

OIL SPILL PUBLIC INFO. CENTER



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EVOS
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S42
1991
v.38

[Shoreline evaluations, 1991].

Prince William Sound EV-18 to EV-39

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REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-18

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ EV-18 SUBDIVISION A (1 OF 1) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 270 m: V.Light 270 m: No Oil 0 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 30 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes bioremediation of area of subsurface and surface oil as shown on sketch map. Work should be conducted after 6/1 based on above 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 Harbor seal and sea lion pupping (5/15 to 7/1)

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

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

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

ADF&G Don Calkins 267-2403

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Roth 267-2206

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

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

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

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

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

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

6Y Special use destination

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

7HH Finfish harvesting

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/ EV 18 SUBDIVISION: A (101) DATE 4-20-90

NDAA

NAME

Michael Buchman SIGNATURE M Buchman☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS NORTHERN END IS A raised shelf/platform outcropping with a Boulder/cobble beach behind. This beach had a coat on surface rocks, with a cover on the underside. One of small (~1/4 m²) patch of asphalt was observed here. Center of segment is a beach of dimen-plate sized shale/sls rocks with slivered shale/slate pebbles underneath, and a 1/2 rock outcrop on the northern end of the beach. An oiled log was seen north of the outer. Pits in the winter storm berm south of the outcrop suggest a continuous layer of subsurface oil thru out the beach. A 15 m band of surface stain, with coat on underside of rocks, diminishes in intensity to the south. Southern end is a rock wall with some 1/2 boulders essentially below the focus zone. Light splattering was observed here. Rainbow sheens were observed on tide pools near the northern rock platform.

ADEC

NAME

John Hayes SIGNATURE John Hayes☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Middle of segment has two areas with surface + subsurface oiling.

Extent of oiling is U.I.T. + not a good candidate for Bio. Bedrock below + adjacent of the cobble + gravel + no water flush for H₂O. /Recommend./

① Map up of any recoverable oil

② Monitor for sheens

LAND MANAGER

NAME

Steve WARD - Chenega Corp. SIGNATURE Steve WARD☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

clean way loose oil that can be reached

monitor for sheens.

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

OG MIKE FOLET NOAA Michael Buckman SEGMENT ST/ EV-18
 BIO KATHLEEN GONIA LAND REP STEVE WOOD SUBDIVISION A (1 OF 1)
 XON CARRY OLSON ADEC John Hayes TIME 13:30 to 14:45
 TEAM NO. 11 TIDE LEVEL +5.1 DATE 4/20/90
 EST. SUBDIVISION LENGTH: 529 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Rocky backshore
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 40 % B 20 % C 20 % P 20 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 50 % Hang 10 % Vert 40 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 240 m VL 289 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	10	15	10	5	10	15	10	5	10	15	10	5	SU	UI	M	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT			X			X							X			
STAIN			X	X		X							X	X		
MOUSSE																
PATTIES																
TARBALLS																
FILM			X			X							X	X		
NO OIL													X			X

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs		X	
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE Stained Logs#BAGS 0

Photographs:

Roll No. _____

Frames _____

SUBSURFACE OIL * OILED INTERVAL < 5 CM IN PITS 1 AND 2 DOES NOT CONSTITUTE SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	10	15	10	5	10	15	10	5	SU	UI	M	U				
* 1	15				X		0-10	X					X					X					Y	10	G, C
* 2	4		X				0-4	X	✓				X					X					Y	2	G, R
3	4		X				0-4	X	✓				X					X					Y	2	C, R
4	10					X	.	X										X					N	-	P, G, R.
5	30		X				20-25	X					X					X					N	-	G, C, G, C
6	30		X				15-30	X										X					N	-	P, C

COMMENTS

The Northern end of the segment contains low angle Rock outcrop w/ a 1m x 150m CT/s along the HITZ. The middle of the segment contains a long O/C Beach w/ a 15m x 230m CT/P (20% coverage) coat/stain in the HITZ and MITZ. In the HITZ is a 2m x 150m subsurface OR oiling about 20 cm below surface. The southern end of the segment contains 3 large rock outcrops w/ 2 cobble/boulder pocket. Reviewed JW DATE 4-23-90
 Reaching Island this zone is a 1m x 175m ST/s in the HITZ.

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 04/13/90

SEGMENT ST/ EV-18 SUBDIVISION A (1 OF 1)

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR							PIT ZONE				A N A	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS	
		OP	OR	OL	OF	NO		VO	UC	SL BR	OR TH	GL EL	BB TL	AB BR	SU	U	M	U							
7	30		X		✓		15-20			✓			X		X							Y	25		C, P, C
8	25					X	.									X					N	-			C, G, R
9	30					X	.									X					N	-			C, P, R
10	25		X				10-15						X		X						N	-			C, P, C
11	20		X				5-20						X		X						N	-			C, P, R
12	25					X	.									X					N	-			C, P, C
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COMMENTS

REVIEWED JW DATE 4-23-90

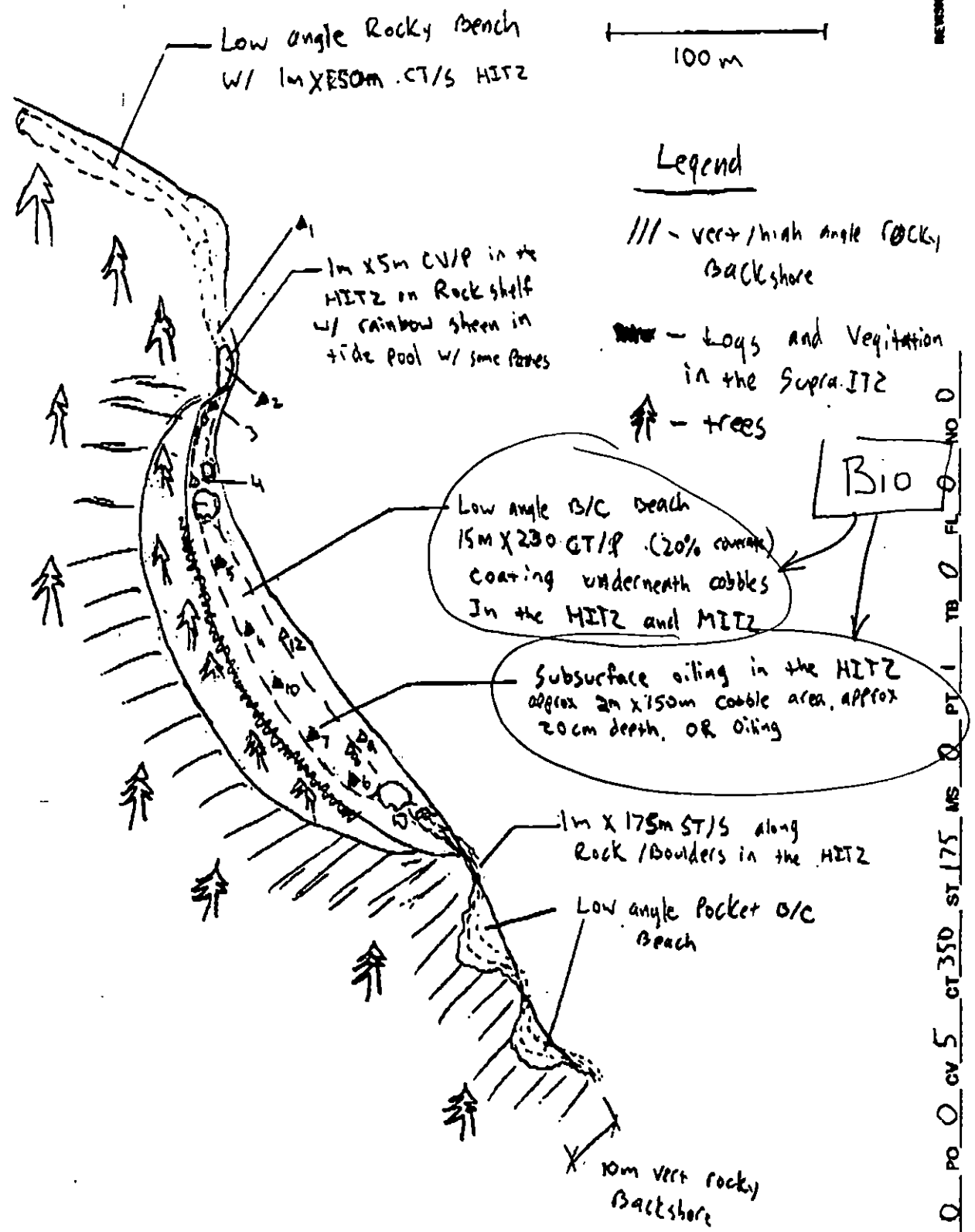
OG Mike Forget
 SEGMENT EV-18
 SUBDIVISION A
 DATE 4/20/90

CHECKLIST
 N Arrow
 Approx. Scale
 Sup/Sub Beddy
 Oil Dis.
 Width
 Length
 % Cover
 Substrate Character
 Est. HMR/LWR
 SSL
 Profile Location(s)
 Profile(s)
 PI Location(s)
 Photo Location(s)

LEGEND

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

SKETCH MAP



21/01

Oil Character Length (m): AP 0 PO 0 CV 5 CT 350 ST 175 MS 0 PT 1 TB 0 FL 0 NO 0

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/11-3 Subdivision A (1 OF 1) Date (mo / day / yr) 4 / 20 / 90
 Time (24 hr) 1328-1930 Biologist KATHLEEN CONLAN

- (A) Substrate type and % of segments:
 (1) Bedrock 40 (2) Boulder 20 (3) Cobble 20 (4) Pebble 20 (5) Sand 0 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 20 Moderate 80 Low 20
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (O)

Photographs:
 Roll No. ST 11-3

Frames 3, 4

BARNACLES

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

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	X	2	2	2	2	2
3	3	3	3	3	3	3	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

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	X	2	2	2	2	2
3	3	3	3	3	3	3	3	3	X	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

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

NOT PRESENT

Wildlife Observations/ General Comments:

OLIGOCHAETES, AMPHIPODS IN COBBLE, GASTROPOD EGGS

Ecological Considerations:

ECOLOGY MAP (1 OF 1)

RESOURCE CODES FOR ENTIRE SEGMENT:

ST-1

III

1 BALD EAGLE NEST $\leq$ 400m OF SEGMENT
AS SHOWN.

EV-1

BALD EAGLE NEST

STII-3

#3

#4

EV-18

EV-1

XXXX Wide

//// Medium

-- Narrow

TTTT Very Light

0000 No Oil

EV-18

ADEC Segment Length: 533m

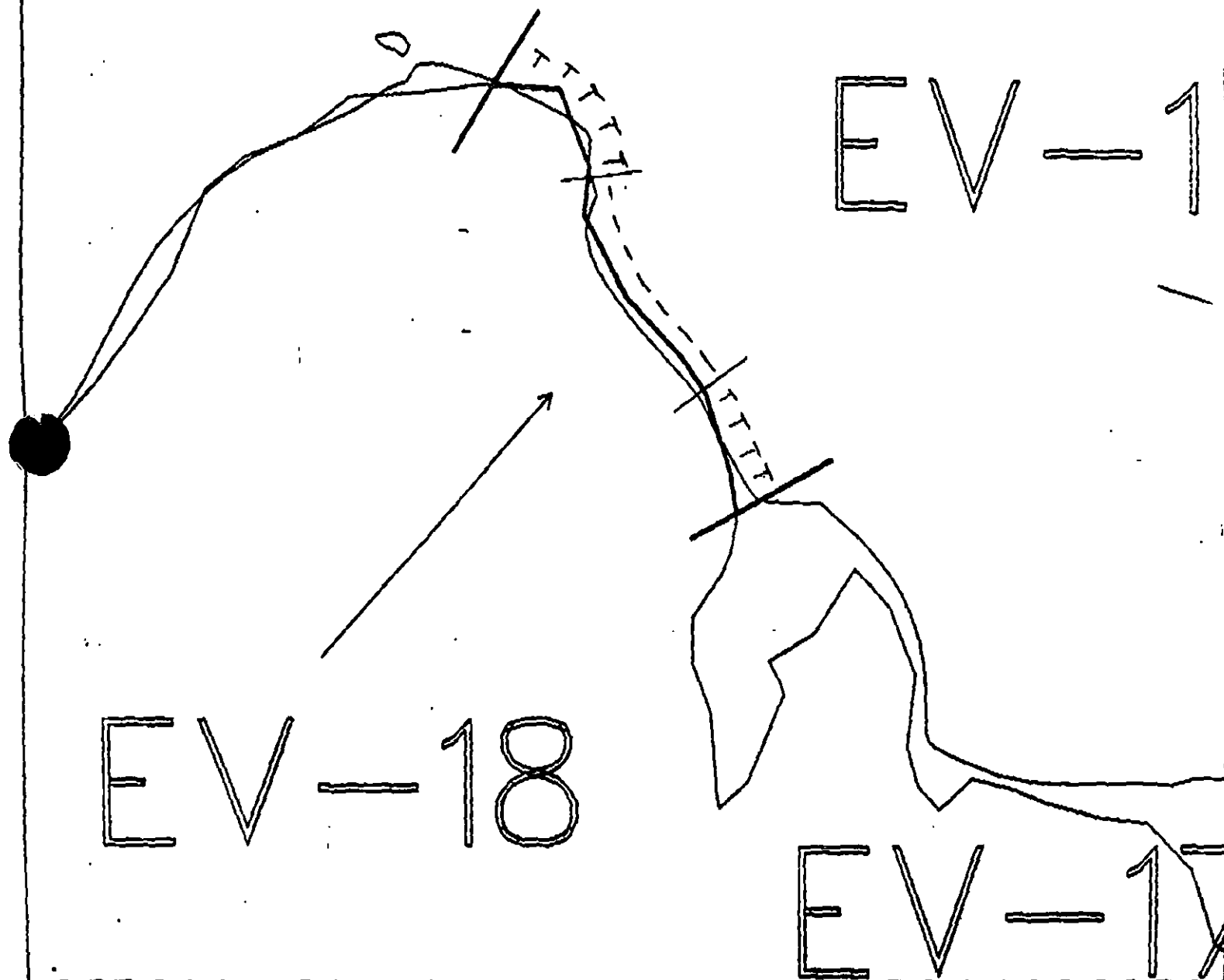


Map Key: PWS-186

Name: _____

Date: _____

Data Entered: _____



XXXX Wide

/// Medium

-- Narrow

TTTT Very Light

0000 No Oil

EV-18

ADEC Segment Length: 533m



Map Key: PWS-186

Name: Mike Foyet

Date: 4/20/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EV-18 SUBDIVISION A (1 of 1)

WORK WINDOW

Bioremediation

WORK PRIOR TO 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

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

7II Subsistence: Deer Harvesting

Closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE

ADEC

EXXON

NOAA

USCG

Prepared By:

FOSC

DATE

Date

Ron Morris
Andy Tenn
W. Kelley

J.P. Phillips

[Signature] DATE *8 June 90*

6/7/90

EV-19

EV-16

EV-18

EV-17

EV-

EV-20

EV-21

WORK
AREA

ECOLOGY MAP
SEGMENT EV-18

SUBDIVISION A (1 of 1)

METERS

0 351 702



Seabird Colony



Active Eagle Nest



Inactive Eagle Nest

1 inch = 1151 feet



Exxon Company, USA

Map Key: PMS-EV-18

June 04, 1990



SHORELINE EVALUATION

SEGMENT ST/ EV-18 SUBDIVISION A (1 OF 1) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: J. David McManis

DATE: 5/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 270 m: V.Light 270 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 30 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes bioremediation of area of subsurface and surface oil as shown on sketch map. Work should be conducted after 6/1 based on above constraints.

See ADDENDUM dated 6/7/90/PP

TAG COMMENTS:

TAG APPROVAL DATE: 5/1/90

ADEC Art Weiner
EXXON Andy Galt
NOAA Gary Petros
USCG Kenneth Korman

FOSC: W L

DATE: 5-8-90

CVC

does not object to bioremediation

SHORELINE EVALUATION

SEGMENT ST/ EV-18 SUBDIVISION A (1 OF 1) DATE 4/20/90

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SHPO SIGNATURE: J. David McMan DATE: 5/1/90

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<u> </u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

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TAG COMMENTS:

TAG APPROVAL DATE: 5/1/90

ADEC Art Weiner
EXXON Andy Ten
NOAA Gary Peboe
USCG Kenneth Kearns

FOSC: W L DATE: 5-8-90
CVC does not object to bioremediation

OG Mike Foret
 SEGMENT ST/ EV-18
 SUBDIVISION A
 DATE 4 / 20 90

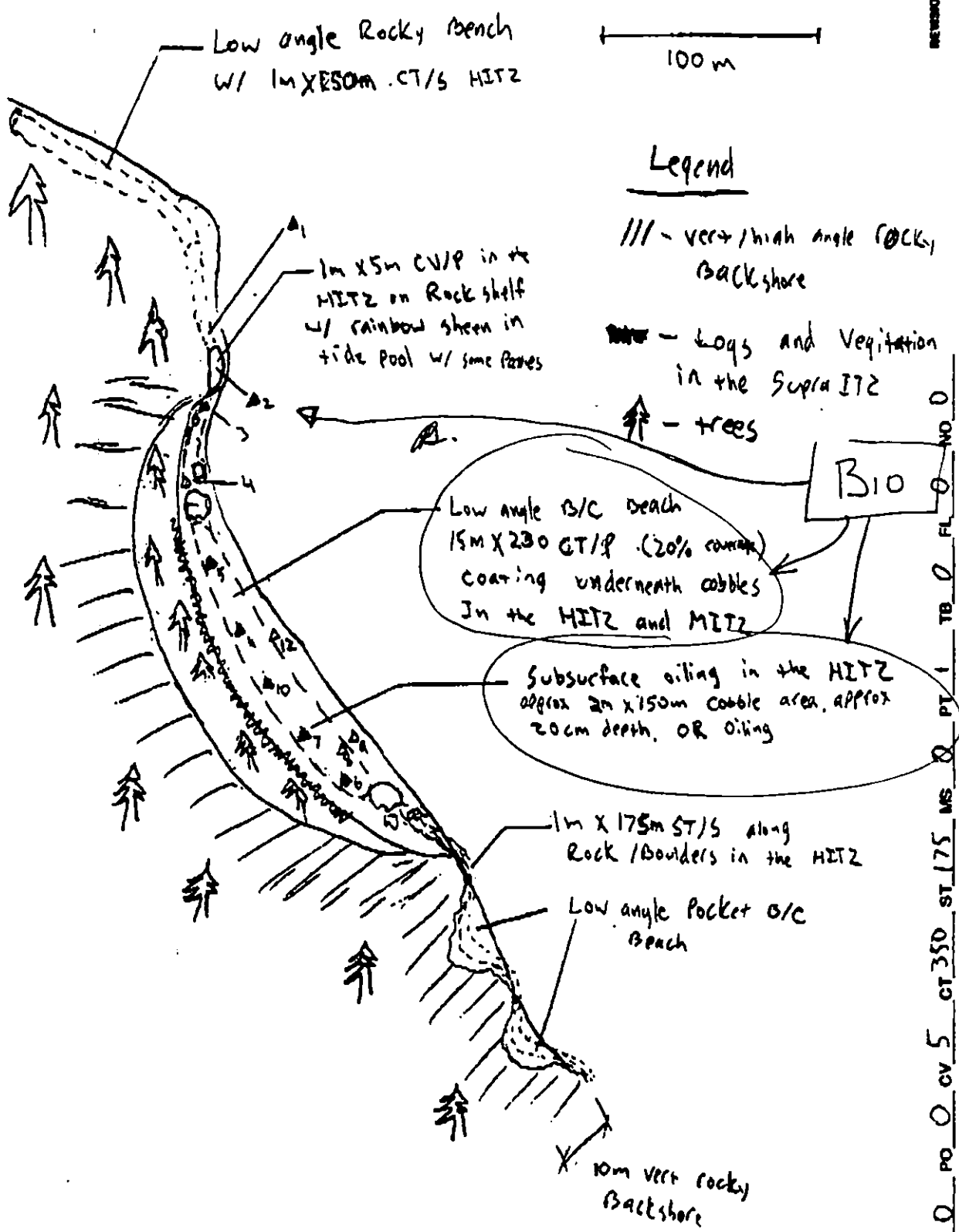
CHECKLIST
 N Arrow
 Approx. Scale
 Sap/Sub Beachy
 Oil Dist.
 Width
 Length
 % Cover
 Substrate Character
 Est. PHUL/LWL
 SSL
 Profile Location(s)
 Profile(s)
 Pti Location(s)
 Photo Location(s)

21/01

LEGEND

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

SKETCH MAP



Scale
 100 m

Legend

- /// - vert+high angle rocky Backshore
- Log and Vegetation in the Supra ITZ
- ↑ - trees

Oil Character Length (m): AP 0 PO 0 CV 5 CT 350 ST 175 MS 0 PT 1 TB 0 FL 0 WO 0

EV-1

EV-18

EV-1

XXXX Wide

//// Medium

-- Narrow

TTTT Very Light

0000 No Oil

EV-18

ADEC Segment Length: 533m



METERS

Map Key: PWS-186

Name: Mike Foyer

Date: 4/20/90

Data Entered:



1991 MAYSAP EVALUATION

SEGMENT: EV 018 **SUB:** A **REGION:** PWS **SURVEY DATE:** 4/30/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ **Date:** _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

TEAM NO. 5 SEGMENT EV-18 SUBDIVISION A DATE 4/30/91

NAME _____

John Hayes

SIGNATURE

[Signature]

DATE 4 / 30 / 91

☐ NTR

☒ R

☐ NTR
☒ Reassessment Recommended

Schoen present in MITZ beach was ~~identifiable~~ with rain. Schoen from S. side. Oiling observed on portion of segment surveyed was HPS oil. SDR/A on surface and H/OR/M/OR saturated surface sediments in the USTZ and MITZ. Because surface oiling was a small % over beach in crevices and matrix of boulders do not recommend manual crew. I do recommend that this beach be reassessed later this season or 1992 to determine full extent of subsurface contamination and more BP that may result from near surface oiling.

EXXON

NAME

Martinez N.J.

SIGNATURE

14.

NTR

NTR

☐ NTR There is some sub surface present as stated Sheaving was prevented. Did not see type or quantity of oil to justify Manual work.

LANDMANAGER

NAME

Steve WARB

OF CVC

SIGNATURE

Mr. Black

NTR

NTR

☐ NTR Lots of Sub-Surface oil and sheening - should be monitored for several years to keep an eye on sheening. Should be labeled w/ by T.A.G for clean-up ideas. I don't think manual will do anything in this area.

USCG/NOAA

NAME _____

Dreher / Hodges

SIGNATURE

CWO K. L. Wheeler

15

NTA

NTA

☐ NTR Some tar patches with sheens observed. Tar patches in mussel bed. Some pits had oiled sediment while others showed traces of silver sheens. At the time of the survey under noted atmospheric conditions I observed RB ECL sheening and consider it probable that a measurable amount of substance will mobilize and migrate (via sheen) to the water column when warmer conditions prevail.

PAGE OF

DATE April 30 1911

ENERGY LEVEL: ☒ H ☐ M ☐ L

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

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

EST. OIL CATEGORY LENGTH: W 30 m M 7 m N 1 m VL 100 m NO 145 m US 250 m

DISTRIBUTION: C = 91-100%; B = 61-90%; P = 11-60%; S = 1-10%; T = <1%

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

PHOTO ROLL # MAYSAP-

3

5

FRAMES 7-12

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

* NOT SUBSURFACE OIL (< 5cm deep)

AREAS A & B HAVE VERY SHALLOW BEDROCK. LOTS OF RAINBOW SHEEN ON RAINY DAY.

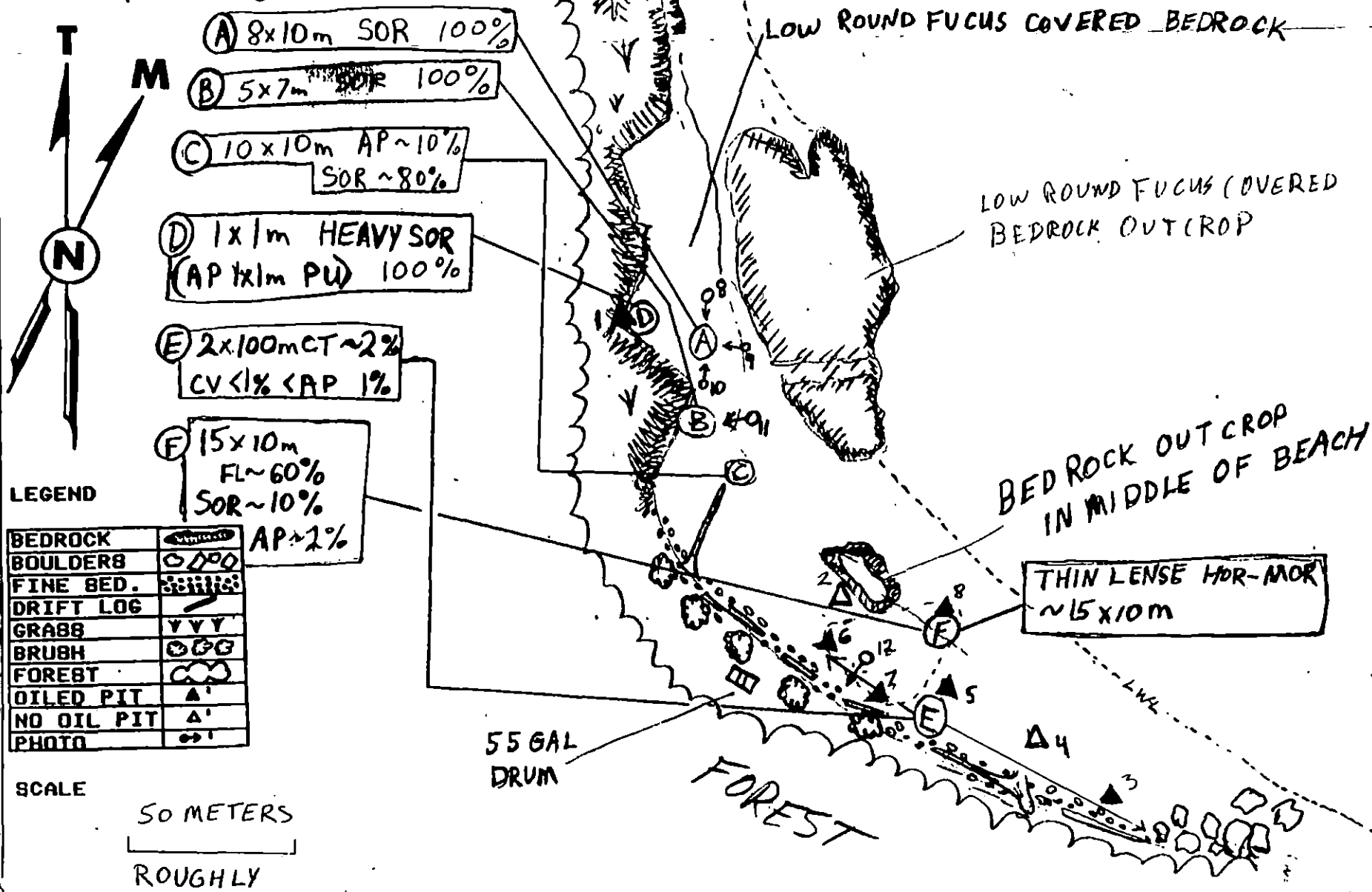
NOTE: SURVEY WAS CONDUCTED IN DRIVING RAIN, MAKING LIGHTER OILING TYPES DIFFICULT TO OBSERVE.

REVISED: F.W. 5/3/91

REVISED: M.C. 5/3/91

MAYBAP 1991
 OG SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV-18A
 DATE: APRIL 30 1991
 AIR P.#: PIM-C-006-114

KNIGHT ISLAND PASSAGE



REVIEWED: F.W. 5/3/91
 REVISION: M.C. 5/3/91

MAYSAP BIOLOGICAL SUMMARY FORM

pg 1 of 2

TEAM # 5

DATE 30 April 1991

SEGMENT # EV-18

TIDAL HEIGHT (Range) ~2.0 → -1.5

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 1-2' (up to 3')

WIND SPEED/DIRECTION 15-20 knots / N

PHOTOGRAPHS: ROLL # MAYSAP 5

FRAME # 10

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

(A) Area is low in VITZ in lee of rock bench. There is an intercobble mussel bed with sparse to moderate concentration (various age classes). Barnacles are rare and tightly sealing their inner plates. Littorina and limpets are rare. Filamentous green algae covers cobble. On bedrock and rock bench w/ 1m of site there is a dense concentration of Fucus with sporcelings.

(B) Area is in VITZ ~10m south of (A). Within site filamentous green algae covers surfaces, patches of Enteromorpha (alga), rare Littorina and rare barnacles. Sparse Fucus with sporcelings are present. Conceptacles are beginning to mature. Directly below site (~1m) there is a sparse intergravel mussel bed. Algae includes Scytosiphon, Fucus, Enteromorpha, Ulvospira and other filamentous greens.

(C) Area is located low VITZ, high MITZ in small boulders and cobble. There is ~20% biota cover with barnacle dominant, spat is present and animals are tightly sealing their inner plates. Sparse limpets and Littorina and Littorina eggs are present as well as rare Fucus and mussels. Ribbon worms (nemertean) are also present.

(D) Area is high in VITZ 3m above (A). Less than one percent biota cover by filamentous green algae and rare Littorina. No other macro-biota was observed w/ the site. Pit #1 located w/ (D)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2	
Seabirds			
Waterfowl	1	8	
Gulls/Kittiwakes	2	10	
Shorebirds			
Corvids			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

Reviewed: 5/3/91 MC

Team 5

Segment: EV-18

Subdivision A

Sev state 1-2'

Date 30 April 1991

Tidal Height $\sim -2.0 \rightarrow -1.5$

Biologist Crank

No Sfcz / Direction 15-20 knots/N

pg 2 of 2

Comments (cont.)

- (E) Area is a band 2m x 100m in the UTLZ. Small boulders and cobble are covered with filamentous green algae. 2-3 cm long segmented worms are found under veneer. Rare barnacles and Fucus sporelings also present <1% biota cover. Pits 2-7 located in area (E).
- (F) Area is located in the MITZ ~ 5 m below (E). Filamentous green algae, sparse barnacles (new set present), sparse limpets, rare Littorina, rare Fucus and rare juvenile mussels are present in the site. Not including filamentous greens there is $\sim 5\%$ biota cover ($\sim 80\%$ with greens).

Subdivision surveyed is a small boulder and cobble beach bordered by boulders and bedrock. On the beach LITZ has $\sim 60\%$ biota cover dominated by algae including Fucus, Habesision, Odonthalia, Ulva, Scytosiphon, bladed and filamentous ~~reds~~ and filamentous greens. The MITZ is $\sim 30\%$ covered with Fucus dominant, sporelings are present. Fauna (animals) is sparse including barnacles (new set present), limpets, Littorina, amphipods and anenomes (in tidepools). Exposed sides of rock ~~beach~~ is 90-100% cover; Fucus dominates.

