

OIL SPILL PUBLIC INFO. CENTER



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EVOS
GC
1552
.P75
S42
1991
v.34

[Shoreline evaluations, 1991].

Prince William Sound ER-01 to ER-08

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REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-01

SUBDIVISIONS: A (1 OF 3)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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 127 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

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

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

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

USCG

NAME LARRY FLETCHER SIGNATURE Larry R Fletcher

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

1. BIO-REMEDIATE.

ADEC

NAME DAVID M. SALE SIGNATURE David M Sale

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

① REMOVE OIL FROM UNDERLYING SEDIMENTS (BELOW Boulders).

② ASSURE OIL COVER ON ROCKS IS NOT MOBILE

③ BIO REMEDIATE

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

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

SHORELINE OILING SUMMARY

REVISION NO. 03/22/88

OG Rich Marty USCG Larry Fletcher SEGMENT ST/ ER-01
 BIO Bob Lemon LAND REP Leigh Carlson SUBDIVISION A (113)
 EXXON Jon Czarnicki ADEC Dave Sale TIME 17:00 to 17:30
 TEAM NO.: 10 TIDE LEVEL: +0.2m(65) to +0.8m(2.5') DATE 06 April 1990
 EST. SUBDIVISION LENGTH: 111 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SW to NE
 SURFACE SEDIMENTS: R 60 % B 15 % C 10 % P 10 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Lang 40 % Hang 60 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 111 m VL 0 m NO 0 m

SURFACE OIL

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

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris	X		

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

Photographs:

Roll No. ST 10/8Frames 33, 34P.T.S.
SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL cm - cm (CM-10)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	SU	U	M	L		
1	21	X					0 - 1	X				X			X					M, S, C, G
							.													
							.													
							.													
							.													
							.													

COMMENTS All observed tar balls were removed during the survey

Revision
RM 7 April 1990

2 of 20

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/98

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

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

Photographs: _____
 Roll No. ST/10/8

Frames 33, 34

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

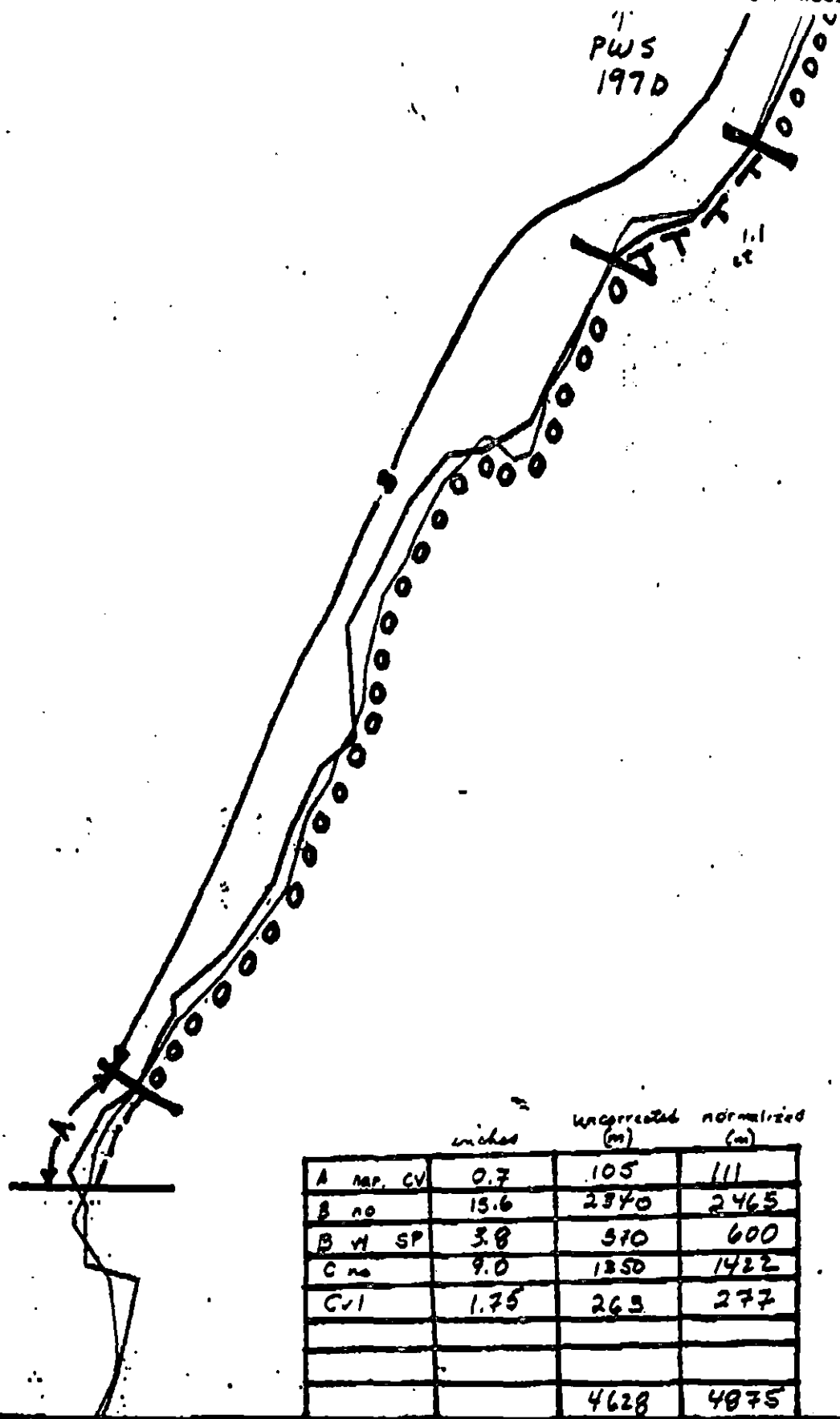
FUCUS

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

NOT PRESENT

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

Ecological Considerations: Invertebrate harvest area and hatchery release.



1/5

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

ER-1.

ADEC Segment Length: 4875m



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

V-58

PWS
197A
↓

PWS
197E
2/5 →

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-1

ADEC Segment Length: 4875m

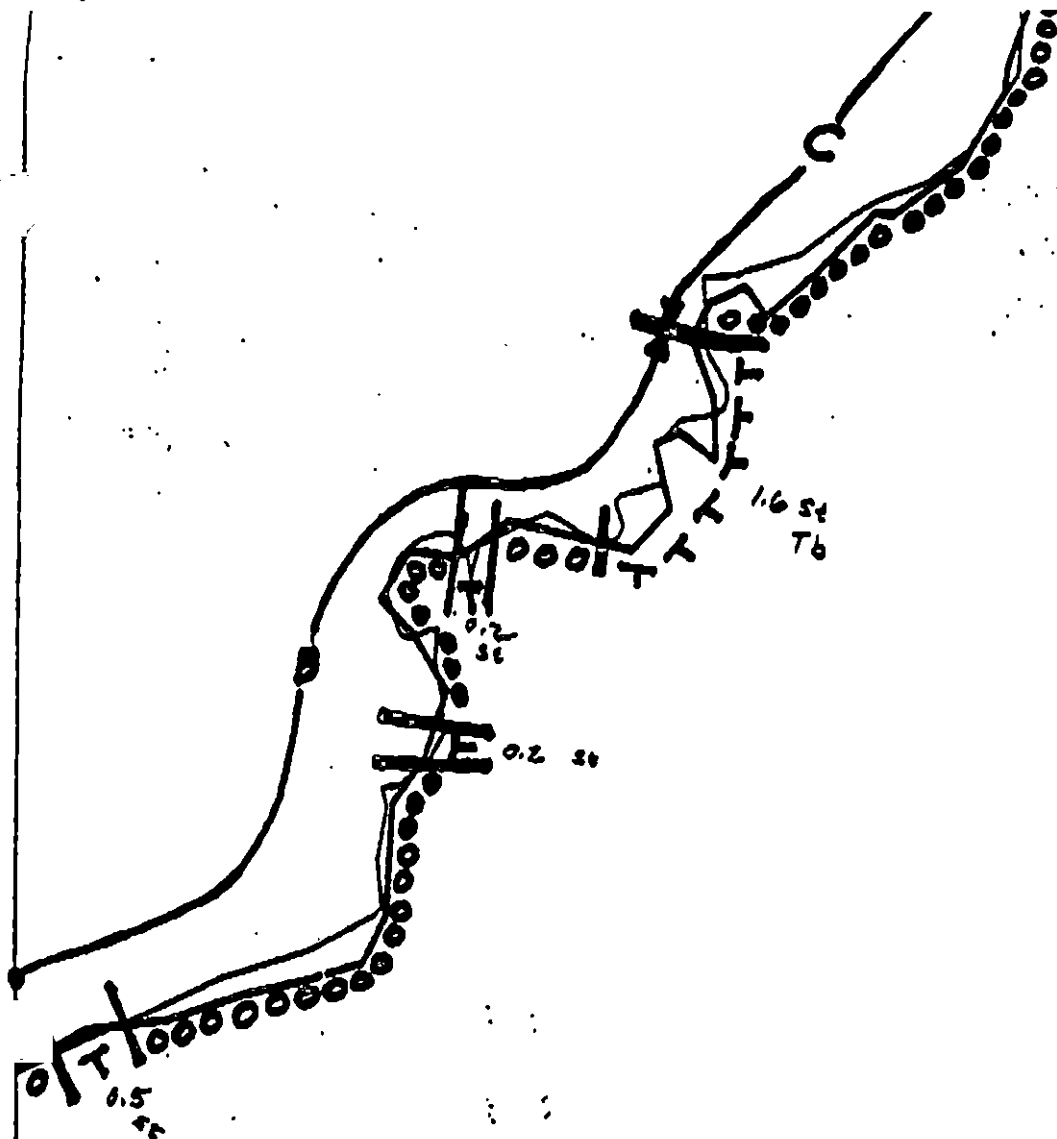
0 100 200 300
METERS

Map Key: PWS-197d

Name: Richard Marty

Date: 07 April 1990

Date Entered:



↑
PWS
1974

ER-01

← PWS
1970

3/5

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-1.

ADEC Segment Length: 4875m



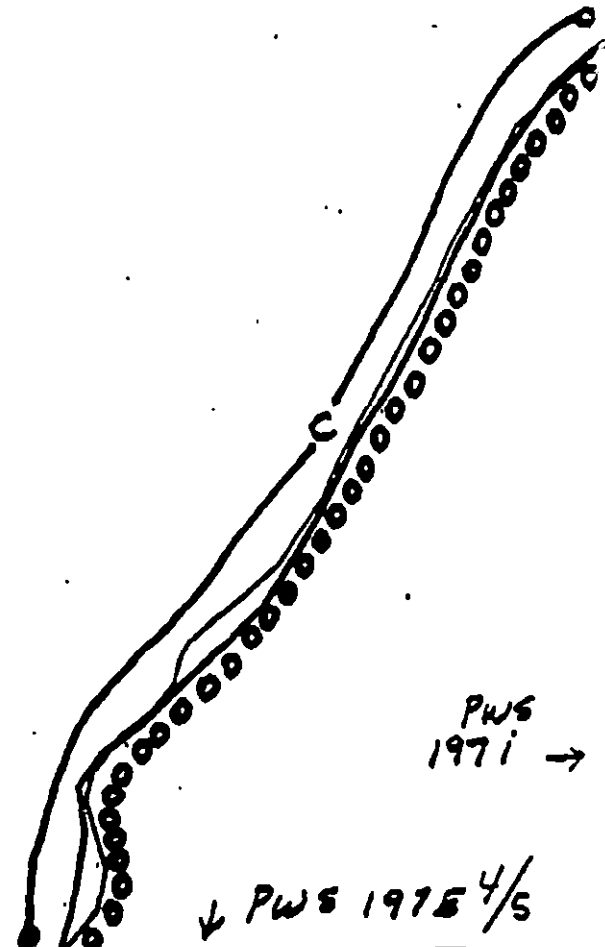
Map Key: PWS-1970

Name: Rich Marty

Date: 07 April 1990

Data Entered:

0



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-1

ADEC Segment Length: 4875m

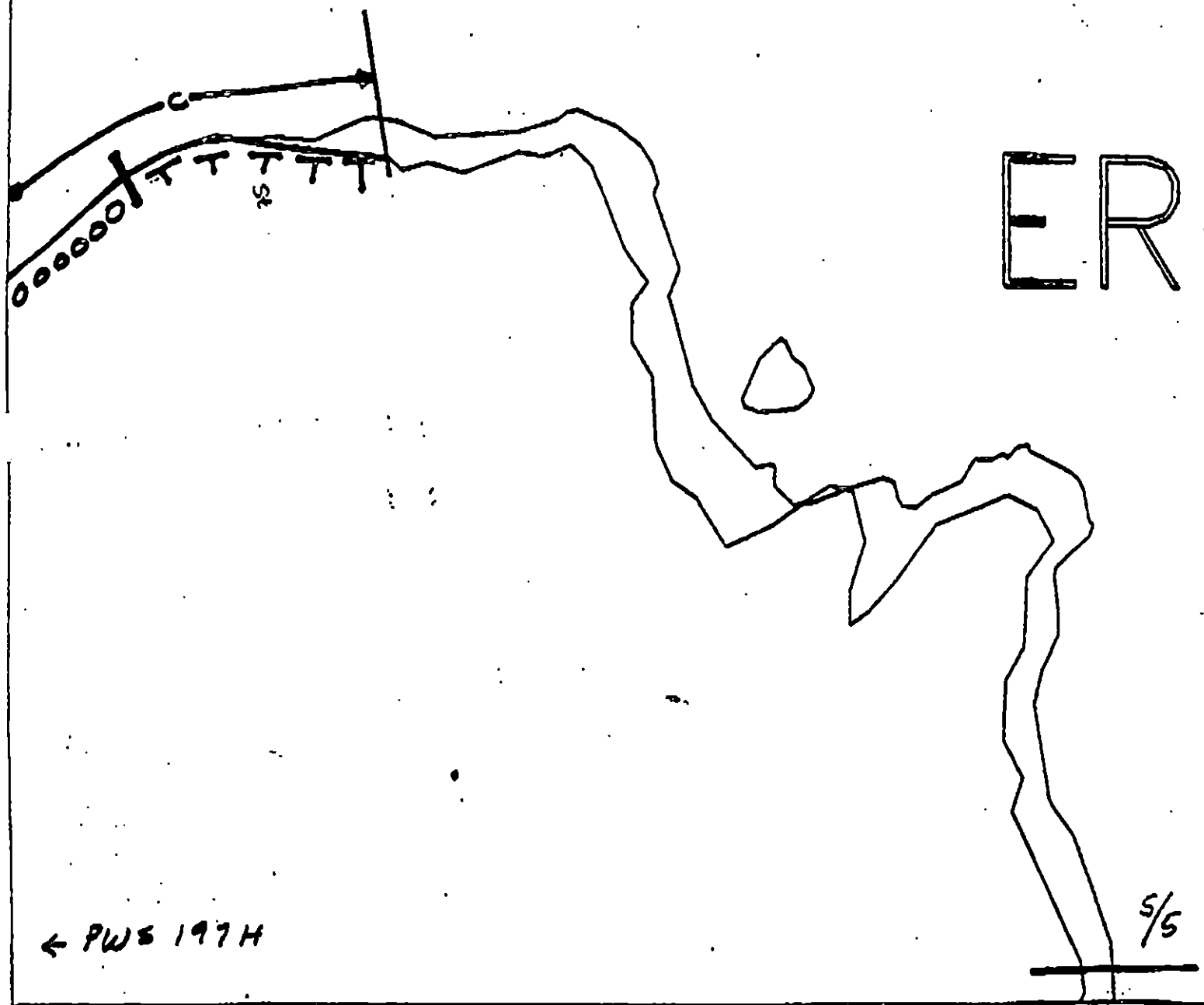


Map Key: PWS-1975

Name: Richard Marley

Date: 03 April 1990

Date Entered:



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

ER-1

ADEC Segment Length: 4875m



Map Key: PWS-1971
 Name: Richard Marty
 Date: 07 April 1990
 Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-01

SUBDIVISIONS: B (2 OF 3)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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 588 m: No Oil 2423 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

7A
7B

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.

7T

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

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

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

6U

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

6V

Anchorage (6/1 to 9/15)

6W

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

6X

Lodge (6/1 to 9/15)

6Y

Special use destination

7Z

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

7HH

Finfish harvesting

7II

Deer harvesting (8/15 to 2/28)

7JJ

Invertebrate harvesting

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

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

USCG

NAME LARRY FLETCHER SIGNATURE Larry R Fletcher

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME DAVID M. JALE SIGNATURE David M Jale

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

- ① ASSURE ALL TAR PATCHES ARE REMOVED.
- ② DETERMINE SOURCE OF SILVER SHEEN NOTED AT RPD AUGER UPPER LIMITS.
- ③ CLEAN OIL FROM SLATE FLAGSTONES ON BEACH NEAR CRABIN.
(NOTE AREA WHERE COAT SHOWN ON "CLASTS, C1070 OIL ON PEBBLES, SHELLS")

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADIVR

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

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

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Rich Marty USCG Larry Fletcher SEGMENT ST/ ER-01
 BIO Bob Lemen LAND REP Leigh Carlson SUBDIVISION B (283)
 EXXON Jon Gearnicki ADEC Dave Sale TIME 17:30 to 20:00
 TEAM NO.: 10 TIDE LEVEL: +0.2 m (0.5') to +0.8 m (+2.5') DATE 06 / April / 90
 EST. SUBDIVISION LENGTH: 3065 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot 2° ☒ Boat 1° ☐ Helo WORKING DIRECTION: SW to NE
 SURFACE SEDIMENTS: R 70 % B 10 % C 10 % P 5 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Lang 30 % Hang 70 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 600 m NO 2465 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES				
	C	B	P	S	SP	BR	GY	DR	TL	LR	SU	UI	MI	U
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT														
STAIN				X				X			X			
MOUSSE														
PATTIES														
TARBALLS				X				X			X			
FILM														
NO OIL											X		X	X

PAVEMENT: H F S None sq. m by 0 cm

PATTIES / TARBALLS 1 < BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

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

DEBRIS COLLECTED
☒ YES ☐ NO

TYPE Trash + Tar

#BAGS << 1

Photographs:

Roll No. ST/10/9 also ST/10/8

Frames 1-13 35-37

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL cm - cm (top - bot)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UD	UC	SP SP	BR BR	GY GY	DR DR	TL TL	LR LR	SU	UI	MI	U		
1	18				X		0 - 3		X					X	X					N	Pebbles
2	16					X	.								X					N	M, G, S
3	23					X	.								X					N	P, Part
4	28					X	.								X					N	P, Part
5	20					X	.								X					N	G, Part
							.														

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

* Does not constitute subsurface oil.

4 of 20

OG R. Hart

SEGMENT ST/EROI

SUBDIVISION C(part)
B(part)

DATE 6-7 April 90

CHECKLIST

- M Arrow
- Approx. Scale
- Seg/Sub Entry
- OS Dist
- Width
- Length
- % Cover
- Substrate Character
- Est. HYAL/WL
- SIL
- Profile Location(s)
- Photo Location(s)
- Photo Location(s)

LEGEND

1 Δ
P1 - No Subsurface Oil

2 Δ
P2 - Subsurface Oil

CT/C
Continuous Distribution

CT/D
Broken Distribution

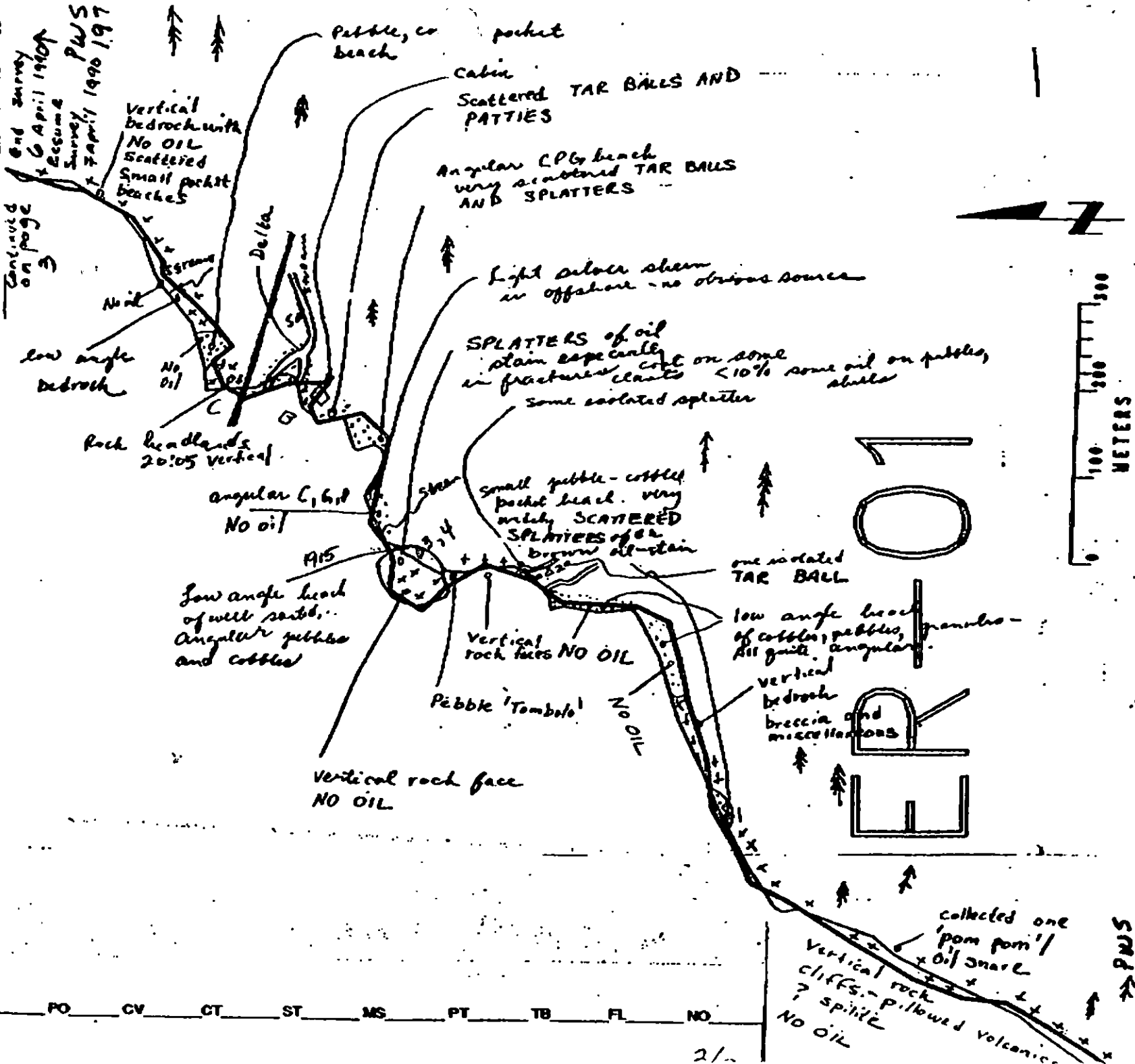
CT/P
Patchy Distribution

CT/S
Spotted Distribution

Oil Vegetation

Photo location, direction, and number

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



DATE 6-7 April 90

CHECKLIST

- ___ M Arrow
- ___ Approx. Scale
- ___ Seg/Sab Bndry
- ___ Off Dist
- ___ Width
- ___ Length
- ___ % Cover
- ___ Substrate Character
- ___ Est. HAV/LWA
- ___ SSL
- ___ Profile Location(s)
- ___ Profile(s)
- ___ Pil Location(s)
- ___ Photo Location(s)

LEGEND

• 1 Δ

Fit - No Subsurface Oil

2 
 PW - Subsurface On

CT/C
Continuous Distribution

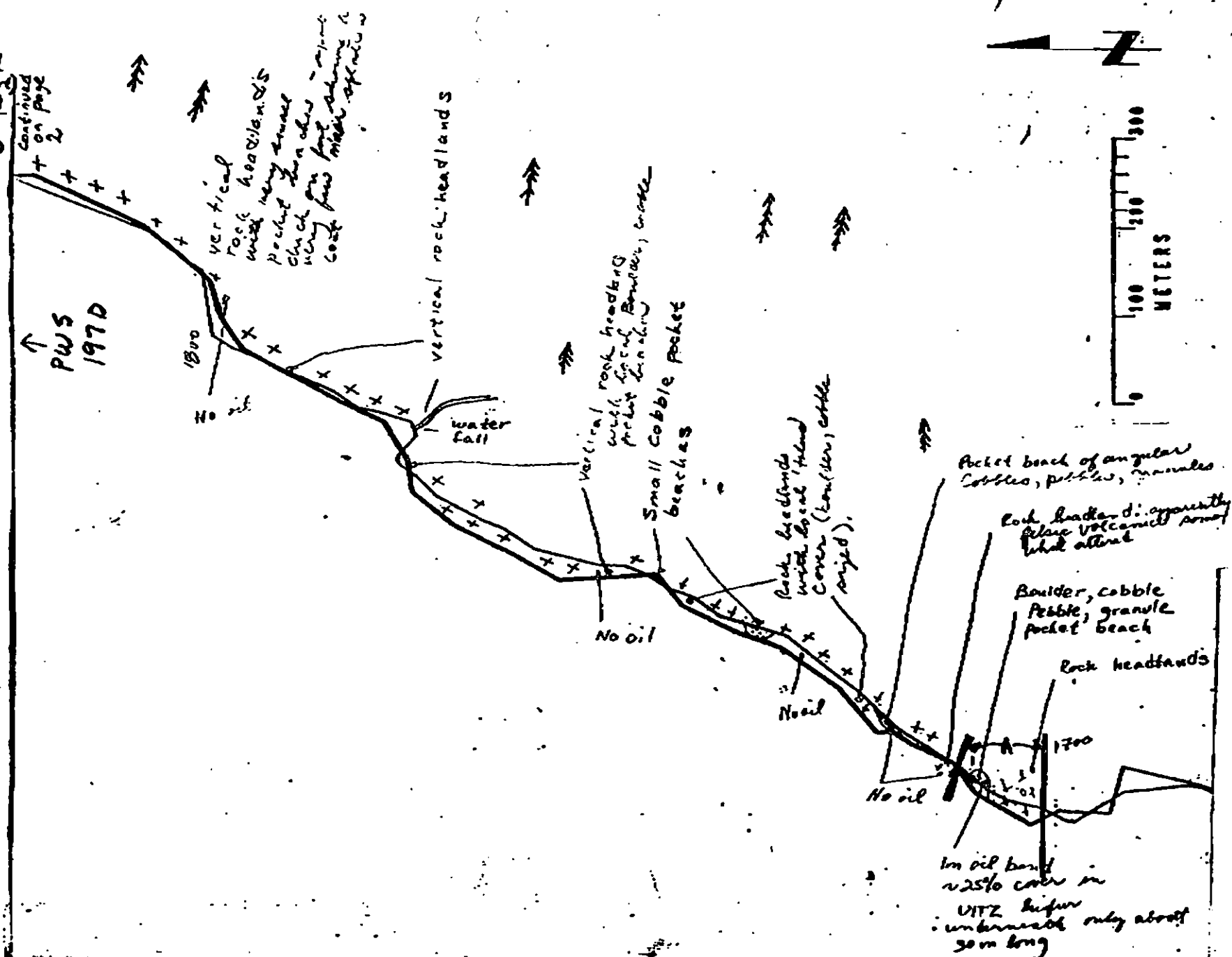
CT/B
Broken Distribution

[CT/P]
Patchy Distribution

[CT/S]
Specialized Distribution

Clad Vegetation

Photo location, direction,
and number

[illegible]

PREVIOUS COUNTRY AIDS

 $\frac{1}{5}$

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/23/90

Segment ST/10/ER1 Subdivision B Date (mo/day/yr) 4/6/90
 Time (24 hr) 1730 - 2010 Biologist Lemon

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

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

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (O)
 Photographs: Roll No. ST/10/9
 Frames 1-13

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

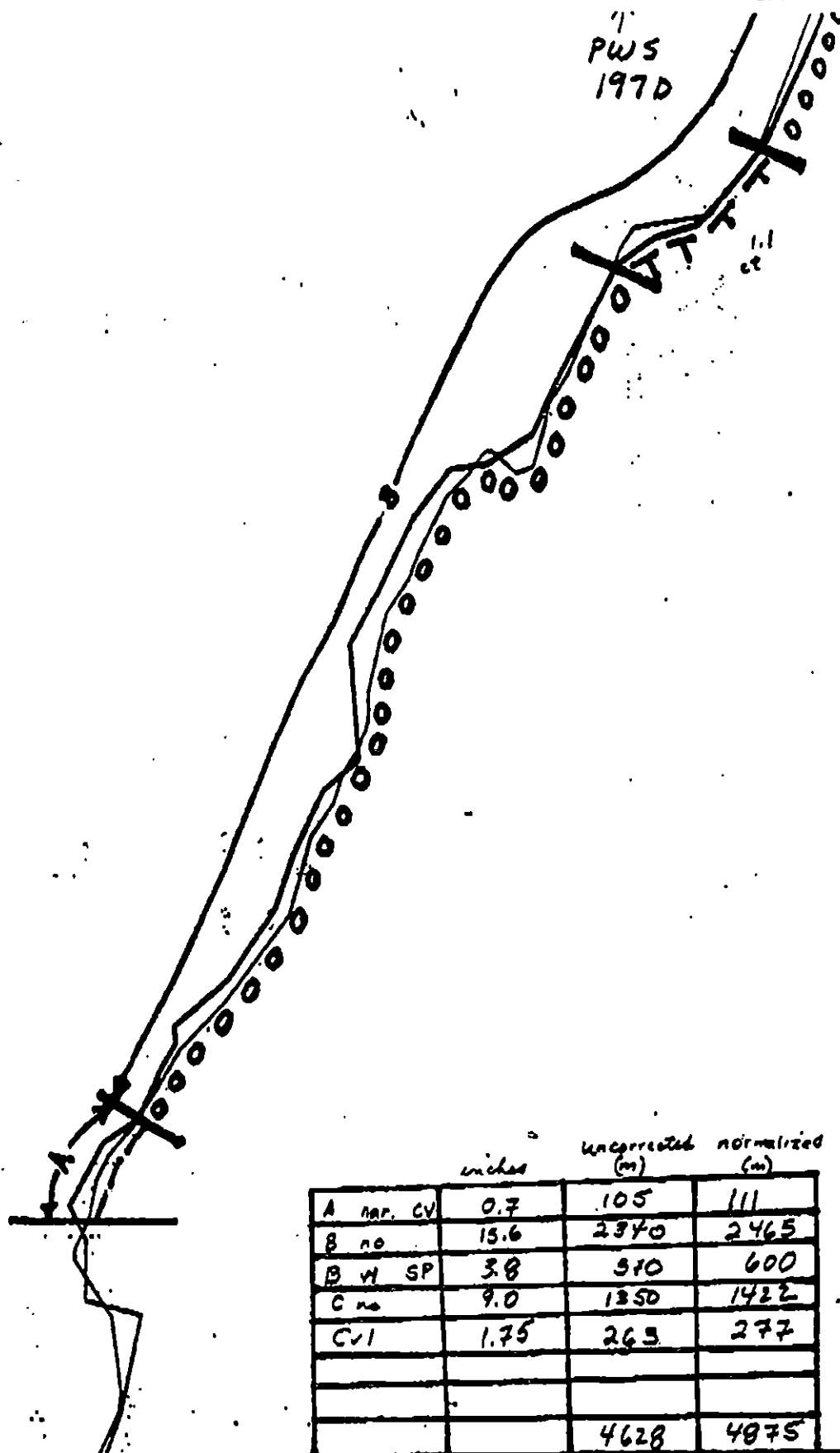
Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

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

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

Invertebrate harvest and hatchery release area.

PWS
1970



1/5

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-1.

ADEC Segment Length: 4875m



Map Key: PWS-1970

Name: 07 April 1990

Date: Richard Monty

Date Entered:

V-58

PWS
197A
↓

PWS
197E
2/3 →

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-1

ADEC Segment Length: 4875m

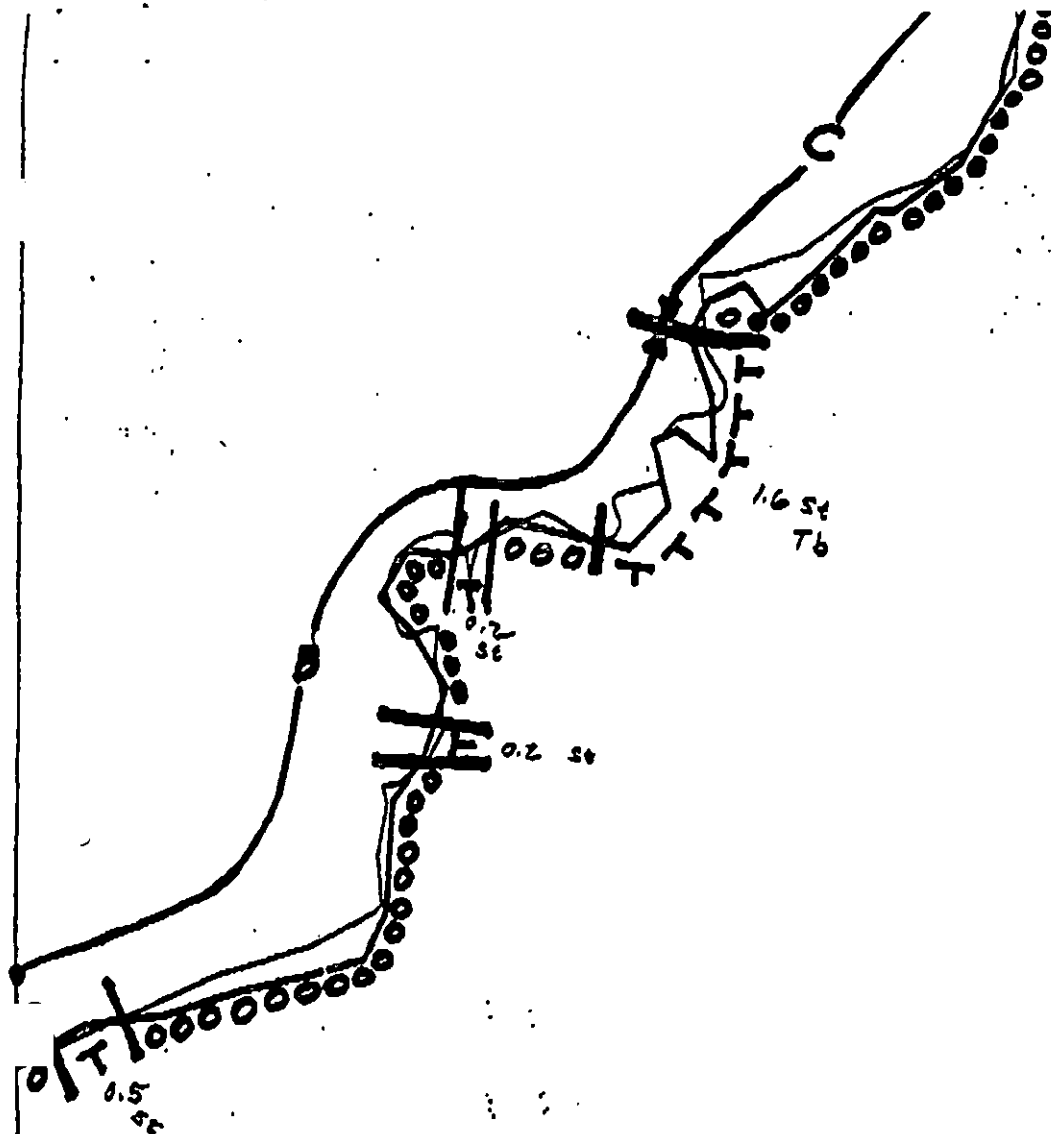


Map Key: PWS-197d

Name: Richard Marty

Date: 07 April 1990

Data Entered:



ER-01

← PWS
1970

3/5

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-1.

ADEC Segment Length: 4875m



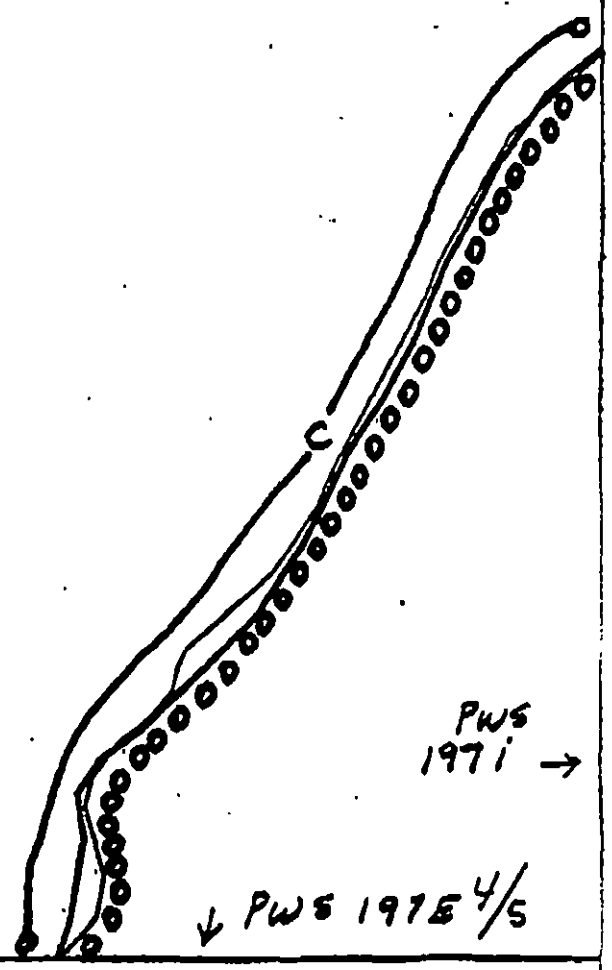
Map Key: PWS-1970

Name: Rich Marty

Date: 07 April 1990

Data Entered:

0



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-1

ADEC Segment Length: 4875m



Map Key: PWS-197h

Name: Richard Marley

Date: 03 April 1990

Date Entered:



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ER-1

ADEC Segment Length: 4875m



Map Key: PWS-1971

Name: Richard Marty

Date: 07 April 1990

Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-01

SUBDIVISIONS: C (3 OF 3)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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 279 m: No Oil 1432 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 1B	Salmon stream mouth - fry outmigration (3/1 to 5/15) Salmon stream mouth - spawning (7/10 to 8/31) No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
1C	Salmon fry nursery area (4/31 to 7/31)
1D	Esther Hatchery release (4/15 to 6/1)
1E	Main Bay Hatchery release (4/20 to 5/10)
1F	Sawmill Bay Hatchery release (4/15 to 6/1)
1G	Cannery Creek Hatchery release (4/21 to 6/1)
1H	Remote release site
1I	Gill net area (6/7 to 8/31)
1J	Purse seine area (7/20 to 9/30)
1K	Purse seine hook-off (7/20 to 9/30)
1L	Set net sites (6/11 to 7/25) For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
2M	Herring spawning (4/1 to 6/15) Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
3N, 3P 3O, 3Q	Harbor seal and sea lion pupping (5/15 to 7/1) Harbor seal and sea lion molting (8/15 to 9/15) Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
5R	Seabird colony (5/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
5S	Shorebird/waterfowl concentration (4/1 to 5/15) Restrict all activity to essential minimum, especially air traffic.
5T	All Bald Eagle nests (3/1 to 6/1) Active Bald Eagle nests (3/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
6U	Recreation: Tent sites (6/1 to 9/15)
6V	Anchorage (6/1 to 9/15)
6W	Forest Service cabins (6/1 to 9/15)
6X	Lodge (6/1 to 9/15)
6Y	Special use destination
7Z	Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH	Finfish harvesting
7II	Deer harvesting (8/15 to 2/28)
7JJ	Invertebrate harvesting For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

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

USCG

NAME LARRY FLETCHER SIGNATURE Larry R Fletcher

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME DAVID SARE SIGNATURE David Sare

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 06/23/90

OG Rich Marty USCG Larry Fletcher SEGMENT ST/ ER-01
 BIO Bob Lemon LAND REP Leigh Carlson SUBDIVISION C
 EXXON Jon Gernicki ADEC Dave Sale TIME 07:30 to 08:30
 TEAM NO.: 10 TIDE LEVEL: +0.8m(2.9) to 1.1m(3.7) DATE 27 April 1990
 EST. SUBDIVISION LENGTH: 1699 m. ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot 2' ☒ Boat 1' ☐ Helo WORKING DIRECTION: SW to NE
 SURFACE SEDIMENTS: R 50 % B 25 % C 15 % P 5 % G 5 % S % M % V %
 SLOPE: Long 50 % Hang 50 % Vert % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W m M m N m VL 277 m NO 1422 m

SURFACE OIL

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

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED ☒ YES ☐ NOTYPE 1 ppm pruv#BAGS <<1

Photographs:

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

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL cm - cm (0-100)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OF	OR	OL	OF	NO		UO	UC	SW	SE	NE	NO	TL	LR			SU	U	M	U		
1	20					X	.												X			N	S, P
							.																
							.																
							.																
							.																
							.																

COMMENTS all observed tar balls were removed during the survey

Revision
RM 7 April 1990

OG R.c.i 274

SEGMENT STI ERO1

SUBDIVISION C (part)

DATE 7 April 90

CHECKLIST

- ☐ M Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/VL
- ☐ SZL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pl Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
PR - No Subsurface Oil

2 Δ
PR - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

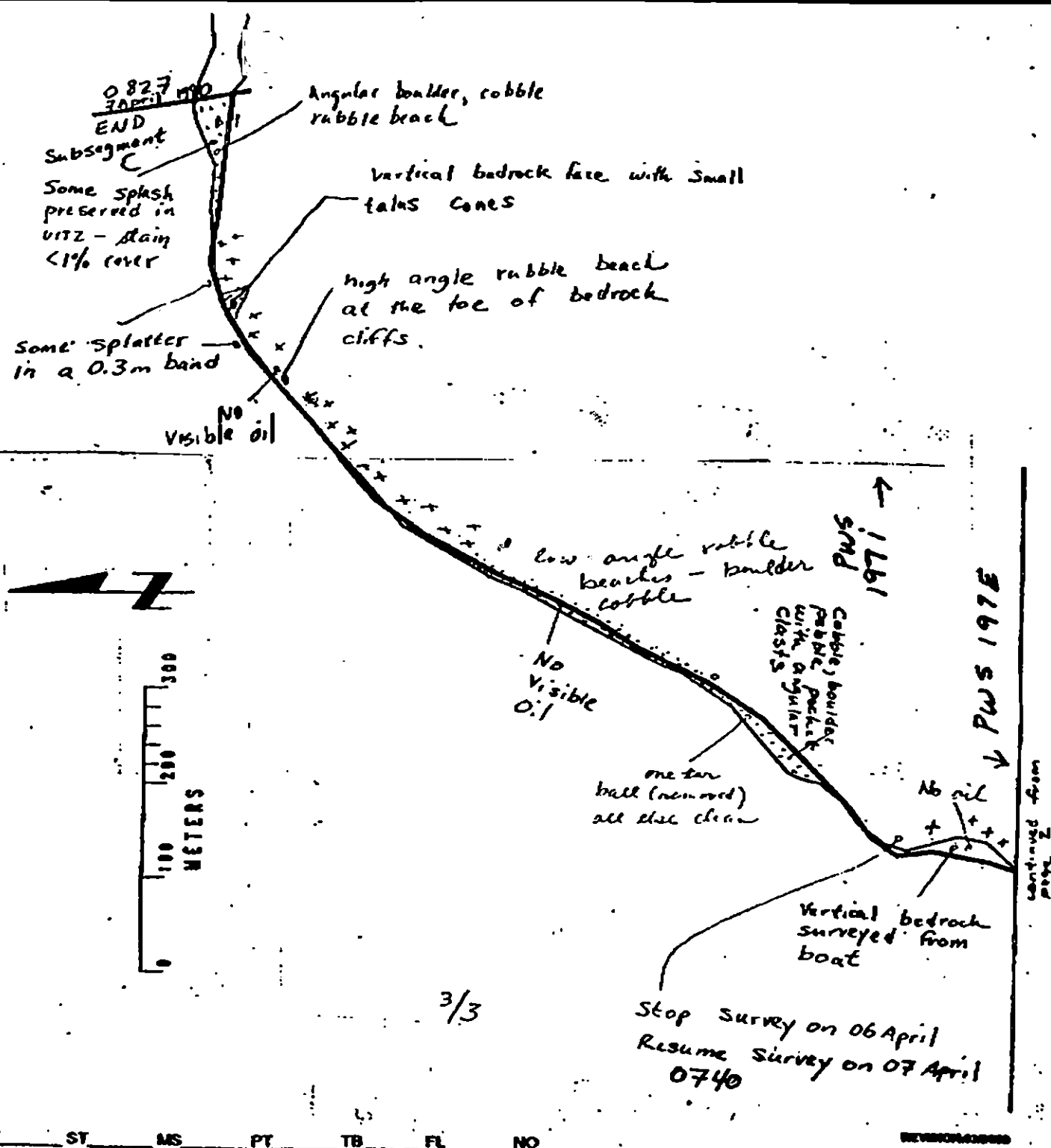
CT/P
Patched Distribution

CT/S
Splashed Distribution

Cilled Vegetation

Photo location, direction,
and number

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



REVISION 020000

DATE 6-7 / Apr / 90

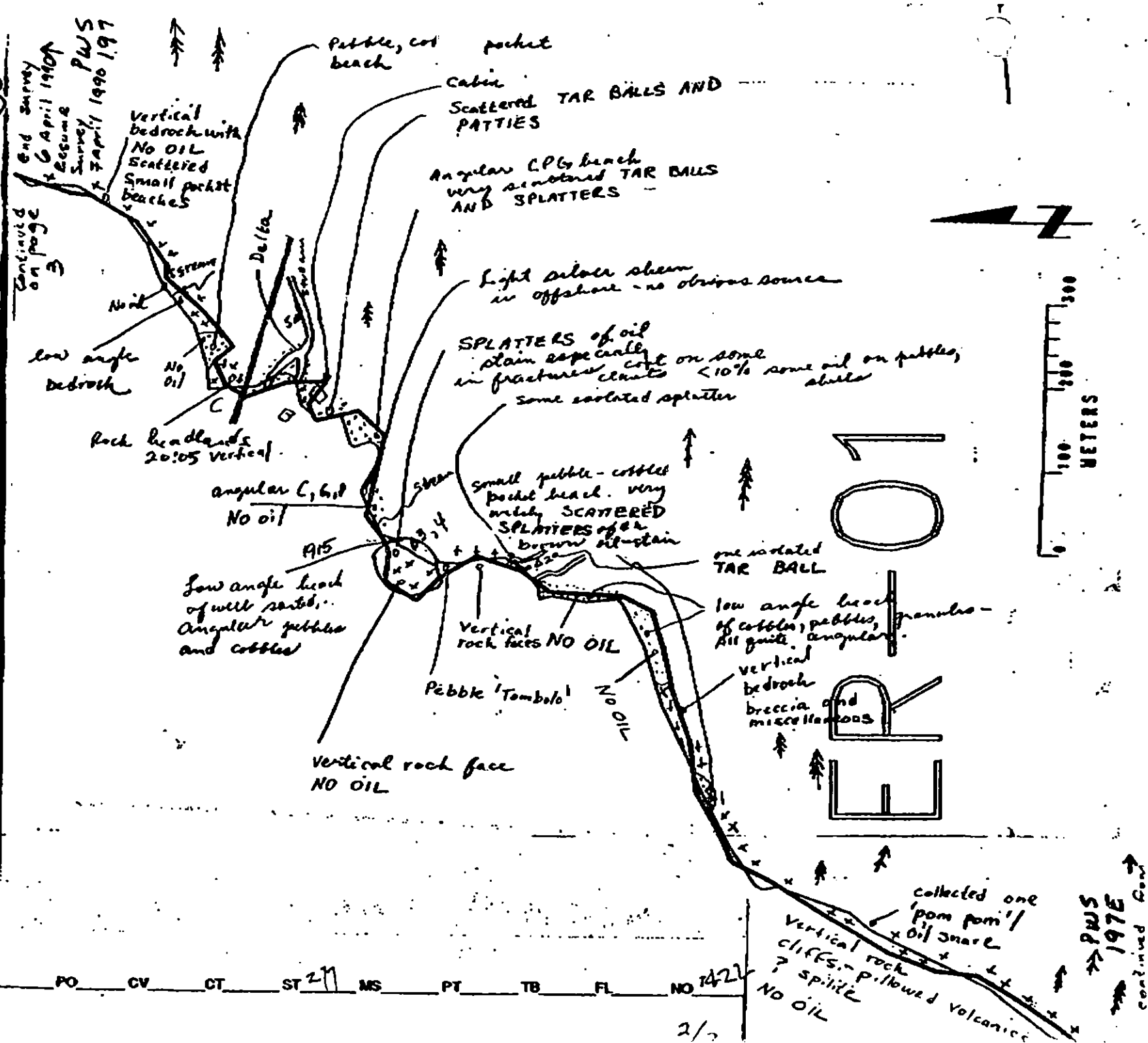
CHECKLIST

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

LEGEND

- 1 
Photo location, direction
and number

Oil Character Length (m): AP



SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / 10 / ER 1 Subdivision C Date (mo / day / yr) 4 / 7 / 90
0700 - 0835
 Time (24 hr) Biologist Lemon

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

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

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

Photographs: Roll No. 5T/10/9

Frames 14 - 17

BARNACLES

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

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

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

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

NOT PRESENT

MYTILUS

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

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

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

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

NOT PRESENT

GASTROPODS

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

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

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

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

NOT PRESENT

FUCUS

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

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

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

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

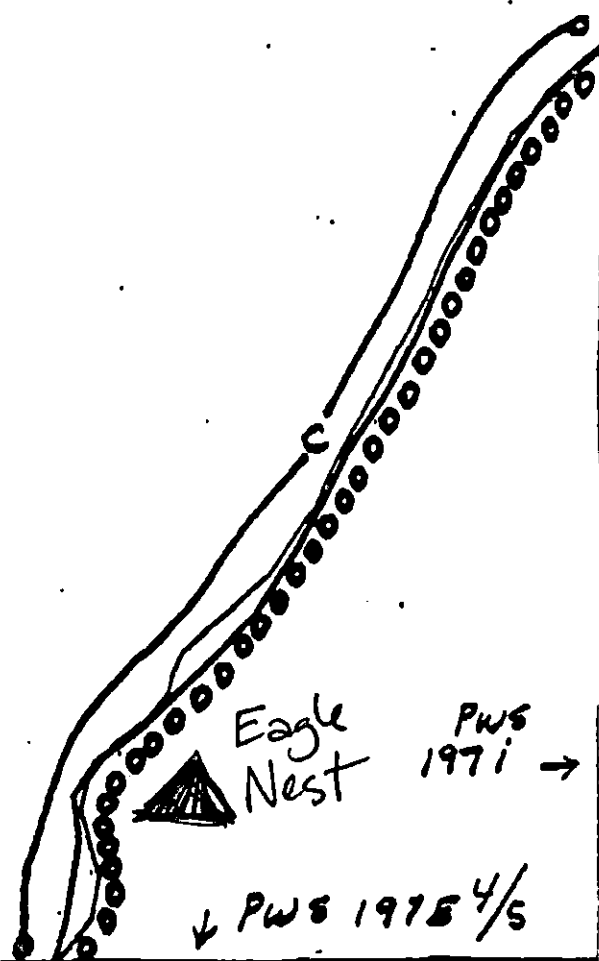
NOT PRESENT

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

Ecological Considerations: Invertebrate harvest at hatchery release area.



ECOLOGY MAP
SEGMENT ER-1
SUBDIVISION C



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-1

ADEC Segment Length: 4875m



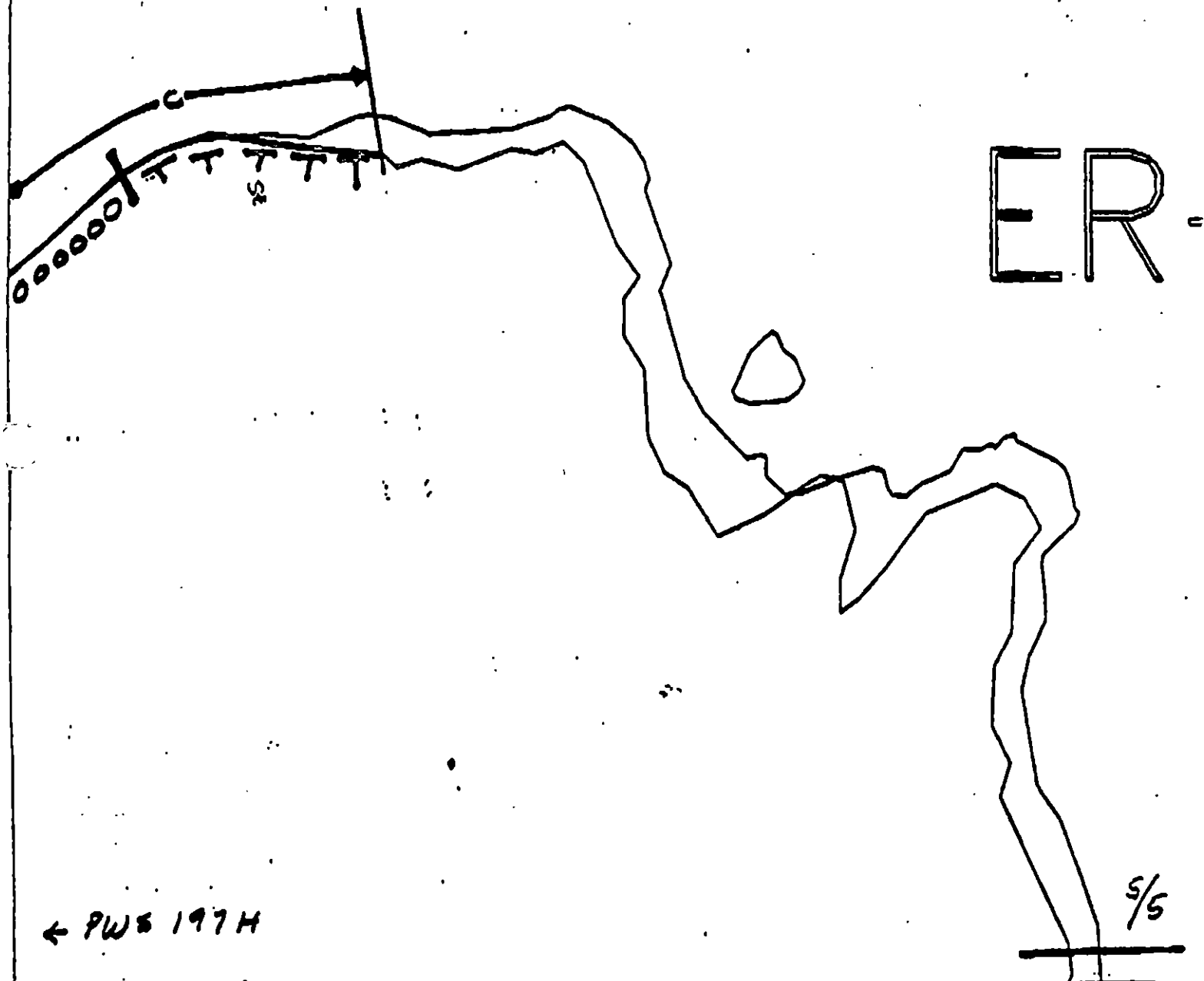
Map Key: PWS-1975

Name: Richard Marley

Date: 07 April 1990

Date Entered:

ECOLOGY MAP
SEGMENT ER-1C



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

ER-1

ADEC Segment Length: 4875m

0 100 200 300
METERS

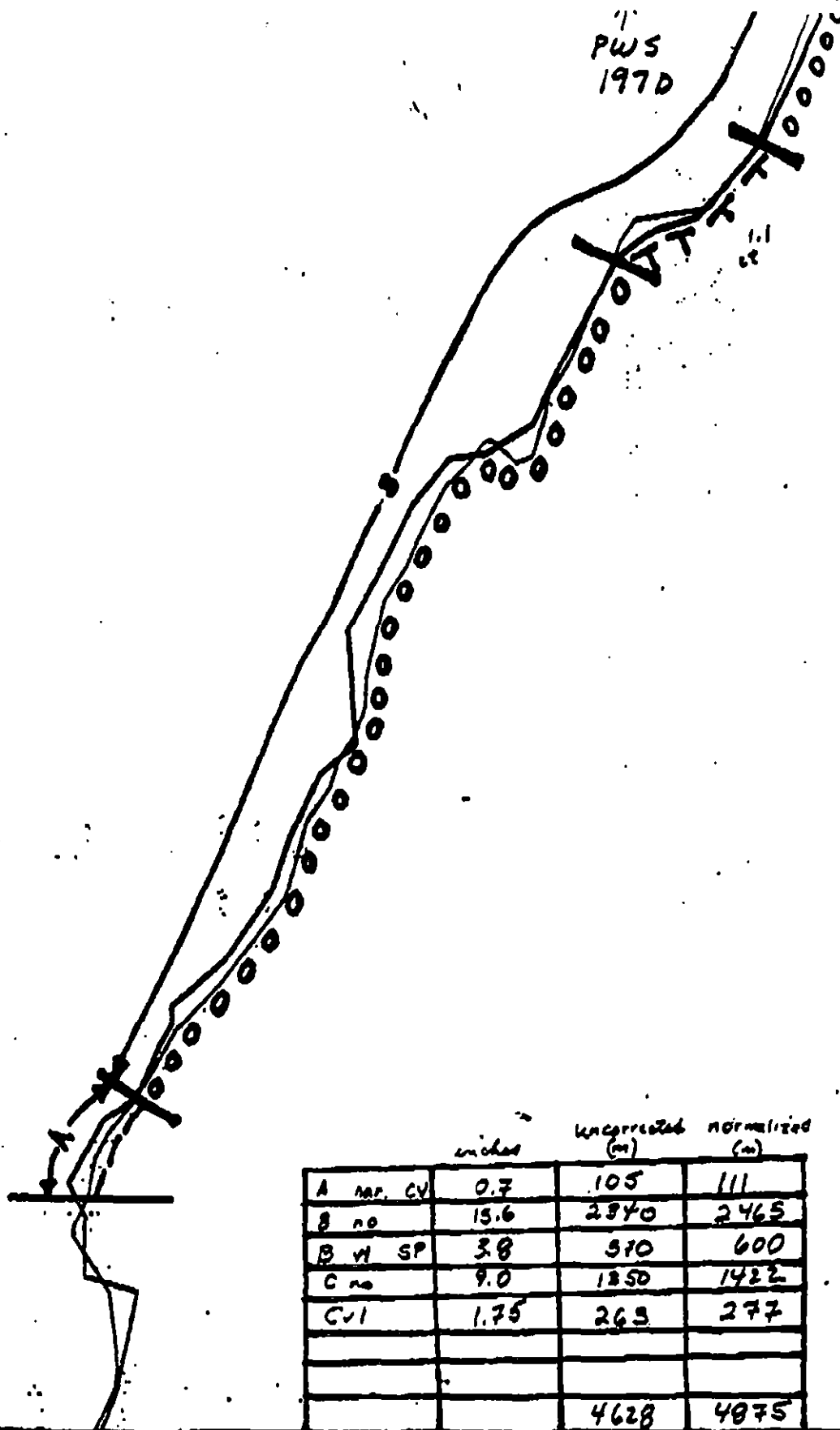
Map Key: PWS-1971

Name: Richard Marty

Date: 07 April 1990

Date Entered:

PWS
1970



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-1.

ADEC Segment Length: 4875m



Map Key: PWS-1970

Name: 07 April 1990

Date: Richard Morley

Date Entered:

1/5

V-58

PWS
197A
↓

PWS
197E
2/5 →

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-1

ADEC Segment Length: 4875m

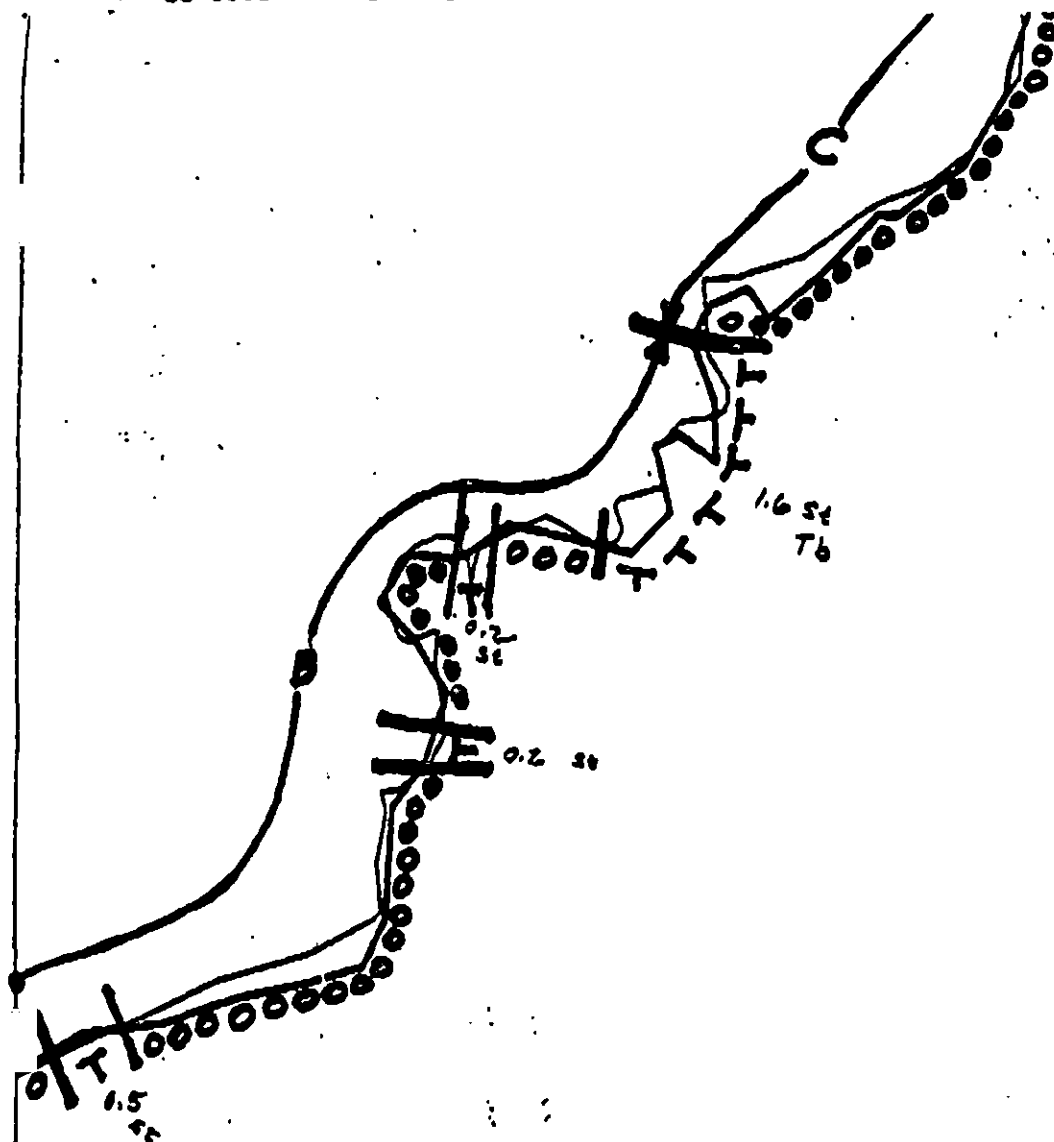


Map Key: PWS-197d

Name: Richard Marty

Date: 07 April 1990

Date Entered:



ER-01

← PWS
1970

3/5

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-1.

ADEC Segment Length: 4875m



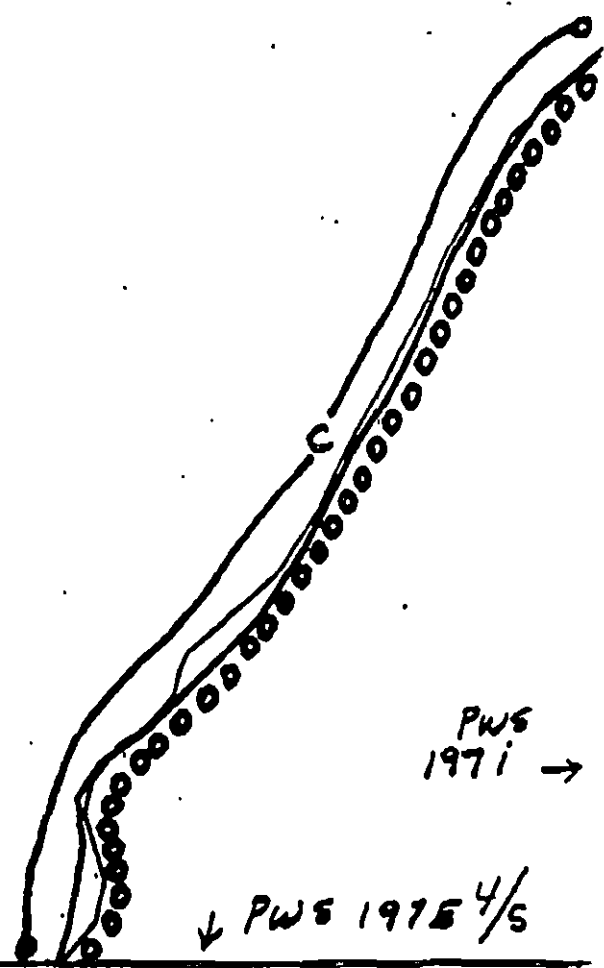
Map Key: PWS-1970

Name: Rich Marty

Date: 07 April 1990

Date Entered:

0



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-1

ADEC Segment Length: 4875m



Map Key: PWS-197h

Name: Richard Marty

Date: 07 April 1970

Date Entered:



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ER-1

ADEC Segment Length: 4875m



Map Key: PWS-1971

Name: Richard Marty

Date: 07 April 1990

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-1 SUBDIVISION A (1 of 3)

WORK WINDOW	
Manual Pickup	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous stream (226-40-16715) is located in adjacent Subdivision B. No constraint to manual pickup.
1F	Sawmill Bay Hatchery Release	No constraint to manual pickup.
1K	Purse Seine Hook-off	No constraint to manual pickup.
5T	Bald Eagle Nest	NO CONSTRAINT. Nest is located in Subdivision C, more than 400m from recommended treatment area.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup.
7JJ	Subsistence: Finfish Harvesting	No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum prior to 6/15 and after 7/25. Restrict beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

TAG ADDENDUM DATE 5/21/90
ADEC Art Weiner
EXXON Amv Tenz
NOAA Joseph Talbott
USCG W. J. Hall

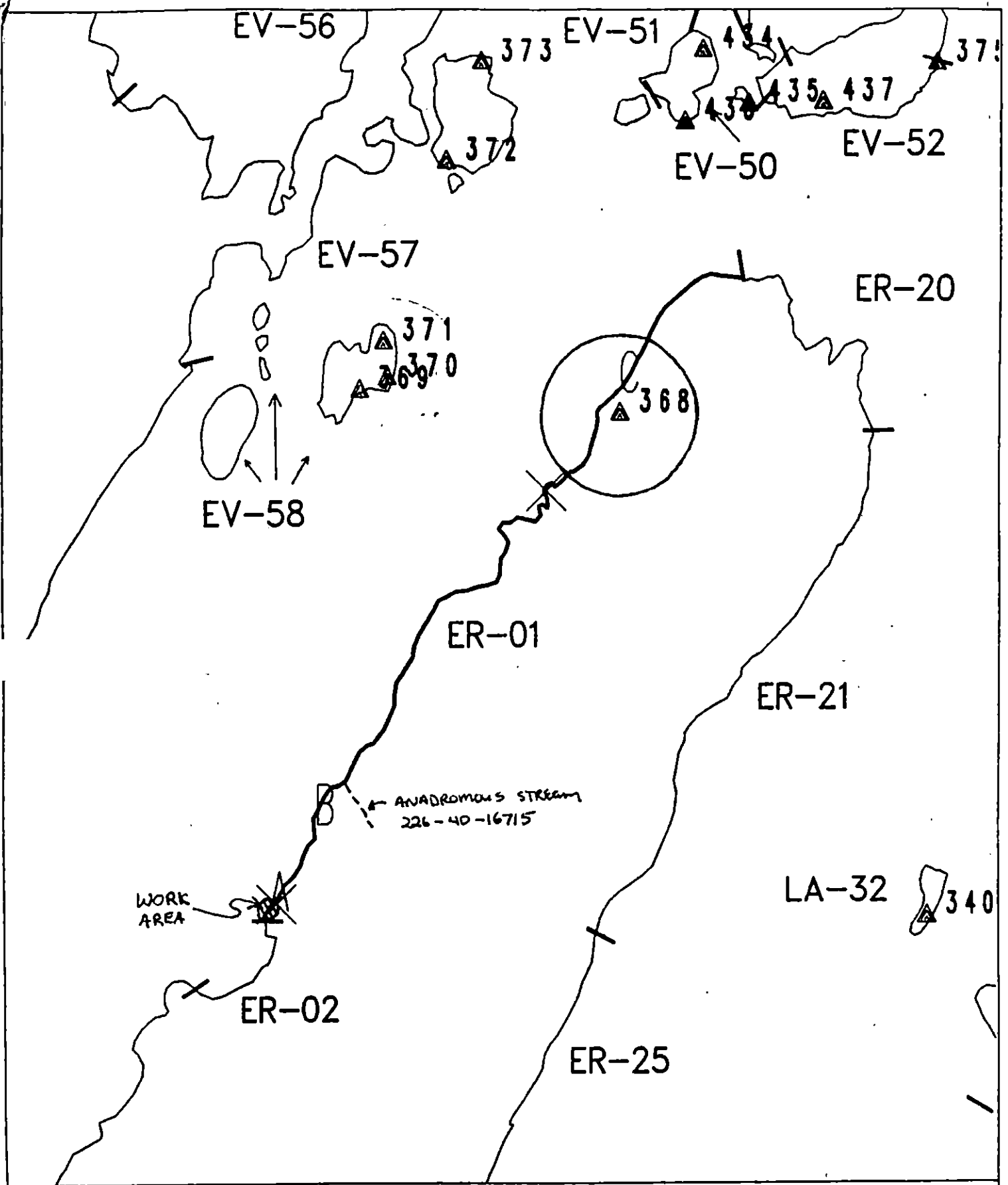
FOSC

DATE

5-21-90

Prepared by: Anda Meyer

Date: 5/19/90



Exxon Company, USA

Map Key: PWS-ER-1

May 11, 1990



ECOLOGY MAP
SEGMENT ER-1
SUBDIVISION A (1 of 3)
METERS



- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 2262 feet

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 127 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

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

SEE ADDENDUM DATED 5/19/90
Doc C.

TAG COMMENTS:

TAG APPROVAL DATE: 4/21/90
ADEC Art Weiner Art Weiner
EXXON Art Tate Art Tate
NOAA Burt Wescott Burt Wescott
USCG William J. ... William J. ...

FOSC: DATE:

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
- 1B Salmon stream mouth - spawning (7/10 to 8/31)
- 5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
- 1F Sawmill Bay Hatchery release (4/15 to 6/1)
- 7II Subsistence area: Deer harvesting (8/15 to 2/28)
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See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 127 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

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

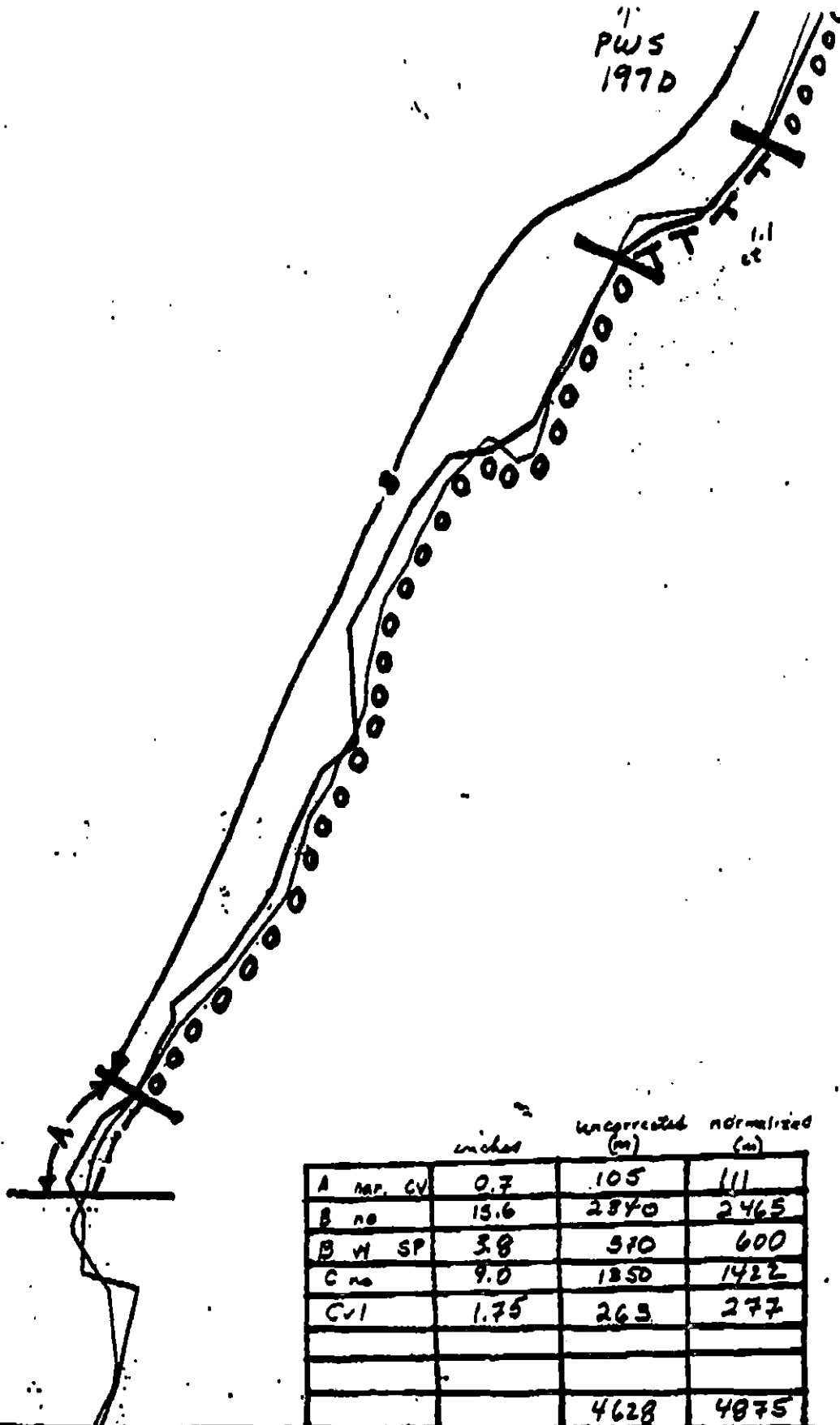
TAG COMMENTS:

TAG APPROVAL DATE: 4/21/90

ADEC ART WEINER Art Weiner
EXXON ANDY TATE Andy Tate
NOAA Burt Wescott Burt Wescott
USCG KENNETH KEANE Kenneth Keane

FOSC: DATE: 4-27-90

PWS
1970



1/5

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-1.

ADEC Segment Length: 4875m



Map Key: PWS-1970

Name: 07 April 1990

Date: Richard Morley

Date Entered:

V-58

PWS
197A
↓

PWS
197E
2/5 →

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-1

ADEC Segment Length: 4875m



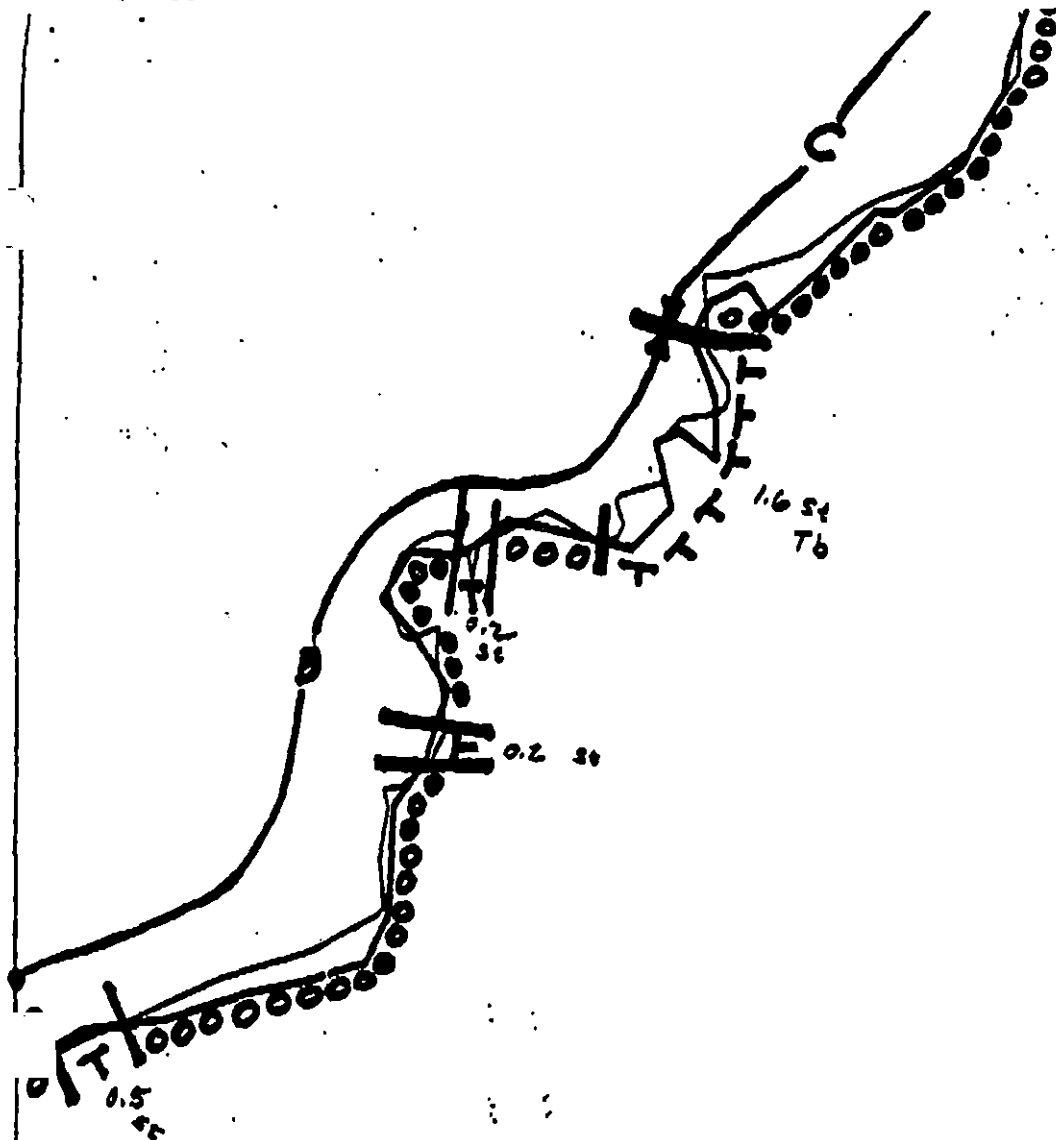
METERS

Map Key: PWS-1976

Name: Richard Marty

Date: 07 April 1990

Date Entered:



↑
PWS
197 H

ER-01

← PWS
1970

3/5

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-1.

