-6Frames 17

BARNACLES

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

NOT PRESEN

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	2
3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	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	6

NOT PRESEN

GASTROPODS

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

NOT PRESEN

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	2
3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	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	6

NOT PRESEN

Wildlife Observations/ General Comments:

GOLDEN EAGLE - 1 GLAUCOUS-WINGED GULL - 3
 BALD EAGLE - 2 MEGALOPTERA - 2
 SEA OTTER - 2 PIGEON GUILLEMOT - 2

Ecological Considerations:

NONE LISTED

TIME, 1645-1845

TIDAL WINDOW +1 → +3

I General Comments

This subdivision is very similar to DI 69-A. In addition to the habitats found in that subdivision, DI 69-B had a few small offshore headland islands and a larger cobble/pebble beach.

A. HABITATS -

1) Vertical Cliffs and high angle ~~sh~~ boulder shores - See DI 69-A

2) Offshore headland islands.

These habitats are composed of highly exposed high angle and vertical shores. Biota are similar to the vertical cliffs and boulder shores of the remainder of the segment, except with greater ~~ab~~ abundance of the rarer species, and perhaps slightly higher diversity overall. Biota are generally dense overall on these habitats.

3) Cobble pebble beaches -

These beaches are highly exposed to waves. Cobble & pebbles are smooth. Littorinids and pagurids are generally abundant, as are limpets and amphipods under larger cobble. Perchle banks are moderate to dense in the low zone, especially under medium to large cobble. Mussel beds are densest adjacent to these beaches, where well defined mussel bands occasionally occur.

B. Oil related comments -

1) Oil is present mainly as a coat in some areas, impacting the high zone barnacles. See DI 69-A

APRIL 21 1990

DI 69-B

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IV Species List

A. MARINE PLANTS

1) DIATOMS / BLUE GREEN ALGAE M-D 123

2) GREEN ALGAE - CHLOROPHYTA

ACROSIPHONIA M123C

CLADOPHORA S12C

ENTEROMORPHA SM123BC

GREEN CRUST. S1AB

ULVA M123BC

UROSPORA M-D 3C

3) RED ALGAE - RHODOPHYTA

BOSSIELLA S1BC

CALLIARTHRON S1BC

CORALLINA S1BC

CRYPTOSIPHONIA ~~S1~~ M123C

ENDOLLADIA MURICATA S12AB

HALOSACCION GLANDIFORME SM123BC

IRIDAEA ?

MASTOCARPUS ?

MEMBRANOPTERA M123BC

MICROCLADIA ?

LITHOTHAMNION PALIFICUM S12BC

PETROCELIS MIDDENDORFFII S12AB

PORPHYRA spp. S123BC

RHODOMELA LAMINATA SM12BC

PALMARIA PALMATA M123BC

4) BROWN ALGAE - PHAEOPHYTA

ALARIA MARGINATA U

AGARUM spp. U

COSTARIA U

FUCUS DISTICHUS M123BC

HEDOPHYLLUM SESSILE U

HILDONBRADIA ~~E~~ S12AB

LAMINARIA U

NEROCYSTIS R U

RALPSIA S12AB

SCYTOSIPHON COMENTARIA S12BC

A SPAT OR JUVENILES
PRESENT

D DENSE

M MODERATE

S SPARSE

R RARE

1 BEDROCK

2 BOULDER

3 COBBLE

4 PEBBLE

U. SUBTIDAL

X - Probably present

A - HIGH ZONE

B - MIDDLE ZONE

C - LOW ZONE

B MARINE INVERTEBRATES

D169-B 4/21/90

1) ANEMONES

EPIACTIS RITTERI ? M 12 BC *
 URTICARIA CRASSICORNIS R 12 BC
 ANTHOPLEURA ELEGANTISSIMA S 12 BC *
 A. ANTIMISEA * S 12 BC
 A. XANTHOGRAMMICA ?

2) ANNELID WORMS

POLYCHAETES
 NEREIDAE S 123 BC
 NEPHTHYDAE S 123 BC
 SERPULIDAE
 SERPULA S 12 BC *
 CRUCIGERA * S 12 BC
 SPIROBIDAE
 SPIROBIDS M 23 * BC

3) PEANUT WORMS - SIPUNCULID

PHASCOLOSOMA THERESITA X

4) MOLLUSCS

a) CHITONS

CATHERINA TUCATA SM 12 BC *
 TORICELLA LINEATA S 12 * BC
 MOTALLA spp. S 12 BC

b) SNAILS - GASTROPODS

LITTORINA SCUTULATA MD * 123 ABC
 L. SITKANA MD * 123 ABC
 NUCELLA LAMELLOSA SM 12 BC
 N. EMARGINATA SM 12 BC
 SCARLETTA DINA S 123 BC
 AMPHISSEA COLEMBIANA R 23 BC *
 TACHYRHYNCHUS spp. X

c) NUDIBRANCHS

LAMELLIDORIS FUSCA S 12 * AB

d) LIMPERS

LOTIA DIGITALIS S 12 A *
 AEMAEA MITRA R 12 BC
 LOTIA PERSONA S 12 * 23

d) LIMPERS (cont)

4/5

TECTURA SCUTUM M S 23 * BC
 T. PERSONA S 23 * AB
 SIPHONAREA THERESITA S 12 * AB
 DIADORA ASPERA X

e) MUSCLE -

MYTILUS EDULIS SM 12 * ABC

f) CLAMS

SINGLE - PODOSTOMUS CEPHO S 2 *
 HIALILLA spp. R 23 * BC
 PROTOSTOMA STOMATEA
 MACOMA spp.

g) CRUSTACEANS

1) BARNACLES

SEMIBALANUS CONIOTUS D 12 * BC
 BALANUS GLANDULA MD 12 * AB
 CHTHAMALUS DALLI MD 12 * AB

2) CRABS

HAPLOGASTRIS spp S 23 BC *
 HEMIGRAPSUS OREGONENSIS S *
 PUZZILLIA spp. R S 23 * BC
 HERMIT CRABS - PAGURIDAE
 MD 23 * AB

3) BEACH HOPPER

ISOPODA X
 AMPHIPODA MD 3 * BC
 ORCHESTRA ?

h) BRYOZOANS

SCHIZAPONELLA spp. ? S 23 * A

i) ECHINODERMS

1) SEA STARS
 S 123 * C PTEROPODIA HELICANTHOID
 S 123 * C DERMATARIAS IMBRICATA
 S 123 * C LEPTASTERIAS HEXACTIS
 S 123 * C EVASTERIAS TRUSCHELI
 X ORTHOSTERIAS KOECHTERI
 M 12 C PISASTER OCHRAEUS

SPECIES LIST (cont)

DI 69-B Apr 1 & 21 1990

5/5

Echinoderms (cont)

2) Brittle Stars

Ophiolus spp? X

3) Sea Cucumbers

Eupentacta quinquesemita S23 C*Cucumaria miniata* S23 C*Cucumaria vegae* S23 C

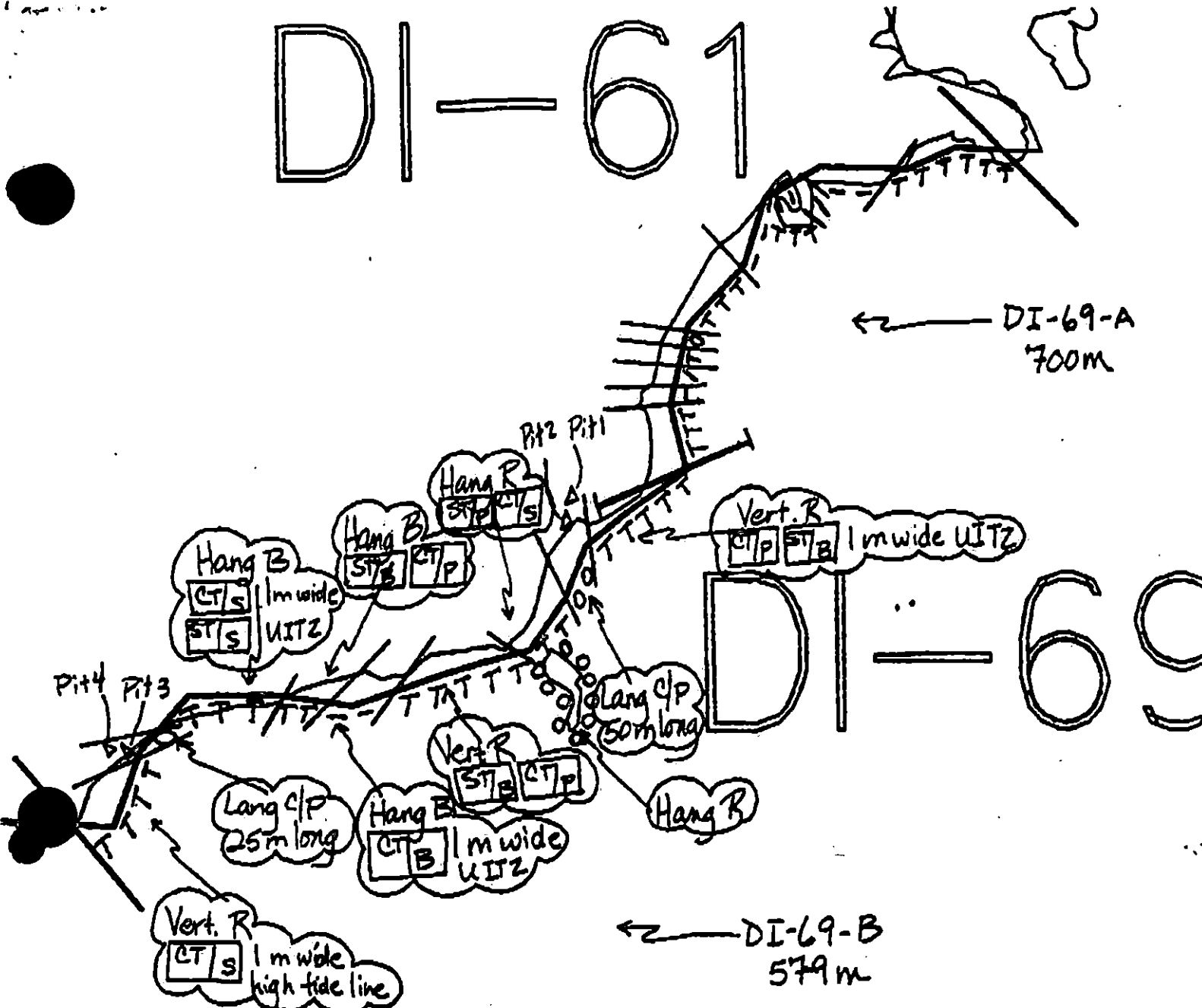
4) Sea Urchins

Strongylocentrotus droebachiensis S23 C

Fishes

Xiphias spp. - Pricklebacks M23 + BC

DI-61



OIL CHARACTER LENGTHS (m): CT 345 ST 159 NO 75

(OFFSHORE UNOILED ROCK IS NOT INCLUDED IN SUBDIVISION, OIL CHARACTER OR OIL CATEGORY LENGTHS)

Wide
Medium
Narrow
Very Light
No Oil

DI-69

EXXON SEGMENT LENGTH: 1279m
ADEC Segment Length: 1125m



Map Key: PWS-101

Name: C. DILLON

Date: 4/21/90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT DI-69 SUBDIVISION A (1 of 2)

WORK WINDOW

Bioremediation
Manual Raking
Other Approved Treatment

OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

No ecological time constraints.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG ADDENDUM DATE

ADEC

EXXON

NOAA

USCG

5/16/90
Art Weiner
Amy Tate
Gary Peters
G.A. REITER

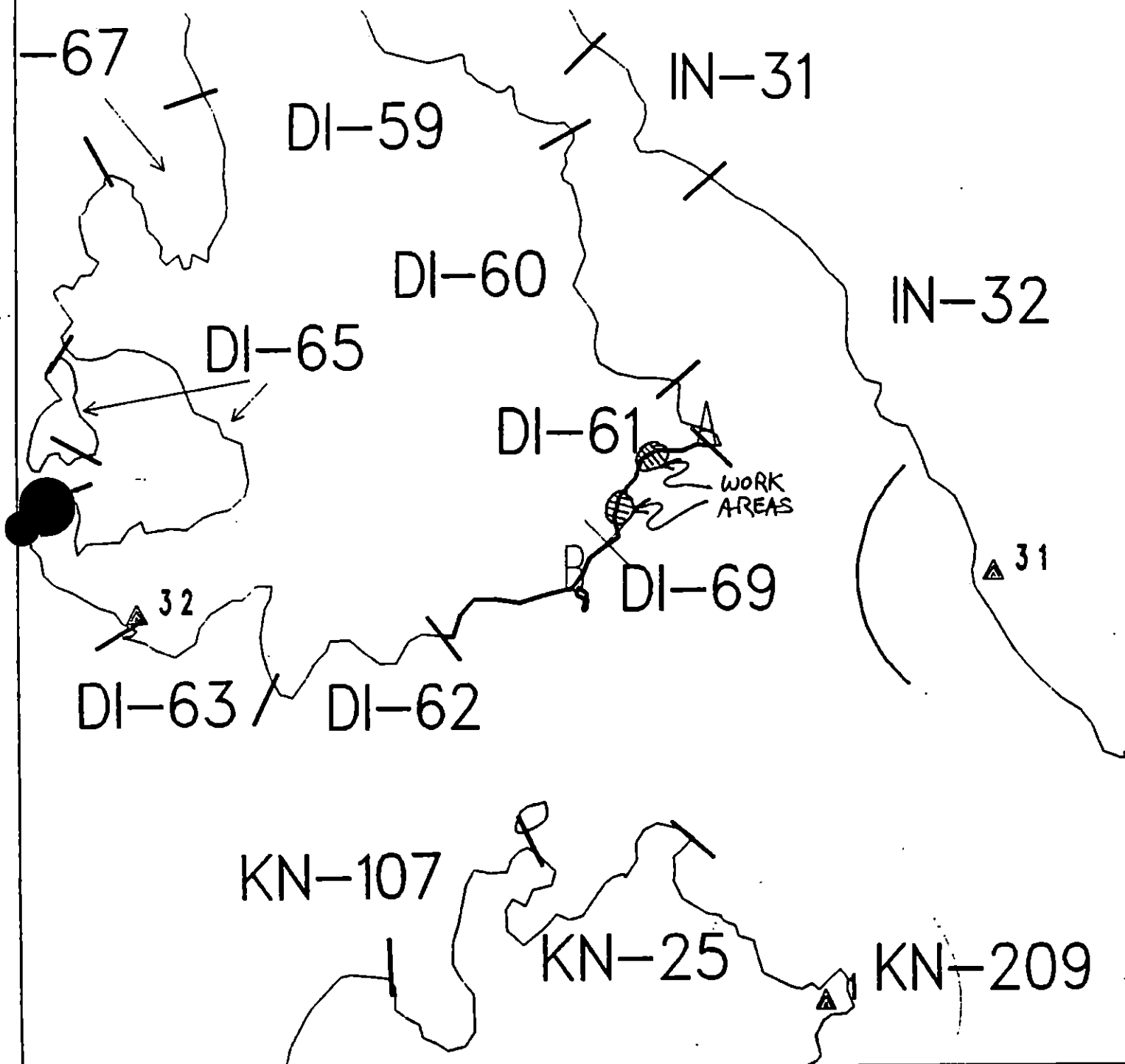
FOSC

DATE 5-17-90

Prepared by:

Andrew Meyer

Date: 5/14/90



Exxon Company, USA
Map Key: KNI-DI-69
May 11, 1990



ECOLOGY MAP
SEGMENT DI-69
SUBDIVISION A (1 of 2)
METERS
0 425 850

★ Seabird Colony
▲ Eagle Nest

1 inch = 1395 feet

SHORELINE EVALUATION ²SEGMENT ST/ DI-69 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

No specific constraints identified.

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. H. Jones DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 24 m: Narrow 187 m: V.Light 229 m: No Oil 16 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 Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommend bioremediation of pocket beaches shown on sketch map. No ecological time constraints identified.TAG COMMENTS: MANUAL RAKING + SNARES IN AREA OF TP 2-3
PRIOR TO BIOTAG APPROVAL DATE: 5/4/90

ADEC

ART WENGER

EXXON

ANN TELL

NOAA

GARY DELONG

USCG

G.A. REITERFOSC: W LDATE: 5-9-90

SHORELINE EVALUATION

SEGMENT ST/ DI-69 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

No specific constraints identified.

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. Hines DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 24 m: Narrow 187 m: V.Light 229 m: No Oil 16 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 Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommend bioremediation of pocket beaches shown on sketch map. No ecological time constraints identified.

TAG COMMENTS: MANUAL RAKING + SNARES IN AREA OF TP 2-3
PRIOR TO BLO

TAG APPROVAL DATE: 5/4/90
ADEC Art Weiner FOSC: W L DATE: 5-9-90
EXXON AMY GIL
NOAA Gary DeRose
USCG G.A. Riedel

OG C. D. Team 6

SEGMENT ST/ DI-69

SUBDIVISION A

DATE 4/21/90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Obs.
- ☐ Wash
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. MW/L/M/L
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

lll

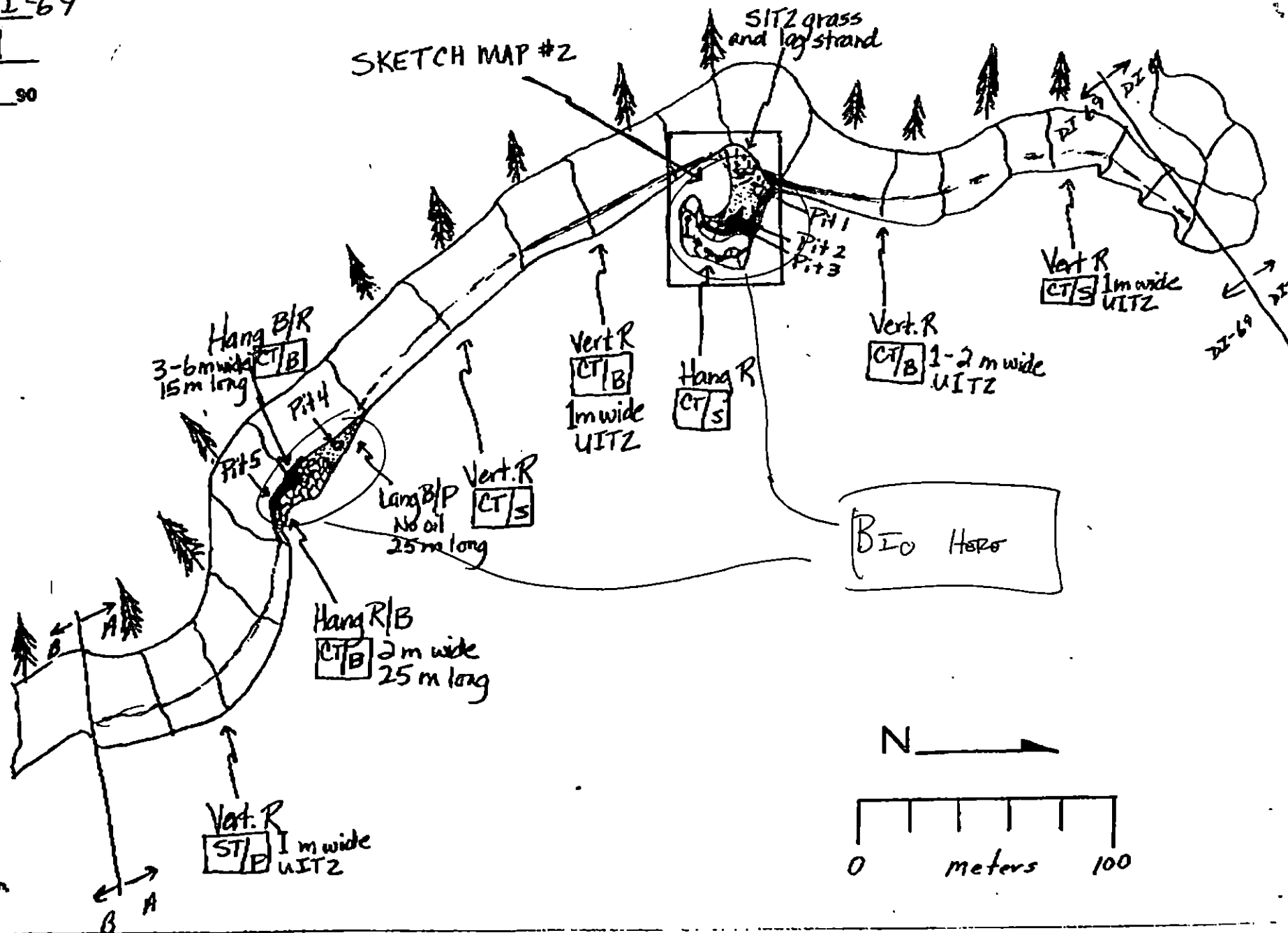
Old Vegetation

1 →

Photo location, direction, and number

SKETCH MAP #1

SKETCH MAP #2



Oil Character Length (m): AP 0 PO 0 CV 20 CT 595 ST 60 MS 0 PT 0 TB 0 FL 0 NO 25

OG C. DILLON TEAM 6

SEGMENT SITE I-69

SUBDIVISION A

DATE 4/21/90

CHECKLIST

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

LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

eee

Oiled Vegetation

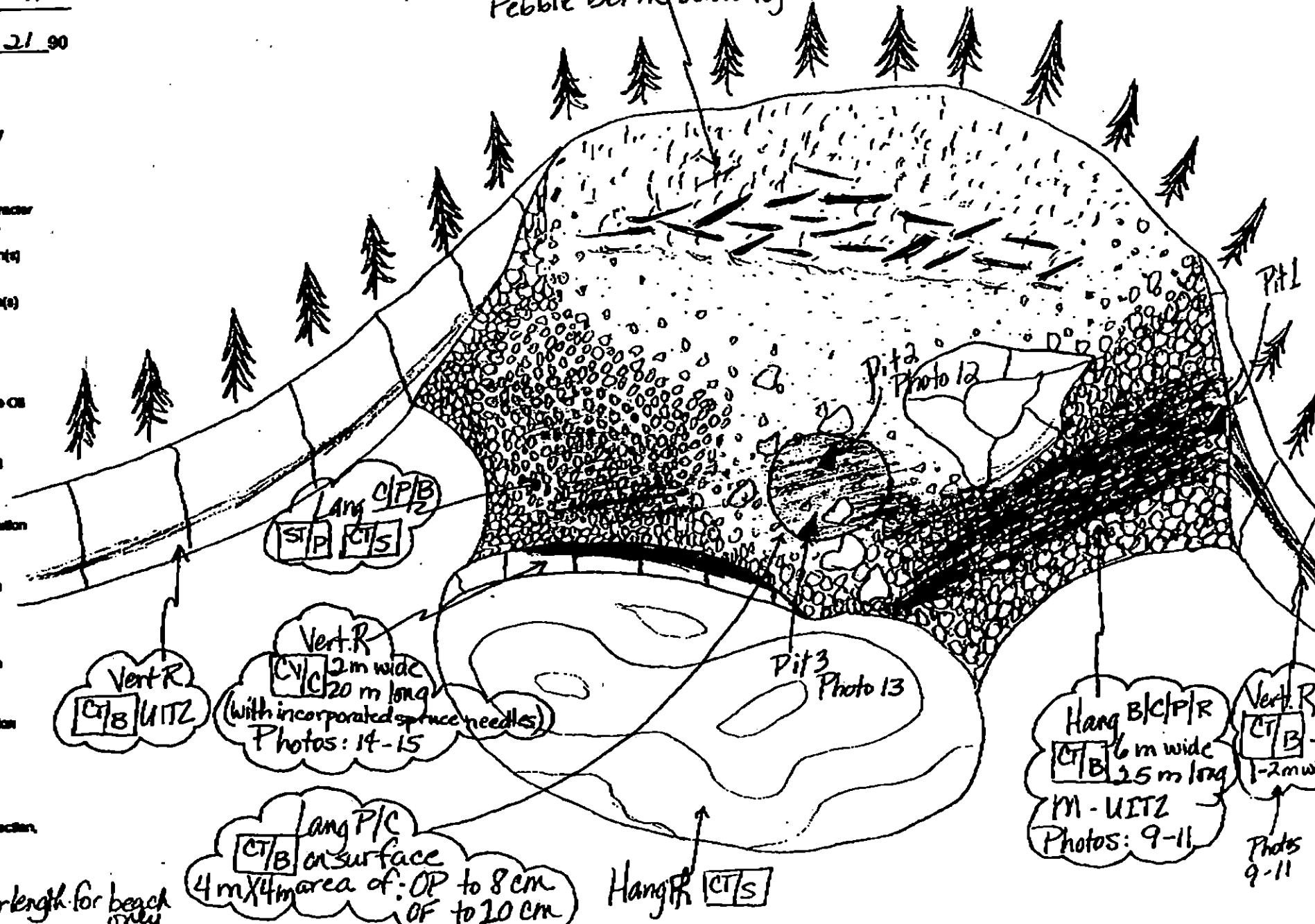
1 →

Photo location, direction, and number

ATCH MAP #2

SITZ : grass, log strand, algae strand
Pebble berm below log strand

N →



Oil Character length for beach only

Oil Character Length (m): AP 0 PO 0 CV 20 CT 30 ST 15 MS 0 PT 0 TB 0 FL 0 NO 0

REVISIONS

DI-61

DI-69-A
700m

DI-69

DI-69-B
579m

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

DI-69

EXXON SEGMENT LENGTH: 1279m
ADEC Segment Length: 1125m

0 100 200 300
METERS

Map Key: PWS-101

Name: C. DILLON

Date: 4/21/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ DI-69 SUBDIVISION B (2 OF 2) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

No specific time constraints identified.

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. H. Smith*

DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 59 m: V.Light 528 m: No Oil 82 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

X No Treatment Recommended
 Treatment Recommended
 Manual Pickup
 Bioremediation
 Tarmat Removal

 Snare/Absorbent Booms
 Oil Snares (pom poms)
 Absorbents (pads, rolls, etc)
 Spot Washing: Wands
 Beach Cleaner
 Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/4/90

ADEC *Art Weiner* *Art Weiner*

EXXON *Andy Katz* *Andy Katz*

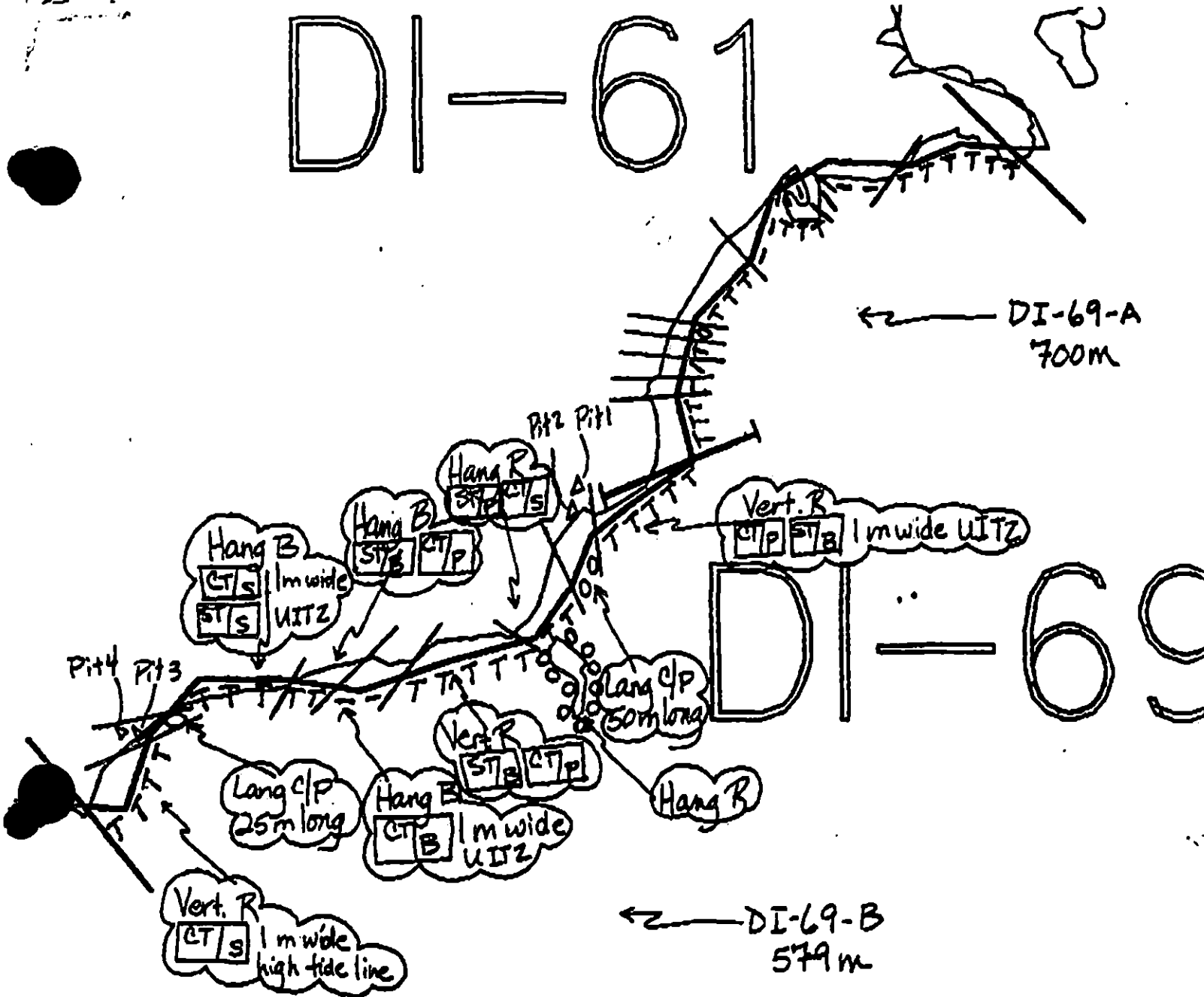
NOAA *Gary Peterson* *Gary Peterson*

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

FOSC: *WJL*

DATE: 5-9-90

DI-61



OIL CHARACTER LENGTHS (m): CT 345 ST 159 NO 75

(OFFSHORE UNOILED ROCK IS NOT INCLUDED IN SUBDIVISION, OIL CHARACTER OR OIL CATEGORY LENGTHS)

Wide
Medium
Narrow
Very Light
No Oil

DI-69

EXXON SEGMENT LENGTH: 1279m
ADEC Segment Length: 1125m



Map Key: PWS-101

Name: C. DILLON

Date: 4/21/90

Data Entered:

1991 MAYSAP EVALUATION

SEGMENT: DI 069 SUB: A REGION: PWS SURVEY DATE: 5/13/91

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 Smith

Date: 6/04/91

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 4 1991

FOSC APPROVAL DATE: 6/9/91

ADEC

FOSC

EXXON

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

USCG

NOAA

TEAM NO. 2 SEGMENT DI 69 SUBDIVISION A DATE 5/13/91

ADEC

NAME Peter MontesanoSIGNATURE [Signature]☐ NTR

TREATMENT RECOMMENDED

PIT 4 was definitely OP, Pit 1 was Brown Mousse MOR NOT LOR, and Pit 3 was HOR not MOR. THE HOR lens around Pit 3 is tight and distinct in fine sediments below a thin, small Boulder cover. Remove HOR + associated AP with trawls (area B). Also Till the area by Pit 1. This area is a Protected Saddle. THE OP in Area "I" is between Boulders and not easily accessible.

EXXON

NAME Chris Fortson-KinsSIGNATURE [Signature]☒ NTR

OG & BIO REPORTS ACCURATELY DESCRIBE CONDITIONS.

MANAGER

NAME Dennis S. KennedyOF HSFSSIGNATURE D.S. Kennedy☒ NTR

This is a protected low energy beach. If treatment is R'd it has good access. The tide pools near (below) pit 1 show good recruitment. The oil in pit #4 is layered in bedrock and boulders and contains a good amount of beach. a good survey by OG & BIO

USCG/NOAA BMI H. P. ZENONE - (CG)

NAME D. SIMEONE-BRATTY NOAASIGNATURE [Signature]☒ NTR

Scattered small paramecia observed between boulders and inside tide pools. No treatment recommended. DSB

CG - Good OG & BIO REPORT, BOTH ACCURATELY DESCRIBE THIS SEGMENT. I MONITORED BIOMONITORING ON THIS SEGMENT LAST YEAR. THERE HAS BEEN SIGNIFICANT IMPROVEMENT. I BELIEVE WE HAVE HELPED AREA AS MUCH AS WE CAN. NO TREATMENT RECOMMENDED. 3

TEAM NO. 2OG B. TrimmADEC P. MontesanoEXXON C. KatsimpalisBIO S. BanLANDMANAGER D. Kennedy for USFS
BUI ZenoneUSCG/NOAA D. Simmel -BeattySEGMENT DI-69SUBDIVISION ADATE MAY 13 1991TIME 06:20 to 07:12TIDE LEVEL -1.34 ft. to -2.44 ft.ENERGY LEVEL: ☒ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☒ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 456 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W 0 m M 0 m N 426 m VL 30 m NO 0 m US 0 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOF	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A					P						R	V	1	6	x	x			
B	S			S				S			BPC	M	1	8		x			under PC veneer
C	C										BPC	M	1	1		x			under BPC veneer
D					P	P					R	M	1	28		x			
E					P	P					R	V	1	28		x			
F				S							PC	M	1	7		x			
G					S	S	S				PC	M	3.5	40	x	x			COVER BEHIND BOULDERS
H							B				R	V	1	22		x			
I	I										R.B	M	3.5	30	x				ON LOW ANGLE ROCK PLATFORM
J							P				R	V	0.5	140	x				
K							P				R	V	0.5	140	x				
L							P				R	V	0.5	45	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 - 11 FRAMES 1-8

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	20					x			10-14	Y	-	-		x			PCB-PG Feat	BEHIND OUTCROP
1B			x						14-18									
2	20							x	3-7	Y	17	S		x			P-PG Feat	
3	15				x				0-10	Y	-	-		x			B-PG	UNDER BOULDER TALUS
4	11	x							6-11	N	-	-		x			B-PG Feat	UNDER BOULDER TALUS
									-									+ H2S odor
									-									
									-									
									-									

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

OG COMMENTS:

LOCATIONS A-H ARE IN A PROTECTED POCKET BEACH

LOCATION I IS AN ANGULAR BOULDER TALUS SHORELINE.

VERTICAL & HIGH ANGLED ROCKY SHORES IS FOUND THROUGHOUT REST OF SUBDIVISION.

THE OIL IN PITS #1 & 4 IS HARD TO DESCRIBE WITH THE FEAT & ORGANICS.

revised 5.18.91 ay
REVISED CD 18 MAY

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 13 May 91
 SEGMENT # DE-69 TIDAL HEIGHT (Range) -2 to -3 ft
 SUBDIVISION A BIOLOGIST S. BAN
 SEA STATE Calm WIND SPEED/DIRECTION Calm
 PHOTOGRAPHS: ROLL # NA FRAME # NA

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

A: Mussels and Barnacle spat below weathered oil on Pillow basalt face

B+C: Sparse Adult barnacles and green algae on cobbles near Pit #3 Pits dug higher in intertidal expose amphipods (beach hoppers) and white polychaetes or polychaetes. Patches of black grass, lichen & moss in areas of oil stain

D: Area below oil band supports rich and diverse tidal pools. One large pool contains numerous sculpins, hermit crabs, chitons (Tubicella), limpets and an eel-like nudibranch (Phidiana crassicornis)

E: Recently settled barnacle spat and Fucus recruits on pillow basalt face above the oil band

F+G: Pebble/cobble beach - moderately dense recently settled spat, few Littorinids & limpets dense Pycnopodia & Pisaster in lower zones

H: Kelp Beds offshore - steep Boulder zone Fucus - Balanus zonation

I: Mousse buried beneath cobbles supporting Fucus recruits and 1990 Barnacle spat. Dog winks (Nucella) spotted near the pit. Small juvenile Littorinids and limpets in this zone. Oiled Barnacles & barnacle scars evident.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			Sculpins ± 10 Ind.
Seabirds			
Waterfowl			
Gulls/Kittiwakes	1	± 8	
Shorebirds			
Corvids			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

REVIEWED 10 MAY 91
 REVIEWED M.B. 5/18/91

TH
↑
Disk
Island
0 50 100
meters

E:
Barnacle spat
and *Fucus* recruits
above oil

Oligochaetes
in pits,
4 polychaetes
under rocks

green
algae,
spine
barnacles

Mussels and
Barnacle
spat below
oiled zone

FaG:
MODERATELY DENSE
Recent Barnacle
spat, Few *L. horridus*,
limp *Oligochaetes* under
Rocks

H
Kelp
Beds offshore

A'
Fucus-Balanus
Ulva, Rhodomele
Pisaster + Pycnopodia
in lower zones

D
Large TIDAL Pool with Ulva
coralline algae, pagurids
chitons, nudibranchs
sculpins

ANGULAR BOULDER
TALUS WITH
PEBBLE-COBBLE
C:
Oligochaetes + green
algae

Ulva, *Urosalpinx*
Fridaea corallina
(algae)

Low ANGLED BEDROCK PLATFORM
WITH VENEER OF BOULDER TALUS

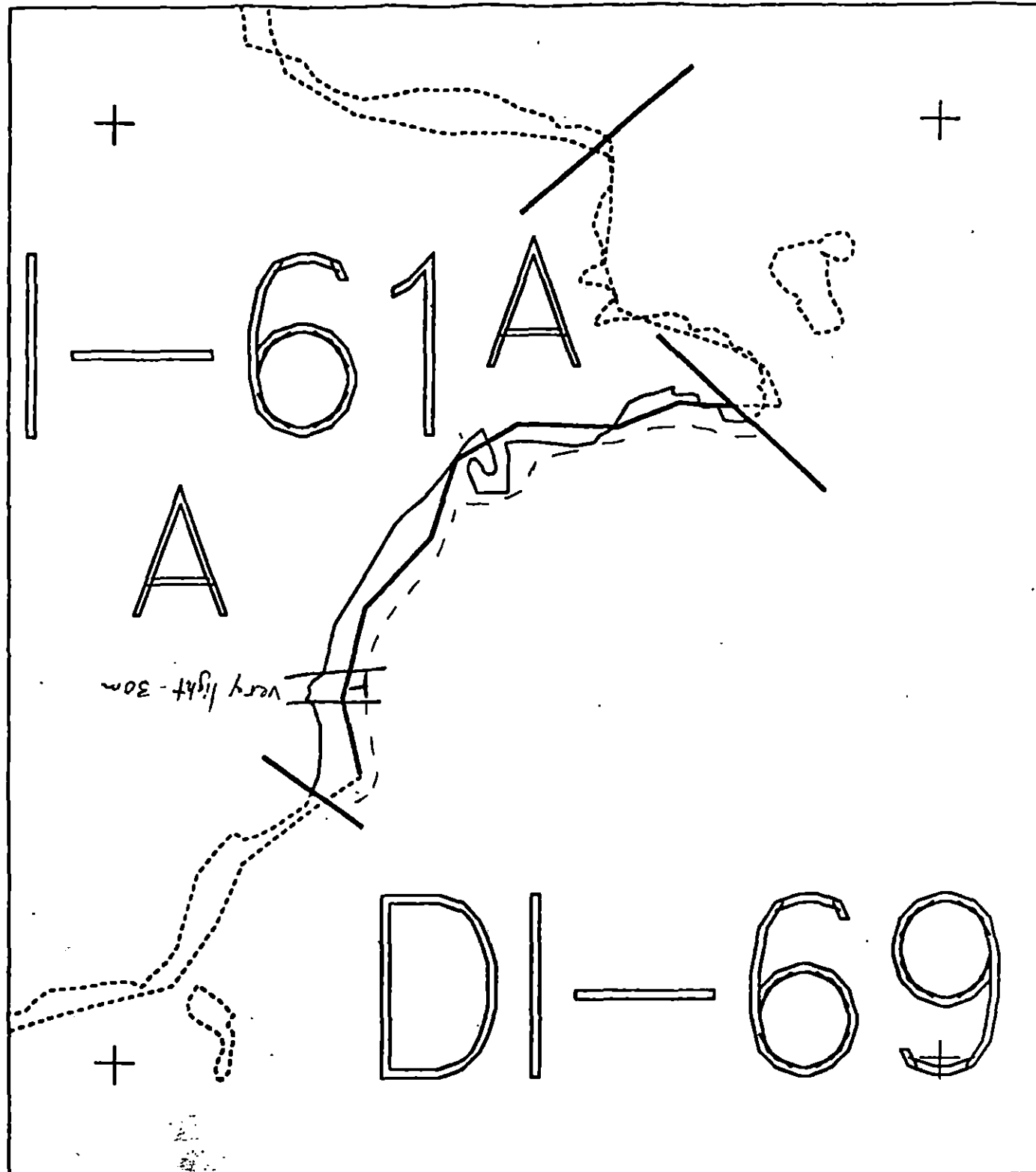
I: *Fucus* recruits, spat from fall 1990,
Nucella, spring spat higher
in ITZ. Oiled barnacles
(most alive) in oil zone

Roll OUTCROP
ANGULAR BOULDER
TALUS
ANGULAR
PEBBLE-
COBBLE
A' ← 35m → A

SKETCH MAP
DI 069-A
13-MAY-91
0620-0712

SMB 13 May 91

Revised N.B. 5/18/91



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

D1069 A
 ADEC Subsegment Length: 458m
 METERS
 0 100 200
 AK State Plane Zone 6
 6410000



Subdivision Field Map
 Map Key: KNID1069A
 Name: TRIMM
 Date: 13-MAY-91
 Date Entered:

• SURFACE OIL CATEGORY MAP •

revised 5.18.91 gy
 REVIEWED CD 18 MAY

1991 MAYSAP EVALUATION

SEGMENT: DI 069 **SUB:** A **REGION:** PWS **SURVEY DATE:** 5/13/91

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 _____

TEAM NO. 2 SEGMENT DI 69 SUBDIVISION A DATE 5/13/91

ADEC

NAME Peter MontesanoSIGNATURE [Signature]☐ NTR ☒ TREATMENT RECOMMENDED

PIT 4 was definitely OP, Pit 1 was Brown mousse MOR NOT LOR, and Pit 3 was HOR NOT MOR. The HOR lens around Pit 3 is tight and distinct in fine sediments below a thin, small Boulder cover. Remove HOR + associated AP with trawls (area B). Also Till the area by Pit 1. This area is a Protected Saddle. THE OP IN Area "I" is between Boulders and NOT easily accessible.

EXXON

NAME Chris F. SmithSIGNATURE [Signature]☒ NTR OG & BIO REPORTS ACCURATELY DESCRIBE CONDITIONS.

LANDMANAGER

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

This is a protected low energy beach. If treatment is fixed it is good access. The tide pools near (below) pit 1 show good recruitment. The oil in pit #4 is layered in bedrock and boulders and contains a good amount of peat. a good survey by OG & BIO

USCG/NOAA BMI H. R. ZENONE (CG)NAME D. SIMEONE - CGMTC NOAASIGNATURE [Signature]☒ NTR

Scattered small paramecia observed between boulder and under well known eye by members of the MAYSAP team. Due to the diverse biota within the tide pools below the area of Pit #1 and area D, no treatment recommended. DSB

CG - Good OG & BIO REPORT, BOTH ACCURATELY DESCRIBE THIS SEGMENT. I MONITORED BIOREMEDIATION ON THIS SEGMENT LAST YEAR. THERE HAS BEEN SIGNIFICANT IMPROVEMENT. I BELIEVE WE HAVE HELPED THIS AREA AS MUCH AS WE CAN. NO TREATMENT RECOMMENDED. 3

MAYSAF SHORELINE OILING SUMMARY

PAGE 1 OF 1TEAM NO. 2OG B. TrimmBIO S. BanSEGMENT DI-69ADEC P. MontesanoLANDMANAGER D. Kennedy for USFS
BUI ZERONESUBDIVISION AEXXON C. KatsimbalisUSCG/NOAA D. Simmel-BattyDATE MAY 13 1991TIME 06:20 to 07:12TIDE LEVEL -1.34 ft. to -2.44 ft.ENERGY LEVEL: ☒ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☒ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 456 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W 0 m M 0 m N 426 m VL 30 m NO 0 m US 0 m

LOC	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE V H M L	AREA		ZONE				NOTES
	AP	MS	TB	SOF	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A					P						R	V	1	6	x	x			
B	S			S				S			BPC	M	1	8		x			under PC veneer
C	C										BPC	M	1	1		x			under BPC veneer
D					P	P					R	M	1	28		x			
E					P	P					R	V	1	28		x			
F				S							PC	M	1	7		x			
G					S	S	S				PC	M	3.5	40	x	x			COVER BEHIND BOULDERS
H											R	V	1	22		x			
I	I										RB	M	3.5	30	x				on Low Angle Rock Platform
J							P				R	V	0.5	140	x				
K							P				R	V	0.5	140	x				
L							P				R	V	0.5	45	x				

DISTRIBUTION: C = 91-100%; B = 81-90%; P = 11-80%; S = 1-10%; T = <1%

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAF- 2 - 11 FRAMES 1-8

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	20				X				10-14	Y	—	—		X			PCB-PBP Flat	BEHIND OUTCROP
1B			X						14-18									
2	20							X	3-7	Y	17	S		X			P-PGS Flat	
3	15				X				0-10	Y	—	—		X			B-PG	UNDER BOULDER TALUS
4	11	FX							6-11	N	—	—		X			B-PG Flat	UNDER BOULDER TALUS
									-									H ₂ S odor
									-									
									-									
									-									

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

OG COMMENTS:

LOCATIONS A-H ARE IN A PROTECTED POCKET BEACH

LOCATION I IS AN ANGULAR BOULDER TALUS SHORELINE.

VERTICAL & HIGH ANGLED ROCKY SHORES IS FOUND THROUGHOUT REST OF SUBDIVISION.
THE OIL IN PITS #1 & 4 IS HARD TO DESCRIBE WITH THE FLAT & ORGANICS.

revised 5.18.91 44

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 13 May 91
 SEGMENT # DE-69 TIDAL HEIGHT (Range) -2 to -3 Ft
 SUBDIVISION A- BIOLOGIST S. BAN
 SEA STATE Calm WIND SPEED/DIRECTION Calm
 PHOTOGRAPHS: ROLL # NA FRAME # NA

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

A: Mussels and Barnacle spat below weathered oil on Pillow
 basalt face

B+C: Sparse Adult barnacles and green algae on cobbles near
 Pit #3 Pits dug higher in intertidal expose amphipods (beach
 hoppers) and white polychaetes or polychaetes. Patches of
 black grass, lichen & moss in areas of oil skin

D: Area below oil band supports rich and diverse tidal pools. One
 large pool contains numerous sculpins, hermit crabs, chitons
 (Tubicella) limpets and an eelgrass branch (Phidiana crassicornis)

E: Recently settled barnacle spat and Fucus recruits on pillow
 basalt face above the oil band

F+G: Pebble/cobble beach - moderately dense recently settled spat, Few
 Littorinids + limpets. Dense Pycnopodia + Pisaster in lower zones

H: Kelp Beds offshore - steep Boulder zone Fucus - Balanus zonation

I: Mosses buried beneath cobbles supporting Fucus recruits and 1990 Barnacle
 spat. Dogwells (Nucella) spotted near the pit. Small juvenile Littorinids
 and limpets in this zone. Oiled Barnacles & barnacle scars evident.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			Sculpins ± 10 ind.
Seabirds			
Waterfowl			
Gulls/Kittiwakes	1	± 8	
Shorebirds			
Corvids			
Other Birds			

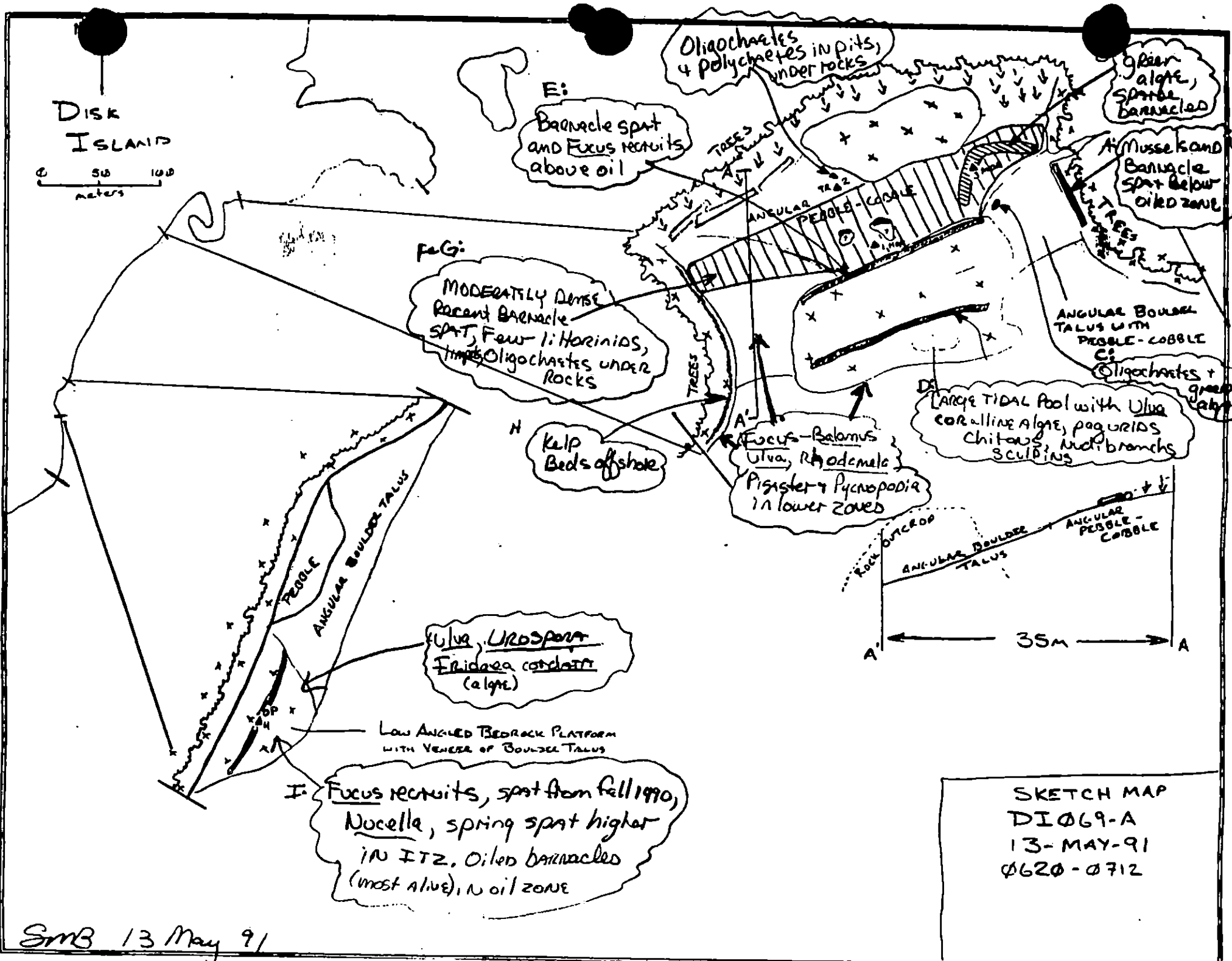
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	1	/	/
Pinnipeds (specify)		/	/
_____les (specify)		/	/
		/	/

Shoreline subdivision map showing important biological features attached.

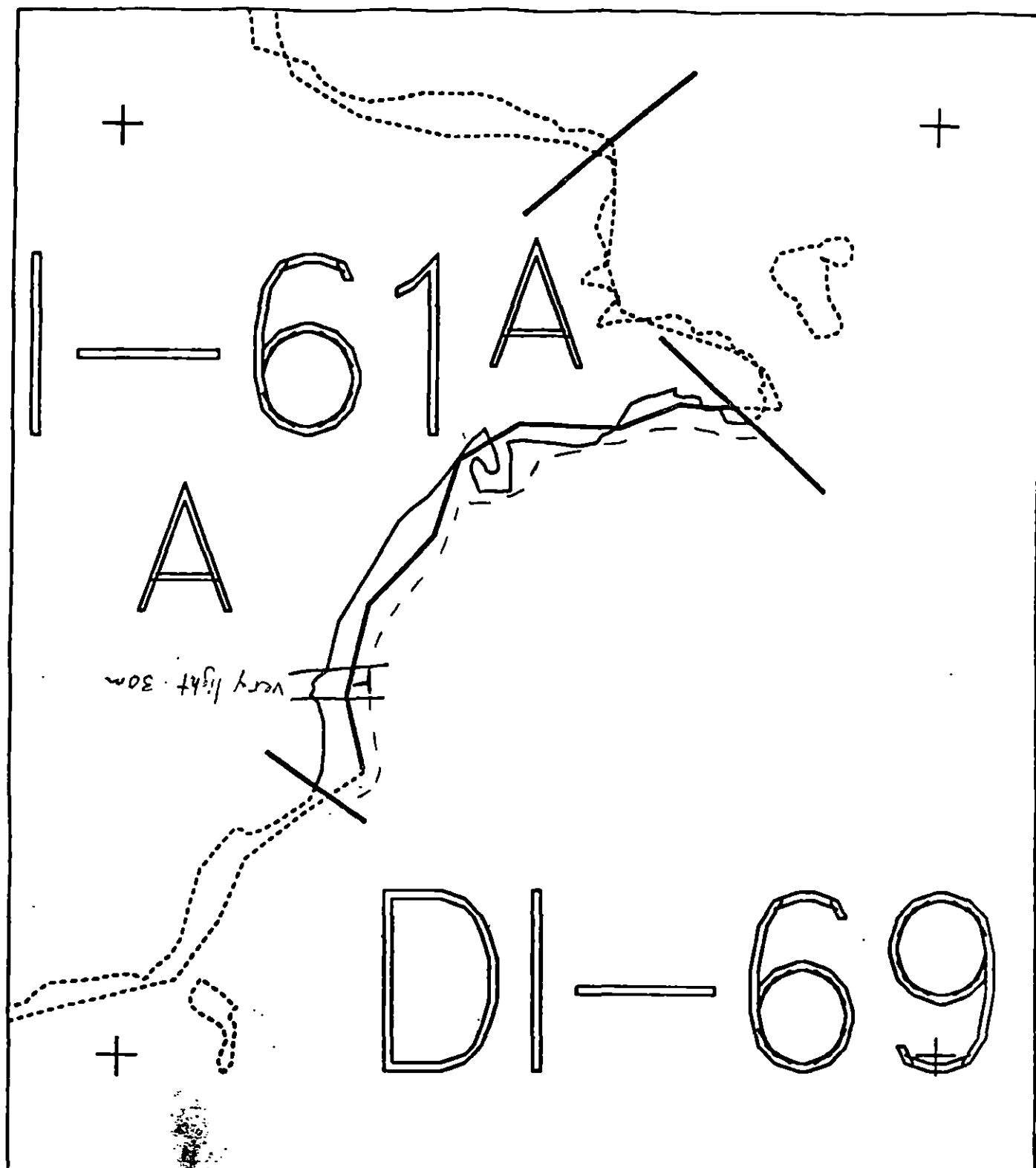
REVIEWED 16 MAY 91
 0 1 2 1 1

DISK ISLAND

0 50 100
meters



SMB 13 May 91



XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

DI069 A
ADEC Subsegment Length: 450m
METERS
0 100 200
AK State Plane Zone 6
6d1069a



Subdivision Field Map
Map Key: KNID1069A
Name: TRIMM
Date: 13-MAY-91
Date Entered:

° SURFACE OIL CATEGORY MAP °

revised 5.18.91 gy
REVIEWED CD 18 MAY

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/DW-01

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ DW-01 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 224-40-14910 rev. 10/84

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

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

6U Recreation: Tent sites (6/1 to 9/15)

Plus one uncatalogued anadromous stream.

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 0 m: Narrow 0 m: V.Light 133 m: No Oil 8679 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

X No Treatment Recommended
_____ Treatment Recommended
_____ Manual Pickup
_____ Bioremediation
_____ Tarmat Removal

_____ Snare/Absorbent Booms
_____ Oil Snares (pom poms)
_____ Absorbents (pads, rolls, etc)
_____ Spot Washing: _____ Wands
_____ Beach Cleaner
_____ Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

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

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. 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.

✓ Recreation: Tent sites (6/1 to 9/15)

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

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

6X Lodge (6/1 to 9/15)

6Y Special use destination

7Z Subsistence area: Salmon harvesting (5/1 to 9/30)

7HH Finfish harvesting

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

7JJ Invertebrate harvesting

For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / DW-001 SUBDIVISION: A DATE 4/19/90

SCG
NAME SCOTT RAMSEY SIGNATURE Scott Ramsey 19571

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC
NAME Lori Stratton SIGNATURE Lori Stratton

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Segment consisted of predominantly bedrock granite slabs and pocket beaches of white sand/gravel. Some locations had VL tarball splashes and mouse patches on surface sediments. Cover and coat were observed over $\approx 1m^2$ area. In 5-6 areas, HIT tarballs were picked up, amounting to ≈ 2 liters. At one location, 6-10 tarball patches were broken up & dispersed into sediments.

Mussel mortality was high at the cobbled beginning section of beach with tidal flat (sketch #1).

No treatment is recommended due to insignificant amount of oil present on segment

LAND MANAGER

NAME U.S. Forest Service SIGNATURE Don Taylor

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Conditions described by ADEC. Suspect scattered splashes in Rock/Boulder area's are could not access. Not enough oil to require manpower or equipment. - Continue Natural Cleaning. - Don Taylor

Deep Water Bay receives significant public use. The oil present is hard to spot by the untrained eye and the majority of it is found on the boulders and bedrock, not on the beaches. Very remote chance of contamination to visitors or their equipment. No treatment recommended.

Lateh Canlan

Paul Graham

ABNR

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

OG G. MacDONALD USCGS RATNSFORD SEGMENT ST/ DW-1
 BIO MA. SCOTT LAND REP LEO KEELE NFS SUBDIVISION A (1 OF 1)
 EXXON J. BUTLER ADEC L. STRATTON TIME 12:30 to 16:35
 TEAM NO. 347 TIDE LEVEL +5 to +2 DATE 1 / 1 / 90
 ST. SUBDIVISION LENGTH: 8,696 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 ISLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 80 % B 5 % C 5 % P 1 % G 7 % S 1 % M 1 % V 0 %
 SLOPE: Long 5 % Hang 20 % Vert 75 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 100 m NO 8596 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	B	P	S	SL	SP	GP	GL	GR	TR	LR	BR	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER				X	X								X			
COAT				X	X								X			
STAIN																
MOUSSE																
PATTIES																
TARBALLS				X	X								X	X		
FILM																
NO OIL													X	X		

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE Pumpkin & TB#BAGS 1

Photographs:

ST-3-3
Roll No. ST-4-21,2
Frames 1-4

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	20% SP	20% GP	20% GL	20% GR	20% TR	20% LR	SU	U	M	U						
1	40					X	-											X						22	GS
2	40					X	-											X						-	GS
3	50					X	-										X							-	GS
4	20					X	-												X					17	GS
5	25					X	-													X				10	GSM
6	10					X	-											X						0	M, Veg.

COMMENTS Pristine embayment set in granite cliffs. Surface oil as rare tarballs (>90% vegetation) @ MITZ-SUITZ Especially on small granule pocket beaches; 1m² cover behind boulder. All surface oil collected or broken-up by SCAT Teams. No subsurface oil.

REVIEWED 7W DATE 5/1/90

SHORELINE OILING SUMMARY (PAGE 2)

SEGMENT ST/ DAN-1 SUBDIVISION A (1 OF 1)

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	GREEN S S	(Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	10/10	5/5	1/1	1/1	1/1	1/1	20	U	M	U					
7	30					X	---										X						-	PGM
8	40					X	---											X					-	GM
9	20					X	---												X				-	MSC
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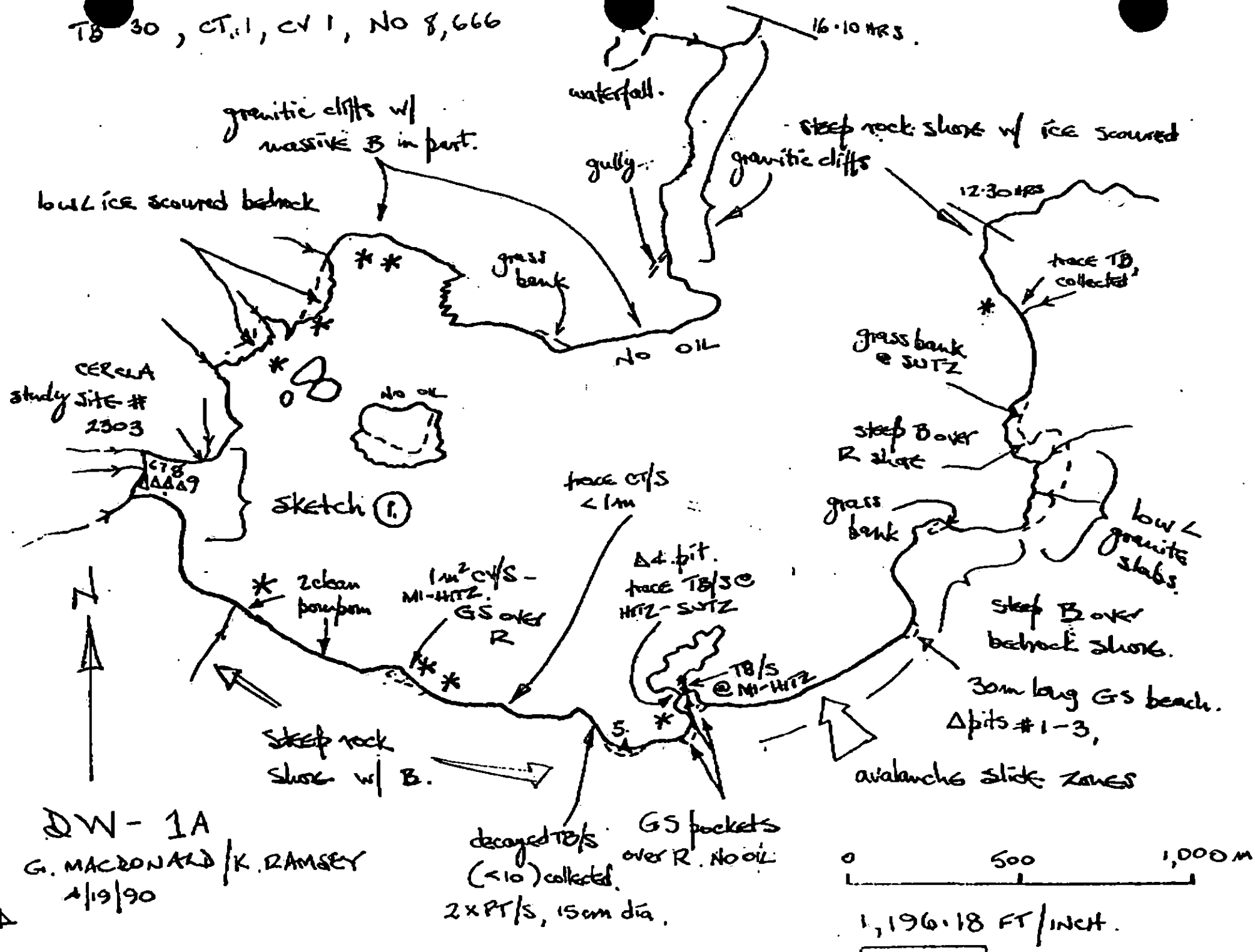
COMMENTS

Teams 3 & 4 surveyed Deep Water Bay in a joint effort.