Reviewed: 5/3/91 MC

MAYBAP 1991
 OG SKETCH MAP: Bio Sketch Map
 GREG CHANEY: Crank

TEAM 5

SEGMENT: EV-18A

DATE: APRIL 30 1991

AIR P.N. PIM-C-006-114

KNIGHT ISLAND PASSAGE

- T**
M
N
- (A) 8x10m SOR
 - (B) 5x7m SOR
 - (C) 10x10m AP~10%
 SOR~80%
 - (D) 1x1m HEAVY SOR 5cm deep
 (AP 1/1m PU)
 - (E) 2x100 CT~2%
 CV>1% AP>1%
 - (F) 15x10
 OF~60%
 SOR~10%

LEGEND

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

SCALE

LITZ has ~60%
 biota cover - predominately
 algae. MITZ has ~30%
 cover with Fucus dominant

55 GAL
 DRUM

In Area E near pits 2-7 there
 is less than one percent biota cover

LOW ROUND FUCUS COVERED BEDROCK

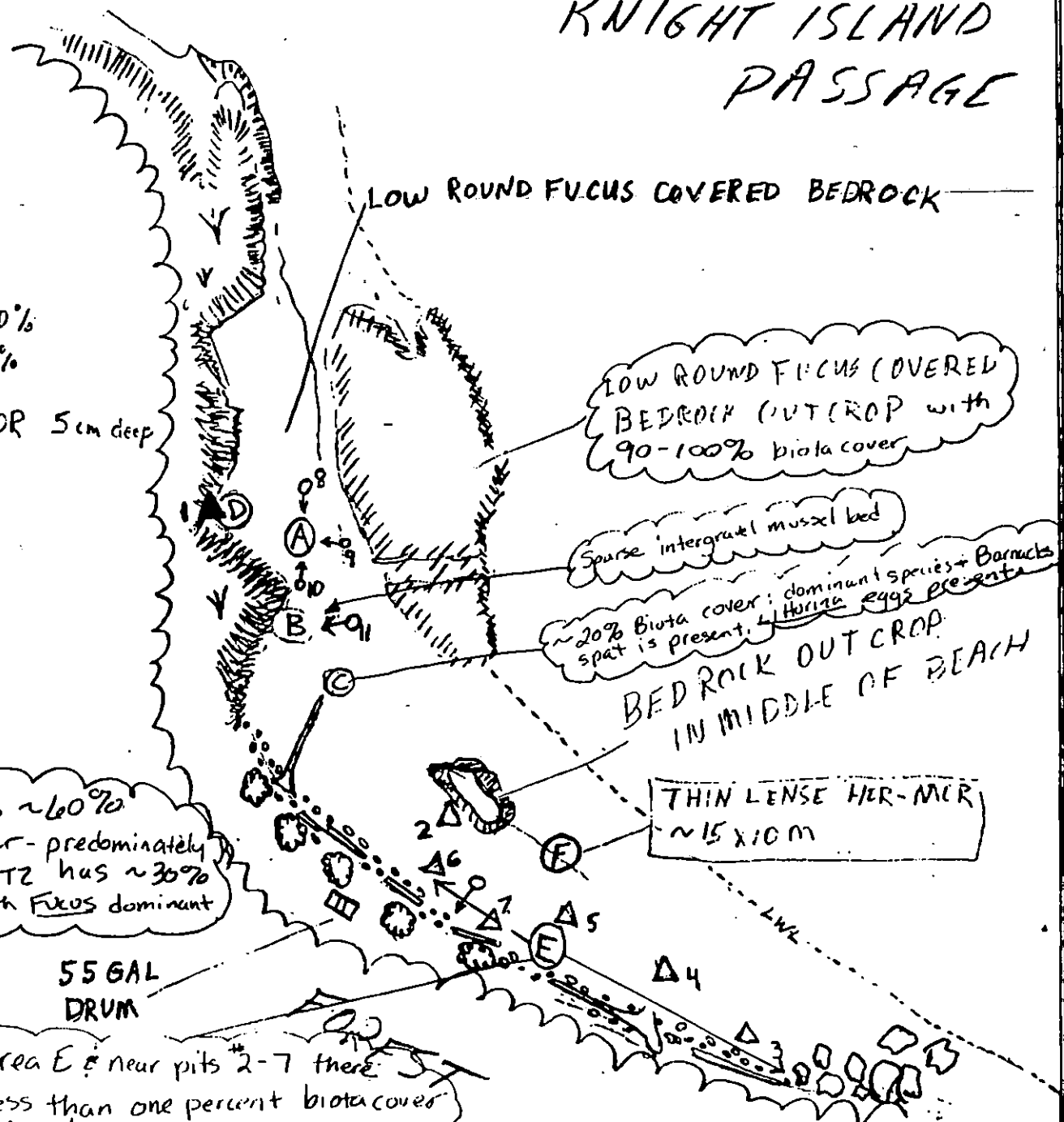
LOW ROUND FUCUS COVERED
 BEDROCK OUTCROP with
 90-100% biota cover

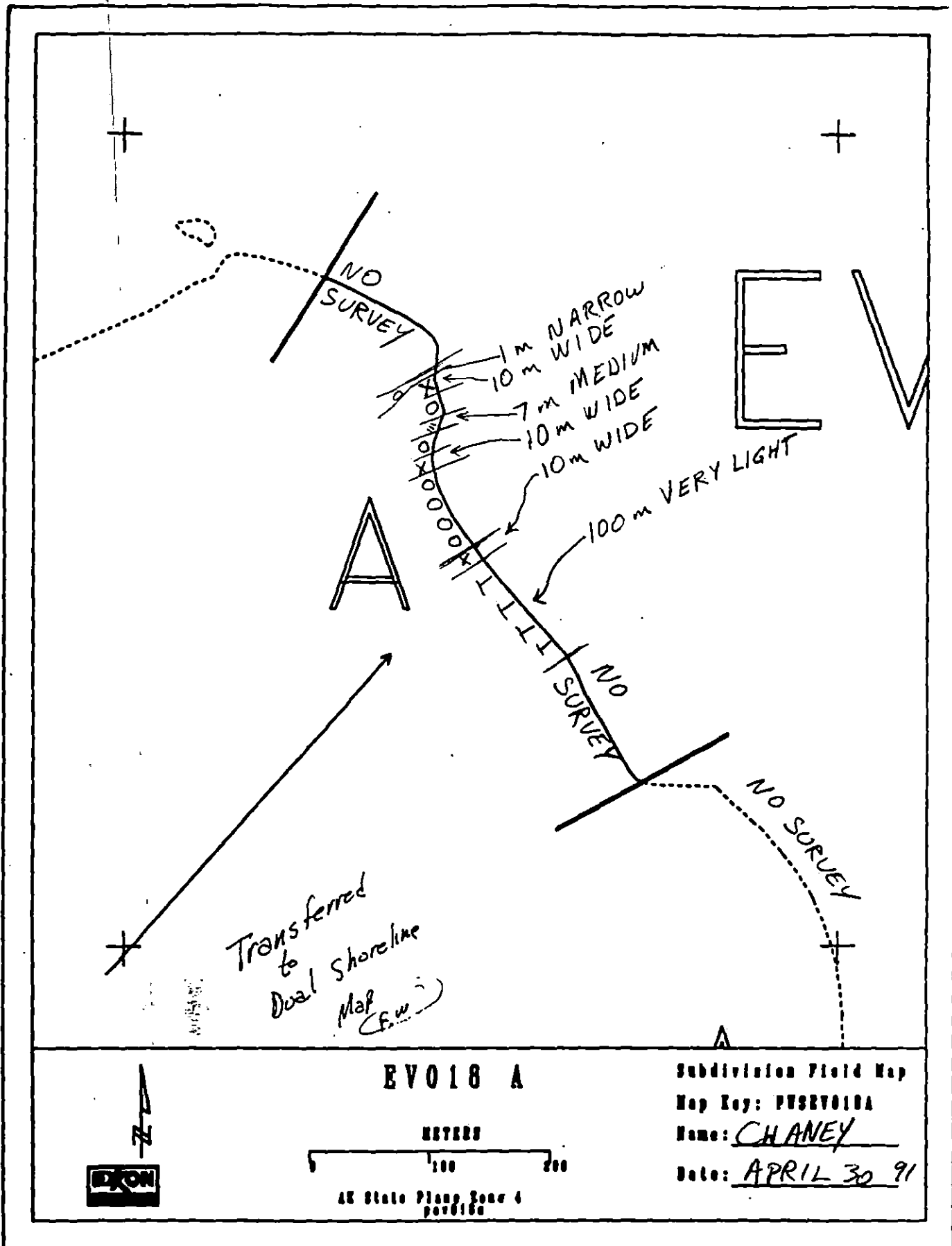
Sparse intergravel mussel bed

~20% Biota cover: dominant species + Barnacles
 spat is present. *Horrea* eggs present

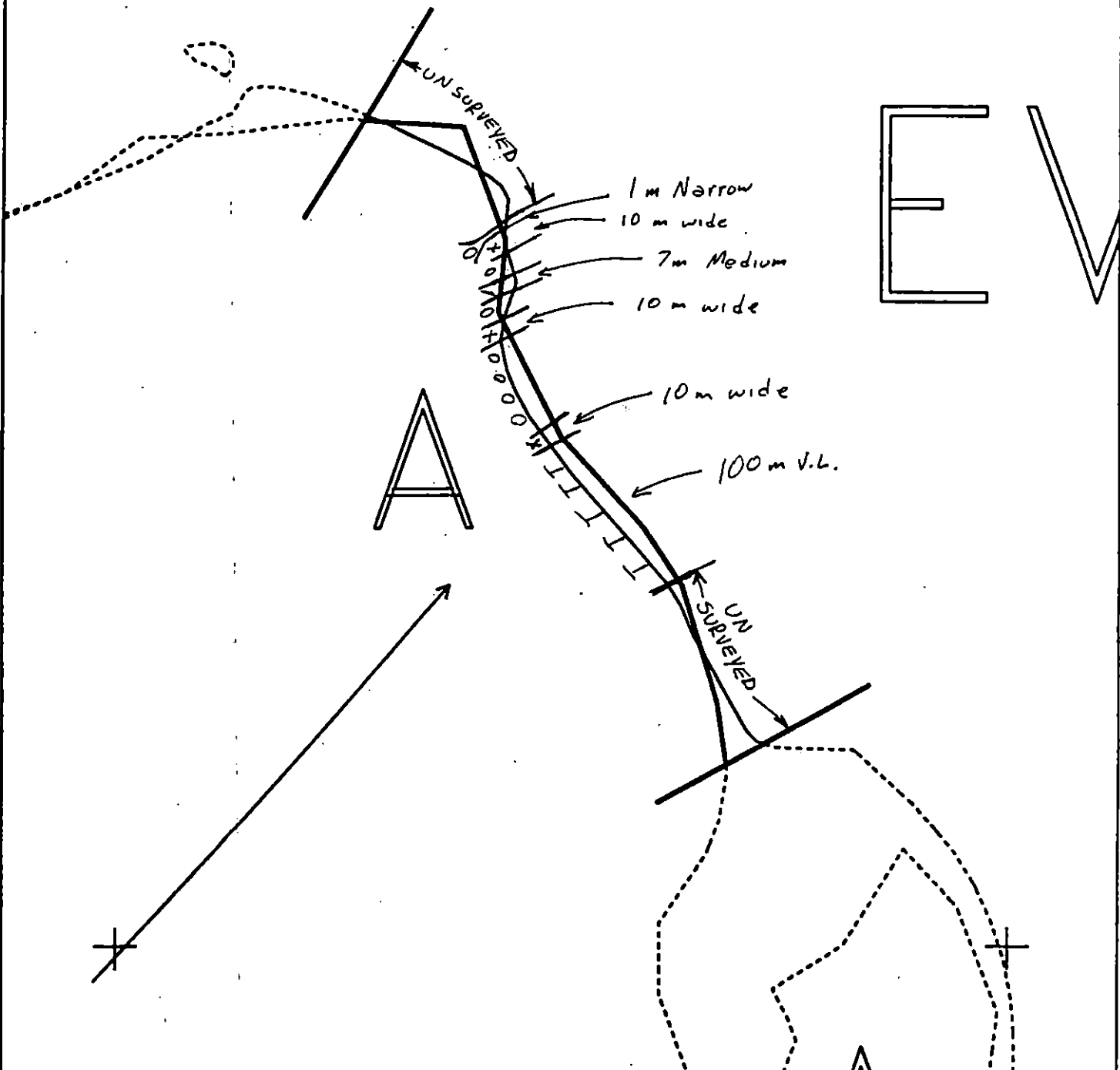
BED ROCK OUTCROP
 IN MIDDLE OF BEACH

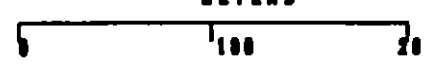
THIN LENSE HER-MIR
 ~15x10m





REVIEWED: F.W. 5/3/91.
 REVIEWED: M.C. 5/3/91



XXXX Wide //// Medium ---- Narrow TTTT Very Light 0000 No Oil	EV018 A ADEC Subsegment Length: 533m METERS  AK State Plane Zone 4 600018a	Subdivision Field Map Map Key: PWSEV018A Name: <u>GREG Choney</u> Date: <u>April 30, 1991</u> Date Entered: _____
---	---	---



Revised: F.W. 5/3/91
 REVISION: M.C. 5/3/91

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT EV-18 SUBDIVISION A DATE 4/30/91

ADEC

NAME

John Hayes

SIGNATURE

[Signature]

☐ NTR

☒ Reassessment Recommended

Sheen present in MITZ beach was ~~identifiable~~ with rain, sheen from S.S. oiling. Oiling observed on portion of segment surveyed was AP/S and SDR/H on surface and H/OR/M/OR saturated surface sediments in the UITZ and MITZ. Because surface oiling was a small % over beach in crevices and matrix of boulders do not recommend manual crew. I do recommend that this beach be reassessed late this season or 1992 to determine full extent of subsurface contamination and more AP that may result from near surface oiling.

EXXON

NAME

Martinez N.D.

SIGNATURE

[Signature]

☐ NTR

There is some sub surface sheen present as stated sheening was prevalent. Did not see type or quantity of oil to justify Manual work.

LANDMANAGER

NAME

Steve Ward

OF

CVC

SIGNATURE

[Signature]

☐ NTR

Lots of Sub-Surface oil and sheening - should be monitored for several years to keep on it on sheening. Should be looked at by T.A.G for clean-up ideas. I don't think manual will do anything in this area.

USCG/NOAA

NAME

Dreher / Hodges

SIGNATURE

[Signature]

☐ NTR

Some tar patches with sheens observed. Tar patches in mussel bed. Some pits had oiled sediment while others showed traces of silver sheens. At the time of the survey under noted atmospheric conditions I observed RB & SL sheening and consider it probable that a measurable amount of substance will mobilize and migrate (via sheen) to the water column when warmer conditions prevail.

PAGE ____ OF ____

5

SEGMENT EV-18

SUBDIVISION A

DATE April 30, 1911

ENERGY LEVEL: ☒ H ☐ M ☐ L

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

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

W 30 m M 7 m N 1 m VL 100 m NO 145 m US 250 m

DISTRIBUTION: C = 91-100%; B = 61-90%; P = 11-60%; S = 1-10%; T = <1%

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

PHOTO ROLL # MAYSAP-

5 - 5 FRAMES 7-12

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

* NOT SUBSURFACE OIL ($< 5\text{cm DEEP}$)

AREAS A & B HAVE VERY SHALLOW BEDROCK. LOTS OF RAINBOW SHEEN ON RAINY DAY.

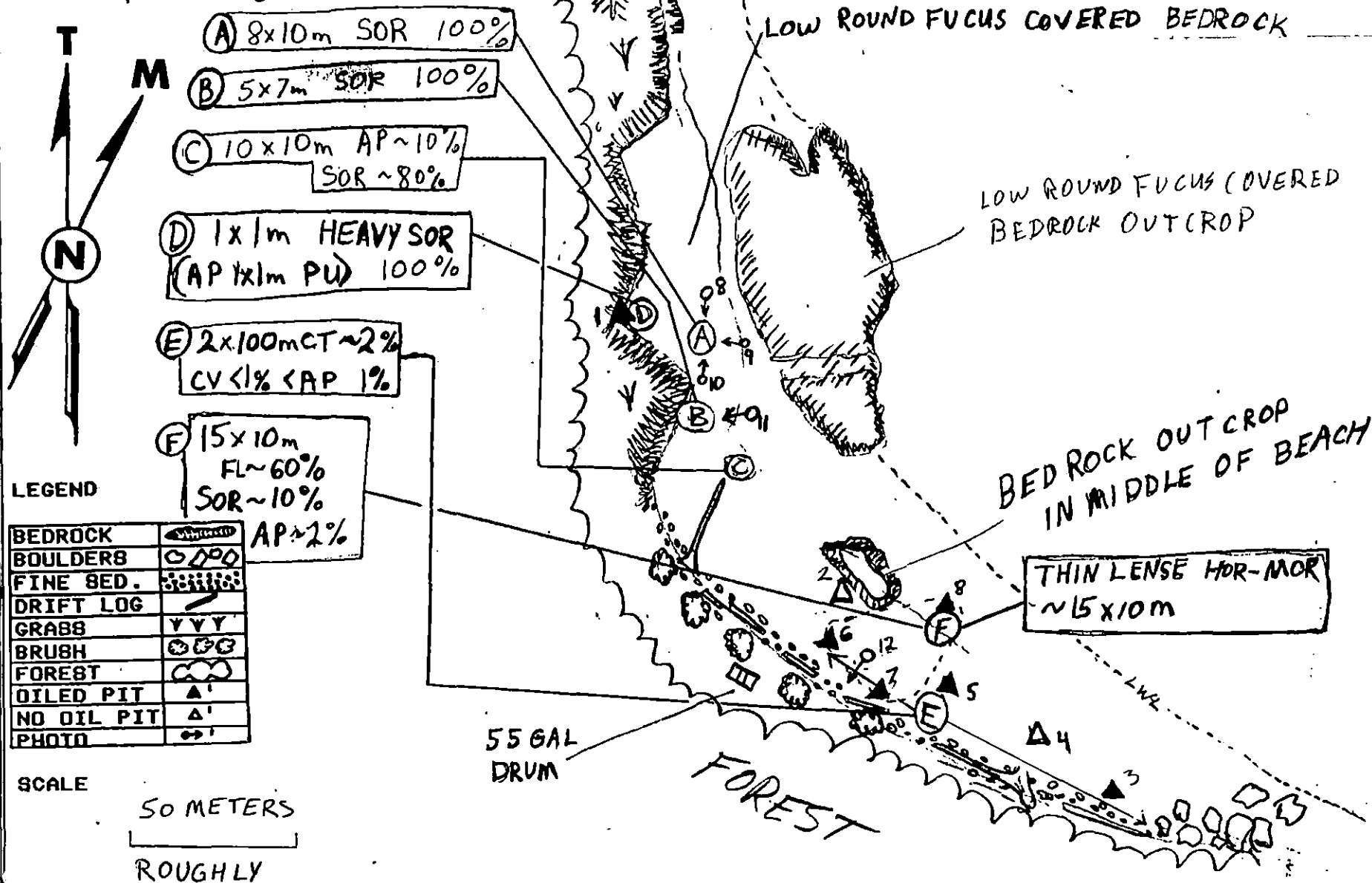
NOTE: SURVEY WAS CONDUCTED IN DRIVING RAIN, MAKING LIGHTER OILING TYPES DIFFICULT TO OBSERVE.

REVISED: F.W. .5/3/91

REMOVED. M.C. 573/91

MAY8AP 1991
 OG SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV-18A
 DATE: APRIL 30 1991
 AIR P.#: PIM-C-006-114

KNIGHT ISLAND PASSAGE



REVIEWED: F.W. 5/3/91
 DRAWN: M.C. 5/3/91

MAYSAP BIOLOGICAL SUMMARY FORM

pg 1 of 2

TEAM # 5

DATE 30 April 1991

SEGMENT # EV-18

TIDAL HEIGHT (Range) -2.0 → -1.5

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 1-2' (up to 3')

WIND SPEED/DIRECTION 15-20 knots /N

PHOTOGRAPHS: ROLL # MAYSAP 5

FRAME # 10

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

(A) Area is low in UITZ in lee of rock bench. There is an intercobble mussel bed with sparse to moderate concentration (various age classes). Barnacles are rare and tightly sealing their inner plates. Littorina and limpets are rare. Filamentous green algae covers cobble. On bedrock and rock bench w/ 1m of site there is a dense concentration of Fucus with sporelings.

(B) Area is in UITZ ~10m south of (A). Within site filamentous green algae covers surfaces, patches of Enteromorpha (alga), rare Littorina and rare barnacles. Sparse Fucus with sporelings are present. Conceptacles are beginning to mature. Directly below site (<1m) there is a sparse intergravel mussel bed. Algae includes Scytosiphon, Fucus, Enteromorpha, Ulva and other filamentous greens.

(C) Area is located low UITZ, high MITZ in small boulders and cobble. There is ~20% biota cover with barnacle dominant, spat is present and animals are tightly sealing their inner plates. Sparse limpets and Littorina and Littorina eggs are present as well as rare Fucus and mussels. Ribbon worms (nemertean) are also present.

(D) Area is high in UITZ 3m above (A). Less than one percent biota cover by filamentous green algae and rare Littorina. No other macro-biota was observed w/ the site. Pit #1 located w/ (D).

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2	
Seabirds			
Waterfowl	1	8	
Gulls/Kittiwakes	2	10	
Shorebirds			
Corvids			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

REVIEWED: 5/3/91 MC

Team 5
Segment EV-18
Subdivision A
Sea State 1-2'

Date 30 April 1991
Tidal Height $\sim -2.0 \rightarrow -1.5$
Biologist Crank
Wind Speed/Direction 15-20 knots/N

pg 2 of 2

Comments (cont.)

- (E) Area is a band 2m x 100m in the ULTZ. Small boulders and cobble are covered with filamentous green algae. 2-3 cm long segmented worms are found under veneer. Rare barnacles and Fucus sporelings also present <1% biota cover. Pits 2-7 located in: below (E).
- (F) Area is located in the MITZ ~5m below (E). Filamentous green algae, sparse barnacles (new set present), sparse limpets, rare Littorina, rare Fucus and rare juvenile mussels are present in the site. Not including filamentous greens there is ~5% biota cover (~80% with greens).

Subdivision surveyed is a small boulder and cobble beach bordered by boulders and bedrock. In the beach LITZ has ~60% biota cover dominated by algae including Fucus, Habosaccion, Odonthalia, Ulva, Scytosiphon, bladed and filamentous reds and filamentous greens. The MITZ is ~30% covered with Fucus dominant, sporelings are present. Fauna (animals) is sparse including barnacles (new set present), limpets, Littorina, amphipods and anenomes (in tidepools). Exposed sides of rock beach is 90-100% cover; Fucus dominates.

REVIEWED: 5/3/91 MC

MAYSAP 1991

OG SKETCH MAP: Bio Sketch Map

GREG CHANEY: Crank

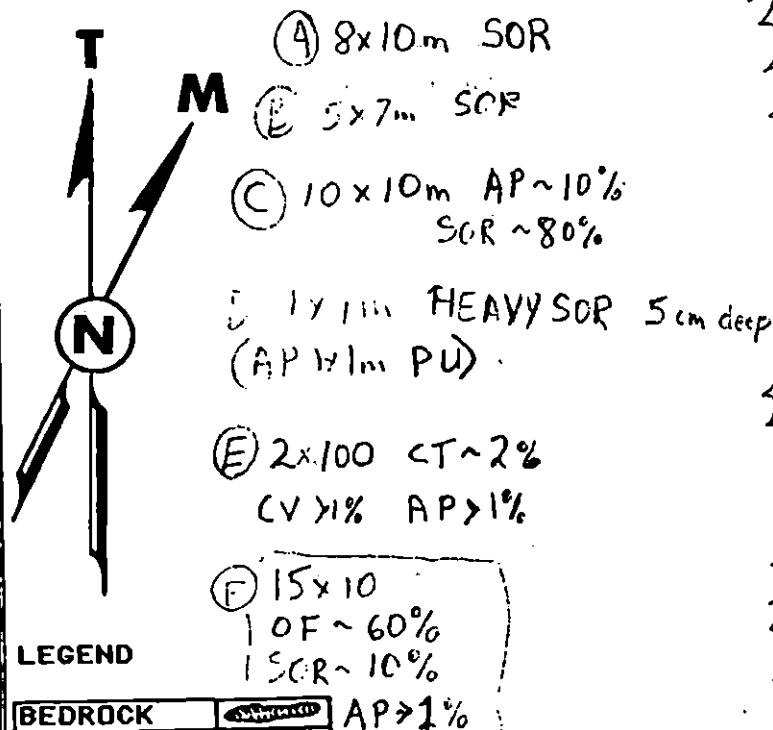
TEAM 5

SEGMENT: EV-18A

DATE: APRIL 30 1991

AIR P.#: PIM-C-006-114

KNIGHT ISLAND PASSAGE



LOW ROUND FUCUS COVERED BEDROCK

LOW ROUND FUCUS COVERED
BEDROCK OUTCROP with
90-100% biota cover

Sparse intergravel mussel bed

~20% Biota cover: dominant species + Barnacles
spat is present. 4. *Horiza* eggs present

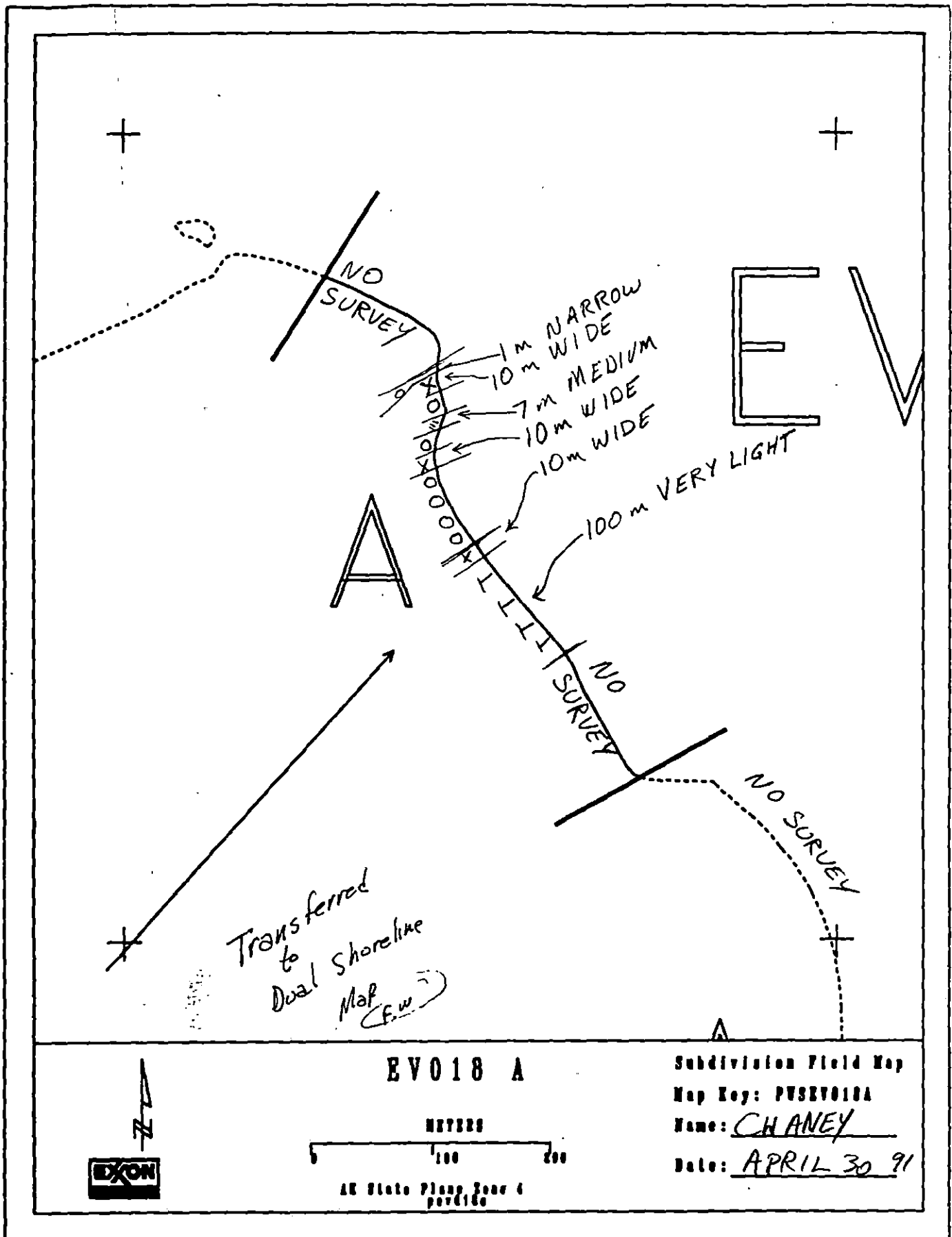
BEDROCK OUTCROP
IN MIDDLE OF BEACH

THIN LENSE HER-MCR
~15x10m

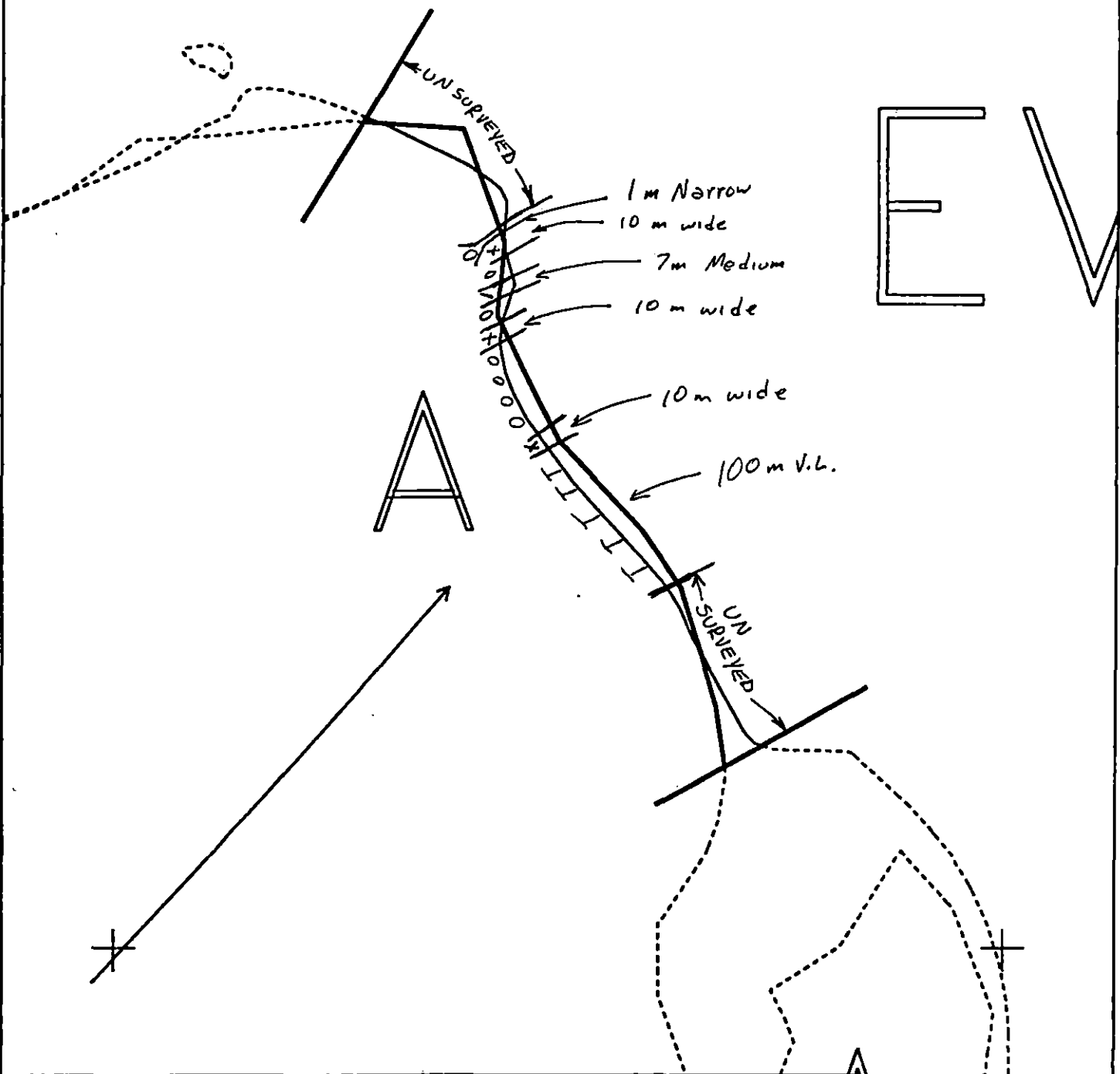
LITZ has ~60%
biota cover - predominately
algae. MITZ has ~30%
cover with *Fucus* dominant

55 GAL
DRUM

In Area E near pits 2-7 there
is less than one percent biota cover



REVIEWED: F.W. 5/3/91.
REVIEWED: M.C. 5/3/91



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

EV018 A
 ADEC Subsegment Length: 533m
 METERS
 5 100 200
 AK State Plane Zone 4
 140018a

Subdivision Field Map
 Map Key: PWSEV018A
 Name: GREG Choney
 Date: April 30, 1991
 Date Entered:



Revised: F.W. 5/3/91
 REVISIONS: M.C. 5/3/91

SHORELINE EVALUATION

SEGMENT ST/ EV-20 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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. Form

DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 228 m: Narrow 99 m: V.Light 520 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 Removal

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

COMMENTS: Recommended treatment includes removal of tarmat and manual pick up of oiled vegetation and tarballs. Work should be conducted after 6/1 and with approval of USFWS regarding eagle nest.

TAG COMMENTS: MONITORS TO HARRY SUITZ

BIOREMEDIATION OF AREAS INDICATED ON SKETCH

TAG APPROVAL DATE: 5/4/90.

ADEC ART WOLKOW

EXXON AMY GIL

NOAA GARY PETERSON

USCG G.A. REITER

FOSC:

DATE: 5-18-90

NOTIFY CMC 24 HRS IN ADVANCE
OF WORK

00 Mike Fogel
 SEGMENT EV-20
 SUBDIVISION A
 DATE 4/14/90

CHECKLIST

N Arrow
 Approx. Scale
 Seg/Sub Entry
 Oil Dist.
 Width
 Length
 % Cover
 Substrate Character
 Est. H/W/L/W/L
 SSL
 Profile Location(s)
 Profile(s)
 Pt Location(s)
 Photo Location(s)

LEGEND

1 ▲
 Pt - No Subsurface Oil

2 ▲
 Pt - Subsurface Oil

CT/C
 Continuous Distribution

CT/B
 Broken Distribution

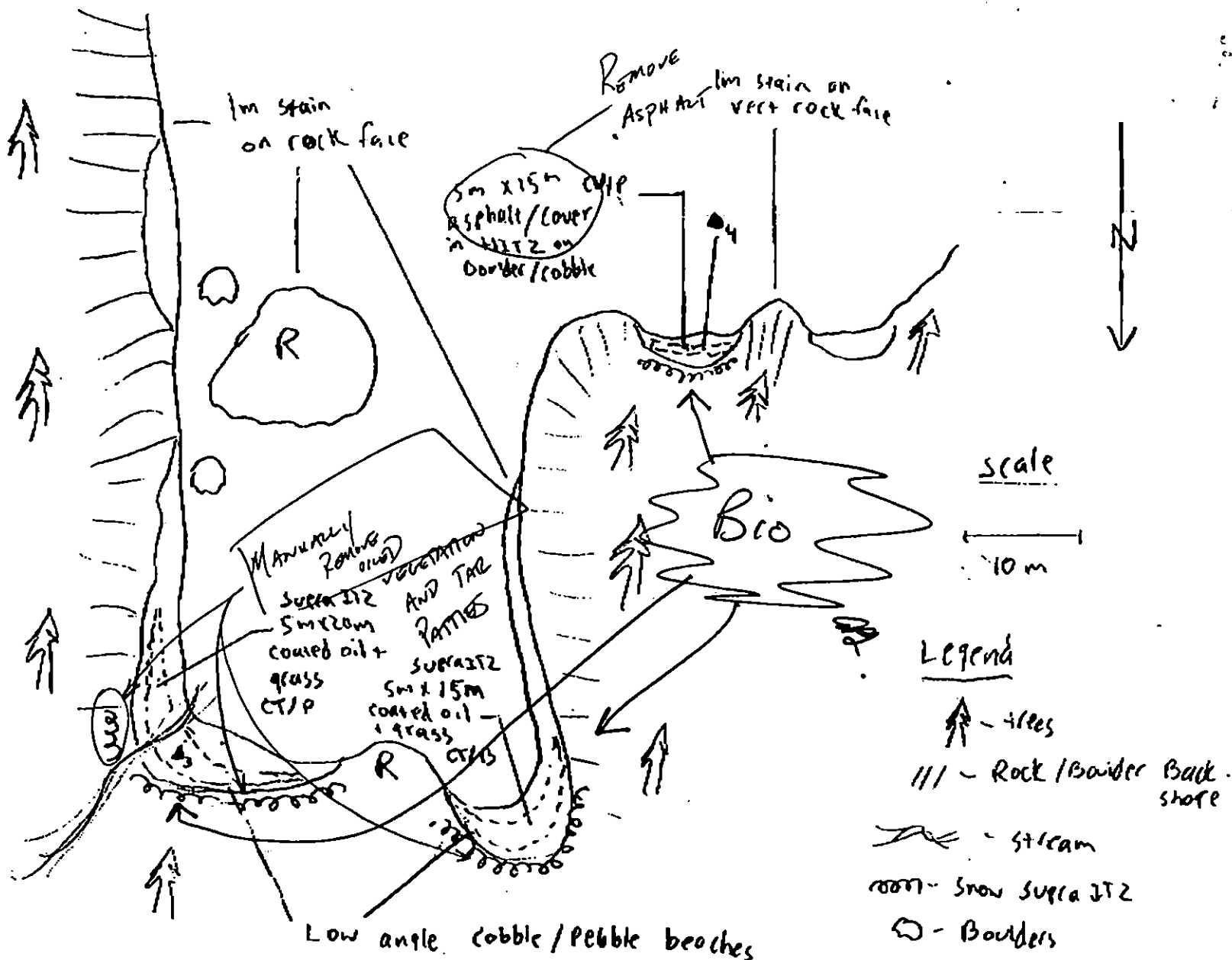
CT/P
 Patchy Distribution

CT/S
 Splashed Distribution

Oil Vegetation

1 ➡
 Photo location, direction,
 and number

ETCH MAP 2



See map 1

OF CHARACTER (Largest (R)): AP PO CV CT ST MS PT TB FL NO

REVISION 000000

ECOLOGY MAP (1 of 1)

Resource Codes For
Entire Segment



BALD EAGLE NEST

EV-2

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-20

ADEC Segment Length: 847m

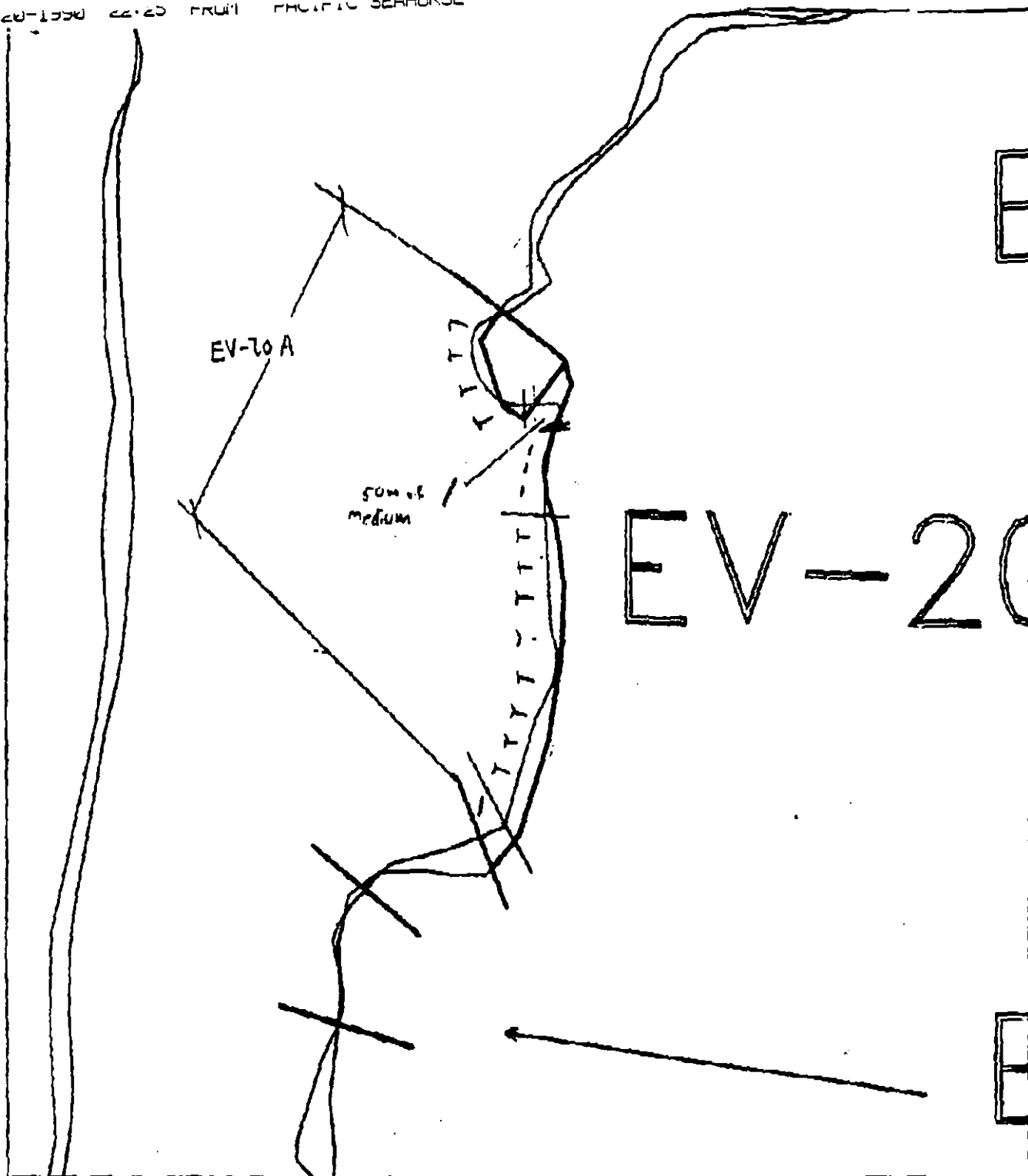


Map Key: PWS-189

Name: _____

Date: _____

Data Entered: _____



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-20A

ABEC Segment Length: 847m



Map Key: PWS-188

Name: Mike Foster

Date: 4/14/90

Data Entered:

1991 MAYSAP EVALUATION

SEGMENT: EV 020 **SUB:** A **REGION:** PWS **SURVEY DATE:** 4/30/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ **Date:** _____

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

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

ADEC _____ **FOSC** _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT EV-20 SUBDIVISION A DATE 4/30/91

ADEC

NAME

John Hayes

SIGNATURE

[Signature]

☐ NTR

This small creek core still has some small patches of AP/MS in ryegrass although grass is doing fine. Crew picked up AP bank below 572 at TBs in USTR. No subsurface oiling observed here and remaining oil does not need ^{extensive manual} treatment at this time. As CVC group will be in area they may want to rake ryegrass + P.O. any remaining SOR+AP on this segment. see Land Manager comments.