ADEC Segment Length: 4875m



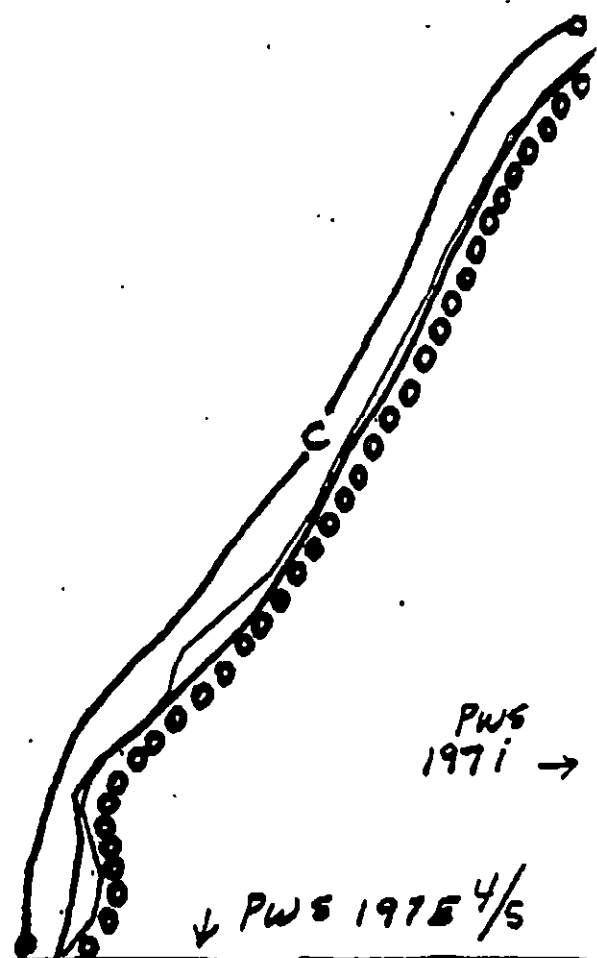
Map Key: PWS-1970

Name: Rich Amarty

Date: 07 April 1990

Date Entered:

0



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ER-1

ADEC Segment Length: 4875m



Map Key: PWS-197h

Name: Richard Marky

Date: 03 April 1990

Date Entered:



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

ER-1

ADEC Segment Length: 4875m



Map Key: PWS-1971

Name: Richard Marty

Date: 07 April 1990

Date Entered:

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

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

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/21/90
ADEC Art Weiner
EXXON Andy Tate
NOAA Burley Wescott
USCG Kenneth Keane

FOSC: DATE: 4-27-90

OG R. Marty

SEGMENT ST/ER 01

SUBDIVISION C(part)
B(part)

DATE 6-7 April 90

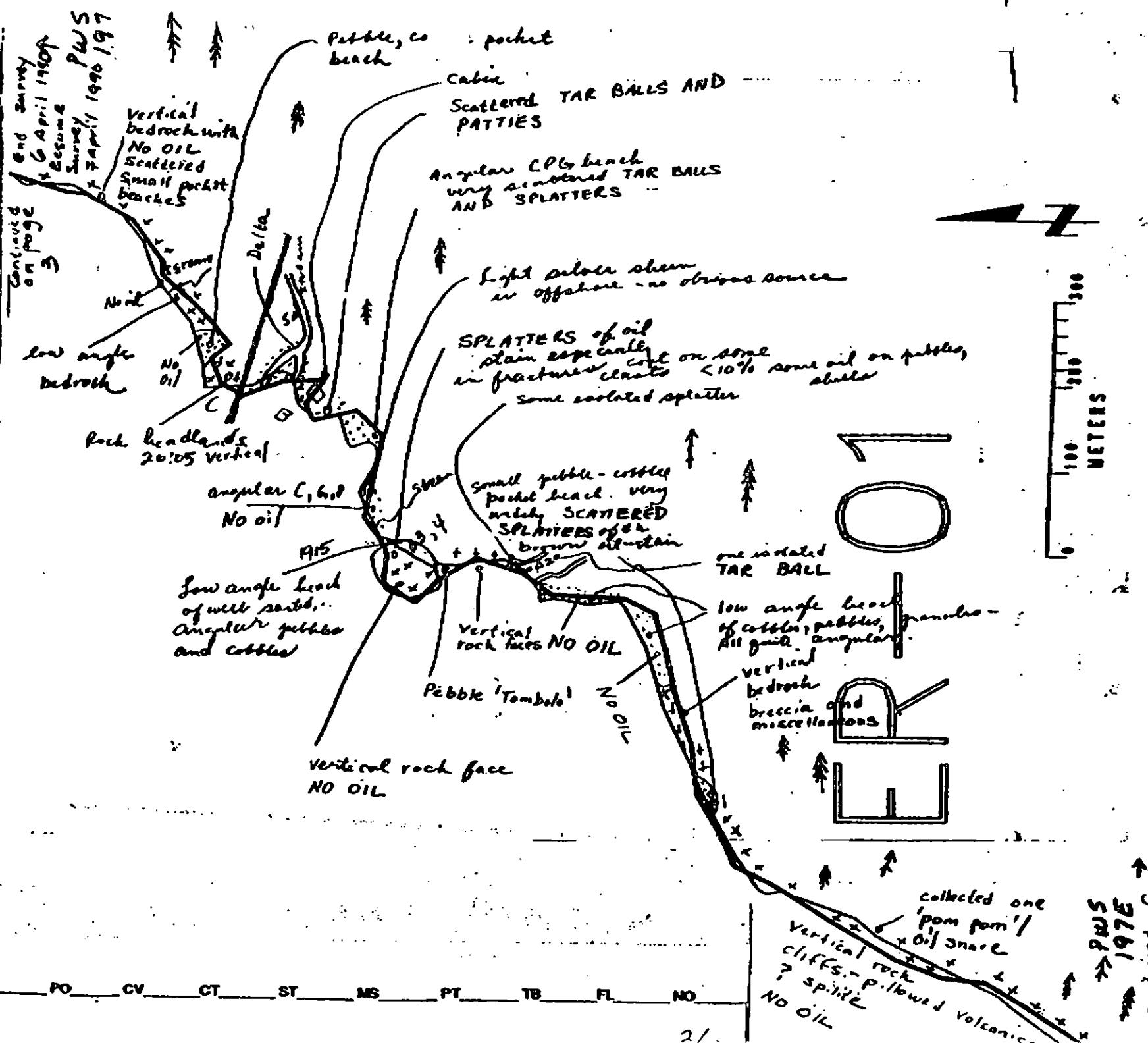
CHECKLIST

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

LEGEND

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

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



OG Rici Party

SEGMENT ST/EROI

SUBDIVISION B (part)
A (all)

DATE 6-7 April 90

CHECKLIST

- ☐ M Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Body
- ☐ Oil Det.
- ☐ 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

CT/C
Continuous Distribution

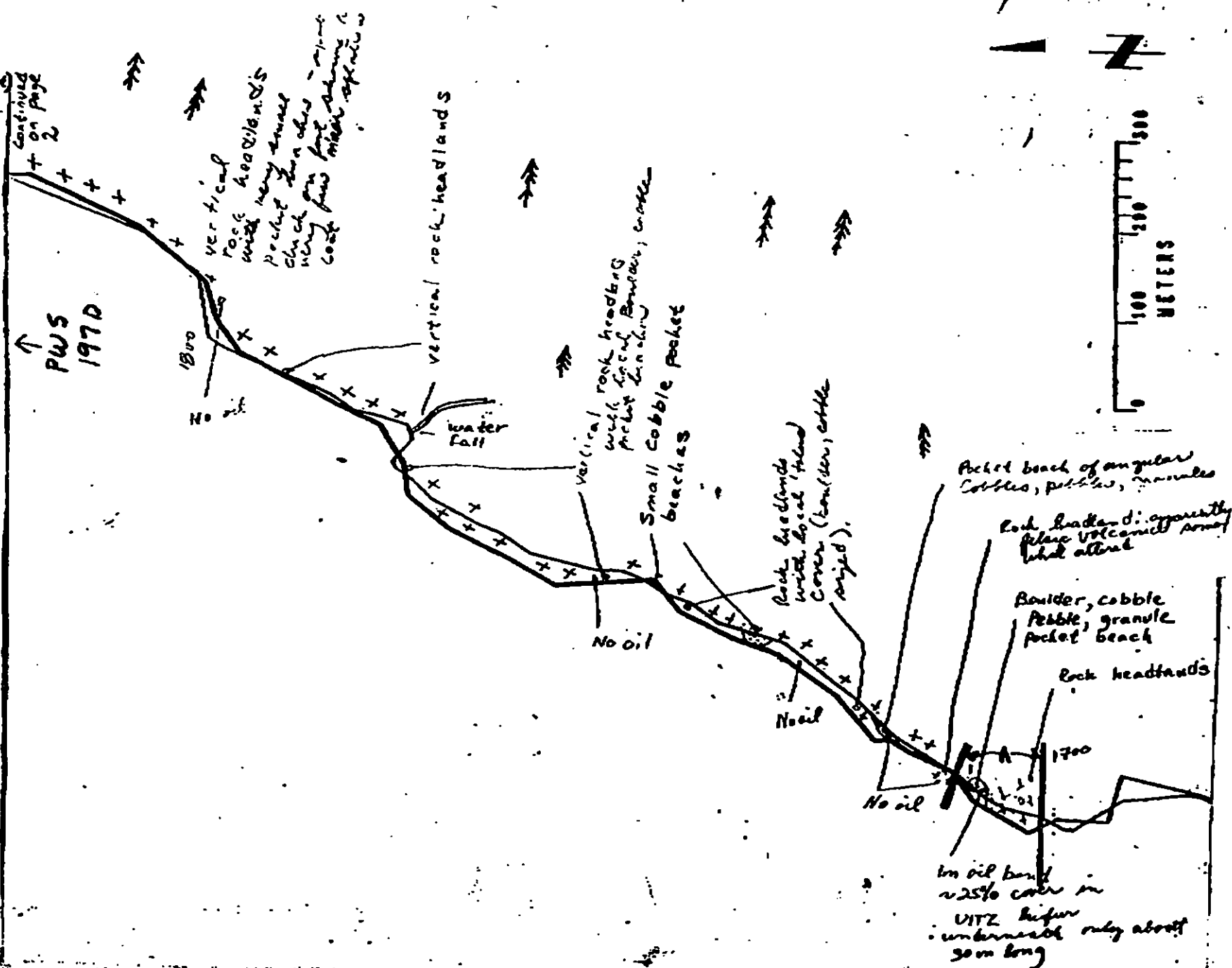
CT/B
Broken Distribution

CT/P
Patchy Distribution

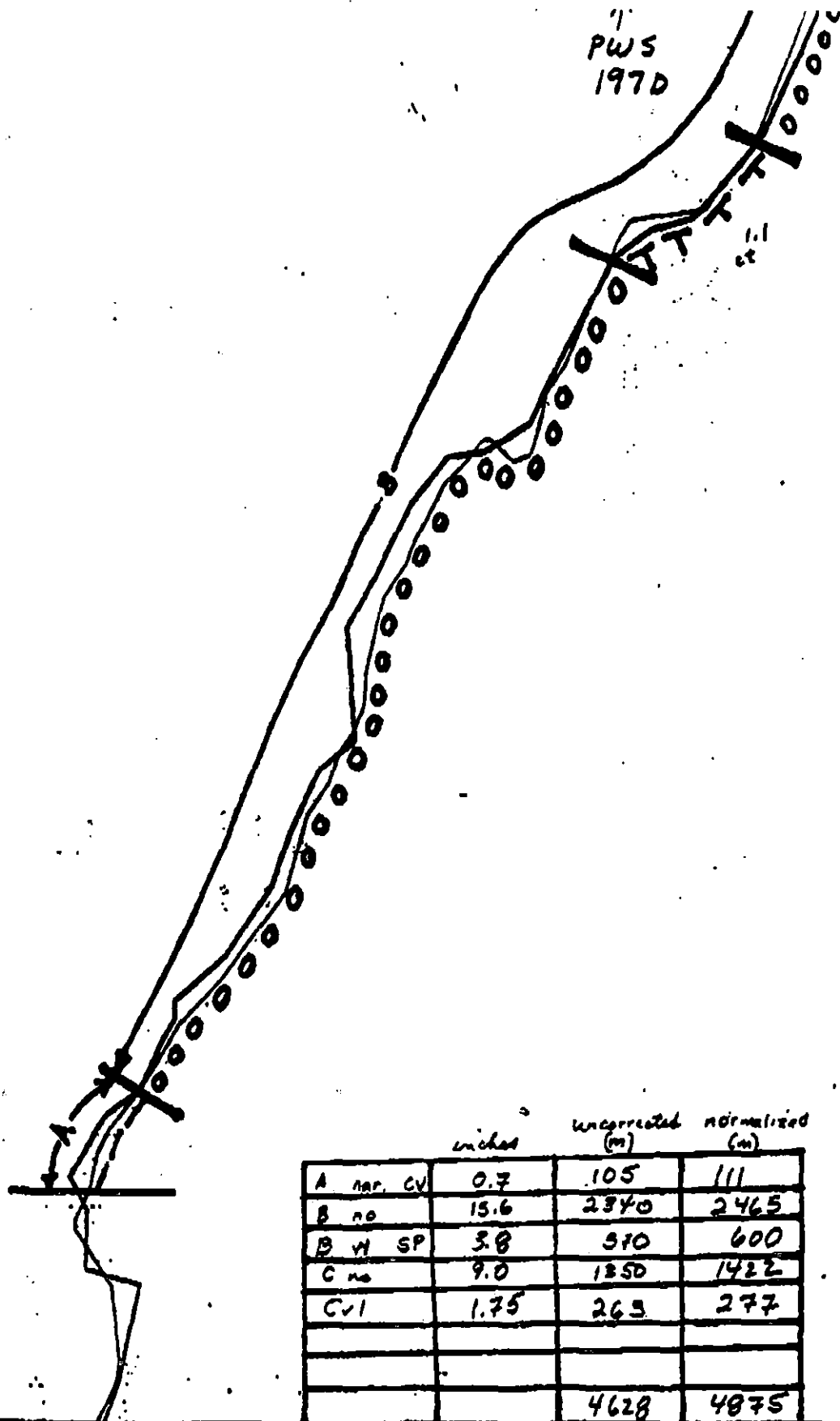
CT/S
Splashed Distribution

Oiled Vegetation

1 ●→
Photo location, direction,
and number



Oil Character Length (m):											
AP	PO	CV	CT	ST	MS	PT	TB	FL	NO		
A			11				16	200		2005	
B				1.5	375						



	inches	uncorrected (m)	normalized (m)
A nar. CV	0.7	105	111
B no	15.6	2340	2465
B W SP	3.8	310	600
C no	9.0	1350	1422
Cv1	1.75	263	277
		4628	4875

1/5

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

ER-1.

ADEC Segment Length: 4875m



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

V-58

PWS
197A
↓

PWS
197E
2/5 →

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-1

ADEC Segment Length: 4875m

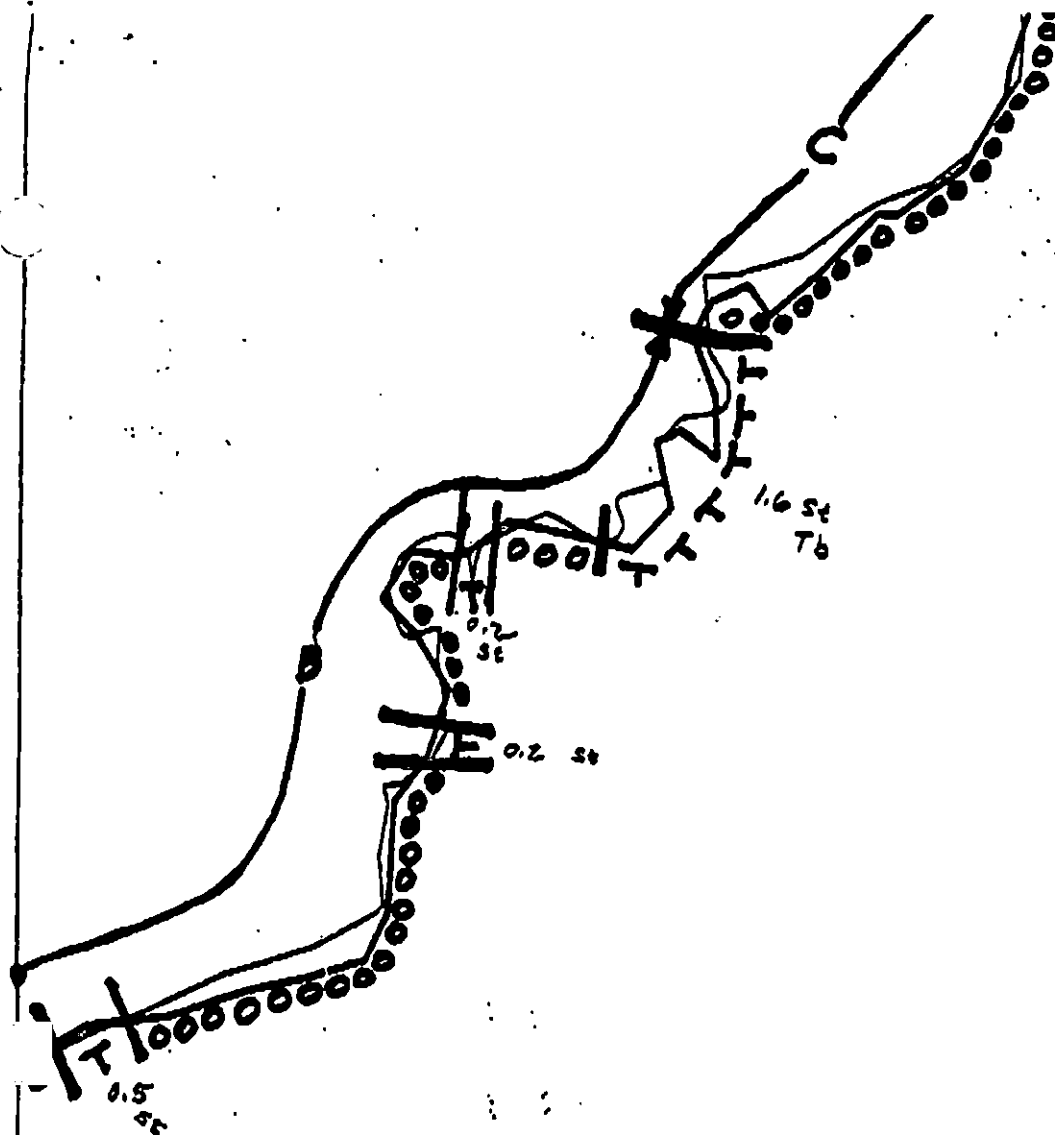


Map Key: PWS-197d

Name: Richard Marty

Date: 07 April 1990

Date Entered:



↑
PWS
197H

ER-01

← PWS
197D

3/5

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-1.

ADEC Segment Length: 4875m



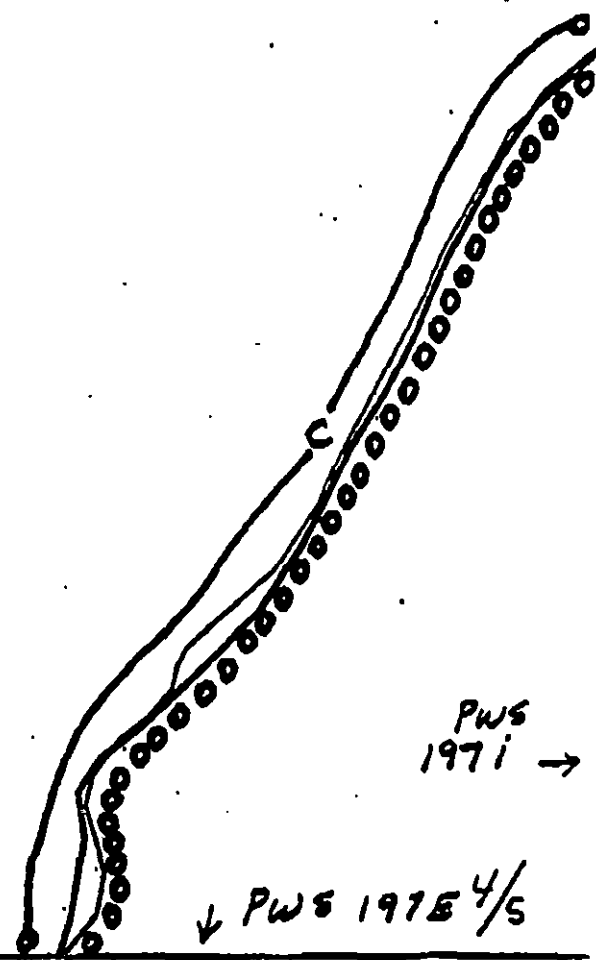
Map Key: PWS-1970

Name: Rich Marty

Date: 07 April 1990

Date Entered:

0



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-1

ADEC Segment Length: 4875m



Map Key: PWS-1975

Name: Richard Marley

Date: 07 April 1990

Date Entered:



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ER-1

ADEC Segment Length: 4875m



Map Key: PWS-1971

Name: Richard Marty

Date: 07 April 1990

Date Entered:

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Adams DATE: 8 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 279 m: No Oil 1432 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/21/90

ADEC ART WEINER Art Weiner

EXXON ANDY TATE Andy Tate

NOAA Burl Wescott Burl Wescott

USCG KENNETH KEANE Kenneth Keane

FOSC: DATE: 4-27-90

OG R. 120

SEGMENT STI ERO1

SUBDIVISION C (part)

DATE 7 April 90

CHECKLIST

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

LEGEND

1 Δ
PR - No Subsurface Oil

2 Δ
PI - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

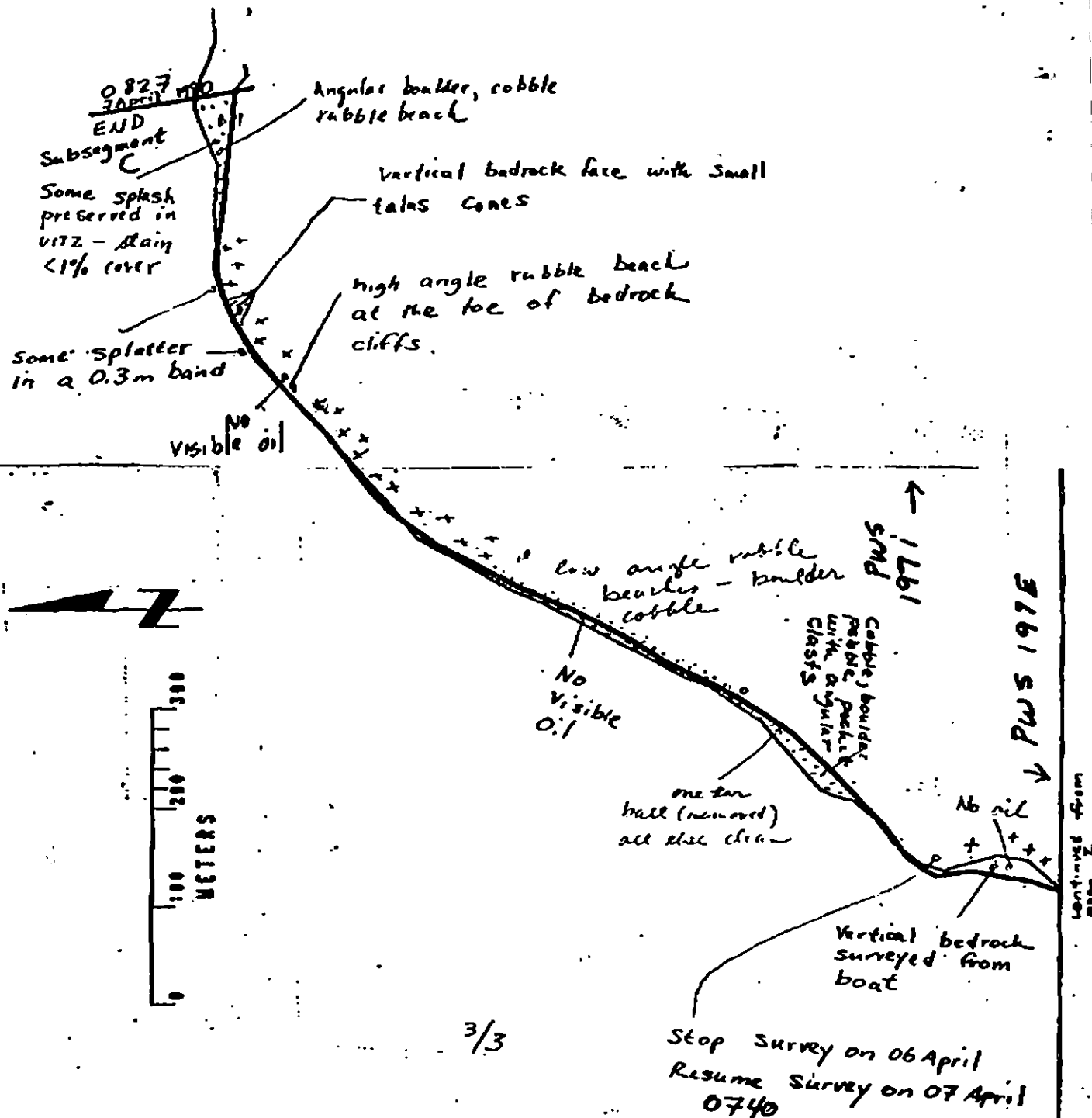
CT/P
Patched Distribution

CT/S
Splashed Distribution

Oil Vegetation

Photo location, direction, and number

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



REVISION 12/88

OG R. Marty

SEGMENT ST/ER 01

SUBDIVISION C(part)
B(part)

DATE 6-7 April 1990

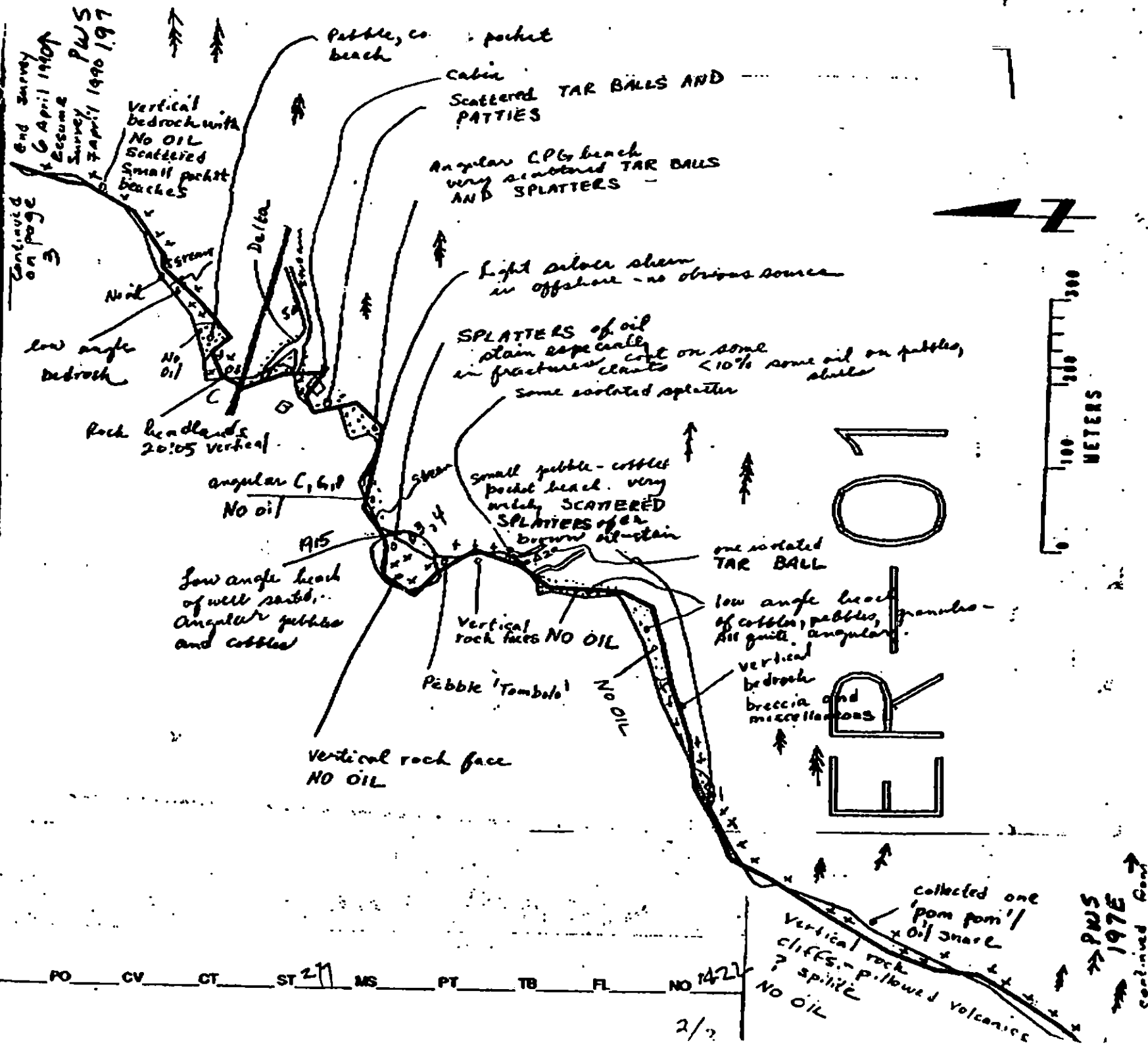
CHECKLIST

- NA Arrow
- Approx. Scale
- Seg/Sub Entry
- Oil Dist
- Width
- Length
- % Cover
- Substrate Character
- Est. HWA/LTR
- SSL
- Profile Location(s)
- Profile(s)
- Pt Location(s)
- Photo Location(s)

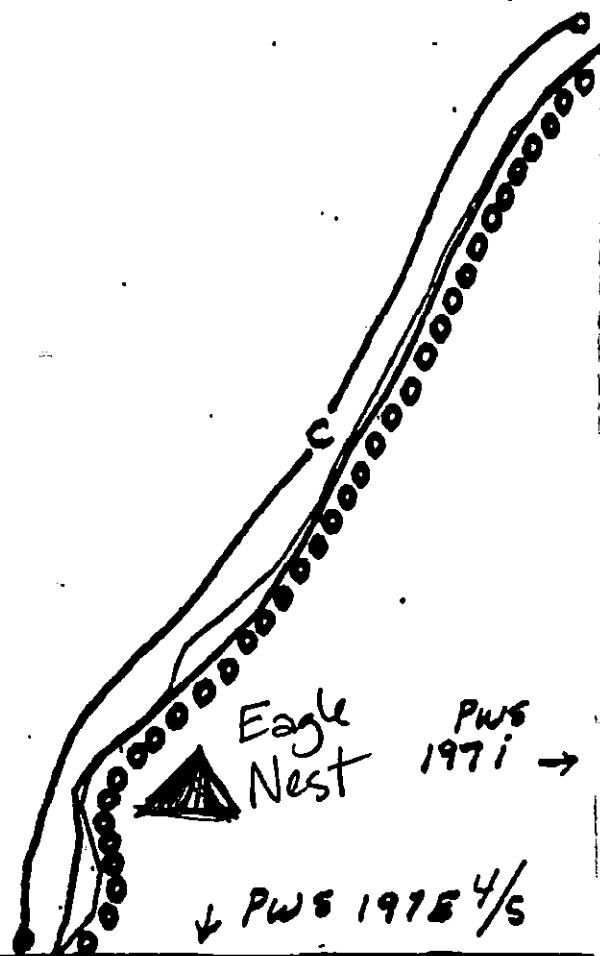
LEGEND

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

Oil Character Length (m): AP PO CV CT ST 21 MS PT TB FL NO 142



ECOLOGY MAP
SEGMENT ER-1
SUBDIVISION C



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-1

ADEC Segment Length: 4875m



Map Key: PWS-107b

Name: Richard Marty

Date: 03 April 1990

Date Entered:

ECOLOGY MAP
SEGMENT ER-1C



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ER-1

ADEC Segment Length: 4875m

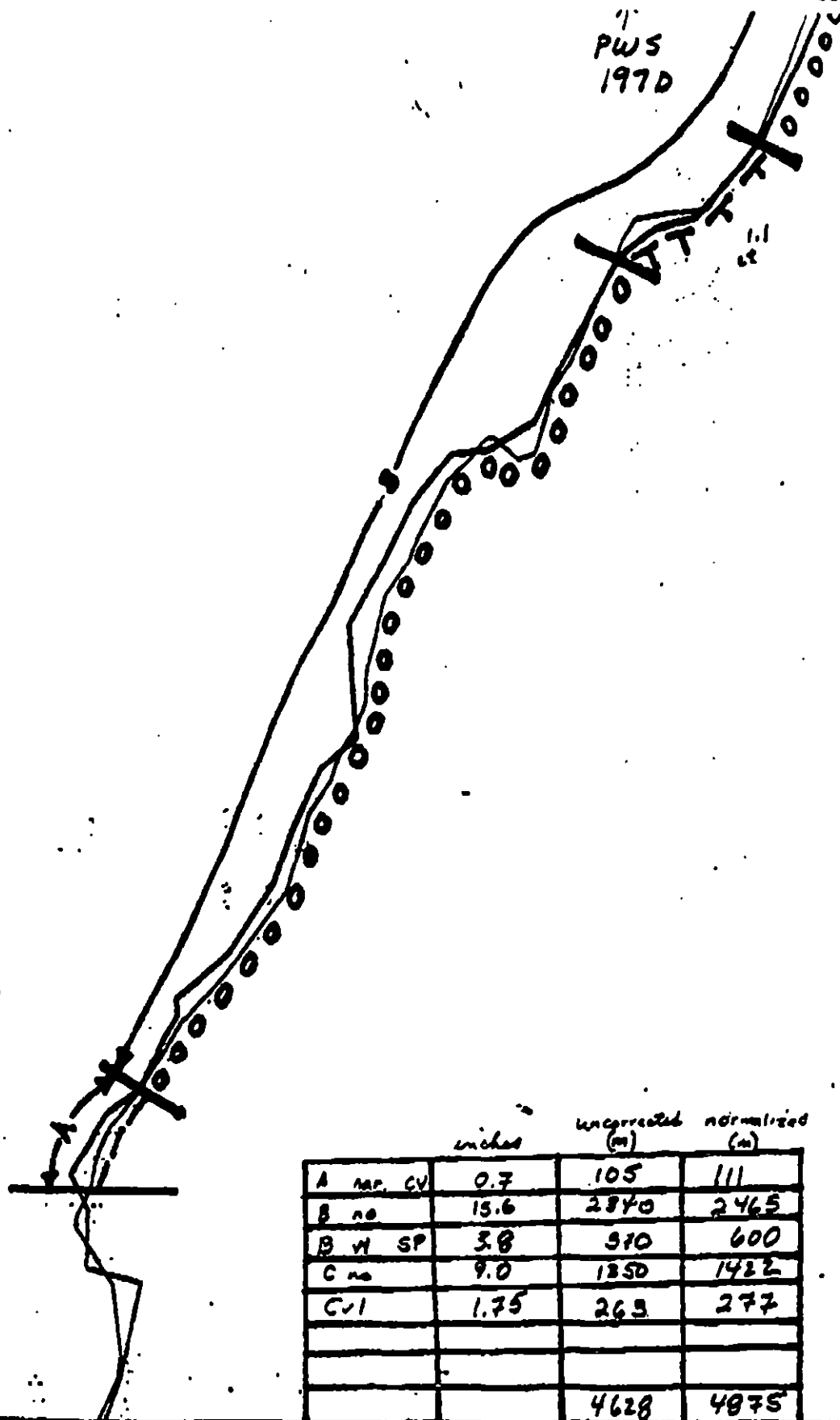


Map Key: PWS-1971

Name: Richard Marty

Date: 07 April 1990

Date Entered:



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-1.

ADEC Segment Length: 4875m



Map Key: PWS-1970

Name: 07 April 1990

Date: Richard Morley

Date Entered:

1/5

V-58

PWS
197A
↓

PWS
197E
2/5 →

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ER-1

ADEC Segment Length: 4875m

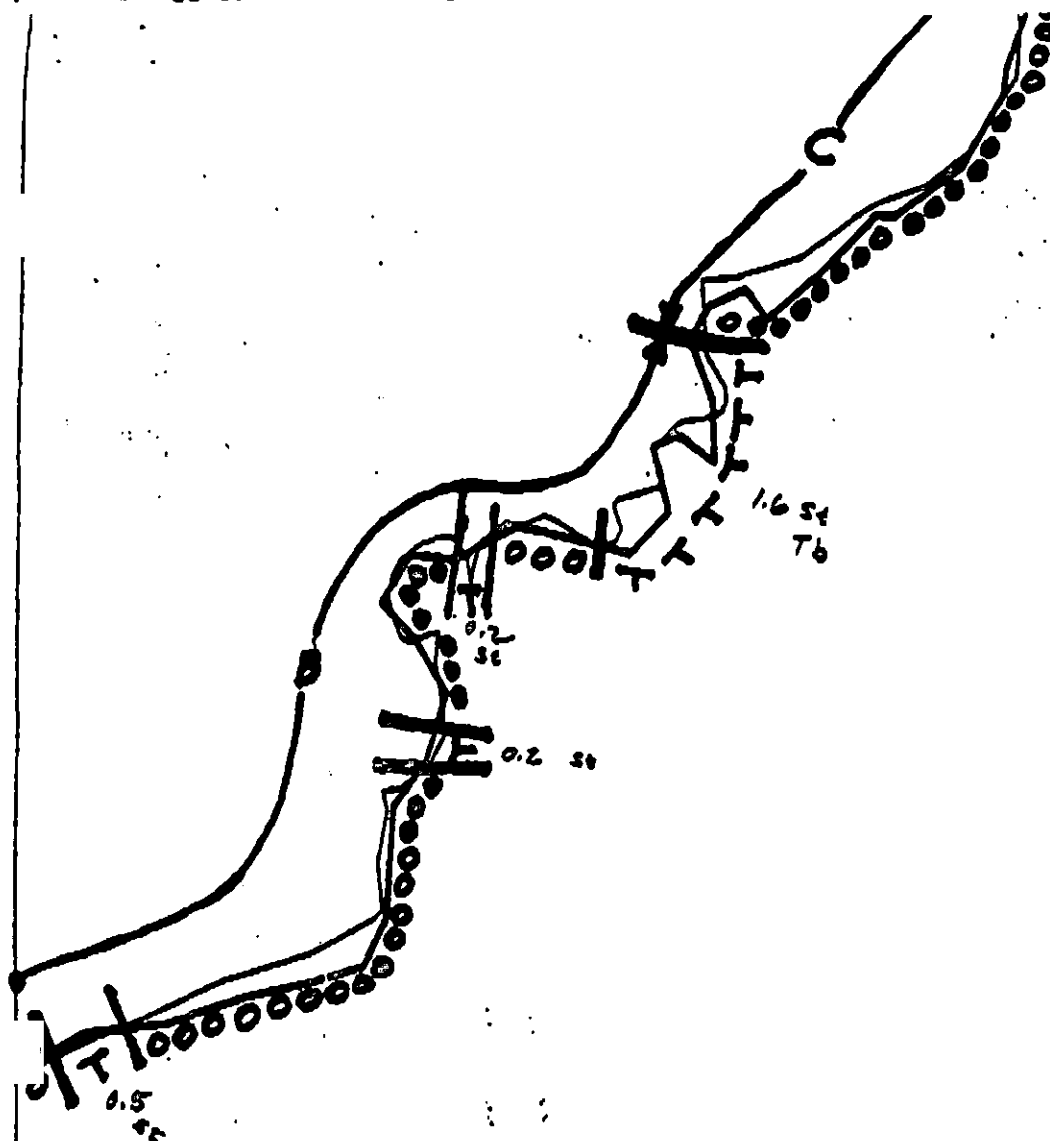


Map Key: PWS-197d

Name: Richard Marty

Date: 07 April 1990

Date Entered:



↑
PWS
197 H

ER-01

← PWS
1970

3/5

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-1.

ADEC Segment Length: 4875m



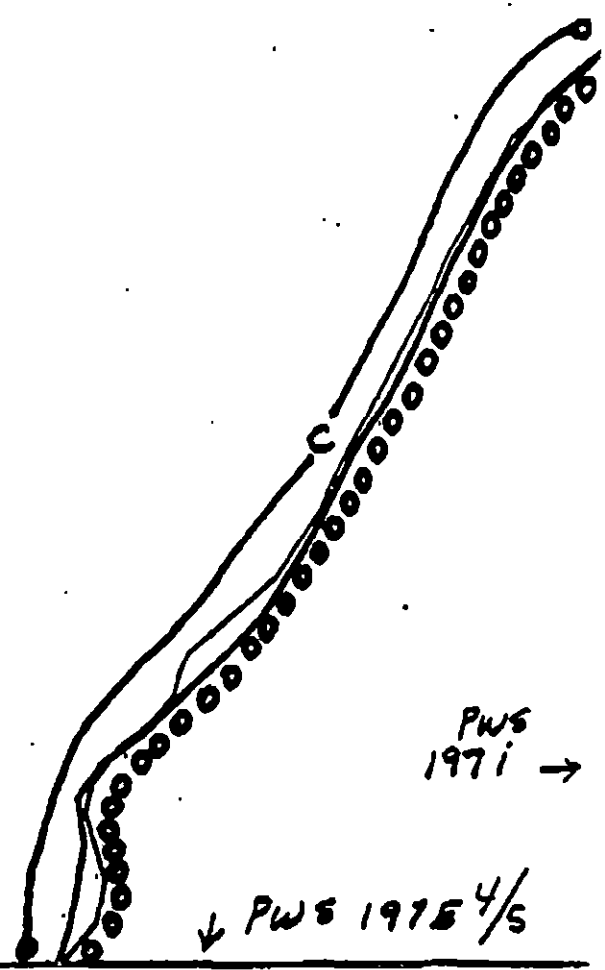
Map Key: PWS-1970

Name: Rich Marty

Date: 07 April 1990

Data Entered:

0



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ER-1

ADEC Segment Length: 4875m



Map Key: PWS-1976

Name: Richard Marky

Date: 07 April 1990

Date Entered:



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ER-1

ADEC Segment Length: 4875m

0 100 200 300
METERS



Map Key: PWS-1971

Name: Richard Marty

Date: 07 April 1990

Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-02

SUBDIVISIONS: A (1 OF 2)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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 73 m: V. Light 336 m: No Oil 252 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
 7H Deer harvesting (8/15 to 2/28)
 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

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

USCG

NAME LARRY FLETCHER SIGNATURE Larry R Fletcher

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME DAVID M. SALE SIGNATURE David M Sale

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

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

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

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

12/18

SHORELINE OILING SUMMARY

REVISION NO. 05/22/90

OG R. Martz USCG LARRY FLETCHER SEGMENT ST/ ER-02
 BIO B. Simon LAND REP Leigh Carlson SUBDIVISION A
 EXXON J. Gzowski ADEC Dave Saly TIME 15:10 to 16:00
 TEAM NO.: 10 TIDE LEVEL: (6') to 11.2m (3.75') DATE 04/06/90
 EST. SUBDIVISION LENGTH: 6.04 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SW to NE
 SURFACE SEDIMENTS: R 5 % B 10 % C 40 % P 30 % G 15 % S 0 % M 0 % V 0 %
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 54 m VL 375 m NO 175 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	TC	AB	PP	RR	SP	OR	OL	OP	NO	SU	U	M	U
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT			X					X				X	
STAIN													
MOUSSE													
PATTIES													
TARBALLS			X					X				X	
FILM													
NO OIL										X		X	X

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

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

DEBRIS COLLECTED

☒ YES ☐ NOTYPE Tar balls#BAGS 1

Photographs:

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

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-in) (0-10-0-10)	BELOW	OIL / FILM COLOR							PIT ZONE				A N A	SUBSURFACE SEDIMENTS		
		SP. OF	RES. OR	LOC. OF	5-10 cm OF	NO			UP	DOWN	SP. OF	RES. OR	LOC. OF	5-10 cm OF	NO	SU	U	M	U				
1	42					X	.									X							Sand, Mud
2	10					X	.									X							G, P
							.																
							.																
							.																
							.																

COMMENTS Note: all visible tar balls removed during survey.

There is evidence for two generations of tar here!

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

Page 1 of 1

Supratidal zone was snow covered during survey.

Revision

RM 4/6/90

REVIEWED DL DATE 4/10/90

10/18

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

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

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

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

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

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

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

11 of 11

SEGMENT ST/ E-02

SUBDIVISION A, B

DATE 6/14/1990

CHECKLIST

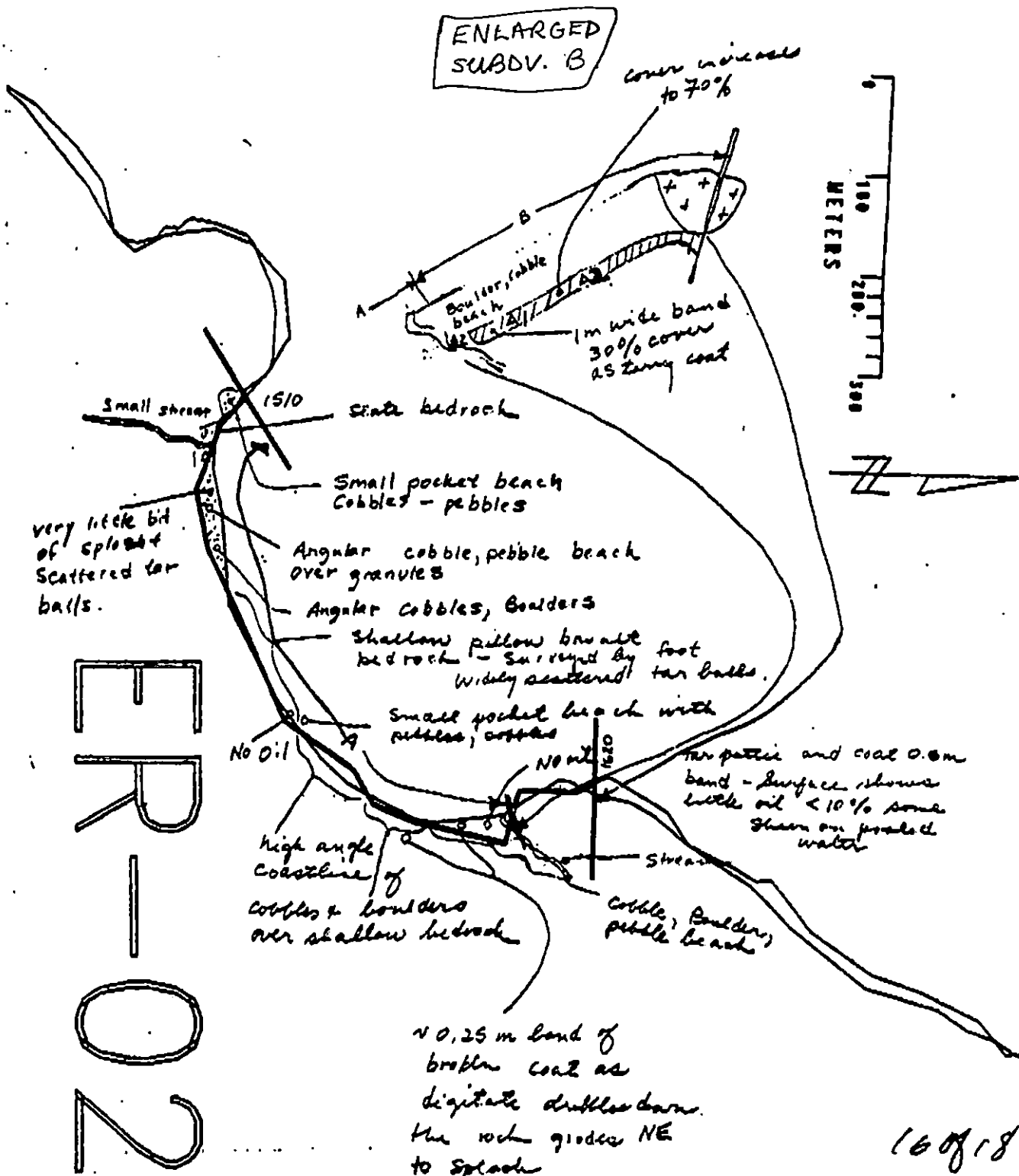
- N Arrow
- Approx Scale
- Seag Side Entry
- Oil Dike
- Width
- Length
- % Cover
- Substrate Character
- Eel (HWA) W/L
- SS
- Profile Location(s)
- Profile(s)
- PI Location(s)
- Photo Location(s)

LEGEND

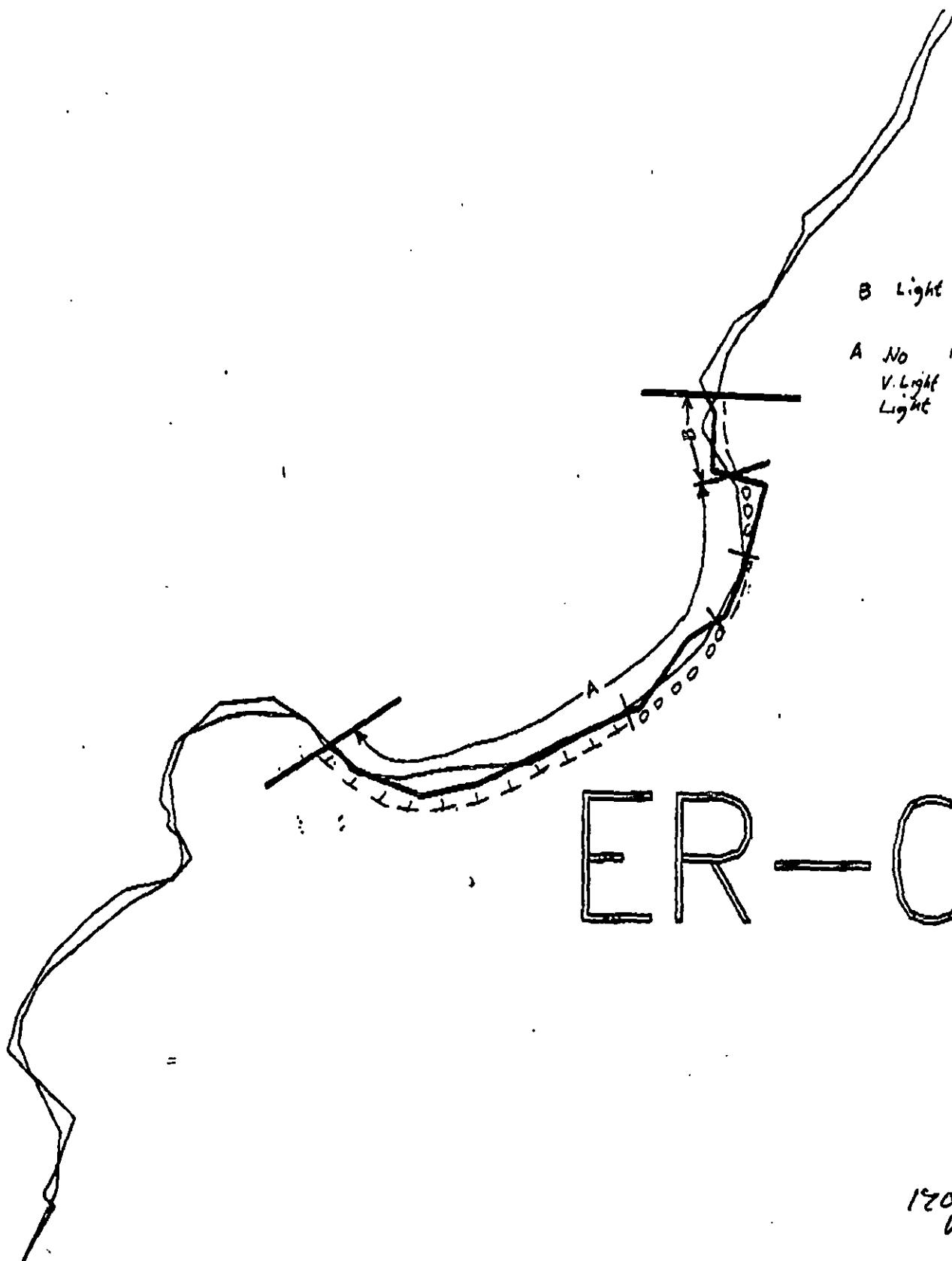
- 1 A
- PI - Subsurface Oil
- 2 A
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Spotted Distribution
- Dead Vegetation
- 1 A
- Photo location, direction, and number

SKETCH MAP

Character Length (m): AP B PO CV CT SY ST MS PT TB FL NO 179



160818



B Light 0.6 90m 10:

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

ER-02

170/18

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-2

ADEC Segment Length: 756m



METERS



Map Key: PWS-156

Name: R. Marry

Date: 6 April 1990

Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-02

SUBDIVISIONS: B (2 OF 2)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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 95 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommend the manual removal of sporadic tar balls and bio-remediate the pocket beach as shown on sketch map. Work should be conducted after 6/1.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

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

USCG

NAME LARRY FLETCHER SIGNATURE Larry R Fletcher

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

1. BIO-REMEDIAL OIL COAT.

ADEC

NAME DAVID M. SALE SIGNATURE David M Sale

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

- ① Remove manually any tar balls, tar mats
- ② Need to remove tar oil from surface sediments, just below pebble/cobble piles. Sheen noted on water and in water in pits shows mobility of existing oil ^{ms} saturating top 2 cm of sandy soil.

③ Bioremediate

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

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

14 of 18

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG R. Marty USCG LARRY FLETCHER SEGMENT ST/ ER-02
 BIO B. Linn LAND REP Leigh Carlson SUBDIVISION B
 EXXON J. Czarnicki ADEC Dave Sale TIME 16:00 to 16:30
 TEAM NO.: 10 TIDE LEVEL: +1.2m (3.95') 10 +1.2m (3.95') DATE 04/06/90
 EST. SUBDIVISION LENGTH: 107 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SW to NE
 SURFACE SEDIMENTS: R 10 % B 40 % C 30 % P 20 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 90 % Hang 10 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 107 m VL 0 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	IC	IS	IP	IR	BR	BL	GR	OR	DR	TR	LR	BR	SU	UI	ME	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 1 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	2		
Vegetation		2	
Trash			1
Debris			

DEBRIS COLLECTED

☒ YES ☐ NOTYPE tar balls#BAGS 1

Photographs:

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

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm - cm) (CAL-SM)	BELOW	OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		SP. OP	RES. OR	CO. OL	FIL. OF	NO			VO	UC	BR	BL	GR	OR	DR	TR	LR	SU	UI	ME	U	
1	6				X		0 - 2	X									X				N	S, G, C, M
2	8				X		0 - 2	X									X				N	S G C M

COMMENTS

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

Revision

RM 4/6/90

13 of 18

OG K 11-14

SEGMENT SIF ER-02

SUBDIVISION A, B

DATE 6/1 April 90

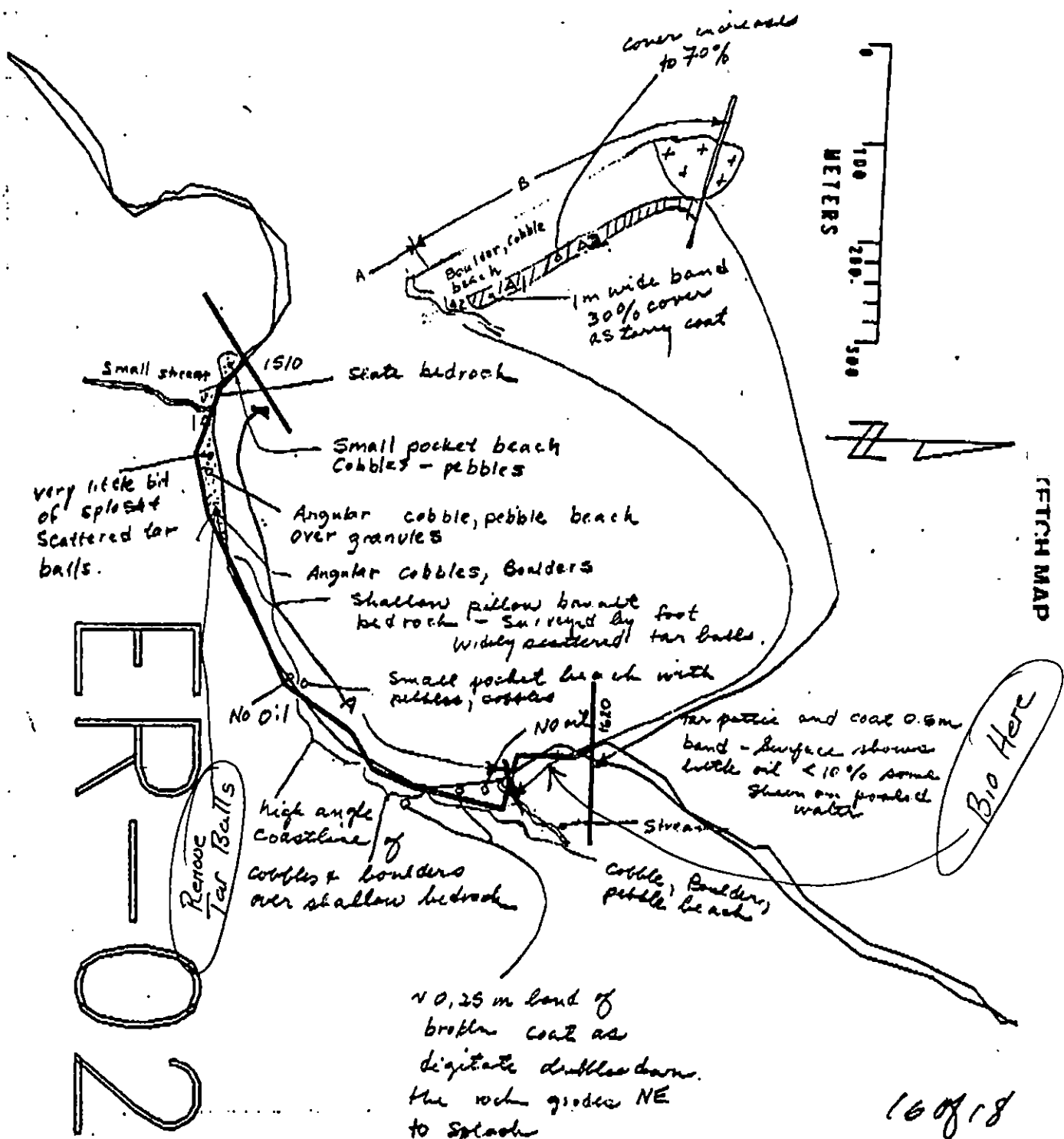
CHECKLIST

- N Name
- Approx. Scale
- Sup/Sub Body
- OR Date
- Width
- Length
- % Cover
- Substrate Character
- Ext. ANIMALS
- SS
- Profile Location(s)
- Profile(s)
- PR Location(s)
- Photo Location(s)

LEGEND

- 1 A
- PR - No Subsurface OR
- 2 A
- PR - Subsurface OR
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Spotted Distribution
- Old Vegetation
- 1 a
- Photo location, direction, and number

03 Character Length (m): AP A PO CV CT SY ST MS PT TB 375 FL NO 179
B 107



SKETCH MAP

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/10/ER2 Subdivision B Date (mo/day/yr) 4/6/90
 Time (24 hr) 1600-1700 Biologist Lemon Clear

- (A) Substrate type and % of segments:
 (1) Bedrock 10 (2) Boulder 40 (3) Cobble 30 (4) Pebble 20 (5) Sand (6) Silt
- (B) Overall % cover of biota (% of segment): Dense Moderate 45% Low
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

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

BARNACLES

Dense			Moderate			Sparse			Rare			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	

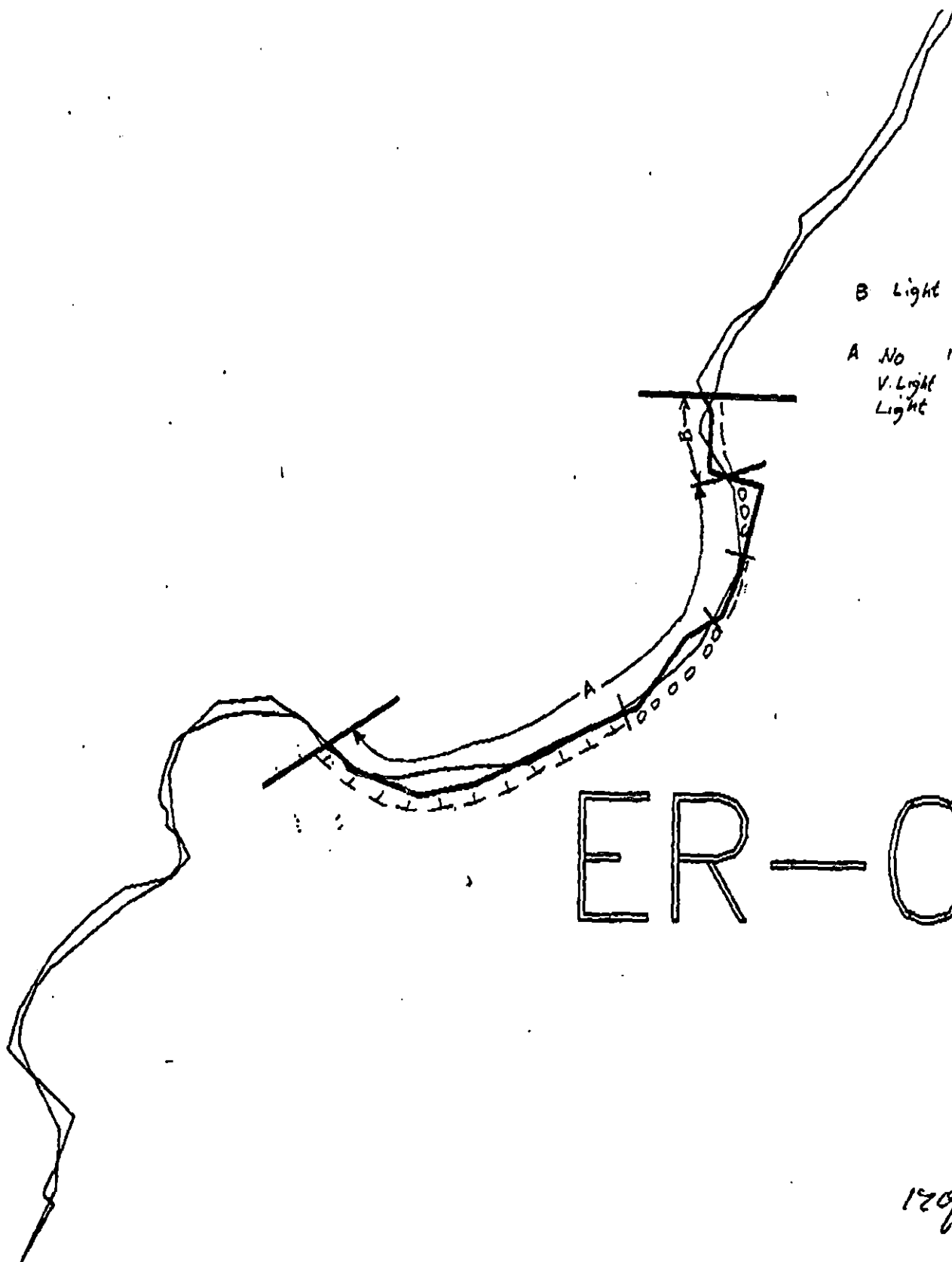
FUCUS

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

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

150/18



B Light 0.6 90m 107

A No	1.0	150m	179
V. Light	2.1	315m	37
Light	0.3	45m	5
		600m	71

ER-02

17 of 18

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-2

ADEC Segment Length: 756m



Map Key: PWS-156

Name: R. Mary

Date: 6 April 1990

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-2 SUBDIVISION B (2 of 2)

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

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

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

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

DATE

6-16-90

Prepared by:

W. Kelley

Date:

6/9/90

TREATMENT AREAS

ER-02

ER-03

USFWS 6/1/90 Map indicates no eagle nests



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



ECOLOGY MAP
SEGMENT ER-2
SUBDIVISION B (2 of 2)
METERS
0 375 749

★ Seabird Colony
▲ Eagle Nest

1 inch = 1229 feet

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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: 4/21/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 95 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

X Bioremediation

 Tarmat: Breakup

 Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommend the manual removal of sporadic tar balls and bio-remediate the pocket beach as shown on sketch map. Work should be conducted after 6/1.

See Constraint Addendum dated 6/9/90 WMC

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

TAG APPROVAL DATE: 4/23/90

ADEC ART WENGER

EXXON ANDY TAYLOR

NOAA Joseph Talbot

USCG KENNETH KLEIN

FOSC: [Signature]

DATE: 4-27-90

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: J. Daniel Mc Mahan

DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 73 m: V.Light 336 m: No Oil 252 m

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

X No Treatment Recommended

 Treatment Recommended

 Manual Pickup

 Bioremediation

 Tarmat: Breakup

 Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/23/90.

ADEC ART WEINER

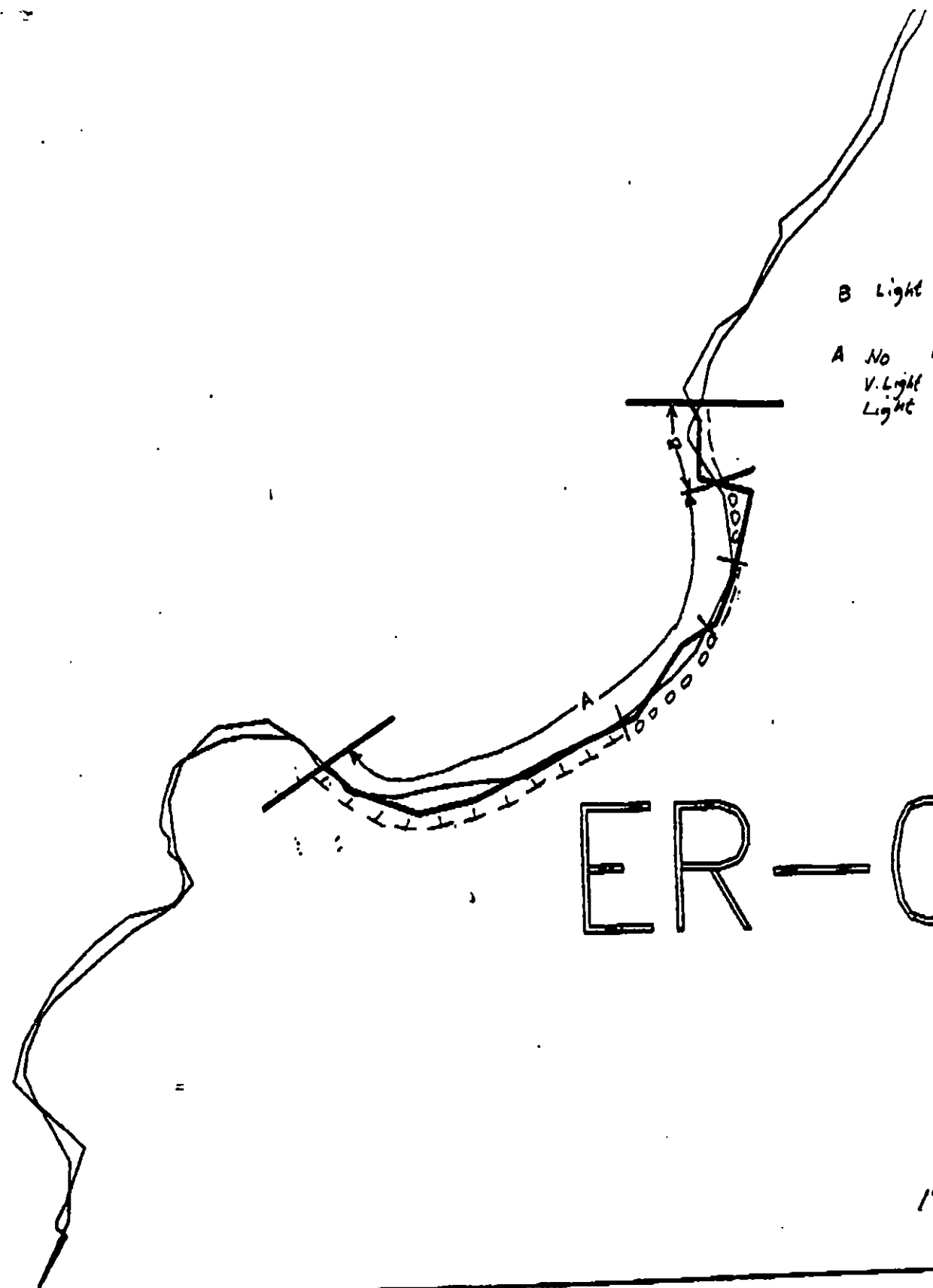
EXXON ANDY GAZ

NOAA Joseph Talbott

USCG KENNETH KEANE

FOSC: W L

DATE: 4-27-90



B Light 0.6 90m 10?

A No 1.0 150m 17
 V. Light 2.1 315m 37
 Light 0.3 45m 5
 600m 7

ER-02

170/18

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

ER-2

ADEC Segment Length: 756m



Map Key: PWS-156

Name: R. Marry

Date: 6 April 1990

Date Entered:

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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 95 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommend the manual removal of sporadic tar balls and bio-remediate the pocket beach as shown on sketch map. Work should be conducted after 6/1.

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

TAG APPROVAL DATE: 4/23/90

ADEC ART WEINER
EXXON ANDY TEAL
NOAA Joseph Talbot
USCG KENNETH KEANE

FOSC: [Signature]

DATE: 4-27-90

OG K. Mar 19

SEGMENT ST/ E202

SUBDIVISION A, B

DATE 6 Apr 1990

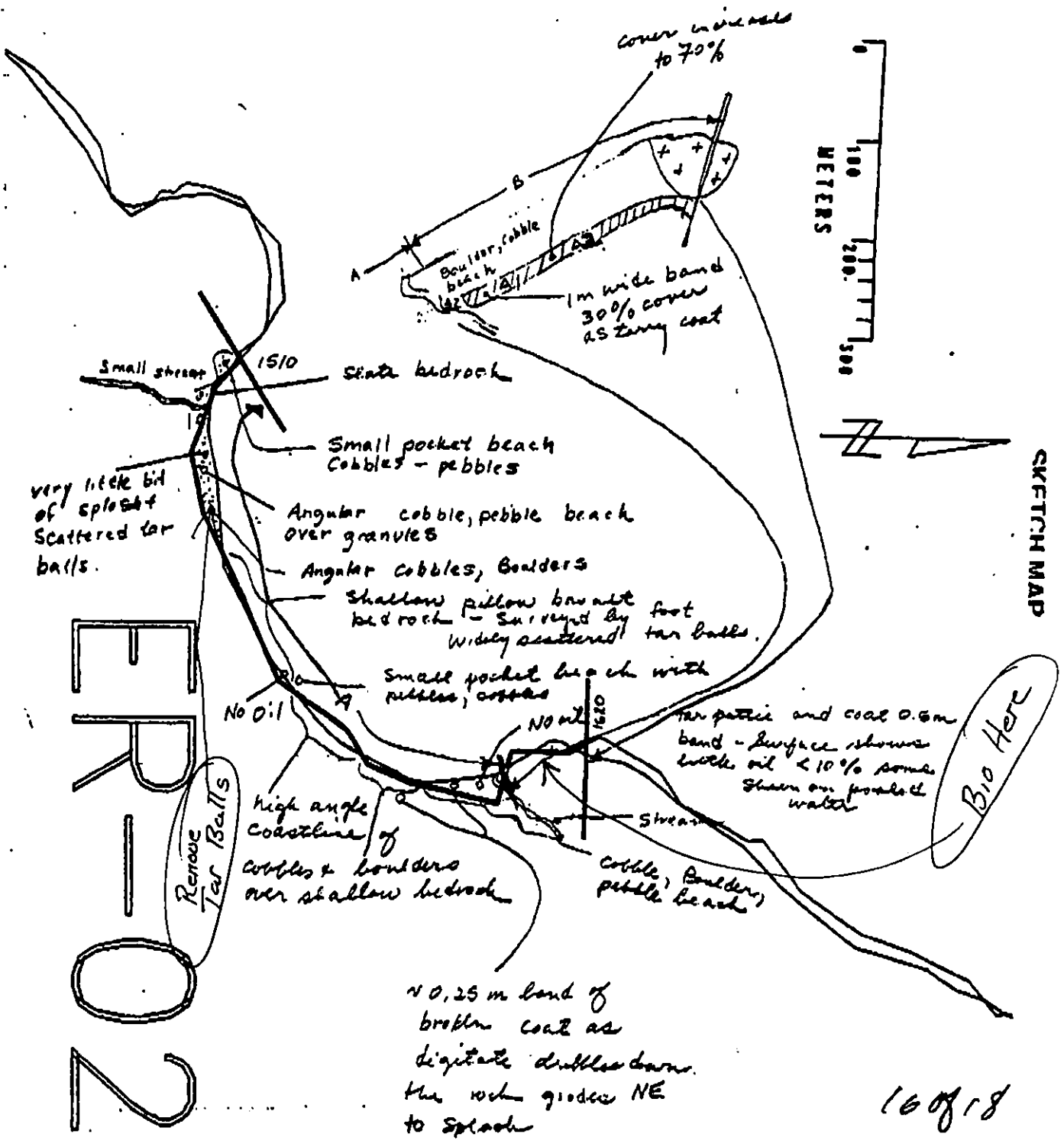
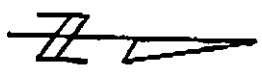
CHECKLIST

- N Arrow
- Approx. Scale
- Seafloor Bedrock
- Oil Dike
- Width
- Length
- % Cover
- Substrate Character
- E.g. HWA, M, L
- SS
- Profile Location(s)
- Profile(s)
- Photo Location(s)
- Photo Location(s)

LEGEND

- 1 A
- Pt. to Seafloor Oil
- 2 A
- Pt. to Seafloor Oil
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Spotted Distribution
- Dead Vegetation
- 1
- Photo location, direction, and number

SKETCH MAP



ER-02

16 of 18

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

A B 54 107

B Light 0.6 90m 107

A No	1.0	150m	179
V. Light	2.1	315m	37.
Light	0.3	45m	5'
		600m	71

ER-02

170 of 18

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ER-2

ADEC Segment Length: 756m



METERS

Map Key: PWS-155

Name: R. MarryDate: 6 April 1990

Data Entered:

1991 MAYSAP EVALUATION

SEGMENT: ER 002 SUB: B REGION: PWS SURVEY DATE: 5/16/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Fry release, Fish harvest area, Subsistence - Deer harvesting, Subsistence - Invertebrate harvesting

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Timothy D. Smith Date: 6/04/91

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: Survey includes approximately 65 m of ER-1A (Location E).

TAG:

FOSC:

TAG APPROVAL DATE: JUNE 4 1991

FOSC APPROVAL DATE: 6/8/91

ADEC John Bane

FOSC

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

EXXON Beal

USCG Donna

NOAA John

**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.

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

Subsistence, Invertebrate Harvesting: Unlimited treatment except avoid disturbance of clam/mussel beds unless specifically directed by TAG Work Order.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT ER-2 SUBDIVISION B DATE 5/16/91

ADEC

NAME John Hayes SIGNATURE [Signature]

☐ NTR ☒ TREATMENT RECOMMENDED

Recommend manual pick up of AP band that continues from ER-002A.

EXXON

NAME John DERN SIGNATURE [Signature]

☒ NTR No oil observed in recoverable quantity or STATE.
SEE COMMENTS ER-2-A

LANDMANAGER

NAME Steve WARD OF CUC-FS SIGNATURE [Signature]

☐ NTR This Area has Asphalt that needs picked up. It is right next to ER-2-A where a manual crew is needed. The same oiling on this sub JUST Extends over to ER-2-A so one crew could do both. Chenega Local Res -
NO BIO.

USCG/NOAA

NAME DREHER / CLINE SIGNATURE [Signature]

☒ NTR Observed no recoverable oil.

Area (E) (30% SPR) should be cleaned - the rest of the oiling is very light
LWC

5

PAGE ____ OF ____

TEAM NO. 0

OG CHANEY

BIO **CRANK**

SEGMENT ER 2

DEC HAYES

LANDMANAGER WARD for CVC

SUBDIVISION B

EXXON MARTINEZ

USCG/NOAA ~~DREHER~~/HODGES

DATE MAY, 16, 1911

TIME 12:55 to 13:20

TIDE LEVEL 4.5 ft. to 6.0 ft.

ENERGY LEVEL: ☐ H ☒ M ☐ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO WEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☒ RAIN ☐ SNOW

TOTAL LENGTH SHORELINE SURVEYED: 160 m
SEE COMMENTS

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

EST. OIL CATEGORY LENGTH: W m M m N m VL 80 m NO 15 m US 0 m
SEE COMMENTS

[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- 5 - 17 FRAMES 23-24

[illegible]

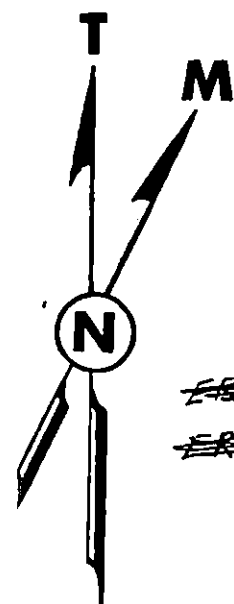
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS: NO PITS DUE TO ANGULAR PACKED BOULDERS.
DUE TO THE SHORT LENGTH OF THE SUBDIVISION & THE CRUDE
NATURE OF DUAL SHORELINE MAP AT THIS SCALE, OUR TEAM
SURVEYED APPROXIMATELY 160m TO INSURE PROPER COVERAGE.
IT IS PROBABLE THAT 65m OF THIS WAS IN EROOIA.

REVIEWS: 5-20-91 MC

MAYSAP 1
 OG SKETCH MAP
 GREG CHANEY
 TEAM 5

SEGMENT: ER 2 B
 DATE: MAY 16 1991
 AIR P.#: PMC 005-116



LEGEND

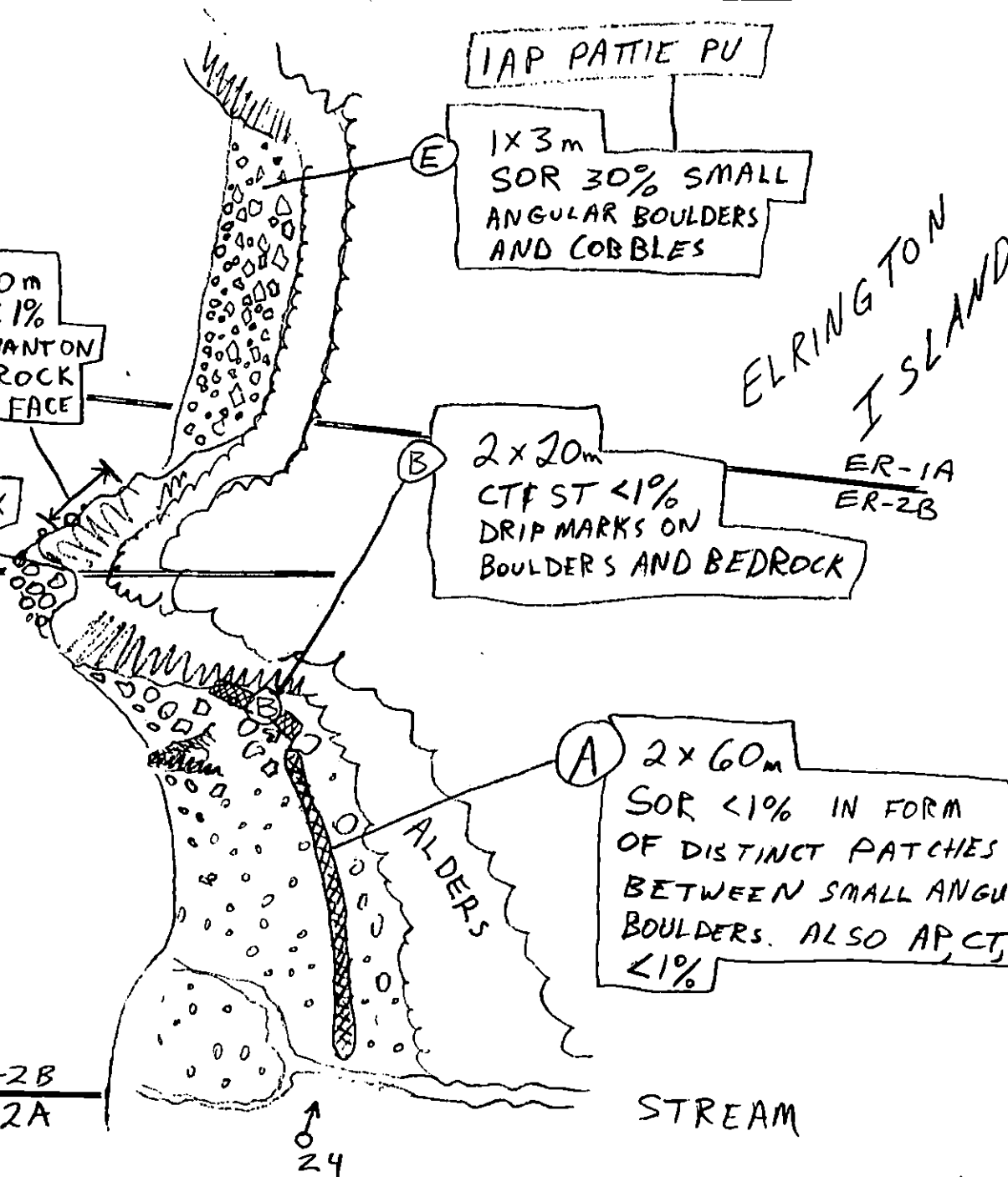
BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE

20 m

ELRINGTON
 PASSAGE

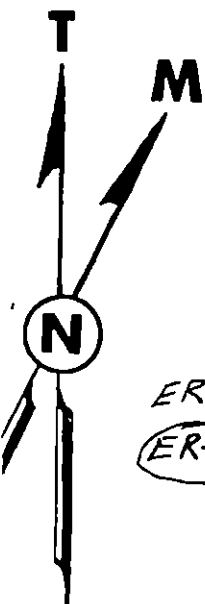
ER-2B
 ER-2A



REVIEWED: ML 5/24/91

revised S.25 94 p.m.c. reviewed 5-19-94

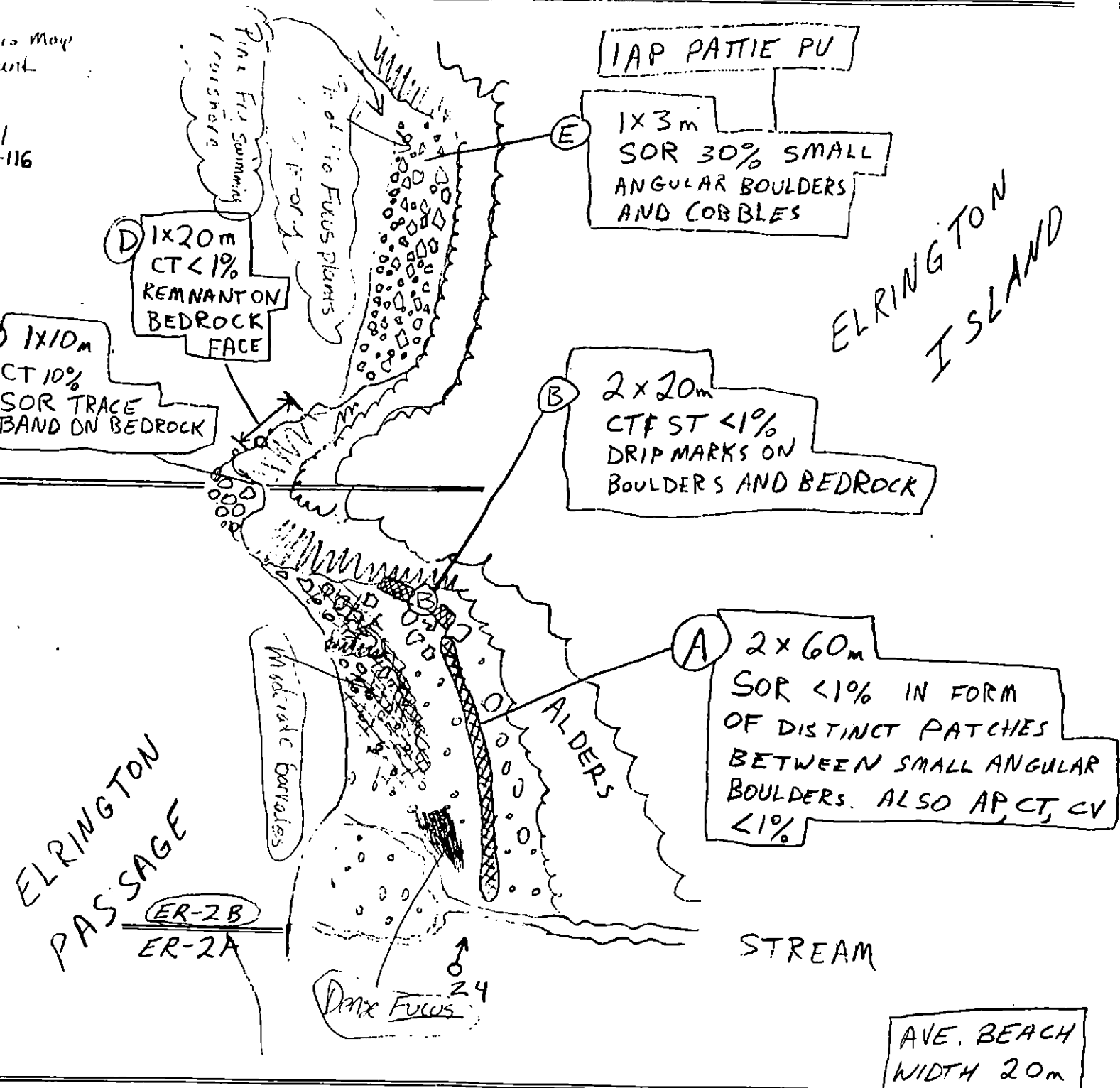
MAYSAP J
 OG SKETCH IP: Bro May
 GREG CHANEY: Crank
 TEAM 5
 EGMENT: ER 2 B
 DATE: MAY 16 1991
 IR P.#: PMC 005-116



LEGEND

EDROCK	
OULDERS	
INE BED.	
RIFT LOG	
RASS	
RUSH	
OREST	
ILED PIT	
O OIL PIT	
HOTO	

SCALE
 20 m



MAYSAP BIOLOGICAL SUMMARY FORM

pg 1 of 1

TEAM # 5

DATE

16 May 1991

SEGMENT # ER-2

TIDAL HEIGHT(Range)

+5 → +6

SUBDIVISION B

BIOLOGIST

Crank

SEA STATE 0

WIND SPEED/DIRECTION

No wind

PHOTOGRAPHS: ROLL #

FRAME #

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

Sites A, B & C are located in the MITZ on a single beach separated from ER-2A by a stream. Within the sites biota cover is ~10%. There are sparsely concentrated mussels; adult, juvenile and spat are present, mainly tightly seen their inner plate when stimulated. There are also rare *Fucus* sporadic and dense patches of *Littorina* and limpets present. Below the sites 1m to the water, in the MITZ, biota cover ranges from 80% near the stream to 50% below site C. *Fucus* is dense near the stream tapering to sparse ~15m from stream bank. In most of the MITZ barnacles are the dominant species, adult, juvenile and spat age classes are present. Gastropods are thriving and are reproductively active. *Littorina* snails are found in dense aggregations with egg masses. Several age classes of limpets are present in dense concentrations and sparse juvenile *Nucella* (whitts) are present. Amphipods are abundant. Mussels are sparsely concentrated several age class observed. Juvenile mussels are colonizing in the cracks and crevices of boulders. MITZ was not exposed during survey. Areas D & E were surveyed but actually lie outside this subdivision, refer to OG notes.

(D) Site is located in the UITZ along a rocky headland. Biota is similar to the biota observed in sites A, B & C.

(E) Site is located on a separate pocket beach, located high in the UITZ. Black lichen, *Littorina*, and limpets cover ~1% of the surface sediments. In the MITZ biota cover is ~50%. Similar species present. About 1% of the sparse *Fucus* population are 'stipe-only'.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

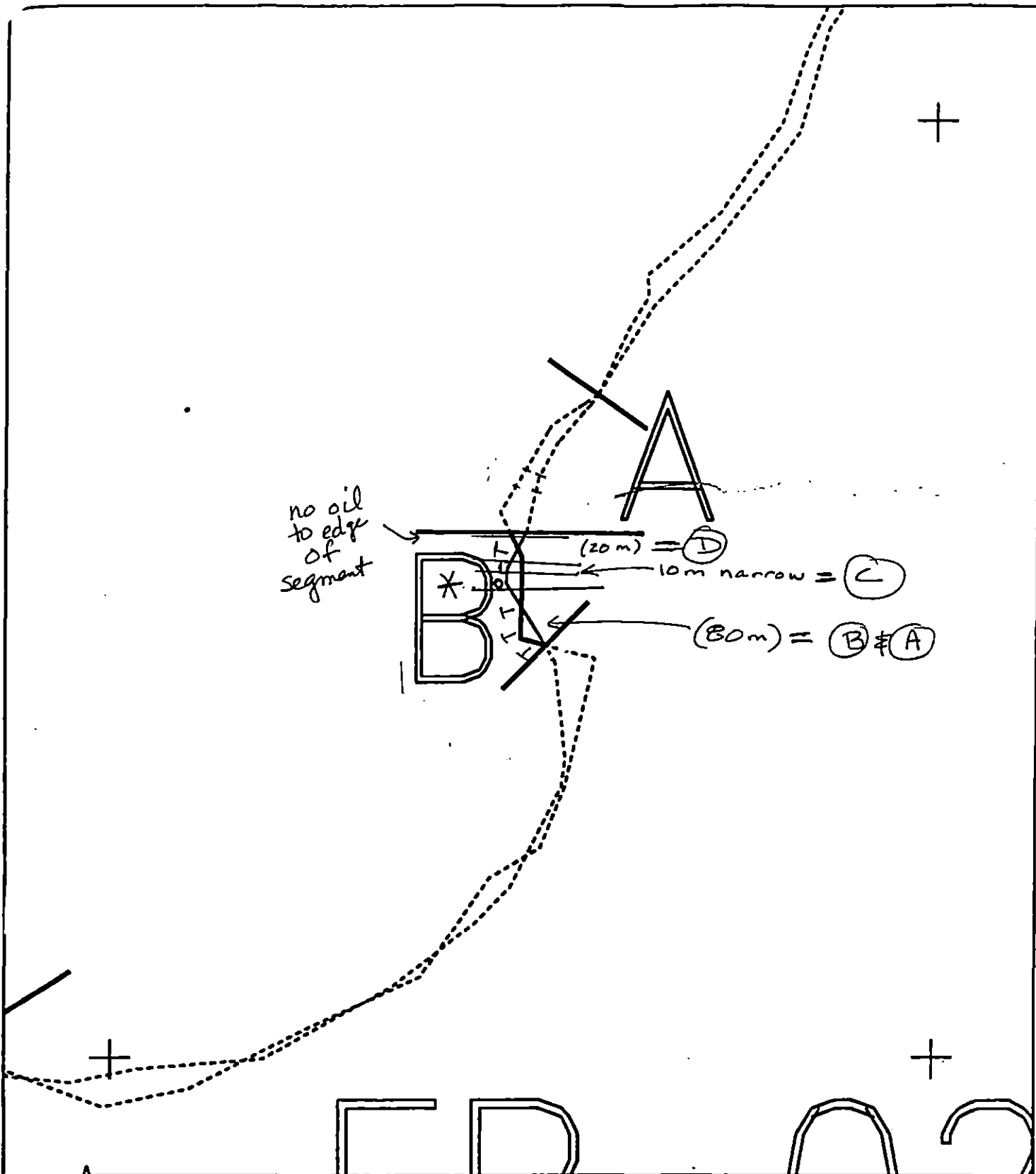
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			Pink fry
Seabirds			
Waterfowl	1	2	
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds			

LAND MAMMALS

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

Shoreline subdivision map showing important biological features attached.