This area had no prior SCAT activity.

REVIEWED JW DATE 5/1/90

TB 30, CT 1, CV 1, No 8,666



SKETCH ①

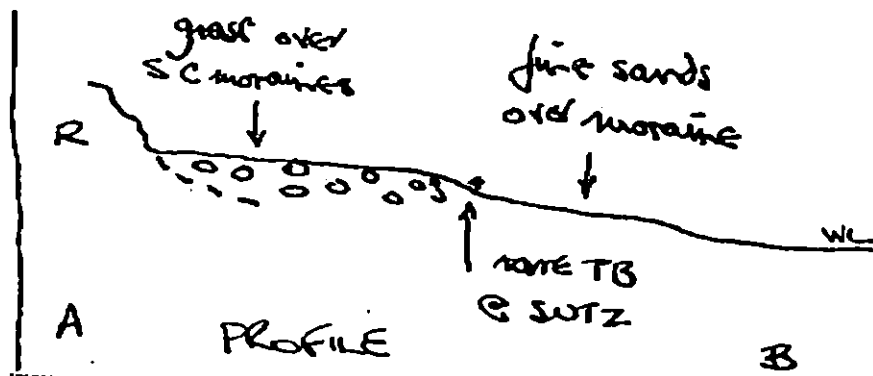
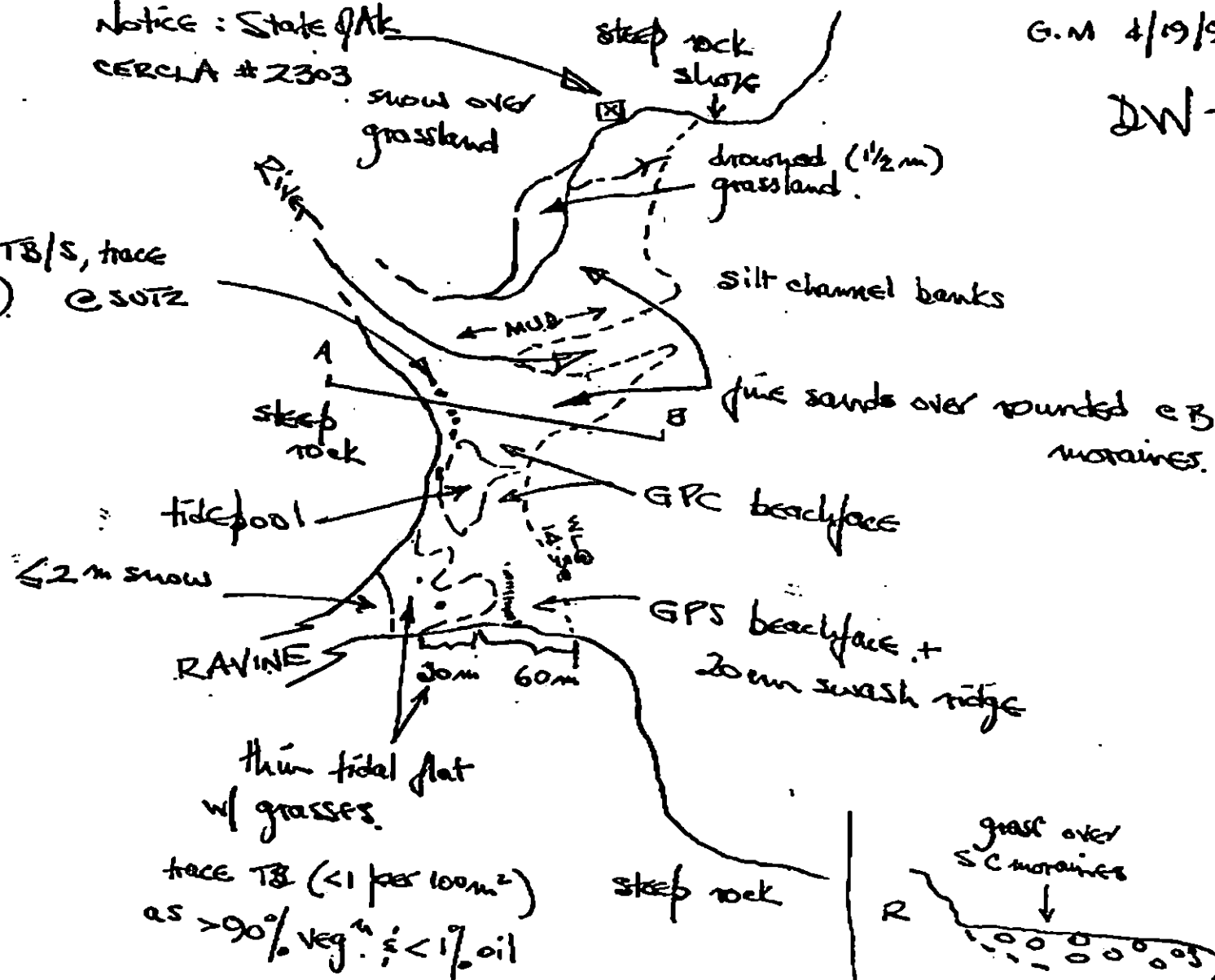
G.M 4/19/90

DW-1A partial.

Notice: State of Ark

CERCLA #2303

TB/S, trace
(1/10m) @ SUTZ



SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/74

Segment ST/ DW-1 Subdivision A Date (mo / day / yr) 04/19/90

Time (24 hr) 12:35 Biologist PENN/Scott

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

(B) Overall % cover of biota (% of segment): Dense 50 Moderate 10 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: ST-4-2, 4, 5, 6
Roll No. ST-4-2, 4, 5, 6

Frames 3 & 4; 1+2

BARNACLES

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

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

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

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

NOT PRESENT

MYTILUS

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

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

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

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

NOT PRESENT

GASTROPODS

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

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

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

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

NOT PRESENT

FUCUS

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

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

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

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

NOT PRESENT

Wildlife Observations/ General Comments:

1 Eagle (juvenile)
6 Sea otter
11 Golden eyes

1 Red necked Grebe
17 Swans
3 Seal

1 Bear Scot
7 gulls
3 crows

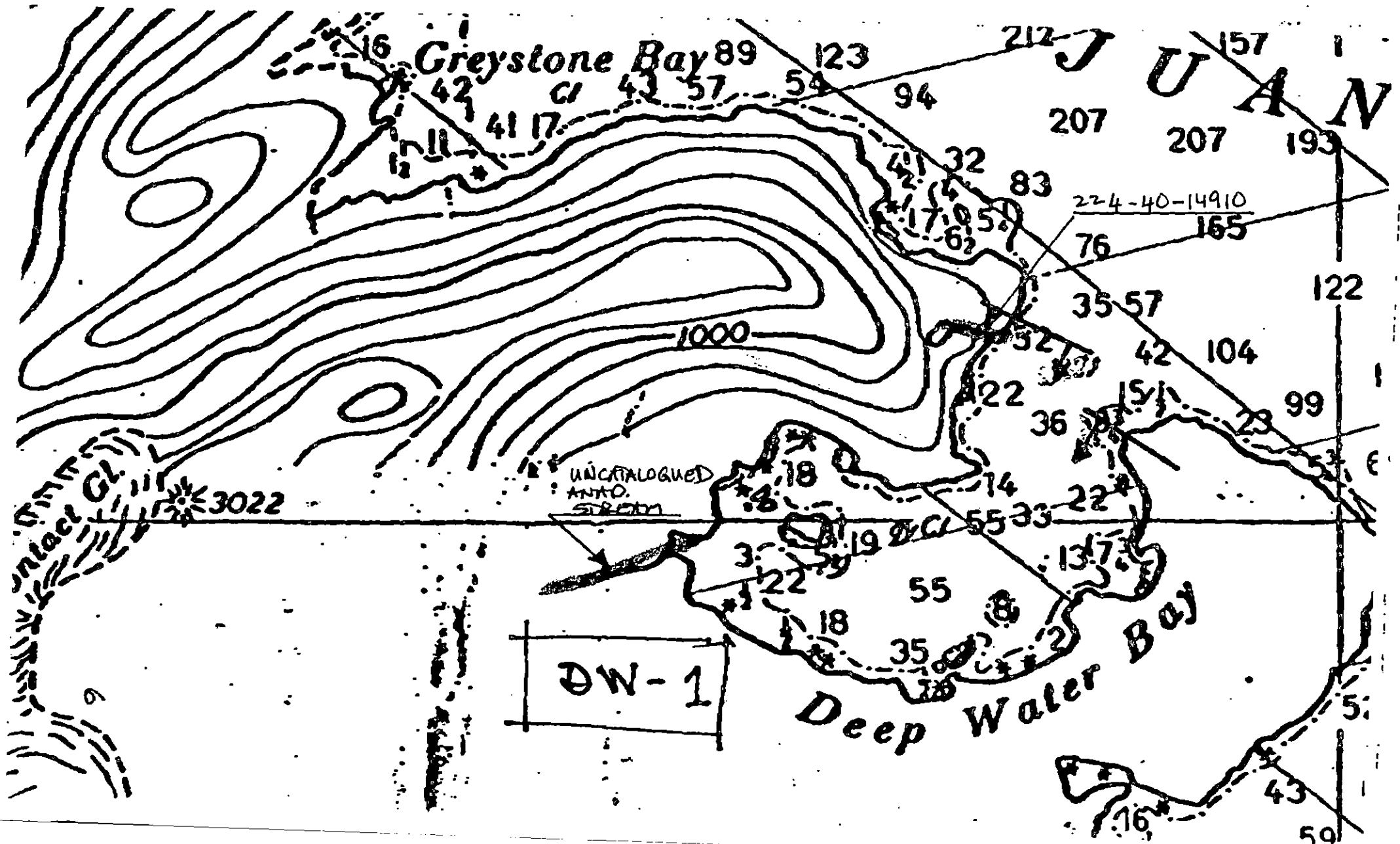
Ecological Considerations:

- robust Biotic Communities - Low diversity probably due to Granite substrates.

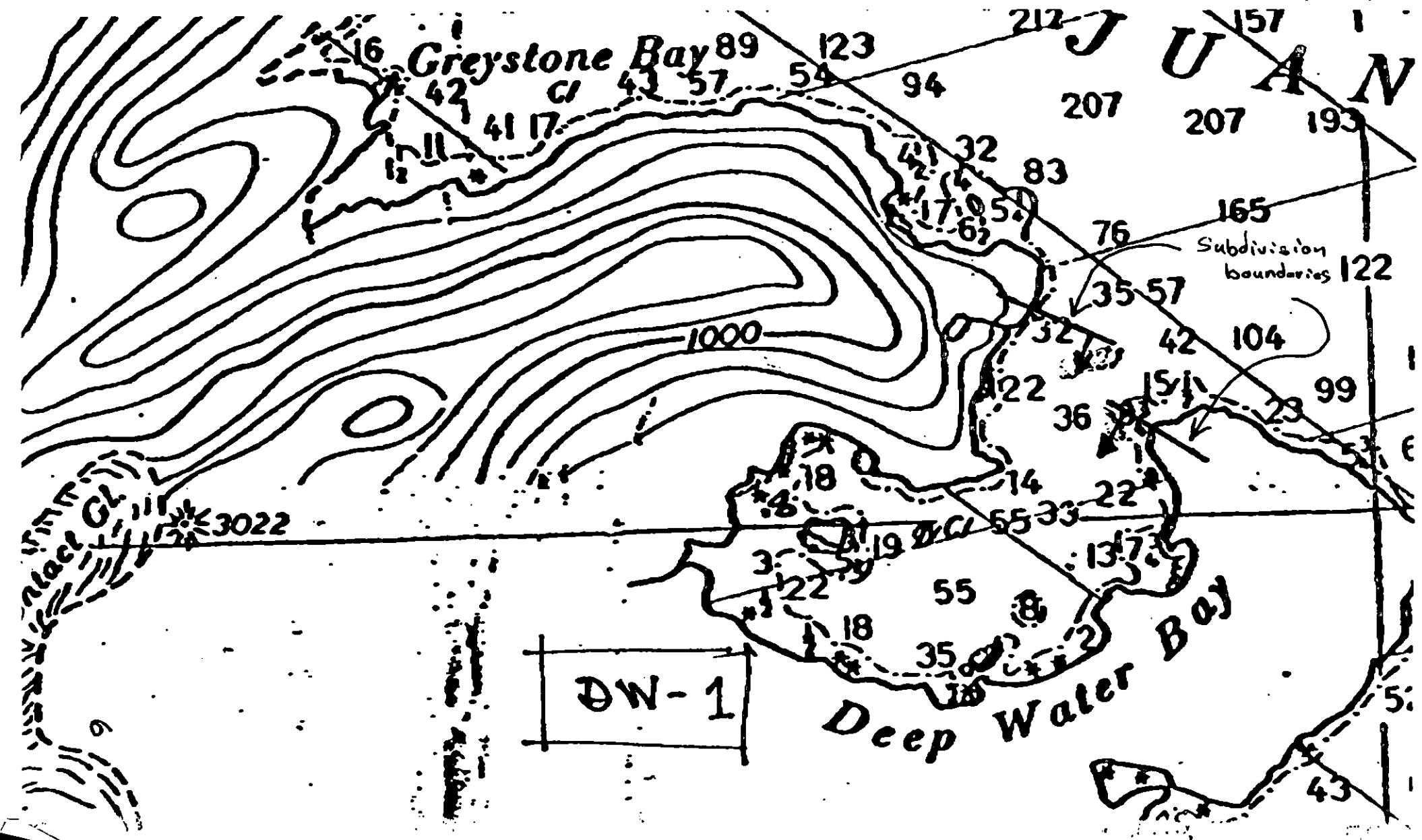
- 2 streams - possible anadromous at back (west) of bay
- Mytilus - only in crevices of rock & boulders (no large beds); high mortality (~50%) in cobble areas, no apparent sign of oiling

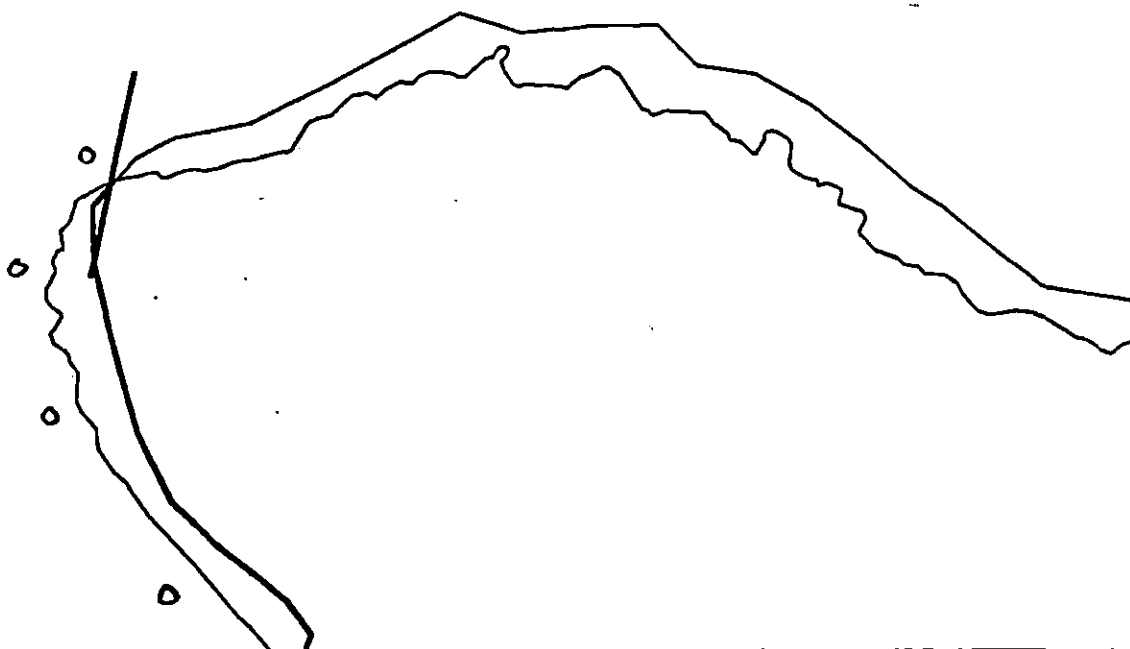
ECOLOGY MAP

REFERENCE MAP FOR ST/DW-1.



REFERENCE MAP FOR ST/DW-1.





XXXX Wide

DW-1

/// Medium

Approx. Segment Length: 6173m

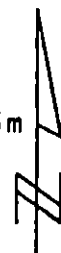
-- Narrow

TTTT Very Light

0000 No Oil



METERS

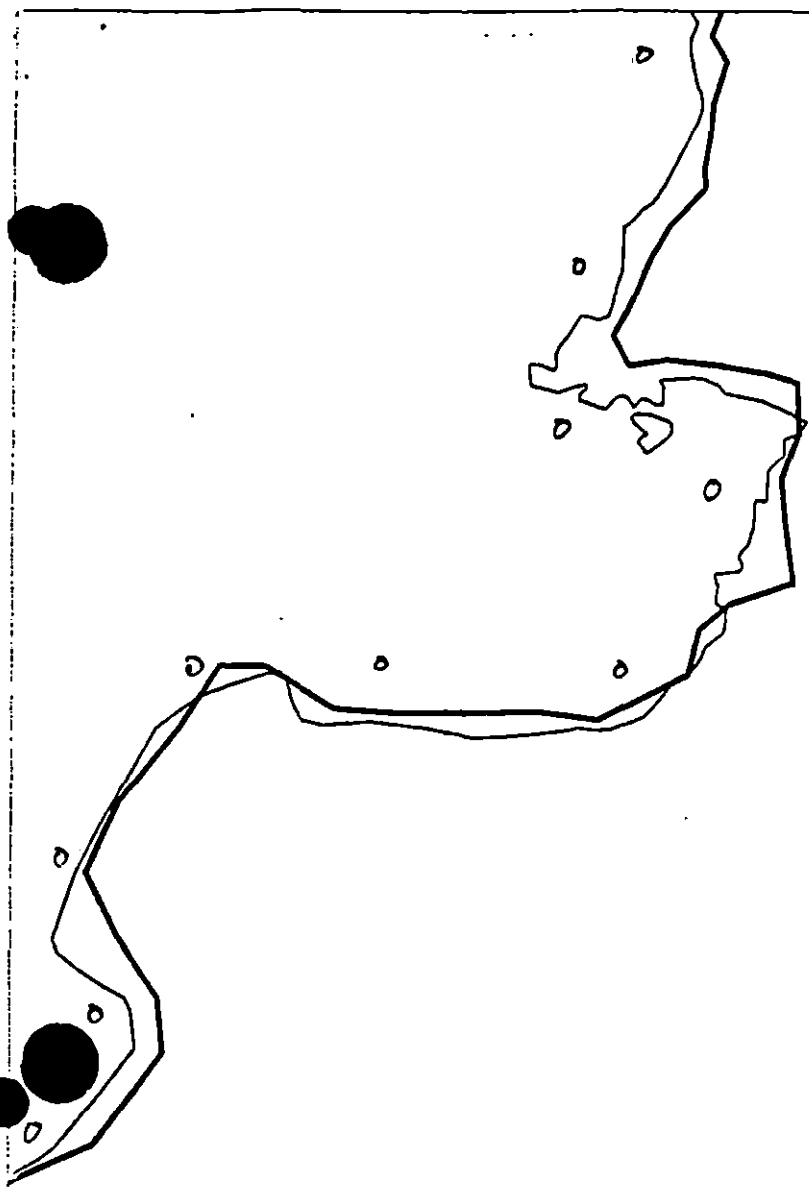


Map Key: PWS-DW-1f

Name: _____

Date: _____

Data Entered: _____



XXXX Wide

/// Medium

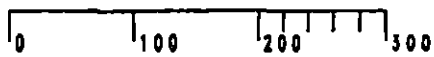
--- Narrow

TTTT Very Light

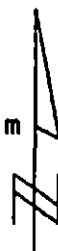
0000 No Oil

DW-1

Approx. Segment Length: 6173m



METERS

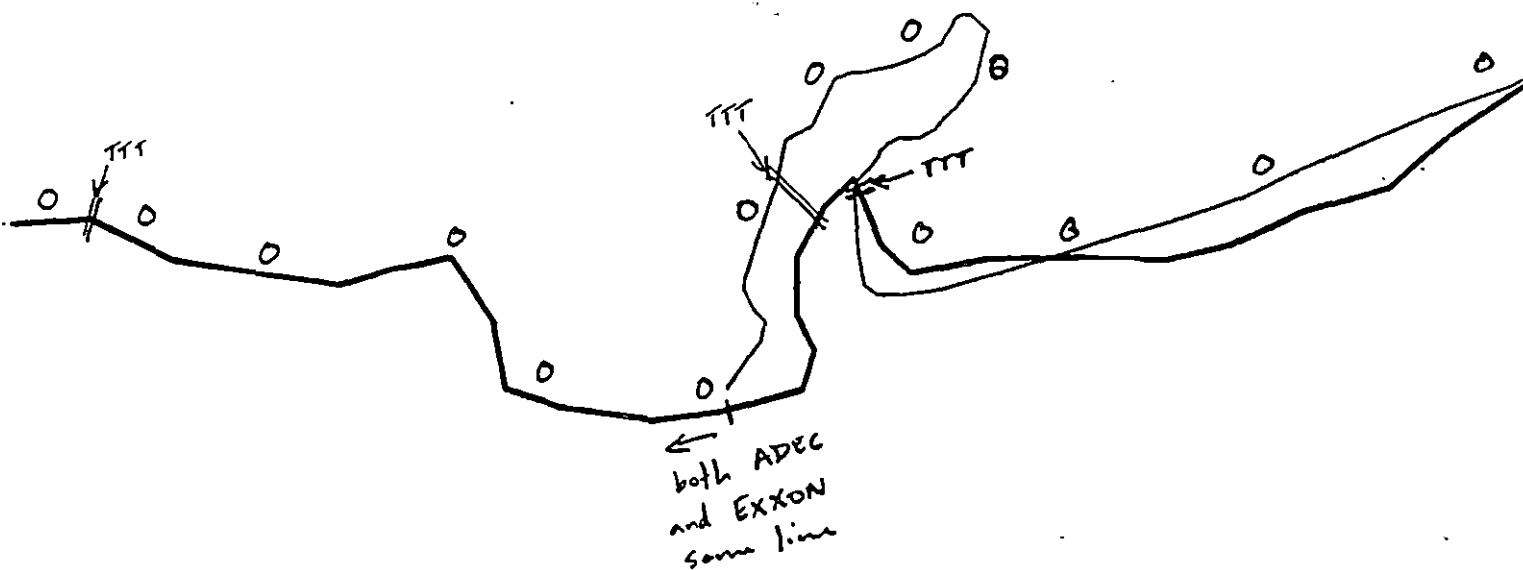


Map Key: PWS-DW-1c

Name: _____

Date: _____

Data Entered: _____



XXXX Wide

/// Medium

---- Narrow

TTTT Very Light

0000 No Oil

DW-1

Approx. Segment Length: 6173m

0 100 200 300

METERS

Map Key: PWS-DW-1b

Name: _____

Date: _____

Data Entered: _____



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

DW-1

Approx. Segment Length: 6173m

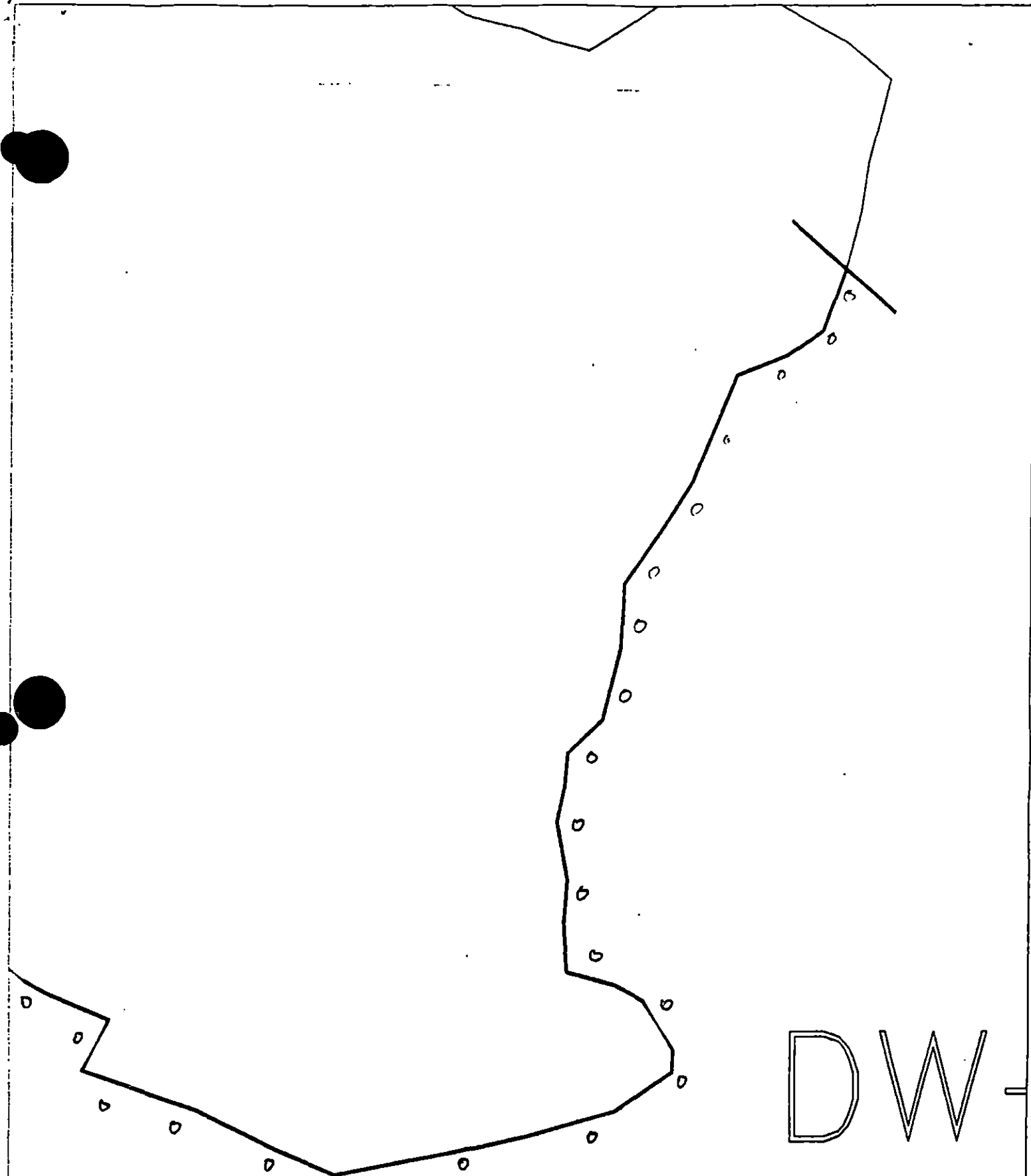
0 100 200 300
METERS

Map Key: PWS-DW-1a

Name: _____

Date: _____

Data Entered: _____



DW-

DW-1

XXXX Wide

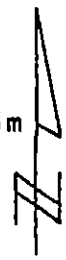
/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

Approx. Segment Length: 6173m



Map Key: PWS-DW-1e

Name: _____

Date: _____

Data Entered: _____

SHORELINE EVALUATION

SEGMENT ST/ DW-01 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 224-40-14910 rev. 10/84

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

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

6U Recreation: Tent sites (6/1 to 9/15)

Plus one uncatalogued anadromous stream.

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: J. Daniel McManus DATE: 5/8/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 133 m: No Oil 8679 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/8/90

ADEC Art Weiner Art Weiner

EXXON Andy Tate Andy Tate

NOAA Gary Peterson Gary Peterson

USCG G.A. Reiter G.A. Reiter

FOSC: ML DATE: 5-12-90

4

4/19/90

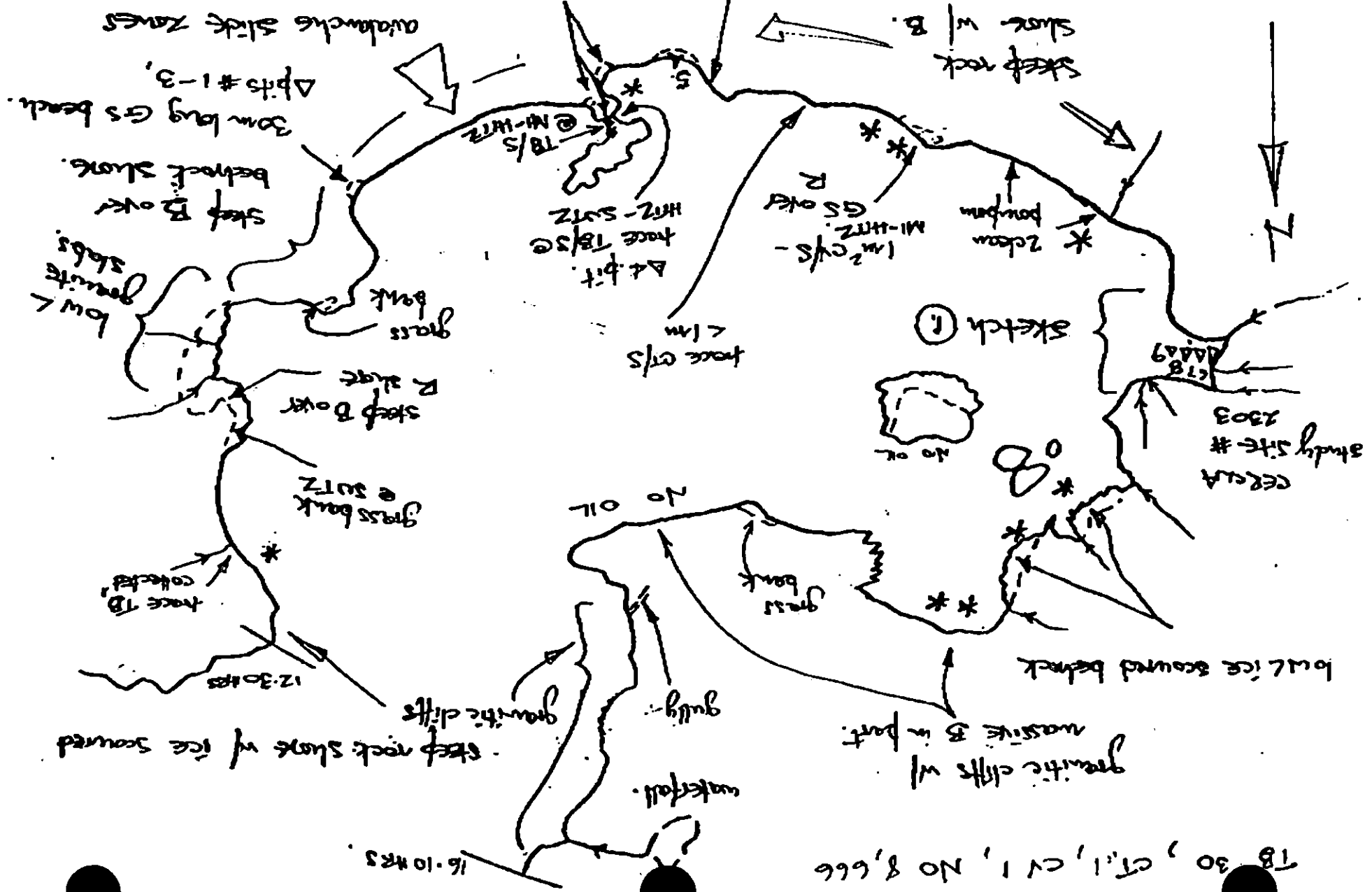
DW-1A
G. MACDONALD / K. RAMSEY

2 x RT's, 15 cm dia.

decayed TB's
(< 10) collected
over R. No oil.

1,196.18 FT/INCH

0 500 1,000 M



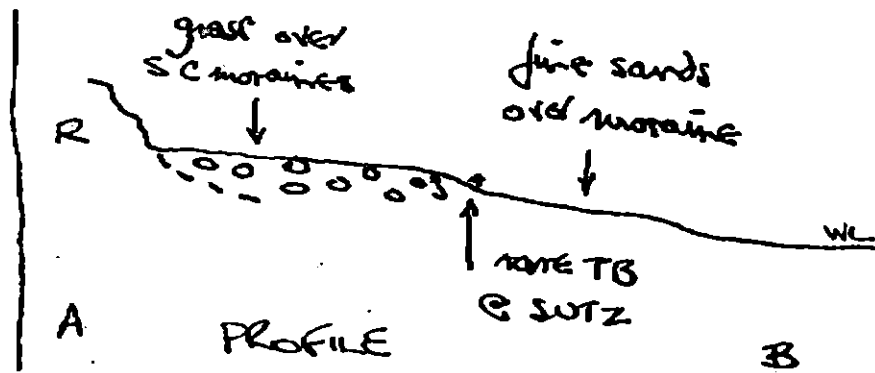
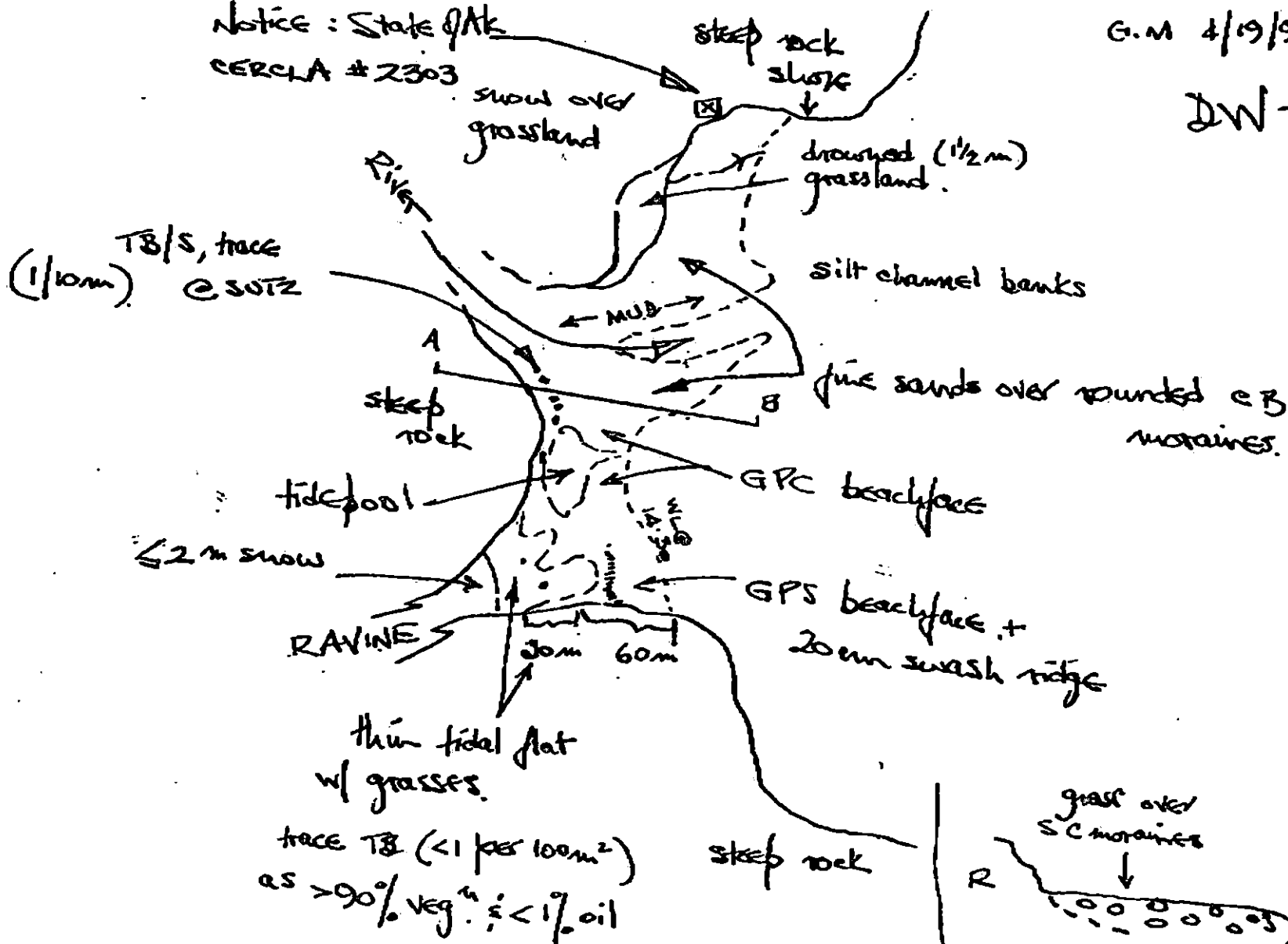
SKETCH ①

G.M 4/19/90

DW-1A partial.

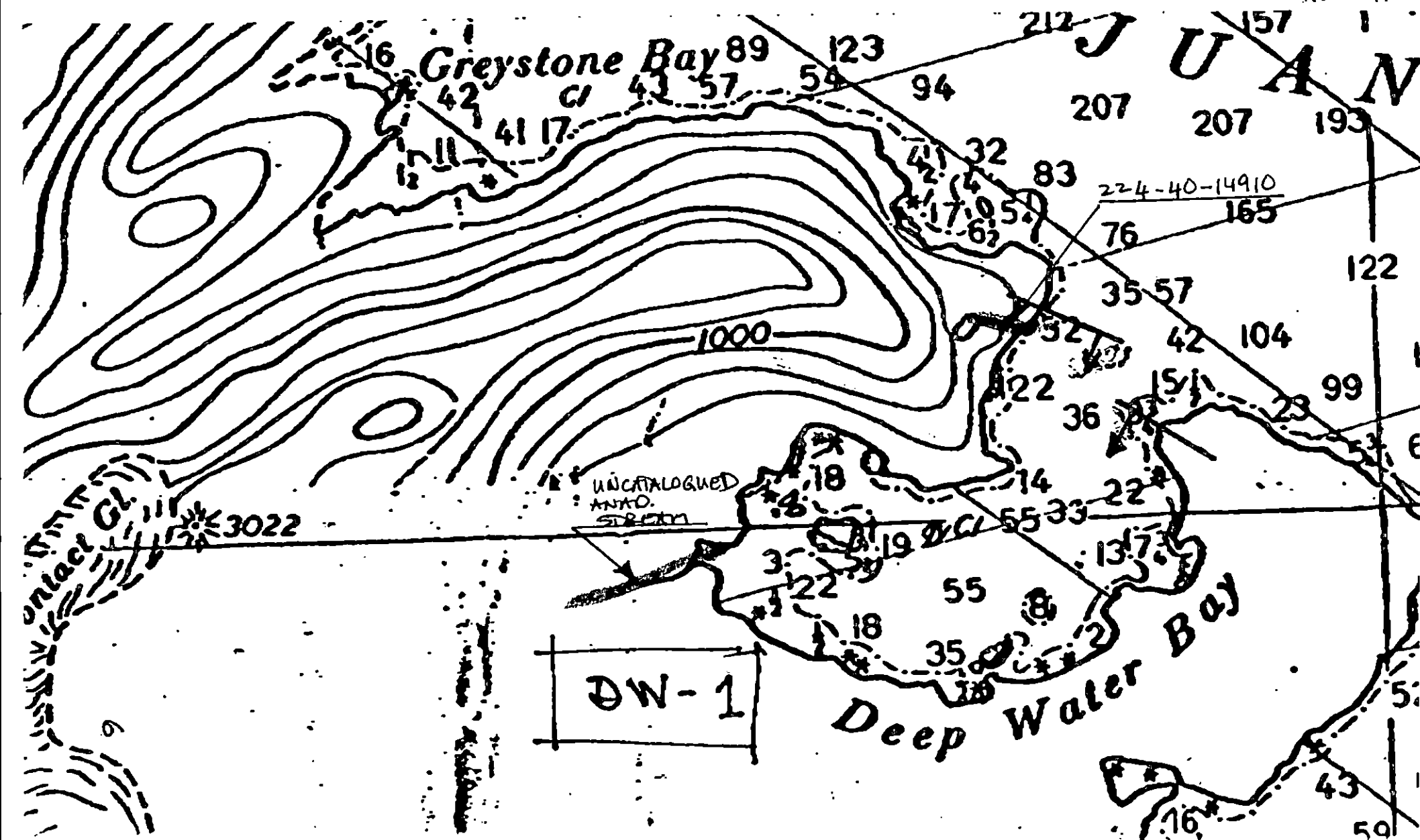
Notice: State QAtk

CERCLA #2303

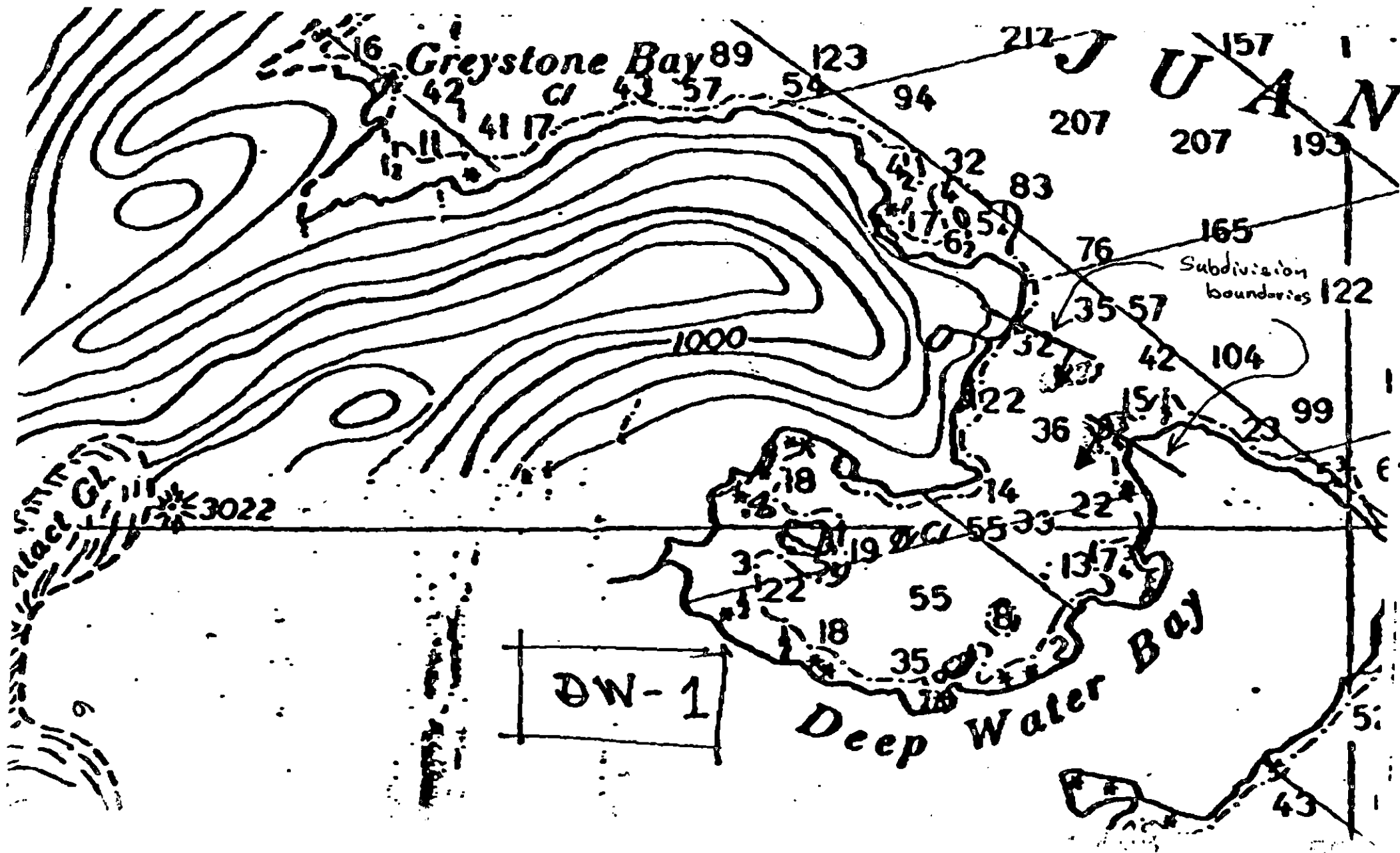


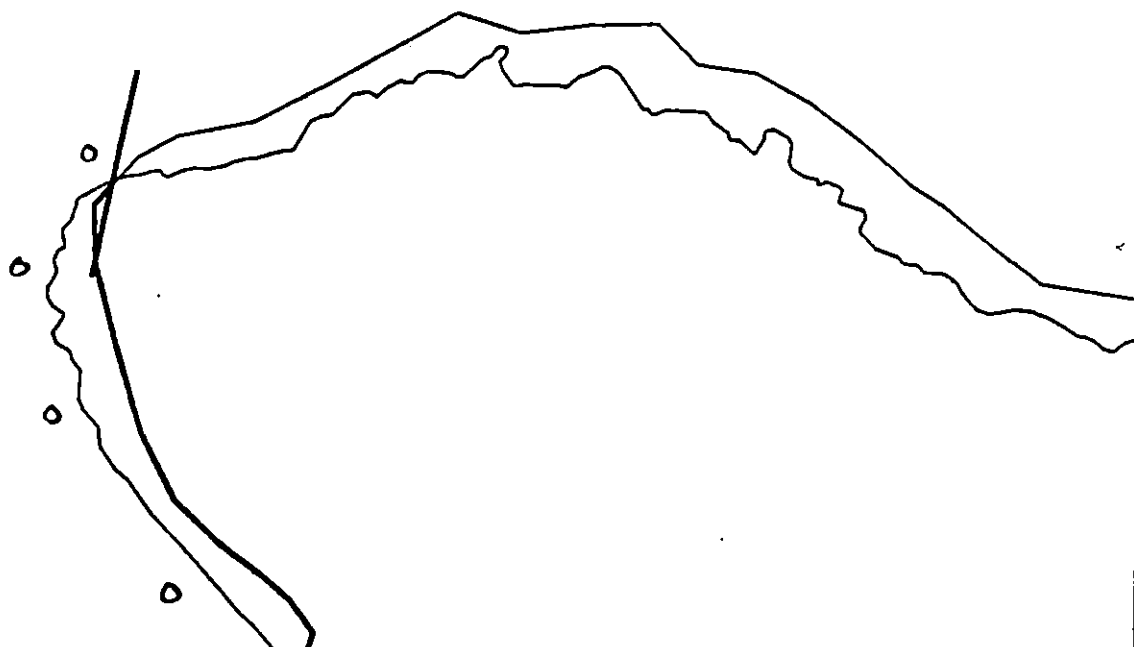
ECOLOGY MA

REFERENCE MAP FOR ST/DW-1.



REFERENCE MAP FOR ST/DW-1.





XXXX Wide

/// Medium

-- Narrow

TTTT Very Light

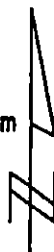
0000 No Oil

DW-1

Approx. Segment Length: 6173m



METERS

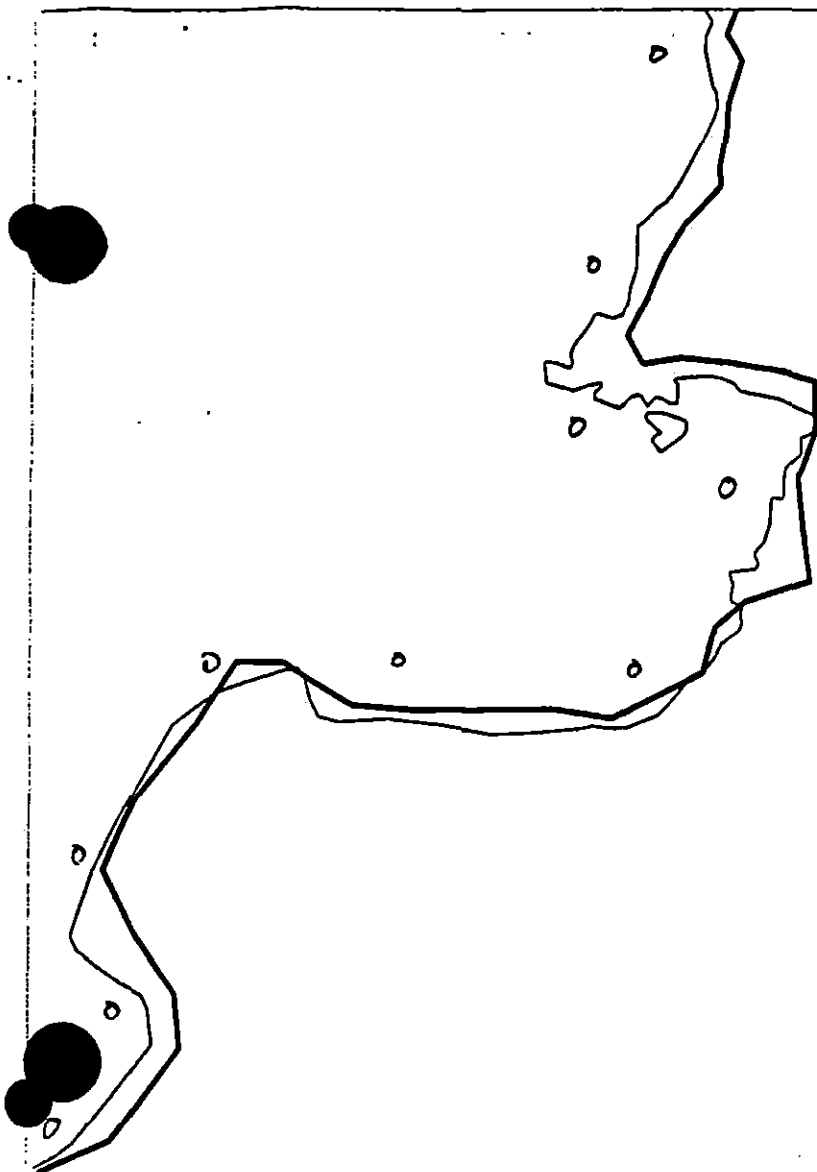


Map Key: PWS-DW-1f

Name: _____

Date: _____

Data Entered: _____



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

DW-1

Approx. Segment Length: 6173m

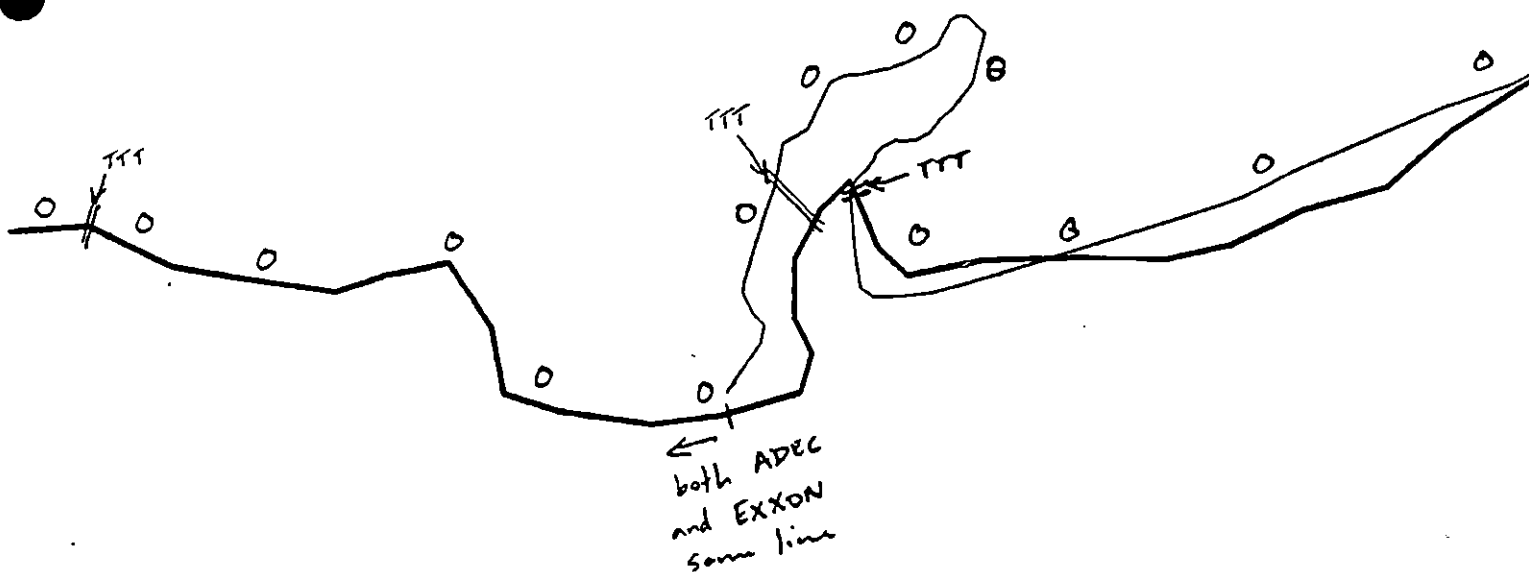


Map Key: PWS-DW-1c

Name: _____

Date: _____

Data Entered: _____



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

DW-1

Approx. Segment Length: 6173m

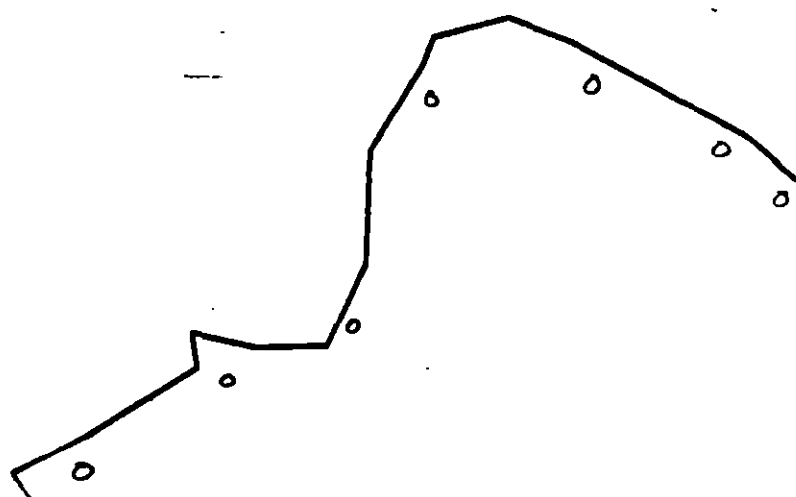


Map Key: PWS-DW-1b

Name: _____

Date: _____

Data Entered: _____



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

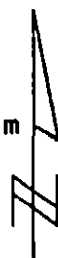
0000 No Oil

DW-1

Approx. Segment Length: 6173m

0 100 200 300

METERS

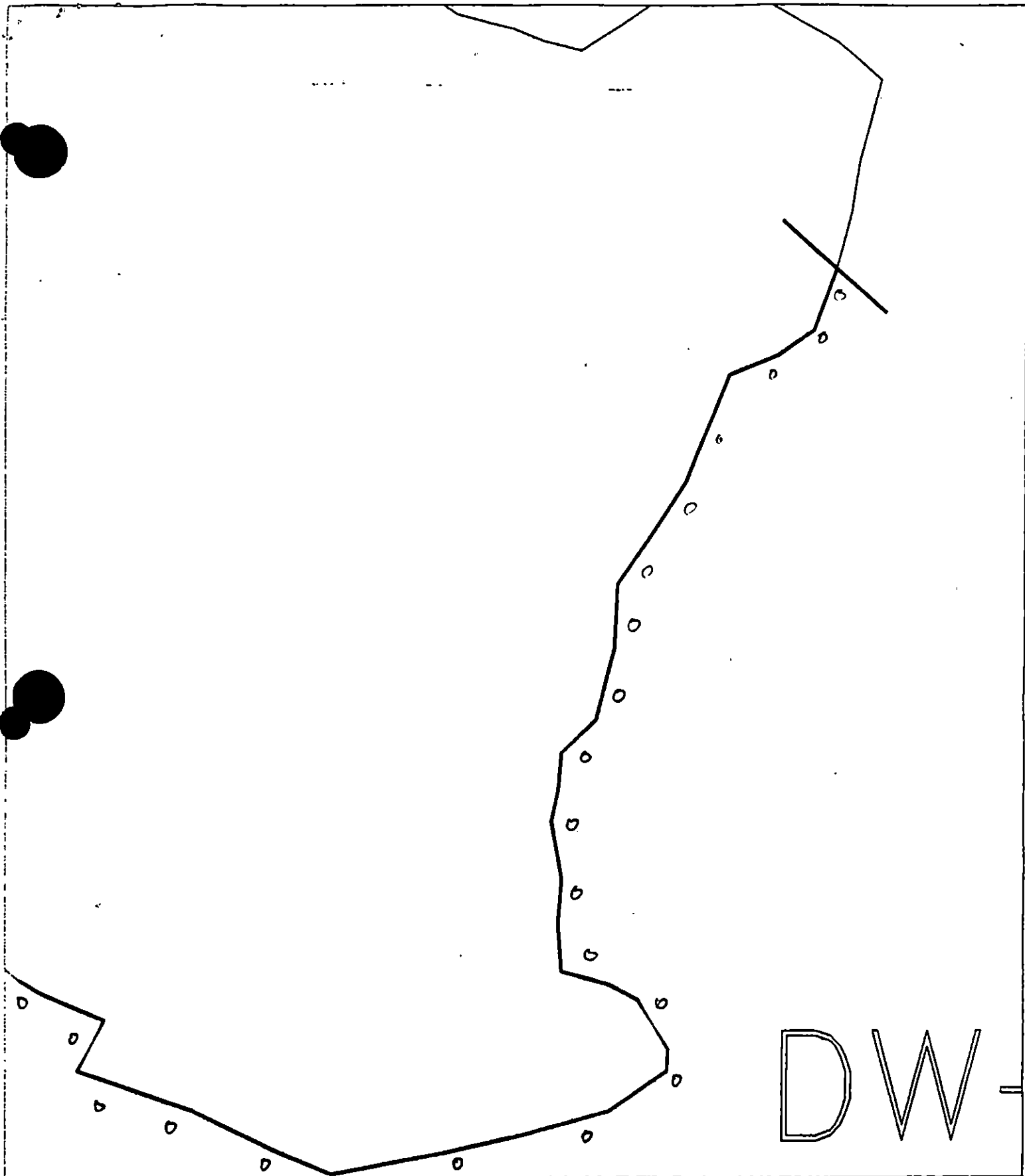


Map Key: PWS-DW-1d

Name: _____

Date: _____

Data Entered: _____



DW-

XXXX Wide

DW-1

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

Approx. Segment Length: 6173m



Map Key: PWS-DW-1e

Name: _____

Date: _____

Data Entered: _____

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EB-01

SUBDIVISIONS: A (1 OF 2)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

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

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

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 / EB-1 SUBDIVISION: A (8 IS SEPARATE) DATE 4/2/90

CG
NAME GARY OTT SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC EBEL
NAME MICHAEL J. [Signature] SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

EB-1-A

LAND MANAGER - USDA FOREST SERVICE
NAME DON J. BREITINGER SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

EB-1 Sub A

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Randy McBride ~~USCG~~ NOAA Gary Ott SEGMENT ST/ EB-1
 BIO Lewis sherman LAND REP/ USFS Van Breitinger SUBDIVISION A (1 of 2)
 EXXON Leonard Herbert ADEC Mike Ebel TIME 14:55 to 15:15
 TEAM NO.: 12 TIDE LEVEL: 1.25' to 1.75' DATE 4/2/90
 EST. SUBDIVISION LENGTH: 383 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: North to South
 SURFACE SEDIMENTS: R 15 % B 25 % C 35 % P 20 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Long 25 % Hang 40 % Vert 35 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 298 m
85

SURFACE OIL

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

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

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? ☒ BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. ST-12-3

Frames 7-9

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS		
		OP	OR	OL	OF	NO		UO	UC	BL OR BR	BL OR BW	GY OR BL	GRN OR BL	YEL OR BL	SU	U	M	L					
1	40					X	-		X							X							Pg photo 1
2	30				X		15-18		X				X				X						Pgs photo 2
							.																
							.																
							.																
							.																

COMMENTS

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

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / EA-1 Subdivision A Date (mo / day / yr) 4/2/90Time (24 hr) 1453-1515 Biologist SHARMAN

(A) Substrate type and % of ~~segment~~ ^{subdiv.} granule
 (1) Bedrock 15 (2) Boulder 25 (3) Cobble 35 (4) Pebble 20 (5) Sand 5 (6) Silt

(B) Overall % cover of biota (% of ~~segment~~ ^{subdiv.}): Dense Moderate X Low

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

Photographs:
 Roll No. ST-12-3

Frames None

BARNACLES

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

MYTILUS

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

GASTROPODS (ALCELLA, LITTORINA, LIMPETS)

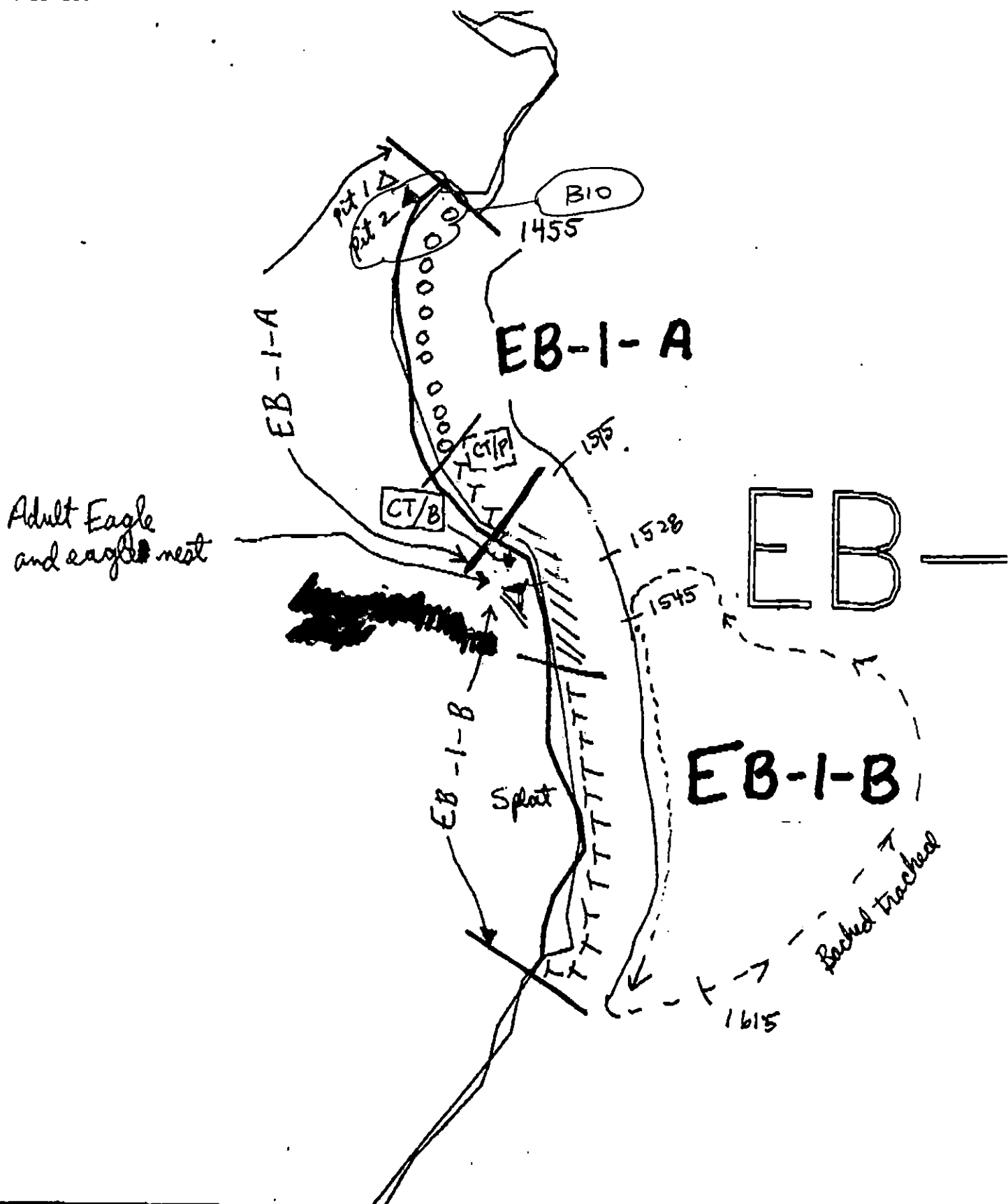
Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

FUCUS

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

Wildlife Observations/ General Comments: 1 adult eagle, 1 raven, 1 crow. Intertidal community appears normal and healthy.