EXXON

NAME

Marthinez N.L.

SIGNATURE

[Signature]

☒ NTR

Area looks very good, any oil left is weathering nicely. Further work would be of no environmental benefit.

LANDMANAGER

NAME

Steve Ward

OF

CVC

SIGNATURE

[Signature]

☐ NTR

Chenega Local Response should clean this Area - No-Sub Surface Found, But there is Enough Surface oil to warrant a clean-up. This is a High-Substance Area for Chenega and a good clean up Right on this section. Claims can be protected by picking up Remaining oil in grass and between rocks.

USCG/NOAA

NAME

Dreher / Hedges

SIGNATURE

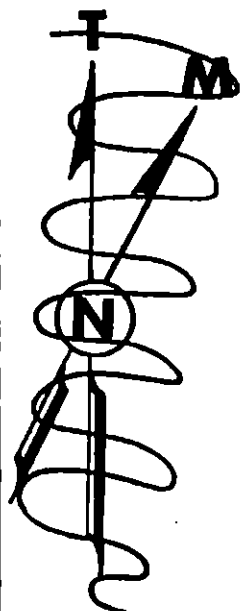
[Signature]

☒ NTR

Oil coat/coverage spatter with pine needles on most upper area rocks. Scattered tar patties in upper stream area were picked up.

REVISED: F.W. 5/3/91
REVISED: M.C. 5/3/91

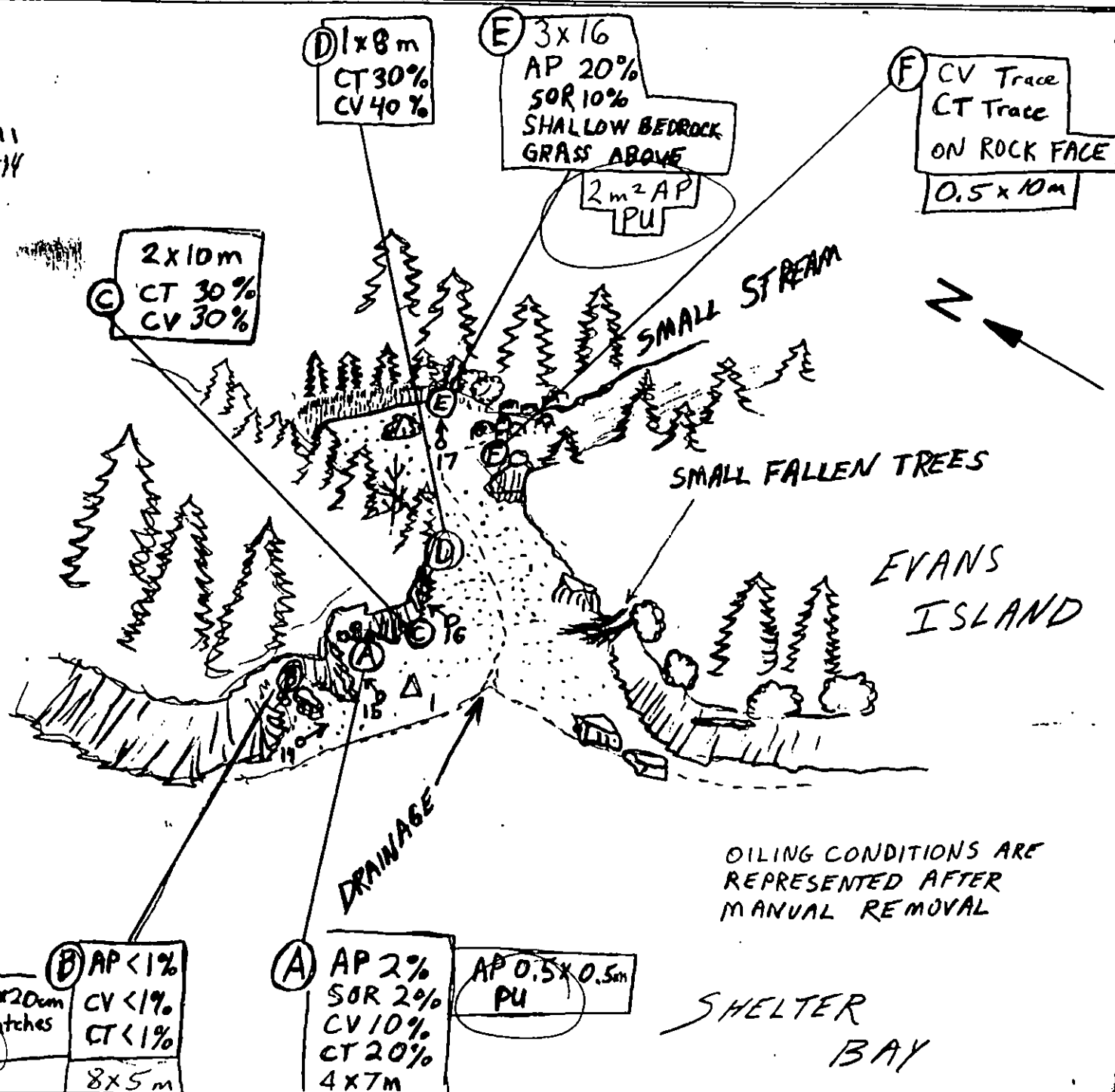
MAYBAP 1991
 OG SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV-20-A
 DATE: APRIL 30 1991
 AIR P.#: EX VRZ-1-65-14



LEGEND

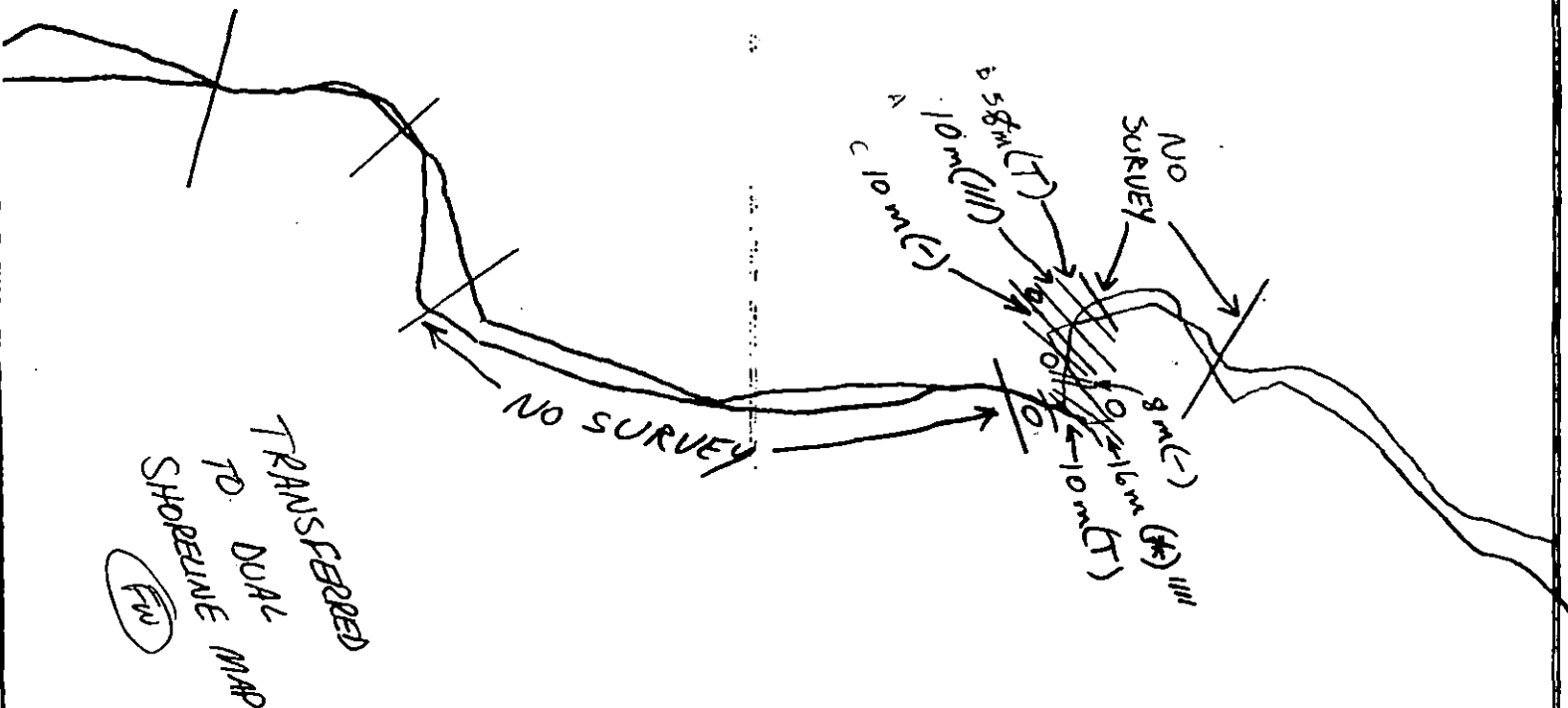
BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE
 ROUGHLY
 10 METERS



REVISED: F.W. 5/3/91
 REVISIONS: M.C. 5/3/91

MAYSAP 1991
~~80 SKETCH MAP~~ TRACED COMPUTER MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV-20A
 DATE: April 30 91
 AIR P.#:



EV 20 A

Note: This computer dual
 shoreline map was traced from
 the old S5AT package because
 a new one couldn't be found.

Greg Chaney

April 30 1991

REVISED: EW. 5/3/91
 REVISED: MC. 5/3/91

TEAM # 5

DATE 30 April

SEGMENT # EV-20

TIDAL HEIGHT(Range) ~ -1.0 → 0

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 1-2'

WIND SPEED/DIRECTION 10-15 knots / N

PHOTOGRAPHS: ROLL # MAYSAP 5

FRAME # 17

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

(A) and Pit #1 - Area located in UITZ cobble with <1% biota cover including rare barnacles, amphipods and filamentous green algae. Barnacles are tightly sealing their inner plates. No other intertidal macro-biota was observed in the area. Rock outcrop 2m SE of site has ~20% biota cover with sparse barnacles and sparse Fucus sporelings. Below site is clam bed and ~20% Fucus cover.

(B) Area is located 30m SW of A in the UITZ. There is ~50% biota cover dominated by a moderate to dense concentration of healthy barnacles. Fucus is sparse, maturing conceptacles and stipe-only plants are present. Mussels are rare. Below site is a clam bed dominated by Prototheca (little-neck); Saxidomus (Butler) and Trexus (Hase) also present. There are sparse limpets and Littorina (juvenile Littorina present).

(C) Area is located along rock face high in UITZ and in SUPRA. No macro-biota observed to be in direct contact with oil. Approx. 30cm above site mosses are present and approx. 30cm below site Fucus with maturing conceptacles and tightly sealing rare barnacles are present. In MITZ on rock face Fucus dominates ~20% of plants are stipes-only (sporelings not present). Below rock is dense clam bed dominated by <4yr old Prototheca. Many other dgs present.

(D) Area is located in UITZ and MITZ ~5m west of stream. There is ~20% biota cover. Barnacles are predominant species - animals are tightly sealing their inner plates. Fucus is present - no stipe-only plants and many sporelings are present. There are rare mussels, Littorina and limpets. Approx. 5m North of site there is a dense Fucus bed and a sparse intercobble mussel bed.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
None observed			
Eagles			
Seabirds			
Waterfowl			
Gulls/Kittiwakes			
Shorebirds			
Corvids			
Other Birds			

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
None obs.			
Sea Otters			
Pinnipeds (specify)			
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

Team 5

Segment EV-20

Subdivision A

Sea State 1-2'

Date 30 April 1991

Tidal Height $\sim -1.0 \rightarrow 0$

Biologist Crank

Wind Speed/Direction 10-15 knots/N

pg 2 of 2

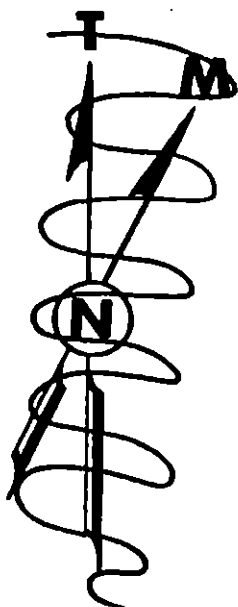
Comments (cont.)

(E) Area is located in SUPRA and UITZ. There is a 30cm^2 patch of oiled rye grass, grass adjacent to patch is sprouting - see photo MAYSAP roll 5 frame 17. Green 'lawn' grass is also present in site. In UITZ Fucus sporelings are dominant species with $\sim 10\%$ biota cover. Barnacles are rare; Littorina and limpets are sparse. Rare Costomblen casings are present. Seven meters below site there is a dense Fucus bed in the fresh water stream.

(F) Area is a band around and near the top of a large boulder. No biota located w/ the band. Moderate limpets and Littorina; sparse Nucella (unrec), and barnacles and rare mussels (various age classes) located on boulder below oil.

Site is a low energy beach with a fresh water runoff stream. LITZ is a ~~dense~~ clam bed dominated by $< 4\text{yr. old}$ Prototheca, Saxidomus ~~also~~ present. There is $\sim 20\% - 80\%$ Fucus cover with maturing conceptacles present. A rare concentrated intergravel mussel bed is also present. Otters have been utilizing area (digs evident). Eagle nest was not located.

MAY8AP 1991
 OG SKETCH MAP: Bio Sketch Map
 GREG CHANEY & Crank
 TEAM 5
 SEGMENT: EV-20-A
 DATE: APRIL 30 1991
 AIR P.#: EXVDZ-65-14



LEGEND

BEDROCK	
BOULDER8	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE
 ROUGHLY

 10 METERS

3 10x20cm
 AP Patches
 PU
 8x5m

(A) AP 2%
 SOR 2%
 CV 10%
 CT 20%
 4x7m

AP 0.5x0.5m
 PU

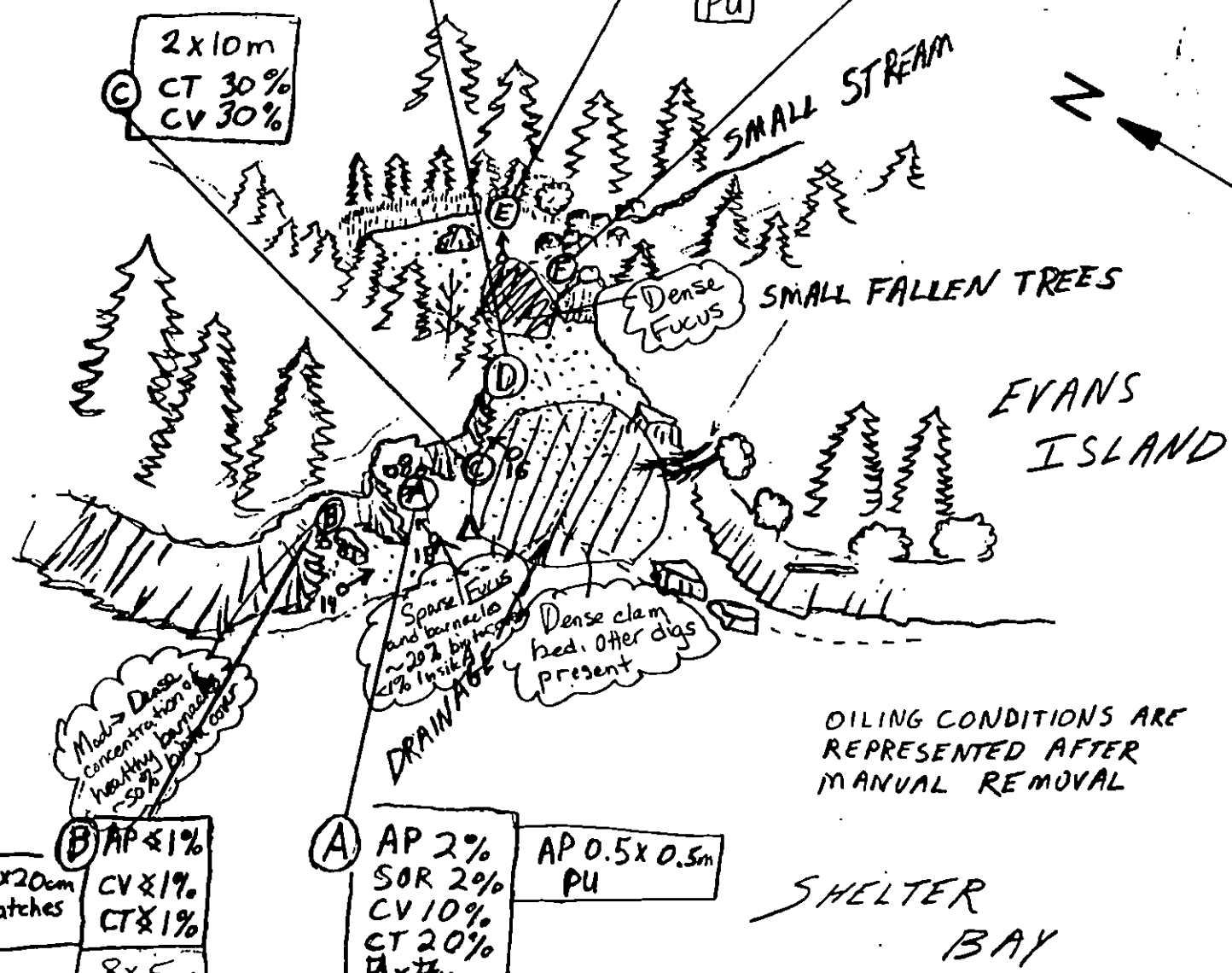
(B) AP 1%
 CV 1%
 CT 1%
 8x5m

(C) 2x10m
 CT 30%
 CV 30%

(D) 1x8m
 CT 30%
 CV 40%

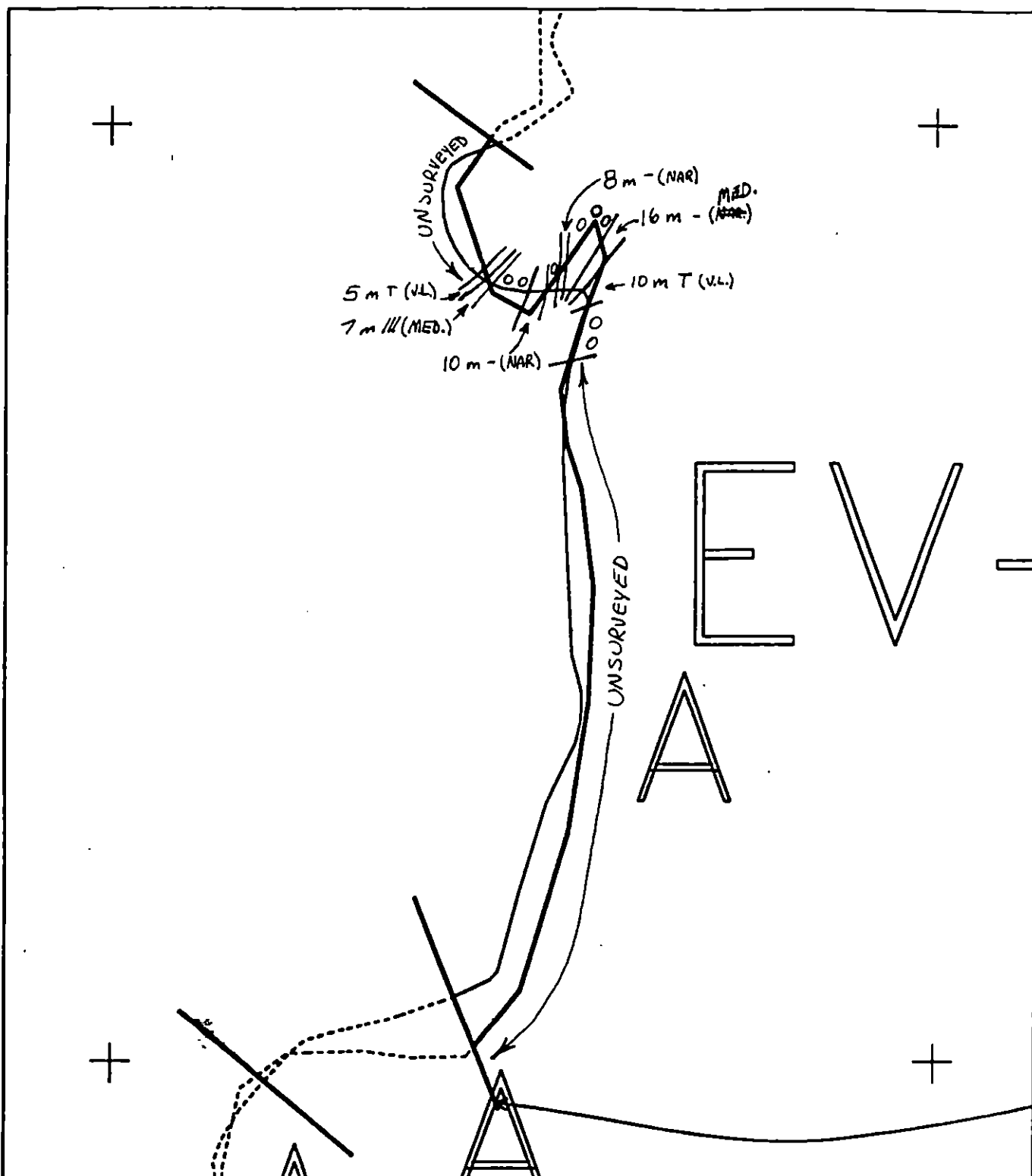
(E) 3x16
 AP 20%
 SOR 10%
 SHALLOW BEDROCK
 GRASS ABOVE
 2m² AP
 PU

(F) CV Trace
 CT Trace
 ON ROCK FACE
 0.5x10m



OILING CONDITIONS ARE
 REPRESENTED AFTER
 MANUAL REMOVAL

SHELTER
 BAY

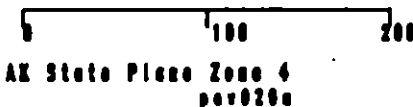


XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

EV020 A

ADEC Subsegment Length: 647m

METERS



AZ State Plane Zone 4
 pr020a



Subdivision Field Map

Map Key: PWSEV020A

Name: GREG CHANEY

Date: APRIL 30 1991

Date Entered:

REVISED: F.W. 5/3/91
 REVISED: M.C. 5/3/91

1991 MAYSAP EVALUATION

SEGMENT: EV 020 SUB: A REGION: PWS SURVEY DATE: 4/30/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Rachel Jan Oren Date: 5/17/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 17 1991 FOSC APPROVAL DATE: 25 MAY 1991

ADEC [Signature]

FOSC

EXXON [Signature]

[Signature]
E.C. PAGE, CDR, USCG
CHIEF OF STAFF, FOSC

USCG [Signature]

NOAA [Signature]

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT EV - 20 SUBDIVISION A DATE 4 / 30 / 91

ADEC

NAME John Hayes SIGNATURE [Signature]

☐ NTR

This small creek core still has some small patches of AP/MS in ryegrass although grass is doing fine. Crew picked up AP bank below ST2 at TBs in USTZ. No subsurface oiling observed here and remaining oil does not need ^{extensive manual} treatment at this time. As CVC group will be in area they may want to rake ryegrass + P.O. any remaining SOR+AP on this segment, see Land Manager comments.

EXXON

NAME Marthinez N.J. SIGNATURE [Signature]

☒ NTR

Area looks very good, any oil left is weathering nicely. Further work would be of no environmental benefit.

LANDMANAGER

NAME Steve WARD OF CVC SIGNATURE [Signature]

☐ NTR

Chenega Local Response should clean this Area - No-Sub Surface Found But there is Enough Surface oil to Warrant a clean-up. This is a High-Substance Area for Chenega and a good clam bed right on this section. Clams can be protected by picking up Remaining oil in grass and between rocks.

USCG/NOAA

NAME Dreher / Hodges SIGNATURE [Signature]

☒ NTR

Oil coat/coverage spatter with pine needles on most upper Area rocks. Scattered tar patties in upper stream area were picked up.

5

SEGMENT EV 20

SUBDIVISION A.

DATE Apr. 1, 30, 191

ENERGY LEVEL: ☐ H ☐ M ☐ L

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

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

EST. OIL CATEGORY LENGTH: W 0 m M 7 m N ~~3~~ m VL 15 m NO 76 m US 742 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 - 5

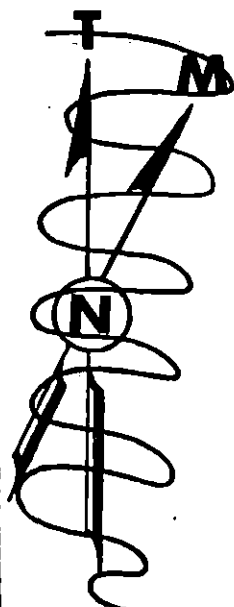
FRAMES 13-17

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

OG COMMENTS: THIS SURVEY WAS CONDUCTED IN DRIVING RAIN SO LIGHT OILING CONDITIONS WERE DIFFICULT TO OBSERVE

REVISED: F.W. 5/3/91
REVISED: M.C. 5/3/91

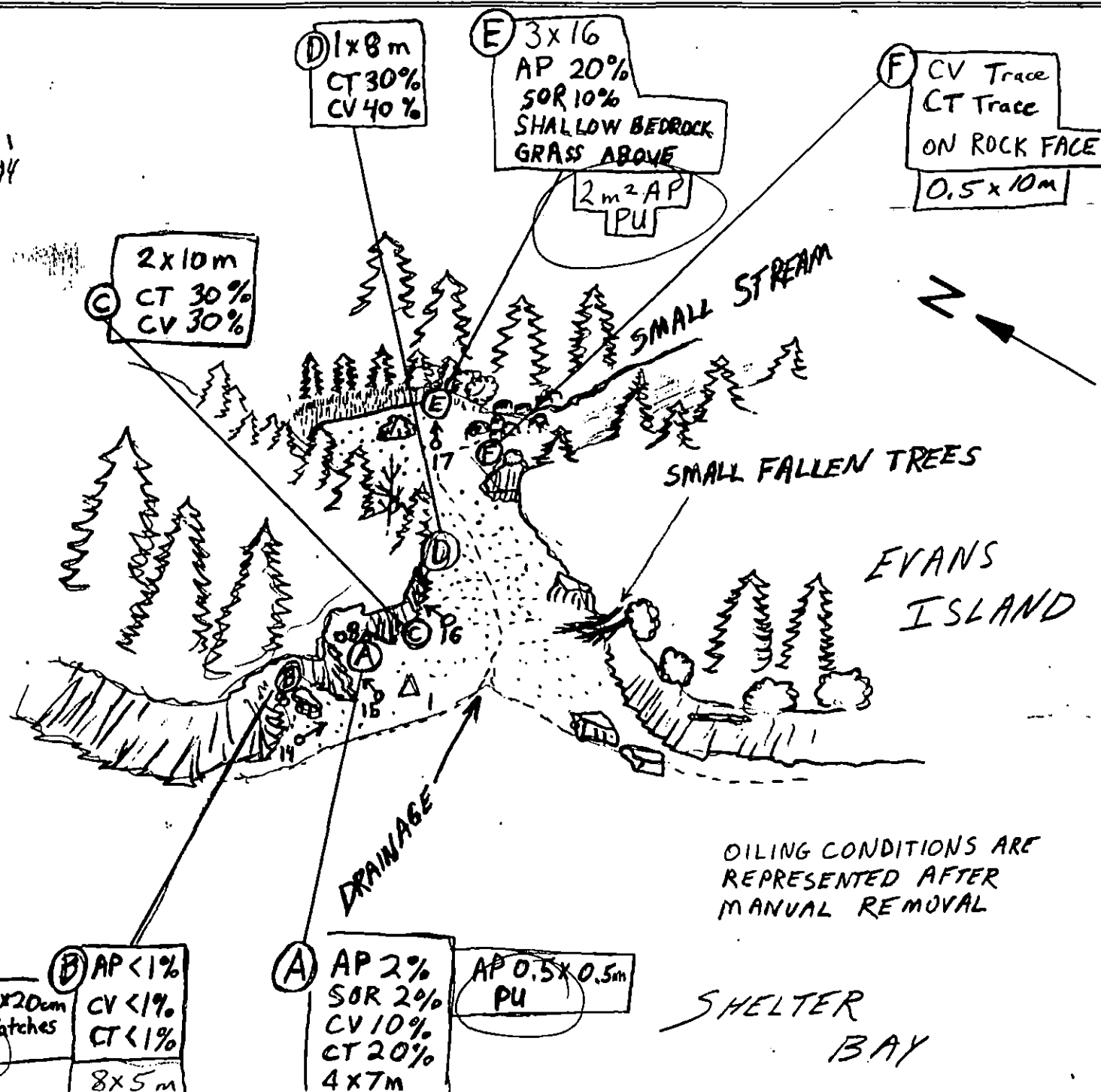
MAYBAP 1991
 OG SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV-20-A
 DATE: APRIL 30 1991
 AIR P.#: EX VRZ-1-65-14



LEGEND

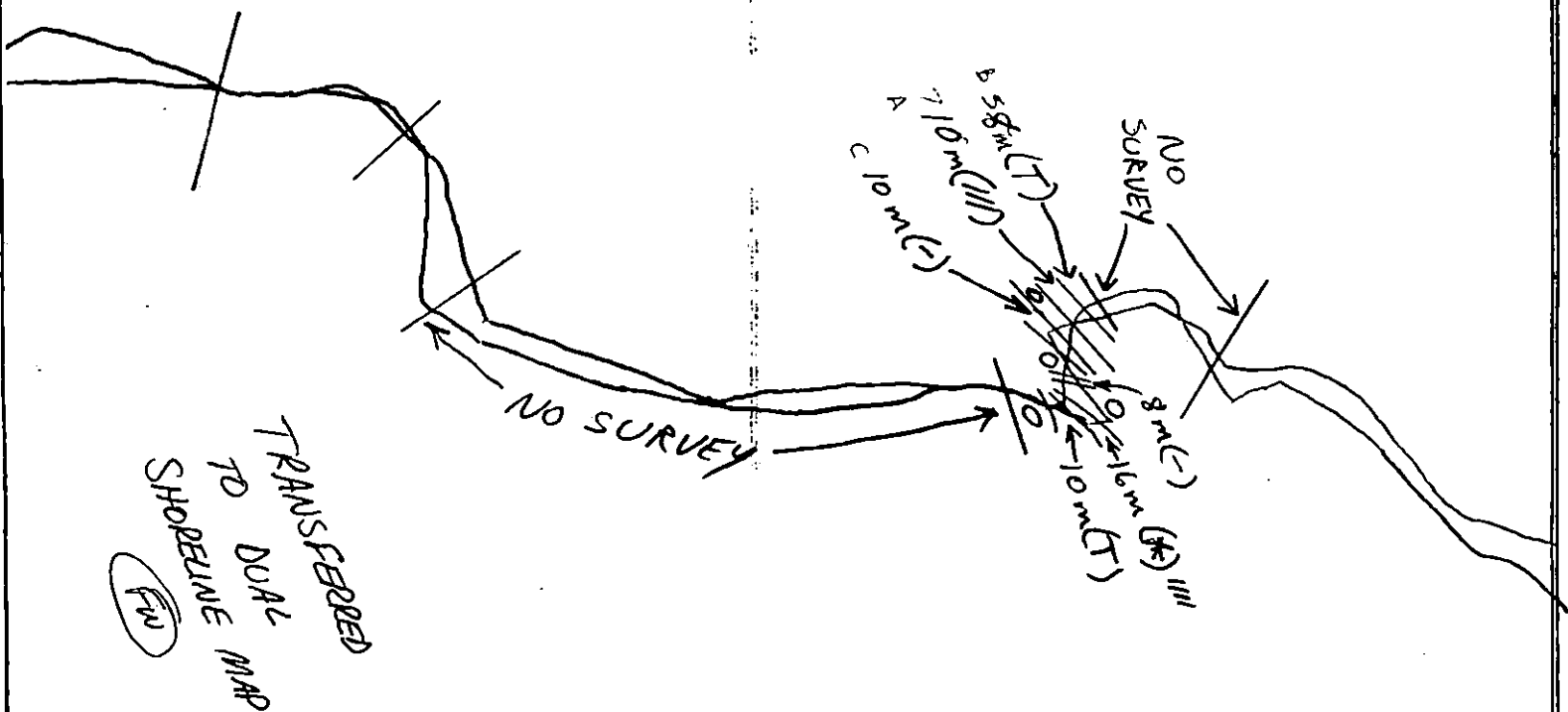
BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE
 ROUGHLY
 10 METERS



REVISED: F.W. S/3/91
 REVISIONS: M.C. 5/3/91

MAYSAP 1991
~~SO SKETCH MAP~~ TRACED COMPUTER MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV-20A
 DATE: April 30 91
 AIR P.N.:



EV 20 A

Note: This computer dual
 shoreline map was traced from
 the old S5AT package because
 a new one couldn't be found,

Greg Chaney

April 30 1991

REVISED: F.W. 5/3/91
 REVISOR: M.L. 5/3/91

MAYSAP BIOLOGICAL SUMMARY FORM

pg 1 of 2

TEAM # 5

DATE 30 April

SEGMENT # EV-20

TIDAL HEIGHT(Range) ~ -1.0 → 0

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 1-2'

WIND SPEED/DIRECTION 10-15 knots / N

PHOTOGRAPHS: ROLL # MAYSAP 5

FRAME # 17

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

(A) and Pit #1 - Area located in UITZ cobble with <1% biota cover including rare barnacles, amphipods and filamentous green algae. Barnacles are tightly sealing their inner plates. No other intertidal macro-biota was observed in the area. Rock outcrop 2m SE of site has ~20% biota cover with sparse barnacles and sparse Fucus sporelings. Below site is clam bed and ~20% Fucus cover.