Reviewed: ME 5/10/91



XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

ER002 B

ADEC Subsegment Length: 95m

METERS

0 100 200
AK State Plane Zone 4
per 002b



Subdivision Field Map

Map Key: PWSER002B

Name: Charney (JY)

Date: 5.16.91

Date Entered:

revised 5.25.94

1991 MAYSAP EVALUATION

SEGMENT: ER 002 SUB: A REGION: PWS SURVEY DATE: 5/16/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) 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**

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

TEAM NO. 5 SEGMENT ER-2 SUBDIVISION A DATE 5/16/91

ADEC

NAME John Hayer SIGNATURE [Signature]

☐ NTR ☒ TREATMENT RECOMMENDED



Recommend small manual crew pick up AP observed in section E band continue into ER-002B recommend both sites be worked together.

EXXON

NAME JOHN DEAN SIGNATURE [Signature]

☒ NTR TRACES OF COAT + STAIN CAN BE FOUND BEHIND + BETWEEN BOULDERS AND IN BEDROCK CRACKS. ANY WORK WOULD YIELD INSIGNIFICANT OIL WITH LIKELY HARM TO ABUNDANT + HEALTHY BIOTA.

LANDMANAGER

NAME Steve WARD OF CWC/FS SIGNATURE [Signature]

☐ NTR Section - E of this Sub-Div. can use some manual pick-up by chenege or Ueco. there is a thin band of asphalt that doesn't need to be left there. quick work and this sub. will be ok again. ALSO Sub-Surface oil in Pt #5 is in this section. so again it needs work

USCG/NOAA

NAME DREHER/CLINE SIGNATURE [Signature]

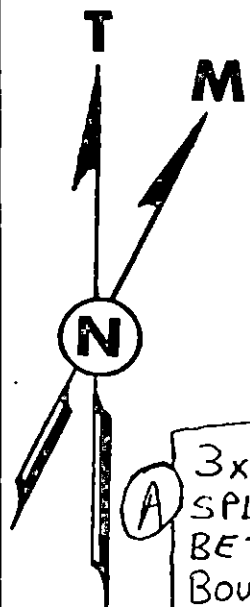
☒ NTR Observed hard, very weathered, stable asphaltic band. Further removal attempts would be more harmful to the environment than the oil residue to be removed.

Use of oil in this subdivision - the only further treatment that might be helpful is in oiling site E; however note the dis. map for this area (hermit crabs). Care should be used if this site is treated. DRC

REVIEWED: MC 5/20/91 ES revised 5/19

MYSAP 1991
 OG SKETCH MAP
 GREG CHANEY/DON CLINE
 TEAM 5

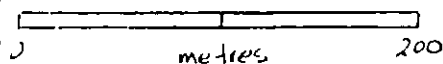
SEGMENT: ER2-A
 DATE: MAY 16 1991
 AIR P.#: PIM-C 005-116



LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE



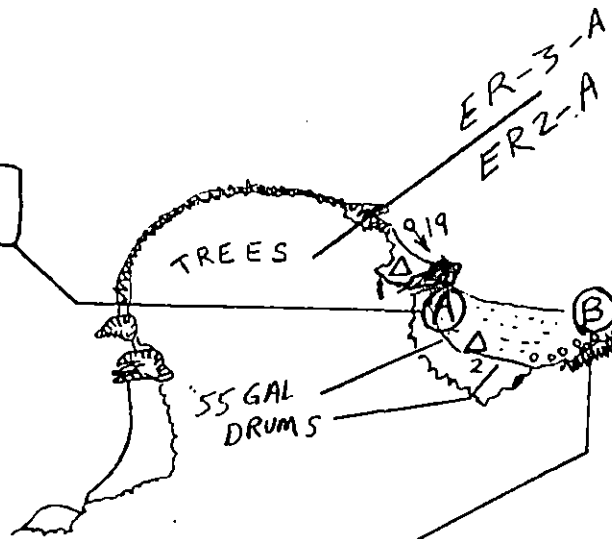
ELRINGTON PASSAGE

(E) 1 x 30m
 AP, SOR, ST > 1%
 CT 5% NARROW BUT
 DISTINCT BAND ALONG
 HIGH TIDE LINE

(D) 3 x 70m
 CT & ST < 1%
 IN BEDROCK
 CRACKS

(C) 1 x 1m
 CT & ST < 1%
 BEHIND BOULDER

(A) 3 x 15m
 SPLATTERS
 BETWEEN
 BOULDERS
 CV & CT < 1%



(B) 1 x 15m
 SPLATTERS
 BETWEEN
 BOULDERS
 CV & CT < 1%

ELRINGTON ISLAND

HOG
 Extent not
 recorded;
 assume 2x

MAYSAP BIOLOGICAL SUMMARY FORM

pg 1 of 2

TEAM # 5

DATE 16 MAY 1991

SEGMENT # ER-2

TIDAL HEIGHT (Range) +1 → +5

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 0

WIND SPEED/DIRECTION no wind

PHOTOGRAPHS: ROLL #

FRAME #

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

(A) Area is in the MITZ. Within the site there are sparse, concentrated *Littorina* and limpets, rare barnacles (adults and juveniles) and black lichen covering <1% of the surface. Below the site in the MITZ, *Fucus*, mussels and nudibrachs are sparsely concentrated. *Littorina* and limpets are dense and *Endocladia* (alga) is rare. Biota cover is ~20%. In the LITZ, biota cover is ~40%. *Algae* is dominant. Bladed and fan-shaped reds and greens are present as well as *Odonthalia* and sparse *Fucus*. Mussels and nudibrachs are still sparsely concentrated. *Littorina* and limpets are still dense with a higher concentration of juveniles. Prickleback fish are common under small boulders.

(B) Site is in the MITZ. Biota cover is ~20%. *Fucus* concentration within the site has increased to sparse and in the MITZ has increased to moderate. Biota cover in the MITZ is ~40%.

(C) Site is in the MITZ. Area is steep graded boulders and boulder area is similar and present. Barnacles are found on the undersides of coralline tubes. Tar spot algae and *Endocladia* are present. *Fucus* is sparse and *Littorina* and limpets are sparse. Biota cover is ~30%. Directly below the site, *Odonthalia* (an alga) is dense. *Fucus* is sparse to moderate and *Halosaccion* (an alga) is present. Limpets and *Littorina* are sparse and nudibrachs are sparse. Biota cover is ~30%.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

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

LAND MAMMALS

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

Shoreline subdivision map showing important biological features attached.

Reviewed: MC/S-20-91

Received 15/10/91

Team # 5
Segment # ER-2
Subdivision A
Sea State 0

Date 16 May 1991 pg 2 of.
Tidal Height +1 → +5
Biologist Crank
Wind Speed / Direction no wind

Comments (cont.)

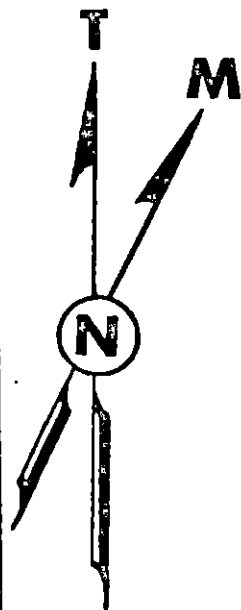
(D) Area is located in the U1Z, Biota is similar to area C.

(E) i pit 5 Area is located in the U1Z. Black licen encrusts approximately 40% of the surface sediments; sparse limpets and Littorina cover <1% of the sediment surface. Two meters below the site, approximately at the +6' tide level, there is a 1m band of moderately concentrated Fucus with maturing conceptacles. Barnacles have a sparse to moderate distribution. There are dense Littorina with egg masses and large limpets. A sparse concentration of juvenile dog whelks (Nucella) is also present. Mussels are moderate to sparse. Hermit crabs are present near the waters edge.

This subdivision has a strong recruitment in the gastropod populations. Recruitment is also present in the barnacle, mussel and algae populations. Biota does not appear to be adversely affected by present oiling conditions.

SAP 1991
 DG SKETCH MAP/Bio Map
 GREG CHANEY/DON CLINE/Crank
 TEAM 5
 SEGMENT: ER2-A
 DATE: MAY 16 1991
 AIR P.#: PIM-C 005-116

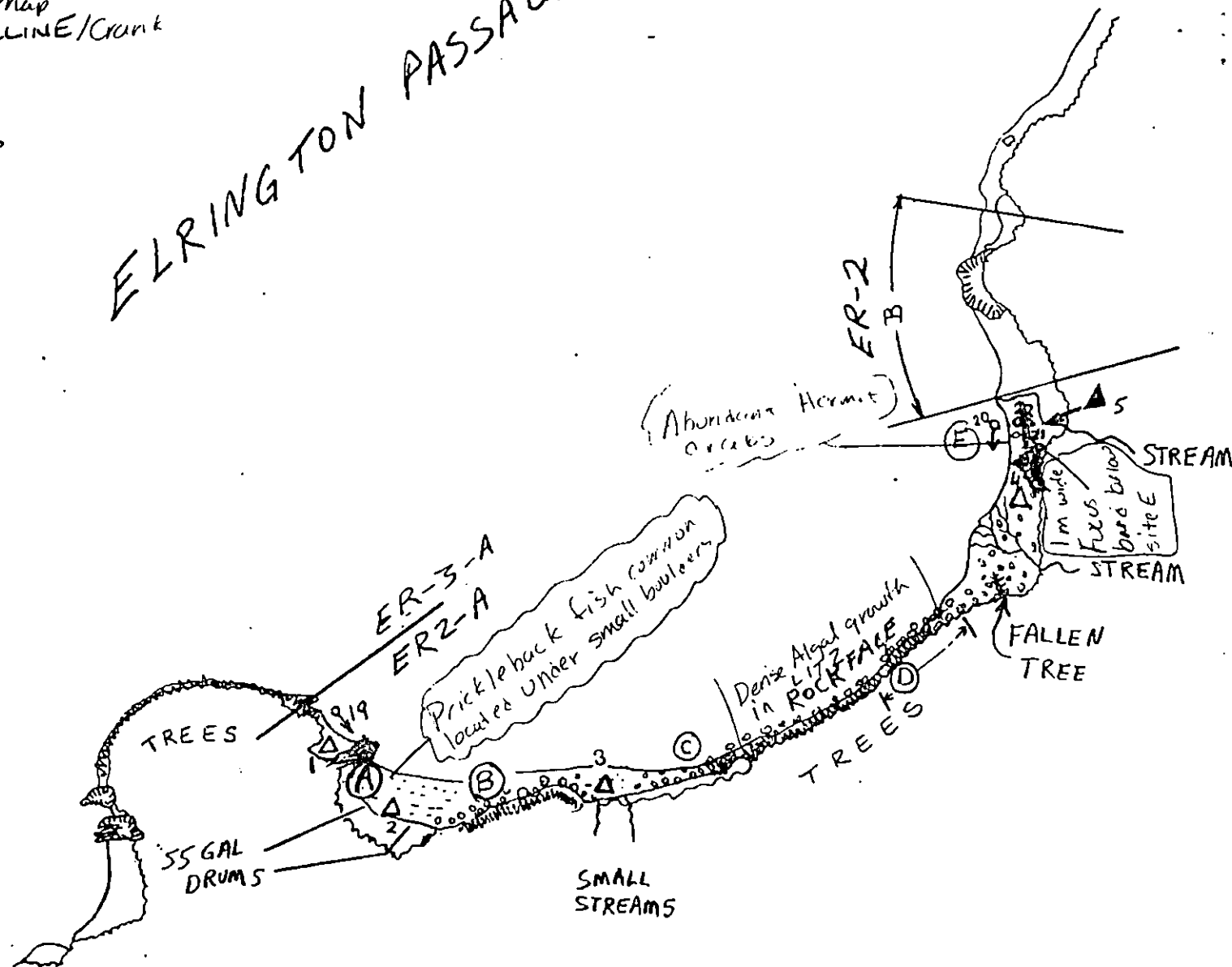
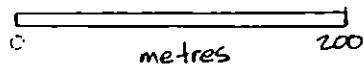
ELRINGTON PASSAGE

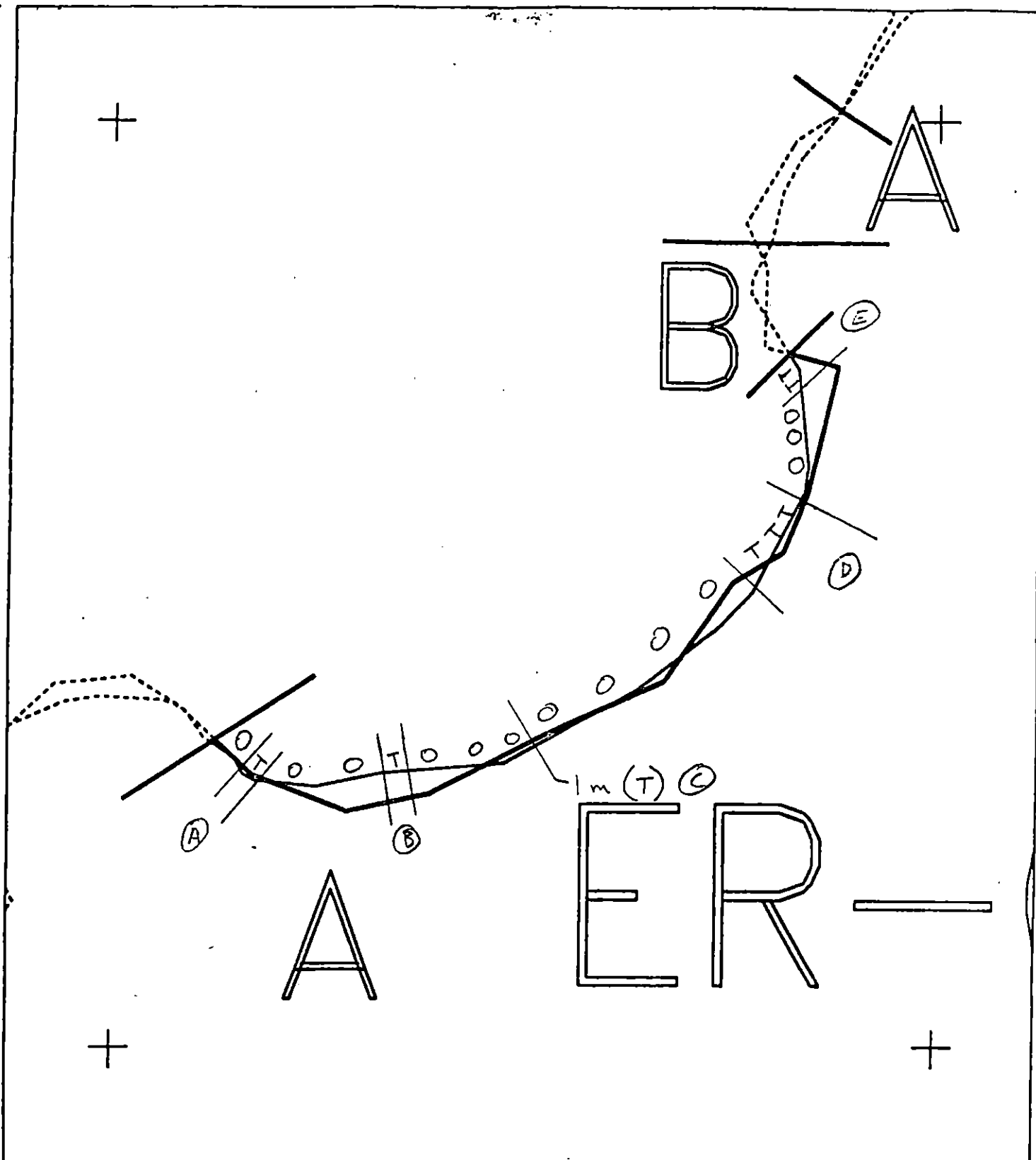


LEGEND

BEDROCK	
BOULDERS	
FINE SED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE





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

ER002 A

ADEC Subsegment Length: 662m
 METERS

0 100 200
 AK State Plane Zone 4
 pr002a



Subdivision Field Map
 Map Key: PWSER002A
 Name: CHANEY
 Date: MAY 16 1991
 Date Entered:

REVIEWED: MC 5/20/91 Reviewed 5/19

1991 MAYSAP EVALUATION

SEGMENT: ER 002 SUB: B REGION: PWS SURVEY DATE: 5/16/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Fry release,
Fish harvest area, Subsistence - Deer harvesting, Subsistence -
Invertebrate harvesting

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: Survey includes approximately 65 m of ER-1A (Location E).

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.

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

Subsistence, Invertebrate Harvesting: Unlimited treatment except avoid disturbance of clam/mussel beds unless specifically directed by TAG Work Order.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT ER-2 SUBDIVISION B DATE 5/16/91

ADEC

NAME John Hayes SIGNATURE [Signature]

☐ NTR ☒ TREATMENT RECOMMENDED

Recommend manual pickup of AP band that continues from ER-002A.

EXXON

NAME John Depp SIGNATURE [Signature]

☒ NTR No oil observed in recoverable quantity or STATE.
SEE COMMENTS ER-2-A

LANDMANAGER

NAME Steve Ward OF CUC-FS SIGNATURE [Signature]

☐ NTR This Area has Asphalt that needs picked up. It is right next to ER-2-A where a manual crew is needed. The same oiling on this sub just extends over to ER-2-A so one crew could do both. Chenega Local Res -
NO BIO.

USCG/NOAA

NAME DREHER / CLINE SIGNATURE [Signature]

☒ NTR Observed no recoverable oil.

Area E (30% SRK) should be cleaned - the rest of the oiling is very light
CWC

DATE MAY, 16, 91

ENERGY LEVEL: ☐ H ☒ M ☐ L

EST. OIL CATEGORY LENGTH: W m M m N m VL 80 m NO 15 m US 0 m
SEE COMMENTS

ER-1A *
ER-2B *

PHOTO ROLL # MAYSAP- 5 - 17 FRAMES 23-24

[illegible]

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

DUE TO THE SHORT LENGTH OF THE SUBDIVISION & THE CRUDE NATURE OF DUAL SHORELINE MAP AT THIS SCALE, OUR TEAM SURVEYED APPROXIMATELY 160m TO INSURE PROPER COVERAGE. IT IS PROBABLE THAT 65m OF THIS WAS IN EROOIA.

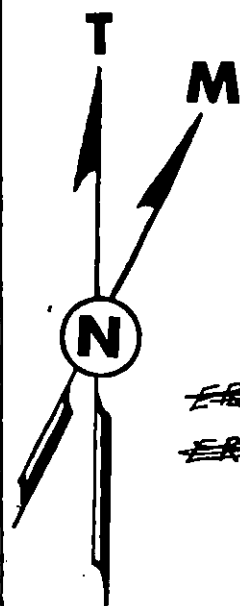
Reviewed: 5-20-91 MC
Reviewed 5.19 QY

MAYBAP 91
OG SKETCH MAP
GREG CHANEY
TEAM 5

SEGMENT: ER 2B

DATE: MAY 16/1991

AIR P.H. PIMC 005-116



LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE

20 m

ELRINGTON
PASSAGE

ER-2B
ER-2A

IAP PATTIE PU

1x3m
SOR 30% SMALL
ANGULAR BOULDERS
AND COBBLES

ELRINGTON
ISLAND

2x20m
CT < 1%
DRIP MARKS ON
BOULDERS AND BEDROCK

A 2x60m
SOR < 1% IN FORM
OF DISTINCT PATCHES
BETWEEN SMALL ANGULAR
BOULDERS. ALSO AP, CT, CV
< 1%

STREAM

AVE. BEACH
WIDTH 20m

REVIEWED: MLC 5/12/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5

DATE

16 May 1991

pg 1 of 1

SEGMENT # ER-2

TIDAL HEIGHT(Range) +5 to +6

SUBDIVISION B

BIOLOGIST Crank

SEA STATE 0

WIND SPEED/DIRECTION No wind

PHOTOGRAPHS: ROLL #

FRAME #

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

Sites A, B & C are located in the MITZ on a single beach separation from ER-2A by a stream. Within the sites, biota cover is ~10%. There are sparsely distributed barnacles, adult, juvenile and spat in crustaceans. Bivalves are mostly sand dollar under plate when stimulated. There are also some *Fucus* spores and dense patches of *Littorina* and limpets present. Below the sites 1m to the water, in the MITZ, biota cover ranges from 80% near the stream to 50% below site C. *Fucus* is dense near the stream, tapering to sparse ~15m from stream bank. In most of the MITZ barnacles are the dominant species, adult, juvenile and spat age classes are present. Gastropods are thriving and are reproductively active. *Littorina* snails are found in dense aggregations with egg masses. Several age classes of limpets are present in dense concentrations and sparse juvenile *Nucella* (various) are present. Amphipods are abundant. Mussels are sparsely distributed, several age class observed. Juvenile mussels are colonizing in the cracks and crevices of boulders. LITZ was not exposed during survey. Areas D & E were surveyed but actually lie outside this subdivision, refer to OG notes.

(D) Site is located in the UITZ along a rocky headland. Biota is similar to the biota observed in sites A, B & C.

(E) Site is located on a separate pocket beach, located high in the UITZ. Black lichen, *Littorina*, and limpets cover ~10% of the surface sediments. In the MITZ biota cover is ~50%. Similar species present. About 10% of the sparse *Fucus* population are 'stipe-only'.

WILDLIFE OBSERVATIONS

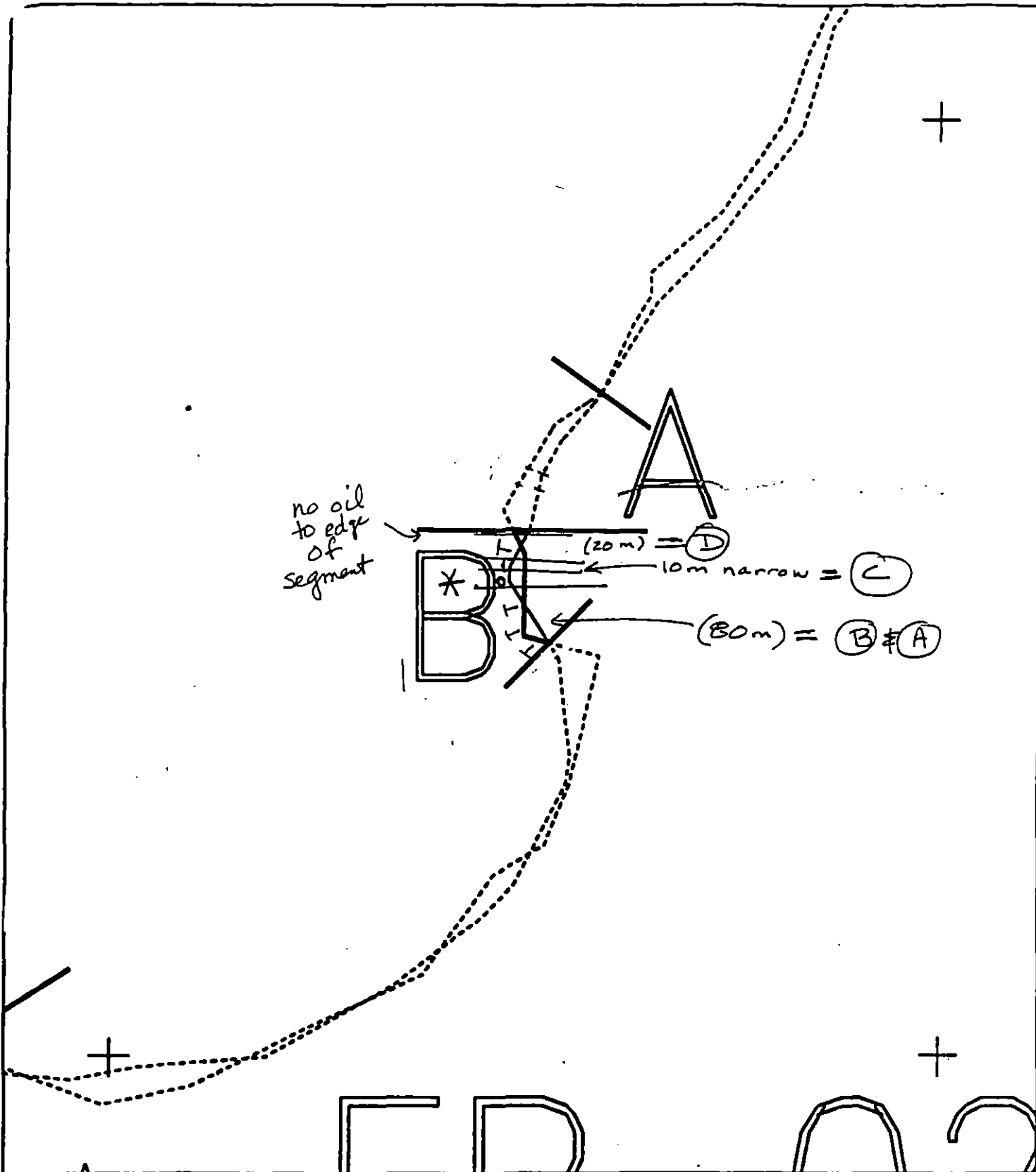
TO BE COMPLETED IN ALL SUBDIVISIONS

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

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

Shoreline subdivision map showing important biological features attached.

Reviewed: ME 5/10/91



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

ER002 B
 ADEC Subsegment Length: 95m
 METERS

AK State Plane Zone 4
 par002b



Subdivision Field Map
 Map Key: PWSE002B
 Name: Chavez (JY)
 Date: 5.16.91
 Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: ER 002 SUB: A REGION: PWS SURVEY DATE: 5/16/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) 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

^

2

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Custombien

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 29 1991

FOSC APPROVAL DATE: 6/5/91

ADEC

EXXON

USCG

NOAA

FOSC

~~EE~~ ~~PAGE~~ CDR USCG

CHIEF OF STAFF, FOSC

→ The staff will evaluate the need for further treatment.

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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. 5 SEGMENT ER-2 SUBDIVISION A DATE 5, 16, 91

ADEC

NAME John Hoyer SIGNATURE [Signature]

☐ NTR ☒ TREATMENT RECOMMENDED



Recommend small manual crew pick up AP observed in section E band continue into ER-002B recommend both sites be worked together.

EXXON

NAME JOHN DEAN SIGNATURE [Signature]

☒ NTR TRACES OF COAT + STAIN CAN BE FOUND BEHIND + BETWEEN BUILDINGS AND IN BEDROCK CRACKS. ANY WORK WOULD YIELD INSIGNIFICANT OIL WITH LIKELY HARM TO ABUNDANT + HEALTHY BIOTA.

LANDMANAGER

NAME Steve WARD OF CVC/FS SIGNATURE [Signature]

☐ NTR Section - E on this sub-div. can use some manual pick-up by chenequa or Veco, there is a thin band of asphalt that doesn't need to be left there. quick work and this sub. will be ok again. Also sub-surface oil in pit #5 is in this section. so again it needs work

USCG/NOAA

NAME DREHER/CLINE SIGNATURE [Signature]

☒ NTR Observed hard, very weathered, stable asphaltic band. Further removal attempts would be more harmful to the environment than the oil residue to be removed.

Very light oil in this subdivision - the only further treatment that might be helpful is in oiling site E; however note the bio. map for this area - (hermit crabs). Care should be used if this site is treated. DVC

5

TEAM NO. 0

OG CHANEY

BIO CRANK

SEGMENT ER-2

ADEC HAYES

LANDMANAGER WARD for CVC

SUBDIVISION A

EXXON DEAN

USCG/NOAA DREHER/CLINE

DATE MAY, 16 191

TIME 11:45 to 12:50

TIDE LEVEL 1 ft. to 5 ft.

ENERGY LEVEL: ☐ H ☒ M ☐ L

SURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 662 m

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

EST. OIL CATEGORY LENGTH: W m M m N m VL 131 m NO 531 m US 0 m

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

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

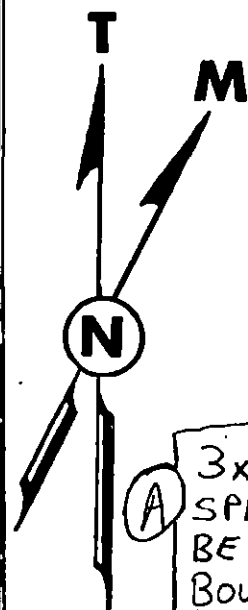
PHOTO ROLL # MAYSAP- 5 - 17 FRAMES 18-22

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

OG COMMENTS: (E) NARROW DEFINED BAND PATCHES SOR to AP. ANGULAR MATRIX OF PEBBLES AND GRANUAL. PHOTO #21 OF ONE PATCH, PHOTO #22 OF ANOTHER PATCH WHICH IS ALSO PIT #5. HOR IS VERY LIMITED IN EXTENT. IT IS CONFINED TO SMALL PATCHES IN A BAND UNDER BOULDERS.

REVIEWED: MC 5/20/91 SC revised 5/19

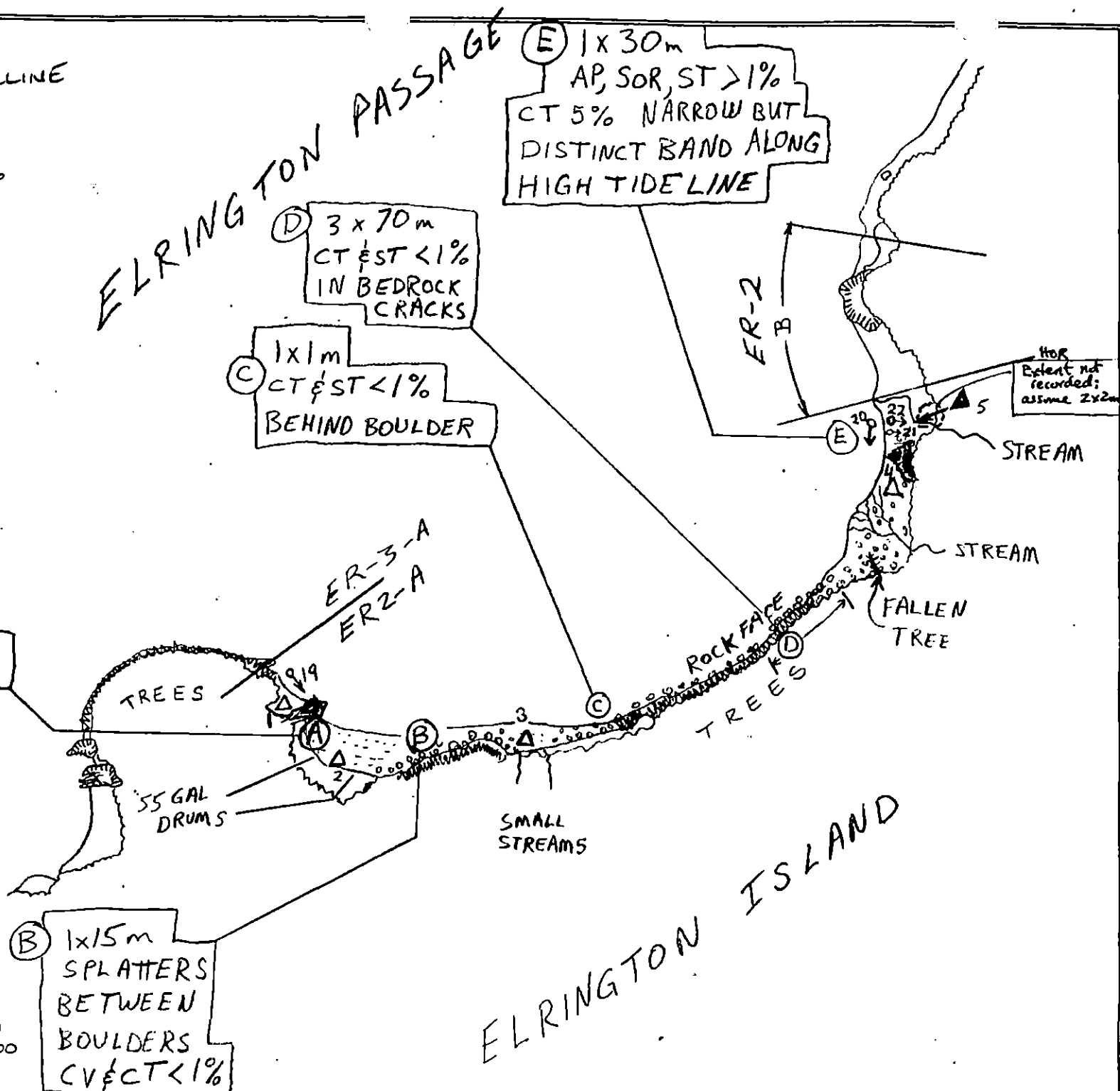
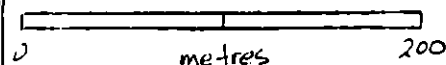
MA IP 1991
 OG SKETCH MAP
 GREG CHANEY/DON CLINE
 TEAM 5
 SEGMENT: ER2-A
 DATE: MAY 16 1991
 AIR P.#: PIM-C COS-116



LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE



MAYSAP BIOLOGICAL SUMMARY FORM

pg 1 of 3

TEAM # 5

DATE

16 MAY 1991

SEGMENT # ER-2

TIDAL HEIGHT(Range) +1 → +5

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 0

WIND SPEED/DIRECTION no wind

PHOTOGRAPHS: ROLL #

FRAME #

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

(A) Area is located high in the MITZ along a steep, angular boulder beach border. Within the site there are sparsely concentrated *Littorina* and limpets, rare barnacle (adult and juveniles) and black lichen covering <1% of the surface. Below the site in the MITZ, *Fucus*, mussels and nudibrachs are sparsely concentrated. *Littorina* and limpets are dense and *Endocladia* (alga) is rare. Biota cover is ~20%. In the LITZ biota cover is ~60%. Algae is dark red. Bladed and filamentous reds and greens are present as well as *Odonthalia* and sparse *Fucus*. Mussels and barnacles are still sparsely concentrated. *Littorina* and limpets are still dense with a heavy concentration of juveniles. Prickleback fish are common under small boulders.

(B) Site is in the MITZ. Biota is similar to site A. *Fucus* concentration within the site has increased to sparse and in the MITZ has increased to moderate. Biota cover in the MITZ ~60%.

(C) Site is located high on steep graded boulders and bedrock. Area is shaded and protected. Barnacles are found on the undersides of cobble talus. Tar spot algae and *Endocladia* are present. *Fucus* is sparse and *Littorina* and limpets are dense. Biota cover is ~30%. Directly below the site, *Odonthalia* (an alga) is dense. *Fucus* is sparse to moderate and *Halosaccion* (an alga) is present. Limpets and *Littorina* are dense and barnacles are sparse. Biota cover is ~80%.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2	Pricklebacks
Seabirds	1	2	
Waterfowl			
Gulls/Kittiwakes			
Shorebirds	1	1	
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: MC/S. 10-91
P. 1.1. 1.1. 1.1

Team # 5
Segment # ER-2
Subdivision A
Sea State 0

Date 16 May 1991 pg 2 of 3
Tidal Height +1 $\rightarrow$ +5
Biologist Crank
Wind Speed / Direction no wind

Comments (cont.)

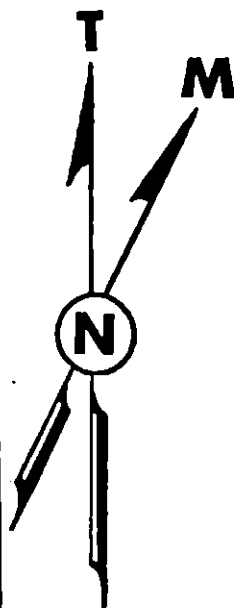
(D) Area is located in the UITZ, Biota is similar to area C.

(E) pit 5 Area is located in the UITZ. Black lichen encrusts approximately 40% of the surface sediments; sparse limpets and Littorina cover <10% of the sediment surface. Two meters below the site, approximately at the +6' tide level, there is a 1m band of moderately concentrated Fucus with maturing conceptacles. Barnacles have a sparse to moderate concentration. There are dense Littorina with egg masses and large limpets. A sparse concentration of juvenile dog whelks (Nucella) is also present. Mussels are moderate to sparse. Hermit crabs are present near the waters edge.

This subdivision has a strong recruitment in the gastropod populations. Recruitment is also present in the barnacle, mussel and algae populations. Biota does not appear to be adversely affected by present oiling conditions.

MA 1991
 OG SKETCH MAP/Bio Map
 GREG CHANEY/DON CLINE/Crank
 TEAM 5
 SEGMENT: ER2-A
 DATE: MAY 16 1991
 AIR P.#: PIM-C COS-116

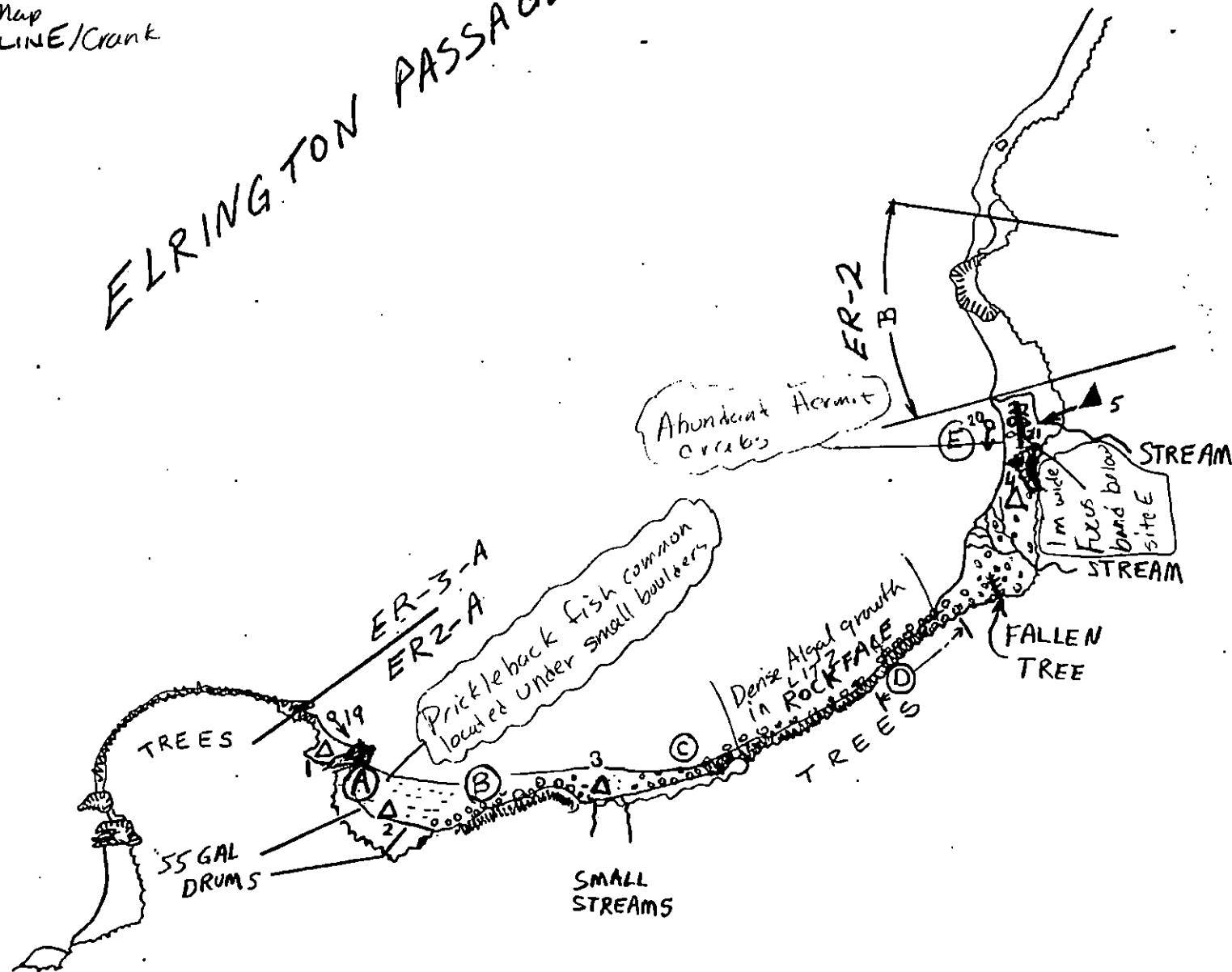
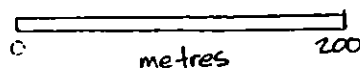
ELRINGTON PASSAGE



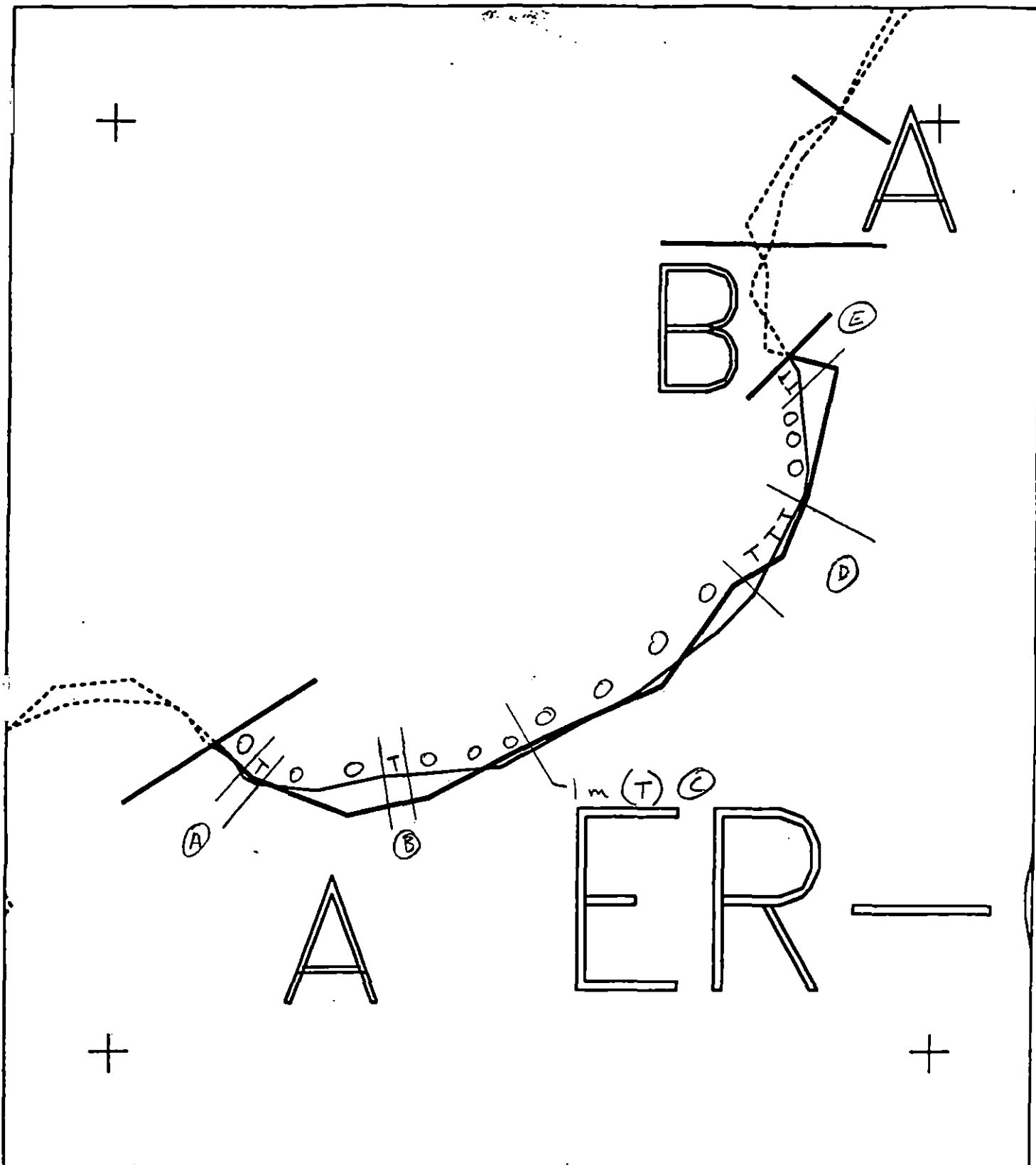
LEGEND

BEDROCK	
BOULDERB	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE



REVISOR: 5/20/91 M.C.



XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

ER002 A

ADEC Subsegment Length: 662m
METERS

5 100 200
AK State Plane Zone 4
per002a



Subdivision Field Map

Map Key: PWSE002A

Name: CHANEY

Date: MAY 16 1991

Date Entered:

REVIEWED: MC 5/20/91 ECR/WRD 5/19

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-03

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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 48 m: No Oil 2984 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / ER-3 SUBDIVISION: A DATE 06 APR 90

USCG

NAME LARRY FLETCHER SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME DAVID 122-SNE SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

30/18

SHORELINE OILING SUMMARY

REVISION NO. 02/22/88

OG R. Marty USCG LARRY FLETCHER SEGMENT ST/ ER-03
 BIO S. Smith LAND REP Leah Carlson SUBDIVISION A
 EXXON J. Czarnicki ADEC Dave Sade TIME 07:16 to 09:00
 TEAM NO.: 10 TIDE LEVEL: 1.2m (3.8') to +2.0m (6.5') DATE 04/06/90
 EST. SUBDIVISION LENGTH: 3072 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SW to NE
 SURFACE SEDIMENTS: R 50 % B 20 % C 10 % P 10 % G 5 % S 5 % M % V %
 SLOPE: Long % Hang % Vert % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W m M m N m VL 48 m NO 3024 m

SURFACE OIL

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

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

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

DEBRIS COLLECTED ☒ YES ☐ NOTYPE Snare boom 'pom pom'#BAGS 1

Photographs:

Roll No 21108Frames 14-23PITS
SUBSURFACE OIL

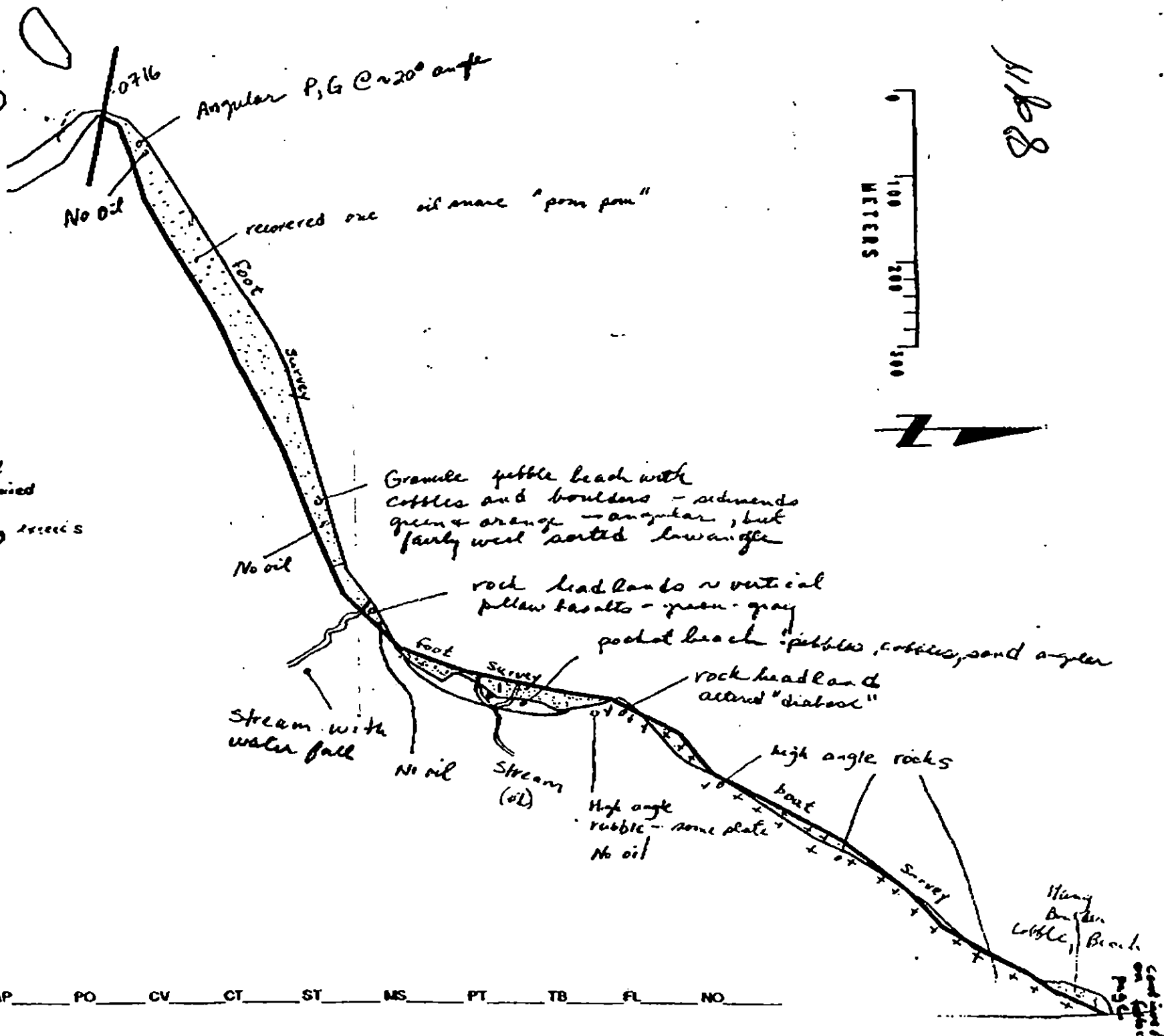
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm - cm) (90-910)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		SP. OF	FE. CR	CO. OL	FL. OF	NO		UP	DO	1	2	3	4	5	6	SU	UI	M	U		
1	6					X	.									X				N	S, G
2	13					X	.										X			↓	S, G
							.														
							.														
							.														
							.														

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

Revision

RM 4/6/90

29/11



OG Party

SEGMENT ST/ER-3

SUBDIVISION A (pt)

DATE 6 April 90

CHECKLIST

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

LEGEND

- 1 Δ
- PR - ~~Showing~~ Showing Base of oiling
- 2 Δ
- PR - ~~Downward~~ Downward extent of oiling determined
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Splashed Distribution
- Oiled Vegetation
- 1 $\rightarrow$
- Photo location, direction, and number

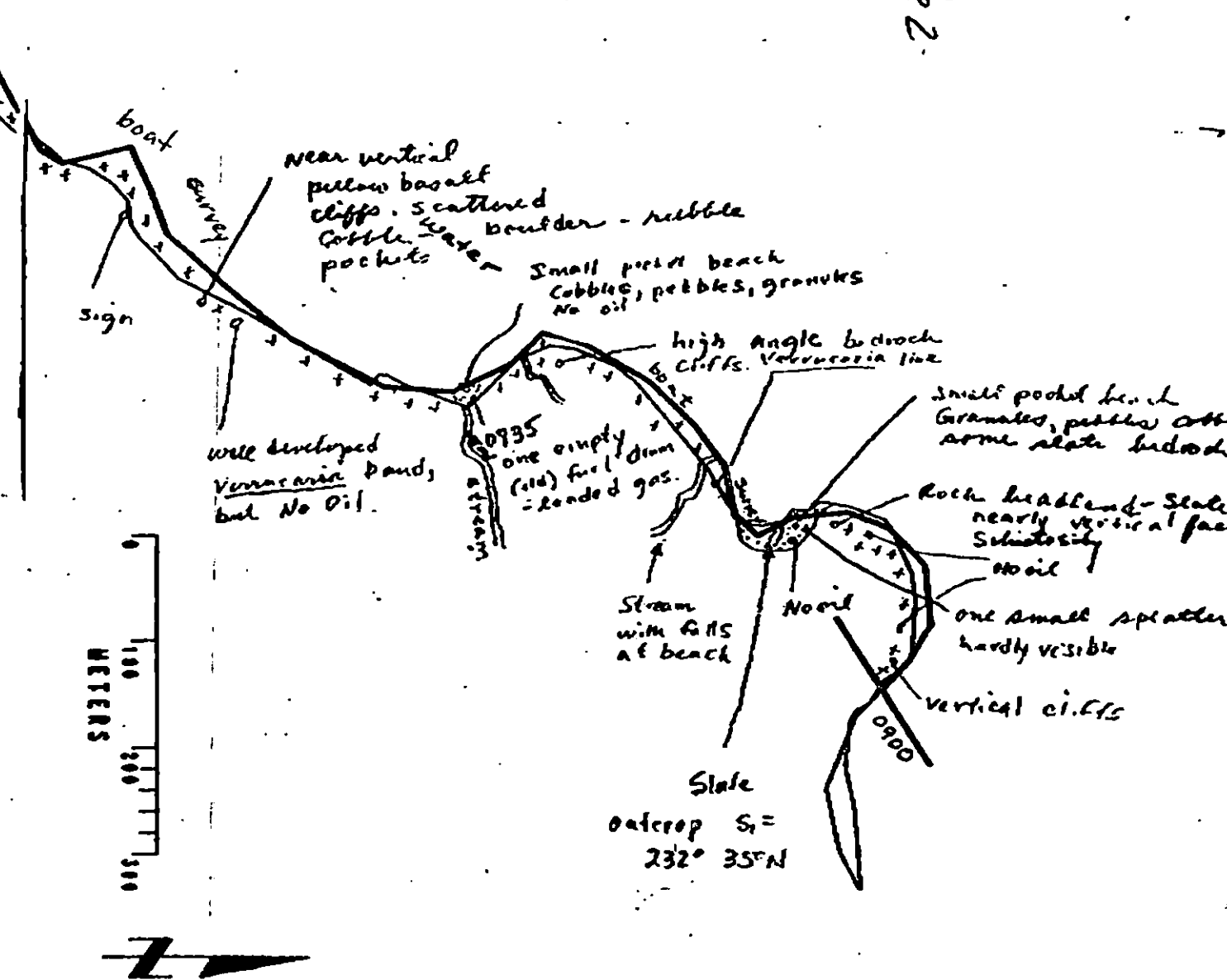
SKETCH MAP

882

No Oil

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

Cont. from previous page



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

REVISION: 03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 05/22/98

Segment ST/10/ER3 Subdivision F Date (mo/day/yr) 4/6/90
 Time (24 hr) 0700 - 2200 Biologist Leman 4°C, wind 16 mph NE, cloudy

- (A) Substrate type and % of segments:
 (1) Bedrock 50 (2) Boulder 20 (3) Cobble 10 (4) Pebble 10 (5) Sand 0 (6) Silt
- (B) Overall % cover of biota (% of segment): Dense Moderate 60% Low
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (O)

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

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

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

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

22/8

ER-

No 19.1" 2865m 3024m
V Light 0.3" 45m 48m
2910 3072

↓ PWS 167B

4 of 08

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-3

ADEC Segment Length: 3031m

0 100 200 300
METERS

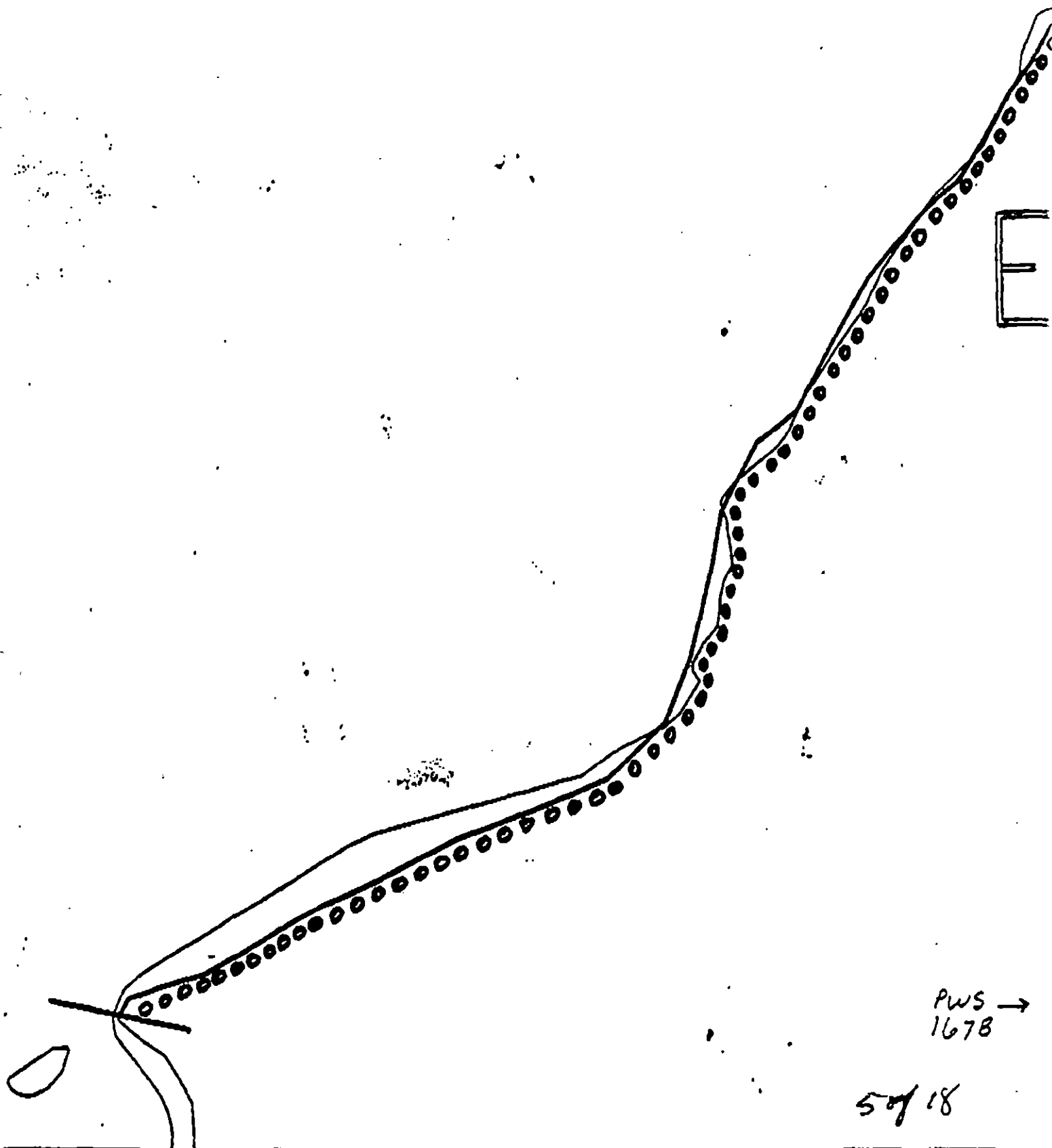


Map Key: PWS-167d

Name: Rich Marty

Date: 6 April 1990

Date Entered:



XXXX Wide.

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-3

ADEC Segment Length: 3031m



METERS



Map Key: PWS-1678

Name: Rich Marty

Date: 6 April 1990

Date Entered:

R-03

← PWS 167A

6 of 18



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ER-3

ADEC Segment Length: 303m



METERS

Map Key: PWS-167b

Name: Pick MartyDate: 6 April 1990

Date Entered:

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

7JJ Subsistence area: Invertebrate harvesting

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles H. Dineen DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 48 m: No Oil 2984 m
Subsurface Oil Observed: Yes No 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: 4/13/90

ADEC JOHN BAUER

EXXON ANDY TAYLOR

NOAA Bruce Wescott

USCG KENNETH KEENE

FOSC: DATE: 4-25-90

OG R.M.

SEGMENT ST/ ER-3

SUBDIVISION A (el)

DATE 6 April 90

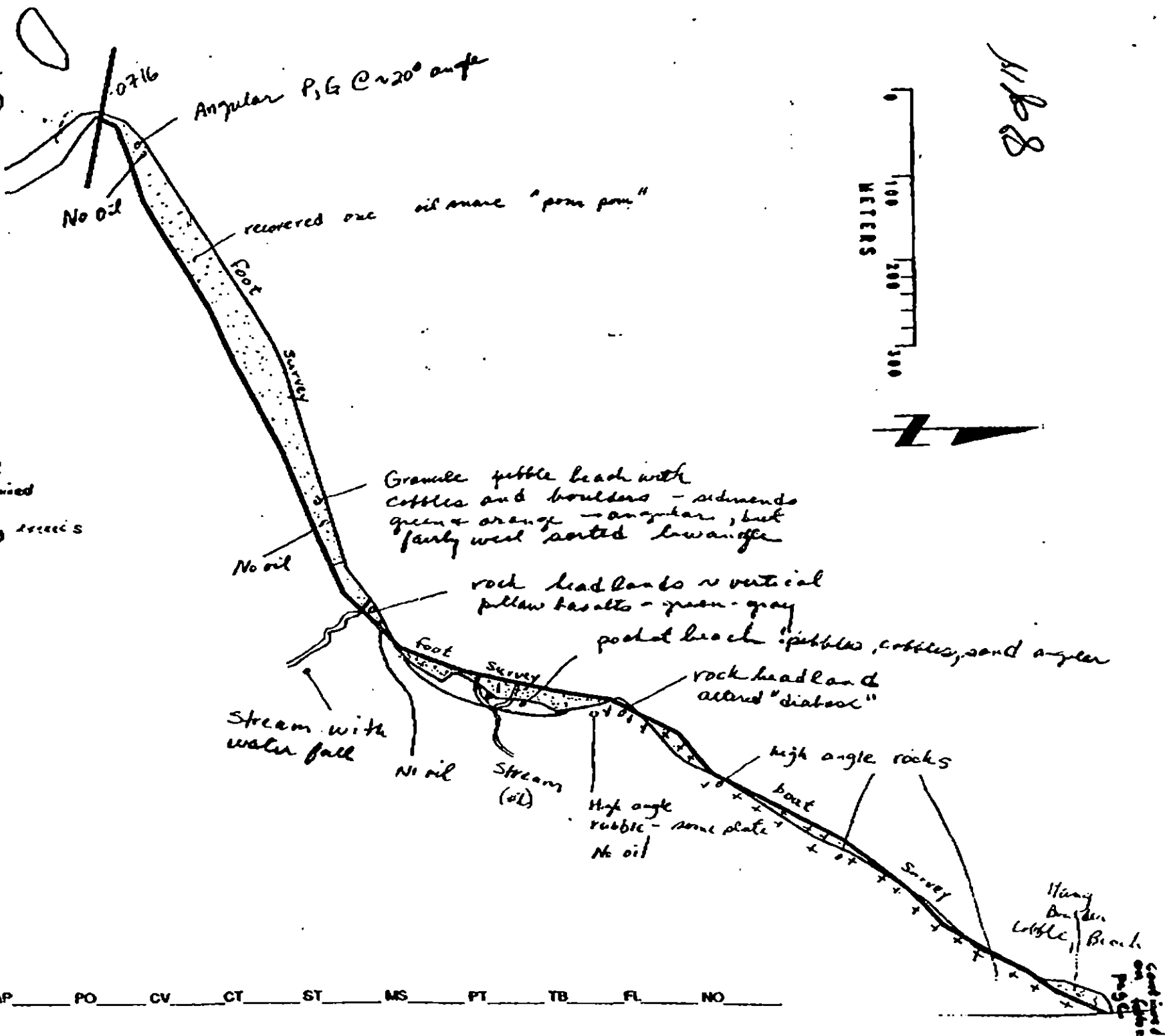
CHECKLIST

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

LEGEND

- 1 Δ Downward extent of oiling determined
- 2 Δ Bottom of oiling series pit depth.
- CT/C Continuous Distribution
- CT/B Broken Distribution
- CT/P Patchy Distribution
- CT/S Splashed Distribution
- Oiled Vegetation
- Photo location, direction, and number

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



OG R erty

SEGMENT ST/ ER-3

SUBDIVISION A (pt)

DATE 6 April 90

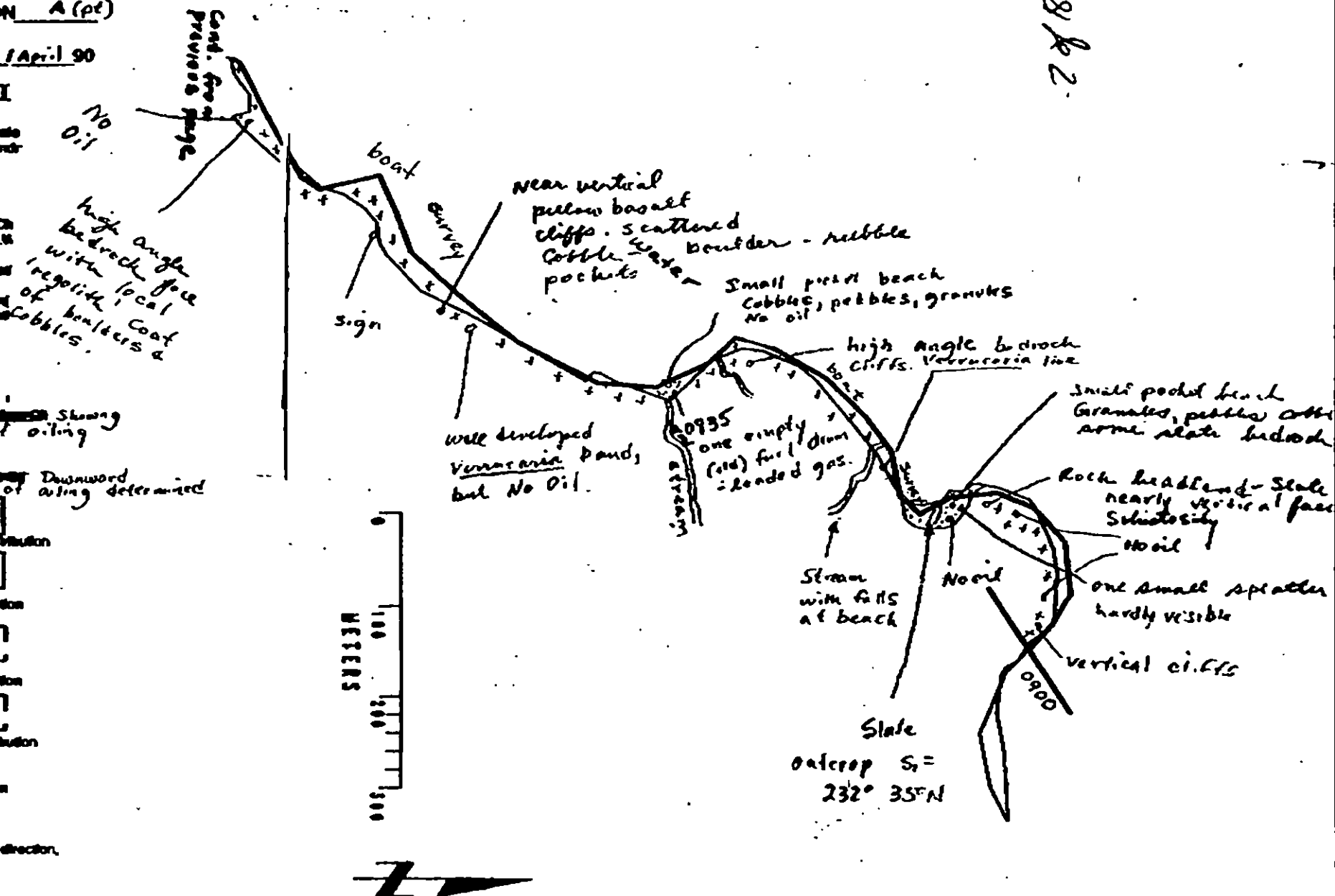
CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Symbols Used
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Ch
- ☐ Est. HAZARD
- ☐ SSL
- ☐ Profile Locat
- ☐ Profile(s)
- ☐ Pit Location
- ☐ Photo Locat

LEGEND

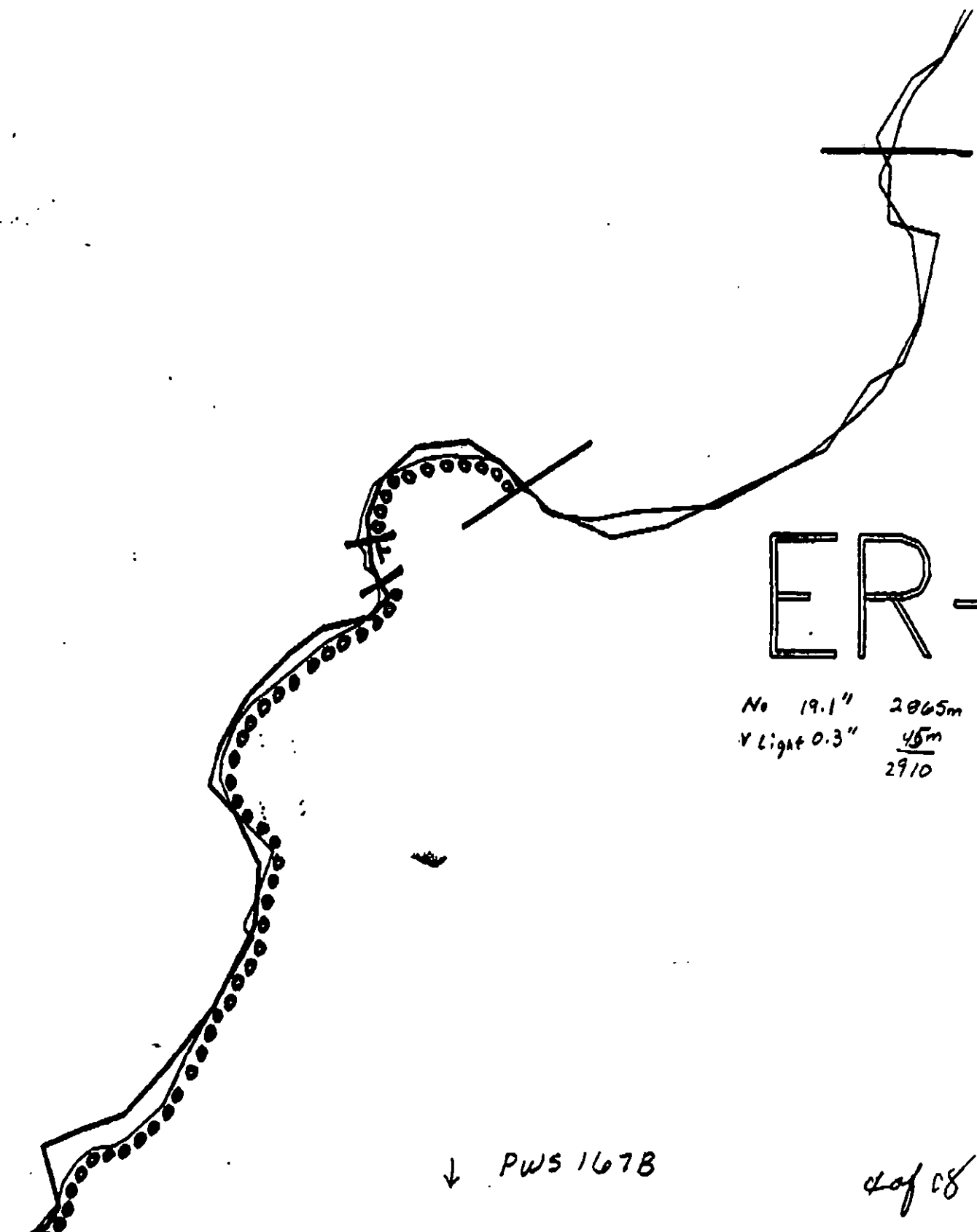
- 1 Δ
- Pt - ~~Shallow~~ Showing Base of oiling
- 2 Δ
- Pt - ~~Shallow~~ Downward extent of oiling determined
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Splashed Distribution
- Oiled Vegetation
- 1 $\Rightarrow$
- Photo location, direction, and number

SKETCH MAP



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

REVISION 032400



ER-

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

↓ PWS 167B

4 of 08

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-3

ADEC Segment Length: 3031m

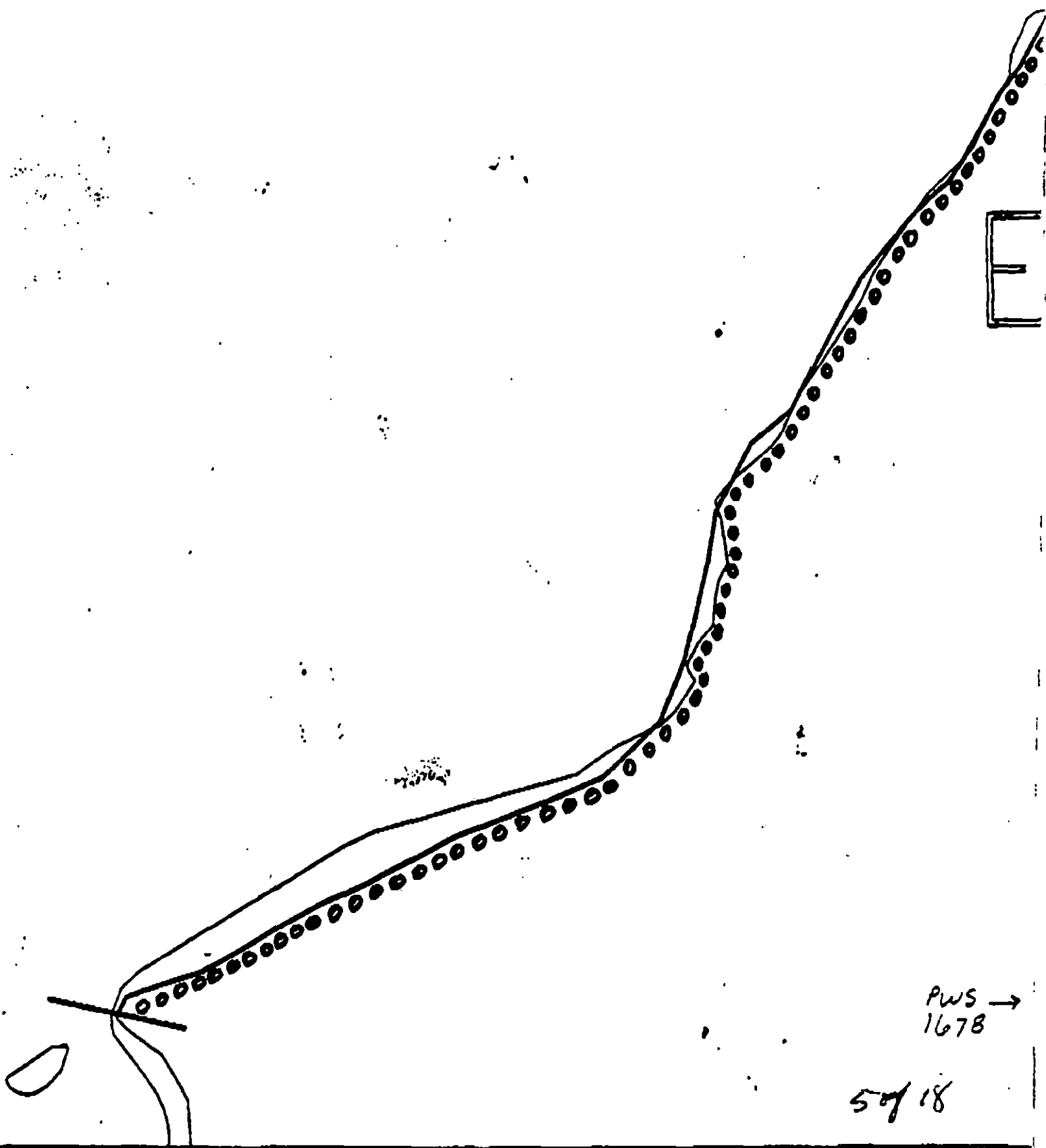


Map Key: PWS-167B

Name: Rich Marty

Date: 6 April 1990

Date Entered:



XXXX Wide.

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ER-3

ADEC Segment Length: 3031m



Map Key: PWS-167a

Name: Rich Marty

Date: 6 April 1990

Date Entered:

R-03

← PWS 167A

6 of 18

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ER-3

ADEC Segment Length: 303m



Map Key: PWS-167b

Name: Pick MartyDate: 6 April 1990

Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: EV 003 SUB: A REGION: PWS SURVEY DATE: 4/26/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest, Fish harvest area, Anadromous stream, Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Charles E. Holmes Date: 5/10/91

RECOMMENDATIONS:	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>n</u>	<u> </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>	<u> </u>
Other <u> </u>	<u> </u>	<u> </u>	<u> </u>

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 10 1991 FOSC APPROVAL DATE: 5/15/91

ADEC John Bauer FOSC E. E. Page

EXXON E. E. PAGE, CDR, USCG

USCG CHIEF OF STAFF, FOSC

NOAA

The state will evaluate in the need for treatment at this subdivision John Bauer

**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.

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.

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT EY-3 SUBDIVISION A DATE 4/26/91

ADEC

NAME John Hoyer SIGNATURE [Signature]

☐ NTR ☒ Treatment Recommended

Portion of segment observed consisted of three pocket beaches, 2 pocket beaches to the North need additional AP pickup in areas A, F, + G identified on sketch map. Recommend sites for cleanup LAP as AP + TB's are easily recoverable + both sites have berms which may still have OSR debris, team does not have time for debris search.

EXXON

NAME Martinez N.J. SIGNATURE [Signature]

☒ NTR

Beach coming back very well. There is a little pick up work that would be good for local response group. Outside of that. I think no other work is needed.

LANDMANAGER

NAME Steve WARD OF CVC SIGNATURE [Signature]

☐ NTR

Very little Sub-Surface-Remains. Amount of Asphalt and Debris makes this Area a perfect Local Response Project. See ADEC Notes for Location.

USCG/NOAA

NAME HODGES/DREHER SIGNATURE CWO K. L. Hodges

☒ NTR

Observed no mobile oil nor sheening. Any additional cleaning would be detrimental to the local ecology.

Small ~ 8cm tar ball and oiled sediment within a rock layer was the only oil observed. Considering the area of this segment, very little oil noted.

TEAM NO. 5

MAYSAP SHORELINE OILING SUMMARY

PAGE _____ OF _____

OG CHANEY

BIO CRANK

SEGMENT EV-3

ADEC HAYES

LANDMANAGER WARD for CVC

SUBDIVISION A

EXXON MARTINEZ

USCG/NOAA DREHER/HODGES

DATE April 26/91

TIME 16:15 to 17:50

TIDE LEVEL 5 ft. to 1 ft.

ENERGY LEVEL: ☐ H ☐ M ☒ L

SURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 240 m

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

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 30 m VL 100 m NO 134 m US 383 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	T				T	S					R	M	1	5		✓			Asphalt patche PU
B					T						R	M	1	5		✓			in bedrock cracks
C						B					B	L	0.3	15		✓			Bed rock face
D					T						B	L	4	10			✓		in cracks on boulders
E					T						B	L	3	3		✓			on boulder
F					T						R	M	1	1		✓			on bedrock crevise
G	S										B	L	1	15	✓				distinct patches
H					B						R	M	0.5	10		✓			in bedding planes
I					T	P					R	H	0.3	10		✓			coat on rock face
J					B						R	H	0.5	5		✓			same
K					T	P					B	M	5	1		✓			large boulders
L					T	T					B,R	M	1	10		✓			
M					T						R	L	0.1	1.5		✓			

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- 5 - 1 FRAMES 1-12

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							✓	-					✓			P-PCG	
2	30							✓	-					✓			P-PCG	
3	15							✓	-						✓		S-SPC	
4	30							✓	-						✓		P-PGS	
5	20							✓	-		10	-		✓			B-BPG	
6	10			✓				✓	0-10		0	-		✓			B-BCG	possibly 5m ²
7	25							✓	-		5	-		✓			GB-GB	
8	35							✓	-					✓			G-G	
9	25						✓		0-20		10	S			✓		C-CG	

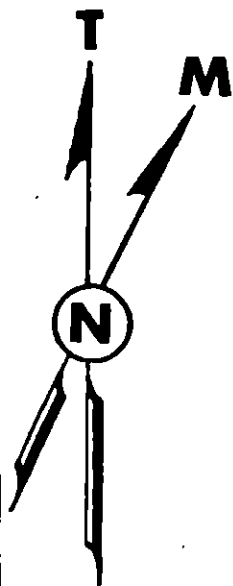
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS:

REVISED: MC 5/4/91

REVIEWED: F.W. 5/2/91

MAY8AP 1991
 DG SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV-3-A
 DATE: APRIL 26 91
 AIR P.#: PIMC 005 236

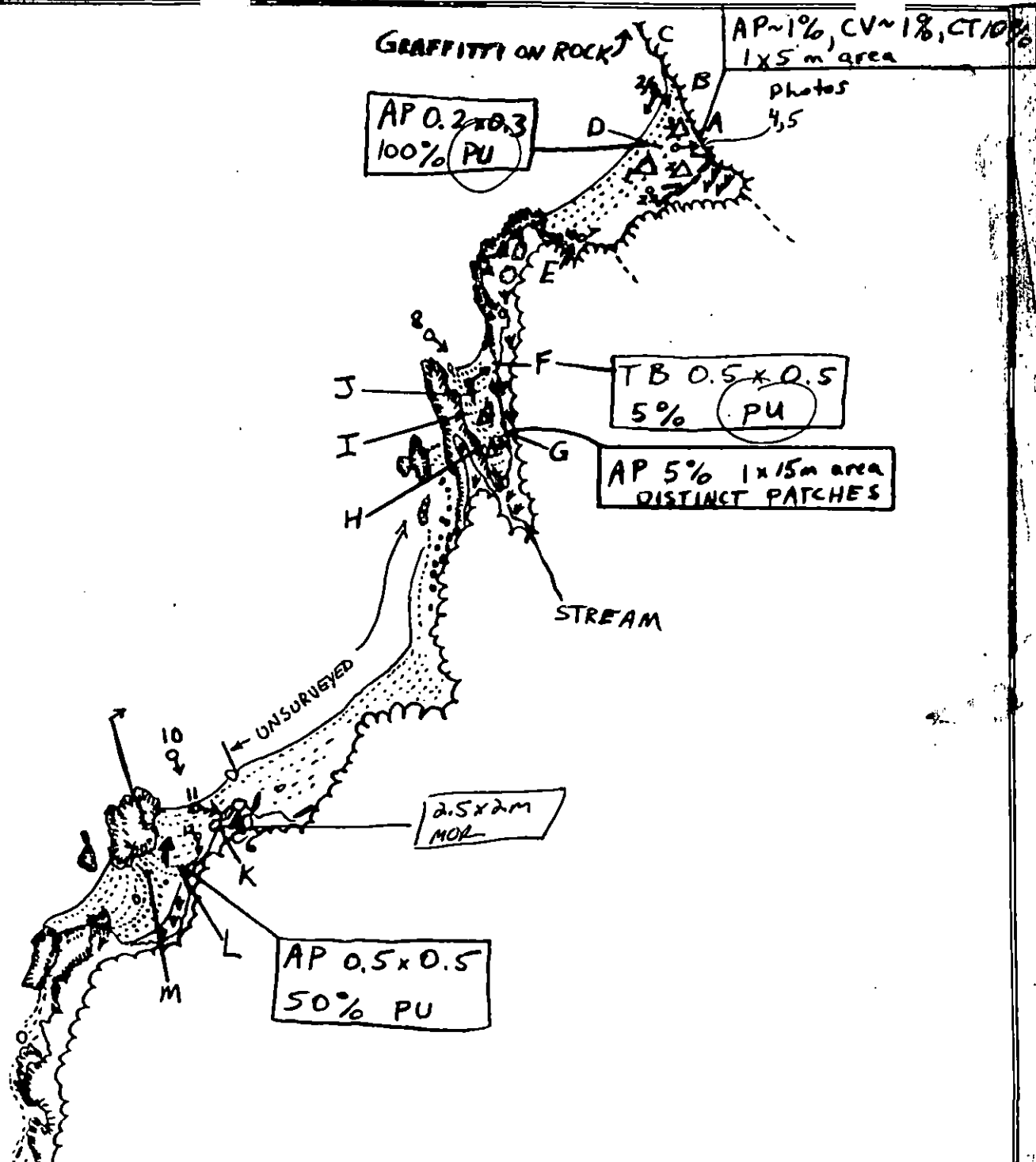


LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE

APPROX. 100
 METERS



Reviewed: F.W. Slaty
 Remsco: M.C. 5/2/91

MAYSAP BIOLOGICAL SUMMARY FORM

pg 1 of 4

TEAM #5

DATE 26 Apr '91

SEGMENT # EV-3

TIDAL HEIGHT (Range) ~+6 → +2

SUBDIVISION A

BIOLOGIST Crank

SEA STATE < 1'

WIND SPEED/DIRECTION Ø → 5mph direction unknown

PHOTOGRAPHS: ROLL #

FRAME #

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

(A) Area located high in U1T2; no intertidal organisms in immediate vicinity. Mosses are present on rock face and boulder shoulder ranging in color from green to dark red. Some oil was picked up by Veco worker with no ecological disturbance.

(B) Area located low in U1T2 along N cliff face and boulder shoulder. There is a sparse to moderate adult barnacle population with a new set present. Patches of *Fucus* with maturing conceptacles, a continuous 1/2 m wide band of mussels along cliff face with several age classes, and a sparse *Littorina* population with a new set. Biota appears healthy.

(C) Area located low in U1T2 among boulders. There is a dense *Fucus* population. Maturing conceptacles are present. Area is also being heavily recruited by barnacles as well as being recruited by mussels. A sparse to rare limpet population is present.

(D) Area located in M1T2. Sparse barnacles (adults and spot new set present). Mussel patch with several age classes. Patch (<5cm) of *Sargassum* (algae). Asphalt was picked by Veco worker with no ecological disturbance.

(E) Area is located on S rock outcrop and boulder shoulder. There is a moderate to dense *Fucus* bed with maturing conceptacles. Patches of mussels are located at the boulder bases and in the cobble next to the boulders, various age classes. There is a moderate barnacle population with rare to sparse recruitment. There are patches of *Rhodomek larin*; *Obolothalia* (algae) and rare to sparse limpets and *Littorina*. Ribbon worms are present under cobbles.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	Ø
Seabirds	2	3	
Waterfowl	2	3	
Gulls/kittiwakes	1	1	
Shorebirds			
Corvids			
Other Birds			

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters	1	(Deer)	(Scat only)
Pinnipeds (specify)			
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed shlar nm

Team #5

Date: 26 Apr '91

pg 2 of 4

Segment: EV-3

Tidal Height: $\sim +6 \rightarrow +2$

Subdivision: A

Biologist: Crank

Sea State: < 1'

Wind Speed/Direction: 0 $\rightarrow$ 5 mph/unknown

Comments (continued)

Areas A $\rightarrow$ E are located on a single pocket beach. Sparse biota coverage in the MITZ consisting mainly of barnacles, mussels, Fucus and filamentous greens and Scytosiphon^(algae) on angular cobble and boulders.