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



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EB-1

ADEC Segment Length: 965m



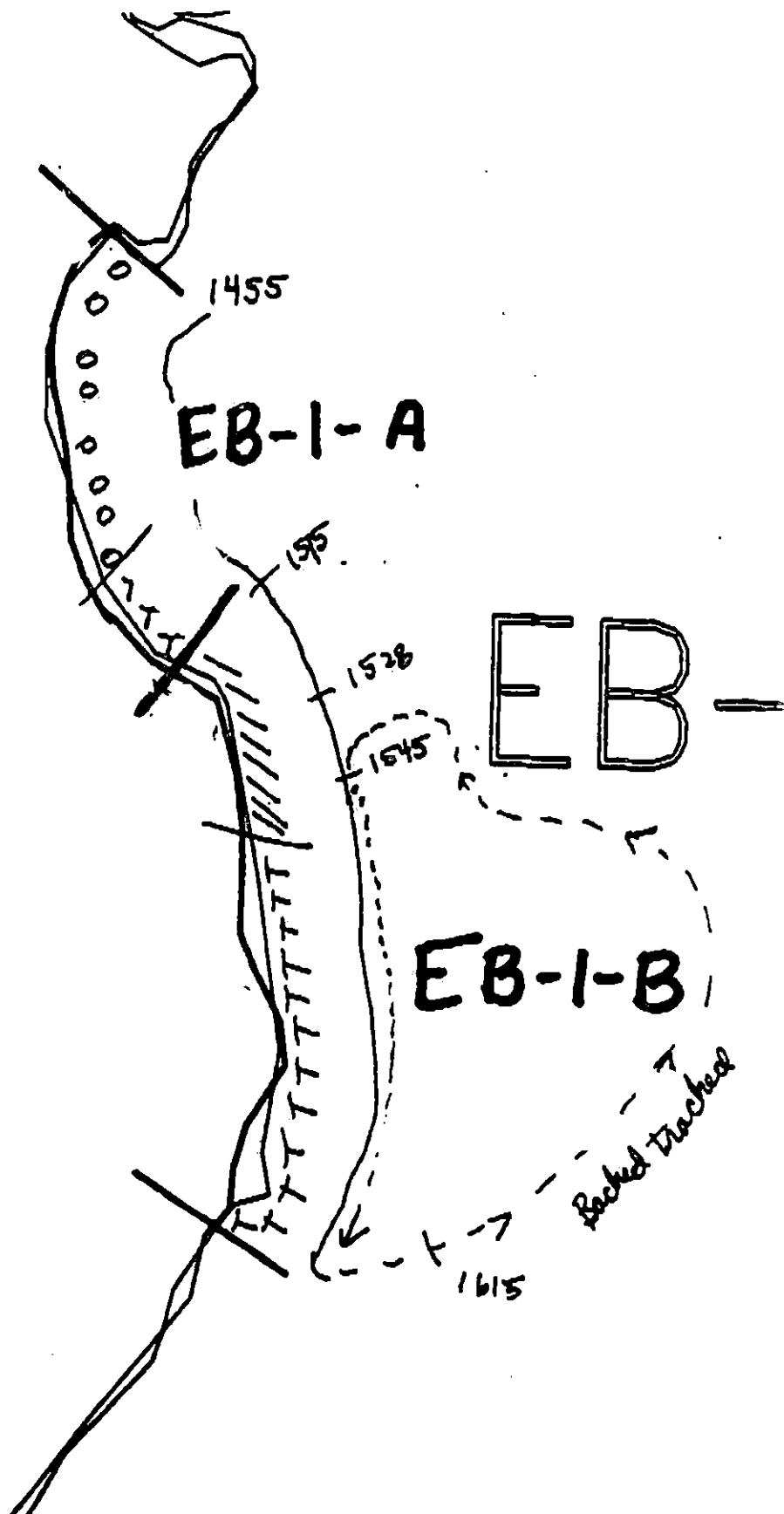
Map Key: PWS-104

Name: Randy McBride

Date: 4/3/90

Data Entered:

4/5 Page 15 of 24



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EB-1-A

ADEC Segment Length: 965m



Map Key: PWS-104

Name: Randy McBride

Date: 4/3/90

Date Entered:

SEGMENT NUMBER: EB-001

STREAM NUMBER: 226-20-15060

This stream was surveyed during the Pre-ANAD survey by a cooperative effort of ADF&G and Exxon on April 13, 1990. During the pre-survey, no oil was found and no ADF&G survey form was completed. As a result of this pre-survey, the ANAD Fish Stream Team decided NOT to survey the stream. The FIELD SHORELINE COMMENT SHEET was prepared based on information provided to the team by Rick Gustin who had conducted the pre-survey.

The ANAD Fish Stream Team recommends: NO TREATMENT

TAG Concurrence Date:

ADEC ART WEINER Art Weiner
EXXON AMY TEAL Amy Teal
NOAA Burl Wescott Burl Wescott
USCG W. J. Hall W. J. Hall

FOSC:

Date: 5-24-90

SEGMENT NUMBER: MN-001

STREAM NUMBER: 227-20-17570

This stream was surveyed during the Pre-ANAD survey by a cooperative effort of ADF&G and Exxon on April 11, 1990. As a result of this pre-survey, the ANAD Fish Stream Team decided NOT to survey the stream, but simply to review the results of the pre-survey. The FIELD SHORELINE COMMENT SHEET was prepared from the review of the pre-survey. Also attached is a copy of the pre-survey for your consideration.

The ANAD Fish Stream Team recommends: NO TREATMENT

TAG Concurrence Date: _____

ADEC	<u>Art Weiner</u>	<u>Dat Weiner</u>
EXXON	<u>Amoy Kar</u>	<u>Paul</u>
NOAA	<u>Bud Wescott</u>	<u>Bud Wescott</u>
USCG	<u>Mr. J. Hall</u>	<u>Mr. J. Hall</u>

FOSC: ML

Date: 5-24-90

PRE SURVEY ~~AND~~ DOCUMENTATION OF THIS STREAM BY TOM CROWE 270
4/11/90 REVIEWED BY USCG & ADF&G. PRE SURVEY DOCUMENTATION IS
FIELD SHORELINE COMMENT SHEET ATTACHED.

AL SNOOK
EXXON REP.

ASC#:

SEGMENT ST 1 MN-001 SUBDIVISION: 227-20-17570 DATE 4/27/90

USCG

NAME KERWIN L. DREYER SIGNATURE K. L. Dreyer

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

~~ADFG-ADFG~~

NAME TOM CROWE SIGNATURE T. Crowe

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

~~LAND MANAGER~~

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

MN-00173
17570

REFUGEE MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: 25 25 26 25 27 25 28 25 29 25 30 25 31 25 32 25 33 25 34 25 35 25 36 25 37 25 38 25 39 25 40 25 41 25 42 25 43 25 44 25 45 25 46 25 47 25 48 25 49 25 50 25 51 25 52 25 53 25 54 25 55 25 56 25 57 25 58 25 59 25 60 25 61 25 62 25 63 25 64 25 65 25 66 25 67 25 68 25 69 25 70 25 71 25 72 25 73 25 74 25 75 25 76 25 77 25 78 25 79 25 80 25 81 25 82 25 83 25 84 25 85 25 86 25 87 25 88 25 89 25 90 25 91 25 92 25 93 25 94 25 95 25 96 25 97 25 98 25 99 25 100 25

2 REGION: PER KP, CI KAP

METHOD: Aerial Ground Boat

3 DATE: 4/11/90 15 HIGH TIDE TIMES: 1 21 TEAM RECORDED: _____

4 START TIME: 0801 16 HIGH TIDE HTS: 1 22 OBSERVERS: TOM CROWE

5 STOP TIME: 0808 17 LOW TIDE TIMES: 1 23 AGENCY: ADP+G

6 SEGMENT #: MN001 18 LOW TIDE HTS: 1 24 PHOTOS TAKEN: Y (N)

7 STATION #: _____ 19 TIDE HT AT SURVEY: _____ Roll #: _____ Frames: _____

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

9 STAT AREA: _____ 20 USCG QUAD: SEWARD A-1 Skates: _____ Rods: _____

10 LAT: _____ 21 LONG: _____ 26 SAMPLES TAKEN: Y (N) RECORD

12 SOURCE: Map _____ Loran _____ 27 _____

13 LOCATION: Montague Island 28 _____

14 DESCRIPTION: GRAVEYARD POINT 29 _____

30 _____

EXTENT OF OIL

	SHORELINE				STREAM			
	L	V	N	S	L	V	N	S
17 SURFACE COVERAGE								
18 SURFACE THICKNESS								
19 PENETRATION								

20 OVERALL OIL IMPACT: N (Y) L N M

21 OIL TYPE: Pooled _____ Mousse Yes Asphalt Sticky _____ Stain _____

22 OILED DEBRIS: Y (N)

23 SHORELINE TYPE: Mudflat _____ Low-lying Rocks Yes _____

24 WAVE EXPOSURE: High Moderate Low

25 SUBSTRATE TYPE: Bedrock _____ Boulder _____ Cobble X

Gravel X Sand _____ Mud/silt _____

26 CATALOGED ANAB. FISH SPECIES: Y N

27 CATALOG #: 17570

28 STREAM NAME: _____

29 OIL IN STREAM BED: Y (N)

30 OIL ON STREAM BANK: (N)

31 OIL ON REEF ADJACENT TO MOUTH: N

(within 50 meters)

32 OIL WITHIN 1 MILE OF STREAM: (Y) N

Notes: NART TO STREAM (see map)

33 ANADROMOUS FISH PRESENT: Y N

34 ANADROMOUS FISH OBSERVATION

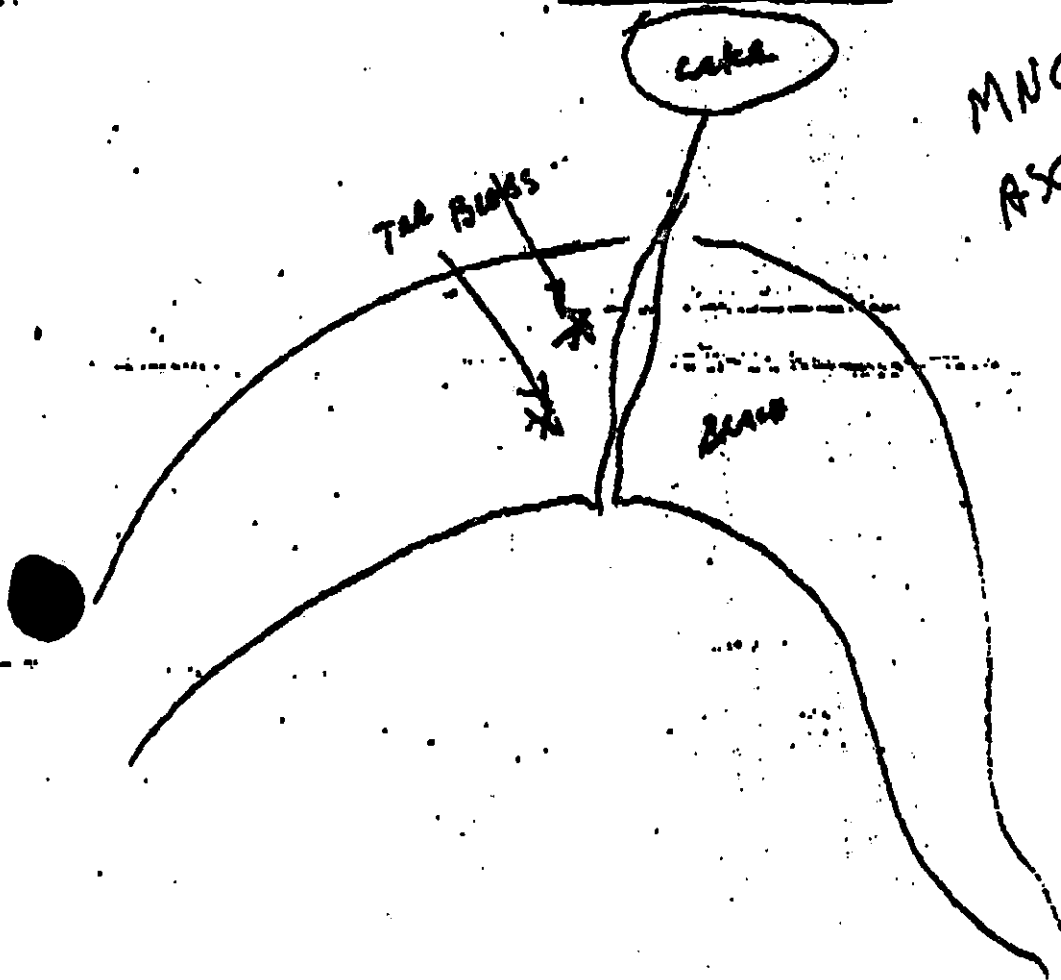
Species	Aerial	Ground

COMMENTS: Small amounts of oil found adjacent to
stream. Very light

NE(S)

DESCRIPTION

48 OIL DISTRIBUTION DIAGRAM



MN001
AXC 17570

4/11/90

ken
to frame # and
direction.

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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. Dineen DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 90 m: No Oil 344 m
Subsurface Oil Observed: Yes X No Maximum Depth 18 cm

RECOMMENDATIONS:

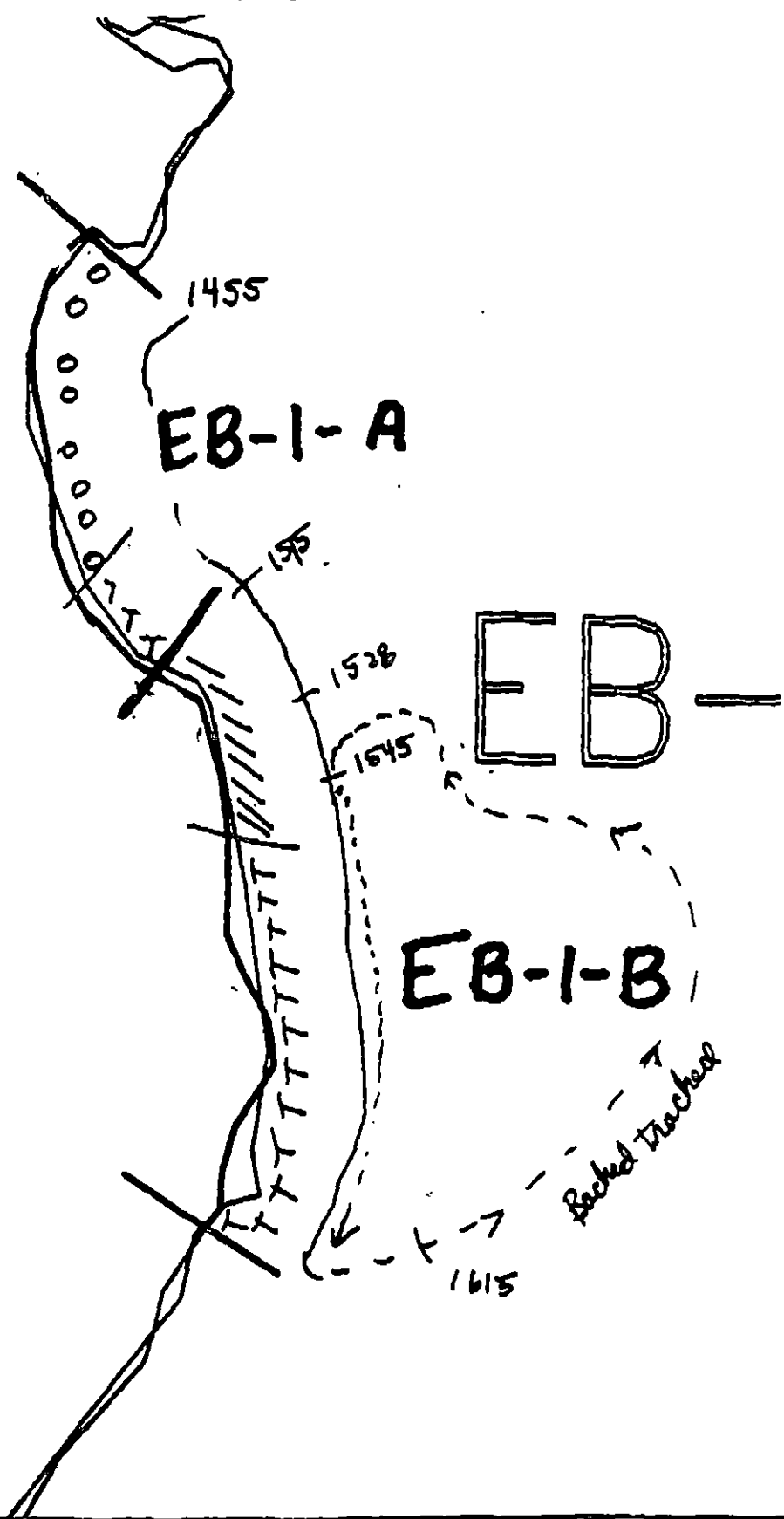
<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u> </u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner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

COMMENTS: Recommend bioremediation of subsurface oil at northern end of subdivision (see sketch map). Work should be conducted between 6/1 and 6/11 with permission of USFWS due to eagle nest constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/90
ADEC JOHN BAUER
EXXON ANDY TEAL
NOAA Burt Wercott
USCG KENNETH KEANE

FOSC: W L DATE: 5-12-90



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

EB-1-A

ADEC Segment Length: 965m

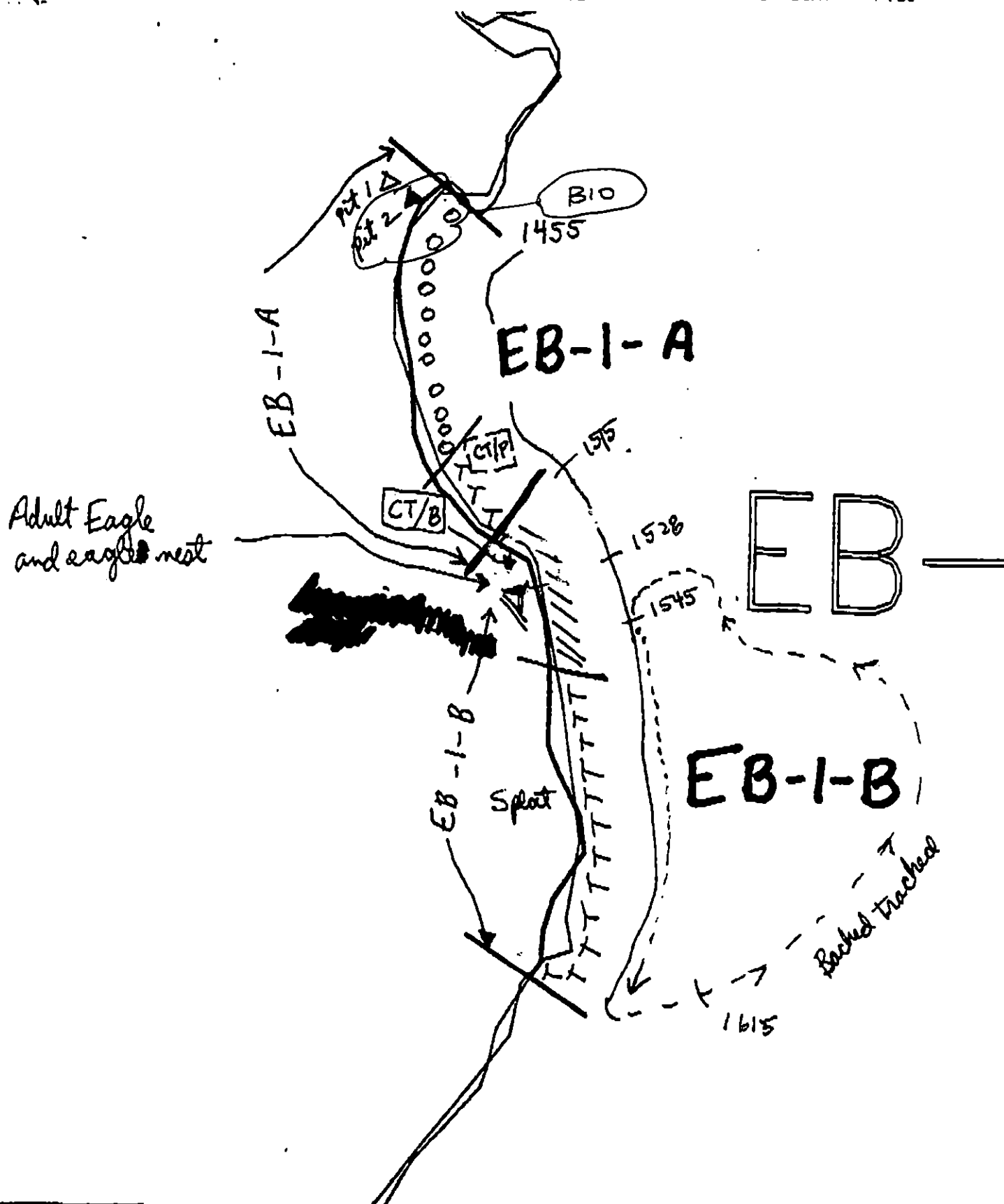


Map Key: PWS-104

Name: Randy McBride

Date: 4/3/90

Date Entered:



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EB-1

ADEC Segment Length: 965m



METERS

Map Key: PWS-104

Name: Randy McBrideDate: 4/3/90

Data Entered:

4/5 Page 15 of 24

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 159 m: Narrow 0 m: V. Light 372 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/90
ADEC JOHN BAKER
EXXON ANDY GAIL
NOAA Burt Wescoff
USCG KENNETH KOTING

FOSC: [Signature] DATE: 4-25-90

OG 1000
 SEGMENT ST/ EB-1
 SUBDIVISION B
 DATE 4, 2 90

SKETCH MAP

NOTE:

Eagle Nest
 and adult eagle

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Substrate Boundary
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HWL/LWL
- ☒ SSA
- ☒ Profile Location(s)
- ☒ Photo(s)
- ☒ Photo Location(s)

LEGEND

1 Δ
 Pt - No Subsurface Oil

2 Δ
 Pt - Subsurface Oil

CT/C
 Continuous Distribution

CT/B
 Broken Distribution

[CT/P]
 Patchy Distribution

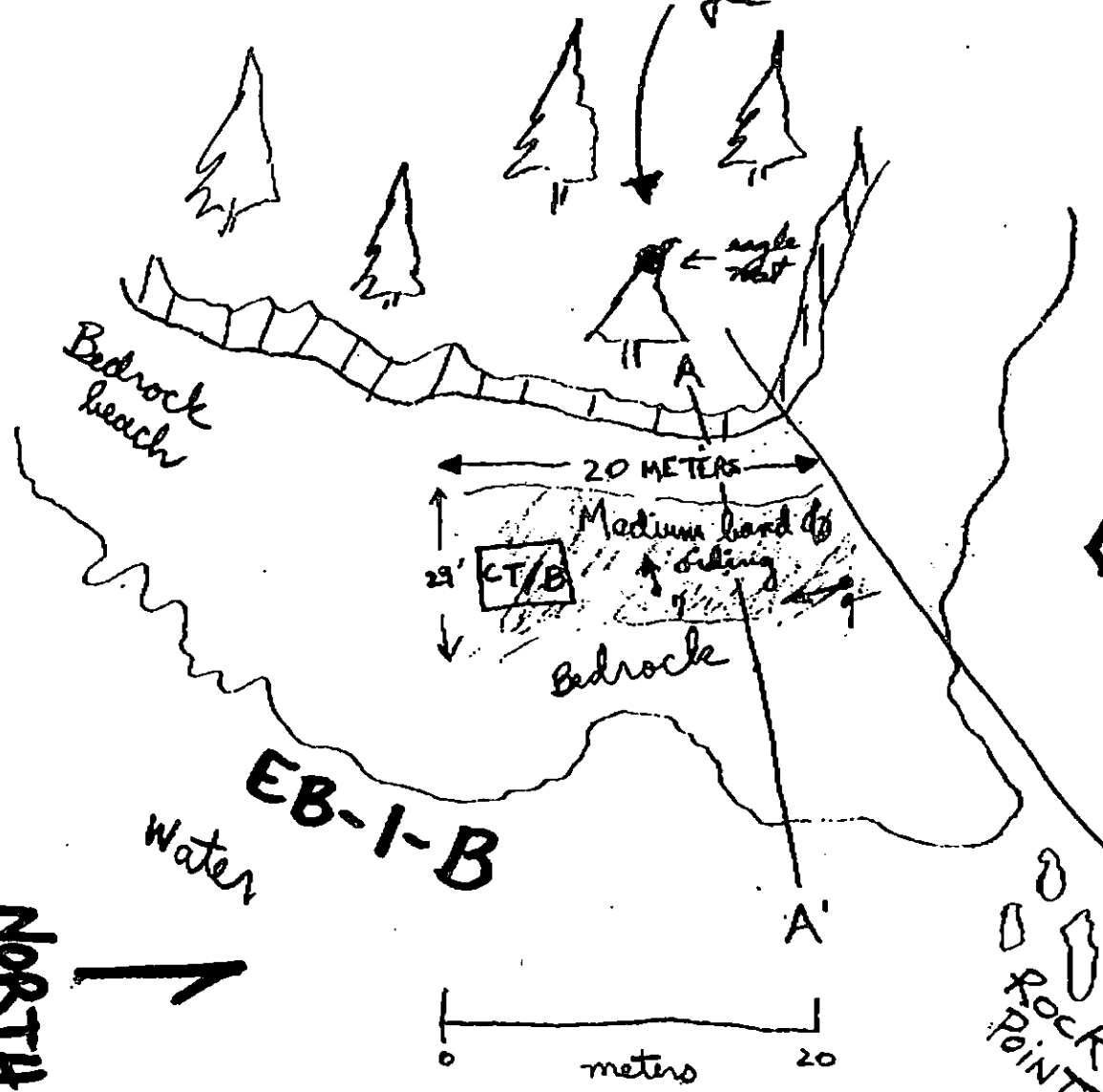
[CT/S]
 Spotted Distribution

Oil Vegetation

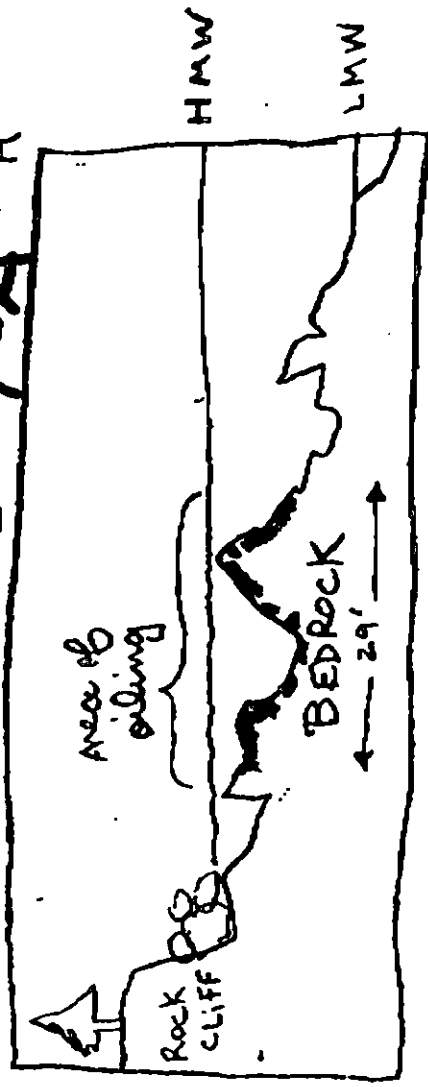
1 ●→
 Photo location, direction,
 and number

20
 833

NORTH



EB-1-A



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

REVISIONS

Adult Eagle
and eagle nest

EB-1-A

EB-

EB-1-B

Splat

Backed tracks

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EB-1

ADEC Segment Length: 965m



Map Key: PWS-104

Name: Randy McBride

Date: 4/3/90

Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EB-02

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

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

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

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

6Y Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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 337 m: No Oil 2242 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

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

USCG

NAME GARY OTT

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME MICHAEL J. EBEL

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

EB-2-A

LAND MANAGER - USDA: FOREST SERVICE

NAME DON J. BREITINGER

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

EB-2 / A antitesag

7/25

5 of 33

SHORELINE OILING SUMMARY

REVISION NO. 08/23/88

OG Randy McBride USCG No AA Gary Ott SEGMENT ST/ EB-2
 BIO Lewis Shatman LAND REP U.S.F.S. Dan Brody SUBDIVISION A 121
 EXXON Leonard Herbst ADEC Mike F. Hal TIME 12:07 to 14:45
 TEAM NO.: 12 TIDE LEVEL: 2.9' to 1.6' DATE 04/02/90
 EST. SUBDIVISION LENGTH: 2067 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: North to South
 SURFACE SEDIMENTS: R 20 % B 20 % C 30 % P 20 % G 5 % S 5 % M 5 % V 5 %
 SLOPE: Long 60 % Hang 5 % Vert 5 % WAVE EXPOSURE: ☒ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 5 m M 5 m N 5 m VL 198 m NO 1875 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	IC	IS	IP	IR	1	2	3	4	5	SU	UI	MI	U
ASPHALT PAVEMENT													
POOLED													
COVER				X				X			X		
COAT		+ 0	X					1/2			1/2		
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										X	X	X	

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris	X		

DEBRIS COLLECTED
☐ YES ☒ NOTYPE #BAGS

Photographs:

Roll No. ST-12-2 and 3Frames 29-37 and 1-8

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			1	2	3	4	5	SU	UI	MI	U		
1	10					X	-	X						X					C
2	40					X	-	X						X					C, P, S
3	37					X	-	X							X				P, S
4	40					X	-	X						X					C, P
5	45					X	-	X							X				C, P

COMMENTS

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

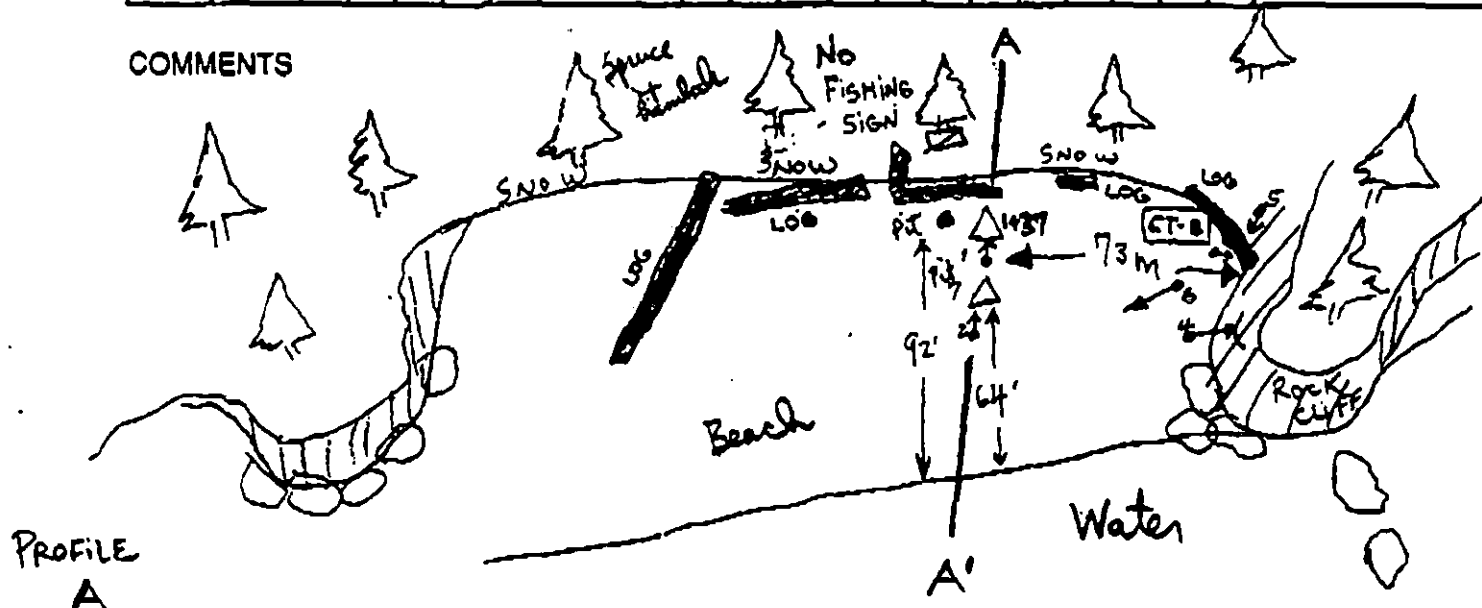
10 of 33

SEGMENT ST/ EB-2 SUBDIVISION A

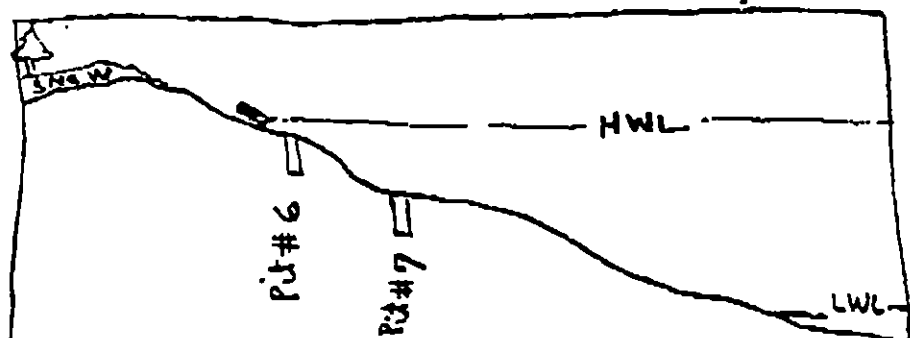
SUBSURFACE OIL (CONTINUED)

[illegible]

COMMENTS



PROFILE
A



REVIEWED _____ DATE _____

1106 33

DATE 4 / 2 / 90

SKETCH MAP

EB-2-A

CHECKLIST

- ☒ Name
- ☒ Approx. Scale
- ☒ Sex/Size/Body
- ☒ Coll. Dist.
- Width
- Length
- % Cover
- ☒ Substrate Character
- ☒ Loc. NAME
- ☒ Loc.
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pl. Location(s)
- ☒ Photo Location(s)

LEGEND

- 1 Δ
PM - No Subsurface Oil

- 2 ▲
Pin - Subsurface Oil

- CT/C
Confidential Distribution

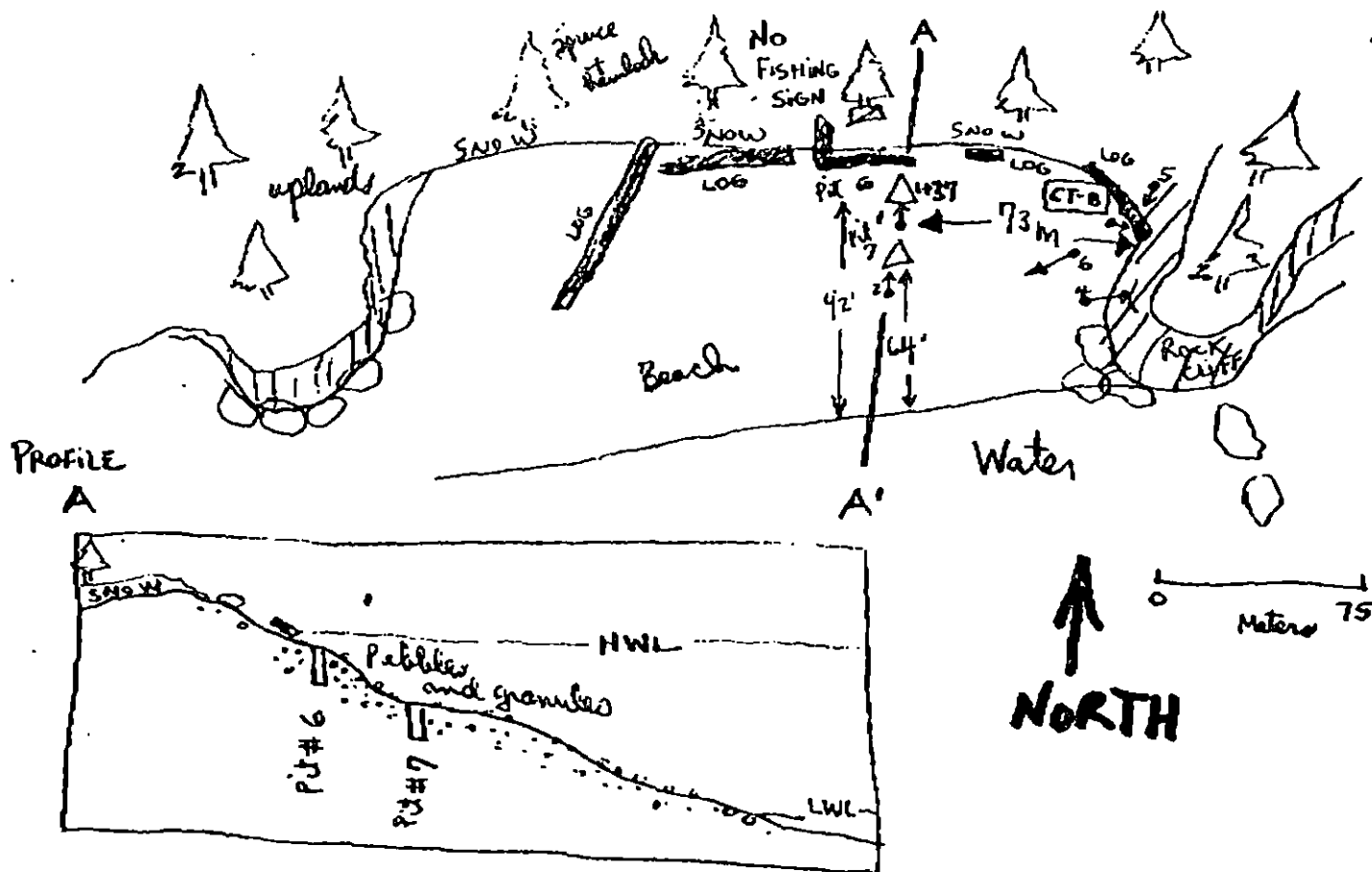
- CT/O
Broken Distribution

- CT/P**
Patchy Distribution

- CT/3**
Splashed Distribution

- ### Cold Vegetarian

- Photo location, direction,
and number



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

REVISIONS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/9

Segment ST / EA-2 Subdivision A Date (mo / day / yr) 4/2/90Time (24 hr) 1205-1445 Biologist SHARMAN(A) Substrate type and % of segments: SUBDIV.(1) Bedrock 20 (2) Boulder 20 (3) Cobble 30 (4) Pebble 20 (5) Sand 10 (6) Silt + gravel(B) Overall % cover of biota (% of segment): Dense SUBDIV. Moderate X Low

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

Photographs: ST-12-2
Roll No. ST-12-3
29-37
Frames 2-6

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS (ANACELLA, LITTORINA, LIMPETS)

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments: 2 adult eagles, 2 Steller's jays, 1 river otter. 2 sea otter skeletons. (≤ 1 yr. since death) in upper ITZ - no oil. Dead sea otter carcass on snow in supratidal off-shore pocket beach bounded by rock walls - young adult, emaciated, sex unknown but not in breeding condition. Cause of death unknown, no wounds, animal seems healthy - hours to days since death. Intertidal community appears normal and healthy.

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

MAINLAND

Knight Is.
Passage

EB-3

EB-4

Dead
sea otter
(non-oil related)

12:07

1215

1225

PWS
11/2

EB-1

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EB-2

ADEC Segment Length: 2242m



Map Key: PWS-111b

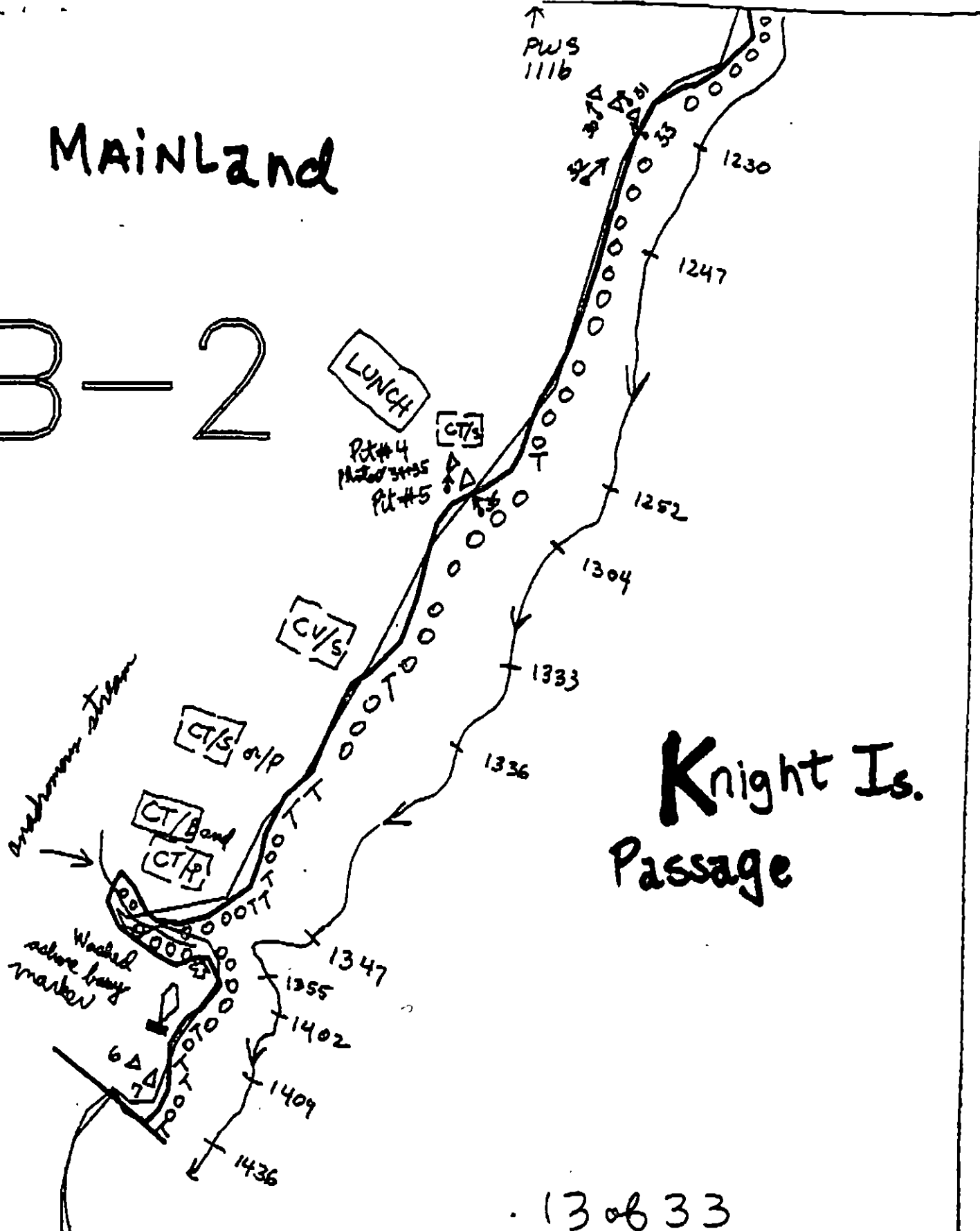
Name: Randy McBride

Date: 4/2/90

Data Entered:

MAINLAND

EB-2



130633

XXX Wide
// Medium
--- Narrow
TTT Very Light
000 No Oil

EB-2

ADEC Segment Length: 2242m



Map Key: PWS-111a

Name: Randy McBride

Date: 4/2/90

Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EB-03

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

6Y Recreation: Special use destination

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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 1035 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

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

FIELD SHORELINE COMMENT SHEET

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

USCG
NAME GARY OTT SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC
NAME MICHAEL J. EBEL SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

EB-3-A

LAND MANAGER USDA: FOREST SERVICE
NAME DON J. BREITINGER SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

EB-3 - A antite sog.

SHORELINE OILING SUMMARY

REVISION NO. 03/23/90

OG Randy M. C. Brice USCG NOAA Gay Off SEGMENT ST/ EB-3
 BIO Leah's Statman LAND REP USFS Don Blawie SUBDIVISION A (191)
 EXXON Leonard Herbst ADEC Mike Ebel TIME 11:35 to 12:06
 TEAM NO.: 12 TIDE LEVEL: 3.75' to 2.5' DATE 04 / 02 / 90
 EST. SUBDIVISION LENGTH: 1055 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: North to South
 SURFACE SEDIMENTS: R 20 % B 25 % C 30 % P 25 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 10 % Hang 75 % Vert 15 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 1055 m

SURFACE OIL

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

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. ST-12-2Frames 26-28

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UD	UC	1	2	3	4	5	SU	U	M	V		
1	35					X	---		X						X					C, P (Photo 26)
2	30					X	---		X							X				P, G, S (Photo 28)

COMMENTS Bio: No oil observed anywhere along this segment; intertidal community appeared healthy and normal; no shoreline
~~Ecological Summary completed for this segment so that~~
~~team could move on to other segments.~~ ITS

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

8/25 7 of 33

4/9/90 For 10 of 24

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/20/87

Segment ST / ED-3 Subdivision A Date (mo / day / yr) 4/8/90

Time (24 hr) 2010-2035 Biologist SHARMAN

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

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

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

Photographs: Roll No. ST-12-2

Frames 25-28

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS (ALICULA, LITTORINA, LIMAEUS)

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

NOT PRESENT

FUCUS

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

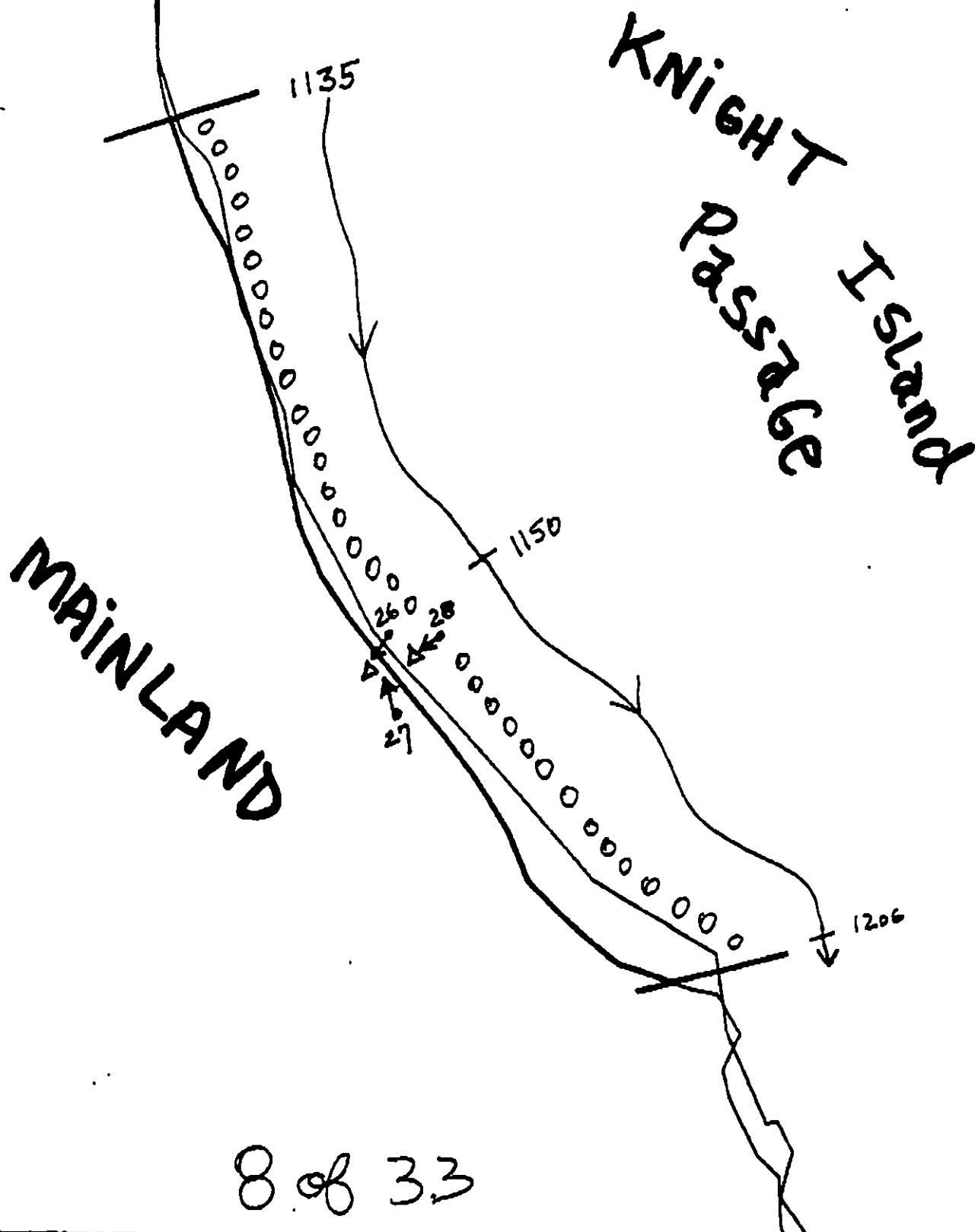
NOT PRESENT

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

Ecological Considerations:

This segment has no oil, no particular ecological sensitivities.

9/25



8 of 33

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EB-3

ADEC Segment Length: 1036m



METERS

Map Key: PWS-112

Name: Randy McBrideDate: 4/3/90Data Entered: 4/2/90

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

6Y Recreation: Special use destination

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Brown DATE: 4/18/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 1035 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/18/90.

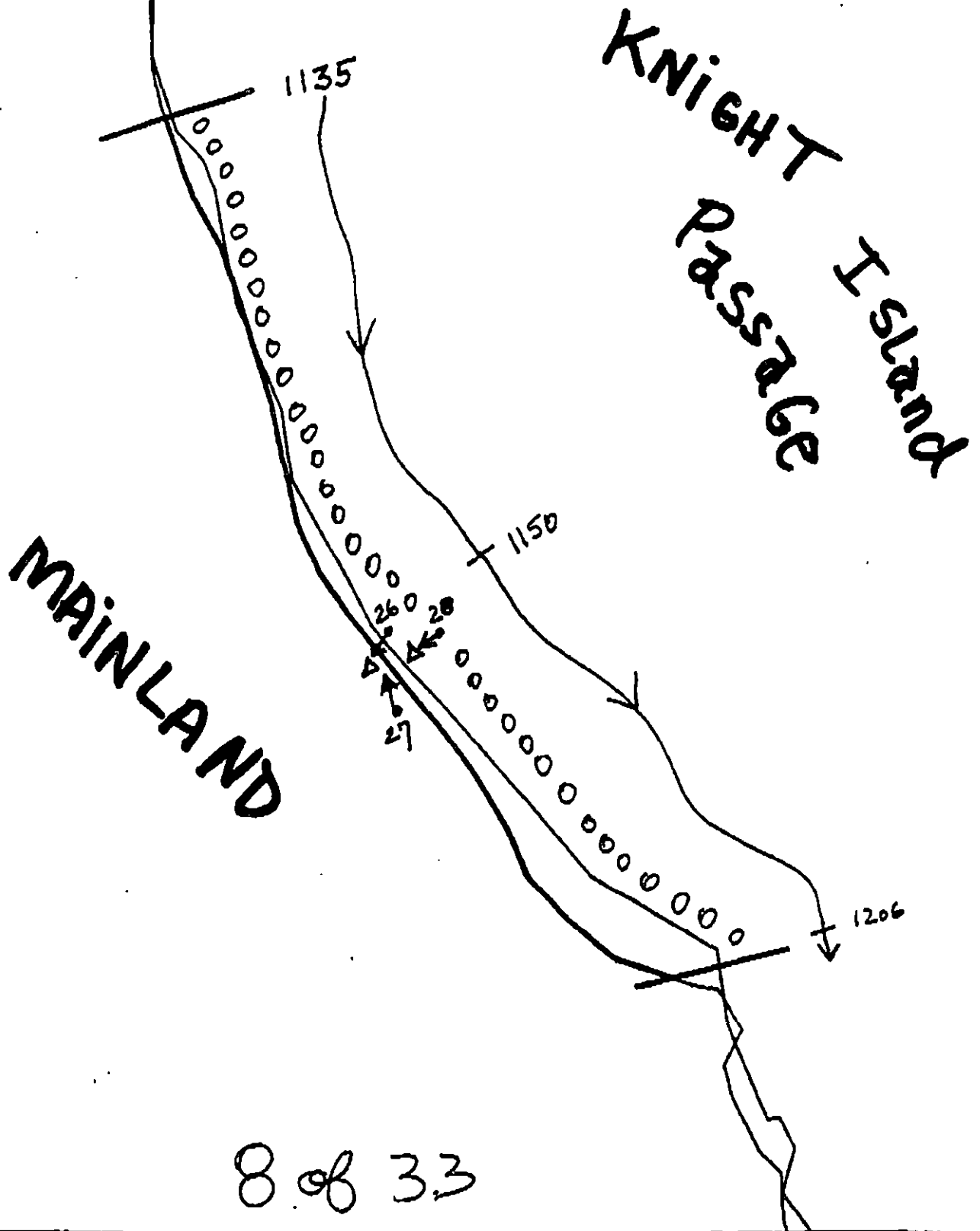
ADEC Art Weiner

EXXON ANDY GIL

NOAA Burt Wier

USCG G.A. Reiter

FOSC: DATE: 4-22-90



8 of 33

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO M. 0.1

EB-3

ADEC Segment Length: 1036m

0 100 200 300

Map Key: PWS-112

Name: Randy McBride

Date: 4/3/90

Date: 4/2/90

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EB-01

SUBDIVISIONS: B (2 OF 2)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

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

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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 159 m: Narrow 0 m: V.Light 372 m: No Oil 0 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

<u>X</u> No Treatment Recommended	_____ 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: _____

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/ EB-1 SUBDIVISION: B (A IS SEPARATE) DATE 4/2/90

SCG
NAME GARY OTT SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

ADEC
NAME MICHAEL J. EBEL SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

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

LAND MANAGER - USDA FOREST SERVICE
NAME DON J. BREITINGER SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

EB-1 subdiv. B

23 of 33

EB-1-B

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

Randy McBride

OG

Page 2 of 2

(4/25)

DATE 4 / 2 90

ETCH MAP

NOTE:

Eagle Nest
and adult eagle

CHECKLIST

☒ N Arrow
☒ Approx. Scale
☒ Geo/Sub Bndry
☒ Oil Dial
☒ Width
☒ Length
☒ Cover
☒ Substrate Character
☒ Est. HVAL/LVAL
☒ SS
☒ Profile Location(s)
☒ Photo(s)
☒ Pin Location(s)
☒ Photo Location(s)

LEGEND

1 Δ
PR - No Subsurface Oil

2 ▲
Pit - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

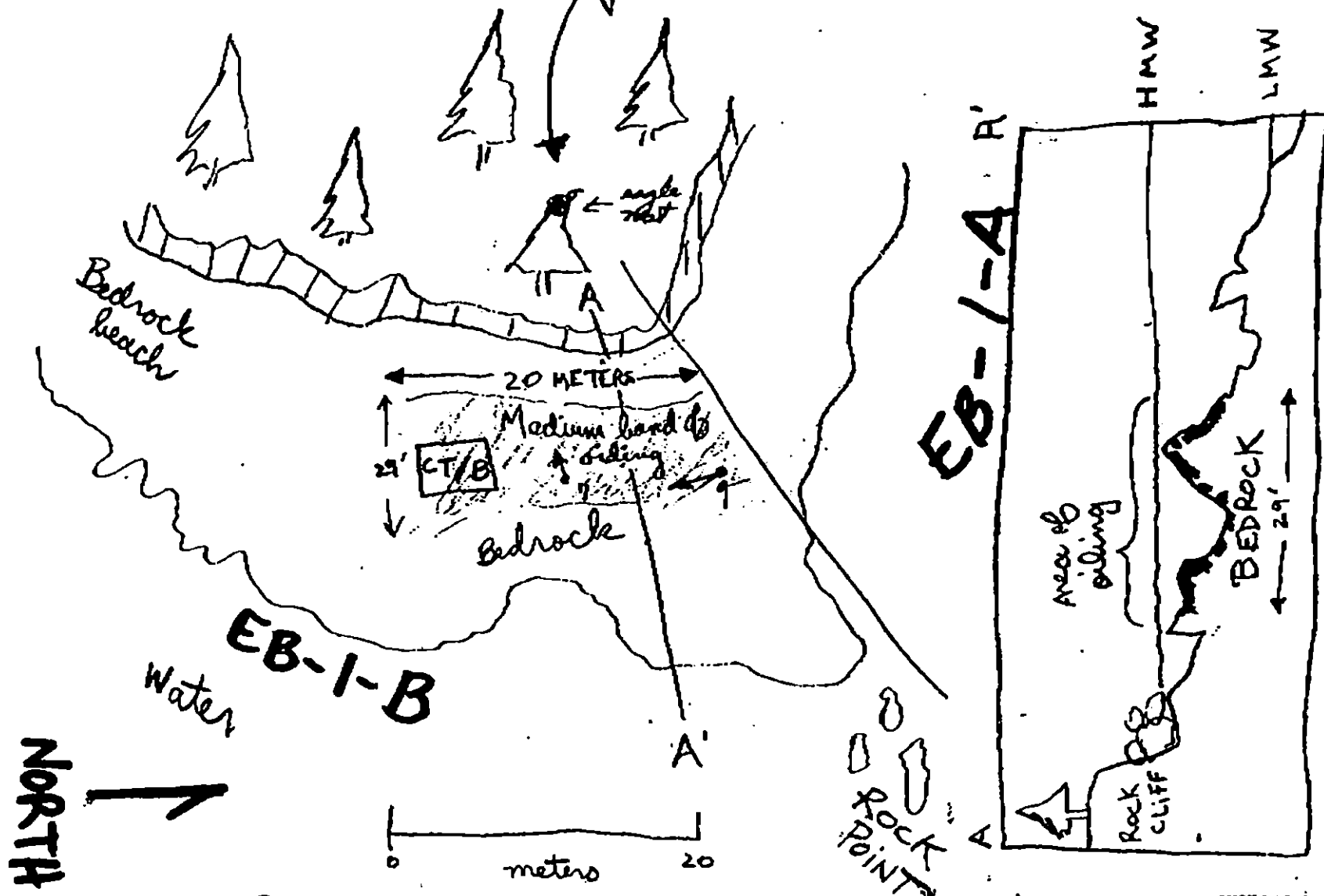
[CT/S]
Spliced Distribution

Cited Vegetation

1 

Photo location, direction,
and number

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



REVENUE **CLUB**

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22

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

Time (24 hr) 1515-1845 Biologist SHARMA

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

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

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

Photographs:
Roll No. ST-12-3

Frames 7, 8, 9

BARNACLES

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

NOT PRESEN

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 PRESEN

GASTROPODS (ALGELLA, LITTORINA, LIMPETS)

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

NOT PRESEN

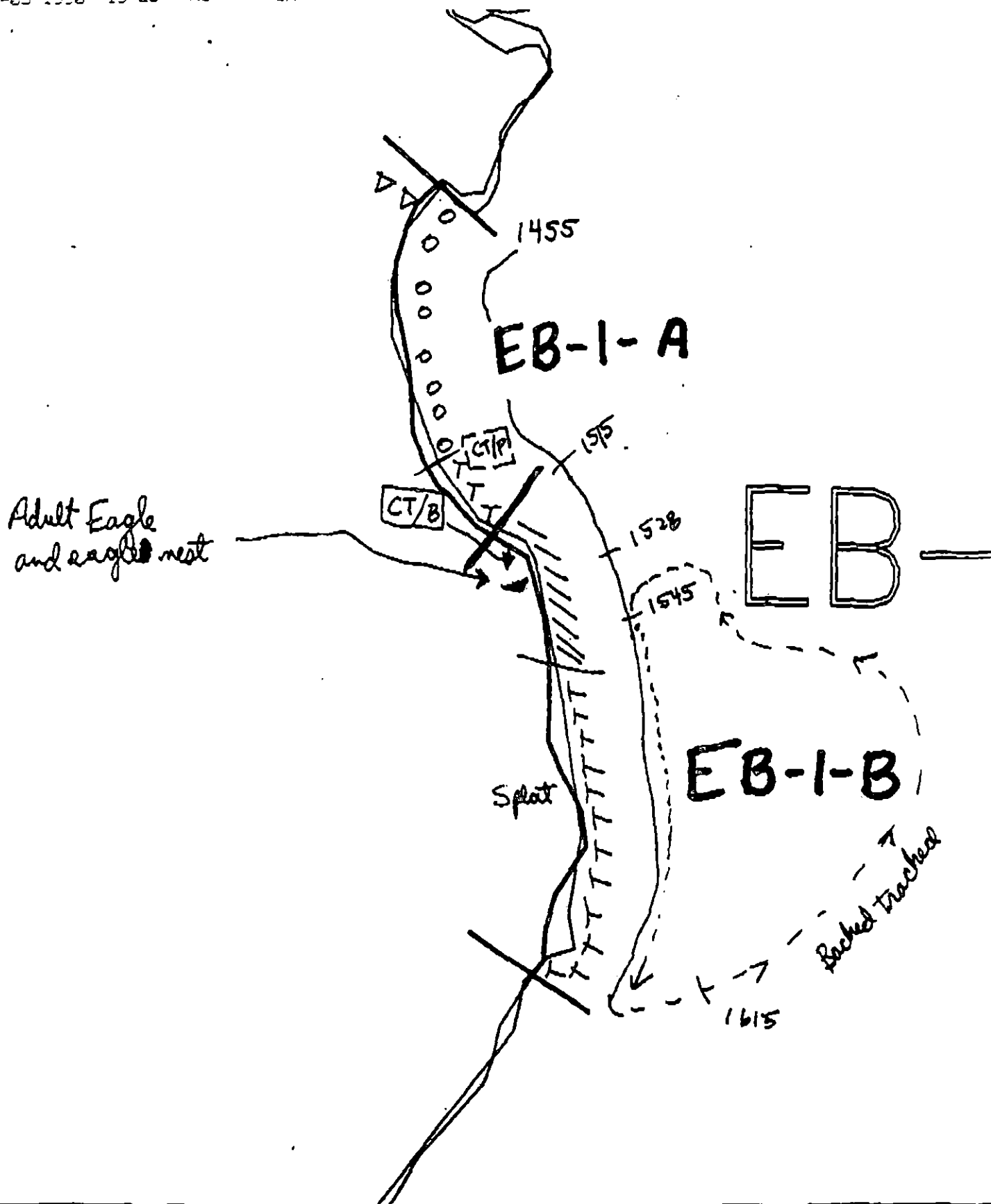
FUCUS

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 PRESEN

Wildlife Observations/ General Comments: 1 adult eagle perched near nest (see computer + abetal maps) - nest was not noted on Privetia and Windows table. 1 pair Harlequin ducks, 1 sea otter, deer jawbone on beach (young deer). Intertidal community appears normal and healthy. Bedrock point near eagle nest is fibrous and protracted with small tidepools (coral algae, anemones). Rhodospira larvae spawning moderately abundant at M.L.W. Some light tarring in upper intertidal; some shrimps seen on some tidepools.