(B) Area is located 30m SW of A in the UITZ. There is ~50% biota cover dominated by a moderate to dense concentration of healthy barnacles. Fucus is sparse, maturing conceptacles and stipe-only plants are present. Mussels are rare. Below site is a clam bed dominated by Prototheca (little-neck), Saxidomus (butter) and Trexus (horse) also present. There are sparse limpets and Littorina (juvenile Littorina present).

(C) Area is located along rock face high in UITZ and in SUPRA. No macro-biota observed to be in direct contact with oil. Approx. 30cm above site mosses are present and approx. 30cm below site Fucus with maturing conceptacles and tightly sealing rare barnacles are present. In MITZ on rock face Fucus dominates ~20% of plants are stipes-only (sporelings not present). Below rock is dense clam bed dominated by <4yr old Prototheca. Many other dgs present.

(D) Area is located in UITZ and MITZ ~5m west of stream. There is ~20% biota cover. Barnacles are predominant species - animals are tightly sealing their inner plates. Fucus is present - no stipe-only plants and many sporelings are present. There are rare mussels, Littorina and limpets. Approx. 5m North of site there is a dense Fucus bed and a sparse intercobble mussel bed.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
None observed			
Eagles			
Seabirds			
Waterfowl			
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
None obs.			
Sea Otters			
Pinnipeds (specify)			
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

Team 5
Segment EV-20
Subdivision A
Sea State 1-2'

Date 30 April 1991
Tidal Height $\sim -1.0 \rightarrow 0$
Biologist Crank
Wind Speed/Direction 10-15 knots/N

pg 2 of 2

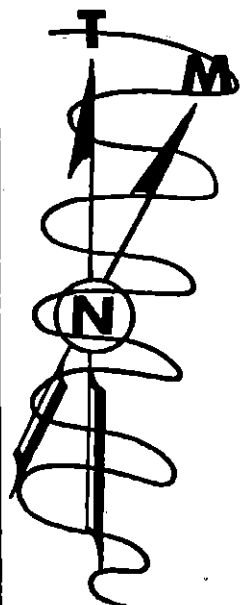
Comments (cont.)

(E) Area is located in SUPRA and UITZ. There is a 30cm^2 patch of oiled rye grass, grass adjacent to patch is sprouting - see photo MAYSAP roll 5 frame 17. Green 'lawn' grass is also present in site. In UITZ Fucus sporelings are dominant species with $\sim 10\%$ biota cover. Barnacles are rare; Littorina and limpets are sparse. Rare Costomblen casings are present. Seven meters below site there is a dense Fucus bed in the fresh water stream.

(F) Area is a band around and near the top of a large boulder. No biota located w/ the band. Moderate limpets and Littorina; sparse Nucella (whorl), and barnacles and rare mussels (various age classes) located on boulder below oil.

Site is a low energy beach with a fresh water runoff stream. LITZ is a dense clam bed dominated by $< 4\text{yr old}$ Prototheca, Saxidomus also present. There is $\sim 20\% - 80\%$ Fucus cover with maturing conceptacles present. A rare concentrated intergravel mussel bed is also present. Otters have been utilizing area (digs evident). Eagle nest was not located.

MAYSAP 1991
 OG SKETCH MAP: Bio Sketch Map
 GREG CHANEY & Crank
 TEAM 5
 SEGMENT: EV-20-A
 DATE: APRIL 30 1991
 AIR P.#: EXVDZ-1-65-14



LEGEND

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

SCALE
 ROUGHLY
 10 METERS

3 10x20cm
 AP Patches
 PU
 CV 1%
 CT 1%
 8x5m

A AP 2%
 SOR 2%
 CV 10%
 CT 20%
 4x7m

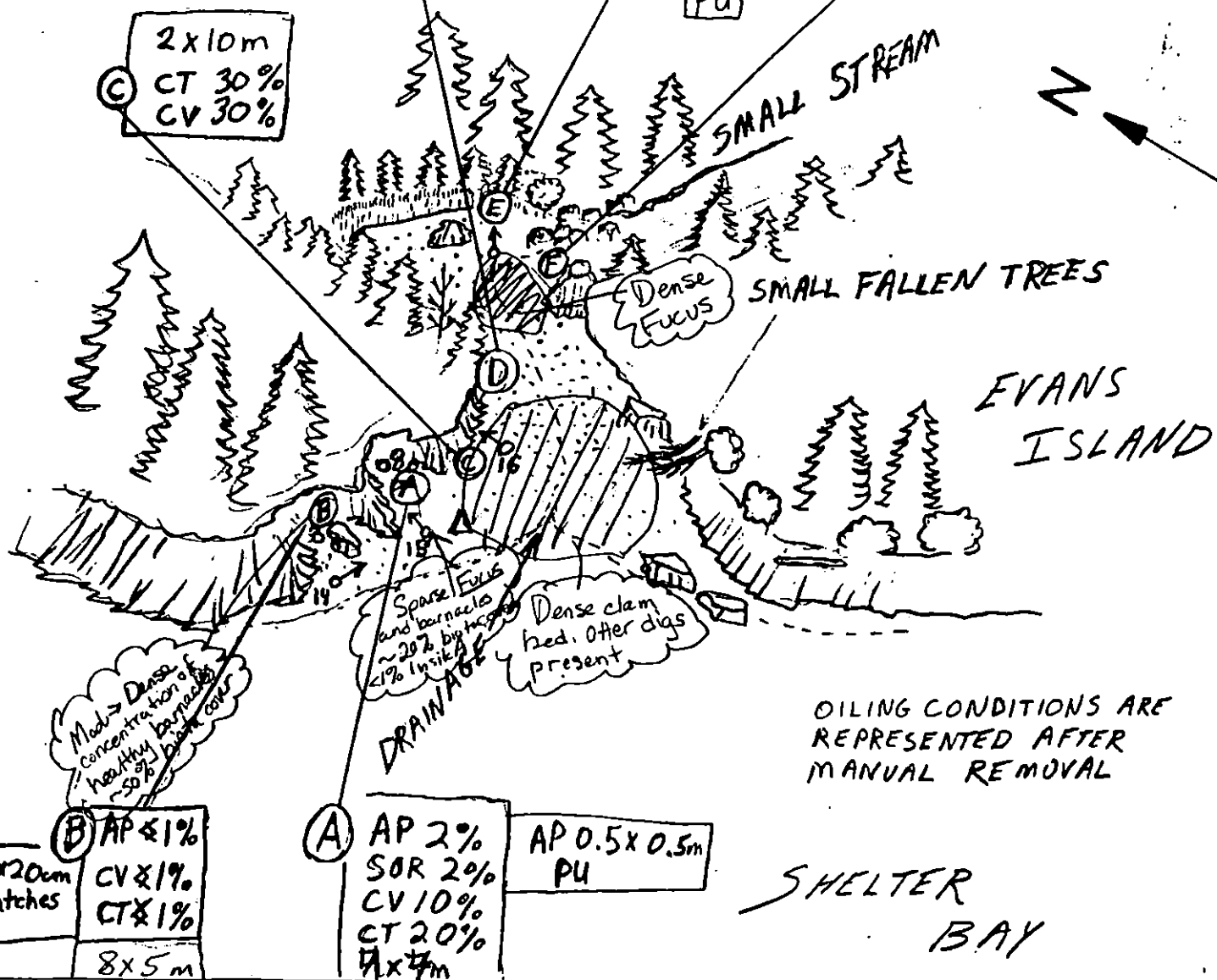
AP 0.5x0.5m
 PU

C 2x10m
 CT 30%
 CV 30%

D 1x8m
 CT 30%
 CV 40%

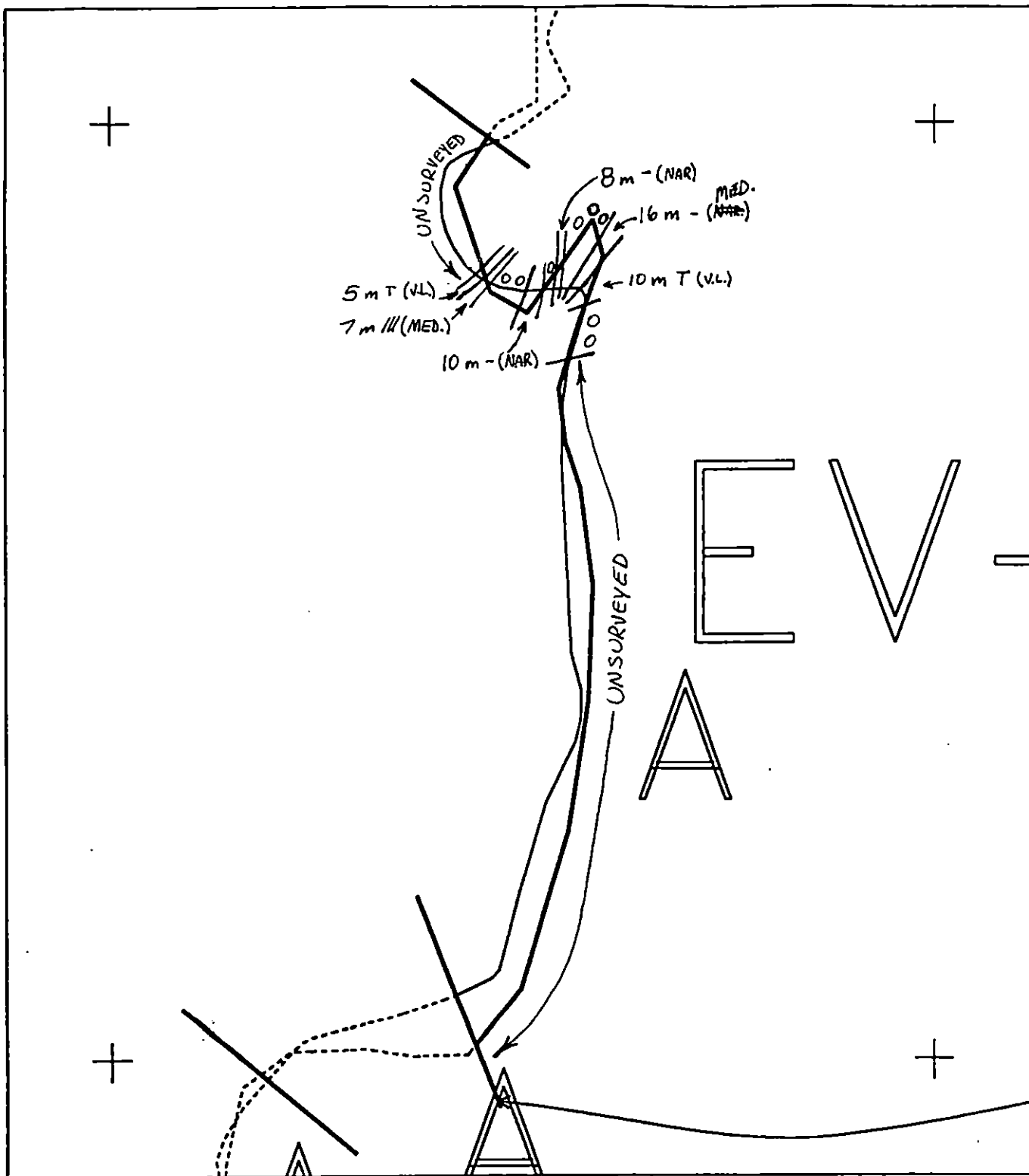
E 3x16
 AP 20%
 SOR 10%
 SHALLOW BEDROCK
 GRASS ABOVE
 2m² AP
 PU

F CV Trace
 CT Trace
 ON ROCK FACE
 0.5x10m



OILING CONDITIONS ARE
 REPRESENTED AFTER
 MANUAL REMOVAL

SHELTER
 BAY



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

EV020 A
 ADEC Subsegment Length: 847m
 METERS
 0 100 200
 AK State Plane Zone 4
 prv020a

Subdivision Field Map
 Map Key: PWSEV020A
 Name: GREG CHANEY
 Date: APRIL 30, 1991
 Date Entered:

REVISED: F.W. 5/3/91
 REVISED: M.C. 5/3/91

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-19

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ EV-19 SUBDIVISION A (1 OF 1) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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 93 m: No Oil 1337 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: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EV-19 SUBDIVISION: _____ DATE 4/7/90

USCG NOAA

NAME GARY SHIGENAKA

SIGNATURE Gary Shigenaka

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

SEGMENT CONSISTED OF BOULDER AND ROCK OUTCROP SHORELINE ON EVANS ISLAND, AT THE NORTHEASTERN APPROACH TO SHELTER BAY. SOME EVIDENCE OF OILING WAS NOTED IN THE FORM OF COAT/COVER ON THE SEAWARD FACES OF ROCK OUTCROPS NOT DIRECTLY EXPOSED TO SURF (I.E., LOCATED BEHIND OTHER OUTCROPS). WEATHERED STAIN AND COAT WERE FOUND ON ANOTHER PORTION OF BEACH (CLOSER IN TO SHELTER BAY AND WITH A MORE WESTERLY ORIENTATION, IN THE UPPER INTER-TIDAL ZONE. THIS STAIN AND COAT WAS SEEN ON LARGE BOULDERS, MOSTLY ON THE LEEWARD SIDE. IN ONE CASE, MOSS GROWING ON A BOULDER HAD BEEN COATED AND HAD DIED, BUT THERE WAS CLEARLY NEW MOSS GROWTH OVER THE WEATHERED OIL AND MOSS.

ALTHOUGH THE STAIN/COAT/COVER WAS OCCASIONALLY FOUND IN BANDS ON THIS SEGMENT, THIS WAS A SPORADIC OCCURRENCE. MUCH OF THE SEGMENT SHOWED NO SIGN OF OIL.

MUCH OF THE SUPRATIDAL THAT COULD BE DEFINED WAS COVERED WITH SNOW; THE UPPER PORTION OF BEACHES WERE FROZEN (AND SOMEWHAT DIFFICULT TO DIG IN!)

ADEC

NAME

John Hayes

SIGNATURE John Hayes

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Oiling observed consisted of Lb. staining on boulders + bedrock in UIZ. No S.S. oiling observed.

Supratidal zone was mostly covered with snow.

Beach was frozen so S.S. holes were difficult to dig in some areas although no S.S. oiling was observed where holes were dug. Beach appeared to be free of mobile oil + well washed.

LAND MANAGER

NAME JAMES A BARKER

SIGNATURE James A Barker

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

OBSERVED VERY LIGHT STAINING ON PROTECTED SIDES

OF ROCKS, STAINS WEATHERED. SMALL BANDS OF WEATHERED

OIL ALSO FOUND.

SHORELINE OILING SUMMARY

REVISION NO. 03/23/90

OG Mike Fogert ^{NOAA} ~~USCG~~ Gary Shigamara SEGMENT ST/ EV-19 (1 of 1)
 BIO Richard Ambrose LAND REP James A. Barker SUBDIVISION A
 EXXON Larry Olson ADEC John Hayes TIME 7:20 to 8:10
 TEAM NO.: 11 TIDE LEVEL: 1.5 to 2.8 DATE 4/7/90
 EST. SUBDIVISION LENGTH: 1414 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 40 % B 35 % C 15 % P 5 % G 5 % S — % M — % V — %
 SLOPE: Long 20 % Hang 50 % Vert 30 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W — m M — m N — m VL 35 m NO 1379 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	B	P	S	SP	BR	OR	OL	OC	OT	LT	LR	SU	U	M	V
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN				X		X							X			
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X		X	X

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris			

DEBRIS COLLECTED
☒ YES ☐ NOTYPE Pom Pom / Plastic#BAGS —

Photographs:

Roll No. —Frames —

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-DM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OC	NO		VO	UC	SP	BR	OR	OL	OC	OT	LT	LR	SU	U	M	V		
1	20					X	-		X									X					C, P, S
2	20					X	-		X									X					C, P, S
3	25					X	-		X									X					P
4	10					X	-		X									X					P, G, R
5	25					X	-		X									X					P, G
							-																

COMMENTS Only some Very light staining CT/S on the protected sides of rock outcrops and boulders was observed. The oil/tar appeared to be weathered (dull black tar stain). The oiling occurred in the MCTZ. The shore zone consists mostly of Boulder/Rock shore line with some pocket cobbie beaches.

OG M. loget
 SEGMENT ST/ EV-19
 SUBDIVISION A
 DATE 4 / 7 90

CHECKLIST

☐ N Arrow
☐ Approx. Scale
☐ Seg/Sub Bndry
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HWT/LTL
☐ SSI
☐ 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 $\rightarrow$
 Photo location, direction,
 and number

scale
 100 m

SKETCH MAP

Very light CT/S stain HITZ
 0.5m x 5m on protected
 side of rock outcrop

Very light CT/S stain HITZ
 1m x 10m on protected
 side of rock outcrop

Very light CT/S
 stain HITZ 0.5m x 5m
 on protected side of
 rock outcrop

very light CT/S
 10m x 0.5m stain
 on protected side
 of rock, HITZ

Very light CT/S 5m x 5m stain, HITZ

Legend

oooo - snow covered supra ITZ
 /// - Rock/Debris shore zone

Oil Character Length (m): AP PO CV CT ST 35 MS PT TB FL NO 1379

REVISED 03/04/00

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/ EVO19 Subdivision A Date (mo / day / yr) 4 / 7 / 90Time (24 hr) 0720 hrs Biologist Ambrose(A) Substrate type and % of segments:
(1) Bedrock 40 (2) Boulder 35 (3) Cobble 15 (4) Pebble 5 (5) Sand 5 (6) Silt —(B) Overall % cover of biota (% of segment): Dense 20 Moderate 20 Low 60

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

Photographs:
Roll No. —Frames —

BARNACLES

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

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

* Wildlife Observations/ General Comments: otter, mink, bald eagle, seal (hauled out on rock)
 Dense cover on bedrock walls in low to mid intertidal; on cobbles, dense filamentous algal cover in lower intertidal, otherwise fairly sparse.

Ecological Considerations:

711, ST: One mature bald eagle seen, but no nests.

* Additional wildlife observations: Pair of mature bald eagles with nest & immature nearby in EVO72, pair of mature eagles and nest in EVO05, plus 3 adult otters + 1 ba 2 bufflehead, 1 magpie, 1 deer, pair of mature eagles and one solitary mature eagle, 1 cormorant, 5 gulls, 3 unid. ducks, and 6 surf scoters.

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.

EV-19A

EV-18

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EV-19A

ADEC Segment Length: 1430m



Map Key: PWS-187

Name: Mike FojetDate: 4/7/90

Data Entered:

1991 MAYSAP EVALUATION

SEGMENT: EV 021 SUB: A REGION: PWS SURVEY DATE: 4/30/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

Y

Manual Pickup (Check as Req.)

X

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

X

Other

Other

COMMENTS:

INITIAL: Remove asphalt at locations A, B, D, E and F. Apply Customblen and Inipol after removal. Rake in customblen in area of pits 4 and 5.

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC

FOSC

EXXON

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT EV-21 SUBDIVISION A DATE 4/30/91

ADEC

NAME John Hayer SIGNATURE [Signature]

☐ NTR

☒ Treatment Recommended

Recommend manual crew remove remaining AP and Jor crew observed on surface particularly around boulders on Eastern half of beach. Sub-surface oiling on this beach needs a more complete survey to determine feasibility of tilling here. This fine grain beach would be tillable in the MITZ+UITZ if extent of subsurface oil merits this treatment. Beach was atest site previously at did not receive much treatment following ^{wash} 1989 or I recall.

EXXON

NAME Martinez N.J. SIGNATURE [Signature]

☐ NTR

There is some A/P patches that could be picked up also some debris. Since area is sensitive good job for CVC.

LANDMANAGER

NAME Steve Ward OF CVC SIGNATURE [Signature]

☐ NTR

Lots of manual can be done on this section to remove ASPHALT and lots of TRASH. There is quite a bit of ASPHALT on the surface and a very large amount of sub-surface oil. The sub surface is shallow to deep and a lg section of this beach could be tilled. A good study of the Ecological Risk to the Area should be conducted before any tilling is done. There are Good Wetlands and Salmon streams close to this Area. High Subsistence use by Cheheque Bay Residents.

USCG/NOAA

NAME Dreher / Hodges SIGNATURE [Signature]

☐ NTR

Oil coat with pine needles in upper rocks. Some tar patches found. Pits showed evidence of subsurface oiled sediment. Very lush focus mat in upper birm. Some manual pick up should be considered. HAD

TEAM NO. 51 MAYSAP SHORELINE OILING SUMMARY PAGE 5 OF 24
 OG CHANEY BIO CRANK SEGMENT EV 21
 ADEC HAYES LANDMANAGER WARD for CVC SUBDIVISION A
 EXXON MARTINEZ USCG/NOAA DREHER/HODGES DATE April 30, 1991

TIME 11:05 to 12:15 TIDE LEVEL +1 ft. to +4.5 ft. ENERGY LEVEL: ☐ H ☒ M ☐ L
 SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO WEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☒ RAIN ☐ SNOW
 TOTAL LENGTH SHORELINE SURVEYED: 164 m NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE
 EST. OIL CATEGORY LENGTH: W 0 m M 10 m N 15 m VL 139 m NO 0 m US 0 m

LOC	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A	S										B	M	3	60	✓	✓			Patches between boulders
B	P				S	S					BP	L	6	10		✓			Seaweed Drift + Covering
C	T				S						GPB	L	10	40		✓	✓		Distance Between Big B.
D	P										BG	M	1	5	✓				Old Grass Roots
E				S	T	S					B	M	5	10	✓				Boulders
F	T				T	S					CB	M	10	30		✓			

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 - 5 18-24
6 FRAMES 1

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	25							✓	-						✓		PG-PG	
2	25							✓	-	?	5	S			✓		PG-PG	high water table
3	30							✓	-	-	-	-			✓		PG-PG	
4	40			✓					25-30		-	-			✓		PG-PG	
5	20				✓				30-40	N	-	-			✓		PG-PG	
6	30							✓	10-20	Y					✓		PG-PG	
7	30							✓	-		0	S			✓		PG-PG	WATER FLOODED PIT

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

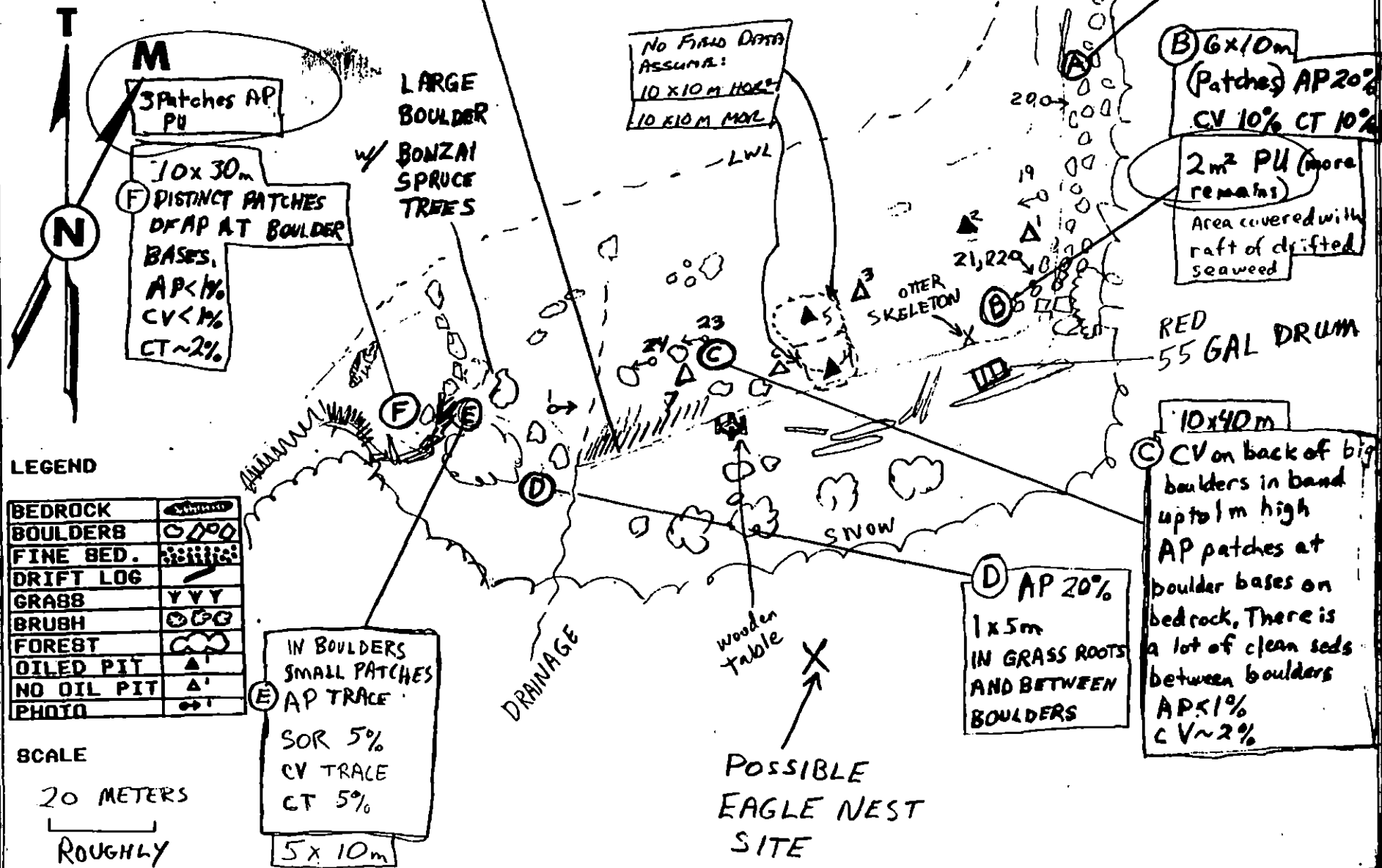
OG COMMENTS: AP REMAINS AT THIS SITE IN DISTINCT PATCHES, SOME ARE ACCESSIBLE WITHOUT DIFFICULTY. THE UITS WAS COVERED BY SEAWEEED DRIFT SO SOME AP MAY HAVE BEEN MISSED. SUBSURFACE OIL DISTRIBUTION IS COMPLEX AND WOULD REQUIRE FURTHER DELINEATION IF TREATMENT IS CONDUCTED.

REVISED: F.W. 5/3/91

REVISOR: M.C. 5/3/91

MAYBAP 1991
 OG SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: **EV 21A**
 DATE: **APR 30 91**
 AIR P.H.: **EXVDZ 165-12**

NOTE: SIX METER BAND OF THICK RAFTED
 SEAWEED IS COVERING HIGH INTERTIDAL ZONE.



Revised: F.W. 5/3/91
 Revised: M.C. 5/3/91

NAYSAP BIOLOGICAL SUMMARY FORM

pg 1 of 2

TEAM # 5

DATE 30 April 1991

SEGMENT # EV-21

TIDAL HEIGHT(Range) +1 → +4.5

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 1-2'

WIND SPEED/DIRECTION 10-15 knots/N

PHOTOGRAPHS: ROLL #

FRAME #

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

(A) Area is located in SUPRA and high UIZ. Moss, black lichen, white lichen, and drift *Fucus* only macro-biota found. Two meters below site there is a ~75% biota cover including a moderate 3m wide *Fucus* band with sporelings. Below *Fucus* band is an intergravel mussel bed including a moderate to dense 10x30m patch. Barnacles are sparse.

Pits 2,3,4:5 located on cobble/gravel high energy beach with ~10% biota cover

(B) Area is located in high UIZ in drift pocket. Drift algae and amphipods are the only biota. Sea Otter carcass adjacent to site; deceased more than 5 days - teeth are present in skull.

(C) Area is in the high UIZ in the driftline, includes pit #17. Boulders in area have *Fucus* sporelings, rare juvenile mussels and barnacles make up the approx 5% biota cover. 50% of the barnacles did not tightly seal their inner plates when stimulated. There are several eagle feathers in the driftline and one dead seaster (*Pycnospira*). Below site is a *Fucus* bed with ~25% cover on boulders and ~40% on cobble. Approx. 10% of the plants are stipe only. In the MITZ barnacles are moderate with a new set present; concentration increases to dense in the UIZ. Juvenile mussels are present in boulder cracks. Limpets and *Littorina* are sparse; *Littorina* juveniles are present.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2 Possible Nest	
Seabirds			
Waterfowl	1	1	
Gulls/Kittiwakes	1	5	
Shorebirds			
Corvids	1	1	
Other Birds	2	? - heard	

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

Shoreline subdivision map showing important biological features attached.

REVIEWED. M.C. 5/5/91

Team #5

Segment EV-21

Subdivision A

Sea State 1-2'

Date 30 April 1990

Tidal Height +1 $\rightarrow$ +4.5

Biologist Crank

Wind Speed/Direction 10-15 knots /N

pg 2 of 2

Comments (cont)

(D) Area is located high in the UTZ in angular cobble in the lee of boulders.

Mosses, black lichen and drift algae (herring spawn on some drift) were the only macro-biota observed to be within the site.

Ten meters below the site there is ~40% biota cover including Fucus (many plants have epiphytes), sparse to moderate barnacles, moderate Littorina, sparse limpets and hermit crabs.

(E) Area is located high in the UTZ ~10m west of D. Biota similar to area (D). Fish bones were present on top of knoll.

(F) Area is located high in the UTZ, in and below the driftline. No intertidal biota present. Five meters below, Fucus sporlings and barnacles are sparse covering ~20% of the small boulders and cobbles. Filamentous green algae, Ulva (algae) and rare mussels are also present below site.

Large amount of drift Fucus was present in the UTZ. Low biota cover on gravel beach (~10%) and up to 80% cover on the boulder/rock beach borders.

There appears to be an inactive Eagle Nest behind gravel beach. A dead sea otter (older than 5 days) was also found, all the teeth are present in both jaws.

Some of the tree tops appear to have been stripped (porcupine activity?).