Barnacles were not tightly sealing their inner plates when stimulated. Other biota appeared to be healthy.

(F) Area is located in the MITZ on the protected side of the N cliff. Dominant biota present is barnacles; Littorina are rare. Biota appears healthy.

(G) Area is located in the SUPRA. There are rare mosses and lichens. No intertidal biota present.

(H) Area is located low in the MITZ on the protected S. cliff face. There is a moderate to dense Fucus band ($1/2 \rightarrow 1$ m wide) directly below the oil. There is moderate Fucus sporlings and sparse to rare mature plants w/ ^{maturing} conceptacles. Barnacles are rare to sparse and rare mussels are found at the boulder bases and in cracks and crevices. Littorina and limpets are sparse with pockets of moderate concentrations.

(I) Site is located low in the MITZ on the exposed side of the S cliff face. There is a moderate to dense barnacle population; sparse limpets and rare (with sparse pockets) mussels and Fucus.

Team: #5

Date: 26 Apr '91

pg 3 of 4

Segment: EV-3

Tidal Height: $\sim +6 \rightarrow +2$

Subdivision: A

Biologist: Crank

Sea State: <1'

Wind Speed/Direction: 0 $\rightarrow$ 5 mph / unknown

Comments (continued)

(J) Area is located low in the UITZ. There is a sparse $\frac{1}{2}$ m wide mussel band and a sparse 1 m wide barnacle band in the area. Only a few Fucus plants are present and they have maturing conceptacles. Littorina and limpets were also present.

Areas F $\rightarrow$ J are located on a single pocket beach. There is a continuous 1 m mussel band on the exposed side of N cliff face with various age classes. Majority of barnacle did tightly seal their inner plates when stimulated. Anad Stream 226-40-16590 is located on this beach. Deer scat present adjacent to stream in the low SUPRA. Intertidal biota appears healthy.

(K) Area is located in UITZ boulders. There is a tide pool 1 m west of site with 5 anemones, rare coralline algae; mussels. Within the site barnacles are rare. Mussels are also rare and the majority are juveniles. Filamentous green algae ~~present~~ in small patches (<10 cm). Below the site MITZ has moderate coverage of Fucus with maturing conceptacles present. Moderate barnacles with spat and moderate Littorina are found underneath Fucus plants. Mussels are present in the cobble near the boulder bases.

(L) Area is located at the bottom edge of the SUPRA and upper edge of the UITZ. Intertidal biota is not present.

Team #5

Date: 26 Apr '91

pg 4 of 4

Segment: EV-3

Tidal Height: $\pm 6 \rightarrow +2$

Subdivision: A

Biologist: Crank

Sea State: <1'

Wind Speed/Direction: 0 $\rightarrow$ 5 mph / unknown

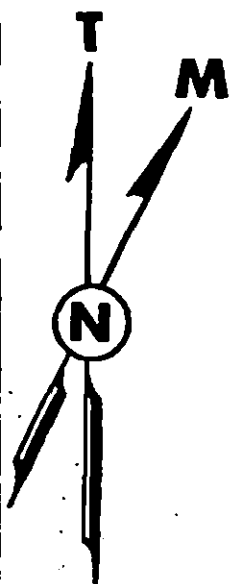
Comments (cont.)

(M) Area is a rock outcrop low in the U1Z. There are sparse barnacles and a 1x2 m patch of Fucus at the base of the rock. Sparse Littorina and limpets are present and rare mussels are found in the crevices.

Areas K $\rightarrow$ M are on a single pocket beach. The rock outcrops at $\approx +2 \rightarrow +4$ tidal range have a dense biota coverage. Adult, juvenile barnacles are present as well as a new set. Both Fucus sporlings and mature plants with active conceptacles are present. Mussels are present in patches found mainly along cracks and crevices. There is a sparse to moderate Littorina and limpet population. Along the angular cobble beach there are sparse adult barnacles with moderate recruits. Littorina and limpets are also moderate. Littorina egg cases are found on the undersides of cobble. Mussels are rare. Small (<3cm) Oligochaete worms are present under cobble. The beach appears healthy. Barnacle did tightly seal their inner plates when stimulated. Biota on this beach does not appear to be adversely impacted by present oil conditions.

MAYSAP 1991
 OG SKETCH MAP Bio Sketch Map
 GREG CHANEY CRANK
 TEAM 5

SEGMENT: EV-3-A
 DATE: April 26 91
 AIR P.#: FM-C-005-236

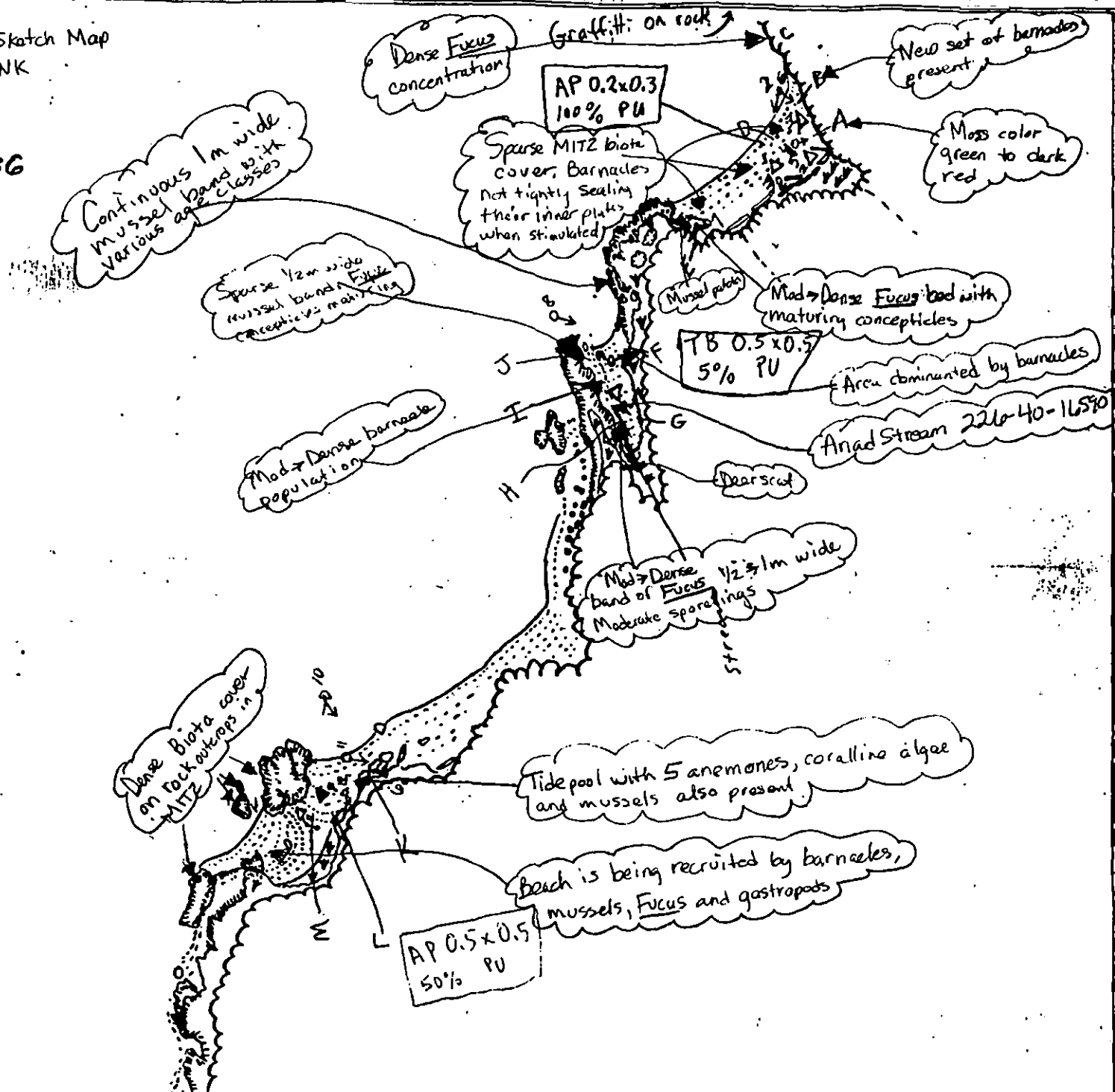


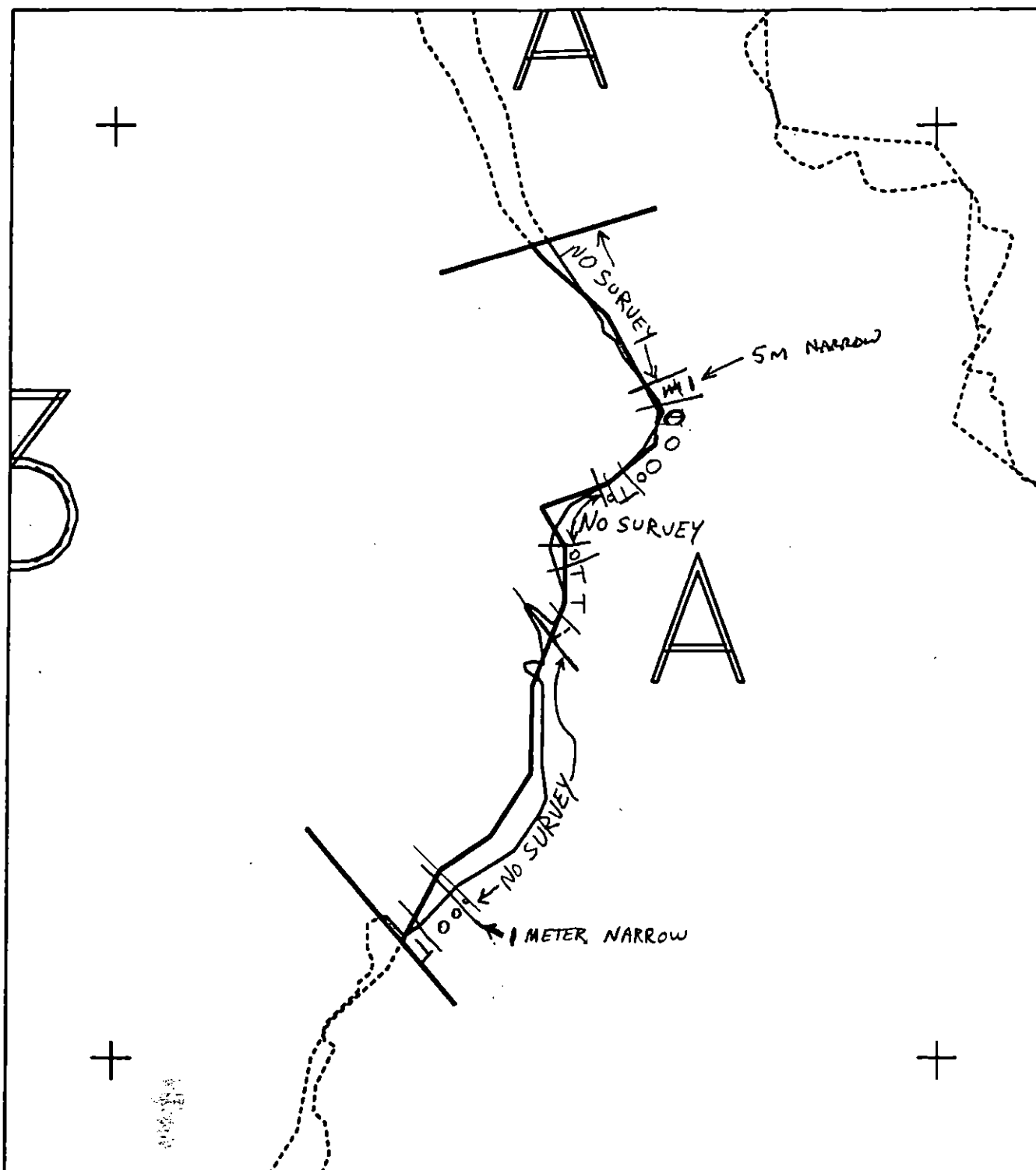
LEGEND

BEDROCK	
BOULDERS	
FINE SED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE

Approx. 100
 METERS





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

EV003 A
 ADEC Subsegment Length: 623m
 METERS
 0 100 200
 AK State Plane Zone 4
 prv003a



Subdivision Field Map
 Map Key: PWSEV003A
 Name: Greg Chaney
 Date: April 27 91
 Date Entered:

REVISOR: ME 5/2/91

REVISED: F.W. 5/2/91

1991 MAYSAP EVALUATION

SEGMENT: ER 004 SUB: A REGION: PWS SURVEY DATE: 5/16/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) 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**

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. 5 SEGMENT ER-4 SUBDIVISION A DATE 5/16/91

ADEC

NAME John Hayer SIGNATURE [Signature]

☒ NTR Very lightly oiled CT/s observed no treatment recommended at this time.

EXXON

NAME John Dean SIGNATURE [Signature]

☒ NTR ONLY OIL OBSERVED CONSISTED OF TRACES OF COAT AND STAIN.

LANDMANAGER

NAME Steve Ward OF CVC/FS SIGNATURE [Signature]

☒ NTR No Sub-Surface oil - Surface oil is scattered cover + stain very lite. no trash observed
NO-BIO

USCG/NOAA

NAME DREHER/CLINE SIGNATURE CWO K.L. Disher [Signature]

☒ NTR No subsurface oiling observed. Only minute traces of CT & ST observed. Any further attempt at clean up of this segment would be counter productive, both environmentally and financially. KLD

Surface oiling was restricted to trace and sporadic coat and stain. No subsurface oiling was located. No further treatment is necessary. Dre

DATE MAY 16 191

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

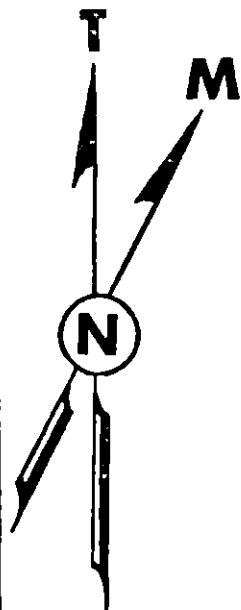
OG COMMENTS:

REVIEWED: F.W. 5/20/91

MAY 1991
 OG SHEET MAP
 GREG CHANEY / DON CLINE
 TEAM 5

SEGMENT: ER4 A
 DATE: MAY 16 1991
 AIR P.#: PIM-C 005-109
 PIM-C 005-110

MAP 1 of 2



ELRINGTON
 PASSAGE

LEGEND

BEDROCK	
BOULDERS	
FINE SED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE



5x25m
 (A) SCATTERED
 DRIPS ON
 BOULDERS
 CT < 1%

(B) 5x10m
 SCATTERED
 DRIPS
 CT < 1%
 ST < 1%

ELRINGTON ISLAND

WHITE
 BEDROCK
 OUTCROP

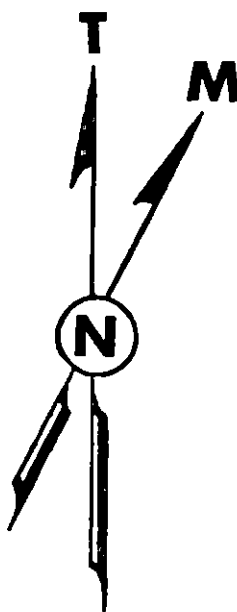
(D) 1x10m
 CT < 1%
 PATCHY CT ON
 BEDROCK

(C) 1x3m
 15% CT
 PATCHY COAT
 ON BEDROCK

Reviewed: R.W. S/20/91
 Reviewed: MC S/21/91

MAP 1991
 OG SKETCH MAP
 GREG CHANEY / DON CLINE
 TEAM 5
 SEGMENT: ER4 A (2 of 2)
 DATE: MAY 16 1991
 AIR P.#: PIM-C 005-109
 PIM-C 005-110

MAP 2 of 2

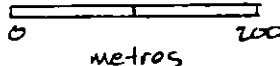


ELRINGTON PASSAGE

LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

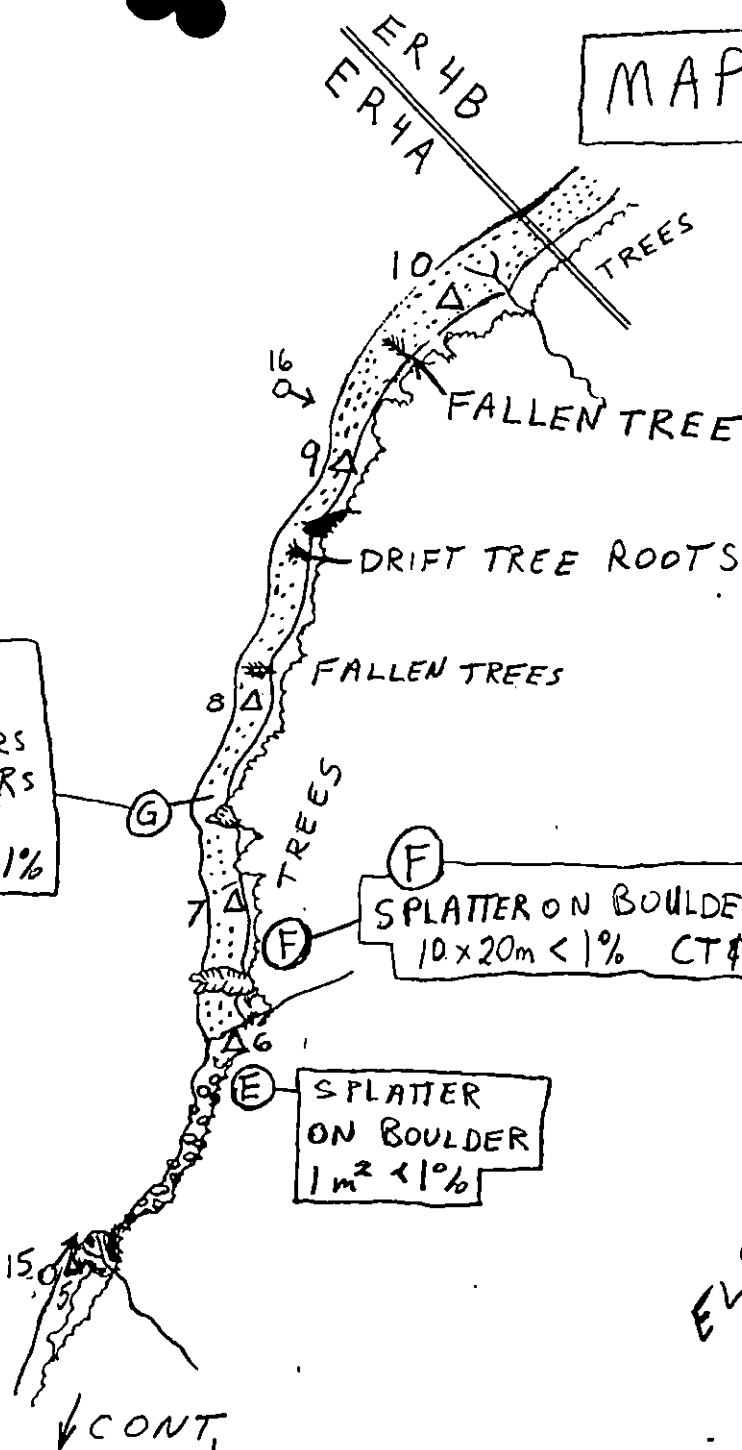
SCALE



5x25m
 SPLATTERS
 ON BOULDERS
 & BEDROCK
 CT 1% ST 1%

10x20m < 1% CT & ST

1m² < 1%



ELRINGTON
 ISLAND

REVIEWED: F.W. 5/20/91
 APPROVED: M.C. 5/24/91

MAYSAP BIOLOGICAL SUMMARY FORM

pg 1 of 3

TEAM # 5

DATE 16 May 1991

SEGMENT # ER-4

TIDAL HEIGHT (Range) -2 to -3.5

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 0

WIND SPEED/DIRECTION No wind

PHOTOGRAPHS: ROLL #

FRAME #

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

(A) Area is located low in the UITZ, in fresh water runoff. Within -10 zone *Fucus*, *Littorina* and limpets have a moderate concentration, barnacles have a sparse density; amphipods are abundant and far spot algae is present. Biota cover is ~100%. In the MITZ, *Fucus* is densely concentrated, barnacles increase up to a moderate density; *Littorina* and limpets remain moderate and there is an occasional mussel. Barnacle spat and *Fucus* sporelings are present. The LITZ is dominated by algae: dense *Odonthalia*, sparse *Fucus* with sporelings; laminarian kelps and bladed and filamentous reds and greens are present. Fauna is present on and under algae. A sparse to moderate concentration of barnacles (acorn and giant acorn); rare mussels; dense *Littorina*, limpets and whelks (*Nucula*); and abundant isopods and amphipods. Biota cover in both MITZ and LITZ is ~80%.

(B) The area is located high in the UITZ. Black lichen covers ~10% of the sediment surfaces. Below the site is a shale granular beach with no to low surface biota cover.

Most of the subdivision has a rich LITZ. Accessing the the granular beach at site B would cause the least ecological disturbance.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2	
Seabirds	3	18	
Waterfowl	2	24	
Gulls/kittiwakes	3	57	
Shorebirds	1	1	
Corvids	1	1	
Other Birds			

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters		Deer, Bear;	
Amphipeds (specify)	1 Sealion	2 Ter Otter tracks	
Whales (specify)	1 Humpback Seal		

Shoreline subdivision map showing important biological features attached.

Team # 5

Segment # ER-4

Subdivision A

Sea State 0

Date 16 May 1991

Tidal Height - 2 → -3.5

Biologist Crank

Wind Speed / Direction No wind

pg 2 of 2

Comments (cont.)

(C) Area is located on the lee side of a bedrock outcrop, next to freshwater runoff, in the ULTZ. In the site, barnacles have a moderate concentration; adults, juveniles and spat are present and the animals tightly sealed their inner plates when stimulated. Limpets have a moderate concentration; several age classes are present and live animals were observed directly on oil. Juvenile Littorina are dense. A rare concentration of Fucus sporelings and juvenile (post-spill) mussels are present. Biota cover is ~50%.

The exposed face of the rock has the same biota. Fucus concentration is increased to moderate with both reproductively active mature plants and sporelings.

Biota cover is ~80%. In addition; the small boulder MLTZ has Halosaccion, Odonthalia and Palmaria algae, dense gastropods (Nucella also present) and sparse mussels. More than half of the mussels present are post-spill age.

Biota cover is ~50%. In the LITZ, algae is dominant covering >95% of the surface. Some of the species present include: Costaria, Lamanaria, Alaria, Desmarestia, Ulva, Enteromorpha, Odonthalia, Phodoglossum, Membranoptera, Ptilota, Palmaria, Halosaccion, Rhodomenia, Cryptopleura and Corallina. Sunflower sea stars (Pycnopodia) were present and amphipods were abundant.

Team # 5
Segment # ER-4
Subdivision A
Sea State 0

Date 16 May 1991 pg 3 of 3
Tidal Height -2 → -3.5
Biologist Crank
Wind Speed / Direction No wind

Comments (cont.)

- (D) Area is located high in the ULTZ. Biota cover is ~5% with dense Littorina and limpets and rare Fucus sporelings. The MITZ and LITZ are similar to site 'C'.
- (E) Area is a 1x1m boulder located high in the ULTZ, next to a runoff stream. Approx. 20cm from the oil splatter there are barnacles, Littorina, limpets and Fucus sporelings covering ~1% of the boulder surface. The MITZ and LITZ are similar to site 'C'.
- (F) Area is located high in the ULTZ. Moss, white and black lichen cover ~1% of the bedrock surface. In the MITZ there is a 4m wide filamentous green algae band covering ~25% of the surface. Sparsely concentrated Fucus, barnacles and mussels and moderately concentrated Littorina and limpets are also present. LITZ is similar to site C.
- (G) Area is located in the ULTZ along bedrock and small boulder and cobble. Barnacles are dominant within the site with a sparse to moderate concentration (several age class present). Littorina and limpets are distributed in dense patches and rare Fucus. Biota cover ranges from 30-50%. The MITZ has dense Littorina, moderate barnacles, sparse mussels and rare Fucus. Biota cover is ~50%. LITZ is similar to site C.

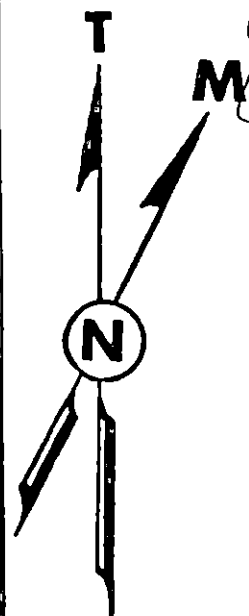
MAP 1991
OG SKETCH MAP/Bio Map
GREG CHANEY/DON CLINE/Crank
TEAM 5

SEGMENT: ER4 A
DATE: MAY 16 1991
AIR P.#: PIM-C 005-109
PIM-C 005-110

MAP 1 of 2

With the exception of the granular beach located below site B, this subdivision has a rich algal community in the lower intertidal with several species of kelps, bladed reds and greens and coralline algae. Biota cover 80-100%

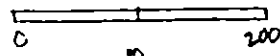
ELRINGTON PASSAGE



LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE



5x25m
A SCATTERED
DRIPS ON
BOULDERS
CT < 1%

B 5x10m
SCATTERED
DRIPS
CT < 1%
ST < 1%

Live limpets observed on
oil. Juvenile Littorina are
dense within site C. Post-
spill age mussels are
15% CT present. Biota cover
in the site ~50%.
1x3m
PATCHY COAT
ON BEDROCK

D 1x10m
CT < 1%
PATCHY CT ON
BEDROCK

Granular/Pebble beach
with low to no surface
biota

ERSA
ER4A

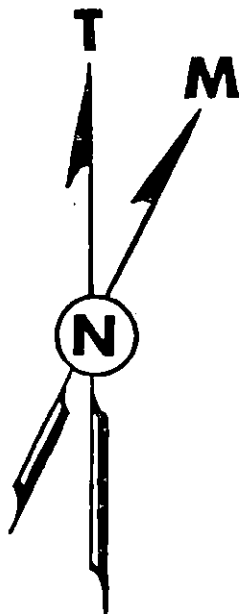


ELRINGTON ISLAND

Fresh water runoff from waterfalls, biota cover is ~40% within site A

MAY 1991
 OG SKETCH MAP / Bio Map
 GREG CHANEY / DON CLINE / Crank
 TEAM 5
 SEGMENT: ER 4 A (2 of 2)
 DATE: MAY 16 1991
 AIR P.#: PIM-C 005-109
 PIM-C 005-110

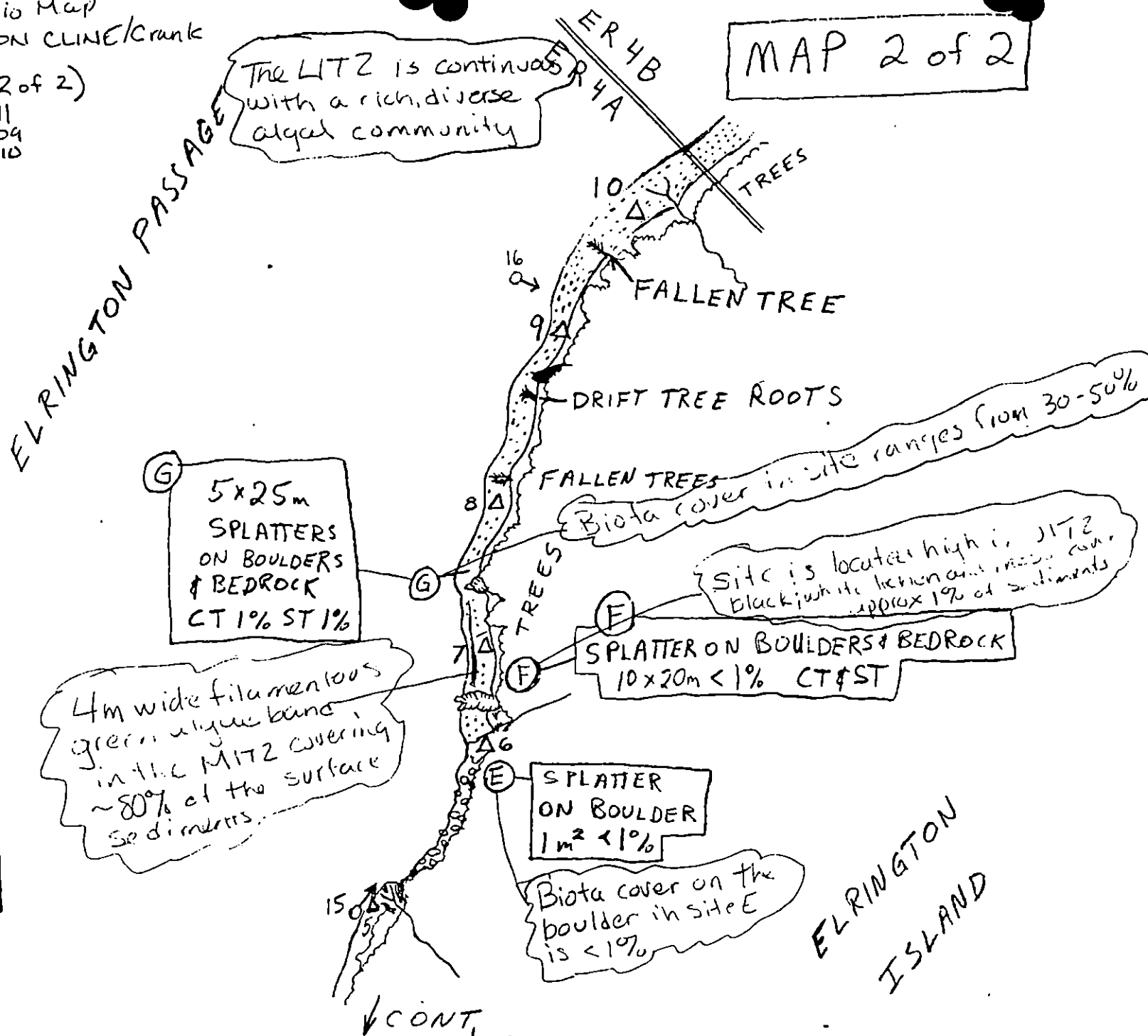
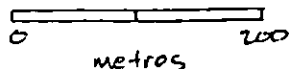
MAP 2 of 2



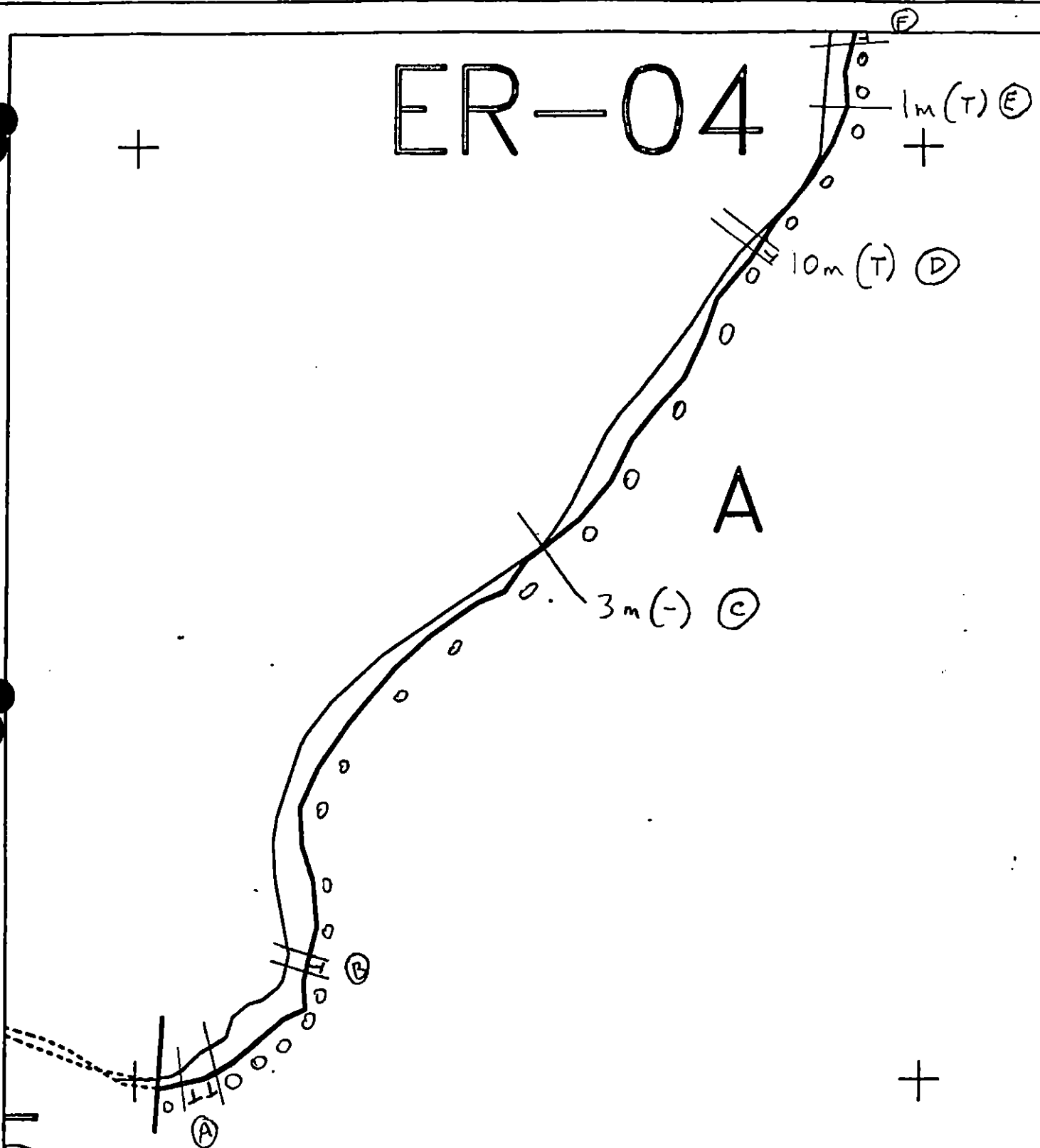
LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE



ER-04



XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

ER004 A

ADEC Subsegment Length: 2292m

METERS

AK State Plane Zone 4
per 8040a



Subdivision Field Map

Map Key: PWSER004Aa

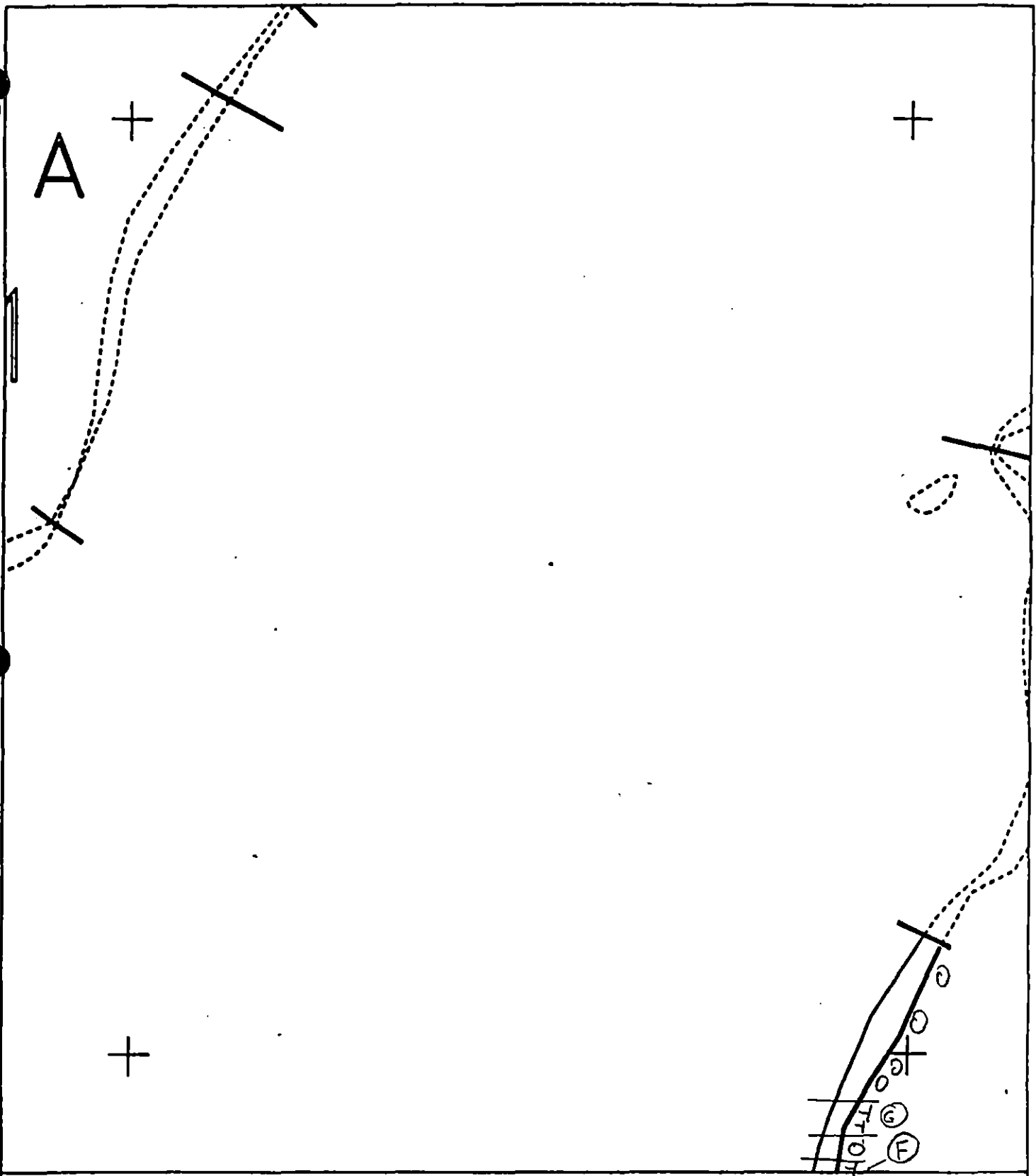
Name: Greg Chaney

Date: MAY 16 1991

Date Entered:



REVIEWED: MC 5/21/91
REVIEWED: F.W. 5/20/91



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

ER004 A

ADEC Subsegment Length: 2292m

METERS

AK State Plane Zone 4
per004ab

Subdivision Field Map

Map Key: PWSER004Ab

Name: Greg Chaney

Date: MAY 16 1991

Date Entered:

Reviewed: MC 5/21/91
REVIEWED: F.W. 5/20/91

SEGMENT: ER 004 SUB: B REGION: PWS SURVEY DATE: 5/16/91

Work Window(s) OPEN 5/1 - 7/10; RESTRICTED 7/10 - 9/15

Ecological/Constraints (see page two for details) Fry release,
Fish harvest area, Anadromous stream, Subsistence - Deer harvest-
ing, Subsistence - Invertebrate harvesting, Subsistence - Finfish
harvesting

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

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

<u>RECOMMENDATIONS:</u>	<u>INITIAL</u>	<u>TAG</u>	<u>FOSC</u>
TREATMENT REQUIRED (Y or N)	<u>N</u>	<u>N</u>	<u>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>	<u> </u>
Other <u> </u>	<u> </u>	<u> </u>	<u> </u>

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: MAY 31 1991

FOSC APPROVAL DATE: 6/3/77

ADEC

FOSC *[Signature]*

EXXON *Exxon*

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

USCG

NOAA [Signature]

**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.

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.

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

Subsistence, Invertebrate Harvesting: Unlimited treatment except avoid disturbance of clam/mussel beds unless specifically directed by TAG Work Order.

Subsistence, Finfish Harvesting: Unlimited treatment.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT ER-4 SUBDIVISION B DATE 5/16/91

DEC

NAME John Hayer

SIGNATURE [Signature]

☐ NTR

Small patches of AP between boulders here, this is overall a lightly oiled segment although a small manual crew could recover the AP and make it a very lightly oiled segment in short order.

EXXON

NAME John Derr

SIGNATURE [Signature]

☒ NTR

An RECOVERABLE oil observed picked up by SURVEY.

LANDMANAGER

NAME Steve WARD

OF

CUC-FS

SIGNATURE [Signature]

☐ NTR

Very few Asphalt Patches, picked up by crew.
Area A has enough oil to that a crew needs to pick it up.

No-B.O.

USCG/NOAA

NAME DREHER/CLINE

SIGNATURE [Signature]

☒ NTR

Observed only very small inert patches of AP in one area and some scattered stain. NOIL

AP patches occur at regular intervals (approx 2m apart) in a line corresponding to the high tide line for a distance of 40m. These patches, each 5-25 cm in diameter, were NOT recovered during the survey; they are susceptible to remobilization, therefore should be retrieved. DWC

PAGE _____ OF _____

SEGMENT ER-4

SUBDIVISION 15

DATE MAY 16 / 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 140m NO 679m US 0m

[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- 3 - 17 FRAMES 17

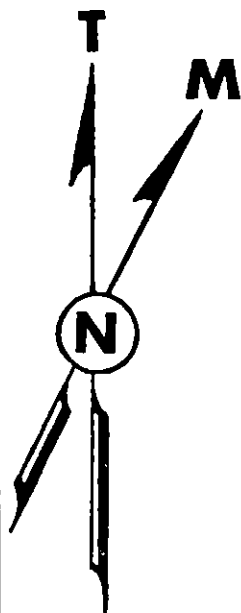
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	28			✓					0-4	Y	—	—		✓			PC-PGL	SURFACE OIL
2	25							✓	—		—	—		✓			P-PM	
3	30							✓	—		—	—		✓			P-PM	
									—									
									—									
									—									
									—									
									—									

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

OG COMMENTS: MAJORITY OF OIL OBSERVED IN THIS SUBDIVISION WAS IN AREA A. THERE SMALL PATCHES OF AP WERE OBSERVED BETWEEN SMALL BOULDERS ALONG THE HIGH TIDE LINE. ALL OTHER OIL WAS IN THE FORM OF SPLATTERED STAINS ON BOULDERS.

Reviewed 5.20 94
REVIEWED: F.W. 5/24/94

MAYSAP 1991
 OG SKETCH MAP
 GREG MANEY / DON CLINE
 TEAM 5
 SEGMENT: ER4B (2 of 2)
 DATE: MAY 16 1991
 AIR P.#: PIM-C 005-113



EL RINGTON PASSAGE

SMALL
BEDROCK
ISLAND WITH
TREES

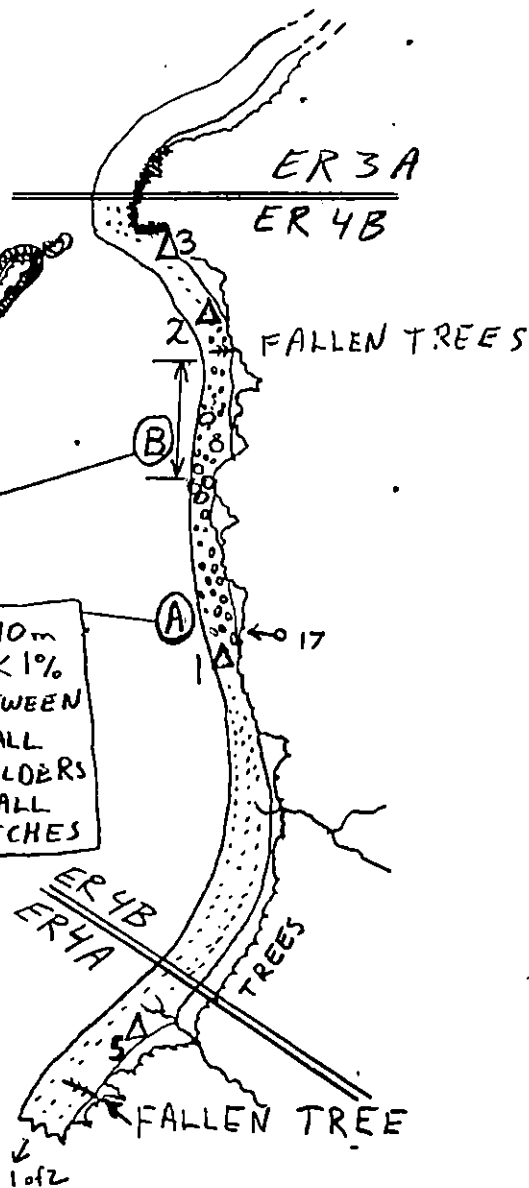
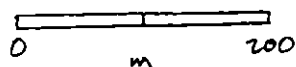
(B) 3x100m
ST < 1%
ON BOULDERS

(A) 1x40m
AP < 1%
BETWEEN
SMALL
BOULDERS
SMALL
PATCHES

LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE



EL RINGTON
ISLAND

Reviewed 5.20 94
 DELETED: C.M. 5/16/94

MAYSAP BIOLOGICAL SUMMARY FORM

pg 1 of 1

TEAM # 5

DATE 16 May 1991

SEGMENT # ER-4

TIDAL HEIGHT(Range) -2 to 0

SUBDIVISION B

BIOLOGIST Crank

SEA STATE 0

WIND SPEED/DIRECTION No wind

PHOTOGRAPHS: ROLL #

FRAME #

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

(A) Area is located from the middle to the high part of the U1T2. Sparsely concentrated barnacles, rare mussels, Oligochaete worms and black lichen are present on site. Biota cover ranges from 10-20%. The MITZ begins 1m below the site. There is a 1m wide band of *Fucus* with maturing conceptacles. *Balanus* and *Littorina* have a moderate concentration. Mussels of various age classes have a sparse to moderate concentration increasing further north up the beach. Biota cover is ~70%. The LITZ has a rich kelp, bladed red and green and filamentous red and green algae cover. There are also dense gastropods (whelks, *Littorina* and limpets), sparse to moderate barnacles (acorn and giant acorn), rare mussels and common amphipods and isopods. Biota cover is ~80%.

(B) Area is in the U1T2. Within the site there are rare barnacles, moderate limpets and densely concentrated juvenile *Littorina*. At the North end of site there is a sparse concentration of *Fucus*. Biota cover range from 10-20%. Three meters below the site, barnacles and mussels with many juveniles have a sparse to moderate concentration. *Fucus* at the southern end of the site has a sparse concentration. Approx 80% of the plants present are 'stipe-only'. At the northern end of the site *Fucus* concentration increases and only 10% of the plants are 'stipe-only'. Biota cover is ~50%. LITZ is a continuation of the LITZ in site A.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

FISH OBSERVED

SPECIES PRESENT

BIRDS

OF SPECIES

TOTAL BIRDS

Eagles	1	9	
Seabirds			
Waterfowl	1	40	
Gulls/Kittiwakes			
Shorebirds			
Corvids	2	7	
Other Birds			

LAND MAMMALS

OBSERVED

SPECIES

OBSERVED

MARINE MAMMALS

Sea Otters		River otter tracks	
Pinnipeds(specify)			
Whales(specify)			

Shoreline subdivision map showing important biological features attached.

MAY 1991

OG MAP

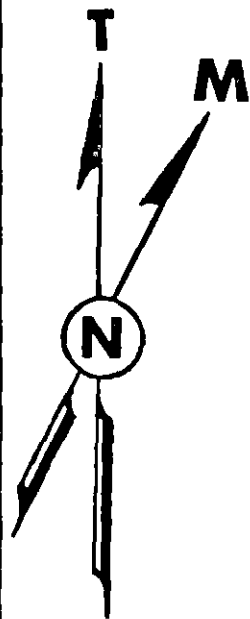
GREG CHANEY / DON CLINE

TEAM 5

SEGMENT: ER4B (2 of 2)

DATE: MAY 16 1991

AIR P.#: PIM-C 005-113



EL RINGTON PASSAGE

SMALL
BEDROCK
ISLAND WITH
TREES

(B) 3x100m
ST < 1%
ON BOULDERS

(A) 1x40m
AP < 1%
BETWEEN
SMALL
BOULDERS
SMALL
PATCHES

LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE



Moderate barnacle
concentration
in the MITZ

1 m wide Fucus band
is replaced by barnacles
North of site

Joins LOTZ

The LITZ has a rich algal cover with
several species of kelps and bladed and
filamentous red and green algae. Biota
cover is at least 80%.

ER 3A

ER 4B

FALLEN TREES

ER 4B

ER 4A

FALLEN TREE

TREES

17

10-20%

is 50%

Biota cover in the site ranges from

10-20%; the MITZ cover

is 50%

EL RINGTON ISLAND

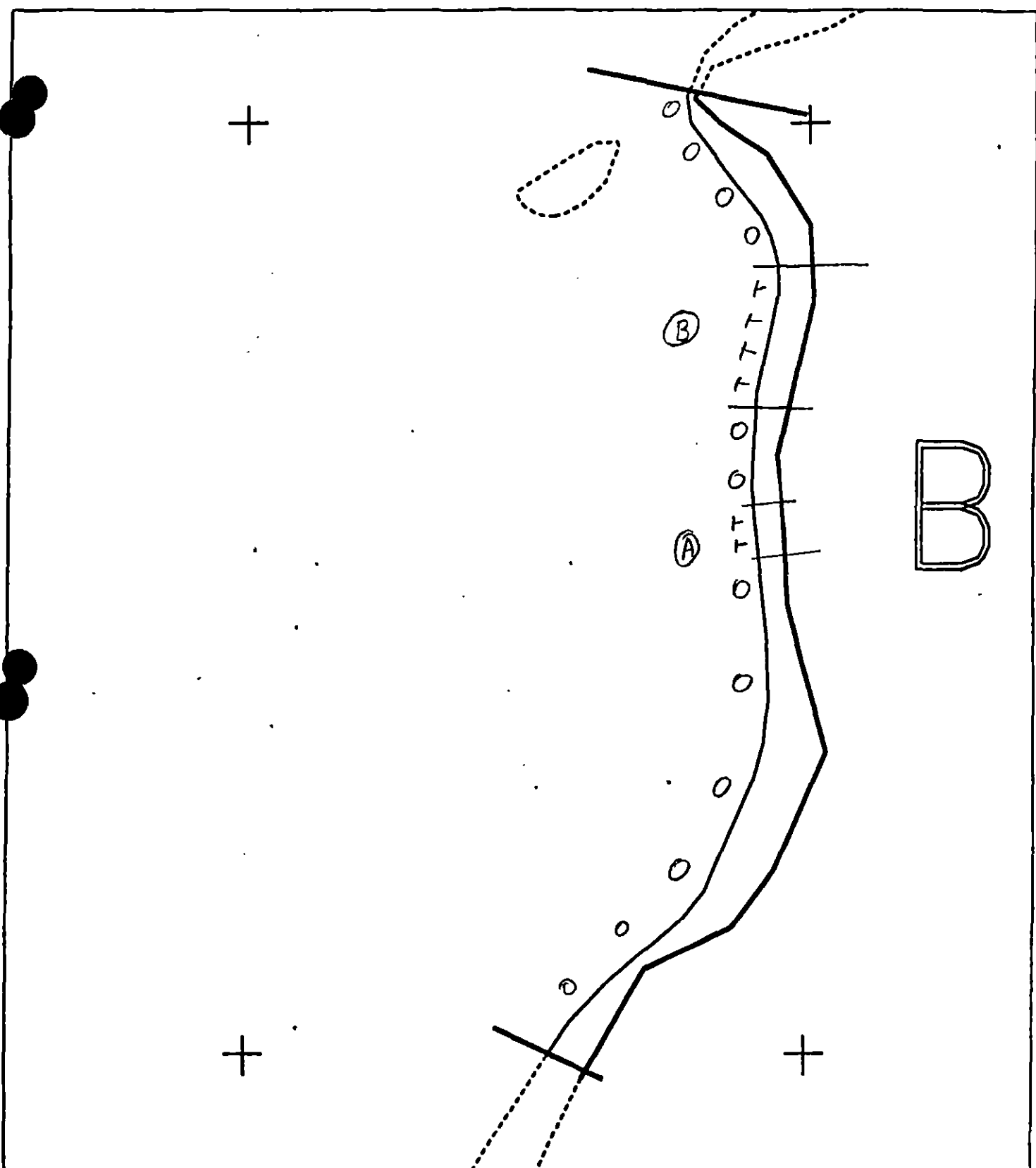
In the site, biota cover ranges from

10-20% in the MITZ

cover is 70%

~10% of the sparsely concentrated
Fucus are 'stipe-only' plants.

~80% of the sparsely concentrated
Fucus are 'stipe-only' plants.



XXXX
 ///

 TTTT
 0000

Wide
 Medium
 Narrow
 Very Light
 No Oil

ER004 B

ADEC Subsegment Length: 819m
 METERS

0 100 200
 AK State Plane Zone 4
 pr004b0



Subdivision Field Map

Map Key: PWSE004B0

Name: GREG CHANEY

Date: MAY 16 1991

Date Entered:

Reviewed 5.20 91
 REVIEWER: F.W. 5/21/91

1991 MAYSAP EVALUATION

SEGMENT: ER 004 SUB: A REGION: PWS SURVEY DATE: 5/16/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) 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**

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. 5 SEGMENT ER-4 SUBDIVISION A DATE 5/16/91

ADEC

NAME John Hayer SIGNATURE [Signature]☒ NTR

Very lightly oiled CT/s observed no treatment recommended at this time.

EXXON

NAME John Dean SIGNATURE [Signature]☒ NTR

ONLY OIL OBSERVED CONSISTED OF TRACES OF COAT AND STAIN.

LANDMANAGER

NAME Steve Ward OF CUC/FS SIGNATURE [Signature]☒ NTR

No Sub-Surface oil - Surface oil is scattered cover + stain very lite. no trash observed
NO-BIO

USCG/NOAA

NAME DREHER/CLINE SIGNATURE CWO K.L. Diche [Signature]

☒ NTR No subsurface oiling observed. Only minute traces of CT & ST observed. Any further attempt at clean up of this segment would be counter productive, both environmentally and financially, KLD

Surface oiling was restricted to trace oil sporadic coat and stain. No subsurface oiling was located. No further treatment is necessary. DRC

5

SEGMENT ERY

'SUBDIVISION A

DATE MAY 16 1911

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 3 m VL 91 m NO 2198 m US m

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

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 5 - 17 FRAMES 10-16

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

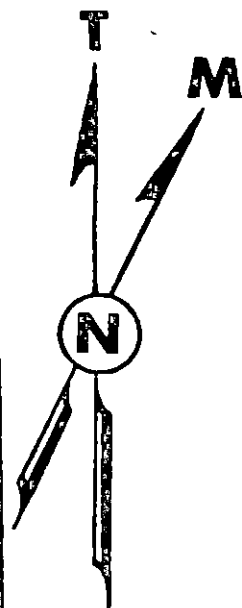
OG COMMENTS: OILING ALONG THIS SUBDIVISION CONSISTED
PRIMARILY OF SPLATTERED COAT & STAIN ON BOULDERS
AND BEDROCK.

REVIEWED: MC 5/24/91
REVIEWED: F.W. 5/20/91

SEP 1991
 OG SKETCH MAP
 GREG CHANEY / DON CUINE
 TEAM 5

SEGMENT: ER4 A
 DATE: MAY 16 1991
 AIR P.#: PIM-C 005-109
 PIM-C 005-110

MAP 1 of 2

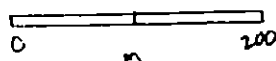


ELRINGTON
 PASSAGE

LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE



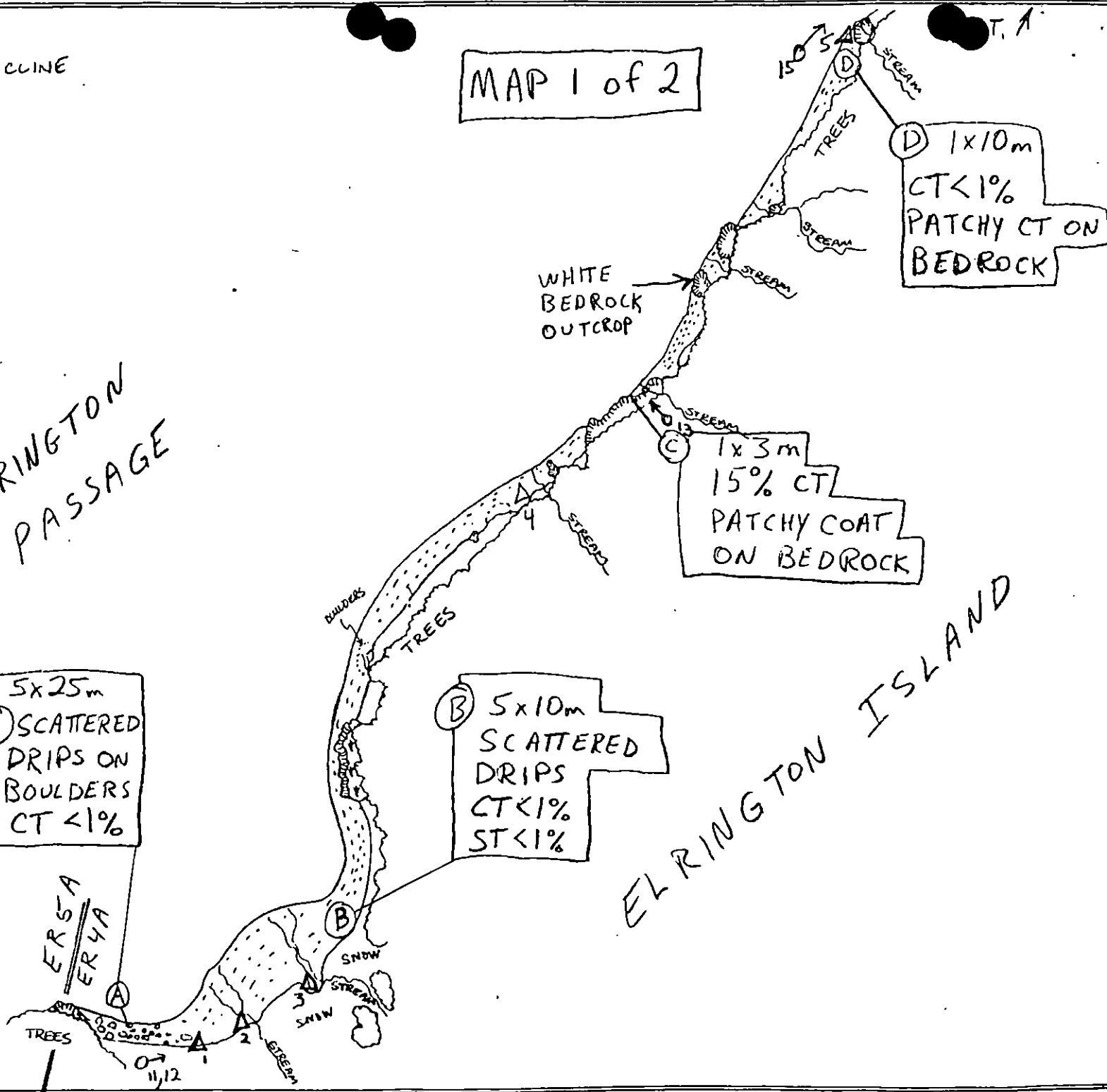
5x25m
 (A) SCATTERED
 DRIPS ON
 BOULDERS
 CT < 1%

(B) 5x10m
 SCATTERED
 DRIPS
 CT < 1%
 ST < 1%

ELRINGTON ISLAND

(D) 1x10m
 CT < 1%
 PATCHY CT ON
 BEDROCK

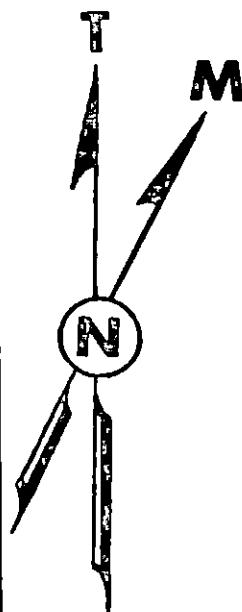
(C) 1x3m
 15% CT
 PATCHY COAT
 ON BEDROCK



Reviewed: F.W. 5/20/91
 Reviewed: M. 5/21/91

15 SEP 1991
 DG SKETCH MAP
 GREG CHANEY / DON CLINE
 TEAM 5
 SEGMENT: ER4 A (2 of 2)
 DATE: MAY 16 1991
 AIR P.#: PIM-C 005-104
 PIM-C 005-110

MAP 2 of 2



ELRINGTON PASSAGE

LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

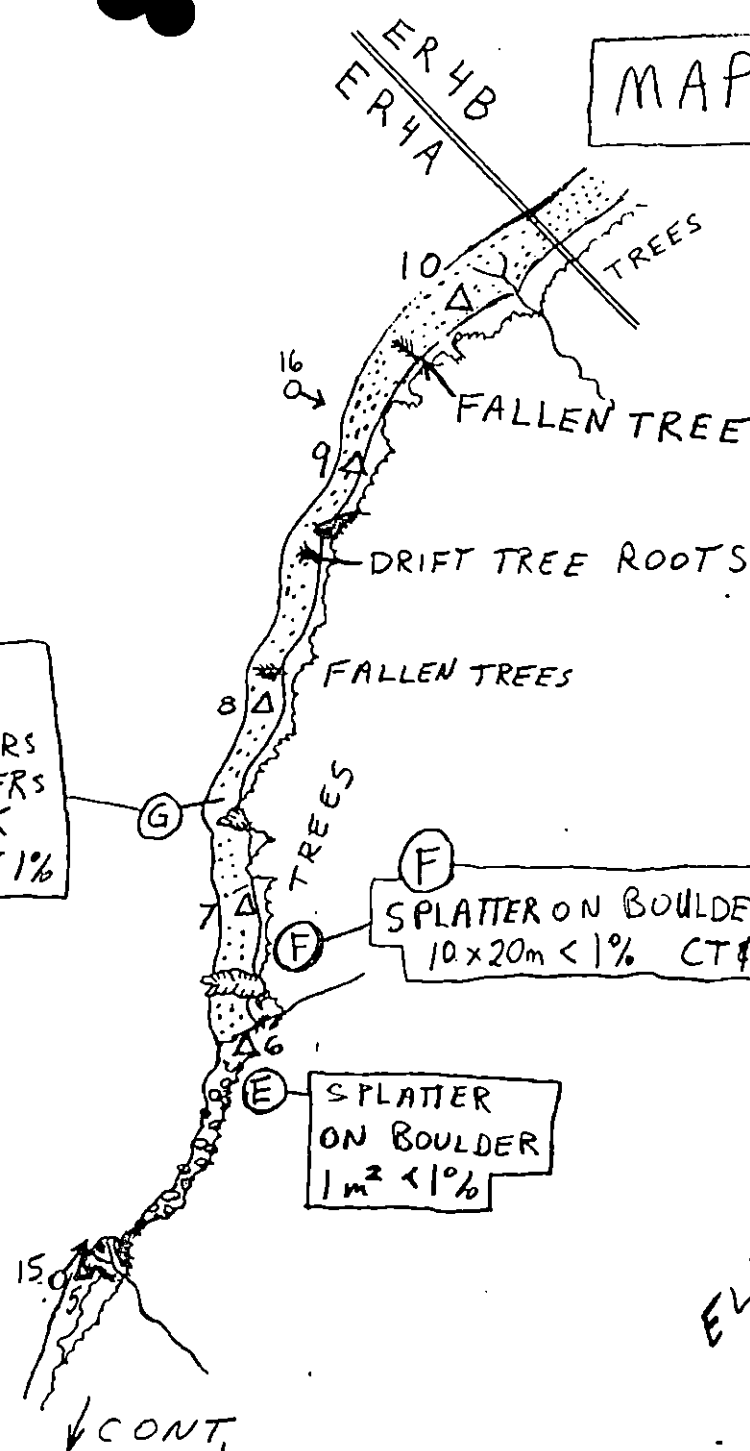
SCALE



(G) 5x25m
 SPLATTERS
 ON BOULDERS
 & BEDROCK
 CT 1% ST 1%

(F) SPLATTER ON BOULDERS & BEDROCK
 10x20m < 1% CT & ST

(E) SPLATTER
 ON BOULDER
 1m² < 1%



ELRINGTON ISLAND

REVIEWED: F.W. 5/20/91
 REVISIONS: M.C. 5/24/91

TEAM # 5

DATE 16 May 1991

SEGMENT # ER-4

TIDAL HEIGHT (Range) -2 to -3.5

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 0

WIND SPEED/DIRECTION No wind

PHOTOGRAPHS: ROLL #

FRAME #

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

(A) Area is located low in the UITZ, in fresh water runoff. Within the area, *Fucus*, *Littorina* and limpets have a moderate concentration, barnacles have a sparse density, amphipods are abundant and star spot algae is present. Biota cover is ~100%. In the MITZ, *Fucus* is densely concentrated, barnacles increase up to a moderate density; *Littorina* and limpets remain moderate and there is an occasional mussel. Barnacle spat and *Fucus* sporlings are present. The LITZ is dominated by *Ulva*; dense *Didemnum*, sparse *Fucus* with sporlings; *Laminaria* sp. and *Bladder* and *Filicinosa*. *Ted* and *Grass* are present. *Fouca* is present on and under algae. A sparse to moderate concentration of barnacles (small and giant acorn); *Littorina*; dense *Littorina*, limpets and whelks (*Nucella*); and abundant amphipods and amphipods. Biota cover in both MITZ and LITZ is ~80%.

(B) The area is located high in the UITZ. Black licen covers ~10% of the segment surface. In the side is a small granular beach with no to low surface biota cover.

Most of the subdivision has a rich LITZ. Accessing the granular beach at Site B would cause the least ecological disturbance.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2	
Seabirds	3	18	
Waterfowl	2	24	
Gulls/Kittiwakes	3	57	
Shorebirds	1	1	
Corvids	1	1	
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters		Deer, caribou	
Pinipeds (specify)	1 Sealion	B. for. mer. seals	
Whales (specify)	1 Humpback whale		

Shoreline subdivision map showing important biological features attached.

Permit # 120101

Team # 5
Segment # ER-4
Subdivision A
Sea State 0

Date 16 May 1991 pg 2 of 2
Tidal Height - 2 → -3.5
Biologist Crank
Wind Speed / Direction No wind

Comments (cont.)

(C) Area is located on the lee side of a bedrock outcrop, next to freshwater runoff, in the ULTZ. In the site, barnacles have a moderate concentration; adults, juveniles and spat are present and the animals tightly sealed their inner plates when stimulated. Limpets have a moderate concentration; several age classes are present and live animals were observed directly on oil. Juvenile Littorina are dense. A rare concentration of Fucus sporelings and juvenile (post-spill) mussels are present. Biota cover is ~50%.

The exposed face of the rock has the same biota. Fucus concentration is increased to moderate with both reproductively active mature plants and sporelings.

Biota cover is ~80%. In addition; the small boulder MLTZ has Halosaccion, Odonthalia and Palmaria algae, dense gastropods (Nucella also present) and sparse mussels. More than half of the mussels present are post-spill age.

Biota cover is ~50%. In the LITZ, algae is dominant covering >95% of the surface. Some of the species present include: Costaria, Lamanaria, Alaria, Desmarestia, Ulva, Enteromorpha, Odonthalia, Phodoglossum, Membranoptera, Ptilota, Palmaria, Halosaccion, Rhodomenia, Cystoseira and Corallines. Sunflower sea stars (Pycnopodia) were present and limpets were abundant.

Team # 5
Segment # ER-4
Subdivision A
Sea State 0

Date 16 May 1991 pg 3 of.
Tidal Height -2 → -3.5
Biologist Crank
Wind Speed / Direction No wind

Comments (cont.)

- (D) Area is located high in the ULTZ. Biota cover is ~5% with dense Littorina and limpets and rare Fucus sporlings. The MITZ and LITZ are similar to site 'C'.
- (E) Area is a 1x1m boulder located high in the ULTZ, next to a runoff stream. Approx. 20cm from the oil splatter there are barnacles, Littorina, limpets and Fucus sporlings covering ~1% of the boulder surface. The MITZ and LITZ are similar to site 'C'.
- (F) Area is located high in the ULTZ. Moss, white and black lichen cover ~1% of the bedrock surface. In the MITZ there is a 4m wide filamentous green algae band covering ~20% of the surface. Sparsely concentrated Fucus, barnacles and mussels and moderately concentrated Littorina and limpets are also present. LITZ is similar to site C.
- (G) Area is located in the ULTZ along bedrock and small boulder. Barnacles are dominant within the site with a sparse to moderate concentration (several age class present). Littorina and limpets are distributed in dense patches and rare Fucus. Biota cover ranges from 30-50%. The MITZ has dense Littorina, moderate barnacle sparse mussels and rare Fucus. Biota cover is ~50%. LITZ is similar to site C.

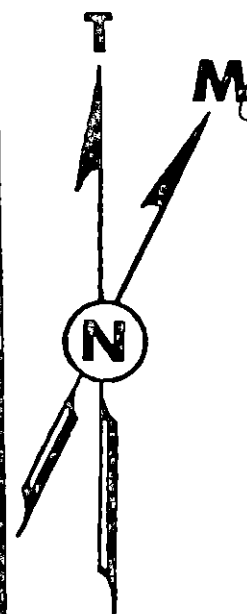
YSAP 1991
 OG SKETCH MAP/Bio Map
 GREG CHANEY/DON CLINE/Crank
 TEAM 5

SEGMENT: ER4 A
 DATE: MAY 16 1991
 AIR P.#: PIM-C 005-109
 PIM-C 005-110

MAP 1 of 2

With the exception of the granular beach located below site B, this subdivision has a rich algal community in the lower intertidal with several species of kelps, bladed reds and greens and coralline algae. Biota cover 80-100%

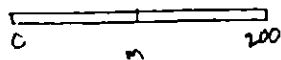
ELRINGTON PASSAGE



LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE

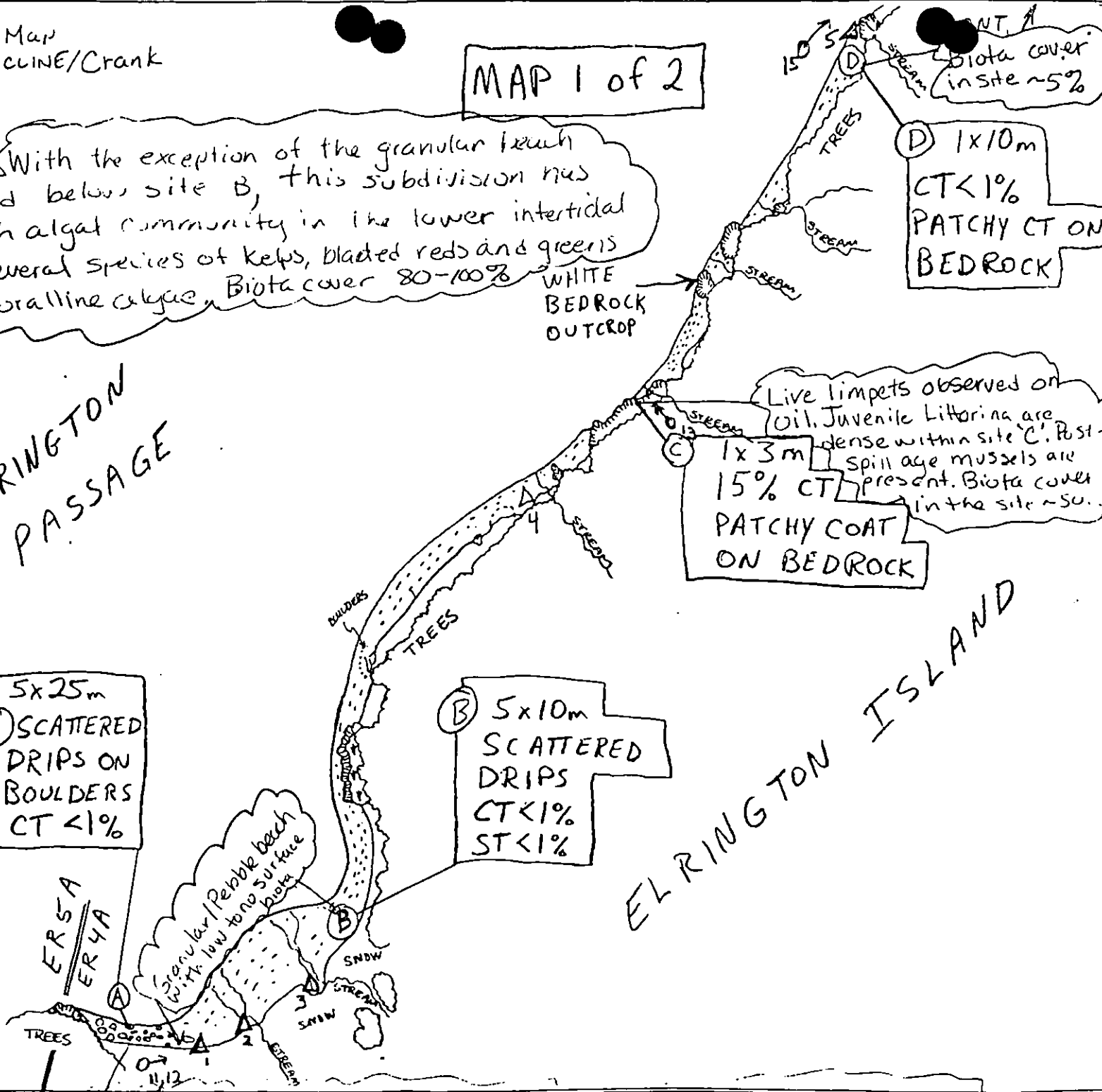


5x25m
 (A) SCATTERED
 DRIPS ON
 BOULDERS
 CT < 1%

(B) 5x10m
 SCATTERED
 DRIPS
 CT < 1%
 ST < 1%

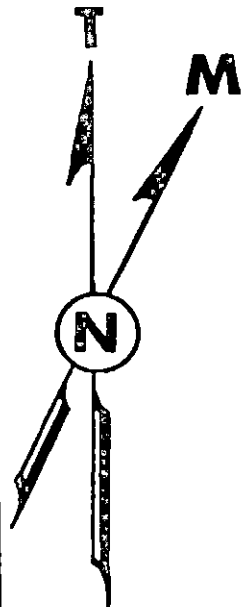
Live limpets observed on oil. Juvenile Littorina are dense within site 'C'. Post-spill age mussels are present. Biota cover in the site ~50%.
 1x3m
 15% CT
 PATCHY COAT
 ON BEDROCK

(D) 1x10m
 CT < 1%
 PATCHY CT ON
 BEDROCK



MAY 1991
 OG SKETCH MAP / Bio Map
 GREG CHANEY / DON CLINE / Crank
 TEAM 5
 SEGMENT: ER 4 A (2 of 2)
 DATE: MAY 16 1991
 AIR P.#: PIM-C 005-109
 PIM-C 005-110

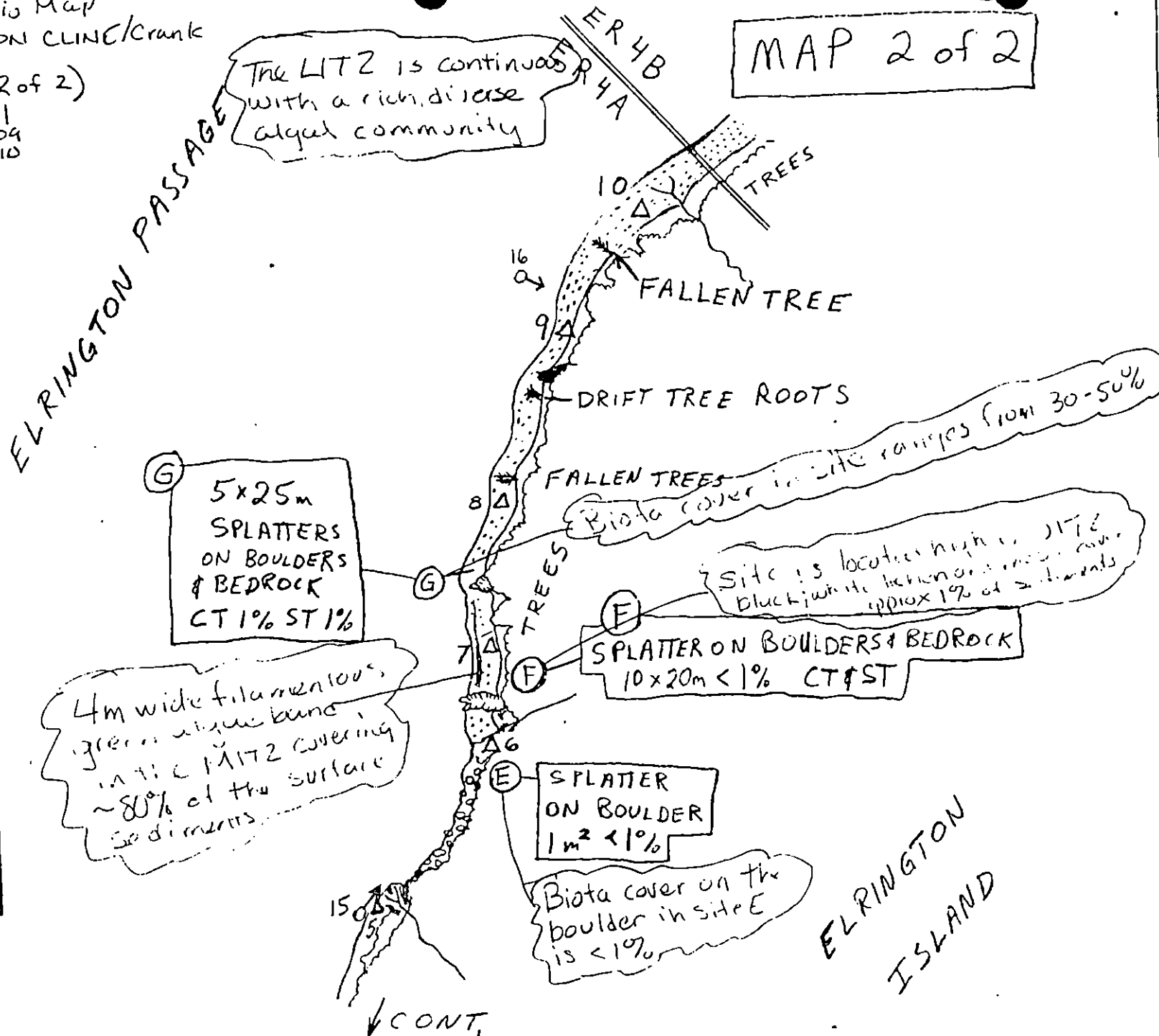
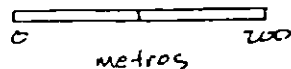
MAP 2 of 2



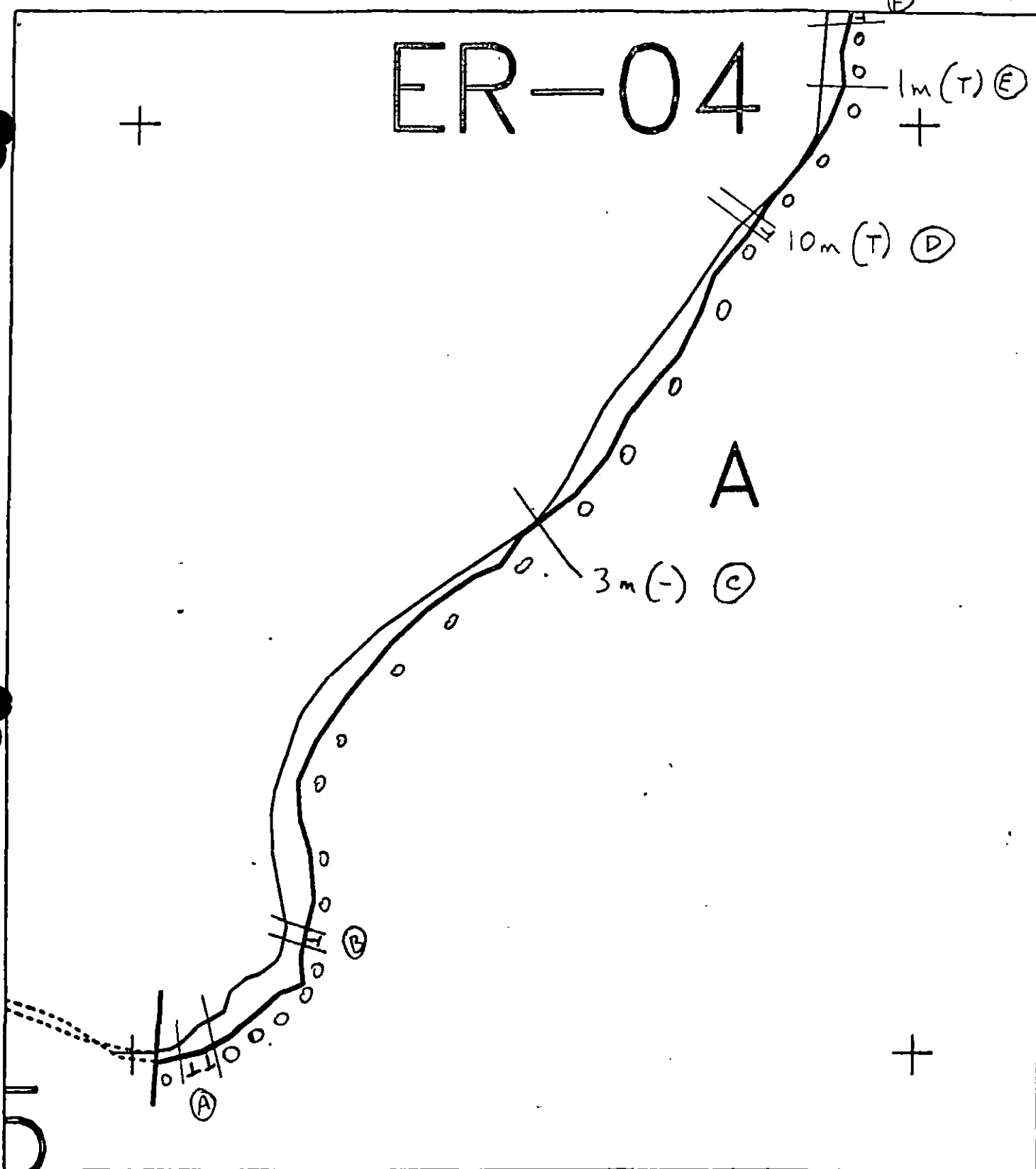
LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE



ER-04



XXXX
 /////

 TTTT
 0000

Wide
 Medium
 Narrow
 Very Light
 No Oil

ER004 A

ADEC Subsegment Length: 2282m

METERS

0 200 400

AK State Plane Zone 4
 per 00400



Subdivision Field Map

Map Key: PWSER004Ae

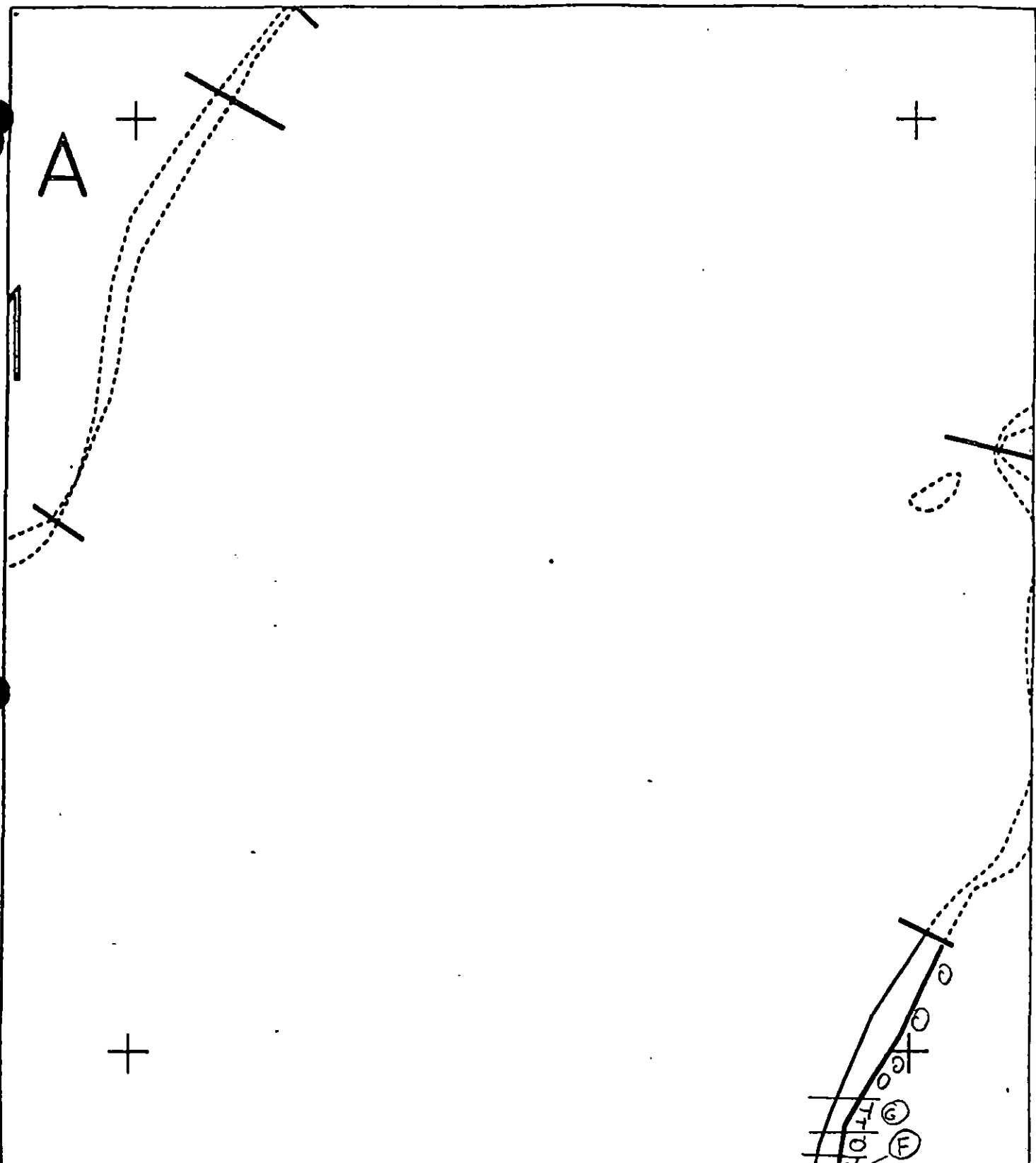
Name: Greg Chaney

Date: MAY 16 1991

Date Entered:



Reviewed: MC 5/21/91
 REVIEWED: F.W. 5/20/91



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

ER004 A
 ADEC Subsegment Length: 2202m
 METERS
 0 200 400
 AK State Plane Zone 4
 pr0004cb



Subdivision Field Map
 Map Key: PWSER004Ab
 Name: Greg Chaney
 Date: MAY 16 1991
 Date Entered:



Reviewed: MC 5/21/91
 REVIEWED: F.W. 5/20/91

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 367 m: No Oil 1925 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/25/90
ADEC ART WEINER Art Weiner
EXXON ANDY TETZ Andy Tetz
NOAA Joseph Talbot JCT
USCG KENNETH KENNEDY Kenneth Kennedy

FOSC: W L DATE: 5-3-90

OG Rich Morfy

SEGMENT ST/ ER DY

SUBMISSION A(H.)