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



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

EB-1

ADEC Segment Length: 965m



Map Key: PWS-104

Name: Randy McBride

Date: 4/3/90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EB-1 SUBDIVISION A (1 of 2)

WORK WINDOW	
Bioremediation	WORK 6/4 - 6/7

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

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

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 6/4/90
ADEC Raymond W. Williams
EXXON Alvin T. ...
NOAA Joseph ...
USCG G.A. ...
FOSC [Signature] DATE 6/6/90
Prepared By: [Signature] Date 6/2/90

Incorporate information from
USFWS Eagle Survey 5/22/90

EB-2

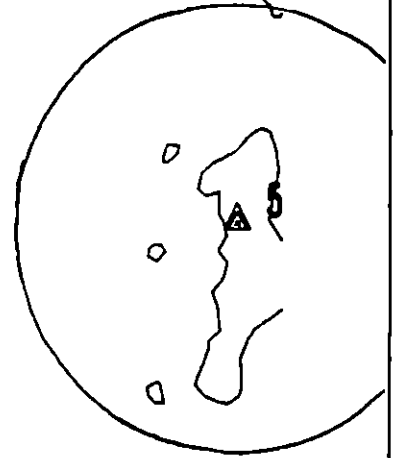
Work
Area

EB-1

Inactive
Nest

EB-5

EB-6



Exxon Company, USA

Map Keys PWS-EB-1

May 11, 1990

ECOLOGY MAP 5/28

SEGMENT EB-1

SUBDIVISION 7 (1 of 2)

METERS

0 351 701



Seabird Colony



Eagle Nest

1 inch = 1150 feet

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

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

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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 E. Hume DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 90 m: No Oil 344 m
Subsurface Oil Observed: Yes X No Maximum Depth 18 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend bioremediation of subsurface oil at northern end of subdivision (see sketch map). Work should be conducted between 6/1 and 6/11 with permission of USFWS due to eagle nest constraints.

See Addendum dated 6/2/90 JPP

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/90
ADEC JOHN BAUER
EXXON ANDY GALT
NOAA Burt Wescott
USCG KENNETH KEENE

FOSC: W L DATE: 5-12-90

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EB-04

SUBDIVISIONS: A (1 OF 1)

FIELD SHORELINE COMMENT SHEET

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

SCG

NAME

GARY OTT

SIGNATURE

[Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME

MICHAEL J. EBEL

SIGNATURE

[Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

EB-4-A

LAND MANAGER - USDA : FOREST SERVICE

NAME

DON J. BREITINGER

SIGNATURE

[Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Seg EB-4
A - entire seg.

(6)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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 0 m: V.Light 121 m: No Oil 780 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: Recommended treatment includes 1) manual pick up of pooled oil, 2) bioremediation of pooled oil in area shown on attached sketch map. Work should be conducted between 5/11 and 6/10 due to hatchery release and set net constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Randy Mc Bride NOAA USCG Gary Ott SEGMENT ST/ EB-4
 BIO Lewis Sharman LAND REP USFS Don Breitinger SUBDIVISION A
 EXXON Leonard Herbst ADEC Mike Ebe TIME 10:27 to 11:34
 TEAM NO.: 12 TIDE LEVEL: 6.75' to 3.75' DATE 4/12/90
 EST. SUBDIVISION LENGTH: 938 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: North to South
 SURFACE SEDIMENTS: R 25 % B 30 % C 25 % P 15 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Lang 25 % Hang 60 % Vert 15 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 160 m NO 772 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	/C	/B	/P	/S	SBL BR	DBL RW	GY SL	DBR TL	LR	SU	UI	M	L	
ASPHALT PAVEMENT														
POOLED				X				X			X			
COVER														
COAT				X				X			X			
STAIN				X				X			X			
MOUSSE														
PATTIES														
TARBALLS														
FILM														
NO OIL										X		X	X	

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

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

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR							PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UD	UC	SBL BR	DBL RW	GY SL	DBR TL	LR	SU	UI	M	U				
1	27.5					X	— . —		X						X							CPG (Photo 22)
2	35					X	— . —		X							X						CPG (Photo 23)
							.															
							.															
							.															
							.															

COMMENTS

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

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / EB-4 Subdivision A Date (mo / day / yr) 4/2/90Time (24 hr) 10/5-1130 Biologist SHARMAN

- (A) Substrate type and % of segments: SUBDIV.
 (1) Bedrock 25 (2) Boulder 30 (3) Cobble 25 (4) Pebble 20 (5) Sand (6) Silt
- (B) Overall % cover of biota (% of segment): Dense Moderate X Low
SUBDIV.
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

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

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

MYTILUS

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

GASTROPODS (*Turcella*, *Littorina*, *Limpeta*)

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

FUCUS

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

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

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

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

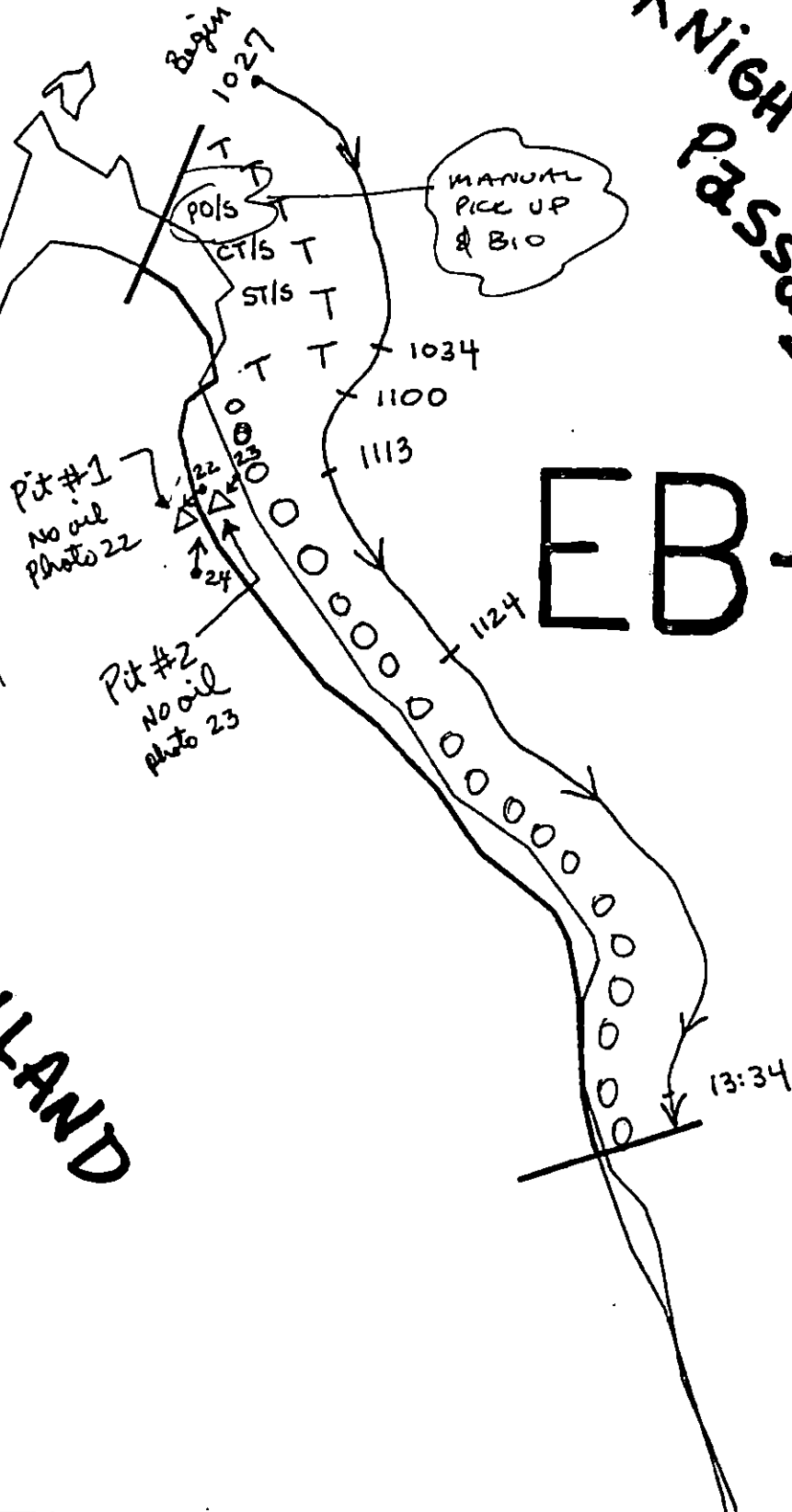
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- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical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

KNIGHT Island
Passage

EB-4

MAINLAND



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

EB-4

ADEC Segment Length: 901m



Map Key: PWS-113

Name: Randy McBride

Date: 4/2/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EB-4 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	CLOSED
Bioremediation	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

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

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG ADDENDUM DATE 6/04/90

ADEC

EXXON RAY MORRIS

NOAA ANDY TEAL

USCG Joseph Tallant

FOSC

DATE

Prepared by:

Date:

20

Incorporates information from
USFWS Eagle Survey 5/22/90

FA-1

Active
Nest

TREATMENT AREA

EB-4

EB-3

CR

CR

5/28 JD



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

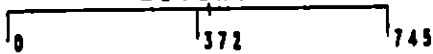


ECOLOGY MAP 5/28

SEGMENT EB-4

SUBDIVISION A (1 of 1)

METERS



- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1222 feet

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

RECOMMENDATIONS:

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

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

See Addendum dated 6/2/90

TAG COMMENTS:

TAG APPROVAL DATE: 4/23/90

ADEC [Signature]
EXXON [Signature]
NOAA [Signature]
USCG [Signature]

FOSC: [Signature]

DATE: 4-27-90

manually remove "pooled" oil before bioremediation.

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

RECOMMENDATIONS:

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

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

TAG COMMENTS:

TAG APPROVAL DATE: 4/23/90

ADEC *[Signature]*
EXXON *[Signature]*
NOAA *[Signature]*
USCG *[Signature]*

FOSC: *[Signature]*

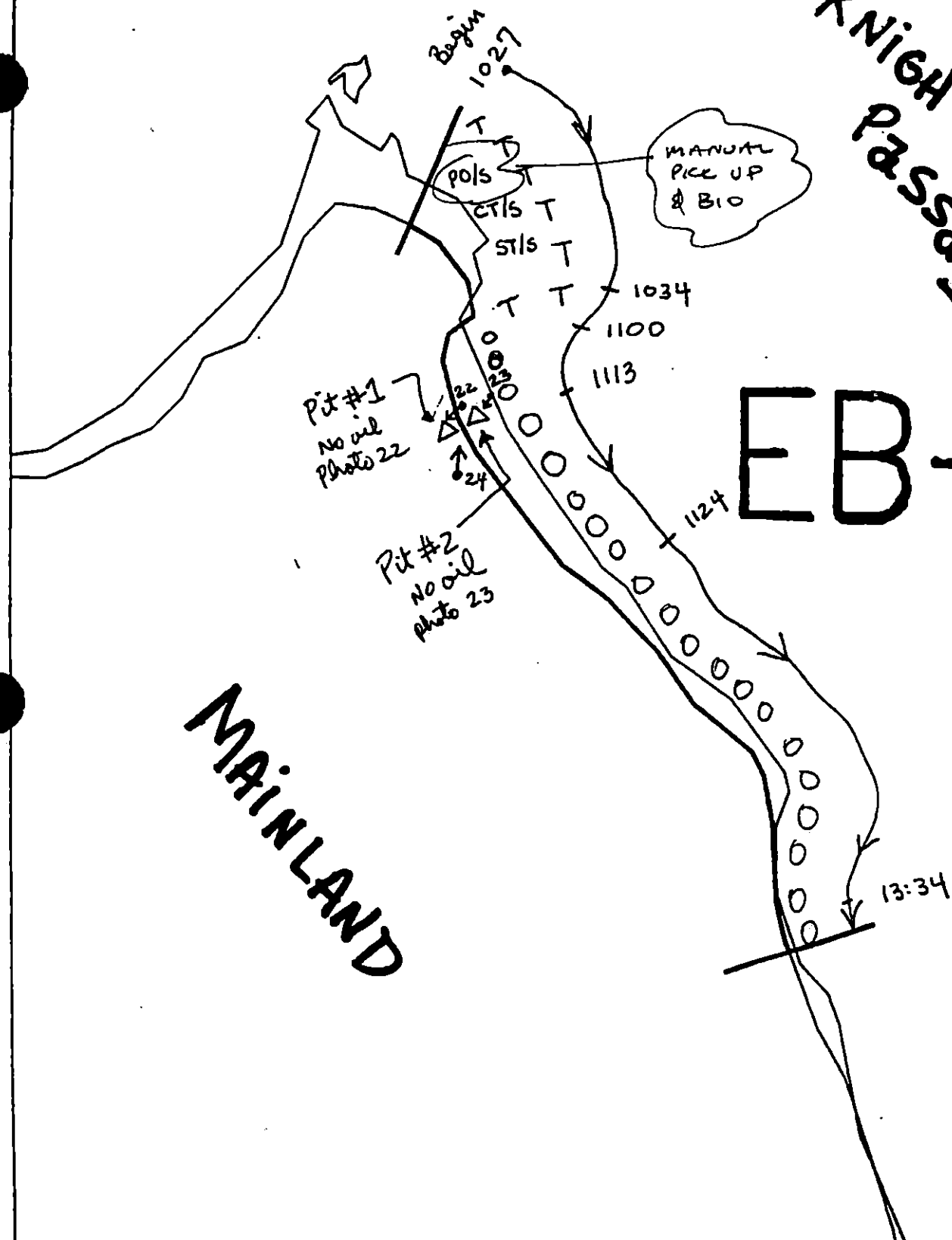
DATE: 4-27-90

manually remove "pooled" oil before bioremediation.

KNIGHT Island Passage

EB-4

MAINLAND



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

EB-4

ADEC Segment Length: 90m



Map Key: PWS-113
 Name: Randy McBride
 Date: 4/2/90
 Data Entered:

1991 MAYSAP EVALUATION

SEGMENT: EB 004 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, Fry release, Fish harvest area

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.

Fry Release: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 1 SEGMENT EB004 SUBDIVISION A DATE 5/20/91

ADEC

NAME

JEFF GINALIAS

SIGNATURE

[Signature]☒ NTRNO RECOVERABLE OIL OBSERVED ON THIS SEGMENT High Energy
WAVE ACTION.

EXXON

NAME

LARRY D. OLSON

SIGNATURE

[Signature]☒ NTR

no recoverable oil remains on this segment.

LANDMANAGER

NAME

MARSHAHALL

OF

DNR

SIGNATURE

[Signature]☒ NTR

no recoverable oil observed.

USCG/NOAA

NAME

SCHULTZ/CHILDS

SIGNATURE

[Signature]☒ NTRNO RECOVERABLE OIL FOUND
! BEAUTIFUL DAY!

PAGE 1 OF 1

SEGMENT EB-4

SUBDIVISION A

DATE 5 / 20 / 9:

ENERGY LEVEL. $\overline{\Gamma}_H$ $\overline{\Gamma}_M$

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

EST. OIL CATEGORY LENGTH: W 1 m M 1 m N 1 m VL 5 m NO 220 m US 675 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- 1 - 27 FRAMES 25

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

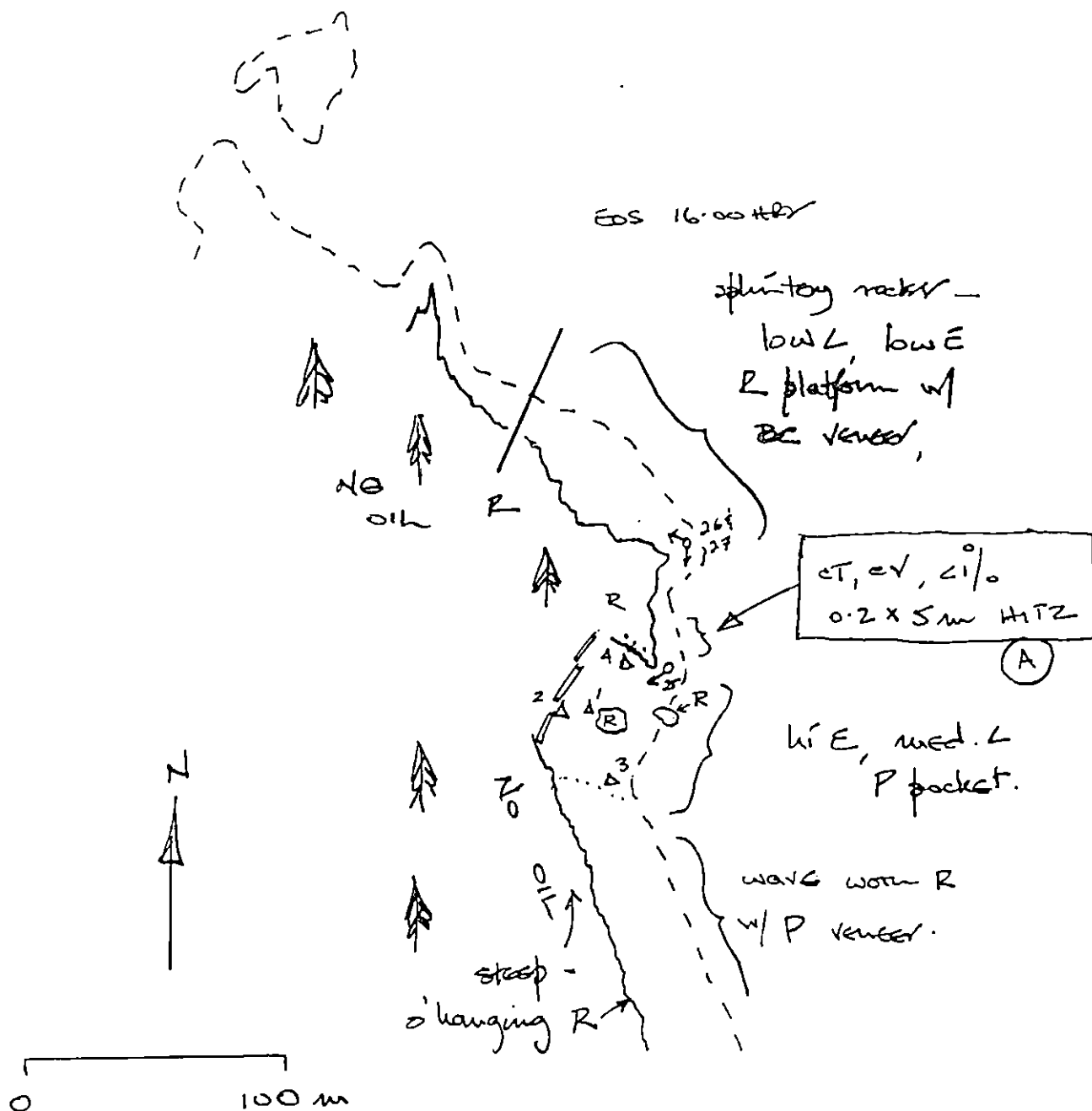
OG COMMENTS: Rugged rocky shore w/ a high energy beach and lower energy R platform to the N.
Surface oil only, as a trace of CT, CV, on a rock in @ east end of pebble beach. No oil was seen over the rocky platform to the north.

REVIEWED: F.W. 5/2

EB-4A

G MACDONALD

5.20.91



MAISAP BIOLOGICAL SUMMARY FORM

TEAM # 1 DATE 20 May 91
 SEGMENT # EB 004 TIDAL HEIGHT (Range) +3.1 to +4.1 ft MLLL
 SUBDIVISION A BIOLOGIST Michael Fawcett
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

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

Bedrock at North end of subdivision has rugged bedrock outcrops, channels, and tidepools with typical dense and diverse biota. Dominant species are rockweed, barnacles, and mussels. LTZ has variety of red, green, and brown algae. MTZ-LTZ tidepools have coralline algae, Rhodomela, other algae, and chitons, limpets, fishes, anemones, hermit crabs, isopods, etc.

The only oil found was a trace of CTXCV on the south face of the bedrock outcrop that is the north end of the wide P/a beach. (see sketch map).

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2 (both immature)	black puckerback
Seabirds			tidepool sculpin
Waterfowl			
Gulls/kittiwakes	1 (6-W gull)	5	
Shorebirds			
Corvids			
Other Birds			

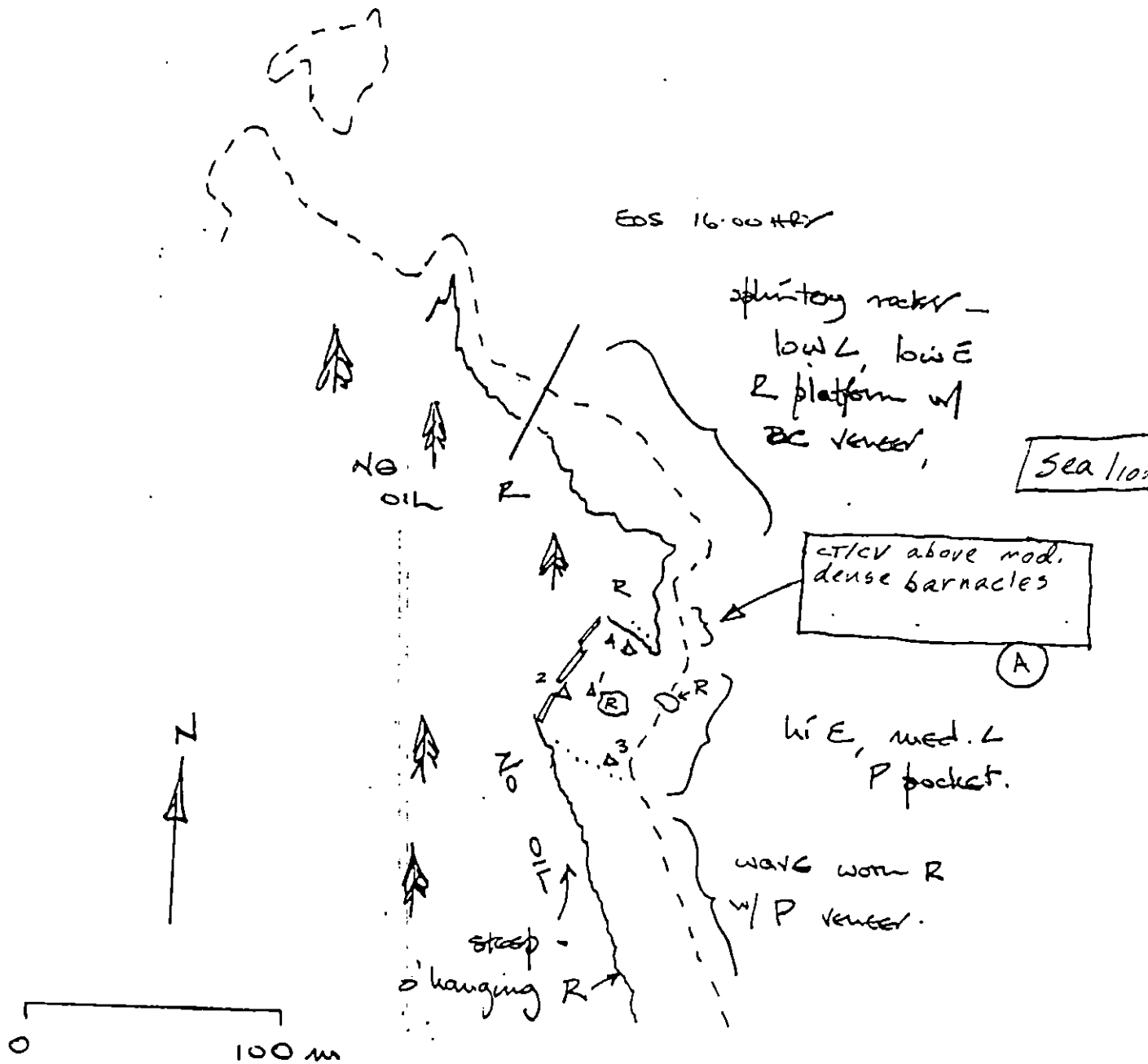
LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters			
Marine Mammals (specify)	9 Sea lions swimming		
Marine Mammals (specify)			
Marine Mammals (specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/22/91

BIO SKETCH MAP
 EB-4A
 M. Fawcett
 20 May 91



Reviewed M.B. 5/22/91

EB 4A 5/20/91 Fawcett

start 1525 hrs

- 4 sealions on way in + 5 more
5 GN Gulls

- calm, no seas

- imm. eagle took off from
beach as we approached

- wide high energy g/p bar
no bivalve

BR at N end of land mussels
Fucus, barnacles, mod. Litt.
sparse limp, sparse photo

TR CT on BR + 8-12 ft above
mod. barnacles

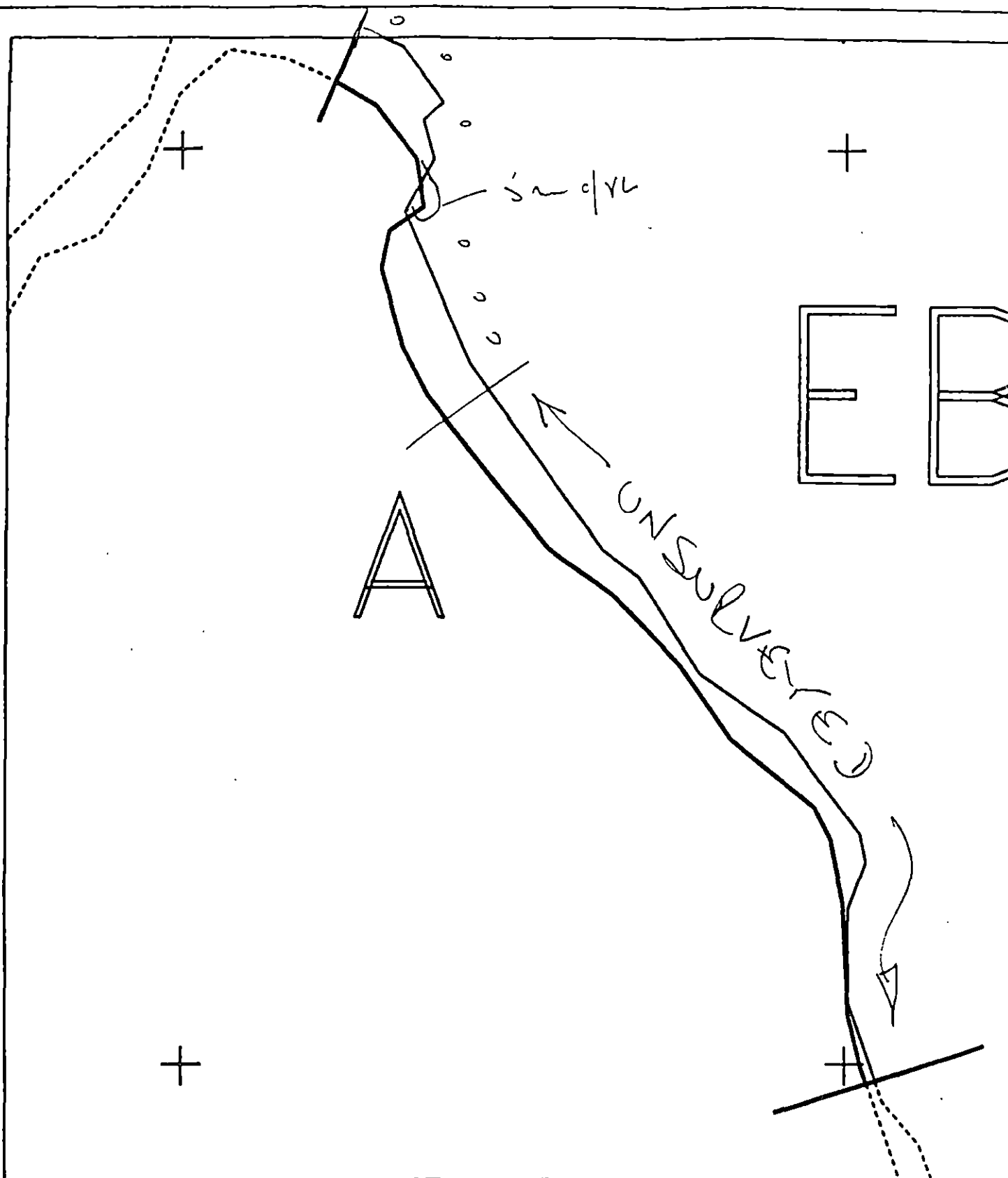
- 1 juv eagle in tree at point

- another flew over

- sup. BR & BK at point

Fucus, Mussels, barnacles

end 1600 hrs



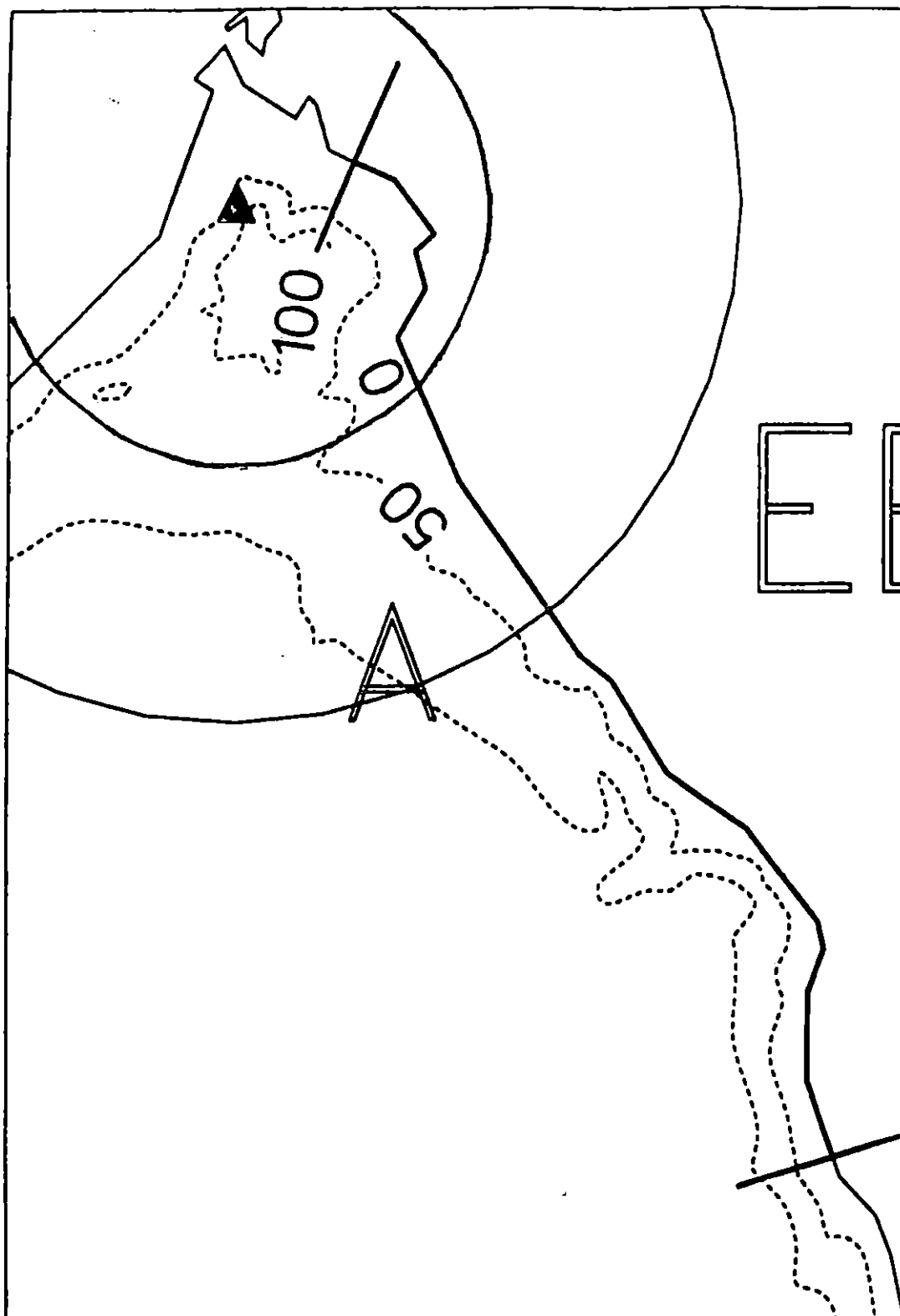
XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

EB004 A
 ADEC Subsegment Length: 901m
 METERS
 0 100 200
 AK State Plane Zone 4
 pub004a



Subdivision Field Map
 Map Key: PWSEB004Aa
 Name: GM
 Date: 5-20-91
 Data Entered:

REVIEWED: F.W. 5/22/91



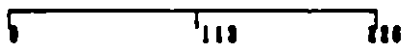
EB-

EB004

Segment Reference Map
Map Key: PVSEB004



METERS



AE State Plane Zone 4
Projected



EAGLE NEST

REVIEWED: F.W. 5/22/91

A

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

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

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

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

6Y Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 337 m: No Oil 2242 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/18/90

ADEC Art Weiner Art Weiner

EXXON Amy Tear Amy Tear

NOAA Bruce Wescott Bruce Wescott

USCG G.A. Reiter G.A. Reiter

FOSC: My h DATE: 4-22-90

OG Andy McBride

SEGMENT EB-2

SUBDIVISION A

DATE 4/2/90

SKETCH MAP

EB-2-A

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Bdry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ LSC, HML, LML
- ☒ LSS
- ☒ L Profile Location(s)
- ☒ L Photo Location(s)
- ☒ L Photo Location(s)

LEGEND

1 Δ
Pl - No Subsurface Oil

2 Δ
Pl - Subsurface Oil

CT/C
Centuries Distribution

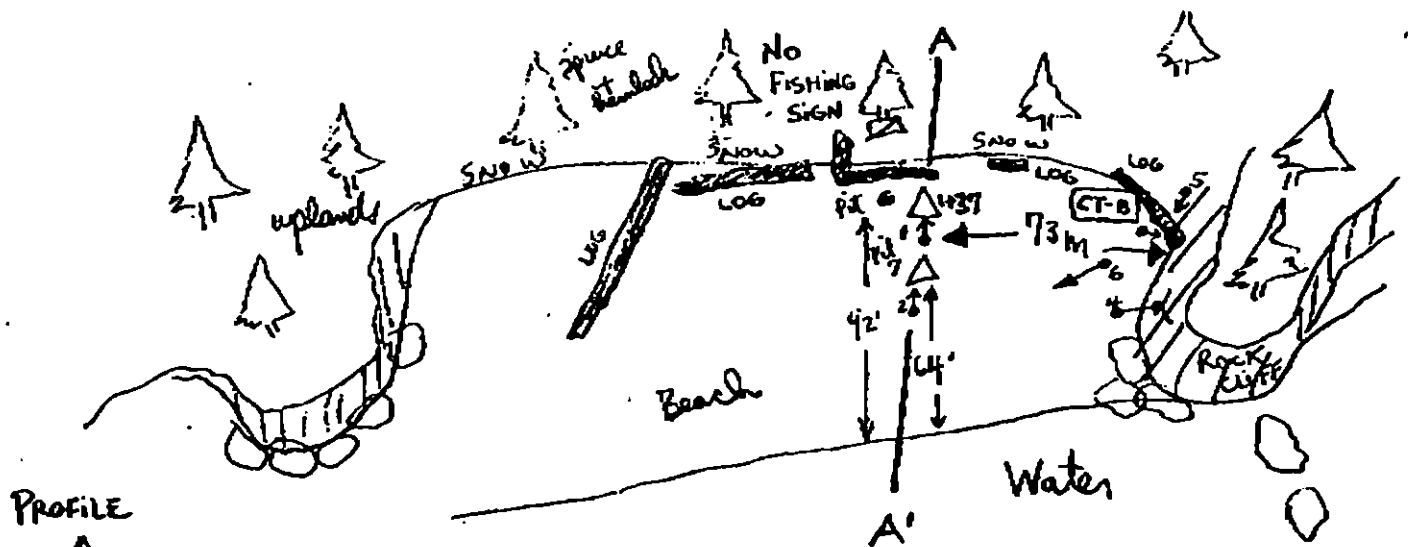
CT/B
Broken Distribution

CT/P
Patchy Distribution

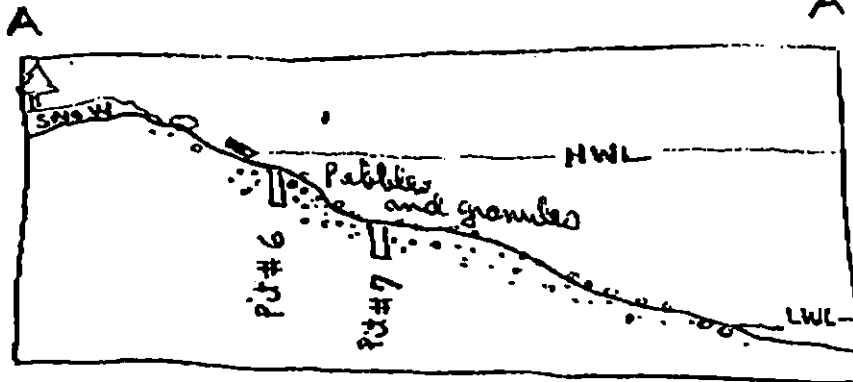
CT/S
Splashed Distribution

Oil Vegetation

Photo location, direction, and number



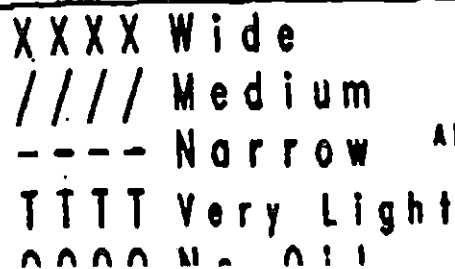
PROFILE



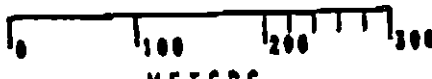
↑
NORTH

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

REVISION 08/01/90



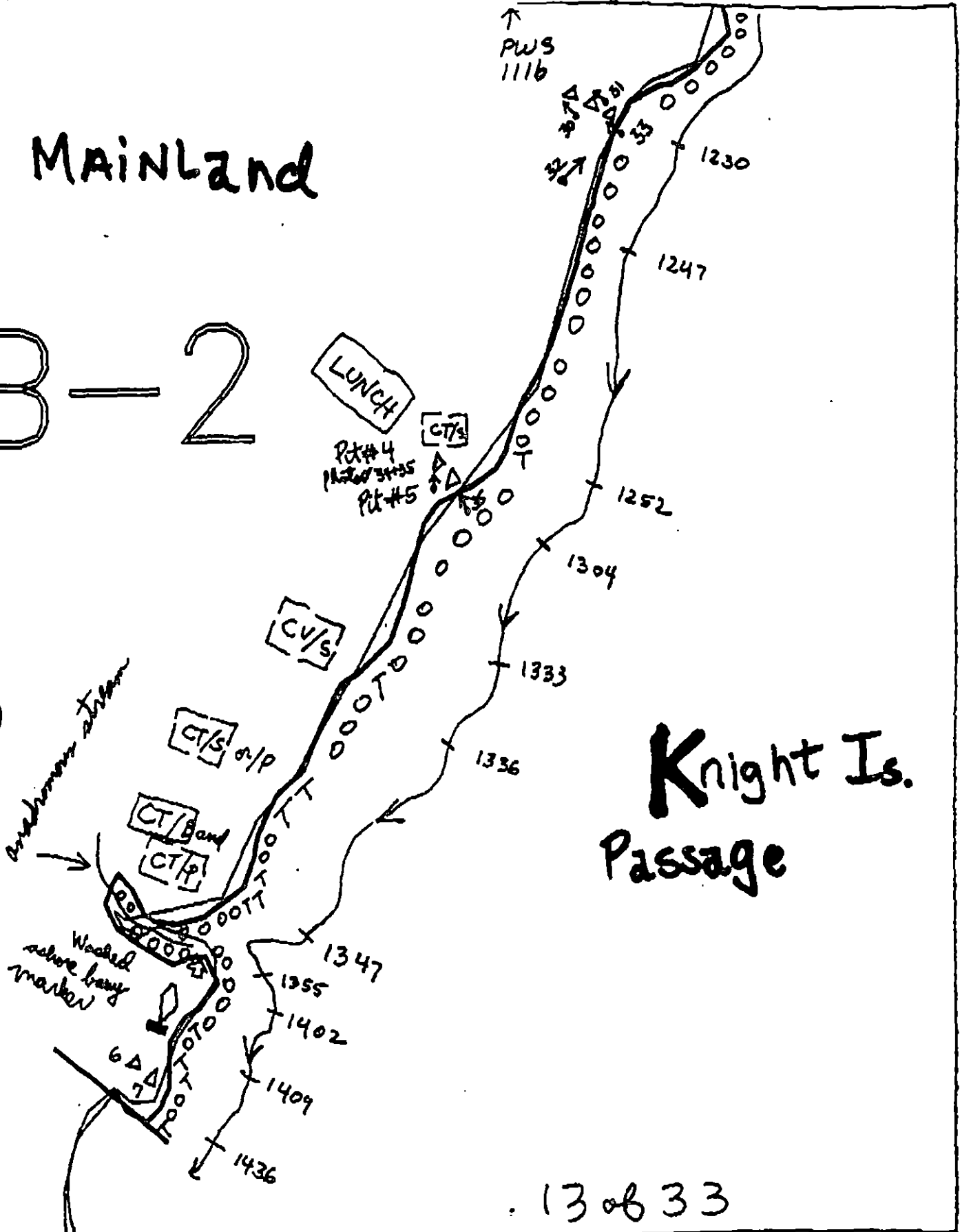
ADEC Segment Length: 2242m



Map Key: PWS-111b
Name: Randy McBride
Date: 4/2/90
Data Entered:

MAINLAND

EB-2



XXX Wide
 M Medium
 --- Narrow
 TTT Very Light
 OOO No Oil

EB-2

ADEC Segment Length: 2242m



Map Key: PWS-111a

Name: Randy McBride

Date: 4/2/90

Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: EB-05

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

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 621 m: No Oil 793 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

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

SCG

NAME GARY OTT SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME MICHAEL J. EBEL SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

EB-5-A

LAND MANAGER - USDA FOREST SERVICE

NAME DON J. BREITINGER SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

EB-5 subdivision A

27 of 33

SHORELINE OILING SUMMARY

REVISION NO. 03/22/88

OG Randy McBride ~~USCG~~ NOAA Gary Ott SEGMENT ST/ EB-5
 BIO Lewis Sherman LAND REP USFS Don Breitenberger SUBDIVISION A
 EXXON Leonard Herbst ADEC Mike Ebel TIME 16:34 to 17:10
 TEAM NO.: 12 TIDE LEVEL: 3.9' to 4.8' DATE 04/02/90
 EST. SUBDIVISION LENGTH: 1309 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: North to South
 SURFACE SEDIMENTS: R 30 % B 20 % C 30 % P 15 % G 2 % S 3 % M 0 % V 0 %
 SLOPE: Long 15 % Hang 45 % Vert 40 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 655 m NO 654 m

SURFACE OIL

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

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. ST-12Frames 10-11

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	1	2	3	4	5	SU	U	M	U		
1	20					X	-		X						X					C, G
2	25					X	-		X						X					C, G, S
3	55					X	-		X						X	X				C, G Photo 10
4	54					X	-		X								X			P, G, S Photo 11
5	25					X	-		X						X					P, G, S
							-													

COMMENTS

only a few sporadic coats of very light oiling found.

24 of 33

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / EB-5 Subdivision A Date (mo / day / yr) 4/2/90

Time (24 hr) 1630-1700 Biologist SHARMAN

- (A) Substrate type and % of segments: SUBDIV.
 (1) Bedrock 30 (2) Boulder 20 (3) Cobble 30 (4) Pebble 15 (5) Sand 5 (6) Silt 5 ^{+ granules}
- (B) Overall % cover of biota (% of segment): Dense Moderate X Low
SUBDIV.
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)
- Photographs: Roll No. ST-12-3

Frames 10, 11

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS (NEREIS, LITTORINA, LIMPETS)

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

NOT PRESENT

FUCUS

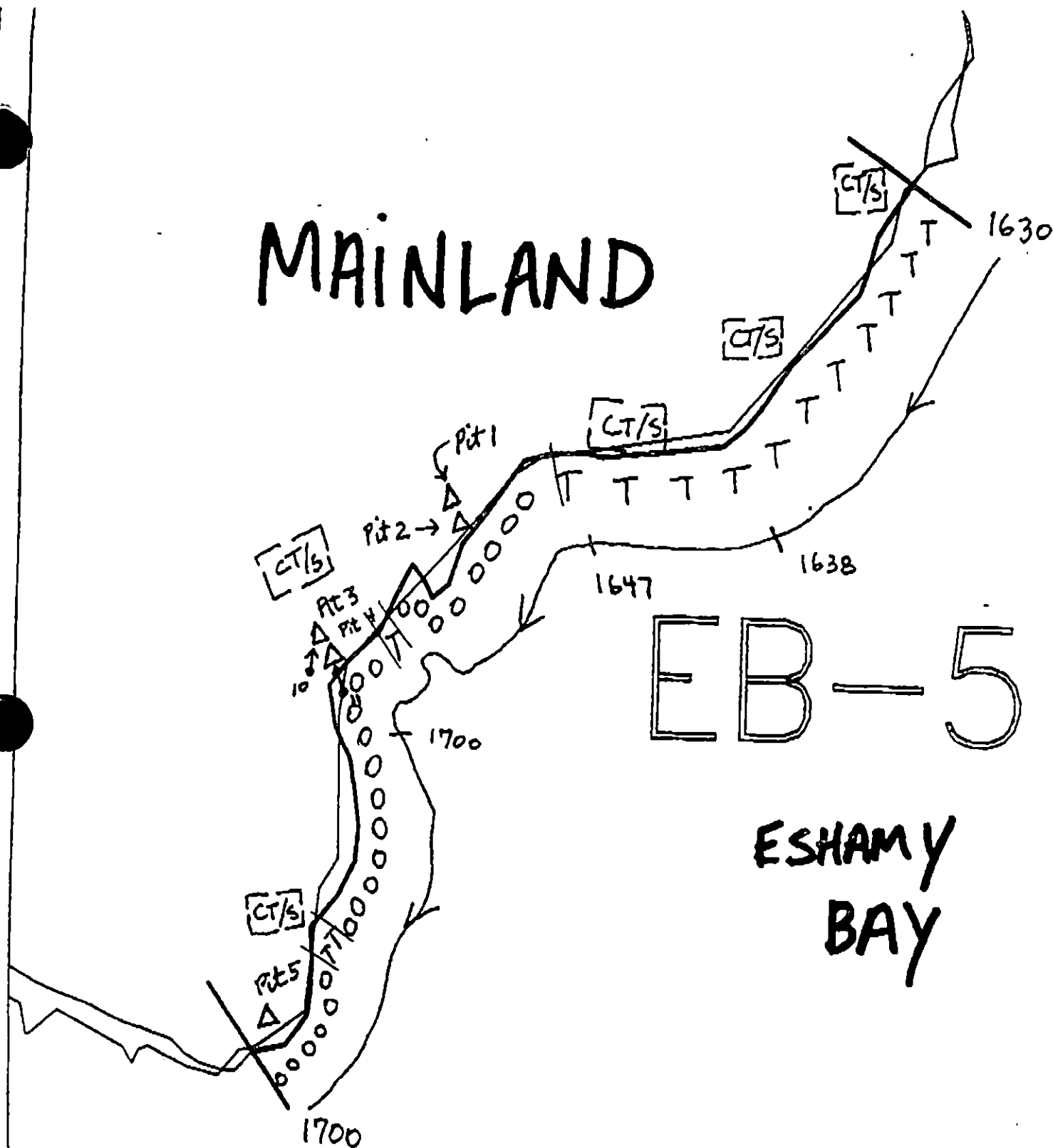
Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

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

Ecological Considerations: According to the Priorities and Window table, this segment is environmentally ranked Priority 1, with an open work window 6/1 - 6/11 (possibly 6/12 - 6/13). Identified ecological sensitivities include use as a Murre, Goldeneye roosting site (code 1E) and presence of active bald eagle roosts (code 5T). The former carries constraints 1-2 with treatment priority 2; the latter carries a constraint of 5 with treatment priority 2. We observed no eagle roosts on our survey.

MAINLAND



25 of 33

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EB-5

ADEC Segment Length: 1309m



Map Key: PWS-156

Name: Randy McBride

Date: 4/3/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EB-6 SUBDIVISION A (1 of 1)

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

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1E Main Bay Hatchery Release

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

1L Set Net Site

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

OTHER ECOLOGICAL CONSIDERATIONS

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

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

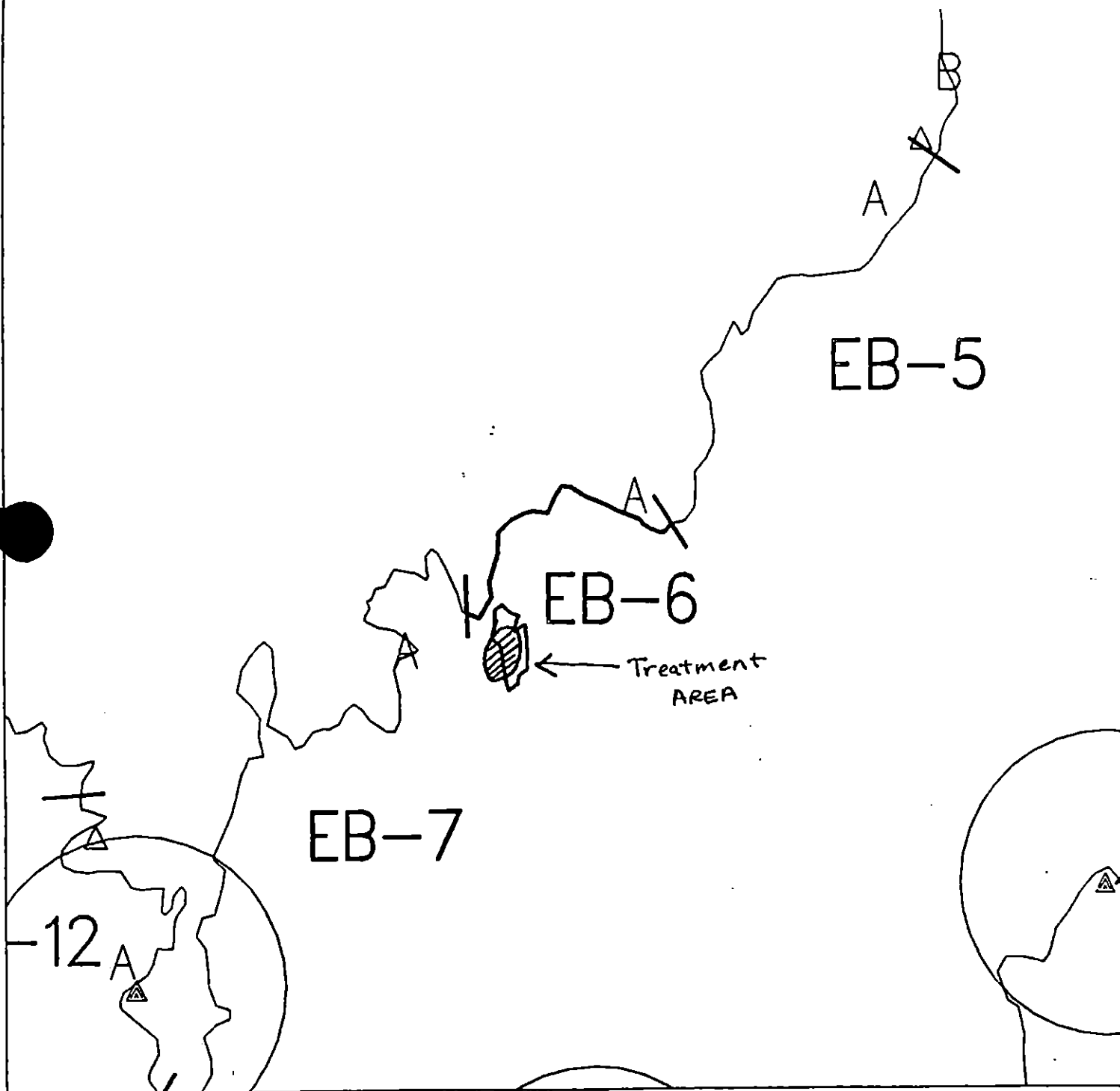
FOSC

DATE 7 June 1990

Prepared By: lyk

Date

6/7/90



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



ECOLOGY MAP
SEGMENT EB-6
SUBDIVISION A (1 of 1)
METERS
0 388 776

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

1 inch = 1273 feet

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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 SM required prior (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: *Paul McMahon* DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 621 m: No Oil 210 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

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

TAG COMMENTS:

HIGH HUMAN USE + SET NET FISHERIES AREA.

TAG APPROVAL DATE: 4/18/90

ADEC *Art Weiner*
EXXON *Andy Isa*
NOAA *Paul Wescott*
USCG *G.A. Reiter*

FOSC: *tyl* DATE: 4-27-90

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EB-06

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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 621 m: No Oil 210 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

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

USCG

NAME GARY OTT

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME MICHAEL J. EBEL

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

EB-6-A

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

LAND MANAGER - USDA FOREST SERVICE

NAME DON J. BREITINGER

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

EB-6 Subdivision A

SHORELINE OILING SUMMARY

REVISION NO. 03/23/90

OG Randy Mc Bride USCG NOAA Gary Ott SEGMENT ST/ EB-6
 BIO Lewis Sherman LAND REP USFS Don Bletting SUBDIVISION A
 EXXON Leonard Harbst ADEC Mike Ebel TIME 17:15 to 19:00
 TEAM NO.: 12 TIDE LEVEL: 4.5' to 7.5' DATE 04/03/90
 EST. SUBDIVISION LENGTH: 829 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: north to south
 SURFACE SEDIMENTS: R 20 % B 30 % C 30 % P 10 % G 6 % S 4 % M 0 % V 0 %
 SLOPE: Lang 15 % Hang 60 % Vert 25 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 120 m NO 709 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	C	N	P	R	1	2	3	4	SU	UI	ME	U
ASPHALT PAVEMENT				X				X	X			
POOLED												
COVER												
COAT		X		O	X				X			
STAIN												
MOUSSE												
PATTIES												
TARBALLS				P	X						X	O
FILM				X				X	X			
NO OIL												

PAVEMENT: H (F) (S) 9 sq. m by 4 cmPATTIES / TARBALLS 3 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

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

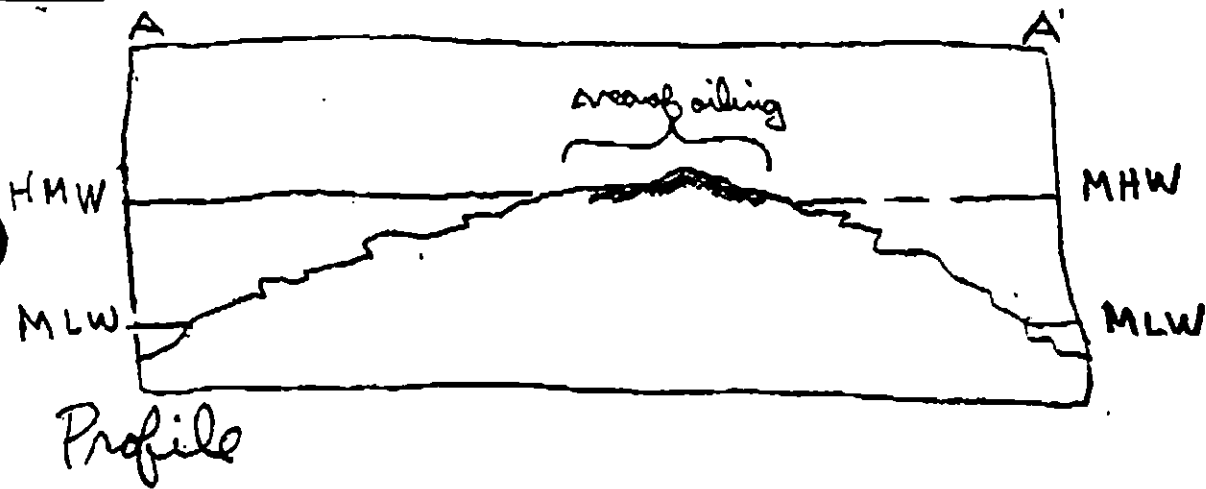
SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	1	2	3	4	5	6	SU	UI	ME	U		
1	40					X	—	X								X					P, G, S (photo 13)
2	23					X	—	X								X					G, S
3	30					X	—	X								X					P, G
4	27					X	—	X								X					P, G
5	22					X	—	X								X					C, P (photo 14)

COMMENTS

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

28 of 33



EB-5

MAINLAND

Flat

Pit #1

oil mark
10" wide
w/ dip mark

A

LRC

Pit 2

oil mark
4" deep

Pit 3

Pit 4

1900
oil mark
splat

A

Tarballs

EB-6

Pit 5

splat on
cables

1836

CT/B

ESTHAY
BAY

EB-7

XXXX Wide
//// Medium
--- Narrow
TTTT Very tight
O000 No Oil

EB-6

ADEC Segment Length: 831m



Map Key: PWS-115

Name: Randy McBride

Date: 4/2/90

Date Entered:

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

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

- (A) Substrate type and % of segments: SUBDIV. + granules
 (1) Bedrock 20 (2) Boulder 30 (3) Cobble 30 (4) Pebble 10 (5) Sand 10 (6) Silt
- (B) Overall % cover of biota (% of segment): Dense Moderate X Low X
SUBDIV.
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)
 Photographs: Roll No. ST-12-3
 Frames 12, 13, 14

BARNACLES

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

MYTILUS

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

GASTROPODS (ALGELLA, LITTORINA, LIMPETS)

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

FUCUS

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

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

Ecological Considerations: According to the Priorities and Windows table, this segment is environmentally ranked Priority 1, with an open work window 5/10-6/11. The identified ecological sensitivity is used as a Main Bay Habitat release site (Code 1E) - Constraints 1, 2 and treatment priority 2. This is a generally biologically/geomorphologically rich and diverse shoreline region, probably reasonably sensitive (relative to most other areas) to oil-recovery-type forms of human disturbance.

Mainland
EB-6-A

EB-6

Eshamy
Bay

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EB-6

ADEC Segment Length: 831m

0 100 200 300
METERS

Map Key: PWS-115

Name: Randy McBride

Date: 4/2/90

Date Entered:

10/25

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

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

SHPO SIGNATURE: Charles J. Homan DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 621 m: No Oil 793 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/13/90

ADEC JOHN BAUER
EXXON ANDY TETZ
NOAA Bruce Westcott
USCG G.A. REITER

FOSC: DATE: 4-20-90

MAINLAND

EB-5

ESHAMY BAY

25 of 33

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EB-5

ADEC Segment Length: 1309m



Map Key: PWS-156

Name: Randy McBride

Date: 4/3/90

Data Entered:

1991 MAYSAP EVALUATION

SEGMENT: EB 005 **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,
Fish harvest area

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.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 1 SEGMENT EB005 SUBDIVISION A DATE 5/20/91

DEC
NAME JEFF GIMALIAS SIGNATURE [Signature]

☒ NTR NO OIL WORTH RECOVERING ON THIS SEGMENT. ONLY OIL PRESENT IS OCCASIONAL TRACE. AREA FAIRLY EXPOSED, RECEIVES HARD STORM ACTION

EXXON
NAME LARRY D. OLSON SIGNATURE [Signature]

☒ NTR No Recoverable oil remains on this segment.

LANDMANAGER
NAME MARSHA HALL OF DNR SIGNATURE [Signature]

☒ NTR Oil at Area A was recovered. Area B was very light - not distinguishable.

USCG/NOAA
NAME SCHULTZ / CHILDS SIGNATURE [Signature]

☒ NTR No Recoverable oil found

MEDIUM ENERGY - STEEPLY DIPPING BEDROCK SHORELINE - "SLATEY" BEDROCK ERODES TO FLAT SUBANGULAR TO SUBROUNDED CP ARMOR ON BEACH FACE, ONLY TRACE OIL FOUND AS CT - SMALL LO SOL & AS - PICKED UP BY TEAM @ "A"

PAGE 1 OF 1

BIO M. FAWCETT

SEGMENT **EB-5**

SUBDIVISION A

DATE 5 / 20 / 91

EXXON L. OLSON

USCG/NOAA SCHULTZ / CHILDS

TIME 14 : 08 to 15 : 10

TIDE LEVEL + 0.1 ft. to +3.0 ft.

ENERGY LEVEL: ☐ H ☒ M ☐ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 1415 m

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

EST. OIL CATEGORY LENGTH: W 1m M 1m N 1m VL 36m NO 379m US 1m

[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- 1 - 27 FRAMES 19~24

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	-	-			X			pc-DEM		
2	15							X	-	-			X			c-CGM		
3	18							X	-	-				X		C-CGR		
4	25							X	-	22	N	X				CP-PCA		
									-									
									-									
									-									
									-									
									-									

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

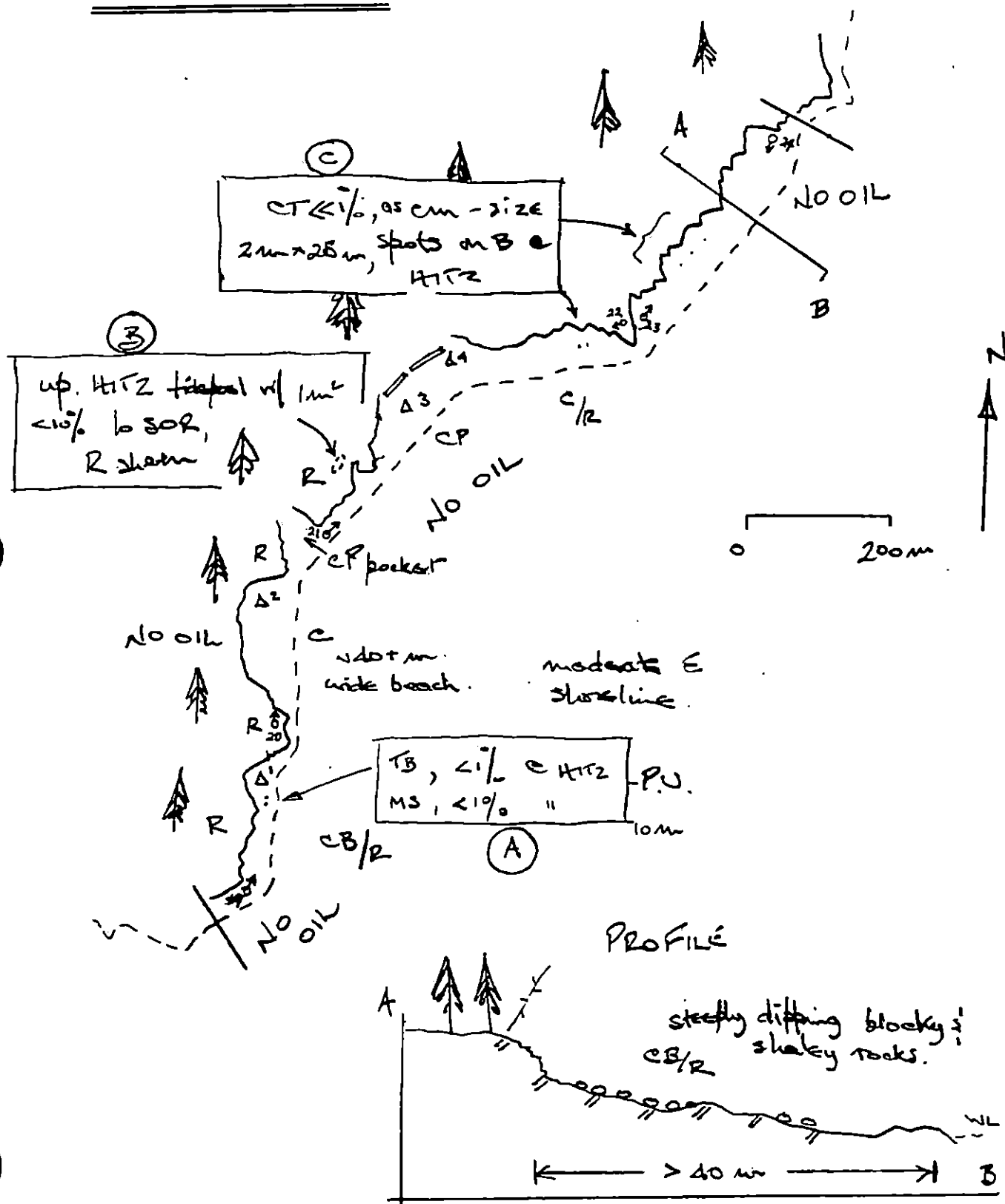
OG COMMENTS: Rugged rocky shore w/ CB veneer over partly polished bedrock. Trace surface oil only, as tiny drops of CT, a trace of sol and MS in a rock crevice. The N end of the segment is overhauled by an eagle @ her nest.