REVIEWED: M.L. 5/3/91

MAYBAP 1991
 OG SKETCH MAP: Bio Map
 GREG CHANEY, Crank
 TEAM 5
 SEGMENT: EV 21A
 DATE: April 30 91
 AIR P.N: EXVDZ LGS-12

NOTE: SIX METER BAND OF THICK RAFTED
 SEAWEED IS COVERING HIGH INTERTIDAL ZONE.
 Fucus drift collection pocket



M
 3 patches AP
 PU
 10x30m
 F DISTINCT PATCHES
 OF AP AT BOULDER
 BASES
 AP < 1%
 CV < 1%
 CT ~ 2%

LARGE
 BOULDER
 w/ BONZAI
 SPRUCE
 TREES

Intercobble Mussel
 Bed with 10x30m
 patch of moderate to
 dense concentration

Gravel beach with
 low biota cover ~10%
 in LITZ

Fucus band
 3m wide
 with sporadic
 patches

A AP ~ 5%
 3x60m
 patches AP
 in Boulders

B 6x10m
 (patches) AP 20%
 CV 10% CT 10%
 2m² PU (more
 remains)
 Area covered with
 raft of drifted
 seaweed

RED
 55 GAL DRUM

10x40m
 C CV on back of big
 boulders in band
 up to 1m high
 AP patches at
 boulder bases on
 bedrock. There is
 a lot of clean sed
 between boulders
 AP < 1%
 CV ~ 2%

D AP 20%
 1x5m
 IN GRASS ROOTS
 AND BETWEEN
 BOULDERS

E IN BOULDERS
 SMALL PATCHES
 AP TRACE
 SOR 5%
 CV TRACE
 CT 5%
 5x10m

DRAINAGE
 Eagle feathers
 in drift line
 wooden
 table

POSSIBLE
 EAGLE NEST
 SITE Appears inactive

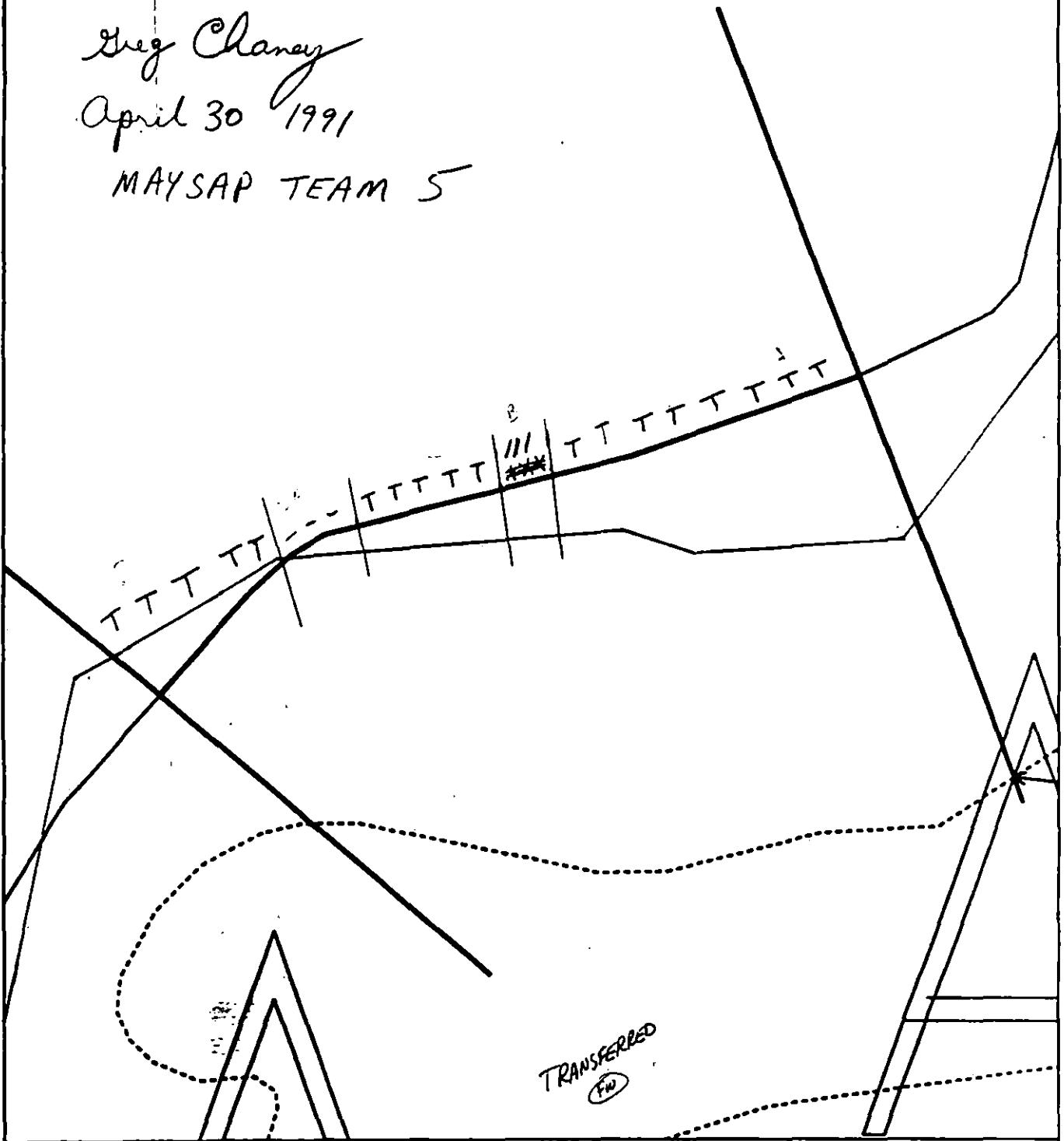
LEGEND

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

SCALE

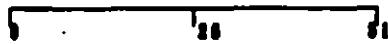
Greg Chaney
April 30 1991

MAYSAP TEAM 5



EV021

METERS



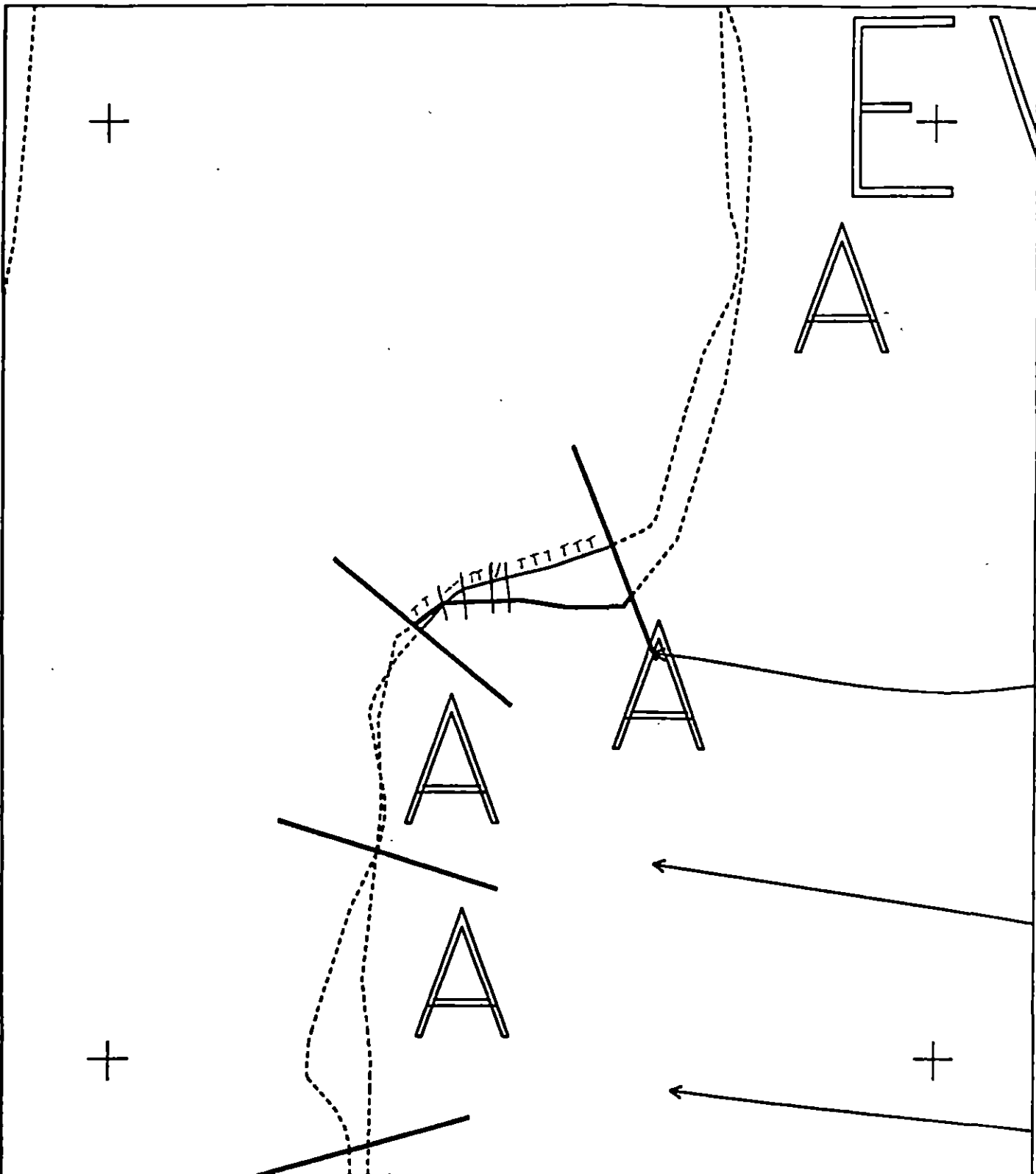
AS State Plane Zone 4
200021

Segment Reference Map
Map Key: PVSEV021



EAGLE NEST

REVIEWED: F.W. 5/3/91
REVIEWED: M.C. 5/3/91



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

EV021 A
 ADEC Subsegment Length: 184m
 METERS
 0 100 200
 AK State Plane Zone 4
 prv021a



Subdivision Field Map
 Map Key: PWSEV021A
 Name: GREG CHANEY
 Date: APRIL 30, 1991
 Date Entered:

REVISED: F.W. 5/3/91
 REVIEWED: M.C. 5/3/91

1991 MAYSAP EVALUATION

SEGMENT: EV 021 SUB: A REGION: PWS SURVEY DATE: 4/30/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

Rachel Don Oase

5/17/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

Y

Y

Y

Manual Pickup (Check as Req.)

X

X

B.

X

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

X

X

Other

Other

COMMENTS:

B.

+ H50R

INITIAL: Remove asphalt at locations A, B, D, E and F. Apply Customblen and Inipol after removal. Rake in customblen in area of pits 4 and 5.

TAG: MANUALLY TILL IN AREA OF PIT 5 (HOR) TO DEPTH OF OIL PRIOR TO BIO APPLICATION

FOSC: NO BIO - DUE TO CVC'S CONCERNS

[Signature]

TAG APPROVAL DATE: MAY 17 1991

FOSC APPROVAL DATE: 5/25/91

ADEC

EXXON

USCG

NOAA

FOSC

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

[Signature]

[Signature]

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT EV-21 SUBDIVISION A DATE 4/30/91

ADEC

NAME John Hayer SIGNATURE [Signature]

☐ NTR ☒ Treatment Recommended

Recommend manual crew remove remaining A/P and SOR crew observed on surface particularly around boulders on Eastern half of beach. Sub-surface oiling on this beach needs a more complete survey to determine feasibility of tilling here. This fine grain beach would be tillable in the MITZ+VITZ if extent of subsurface oil merits this treatment. Beach was atent site previously as it did not receive much treatment following ^{wash} 1989 as I recall.

EXXON

NAME Martinez N.J. SIGNATURE [Signature]

☐ NTR There is some A/P patches that could be picked up also some debris. Since area is sensitive good job for CVC.

LANDMANAGER

NAME Steve Ward OF CVC SIGNATURE [Signature]

☐ NTR Lots of manual can be done on this section to Re-move ASPHALT and Lots of TRASH. There is quite a bit of ASPHALT on the surface and a very large amount of Sub-Surface oil. The Sub Surface is shallow to deep and a lg section of this Beach could be tilled. A good study of the Ecological Risk to the Area should be Conducted before any tilling is done. There are Good Ocean Beds and Salmon Streams close to this Area. High Subsurface use by Chehege Bay Residents.

USCG/NOAA

NAME Dreher / Hodges SIGNATURE [Signature]

☐ NTR Oil coat with pine needles in upper rocks. Some tar patches found. Pits showed evidence of subsurface oiled sediment. very lush focus mat in upper birm. Some manual pick up should be considered. HARD

TEAM NO. 5

PAGE ____ OF ____

BIO _____ **CRANK**

SEGMENT EV 21

SUBDIVISION 77

DATE April 30 1911

TIME 11:05 to 12:15

TIDE LEVEL + 1 ft. to + 4.5 ft.

ENERGY LEVEL: ☐ H ☒ M ☐ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 164 m

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

EST. OIL CATEGORY LENGTH: W 0 m M 10 m N 15 m VL 139 m NO 0 m US 0 m

[illegible]

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

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

PHOTO ROLL # MAYSAP-

5 - 5 18-24
6 FRAMES 1

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	25							✓	-						✓		PG-PG	
2	25						✓	✓	-	?	5	S			✓		PG-PG	high water table
3	30							✓	-	-	-			✓			PG-PG	
4	40			✓					25-30		-	-		✓			PG-PG	
					✓				30-40	N	-	-		✓			PG-PG	
5	20		✓						10-20	Y				✓	✓		PG-PGC	
6	30						✓		?	-	0	S		✓			PG-PG	WATER FLOODED PIT
7	30						✓		-					✓			PG-PG	

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

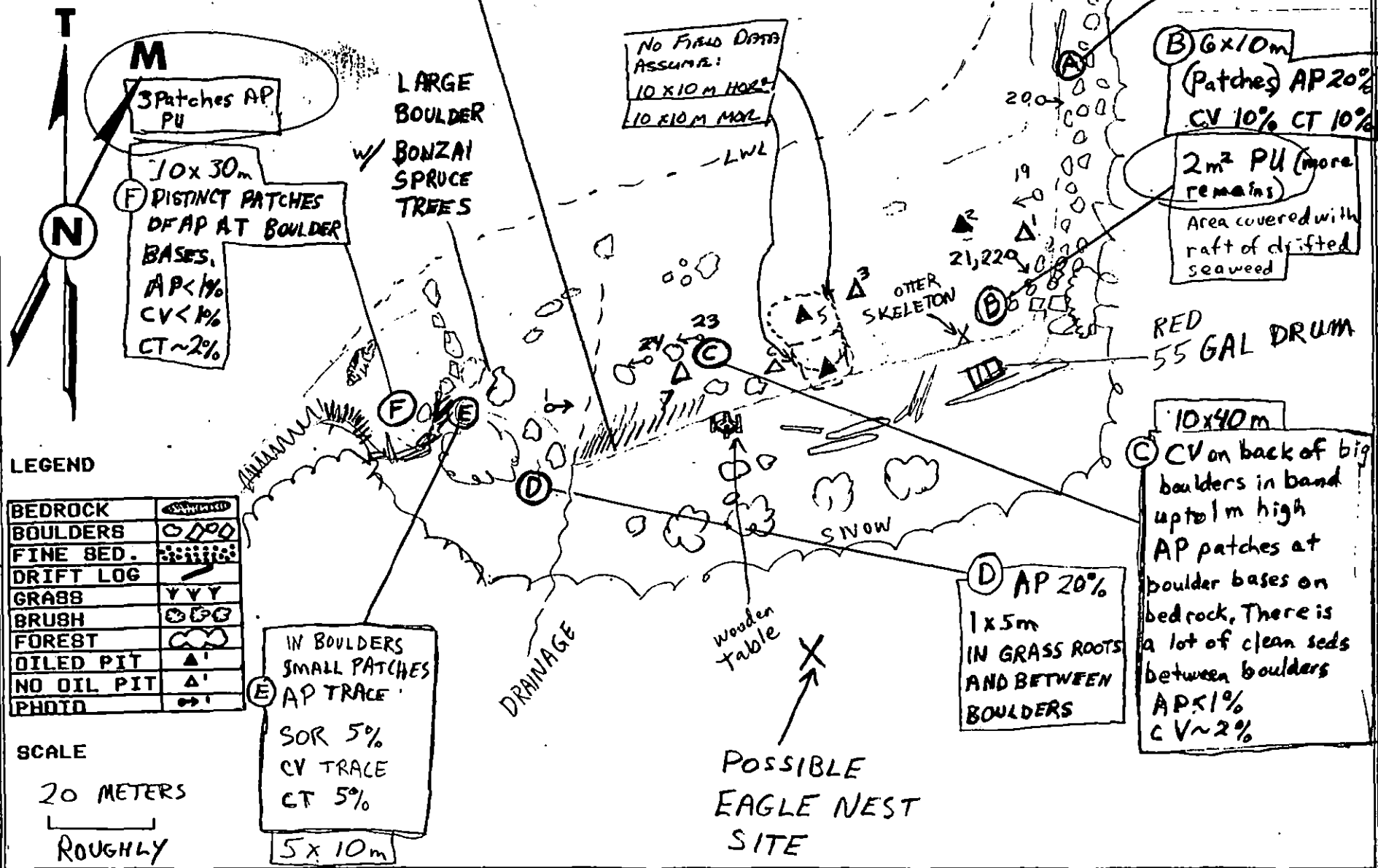
OG COMMENTS: AP REMAINS AT THIS SITE IN DISTINCT PATCHES. SOME ARE ACCESSIBLE WITHOUT DIFFICULTY. THE UITS WAS COVERED BY SEAWEED DRIFT SO SOME AP MAY HAVE BEEN MISSED. SUBSURFACE OIL DISTRIBUTION IS COMPLEX AND WOULD REQUIRE FURTHER DELINEATION IF TREATMENT IS CONDUCTED.

REFUSED: F.W. 5/3/91

REVRBOR: M.C. 5/3/91

MAYSAP 1991
 OG SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV 21A
 DATE: April 30 91
 AIR P.#: EXVDZ LGS-12

NOTE: SIX METER BAND OF THICK RAFTED
 SEAWEED IS COVERING HIGH INTERTIDAL ZONE.



Reviewed: F.W. 5/3/91
 Revised: M.C. 6/3/91

MAYSAP BIOLOGICAL SUMMARY FORM

pg 1 of 2

TEAM # 5

DATE 30 April 1991

SEGMENT # EV-21

TIDAL HEIGHT (Range) +1 → +4.5

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 1-2'

WIND SPEED/DIRECTION 10-15 knots / N

PHOTOGRAPHS: ROLL #

FRAME #

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

(A) Area is located in SUPRA and high UITZ. Moss, black lichen, white lichen, and drift *Fucus* only macro-biota found. Two meters below site there is a ~75% biota cover including a moderate 3m wide *Fucus* band with sporelings. Below *Fucus* band is an intergravel mussel bed including a moderate to dense 10x30m patch. Barnacles are sparse.

Pits 2,3,4;5 located on cobble/gravel high energy beach with ~10% biota cover

(B) Area is located in high UITZ in drift pocket. Drift algae and amphipods are the only biota. Sea Otter carcass adjacent to site, deceased more than 5 days - teeth are present in skull.

(C) Area is in the high UITZ in the driftline, includes pit #17. Boulders in area have *Fucus* sporelings, rare juvenile mussels and barnacles - make up the approx 5% biota cover. 50% of the barnacles did not tightly seal their inner plates when stimulated. There are several eagle feathers in the driftline and one dead seastar (*Pycnopodia*). Below site is a *Fucus* bed with ~25% cover on boulders and ~40% on cobble. Approx. 10% of the plants are stipe only. In the MITZ barnacles are moderate with a new set present. Concentration increases to dense in the UITZ. Juvenile mussels are present in boulder cracks. Limpets and *Littorina* are sparse; *Littorina* juveniles are present.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2 Possible Nest	
Seabirds			
Waterfowl	1	1	
Gulls/Kittiwakes	1	5	
Shorebirds			
Corvids	1	1	
Other Birds	2	? - heard	

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

Shoreline subdivision map showing important biological features attached.

REVIEWED. M.C. 5/5/91

Team #5

Date 30 April 1990

pg 2 of 2

Segment EV-21

Tidal Height +1 → +4.5

Subdivision A

Biologist Crank

Sea State 1-2'

Wind Speed/Direction 10-15 knots /N

Comments (cont)

(D) Area is located high in the ULTZ in angular cobble in the lee of boulders.

Mosses, black lichen and drift algae (herring spawn on some drift)

were the only macro-biota observed to be within the site.

Ten meters below the site there is ~40% biota cover including

Fucus (many plants have epiphytes), sparse to moderate barnacles, moderate Littorina, sparse limpets and hermit crabs.

(E) Area is located high in the ULTZ ~10m west of D. Biota similar to area (D). Fish bones were present on top of knoll.

(F) Area is located high in the ULTZ, in and below the driftline. No intertidal biota present. Five meters below, Fucus sporlings and barnacles are sparse covering ~20% of the small boulders and cobbles. Filamentous green algae, Ulloa peltis (algae) and rare mussels are also present below site.

Large amount of drift Fucus was present in the ULTZ. Low biota cover on gravel beach (~10%) and upto 80% cover on the boulder/rock beach borders.

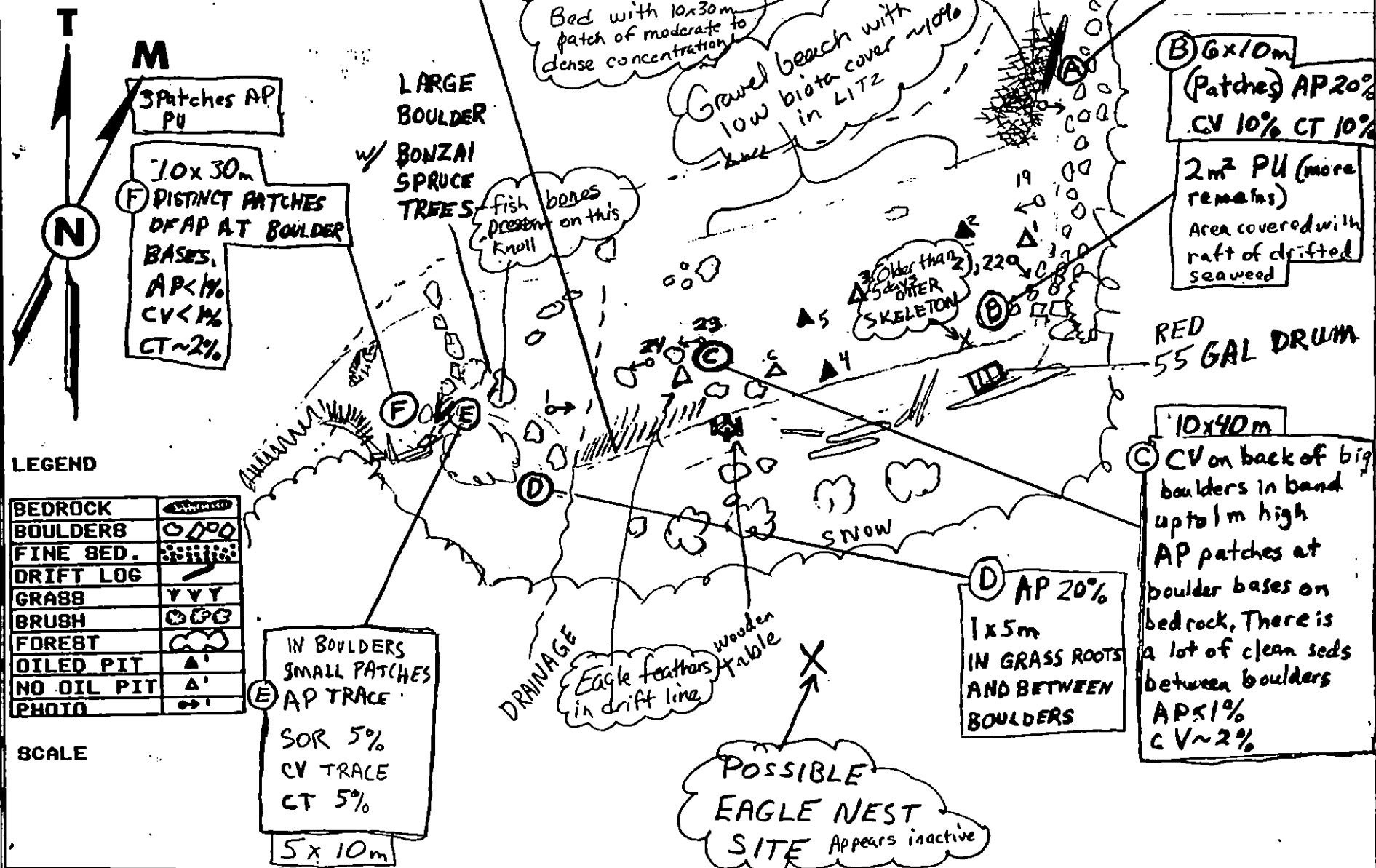
There appears to be an inactive Eagle Nest behind gravel beach. A dead sea otter (older than 5 days) was also found, all the teeth are present in both jaws.

Some of the tree tops appear to have been stripped (porcupine activity?).

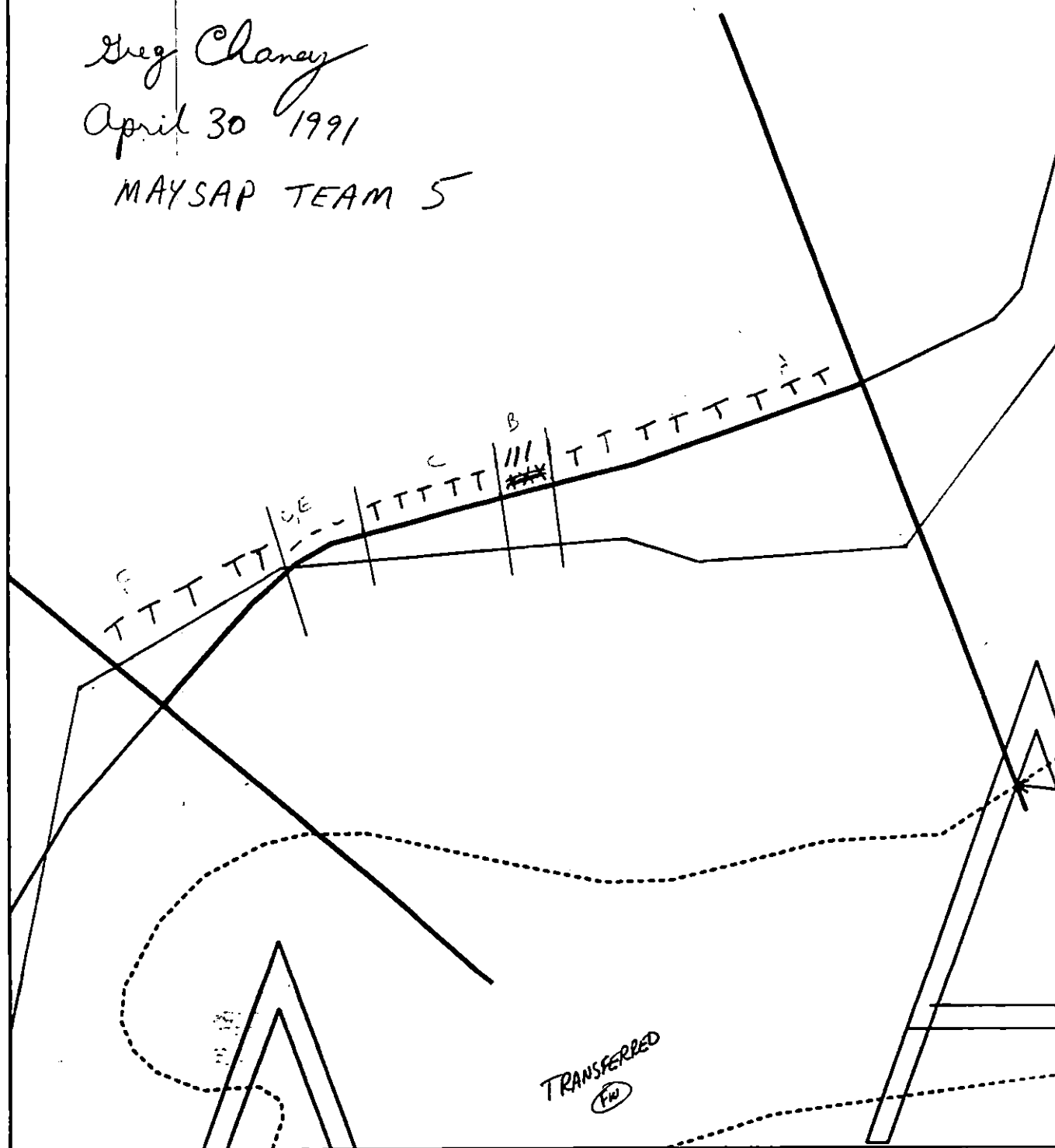
REVIEWED: M.C. 5/15/91

MAY8AP 1991
 DG SKETCH MAP: Bio Map
 GREG CHANEY: Crank
 TEAM 5
 SEGMENT: **EV 21A**
 DATE: **April 30 91**
 AIR P.H.: **EXVDZ LGS-12**

NOTE: SIX METER BAND OF THICK RAFTED
 SEAWEED IS COVERING HIGH INTERTIDAL ZONE.
 Fucus drift collection pocket



MAYSAP TEAM 5



NOTES



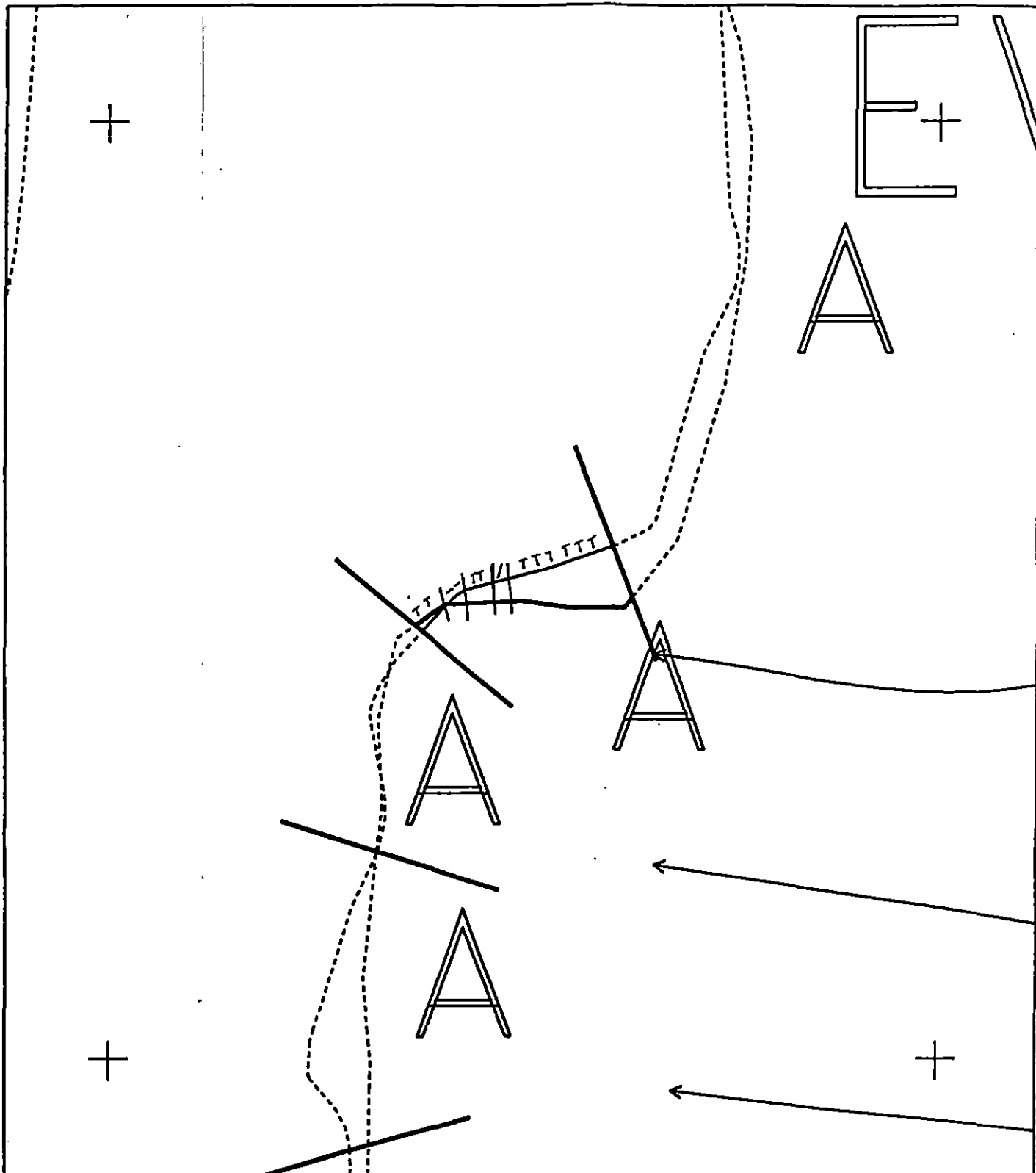
AR State Plane Zone 4
pov021

Map Key: PUSRV021



EAGLE NEST

REVIEWED: MC 5/3/91



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

EV021 A
 ADEC Subsegment Length: 164m
 METERS

AK State Plane Zone 4
 pr021a



Subdivision Field Map
 Map Key: PWSEV021A
 Name: GREG CHANEY
 Date: APRIL 30, 1991
 Date Entered:

REVISED: F.W. 5/3/91
 REVIEWED: M.C. 5/3/91

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-20

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ EV-20 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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 228 m: Narrow 99 m: V.Light 520 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 Removal	☐ Beach Cleaner
	☐ Other (see comments)

COMMENTS: Recommended treatment includes removal of tarmat and manual pick up of oiled vegetation and tarballs. Work should be conducted after 6/1 and with approval of 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 (8/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (8/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrasses. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- ✓ 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (8/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (8/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 ✓ 7JJ Deer harvesting (8/15 to 2/28)
 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/ EV-20 SUBDIVISION: A (1001) DATE 8-17-90NAME Michael RuelmanSIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Predominately narrow stage boulder/cobble shoreline with stain band 3m wide at southern end tapering to 1m moving north. Heavier coat was seen on back & under sides of rocks and in crevices. Sporadic patches of asphalt occurred in underlying gravel. No oil was observed thru the middle of the segment. A 2m band of coat under rocks was seen above Ficus zone just south of pocket beach. The pocket beach was highly protected with vertical rock walls along either side of entrance. A lg rock outcrop also blocks entrance. The outcrop & rock walls have bottle top stain ring (1m) Cobble boulders at the band were coated, including grass debris

ADEC

NAME John HayesSIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

① Manual pick up of asphalt patches & manual mop up of oil UITE 3X30m. Band (see sketch map)

② Manual removal of oiled grass + oil beneath grass & oiled vegetation in 2 pocket beaches on sketch map #2. Oil accumulations on boulder tops & 1m wide + surfactant pods would be appropriate.

③ Pocket beach #3 manual removal of tar band incl subsurface oil to 2cm.

LAND MANAGER

NAME

SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

NORTHERN : SOUTHERN SEGMENTS HAD STAIN : BANDS OF ASPHALT, SOUTHERN SEGMENT ROCKS : COBBLE BAND OF ASPHALT 3m X 30m RUNS. NORTH BAND THING W/ 2m X 30m ASPHALT PATCH, CONTINUING NORTH STAIN : COVE BECAME BROKEN DISTRIBUTION. AT THE NORTH END OF SEGMENT FOUND ORIENT COVE. UPPER TIDAL AND SUPRATIDAL PATCHES OF OIL THAT WERE FOUND. AREAS EAST WEST OF COVE & LOWER TIDAL PATCHES, CONTINUING. LIGHT STAIN PRESENT IN LOWER TIDAL.

REVISION NO. 000100

SHORELINE OILING SUMMARY

REVISION 10/01/90

OG MISS FOLET NAME Michael Buckman SEGMENT ST/ EV-20
 RIO KATHLEEN Conlin LAND REP James A. Breen SUBDIVISION A (1 OF 1)
 EXXON LARRY OLSON ADEC John Hayes TIME 16:45 10/17/95
 TEAM NO. 11 TIDE LEVEL +3.3 DATE 4/19/90
 EST. SUBDIVISION LENGTH: 736 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock show in the supra ITZ in some large patches
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 20 % B 50 % C 25 % P 5 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 5 % Hang 75 % Vert 20 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 80 m N 0 m VL 656 m NO 0 m

SURFACE OIL

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

PAVEMENT H (P) S 7 sq. m by 2 cmPATTIES/TARBALLS 15 BAGSNEAR SHORE SHEEN? ☒ BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation	X		
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE grass#BAGS 0

Photographs:

Roll No. _____

Frames _____

SUBSURFACE OIL * OILED INTERVAL < 5 CM IN PIT NOS. 3 AND 4 DOES NOT CONSTITUTE SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE					A N A	SHEEN	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	UP	NO		VO	UC	SW	U	M	V	N	SW	U	M	V	N				
1	15					X	.	X							X							-	P.G.S
2	15					X	.	X							X							-	C.G.S.C
* 3	15		X				0-2	X		X					X							-	P.G.C
* 4	15		X				0-2	X		X					X							-	G.C
							.																
							.																

COMMENTS

Medium oiling occurs in the Southern and Northern Parts of the Segment.
 There is a 3m x 20m Broken Coat among the boulders in the southern part of the segment.
 The Northern Part of the segment has a narrow protected coast w/ a low angle cobble/pebble beach. Located in the supra + HIZ are a few patches of grass with a oil coat at the base of the grass. Some of this is covered by snow in the supra ITZ. (map 2)
 The majority of the segment is a splattered distribution of stain among the high angle boulder/cobble in the HIZ.