DATE 05 April 90

CHECKLIST

☐ N. Arrow
☐ Approx. Scale
☐ Sed/Sub. Body
☐ Oil Dmt.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HMA/MK
☐ SST
☐ Profile Location(s)
☐ Photo(s)
☐ Pit Location(s)
☐ Photo Location

LEGEND

1 Δ

Pit - No Substratum Obs

2 Δ

Pit - Substratum Obs

Continuous Distribution

CT/C

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Spotted Distribution

Old Vegetation

1 Δ

Photo location, direction, and number

Photo location, direction, and number

Map cont.
on page 2

PWS 1706

Pebble, granule beach

No oil.

Cobbles, boulders, granules, sand

No oil (except 1 tar patty)

Cobbles, granules, sand.

Cobbles, boulders, pebbles on shallow bedrock

No oil

Pebble, cobble pocket beach

Shallow slate bedrock

Scattered thin bands of splattered "stain"

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

No oil

Splatter in MTZ - Uitz Coat 41% cover

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

The supratidal zone is snow covered.

rock headland

1 MAP

8 of 12

1/2



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

OG Kich Marby

SEGMENT ST/EC04

SUBDIVISION A9B

DATE 05 April 94

CHECKLIST

... N. Area
... Approx. Scale
... Say/Side Briefly
... Oil Out
... Notes
... Length
... % Cover
... Stream Character
... E. L. H. M. L. W. L.
... S. S.
... Profile Location(s)
... Photo Location(s)
... Photo Location(s)

LEGEND

1 A

M - No Surface Oil

2 A

M - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Fractured Distribution

CT/S

Spattered Distribution

Oil Distribution

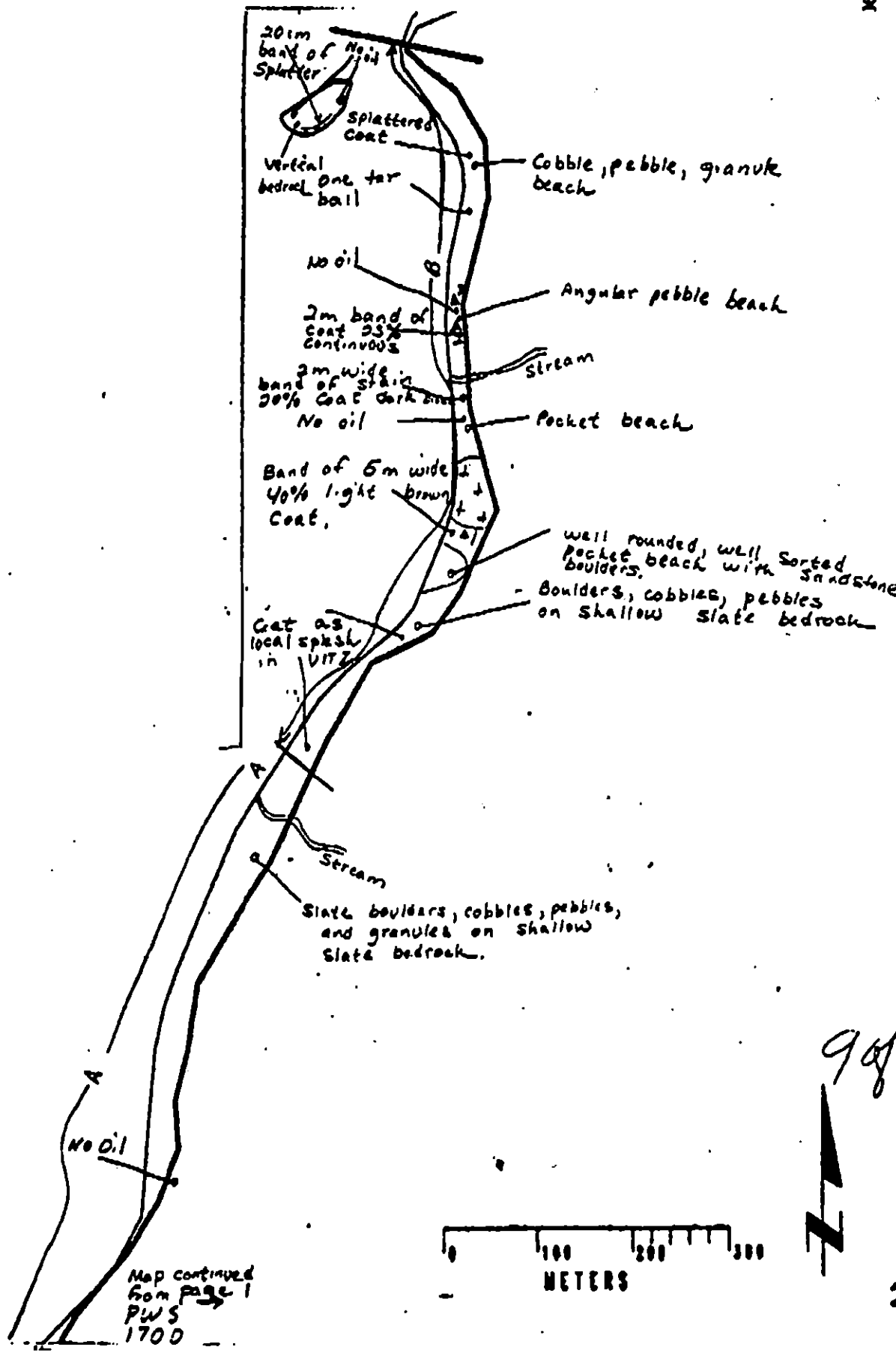
Oil Distribution

Oil Distribution

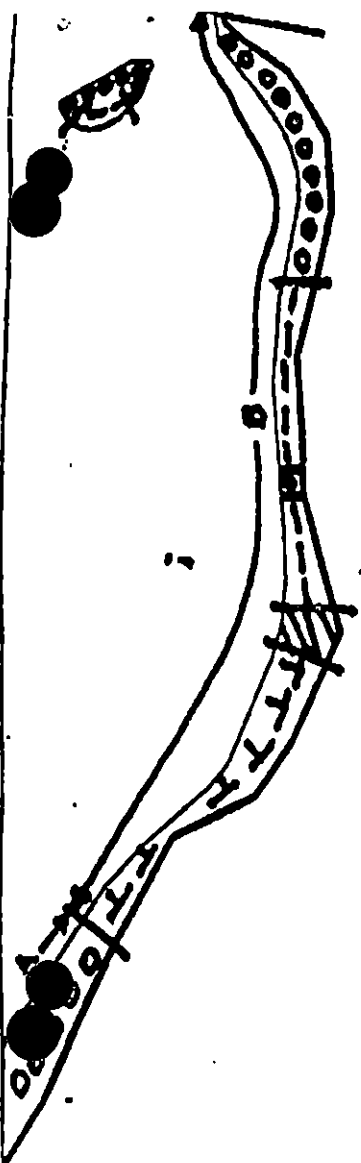
Oil Distribution

Oil Distribution

SKETCH MAP



Oil Character (m): AP PO CV CT ST 5% ST 10% ST 15% ST 20% ST 25% ST 30% ST 35% ST 40% ST 45% ST 50% ST 55% ST 60% ST 65% ST 70% ST 75% ST 80% ST 85% ST 90% ST 95% ST 100% ST



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

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

12/12

← PWS
1700

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

ER-4

ADEC Segment Length: 3110m



Map Key: PWS-170d

Name: R. Marty

Date: 5 April 1990

Date Entered:

ER-04

↓ PWS 170A



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-4

ADEC Segment Length: 3110m



Map Key: PWS-170c

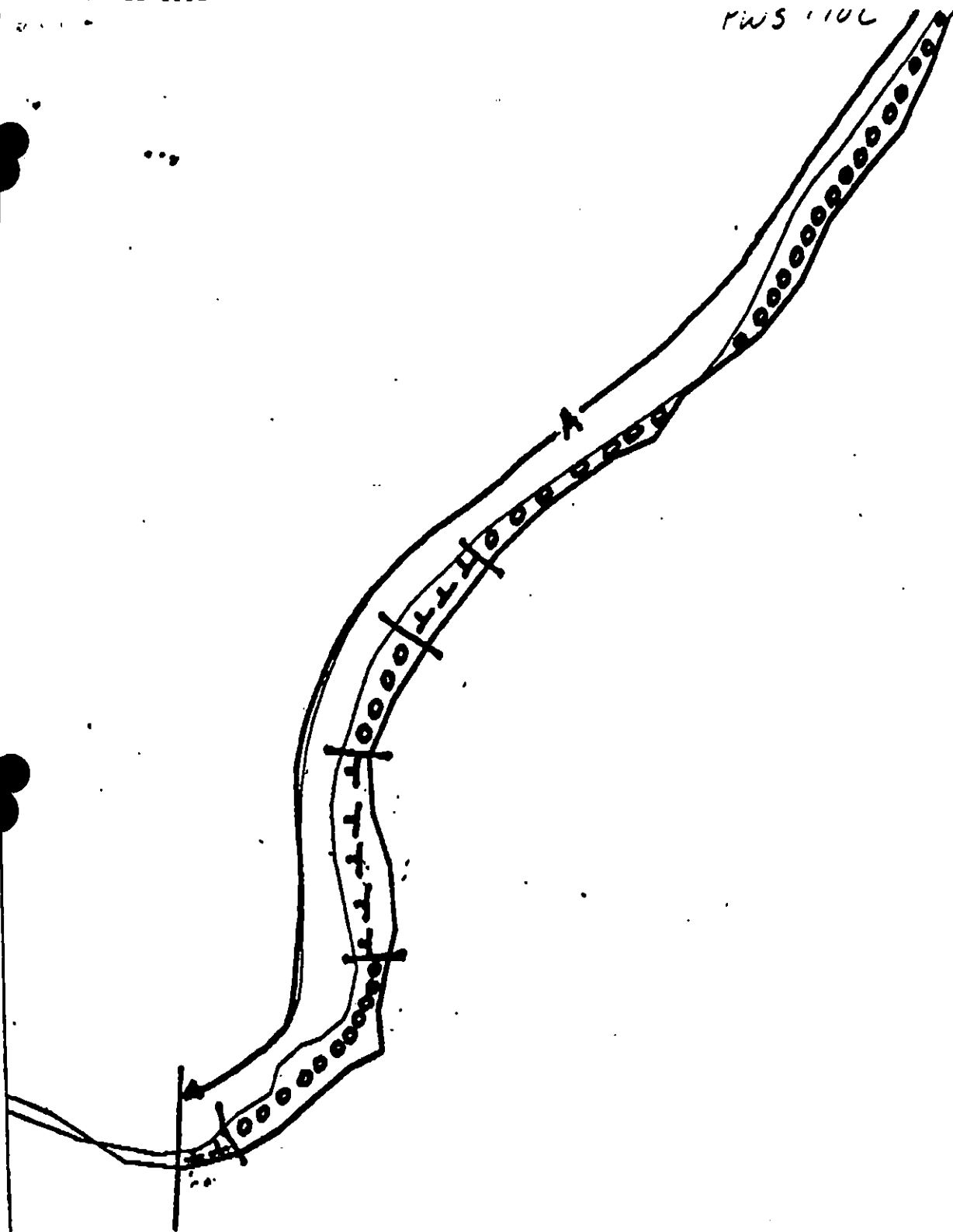
Name: R. Marty

Date: 5 April, 1990

Date Entered:

PWS 110C

Sub Segment A
Continued on next
Page



10 of 12

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

ER-4

ADEC Segment Length: 3110m



Map Key: PWS-170a

Name: R. Marty

Date: 5 April 1990

Date Entered:

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Anadromous stream no. 226-50-16436

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

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

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

7HH Subsistence area: Finfish harvesting

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

7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 43 m: Narrow 234 m: V.Light 272 m: No Oil 269 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

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

TAG COMMENTS:

TAG APPROVAL DATE: 4/25/90

ADEC Art Weimer Art Weimer

EXXON Arny Earl Beck

NOAA Joseph Talbot J. Talbot

USCG Kenneth Keane Kenneth Keane

FOSC: DATE: 5-3-90

OG Field Party
SEGMENT ST/EC04

SUBMISSION A4B

DATE 05 April 94

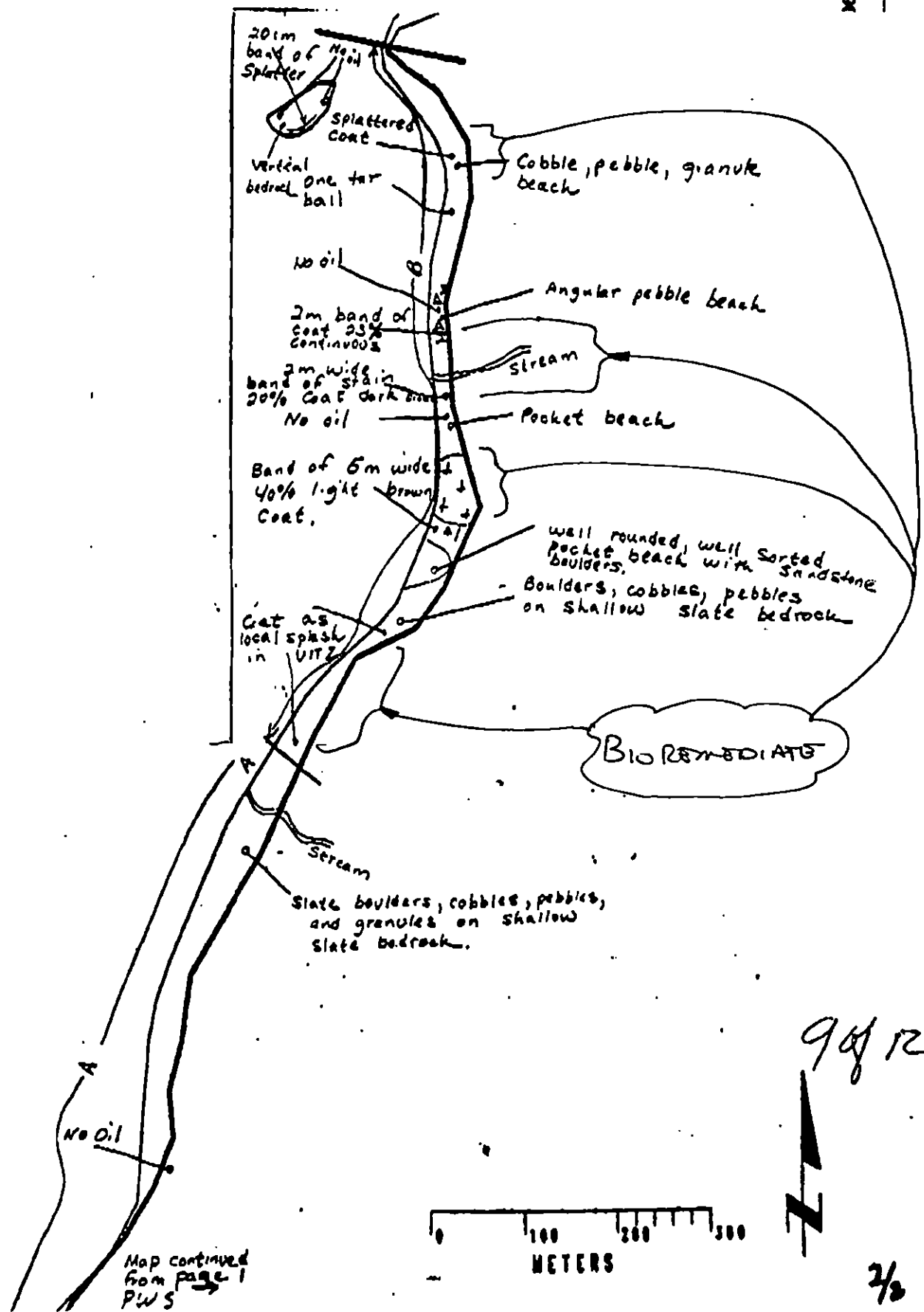
CHECKLIST

- Map Area
- Approx. Scale
- Seafloor Bathymetry
- Oil Data
- Weather
- Length
- % Cover
- Substrate Character
- Est. HRA/LML
- SSL
- Profile Location(s)
- Profile(s)
- Photo Location(s)
- Photo Location(s)

LEGEND

- 1 A
- 2 A
- M: Substrate Oil
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Spotted Distribution
- Oil Vegetation
- Photo location, direction, and number

SKETCH MAP

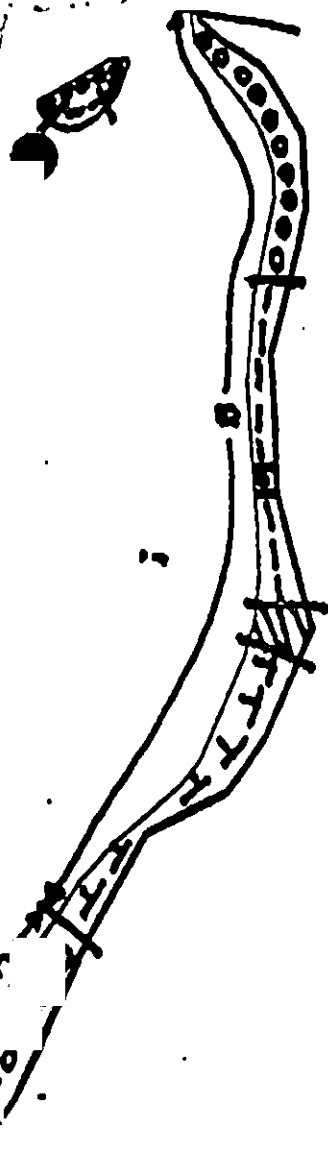


9 of 12

2/3

OR Change Length (m): AP PO CV CT ST 332 1912
NO 216

REVISIONS



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

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

12/12

← PWS
1702

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

ER-4

ADEC Segment Length: 3110m



Map Key: PWS-1704

Name: R. Marty

Date: 5 April 1990

Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: ER 004 SUB: B REGION: PWS SURVEY DATE: 5/16/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN 5/1 - 7/10; RESTRICTED 7/10 - 9/15

Ecological/Constraints (see page two for details) Fry release,
Fish harvest area, Anadromous stream, Subsistence - Deer harvest-
ing, Subsistence - Invertebrate harvesting, Subsistence - Finfish
harvesting

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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.

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

Subsistence, Invertebrate Harvesting: Unlimited treatment except avoid disturbance of clam/mussel beds unless specifically directed by TAG Work Order.

Subsistence, Finfish Harvesting: Unlimited treatment.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT ER-4 SUBDIVISION B DATE 5/16/91

ADEC

NAME John Hayes SIGNATURE [Signature]☐ NTR

Small patches of AP between boulders here, this is overall a lightly oiled segment although a small manual crew could recover the AP and make it a very lightly oiled segment in short order.

EXXON

NAME John Derr SIGNATURE [Signature]☒ NTR

All RECOVERABLE oil observed picked up by SURVEY.

LANDMANAGER

NAME Steve WARD OF CUC-FS SIGNATURE [Signature]☐ NTR

Very Few Asphalt Patches, picked up by crew.
Area A has Enough oil to that a crew needs to pick it up.

No-B.O.

USCG/NOAA

NAME DREHER/CLINE SIGNATURE CWO K. P. D. [Signature]☒

NTR Observed only very small inert patches of AP in one area and some scattered stain. No B.O.

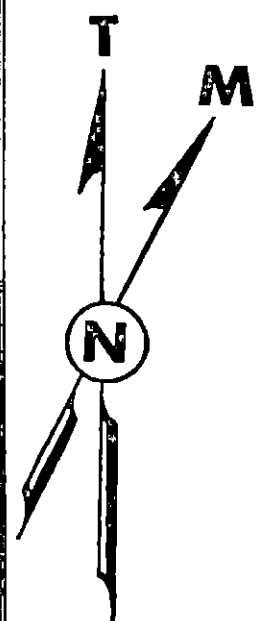
AP patches occur at regular intervals (approx 2m apart) in a line corresponding to the high tide line for a distance of 40m. These patches, each 5-25 cm in diameter, were NOT recovered during the survey; they are susceptible to remobilization, therefore should be retrieved. DWC

Reviewed 5.20 94
REVIEWED: F.W. 5/24/94

MAY 1991
 OG SKETCH MAP
 GREG CHANEY / DON CLINE
 TEAM 5

SEGMENT: ER4B (2 of 2)
 DATE: MAY 16 1991
 AIR P.#: PIM-C 005-113

ELRINGTON PASSAGE



SMALL
 BEDROCK
 ISLAND WITH
 TREES

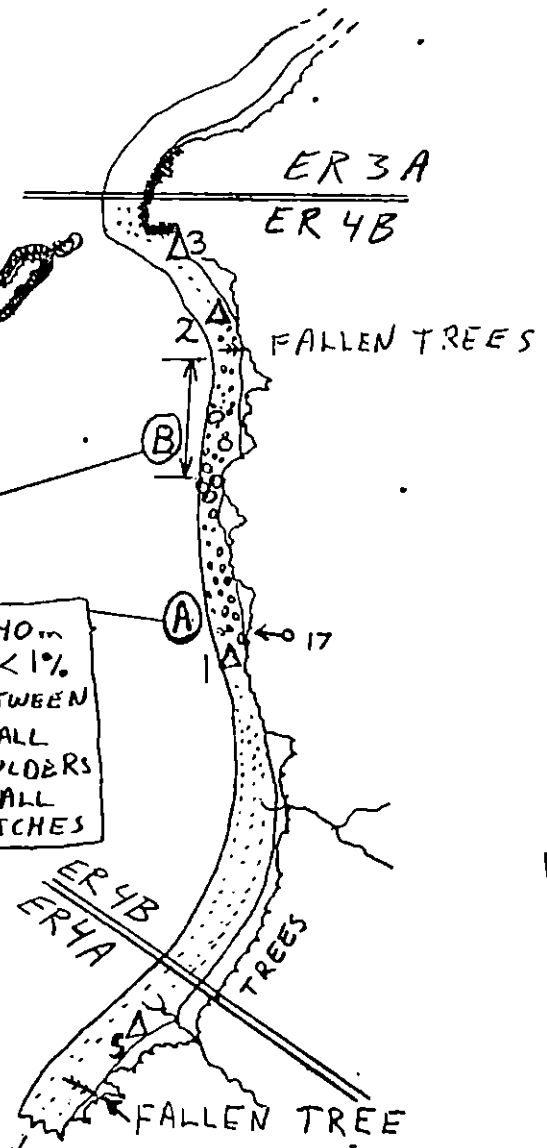
(B) 3x100m
 ST < 1%
 ON BOULDERS

(A) 1x40m
 AP < 1%
 BETWEEN
 SMALL
 BOULDERS
 SMALL
 PATCHES

LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE



EL RINGTON
 ISLAND

TEAM # 5 DATE 16 May 1991
 SEGMENT # ER-4 TIDAL HEIGHT (Range) -2 to 0
 SUBDIVISION B BIOLOGIST Crank
 SEA STATE 0 WIND SPEED/DIRECTION no wind
 PHOTOGRAPHS: ROLL # FRAME #

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

(A) Area is located from the middle to the high part of the UITZ.

Sparsely concentrated barnacles, rare mussels, Oligochaete worms and black lichen are present at site. Biota cover ranges from 10-20%. The MITZ begins 1m below the site. There is a 1m wide zone of *Fucus* with maturing conceptacles. *Fucus* and *Littorina* have a moderate concentration. Mussels of various age classes have a sparse to moderate concentration increasing further north up the beach. Biota cover is ~70%. The LITZ has a rich kelp, bladed red and green and filamentous red and green algae cover. There are also dense gastropods (whelks, *Littorina* and limpets); sparse to moderate barnacles (acorn and giant acorn); rare mussels and common amphipods and isopods. Biota cover is ~80%.

(B) Area is in the UITZ. Within the site there are rare barnacles, moderate limpets and densely concentrated juvenile *Littorina*. At the North end of site there is a sparse concentration of *Fucus*. Biota cover range from 10-20%. Three meters below the site, barnacles and mussels with many juveniles have a sparse to moderate concentration. *Fucus* at the southern end of the site has a sparse concentration. Approx 80% of the plants present are 'stripe-only'. At the northern end of the site *Fucus* concentration increases and only 10% of the plants are 'stripe-only'. Biota cover is ~50%. LITZ is a continuation of the LITZ in site A.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	9	
Seabirds			
Waterfowl	1	40	
Gulls/kittiwakes			
Shorebirds			
Corvids	2	7	
Other Birds			

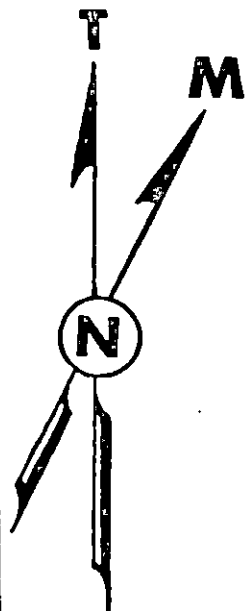
LAND MAMMALS

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

Shoreline subdivision map showing important biological features attached.

Crank 5/21/91

MAYSNIP 1991
 OG SKETCH MAP
 GREG CHANEY / DON CLINE
 TEAM 5
 SEGMENT: ER4B (2 of 2)
 DATE: MAY 16 1991
 AIR P.#: PIM-C 005-113



ELRINGTON PASSAGE

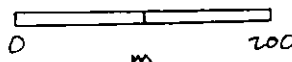
SMALL
BEDROCK
ISLAND WITH
TREES

(B) 3x100m
ST < 1%
ON BOULDERS

LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE



High tide barnacle
Concentration
in the MITZ

(A) 1x40m
AP < 1%
BETWEEN
SMALL
BOULDERS
SMALL
PATCHES

1 m wide band
is replaced by barnacles
North of Site

The LITZ has a rich algal cover with
several species of kelps and bladed and
filamentous red and green algae. Biota
cover is at least 80%.

ER 3A

ER 4B

FALLEN TREES

~10% of the sparsely concentrated
Fucus are 'stipe-only' plants.

~80% of the sparsely concentrated
Fucus are 'stipe-only' plants.

Biota cover in the site ranges from
10-20%; the MITZ cover
is 50%

EL RINGTON
ISLAND

In the site, biota cover ranges
from 10-20% in the MITZ
cover is 70%

ER 4B

ER 4A

TREES

FALLEN TREE

Joins Lot 2

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-04

SUBDIVISIONS: A (1 OF 2)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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 367 m: No Oil 1925 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ER-04 SUBDIVISION: A DATE 05 APRIL 90

USCG

NAME LARRY FLETCHER SIGNATURE Larry R Fletcher

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

ADEC

NAME DAVID W. SALE SIGNATURE David W Sale

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

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

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

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

4 of 12

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG R. Maty USCG LARRY FLETCHER SEGMENT ST/ ER-04
 BIO B. Limb LAND REP Leigh Carlson SUBDIVISION A
 EXXON J. Gzarnski ADEC Dave Sales TIME 17:00: 10 17:35
 TANK NO.: 10 TIDE LEVEL: +0.3m (1') to +0.3m (1') DATE 04/05/90
 T. SUBDIVISION LENGTH: 2244 m ☐ Sun ☐ Clouds ☒ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 5 % B 10 % C 40 % P 30 % G 10 % S 5 % M 0 % V 0 %
 SLOPE: Long 90 % Hang 10 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 332 m NO 1912 m

SURFACE OIL

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

PAVEMENT: H F S None sq. m by 0 cmPATTIES / TARBALLS 2 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE 0
#BAGS 0

Photographs:

Roll No. 51/10/8Frames 1-8

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm - cm) (910-914)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		SP. OF	CR. OL	LY. OL	FILM OF	NO		UP	HE	SP. CR	CR. LY	LY. OL	OL. FILM	FILM NO	SU	U	M	U					
1	37					X	-										X			N	SG		
2	35					X	-										X				GS		
3	32					X	-											X			GS		
4	50					X	-										X				GS		
5	8					X	-										X				SG		
6	20					X	-										X			V	GS (silt)		

COMMENTS

Revision

RM 4/5/90

385

2612

8/12

**Photo location, direction
and number**

METERS

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

 $\frac{1}{2}$

OG Rich Murphy

SEGMENT ST/EC04

SUBDIVISION A5B

DATE 05 April 94

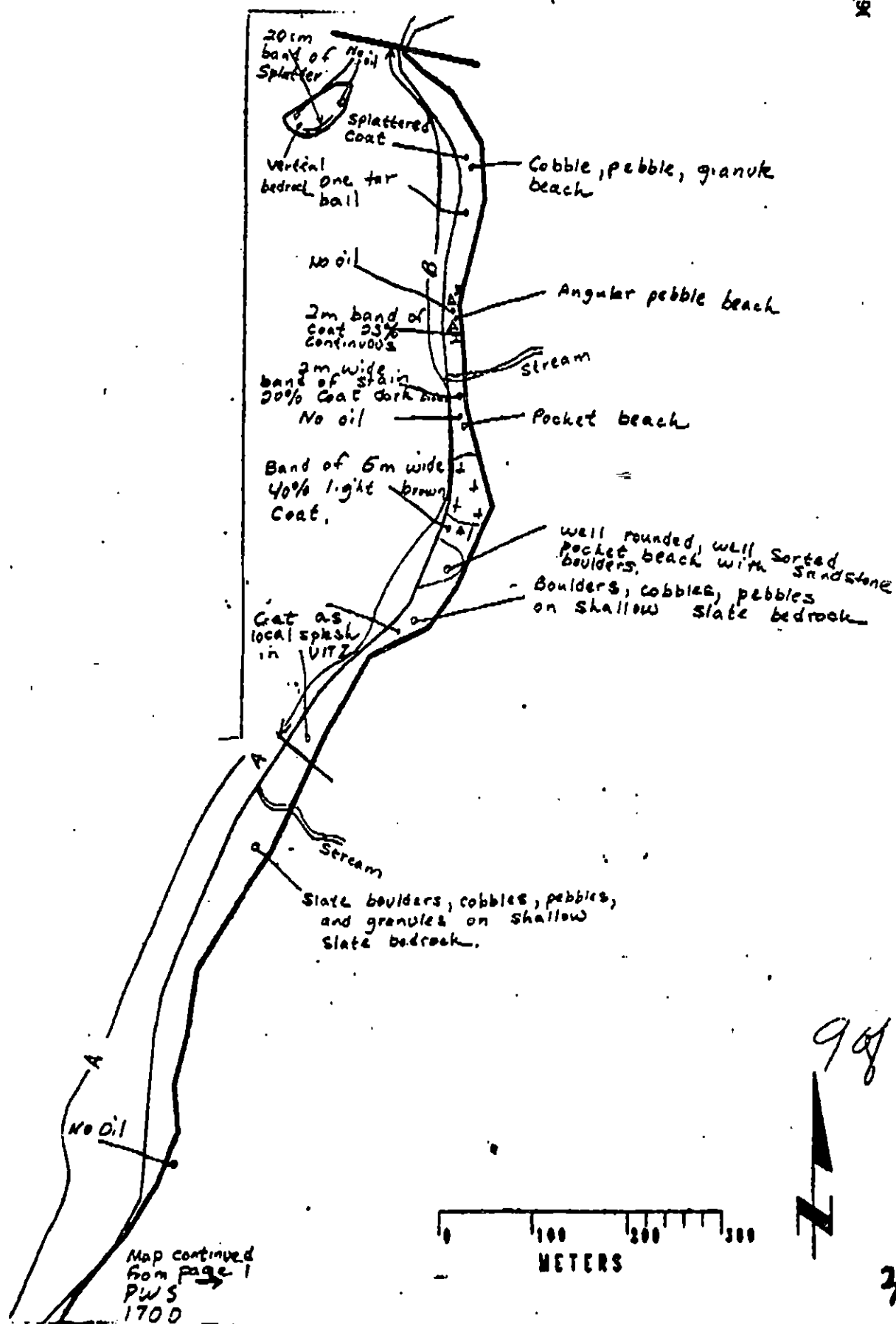
CHECKLIST

- Map Arrow
- Approx. Scale
- Topographic
- Oil Data
- Length
- % Cover
- Substrate Character
- Eel, HML, LML
- SSL
- Profile Location(s)
- Profile(s)
- Photo Location(s)

LEGEND

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

SKETCH MAP



OR Character A 5 332 MS TB FL NO 216 1912

REVISIONS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/90

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

- (A) Substrate type and % of segments:
 (1) Bedrock 5 (2) Boulder 10 (3) Cobble 40 (4) Pebble 30 (5) Sand 15 (6) Silt _____
- (B) Overall % cover of biota (% of segment): Dense _____ Moderate 35% Low _____
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)
- Photographs: Roll No. ST/10/8
 Frames 1-8

BARNACLES

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

MYTILUS

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

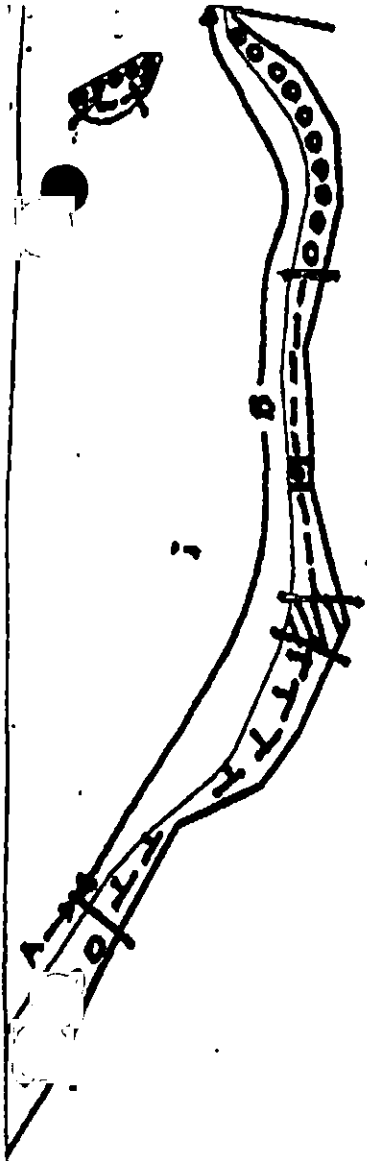
GASTROPODS

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

FUCUS

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

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



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

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

12/12

← PWS
1700

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-4

ADEC Segment Length: 3110m



Map Key: PWS-170d

Name: R. Marty

Date: 5 April 1990

Date Entered:

ER-04

↓ PWS 170A

110/12

PWS 170D →

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-4

ADEC Segment Length: 3110m



Map Key: PWS-170c

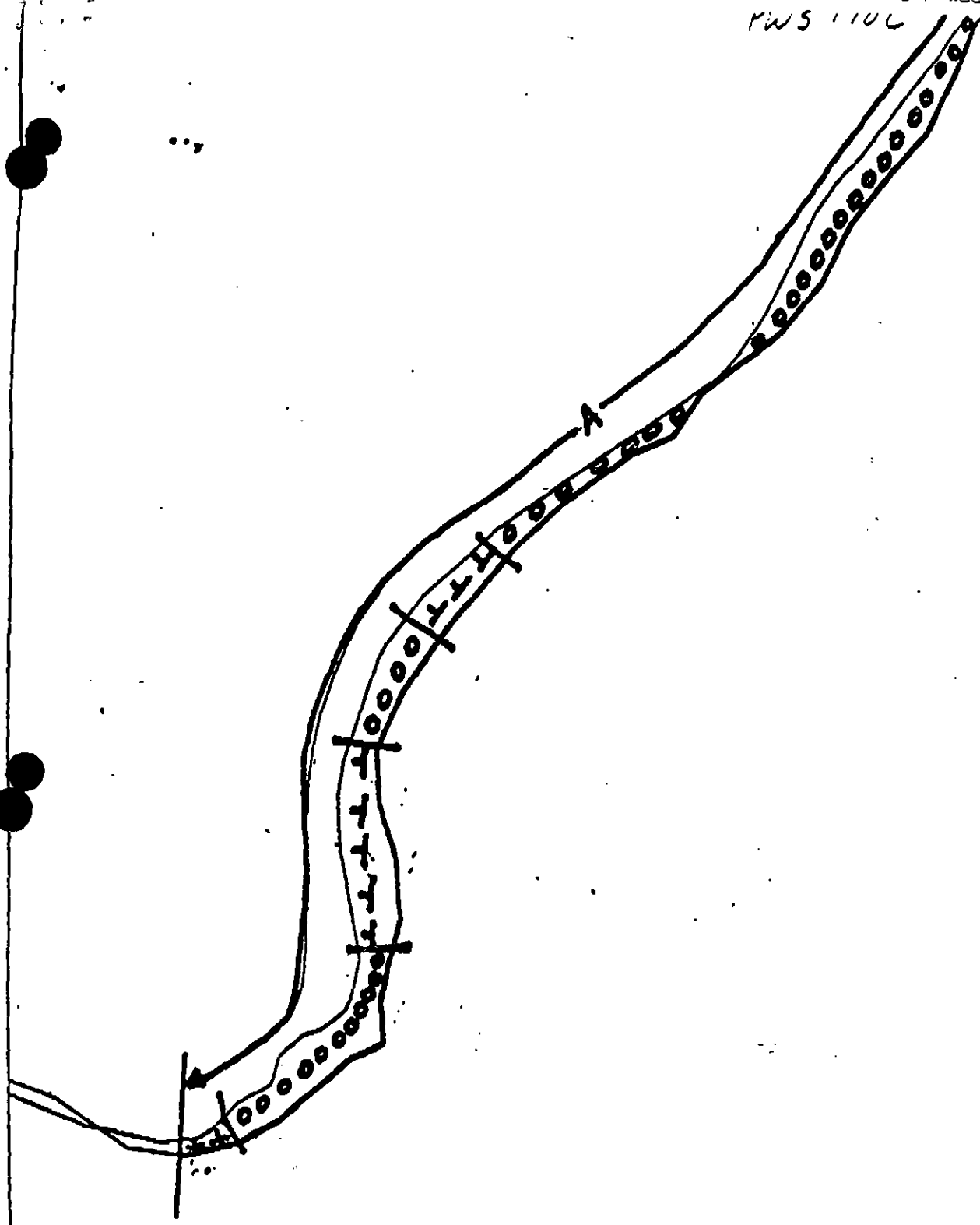
Name: R. Marty

Date: 5 April, 1990

Date Entered:

PWS 1100

Subsegment A
Continued on next
Page



16 of 12

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-4

ADEC Segment Length: 3110m



Map Key: PWS-170a

Name: R. Marty

Date: 5 April 1990

Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-04

SUBDIVISIONS: B (2 OF 2)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Anadromous stream no. 226-50-16436

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

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

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

7HH Subsistence area: Finfish harvesting

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

7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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 43 m: Narrow 234 m: V.Light 272 m: No Oil 269 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: Recommend bioremediation between 6/2 and 7/9. Bioremediation may not be conducted within 100m of anadromous fish stream without prior permission of ADF&G.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

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/ ER-04 SUBDIVISION: B DATE 05 APRIL 90

ISCG

NAME LARRY FLETCHER

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

1. BIO-REMEDIATE, OIL COAT AND SPLASH.

ADEC

NAME DAVID M. SALE

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

THIS BEACH SEGMENT REQUIRES SOME SORT OF TREATMENT;

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

② BIOREMEDIATE LARGER ROCKS FOR REMOVAL OF COVER.

LAND MANAGER

NAME Leigh Carlson

SIGNATURE [Signature]

ADNR

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

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

7 of 12

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG R. Marty USCG LARRY FLETCHER SEGMENT ST/ ER-08 04
 BIO B. Lumb LAND REP Leigh Carlson SUBDIVISION B
 EXXON J. Czarnicki ADEC Dave Sale TIME 14:08 to 17:35
 AM NO.: 10 TIDE LEVEL: +1.8m (6') to +0.3m (1') DATE 04/05/90
 ST. SUBDIVISION LENGTH: 792 m ☐ Sun ☒ Clouds ☒ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 10 % B 20 % C 40 % P 20 % G 10 % S 0 % M 0 % V 0 %
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 44 m N 249 m VL 293 m NO 216 m

SURFACE OIL

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

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

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

DEBRIS COLLECTED

☐ YES ☒ NO

TYPE

#BAGS

Photographs:

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

SUBSURFACE OIL

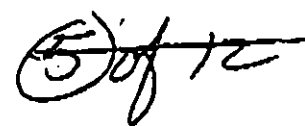
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-in)	BELOW	OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		ST. OF	RES. OF	LEV. OF	FILM OF	NO			1	2	3	4	5	6	7	8	SU	U	M	U		
1	12				X		0-4	X					X				X				N	GS
2	5	X					0-2	X					X				X				N	GS
3	14	X					0-2	X					X				X				N	S

* Oiled interval < 5 cm does not constitute subsurface oil.
 COMMENTS

Revision

RM 4/5/90

20/5



OG Rich Marty

SEGMENT ST/EROY

SUBDIVISION A+B

DATE 05 April 91

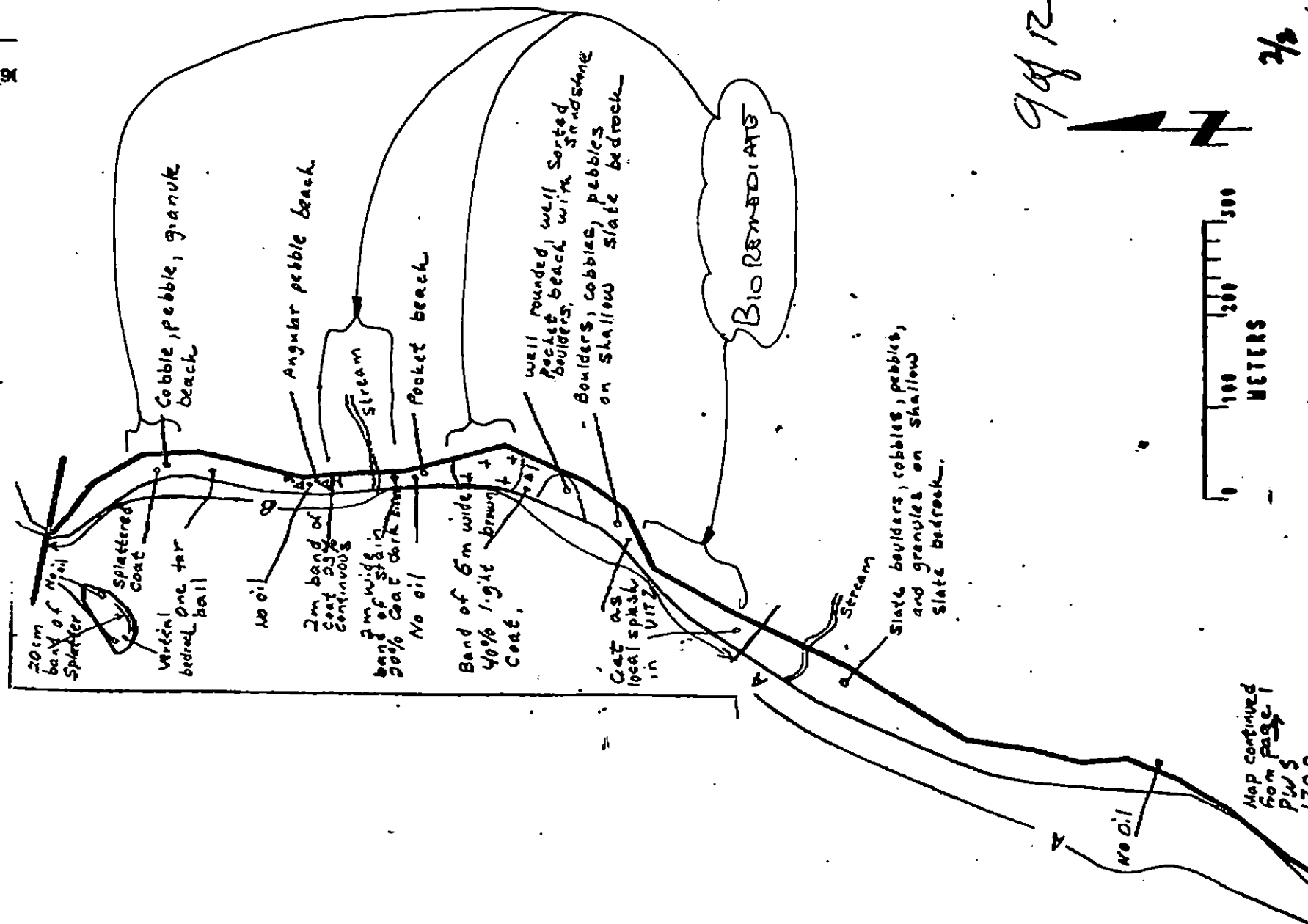
SKETCH MAP

CHECKLIST

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

LEGEND

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



Oil Character (m): AP 5 PO 332 CV 576 ST MS TB FL NO 1912
216

REVISION 000000

SHORELINE ECOLOGICAL SUMMARY

REVISION: 00/22/90

Segment ST/10/ER 4 Subdivision B Date (mo/day/yr) 4/5/90

Time (24 hr) 1630 - 1800 Biologist Lemon Snowing; wind 7 mph NE

(A) Substrate type and % of segments:

(1) Bedrock 10 (2) Boulder 20 (3) Cobble 40 (4) Pebble 20 (5) Sand 10 (6) Silt

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

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

Photographs:

Roll No. ST/10/8

Frames 9-13

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

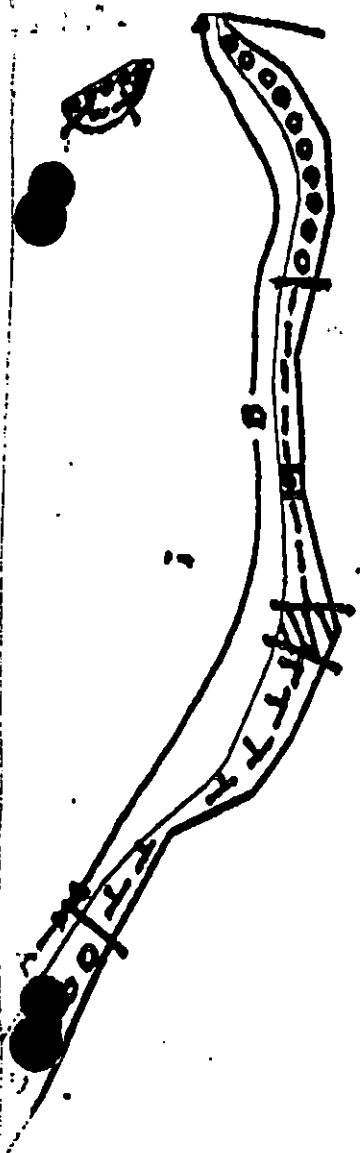
NOT PRESENT

Wildlife Observations/ General Comments: Other noteworthy marine biota: Dermasterias (on bedrock), Scalaster ~~impunctatus~~, Ophiasterias koshleri, and Pycnopodia halleri ovigerous ♀ (ASTEROIDEA) were all seen at about 2 meter intervals along the shore. Common amphipods were found along the drift line and annelid worms in the low zone. one high zone area about 1 meter wide and 3 long had a dense mussel cover, otherwise as reported above.

Mammals: deer tracks and otter scat on shore; otter and harbor seal in water.

Inspected stream, tiny eggs (not salmon) found. Baxillanus giganteus (bivalve) shells common on beach suggests a nearby bed perhaps of substantial value. Deer harvest, invertebrate harvest, hatchery release, finfish harvest, stream spawning.

6 of 12



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

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

128/12

← PWS
1732

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-4

ADEC Segment Length: 3110m

METERS

Map Key: PWS-170d

Name: R. Marty

Date: 5 April 1990

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-4 SUBDIVISION B (2 of 2)

WORK WINDOW

Bioremediation More Than 100m From Stream	WORK PRIOR TO 7/1
Bioremediation Less Than 100m from stream	WORK PRIOR TO 7/1 (ADF&G MONITOR REQ.)

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (226-50-16436 is located in adjacent Subdivision A more than 100m from recommended treatment area. An uncatalogued stream is present in Subdivision B. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream.

1F Sawmill Bay Hatchery Release

Closed to bioremediation prior to 6/1.

7HH Subsistence: Finfish Harvesting

Closed to bioremediation after 7/1.

7II Subsistence: Deer Harvesting

Closed to bioremediation after 8/15.

7JJ Subsistence: Invertebrate Harvesting

No constraint to bioremediation.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or bank. No flushing of pollutants or sediment into stream drainage. Restrict boat and air traffic and beach disturbance to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to uncolled biota and substrate.

FOSC

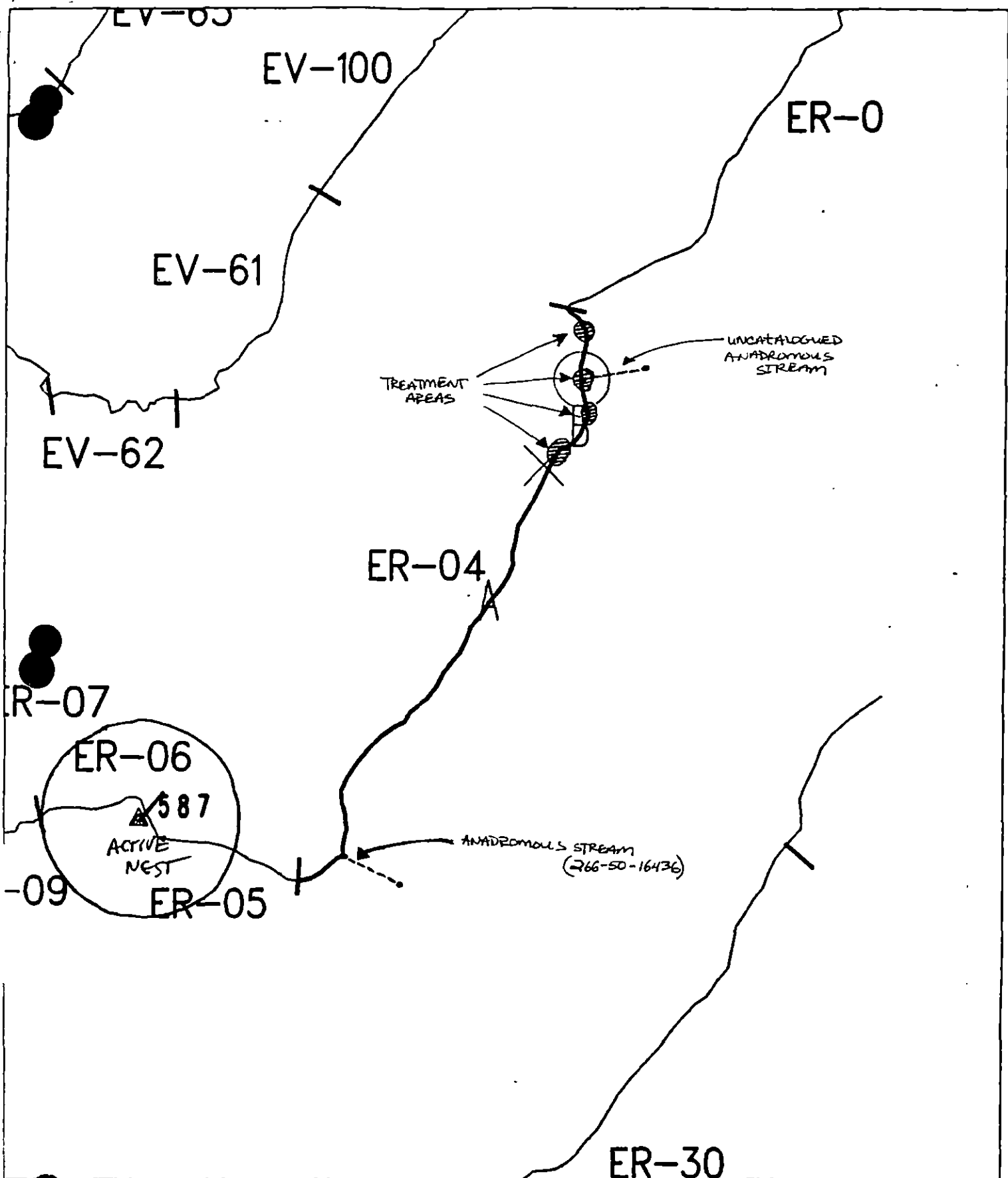
Date

6-10-90

Prepared by

Date

6/10/90



Exxon Company, USA

Map Key: PWS-ER-4

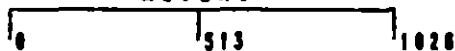
May 11, 1990 6/4/90



ECOLOGY MAP SEGMENT ER-4

SUBDIVISION B (2 of 2)

METERS



Seabird Colony



Eagle Nest

1 inch = 1683 feet

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Anadromous stream no. 226-50-16436

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

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

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

7HH Subsistence area: Finfish harvesting

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

7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 43 m: Narrow 234 m: V.Light 272 m: No Oil 269 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

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

TAG COMMENTS: SEE ADDENDUM dated 6/10/90/PP

TAG APPROVAL DATE: 4/25/90
ADEC Art Weir
EXXON Art Weir
NOAA Joseph Talbot
USCG Kenneth Kinn

FOSC: DATE: 5-3-90

1991 MAYSAP EVALUATION

SEGMENT: ER 005 SUB: A REGION: PWS SURVEY DATE: 5/26/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: *Timothy D. Smith* Date: 6/04/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

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

ADEC <u><i>WhBau</i></u>	FOSC <u><i>EC</i></u>
EXXON <u><i>Boal</i></u>	E. E. PAGE, CDR, USCG
USCG <u><i>SMade</i></u>	CHIEF OF STAFF, FOSC
NOAA <u><i>J. F. S.</i></u>	

**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.

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.

Fry Release: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 3 SEGMENT ER-05 SUBDIVISION A DATE 5/26/91

ADEC

NAME Wesley Ghermley SIGNATURE Wesley Ghermley 

☐ NTR ☐ TREATMENT RECOMMENDED

Due to time limits I did not take part in this segment survey, but according to survey members on site, remaining oil was removed.

EXXON

NAME Ray Sotelo SIGNATURE Ray Sotelo

☒ NTR

No treatable oil remains on this segment no further work recommended or required.

LANDMANAGER

NAME DAVE BLANCHET OF USFS SIGNATURE Dave Blanchet

☒ NTR MODERATE ENERGY ENVIRONMENT. PRIMARILY BOULDER COBBLE BEACH, WITH SOME HIGH ANGLE, ANGLING BOULDER/COBBLE SHORELINE. PROBABLY ABOUT 20 TAR BALLS FOUND IN ONE SECTION OF BEACH. ARE TAR BALLS FOUND WERE BROKEN UP. VERY LIMITED POSSIBILITIES FOR CAMPSITES.

USCG/NOAA

NAME DAHLIN / MOONEY SIGNATURE Tung Mooney 

☒ NTR COMPRISED OF BOULDER, COBBLE, PEBBLE, GRAVEL SHORELINE. 5 PITS DUG "NO SUBSURFACE OIL." REMOVED AND FILLED TAR BALL AND PATTY AREAS. NO FURTHER TREATMENT REQUIRED.

PAGE 7 OF

DATE 26 / MAY / 91

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 820 m US 0 m

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

OG 1 of 2/
reviewed 5/28/91 KG

OG SKETCH MAP

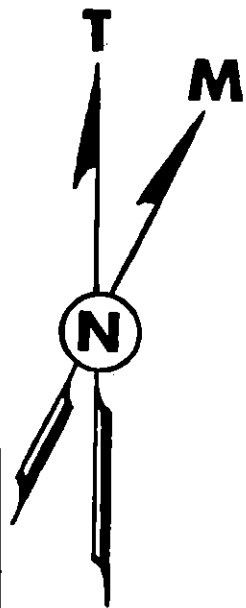
~~GREG CHANNY~~ JOHN HARPER

TEAM 5

SEGMENT: ERSA

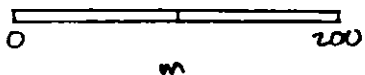
DATE: 26 MAY 91 .

AIR P.#: PIM-6 005-108



LEGEND

BEDROCK	
BOULDER	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE

B1 J172 (LHTS)

G/P N.O

A2 0177 30

PG/SK N.O

Δ3 MITZ 25

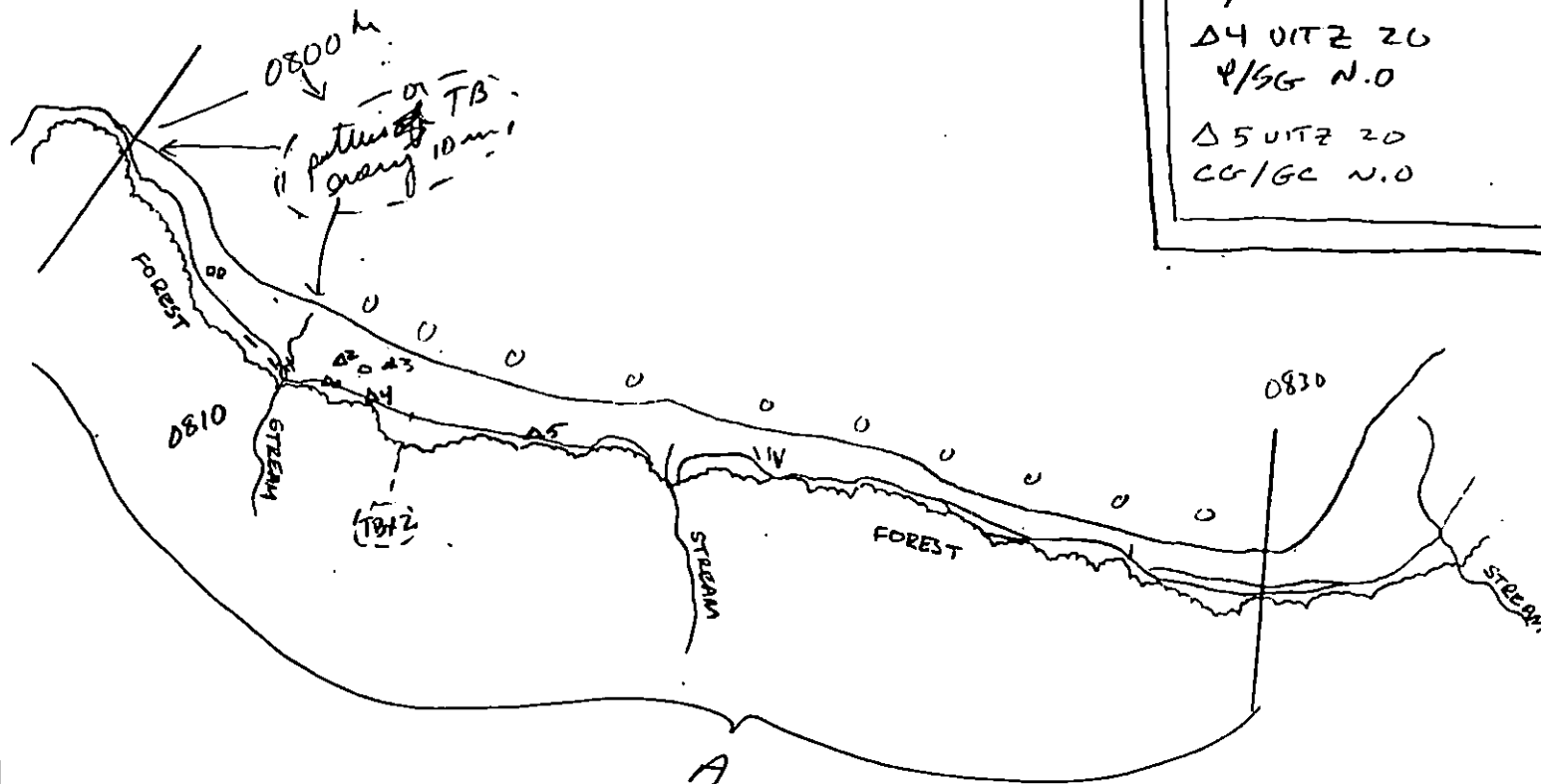
P/S G N.O

Δ4 VITZ 20

4/56 N.O

 $\Delta 50177 \quad 20$

CC/GC N.O



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3

DATE 5/26/91

SEGMENT # EROS

TIDAL HEIGHT(Range) 0-0.5'

SUBDIVISION A

BIOLOGIST STOKER

SEA STATE Calm

WIND SPEED/DIRECTION Calm

PHOTOGRAPHS: ROLL #

FRAME #

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

Generally low energy shoreline consisting of mixed substrate pebbles/cobble and cobble/boulder beaches.

Biota on pebbles/cobble beaches includes patchy and variably sparse to dense *Fucus*, dense barnacles and spat, moderate to patchily dense small limpets, moderately dense to dense *Littorina* (+ egg masses), extensive and generally dense patches of attached and interbedded *Mytilus*, clusters of small *Pagurus*, Nereoid worms, patchily dense isopods (*Idotea*), *Scaligeria*, *Nucella*, and amphipods.

Biota on cobble/boulder includes, in addition to the above, patchily dense small holothurians, clusters of small nudibranchs (*Lamellidors*), small sea urchins, chitons (*M. tunicata*), oar blennies, *Erastrius*, *Pycnogonida*, and small *Lepidasterias*.

No mappable or treatable oil remains on this segment.

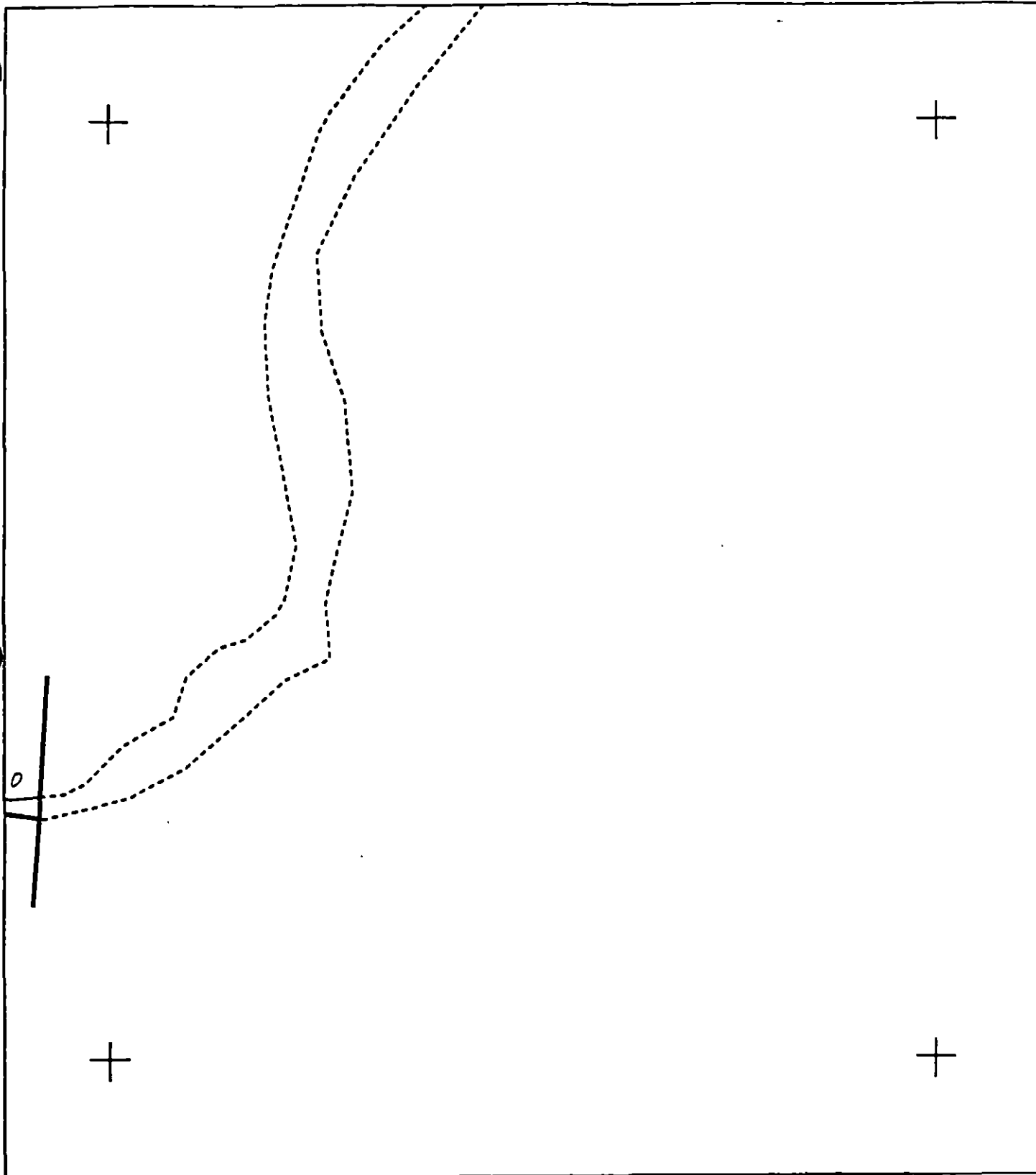
WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			Eel blennies
Seabirds			Dense schools of fry
Waterfowl	mergansers	2	
Gulls/Kittiwakes			
Shorebirds			
Corvids			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

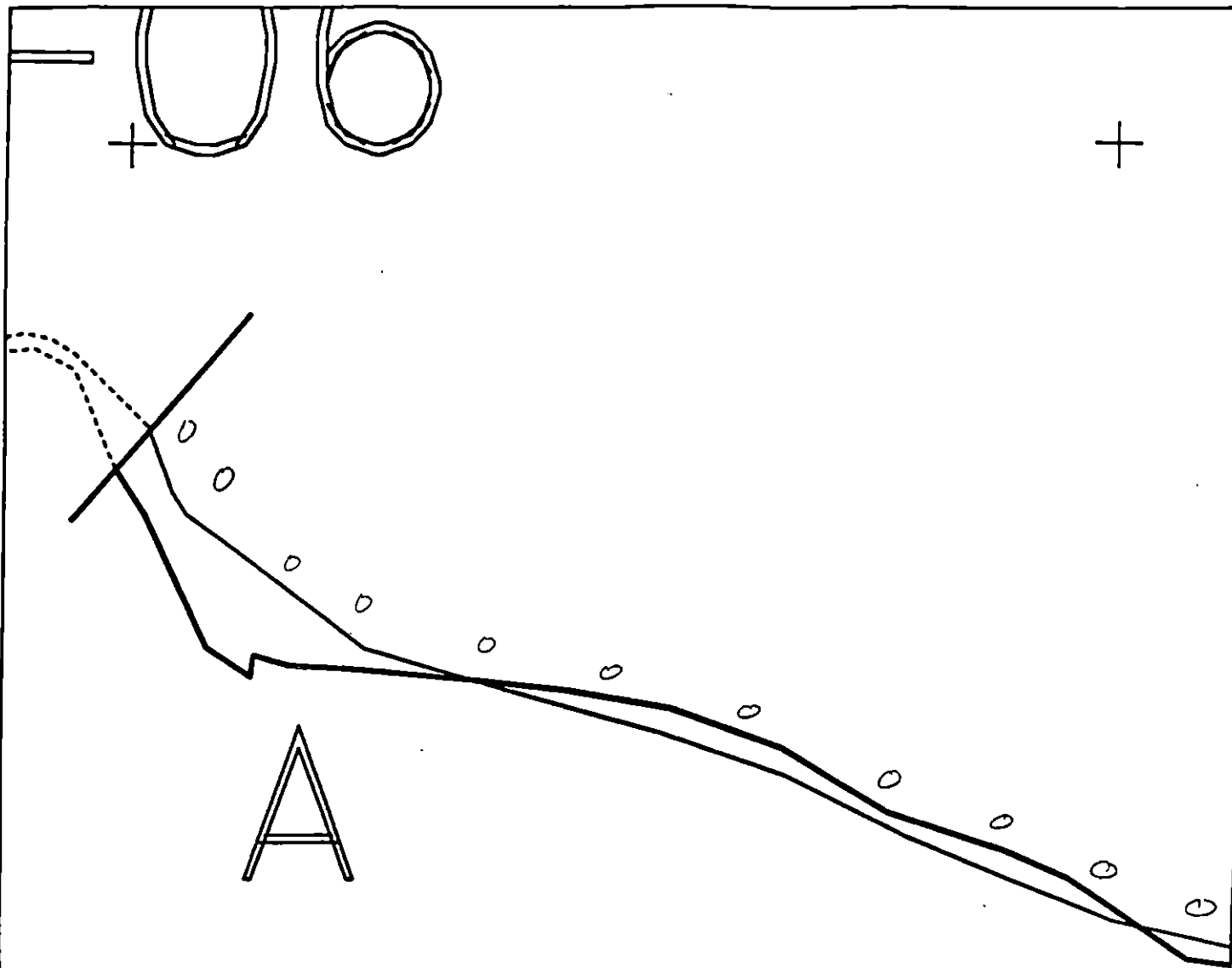


XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

ER005 A
ADEC Subsegment Length: 820m
METERS
5 100 200
AK State Plane Zone 4
per 805ab

Subdivision Field Map
Map Key: PWSER005Ab
Name: HARPER
Date: 26 MAY 91
Data Entered:


REVIEWED: MC 5128191
reviewed 5128191 KG OG 4 of 4



ER-05

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

ER005 A
 ADEC Subsegment Length: 820m
 METERS
 5 100 200
 AK State Plane Zone 4
 per005a

Subdivision Field Map
 Map Key: PWSE005Aa
 Name: VHARPER
 Date: 26 MAY 91
 Data Entered:

Reviewed: MC 5/28/91
 OG 3 of 4
 reviewed 5/28/91 KG

1991 MAYSAP EVALUATION

SEGMENT: ER 005 **SUB:** A **REGION:** PWS **SURVEY DATE:** 5/26/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ **Date:** _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other _____

Other _____

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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.

Fry Release: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

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

TEAM NO. 3 SEGMENT ER-05 SUBDIVISION A DATE 5/26/91

ADEC

NAME Wesley Gharmlay SIGNATURE Wesley Gharmlay ☐ NTR☐ TREATMENT RECOMMENDED

Due to time limits I did not take part in this segment survey, but according to survey members on site, remaining oil was removed.

EXXON

NAME Ray Sotelo SIGNATURE Ray Sotelo☒ NTR

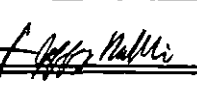
No treatable oil remains on this segment no further work recommended or required.

LANDMANAGER

NAME Dave Blanchet OF USFS SIGNATURE J. David Blanchet☒ NTR

MODERATE ENERGY ENVIRONMENT. PRIMARILY BOULDER COBBLE BEACH, WITH SOME HIGH ANGLE ANGULAR BOULDER/COBBLE SHORELINE. PROBABLY ABOUT 20 TAR BALLS FOUND IN ONE SECTION OF BEACH. ARE TAR BALLS FOUND WERE BROKEN UP. VERY LIMITED POSSIBILITIES FOR CAMPSITES.

USCG/NOAA

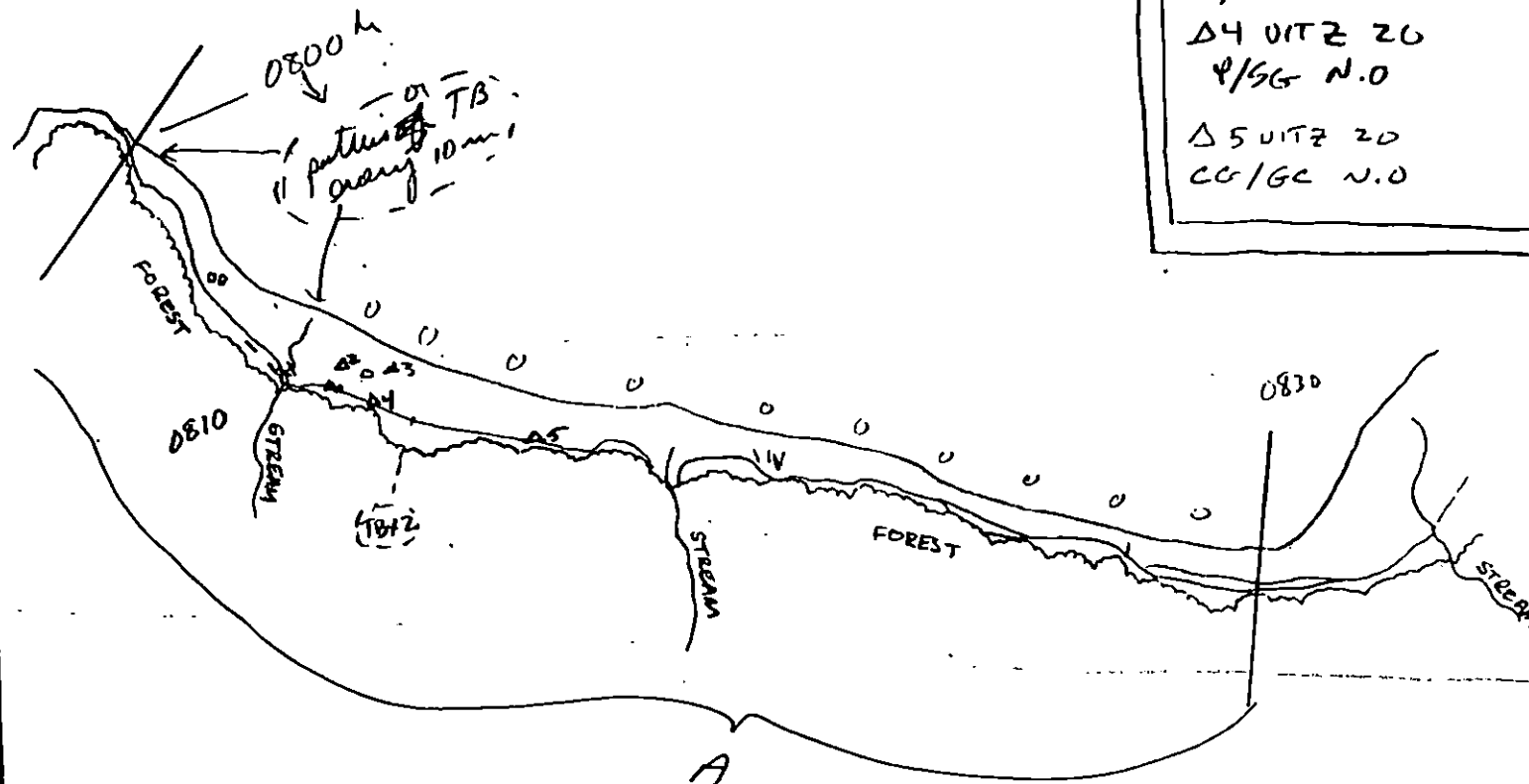
NAME DAHLIN / MOONEY SIGNATURE Tina Mooney ☒ NTR

Comprised of Boulder, Cobble, Pebble, Gravel Shoreline. 5 PITS DUG "NO SUBSURFACE OIL." REMOVED AND FILLED TAR BALL AND PATTY AREAS. NO FURTHER TREATMENT REQUIRED.

OG 1 of 2
revised 5/2010

AIR P.#: PIM-6 005-108

CC/GC N.O



BEDROCK	
BOULDERB	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

A horizontal number line is shown with the number 0 at the left end and 200 at the right end. A single tick mark is placed exactly halfway between 0 and 200, representing the value 100.

ORIGINAL FILED NOTED

06-2044
Renewed 5/28/91 KLG
Renewed 6/28/91 me

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3 DATE 5/26/91
 SEGMENT # ER05 TIDAL HEIGHT(Range) 0-0.5'
 SUBDIVISION A BIOLOGIST Stoker
 SEA STATE Calm WIND SPEED/DIRECTION Calm
 PHOTOGRAPHS: ROLL # FRAME #

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

Generally low energy shoreline consisting of mixed substrate pebble/cobble and cobble/boulder beaches.

Biota on pebble/cobble beaches includes patchy and variably sparse to dense Fucus, dense barnacles and spat, moderate to patchily dense small limpets, moderately dense to dense Littorina (egg masses), extensive and generally dense patches of attached and interbedded Mytilus, clusters of small Pagurus, Nereid worms, patchily dense isopods (Idotea), Scudicaria, Nucella, and amphipods.

Biota on cobble/boulder includes, in addition to the above, patchily dense small holothurians, clusters of small nudibranchs (Lamellidors), small sea urchins, chitons (M. Tunicata), eel blennies, Euteriacs, Pyrenopodia, and small Leptasterias.

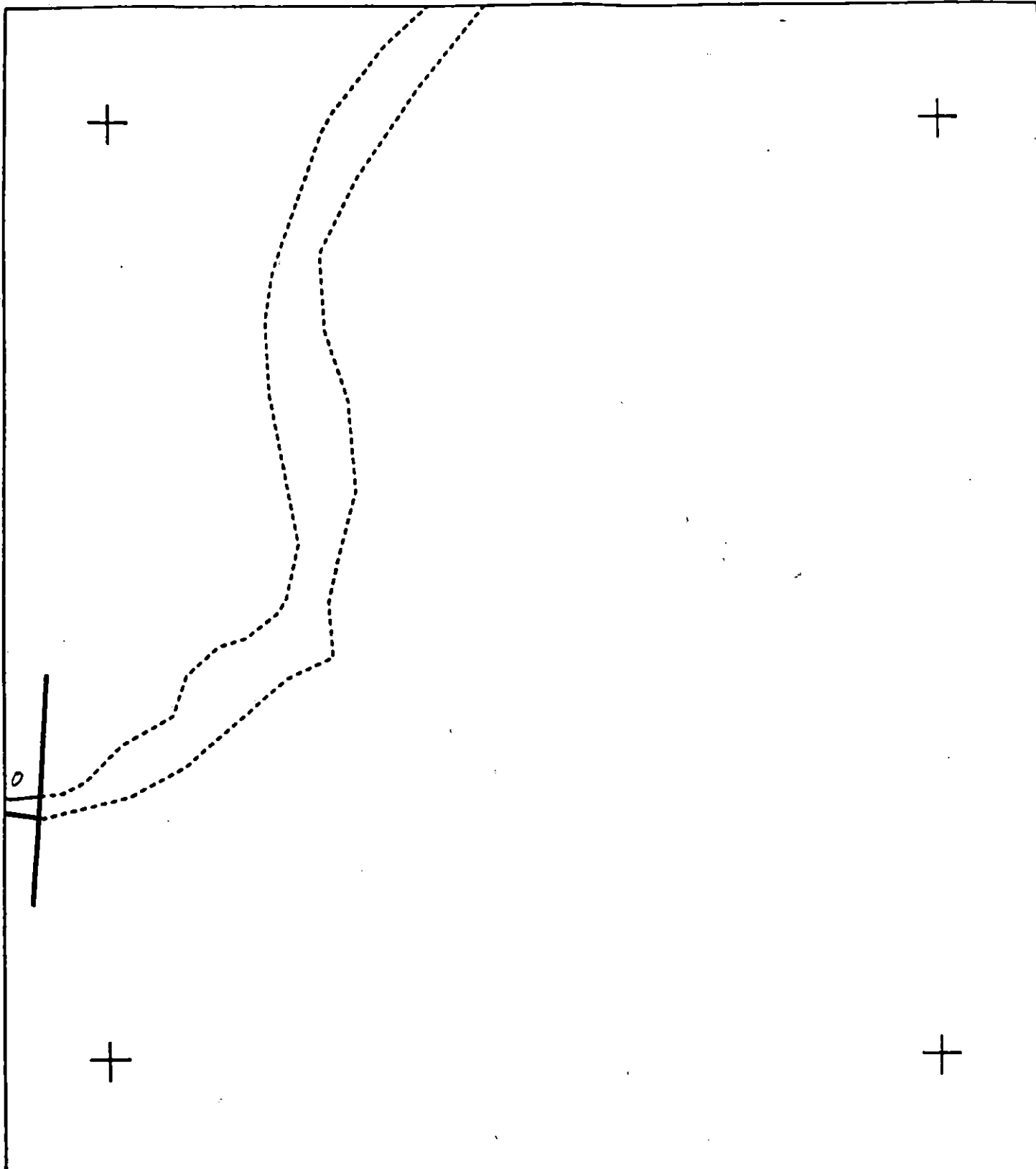
No mappable or treatable oil remains on this segment.

WILDLIFE OBSERVATIONS
 TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			Eel blennies
Seabirds			Dense schools of fry
Waterfowl	mergansers	2	
Gulls/Kittiwakes			
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	1		
Pinnipeds (specify)	Sea lion - 1		
Cetaceans (specify)			

Shoreline subdivision map showing important biological features attached.



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

ER005 A

ADEC Subsegment Length: 820m
METERS

0 100 200
 AK State Plane Zone 4
 per005ab



Subdivision Field Map

Map Key: PWSER005Ab

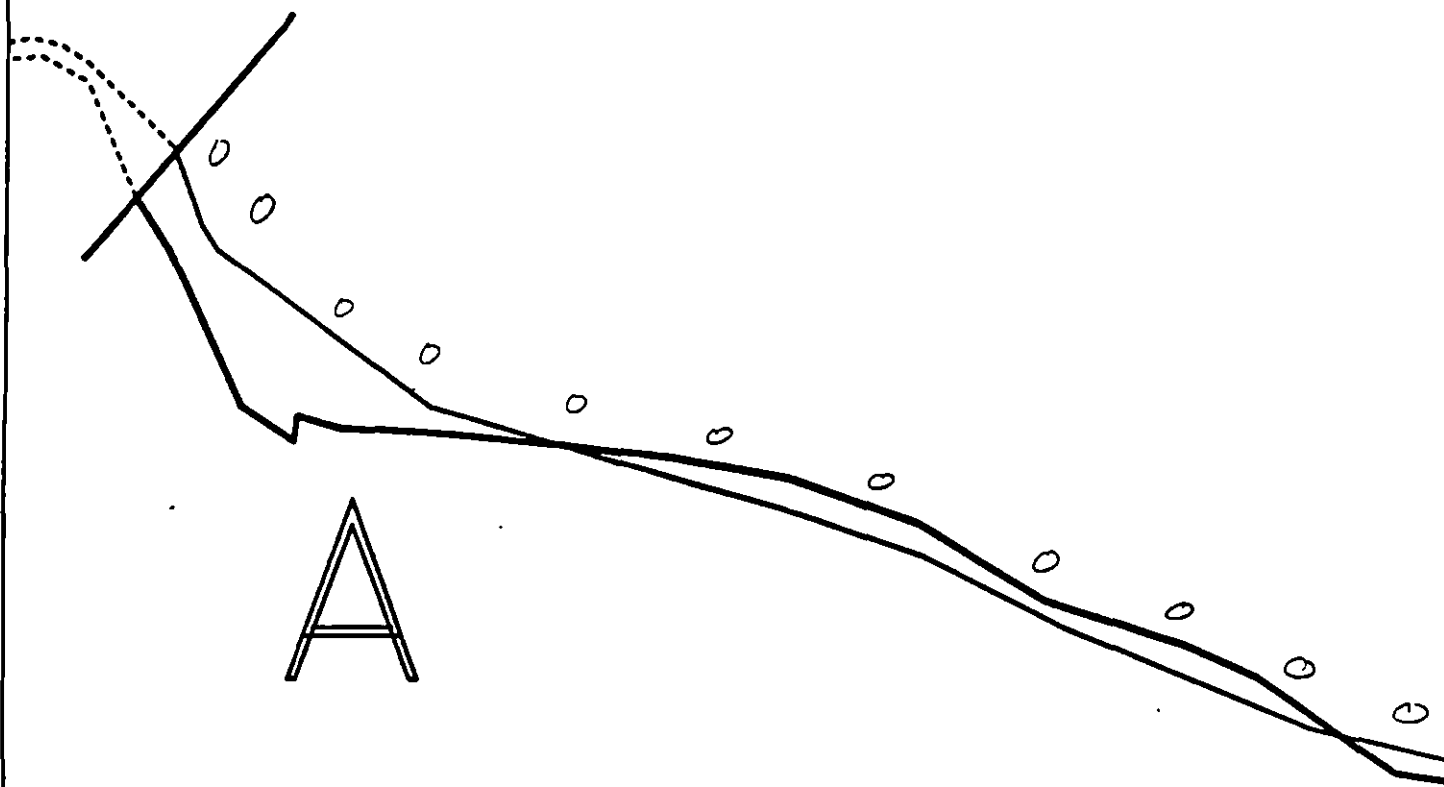
Name: HARPER

Date: 26 MAY 91

Date Entered:

REVIEWED MC 5128191
 reviewed 5128191 KG OG 4 of 4

06



ER-05

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

ER005 A
ADEC Subsegment Length: 820m
METERS
5 100 200
AK State Plane Zone 4
per005a



Subdivision Field Map
Map Key: PWSE005Ae
Name: VARDER
Date: 26 May 91
Data Entered:

Reviewed: MC 5/28/91
OG 3 of 4

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ ER-05 STREAM NO: 226-50-16432 DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiiled biota and substrate. Bald Eagle nest within 400M of stream 226-50-16432 - see ecology map. Subject stream is located in Subdivision A (1 of 1).