REVIEWED: F.W. 5/22/91

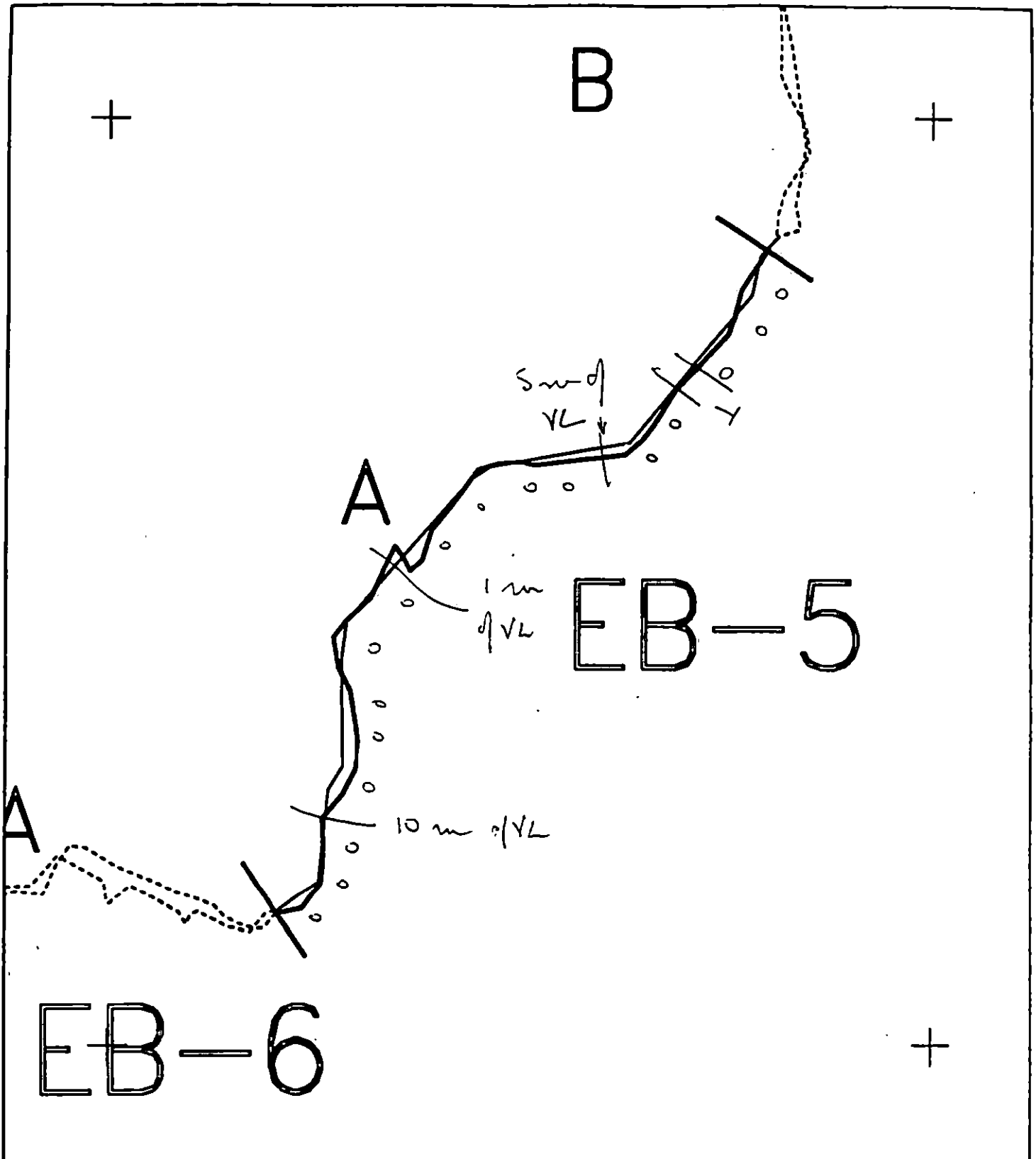
EB-5A

G. MACDONALD

5-20-91



REVIEWED: F.W.
5/22/91



XXXX	Wide	EB005 A	Subdivision Field Map
////	Medium	ADEC Subsegment Length: 1414m	Map Key: PWSEB005A
----	Narrow	METERS	Name: <u>ESM</u>
TTTT	Very Light	0 200 400	Date: <u>5.20.91</u>
0000	No Oil	AK State Plane Zone 4 psb005a	Date Entered:

REVIEWED: F.W. 5/22/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 1 DATE 20 May 91
 SEGMENT # EB 005 TIDAL HEIGHT(Range) +0.6 to +2.5 ft
 SUBDIVISION A BIOLOGIST Michael Fawcett
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

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

This subdivision contains small B/C/P moderate energy beaches with dense barnacles, rockweed, mussels, Rhodowela, limpets and Littorinids in MTZ-LTZ areas, and dense barnacle SPAT in most of the intertidal zone. Bedrock outcrops and platforms have dense barnacles and rockweed in MTZ, patches of dense mussels on MTZ rock, & dense beds of ^{rockweed} in LTZ channels and some boulder areas. LTZ tidepools & low reefs near the north end of the subdivision have typical rich biota including mixed algae, chitons, limpets, hermit crabs, sculpins, anemones, & starfish. Minute amounts of residual oil found in 3 areas (see sketch map).

WILDLIFE OBSERVATIONS

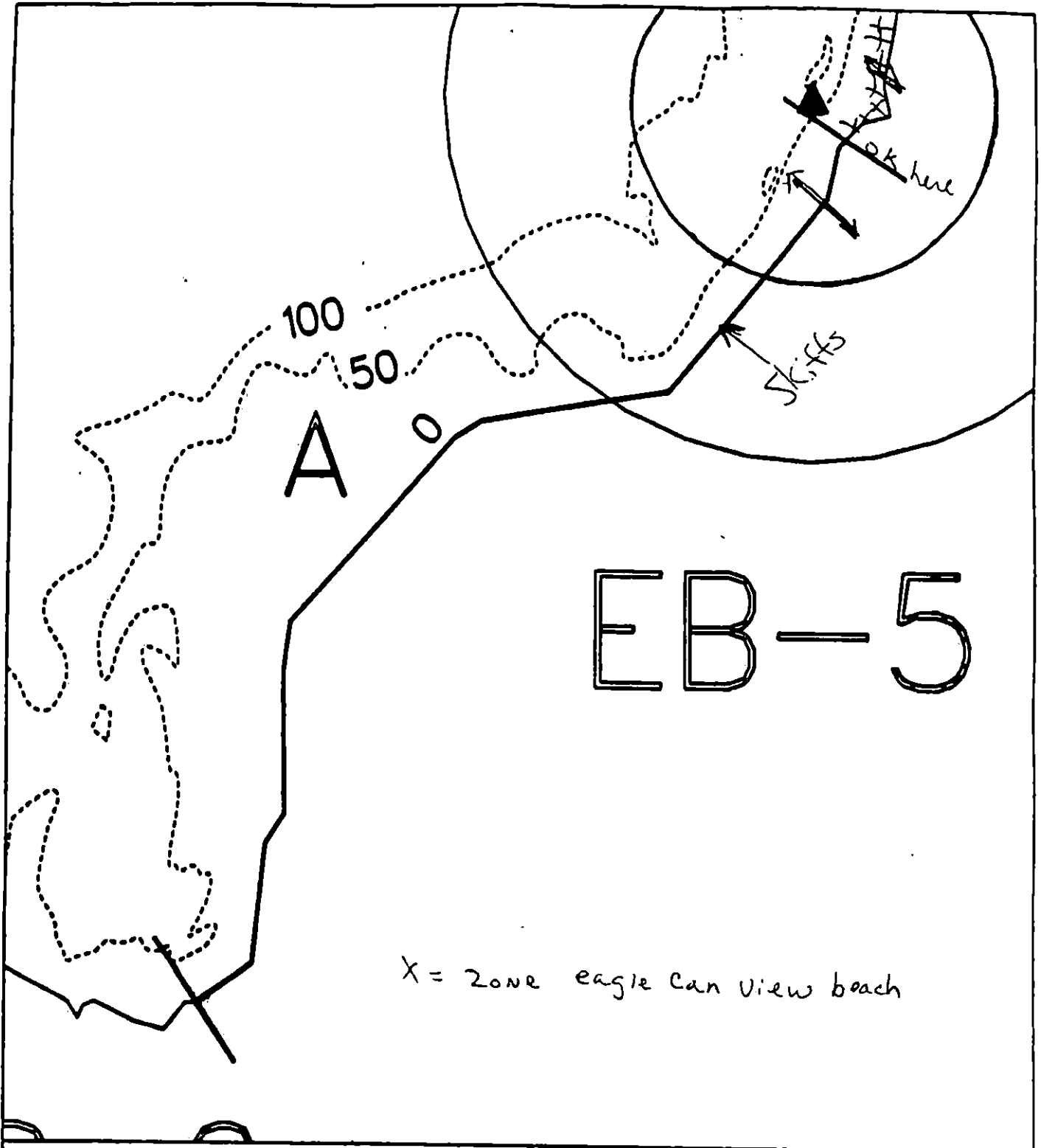
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	3 (1 imm., 2 adults w/ nest)	
Seabirds	1 pigeon guillemot	3	
Waterfowl	1 harlequin duck	8	
Gulls/Kittiwakes			tidepool sculpin
Shorebirds			black prickleback
Corvids			
Other Birds			

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

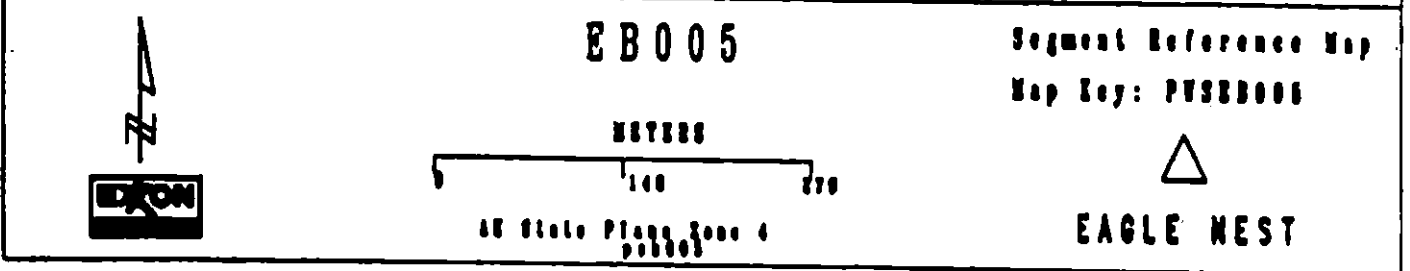
Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/22/91



EB-5

X = zone eagle can view beach



Reviewed M.B. 5/22/91

EB005A 5/20/91 Fawcett
1405 hrs

proceeding north - Dr. Stine
offshore watching eagle nest -
we could see eagle on nest
as we went by

- moderate energy R/PK/P beach

- mod barnacles MTZ ~~barrens~~

spars Fucus - dense spot MTZ
UTZ

- SOR patches UTZ - SVTZ - no SVTZ
spars barn barn 3m downshore

- Fucus & Rhodocela, barrens dense
on bigger boulders & outcrops

3 pigeon guillemot

- small MTZ pools in br reefs -

urchins, shrimp, hermit crabs,

sculpin, lamellibranchs, anemones

legless lizards - Pycnonotus

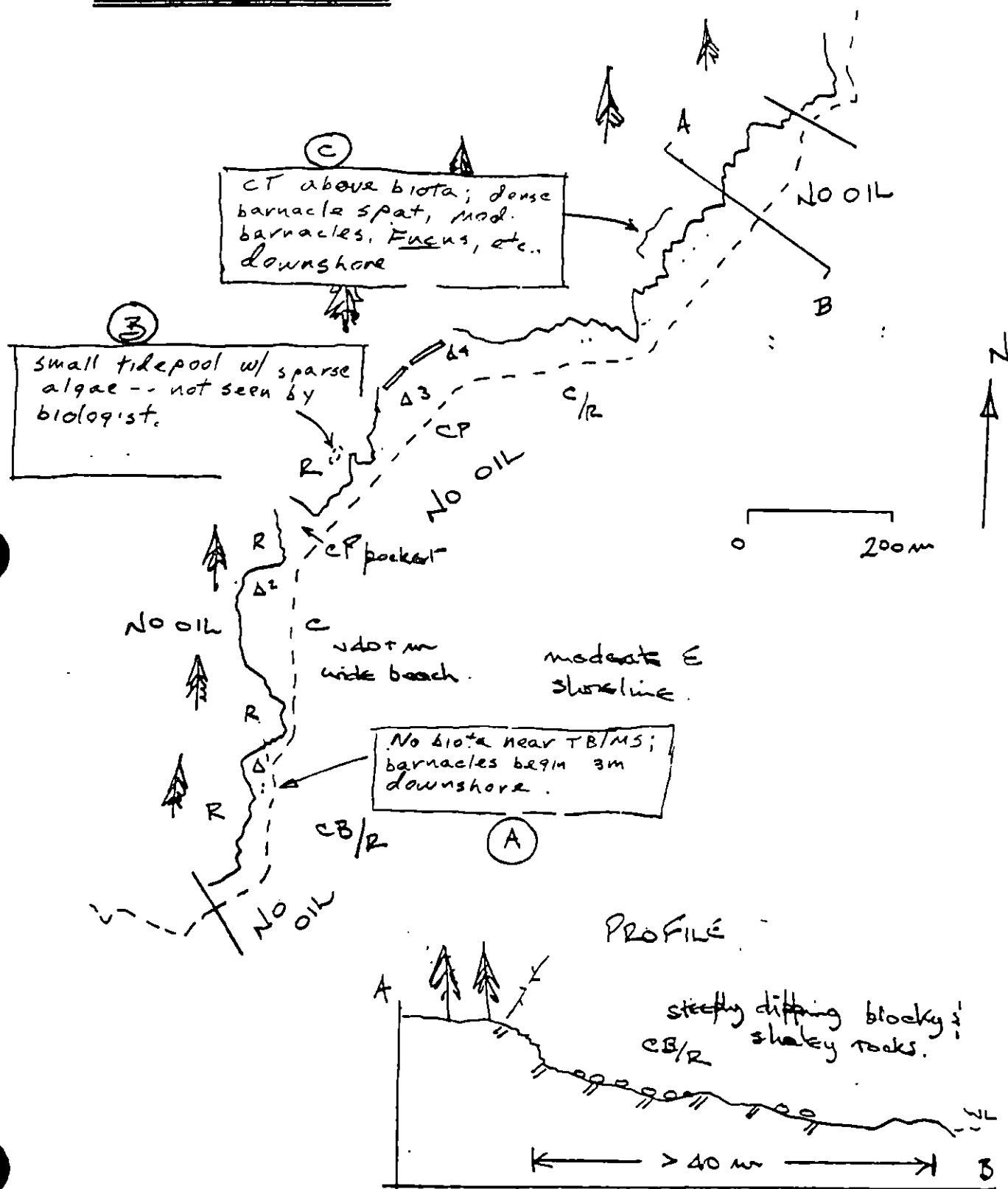
1425 hrs C/P beach - mostly
barren, unstable - dense spot

- on isolated boulders, all over
- 1 juv. eagle flew over near north end

84 Harlequins

- stopped before reaching
eagle nest. Day with us
end 1510 hrs

EB-5A
Bio Sketch Map
M. Fawcett
20 May 91



1991 MAYSAP EVALUATION

SEGMENT: EB 004 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, Fry release, Fish harvest area

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Timothy A. Smith Date: 5/31/91

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 31 1991

FOSC APPROVAL DATE: 6/5/91

ADEC

FOSC

EXXON

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

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

Fry Release: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 1 SEGMENT EB 004 SUBDIVISION A DATE 5/20/91

ADEC

ME

JEFF GINALIAS

SIGNATURE

[Signature]

☒ NTR NO RECOVERABLE OIL OBSERVED ON THIS SEGMENT High Energy
WAVE ACTION.

EXXON

NAME

LARRY D. OLSON

SIGNATURE

[Signature]

☒ NTR No recoverable oil remains on this segment.

LANDMANAGER

NAME

MARSHA

HALL

OF

DNR

SIGNATURE

[Signature]

☒ NTR no recoverable oil observed.

USCG/NOAA

NAME

SCHULTZ/CHILDS

SIGNATURE

[Signature]

☒ NTR No RECOVERABLE oil FOUND
i BEAUTIFUL DAY!

PAGE 1 OF 1

SEGMENT EB-4

SUBDIVISION A

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 1 m M 1 m N 1 m VL 5 m NO 220 m US 675 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- 1 - 27 FRAMES 25~27

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

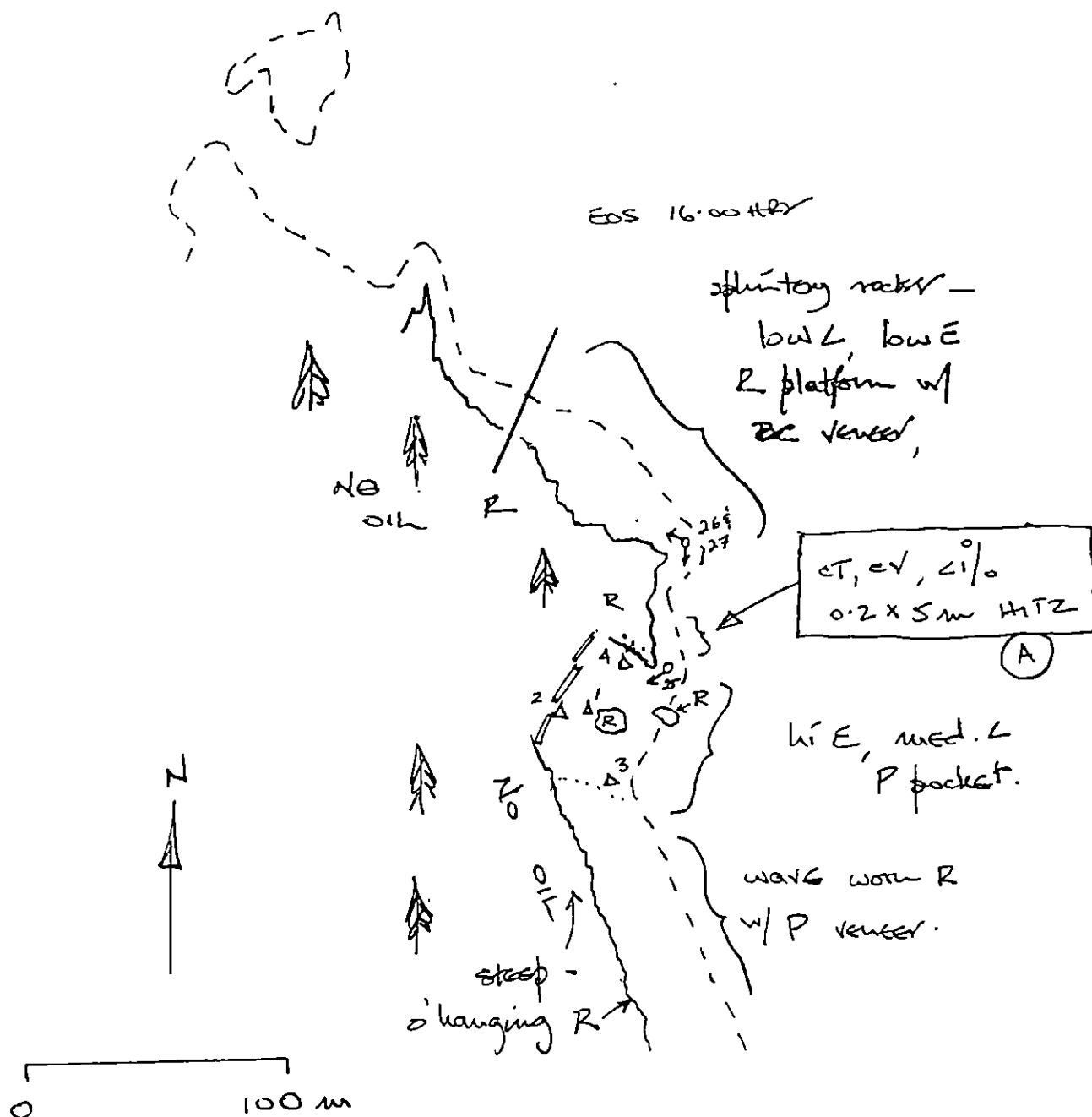
Surface oil only, as a trace of CT, CV, on a rock wall @ east end of pebble beach. No oil was seen over the rocky platform to the north.

REVIEWED: F.W. 5/22/91

EB-4A

G. MACDONALD

5.20.91



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #

1

DATE

20 May 91

SEGMENT #

EB 004

TIDAL HEIGHT(Range)

+3.1 to +4.1 ft MLLW

SUBDIVISION

A

BIOLOGIST

Michael Fawcett

SEA STATE

calm

WIND SPEED/DIRECTION

calm

PHOTOGRAPHS: ROLL #

FRAME #

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

Bedrock at North end of subdivision has rugged bedrock outcrops, channels, and tidepools with typical dense and diverse biota. Dominant species are rockweed, barnacles, and mussels. LTZ has variety of red green, and brown algae. MTZ-LTZ tidepools have coralline algae, Rhodomela, tocher algae, and chitons, limpets, fishes, anemones, hermit crabs, isopods, etc.

The only oil found was a trace of CT & CV on the south face of the bedrock outcrop that is the north end of the wide P/O beach. (see sketch map).

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

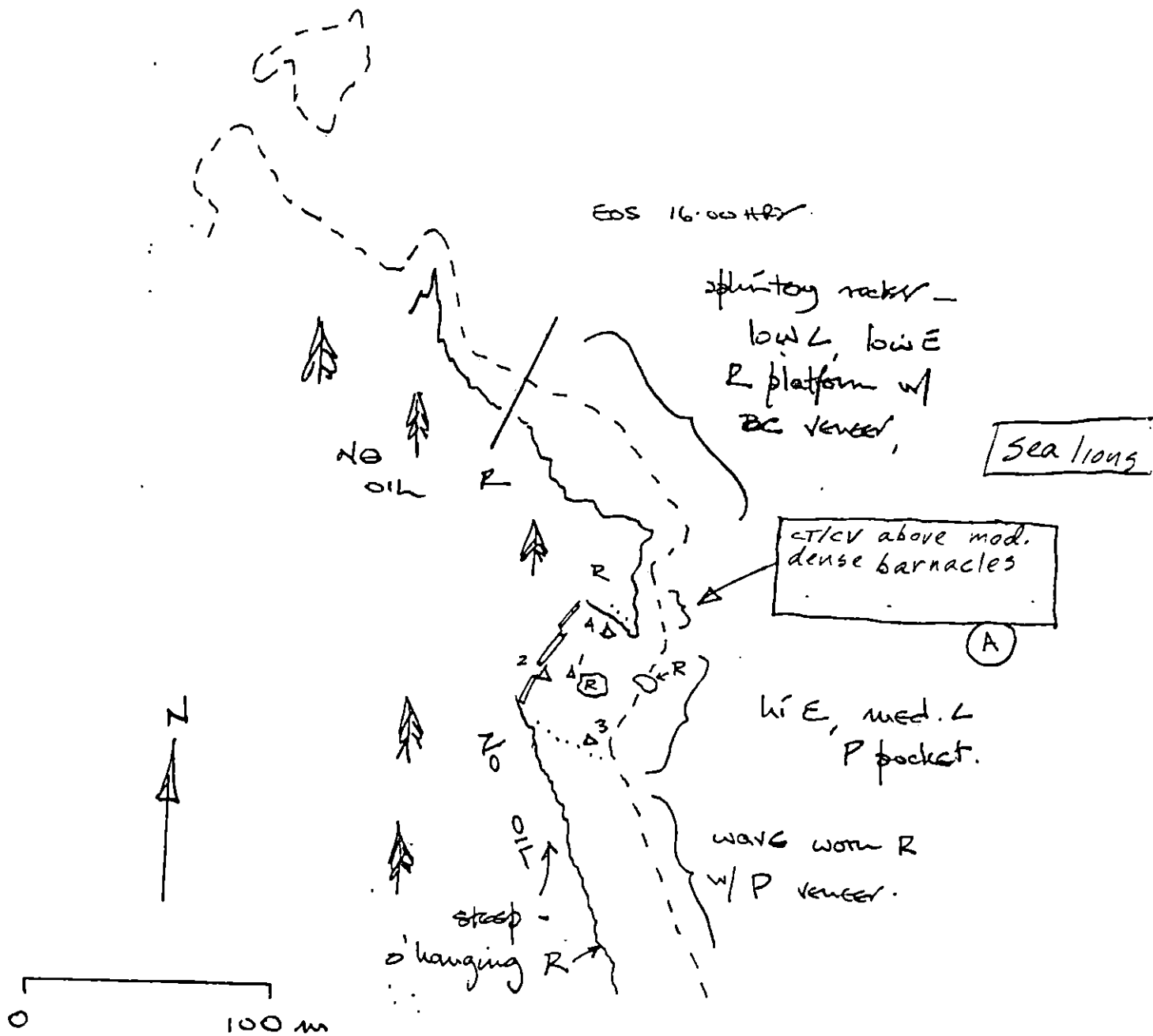
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2 (both immatures)	black prickleback
Seabirds			tidepool sculpin
Waterfowl			
Gulls/Kittiwakes	1 (6-W gull)	5	
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Amphipeds(specify)	9 Sea lions swimming		
Whales(specify)			

shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/22/91

BIO Sketch Map
 EB-4A
 M. Fawcett
 20 May 91



Reviewed M.B. 5/22/91
 6

FB 4A 5/20/91 Fauceff

start 1525 hrs

- 4 sea lions on way in + 5 more
5 GN Gulls

- calm, no seas

- 1 imm. eagle took off from
beach as we approached

- wide high energy g/p beach
no birds

BR at N end w/ sand mussels

Fucus, barnacles, mod. Litt.

spare limp, sparse photo

TR CT on BR + 8-12 ft above
mod. barnacles

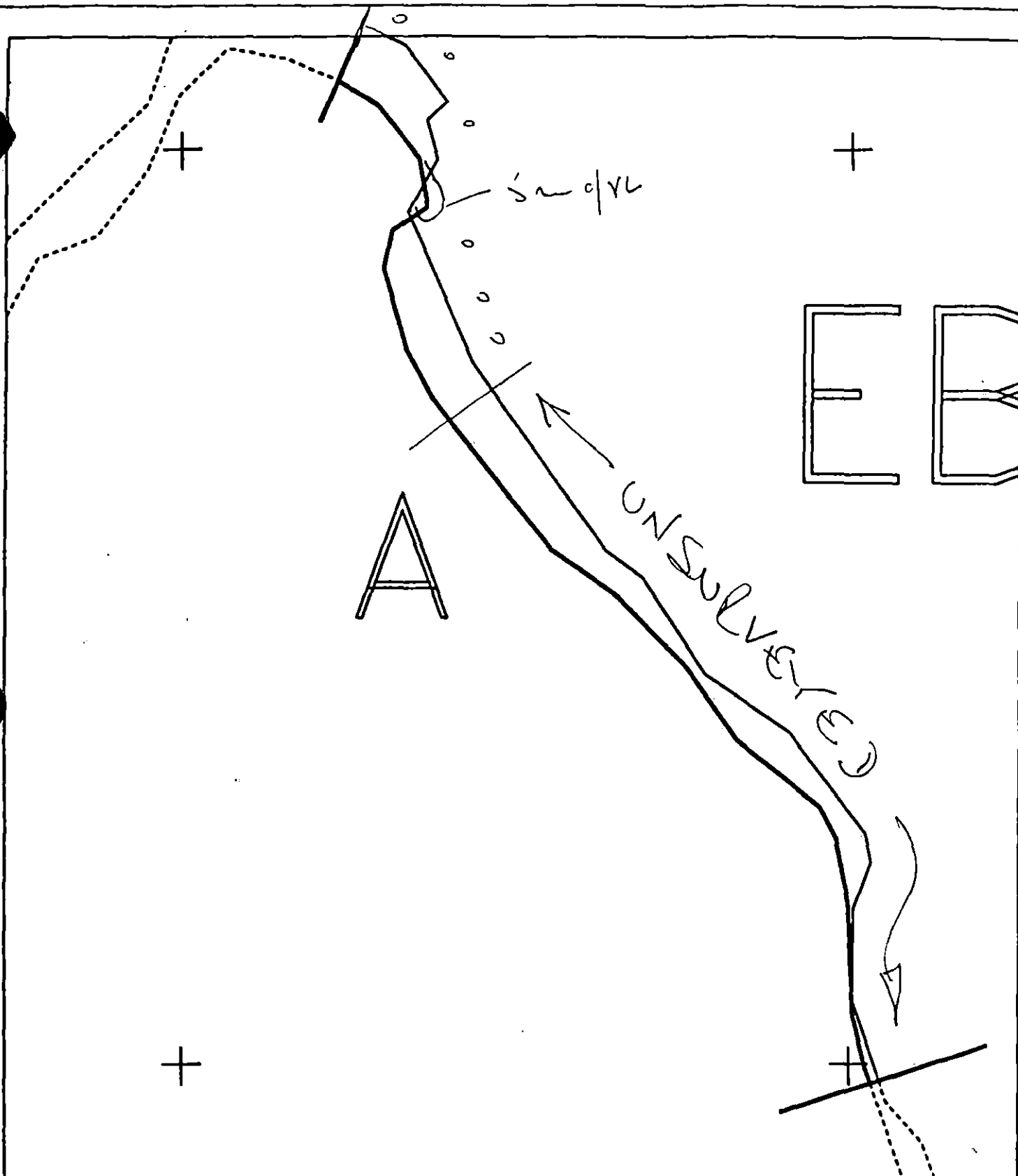
- 1 juv eagle in tree at point

- another flew over

- suggest BR & BK at point

Fucus, mussels, barnacles

end 1600 hrs



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

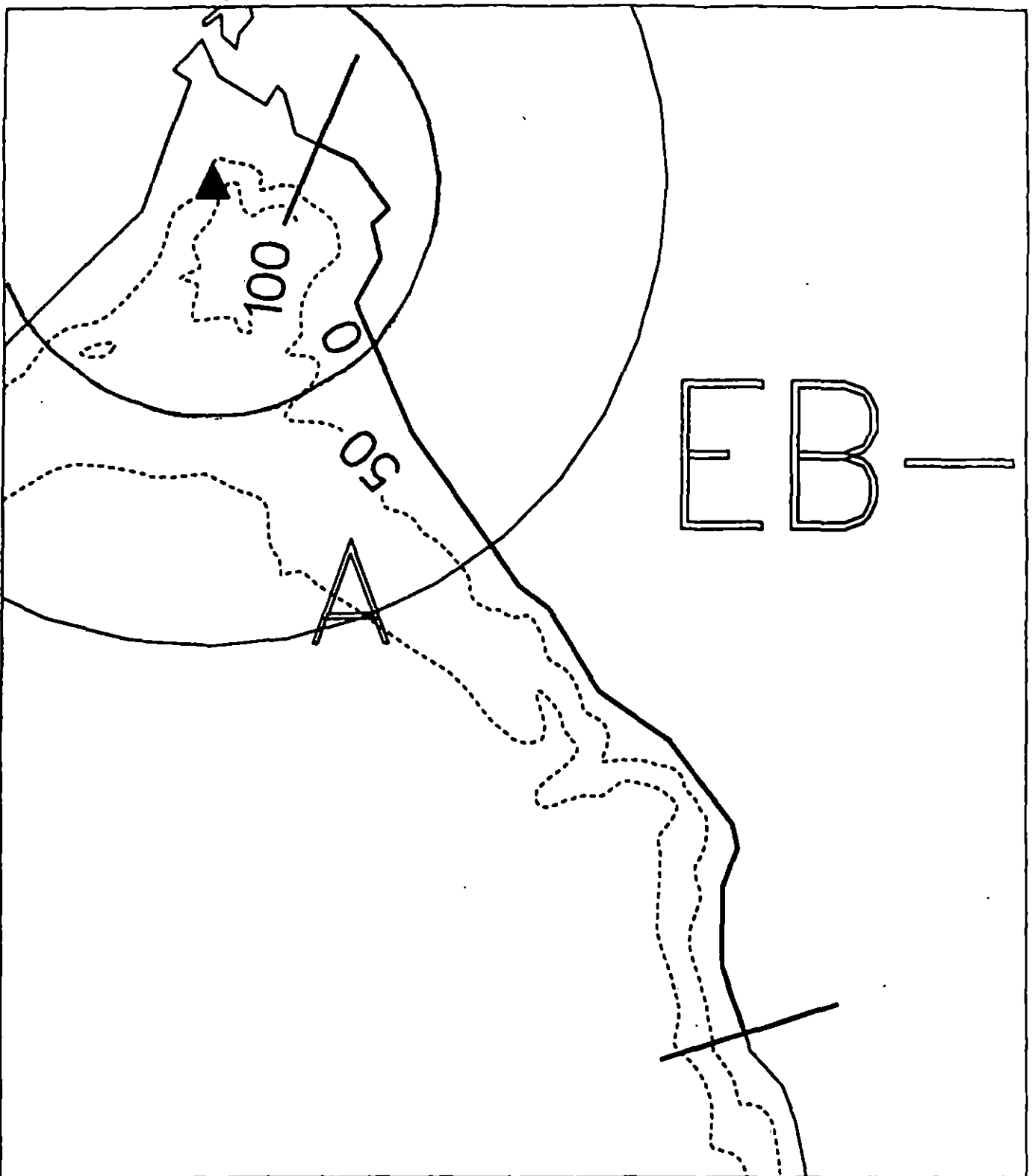
EB004 A
 ADEC Subsegment Length: 901m
 METERS

5 100 200
 AK State Plane Zone 4
 psh004a



Subdivision Field Map
 Map Key: PWSEB004Aa
 Name: GM
 Date: 5-20-91
 Date Entered:

REVIEWED: F.W. 5/22/91



EB004

Segment Reference Map
Map Key: PVS20004

EXON

METERS

0 112 220

AK State Plane Zone 4
960004

EAGLE NEST

△

REVIEWED: F.W. 5/22/91

A

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EB-07

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

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

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

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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 224 m: No Oil 2964 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

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

USCG

NAME

GARY OTT

SIGNATURE

[Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME

MICHAEL J. EBEL

SIGNATURE

[Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

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

LAND MANAGER - U.S.D.A. FOREST SERVICE

NAME

DON J. BREITINGER

SIGNATURE

[Signature] 4/4/90

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 02/02/88

OG Randy McBride ~~NOAA~~ Gary O'H SEGMENT ST/ EB-7
 BIO Lewis Sherman LAND REUSE Don Brattiger SUBDIVISION A 1 of 1
 EXXON Leonard Herbst ADEC Mike Ebel TIME 12:09 to 14:30
 TEAM NO.: 12 TIDE LEVEL: 7.8' to 3.2' DATE 4/14/90
 EST. SUBDIVISION LENGTH: 3617 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow 42° F
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: North to South
 SURFACE SEDIMENTS: R 60% B 10% C 25% P 3% G 1% S 1% M 0% V 0%
 SLOPE: Long 5% Hang 75% Vert 20% WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 145 m NO 3472 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	IC	IB	IF	IS	1	2	3	4	5	6	7	8	SU	UI	MI	LI
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL																

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris			

DEBRIS COLLECTED
☒ YES ☐ NOTYPE Plastic Bottle#BAGS 0

Photographs:

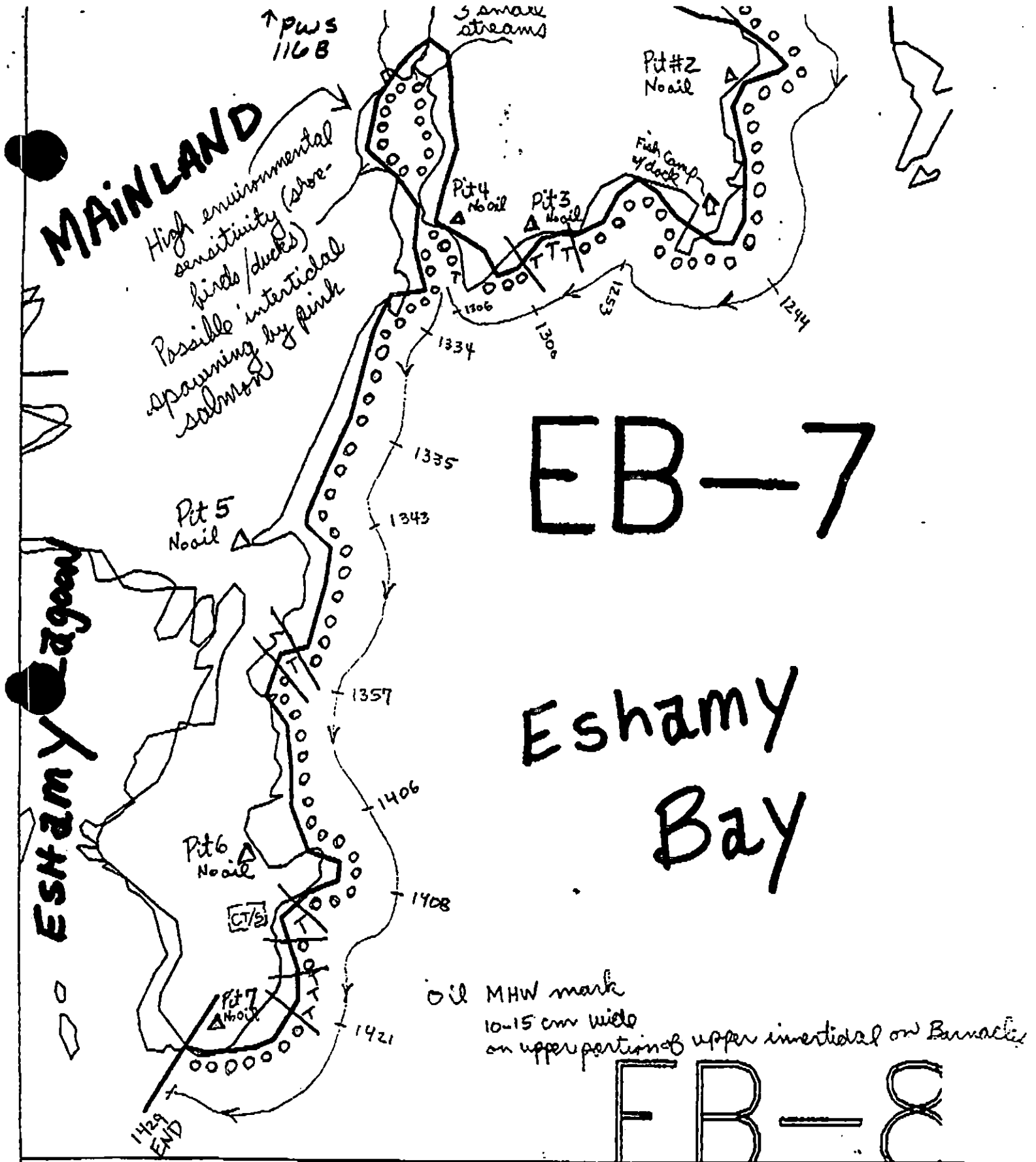
Roll No. ST-12-3Frames 15

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
		CO	OR	OL	OF	NO		UC	UC	1	2	3	4	5	6	7	8			
1	20					X	---		X											C, B
2	15					X	---		X											C, P
3	20					X	---		X											C, P, G
4	30					X	---		X											P, G, S
5	35					X	---		X											C, P, G
6	35					X	---		X											C, P, G, S

COMMENTS

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



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EB-7

ADEC Segment Length: 3188m

0 100 200 300
METERS

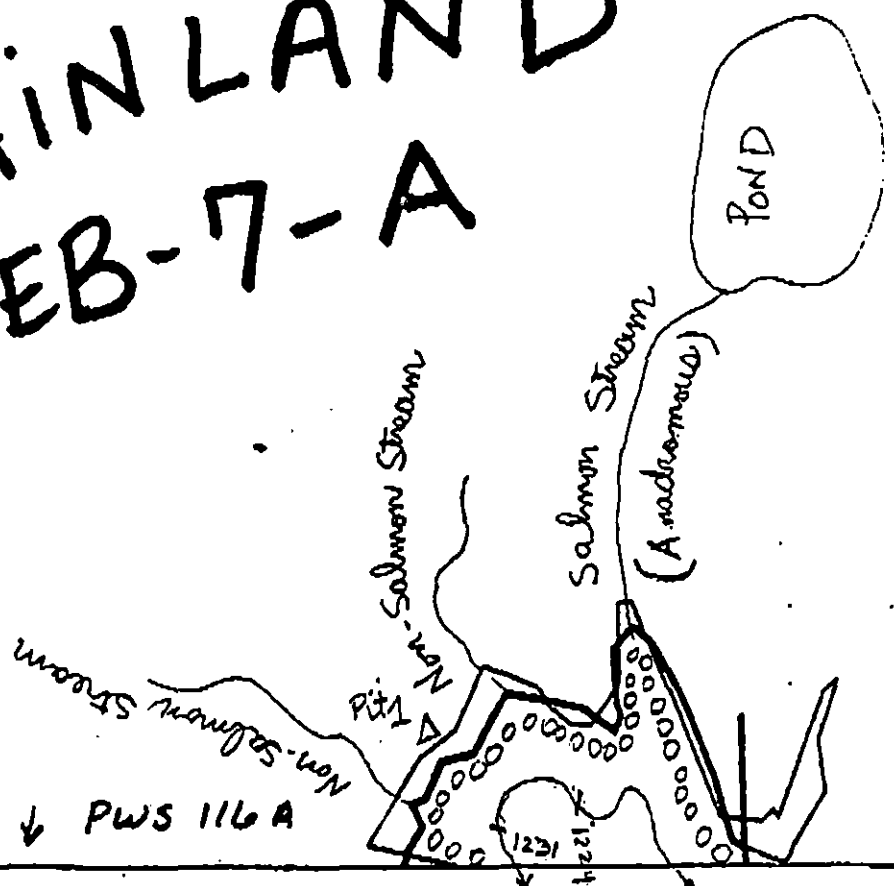
Map Key: PWS-1160

Name: Randy McBride

Date: 4/4/90

Date Entered:

MAINLAND EB-7-A



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EB-7

ADEC Segment Length: 3188m



Map Key: PWS-116b

Name: Randy McBrideDate: 4/4/90

Data Entered:

1-5.1m

11.5m

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

Time (24 hr) 1205-1420 Biologist SHARMAN

SUBDIV.

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

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

SUBDIV.

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

Photographs: Roll No. ST-12-3

Frames 15

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS (ANCELLA, LITTORINA, LIMPETS)

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

NOT PRESENT

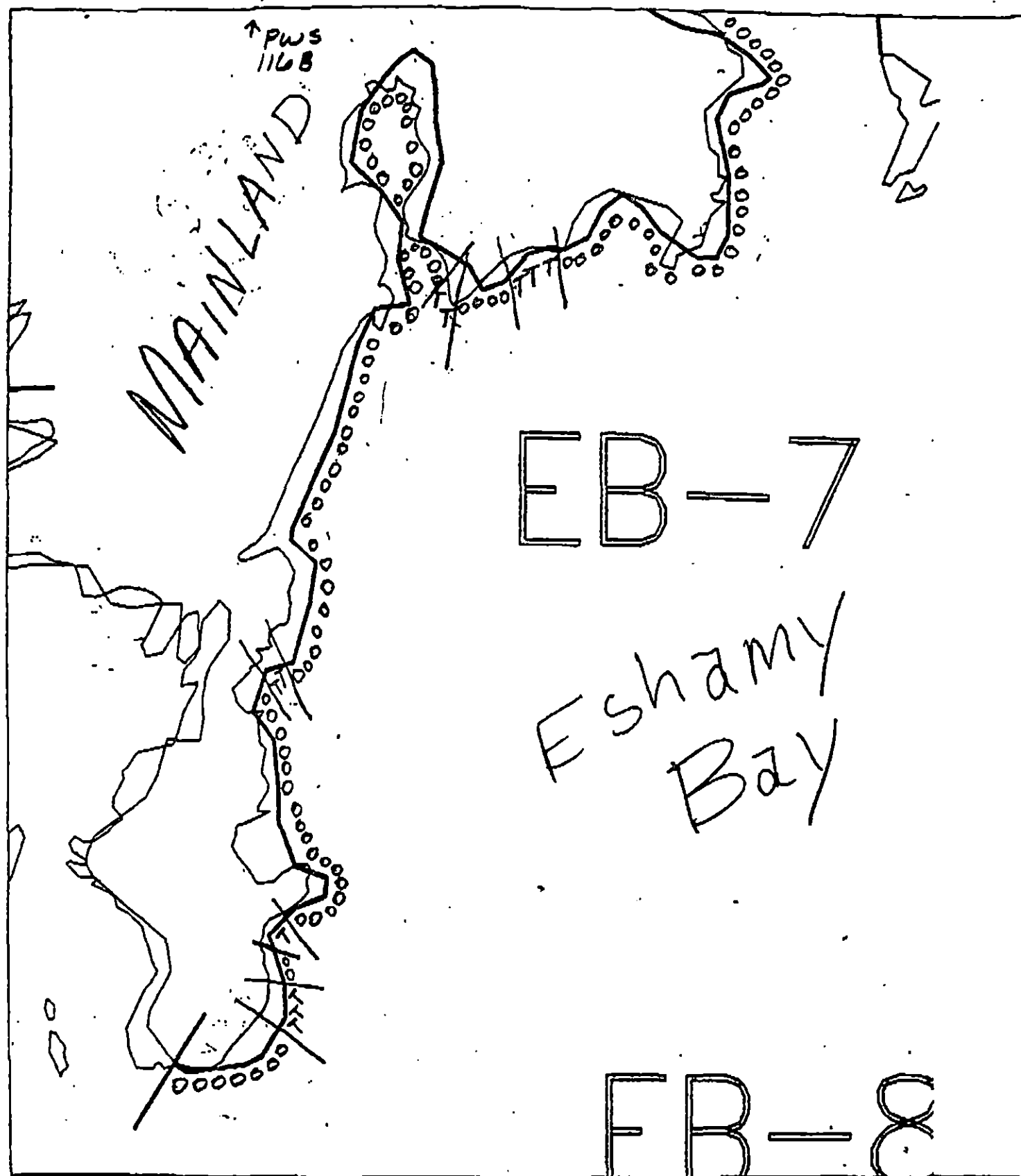
FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments: 12 pairs surf scoters, 12 pairs goldeneyes, mink tracks in snow, sea otter bone, 1 pair black oystercatchers at segment end point at neck of entrance to Esklamy Pass. Shoreline spruce trees scarred by porcupines the water are common. Very rich area (see below) - fortunately, no oil. Did not observe L. on early portions of segment. Lots of drift from yesterday's storm - visible. Some Rhodospirillum (recruit) along with Fucus in the MTA. Abundant Amphipoda, bivalve boulders, also some Littorina laying eggs. No Ecological Considerations: and heavily isolated communities.

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



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EB-7

ADEC Segment Length: 3188m

0 100 200 300
METERS

Map Key: PWS-116a -

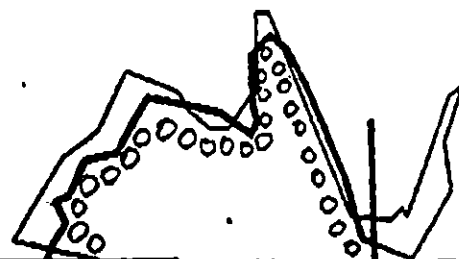
Name: Randy McBrideDate: 4/4/90

Data Entered:

15705

MAINLAND
EB-7-A

↓ PWS 116A



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EB-7

ADEC Segment Length: 3188m



METERS

Map Key: PWS-116b

Name: Randy McBride

Date: 4/4/90

Data Entered: 1152

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

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

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

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 224 m: No Oil 2964 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

X No Treatment Recommended
 Treatment Recommended
 Manual Pickup
 Bioremediation
 Tarmat: Breakup
 Removal

 Snare/Absorbent Booms
 Oil Snares (pom poms)
 Absorbents (pads, rolls, etc)
 Spot Washing: Wands
 Beach Cleaner
 Other (see comments)

COMMENTS:

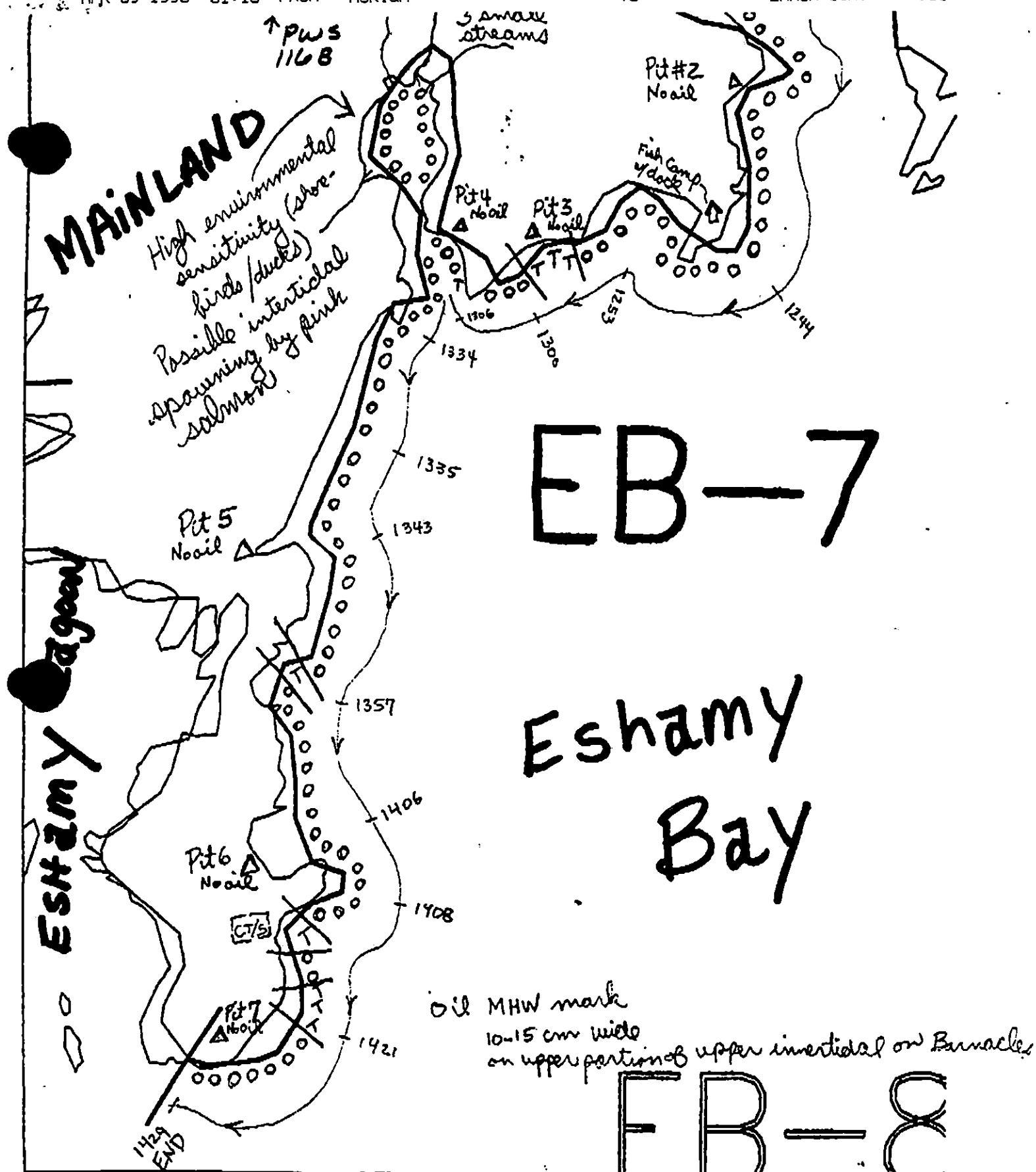
TAG COMMENTS:

TAG APPROVAL DATE: 4/20/90

ADEC ART WEINER Art Weiner
EXXON DIMY GEL Dimy Gel
NOAA Burt Wescott Burt Wescott
USCG KENNETH KEANE Kenneth Keane

FOSC:

DATE: 4-26-90



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EB-7

ADEC Segment Length: 3188m

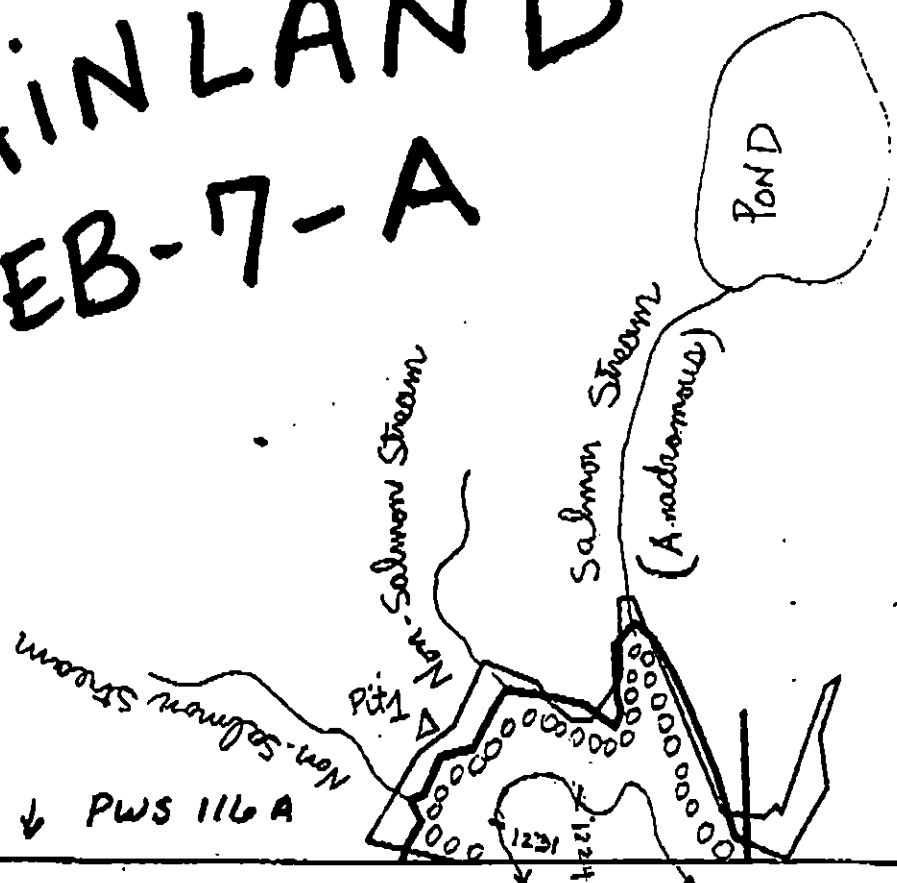


Map Key: PWS-116a

Name: Randy McBrideDate: 4/4/90

Data Entered:

MAINLAND EB-7-A



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

EB-7

ADEC Segment Length: 3188m

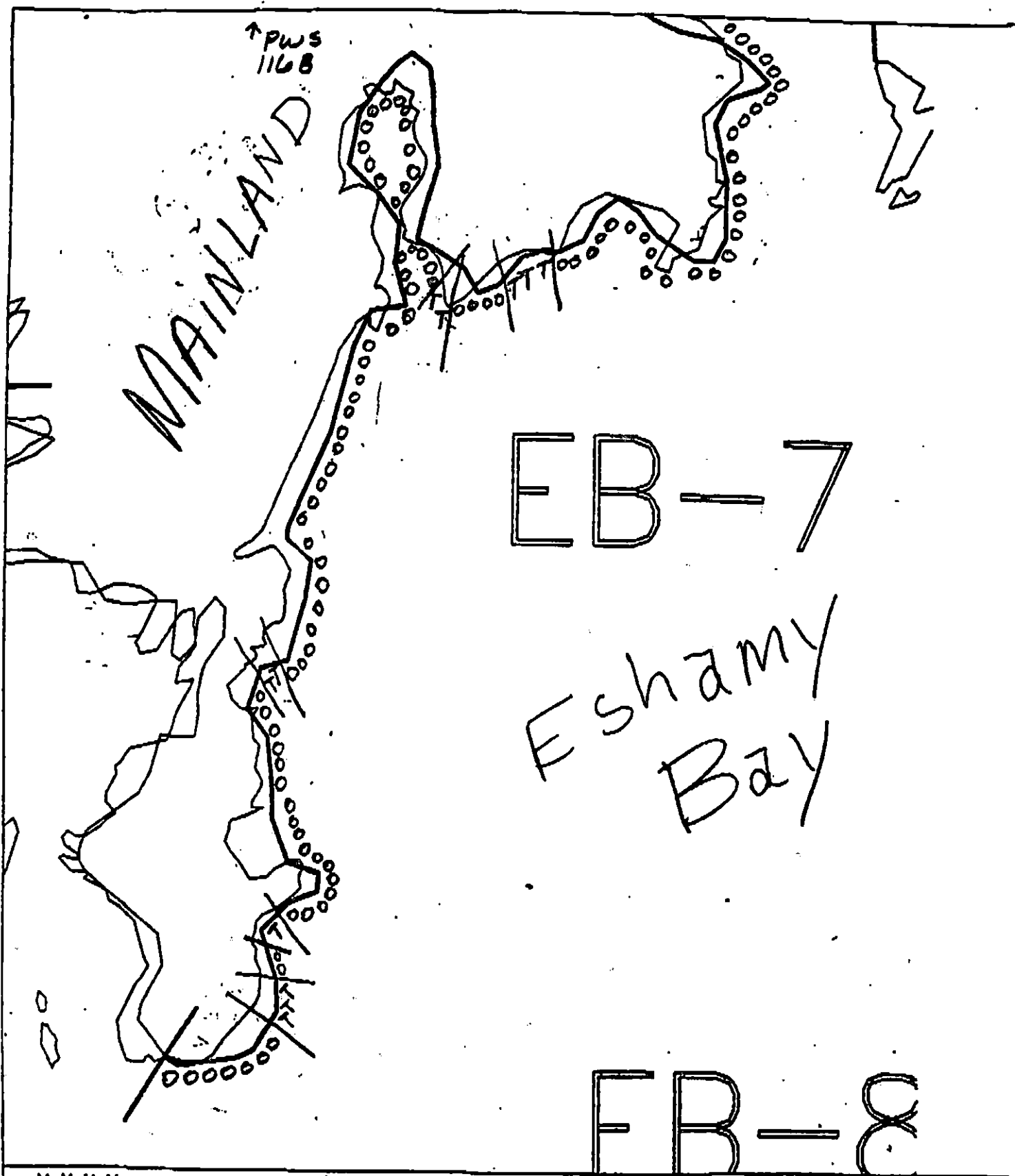


Map Key: PWS-116b

Name: Randy McBride

Date: 4/4/90

Data Entered:



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EB-7

ADEC Segment Length: 3188m

0 100 200 300
METERS

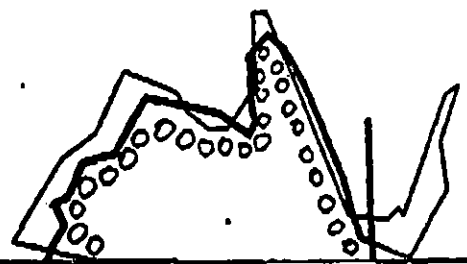
Map Key: PWS-1168

Name: Randy McBrideDate: 4/4/90

Date Entered:

MAINLAND
EB-7-A

↓ PWS 116A



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EB-7

ADEC Segment Length: 3188m



Map Key: PWS-116b

Name: Randy M. Birds

Date: 4/4/90

Date Entered: 4/4/90

1991 MAYSAP EVALUATION

SEGMENT: EB 008 SUB: A REGION: PWS SURVEY DATE: 4/30/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest,
Fry Release, Fish harvest area, Anadromous stream

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.

Fry Release: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Anadromous Stream: 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.

WYSAF FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT EO 008 SUBDIVISION A DATE 30 APR 91

ADEC

NAME Dianne Munson SIGNATURE Dianne Munson

☒ NTR ☐ Treatment Recommended

Primarily tarballs, patties broken and patchy over a large area. Several areas of oiling were picked up and areas A₁ and A₂ were worked on. App Previous areas showing no oiling on SSAT and ASAP were not surveyed.

EXXON

NAME LARRY D. OLSON SIGNATURE Larry D Olson

☒ NTR

Segment was worked by VECO crew. 9 bags of tar balls and patties were removed. Remainder of segment showed no sign of oil.

LANDMANAGER

NAME LARRY EVANOFF OF CVC SIGNATURE LM

☐ NTR

☐ TREATMENT RECOMMENDED

APPROX. 1/3 OF SEGMENT WAS NOT SURVEYED DUE PREVIOUS SURVEYS SHOWED NO OIL. MAINLY TAR BALLS, TAR PATTIES WERE FOUND AND PICKED UP BY SURVEY CREW AND VECO CREW. SOME TAR BALLS WERE FOUND IN THE SUPRATIDAL ZONE NEAR SNOW EDGE. QUESTION: HOW MUCH IS THE SNOW HIDING?