REVIEWED W DATE 4-21-90

OG Mike [redacted]
 SEGMENT ST EV-20
 SUBDIVISION A
 DATE 4/19/90

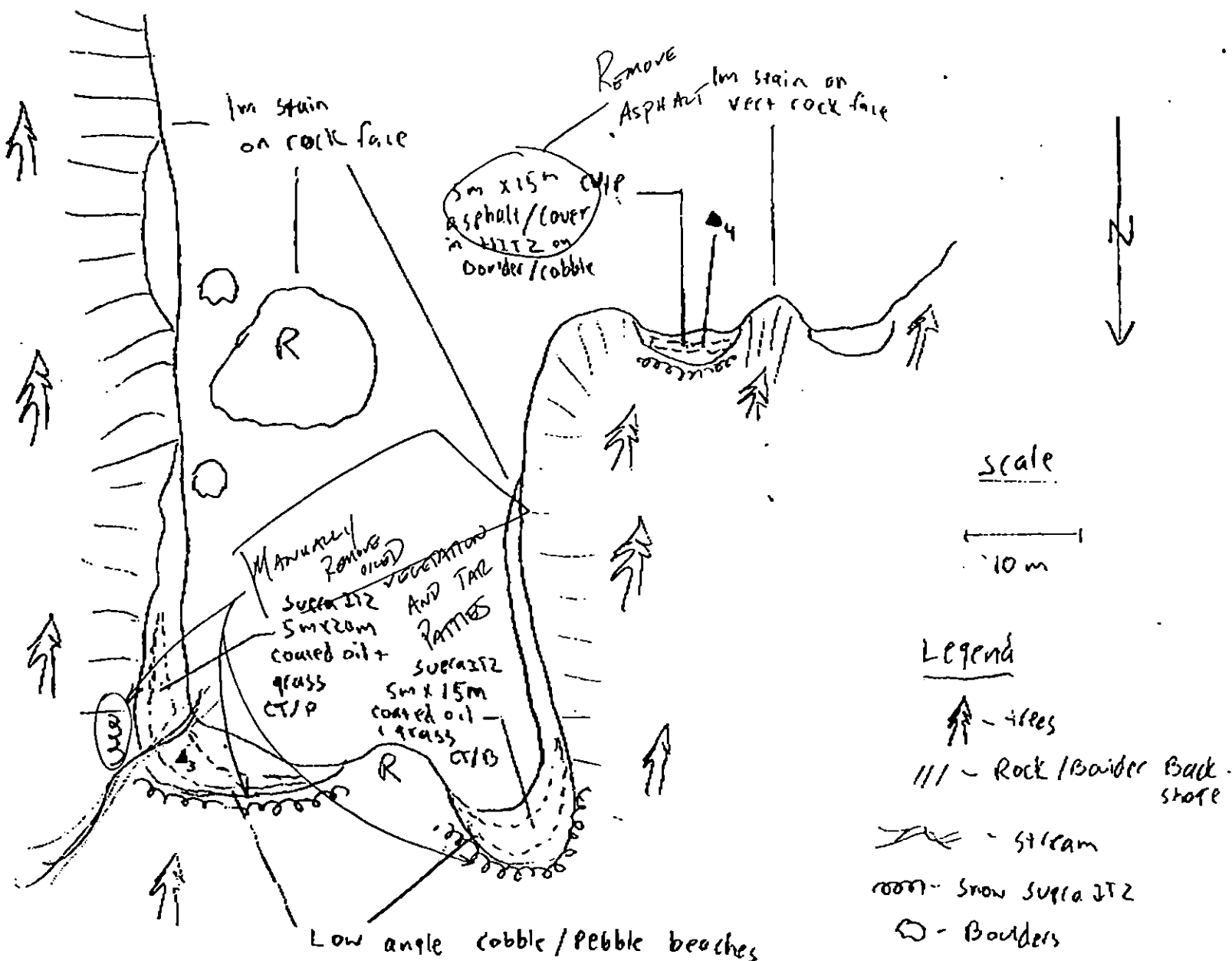
CHECKLIST

- ☒ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LML
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pht 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
Pachy Distribution
- CT/S
Styshed Distribution
- Oil Vegetation
- 1 $\Rightarrow$
Photo location, direction, and number

TCH MAP 2



See map 1

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

REVISION 03/2000

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/27/79

Segment ST/ EU-20 Subdivision A (1, 2, 3) Date (mo/day/yr) 4/19/90

Time (24 hr) 1630 Biologist KATHLEEN COLLAN

(A) Substrate type and % of segments:

(1) Bedrock 20 (2) Boulder 50 (3) Cobble 25 (4) Pebble 5 (5) Sand 0 (6) SR 0

(B) Overall % cover of biota (% of segment): Dense 5 Moderate 80 Low 15

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

Photographs:

Roll No. _____

Frames _____

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/General Comments:

Heavy cover of brown filamentous algae on boulders.

Many mussels brood by predatory gastropods

Ecological Considerations:

About 50% heavily brooded mussels and barnacles alive, others dead

ECOLOGY MAP (1 of 1)

Resource Codes For
Entire Segment

ST-9

7 IE

BALD EAGLE NEST

EV-2

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-20

ADEC Segment Length: 847m

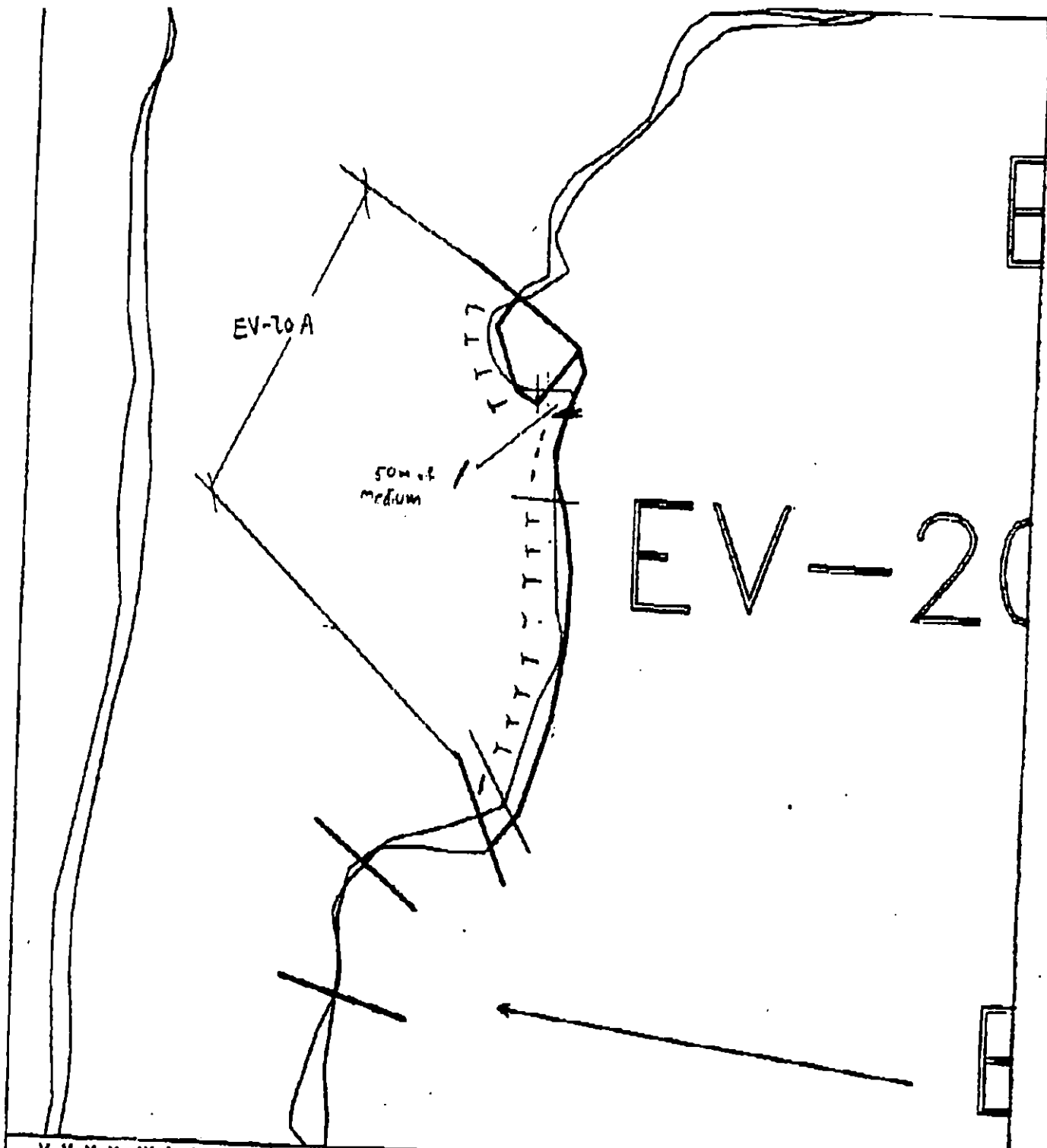
0 100 200 300
METERS

Map Key: PWS-189

Name: _____

Date: _____

Data Entered: _____



XXXX Wide	EV-20A	
//// Medium	ABEC Segment Length: 847m	
--- Narrow		
TTTT Very Light		
0000 No Oil		

100 200 300 METERS

Map Key: PWS-100
 Name: Mike Foster
 Date: 4/14/90
 Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EV-20 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarnat Removal	CLOSED
Bioremediation	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

USFWS 6/1/90 map indicates an active nest in Subdivision B. Closed to manual pickup, tarnat removal, and bioremediation within 400m of active nest.

7II Subsistence: Deer Harvesting

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

OTHER ECOLOGICAL CONSIDERATIONS

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

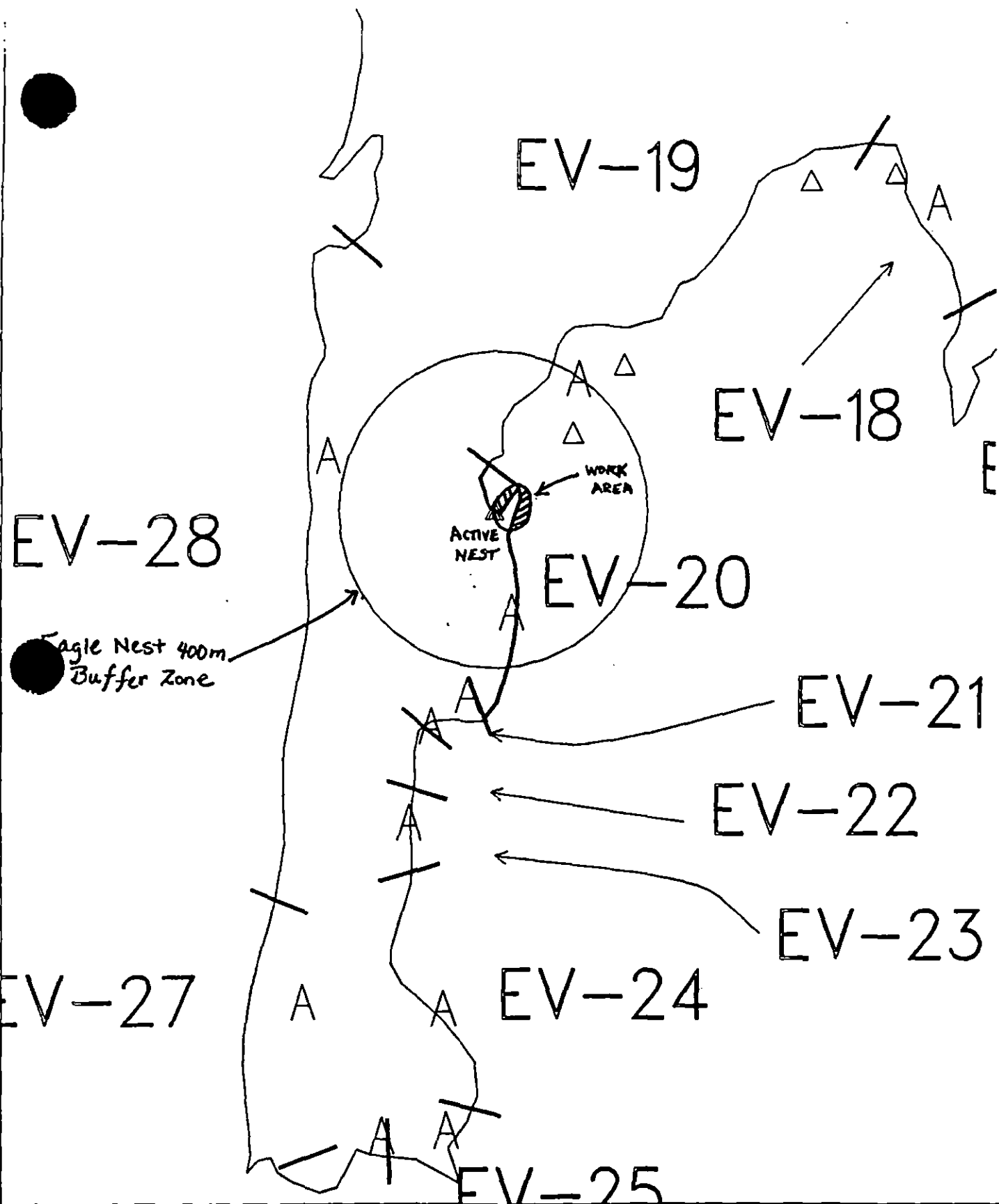
TAG APPROVAL DATE _____
ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC

DATE 17 June 1990

Prepared By: WV

Date 6/7/90



Exxon Company, USA

Map Key: PWS-EV-20

June 04, 1990

ECOLOGY MAP
SEGMENT EV-20
SUBDIVISION A (1 of 1)
METERS

0 334 669

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

1 inch = 1097 feet

SHORELINE EVALUATION

SEGMENT ST/ EV-20 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ST-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 228 m: Narrow 99 m: V.Light 520 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes removal of tarmat and manual pick up of oiled vegetation and tarballs. Work should be conducted after 6/1 and with approval of USFWS regarding eagle nest.

TAG COMMENTS: MONITORS TO HSEER SUITZ

BIOREMEDIATION OF AREAS INDICATED ON SKETCH

TAG APPROVAL DATE: 5/4/90

ADEC ART WEINER Art Weiner

EXXON ANDY GEL Andy Gel

NOAA GARY PETERSON Gary Peterson

USCG G.A. REITER G.A. Reiter

FOSC:

DATE: 5-18-90

NOTIFY CMC 24 HRS IN ADVANCE OF WORK

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-21

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ EV-21 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

II 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: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 138 m: Narrow 0 m: V.Light 26 m: No Oil 0 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 35 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tar patties and tarmats in areas indicated on attached sketch map, and 2) bioremediation of beaches indicated on sketch map after tar patties and tarmats are removed. Work should be conducted after 5/1.

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 (8/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (8/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (8/1 to 9/15)
6V Anchorages (8/1 to 9/15)
6W Forest Service cabins (8/1 to 9/15)
6X Lodge (8/1 to 9/15)
6Y 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 / EV-21 SUBDIVISION: A (1 of 1) DATE 4-19-90

NAME Michael Buchman SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS This segment is largely a broad pebble beach with occasional rock outcroppings. ~~Eastern~~ western tip is rock outcrop with a small pocket beach. Asphalt band continues from pocket beach to stain or coat band on rock outcrop. Rocks on beach are all stained on bottom half. Light stain present on pebbles thru out beach. Several patches of asphalt scattered about beach. Silver to rainbow sheen observed in snow melt seepage near asphalt patches. A presumably old pit, filled with water, had a slight silver sheen and a 5cm band of oiled sediments was clearly detectable. Physical characteristics of beach may be appropriate for bioremediation. Oiled debris extended under snow cover.

"COASTLINE" IS THE ONLY ONE THAT SAW OILED DEBRIS

ADEC NAME John Hayes SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS * Exxon / Dames + Moore Study Test Site
Beach segment EV-21 is a 152m segment primarily made up of sand + gravel + bordered on both sides by boulder outcrops. Entire segment has surface oil film.
① Mop up + pick up oil in ^{upheld} matrix of boulders that border segment on both sides.
② Manual removal of large extensive asphalt patches on segment (see sketch no. 3)
③ Till gravel beach, flush with hot water deluge, + bioremediate as finishing treatment. Beach is a good candidate for tilling + has S.S. oiling extensive OR S.S. oil in MITZ from 5-15 cm. / S.S. oil film to 35cm in URTZ.
④ SIZ covered with snow, oiled logs + vegetation at snow line manual removal.

LAND MANAGER NAME JAMES A. PARKER SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS
NOTE! EXXON STUDY SITE, BEACH LOW GRADE ANGLE, BEACH WAS LARGELY SAND, GRAVEL AND PEBBLE, MORE THAN 1 DOZEN HULES WERE OUG, MOST REVEALING STAIN: SHEEN, SOME REVEALED SATURATION 3cm to 10cm DEPTH. MUCH OF THE BEACH SEGMENT WAS COVERED WITH LARGE ASPHALT PATCHES PATCHES VARIOUS IN SIZE. 4m x 7m TO 8m x 30m. WEST: EAST ENDS OF SEGMENT WERE ROCK: COBBLE, STAIN: ASPHALT PRESENT.

SHORELINE OILING SUMMARY

REGULON MO. 04-13-90

OO/MINE FOOT NAME Michael Buchman SEGMENT ST/ EU-21
 BIO KATHLEEN Carlin LAND REP Jamex A RABBER SUBDIVISION A (1 OF 1)
 EXXON CARRY Olson ADEC John HAYES TIME IS 45:10:16:45
 TEAM NO. 11 TIDE LEVEL +2.1 DATE 4/14/90
 EST. SUBDIVISION LENGTH: 15.2 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock Surf II2 covered by snow
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 20 % B 15 % C 10 % P 30 % G 20 % S 5 % M 0 % V 0 %
 SLOPE: Long 20 % Hang 15 % Vert 15 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 132 m N 0 m VL 20 m NO 0 m

SURFACE OIL

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

PAVEMENT H @ S 10 sq. m by 2 cmPATTIES/TARBALLS 20 BAGSNEAR SHORE SHEEN? ☒ BR RW SL TL

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

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE Logs; fucus#BAGS 0

Photographs:

Roll No. _____

Frames _____

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SHEEN	CYND	T	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		10	15	20	25	30	35	SU	U	M	N					
* 1	30		X				0-5	X		X					X				Y	20		P, G, S
* 2	30				X		0-5	X			X			X					N	-		P, G
* 3	36				X		0-35	X			X			X					N	-		P
* 4	25				X		0-10	X			X				X				Y	20		G
* 5	30				X		0-5	X			X				X				Y	15		G
* 6	20				X		0-5	X			X				X				N	-		G

COMMENTS

Shore zone consists mostly of a cobble/pebble beach w/ some boulders and a rock/boulder outcrop to the East and West of the beach. The rock outcrop to the West has coating among the boulders/Rocks with some asphalt/tar in the crevices. The pebble cobble beach has several large asphalt patches (Secumup) in the upper and mid LZ. Boulders located on the C/P beach also have a light stain on them. The entire 120m x 35m C/P beach has a light stain w/ some film residue in the subsurface sediments.

REVIEWED SWDATE 4-21-90

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 04, 3-00

SEGMENT ST/ EV-21 SUBDIVISION A (1 OF 1)

SUBSURFACE OIL (CONTINUED)

[illegible]

* OILED INTERVAL ~~HOW~~ < 5 cm IN PIT NOS. 1, 2, 3, 4, 5, 6, 8, 9. FID DOES NOT CONSTITUTE SUBSURFACE OIL

COMMENTS For Pies 2, 3, 6, 8 and 9 there is no film on the sediments just a oil residue that rubs off on your hands.

Cobble / Pebble beach is a low oval beach, with possible oiled vegetation and logs in the supra ITZ. A majority of the supra ITZ is covered by snow on the C/P beach.

REVIEWED

DATE 4-21-90

SEGMENT **EU-21**
 SUBDIVISION **A**
 DATE **4 / 19 90**

CHECKLIST

☐ N Arrow
☐ Approx. Scale
☐ Sep/Sub Body
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HWM/LWL
☐ SSL
☐ Profile Location(s)
☐ Profile(s)
☐ Pz Location(s)
☐ Photo Location(s)

LEGEND

1 ▲
 PU - No Subsurface Oil

2 ▲
 PH - 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

MANUALLY REMOVE
 TARMATS AND PATTIES
 OFF BEACHES

D/R OUTCROP

3m X 10m AP/P
 Asphalt Patties
 in the H1T2

2m X 20m
 Sign
 H1T2

3m X 20m CT/P
 Coat on D/R outcrop
 in the H1T2

3m X 20m CT/P
 Coat on Boulder
 outcrop in the H1T2

6m X 12m AP/B
 Asphalt Pattie H1T2

2m X 30m
 AP/B asphalt
 Band H1T2

2m X 20m PT/P
 dist. of asphalt
 Patties in the
 H1T2

3m X 15m
 AP/B in H1T2
 w/ CV on Rocks
 and Boulders

3m X 10m
 AP/B in
 H1T2

2m X 10m
 AP/B asphalt band
 H1T2

Legend ~~MANUALLY REMOVE OILED~~

COO - snow in the super H1T2
 w/ some oiled logs & furcs

○ - Boulders
 ▲ - trees

Scale
 20m

Total segment requires
 a squad to clean entire
 segment as several areas
 have asphalt Patties

Entire 120m X 35m P/B beach w/
 some boulders has a light stain, with
 a subsurface residue which will rub
 off on ones hands.

BIOREMEDIATE PEBBLE AND GRAVEL
 BEACHES ~~UP TO 100m~~ AFTER
 TARMATS ARE REMOVED

Oil Character Length (m): AP **77** PO **0** CV **0** CT **40** ST **40** MS **0** PT **30** TB **0** FL **0** NO **0**

ETCH MAP

OUTCROP

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/82/78

Segment ST/ EU-2 Subdivision A (1 OF 1) Date (mo / day / yr) 4/19/90Time (24 hr) 1544 Biologist K. CONLAN(A) Substrate type and % of segments:
(1) Bedrock 20 (2) Boulder 15 (3) Cobble 10 (4) Pebble 30 (5) Sand 25 (6) Silt 0(B) Overall % cover of biota (% of segment): Dense 5 Moderate 15 Low 80

(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-11-3Frames # 2

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

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:

Heavy filamentous brown algal cover on rocks
 About 40% of the Balanus glandula in the low intertidal zone

Ecological Considerations: on the bedrock are dead.

Strong predation on Mytilus by Nucella

DATE 19 APR 90 TIME 1544

TIDE HEIGHT

2.0 ft

1 - BEDROCK

2 - BOULDER

3 - COBBLE

5 - SAND

6 - SILT

FLORA:

SPECIES	UITZ	MITZ	LITZ	COMMENTS
BOSSIELLA/CORALLINA				
CALLIARTHRON/CORALLINA				
CLADOPHORA SPP				
COSTARIA SPP				
ENDOCLADIA MURICATA				
FILAMENTOUS GREENS				
FILAMENTOUS REDS				
GLOIOPELTIS FURCATA				
HALOSACCION GLANDIFORME				
LAMINARIA SPP				
LITHOTHAMNION	2			
NEREOCYSTIS SPP				
PORPHYRA SPP				
RALPHSIA/HILDENBRANDIA				
PHODOMELA LARX				
RHOHOMENIA PALMATA				
SCYTOSIPHON SPP				
ULVA SPP				
ZOSTERA MARINA				
ENTOROMORPHA			3	

FAUNA:

ANTHOPELURA SPP				
(SEMI) BALUNUS CARIOSUS		2		
B. GLANDULA		2		
BRYOZOANS				
CHITONS (other than K. TUNICATA)				
CLAMS				1
CRABS				
DERMASTERIAS IMBRICATA				
KATHARINA TUNICATA				
LEPTASTERIAS HEXACTIS				
LIMPETS		2		
LITTORINA SPP		2		
NUCELLA SPP			1	
PAGURUS SPP				
PISASTER OCHRACEUS			5	Grey-black, ~ 10 cm across
POLYCHAETES				
PYCNOPODIA HELIANTHOIDES				
SEARLESIA DIRA		2		
SERPULIDS				
SIPHONARIA THERSITES				
TEALIA				

ECOLOGY

MAP (1 of 1)

Resource Codes For
Entire Segment

7II

EV-

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

EV-21

ADEC Segment Length: 164m

0 100 200 300

Map Key: PWS-190

Name: _____

Date: _____

Date Entered: _____

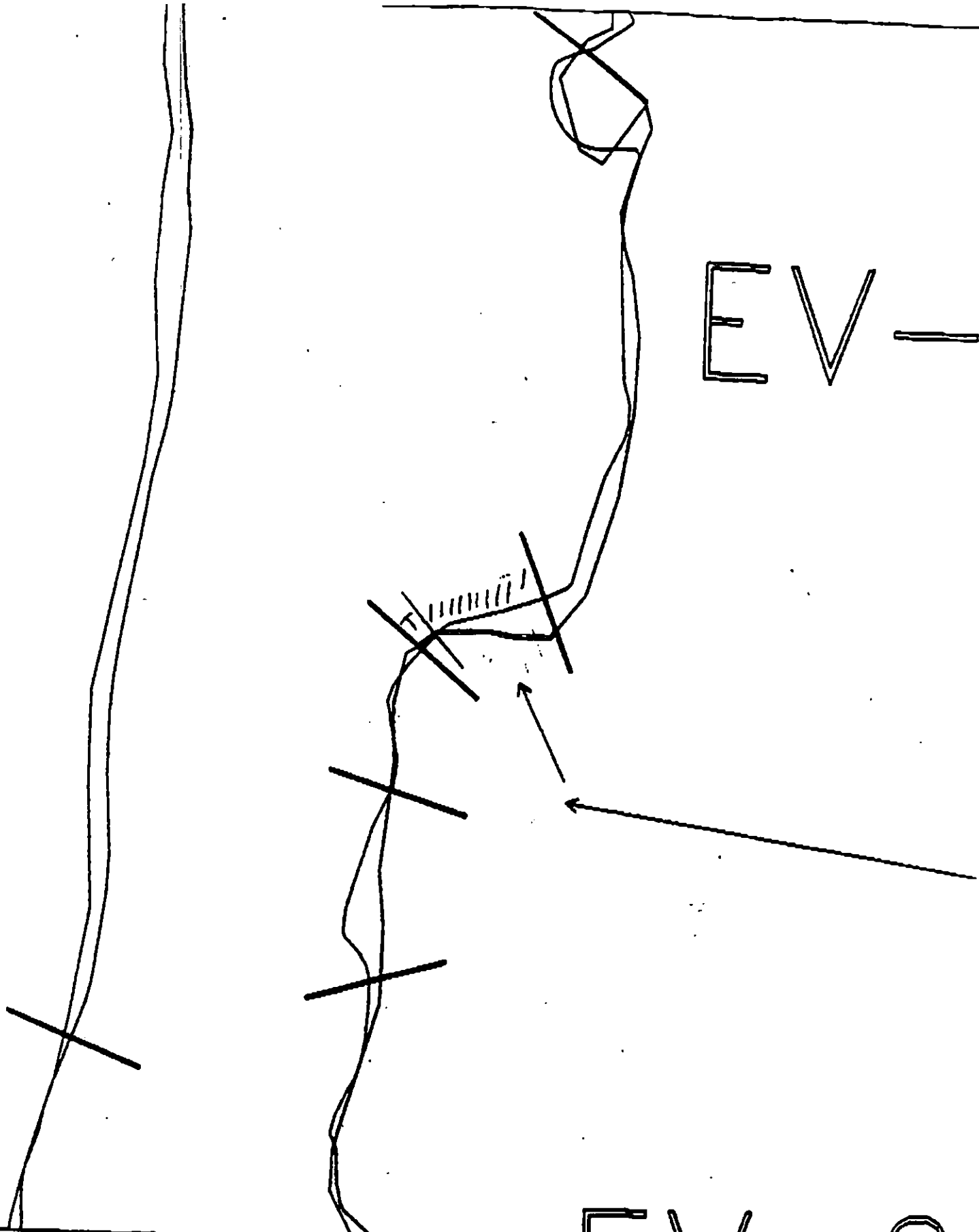


EVEN 21

5000

OILING	
H	Heavy
M	Moderate
L	Light
VL	Very Light
N	None
NS	Not Surveyed

EV-



XXXX Wide

/// Medium

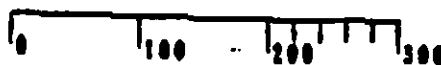
--- Narrow

TTTT Very Light

0000 No Oil

EV-21A

ADEC Segment Length: 164m



Map Key: PWS-190

Name: Mike Fogel

Date: 4/19/90

Note: Extended

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EV-21 SUBDIVISION A (1 of 1)

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

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

7II Subsistence: Deer harvesting

No constraint to Manual Pickup or Tarmat Removal;
closed to Bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

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

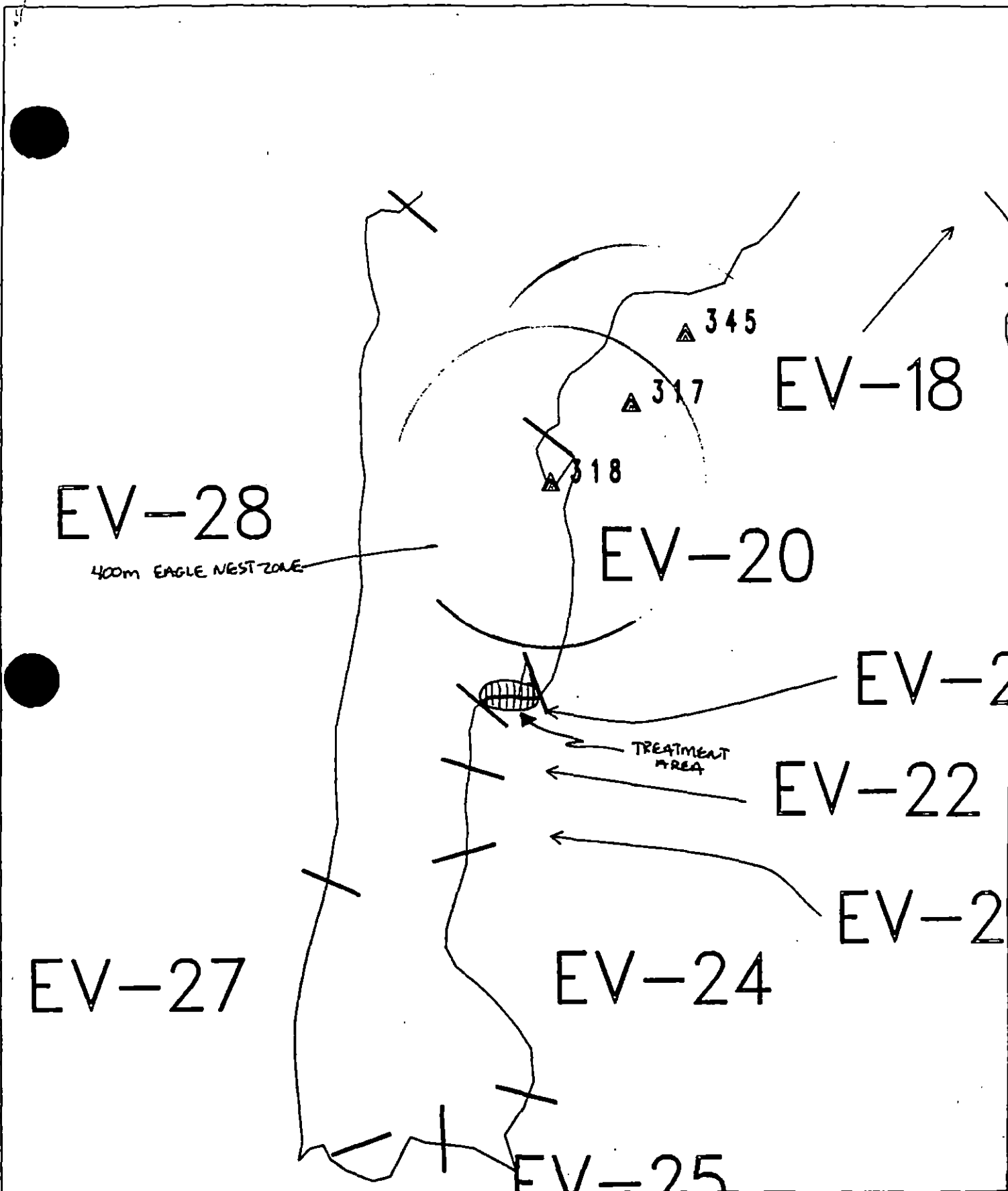
TAG ADDENDUM DATE 5/16/90
ADEC Art Wenzel Drt Wenzel
EXXON AMY RAL Real
NOAA Gary Petrac Ray Petrac
USCG G.A. REITER G.A. Reiter

FOSC

DATE 5-17-90

Prepared by: Andie Meyer

Date: 5/14/90



EXXON
 Exxon Company, USA
 Map Key: PMS-EV-21
 May 11, 1990

ECOLOGY MAP
 SEGMENT EV-21
 SUBDIVISION A (L of L)
 METERS
 0 333 666

- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1093 feet

SHORELINE EVALUATION

SEGMENT ST/ EV-21 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

III 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: J. Paul McMan DATE: 5/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 138 m: Narrow 0 m: V.Light 26 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 35 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tar patties and tarmats in areas indicated on attached sketch map, and 2) bioremediation of beaches indicated on sketch map after tar patties and tarmats are removed. Work should be conducted after (5/1).

TAG COMMENTS: MONITOR TO ASSES SUITZ

TAG APPROVAL DATE: 7/28/90
DEC ART WEINER
EXXON ANDY TEAL
NOAA Craig Petrone
USCG KENNETH KEANE

FOSC: W/L

DATE: 5-8-90

CVC does not object to bioremediation.

See Addendum
Dated 5/14/90 w/

and debris/
oiled veg.

SHORELINE EVALUATION

SEGMENT ST/ EV-21 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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. D. McMan DATE: 5/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 138 m: Narrow 0 m: V.Light 26 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 35 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tar patties and tarmats in areas indicated on attached sketch map, and 2) bioremediation of beaches indicated on sketch map after tar patties and tarmats are removed. Work should be conducted after 5/1.

TAG COMMENTS: MONITOR TO ASSESS SUITZ

TAG APPROVAL DATE: 4/28/90
ADEC ART WEINER
EXXON ANDY TEAL
NOAA Greg Petrac
USCG KENNETH KEANE

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

CRC does not object to bioremediation.