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. Daniel McManis DATE: 5/8/90

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u> </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 is manual removal of tarmat as indicated on sketch map. Work should be conducted between 6/1 and 7/10 based on above constraints, with approval of USFWS regarding eagle nest.

TAG COMMENTS:

TAG APPROVAL DATE: 5/7/90

ADEC Art Womack Art Womack

EXXON Andy Tera Andy Tera

NOAA Gary Peters Gary Peters

USCG G.A. Reiter G.A. Reiter

FOSC: ML DATE: 5-15-90

OG CAL ARSON

SEGMENT ST/ ETL-005

STREAM 226-50-16432

DATE 4/20/90

CHECKLIST

- ☐ N Area
- ☐ Approx. Scale
- ☐ Segment Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HMLA/VL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PH Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

PH - No Subsurface Oil

2 Δ

PH - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

lll

Old Vegetation

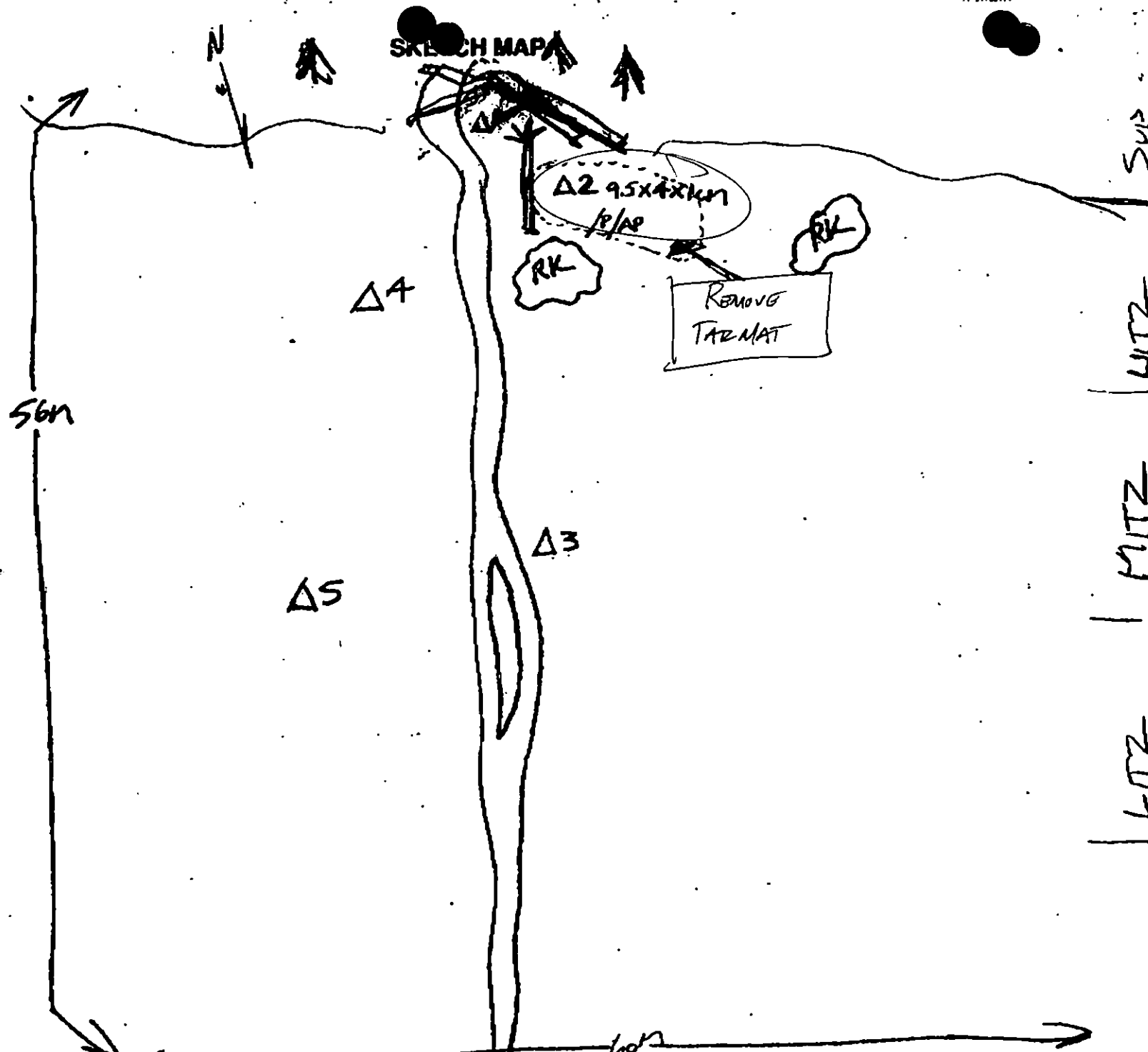
1 ●→

Photo location, direction,
and number

Oil Character Length (m): AP _____ PO _____ CV _____ CT 9.5 ST _____ MS _____ PT _____ TB _____ FL _____ NO _____

REVISION 000000

7/56



ELRINGTON

ECOLOGY MAP

am
4/24/90

PASSAGE

ELRINGTON

Nave

Light

Donald

Bald Eagle
Nest

ER-05

226-50-16432

28

EL

R-06

SUBJECT
ANADROMOUS
STREAM
ER 05-A (1 of 1)

ER-05

No	1.75	263	2
V. Light	1.1	165	16
Light	2.1	315	315
		743	75

19 of 22

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-5

ADEC Segment Length: 820m

0 100 200 300
METERS

Map Key: PWS-171

Name: R. Marty

Date: 04/04/90

Date Entered:

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-50-16432

SEGMENT ER-5 SUBDIVISION A

WORK WINDOW

Tarmat Removal

CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	No constraint to tarmat removal.
1F	Sawmill Bay Hatchery Release	No constraint to tarmat removal.
5T	Bald Eagle Nest	Closed to tarmat removal. USFWS bald eagle impact assessment completed on 5/26/90 by Mike Lockhart indicates an active nest within 400m of the work area.
7II	Subsistence: Deer Harvesting	No constraint to tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

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

SEE SUBDIVISION CONSTRAINT ADDENDUM ER-5A
FOR ADDITIONAL CONSTRAINT INFORMATION.

TAG APPROVAL DATE 6/04/90
ADEC Ray Morris
EXXON ANDY TEAL
NOAA John C. Tisholt
USCG G.A. DEITER

FOSC

Date

Prepared by

Date

Incorporates information from
USFWS bald eagle survey 5/26/90.

ER-04

ER-07

ER-06

Active
Eagle
Nest

587

WORK
AREA

ER-09

ER-05

ANADROMOUS
STREAM
226-50-16432

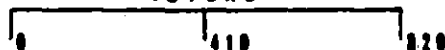
ANADROMOUS
STREAM
226-50-16436

Anadromous Stream Evaluation: 226-50-16452

ECOLOGY MAP 6/1
SEGMENT ER-5

SUBDIVISION A (1 of 1)

METERS



- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1346 feet

Exxon Company, USA
Map Key: PMS-ER-5
May 11, 1990

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ ER-05 STREAM NO: 226-50-16432 DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unhoiled biota and substrate. Bald Eagle nest within 400M of stream 226-50-16432 - see ecology map. Subject stream is located in Subdivision A (1 of 1).

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: S. David M. Mahan DATE: 5/2/90

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment is manual removal of tarmat as indicated on sketch map. Work should be conducted between 6/1 and 7/10 based on above constraints, with approval of USFWS regarding eagle nest.

See Addendum dated 6/3/90

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/7/90

ADEC Art Worners DeHaven

EXXON Amry Tech

NOAA Gary Jensen Gary Jensen

FOSC: ML DATE: 5-15-90

USCG G.A. REITER / G.A. Reiter

ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND

SEGMENT: ER-05

STREAM NO: 226-50-16432

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ ER-05 STREAM NO: 226-50-16432 DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Bald Eagle nest within 400M of stream 226-50-16432 - see ecology map. Subject stream is located in Subdivision A (1 of 1).

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: _____

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 is manual removal of tarmat as indicated on sketch map. Work should be conducted between 6/1 and 7/10 based on above constraints, with approval of USFWS regarding eagle nest.

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 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 6/1)

1E Main Bay Hatchery release (4/20 to 6/10)

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

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

1H Remote release site

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 (8/11 to 7/25)

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

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

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

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

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

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 267-2208

AST-1 All Bald Eagle nests (3/1 to 6/1)

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation:

Tent sites (8/1 to 9/15)

6V Anchorages (8/1 to 9/15)

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

6X Lodge (8/1 to 9/15)

Special use destination

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

50754

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / ER-005 SUBDIVISION: ^{ASCE} 226-50-16432 DATE 4-20-90

USCG

NAME Kerwin L. Dreher SIGNATURE awoz K. L. Dreher

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

AD546

ADEC

NAME Aimee Weseman SIGNATURE Aimee Weseman

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Manually remove scattered tar matts and sporadic asphalt patches on NW side of stream.
Coverage includes an area 9^{ft}m x 4^{ft}m x 4^{ft}m - of broken tar matt and 4m x 1m x 4cm of sporadic tar matts
No bioremediation recommended.

LAND MANAGER

NAME no team member SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY (ANAD)

REVISION NO. 04/13

OG CAL LARSON USCG DREHER, CWE SEGMENT ST/ ER.005 6/50
 BIO KEN CRITCHFIELD LAND REP STREAM 226-50-164321 OF 1
 EXXON DARRELL YONES ADFG RAK GUTHRIE-AIMEE WISEMAN TIME 15:00 to 15:30
 TEAM NO. 14 TIDE LEVEL +2 FT DATE 4/20/90
 EST. SUBDIVISION LENGTH: 60 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 5 % B 5 % C 20 % P 50 % G 10 % S 10 % M 0 % V 0
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 9.5 m NO 50.5 m

SURFACE OIL

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

PAVEMENT H F 2 sq. m by 1 c

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 NO

☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. 2

Frames 1-10

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		NO	NO	SW	W	U	ME	U	SW	W	ME	U				
1	10					✓	•								✓				✓	N	N	PB, GR
2	10					✓	•			✓	✓				✓							CB, PB, GR, SC
3	8					✓	•															CB, PB, GR, SC
4	15					✓	•								✓							CB, PB, GR, SC
5	10					✓	•															CB, PB, GR, SC

COMMENTS

BROWN TAP-MAT / ASPHALT PATCH NO OIL IN STREAM

REVIEWED JW

DATE 4-24-90

OG CAL ARSON

SEGMENT ST/ 12-005

STREAM 226-50-16432

DATE 4/20/90

CHECKLIST

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

LEGEND

1 Δ

PI - No Subsurface Oil

2 Δ

PI - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Spashed Distribution

eee

Old Vegetation

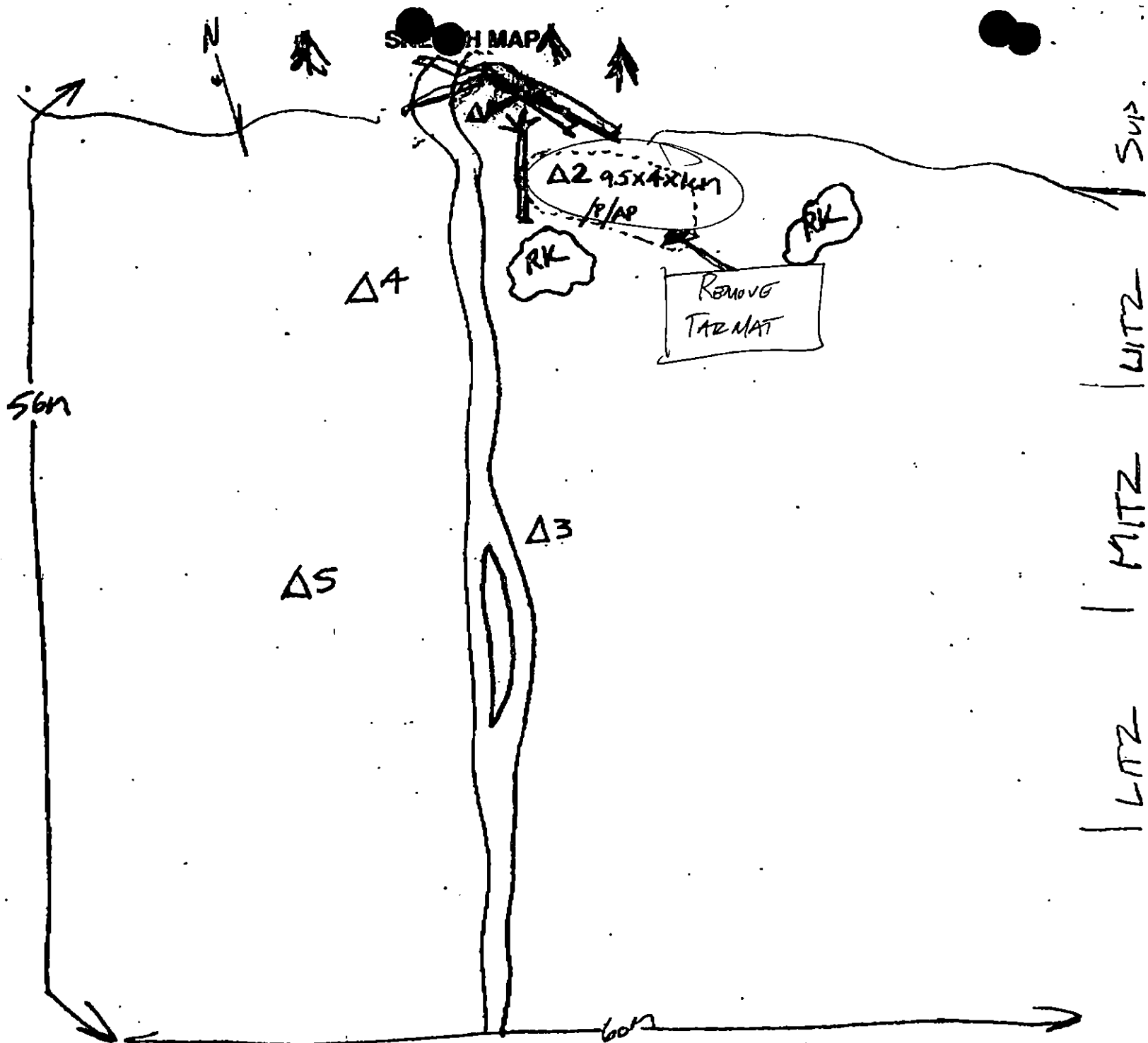
1 $\Rightarrow$

Photo location, direction,
and number

Oil Character Length (m): AP _____ PO _____ CV _____ CT 9.5 ST _____ MS _____ PT _____ TB _____ FL _____ NO _____

REVISIONS

45/4



ADP&C MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS (SS) DS TS AVS SCMA HHS PTA 2 REGION: (CIS) KP CI K, AP
 METHOD: Aerial (Ground) Boat
 3 DATE: 4-20-90 15 HIGH TIDE TIMES: 1 21 TEAM RECORDER: R. Gustin
 4 START TIME: 1510 16 HIGH TIDE HTS: 1 22 OBSERVERS: A. W. Wynn
 5 STOP TIME: 1535 17 LOW TIDE TIMES: 1 23 AGENCY: ADP&C
 6 SEGMENT #: ER-5 18 LOW TIDE HTS: 1 24 PHOTOS TAKEN: Y (N)
 7 STATION #: _____ 19 TIDE HT AT SURVEY: _____ Roll #: _____ Frames: _____
 8 K-UNIT: _____ Ebb Slack Flood Slack 25 VIDEO TAKEN: (Y) N TAPES: 90RL601555
 9 STAT AREA: _____ 20 USCG QUAD: _____ Starts: 1180 Ends: 1241
 10 LAT: _____ 11 LONG: _____ 26 SAMPLES TAKEN: Y (N) Water
 12 SOURCE: (Map) Loren OIL _____
 13 LOCATION: Sluiceway Is. Sediments _____
 14 DESCRIPTION: under coral Biological _____

EXTENT OF OIL

	SHORELINE				STREAM			
	L	V	H	N	L	V	H	N
27 SURFACE COVERAGE								
28 SURFACE THICKNESS	4.5cm							
29 PENETRATION	4.5cm							
30 OVERALL OIL IMPACT:	N	VL	L	N	N			
31 OIL TYPE:	Pooled	Mousse	<u>(Tar)</u> ^{mat}	Asphalt	Sticky	Stain		
32 OILED DEBRIS?	<u>(Y)</u>	N						
33 SHORELINE TYPE:	Headland	Low-lying Rocks	<u>(Beach)</u>	Cove				
		Lagoon	Marsh					
34 WAVE EXPOSURE:	<u>(High)</u>	Moderate	Low					
35 SUBSTRATE TYPE:	Bedrock	Boulder	<u>20%</u>	Cobble	<u>25%</u>			
	Gravel	<u>55%</u>	Sand		Mud/silt			

36 CATALOGED ANAD. FISH BREATH (Y) N
 37 CATALOG #: 226-50-16432
 38 STREAM NAME: _____
 39 OIL IN STREAM BED? (Y) (N)
 40 OIL ON STREAM BANKS? (Y) N
 41 OIL ON BEACH ADJACENT TO MOUTH? (Y) N
 (within 50 meters)
 42 OIL WITHIN 1 MILE OF STREAM (Y) N
 Where: _____
 43 ANADROMOUS FISH PRESENT? Y N
 44 ANADROMOUS FISH OBSERVATION
 Species Aerial Ground

REMARKS: Narrow band tar mat in upper intertidal on NW side
Crack, very irregular from 8-10 feet to 2-3 feet
on LSPDS only. (Slud removal)
9km x 4m x 1cm broken up Tar mat
LSPDS → 4m x 1m x 1cm cohesive asphalt mat

ELRINGTON

ECOLOGY MAP

am
4/24/90

PASSAGE

ELRINGTON

Nave

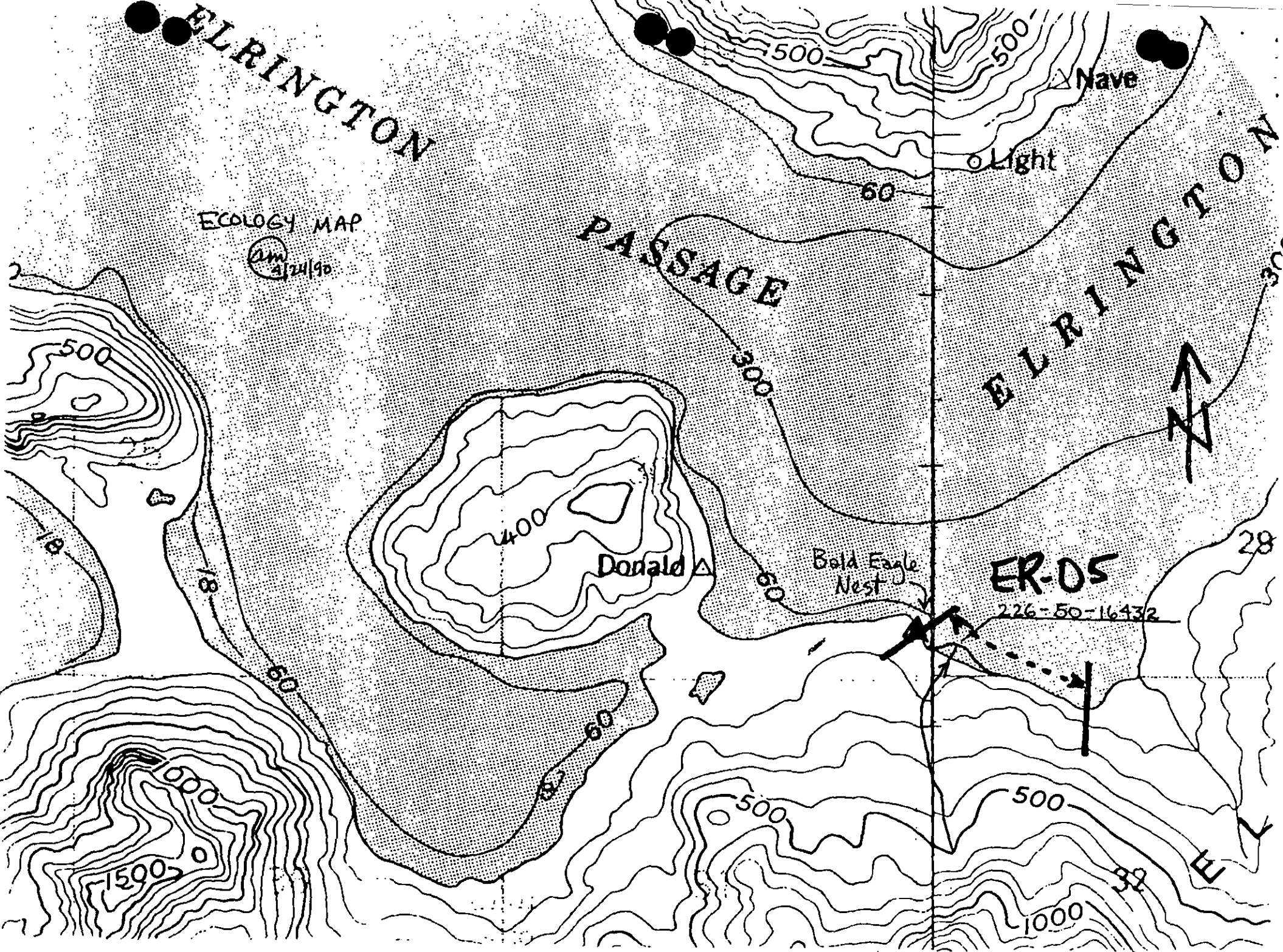
Light

Donald

Bald Eagle
Nest

ER-05

226-50-16432



R-06

SUBJECT
ANADROMOUS
STREAM
ER-05-A (1 of 1)

ER-05

No	1.75	263	2
V. Light	1.1	165	18
Light	2.1	315	31
		<u>743</u>	<u>76</u>

19 of 22

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

ER-5

ADEC Segment Length: 820m

0 100 200 300
METERS



Map Key: PWS-171

Name: R. Marty

Date: 04/04/90

Date Entered:

53

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-5 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup & Tarmat Removal More Than 400m From Eagle Nest	OPEN
Manual Pickup & Tarmat Removal Less Than 400m From Eagle Nest	CLOSED
Bioremediation More Than 400m From Eagle Nest	WORK PRIOR TO 8/15
Bioremediation Less Than 400m From Eagle Nest	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

- | | | |
|-------|--------------------------------------|---|
| 1A,1B | Salmon Stream | ADF&G catalogued anadromous stream (226-50-16432) is present in Subdivision A. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream. No constraint to manual pickup and tarmat removal. |
| 1F | Sawmill Bay
Hatchery Release Area | No constraint to manual pickup and tarmat removal; closed to bioremediation prior to 6/1. |
| 5T | Bald Eagle Nest | USFWS bald eagle impact assessment completed on 5/26/90 by Mike Lockhart indicates an active nest within 400m of the work area. Closed to manual pickup, tarmat removal and bioremediation less than 400m from active nest. No constraint to manual pickup, tarmat removal and bioremediation more than 400m from nest. |
| 7II | Subsistence:
Deer Harvesting | No constraint to manual pickup and tarmat removal; closed to bioremediation after 8/15. |

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. No flushing of pollutants or sediments into stream drainage; do not allow Injopol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. No personnel or boats within 400m of active nest. Restrict boat and air traffic and all disturbance to essential minimum. Air approach and takeoff from and to seaward only; maintain ~~800m~~ ^{400m work} horizontal, 300m vertical distance from nests. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NO. 226-50-16432)
FOR ADDITIONAL CONSTRAINT INFORMATION

FOSC

DATE 6.10.90

Incorporates information from
USFWS bald eagle survey 5/26/90.

ER-04

ER-07

ER-06

WORK
AREA

Active

587

Inactive

ER-09

ER-05

Anadromous
Stream
226-50-16436

ANADROMOUS
STREAM
226-50-16432



Exxon Company, USA
Map Key: PWS-ER-5
May 11, 1990



ECOLOGY MAP 6/1
SEGMENT ER-5
SUBDIVISION A (1 of 1)
METERS

0 410 820



Seabird Colony



Eagle Nest

1 inch = 1346 feet

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Salmon stream mouth (no. 16436); Salmon fry outmigration (1A) - 3/1 to 5/15 and spawning (1B) - 7/10 to 8/31; Sawmill Bay Hatchery release (1F) - 4/15 to 6/1. Contact ADF&G for dates and locations. Deer harvest (7II) - 8/15 to 2/28. Special use area (6Y) - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: No disturbance of stream bed or banks unless authorized by ADF&G. Contact ADF&G Habitat Division prior to treatment for permit. Avoid disturbance/damage to unoiled biota and substrate.

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

SHPO SIGNATURE: Charles E. Homan DATE: April 12, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 342 m: V.Light 208 m: No Oil 270 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Breakup and remove tarmats. Manual pickup of scattered tarballs. Bioremediation of coated area shown on sketch map. Work between 5/15 - 7/10 based on constraints.

→ See Constraint Addendum Dated 6/9/90 WTK

TAG COMMENTS:

TAG APPROVAL DATE: 4/12/90

ADDEC JOHN BAUER
EXXON ANDY TATE
NOAA Burt Wescott
USCG M. J. HALL

FOSC: hgh DATE: 4-14-90

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Salmon stream mouth (no. 16436); Salmon fry outmigration (1A) - 3/1 to 5/15 and spawning (1B) - 7/10 to 8/31; Sawmill Bay Hatchery release (1F) - 4/15 to 6/1. Contact ADF&G for dates and locations. Deer harvest (7II) - 8/15 to 2/28. Special use area (6Y) - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: No disturbance of stream bed or banks unless authorized by ADF&G. Contact ADF&G Habitat Division prior to treatment for permit. Avoid disturbance/damage to unoiled biota and substrate.

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

SHPO SIGNATURE: Charles Z. Homan DATE: April 12, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 342 m: V.Light 208 m: No Oil 270 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Breakup and remove tarmats. Manual pickup of scattered tarballs. Bioremediation of coated area shown on sketch map. Work between 5/15 - 7/10 based on constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/12/90

ADEC JOHN BAUER
EXXON ANDY TEAL
NOAA Burt Wescott
USCG M. J. HALL

FOSC:

DATE: 4-19-90

OG Roadway
SEGMENT ST/ ER 05

SUBDIVISION A

DATE 05 April 90

CHECKLIST

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

LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

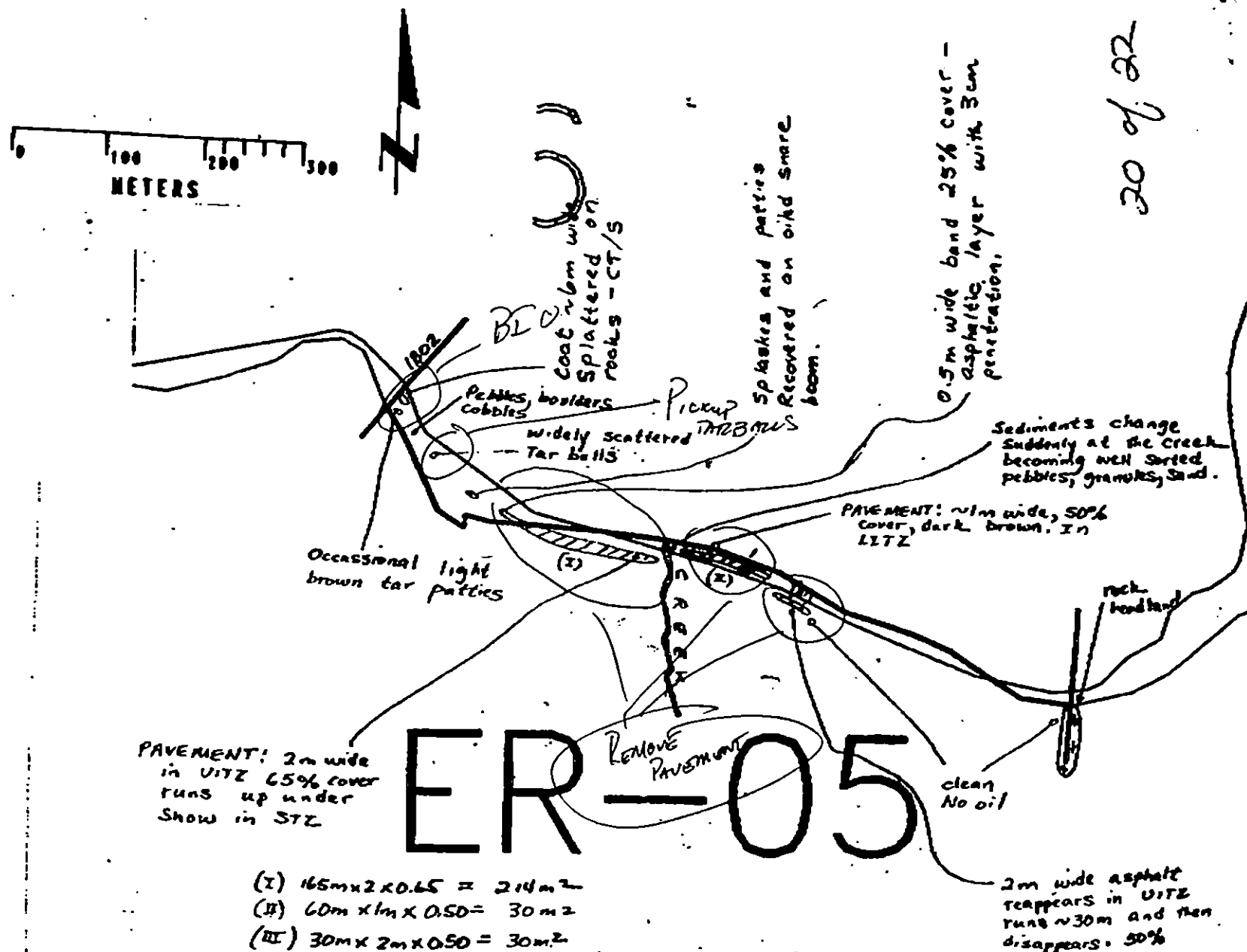
Splashed Distribution

Oiled Vegetation

1 $\Rightarrow$

Photo location, direction, and number

SKETCH MAP



- (I) $165m \times 2 \times 0.65 = 214m^2$
- (II) $60m \times 1m \times 0.50 = 30m^2$
- (III) $30m \times 2m \times 0.50 = 30m^2$

R-06

ER-05

No	1.75	263	26
V. Light	1.1	165	16
Light	2.1	315	31
		<u>743</u>	<u>75</u>

19 of 22

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-5

ADEC Segment Length: 820m

0 100 200 300
METERS

Map Key: PWS-171

Name: R. Marty

Date: 04/04/90

Date Entered:

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Salmon stream no. 226-50-16432 and 16430

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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. Finner DATE: 4/18/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 125 m: V.Light 0 m: No Oil 415 m
Subsurface Oil Observed: Yes X No Maximum Depth 7+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommend removal of tarmat and bioremediation as shown on sketch map. Work should be conducted between 6/1 and 7/10 as a result of hatchery and salmon constraints and with the approval from ADF&G and USFWS regarding eagle nest.

TAG COMMENTS:

TAG APPROVAL DATE: 4/18/90

ADEC JOHN BAUER John Bauer
EXXON ANDY COLE Andy Cole FOSC: DATE: 4-22-90
NOAA Bur. Wescott Bur. Wescott
USCG G.A. REITER G.A. Reiter

WFOG R. Marty

SEGMENT ST/ ER06

SUBDIVISION A

DATE 04 April 90

CHECKLIST

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

LEGEND

1 Δ

Pt - No Subsurface Oil

2 Δ

Pt - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

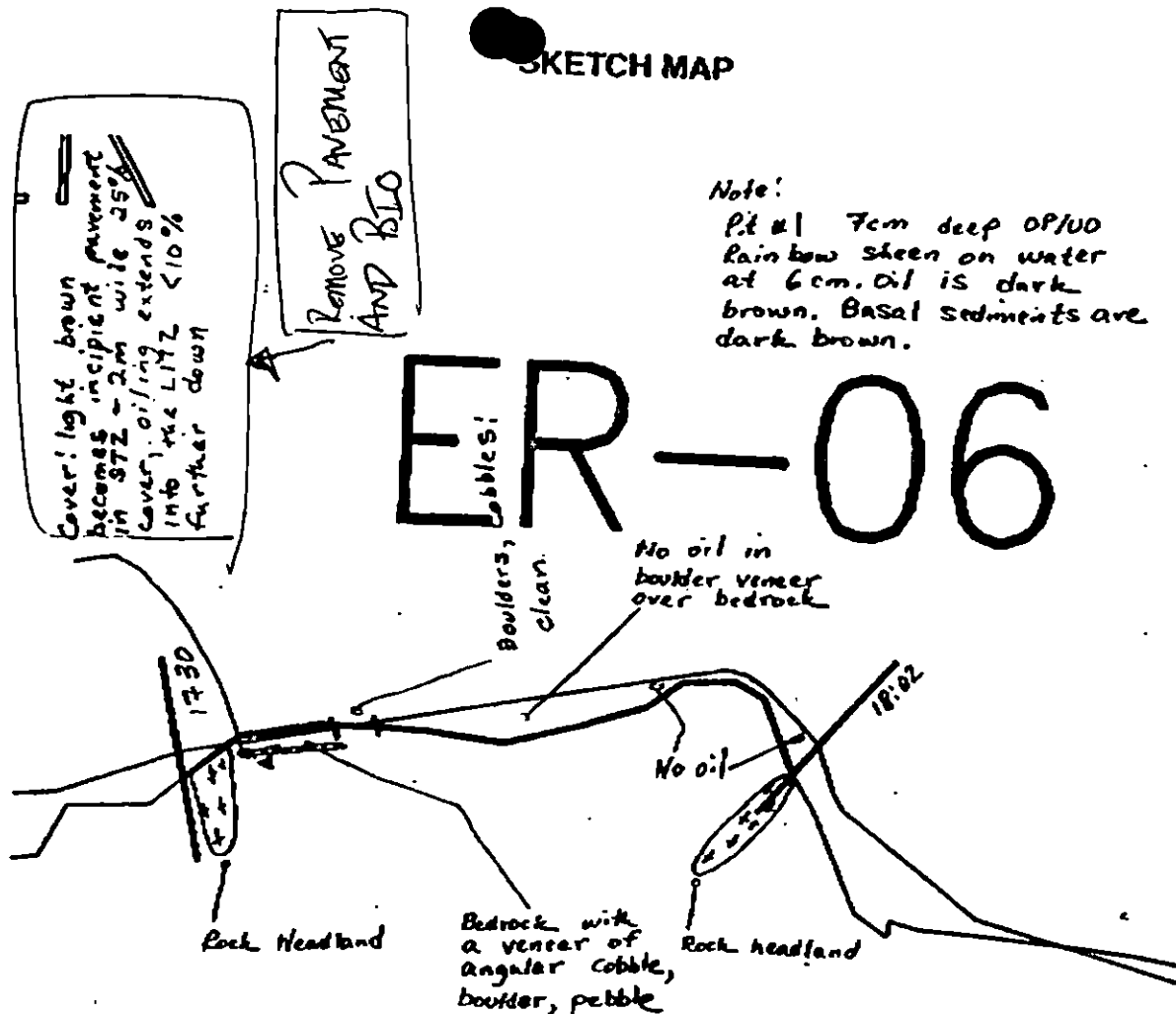
Splashed Distribution

Oiled Vegetation

1 ●→

Photo location, direction, and number

SKETCH MAP



Note:

Pit #1 7cm deep OP/UD
Rainbow sheen on water
at 6cm. Oil is dark
brown. Basal sediments are
dark brown.

ER-06

15 of 22

Oil Character Length (m): AP 90 PO CV 118 CT ST MS PT TB FL NO 408

REVISIONS

ER-07

ER-06

ER-09

No	2.6	390	408
Light	0.75	$\frac{113}{503}$	$\frac{118}{526}$

ER-(

140/22

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ER-6

ADEC Segment Length: 540m

0 100 200 300
METERS

Map Key: PWS-172

Name: Richard Marty

Date: 4 April 1990

Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-06

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Salmon stream no. 226-50-16432 and 16430

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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 125 m: V.Light 0 m: No Oil 415 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 7+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommend removal of tarmat and bioremediation as shown on
sketch map. Work should be conducted between 6/1 and 7/10 as a result
of hatchery and salmon constraints and with the approval from ADF&G and
USFWS regarding eagle nest.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

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 (8/1 to 9/15)
6V Anchorages (6/1 to 9/15)
6W Forest Service cabins (6/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination
- 7Z** Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH Finfish harvesting
7I Deer harvesting (8/15 to 2/28)
7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

SEGMENT ST/ ER-06 SUBDIVISION: A DATE 04 APRIL 90

USCG

NAME LARRY FLETCHER SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

1. MANUALLY REMOVE ASPHALT.
2. BIO-REMEDIATE.

ADEC

NAME DAVID M. SAE SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

- ① MANUALLY REMOVE TAR BALLS, ASPHALT AND SATURATED SEDIMENTS TO 3-4 cm.

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Public uses for the segment include recreation and tent sites and subsistence harvesting of deer, finfish and invertebrates. Recommend manual removal followed by bioremediation.

12 of 22

SHORELINE OILING SUMMARY

REVISION NO. 002208

OG R. M. M. M. USCG LARRY FLETCHER SEGMENT ST/ ER-06
 BIO B. L. L. L. LAND REP L. L. L. L. SUBDIVISION A
 EXXON J. J. J. J. ADEC Dave Sale TIME 17:30 to 18:02
 TEAM NO.: 10 TIDE LEVEL: 0.5m (1.79) to 0.5m (1.79) DATE 04/04/90
 EST. SUBDIVISION LENGTH: 526 m ☐ Sun ☒ Clouds ☒ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 30 % B 30 % C 20 % P 20 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 90 % Hang 0 % Vert 10 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 119 m VL 0 m NO 408 m

SURFACE OIL

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

PAVEMENT: H F (S) 45 sq. m by 3 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris			

DEBRIS COLLECTED
☒ YES ☐ NO

TYPE Shore boom

#BAGS 2

Photographs:

Roll No. ST/10/7

Frames 25-28

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm - cm) (000-000)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		WT. OF	WT. OF	WT. OF	WT. OF	NO		UP	DOWN	1	2	3	4	5	6	7	8	SU	U	M	L		
1	7	X					0-7	X						X				X				N	G, S

COMMENTS

Revision

RM 4/4/90

13 of 22

SEGMENT 51/ ER06

SUBDIVISION A

DATE 04 April 90

CHECKLIST

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

LEGEND

1 Δ

Pt - No Subsurface Oil

2 Δ

Pt - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

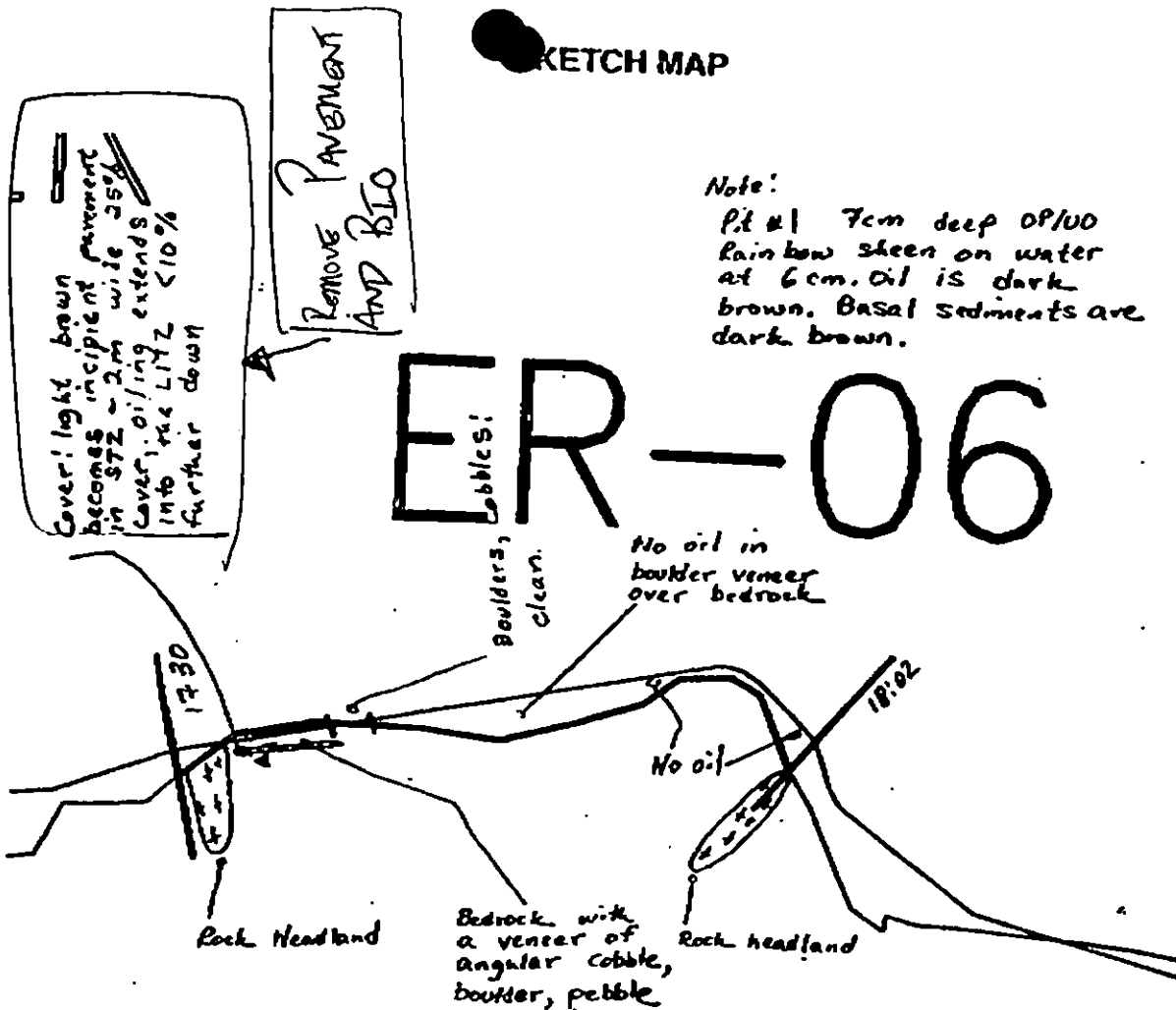
Splashed Distribution

Oiled Vegetation

1 →

Photo location, direction, and number

SKETCH MAP



15 of 22

Oil Character Length (m): AP 90 PO CV 118 CT ST MS PT TB FL NO 408

SHORELINE ECOLOGICAL SUMMARY

REVISION: 05/19/88

Segment ST/10/ER6 Subdivision A Date (mo/day/yr) 4/4/90
1730-1800
 Time (24 hr) _____ Biologist Lemon Rain _____

- (A) Substrate type and % of segments:
 (1) Bedrock 30 (2) Boulder 30 (3) Cobble 20 (4) Pebble 20 (5) Sand _____ (6) Silt _____
- (B) Overall % cover of biota (% of segment): Dense _____ Moderate 40% Low _____
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (O)

Photographs:

Roll No. ST/10/7Frames 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

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	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: Anthopleura xanthogramica in high tide pool.
 Lots of Rhodophyta in low zone includes Halosaccion; also spirorbis (annelida).

Ecological Considerations: Invertebrate harvest, spawning, deer harvest, hatchery release,
 fin fish harvest, Tent sites, bald eagle nest.

16 of 22

ER-07

ER-06

ER-09

ER-(

No	2.6	390	408
Light	0.75	$\frac{113}{503}$	$\frac{118}{526}$

140/22

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ER-6

ADEC Segment Length: 540m

0 100 200 300
METERS



Map Key: PWS-172

Name: Richard Marty

Date: 4 April 1990

Data Entered:

ADDENDUM; SUBDIVISION CONSTRAINTS

SEGMENT ER-6 SUBDIVISION A (1 of 1)

WORK WINDOW

Tarmat Removal More Than 400m From Eagle Nest	OPEN
Tarmat Removal Less Than 400m From Eagle Nest	CLOSED
Bioremediation Less Than 400m From Eagle Nest	CLOSED
Bioremediation More Than 400m From Eagle Nest and Less Than 100m From Stream	WORK PRIOR TO 7/10 (ADF&G MONITOR REQ.)

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Streams	ADF&G catalogued streams (226-50-16430, 16432) are present in Subdivision A. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream. No constraint to tarmat removal.
1F	Sawmill Bay Hatchery Release	No constraint to tarmat removal; closed to bioremediation prior to 6/1.
1K	Purse Seine Hook-off	No constraint to tarmat removal; closed to bioremediation after 7/20.
5T	Bald Eagle Nest	USFWS bald eagle impact assessment completed on 5/26/90 by Mike Lockhart indicates an active nest within 400m of the work area. Closed to tarmat removal and bioremediation less than 400m from active nest. No constraint to tarmat removal and bioremediation more than 400m from nest.
7HH	Subsistence: Finfish Harvesting	No constraint to tarmat removal and bioremediation.
7II	Subsistence: Deer Harvesting	No constraint to tarmat removal; closed to bioremediation after 8/15.
7JJ	Subsistence: Invertebrate Harvesting	No constraint to tarmat removal and bioremediation.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or bank. No flushing of pollutants or sediments into stream drainage; do not allow Inipol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Restrict boat and air traffic and all disturbance to essential minimum. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Avoid any unnecessary disturbance or damage to uncolled biota and substrate.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NO. 226-50-16430)
FOR ADDITIONAL CONSTRAINT INFORMATION

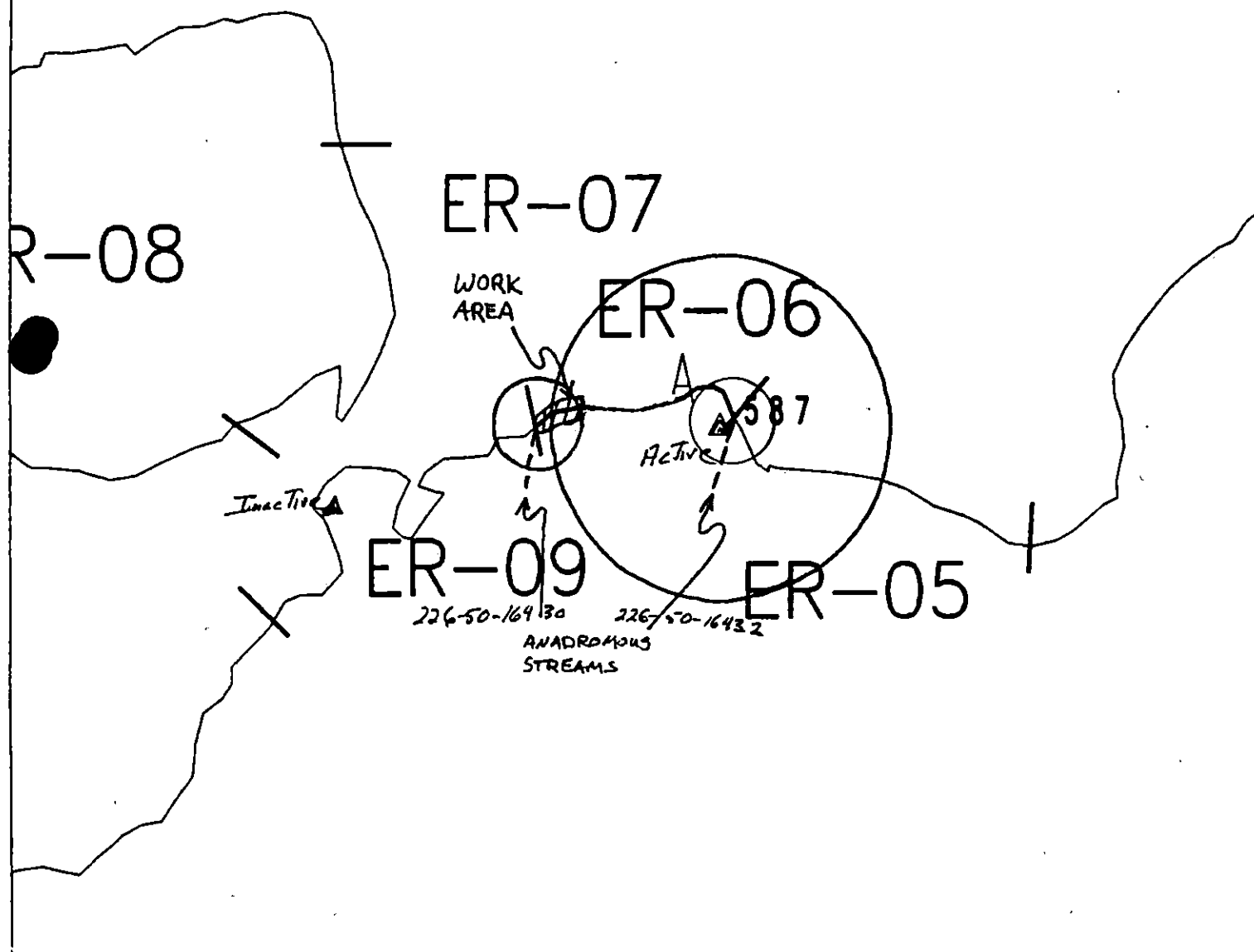
FOSC

DATE

6-10-90

Incorporates information from
USFWS bald eagle survey 5/26/90.

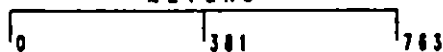
ER-



Exxon Company, USA
Map Key: PWS-ER-6
May 11, 1990



ECOLOGY MAP 6/1
SEGMENT ER-6
SUBDIVISION A (1 of 1)
METERS



Seabird Colony



Eagle Nest

1 inch = 1251 feet

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Salmon stream no. 226-50-16432 and 16430

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Jones DATE: 4/18/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 125 m: V.Light 0 m: No Oil 415 m
Subsurface Oil Observed: Yes X No Maximum Depth 7+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommend removal of tarmat and bioremediation as shown on sketch map. Work should be conducted between 6/1 and 7/10 as a result of hatchery and salmon constraints and with the approval from ADF&G and USFWS regarding eagle nest.

SEE ADDENDUM dated 6/9/90

TAG COMMENTS:

TAG APPROVAL DATE: 4/18/90

ADEC JOHN BAUER JOHN BAUER
EXXON ANDY TON ANDY TON FOSC: DATE:
NOAA Burt Wescott Burt Wescott
USCG G.A. REITER G.A. REITER

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ ER-6 A STREAM NO: 226-50-16430 DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

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

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

7HH Subsistence area: Finfish harvesting

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

7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specifif constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiiled biota and substrate. Bald eagle nest is possibly within 400 M of stream 226-50-16430- see ecology map.

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 McWhorter* DATE: 5/9/90

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X 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 tarmat and manual pickup of mousse patties. Work should be conducted between 6/1 and 7/10 based on constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 5/9/90

ADEC Art Weimer Art Weimer

EXXON Amy TGA Alba

NOAA Barl Warcott Barl Warcott

USCG D.D. Rome DL Rome

FOSC: *My L* DATE: 5-15-90

25/56

00 CALLARSON

SEGMENT ST/ER006

STREAM 226-50-16430

DATE 1 90

CHECKLIST

- ☒ M Area
- ☐ Approx. Scale
- ☐ Seg/Sub Boundary
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWM/LWL
- ☐ SCL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PT Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

PT - No Subsurface Oil

2 Δ

PT - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

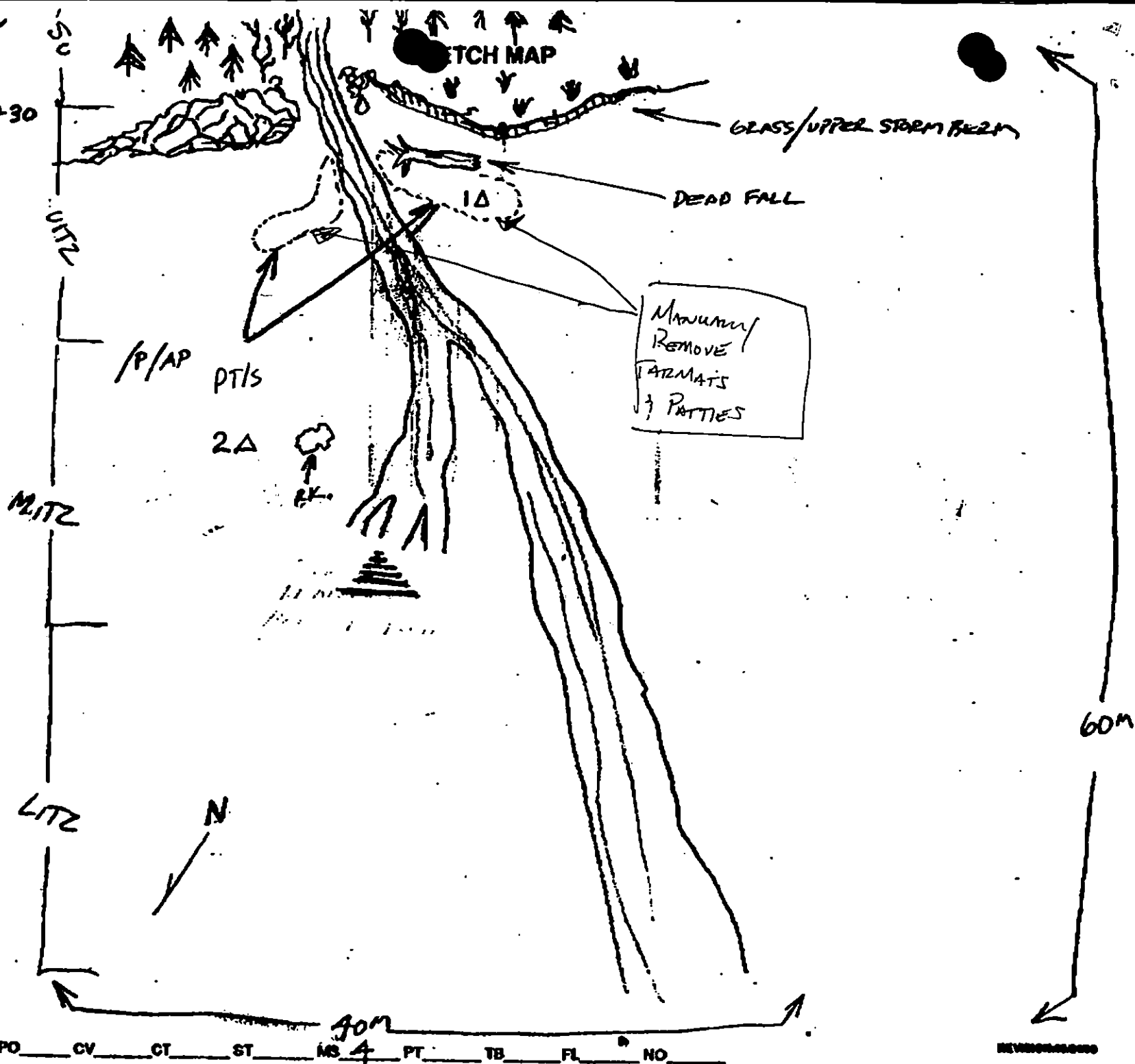
Pecdy Distribution

CT/S

Splashed Distribution

Oil Vegetation

Photo location, direction,
and number



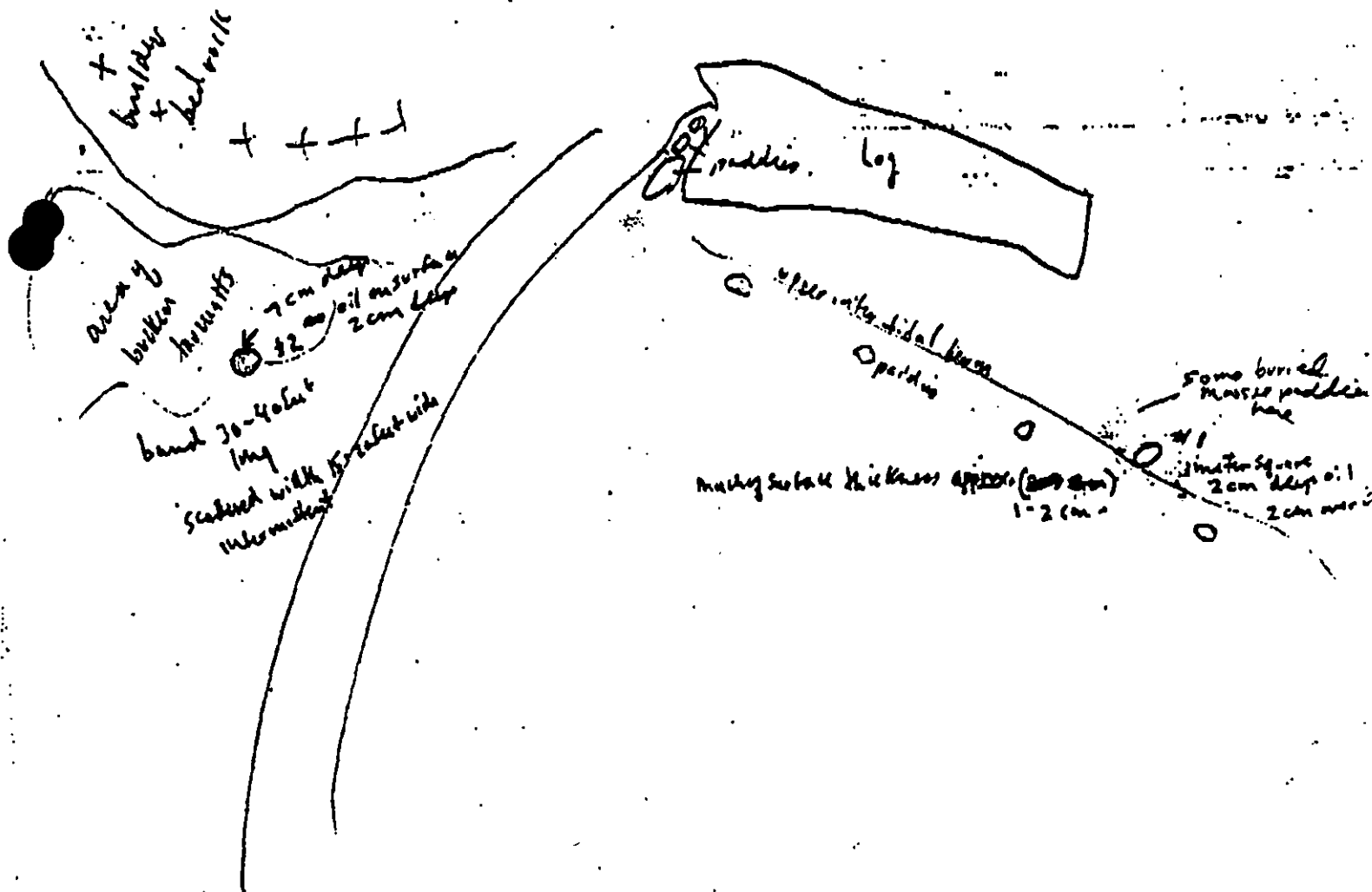
46/50

45 PHOTOLOG

RECOMMENDATIONS	DESCRIPTION
	No treatment / back removal. Shovel remains and bag mussels. paddle / Pick up any oiled debris. grasses etc. If any finer sediment brought with oil bag & remove those. No bio remediation recommended.

46 OIL DISTRIBUTION DIAGRAM

Comments by Ken Critchlow:
I agree with ADFG's recommendation KRC



ELRINGTON

ECOLOGY MAP

4/24/90

PASSAGE

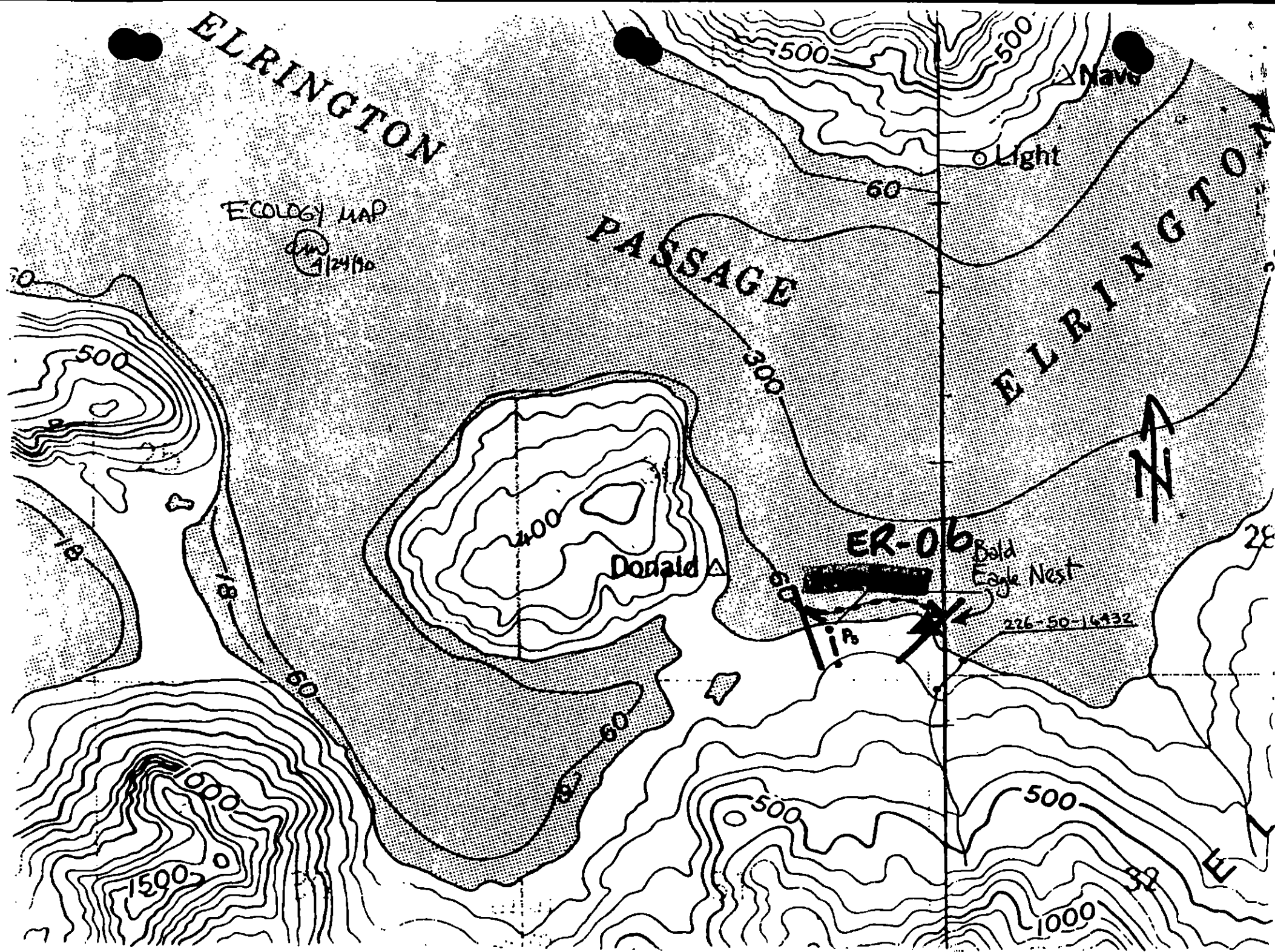
ELRINGTON

Donald

ER-06

Bald Eagle Nest

226-50-1432



ER-07

SUBJECT
ANADROMOUS
STREAM

ER-06-A
(1 of 1)

ER-06

ER-09

No	2.6	390	408
Light	0.75	$\frac{113}{503}$	$\frac{118}{526}$

ER-(

140122

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ER-6

ADEC Segment Length: 540m



Map Key: PWS-172

Name: Richard Marty

Date: 4 April 1990

Date Entered:

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-50-16430

SEGMENT ER-6 SUBDIVISION A

WORK WINDOW

Manual Pickup
Tarmat Removal

OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous streams (226-50-16430 and -16432) are on the two boundaries of Subdivision A. No constraint to manual pickup and tarmat removal.
1F	Sawmill Bay Hatchery Release	No constraint to manual pickup and tarmat removal.
1K	Purse Seine Hook-off	No constraint to manual pickup and tarmat removal.
5T	Bald Eagle Nest	NO CONSTRAINT. Bald eagle nest is more than 400m from work site.
7HH	Subsistence: Finfish Harvesting	No constraint to manual pickup and tarmat removal.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup and tarmat removal.
7JJ	Subsistence: Invertebrate Harvesting	No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

400m AP 6/3
No disturbance to stream bed or banks. Restrict boat and air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM ER-6A
FOR ADDITIONAL CONSTRAINT INFORMATION.

TAG APPROVAL DATE 6/04/90.
ADEC Ray Monaco
EXXON Amy TSM
NOAA Joseph Tebbat
USCG G.A. Reiter

FOSC

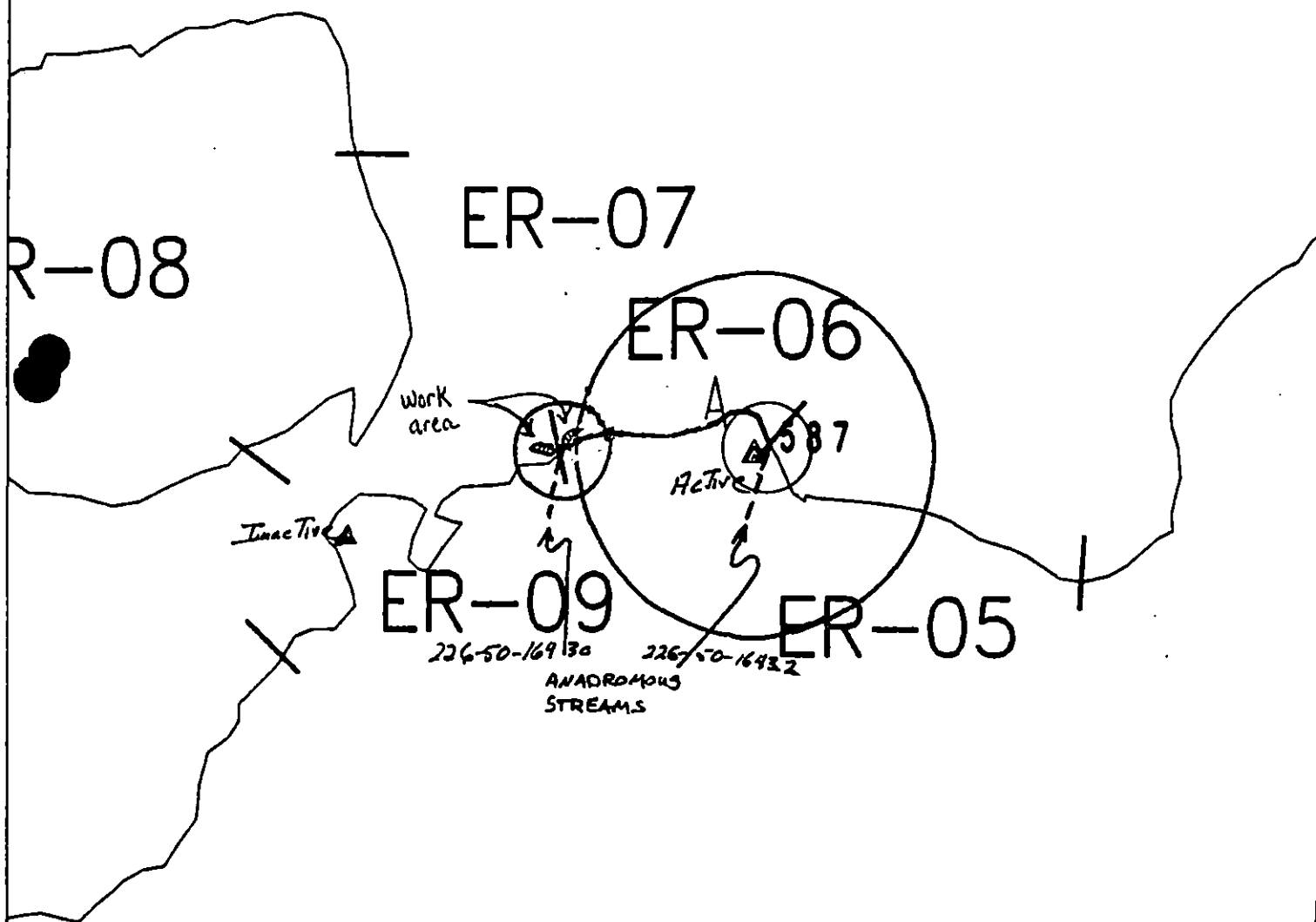
Date

Prepared by

Date

Incorporates information from
USFWS bald eagle survey 5/26/90.

ER-



Anadromous Stream Evaluation: 226-50-16430



Exxon Company, USA
Map Key: PMS-ER-6
May 11, 1990



ECOLOGY MAP 6/1
SEGMENT ER-6
SUBDIVISION A (1 of 1)
METERS
0 301 703

- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1251 feet

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ ER-6 A STREAM NO: 226-50-16430 DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
6U Recreation: Tent sites (6/1 to 9/15)
7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specifif constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Bald eagle nest is possibly within 400 M of stream 226-50-16430- see ecology map.

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 McWhorter* DATE: 5/9/90

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes manual removal of tarmat and manual pickup of mousse patties. Work should be conducted between 6/1 and 7/10 based on constraints.

see Addendum dated 6/3/90 JPP

TAG COMMENTS:

TAG APPROVAL DATE: 5/9/90
ADEC Art Wenger Art Wenger
EXXON Amy Tetz Amy Tetz
NOAA Barl Warcott Barl Warcott
USCG D.D. Rome D.D. Rome

FOSC: DATE: 5-15-90

ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND

SEGMENT: ER-06 A

STREAM NO: 226-50-16430

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ ER-6 A STREAM NO: 226-50-16430 DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

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

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

7HH Subsistence area: Finfish harvesting

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

7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specifif constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiiled biota and substrate. Bald eagle nest is possibly within 400 M of stream 226-50-16430- see ecology map.

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: _____

Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

_____ No Treatment Recommended

X Treatment Recommended

X 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 tarmat and manual pickup of mousse patties. Work should be conducted between 6/1 and 7/10 based on constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- ✓ 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream 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 6/1)
 1E Main Bay Hatchery release (4/20 to 6/10)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom 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
- 6V Recreation: Tent sites (6/1 to 9/15)
 6W Anchorages (6/1 to 9/15)
 6X Forest Service cabins (6/1 to 9/15)
 6Y Lodge (6/1 to 9/15)
 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 1 ER-006 A SUBDIVISION: ^{ASC #} 226-50-16430 DATE 4-20-90

USCG

NAME Kerwin L. Dreher SIGNATURE CWO2 K. L. Dreher

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

ADFG

~~ADFG~~

NAME Rick Gustin SIGNATURE Richard S. Gustin

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Our recommendations include shovel removal and bagging of mousse paddies and picking up any oiled debris (grasses etc.)

If any finer sediments are found with oil in them, remove these.

No bio remediation recommended.

ADFG

~~LANDMANAGER~~

NAME Rick Gustin SIGNATURE Richard S. Gustin

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

The upper intertidal small storm berm on the south side of creek has oil paddies and some oiled sediments.

Oiled sediments/mousse paddies continue in broken bands up to stream edge. There are some paddies at the base of the butt end of the large upper intertidal log.

The southside of stream upper intertidal layer has broken paddies + mats

SHORELINE OILING SUMMARY (ANAD)

24/57
REVISION NO. 10/13/90

OG CAL LARSON USCG DREHER, CWE SEGMENT STI ER 000
 BIO KEN CRITCHLOW LAND REP STREAM 226.50-16730 (OF)
 EXXON DARLHL YOE5 ADFG RE KATHIN-AIMEE WISEMAN TIME 10:24 10/6:45
 TEAM NO. 14 TIDE LEVEL XL DATE 4 / 20 / 90
 EST. SUBDIVISION LENGTH: 100 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 10 % B 10 % C 60 % P 10 % G 5 % S 5 % M % V %
 SLOPE: Long 100 % Hang % Vert % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W m M m N m VL 2 m NO 50 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													
COAT													
STAIN													
MOUSSE													
PATTIES				✓	✓					✓			
TARBALLS													
FILM													
NO OIL										✓	✓	✓	

PAVEMENT H F (S) 2 sq. m by .2 cmPATTIES / TARBALLS 1 BAGSNEAR SHORE SHEEN? ☒ BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

 Did You Collect
 DEBRIS
☐ YES ☒ NO
TYPE #BAGS

Photographs:

ANAD-14 - 2
Roll No. Frames: 18-24

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		SO	SC	1	2	3	4	5	SU	U	M	L				
* 1	10				✓		0-2	✓		✓					✓					N	N	Gr, CO, PB
* 2	7				✓		0-1	✓		✓						✓				N	N	ON-TM, PB, H S, CO, PB, CO
							.															
							.															
							.															
							.															

 COMMENTS SMALL AMOUNT OF OIL OBSERVED AT SITE, NO SHEEN OR OIL IN STREAM BED.

* OILED INTERVAL < 5 cm IN PIT NOS. 1 AND 2 DOES NOT CONSTITUTE SUBSURFACE OIL

REVIEWED JW DATE 4-24-90

25/56

OG CAL LARSON

SEGMENT ST/2006

STREAM 226-50-16430

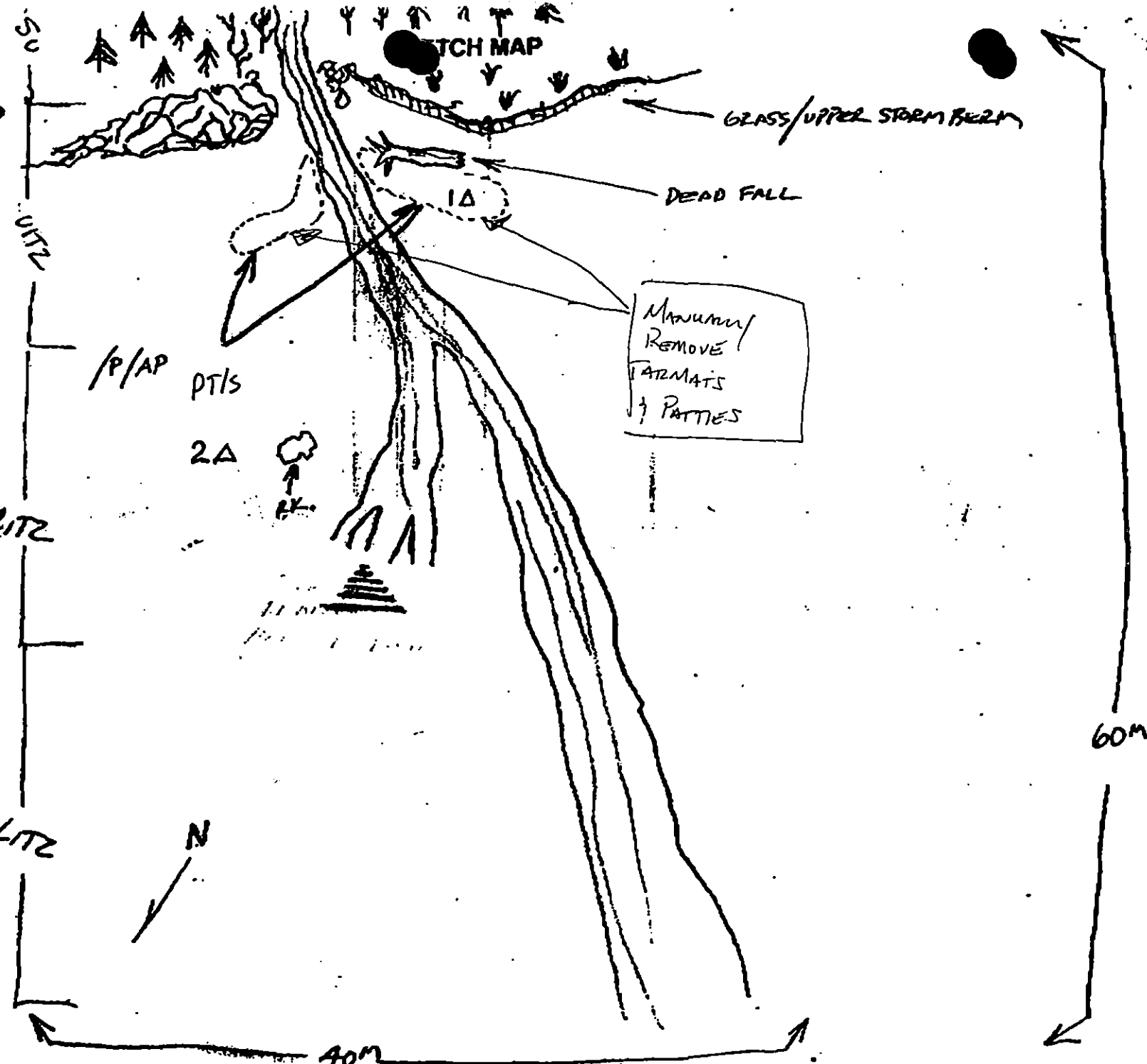
DATE 1 90

CHECKLIST

- ☒ N Area
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. INM/L/VOL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pt Location(s)
- ☐ Photo Location(s)

LEGEND

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



Oil Character Length (m): AP 1 PO 1 CV 1 CT 1 ST 1 MS 4 PT 1 TB 1 FL 1 NO 1

ADFG MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS Q DS TS AVS SCH WHS PTA 2 REGION: KP CI K,AP

METHOD: Aerial Ground Boat

3 DATE: 4-20-90 16 HIGH TIDE TIMES: 1 21 TEAM RECORDER: R. Lusti

4 START TIME: 1625 18 HIGH TIDE HTS: 1 22 OBSERVERS: A. Wessman

5 STOP TIME: 1650 17 LOW TIDE TIMES: 1 23 AGENCY: ADFG

6 SEGMENT #: 55-6 19 LOW TIDE HTS: 1 24 PHOTOS TAKEN: Y (N)

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

8 K-UNIT: _____ Ebb Slack Flood Slack 25 VIDEO TAKEN: Y N TAPES: 90RL6001 995

9 STAT AREA: _____ 20 USCG QUAD: _____ Start: 1241 End: 1357

10 LAT: _____ 11 LONG: _____ 26 SAMPLES TAKEN? Y (N) Mudrec

12 SOURCE: Map Logan Oil _____

13 LOCATION: Elkington Is. Sediment _____

14 DESCRIPTION: _____ Biological _____

Water _____

EXTENT OF OIL

	SHORELINE				STREAM			
	L	M	H	S	L	M	H	S
27 SURFACE COVERAGE								
28 SURFACE THICKNESS	2 cm							
29 PENETRATION	8 cm							
30 OVERALL OIL IMPACT:	N	VL	L	M	N			
31 OIL TYPE:	Pooled	<u>House</u>	<u>Asp</u>	Asphalt	Sticky	Stain		
32 OILED DEBRIS?	<u>Y</u>	N						
33 SHORELINE TYPE:	Headland	Low-lying Rocks	<u>Beach</u>	Cove				
		Lagoon	Marsh					
34 WAVE EXPOSURE:	High	<u>Moderate</u>	Low					
35 SUBSTRATE TYPE:	Bedrock	Boulder	<u>20</u>	Cobble	<u>55</u>			
	Gravel	<u>25</u>	Sand		Mud/silt			

36 CATALOGED ANAD. FISH SKEWT? (Y) N

37 CATALOG #: 226-50-16430

38 STREAM NAMES: _____

39 OIL IN STREAM BED? Y (B)

40 OIL ON STREAM BANKS? (Y) N

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

42 OIL WITHIN 1 MILE OF STREAM? (Y) N

Where: _____

43 ANADROMOUS FISH PRESENT? Y N

44 ANADROMOUS FISH OBSERVATION

Species	Aerial	Ground

COMMENTS: Upper intertidal creek storm beach South side creek has oil patches
and some oiled sediments / more patches continue up to stream edge.
South side upper intertidal layer broken patches too Asphalt matts creek bottom.

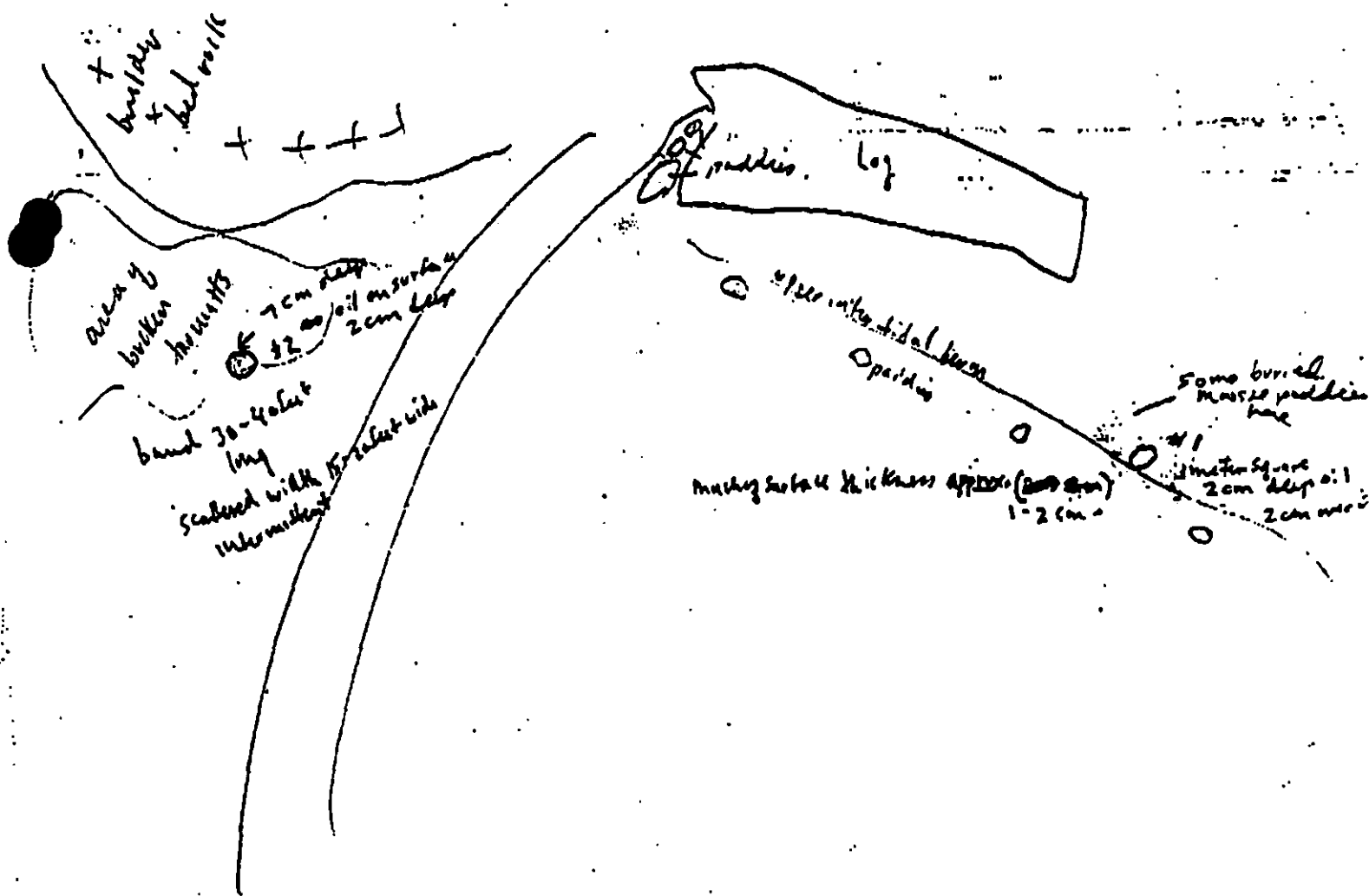
46/56

48 PHOTOLOG

RECOMMENDATIONS	DESCRIPTION
	red mud / dark sediment. Shovel remove each bag. remove bottles / pick up any oiled debris. grasses etc. If any live sediments found with oil bag & remove those. No bio-remediation recommended.