USCG/NOAA

NAME Jerry Galt NOAA SIGNATURE J. Galt

☒ NTR

very small % coverage throughout segment

revised 5/2/91 Ki
Revised: 5/2/91 MC

OG sketched Map

EA008-A

JM SENNELS

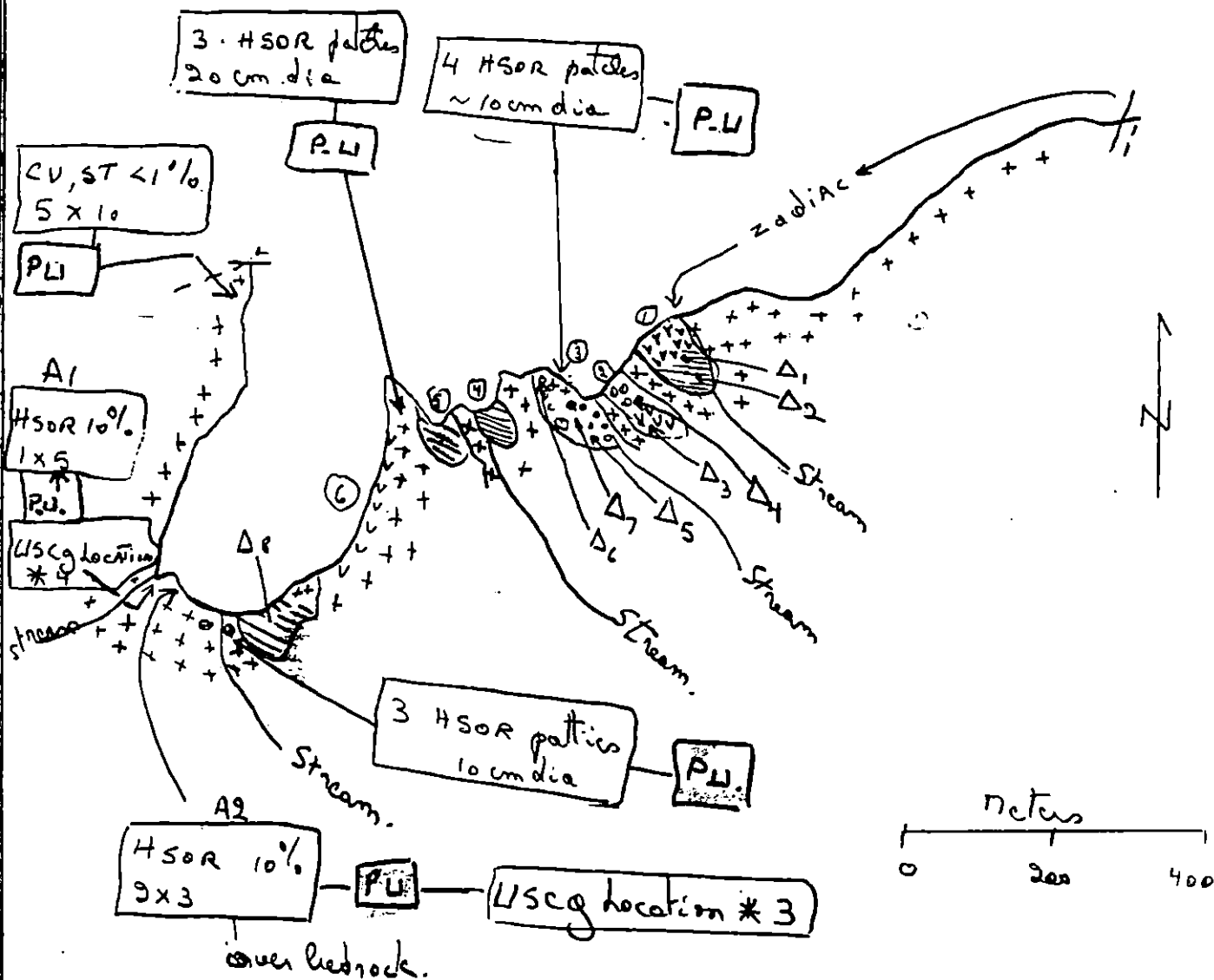
30 April 91

0612 - 0800

Legend

- [+] Bedrock
- [Y] Boulder/cobble
- [oo] Pebble/cobble
- [//] P. Gble / gravel

- ① Pocket beach of Bd/cb between bedrock headlands
 Δ_1 in mltz Δ_3 in uitz
- ② Same type of beach Δ_3 uitz, Δ_4 mltz
- ③ Pb/cb pocket beach, bedrock outcrops in litz
 Δ_5 uitz, Δ_6 litz, Δ_7 mltz, 4-10cm² tan pebbles
picked up near stream. Well sorted pb uitz, grassy
backshore, steep beach face
- ④ Platy pebble pocket beach, well developed berm.
- ⑤ same beach as 4.
- ⑥ narrow fringing beach of angular platy
cb/pb/bd in front of bedrock cliffs.



reviewed 5/21
REVIEWED 5/8/91 MC

NAYSAP BIOLOGICAL SUMMARY FORM

TEAM #	4	DATE/TIME	April 30, 1991 0612 => 0815
SEGMENT #	EB008	TIDAL HEIGHT (Range)	+5.0 => -1.5
SUBDIVISION	A	BIOLOGIST	JIM BARRY
SEA STATE	Calm	WIND SPEED/DIRECTION	NE 5-10 kt. Rain

COMMENTS / OBSERVATIONS - OILED SUBDIVISIONS

A,B The oiled site (MSOR patches) is located in the extreme upper intertidal near the supratidal zone on a medium exposure beach of clean cobble. Little biota is present at this tidal level. Black lichen, sparse limpets, littorines, barnacles, and a few amphipods were the only common species. Below the oiled site, the cobble beach and adjacent headlands have a high cover of biota, with moderate cover of Fucus, barnacles, and mussels. Barnacles and mussels are dense in patches. Limpets, mussels, littorines, and whelks also are common on the headlands near the oiled site, as are several species of green and red algae. Most species are present as adults, as well as, juveniles, recently settled individuals, or eggs. No evidence of recent oil-related effects to biota are evident.

MANUAL PICKUP PERFORMED DURING SURVEY. Potential additional clean-up activities will not adversely impact the biota in the area.

C The site with MSOR patches is a high intertidal location with medium to small angular cobble. Moderate densities of limpets, fairly low densities of littorine snails and barnacles are the major macrobiota of the site. Nearby headlands in the lower intertidal zones have higher abundances of Fucus, mussels, barnacles, and marine snails (limpets, littorines, etc.), with adults, juveniles, and in some cases, egg masses. No apparent recent impacts to biota from the oil residual were observed.

MANUAL PICKUP PERFORMED DURING SURVEY. Potential additional clean-up operations will not adversely affect biota at this site, so long as activities are restricted to the immediate vicinity of the oiled area.

(continued)

WILDLIFE OBSERVATIONS - Completed on all subdivisions

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2	
Seabirds			
Waterfowl	3	11	
Gulls/Kittiwakes	3	7	
Shorebirds	1	2	
Corvids	1	2	
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)	Sea Lions (2 each)		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

EB008-A - Biology Report (continued)

- D This oiled site is located in a small cove protected from waves or strong surge. Directly around the oiled site, the abundances and diversity of biota are quite low. The major species are sparse densities of barnacles, limpets, littorines, and Fucus. Beach grass and black lichen are the two common upland species. The lower zone fauna and flora are richer, especially on nearby headlands where Fucus is dense, along with barnacles and limpets. The cobble beach in the lower zone directly below the oiled site has a dense cover of Fucus, with high densities of recruits for Fucus, littorines, barnacles, and mussels. No recent oil-related impacts to the surrounding biota were evident.

MANUAL CLEANUP PERFORMED DURING SURVEY. Additional clean-up, if recommended, will not adversely impact biota directly at or surrounding the oiled site so long as access is restricted to manual pick-up teams. An eel grass and clam bed is present in the adjacent cove.

- E The oiled site (HSOR) is in the high intertidal drift zone. Barnacles, littorines, and Fucus are sparse. Black lichen is present as well. No recent impacts due to oil are apparent. Barnacle spat are present on weathered oil patches. Dead porcupine in supratidal-drift line.

MANUAL CLEANUP PERFORMED DURING SURVEY. Additional cleanup operations will not adversely affect the biota of the area (except the scattered barnacles on the weathered oil), but should be restricted to the upper and middle intertidal zones so that the middle to low, and low zone mussel bed, or the subtidal eel grass and clam bed is not disturbed.

- F This oiled site (HSOR) is also in the very high intertidal along the drift line of a beach of medium shingle. The biota at the oiled location include supratidal species such as beach grass, black lichen, and mosses, as well as intertidal species (drift Fucus, scattered limpets, barnacles, and littorines). This low exposure site shingle beach has very little in the upper zone. In the zones below the oiled site, there is a fairly dense mussel bed with adults and juveniles, with moderate cover of barnacles, limpets, littorines, whelks, and Fucus. Juveniles or egg masses or all these species were present. Lower in the intertidal, the habitat changes to a sparse eel grass bed and clam bed. An otter haul out site is located on the adjacent headland. No adverse oil-related impacts were evident.

MANUAL CLEAN-UP PERFORMED DURING SURVEY. Additional clean-up, if performed, should be restricted to the upper intertidal, so that there will be no disturbance to the lower intertidal mussel bed or to the low and subtidal zone eel grass and clam bed.

Summary of Biological Features of EB008-A.

Segment EB008-A has medium exposure beaches of shingle and high angle cobble, bedrock headlands, and a protected bay. The general features of the shingle beaches are: low to very sparse biota in the upper zones, medium densities and cover of biota in the low zone. Headlands throughout the segment are typical of medium exposure bedrock headlands, with patchy, but generally moderate to dense cover and densities of barnacles, Fucus, and mussels, littorines, and limpets in the upper to lower zones. Filamentous green and brown algae is abundant in the lower zones. In the bay, the eel grass - clam bed appears patchy in its distribution.

The clam bed has several species of clams. *Macoma* sp., *Saxidomus* sp., and *Prototheca staminea* are abundant. Low zone cobble community species include crabs, hermit crabs, peanut worms, nereid worms, encrusting bryozoans, and several species of algae, including filamentous greens and browns.

A. Marine Plants

1. Diatoms, Blue Greens
2. Green Algae - Chlorophyta
Acrosiphonia sp., Enteromorpha sp., Ulva sp., Urospora sp.
3. Brown Algae - Phaeophyta
Agarum fimbriatum, Fucus distichus, Hildenbrandia sp., Syctosiphon lomentaria
4. Red Algae - Rhodophyta
Ahnfeltia plicata, Calliarthron sp., Lithothamnion sp., Membranoptera dimorpha, Odonthalia floccosa, Palmaria palmata, Petrocelis sp., Rhodomela larix
5. Higher Plants
Zostera marina (eel grass), Elymus mollis (beach rye grass),

II. Marine Animals

1. Sponges - Porifera - Halichondria sp.
2. Anemones - Anthopleura artemesia, Epiactis ritteri
3. Hydroids - Sertularidae - Sertularella
5. Flatworms - Platyhelminthes - Polyclads
6. Nemertean Worms - Ribbon Worms - Emplectonema gracile, Tubulanus polymorphus
7. Polychaete Worms
Glyceridae
Nepthyidae
Nereidae - Nereis spp.
Serpulidae
Serpula sp., Crucigera sp., Eudistylia polymorpha
Spirorbidae - Spirorbis sp.
9. Peanut worms - Sipunculids - Phascolosoma agassizii, Golfingia margaritacea
10. Crustaceans
a. Amphipods - Orchestia sp.?
b. Barnacles - Balanus glandula, Chthamalus dalli
c. Crabs
Hemigrapsus oregonensis, Paguridae (hermit crabs), Oregonia gracilis, Pugettia sp., Cancer gracilis
d. Isopods - Gnorimorsphaeroma oregonensis
11. Mollusca
a. Chitons - Mopalia mucosa, Tonicella lineata,
b. Snails - Gastropods
Littorina scutulata, L. sitkana, Natica clausa, Nucella lamellosa, N. lima,
c. Limpets - Lottia digitalis, L. persona, T. persona
e. Mussels and Clams
Clinocardium sp., C. nuttalli, Hiatella arctica, Macoma sp., Macoma nasuta, Mya arenaria (soft-shell clam), Mytilus edulis, Prototheca sariniae, Saxidomus giganteus
12. Echinoderms
a. Sea stars
Dermasterias imbricata, Evasterias truscheli, Leptasterias hexactis, Pycnopoda helianthoides,
c. Sea Cucumbers - Holothurians - Leptosynapta sp.
d. Urchins - Strongylocentrotus droebachiensis
13. Bryozoans
Membranipora sp., Microporina borealis, Schizoporella sp.
15. Fishes
Cottidae
Stichaeidae - Xiphister atropurpureus, X. mucosus

OG sketch Map

EA008-A

JM SENEELS

30 April 91

0612 - 0800

Legend

- [+] Bedrock
- [Y] Boulder/cobble
- [oo] Pebble/cobble
- [//] Pebble/gravel

BIO SKETCH MAP - EBO08-A

- ① Pocket beach of Bd/cb between bedrock headlands
 Δ_1 in mltz, Δ_2 in uitz
- ② Same type of beach Δ_3 uitz, Δ_4 nitz
- ③ Pb/cb pocket beach, bedrock outcrops in litz
 Δ_5 uitz, Δ_6 litz, Δ_7 nitz. 4-10cm² far pitting
picked up near stream. Well sorted pb uitz, greeny
blackstone, steep beach face.
- ④ Platy pebble pocket beach, well developed berm.
- ⑤ same beach as 4.
- ⑥ Narrow fringing beach of angular platy
cb/pb/bd in front of bedrock cliffs.

BEACH GRASS, BLACK LICHEN,
MOSSSES, FUCUS DRIFT, SCAT-
TERED BARNACLES, LIMPETS,
LITTORINES.

HIGH ZONE SITE
MODERATE DENSITIES
OF LIMPETS, SPARSE
LITTORINES, BARNACLES

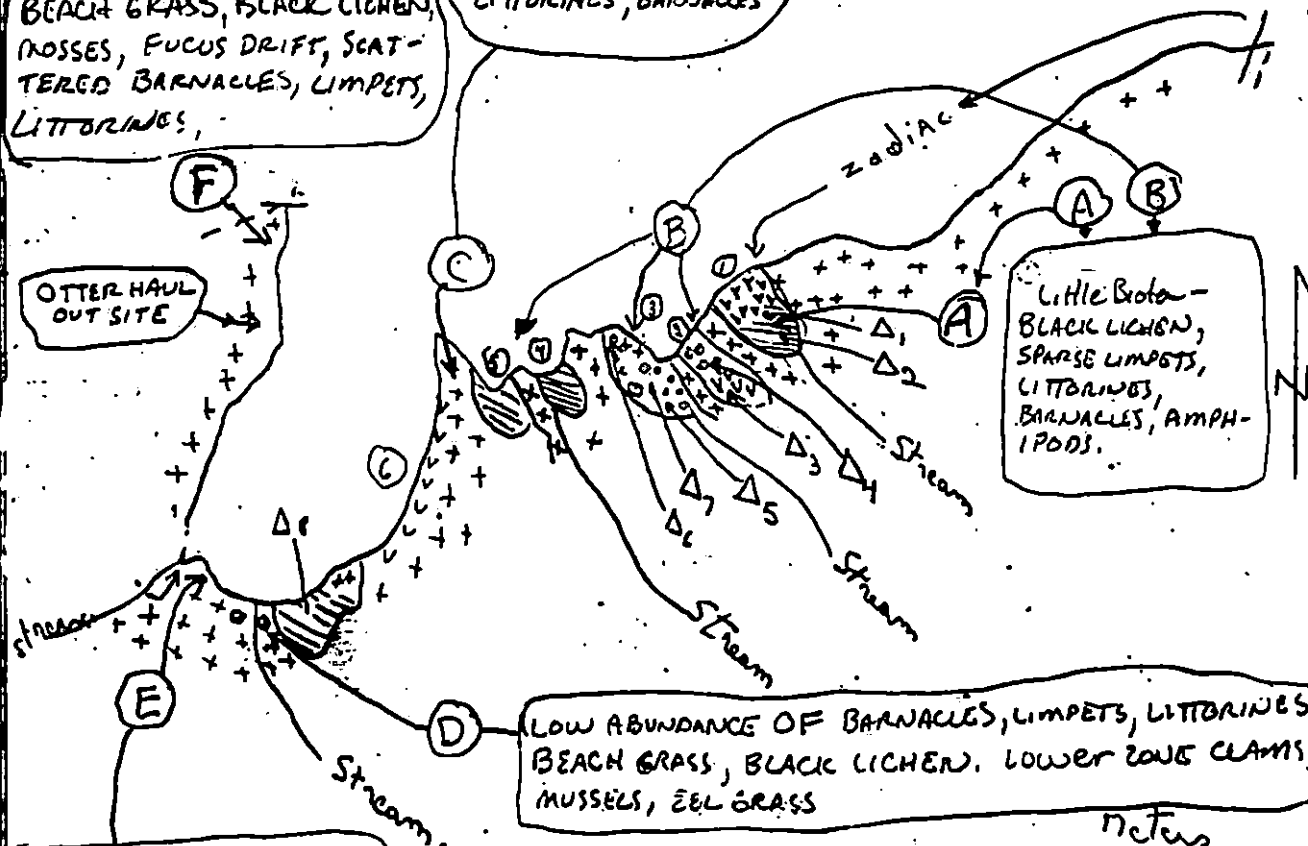
OTTER HAUL
OUT SITE

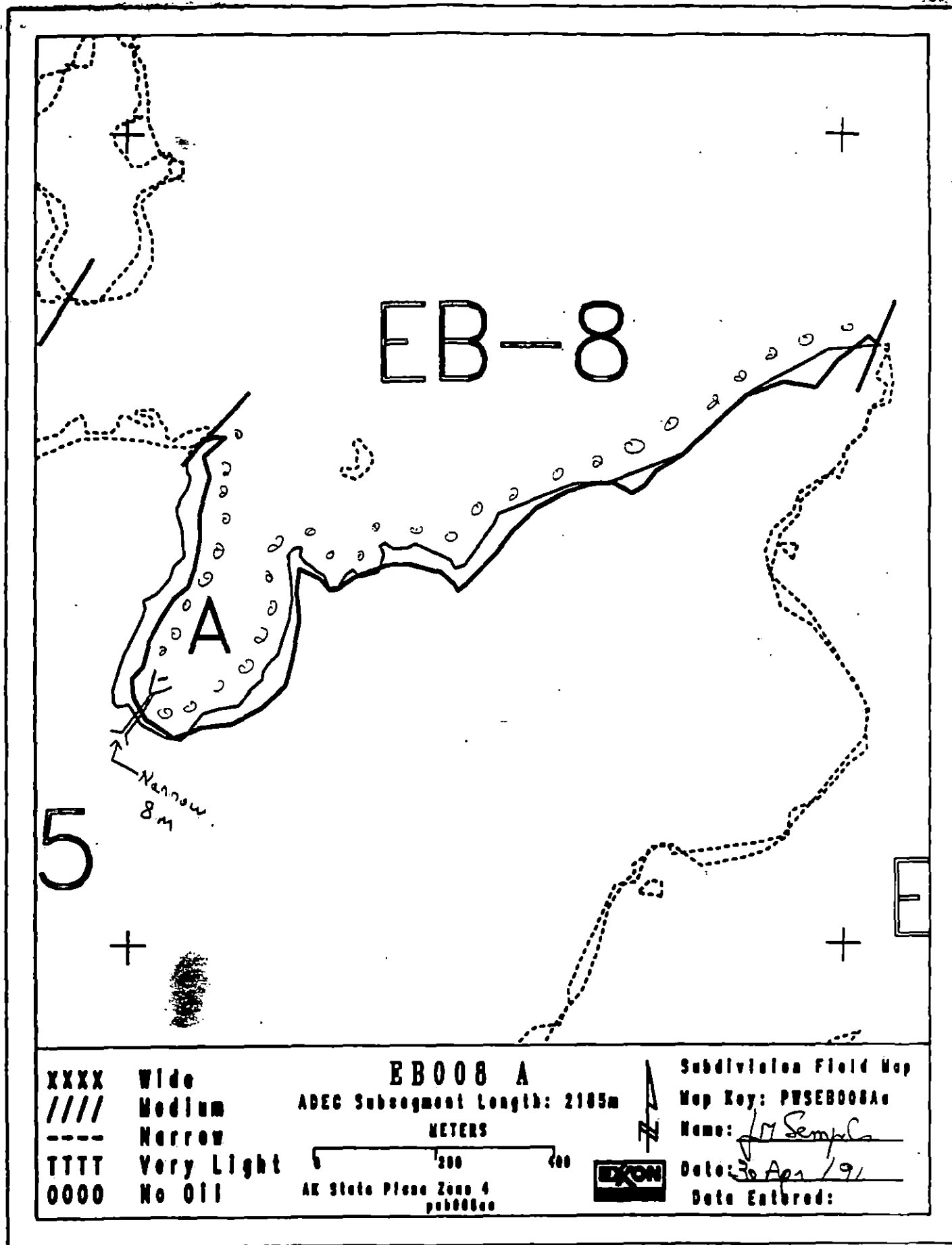
Little Biotra -
BLACK LICHEN,
SPARSE LIMPETS,
LITTORINES,
BARNACLES, AMPH-
IPODS.

LOW ABUNDANCE OF BARNACLES, LIMPETS, LITTORINES
BEACH GRASS, BLACK LICHEN. LOWER ZONE CLAMS,
MUSSELS, EEL GRASS

SPARSE BARNACLES
LIMPETS, LITTORINES,
BLACK LICHEN, FUCUS
DRIFT

0 200 400
meters





REVIEWED: MC 5/2/91
reviewed 5/2/91

1991 MAYSAP EVALUATION

SEGMENT: EB 008 SUB: A REGION: PWS SURVEY DATE: 4/30/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest, Fry Release, Fish harvest area, Anadromous stream

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Charles E. Holman Date: 5/10/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or 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 10 1991

FOSC APPROVAL DATE: 5/15/91

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.

Fry Release: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Anadromous Stream: 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.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT EB 008 SUBDIVISION A DATE 30 APR 91

ADEC

NAME Dianne MunsonSIGNATURE Dianne Munson☒ NTR ☐ Treatment Recommended

Primarily tarballs, patties broken and patchy over a large area. Several areas of oiling were picked up and areas A₁ and A₂ were worked on. App previous areas showing no oiling on SSHT and ASAP were not surveyed.

EXXON

NAME LARRY D. OLSONSIGNATURE Larry D Olson☒ NTR

Segment was worked by VECO crew. 9 bags of tar balls and patties were removed. Remainder of segment showed no sign of oil.

LANDMANAGER

NAME LARRY EVANOFF OF CVCSIGNATURE LM EV☐ NTR☐ TREATMENT RECOMMENDED

APPROX. 1/3 OF SEGMENT WAS NOT SURVEYED DUE PREVIOUS SURVEYS SHOWED NO OIL. MAINLY TAR BALLS, TAR PATTIES WERE FOUND AND PICKED UP BY SURVEY CREW AND VECO CREW. SOME TAR BALLS WERE FOUND IN THE SUPRATIDAL ZONE NEAR SNOW EDGE. QUESTION: HOW MUCH IS ^{THE} SNOW HIDING?

USCG/NOAA

NAME Jerry Galt NOAASIGNATURE J Galt☒ NTR

very small % coverage throughout segment.

PAGE OF

revised 5/2/91 KG
revised: 5/2/91 MC

Og skjed Map

$$E A_{\infty} - A$$

47 SEAPALS

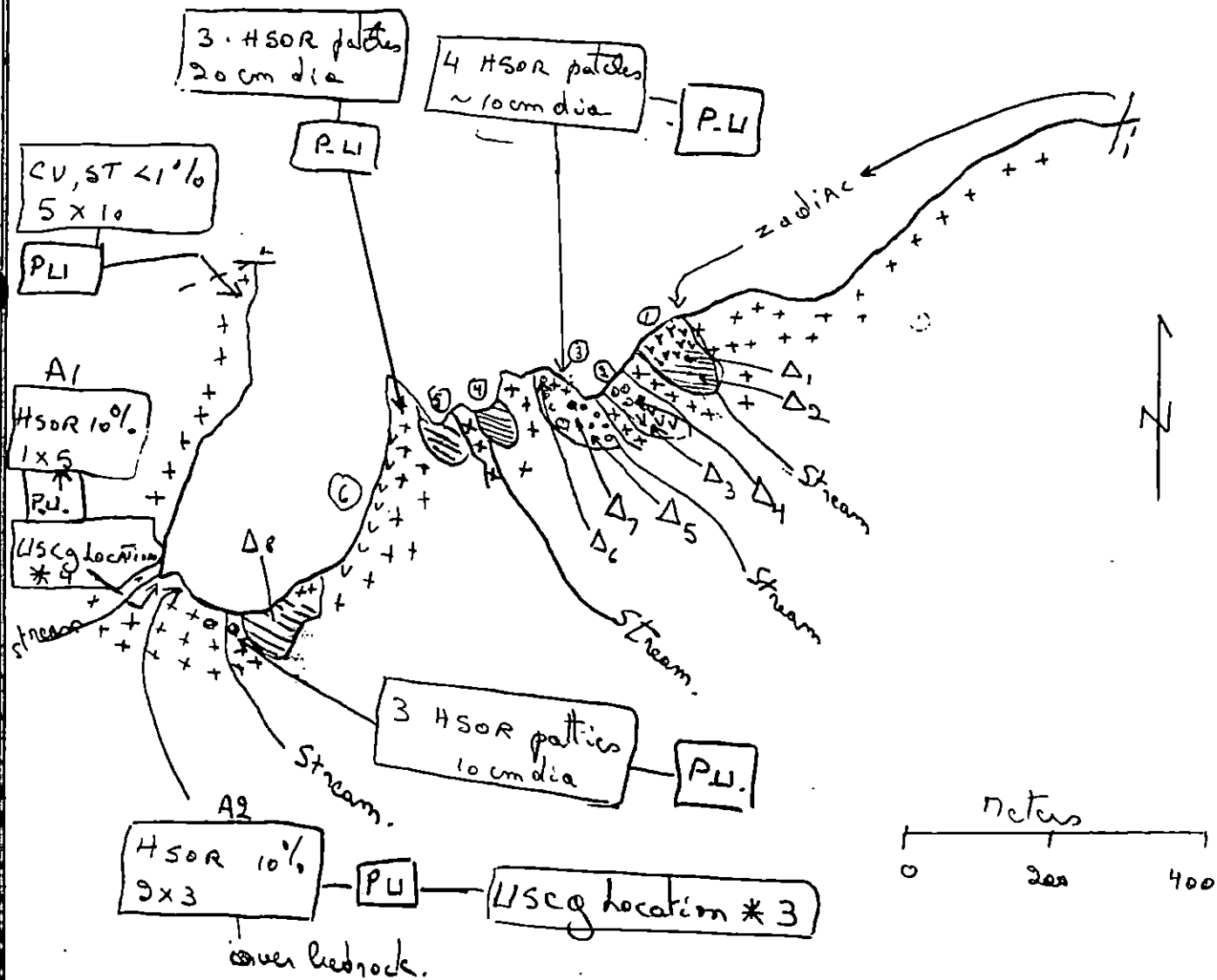
30 April 91

0612 - 0800

Legend

- | | |
|---|-------------------|
|  | Bedrock |
|  | Boulder / cobble |
|  | P. Cbble / cobble |
|  | P. Cbble / gravel |

- ① Pocket beach of Bb/cb between bedrock headlands
 Δ_1 in mitz, Δ_2 in uitz
- ② Same type of beach B₃ uitz, Δ_4 nitz
- ③ Pb/cb pocket beach, bedrock outcrops in litz
 Δ_5 uitz, Δ_6 litz, Δ_7 nitz. 4-10 cm² tan pebbles
picked up near stream. Well sorted pb uitz, grassy
beachshore, steep beach face.
- ④ Platy pebble pocket beach, well developed berm.
- ⑤ same beach as 4.
- ⑥ narrow fringing beach of angular platy
cb/pb/bb in front of bedrock cliffs.



reviewed 5/2/91 KG
REVIEWED 5/8/91 MC

HAYSAP BIOLOGICAL SUMMARY FORM

TEAM #	4	DATE/TIME	April 30, 1991 0612 => 0815
SEGMENT #	EB008	TIDAL HEIGHT (Range)	+5.0 => -1.5
SUBDIVISION	A	BIOLOGIST	JIM BARRY
SEA STATE	Calm	WIND SPEED/DIRECTION	NE 5-10 kt. Rain

COMMENTS / OBSERVATIONS - OILED SUBDIVISIONS

A,B The oiled site (MSOR patches) is located in the extreme upper intertidal near the supratidal zone on a medium exposure beach of clean cobble. Little biota is present at this tidal level. Black lichen, sparse limpets, littorines, barnacles, and a few amphipods were the only common species. Below the oiled site, the cobble beach and adjacent headlands have a high cover of biota, with moderate cover of Fucus, barnacles, and mussels. Barnacles and mussels are dense in patches. Limpets, mussels, littorines, and whelks also are common on the headlands near the oiled site, as are several species of green and red algae. Most species are present as adults, as well as, juveniles, recently settled individuals, or eggs. No evidence of recent oil-related effects to biota are evident.

MANUAL PICKUP PERFORMED DURING SURVEY. Potential additional clean-up activities will not adversely impact the biota in the area.

C The site with HSOR patches is a high intertidal location with medium to small angular cobble. Moderate densities of limpets, fairly low densities of littorine snails and barnacles are the major macrobiota of the site. Nearby headlands in the lower intertidal zones have higher abundances of Fucus, mussels, barnacles, and marine snails (limpets, littorines, etc.), with adults, juveniles, and in some cases, egg masses. No apparent recent impacts to biota from the oil residual were observed.

MANUAL PICKUP PERFORMED DURING SURVEY. Potential additional clean-up operations will not adversely affect biota at this site, so long as activities are restricted to the immediate vicinity of the oiled area.

(continued)

WILDLIFE OBSERVATIONS - Completed on all subdivisions

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2	
Seabirds			
Waterfowl	3	11	
Gulls/Kittiwakes	3	7	
Shorebirds	1	2	
Corvids	1	2	
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)	Sea Lions (2 each)		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

EB008-A - Biology Report (continued)

- D This oiled site is located in a small cove protected from waves or strong surge. Directly around the oiled site, the abundances and diversity of biota are quite low. The major species are sparse densities of barnacles, limpets, littorines, and Fucus. Beach grass and black lichen are the two common upland species. The lower zone fauna and flora are richer, especially on nearby headlands where Fucus is dense, along with barnacles and limpets. The cobble beach in the lower zone directly below the oiled site has a dense cover of Fucus, with high densities of recruits for Fucus, littorines, barnacles, and mussels. No recent oil-related impacts to the surrounding biota were evident.

MANUAL CLEANUP PERFORMED DURING SURVEY. Additional clean-up, if recommended, will not adversely impact biota directly at or surrounding the oiled site so long as access is restricted to manual pick-up teams. An eel grass and clam bed is present in the adjacent cove.

- E The oiled site (HSOR) is in the high intertidal drift zone. Barnacles, littorines, and Fucus are sparse. Black lichen is present as well. No recent impacts due to oil are apparent. Barnacle spat are present on weathered oil patches. Dead porcupine in supratidal-drift line.

MANUAL CLEANUP PERFORMED DURING SURVEY. Additional cleanup operations will not adversely affect the biota of the area (except the scattered barnacles on the weathered oil), but should be restricted to the upper and middle intertidal zones so that the middle to low, and low zone mussel bed, or the subtidal eel grass and clam bed is not disturbed.

- F This oiled site (HSOR) is also in the very high intertidal along the drift line of a beach of medium shingle. The biota at the oiled location include supratidal species such as beach grass, black lichen, and mosses, as well as intertidal species (drift Fucus, scattered limpets, barnacles, and littorines). This low exposure site shingle beach has very little in the upper zone. In the zones below the oiled site, there is a fairly dense mussel bed with adults and juveniles, with moderate cover of barnacles, limpets, littorines, whelks, and Fucus. Juveniles or egg masses or all these species were present. Lower in the intertidal, the habitat changes to a sparse eel grass bed and clam bed. An otter haul out site is located on the adjacent headland. No adverse oil-related impacts were evident.

MANUAL CLEAN-UP PERFORMED DURING SURVEY. Additional clean-up, if performed, should be restricted to the upper intertidal, so that there will be no disturbance to the lower intertidal mussel bed or to the low and subtidal zone eel grass and clam bed.

Summary of Biological Features of EB008-A.

Segment EB008-A has medium exposure beaches of shingle and high angle cobble, bedrock headlands, and a protected bay. The general features of the shingle beaches are: low to very sparse biota in the upper zones, medium densities and cover of biota in the low zone. Headlands throughout the segment are typical of medium exposure bedrock headlands, with patchy, but generally moderate to dense cover and densities of barnacles, Fucus, and mussels, littorines, and limpets in the upper to lower zones. Filamentous green and brown algae is abundant in the lower zones. In the bay, the eel grass - clam bed appears patchy in its distribution.

The clam bed has several species of clams. *Macoma* sp., *Saxidomus* sp., and *Prototheca staminea* are abundant. Low zone cobble community species include crabs, hermit crabs, peanut worms, nereid worms, encrusting bryozoans, and several species of algae, including filamentous greens and browns.

List of Common Species from EB008-A

A. Marine Plants

1. Diatoms, Blue Greens
2. Green Algae - Chlorophyta
Acrosiphonia sp., Enteromorpha sp., Ulva sp., Urospora sp.
3. Brown Algae - Phaeophyta
Agarum fimbriatum, Fucus distichus, Hildenbrandia sp., Sycosiphon lomentaria
4. Red Algae - Rhodophyta
Ahnfeltia plicata, Calliarthron sp., Lithothamnion sp., Membranoptera dimorpha, Odonthalia floccosa, Palmaria palmata, Petrocelis sp., Rhodomela larix
5. Higher Plants
Zostera marina (eel grass), Elymus mollis (beach rye grass),

II. Marine Animals

1. Sponges - Porifera - Halichondria sp.
2. Anemones - Anthopleura artemesia, Epiactis ritteri
3. Hydroids - Sertularidae - Sertularella
5. Flatworms - Platyhelminthes - Polyclads
6. Nemertean Worms - Ribbon Worms - Emplectonema gracile, Tubulanus polymorphus
7. Polychaete Worms
Glyceridae
Nepthyidae
Nereidae - Nereis spp.
Serpulidae
Serpula sp., Crucigera sp., Eudistylia polymorpha
Spirorbidae - Spirorbis sp.
9. Peanut worms - Sipunculids - Phascolosoma agassizii, Golfingia margaritacea
10. Crustaceans
a. Amphipods - Orchestia sp.?
- b. Barnacles - Balanus glandula, Chthamalus dalli
- c. Crabs
Hemigrapsus oregonensis, Paguridae (hermit crabs), Oregonia gracilis, Pugettia sp., Cancer gracilis
- d. Isopods - Gnorimosphera oregonensis
11. Mollusca
a. Chitons - Mopalia mucosa, Tonicella lineata,
- b. Snails - Gastropods
Littorina scutulata, L. sitkana, Natica clausa, Nucella lamellosa, N. lima,
- c. Limpets - Lottia digitalis, L. persona, T. persona
- e. Mussels and Clams
Clinocardium sp., C. nuttalli, Hiatella arctica, Macoma sp., Macoma nasuta, Mya arenaria (soft-shell clam), Mytilus edulis, Prototheca staminea, Saxidomus giganteus
12. Echinoderms
b. Sea stars
Dermasterias imbricata, Evasterias truscheli, Leptasterias hexactis, Pycnopoda helianthoides,
- c. Sea Cucumbers - Holothurians - Leptosynapta sp.
- d. Urchins - Strongylocentrotus droebachiensis
13. Bryozoans
Membranipora sp., Microporina borealis, Schizoporella sp.
15. Fishes
Cottidae
Stichaeidae - Xiphister atropurpureus, X. mucosus

OG sketch Map

EB008-A

17 SEPTELS

30 April 91

0612 - 0800

Legend

- [+] Bedrock
- [Y] Boulder/cobble
- [o] Pebble/cobble
- [//] Pebble/gravel

BIO SKETCH MAP - EB008-A

- ① Pocket beach of Bd/cb between bedrock headlands
Δ1 in mitz Δ2 in uitz
- ② Same type of beach Δ3 uitz, Δ4 nitz
- ③ Pb/cb pocket beach, bedrock outcrops in litz
Δ5 uitz, Δ6 litz, Δ7 nitz, 4.100m² tan pebbles
picked up near stream. Well sorted pb uitz, greeny
beachstone, steep beach face.
- ④ Platy pebble pocket beach, well developed berm.
- ⑤ same beach as 4.
- ⑥ narrow fringing beach of angular platy
cb/pb/bd in front of bedrock cliffs.

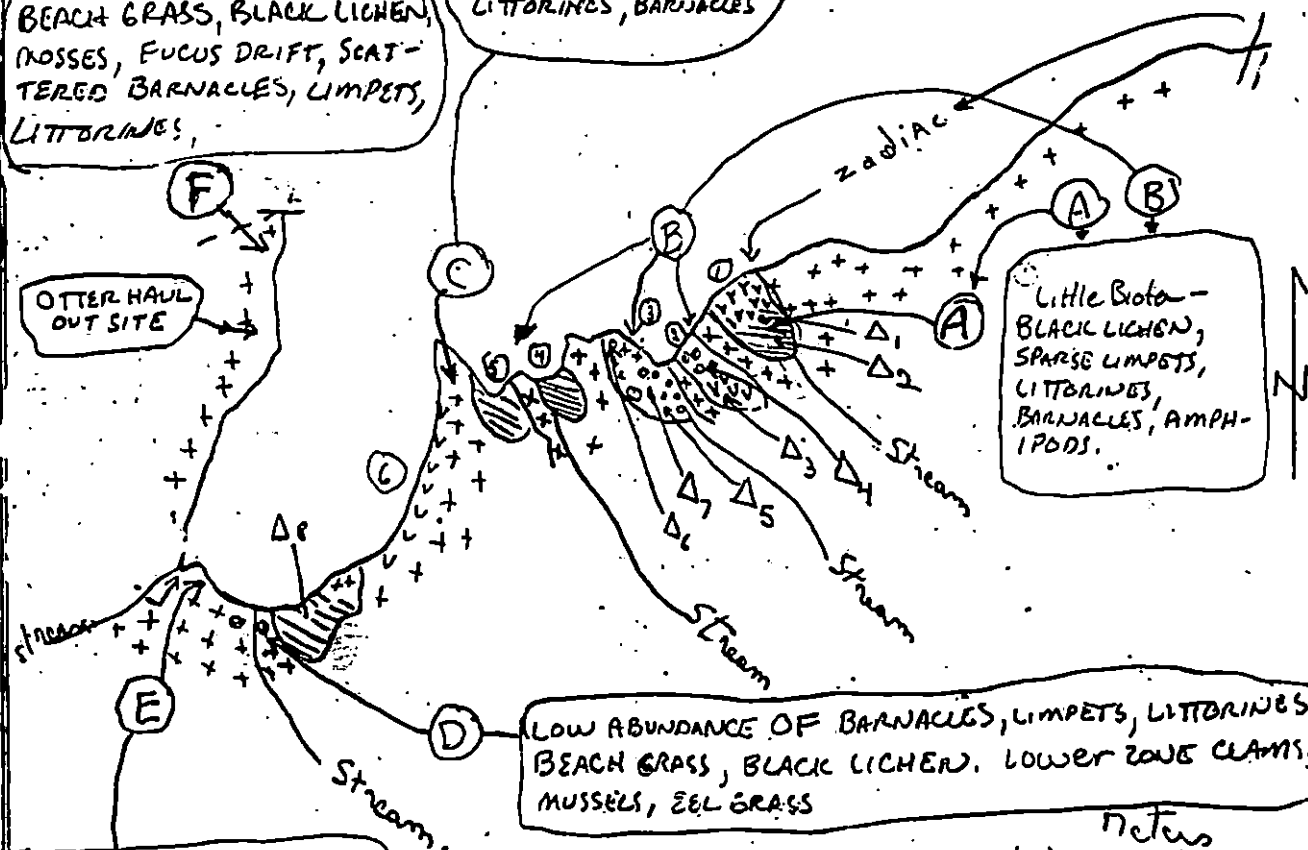
BEACH GRASS, BLACK LICHEN,
MOSES, FUCUS DRIFT, SCAT-
TERED BARNACLES, LIMPETS,
LITTORINES.

HIGH ZONE SITE
MODERATE DENSITIES
OF LIMPETS, SPARSE
LITTORINES, BARNACLES

Little Biot -
BLACK LICHEN,
SPARSE LIMPETS,
LITTORINES,
BARNACLES, AMPH-
IPODS.

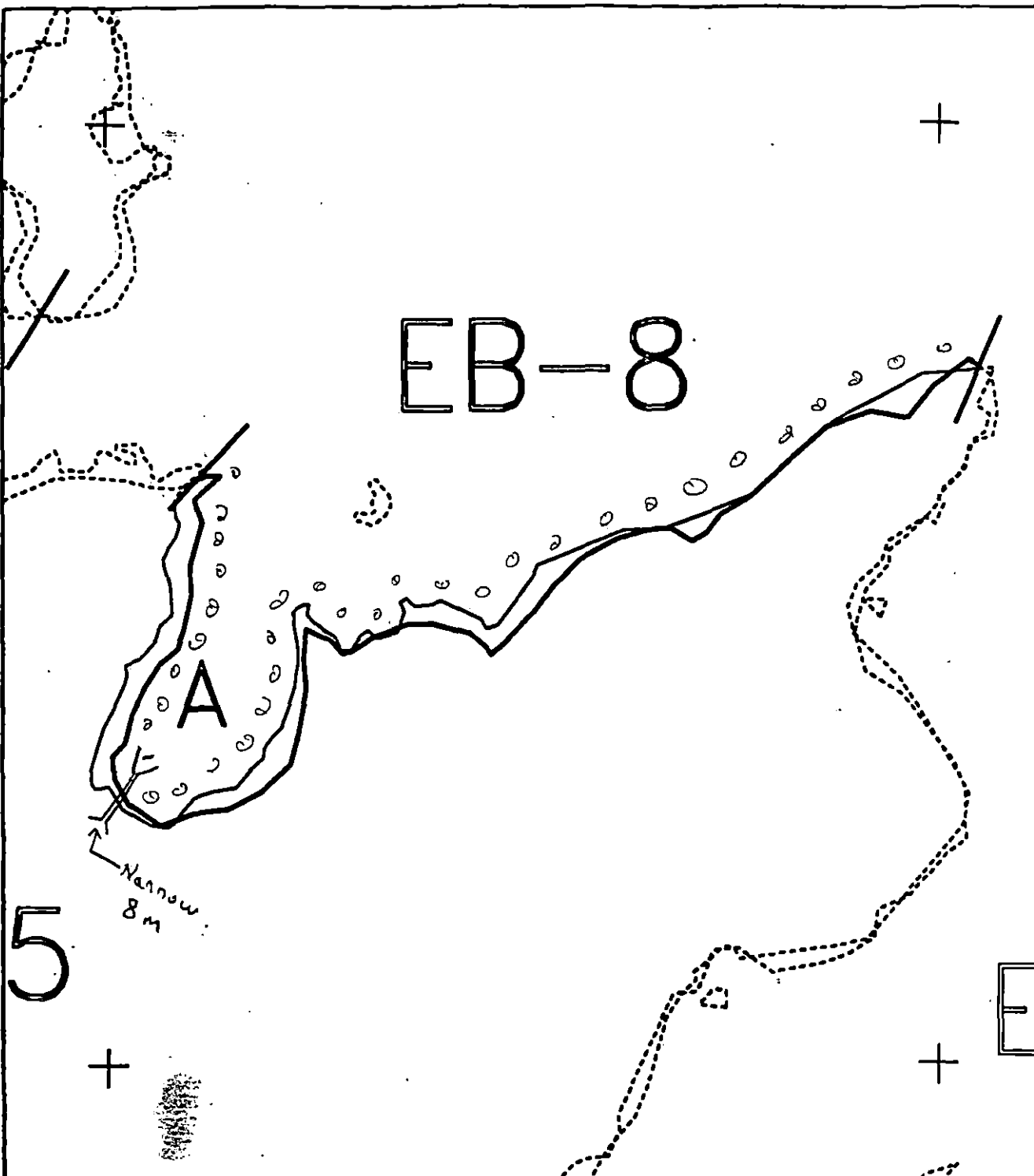
LOW ABUNDANCE OF BARNACLES, LIMPETS, LITTORINES
BEACH GRASS, BLACK LICHEN. LOWER ZONE CLAMS,
MUSSELS, EEL GRASS

SPARSE BARNACLES
LIMPETS, LITTORINES,
BLACK LICHEN, FUCUS
DRIFT



meters
0 200 400

EB-8



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

EB008 A
 ADEC Subsegment Length: 2185m
 METERS
 0 200 400
 AK State Plane Zone 4
 pub008a



Subdivision Field Map
 Map Key: PWSEB008Aa
 Name: *J. M. Semple*
 Date: *30 Apr 1991*
 Date Entered:

Reviewed: MC 5/2/91
 reviewed 5/2/91 LG

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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 ^{required prior} (564-3657; 564-3658 or 564-3276). *gm*

SHPO SIGNATURE: *J. Daniel McMahon* DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 621 m: No Oil 210 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

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

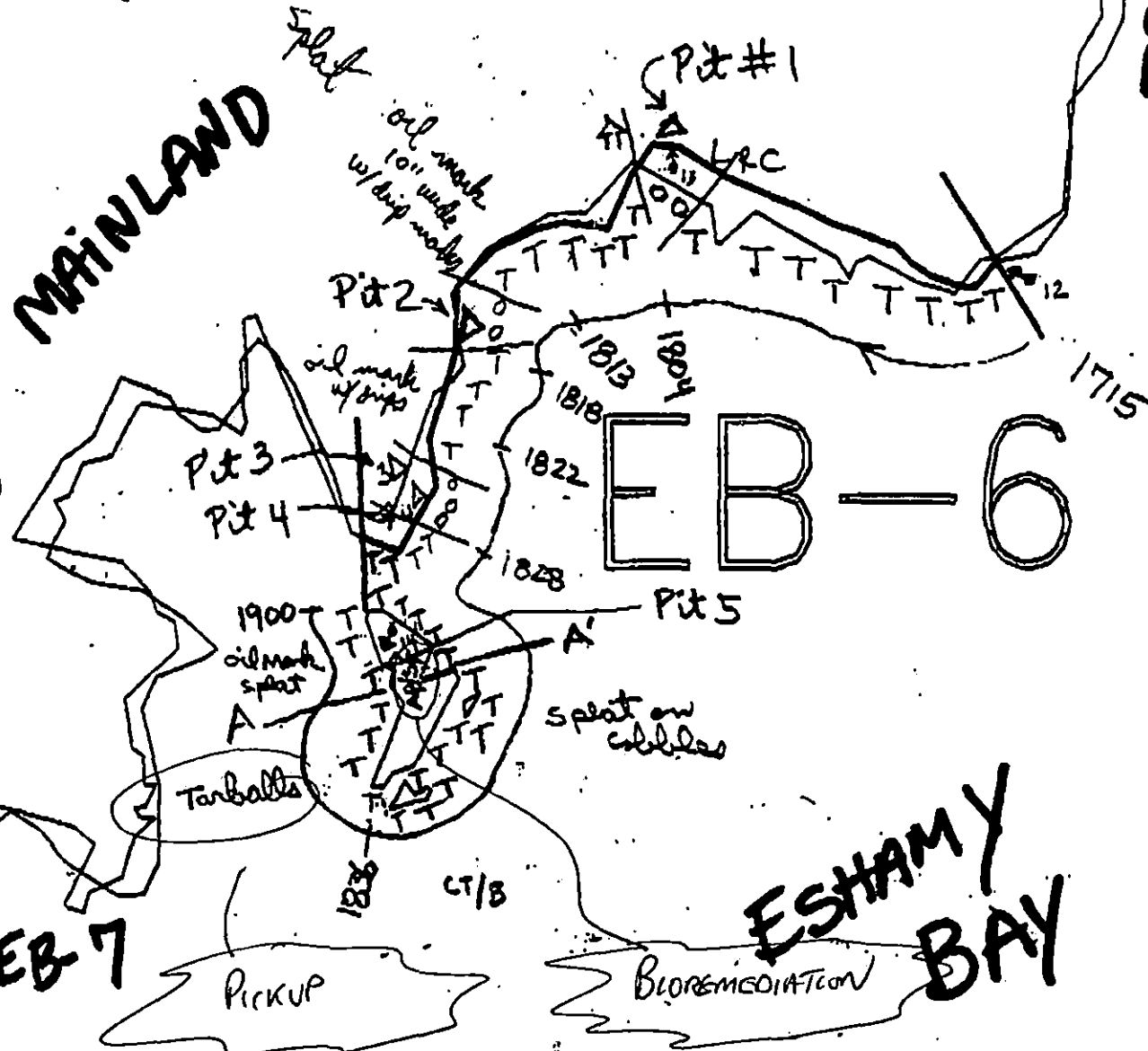
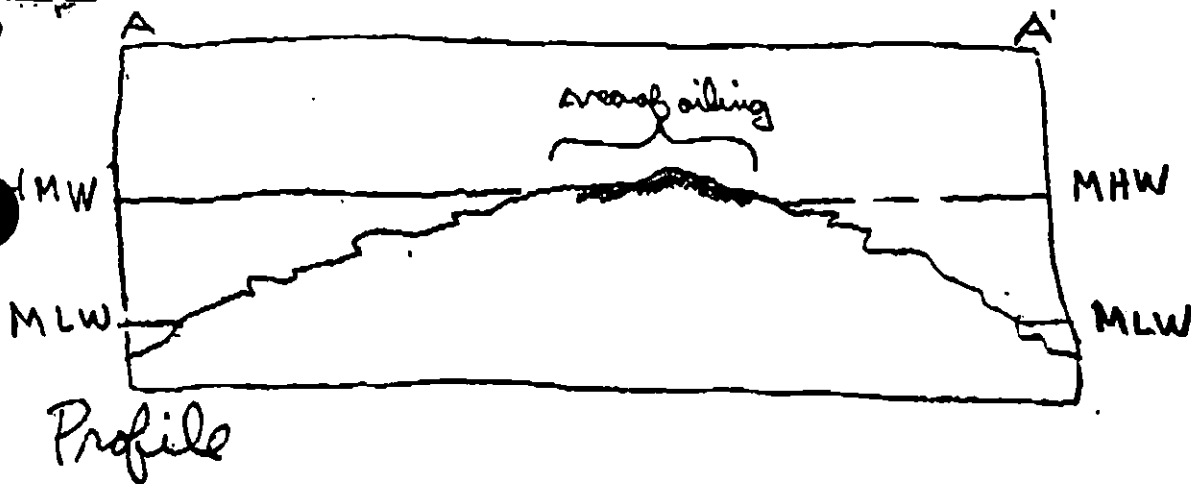
TAG COMMENTS:

High Human Use + SET NET FISHERIES AREA.

TAG APPROVAL DATE: 4/18/90

ADEC *Det Weiner*
EXXON *Andy Isa*
NOAA *Burt Westcott*
USCG *G.A. Reiter*

FOSC: *Kyl* DATE: 4-27-90



XXXX Wide

//// Medium

--- Narrow

TTTT Very tight

0000 No Oil

EB-6

ADEC Segment Length: 831m

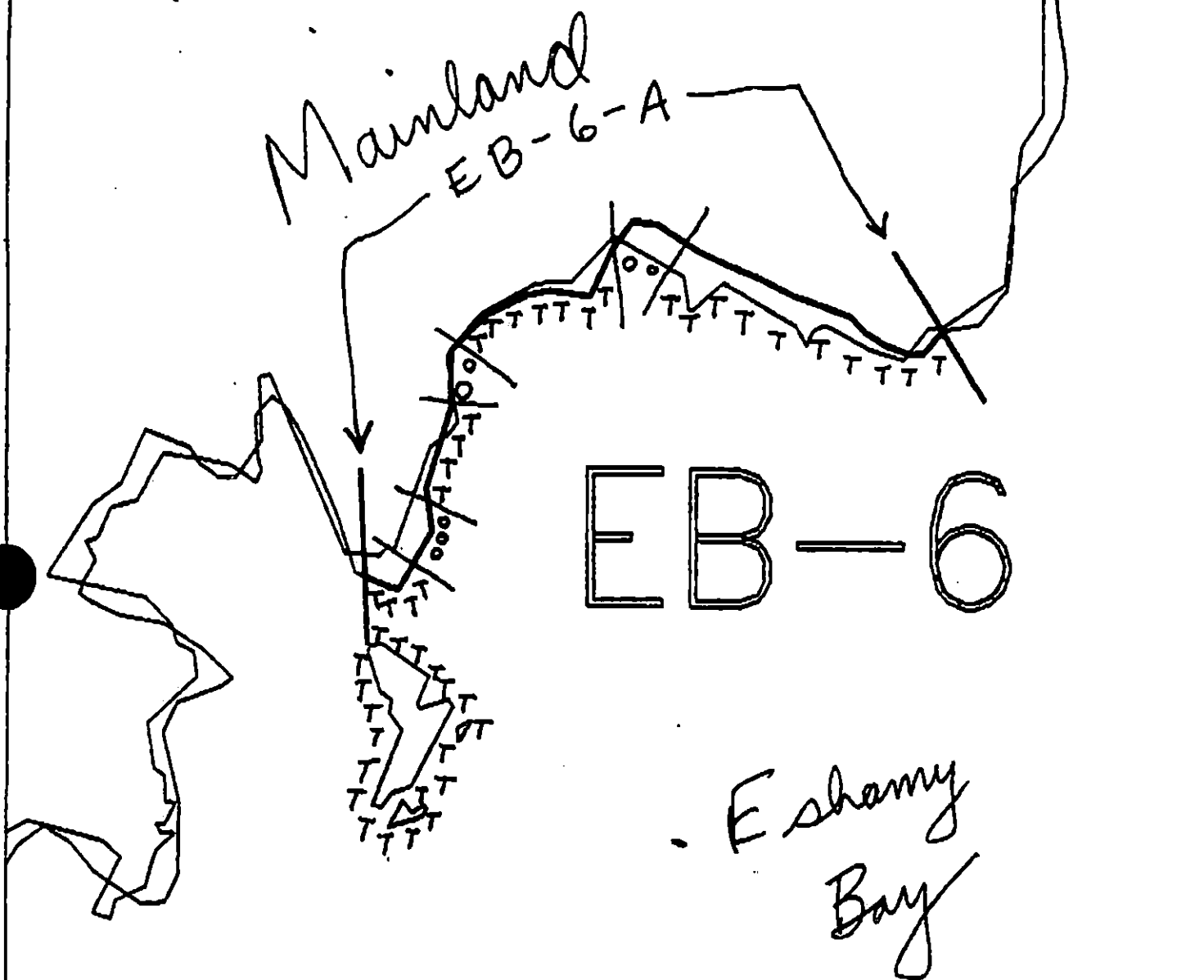


Map Key: PWS-115

Name: Randy McBride

Date: 4/2/90

Date Entered:



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

EB-6

ADEC Segment Length: 831m



Map Key: PWS-115

Name: Randy McBride

Date: 4/2/90

Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: EB 006 SUB: A REGION: PWS SURVEY DATE: 5/15/91ENVIRONMENTAL SENSITIVITIES:Work Window(s) OPENEcological/Constraints (see page two for details) Fry release,
Fish harvest areaARCHAEOLOGICAL 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**

Fry Release: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

ADEC

NAME

JEFF GWALIAS

SIGNATURE

[Signature]☒ NTR

NOT ENOUGH OIL REMAINING ON SEGMENT TO JUSTIFY FURTHER TREATMENT. ONLY ~~THE~~ OILED AREA TO POSE ANY REAL CONCERN WAS AT SITE C (OG MAP). MARSAP CREW REMOVED 4x5 m MOOSE/HIGH SOR MAT, LYING ON FLAT PLATFORM. TRACE OF RESIDUAL STILL REMAINS, BUT EXPOSED, SHOWS WEATHER AND NOT IMPACT HIGH COMMERCIAL FISHING ACTIVITY IN AREA. SET NET CABIN SITES ~~INDICATE~~ WITHIN ~~THE SITE OF~~ AREA INDICATE HIGH ~~FOR~~ HUMAN USE. ONE CABIN OCCUPIED; ONE SKIFF IN H₂O AT OTHER SITE.

EXXON

NAME

RANDALL K. BOYER

SIGNATURE

Randall K. Boyer☒ NTR

THIS SHORT SUBDIVISION WAS MARKED AS LIGHT OILING CONDITIONS EXCEPT FOR AREA C. AT THE CREST OF THE ISLAND ON A FLAT PEBBLE, COBBLE BEACH A PATCH OF ASPHALT WAS REMOVED BY THE SURVEY CREW. SOME OF THE THIN LENSE EXPANDED BELOW THE SURFACE ABOUT 5-8 CM. THIS ALSO WAS REMOVED. ONLY A SMALL PERCENTAGE REMAINS AND WOULD NOT WARRANT THE RETURN OF ANY CLEANUP CREW. THE SUBDIVISION LOOKS HEALTHY AND PRESENTS NO HARMFUL EFFECT TO THE UPCOMING FISHING SEASON.

LANDMANAGER

NAME

MARSHAHALL OF DNR

SIGNATURE

Marsha Hall☐ NTR☒ treatment

High human use, set net sites. We took approx. 80% of Asphalt - cold enough to not be so gooey as it would have been extremely runny on a warm sunny day, from area C. Advise a group to return to site PRIOR to 6-7 to RAKE surface and remove any pieces of asphalt we could not chase. due to weather turning bad. Lens varied from 8 to 1 cm deep.

USCG/NOAA

NAME

SCHULTZ / CHILDS

SIGNATURE

J. A. Schultz / Z2C☒ NTR

FURTHER REMOVAL EFFORTS COULD BE MORE ENVIRONMENTALLY HARMFUL THAN THE OIL TO BE REMOVED

HIGH ANGLE BEDROCK OUTCROP SHORELINE WITH SMALL BOULDER COBBLE & PEBBLE POCKET BEACHES. ISLAND HAD A PATCH OF HIGH SOR WHICH TEAM CLEANED - OTHER OIL AS TRACE OF COVER IN CRACKS & CREVICES.

PAGE 1 OF 1

SEGMENT E3-6

SUBDIVISION A

DATE 5 / 15 / 91

ENERGY LEVEL: ☐ H ☐ M ☒ L

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

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

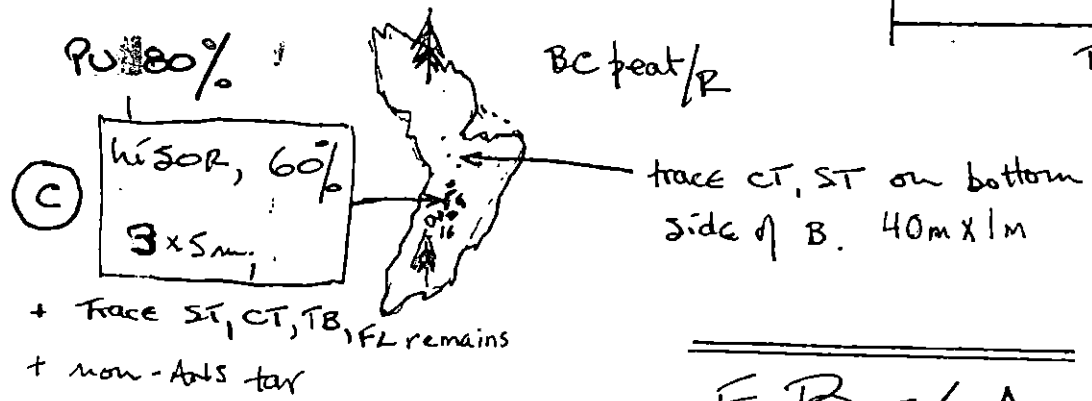
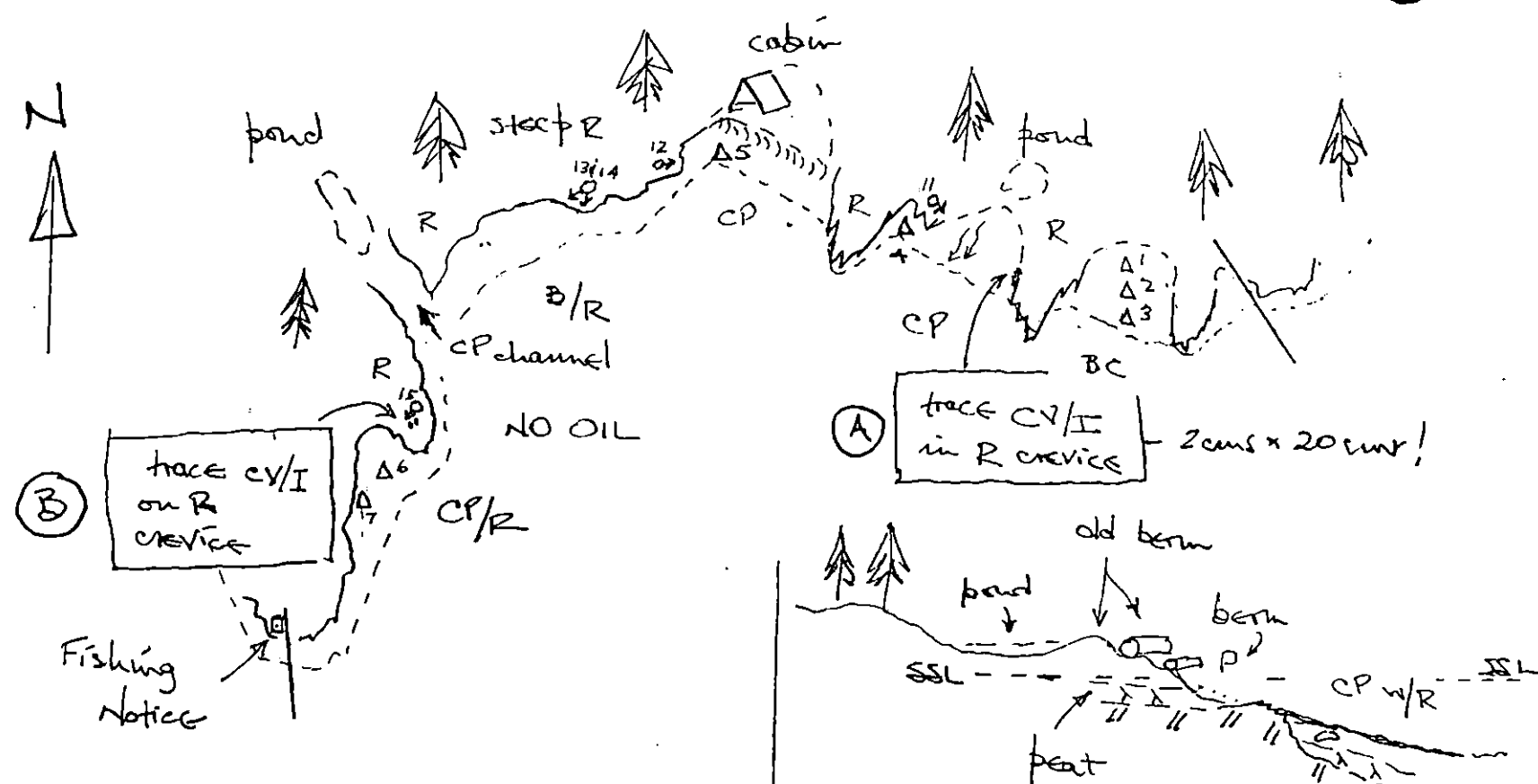
EST. OIL CATEGORY LENGTH: W - m M - m N - m VL 47 m NO 1210 m US - m

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 1 - 23 FRAMES 11~16

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

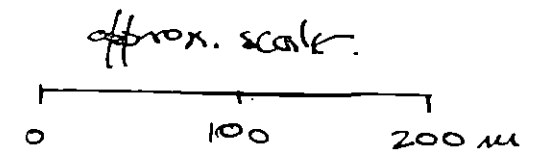
OG COMMENTS: Rocky shore w/ small BC, CP beaches over bedrock. Surface sil only as trace cv/I @ SURZ, and patch of hr SOR on island. — PU. (3x5m to 10m deep).