SEGMENT EU-21

SUBDIVISION A

DATE 4 / 19 90

CHECKLIST

N Arrow
 Approx. Scale
 Sep/Sub Entry
 Oil Dist.
 Width
 Length
 % Cover
 Substrate Character
 Est. HML/LWL
 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

Oiled Vegetation

1 →
Photo location, direction,
and number

MANUALLY REMOVE
TARMATS AND PATTIES
OFF BEACHES

SKETCH MAP



Oil Character Length (m): AP 77 PO 0 CV 0 CT 40 ST 140 MS 0 PT 30 TB 0 FL 0 NO 0

BIOREMEDIATE PEBBLE AND GRAVEL
BEACHES AFTER
TARMATS ARE REMOVED

ECOLOGY MAP (1 of 1)

Resource Codes For
Entire Segment

7II

EV-

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO None

EV-21

ADEC Segment Length: 164m

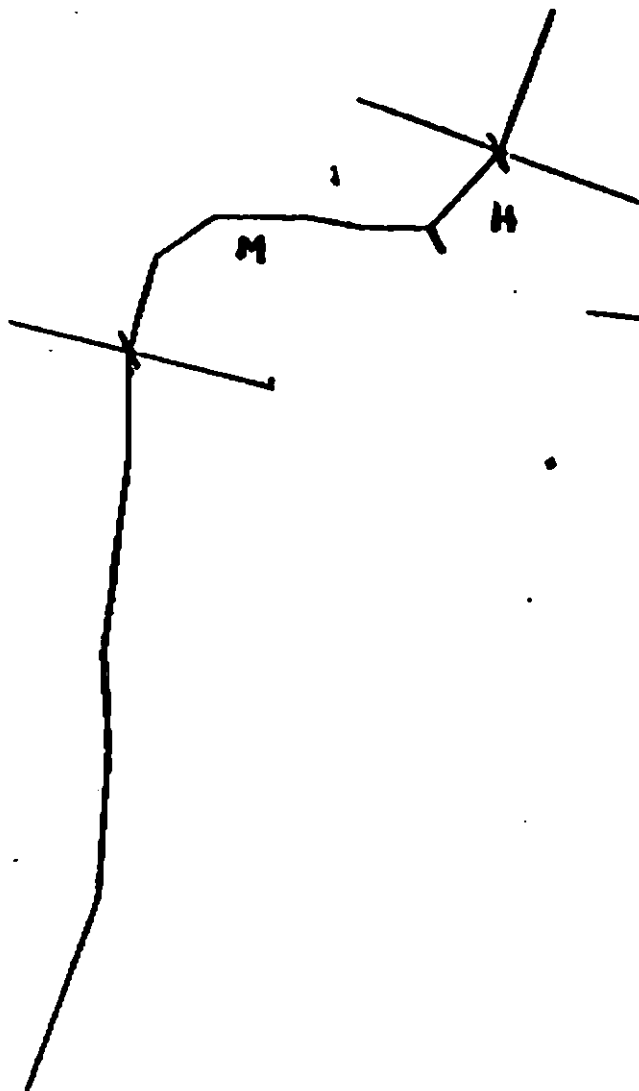
0 100 200 300

Map Key: PWS-190

Name: _____

Date: _____

Date Entered: _____

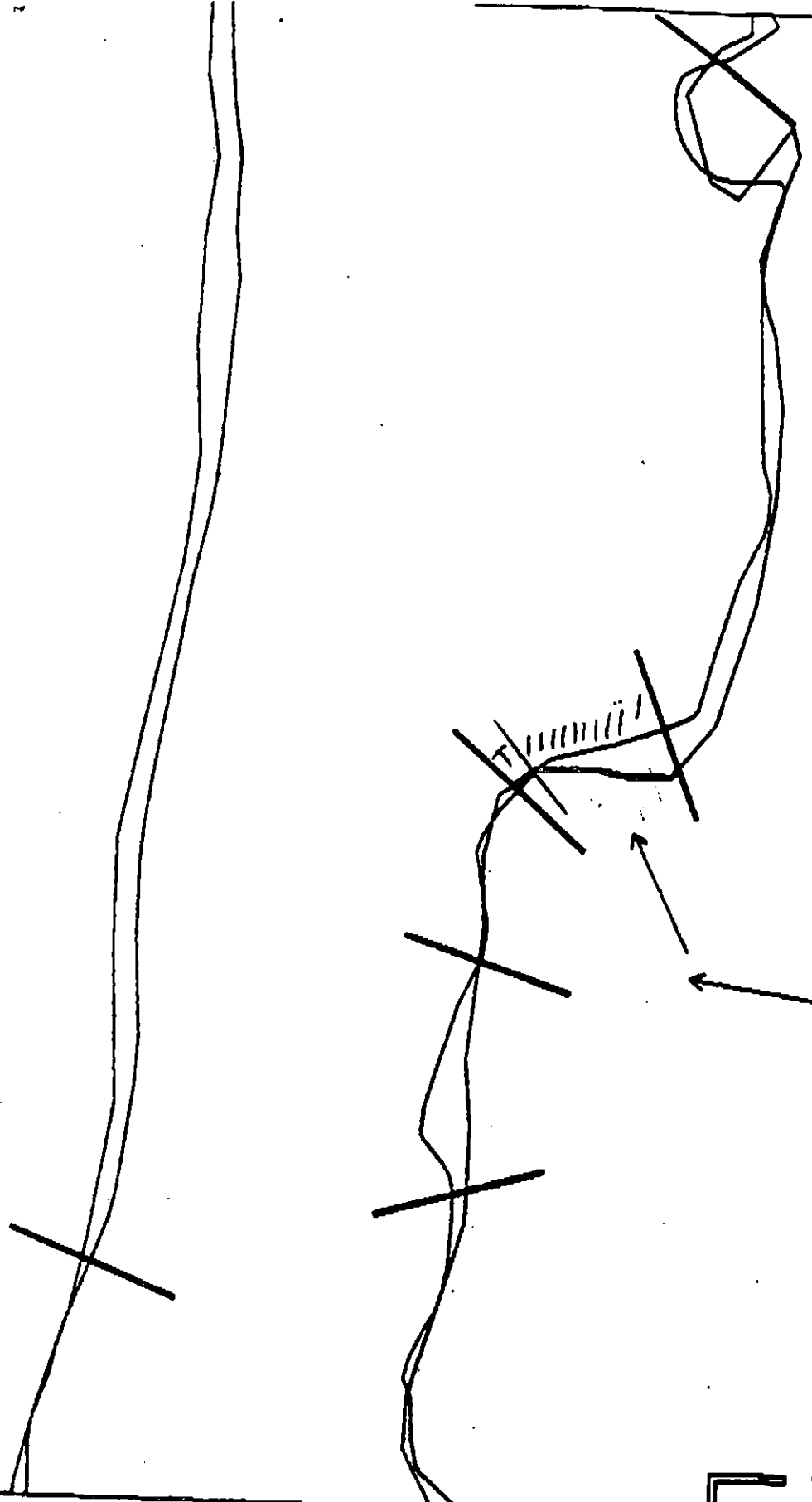


EV021

500.0

OILING	
H	Heavy
M	Moderate
L	Light
VL	Very Light
N	None
NS	Not Surveyed

EV-



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-21A

ADEC Segment Length: 164m



Map Key: PWS-190

Name: Mike Fogel

Date: 4/19/90



1991 MAYSAP EVALUATION

SEGMENT: IN 029 SUB: A REGION: PWS SURVEY DATE: 5/14/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Rachel Jan Dahn Date: 5/24/91

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 24 1991

FOSC APPROVAL DATE:

5/29/91

ADEC

[Signature]

FOSC

[Signature]

EXXON

Beal

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

USCG

[Signature]

NOAA

[Signature]

ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT IN 29 SUBDIVISION A DATE 5/14/91

ADEC

NAME Peter MontesanoSIGNATURE [Signature]☒ NTR ☐ TREATMENT RECOMMENDED

PIT #1 was in location of heaviest concentration of oil for ASAP and SSAT. The Remaining ms/SOR/AP (mapped as SOR) is barely retrievable around Boulders. The USCG Rep. never left the shift for the Southern 3/4 missing areas A,B,C,D.

EXXON

NAME C.M. KatsimpralisSIGNATURE [Signature]

☒ NTR OG & BIO REPORTS ARE ACCURATE. MOST OF THIS SHORELINE RELIEVES HIGH ENERGY. GOOD TEAM EFFORT HERE!

LANDMANAGER

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

Small amounts of stain & corr/coat found.
High energy beach - no need for future treatments.

USCG/NOAA DEBRA SIMCEK-BEATTY NOAA

NAME BRIAN M. P. ZENONE USCGSIGNATURE [Signature]☒ NTR

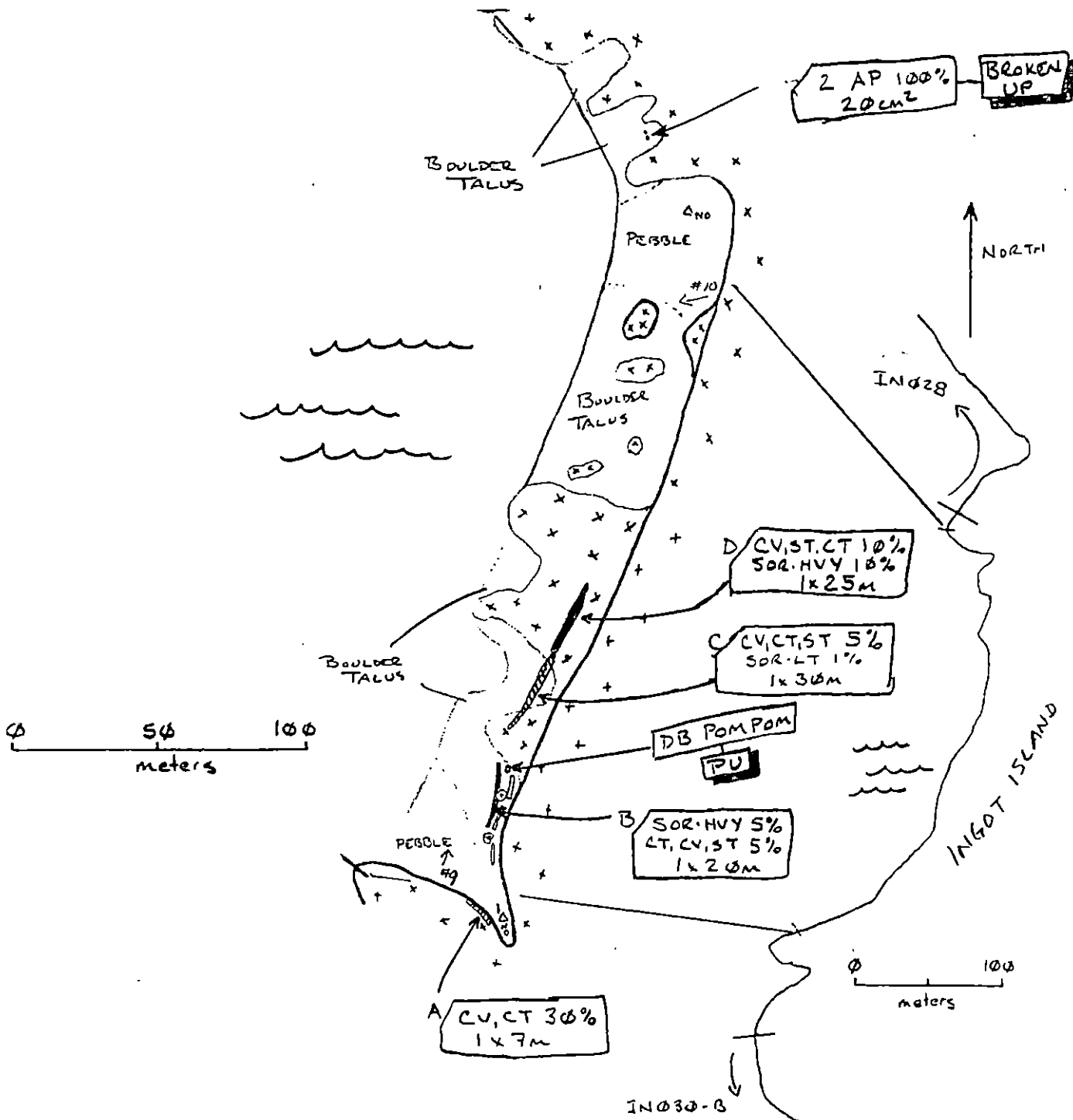
Only very small amounts of surface oiling was observed on this segment. In general, most of the SOR occurred between the larger boulders and on high energy shoreline. OS-B

GG - Good Bio & OG Reports. No TREATMENT NECESSARY. 3

PAGE 1 OF 1

reviewed 5.18 qy
revised 5/19

OG SKETCH MAP
IN 029-A
14-MAY-91
0849-0929
BRYAN TRIMM



reviewed 5.18 by
5/19

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 14 May 91
 SEGMENT # FN-29 TIDAL HEIGHT (Range) -3 to -15 ft
 SUBDIVISION A BIOLOGIST S M B R N
 SEA STATE Calm WIND SPEED/DIRECTION Calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

A: Oil is a band on rock face. *Urticularia* & mosses above oil on rocks. Rock face seaward of oil supports numerous egg laying *Nucella*. These egg cases should not be disturbed. *Tridacna* (red algae) dense below crevices along with *Fucus*.
 B: SOR is high in ITZ - mosses and lichens are in this zone. Seaward the oil is a thick cover of *Urticularia*. Lower zones support *Balanus*, *Fucus*, and sparse littorinids on the boulders. Pebble areas have no surface biota.
 C & D: Oiled zones are high in ITZ with only lichen on boulders. *Urticularia* and other green algae in vicinity of oiled areas. Also sparse adult *Balanus*. The lower ITZ in this region has small *Fucus* recruits and recently settled *Balanus* spat.
 E: Lichen in vicinity of oil. *Urticularia* immediately seaward. Lower zones support recent spat and littorinids. Algae is dense and diverse at water line. *Ulva*, *Fucus*, *Halosaccion*, *Tridacna*, *Sargassum* etc.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

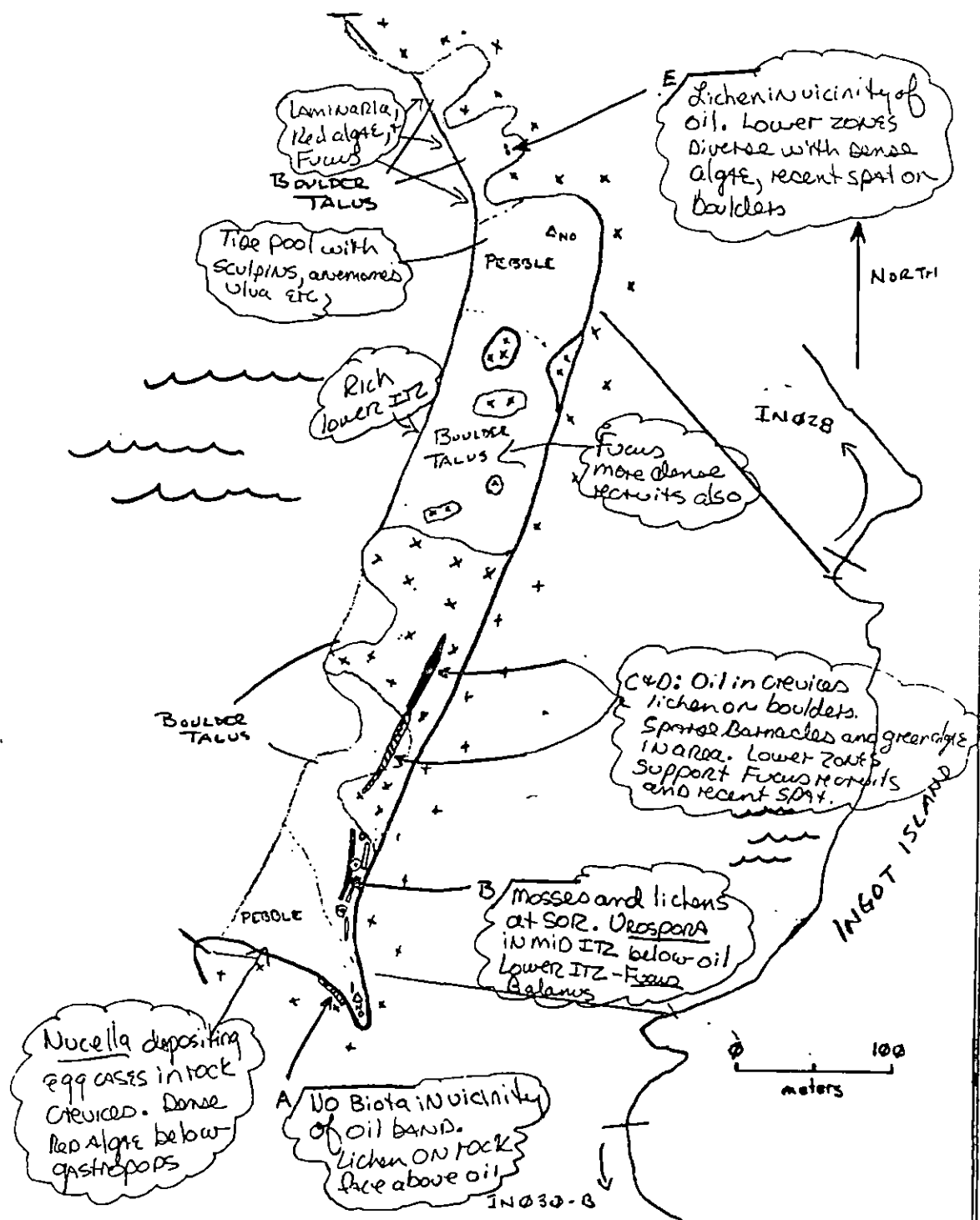
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	Not in nest - did not move	1	Sculpins ± 3
Seabirds			
Waterfowl			
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/18/91

SKETCH MAP
IN029-A
14-MAY-91
0849-0929



SMB
14 May 91

Reviewed M.B. 5/15



UNSURVEYED

--- Narrow (7m)

UNSURVEYED

IN

A

B



XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

IN029 A

ADEC Subsegment Length: 411m

METERS

0 100 200

AK State Plane Zone 4
NAD83



Subdivision Field Map

Map Key: KNIN020A

Name: TRIMM

Date: 14-May-91

Date Entered:

— SURFACE OIL CATEGORY MAP —

revised 5.18 94
ES revised 5/19

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-22

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ EV-22 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

VII 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 9 m: No Oil 159 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 (8/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (8/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to uncultured intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (8/1 to 9/15)
 6V Anchorages (8/1 to 9/15)
 6W Forest Service cabins (8/1 to 9/15)
 6X Lodge (8/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence 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/ EV 22 SUBDIVISION: A (1 of 1) DATE 4-19-90

DAB

NAME Michael Buchman SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Tail ends of this segment are rock faces (covered by barn).
Middle of segment is narrow, very steep sloped boulder beach (walked).
Light stain was observed on boulders in a 1x15m band.
No oiling was observed in crevices or on underside of rocks.
Two small patches of asphalt ($1/4 m^2$) were observed south of water fall. in underlying gravel

ADEC

NAME John Hayes SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Segment is steep boulder beach bordered on both sides with vertical headwall.
Observed staining + tar splatters in U.I.T.
Two small asphalt patches south of waterfall. Recommend manual pickup if crews are working in area.
Low priority for treatment. Except for isolated patches (2) observed no treatment recommended for the rest of segment.
No pits dug as substrate was boulder + bedrock.

LAND MANAGER

NAME JAMES A. PARKER SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

EU - 22, BEACH SEGMENT HARD TO OBSERVE DUE TO STEEP

SLOPE OF BEACH. 60% - 70% WAS WALKED, LARGE ROCK - BOULDER

ON THIS SEGMENT, LIGHT STAINING WAS FOUND 2 STAIN WIDE
FOUNDED AT SOUTHERN END OF SEGMENT 1m x 20 cm ANOTHER
THAT WAS 15 x 20 cm STAIN.

SHORELINE OILING SUMMARY

REVISION NO. 08-13-90

OG MINE FOUET ~~NRAA~~ Michael Bushman SEGMENT ST/ EU-22
 BIO Kathleen Conlin LAND REP STEVE A WARD SUBDIVISION A (1 OF 1)
 EXXON LARRY ELSON ADEC John HAYES TIME 15:30 to 15:45
 TEAM NO. 11 TIDE LEVEL +2.1 DATE 4/19/90
 EST. SUBDIVISION LENGTH: 169 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 40 % B 30 % C 25 % P 5 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 0 % Hang 60 % Vert 40 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 15 m NO 154 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	C	B	P	V	1	2	3	4	SU	U	M	L
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT												
STAIN				X	X				X			
MOUSSE												
PATTIES				X	X				X			
TARBALLS												
FILM												
OIL											X	X

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE Sorbent pad#BAGS 1

Photographs:

Roll No. _____

Frames _____

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE-SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	VO	1	2	3	4	SU	U	M	L				

COMMENTS

No pits were excavated due to nature of the shore zone. Cobbles were overturned but not logged. No oiling was observed in this segment with the exception of a very light 1m x 15m staining in the near ITZ. Shore zone consisted mostly of Boulder/Cobble High angle beach. Very rock wall to the Northern end of the segment.

REVIEWED SWDATE 4-20-90

OG Mike Tojer

SEGMENT EV-22

SUBDIVISION A

DATE 4 / 19 / 90

CHECKLIST

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

LEGEND

1 Δ
Pht - No Subsurface Oil

2 Δ
Pht - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oil on Vegetation

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

ETCH MAP

Scale
20 m



vert Rock/
boulder

1m x 15m ST/S
stain in the supra
ITZ among the boulder
beach

High angle boulder/
cobble beach

2 far: patches in the
HITZ, 1.2m x .3m and
.1m x .2m

Legend
/// - high angle rock/boulder
backshore
O - boulders

Water fall

Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 15 MS 0 PT 0 TB 0 FL 0 NO 154

SHORELINE ECOLOGICAL SUMMARY

REVISION: 09/22/78

Segment ST / BV-22 Subdivision A (1 of 1) Date (mo / day / yr) 4/19/90
 Time (24 hr) 1530 Biologist KATHLEEN CONLAN

- (A) Substrate type and % of segments:
 (1) Bedrock 40 (2) Boulder 30 (3) Cobble 25 (4) Pebble 5 (5) Sand 0 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 95 Moderate 0 Low 5
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
 Roll No. _____

Frames _____

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

1 SEA OTTER DENNING.

Ecological Considerations:

DATE 19 APR 90 TIME 1530

TIDE HEIGHT 2.0 ft

1 = BEDROCK 2 = BOULDER 3 = COBBLE 5 = SAND 6 = SILT

FLORA:

SPECIES	UITZ	MITZ	LITZ	COMMENTS
BOSSIELLA/CORALLINA				
CALLIARTHRON/CORALLINA				
CLADOPHORA SPP				
COSTARIA SPP				
ENDOCLADIA MURICATA				
FILAMENTOUS GREENS				
FILAMENTOUS REDS				
GLOIOPELTIS FURCATA				
HALOSACCION GLANDIFORME				
LAMINARIA SPP				
LITHOTHAMNION				
NEREOCYSTIS SPP				
PORPHYRA SPP				
RALPHSIA/HILDENBRANDIA				
PHODOMELA LARX				
RHOHOMENIA PALMATA				
SCYTOSIPHON SPP				
ULVA SPP		3		
ZOSTERA MARINA				
ENTOROMORPHA				

FAUNA:

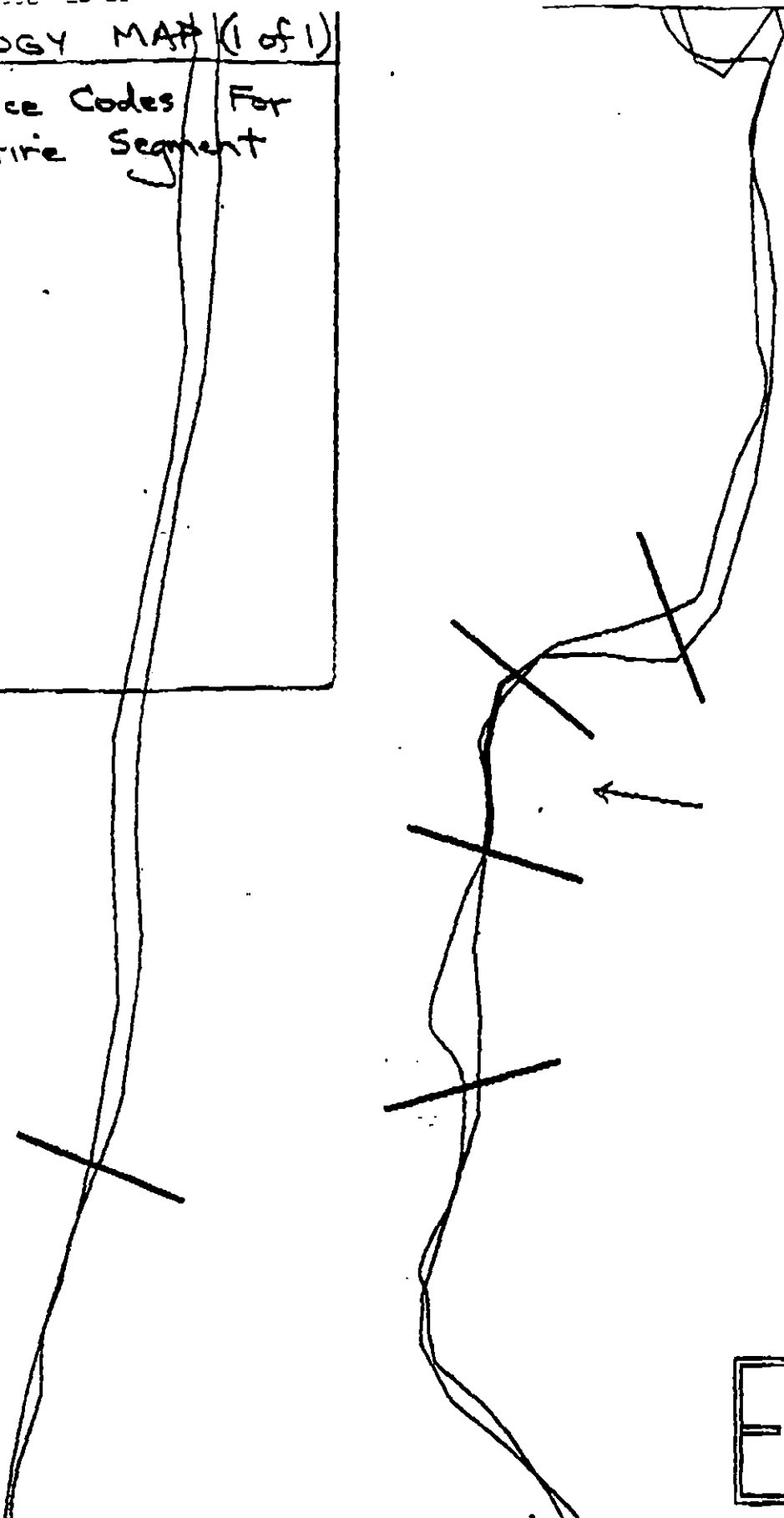
ANTHOPELURA SPP				
(SEM) BALUNUS CARIOSUS				
B. GLANDULA				
BRYOZOANS		3		
CHITONS (other than K. TUNICATA)				
CLAMS				
CRABS				
DERMASTERIAS IMBRICATA				
KATHARINA TUNICATA				
LEPTASTERIAS HEXACTIS				
LIMPETS		3		
LITTORINA SPP				
NUCELLA SPP				
PAGURUS SPP		3		
PISASTER OCHRACEUS				
POLYCHAETES				
PYCNOPODIA HELIANTHOIDES				
SEARLESIA DIRA		3		
SERPULIDS				
SIPHONARIA THERSITES				
TEALIA				

ECOLOGY MAP (1 of 1)

Resource Codes For Entire Segment

711

EV-



EV-22

ADEC Segment Length: 168m

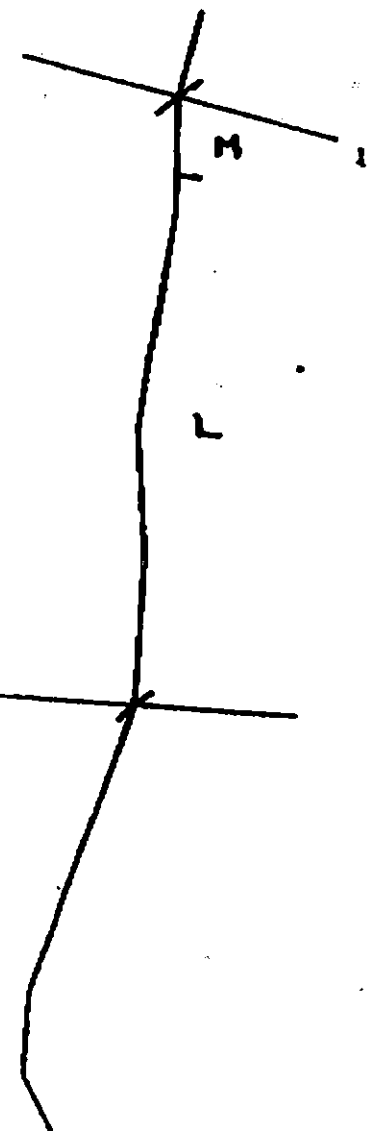


Map Key: PWS-191

Name: _____

Date: _____

Data Entered: _____



EV022
500.0

OILING	
N	Heavy
M	Moderate
L	Light
VL	Very Light
N	None
NS	Not Surveyed
Distance in Meters	

EV -

15 m of T

EV-22A

EV -

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-22A

ADEC Segment Length: 168m



Map Key: PWS-191

Name: Mike Fogel

Date: 4/14/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ EV-22 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: J. Daniel McMahon DATE: 5/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 9 m: No Oil 159 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS: MONITORS TO ASSESS THE NEED FOR TARP PARTY
PICK UP AS SHOWN ON SKETCH.

TAG APPROVAL DATE: 4/28/90.
ADEC ART WEINER
EXXON ANDY TEAL
NOAA GARY POLK
USCG KENNETH KEANE

FOSC: DATE: 5-8-90

OG Plike 2012

SEGMENT EV-22

SUBDIVISION A

DATE 4/19/90

CHECKLIST

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

LEGEND

- 1 Δ
PH - No Subsurface Oil
- 2 Δ
PH - Subsurface Oil
- $\boxed{CT/C}$
Continuous Distribution
- $\boxed{CT/B}$
Broken Distribution
- $\boxed{CT/P}$
Patchy Distribution
- $\boxed{CT/S}$
Splashed Distribution
- $\bullet \Rightarrow$
Oil of Vegetation
- $\bullet \Rightarrow$
Photo location, direction, and number

SKETCH MAP

Scale
20 m



vert Rock/
boulder

1m x 17m ST/3
stain in the supra
ITZ among the boulder
beach

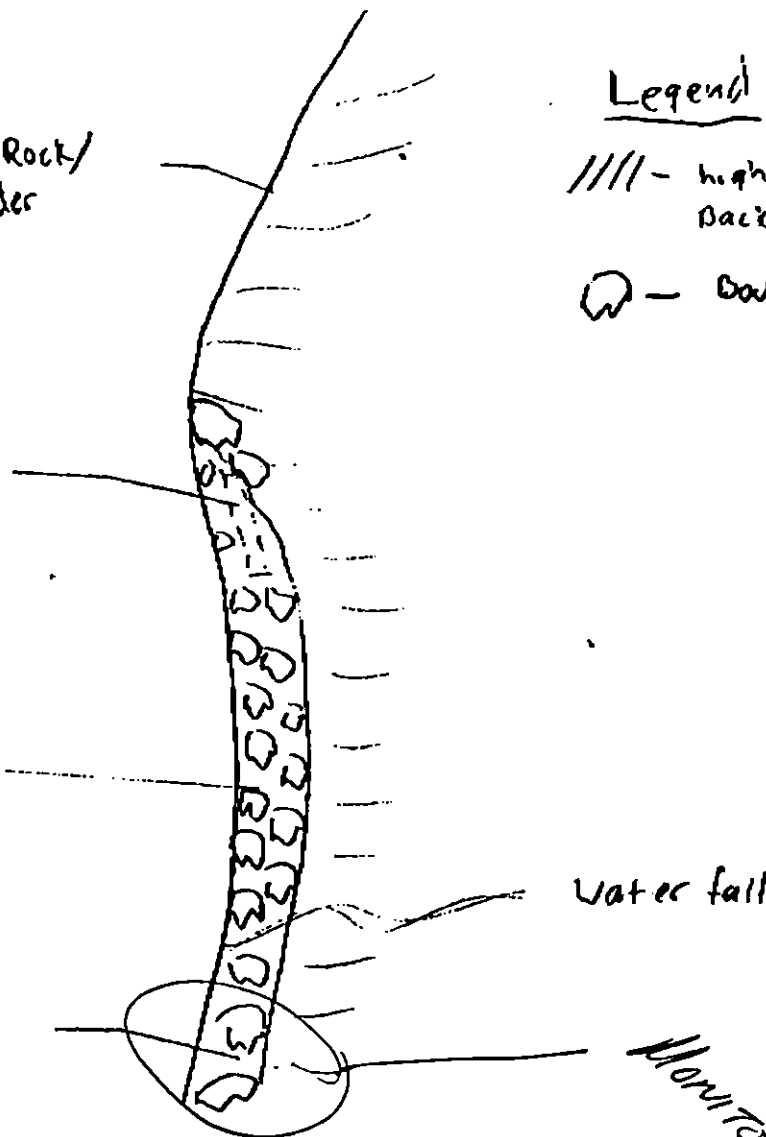
High angle boulder/
cobble beach

2 far: patches in the
MITZ, 12m x 3m and
1m x 12m

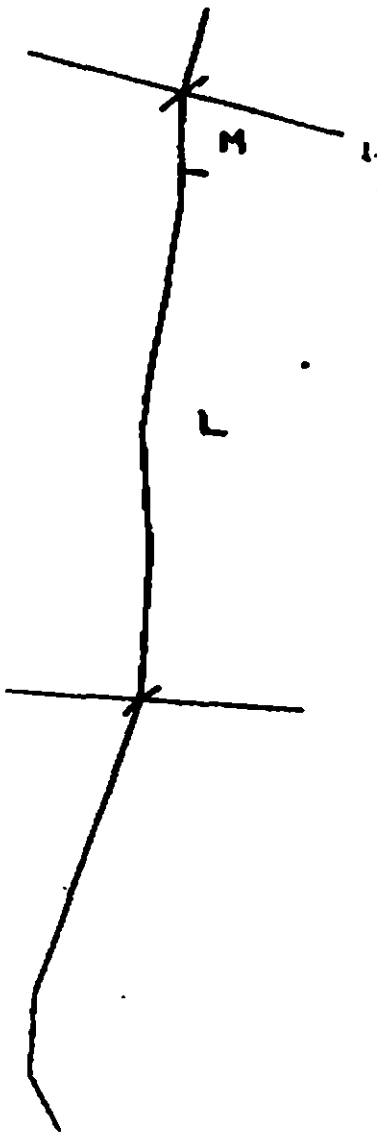
Legend

//// - high angle rock/Boulder
Backshore

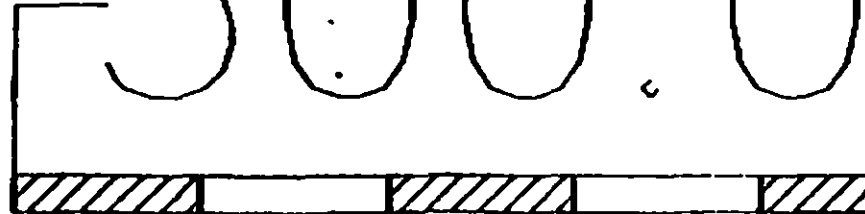
$\bigcirc$ - boulders



Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 15 MS 0 PT 0 TB 0 FL 0 NO 154



EV022
500.0



OILING	
N	Heavy
M	Moderate
L	Light
VL	Very Light
N	None
NS	Not Surveyed
Distance in Meters	

EV-

15m of T

EV-22A

EV-2

EV-22A

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ADEC Segment Length: 168m



Map Key: PWS-191

Name: Mike Fogert

Date: 4/14/90

Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-23

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ EV-23 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

VII 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 61 m: Narrow 0 m: V.Light 55 m: No Oil 95 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes manual removal of tarmats in two areas indicated on sketch map. Work should be conducted after 5/1. No specific time constraints identified.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
1D Esther Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 5/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
6V Anchorages (6/1 to 9/15)
6W Forest Service cabins (6/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7H-H Finfish harvesting
7I Deer harvesting (8/15 to 2/28)
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/ EV-23

SUBDIVISION: A (1 of 1)

DATE 4-19-90

NOAA

NAME Michael Buchman

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Center of this segment is a narrow, high angle rock/boulder beach which tapers into gravel/pebble beach at either end. There's a broad band of Fucus below the boulder area which tapers off too. A 10 m wide band of asphalt patches, straddling above & below the high water line of the Fucus zone, was observed near a lg rock outcropping on the northern half. A silver sheen was on snowmelt seepage in this area. It did not extend to water's edge. The asphalt patches were also observed in the gravel underlying the rock/boulder beach. Approximately six $\frac{1}{2}$ m² patches were seen. Lg boulders have splatter stain.

ADEC

NAME John Hayer

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

- ① Rec. mop up + manual pick up of oil in UITS band.
- ② Rec. manual pick up of 3 oblong large asphalt patties in middle of segment. Patties range from 2-5 cm. in depth. (See sketch map) Rakes + shovels for asphalt patties.

LAND MANAGER

NAME JAMES A BARKER

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

FOUND IN CENTRAL AREA OF SEGMENT EXTENDING NORTH PATCHES AND BANDS OF ASPHALT FOUND, PITS OUG SATURATION SHOWN ASPHALT STAIN BANDS RANGE IN SIZE 4m x 6m, 3x15m, BAND RUNS TO END OF SEGMENT. OVERTURNING ROCKS REVEALED STAIN.

SHORELINE OILING SUMMARY

REVISION NO. 06-10-90

OG Mike Fobert ^{NOAA} Michael Buchner SEGMENT ST/ EV-23
 BIO Kathleen Coolin LAND REP James A. Barker SUBDIVISION A (1 OF 1)
 EXION John Hayes ADEC John Hayes TIME 14:45 to 15:30
 TEAM 11 TIDE LEVEL +2.1 DATE 4/19/90
 EST. SUBDIVISION LENGTH: 238 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock SNOW IN THE UPPER PT
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 20 % B 25 % C 40 % P 10 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Lang 40 % Hang 50 % Vert 10 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 75 m N 0 m VL 60 m NO 96 m

SURFACE OIL

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

PAVEMENT H PS 4 sq. m by 5 cm

PATTIES / TARBALLS _____ BAGS

NEAR SHORE SHEEN? ☒ BR RW SL TL

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

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE Logs, fucus#BAGS 0

Photographs:

Roll No. _____

Frames _____

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR				PIT ZONE				AN A	DEPT (m)	V	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		U	U	1	2	3	4	SU	U	M	V				
1	15				X		0.5	X				X		X					Y	5	C, P, G
2	15					X		X						X					N	5	C, P, G
3	30					X		X						X					N	-	P, G, S, M
* 4	20		X				0.5	X		X				X					Y	5	P, G
* 5	15		X				0.2	X		X				X					N	-	P, S

* OILED INTERVAL < 5 cm IN PIT NOS. 4 AND 5 DOES NOT CONSTITUTE SUBSURFACE OIL

COMMENTS No oil was observed in the Northern and Southern Parts of the Segment on the Large Boulder/Rock outcrop. There is a patchy distribution of asphalt and coating occurs on the Rocks + boulders and asphalt is located between the crevices of the rocks. To the north of this rock outcrop is a patchy distribution of asphalt in the Boulder/cobble. The Band is 10m wide at the rock outcrop and tapers down to 1m wide stain, 50m north of the outcrop. The shore zone consists mostly of cobble beach w/ some sand. Consider woodlands.