48 OIL DISTRIBUTION DIAGRAM

Comments by Ken Critchlow:
 I agree with ADFG's recommendation KRC



ELRINGTON

ECOLOGY MAP

dm
4/24/90

PASSAGE

ELRINGTON

Nave

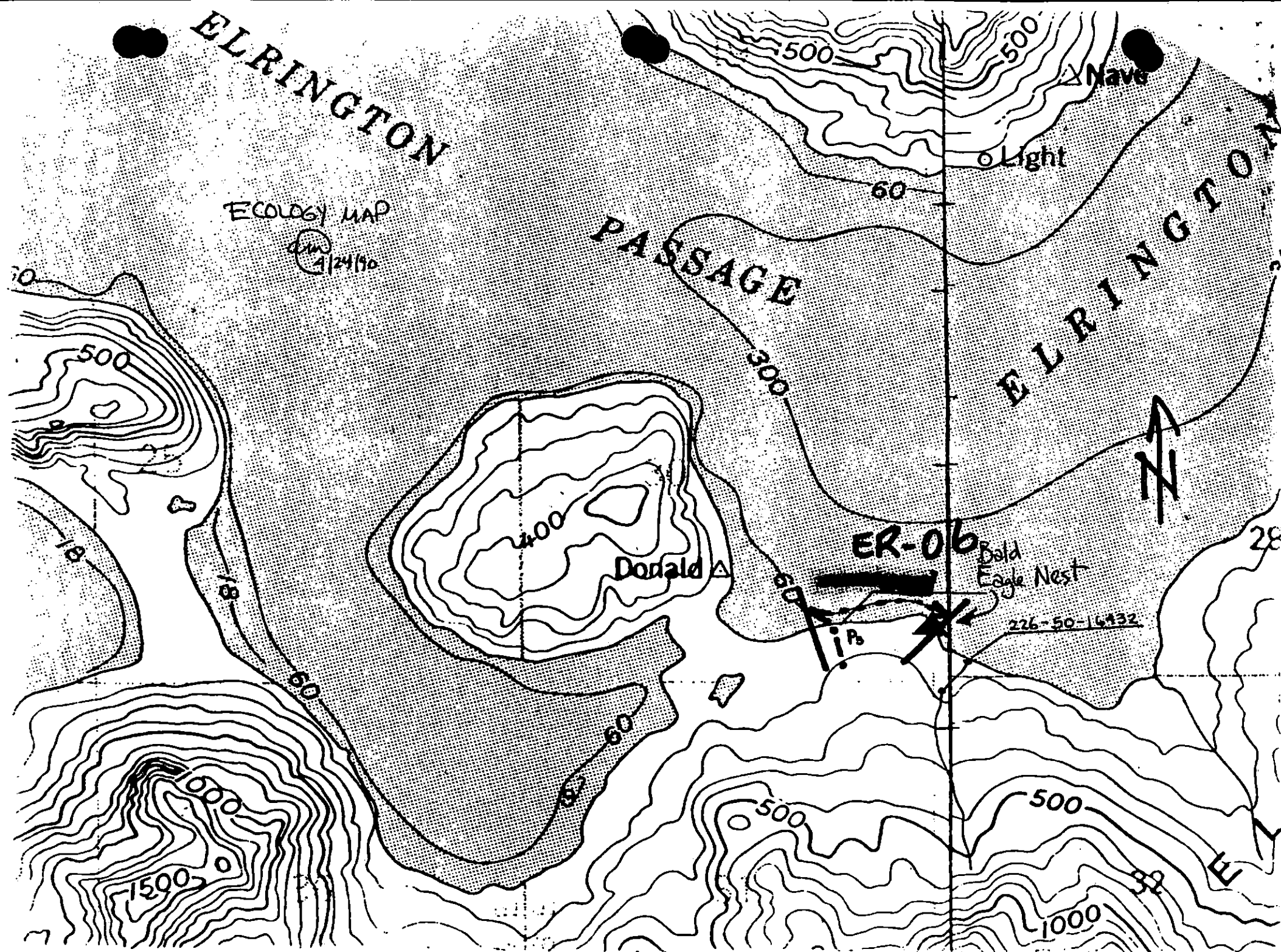
Light

Donald

ER-06

Bald
Eagle Nest

226-50-14432



ER-07

SUBJECT
ANADROMOUS
STREAM

ER-06-A
(L of I)

ER-06

ER-09

No	2.6	390	408
Light	0.75	$\frac{113}{503}$	$\frac{118}{526}$

ER-(

140/22

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-6

ADEC Segment Length: 540m

0 100 200 300
METERS

Map Key: PWS-172

Name: Richard Marty

Date: 4 April 1990

Date Entered:

ASAP TAG REVIEW SHEET

Segment: ER07 Subd: A Site: 2 Date 11 AUG 90
PRE-Review

Priority For Addressing In 1990

 HIGH MEDIUM X LOW NTR

Treatment
Recommended:

~~MANUAL REMOVE ASPHALT PATCHES~~ TAR MATS

MATRIX calls for
M/P of ASPHALT
ON Broken

Priority Site For Reassessment In 1991

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

TAG 13 AUG 90

Additional TAR MAT removal &
CUSTOMER

ASAP TAG REVIEW SHEET

Segment: ERO7 Subd: A Site: 1 Date
PRE-Review 11 AUG 90

Priority For Addressing In 1990

 HIGH MEDIUM X LOW NTR

Treatment

Recommended: MANUAL REMOVE - ASPHALT PATCHES & TAR BARS

↑
only Because of SITE 2 clean-up
But MATRIX calls
for NTR

Priority Site For Reassessment In 1991

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

TAG 13 AUG 90
NTR

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-07 SUBDIVISION A DATED 8-1-90

MODIFICATION CLASS I CLASS II ✓ CLASS III

1. REASON FOR MODIFICATION

Some Friable Asphalt Mat Still on Segment.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

Manually Remove Asphalt Mat/Patties.

3. TIMING ISSUES

ADEC [Signature]

EXXON [Signature]

USCG [Signature]

LAND MANAGER [Signature] (If field rep is on scene)

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT EB-07 SUBDIVISION A DATED 8-1-90MODIFICATION CLASS I CLASS II ✓ CLASS III

1. REASON FOR MODIFICATION

Some Friable Asphalt Mat Still on
Segment.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

Manually Remove Asphalt Mat Patches.

3. TIMING ISSUES - -

ADEC *[Signature]*EXXON *[Signature]*USCG *[Signature]*LAND MANAGER *[Signature]* (If field rep is on scene)

ASAP

SEGMENT AS/ ER-7 SUBDIVISION: A SITE: 1 DATE 8/1/90**USCG**NAME MSC Michael D. Brown SIGNATURE Michael D. Brown☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

ADECNAME John Hoyer SIGNATURE John Hoyer☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Work order modification sent in for AP manual pickup on this segment. Should be reassessed following additional treatment. Heaviest AP found adjacent to tot site.

LAND MANAGERNAME DOUGLAS GIBSON SIGNATURE Douglas Gibson☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

EXXONNAME Martinez N.J. SIGNATURE Nicholas G. Martinez☒ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: To Check For Asphalt.

SEGMENT AS/ ER-7 SUBDIVISION: A SITE: 2 DATE 8/1/90**USCG**NAME MSC Michael D. Brown SIGNATURE Michael D. Brown

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

ADECNAME John Hoyer SIGNATURE John Hoyer

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

Work order modification sent in for AP manual pickup on
this segment, should be reassessed following additional treatment.

LAND MANAGERNAME DOUGLAS GIBSON SIGNATURE Douglas Gibson

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

EXXONNAME Martinez, N.W. SIGNATURE N.W. Martinez

☒ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: To check for Asphalt

ASAP SHORELINE OILING SUMMARY

PAGE 1 OF

TEAM NO ONE EXXON MARTINEZ SEGMENT AS/ ER-7
 OG Reimer USGS BROWN SUBDIVISION A
 ADEC HAYES LAND REP GIBSON TOTAL NO. SITES 2
 DATE 8/1/90 TIME 15:10:40 TIDE LEVEL 7 10 7

TOTAL EST LENGTH OF SHORELINE SURVEYED: 590 m

SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 OIL CATEGORY LENGTH: W 0 m M 0 m N 250 m VL 50 m NO 190 m US 0 m

SURFACE OIL

SITE 1

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT				I	I			
S.O.R.								
POOLED								
COVER								
COAT				U	U			
STAIN								
MOUSSE								
PATTIES/T.B.				X	X	X		
FILM								
NO OIL					X			X
EST. SITE LENGTH					340			

SITE 2

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT		F			F			
S.O.R.								
POOLED								
COVER								
COAT								
STAIN								
MOUSSE								
PATTIES/T.B.			X		X	X		
FILM								
NO OIL					X			X
EST. SITE LENGTH					250			

SITE 3

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

SUBSURFACE OIL

SITE NO.	PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER				OILED INTERVAL (cm)	CLEAN BELOW (Y/N)	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS
			OP	OR	OF	NO			SU	UI	MI	LI	
1	1	15				X	.			X			P-P
2	1	30				X	.			X			P-PG
							.						
							.						
							.						
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							.						
							.						
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							.						
							.						
							.						

Photographs:

Roll No. ASAP-01-01

Frames 16 & 17

COMMENTS The only significant oiling on this subdivision is the Tarmat remaining on site #2. This area was manually worked and Tarmat removed. The mat present is in and around the trenches left by previous work?? The current oiling may represent more oiling being brought to surface in worm

REVISION NO. 7/27/88

Reviewed
F.W.

ER-0

E

A

SET ASIDE SITE
NO SURVEY

(2-3 m bend)
PT/P (15%)

(3m)
AP/F/B (60%)

SITE #2
4

SITE #1
4

PIT #1

PIT #1

CT/S/L
AP/S/L
Boulders

TB/S

STREAM

ER-7 A

ADEC Subsegment Length: 1022m

METERS

0 123 245

AK State Plane Zone 4 1:4031
per-7a



Subdivision Field Map

Map Key: PWSE-7A

Name: Reimer

Date: 8/1/90

Data Entered:

XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

ER-0

E

SITE #2
yes

SITE #1
yes

TTTT

A

A

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

ER-7 A
ADEC Subsegment Length: 1022m
METERS

0 125 248
AK State Plane Zone 4 1:4831
per-70



Subdivision Field Map
Map Key: PWSE-7A
Name: Reimer
Date: 8/1/90
Data Entered:

ER-0

E

A
SITE # 2
YES

SITE # 1
YES

A

A

ER-7 A

ADEC Subsegment Length: 1022m

METERS

0 125 245

AK State Plane Zone 4, 1:4831
per-7a



Subdivision Field Map

Map Key: PWSE-7A

Name: Reimer

Date: 8/1/90

Date Entered:

XXXX

Wide

////

Medium

Narrow

TTTT

Very Light

0000

No Oil

GENERAL DATA

SEG ID: ER-7 SBOV: A SITE: 1 TEAM: 1 DATE: 8/1/90
SITE LGTH 340 OIL CATEGORIES: W 0 M 0 N 850 VL 150 NO 190 U 0 ⁴³²
1991 REASSESSMENT: USCG: N ADEC: Y LDMGR: N EXXON: 3/19/94 f.w.

SURFACE DATA

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

CHAR #: 2 OIL CHAR: CT OIL DIST: CONT BRKN PTCH SPLH 0
TIDAL ZONE: SU UI 0 MI LI

CHAR #: 3 OIL CHAR: TB OIL DIST: CONT BRKN PTCH SPLH X
TIDAL ZONE: SU UI X MI X LI

CHAR #: 4 OIL CHAR: NO OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU X UI MI LI X

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

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

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

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

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

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

ASAP DATA ENTRY FORM

SUBSURFACE DATA

PAGE 2 OF 2SEGMENT ID: ER-7 SUBDIV: A SITE: 1

PIT # 1 PIT DEPTH 15 OIL CHARACTER NO OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI X MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB X GRN SAN MUD VEG

F.W. PIT # 2 PIT DEPTH 30 OIL CHARACTER NO OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI X MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

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

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

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

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

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

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

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

GENERAL DATA

SEG ID: ER-7 SBDV: A SITE: 2 TEAM: 1 DATE: 8/1/90
SITE LGTH 250 OIL CATEGORIES: W 0 M 0 N 250 VL 150 NO 190 U 432 F.W.
1991 REASSESSMENT: USCG: 11 ADEC: y LDMGR: y EXXON: y

SURFACE DATA

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

CHAR #: 2 OIL CHAR: T.B OIL DIST: CONT BRKN PTCH X SPLH
TIDAL ZONE: SU UI X MI X LI

CHAR #: 3 OIL CHAR: NO OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU X UI MI LI X

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

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

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

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

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

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

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

ASAP DATA ENTRY FORM

SUBSURFACE DATA

PAGE 2 OF 2SEGMENT ID: ER-7 SUBDIV: A SITE: 2PIT # 1 PIT DEPTH 30 OIL CHARACTER NO OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI X MI LI SUBSURF SEDIMENT: BRK BLD COB PEB X GRN X SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

→ The ~~CHIEF OF STAFF~~ / FOSC evaluate the need for further treatment.

**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.

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.

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT ER-7 SUBDIVISION A DATE 5/14/91

ADEC

NAME

John Ayler

SIGNATURE

[Signature]☐ NTR ☒ COMMENT RECOMMENDATIONS

Recommend that AP outside of test site area be manually removed.

EXXON

NAME

John Dean

SIGNATURE

[Signature]

☒ NTR Oiling present is light, some limited amount could possibly be recovered but I do not recommend it. I feel the damage to abundant & healthy biota would be much greater than any possible benefit.

LANDMANAGER

NAME

Steve WardOF CUG-FS

SIGNATURE

[Signature]☐ NTR

Lots of oil can be picked up from this site. Also a bunch of trash in area. This is a test site so it is already agreed to be cleaned. This asphalt is several hundred feet in length and covers most of the sub. v. Chesapeake Canal Respc.

NO-BIO AT ALL.

USCG/NOAA

NAME

DREHER/CLINE

SIGNATURE

[Signature]

☒ NTR Observed only small sporadic hardened asphalts. No probability of mobilization or sheening if left undisturbed.

Very light oiling occurs as indicated on the sketch map. Most of the AP could be removed easily by manual crews. DEC

TEAM NO. 6

Original

OG CHANEYBIO CRANKSEGMENT ER 7ADEC HAYESLANDMANAGER WARD for CUCSUBDIVISION AXON DEANUSCG/NOAA DREHER/CLINEDATE May 14 191TIME 07:15 to 8:45TIDE LEVEL -2 ft. to -3.5 ft.ENERGY LEVEL: ☐ H ☐ M ☒ LSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☒ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 822 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W — m M — m N 24 m VL 420 m NO 378 m US 200 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE V H M L	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A	P										BC	M	0.5	4		✓			NOT PU-NOAA SITE CONFUSION
B	S										B	M	1	25		✓			" " " " "
C	S										B	M	0.5	15		✓			" " " " "
D	T										SPG	L	20	30			✓		SCATTERED ON FLATS
E	T			T							SPG	L	20	50			✓		SCATTERED SOME PU
F	P										PC	M	2.5	5		✓			AP PATCHES
G	S										PR	M	3	100		✓			AP PATCHES
H	S										PC	M	6	200		✓			RANDOM PATCHES
I	P										PCB	M	2	15		✓			PATCHES BETWEEN BOULDERS

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-

5 - 14 22-27
15 FRAMES 1-6

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	35							✓	-					✓			PG-PG	
2	35							✓	-					✓			PG-PG	
3	35							✓	-					✓			PG-PG	
4	35							✓	-					✓			PG-PG	
5	30							✓	-					✓			PG-PG	
6	30							✓	-					✓			BP-BPC	

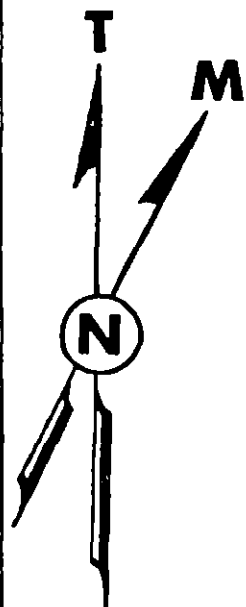
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS: RANDOM PATCHES ON TIDE FLATS. MORE CONCENTRATED AP PATCHES IN BOULDERS ALONG VITZ. NO PICKUP WAS CONDUCTED ALONG THE SOUTHERN PORTION OF THE SEGMENT DUE TO CONFUSION ABOUT NOAA TEST SITE RESTRICTIONS, ACTUAL LOCATION OF NORTHERN BOUNDARY OF ER-D7A MAY BE FARTHER SOUTH THAN SHOWN ON COMPUTER MAP. WE STOPPED SURVEYING WHERE PEBBLE BEACH CHANGED TO MASSIVE BOULDERS AS OG NOTES INDICATED BUT THIS WAS SOUTH OF COMPUTER BOUNDARY.

SC revised 5/19
REVIEWED CD 19 MAY

MAYSAP 1991
OG SKETCH MAP
GREG CHANEY
TEAM 5

SEGMENT: ER-07 A
DATE: MAY 14 1991
AIR P.#: PIM-C 005-107
PIM-C 005-108



LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE



3x100m
AP ON PEBBLES
VERTICAL BEDDING
PLANES
2%
DISTINCT PATCHES

SMALL SLIDES

LARGE DRIFT TREE
ROOTS

20x50m
SOR Trace
AP Trace
2m² AP PU

0.5x15m
AP PATTIES
IN BOULDERS
5%

AP PATTIES
1x25m
IN BOULDERS
5%

AP PATTIES
0.5x4m
40%

20x30m
AP Patties
Scattered on
Tide Flats
1%

AP Patches
2.5x5m
15%

6x200m
RANDOM PATCHES
AP > 1%

2x15m
AP PATCHES
20% BETWEEN
BOULDERS

ER-8 A

MASSIVE BOULDER WITH MOSS ON
TOP

1m² AP WHITE QUARTZ BOULDERS

ER-6 A

ELRINGTON ISLAND

REVIEWED CB 19 MAY

MAYSAP BIOLOGICAL SUMMARY FORM

pg 1 of 2

TEAM # 5

DATE 14 May 1991

SEGMENT # ER-7

TIDAL HEIGHT (Range) -1.5 → -3.5

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 0

WIND SPEED/DIRECTION 5 knots/N

PHOTOGRAPHS: ROLL # 14

FRAME # 22, 23

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

(A) Area - located in the upper part of the U1T2. Within the site there is a sparse concentration of healthy barnacles with a recent spat settlement. Also there are a few *Fucus* concentrations with maturing conceptacles. Sparse concentrations of various age classes and moderate concentration of limpets and limpets. *Gracilaria* cover ranges from 10-20%.

(B) Area - 25m bar in the high U1T2 located among small boulders and bedrock in a sandy beach. Lichens, black yellow, cover <1% of the exposed surface. 10m below site surfaces have ~50% biota cover, *Fucus* dominant.

(C) Area - located in the SUP1A. Sprouting sea grass covers ~30% of the site. There is a strong sea dog odor (H₂S).

(D) Area - a 20x30m block in the MIT2. There is a moderate *Fucus* concentration and patches of moderately concentrated barnacles on substrate. *Littorina* and limpets are rare. Biota cover is ~50%.

(E) Area - a 20x50m block in the MIT2. Biota is similar to (D); cover ranges from 20-50%.

(F, G, H, I) Areas are located in the U1T2. There are barnacles, black lichens, *Littorina* and a few *Fucus* plants covering <1% of the surface. Seagrass.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds	3	16	
Waterfowl	2	3	
Gulls/Kittiwakes	3	~350	
Shorebirds	3	~5	
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	2 (Adults)		
Pinnipeds (specify)	2 (Seals)		
Bales (specify)	1 (Horse Seal)		

Shoreline subdivision map showing important biological features attached.

REVIEWED CD 19 MAY
Printed at the end

Team # 5

Date 14 May 1991

pg 2 of 2

Segment # ER-7

Tidal Height -1.5 to -3.5

Subdivision A

Biologist Crank

Sea State 0

Wind Speed / Direction 5 knots / N

Comments (cont.)

This subdivision has a large tidal flat. Fucus beds cover ~50 - 70% of the LITZ surface sediments. Barnacles have a patchy distribution and a moderate concentration. There is a recent barnacle settlement pattern. In-ergravel mussels range in density from rare to moderate with various age classes.

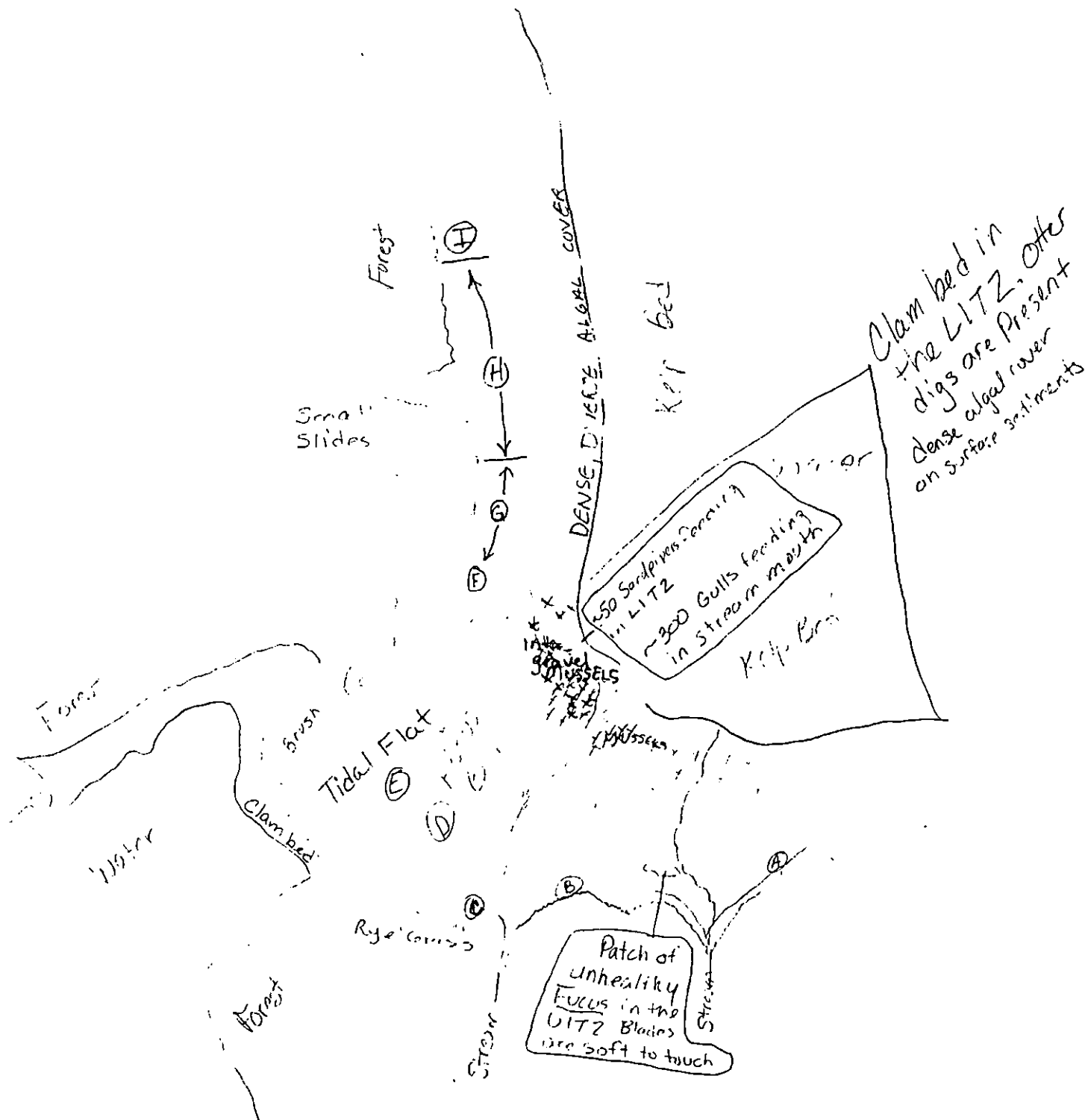
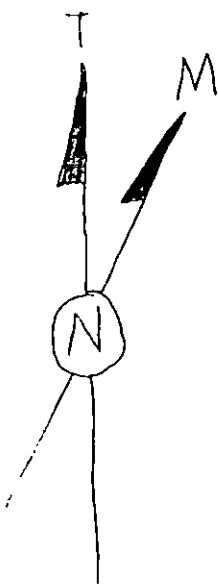
The LITZ has a rich algal growth. Above the mean low water level cover is ~60%; below the mean low water level cover is ~80%. Some of the species present

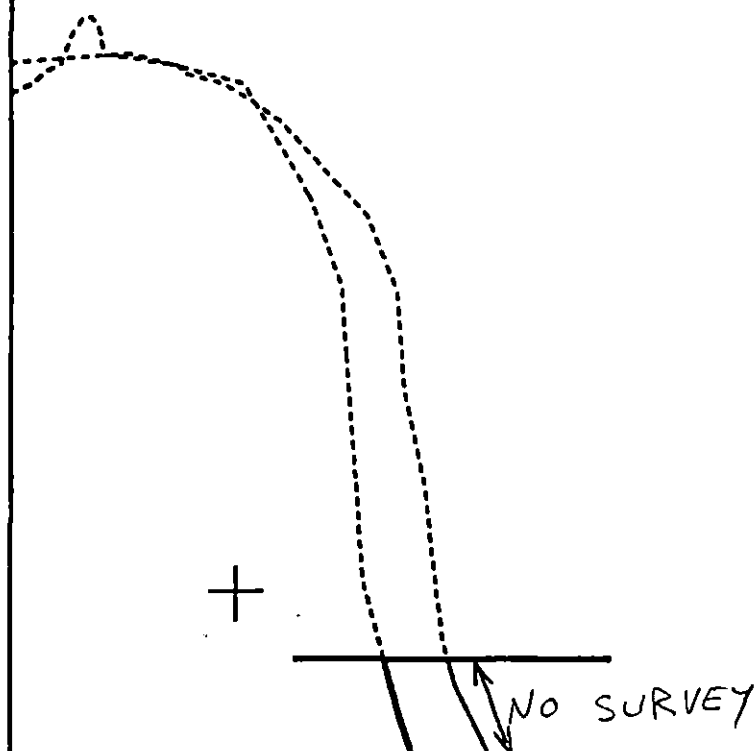
are: Fucus, Scytosiphon, Palmaria, Odonthalia, Halosaccion, Alaria, Laminaria & Ulva. A clam bed is also present in the LITZ. Kelp bed is located nearshore.

This area is utilized by wildlife. Gulls, sandpipers, and oystercatchers were observed feeding in the LITZ. Other foraging digs were also present in the clam beds.

Mechanical equipment, including 4-wheelers, could create a net-environmental loss. If tidal flat is accessed, it should be restricted to manual pick-up.

100 Skates 11/4
 10000 - 7000
 10000
 10000 - 10000 - 7/1
 10000 - 10000 - 20





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

ER007 A

ADEC Subsegment Length: 1022m

METERS

0 100 200

AK State Plane Zone 4
per007eb



Subdivision Field Map

Map Key: PWSER007Ab

Name: CHANEY

Date: MAY 14 ?

Data Entered:

ES reviewed 5/19
REVIEWED CD 19 MAY

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-50-16428

SEGMENT ER-7 SUBDIVISION A

WORK WINDOW

Manual Pickup
Tarmat Removal

OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (226-50-16428) is in Subdivision A. No constraint to manual pickup and tarmat removal.

1F Saw Mill Bay Hatchery Release

No constraint to manual pickup and tarmat removal.

1K Purse Seine Hook-off

No constraint to manual pickup and tarmat removal.

7II Subsistence: Deer Harvesting

No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Restrict boat and air traffic to essential minimum after 7/20. Restrict beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM ER-7A
FOR ADDITIONAL CONSTRAINT INFORMATION.

TAG APPROVAL DATE 6/04/90
ADEC RAG Morris
EXXON Andy Galt
NOAA Joseph Talbot
USCG G. Reiter

FOSC

DATE

Prepared By:

Date 6/3/90

EV-62

Incorporates information from
USFWS bald eagle survey 5/26/90.

ER-08

ER-07

ER-06

ER-09

ER-05

EXXON STUDY SITE (AP-16)

Active ~~A~~ 587

ANADROMOUS STREAM
(226-50-16430)

WORK AREA

ANADROMOUS STREAM
(226-50-16428)

Inactive

-10

Anadromous Stream Evaluation: 226-50-16428



Exxon Company, USA
Map Key: PMS-ER-7
May 11, 1990

ECOLOGY MAP ^{5/31} SEGMENT ER-7

SUBDIVISION A (1 of 1)

METERS

0 381 762

- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1250 feet

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ ER-07 STREAM NO: 226-50-16428 DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
9EE Set aside

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. Subject stream is located in Subdivision A (1 of 1).

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).

NPO SIGNATURE: [Signature] DATE: 5/8/90

Subsurface Oil Observed: Yes X No Maximum Depth 6 cm

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u> </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 pavement and mousse patties as indicated on sketch map. Work should be conducted between 6/1 and 7/10 based on constraints.

See Addendum dated 6/2/90 PP

TAG COMMENTS:

TAG APPROVAL DATE: 5/7/90

DEC Art Weimer

EXXON Amy Ten

NOAA Gary R. [unclear]

USCG G.A. Reiter

FOSC: [Signature] DATE: 5-15-90

ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND

SEGMENT: ER-07

STREAM NO: 226-50-16428

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ ER-07 STREAM NO: 226-50-16428 DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
9EE Set aside

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoilied biota and substrate. Subject stream is located in Subdivision A (1 of 1).

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: _____

Subsurface Oil Observed: Yes X No _____ Maximum Depth 6 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes manual removal of pavement
and mousse patties as indicated on sketch map. Work should be conduc-
ted between 6/1 and 7/10 based on constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 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 6/1)
 1E Main Bay Hatchery release (4/20 to 6/10)
 ✓ 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 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 uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 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 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)
 7H Finfish harvesting
 7I Deer harvesting (8/15 to 2/28)
 7J Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / ER-007 SUBDIVISION: 226-50-16428 ^{ASC#} DATE 4-20-90

USCG

NAME

Kerwin L. Dreher

SIGNATURE

cwoz K. L. Dreher

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

~~ADFG~~ ADFG.

NAME

Rick Gustin

SIGNATURE

Richard J. Gustin

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

We recommend shovel removal and bagging of mousse paddies, oiled grasses and other oiled debris where found in upper intertidal and lower half of upper intertidal & top of mid intertidal.
No bioremediation recommended

This stream consists of small bands of broken tar matt in the upper intertidal on the south bank extending into grass areas almost to the stream mouth.

~~ADFG~~ LAND-MANAGER

NAME

Rick Gustin

SIGNATURE

Richard J. Gustin

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

The north bank has small broken bands of tar matt in the lower $\frac{1}{2}$ of upper intertidal (splashed distribution)

SHORELINE OILING SUMMARY (ANAD)

REVISION NO. 04-134

OG CAL LARSON USCG DREHER, CWE SEGMENT ST/ ER 007
 BIO KEN CLUTCHLOW LAND REP STREAM 226-50-10420 (OF)
 EXXON DARWIN YVES ADFG 2R K. AUSTIN-AIMEE WESEMAN TIME 15:15 to 16:15
 TEAM NO. 14 TIDE LEVEL VLPI DATE 4/20/90
 EST. SUBDIVISION LENGTH: 60 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 5 % B 5 % C 45 % P 25 % G 20 % S 0 % M 0 % V 0
 SLOPE: Long 6 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 17 m NO 63 m

SURFACE OIL

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

PAVEMENT H F (S) 3 sq. m by 2 cPATTIES / 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 0☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

ANAD-14-2

Roll No. 2Frames 11-17

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN	(V%)	!	SURFACE - SUBSURFACE SEDIMENTS	
		OP	OR	OL	OF	NO		BO	UC	Y	B	BL	BR	BU	BU	U	BU	U						
* 1	12		✓				0-6		✓		✓				✓									Two in tank SPB, CB
2	10					✓	.		✓						✓									PB, CB, SP
							.																	
							.																	
							.																	
							.																	
							.																	

COMMENTS VERY SMALL AMOUNTS OF ASPHALT OBSERVED AT SITE.OBSERVED ONE PIN TAIL DUCK.

* OILED INTERVAL < 5 cm IN PIT NO. 1 DOES NOT CONSTITUTE SUBSURFACE OIL

REVIEWED fwDATE 4-24-90

15/5

OG CAL LARSON

SEGMENT 107

STREAM 226-50-16428

DATE 1 90

CHECKLIST

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

LEGEND

1 Δ
PH - No Subsurface Oil2 Δ
PH - Subsurface Oil

CT/C

 Continuous Distribution

CT/B

 Broken Distribution

CT/P

 Patchy Distribution

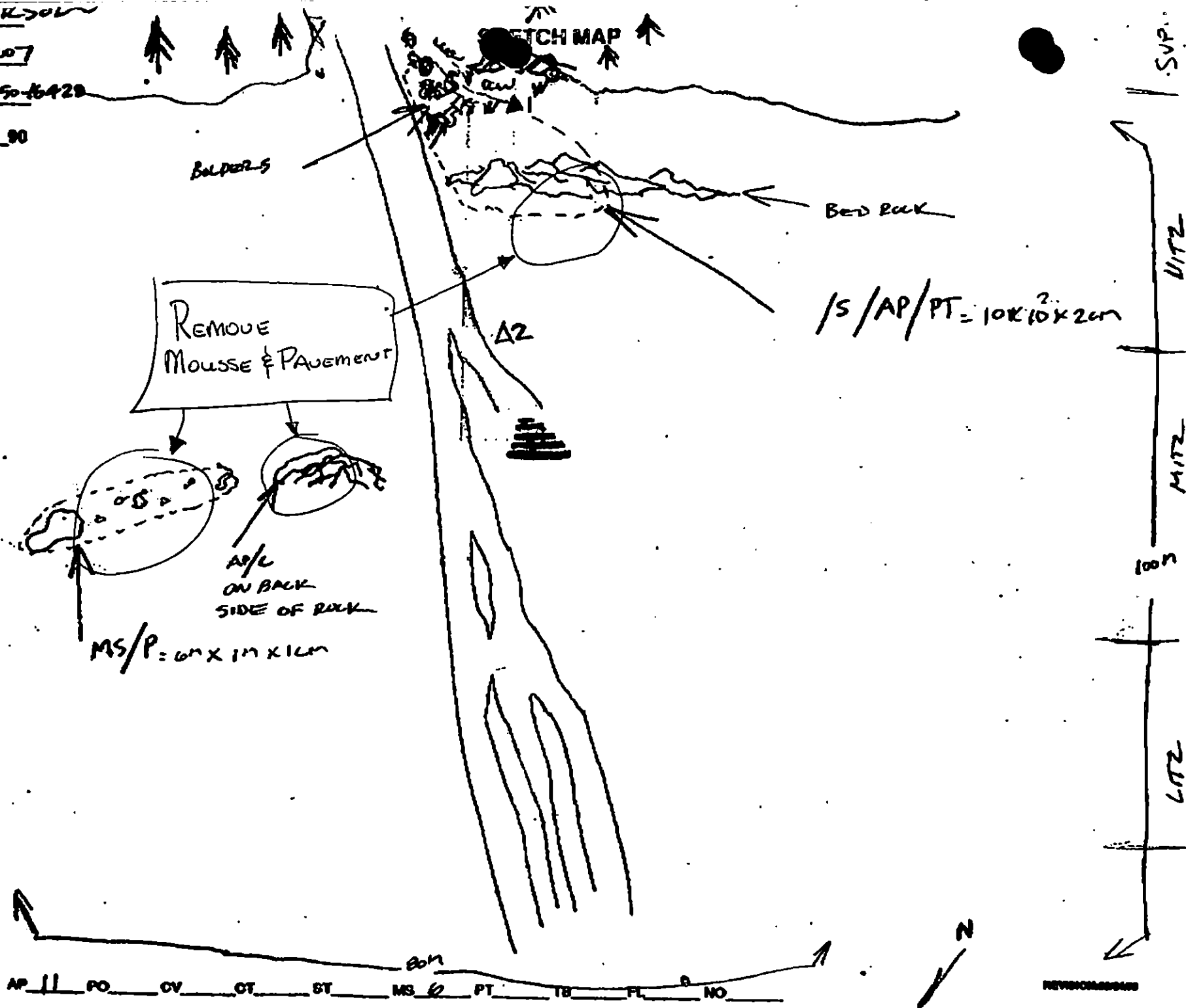
CT/S

 Splashed Distribution

Oiled Vegetation

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

Oil Character Length (m): AP 11 PO CV CT ST MS 6 PT TB FL 8 NO



REVISED 08/08/00

4/5/90

ADPAC MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS (S) DS TS AVS SCNA 1945 PTA

2 REGION: (PWS) KP, CI K, AP

METHOD: Aerial (Ground) Boat

3 DATE: 4-26-90

15 HIGH TIDE TIMES: 1

21 TEAM RECORDER: R. Austin

4 START TIME: 1550

16 HIGH TIDE HTS: 1

22 OBSERVERS: A. Wasserman

5 STOP TIME: 1620

17 LOW TIDE TIMES: 1

23 AGENCY: ADFG

6 SEGMENT #: ER 007

18 LOW TIDE HTS: 1

24 PHOTOS TAKEN: Y (H)

7 STATION #:

19 TIDE HT AT SURVEY:

Roll #: _____ Frame: _____

8 K-UNIT:

Ebb Slack Flood Slack

25 VIDEO TAKEN: (Y) H TAPES: 90RL6001 555

9 STAT AREA:

20 USCG QUAD:

Start: 164 End: 1283

10 LAT:

11 LONG:

26 SAMPLES TAKEN: Y (H) Number

12 SOURCE: (Map) Loran

OII _____

13 LOCATION: Elington Jr.

Sediment _____

14 DESCRIPTION:

Biological _____

Water _____

EXTENT OF OIL

27 SURFACE COVERAGE

SHORELINE				STREAM			
L	M	H	S	L	M	H	S

36 CATALOGED ANAD. FISH BREAST (Y) H

28 SURFACE THICKNESS

2-3cm							
6-10cm							

37 CATALOG #: 226-50-16428

29 PENETRATION

38 STREAM NAME:

30 OVERALL OIL IMPACT: N VL L M H

39 OIL IN STREAM BED? Y (H)

31 OIL TYPE: Pooled Mousse (Tar) Asphalt (Sticky) Stain

40 OIL ON STREAM BANKS? (B) H

32 OILED DEBRIS? (Y) H

41 OIL ON BEACH ADJACENT TO MOUTH? (Y) H

(within 50 meters)

42 OIL WITHIN 1 MILE OF STREAM? (Y) H

33 SHORELINE TYPE: Headland Low-lying Rocks (Beach) Cove

43 ANADROMOUS FISH PRESENT? Y H

Lagoon Marsh

34 WAVE EXPOSURE: High (Moderate) Low

44 ANADROMOUS FISH OBSERVATION

35 SUBSTRATE TYPE: Bedrock Boulder 25 Cobble 10

Gravel 65% Sand Mud/silt

Species	Aerial	Ground

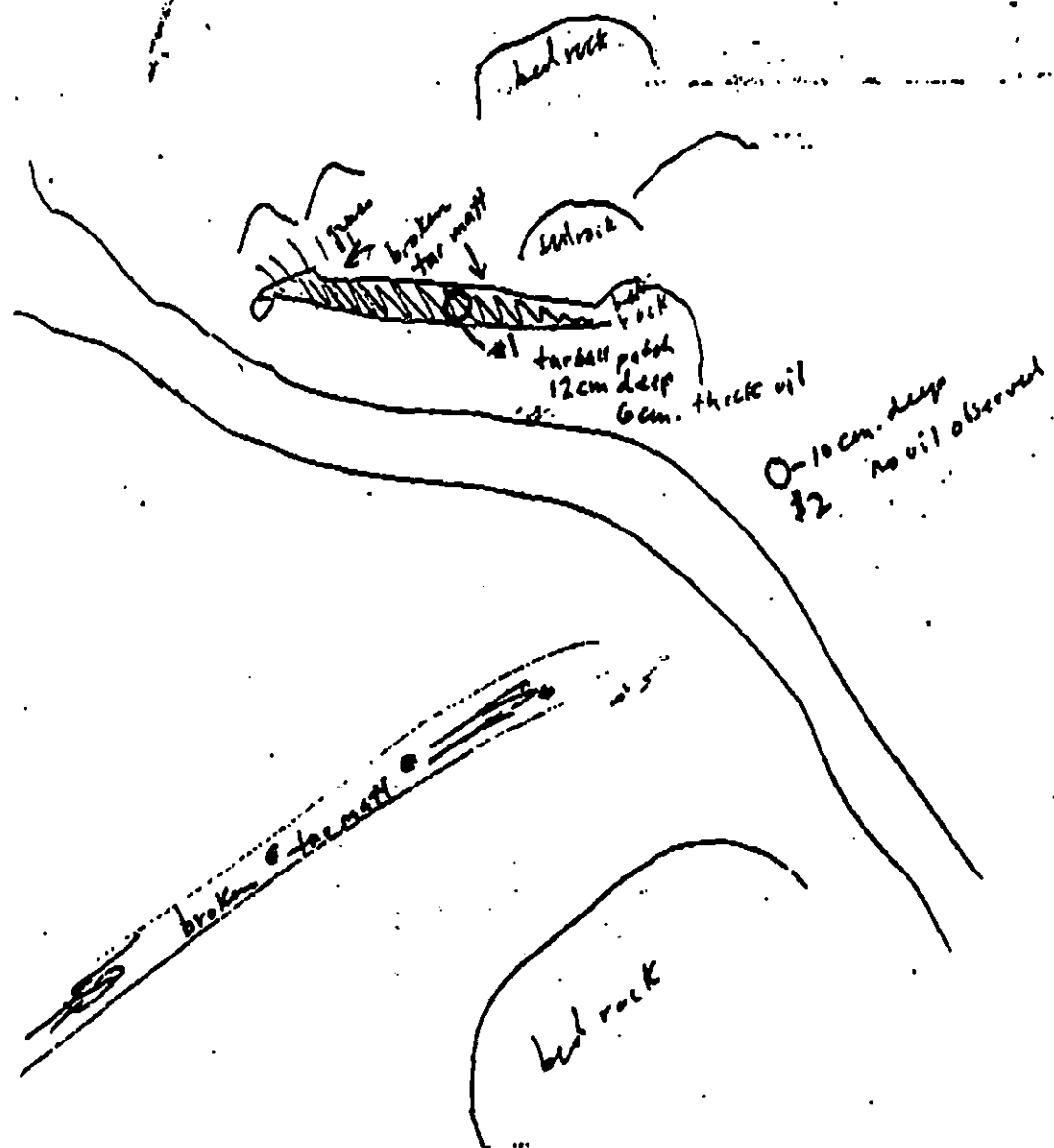
COMMENTS: Small bands broken far west upper intertidal on South bank
into grass areas almost towards y stream
N. bank North bank small broken band far west lower s of upper
inter tidal (splashed distribution) random

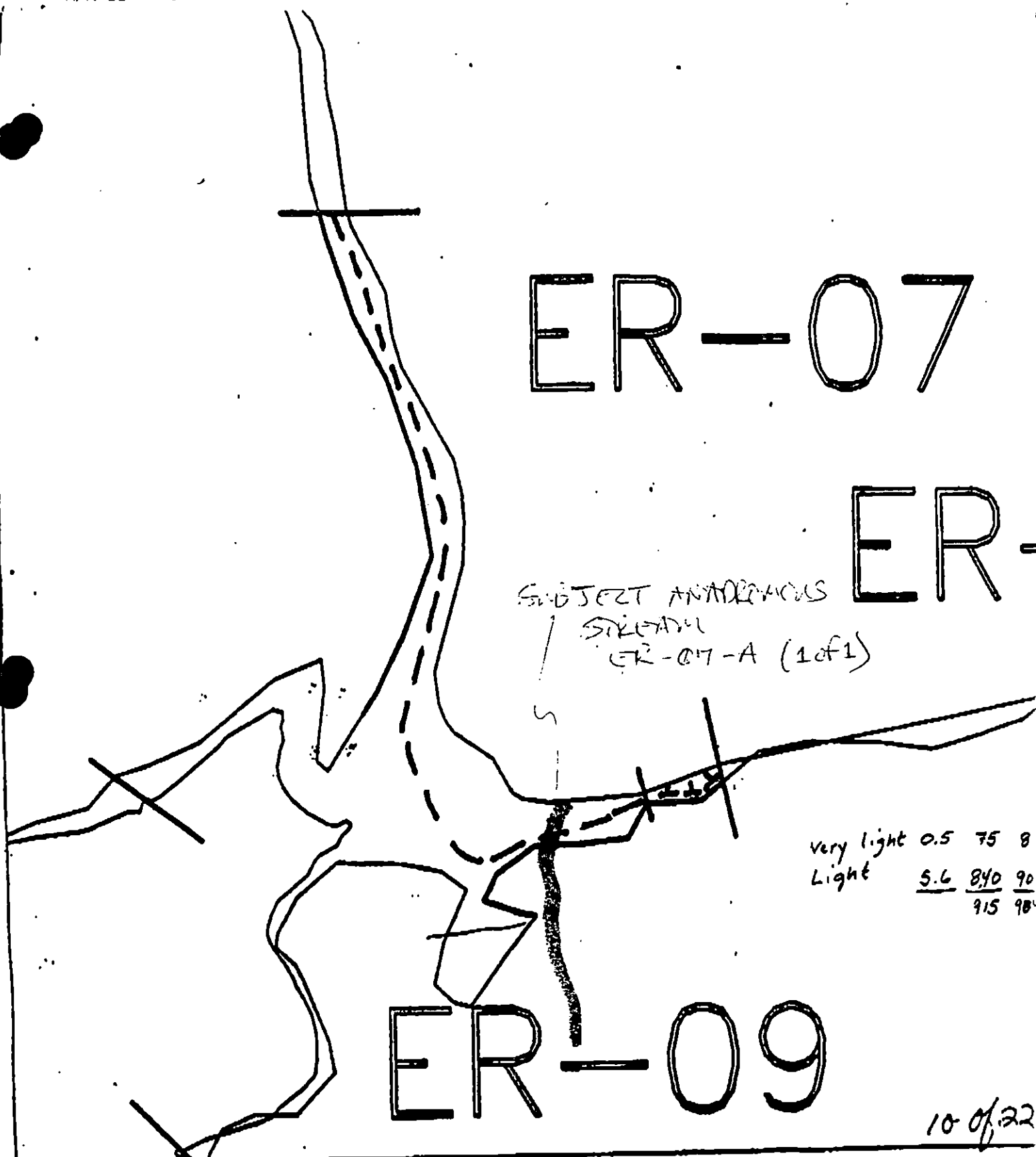
48 PHOTOLOG

RECOMMENDATIONS	DESCRIPTION
Recommendations	Shore should be removed. Shovel remove clay, various pebbles, oiled grasses in upper inter-tidal and lower half of upper inter-tidal. No bioremediation recommended

48 OIL DISTRIBUTION DIAGRAM

Comments by Ken Critchell:
 I agree with ADFG recommendations KRC





10/02/22

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

ER-7

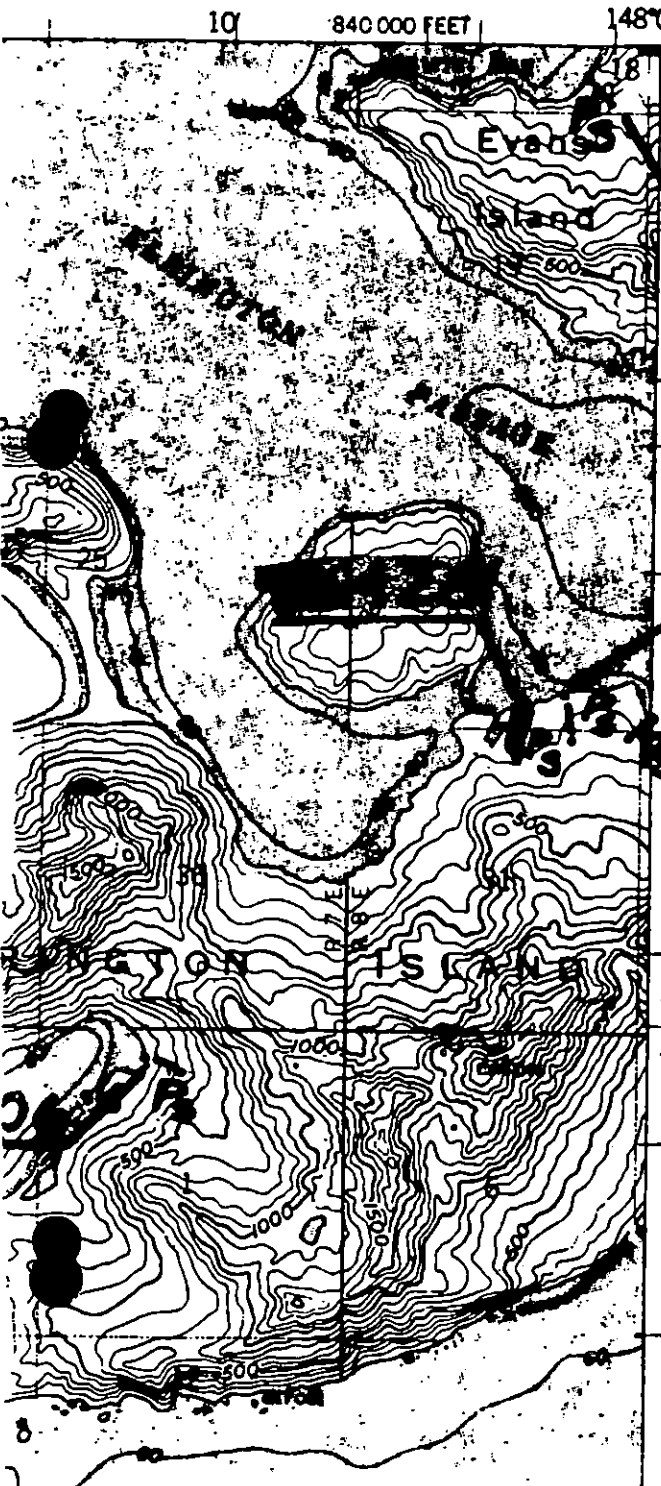
ADEC Segment Length: 1022m



Map Key: PWS-173: *St*
Name: Richard Marty
Date: 04/04/90
Date Entered:

YING SOUND (D-4) QUADRANGLE
ALASKA
1:63 360 SERIES (TOPOGRAPHIC)

(SEWARD (A-3))



16448

16430

16432

1991 MAYSAP EVALUATION

SEGMENT: ER 007 **SUB:** A **REGION:** PWS **SURVEY DATE:** 5/14/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN 5/1 - 7/10; RESTRICTED 7/10 - 9/15

Ecological/Constraints (see page two for details) Fry release,
Fish harvest area, Anadromous stream, Subsistence - Deer harvest-
ing

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: Set aside site covers locations F, G, and H. Signs
marking limits of the site are in the backshore.

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.

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.

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT ER-7 SUBDIVISION A DATE 5/14/91

ADEC

NAME John HayesSIGNATURE [Signature]☐ NTR☒ NTR REQUIREMENTS

Recommend that AP outside of test site area be manually removed.

EXXON

NAME John DeppSIGNATURE [Signature]☒ NTR

Oiling present is light, some limited amount could possibly be recovered but I do not recommend it. I feel the damage to abundant & healthy biota would be much greater than any possible benefit.

LANDMANAGER

NAME Steve WardOF CUG-FSSIGNATURE [Signature]☐ NTR

Lots of oil can be picked up from this site. Also a bunch of trash in area. This is a test site so it is already agreed to be cleaned. This asphalt is several hundred feet in length and covers most of the sub-adjacent Chesapeake Canal Reservoir.

NO-BIO AT ALL.

USCG/NOAA

NAME DREHER/CLINESIGNATURE [Signature]☒ NTR

Observed only small sporadic hardened asphalts. No probability of mobilization or sheening if left undisturbed.

Very light oiling occurs as indicated on the sketch map. Most of AP could be removed easily by manual crews. DOC

TEAM NO. 6 MAYSAP SHORELINE SURVEY SUMMARY
 OG CHANEY BIO CRANK Original
 ADEC HAYES LANDMANAGER WARD for CUC
 EXXON DEAN USCG/NOAA DREHER/CLINE

PAGE 1 OF 1
 SEGMENT ER 7
 SUBDIVISION A
 DATE May 14 / 91

TIME 07:15 to 8:45 TIDE LEVEL -2 ft. to -3.5 ft. ENERGY LEVEL: ☐ H ☐ M ☒ L
 SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO WEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☒ RAIN ☐ SNOW
 TOTAL LENGTH SHORELINE SURVEYED: 822 m NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE
 EST. OIL CATEGORY LENGTH: W — m M — m N 24 m VL 420 m NO 378 m US 200 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE V H M L	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A	P										BC	M	0.5	4		✓			NOT PU-NOAA SITE CONFUSION
B	S										B	M	1	25		✓			" " " " "
C	S										B	M	0.5	15		✓			" " " " "
D	T										SPG	L	20	30			✓		SCATTERED ON FLATS
E	T			T							SPG	L	20	50			✓		SCATTERED SOME P.U.
F	P										PC	M	2.5	5		✓			AP PATCHES
G	S										PR	M	3	100		✓			AP PATCHES
H	S										PC	M	6	200		✓			RANDOM PATCHES
I	P										PCB	M	2	15		✓			PATCHES BETWEEN BOULDERS

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-

5 - 14 22-27
15 FRAMES 1-6

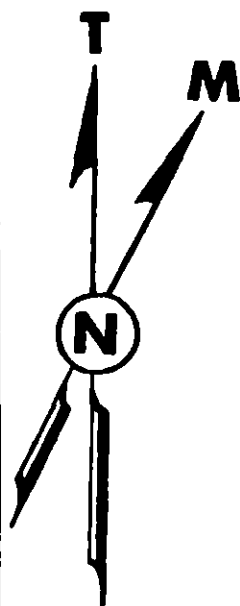
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	35							✓	-					✓			PG-PG	
2	35							✓	-					✓			PG-PG	
3	35							✓	-					✓			PG-PG	
4	35							✓	-						✓		PG-PG	
5	30							✓	-						✓		PG-PG	
6	30							✓	-						✓		BP-3PC	
									-									
									-									
									-									

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

OG COMMENTS: RANDOM PATCHES ON TIDE FLATS. MORE CONCENTRATED AP PATCHES IN BOULDERS ALONG VITZ, NO PICKUP WAS CONDUCTED ALONG THE SOUTHERN PORTION OF THE SEGMENT DUE TO CONFUSION ABOUT NOAA TEST SITE RESTRICTIONS, ACTUAL LOCATION OF NORTHERN BOUNDARY OF ER-07A MAY BE FARTHER SOUTH THAN SHOWN ON COMPUTER MAP, WE STOPPED SURVEYING WHERE PEBBLE BEACH CHANGED TO MASSIVE BOULDERS AS OG NOTES INDICATED BUT THIS WAS SOUTH OF COMPUTER BOUNDARY.

SC revised 5/19
 REVIEWED CB 19 MAY

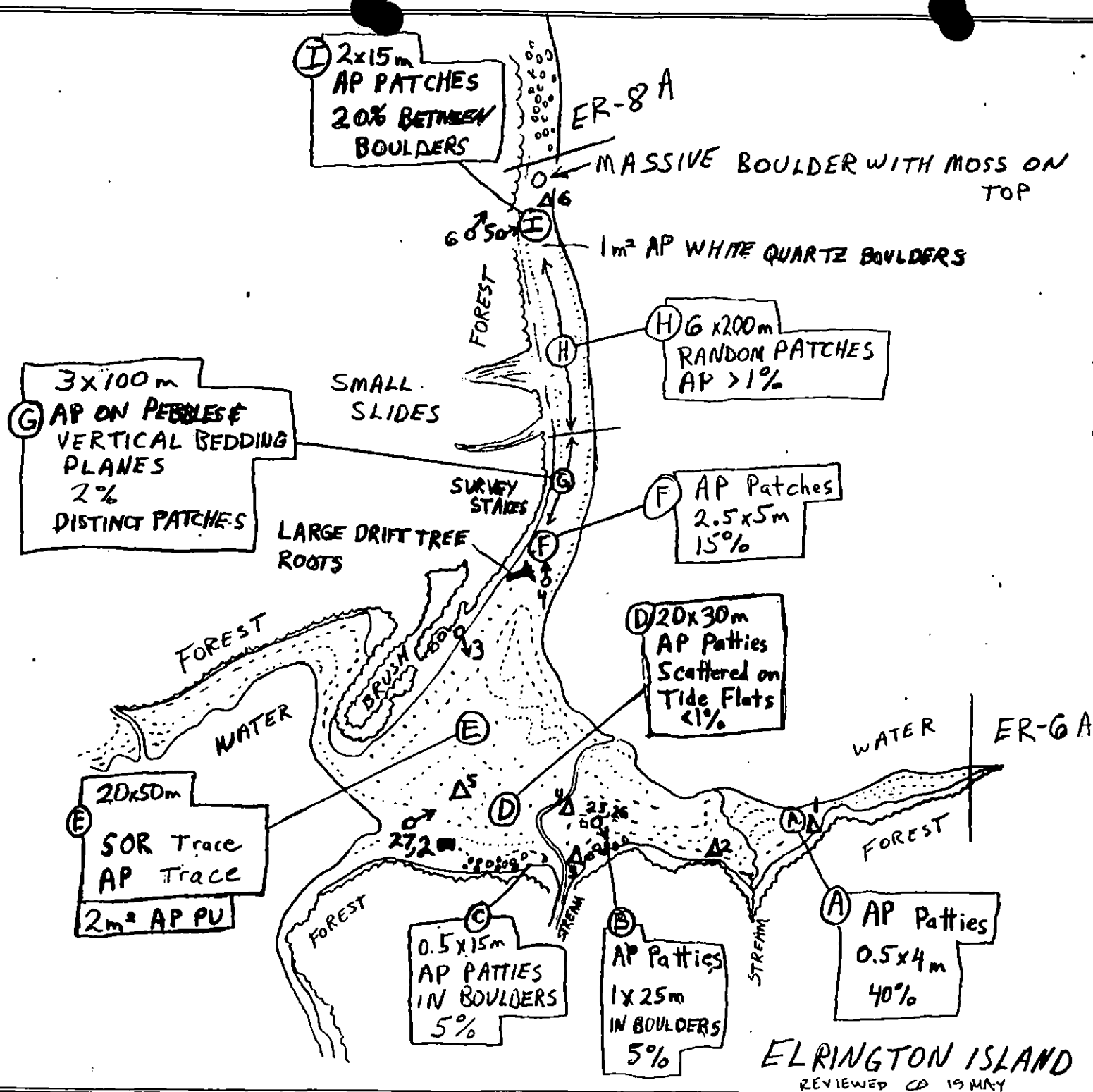
MAYBAP 1991
 OG SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: ER-07 A
 DATE: MAY 14 1991
 AIR P.#: PIM-C 005-107
 PIM-C 005-108



LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE



ELRINGTON ISLAND
 REVIEWED CD 19 MAY

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5

DATE 14 May 1991

SEGMENT # ER-7

TIDAL HEIGHT (range) -1.5 → -3.5

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 0

WIND SPEED/DIRECTION 5 knots IN

PHOTOGRAPHS: ROLL # 14

FRAME # 22, 23

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

(A) Area is a 20x50m plot in the MITZ. Within the site there is a sparse concentration of newly hatched larvae with a recent spat settlement. Few *Fucus* are present in the area. The majority of the larvae are *Mytilus* sp. of various age classes and moderate concentration. *Mytilus* cover is estimated to be between 10-20%.

(B) Area is a 20x50m plot in the MITZ located among small boulders. *Mytilus* are present in the area. *Mytilus* cover is estimated to be between 10-20%.

(C) Area is a 20x50m plot in the MITZ. *Mytilus* are present in the area. *Mytilus* cover is estimated to be between 10-20%.

(D) Area is a 20x50m plot in the MITZ. There is a moderate *Fucus* cover. *Mytilus* are present in the area. *Mytilus* cover is estimated to be between 10-20%.

(E) Area is a 20x50m plot in the MITZ. Biota is similar to (D); *Mytilus* cover is estimated to be between 10-20%.

(F, G, H, I) Areas are located in the MITZ. There are barnacles, black *Mytilus*, *Fucus* and a few *Mytilus* cover covering <1% of the surface.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds	3	16	
Waterfowl	2	3	
Gulls/kittiwakes	3	~350	
Shorebirds	3	~5	
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	2 (Faint)		
Pinnipeds (specify)	1 (Faint)		
Bales (specify)	1 (Faint)		

Shoreline subdivision map showing important biological features attached.

REVIEWED CD 19 MAY
Print date in

Team # 5

Date 14 May 1991

pg 2 of 2

Segment # ER-7

Tidal Height -1.5 to -3.5

Subdivision A

Biologist Crank

Sea State 0

Wind Speed / Direction 5 knots / N

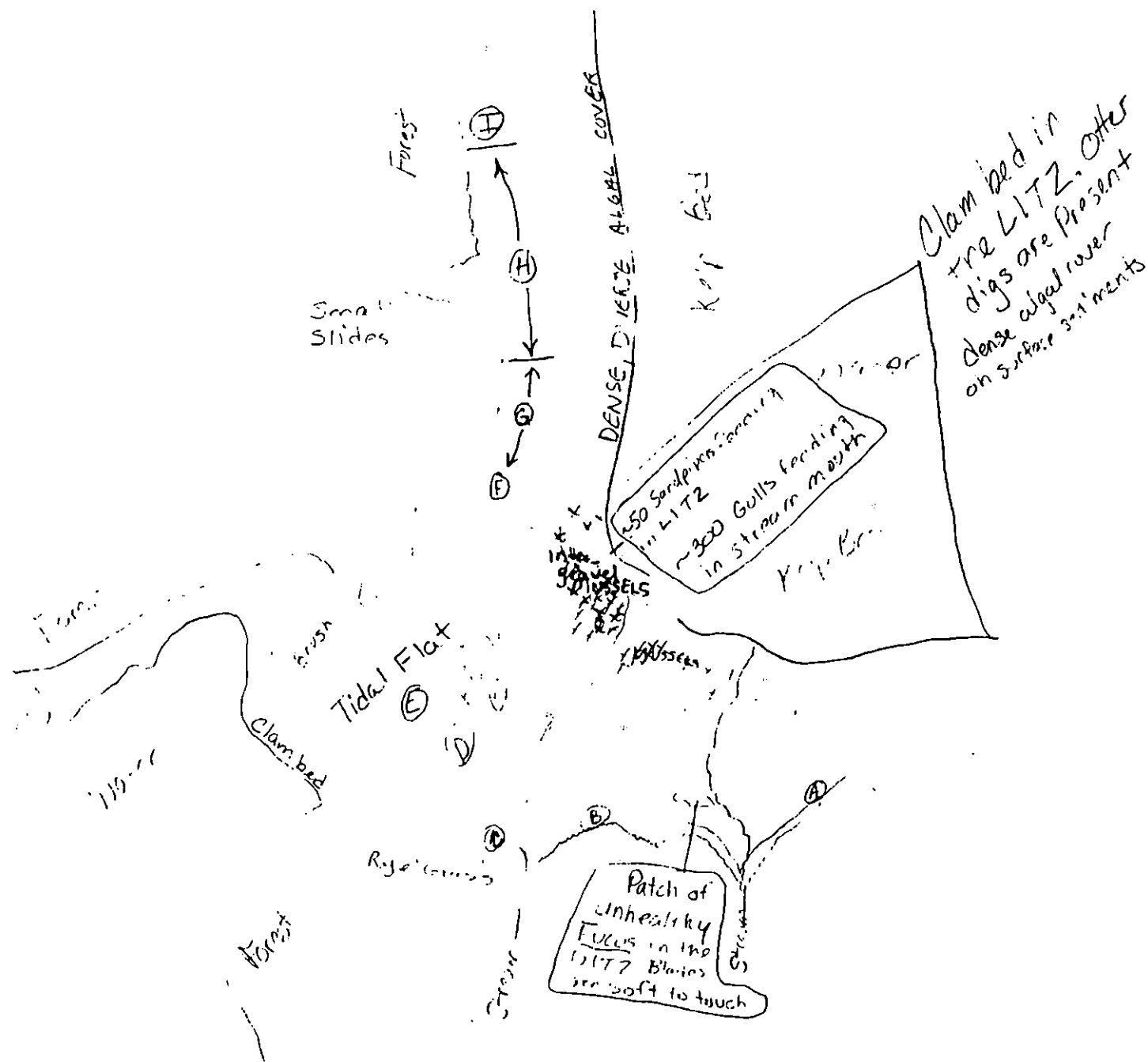
Comments (cont.)

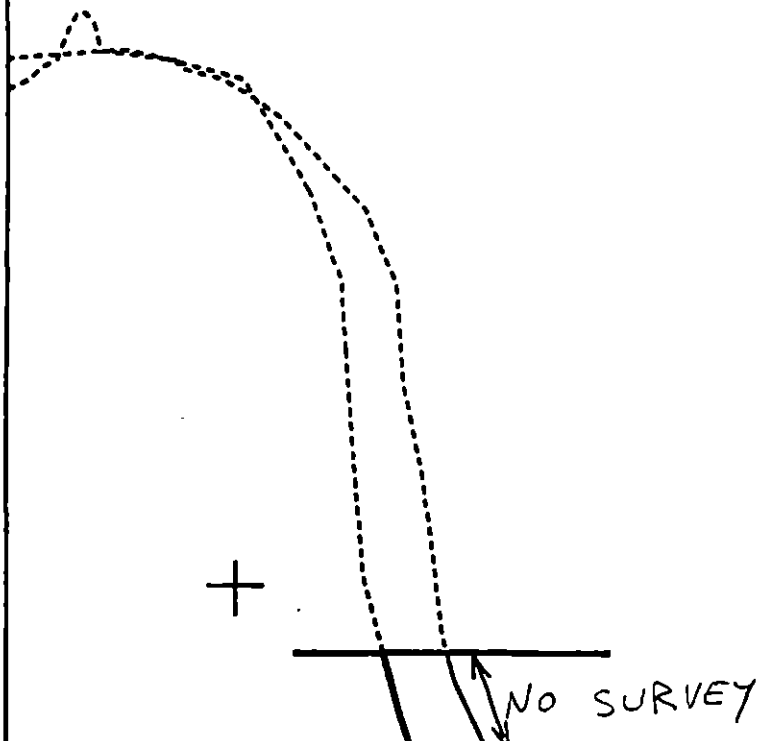
This subdivision has a large tidal flat. Fucus brown cover ~50 - 70% at the M-LZ surface sediments. Barnacles have a patchy distribution and a moderate concentration. There is recent turnover of sediment. Irregular masses range in density from rare to moderate with various ages.

The LITZ has a rich algal growth. Above the mean low water level cover is ~60%; below the mean low water level cover is ~80%. Some of the species present are: Fucus, Scytosiphon, Parmaria, Idonothalia, Hyalosira, Alaria, Laminaria & Ulva. A clam bed is also present in the LITZ. Kelp bed is located nearshore.

This area is utilized by wildlife. Gulls, sandpipers, and oystercatchers were observed feeding in the LITZ. Other foraging digs were also present in the clam beds.

Mechanical equipment, including 4-wheelers, could create a net-environmental loss. If tidal flat is accessed, it should be restricted to manual pick-up.





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

ER007 A

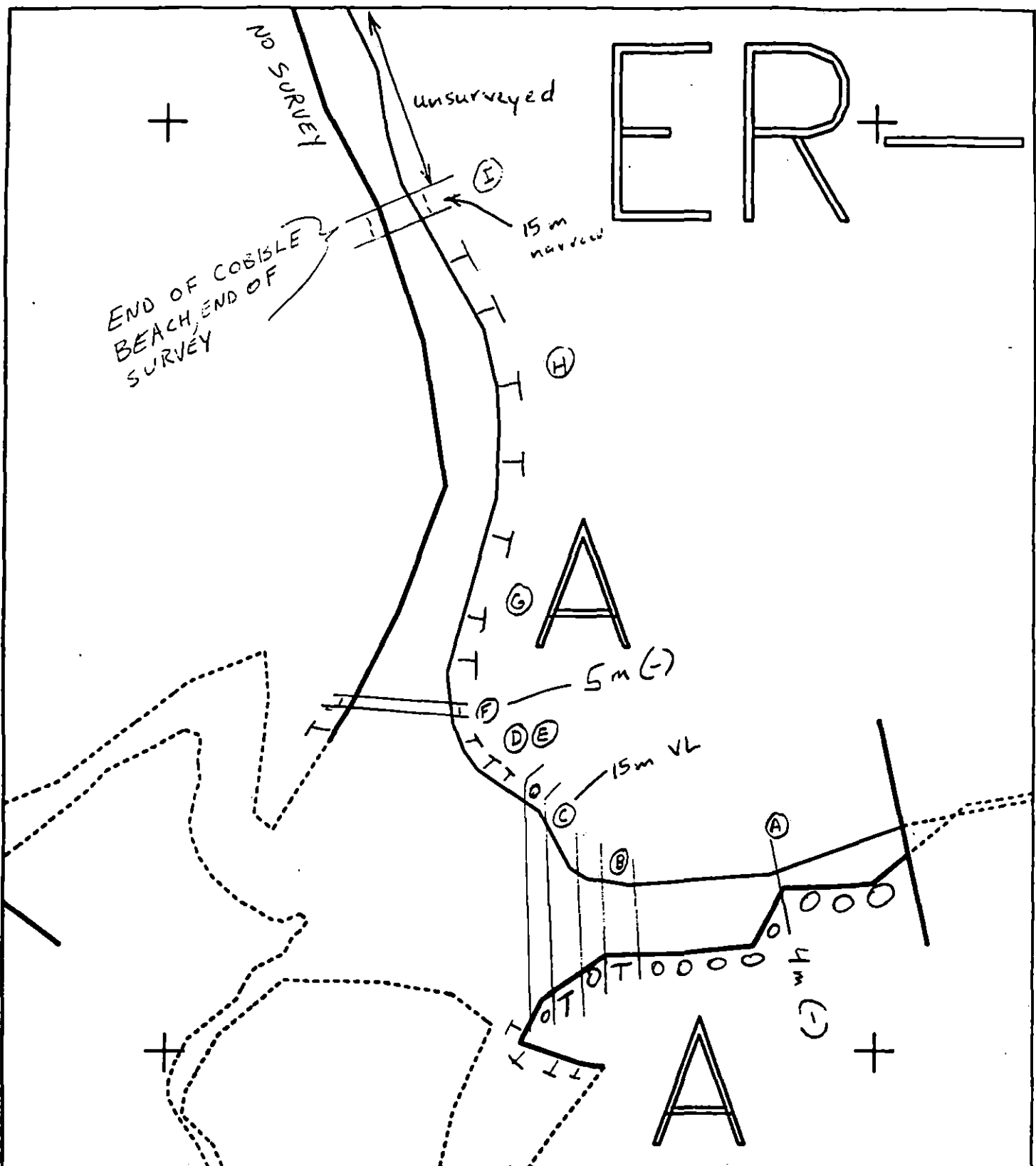
ADEC Subsegment Length: 1022m
METERS

5 100 200
AK State Plane Zone 4
per007ab



Subdivision Field Map
Map Key: PWSER007Ab
Name: CHANEY
Date: MAY 14
Date Entered:

EC reviewed 5/19
REVIEWED CD 19 MAY



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

ER007 A

ADEC Subsegment Length: 1022m
 METERS

5 100 200
 AK State Plane Zone 4
 par007a



Subdivision Field Map
 Map Key: PWSE007Aa
 Name: CHANEY
 Date: MAY 14 91
 Data Entered:

Examined 5/19
 REVISED CB 19 MAY

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ ER-07 STREAM NO: 226-50-16428 DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

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

6Y Recreation: Special use destination

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

9EE **Set aside**

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unhoiled biota and substrate. Subject stream is located in Subdivision A (1 of 1).

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:

Subsurface Oil/Observed: Yes X No Maximum Depth 6 cm

RECOMMENDATIONS:

No Treatment Recommended

X	Treatment Recommended
1	1
2	1
3	1
4	1
5	1
6	1
7	1
8	1
9	1
10	1
11	1
12	1
13	1
14	1
15	1
16	1
17	1
18	1
19	1
20	1
21	1
22	1
23	1
24	1
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81	1
82	1
83	1
84	1
85	1
86	1
87	1
88	1
89	1
90	1
91	1
92	1
93	1
94	1
95	1
96	1
97	1
98	1
99	1
100	1

 X Manual Pickup

Bioremediation

☒ Tarmat Removal

Snare/Absorbent Booms

Oil Snares (pom poms)

Absorbents (pads, rolls, etc)

Spot Washing: Wands

Beach Cleaner

Other (see comments)

COMMENTS: Recommended treatment includes manual removal of pavement and mousse patties as indicated on sketch map. Work should be conducted between 6/1 and 7/10 based on constraints.

TAG COMMENTS:

TAG APPROVAL DATE:

ADEC

EXXON

NOAA

USCG

FOSC:

DATE:

03-51-5

15/5

OG CALLAPALSON

SEGMENT 2007

STREAM 226-50-16420

DATE 1 90

CHECKLIST

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

LEGEND

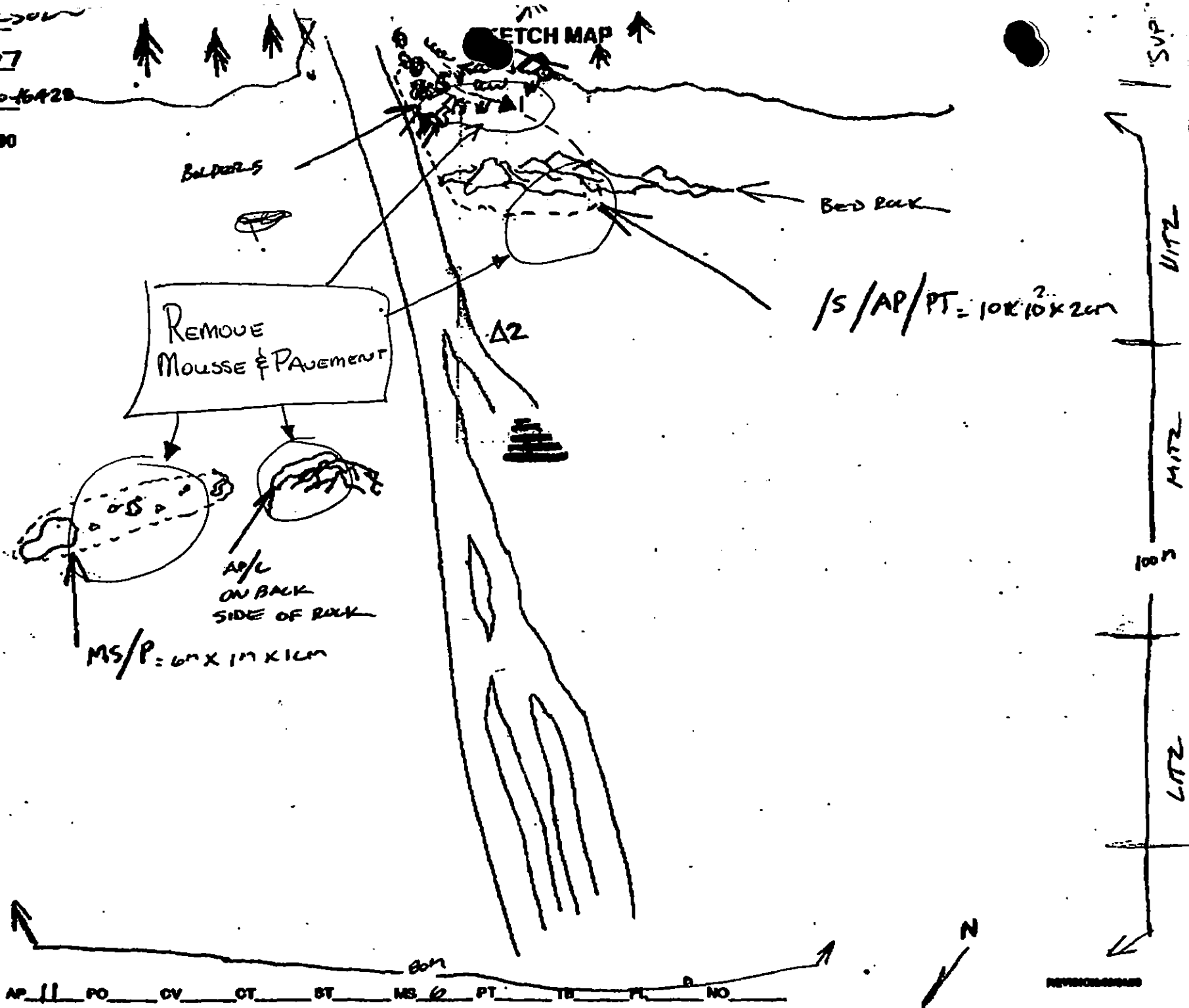
- 1 Δ
PH - No Subsurface Oil
- 2 Δ
PH - Subsurface Oil
- CT/C

Continuous Distribution
- CT/D

Broken Distribution
- CT/P

Patchy Distribution
- CT/S

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



Oil Character Length (m): AP 11 PO CV OT ST MS 6 PT TB PL NO

REVISIONS

ER-07

ER-

SUBJECT ANADROMOUS
STREAM
ER-07-A (1 of 1)

very light 0.5 75 81
Light 5.6 840 90:
915 904

ER-09

10/01/22

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-7

ADEC Segment Length: 1022m



Map Key: PWS-173

Name: Richard Marty

Date: 04/04/90

Date Entered:

YING SOUND (D-4) QUADRANGLE
ALASKA
1:63 360 SERIES (TOPOGRAPHIC)

(SEWARD (A-3))



16448

16430

16432

(52)

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-07

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G Anadromous stream no. 226-50-16428

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

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

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

6Y Recreation: Special use destination

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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 923 m: V.Light 99 m: No Oil 0 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommend manual removal of tarmat and asphalt patches followed by bioremediation. Work should be conducted between 6/2 and 7/9 based on above salmon constraints. No treatment should be performed at the Special Study site (Exxon AP-16) on the east shore of the small islet (see sketch map); Contact SCAT office for specific restrictions (564-3660).

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ER-07 SUBDIVISION: A DATE 04 APRIL 90

USCG

NAME LARRY FLETCHER

SIGNATURE *Larry R. Fletcher*

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

1. MANUALLY REMOVE ASPHALT AND TAR PATTIES.
2. BIO-REMEDIALTE.

ADEC

NAME DAVID M. SALE

SIGNATURE *David M. Sale*

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

- ① MANUALLY REMOVE ASPHALT AND TAR PATTIES FROM SHORELINE OF ISLAND AND TOMBOLO.

TOMBOLO NEEDS TO BE TREATED/CLEANED AT A LOW TIDE TO ACCESS. TOMBOLO ALSO HAD A SHEEN OF OIL IN THE PIT, ESPECIALLY WHEN SURFACE SEDIMENTS FELL INTO PIT. THERE IS A COLOR DIFFERENCE (DARKER IN TOP 2cm) BETWEEN SURFACE AND SUBSURFACE. THERE MAY BE MORE OIL IN THE TOMBOLO THEN JUST TAR BALLS/PATTIES.

LAND MANAGER

NAME Leigh Carlson

SIGNATURE *Leigh Carlson ADNR*

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Listed as priority 1 by PWSCA. Listed as public use area in the PWS area plan. Area used for recreation and subsistence deer harvesting. Recommend manual removal followed by bioremediation.

SHORELINE OILING SUMMARY

REVISION NO. 02/22/90

OG R. Mary USCG LARRY FLETCHER SEGMENT ST/ ER-07
 R/S B. Smith LAND REP Lang Carson SUBDIVISION A
 AXON J. Czarnski ADEC Dave Sale TIME 15:15 to 15:35
 TEAM NO.: 10 TIDE LEVEL: 0.5m (1.7') to 0.5m (1.7') DATE 04/04/90
 EST. SUBDIVISION LENGTH: 984 m ☐ Sun ☒ Clouds ☒ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to SE
 SURFACE SEDIMENTS: R 20 % B 10 % C 10 % P 15 % G 15 % S 40 % M 0 % V 0 %
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 903 m VL 71 m NO 0 m

SURFACE OIL

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

PAVEMENT: H F (S) 496 sq. m by 2 cm

PATTIES / TARBALLS 1 BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	<u>2</u>		
Vegetation	<u>1</u>		
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE

#BAGS

Photographs:

Roll No. ST/10/7

Frames 20-24

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-in)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		1	2	3	4	5		UP	DOWN	1	2	3	4	5	SU	U	M	L		
1	15					X	-									X			N	L
2	20	X					0-1	X				X			X				N	G
3	10	X					0-2	X				X				X				G
4	25				X		0-1	?				X					X	Y		S
5	7	X					0-0.5	X							X					S

* Oiled interval less than 5cm in G/S sediments does not constitute subsurface oil.

COMMENTS

Asphalt $150 \times 2 \times 25\% (e) = 75$

$210 \times 3 \times 35\% (c) = 221$

$210 \times 2 \times 10\% (c) = 42$

$263 \times 3 \times 20\% (N) = 158$
4% m²

Revision

RM 4/4/90

8 of 22

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST/10/ER7 Subdivision A Date (mo/day/yr) 4/4/90
 Time (24 hr) 1500 - 1600 Biologist Lemon Rain

- (A) Substrate type and % of segments:
 (1) Bedrock 20 (2) Boulder (3) Cobble 10 (4) Pebble 15 (5) Sand 55 (6) Silt
- (B) Overall % cover of biota (% of segment): Dense Moderate Low 20%
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

Photographs:
 Roll No. ST/10/7

Frames 20-24

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments: In mid zone found nudibranch eggs, annelid worms, Spiorobus on Fucus. Deer and possibly wolfbane Tracks in snow.

Ecological Considerations: clam shells (Tresus sp.) from apparent raised bed as described for section 8. Hatchery release, spawning, deer harvest, set aside. Checked stream and found no fish or potential food.

OG R. Marry

SEGMENT ST/ ER-07

SUBDIVISION A

DATE 07/14/90

CHECKLIST

- Navigation
- Approach Route
- Sample Data
- Oil Data
- Width
- Length
- % Cover
- Substrate Character
- Est. HSP/LALWL
- SSL
- Profile Location(s)
- Profile(s)
- PI Location(s)
- Photo Location(s)

LEGEND

1 A

PI - No Substrate Oil

2 A

PI - Substrate Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

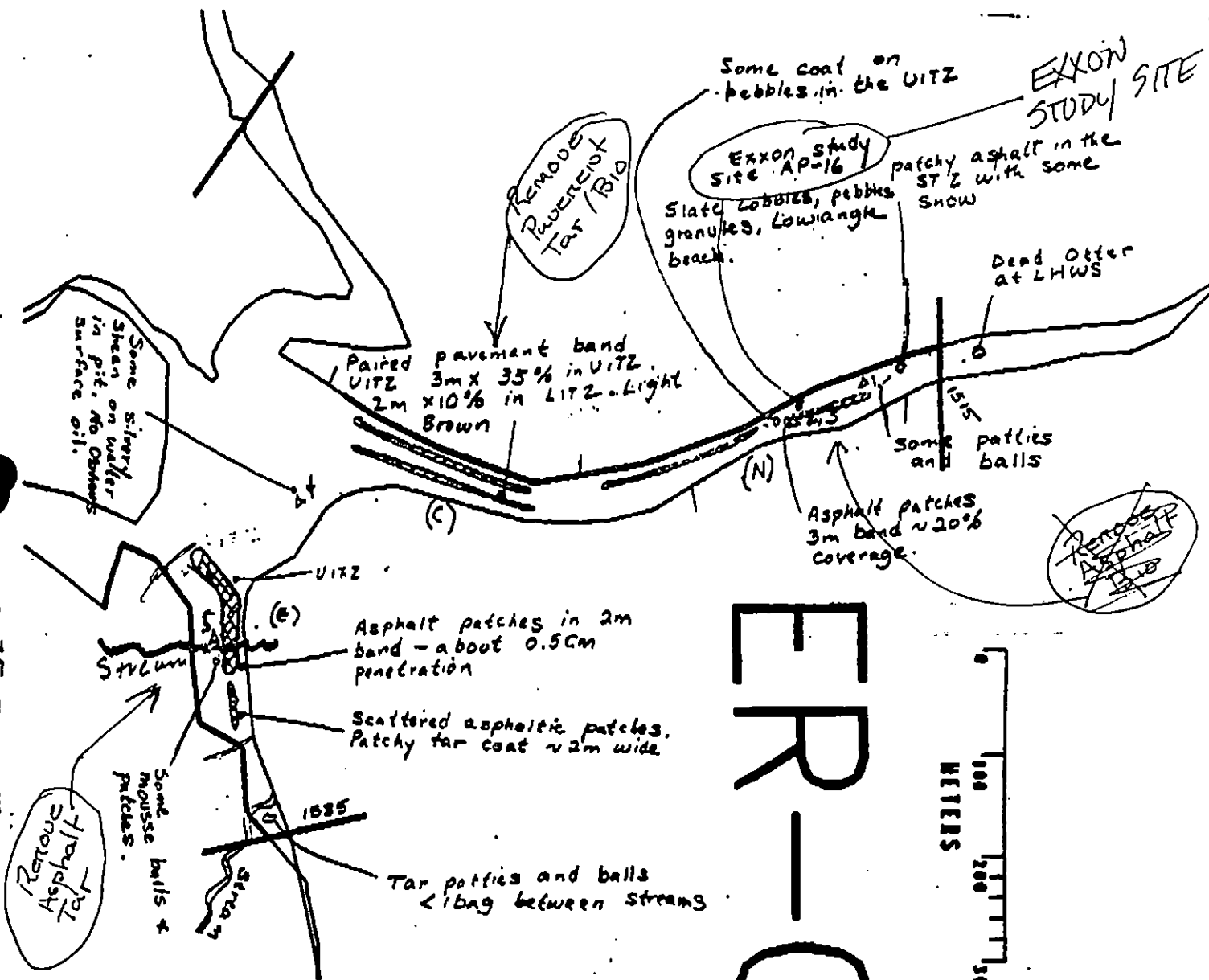
Scattered Distribution

Old Vegetation

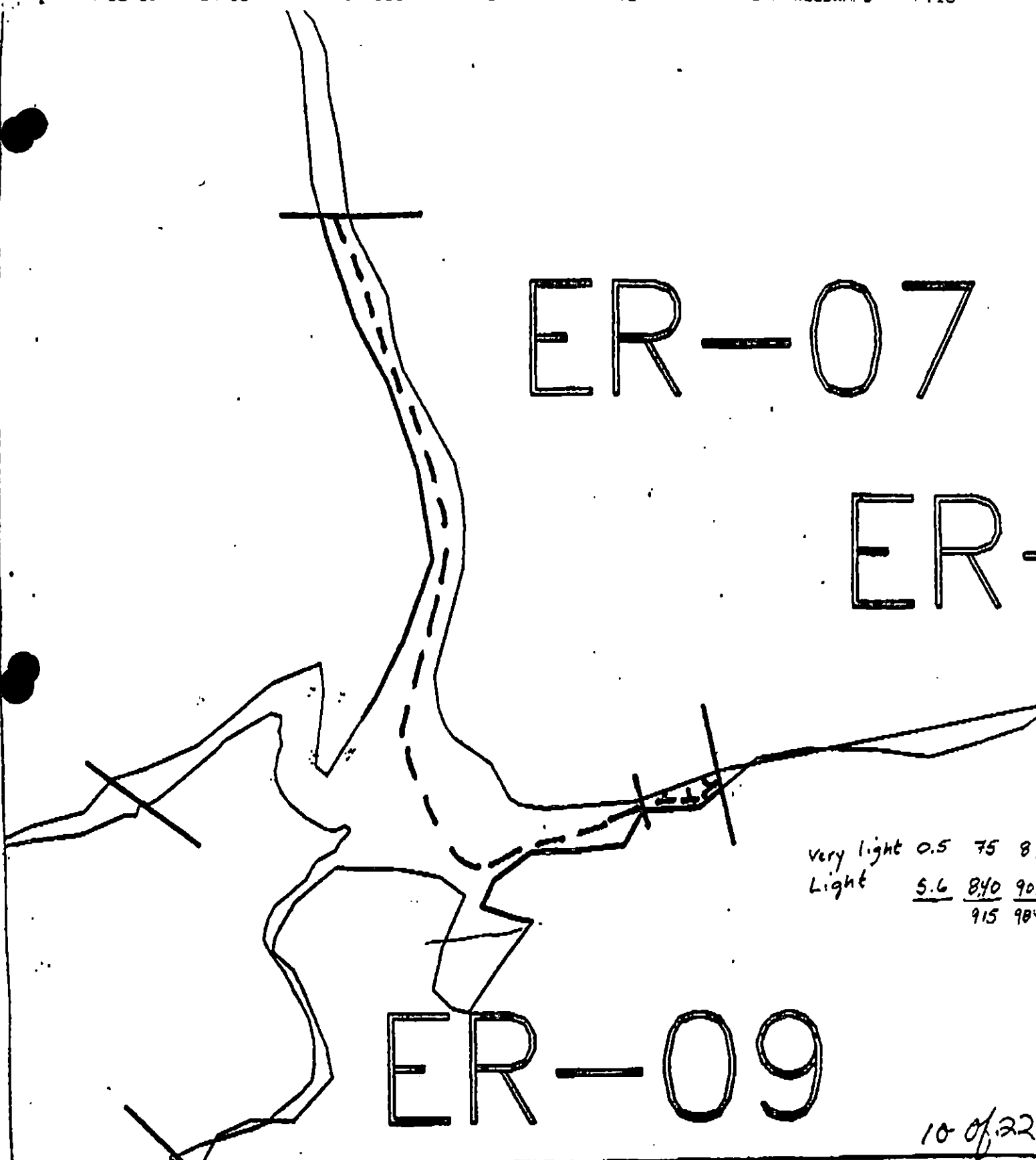
1

Paved location, direction, and number

ON Character 903 PO CV CT 600 ST MS TB 75 FL NO



90/22



Very light 0.5 75 81
 Light 5.6 840 90:
 915 985

ER-09

10 of 22

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-7

ADEC Segment Length: 1022m



Map Key: PWS-173

Name: Richard Marty

Date: 04/04/90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-7 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation More Than 100m From Stream	WORK 6/1 to 7/20
Bioremediation Less Than 100m From Stream	WORK 6/1 TO 7/10 (ADF&G MONITOR REQ.)