Revised 5.21.94
Reviewed: F.W. 5/22/94



EB-6A

G. MACDONALD
S. 15. 91



revised 5.21 94

TEAM # 1 DATE 5/15/91
 SEGMENT # EB 006 TIDAL HEIGHT (Range) +2.5 to +6.0 ft MLW
 SUBDIVISION A BIOLOGIST Michael Fawcett
 SEA STATE 3 ft swell, 2 ft seas WIND SPEED/DIRECTION NE 20-25
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

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

Most of subdivision is a low-moderate energy shale boulder/cobble beach, with BR outcrops - cobble areas sparsely populated with littorinids, limpets & barnacles, all more dense along dense Fucus on Bedrock. Small island near south end of segment exposed to long NE fetch, generally higher energy than mainland shore. A pair of eagles was in the vicinity, throughout survey -- no nest observed. One juvenile flew by. See sketch map for description of biota near oil residue.

WILDLIFE OBSERVATIONS

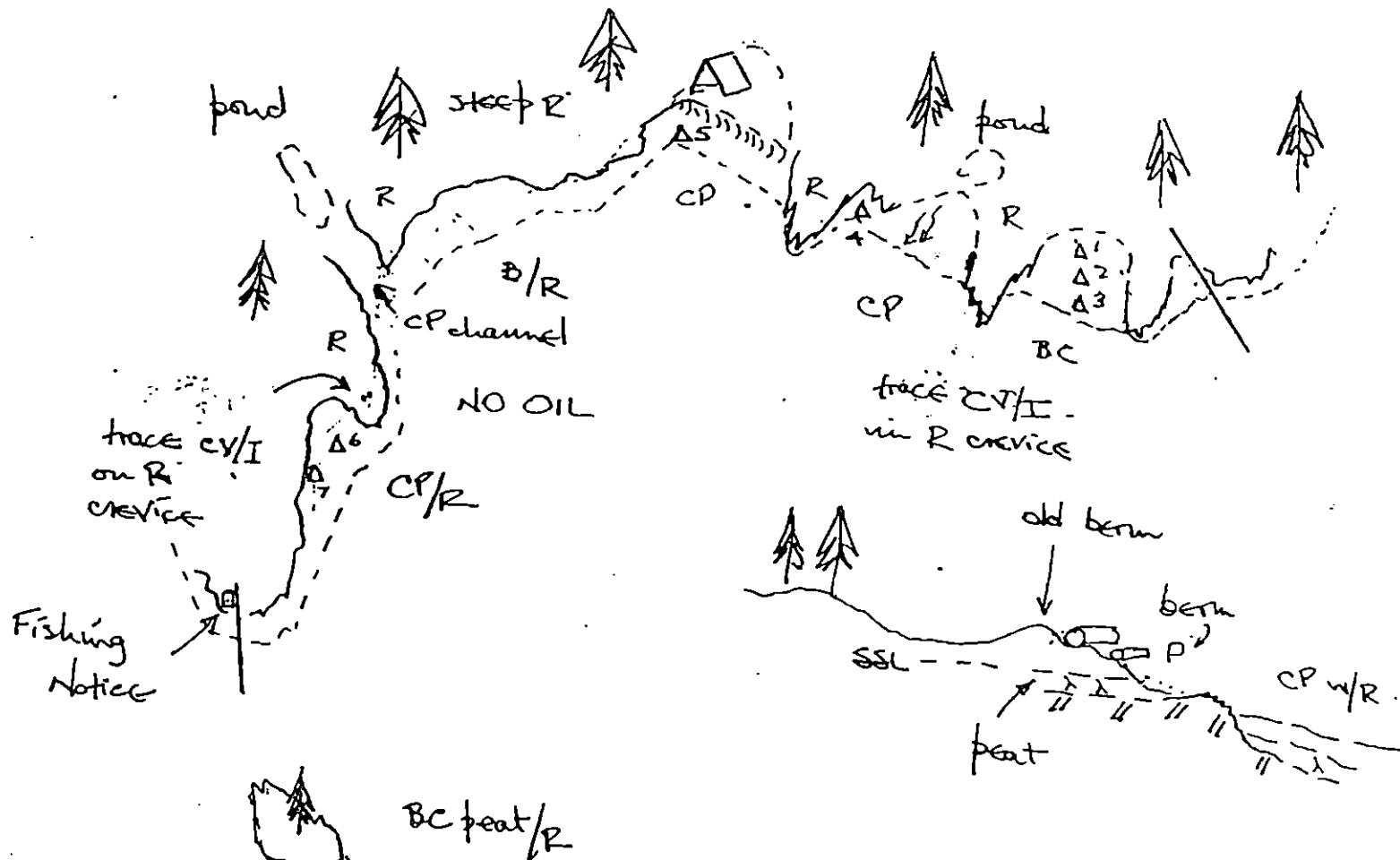
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	3 (2 mature, 1 juvenile)	
Seabirds			
Waterfowl			black prickleback
Gulls/Kittiwakes	1 (bl. kittiwake)	7	
Shorebirds			
Corvids			
Other Birds			

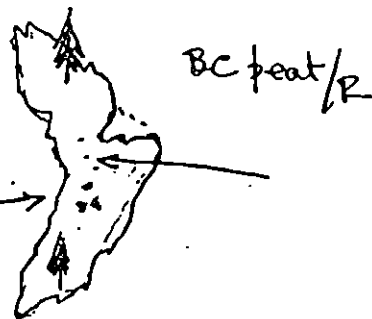
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

REVIEWED: F.W. 5/22/91
 Reviewed M.B. 5/22/91



SOR in SUTZ, +12ft MLLW;
Lichen, terrestrial grass only;
biota nearby; 10-20m down-
shore on either side of island
are dense rockweed & barnacles,
plus littorinids; limpets, mussels,
etc



REVIEWED: F.W. 5/2
Reviewed M.B. 5/2/41

EB 6A 5/15/91 Fawcett

arr 18²⁰

shale B/c/p beach - low-moderate

1 KTH wake

- sparse birds on B/c/p above

6 feet - litt, limp, sparse barn -

dense Fucus + barn on rubble

+6-+10 ft

- Tr CT in crevice on BR +9-10 ft -

veg, sparse barn + young Fucus nearby,

- mod spat, sparse barn, litt, limp,

muss in cobble 5m down shore

at +6 ft

1 eagle in tree eating

1915 hrs

Trace CV in crevice +10 ft - lichen

zone - dense Fucus young & old

downshore on BR - sparse barn, etc

- SOR patch in SVTZ on eagle

Islet +12 ft - no birds except

grass & lichen - 20m downshore

to Fucus, barn, etc

2 Masked Eagles, 1 juvenile

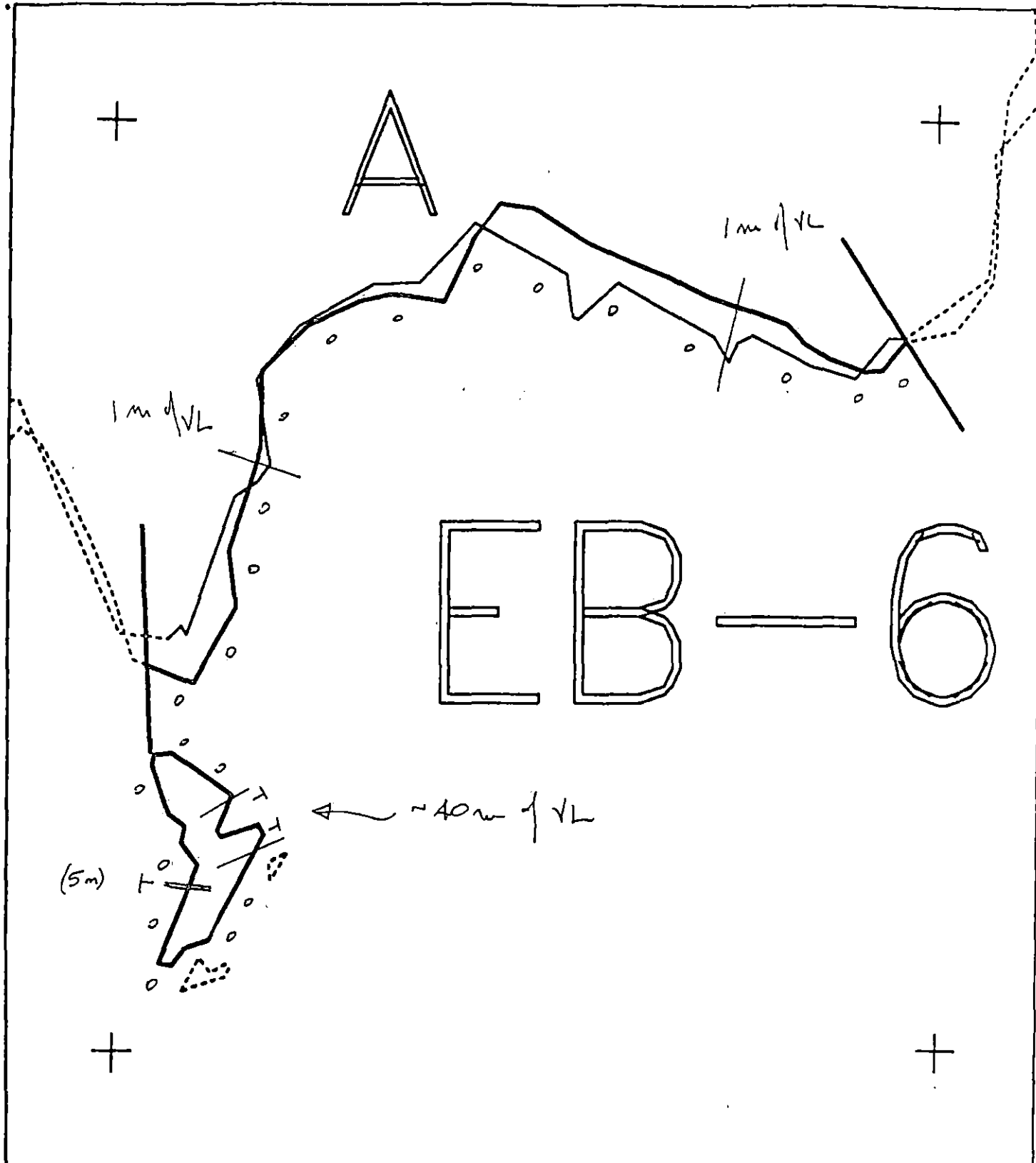
in area

6 KTH wakes

MTZ - dense Fucus, litt, limp (person)

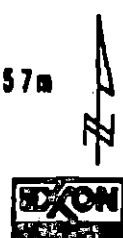
patchy dense mussels in splashy BR

finish ~ 1945 - P.V. SOR until ~ 2020



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

EB006 A
 ADEC Subsegment Length: 1257m
 METERS
 0 100 200
 AK State Plane Zone 4
 pch006a



Subdivision Field Map
 Map Key: PWSEB006A
 Name: GM
 Date: 5.15.91
 Date Entered:

Revised 5.21.93
 REVIEWED: F.W. 5/22/91

1991 MAYSAP EVALUATION

SEGMENT: EB 006 SUB: A REGION: PWS SURVEY DATE: 5/15/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) Fry release,
Fish harvest area

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Charles E. Holmes Date: 5/30/91

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 29 1991

FOSC APPROVAL DATE: 6/5/91

ADEC

FOSC

EXXON

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

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Fry Release: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

TEAM NO. 1SEGMENT EB-6SUBDIVISION ADATE 5/15/91

ADEC

NAME JEFF GWALIASSIGNATURE [Signature]☒ NTR

NOT ENOUGH OIL REMAINING ON SEGMENT TO JUSTIFY FURTHER TREATMENT. ONLY ~~ZONE~~ OILED AREA TO POSE ANY REAL CONCERN WAS AT SITE C (OG MAP). MARSAP CREW REMOVED 4x5m MOUSSE/HIGH SOR MAT, LYING ON FLAT PLATFORM. TRACE OF RESIDUAL STILL REMAINS, BUT EXPOSED, SHOULD WEATHER AND NOT IMPACT HIGH COMMERCIAL FISHING ACTIVITY IN AREA. SET NET CABIN SITES ~~W/IN~~ WITHIN ~~THE SITE OF~~ AREA INDICATE HIGH ~~EAR~~ HUMAN USE. ONE CABIN OCCUPIED; ONE SKIFF IN H₂O AT OTHER SITE.

EXXON

NAME RANDALL K. BOYERSIGNATURE Randall K. Boyer☒ NTR

THIS SHORT SUBDIVISION WAS MARKED AS LIGHT OILING CONDITIONS EXCEPT FOR AREA C. AT THE CREST OF THE ISLAND ON A FLAT PEBBLE, COBBLE BEACH A PATCH OF ASPHALT WAS REMOVED BY THE SURVEY CREW. SOME OF THE THIN LENSE EXPANDED BELOW THE SURFACE ABOUT 5-8cm. THIS ALSO WAS REMOVED. ONLY A SMALL PERCENTAGE REMAINS AND WOULD NOT WARRANT THE RETURN OF ANY CLEANUP CREW. THE SUBDIVISION LOOKS HEALTHY AND PRESENTS NO HARMFUL EFFECT TO THE UPCOMING FISHING SEASON.

LANDMANAGER

NAME MARSHAHALL OF DNRSIGNATURE Marsha Hall☐ NTR☒ treatment

High human use, set net sites. We took approx. 80% of Asphalt - cold enough to not be so gooey as it would have been extremely runny on a warm sunny day, from area C. Advise a group to return to site PRIOR to 6-7 to RAKE surface and remove any pieces of asphalt we could not chase. due to weather turning bad. Lens varied from 8 to 1cm deep.

USCG/NOAA

NAME SCHULTZ/ CHILDSIGNATURE J. A. Schultz☒ NTR

FURTHER REMOVAL EFFORTS COULD BE MORE ENVIRONMENTALLY HARMFUL THAN THE OIL TO BE REMOVED

High Angle BEACH OUTCROP SHORELINE WITH SMALL BOULDER COBBLE & PEBBLE POCKET BEACHES. ISLAND HAD A PATCH OF HIGH SOR WHICH TEAM CLEANED - OTHER OIL AS TRACE OF COVER IN CRACKS & CREVICES.

PAGE 1 OF 1

SEGMENT EB-6

SUBDIVISION A

DATE 5 / 15 / 91

ENERGY LEVEL: ☐ H ☐ M ☒ L

EST. OIL CATEGORY LENGTH: W - m M - m N - m VL 47 m NO 1210 m US - m

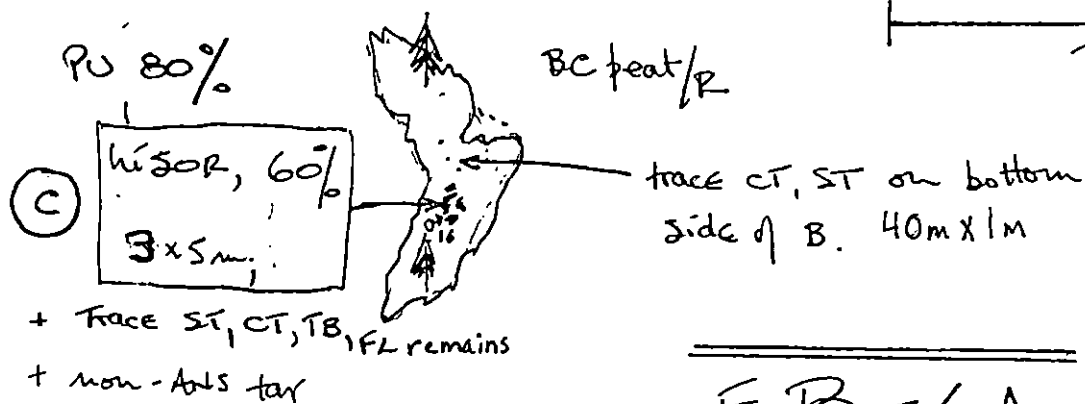
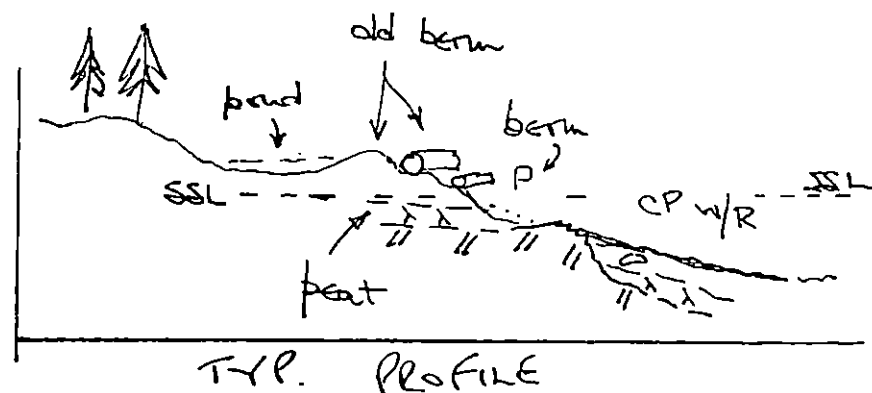
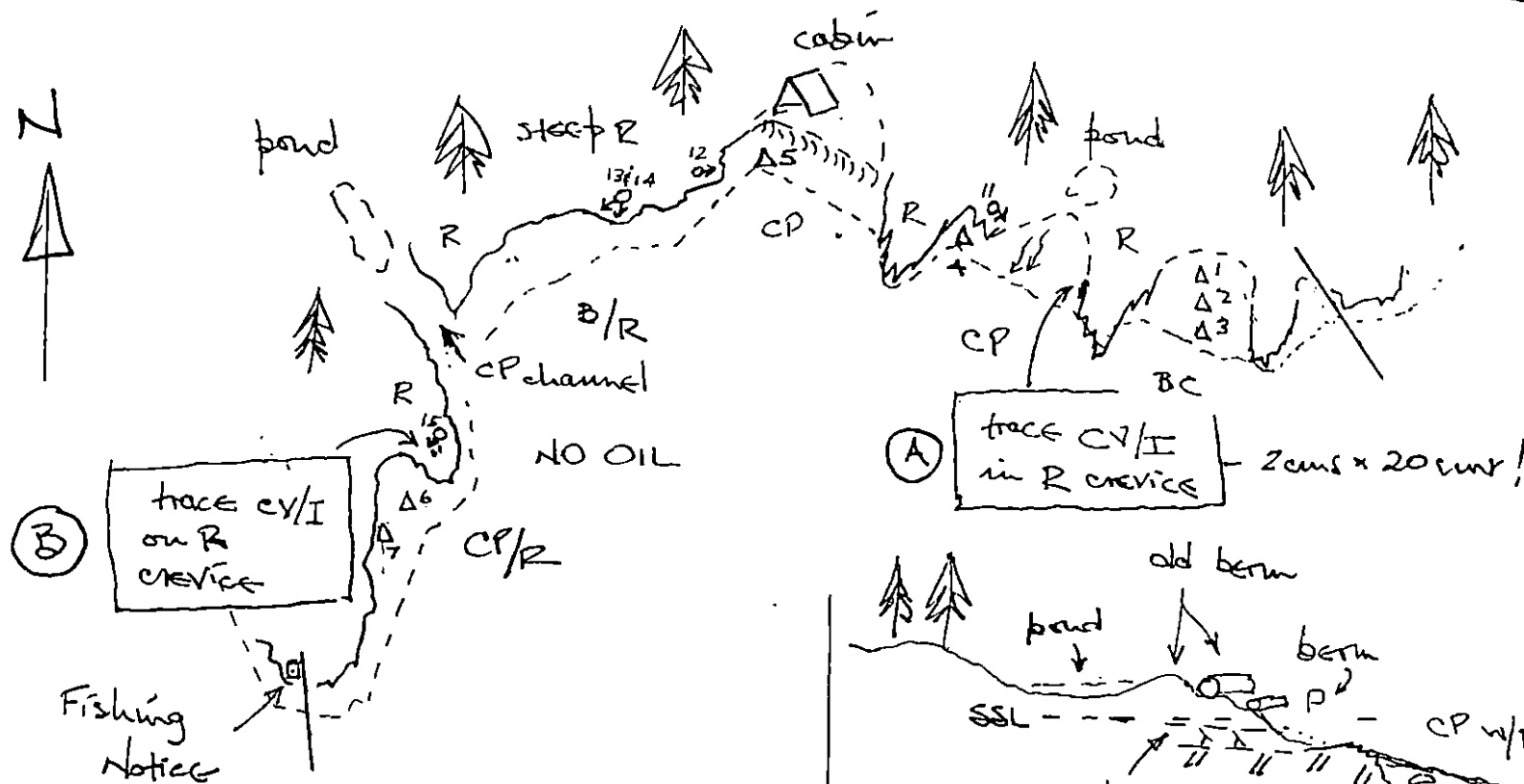
DISTRIBUTION: C = 91-100%; B = 51-90%; P = 11-50%; S = 1-10%; T = <1%

SLOPE: V = VERTICAL: H = HIGH ANGLE: M = MEDIUM ANGLE: L = LOW ANGLE PHOTO ROLL # MAYSAP- 1 - 23 FRAMES 11~16

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

OG COMMENTS: Rocky shore w/ small BC, CP beaches over bedrock. Surface soil only as trace CV/I @ SURZ, and patch of hi SOR on island. — PU. (3x5m to 10m deep).

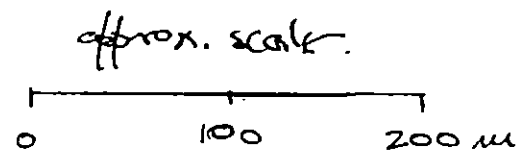
revised 5.21 9y
REVIEWED: Full 5/22/21



EB-6A

G. MACDONALD

S. 15.91



revised 5.21 94
REVIEWED: F.W. S/22/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #

1

DATE

5/15/91

SEGMENT #

EB 006

TIDAL HEIGHT(Range)

+2.5 to +6.0ft MLLW

SUBDIVISION

A

BIOLOGIST

Michael Fawcett

SEA STATE

3 ft swell, 2 ft seas

WIND SPEED/DIRECTION

NE 20-25

PHOTOGRAPHS: ROLL #

FRAME #

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

Most of subdivision is a low-moderate energy shale boulders/cobble beach, with BR outcrops - cobble areas sparsely populated with littorinids, limpets, & barnacles; all more dense plus dense Fucus on Bedrock. Small island near south end of segment exposed to long NE fetch, generally higher energy than mainland shore. A pair of eagles was in the vicinity throughout survey -- no nest observed. One juvenile flew by. See sketch map for description of biota near oil residue.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

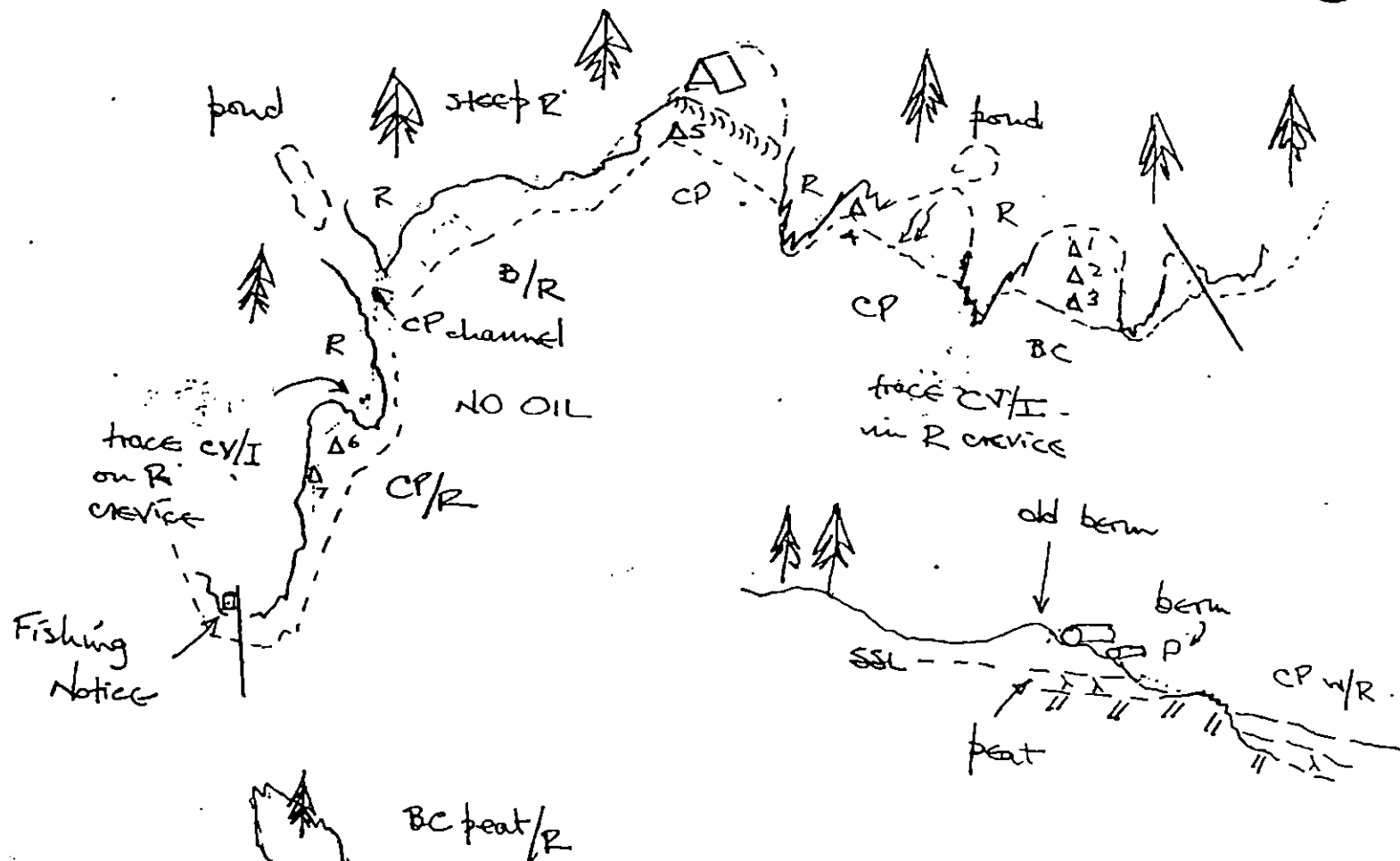
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	3 (2 mature, 1 juvenile)	
Seabirds			
Waterfowl			black prickleback
Gulls/Kittiwakes	1 (bl. Kittiwake)	7	
Shorebirds			
Corvids			
Other Birds			

LAND MAMMALS

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

Shoreline subdivision map showing important biological features attached.

 REVIEWED: F.W. 5/22/91
 Reviewed M.B. 5/22/91



SOR in SUTZ, +12ft MLLW;
Lichen, terrestrial grass only;
biota nearby; 10-20m down-
shore on either side of island
are dense rockweed & barnacles,
plus littorinids, limpets, mussels,
etc

Reviewed M.B. 5/22/41

REVIEWED: F.W. 5/22/41

EB 6A 5/15/91

Faukett

arr 1820

shale B/C/p beach - low-mid water

1 KTHI wake

- sparse kula on B/C/p above

6 feet - litt, limp, sparse barn -

dense Fucus + barn on subrocks
+6 - +10 ft

- Tr st a in crevice on BR +9-10 ft -

very sparse barn + young Fucus nearby,

- mod spst, sparse barn, litt, limp,

muss in cobble 5m down shore

at +6 ft

1 eagle in tree eating

L 1915 hrs

Trace CV in crevice +10 ft - lichen

zone - dense Fucus young & old

downshore on BP - sparse barn, etc

- SOR patch in SWTZ on eagle

islet +12 ft - no kula except

grass & lichen - 20m downshore

to Fucus, barn, etc

2 Mahoe eagles, 1 juvenile

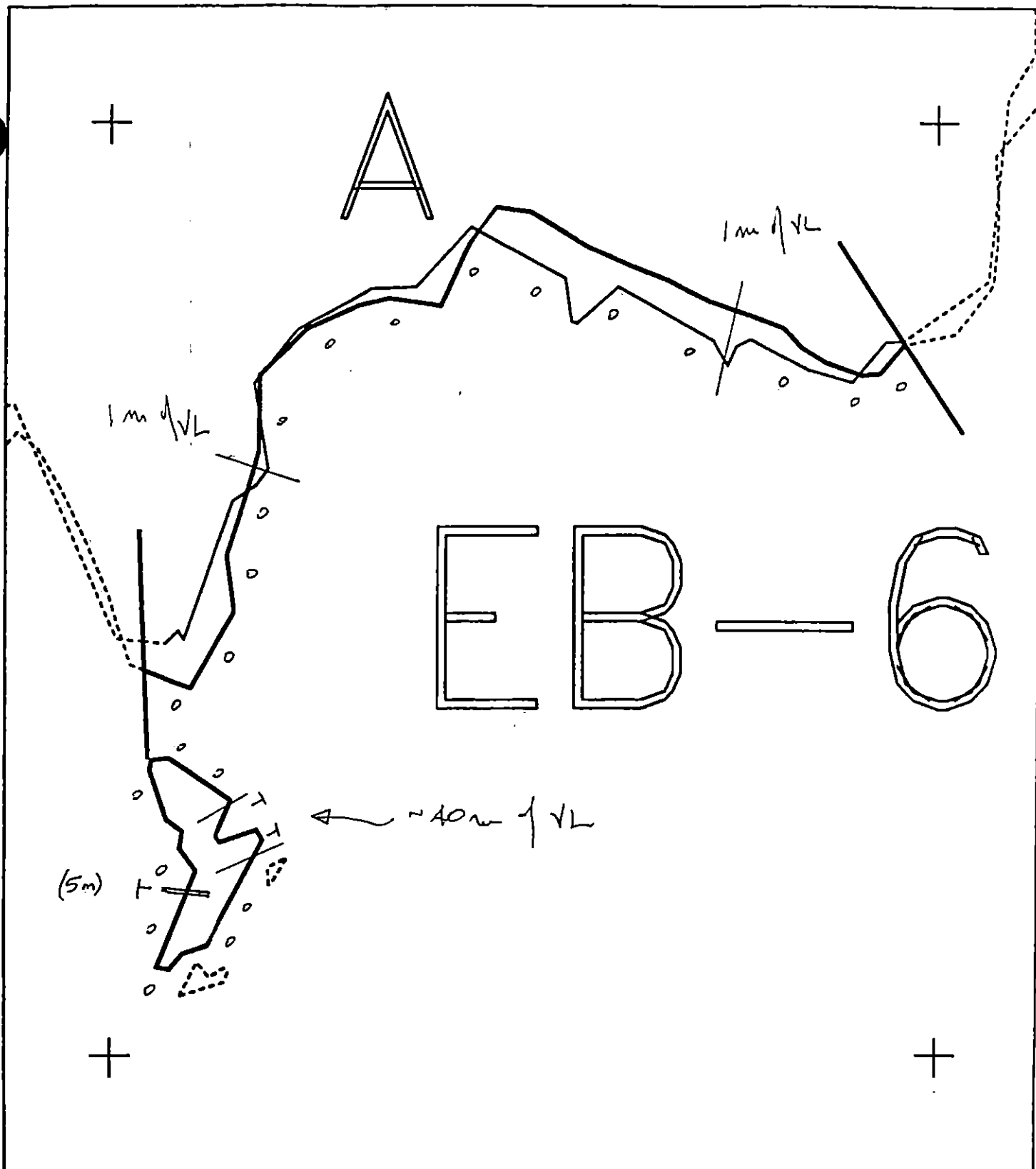
in area

6 KTHI wakes

MTZ - dense Fucus, litt, limp (persons)

patchy dense mussels in splinty BR

finish ~ 1945 - P.V. SOR until ~ 2020



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

EB006 A
 ADEC Subsegment Length: 1257m
 METERS
 0 100 200
 AK State Plane Zone 4
 pab006a

Subdivision Field Map
 Map Key: PWSEB006A
 Name: GM
 Date: 5-15-91
 Data Entered:

Revised 5.21 983
 REVIEWED: F.W. 5/22/91

1991 MAYSAP EVALUATION

SEGMENT: EB 005 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, Fish harvest area

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Timothy P. Smith Date: 5/31/91

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 31 1991

FOSC APPROVAL DATE: 6/5/91

ADEC [Signature]

FOSC [Signature]

EXXON [Signature]

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

USCG [Signature]

NOAA [Signature]

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 1 SEGMENT EB 005 SUBDIVISION A DATE 5/20/91

DEC

NAME JEFF GIMALIAS SIGNATURE [Signature]

☒ NTR NO OIL WORTH RECOVERING ON THIS SEGMENT. ONLY OIL PRESENT IS OCCASIONAL TRACE. AREA FAIRLY EXPOSED, RECEIVES HARD STORM ACTION.

EXXON

NAME LARRY D. OLSON SIGNATURE [Signature]

☒ NTR No Recoverable oil remains on this segment.

LANDMANAGER

NAME MARSHA HALL OF DNR SIGNATURE [Signature]

☒ NTR Oil at Area A was recovered. Area B was very light - not distinguishable.

USCG/NOAA

NAME SCHULTZ / CHILDS SIGNATURE [Signature]

☒ NTR No Recoverable oil found

MEDIUM ENERGY - STEEPLY DIPPING BEDROCK SHORELINE - "SLATEY" BEDROCK ERODES TO FLAT SUBANGULAR TO SUBROUNDED CP ARMOR ON BEACH FACE, ONLY TRACE OIL FOUND AS CT - SMALL LO SOR EAS - PICKED UP BY TEAM "A"

PAGE 1 OF 1

SEGMENT EB-5

SUBDIVISION A

DATE 5 / 20 / 91

OG G. MACDONALD

BIO M. FAWCETT

ADEC J. GINAWAS

LANDMANAGER M. HALL for DNR

EXXON L. OLSON

USCG/NOAA SCHULTZ / CHILDS

TIME 14 : 05 to 15 : 10

TIDE LEVEL + 0.1 ft. to +3.0 ft.

ENERGY LEVEL: ☐ H ☒ M ☐ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 1415 m

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

EST. OIL CATEGORY LENGTH: W m M m N m VL 36 m NO 1,379 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

PHOTO ROLL # MAYSAP- 1 - 27 FRAMES 19~24

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

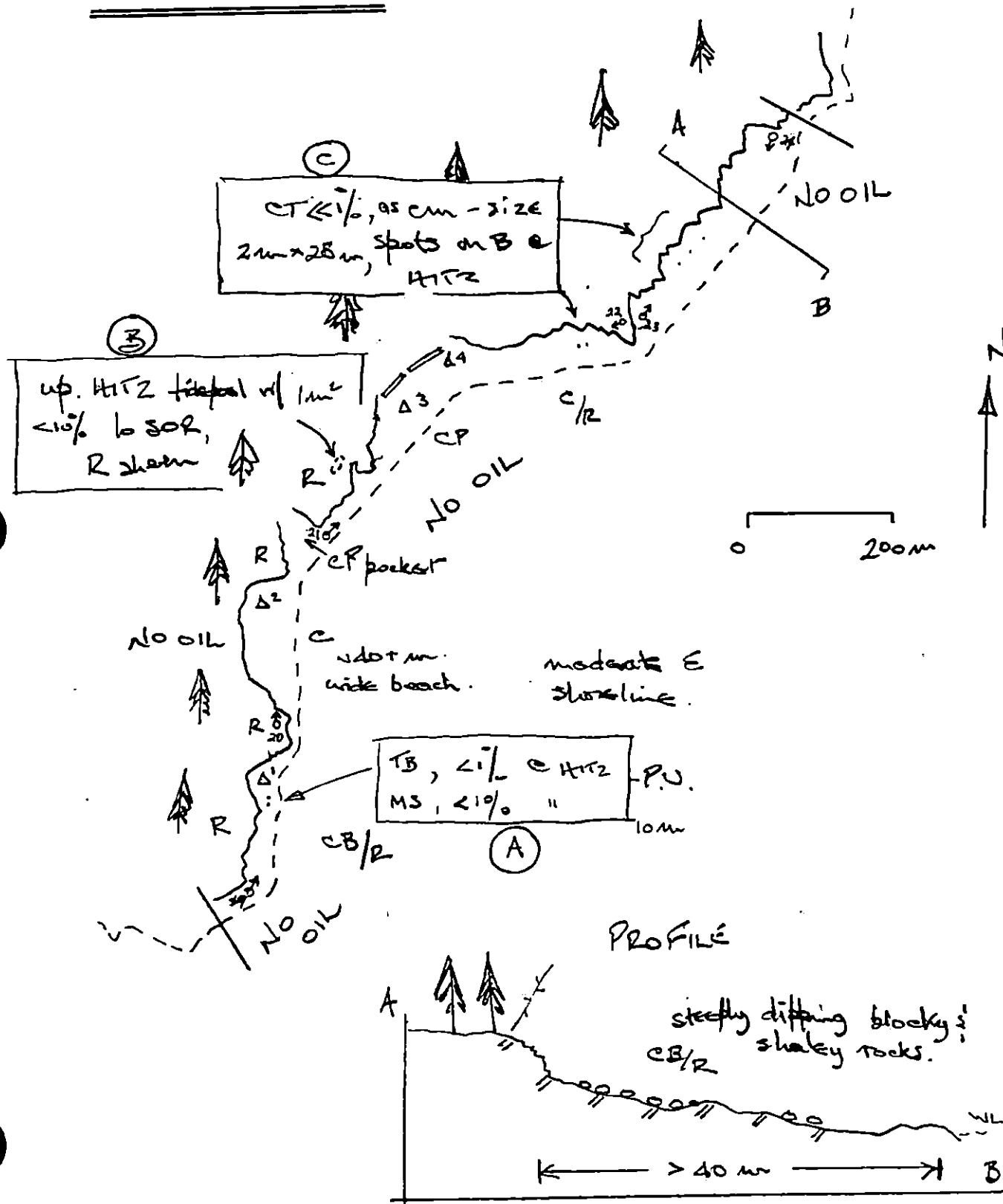
OG COMMENTS: Rugged rocky shore w/ CB veneer over partly polished bedrock. Trace surface oil only, as tiny drops of CT, a trace of sol and MS in a rock crevice. The N end of the segment is overbooked by an eagle @ her nest.

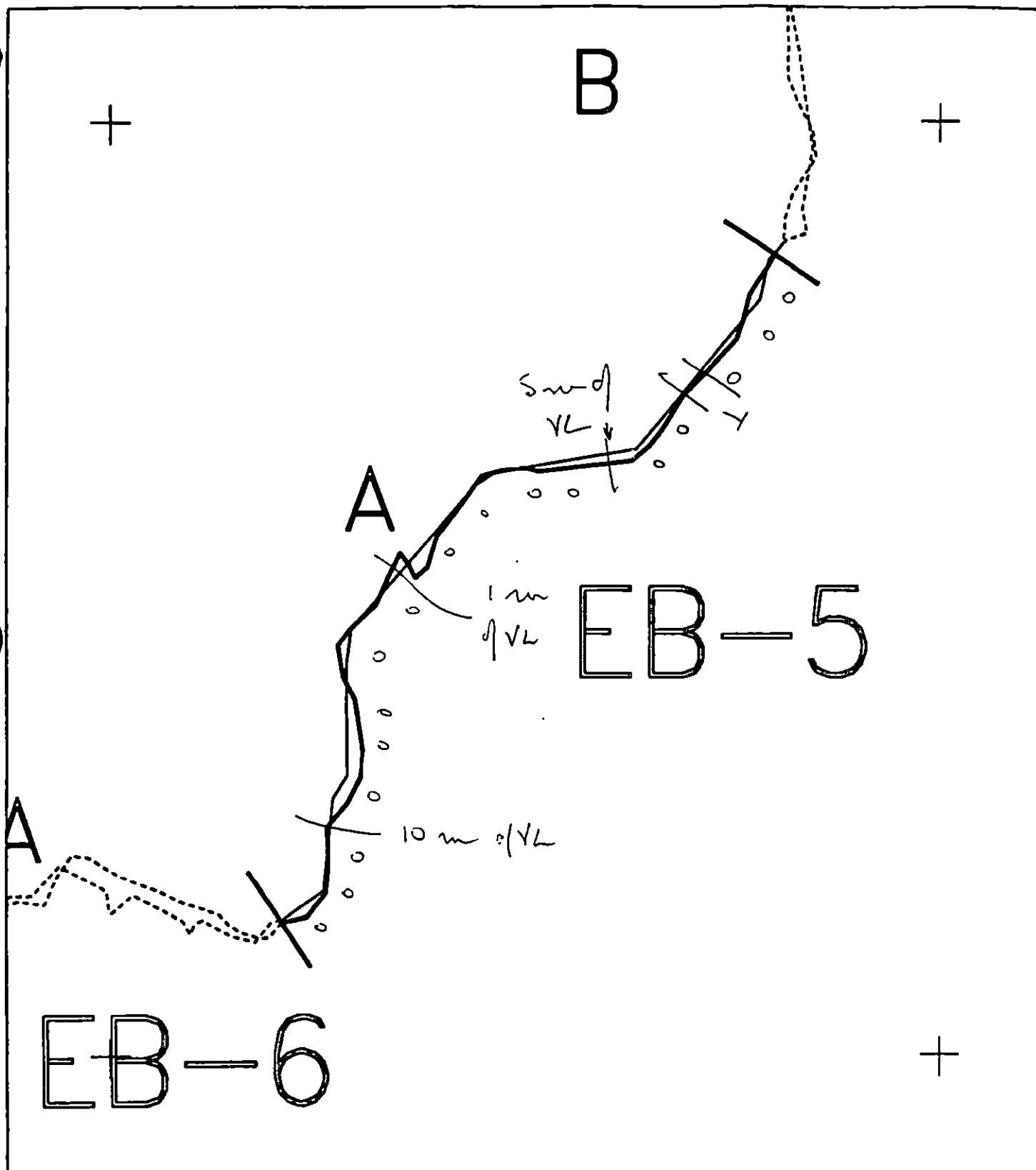
REVIEWED: Cui 5/22/04

EB-5A

G. MACDONALD

5-20-91





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

EB005 A
 ADEC Subsegment Length: 1414m
 METERS
 0 200 400
 AK State Plane Zone 4
 pub005a



Subdivision Field Map
 Map Key: PWSEB005A
 Name: GM
 Date: 5.20.91
 Date Entered:

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #

DATE 20 May 91

SEGMENT #

EB 005

TIDAL HEIGHT(Range) +0.6 to +2.5 ft

SUBDIVISION

A

BIOLOGIST Michael Fawcett

SEA STATE

Calm

WIND SPEED/DIRECTION

calm

PHOTOGRAPHS: ROLL #

FRAME #

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

This subdivision contains small B/C/P moderate energy beaches sparse to dense barnacles, rockweed, mussels, Rhodowela, limpets and Littorinids in MTZ-LTZ areas and dense barnacle SPAT in most of the intertidal zone. Bedrock outcrops and platforms have dense barnacles and rockweed in MTZ, patches of dense mussels on MTZ rock, & dense beds of mussels in LTZ channels and some boulder areas. LTZ tidepools & low reefs near the north end of the subdivision have typical rich biota including mixed algae, chitons, limpets, hermit crabs, sculpins, anemones, & starfish. Minute amounts of residual oil found in 3 areas (see Sketch map).

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	3(1 imm., adults w/ nest)	
Seabirds	1 pigeon guillemot	3	
Waterfowl	1 harlequin duck	8	
Gulls/kittiwakes			tidepool sculpin
Shorebirds			black prickleback
Corvids			
Other Birds			

MARINE MAMMALS

OBSERVED

LAND MAMMALS

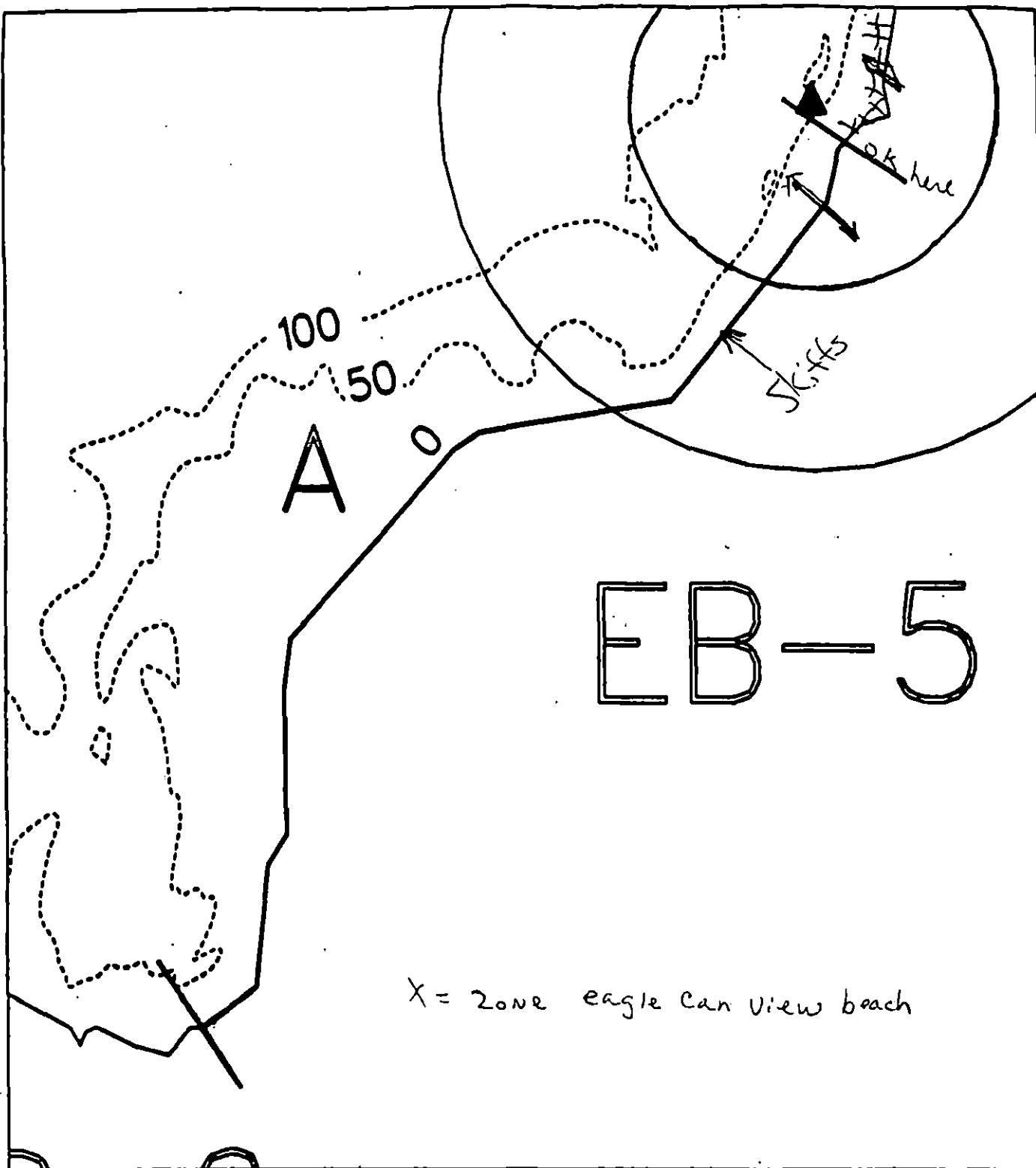
SPECIES

OBSERVED

Sea Otters			
Pinnipeds(specify)			
Whales(specify)			

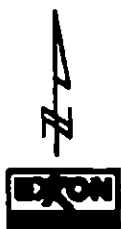
Shoreline subdivision map showing important biological features attached.

Revised M.B. 5/2/91



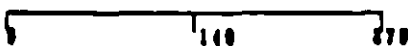
EB-5

X = zone eagle can view beach



EB005

METERS



AS STATE PLANS, Zone 4
011000

Segment Reference Map
Map Key: PVSEB005



EAGLE NEST

Reviewed M.B. 5/22/91

EB005A 5/20/91 Fawcett
1405 hrs

proceeding north - Dr. Stine
offshore watching eagle nest -
we could see eagle on nest
as we went by

- moderate energy R/Pk/P beach

- mod barnacles MTZ waters -

- sparse Fucus - dense spot MTZ
UTZ

- SOR patches UTZ - SVTZ - no SVH
sparse barn barn 3m downshore

- Fucus & Rhodocela, barnacles dense
on bigger boulders & outcrops

3 pigeon guillemot

- small MTZ pools in br reefs -

urchins, shrimp, hermit crabs,

sculpin, lancelets, anemones

Leptasterias - Pecten, Arctica

1425 hrs C/P beach - mostly

barren, unstable - dense spot

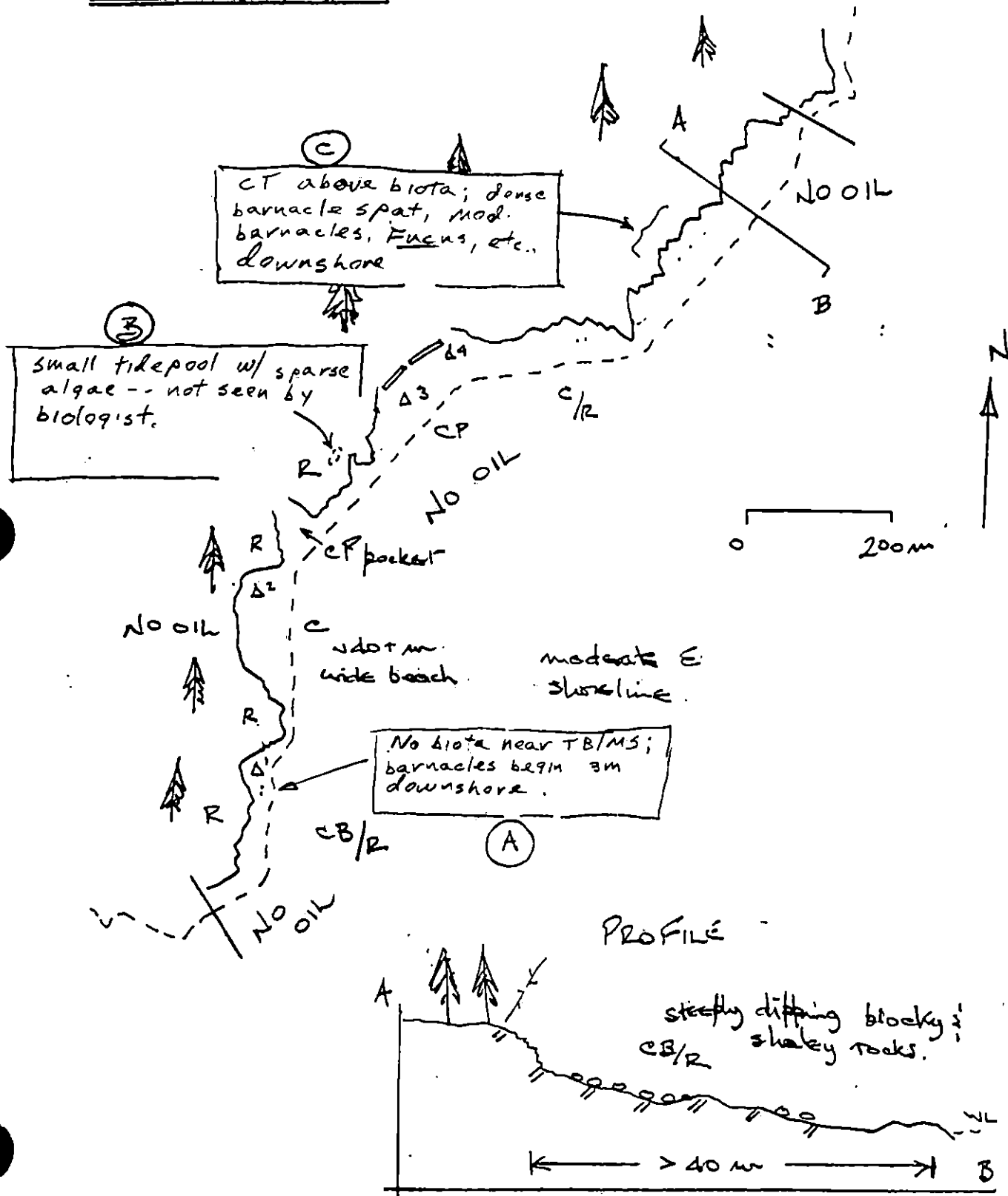
on isolated boulders, all over

- 1 juv. eagle flew over near north
end

84 Harems

- stopped before reaching
eagle nest. Duvy with us
end 1510 hrs

EB-5A
Bio Sketch Map
M. Fawcett
20 May 91



1991 MAYSAP EVALUATION

SEGMENT: EB 007 SUB: A REGION: PWS SURVEY DATE: 4/30/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest,
Fish harvest area

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Charles J. H. [Signature] Date: 5/10/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or 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 10 1991

FOSC APPROVAL DATE: 5/15/91

ADEC

FOSC

EXXON

E. E. PAGE, CAPT, 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.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT E B 007 SUBDIVISION A DATE 30 Apr 91

ADEC

NAME Dianne Munson SIGNATURE Dianne Munson☒ NTR ☐ Treatment Recommended

~~Very tight oiling. A few tarballs were observed and removed.~~
~~Some coats on undersides of cobbles and small boulders.~~
No oiling observed.

EXXON

NAME LARRY D. OLSON SIGNATURE Larry D. Olson

☒ NTR no oiling was found. Areas surveyed showed trace
of oil previously on surveys. Found none on this survey.

LANDMANAGER

NAME LARRY EVANOFF OF CVC SIGNATURE LE☒ NTR ☐ TREATMENT RECOMMENDED

MASOPEY OF SEGMENT NOT SURVEYED DUE TO
PREVIOUS SURVEYS SHOWED NO OIL AREAS THAT
WERE SURVEYED ~~HAD SOME STAIN/COAT UNDERSIDE~~
~~OF ROCKS AND A FEW TB's, SHOWED NO OIL~~

USCG/NOAA

NAME Ferry Galt NOAA SIGNATURE Ferry Galt☒ NTR as above

reviewed 5.2 9y
REVISORS: 5/5/91 MC

Big Sketch Map

EB007-A

17 Samples

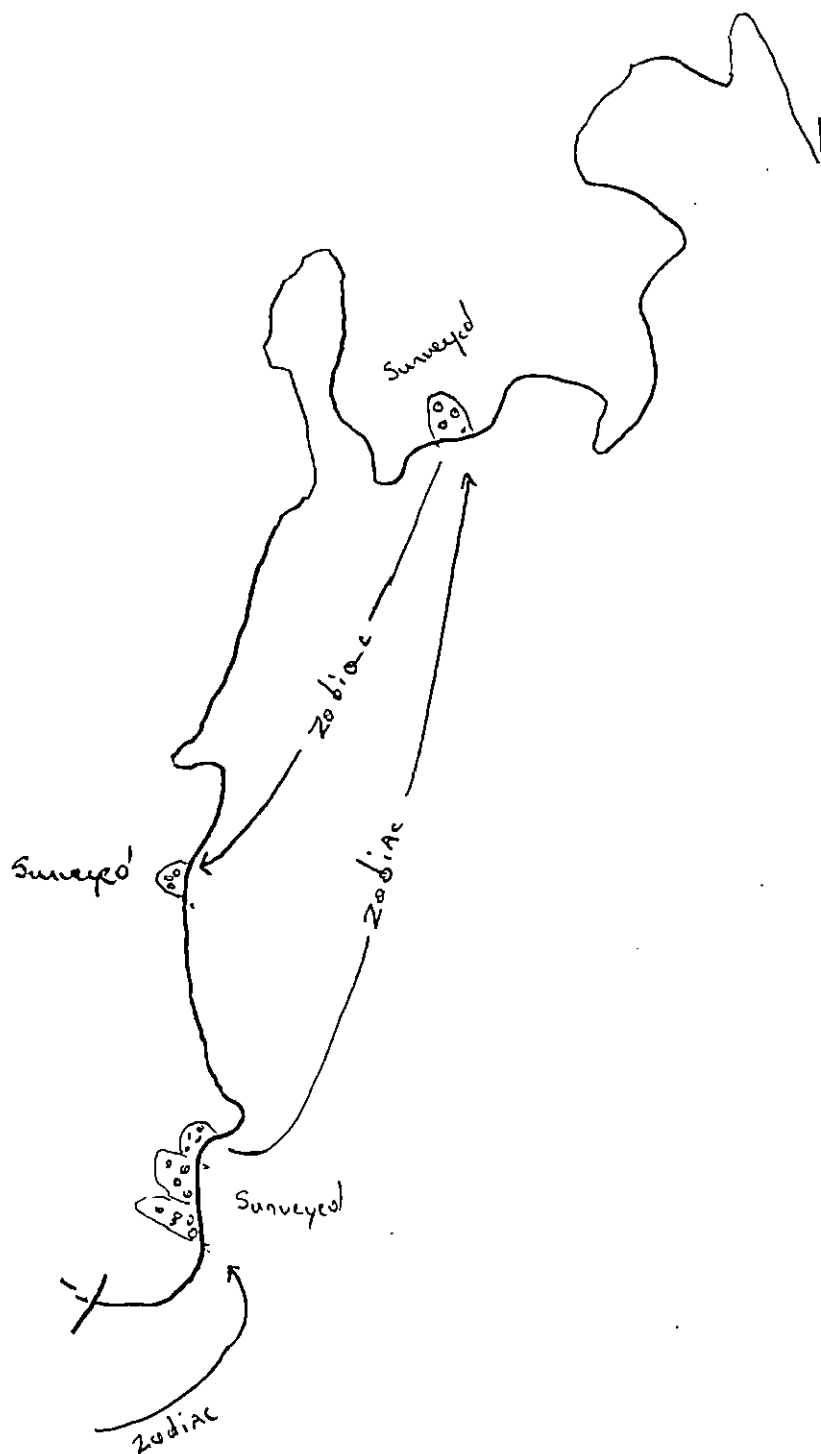
30 April 91

1109-1200

Legend

⊕ Bedrock

⊙ Round col
pb/cb/gv



Meters
0 200 400

reviewed 5.2 94
REVIEWED: 5/3/91 M.L.

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #	4	DATE/TIME	April 30, 1991 1100 => 1200
SEGMENT #	EB007	TIDAL HEIGHT (Range)	+1.0 => +4.0
SUBDIVISION	A	BIOLOGIST	JIM BARRY
SEA STATE	0 - 0.5 ft. chop	WIND SPEED/DIRECTION	ENE 10-15 Rain

COMMENTS / OBSERVATIONS - OILED SUBDIVISIONS

NO OILED SITES OBSERVED

This segment is 3188m long. Most of the segment was not surveyed and only three main sites were inspected. These had previous reports of oiling. This segment has medium to highly exposed bedrock cliffs and headlands, and pocket beaches with medium to low exposure.

- | | | |
|----|--------|---|
| A | NO OIL | Pocket beach of smooth shingle - high energy. Little on beach cobble throughout intertidal. Adjacent headlands with typical high exposure fauna and flora. Dense mussels and barnacles in patches, moderate to dense Fucus, high to medium densities of limpets, littorines, whelks, etc. Low zone algae include filamentous and bladelike red algae. |
| B | NO OIL | Medium exposure cobble beach. Little macrobiota. Dead juvenile bald eagle found in upper zone drift line. |
| C. | NO OIL | Medium to low exposure cobble beach. Sparse limpets, littorines, mussels, and Fucus on beach from middle to high zone. |

WILDLIFE OBSERVATIONS - Completed on all subdivisions

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2 (1 dead)	
Seabirds			
Waterfowl	2	8	
Gulls/Kittiwakes	2	6	
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
Sea lions	4		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

00 Sketch Map

EB007-A

17 Samples

30 April 91

1109-1200

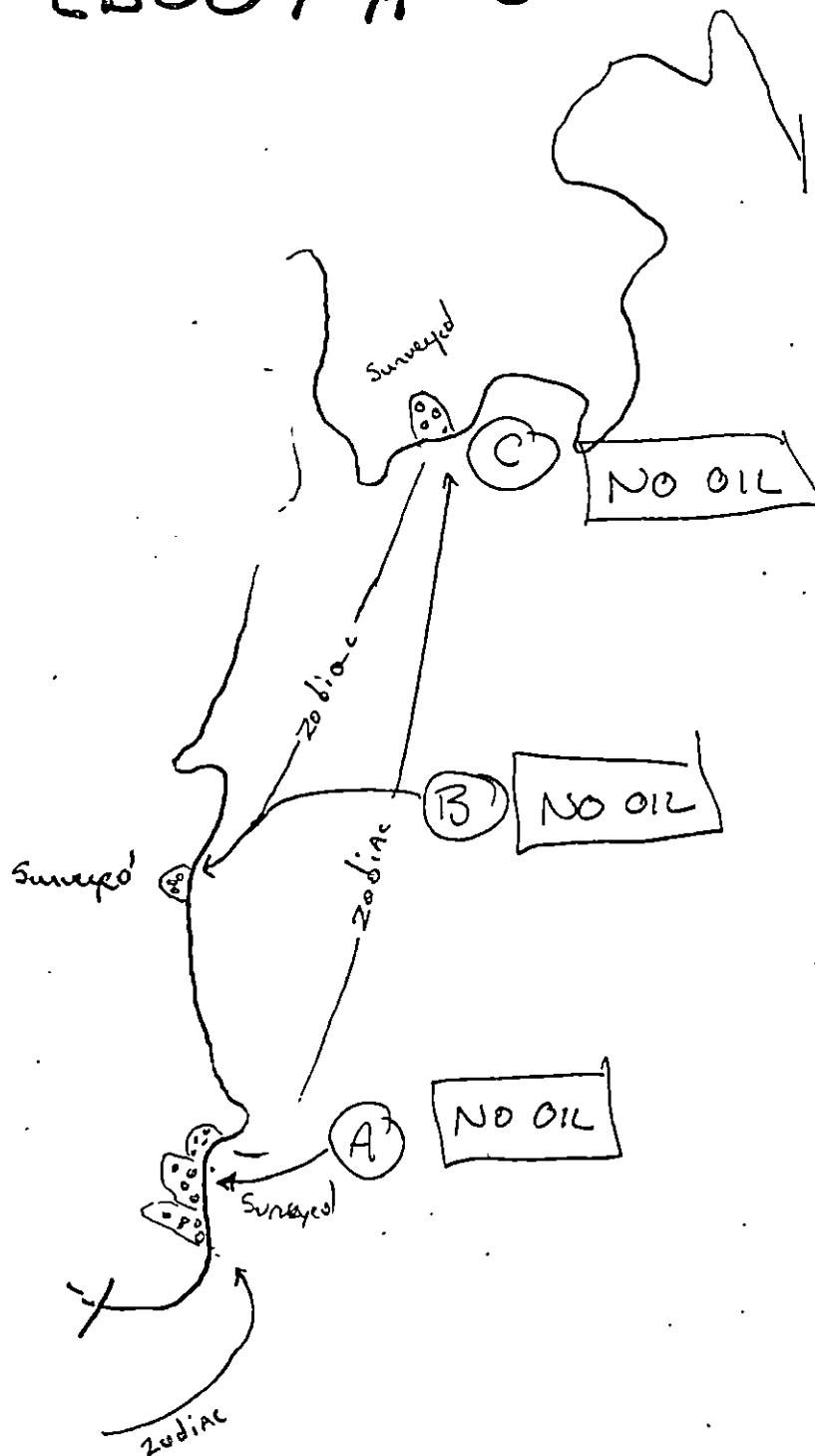
Legend

⊕ Bedrock

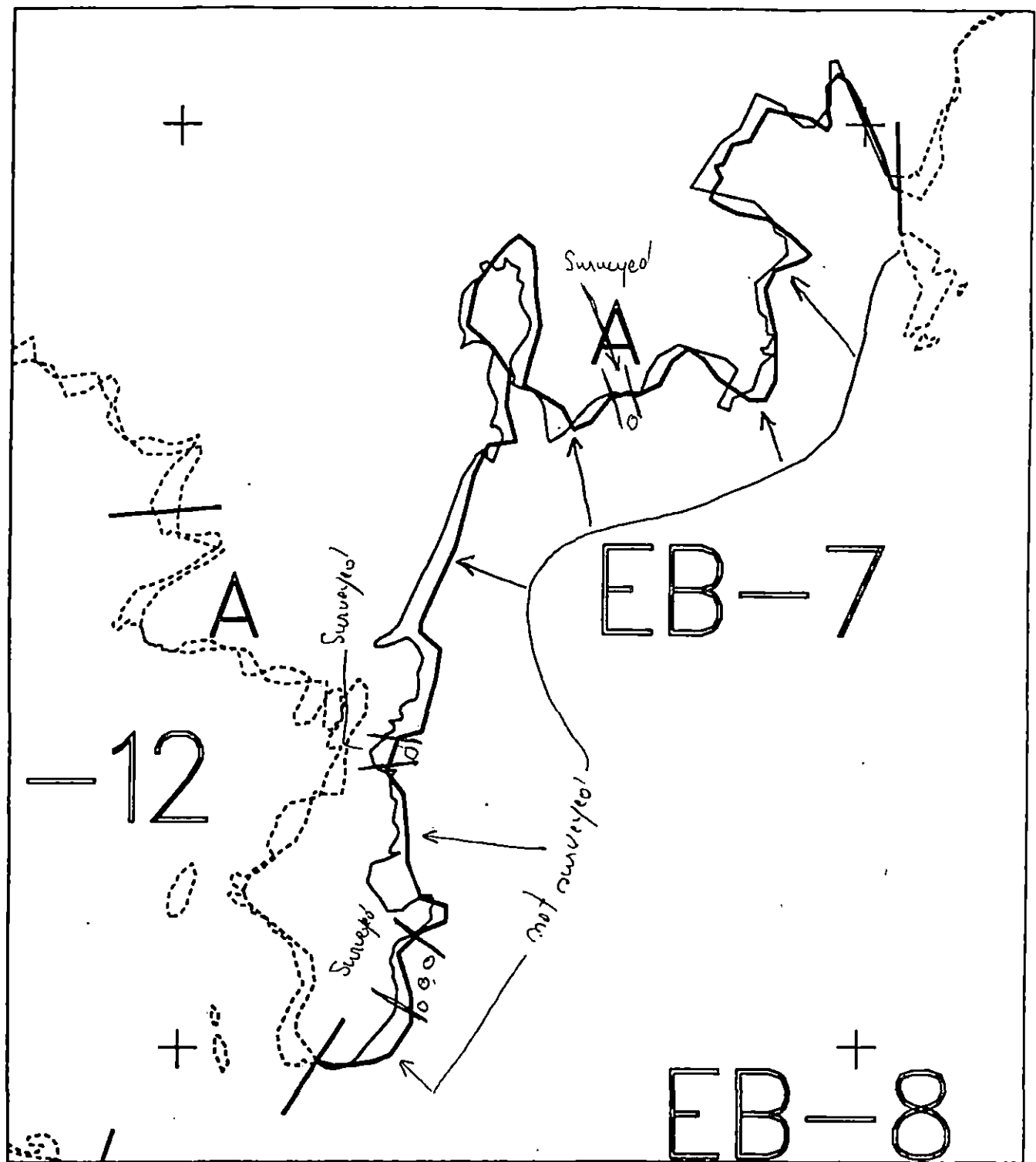
⊙ Rounded
pb/cb/gv

BID SKETCH MAP

EB007-A 30 AP 91



feet
0 200 400



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

EB007 A
 ADEC Subsegment Length: 3188m
 METERS
 0 200 400
 AK State Plane Zone 4
 pcb007aa



Subdivision Field Map
 Map Key: PWSEB007Aa
 Name: JM Semper
 Date: 30 April 91
 Date Entered:

reviewed 5.2 94
 REVIEWED: 5/3/91 H.C.