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Streams	ADF&G catalogued anadromous streams (226-50-16428 and 16430) are present in Subdivision A. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream. No constraint to manual pickup and tarmat removal.
1F	Sawmill Bay Hatchery Release	No constraint to manual pickup and tarmat removal; closed to bioremediation prior to 6/1.
1K	Purse Seine Hook-off	No constraint to manual pickup and tarmat removal; closed to bioremediation after 7/20.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup and tarmat removal; closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or bank. No flushing of pollutants or sediment into stream drainage. Restrict boat and air traffic to essential minimum after 7/20. Restrict beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unloiled biota and substrate.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM FOR (STREAM NO. 226-50-16428)
FOR ADDITIONAL CONSTRAINT INFORMATION

TAG APPROVAL DATE 6/04/90
ADEC Ray Morris
EXXON Steve Rich
NOAA Joseph J. Jett
USCG G. J. Jett
FOSC [Signature] Date 6/7/90

Prepared by Anders Meun AP Date 6/4/90

EV-62

Incorporates information from
USFWS bald eagle survey 6/1/90.

ER-08

ER-07

ER-06

Inactive Δ

ER-09

Active Δ 587

ANADROMOUS STREAM
(226-50-16430)

ER-05

ANADROMOUS STREAM
(226-50-16428)

-10



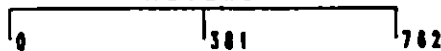
Exxon Company, USA
Map Key: PMS-ER-7
May 11, 1990



ECOLOGY MAP 5/30
SEGMENT ER-7

SUBDIVISION A (1 of 1)

METERS



Seabird Colony



Eagle Nest

1 inch = 1250 feet

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G Anadromous stream no. 226-50-16428

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

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

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

6Y Recreation: Special use destination

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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. Holman

DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 923 m: V.Light 99 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

X Bioremediation

X Tarmat: Breakup

X Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommend manual removal of tarmat and asphalt patches
followed by bioremediation. Work should be conducted between 6/2 and
7/9 based on above salmon constraints. No treatment should be performed
at the Special Study site (Exxon AP-16) on the east shore of the small
islet (see sketch map); Contact SCAT office for specific restrictions
(564-3660). SEE Addendum dated 7/4/90/PP

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/90.

ADEC ART WEINER Art Weiner

EXXON ANDY TOL Andy Tol

NOAA Bruce Wasscott Bruce Wasscott

JSCG KENNETH ICEANE Kenneth Iceane

FOSC:

DATE: 4-25-90

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G Anadromous stream no. 226-50-16428

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

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

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

6Y Recreation: Special use destination

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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. Holman

DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 923 m: V.Light 99 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

X Bioremediation

X Tarmat: Breakup

X Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommend manual removal of tarmat and asphalt patches
followed by bioremediation. Work should be conducted between 6/2 and
7/9 based on above salmon constraints. No treatment should be performed
at the Special Study site (Exxon AP-16) on the east shore of the small
islet (see sketch map); Contact SCAT office for specific restrictions
(564-3660).

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/90

ADEC ART WEINER Art Weiner

EXXON ANDY TOL Andy Tol

NOAA Bruce Wescott Bruce Wescott

USCG KENNETH KEANE Kenneth Keane

FOSC:

DATE: 4-25-90

OG R. Marry

SEGMENT ST/ 6003

SUBDIVISION A

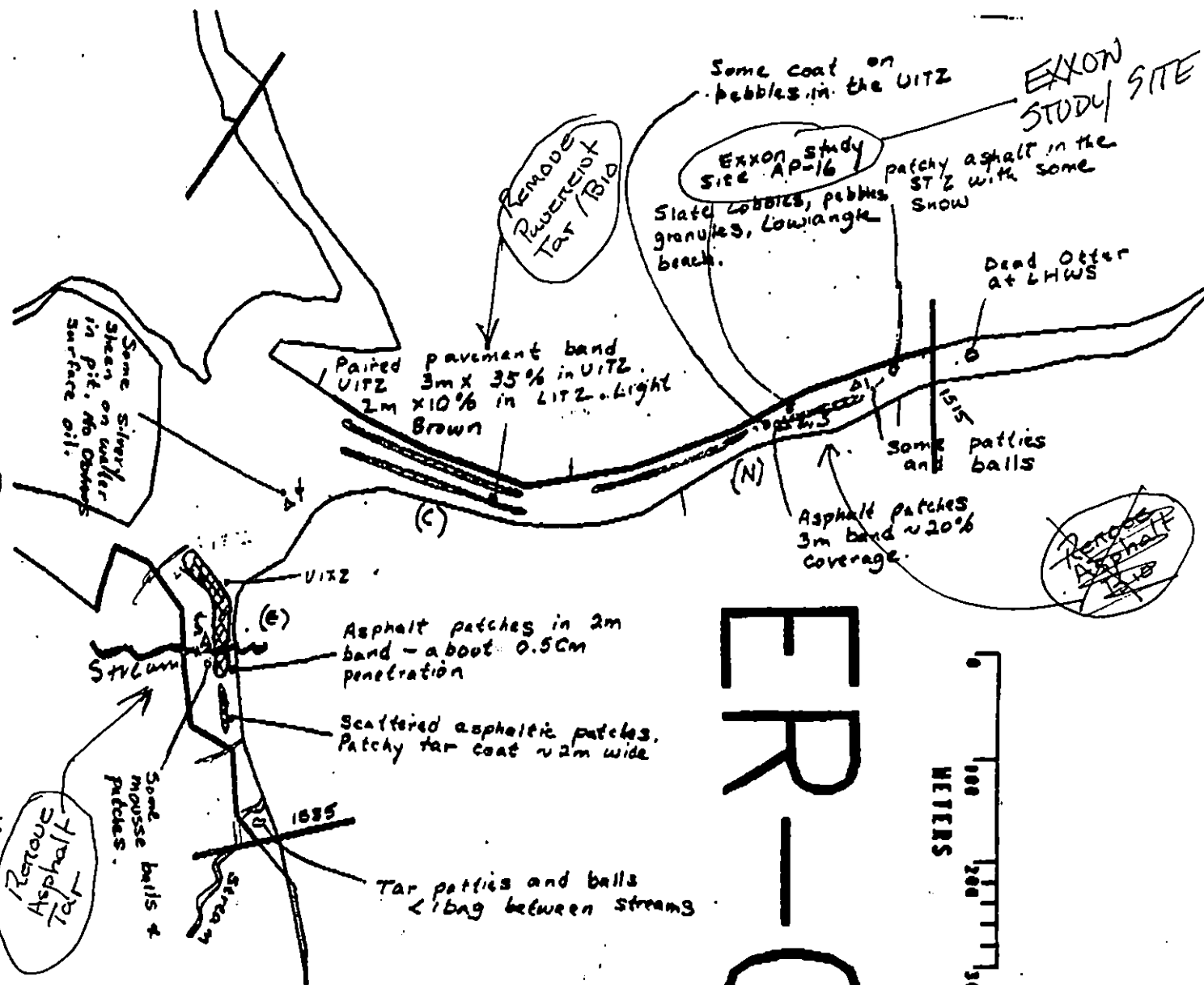
DATE 04/14/80

CHECKLIST

- N. Area
- Approx. Scale
- Soil Data
- Oil Data
- Width
- Length
- % Cover
- Sketches Character
- Est. 1980/1981
- Photo Location(s)
- Profile(s)
- Photo Location(s)
- Photo Location(s)

LEGEND

- 1 A
- 2 A
- PR - No Substances OR
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Scattered Distribution
- Obs. Vegetation
- 1
- Photo location, direction, and number



ER-07

9/22

ER-07

ER-

ER-09

very light 0.5 75 81
 Light 5.6 840 90:
 915 984

10 of 22

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-7

ADEC Segment Length: 1022m



Map Key: PWS-173

Name: Richard Marty

Date: 04/04/90

Date Entered:



1991 MAYSAP EVALUATION

SEGMENT: ER 008 SUB: A REGION: PWS SURVEY DATE: 5/26/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest,
Fry release, Fish harvest area, Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____ FOSC APPROVAL DATE: _____

ADEC _____ FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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.

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

MAYSAP FIELD SHORELINE COMMENT SHEET

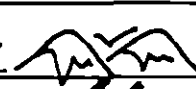
TEAM NO. 3 SEGMENT ER-08 SUBDIVISION A DATE 5/26/91

ADEC

NAME

Wesley Ghormley

SIGNATURE

Wesley Ghormley☐ NTR

TREATMENT RECOMMENDED

Due to time limits I did not partake in this survey, but according to survey members remaining oil was broken up or removed.

EXXON

NAME

REY SOTELO

SIGNATURE

Rey Sotelo☒ NTR

No recoverable oil remains in this segment. Segment looks good throughout with very healthy dense biota.

LANDMANAGER

NAME

DAVE BLANCHET

OF

USFS

SIGNATURE

Dave Blanchet☒ NTR

LOW TO MODERATE ENERGY ENVIRONMENT, ALL BEACHES CLIFFS OR, HIGH ANGLE, ANGULAR BOUNDED/Cobble SHORELINE. SOUTHEAST PORTION OF SEGMENT IS WITHIN A PROTECTED BAY AND HAS NUMEROUS (APPROX. 100) TARBALLS AND/OR PATCHES. ALL S.O.R. FOUND WAS BROKEN UP - LIKELY NOT ALL WAS FOUND, BUT THE MAJORITY WAS. NO GOOD CAMPSITE AREAS THIS SHORELINE SEGMENT, AND LIMITED GENERAL RECREATION POTENTIAL.

USCG/NOAA

NAME

DAHLIA / MOORE

SIGNATURE

Dahlia / Moore☒ NTR

COMPRISED OF BEDROCK CLIFF WITH A FEW POCKET SHORINENT BEACHES OF: Boulder, RUBBLE, GRAVEL. NORTHERN PORTION COMPRISED OF Boulder, RUBBLE, GRAVEL, PEBBLES, SAND. ALL WALKABLE AREAS WALKED. REMOVED SOR AND FILLED AREA. "NO SUBSURFACE OIL OR FURTHER TREATMENT REQUIRED"

PAGE 7 OF 8

SEGMENT ER-8A

SUBDIVISION 4

DATE 26 / MAY / 91

ENERGY LEVEL: ☐ H ☒ M ☒ L

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

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 3 m NO 2859 m US 0 m

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

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

PHOTO ROLL # MAYSAP-

NONE

FRAMES

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

On the southern portion of the island isolated, dry, friable
mousse patches were present at about 5m intervals
These patches were broken-up during the summer.

revised 5/28/91 KG. 06/1 of 5
Revised by: MC 5/28/91

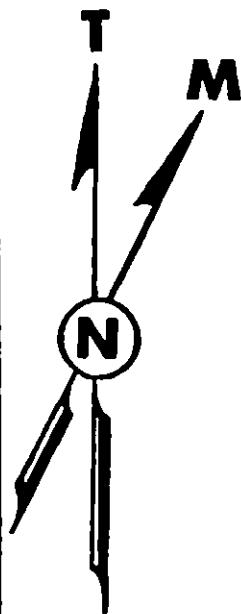
MA 1991
 DG SKETCH MAP JOHN HARPER

TEAM 5

SEGMENT: EP 8 A

DATE: 26 MAY 91

AIR P.#: AM-C 005-155
 AM-L 005-156



ELRINGTON

PASSAGE

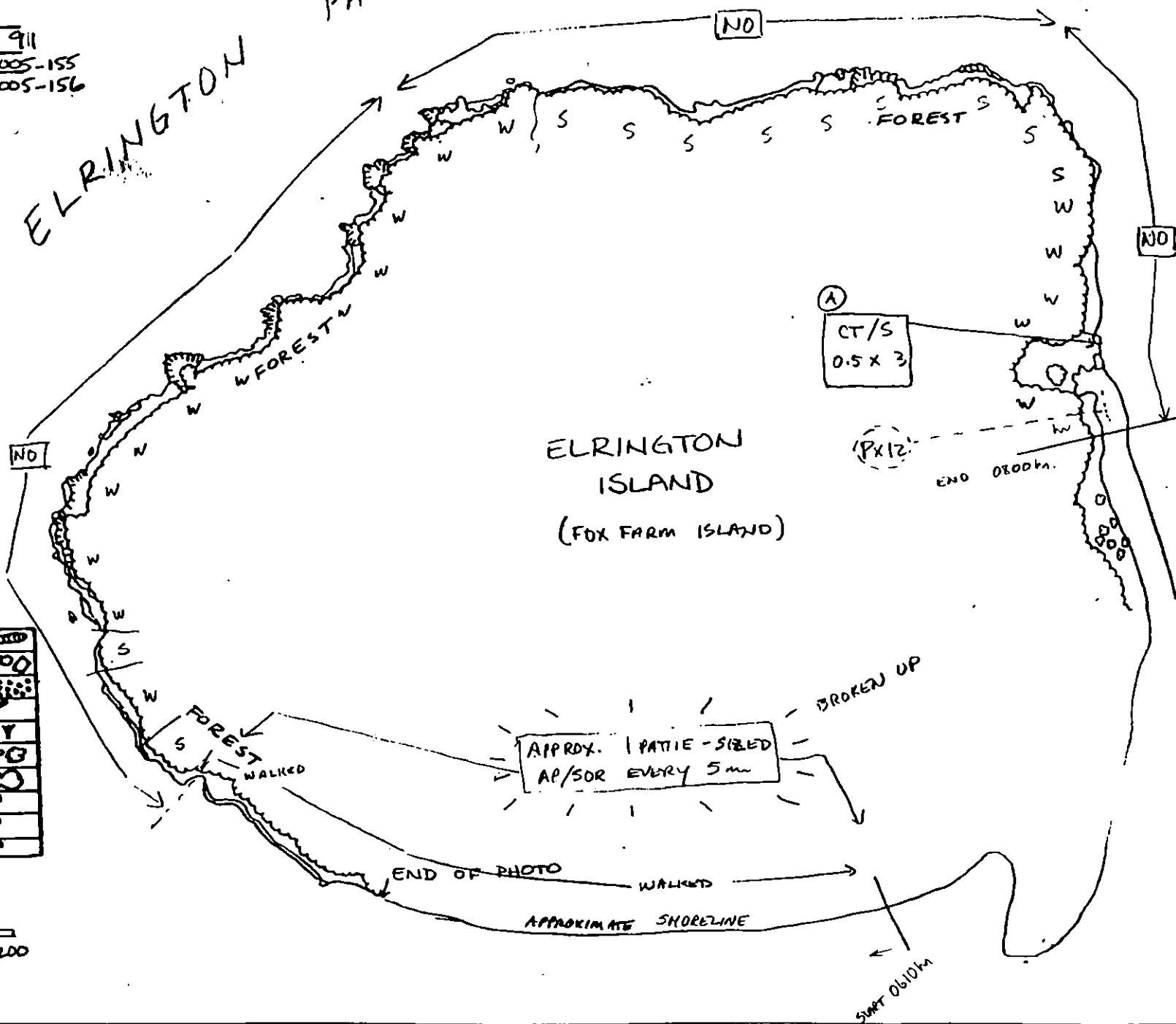
ELRINGTON ISLAND
 (FOX FARM ISLAND)

LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SKIFF SURVEY
 WALK SURVEY
 SCALE

0 100 200
 M

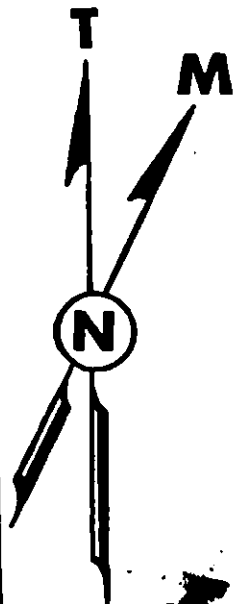


REVISED FIELD SKETCH

OG 3065
 revised sketch
 5/18/91

MAYSAP 1991
 OG SKETCH MAP
 GREG CHANEY / DON CLINE
 TEAM 5

SEGMENT: EP 8 A
 DATE:
 AIR P.#: PIM-C 005-155
PIM-C 005-156

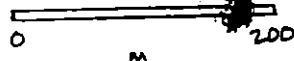


ORIGINAL FIELD NOTES

LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED RIT	
NO OIL RIT	
PHOTO	

SCALE



PASSAGE

ELRINGTON

ELRINGTON ISLAND

FOREST

FOREST

CT
0.5 x 3/5

AVALANCHES
CHUTE

(P x 12)

0600 hr

FOREST

END OF PHOTO

1 patches away 5m broken up

OG 5 of 5

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3 DATE 5/26/91
 SEGMENT # ERO8 TIDAL HEIGHT(Range) 0 to -2'
 SUBDIVISION A BIOLOGIST STAKOV
 SEA STATE Calm WIND SPEED/DIRECTION Calm
 PHOTOGRAPHS: ROLL # FRAME #

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

Segment includes most of an Island/Promontory. Shoreline consists of generally low energy mixed substrate beaches composed of varying ratios of sand/gravel/pebble/cobble or pebble/cobble/boulder, with bedrock exposures and headlands.

Biota on bedrock consists primarily of dense Fuus, ulva, Rhodymania, Alaria, Sartaria, Laminaria, Hedophyllum and various filamentous algae. Fauna include dense barnacles, patchy limpets and Littorina, patchy Nucella, and starfish (Dermasterias, Evasterias, Pisaster).

Biota on beaches varies somewhat depending on substrate composition, but is characterized overall by relatively dense Fuus, ulva and filamentous algae, moderately dense to dense barnacles and spat, limpets and Littorina (often with egg masses), generally sparse and patchy attached and interbedded small Mytilus, Pagurus (dense clusters of small individuals), patchily dense small nudibranchs (Lamellidorsis), Nucella, Scudicella, Neroid worms, Saxidomus, Pycnogonids, Dermasterias and small Leptasterias.

No recoverable or treatable oil remains on this segment. Biota overall is very diverse and abundant, with evidence of vigorous new growth and recruitment.

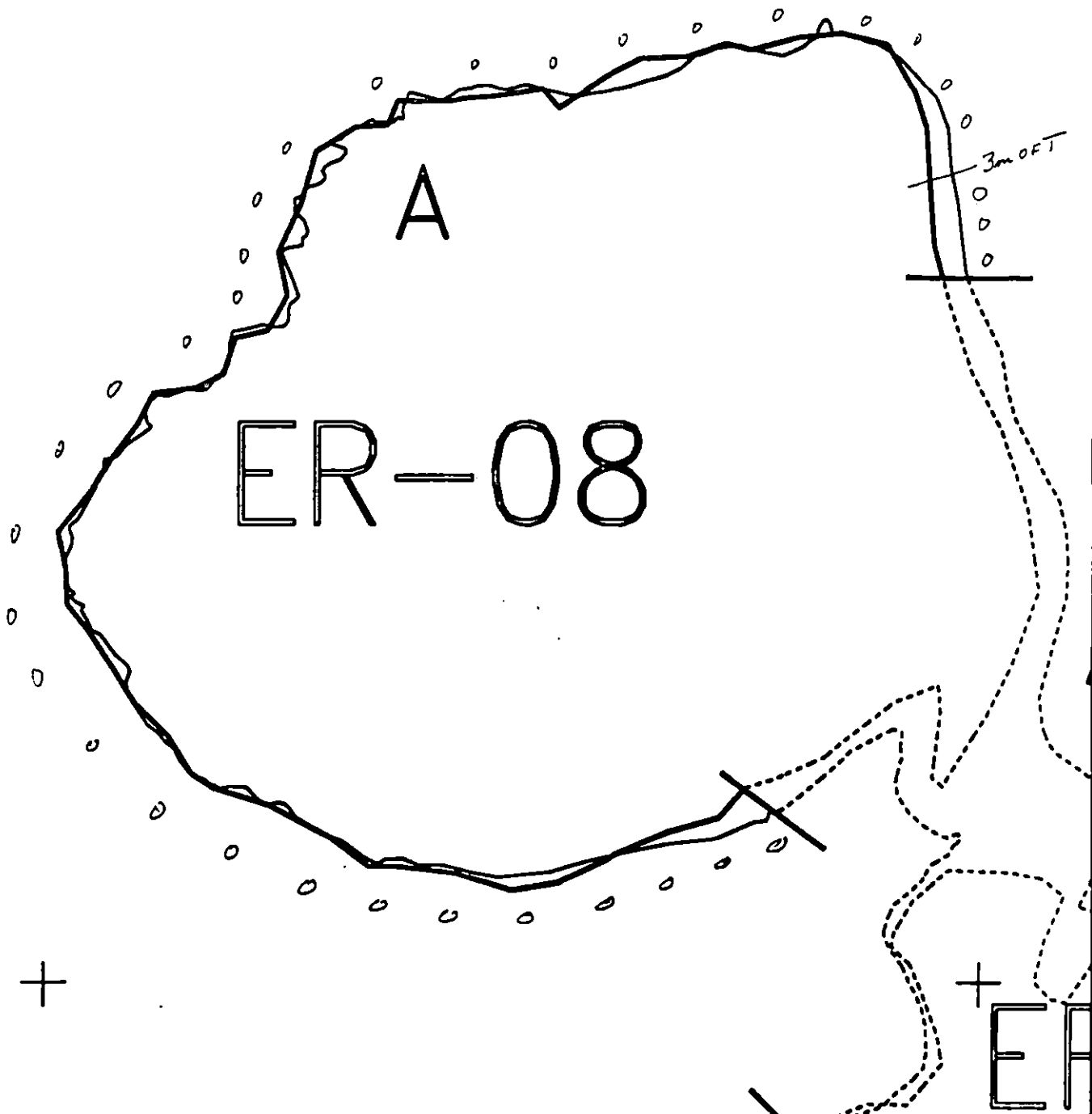
WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	col. blennies
Seabirds			large schools of fry
Waterfowl			
Gulls/kittiwakes			
Shorebirds			
Corvids	Raven	1	
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	4 + 1 pup		
Pinnipeds (specify)	Sea lions - 7		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.



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

ER008 A
ADEC Subsegment Length: 2862m
METERS
0 200 400
AK State Plane Zone 4
per008a



Subdivision Field Map
Map Key: PWSE008A
Name: HARPER
Date: 26 MAY 91
Data Entered:

SURFACE OILING SUMMARY MAP

REVIEWED: MC 5188/91
OG 4015

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-08 SUBDIVISION A. DATED 8-1-90.MODIFICATION CLASS I CLASS II ✓ CLASS III

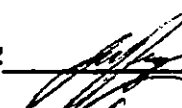
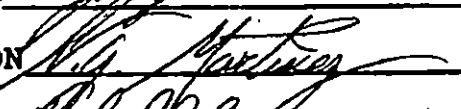
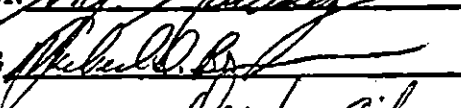
1. REASON FOR MODIFICATION

Asphalt Patches (Friable) starting at E
End of Segment need to be removed.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

Manually Remove Asphalt Patches.
@ Site #1 on Sketch Map.

3. TIMING ISSUES

ADEC EXXON USCG LAND MANAGER 

(If field rep is on scene)

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-08 SUBDIVISION A. DATED 8-1-90.MODIFICATION CLASS I CLASS II ✓ CLASS III

1. REASON FOR MODIFICATION

Asphalt Patches (Friable) starting at E
End of Segment need to be removed.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

Manually Remove Asphalt Patches.
@ Site #1 on Sketch Map.

3. TIMING ISSUES

ADEC EXXON USCG LAND MANAGER Douglas Gibson

(If field rep is on scene)

SEGMENT AS/ ER-Y SUBDIVISION: A SITE: 1 DATE 8/1/90**USCG**NAME Michael D. Brown SIGNATURE Michael D. Brown

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

ADECNAME John Hayer SIGNATURE John Hayer

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

Work order modification sent in ^{for} with this area.

Oiling consisted of 3m band of AP/P/K in UITS needs manual P.U.
 No further treatment recommended for this site beyond work order modification.

LAND MANAGERNAME DOUGLAS GIBSON SIGNATURE Douglas Gibson

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

EXXONNAME Martinez Nul SIGNATURE Martinez Nul

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

To see if any additional asphalt forms.

SEGMENT AS / ER-8 SUBDIVISION: A SITE: 2 DATE 8/1/90**SCG**NAME MICHAEL D. BROWN SIGNATURE Michael D. BrownREASON: ☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991**ADEC**NAME John Hoyer SIGNATURE John HoyerREASON: ☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991

No treatment at this time only remnants of
oiling were CT/S.

LAND MANAGERNAME DOUGLAS GIBSON SIGNATURE Douglas GibsonREASON: ☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991**EXXON**NAME Martinez N.S. SIGNATURE Nicholas G. MartinezREASON: ☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991

SEGMENT AS/ ER-8 SUBDIVISION: A SITE: 3 DATE 8/1/90**USCG**NAME Michael D. Brown SIGNATURE Michael D. Brown☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

ADECNAME John Hayes SIGNATURE John Hayes☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Patches of MS and SOR found here, they have been customblended but should be reassessed for more bio. treatment in 1991. Oil consistency is moderate OR and accumulations are in discontinuous band see sketch map site #3.

LAND MANAGERNAME DOUGLAS GIBSON SIGNATURE Douglas Gibson☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

DON'T HAVE INFORMATION WHEN BIO SQUAD VISITED/TREATED THIS SITE. RECOMMEND FURTHER APPLICATION IN '90 IF TIME ALLOWS. TURN OVER ROCKS AND SPRAY TREATMENT. (EAST END OF SITE 3 ONLY NEEDS TREATMENT)

EXXONNAME Martinez SIGNATURE Martinez☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

SEGMENT AS/ ER-8 SUBDIVISION: A SITE: 4 DATE 8/1/90**USCG**NAME MSgt Michael D. Brown SIGNATURE Michael D. Brown☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:**ADEC**NAME John Hayes SIGNATURE John Hayes☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:

No treatment recommended at this time. Patches remaining are sporadic and well weathered.

LAND MANAGERNAME DOUGLAS GIBSON SIGNATURE Douglas Gibson☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:**EXXON**NAME Martinez M.D. SIGNATURE Martinez M.D.☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:

ASAP SHORELINE OILING SUMMARY

PAGE 1 OF 2

TEAM NO. ONE EXXON MARTINEZ SEGMENT AS/ ER-8
 OG Reimer USGS BROWN SUBDIVISION A
 ADEC HAYES LAND REP GIBSON TOTAL NO. SITES 4
 DATE 8/1/90 TIME 04:10 to 11:55 TIDE LEVEL 6 to 6
 TOTAL EST LENGTH OF SHORELINE SURVEYED: 640 m
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 OIL CATEGORY LENGTH: W 0 m M 0 m N 340 m VL 300 m NO 60 m US 0 m

SURFACE OIL

SITE 1

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT			F			F		
S.O.R.								
POOLED								
COVER								
COAT								
STAIN								
MOUSSE								
PATTIES/T.B.				X		X	X	
FILM								
NO OIL					X			X
EST. SITE LENGTH					200			

SITE 2

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT								
S.O.R.								
POOLED								
COVER								
COAT				X		X	X	
STAIN								
MOUSSE								
PATTIES/T.B.								
FILM								
NO OIL					X			X
EST. SITE LENGTH					60-120			

SITE 3

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT								
S.O.R.				I		I		
POOLED								
COVER			✓	1/4		✓	1/4	
COAT			X			X		
STAIN								
MOUSSE				I		I		
PATTIES/T.B.								
FILM								
NO OIL					X			X
EST. SITE LENGTH					250			

SUBSURFACE OIL

SITE NO.	PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER				OILED INTERVAL (CM-CL)	CLEAN BELOW (Y/N)	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS
			OP	OR	OF	NO			SU	UI	MI	LI	
1	1	20				X	.			X			P-GP
							.						
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Photographs:

Roll No. ASAP-01-01

Frames 18, 19, 20, 21

COMMENTS Site # 1 was previously worked with the removal of Tarmat according to Exxon Rep. The existing tarmat is in and around the trenches on the beach where material was removed. This is a bit of a mystery.

REVISION NO. 7/27/88

SURFACE OIL (CONTINUED)

CHARACTER	SITE				SITE				SITE																
	DISTRIBUTION				OILED ZONES				DISTRIBUTION				OILED ZONES												
	/C	/B	/P	/S	SU	UI	MI	LI	/C	/B	/P	/S	SU	UI	MI	LI	/C	/B	/P	/S	SU	UI	MI	LI	
ASPHALT																									
S.O.R.																									
POOLED																									
COVER																									
COAT																									
STAIN																									
MOUSSE																									
PATTIES/T.B.				X		X	X																		
FILM																									
NO OIL					X			X																	
EST. SITE LENGTH					/ 30																				

SUBSURFACE OIL (CONTINUED)

SITE NO.	PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER				OILED INTERVAL	CLEAN BELOW (Y/N)	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS
			OP	OR	OF	NO			SU	UI	MI	LI	
							.						
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COMMENTS

ER-08

A

PT/S
M-VITZ
AP/P/P
(3m)
YES
SITE #1
Pit #1
18

CT/S 1%
on Boulders
MITZ-VITZ

SITE #2
NO

PT/S
VITZ

SITE #3
yes

SITE 4
NO

ALDERS

Slide
C/P/C

Rock

ALDERS

Rock

BOULDERS

Fucus

Fucus

CT/P
CV/P/K
SOR/S/I

CV/P
MS/S/I

CV/S
MS/S/I
on Bldgs,
rock

XXXX
////

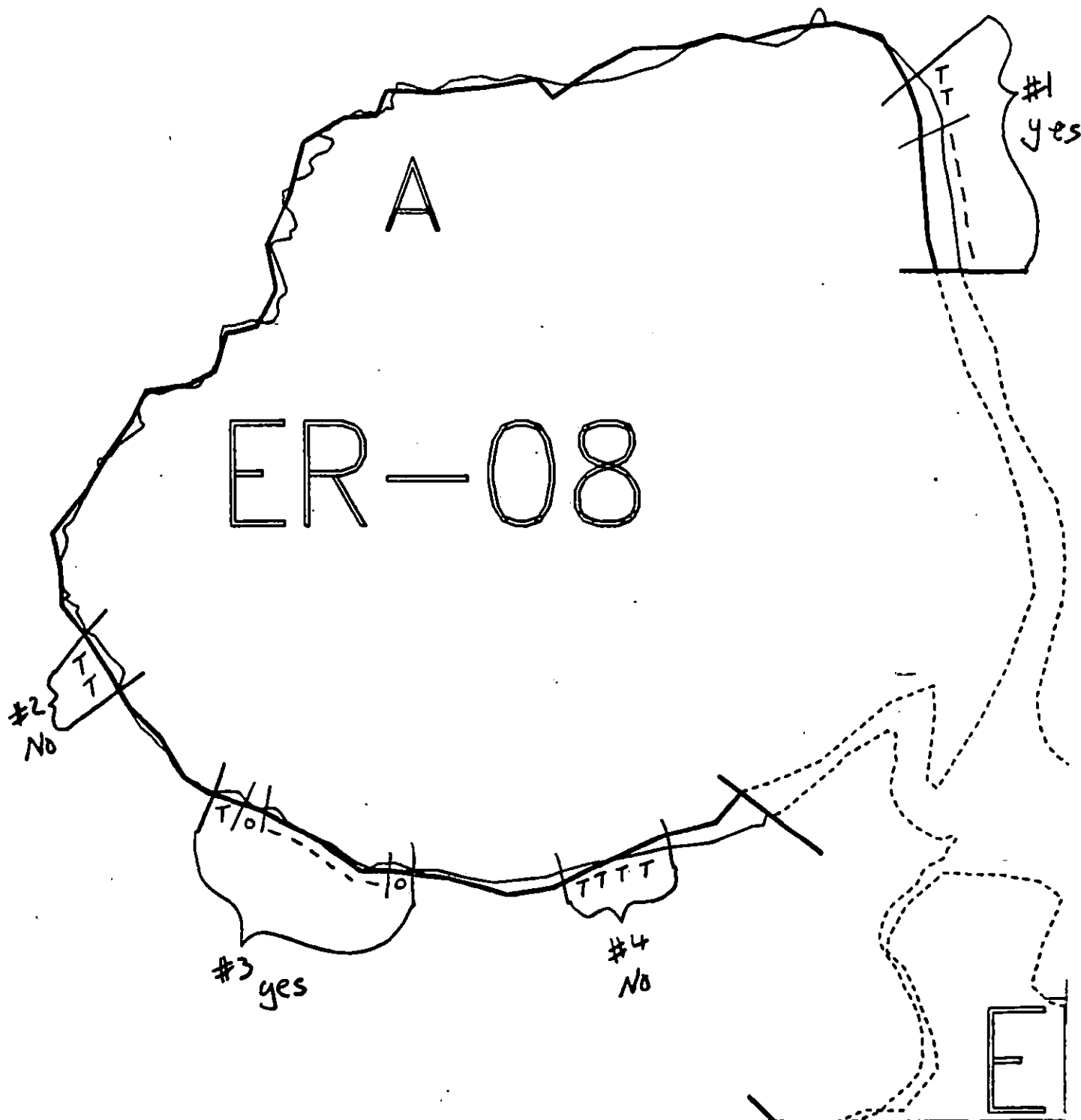
TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

ER-8 A
ADEC Subsegment Length: 2862m
METERS
0 185 370
AK State Plane Zone 4 1:7282
per-8a



Subdivision Field Map
Map Key: PWSE-8A
Name: Reimer
Date: 8/1/90
Date Entered:



XXXX
 /////

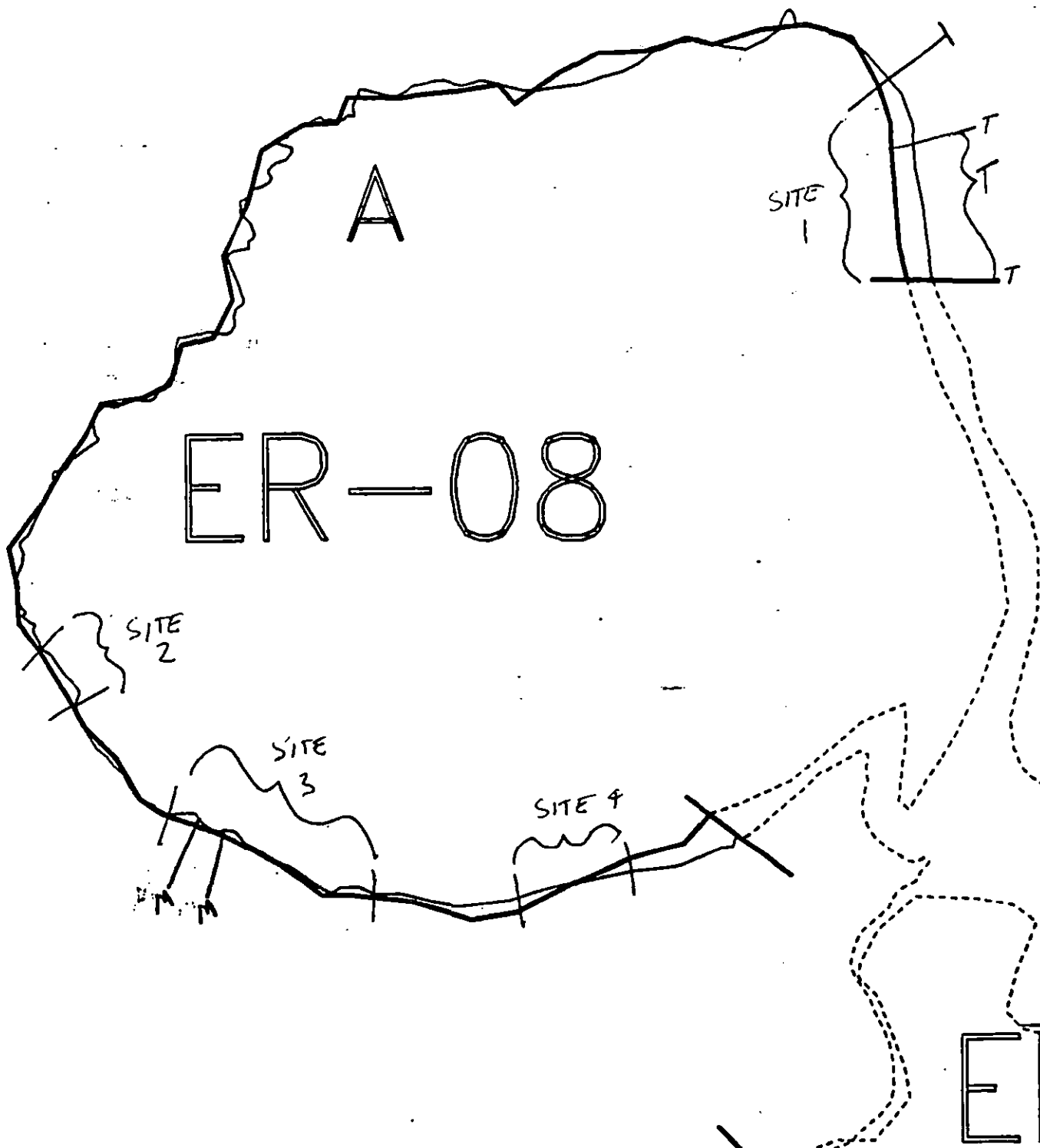
 TTTT
 0000

Wide
 Medium
 Narrow
 Very Light
 No Oil

ER-8 A
 ADEC Subsegment Length: 2862m
 METERS
 0 186 370
 AK State Plane Zone 4 1:7282
 per-8a



Subdivision Field Map
 Map Key: PWSE-8A
 Name: Reimer
 Date: 8/1/90
 Date Entered:



XXXX
 ////

 TTTT
 0000

Wide
 Medium
 Narrow
 Very Light
 No Oil

ER-8 A
 ADEC Subsegment Length: 2862m
 METERS
 0 186 370
 AR State Plane Zone 4 1:7282
 per-8a



Subdivision Field Map
 Map Key: PWSE-8A
 Name: Reimer
 Date: 8/1/90
 Date Entered:

GENERAL DATA

SEG ID: ED-8 SBDV: A SITE: 1 TEAM: 1 DATE: 8/1/90
SITE LGTH 200 OIL CATEGORIES: W 0 M 0 N 340 VL 300 NO 60 U 0
1991 REASSESSMENT: USCG: N ADEC: Y LDMGR: N EXXON: N 2162 f.w.

SURFACE DATA

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

CHAR #: 2 OIL CHAR: T.B OIL DIST: CONT BRKN PTCH SPLH X
TIDAL ZONE: SU UI X MI X LI

CHAR #: 3 OIL CHAR: NO OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU X UI MI LI X

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

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

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

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

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

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

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

ASAP DATA ENTRY FORM

SUBSURFACE DATA

PAGE 5 OF 5SEGMENT ID: ER-8 SUBDIV: A SITE: 1PIT # 1 PIT DEPTH 20 OIL CHARACTER NO OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI X MI LI SUBSURF SEDIMENT: BRK BLD COB PEB X GRN X SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GR SA MUD VEG

GENERAL DATA

SEG ID: E2-8 SBDV: A SITE: 2 TEAM: 1 DATE: 8/1/90
f.w. SITE LGTH 60¹²⁰ OIL CATEGORIES: W 0 M 0 N 346 VL 300 NO 60 U 0
1991 REASSESSMENT: USCG: N ADEC: / LDMGR: / EXXON: / 2162 f.w.

SURFACE DATA

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

CHAR #: 2 OIL CHAR: NO OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU X UI MI LI X

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

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

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

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

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

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

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

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

GENERAL DATA

SEG ID: ETZ-8 SBDV: A SITE: 3 TEAM: 1 DATE: 8/1/90
SITE LGTH 250 OIL CATEGORIES: W 0 M 0 N 340 VL 300 NO 60 U 0
1991 REASSESSMENT: USCG: N ADEC: y LDMGR: y EXXON: ✓

SURFACE DATA

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

CHAR #: 2 OIL CHAR: CY OIL DIST: CONT BRKN PTCH ✓ SPLH 8/6
TIDAL ZONE: SU UI 8/6 MI LI

CHAR #: 3 OIL CHAR: CT OIL DIST: CONT BRKN PTCH X SPLH
TIDAL ZONE: SU UI X MI LI

CHAR #: 4 OIL CHAR: MS OIL DIST: CONT BRKN PTCH SPLH I
TIDAL ZONE: SU UI I MI LI

CHAR #: 5 OIL CHAR: NO OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU X UI MI LI X

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

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

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

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

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

GENERAL DATA

SEG ID: ER-Y SBOV: A SITE: 4 TEAM: 1 DATE: 8/1/90
SITE LGTH 130 OIL CATEGORIES: W 0 M 0 N 340 VL 300 NO 60 U 0
1991 REASSESSMENT: USCG: N ADEC: N LDMGR: N EXXON: N

SURFACE DATA

CHAR #: 1 OIL CHAR: P.T.^{TS} OIL DIST: CONT BRKN PTCH SPLH X
TIDAL ZONE: SU UI X MI X LI

CHAR #: 2 OIL CHAR: N.O. OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU X UI MI LI X

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

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

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

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

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

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

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

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

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1F Sawmill Bay Hatchery release (4/15 to 6/1)
6U Recreation: Tent sites (6/1 to 9/15)
7II Deer harvesting (8/15 to 2/28)

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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. Horman DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 523 m: V.Light 1026 m: No Oil 1313 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: The recommended treatment activities are as follows: 1) Manual ~~break-up~~ and removal of tarmats, 2) Bioremediation of areas shown on attached sketch map. Work after 6/1 based on above hatchery constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90
ADEC JOHN BAUER
EXXON ANDY TEAR
NOAA Burt Wescott
USCG KENNETH KEANE

FOSC: DATE: 4-22-90

OG Richard Marty
SEGMENT ST/ER-08

SUBMISSION A

DATE 14 April 90

CHECKLIST

N Arrow
Approx. Scale
Sag/Sub Body
Oil Dri
Width
Length
% Cover
Substrate Character
Eel H/W/L/A/W
SSL
Profile Location(s)
Profile(s)
Photo Location(s)
Photo Location(s)

LEGEND

1 A

Pr - No Substrate OS

2 A

Pr - Substrate OS

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

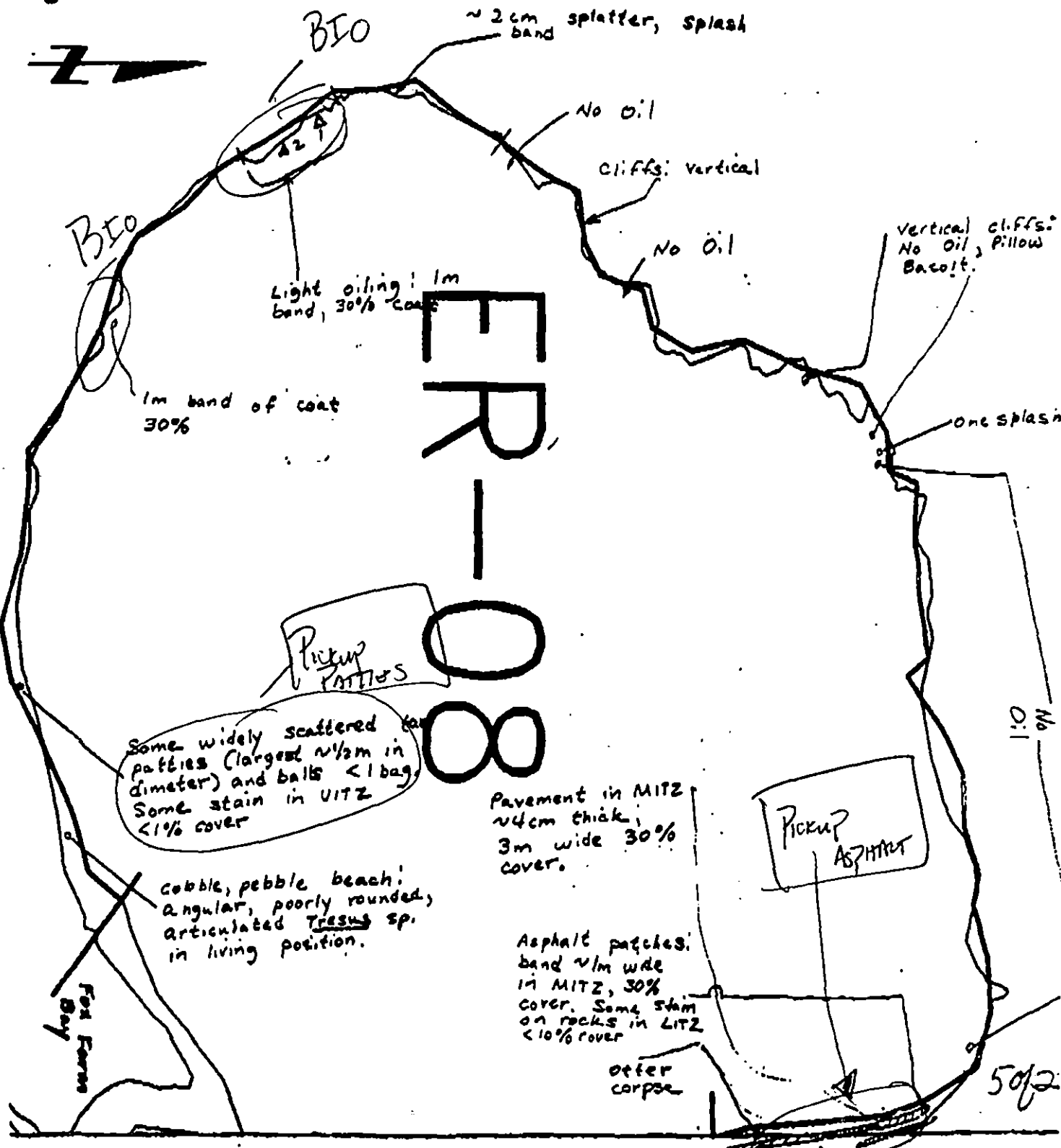
Spaced Distribution

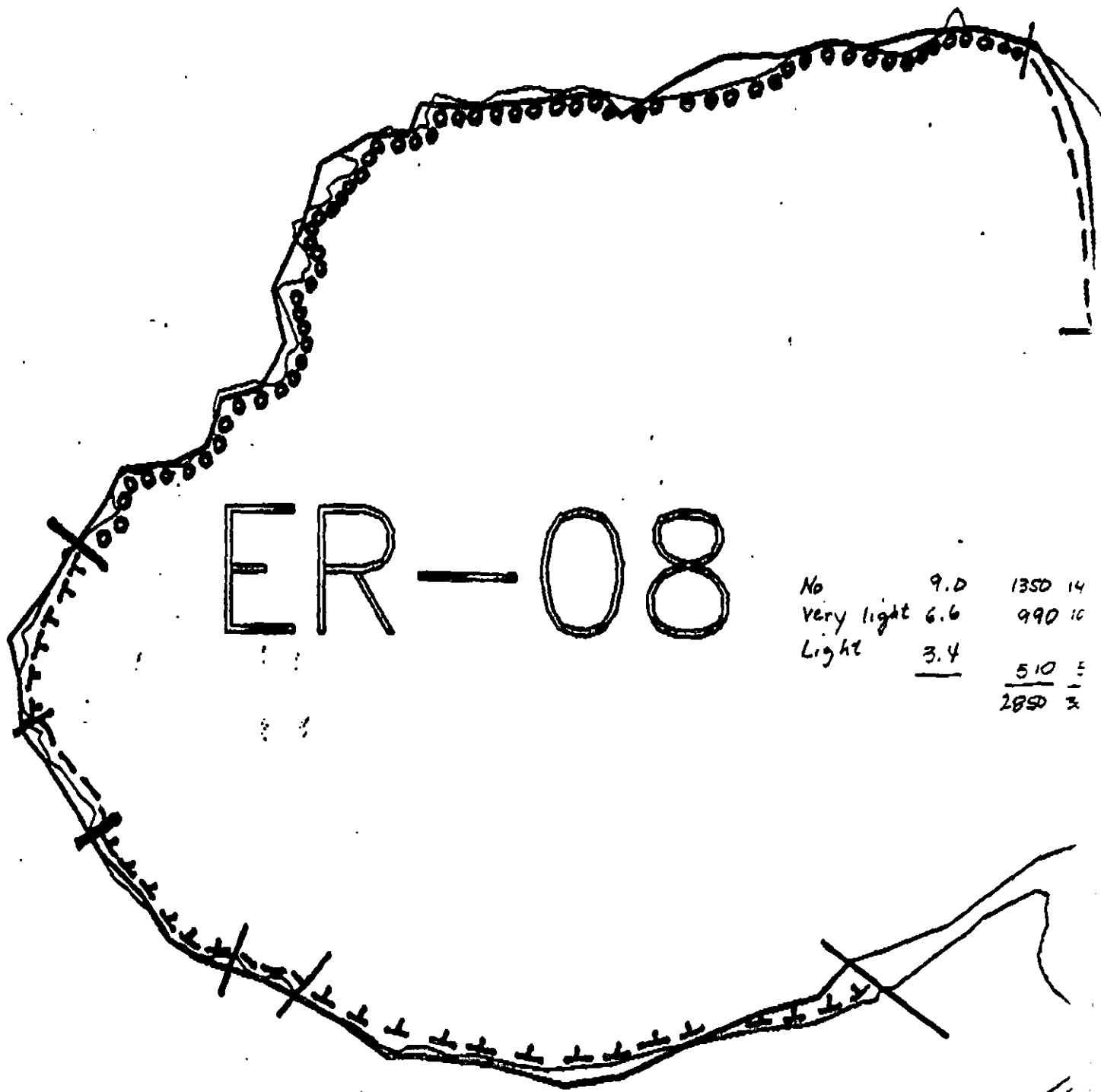
Other Vegetation

Photo location, direction,
and number



On Character: (m): AP 370 PO CV 370 CT ST MS CT TB 1067 FL NO 1455





No	9.0	1350	14
Very light	6.6	990	10
Light	<u>3.4</u>	<u>510</u>	<u>5</u>
		2850	3

40/22

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-8

ADEC Segment Length: 2862m



Map Key: PWS-174a

Name: Richard Marty

Date: 04/04/90

Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-08

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1F Sawmill Bay Hatchery release (4/15 to 6/1)
6U Recreation: Tent sites (6/1 to 9/15)
7II Deer harvesting (8/15 to 2/28)

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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 523 m: V.Light 1026 m: No Oil 1313 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: The recommended treatment activities are as follows: 1) Manual break-up and removal of tarmats, 2) Bioremediation of areas shown on attached sketch map. Work after 6/1 based on above hatchery constraints.

TAG COMMENTS:

TAG APPROVAL DATE: _____

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/ ER-8 SUBDIVISION: A DATE 04 APRIL 90

USCG

NAME LARRY FLETCHER SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

1. REMOVE ASPHALT AND TAR PATCHES MANUALLY.
2. BIO-REMEDIATE.

ADEC

NAME DAVID M. SALE SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

- ① REMOVE ASPHALT AND TAR PATCHES MANUALLY
MOVE ROCKS WHERE NECESSARY TO GET OUT OF ASPHALT
- ② BIOREMEDIATION

LAND MANAGER

NAME Leigh Carlson SIGNATURE [Signature] ADNR

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Listed as priority 1,3 by PWS CA. Listed in PWS area plan as public use area for anchorage, recreation and subsistence uses. Recommend manual removal followed by bioremediation.

2 of 22

SHORELINE OILING SUMMARY

REVISION NO. 03/22/89

OG R. Marty USCG LARRY FLETCHER SEGMENT ST/ ER-08
 BIO B. Lumber LAND REP Larry Carlson SUBDIVISION A
 EXXON J. Czarnski ADEC Dave Sales TIME 13:19 to 15:15
 TEAM NO.: 10 TIDE LEVEL: +1.8m (6') to +10.6m (1.8') DATE 04/04/90
 EST. SUBDIVISION LENGTH: 3072 m ☐ Sun ☒ Clouds ☒ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: _____ to clockwise
 SURFACE SEDIMENTS: R 40 % B 40 % C 20 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long _____ % Hang _____ % Vert _____ % WAVE EXPOSURE: ☒ Low ☒ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 550 m VL 1067 m NO 1455 m

SURFACE OIL

229x1x.30 + 75x1x0.1 =

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	C	B	P	R	SP	OR	OL	OP	NO	UP	SU	U	M	U
ASPHALT PAVEMENT			X						X				X	X
POOLED														
COVER														
COAT			X	✓				X				X	✓	
STAIN				X				X				X		
MOUSSE														
PATTIES														
TARBALLS														
FILM														
NO OIL											X			

PAVEMENT: H F (S) 75 sq. m by 3 cmPATTIES / TARBALLS 1 BAGS

NEAR SHORE SHEEN? NO BR RW (SL) TL

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

DEBRIS COLLECTED
☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. ST 10/3Frames 14-19

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-in) (0-10)	BELOW	OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		SP. OF	OR	OL	OP	NO			UP	U	M	U	SP	OR	OL	OP	NO	SU	U	M		
1	5					X	.		X								X				N	P, G
2	10		X				0 - 1		X					X			X					P, G.
							.															
							.															
							.															
							.															
							.															

COMMENTS Segment consists mainly of high angle cliffs.

Pavement is concentrated near junction with ER-07.

* oiled interval < 5 cm does not constitute subsurface oil.

Revision

RM 4/4/90

3 of 22

REVIEWED WDATE 4/9/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST/10/ER8 Subdivision ft Date (mo / day / yr) 4/4/90
 Time (24 hr) (1230 - 1500) Biologist Lemon Rain, wind 12 mph, waves 1/3 mile - 4°C

- (A) Substrate type and % of segments:
 (1) Bedrock 40 (2) Boulder 40 (3) Cobble 20 (4) Pebble (5) Sand (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 70% Moderate Low
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
 Roll No. ST/10/7
 Frames 14-19

BARNACLES

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

MYTILUS

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

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: Greatest total coverage on bedrock was through the mid zone. Reds and Alaria and Katharina and Halosaccus all moderate in low zone. Endocladia in high zone. Leptasterias hexactis in mid. Littorina seen laying eggs.

Ecological Considerations: Beds of Tresus (bivalve) have apparently been uplifted and now died in the zones we see today; deeper water may hold many more; important for subsistence and recreation. Odocoileus hemionus (deer), Mustella vison (mink) and bald eagle were sighted. A dead Enhydra lutra (sea otter) was found unfiled, only skin and bones remaining. Tent sites, deer harvest

OG Richard Marty

SEGMENT SITE/ER-08

SUBDIVISION A

DATE 1 April 90

CHECKLIST

N Area
Approx. Scale
Seagull Birdy
Oil Dst.
Width
Length
% Cover
Substrate Character
Est. HMA/ML
SSL
Profile Location(s)
Profile(s)
PI Location(s)
Photo Location(s)

LEGEND

1 A

PI - No Subsurface Oil

2 A

PI - Subsurface Oil

CT/C

Continuous Disturbance

CT/B

Broken Disturbance

CT/P

Partial Disturbance

CT/S

Spashed Disturbance

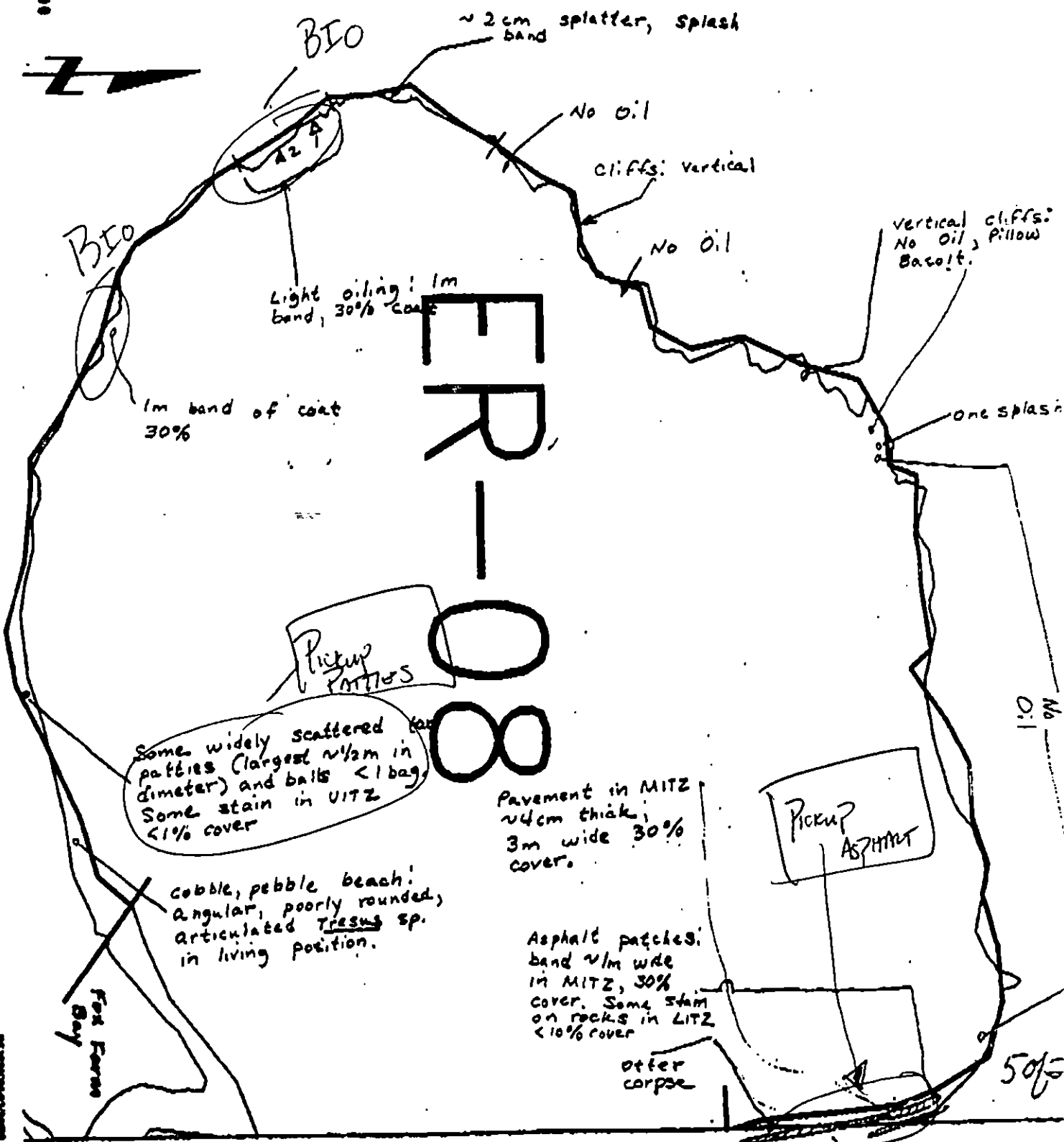
Dead Vegetation

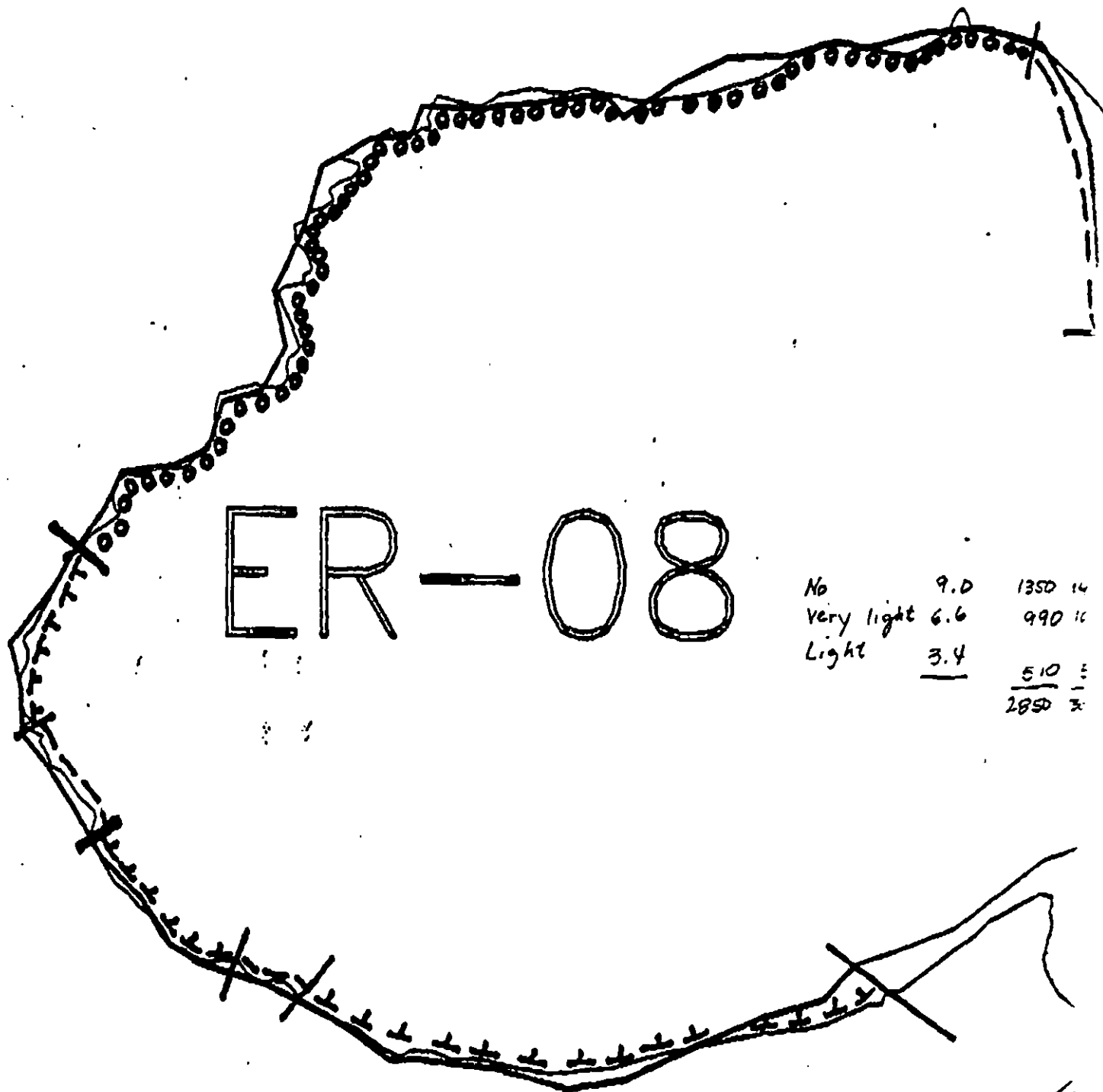
1 A

Photo location, direction,
and number

METERS
100 200 300

OG Character (m): AP 200 PO CV 300 CT ST NS PT TB 1067 FL NO 1455





ER-08

No	9.0	1350	14
Very light	6.6	990	16
Light	3.4	510	3
		2850	3

40/22

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-8

ADEC Segment Length: 2852m



Map Key: PWS-174a

Name: Richard Marty

Date: 04/04/90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-8 SUBDIVISION A (1 of 1)

WORK WINDOW	
Tarmat Removal Manual Pickup	OPEN
Bioremediation	WORK 6/1 to 7/20

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1F	Sawmill Bay Hatchery Release	Subdivision is closed to bioremediation prior to 6/1. No constraint to manual pickup or tarmat removal.
1K	Purse Seine Hook-off	Subdivision is closed to bioremediation after 7/20. No constraint to manual pickup or tarmat removal.
7II	Subsistence: Deer Harvesting	Subdivision is closed to bioremediation after 8/15. No constraint to manual pickup or tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/20. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

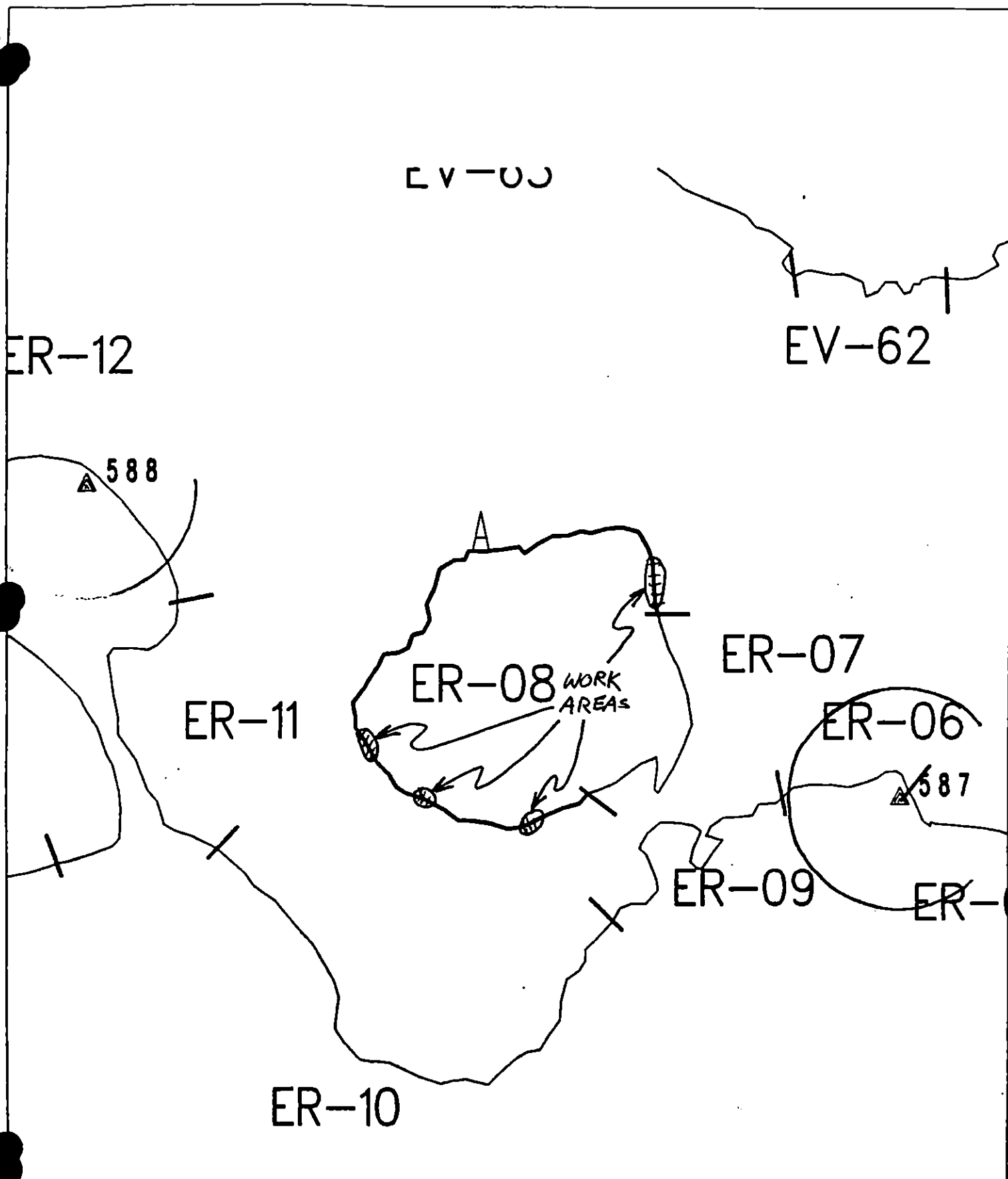
TAG ADDENDUM DATE 5/18/90
ADEC Art Weiner
EXXON Art Weiner
NOAA Joseph T. Bland
USCG G.A. Reiter

FOSC

DATE 5-18-90

Prepared by:

Date: 5/18/90



Exxon Company, USA



ECOLOGY MAP
SEGMENT ER-8
SUBDIVISION A (1 of 1)
METROS

- | | |
|---|----------------|
| ★ | Seabird Colony |
| ▲ | Eagle Nest |

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1F Sawmill Bay Hatchery release (4/15 to 6/1)
6U Recreation: Tent sites (6/1 to 9/15)
7II Deer harvesting (8/15 to 2/28)

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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. H. H. H. DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 523 m: V. Light 1026 m: No Oil 1313 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: The recommended treatment activities are as follows: 1) Manual ~~break up~~ and removal of tarmats, 2) Bioremediation of areas shown on attached sketch map. Work after 6/1 based on above hatchery constraints.

→ See Addendum
Dated 5/17/90
WPK

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90
ADEC JOHN BAUER
EXXON ANDY TEE
NOAA Bruce Weratt
USCG KENNETH KLANE

FOSC: DATE: 4-22-90

1991 MAYSAP EVALUATION

SEGMENT: ER 008 SUB: A REGION: PWS SURVEY DATE: 5/26/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest,
Fry release, Fish harvest area, Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:

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

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

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

2

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Custombien

Other

Other

COMMENTS:

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.

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.

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 3 SEGMENT ER-08 SUBDIVISION A DATE 5/26/91

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☐ NTR ☐ TREATMENT RECOMMENDED

Due to time limits I did not partake in this survey, but according to survey members remaining oil was broken up or removed.

EXXON

NAME REY SOTELO SIGNATURE Rey Sotelo

☒ NTR

No recoverable oil remains in this segment. Segment looks good throughout with very healthy dense biota.

LANDMANAGER

NAME DAVE BLANCHET OF USFS SIGNATURE J. David Blanchet

☒ NTR Low To Moderate Energy Environment, All Beaches ^{Medium To} High Angle, Angular. Boulder/Cobble Shoreline. Southeast portion of segment is within a protected bay and has numerous (approx. 100) tarballs and/or patties. All S.O.R found was broken up - likely not all was found, but the majority was. No good candidate areas this shoreline segment, and limited general recreation potential.

USCG/NOAA

NAME DAHLIN/MOORE SIGNATURE Timothy Moore

☒ NTR Comprised of Breckinridge cliff with a few pocket sediment beaches of: Boulder, Rubble, Gravel. Northern portion comprised of Boulder, Rubble, Gravel, Pebble, Sand. All walkable areas walked. Removed SOR and fill area. "No subsurface oil or further treatment required"

PAGE 1 OF 2

DATE 26 / MAY / 91

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 3 m NO 2859 m US 0 m

NONE

PHOTO ROLL # MAYSAP-

FRAMES

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

OG COMMENTS: This shoreline is located on a small island (Fox Farm Island) at the south end of Edrington Is. Substrate is predominantly bedrock. Wave exposure is mostly low except for the northwestern corner which receives refracted swell through Edrington Passage. On the southern portion of the island isolated, dry, friable mussel patches were present at about 5m intervals. These patches were broken-up during the survey.

revised 5/28/91 KG. OG 1 of 5

TEAM NO. 3

PAGE 2 OF 2

SEGMENT ER-05

SUBDIVISION A

DATE 26 May 191

[illegible]**OG COMMENTS:**

Another short stretch of SOR/14, comprised of about 12 patches, was broken up at the eastern-end of the segment. The lee-side of one boulder/outcrop had a 0.5×3 m dripline.

No subsurface oil was noted - substrate on the western part of the island was either large boulders/rubble or bedrock, preventing penetration. The eastern beach area was comprised of a fine weathered shale and appeared to limit penetration of the mousse to less than 3 cm. Informal pits in this area, dug while treating the potties, revealed no subsurface oil.

reviewed 5/28/91 KG

REVIEWERS: MC 5/28/91

OG 2 of 5

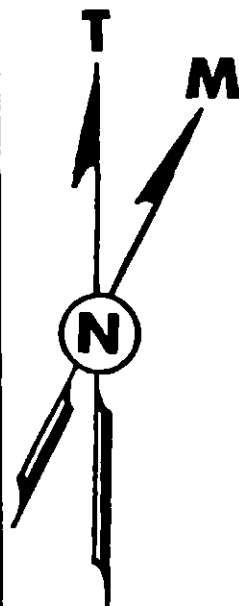
MAY 1991
OG SKETCH MAP JOHN HARPER

TEAM 5

SEGMENT: EP 8 A

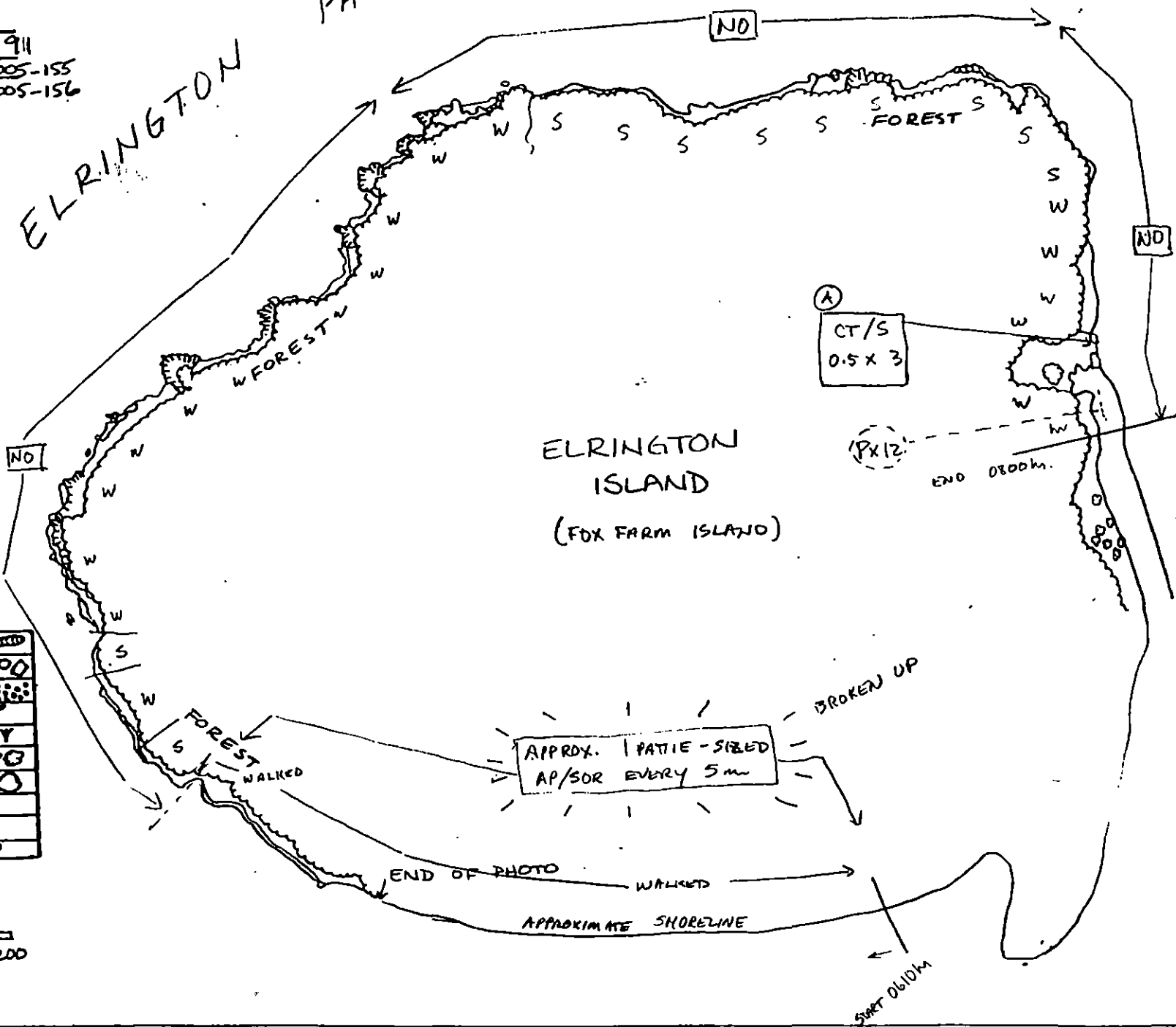
DATE: 26 MAY 91

AIR P.#: AM-C 005-155
PM-L 005-156



ELRINGTON

PASSAGE

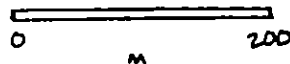


LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SKIFF SURVEY
WALK SURVEY

SCALE

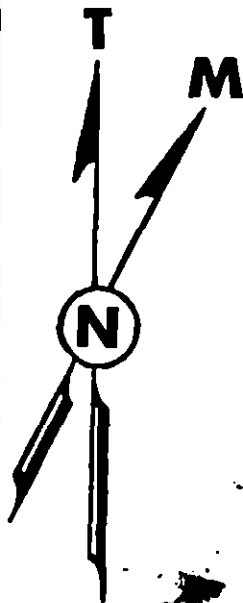


REVISED FIELD SKETCH

OG 3015
revised 3/2/91

MAYSAP 1991
 OG SKETCH MAP
 GREG CHANEY / DON CLINE
 TEAM 5

SEGMENT: EP 8 A
 DATE: _____
 AIR P.#: PIM-C 005-155
PIM-C 005-156



ELRINGTON

PASSAGE

ELRINGTON ISLAND

FOREST

CT
0.5x3/5

AVALANCHES
CHUTE

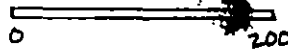
(P12)

0800 hr

LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE



1 patches away 5m - broken up

END OF PHOTO

ORIGINAL FIELD NOTES

OG 545

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3 DATE 5/26/91
 SEGMENT # ERO8 TIDAL HEIGHT (Range) 0 to -2'
 SUBDIVISION A BIOLOGIST STAKOR
 SEA STATE Calm WIND SPEED/DIRECTION Calm
 PHOTOGRAPHS: ROLL # FRAME #

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

Segment includes most of an Island/Barren. Shoreline consists of generally low energy mixed substrate beaches composed of varying ratios of sand/gravel/pobble/cobble or pebble/cobble/boulder, with bedrock exposures and headlands.

Biota on bedrock consists primarily of dense Fucaea, Ulva, Rhodospira, Alaria, Sargassum, Laminaria, Hedophyllum and various filamentous algae. Fauna includes dense barnacles, patchy limpets and Littorina, patchy Nucella, and starfish (Dermapterias, Eristaria, Pisaster).

Biota on beaches varies somewhat depending on substrate composition, but is characterized overall by relatively dense Fucaea, Ulva and filamentous algae, moderately dense to dense barnacles and spat, limpets and Littorina (often with egg masses), generally sparse and patchy attached and interbedded small Mytilus, Pagurus (dense clusters of small individuals), patchily dense small nudibranchs (Lamellidorsae), Nucella, Scudicaria, Nereid worms, Saccidomus, Pyrosopodia, Dermapterias and small Leptasterias.

No recoverable or treatable oil remains on this segment. Biota overall is very diverse and abundant, with evidence of vigorous new growth and recruitment.

WILDLIFE OBSERVATIONS

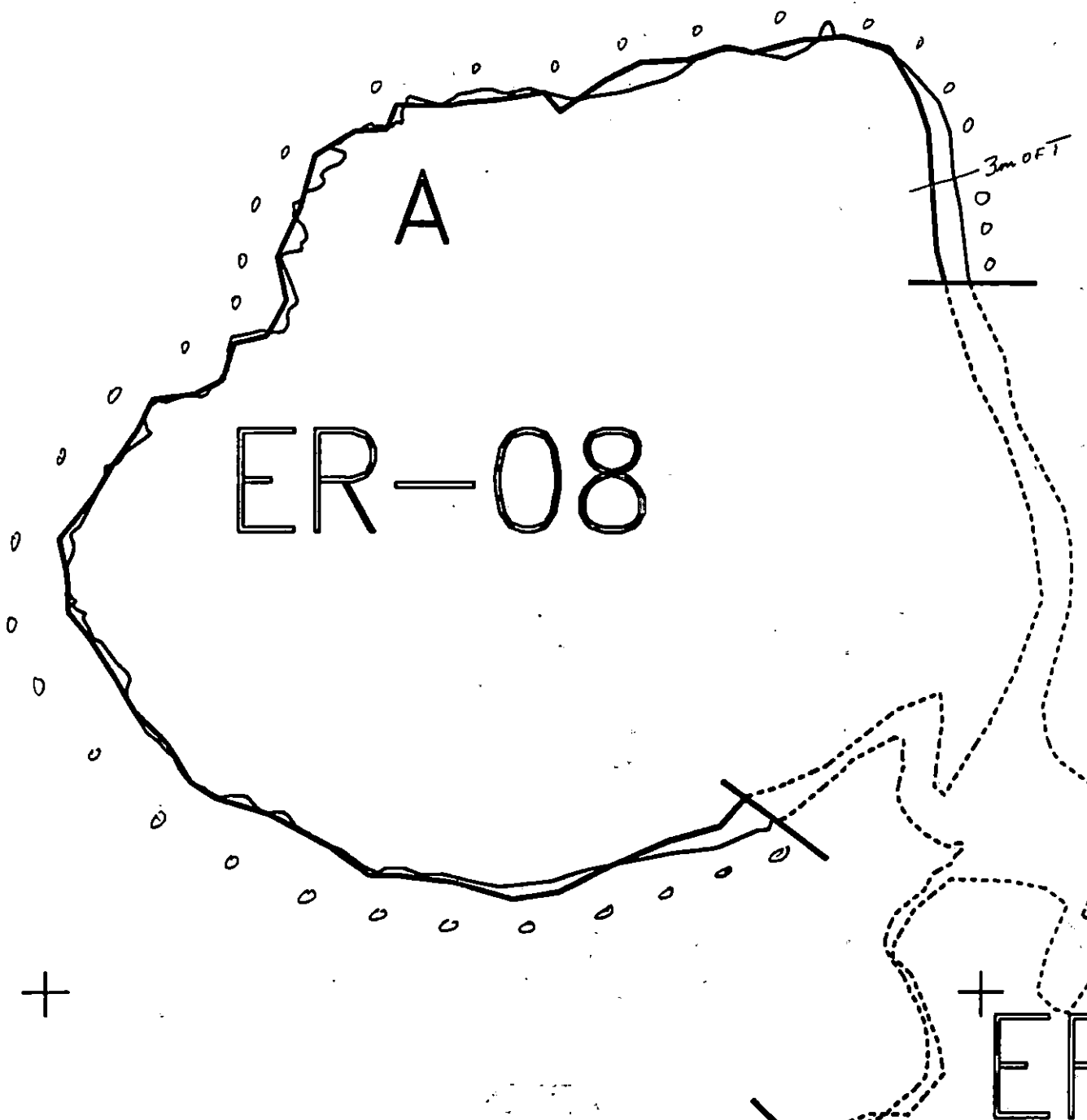
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	Col blonnet
Seabirds			Perse schools at fry
Waterfowl			
Gulls/Kittiwakes			
Shorebirds			
Corvids	Raven	1	
Other Birds			

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters	4 + 1 pup		
Pinnipeds (specify)	Sea lions - 7		
Bales (specify)			

Shoreline subdivision map showing important biological features attached.



XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

ER008 A
ADEC Subsegment Length: 2862m
METERS
0 200 400
AK State Plane Zone 4
per008a



Subdivision Field Map
Map Key: PWSE008A
Name: HARPER
Date: 26 MAY 91
Date Entered:

SURFACE OILING SUMMARY MAP
Reviewed: 5/28/91
Reviewed: 5/28/91 KLG

ARLIS

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