1991 MAYSAP EVALUATION

SEGMENT: EB 007 SUB: A REGION: PWS SURVEY DATE: 4/30/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest,
Fish harvest area

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.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

ADEC

NAME Dianne Monson SIGNATURE Dianne Monson

☒ NTR ☐ Treatment Recommended

~~Very light oiling. A few tarballs were observed and removed.~~
~~Some coats on undersides of cobbles and small boulders.~~
 No oiling observed.

EXXON

NAME LARRY D. OLSON SIGNATURE Larry D. Olson

☒ NTR No oiling was found. Areas surveyed showed trace of oil previously on surveys. Found none on this survey.

LANDMANAGER

NAME LARRY EVANOFF OF CVC SIGNATURE LE

☒ NTR ☐ TREATMENT RECOMMENDED

MAJORITY OF SEGMENT NOT SURVEYED DUE TO PREVIOUS SURVEYS SHOWED NO OIL. AREAS THAT WERE SURVEYED ~~HAD SOME STAIN/COAT UNDERSIDE~~ OF ROCKS AND A FEW TBs, SHOWED NO OIL

USCG/NOAA

NAME Jerry Galt NOAA SIGNATURE Jerry Galt

☒ NTR as above

reviewed 5.2
REVISORS: 5/5/91 MC

09 Sketch Map

EB007-A

17 Samples

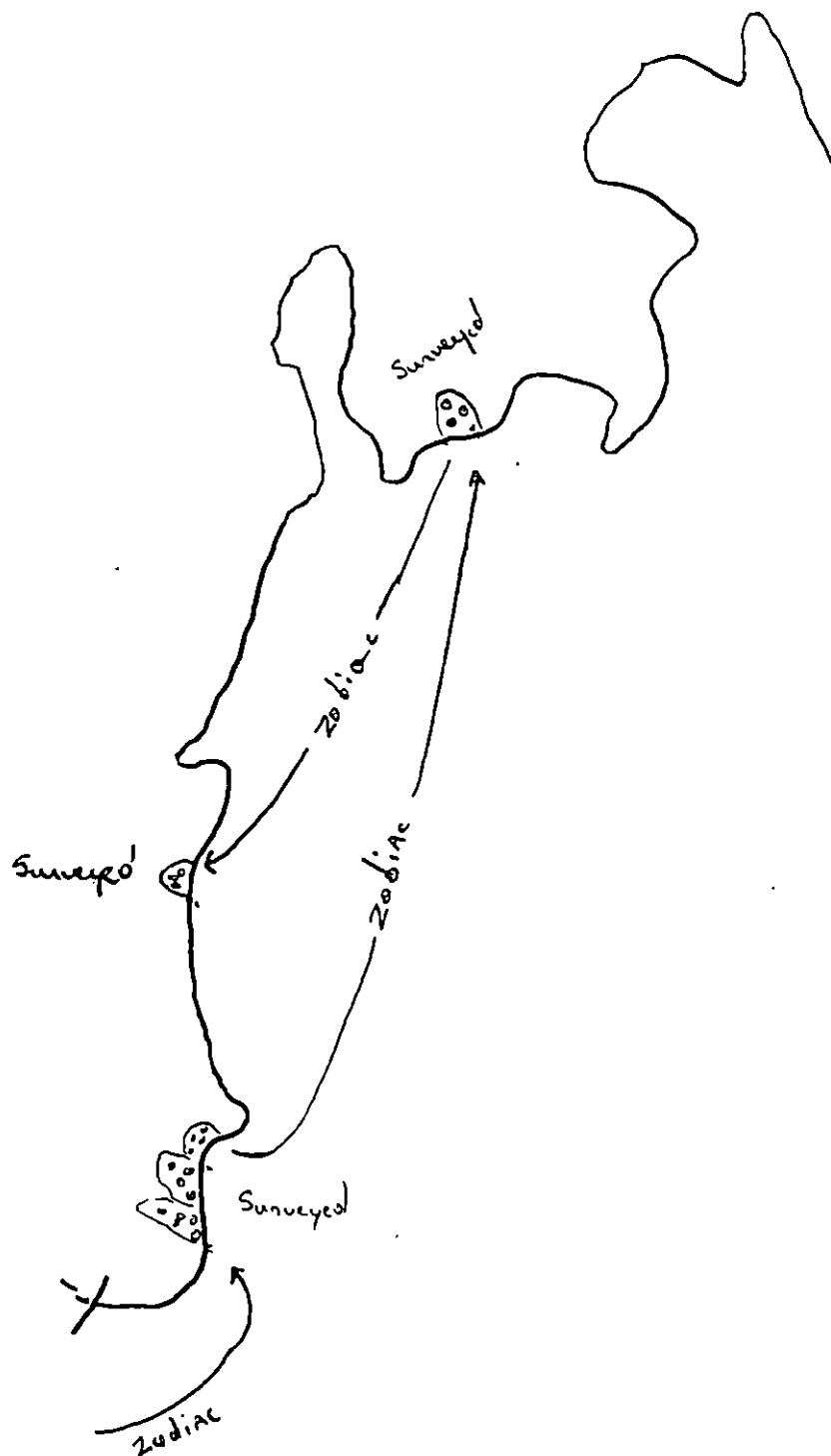
30 April 91

1109-1200

Legend

⊕ Bedrock

⊖ Rounded
pb/cb/gv



reviewed 5.2.94
REVIEWED: 5/3/91 M.C.

NAYSAP BIOLOGICAL SUMMARY FORM

TEAM #	4	DATE/TIME	April 30, 1991 1100 => 1200
SEGMENT #	EB007	TIDAL HEIGHT (Range)	+1.0 => +4.0
SUBDIVISION	A	BIOLOGIST	JIM BARRY
SEA STATE	0 - 0.5 ft. chop	WIND SPEED/DIRECTION	ENE 10-15 Rain

COMMENTS / OBSERVATIONS - OILED SUBDIVISIONS

NO OILED SITES OBSERVED

This segment is 3188m long. Most of the segment was not surveyed and only three main sites were inspected. These had previous reports of oiling. This segment has medium to highly exposed bedrock cliffs and headlands, and pocket beaches with medium to low exposure.

- A **NO OIL** Pocket beach of smooth shingle - high energy. Little on beach cobble throughout intertidal. Adjacent headlands with typical high exposure fauna and flora. Dense mussels and barnacles in patches, moderate to dense Fucus, high to medium densities of limpets, littorines, whelks, etc. Low zone algae include filamentous and blade-like red algae.
- B **NO OIL** Medium exposure cobble beach. Little macrobiota. Dead juvenile bald eagle found in upper zone drift line.
- C. **NO OIL** Medium to low exposure cobble beach. Sparse limpets, littorines, mussels, and Fucus on beach from middle to high zone.

WILDLIFE OBSERVATIONS - Completed on all subdivisions

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2 (1 dead)	
Seabirds			
Waterfowl	2	8	
Gulls/Kittiwakes	2	6	
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
Sea lions	4		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

BD Sketch Map

EB007-A

JM Samples

30 April 91

1109 - 1200

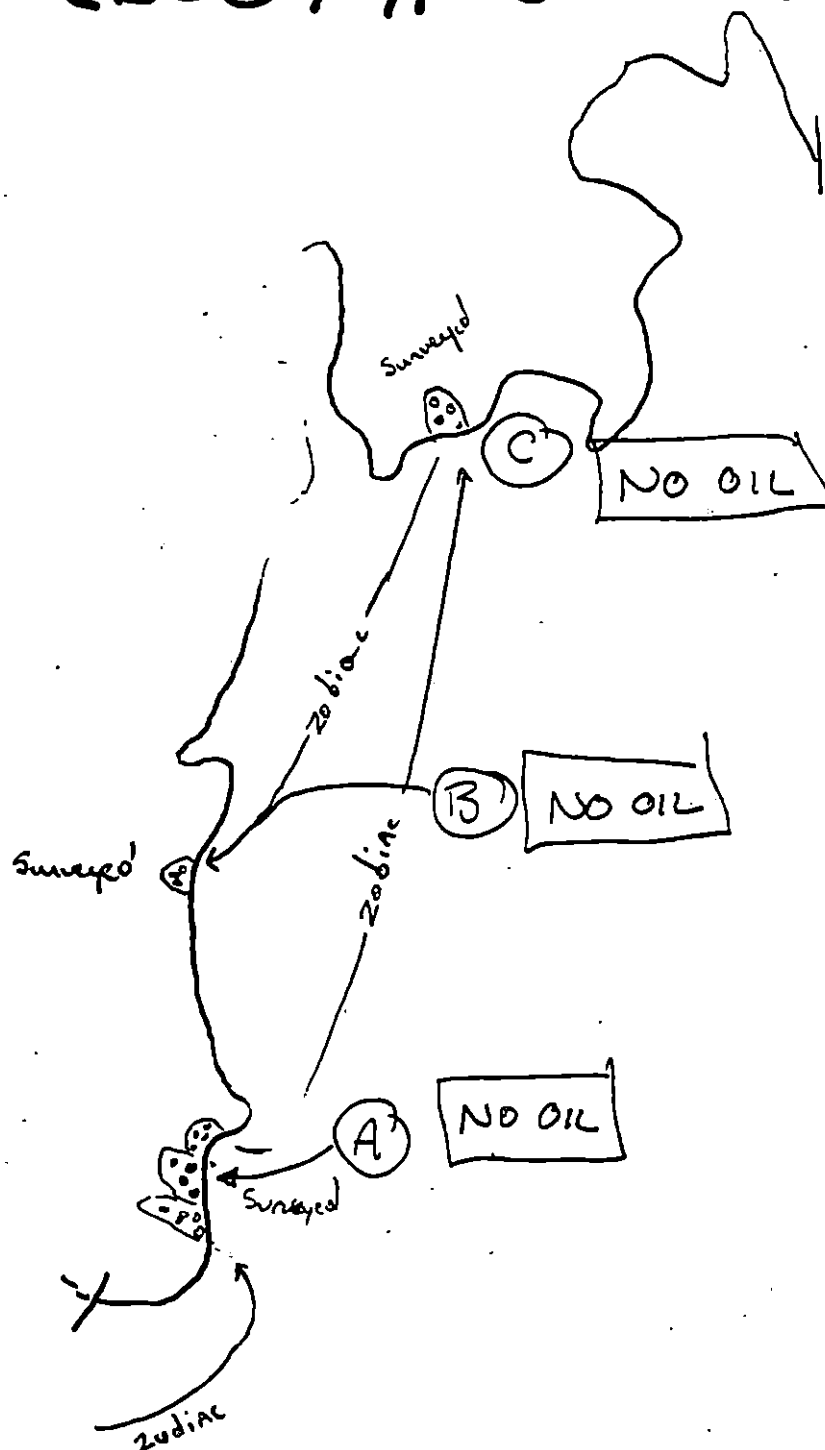
Legend

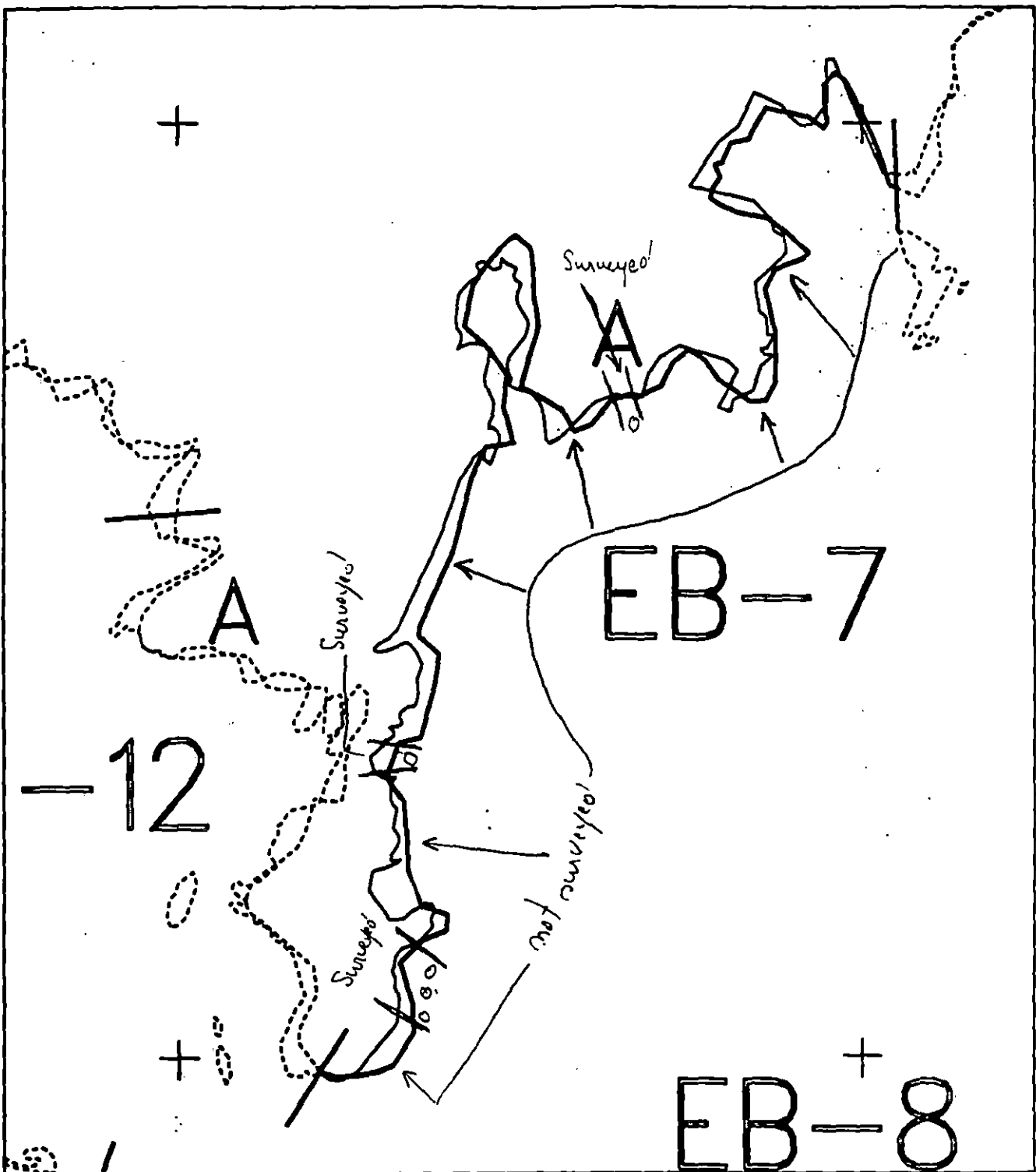
⊕ Bedrock

⊙ Around
pb/cb/gv

BD SKETCH MAP

EB007-A 30 AP 91





XXXX	Wide	EB007 A	Subdivision Field Map
////	Medium	ADEC Subsegment Length: 3188m	Map Key: PWSEB007Aa
----	Narrow	METERS	Name: <u>J. M. Seampes</u>
TTTT	Very Light	0 200 400	Date: <u>30 April 91</u>
0000	No Oil	AK State Plane Zone 4 psh007aa	Date Entered:

reviewed 5.2 74
 REVISIONS: 5/3/91 n.c.

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EB-08

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

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

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

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

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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 44 m: Narrow 10 m: V.Light 569 m: No Oil 1561 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: Recommended treatment includes 1) manual pickup of mousse patties in 2 areas indicated on sketch maps, and 2) manual removal of tarmats in 2 areas indicated on sketch maps. Work should be conducted between 6/15 and 7/10 with approval of ADF&G due to set net site 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 without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- ✓ 1D Esther Hatchery release (4/15 to 6/15)
 1E Main Bay Hatchery release (4/20 to 6/15)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- ✓ 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 ✓ 1L Set net sites (6/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3N, 3O, 3Q Harbor seal and sea lion pupping (5/15 to 7/1)
 Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Rothly 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- ✓ 6U Recreation: Tent sites (6/1 to 9/15)
 ✓ 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 Deer harvesting (8/15 to 2/26)
 Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

11/17

SEGMENT ST / EB 008 SUBDIVISION: _____ DATE 25 APR 90NAME Robert Jensen SIGNATURE Robert Jensen☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

Special considerations would be the salmon streams located near the hard pavement (AP/P) shown on the sketch map.

ADEC

NAME Rowann T. Hudnall SIGNATURE Rowann T. Hudnall☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

Oil tends to form patties in UITZ w/ pine needles.

Manual removal of pavement, patties, tarballs would effectively clean most of this segment.

There is a higher concentration of patties around the salmon streams these could be removed w/ shovels w/o disturbing the stream structure.

LAND MANAGER

NAME LARRY EVANOFF SIGNATURE Larry Evanoff☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

MANUAL REMOVAL OF TAR BALLS/PATTIES/ASPHALT PAVEMENT.
NO BIOREMEDIATION RECOMMENDED.

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

OG SHARPER USCG R. VON REY SEGMENT ST/ EB-008
 BIO J. DIXON LAND REP LARRY EVANOFF SUBDIVISION A (1 OF 1)
 EXXON J. ELLISON ADEC R. HUDNALL TIME 06501009:30
 TEAM NO. 2 TIDE LEVEL -1.03 to -3.2 DATE 4/25/90
 EST. SUBDIVISION LENGTH: 2,099 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 30 % B 20 % C 30 % P 20 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 50 % Hang 45 % Vert 5 % WAVE EXPOSURE: ☒ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 30 m N 5 m VL 582 m NO 1482 m

SURFACE OIL

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

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE POM POMS, DIAPY#BAGS 1.5

Photographs:

Roll No. 57-2-202Frames 35, 36

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A	N	SHEEN (Y/N)	F	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UO	1	2	3	4	5	SU	U	M	U					
1	10					X	.		X							X					N		P, G/G, V
2	20					X	.		X							X					N		P
							.																
							.																
							.																
							.																

COMMENTS

see separate sheetsREVIEWED LYHDATE 4-26-90

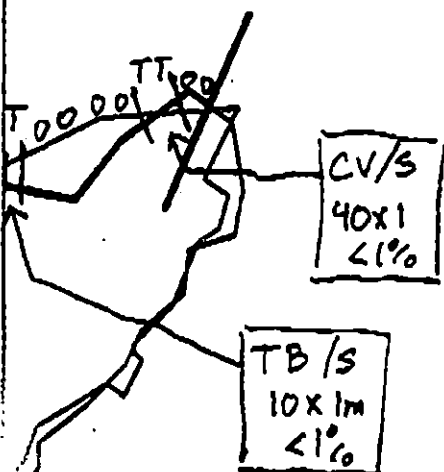
YL = 42

NO = 120

OIL
CHARACTER

CV = 40

TB = 10



← PWS
117A

EB-9

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ST-EB-8A

ADEC Segment Length: 2185m



Map Key: PWS-117b

Name: HARPER

Date: 25 APRIL 90

Date Entered:

OG _____ HARPER

SEGMENT ST 008

SUBDIVISION A

DATE 4 125/90

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)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

1
 Pit - No Subsurface Oil

2
 Pit - Subsurface Oil

Continuous Distribution

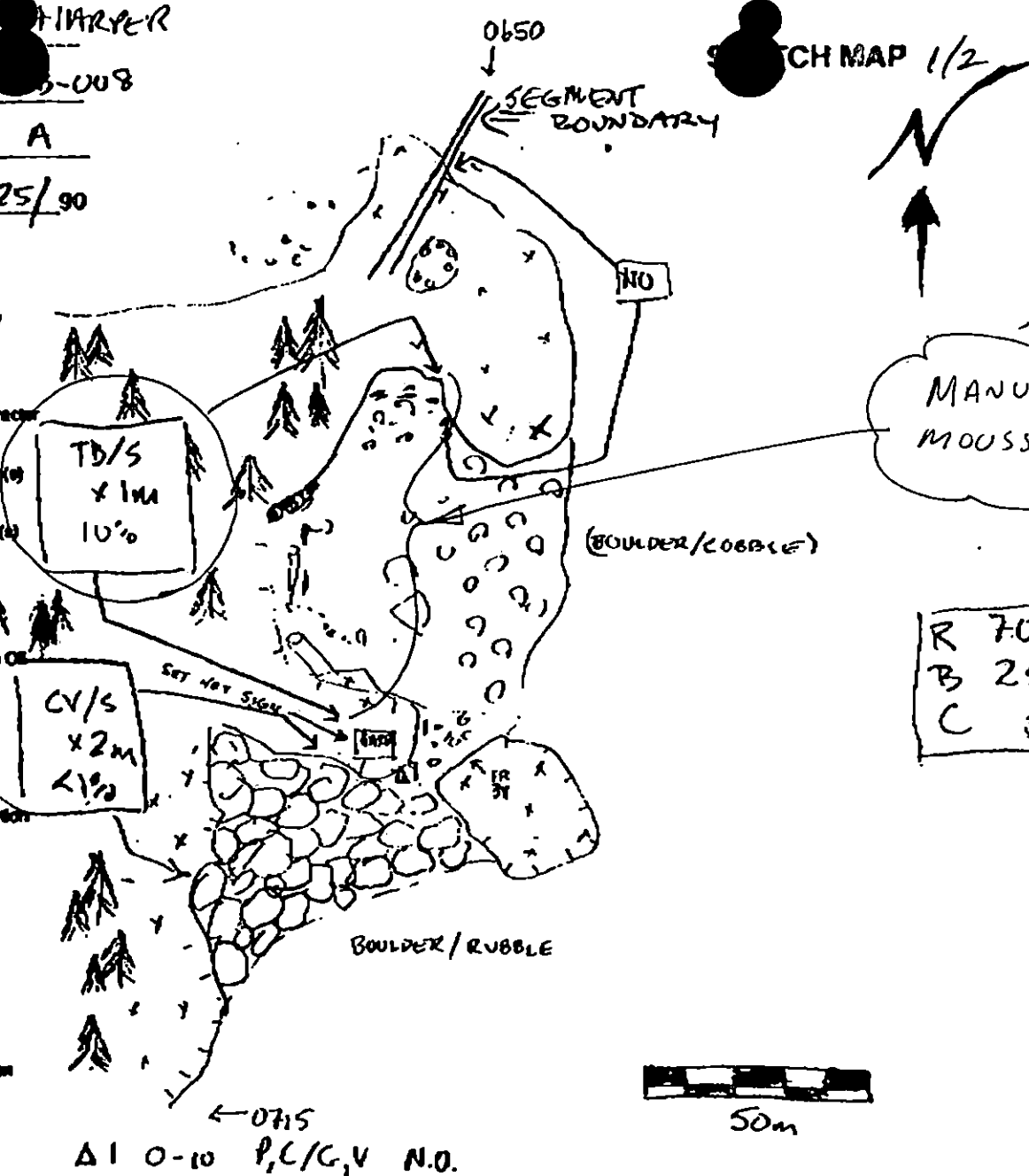
Broken Distribution

Patchy Distribution

Splashed Distribution

Old Vegetation

Photo location, direction, and number



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

4/14

OG _____ HARPER

SEGMENT S _____ 3-08

SUBDIVISION A

DATE 4/25/90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Body
- ☒ Oil Dir.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HW/LWL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ PH Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ
PI - No Subsurface Oil

2 Δ
PI - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Pachy Distribution

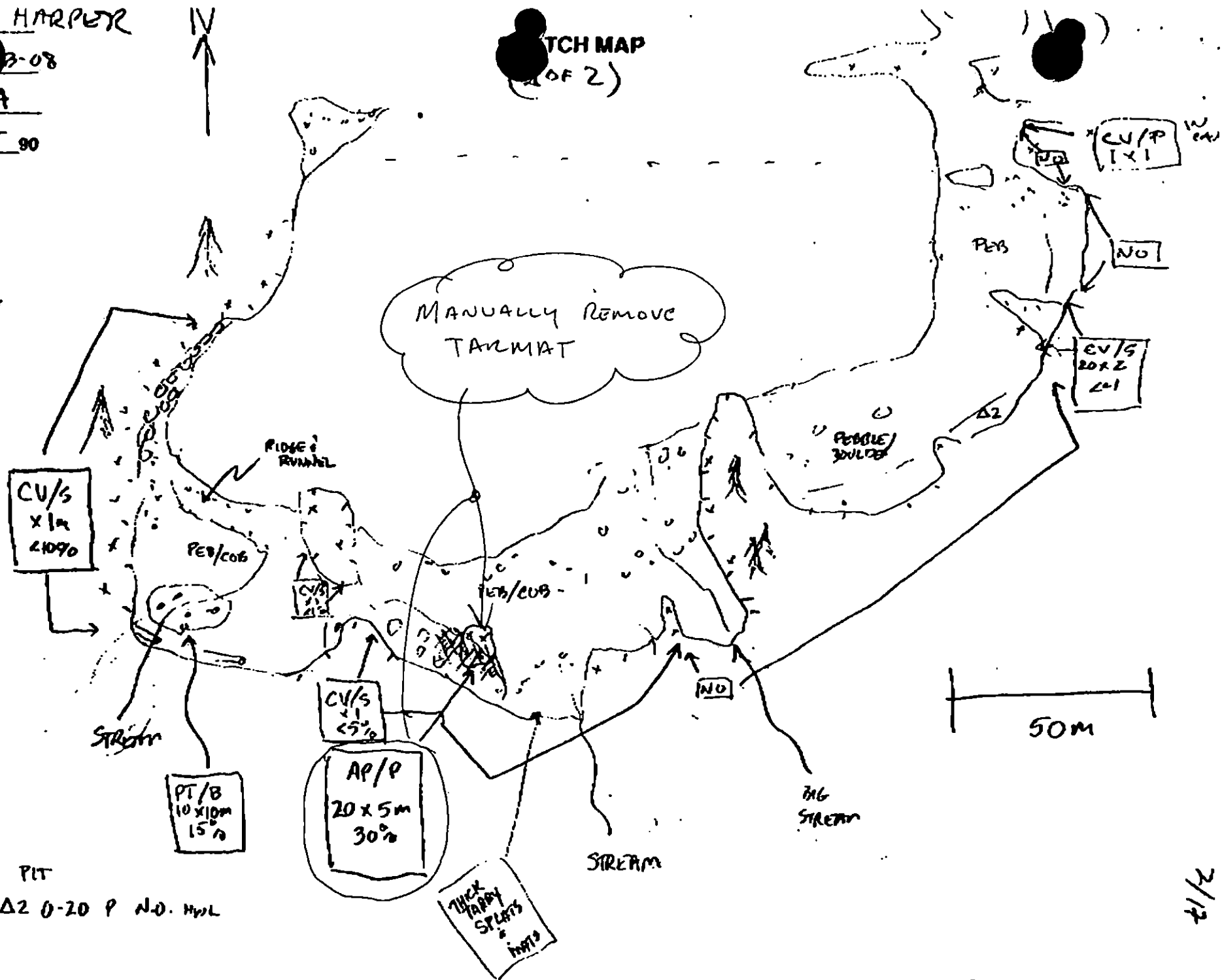
CT/S
Splashed Distribution

eee
Old Vegetation

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

PI
 $\Delta 2$ 0-20 P N.O. HWL

ATCH MAP
(OF 2)



2/2

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

← see previous sheet

REVISION: 000000

SUMMARY OF OILING OBSERVATIONSfor EB-008A

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

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

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

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

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

Time (24 hr) 0645-0945 Biologist John Dixon

- (A) Substrate type and % of segments:
 (1) Bedrock 30 (2) Boulder 20 (3) Cobble 30 (4) Pebble 20 (5) Sand 0 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 13 Moderate 28 Low 59
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (O)

Photographs:
 Roll No. ST-2-

Frames _____

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments: Waterline during survey: -0.8' - -3.2
OTTAWA offshore. Mink in intertidal. Stellers Jays.

Ecological Considerations: Listed Sensitivities: IAB(275-30-15120); IE; IL; GL; ST.
Vertical Rock Faces & hummocky platforms interspersed with
cobble boulders. Sparse biota on cobble boulders.
Outcrops & talus blocks with ~100% algal cover in
L.I.; Fucus, Bglandula, & Littorines main species higher.
The main biota in the area is Fucus in L.I.

Wednesday 04/25/90

0655-0945

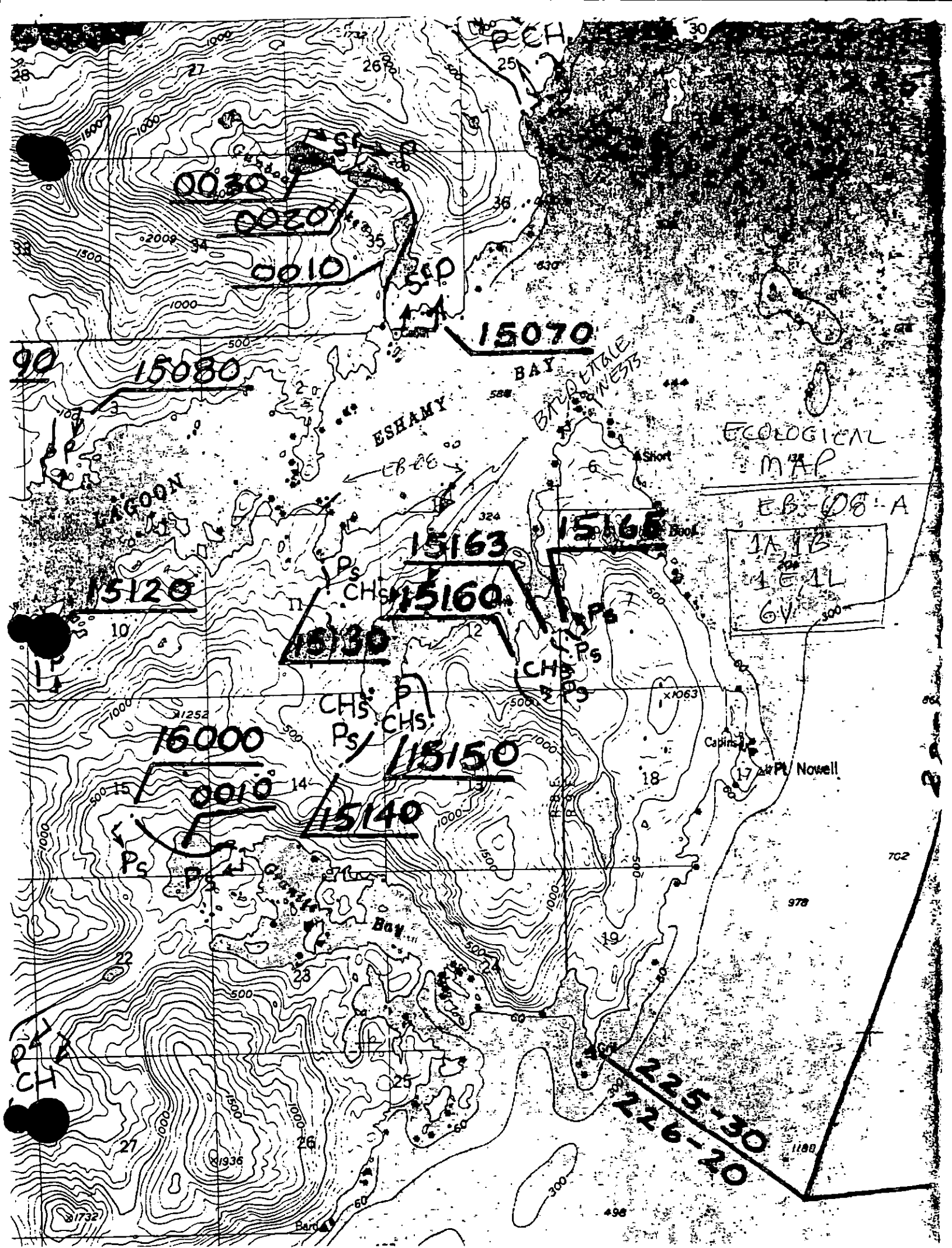
-0.8 - -3.2 ft

Biologist: John Dixon

EB-06 "A"

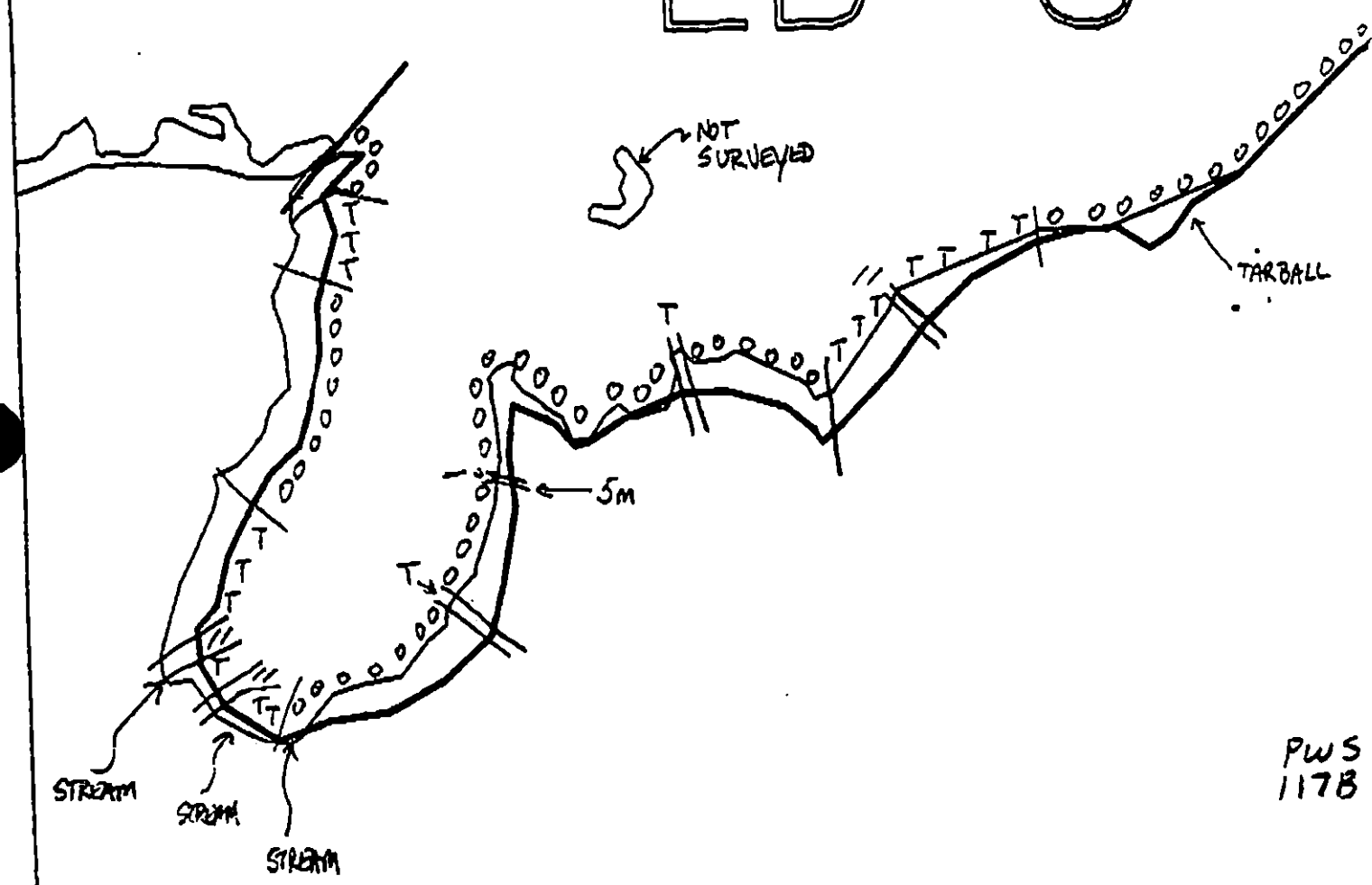
This 2,099-m long segment includes several different habitats. A series of bedrock cliffs or ramps form small headlands which bound pocket beaches containing various mixes of boulders, cobbles and pebbles. Most of the pocket beaches contain angular material, but the pebbles and cobbles on the eastern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

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



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

EB-8

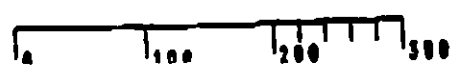


PWS 1178

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

EB-8

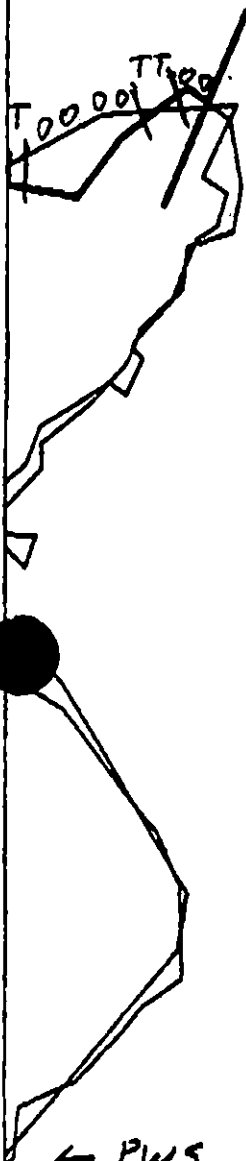
ADEC Segment Length: 2185m



Map Key: PWS-117a
 Name: HARPER
 Date: 25 APRIL 70
 Data Entered:

YL = 42

NO = 120



EB-9



XXXX Wide

//// Medium

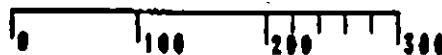
--- Narrow

TTTT Very Light

0000 No Oil

EB-8

ADEC Segment Length: 2185m



Map Key: PWS-117b

Name: HARPER

Date: 25 APRIL 90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EB-08 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous stream (225-30-15130) is present in segment. No constraint to manual pickup and tarmat removal.
5T	Bald Eagle Nest	NO CONSTRAINT. Bald eagle nest borders Segments EB-8/EB-9 and is more than 400m from work sites.
1E	Main Bay Hatchery Release	No constraint to manual pickup and tarmat removal.
1L	Set Net Site	No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Restrict boat and air traffic to essential minimum from 6/11 to 7/25. When set net sites are present restrict beach operations to essential minimum. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

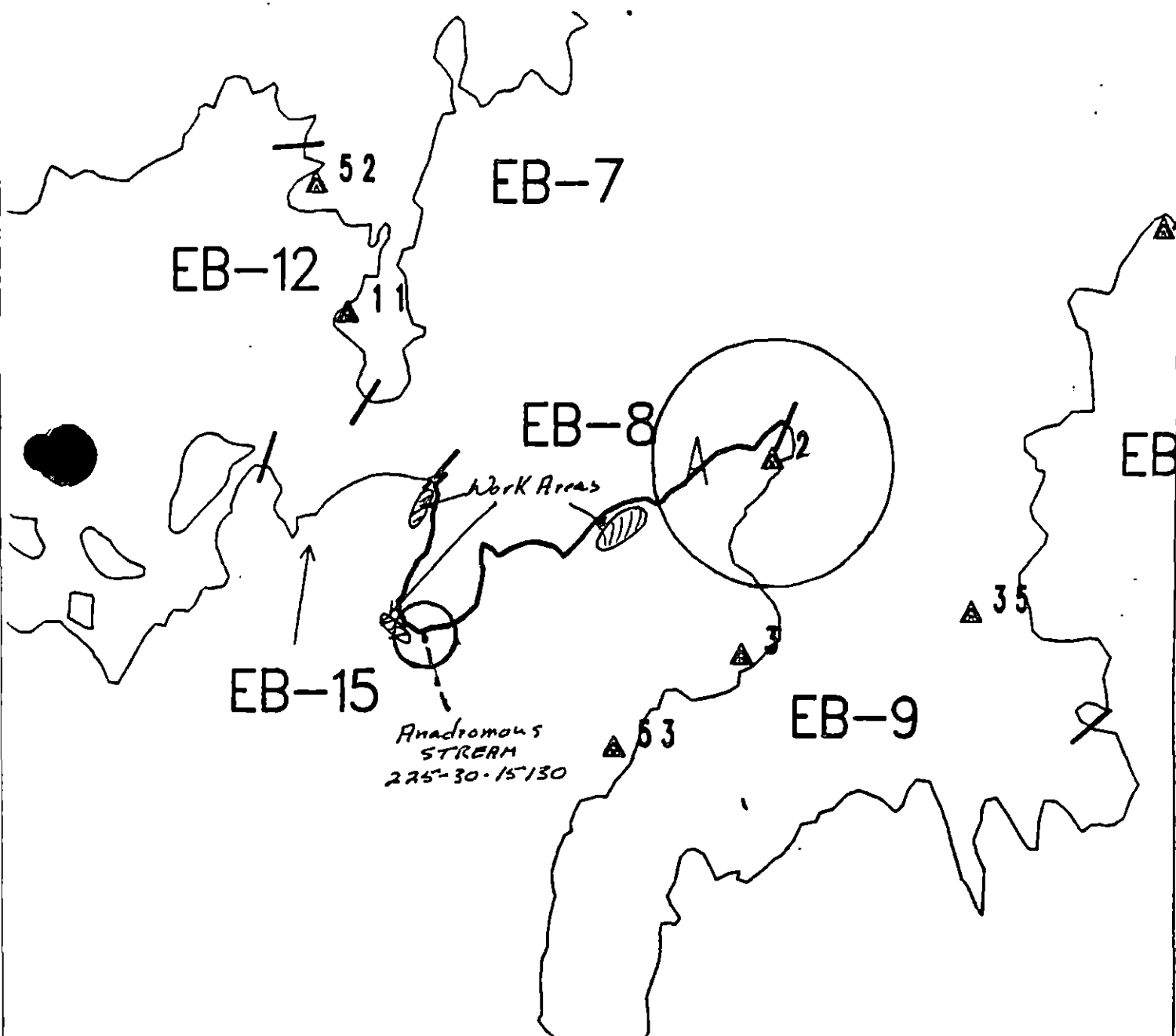
TAG ADDENDUM DATE 5/21/90.
ADEC ART WEINER
EXXON AMY TEAL
NOAA Joseph J. Hall
USCG AM. J. HALL

FOSC W

DATE 5-21-90

Prepared by: Andre Meyer

Date: 5/20/90



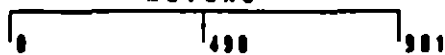
Exxon Company, USA

Map Key: PMS-EB-8

May 11, 1990



ECOLOGY MAP
SEGMENT EB-8
SUBDIVISION A (1 of 1)
METERS



- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1609 feet

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

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

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

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

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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: J. David McMahon DATE: 5/9/90

OILING CATEGORIZATION:

Wide 0 m: Medium 44 m: Narrow 10 m: V.Light 569 m: No Oil 1561 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

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

SEE ADDENDUM DATED 5/20/90
REAC.

TAG COMMENTS:

TAG APPROVAL DATE: 5/9/90
ADEC Art Wance Int Wance
EXXON Art Wance
NOAA Burl Wescott Burl Wescott
USCG D.D. Rome DK Rome

FOSC: DATE: 5-12-90

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

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

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

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

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 44 m: Narrow 10 m: V.Light 569 m: No Oil 1561 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

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

TAG COMMENTS:

TAG APPROVAL DATE: 5/9/90

ADEC Art Wanger Art Wanger

EXXON Anthony Anthony

NOAA Burt Wescott Burt Wescott

USCG D.D. Rome D.D. Rome

FOSC: DATE: 5-12-90

Map Key: PWS-117a
Name: HARPER
Date: 25 APRIL 90
Data Entered:

YL = 42

NO = 120

OIL CHARACTER

CV = 40

TB = 10

CV/S

40x1

<1%

TB/S

10x1m

<1%

← PWS
117A

EB-9

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ST-EB-8A

ADEC Segment Length: 2185m



METERS

Map Key: PWS-117b

Name: HARPER

Date: 25 APRIL 90

Date Entered:

OG HARPER

SEGMENT ST/ EB-008

SUBDIVISION A

DATE 4 125/90

CHECKLIST

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

LEGEND

1 Δ
P1 - No Subsurface Oil

2 Δ
P1 - Subsurface Oil

CT/C
Continuous Distribution

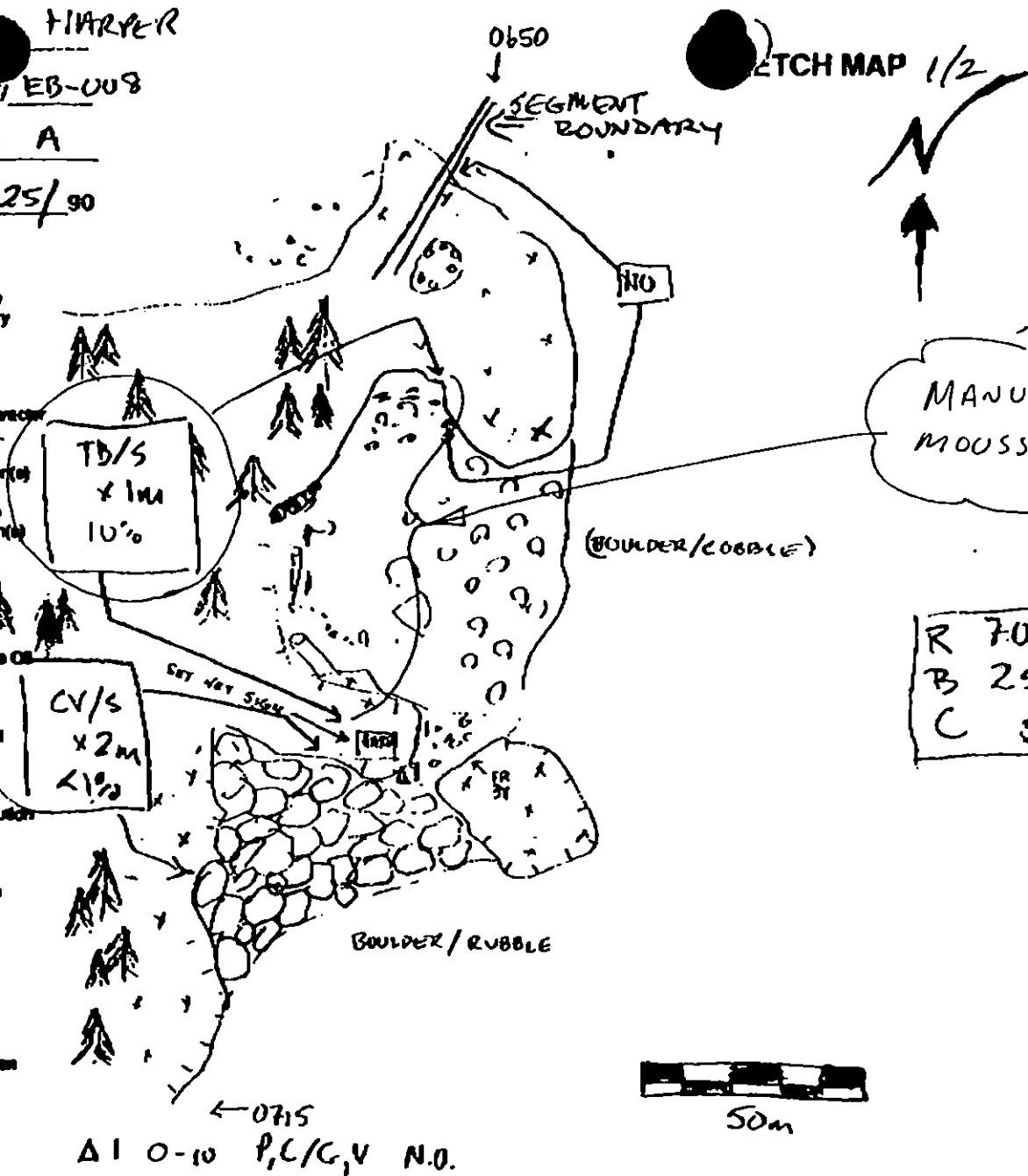
CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

eee
Old Vegetation

1 →
Photo location, direction,
and number



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

REVISION: 01/00

4/17

OG HARPER

SEGMENT EB-08

SUBDIVISION A

DATE 4/25/90

SKETCH MAP
(2 OF 2)

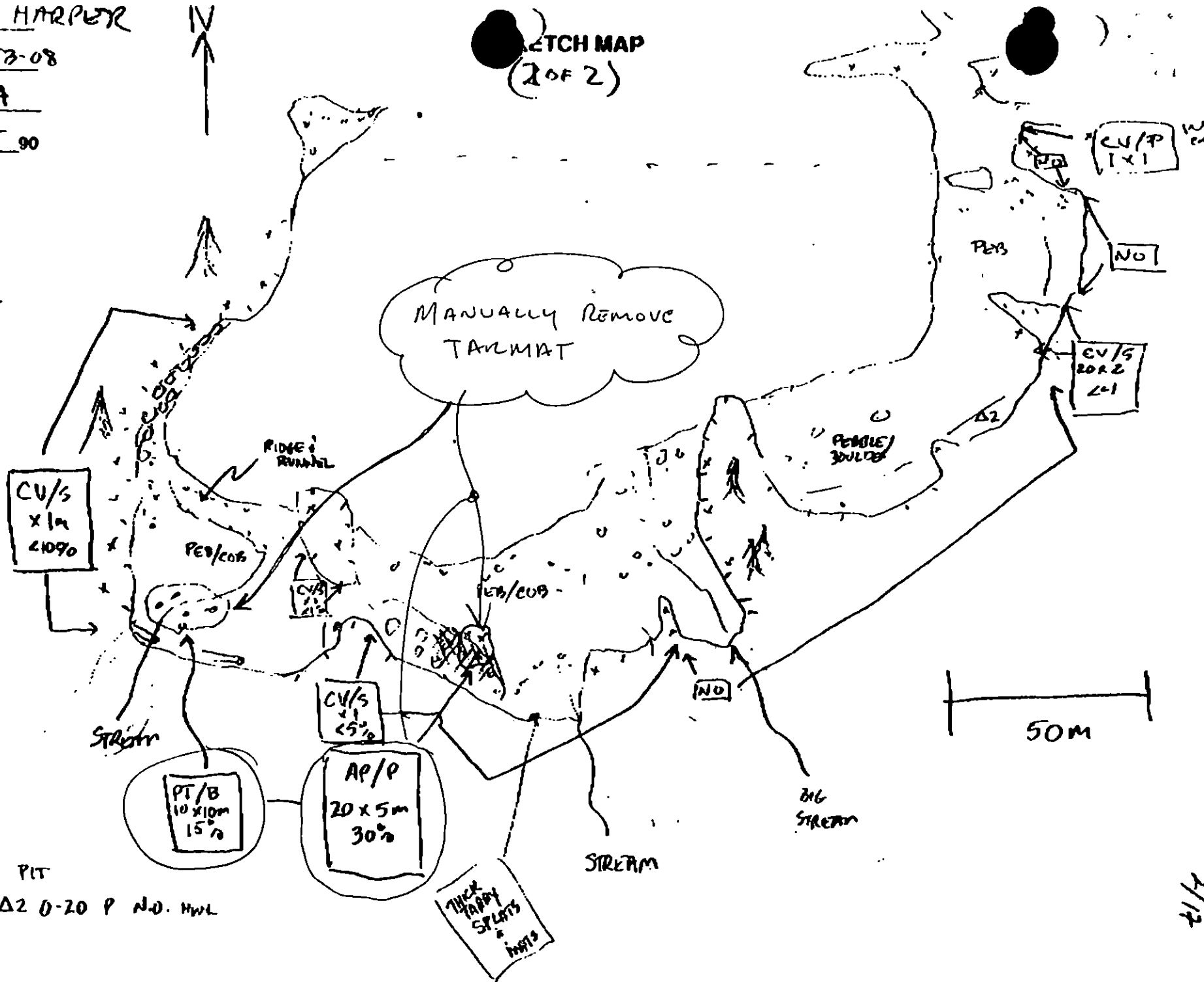
CHECKLIST

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

LEGEND

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

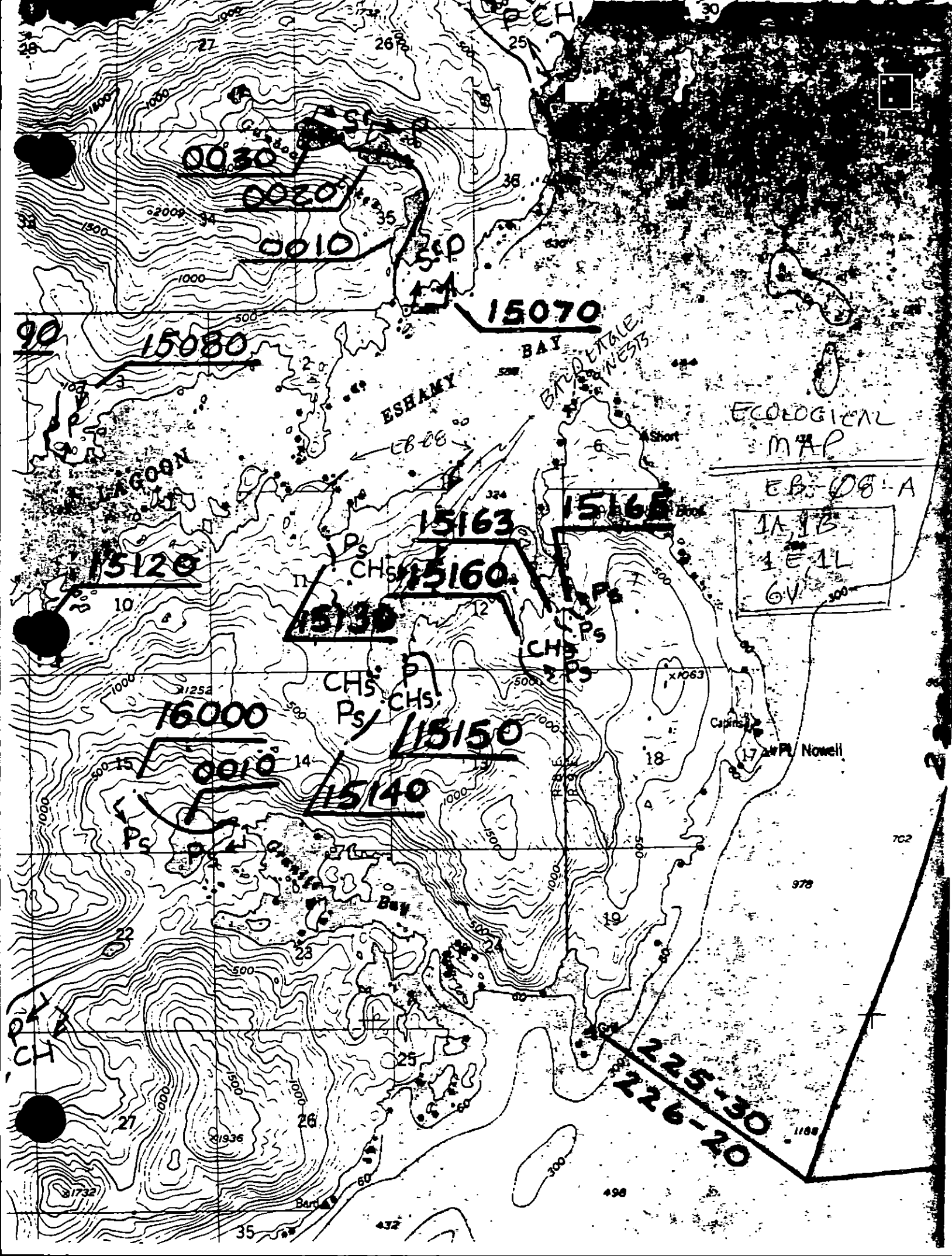
PIT
 $\Delta 2$ 0-20 P N.O. HWL



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

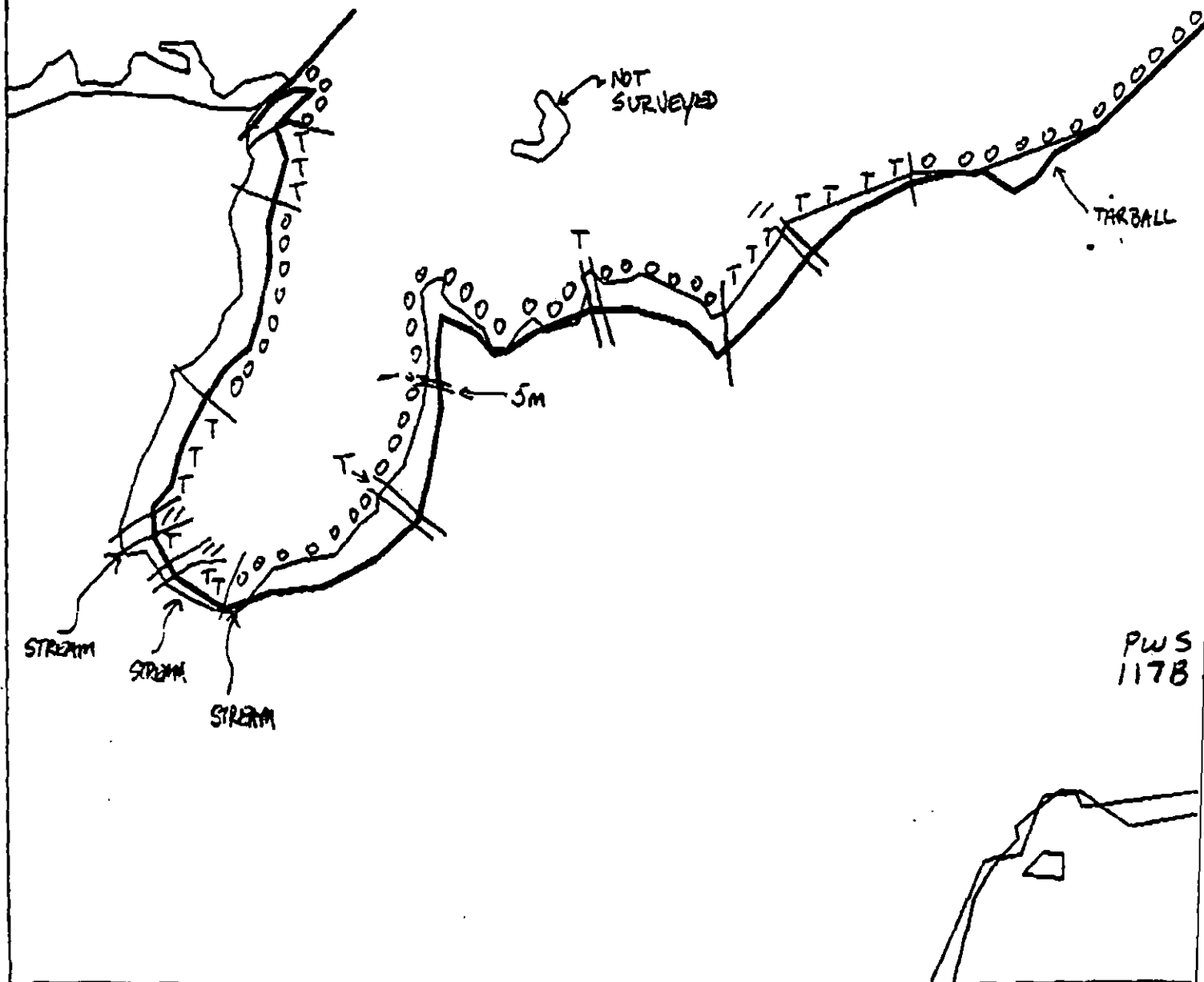
← see previous sheet

REVISION: 000000



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

EB-8



PWS 1178

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

EB-8

ADEC Segment Length: 2185m



Map Key: PWS-117a
 Name: HARPER
 Date: 25 APRIL 90
 Data Entered:

YL = 42

NO = 20



← PWS
117A

EB-9

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EB-8

ADEC Segment Length: 2185m

0 100 200 300
METERS



Map Key: PWS-1176

Name: HARDER

Date: 25 APRIL 90

Data Entered:

ARLIS
Alaska Resources
Library & Information Services
Anchorage, AK