REVIEWED JWDATE 4-20-90

OG Mike [redacted]

SEGMENT ST/ EV-23

SUBDIVISION A

DATE 4 / 19 90

CHECKLIST

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

LEGEND

1 ▲

Pit - No Subsurface Oil

2 ▲

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oil on Vegetation

1 ➡

Photo location, direction, and number

SKETCH MAP

Scale

20 m

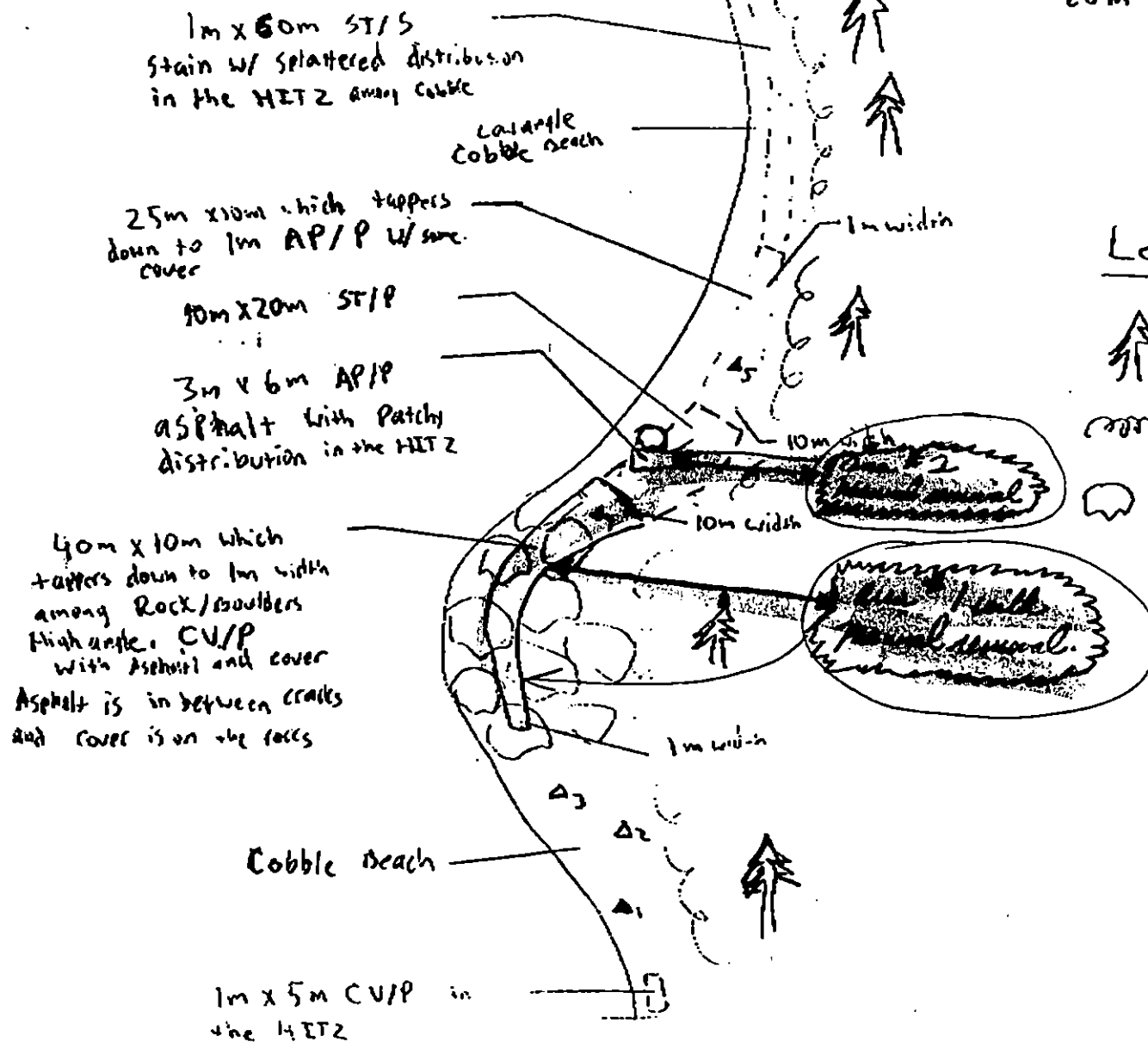


Legend

▲ - trees

--- - Boulders Backshore

☞ - Boulder / Rock outcrop



Oil Character Length (m): AP 31 PO 0 CV 45 CT 0 ST 80 MS 0 PT 0 TR 0 FL 0 NO 40

REVISION 3/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 06/22/90

Segment ST/ EU-23 Subdivision A (1 of 1) Date (mo / day / yr) 4 / 19 / 90

Time (24 hr) 1516 Biologist K. CONLAN

(A) Substrate type and % of segments:
(1) Bedrock 20 (2) Boulder 25 (3) Cobble 40 (4) Pebble 10 (5) Sand 5 (6) Silt 0

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

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

Photographs:
Roll No. _____

Frames _____

BARNACLES

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

Wildlife Observations/ General Comments:

GASTROPOD EGG MASSES UNDER COBBLES.
AMPHIPODS, ISOPODS, OLIGOCHAETES.

Ecological Considerations:

DATE 19 APR 90 TIME 1500

TIDE HEIGHT

2.2 ft

1 - BEDROCK

2 - BOULDER

3 - COBBLE

5 - SAND

6 - SILT

FLORA:

SPECIES	UTZ	MITZ	LITZ	COMMENTS
BOSSIELLA/CORALLINA				
CALLIARTHRON/CORALLINA				
CLADOPHORA SPP				
COSTARIA SPP				
ENDOCLADIA MURICATA				
FILAMENTOUS GREENS				
FILAMENTOUS REDS				
GLOIOPELTIS FURCATA				
HALOSACCION GLANDIFORME				
LAMINARIA SPP				
LITHOTHAMNION				
NEREOCYSTIS SPP				
PORPHYRA SPP				
RALPHSIA/HILDENBRANDIA	1			
PHODOMELA LARIX				
RHOHOMENIA PALMATA				
SCYTOSIPHON SPP			3	
ULVA SPP			1	
ZOSTERA MARINA				
ENTOROMORPHA				

FAUNA:

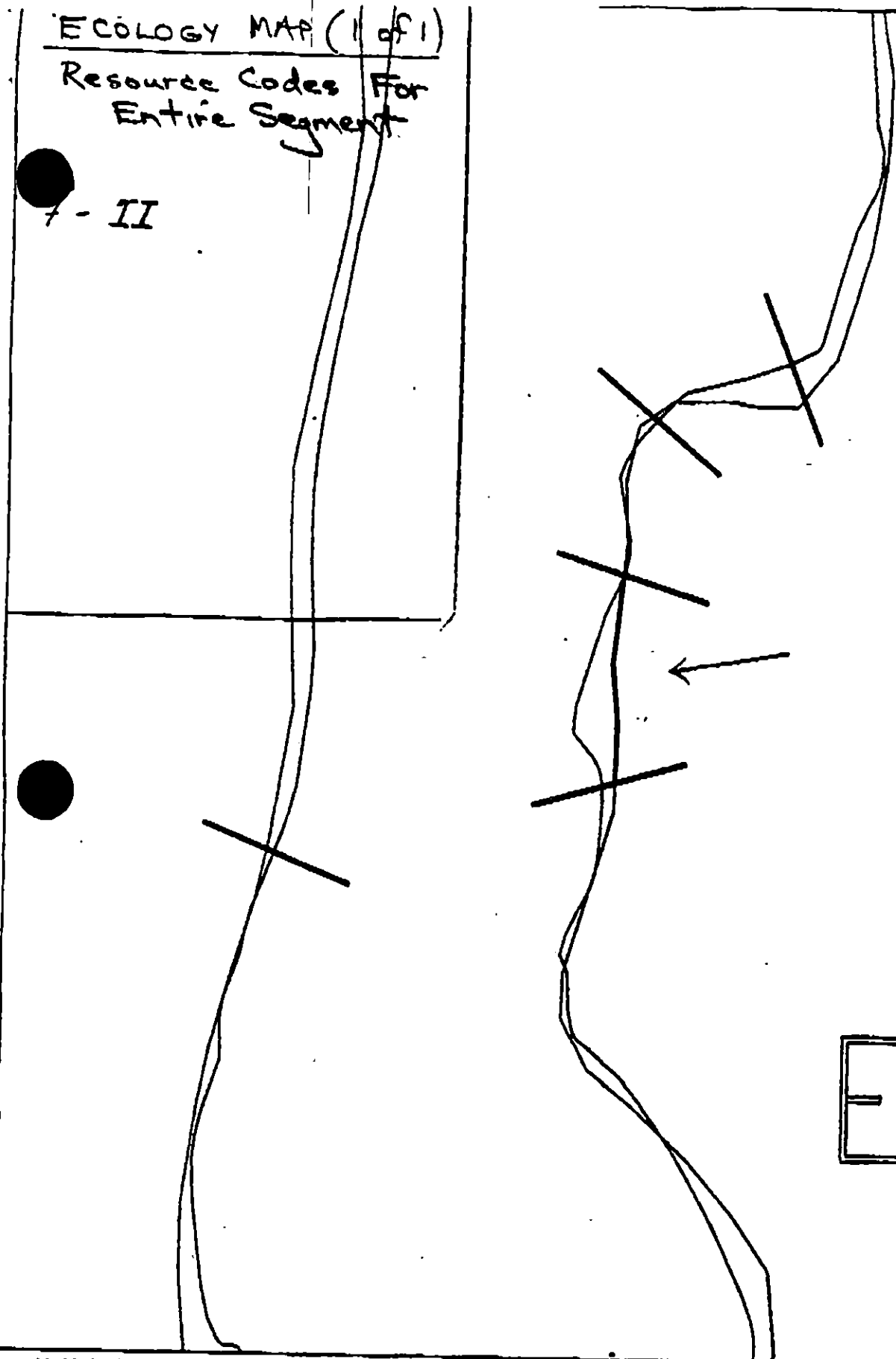
ANTHOPELURA SPP				
(SEM) BALUNUS CARIOSUS	1			
B. GLANDULA			1	
BRYOZOANS				
CHITONS (other than K. TUNICATA)				
CLAMS				
CRABS				
DERMASTERIAS IMBRICATA				
KATHARINA TUNICATA				
LEPTASTERIAS HEXACTIS				
LIMPETS		1	1	
LITTORINA SPP		1	1	
NUCELLA SPP			1	
PAGURUS SPP				
PISASTER OCHRACEUS			1	
POLYCHAETES				
RYCNOPODIA HELIANTHOIDES				
EARLESIA DIRA				
SERPULIDS				
SIPHONARIA THERSITES				
TEALIA				

ECOLOGY MAP (1 of 1)

Resource Codes For
Entire Segment

7 - II

EV



EV

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-23

ADEC Segment Length: 210m

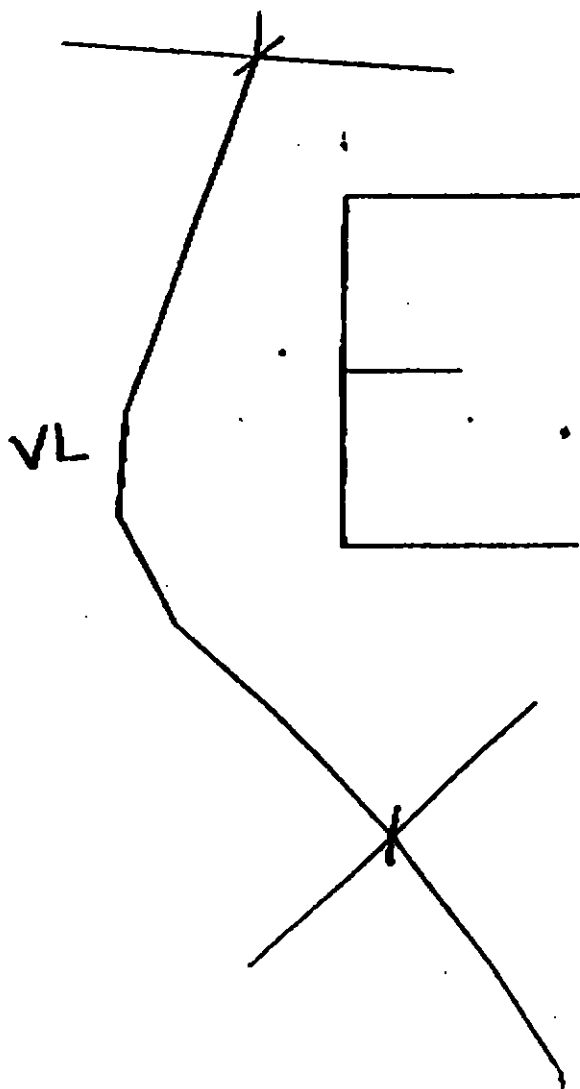


Map Key: PWS-192

Name: _____

Date: _____

Data Entered: _____



E

V

0

2

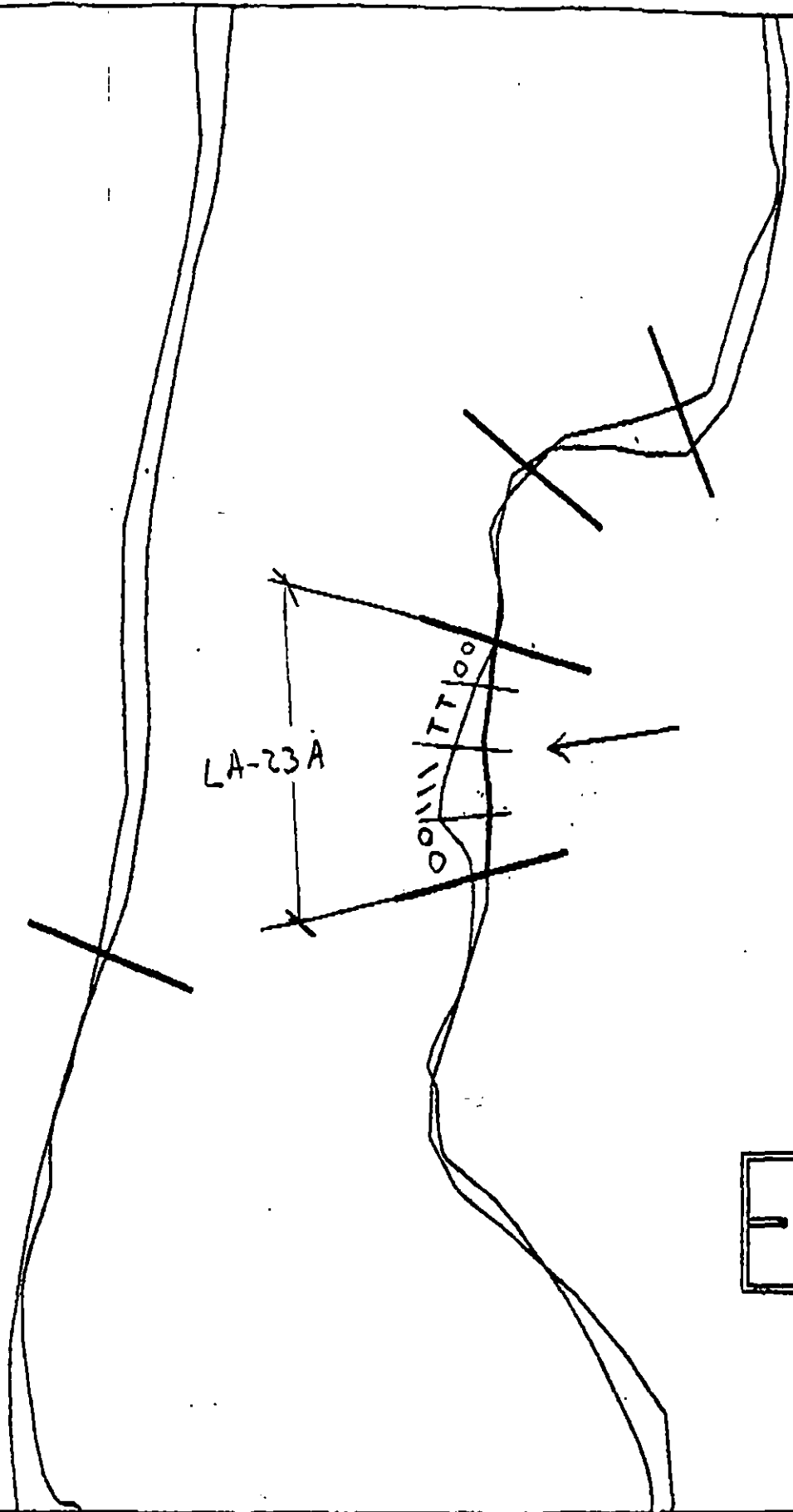
3

500.0

OILING

H	-	Heavy
M	-	Moderate
L	-	Light
VL	-	Very Light
N	-	None
NS	-	Not Surveyed

EV

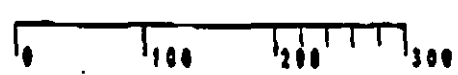


EV-

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

EV-23

ADEC Segment Length: 210m



Map Key: PWS-192
Name: Mike Foot
Date: 4/19/90
Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EV-23 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup
Tarmat Removal

OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

7II Subsistence: Deer harvesting

No constraint to Manual Pickup or Tarmat Removal.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG ADDENDUM DATE

5/16/90.

ADEC

Art Weiner Art Weiner

EXXON

Amy Tate Amy Tate

NOAA

Gary Petree Gary Petree

USCG

G.A. Deiter G.A. Deiter

FOSC

DATE

5-17-90

Prepared by:

Andrew Meyer wk

Date:

5/14/90

EV-28

▲ 345

▲ 317

EV-18

▲ 318

EV-20

EV

EV-2

EV-21

EV-

EV-27

EV-24

EV-26

EV-25

WORK
AREA

A



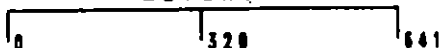
Exxon Company, USA
Map Key: PMS-EV-23
May 11, 1990



ECOLOGY MAP SEGMENT EV-23

SUBDIVISION A (1 of 1)

METERS



Seabird Colony



Eagle Nest

1 inch = 1051 feet

SHORELINE EVALUATION

SEGMENT ST/ EV-23 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature] DATE: 5/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 61 m: Narrow 0 m: V. Light 55 m: No Oil 95 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes manual removal of tarmats in two areas indicated on sketch map. Work should be conducted after 5/1. No specific time constraints identified. REMOVE UNATTACHED OILED VEGETATION.

TAG COMMENTS: MONITORS TO ADDRESS SUITZ

TAG APPROVAL DATE: 4/28/90
DEC [Signature]
EXXON [Signature]
NOAA [Signature]
USCG [Signature]

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

See Addendum dated 5/14/90 WMC

SHORELINE EVALUATION

SEGMENT ST/ EV-23 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

VII 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: J. David McManus DATE: 5/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 61 m: Narrow 0 m: V. Light 55 m: No Oil 95 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes manual removal of tarmats in two areas indicated on sketch map. Work should be conducted after 5/1. No specific time constraints identified. REMOVE UNATTACHED OILED VEGETATION.

TAG COMMENTS: MONITORS TO #3855 SURT2

TAG APPROVAL DATE: 4/28/90.
ADEC Art Weiner
EXXON AMY TEAL
NOAA GARY PETRAE
USCG KENNETH KEANE

FOSC: ML DATE: 5-8-90

OG Mike

SEGMENT ST/ EV-23

SUBDIVISION A

DATE 4 / 19 90

CHECKLIST

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

LEGEND

1 Δ

Pt - No Subsurface Oil

2 Δ

Pt - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Spattered Distribution

Oil on Vegetation

1 →

Photo location, direction,
and number

SKETCH MAP

Scale

20 m



Legend

↑ - trees

o - boulders Backshore

☪ - Boulder / Rock
outcrop

1m x 60m ST/S
stain w/ splattered distribution
in the HITZ among cobble

Large
cobble beach

25m x 10m which tapers
down to 1m AP/P w/ some
cover

10m x 20m ST/P

3m x 6m AP/P
asphalt with patchy
distribution in the HITZ

40m x 10m which
tapers down to 1m width
among Rock/boulders
High angle. CV/P
with Asphalt and cover
Asphalt is in between cracks
and cover is on the rocks

Cobble Beach

1m x 5m CV/P in
the HITZ

Oil Character Length (m): AP 31 PO 0 CV 45 CT 0 ST 80 MS 0 PT 0 TR 0 FL 0 NO 40

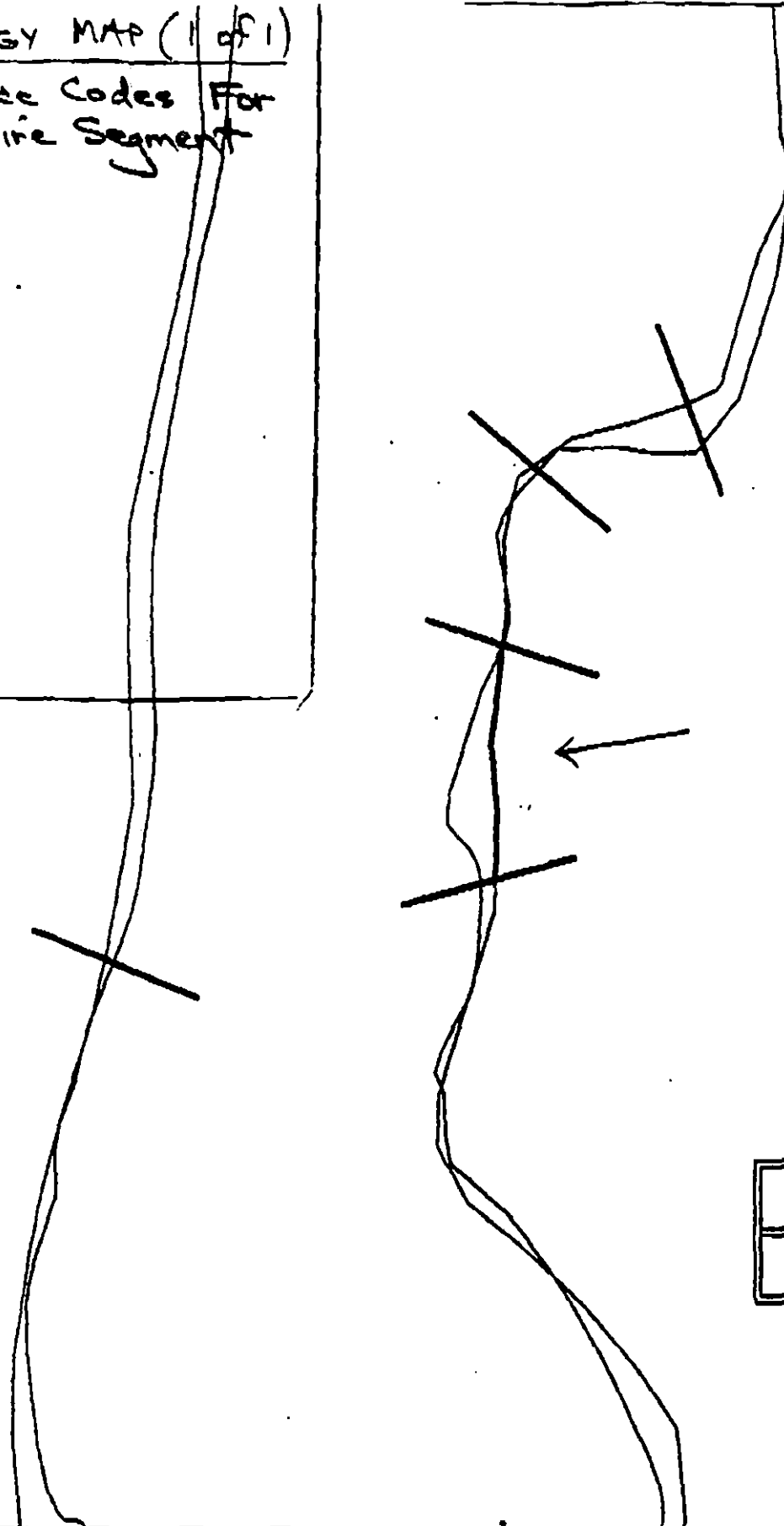
REVISION: 00/00/00

ECOLOGY MAP (1 of 1)

Resource Codes For
Entire Segment

7 - II

EV



EV-

XXXX Wide

EV-23

Map Key: PWS-192

/// Medium

Name: _____

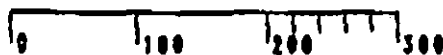
--- Narrow

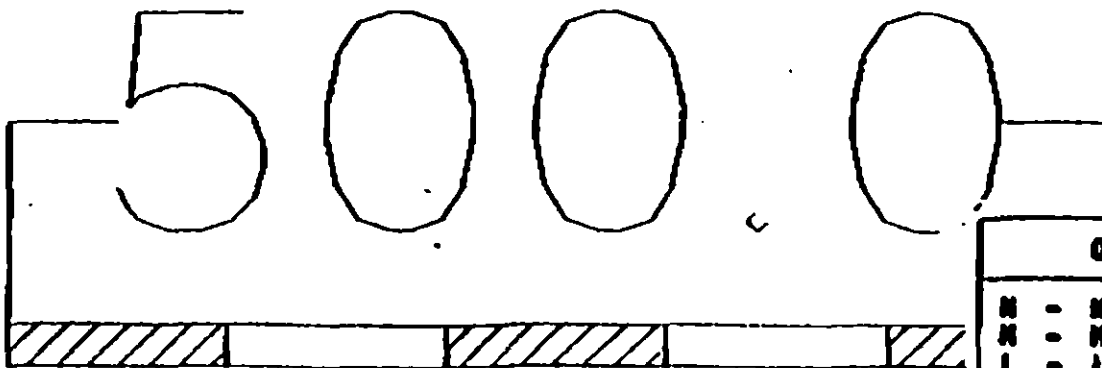
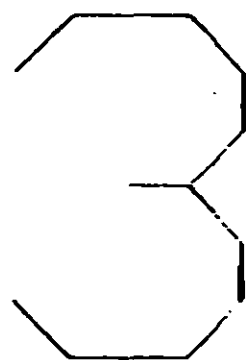
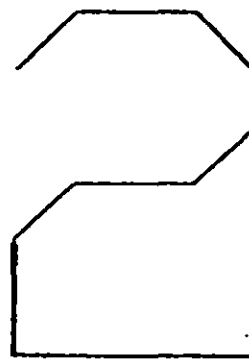
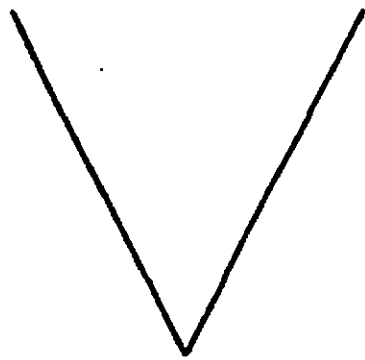
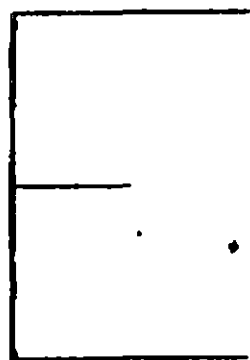
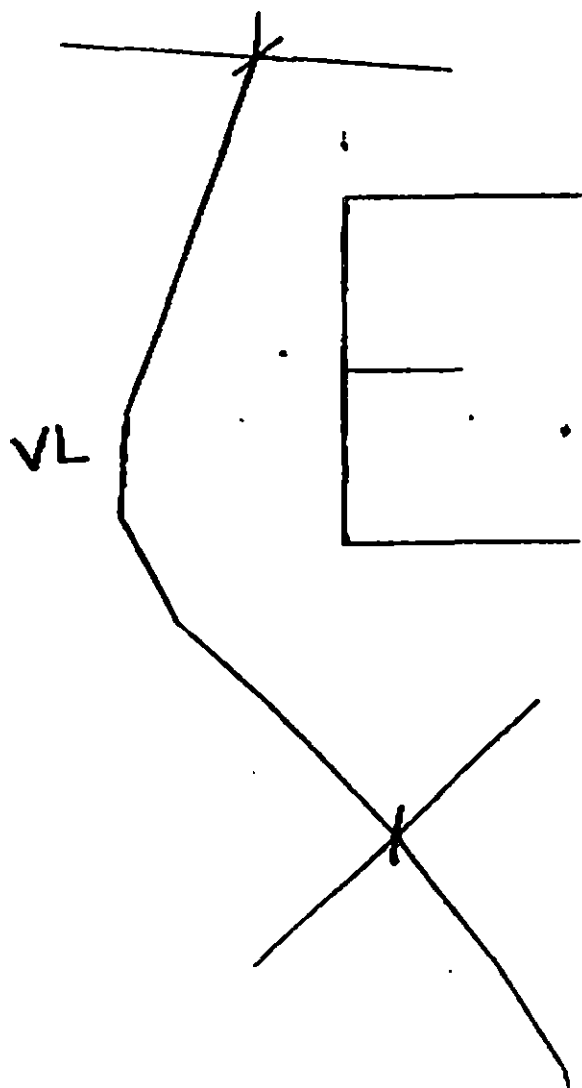
ADEC Segment Length: 210m

Date: _____

TTTT Very Light

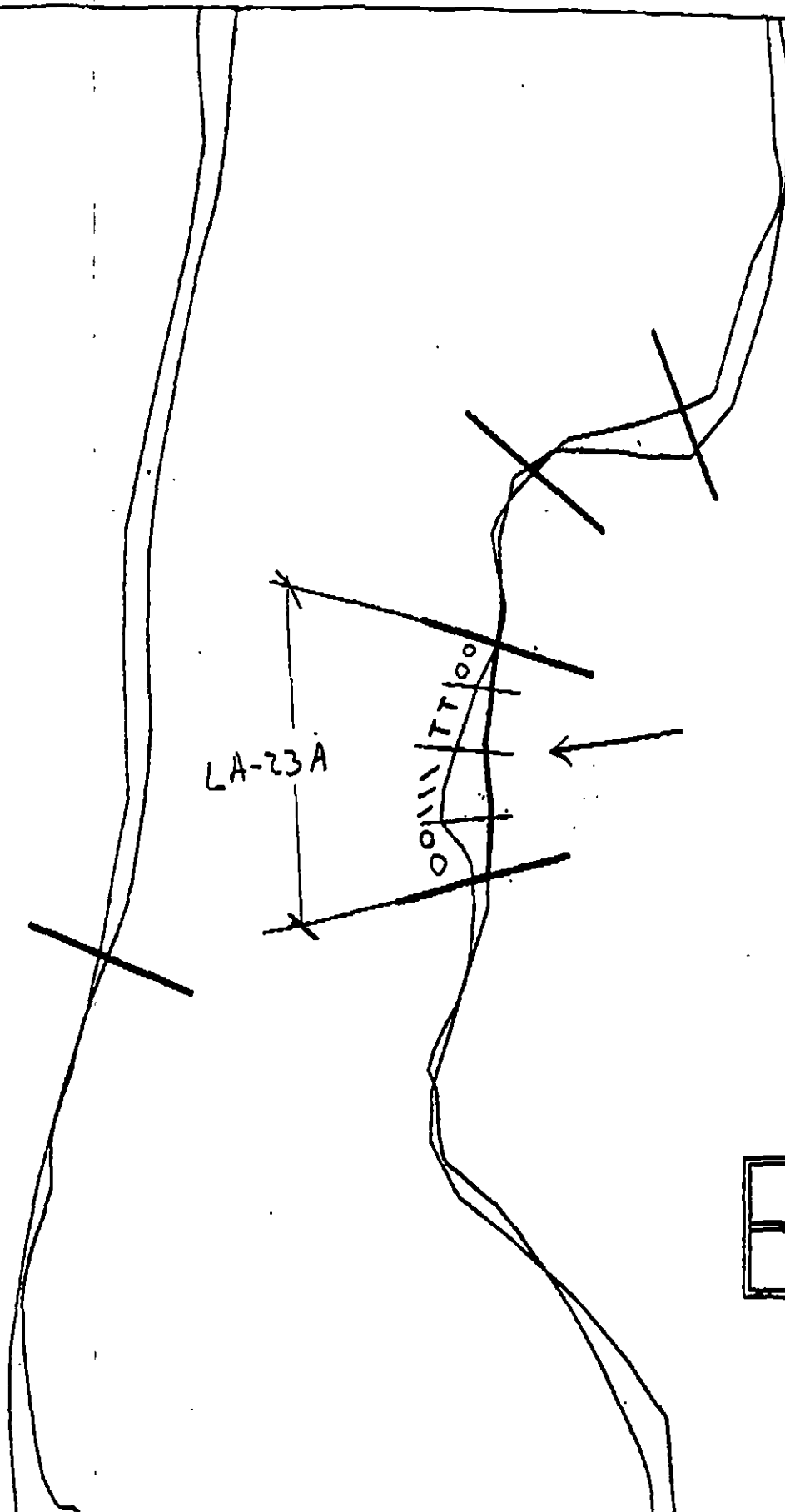
OOOO No Oil





OILING	
H	Heavy
M	Moderate
L	Light
VL	Very Light
N	None
NS	Not Surveyed

EV



EV-

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

EV-23

ADEC Segment Length: 210m



Map Key: PWS-192

Name: Mike Foote

Date: 4/14/90

Data Entered:

1991 MAYSAP EVALUATION

SEGMENT: EV 023 **SUB:** A **REGION:** PWS **SURVEY DATE:** 4/30/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

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

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____ FOSC APPROVAL DATE: _____

ADEC _____ FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

TEAM NO. 5 SEGMENT EV-23 SUBDIVISION A DATE 4/30/91

ADEC

NAME John Hayer SIGNATURE [Signature]

☐ NTR ☒ Treatment Recommended

Recommend manual pickup of AP in sections A-E as identified on sketch map. Much of this AP is in isolated patches and clearly visible for pickup crews. Good area for Chuga LRP manual crews.

EXXON

NAME Martinez N.J. SIGNATURE [Signature]

☒ NTR Oil in the segment is minor weathering widely. I don't believe it would be wise to send a crew in. Maybe CUC local response for debris pick up.

LANDMANAGER

NAME Steve WARD OF CUC SIGNATURE [Signature]

☐ NTR Good Area for Chuga Local Response, Lots of Asphalt, Lots of spill generated trash manual treatment necessary.

USCG/NOAA

NAME Dreher / Hodges SIGNATURE [Signature]

☒ NTR Widely scattered tar patches and oiled sediment in upper beach area. Some oil coat/coverage observed. No mobile oil or clean up required.

SEGMENT EV 23

SUBDIVISION A

DATE April 30 1991

ENERGY LEVEL: ☐ H ☐ M ☒ L

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

TOTAL LENGTH SHORELINE SURVEYED: 210 m NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

EST. OIL CATEGORY LENGTH: W 1 m M 1 m N 1 m VL 35 m NO 9 m US 0 m

[illegible]

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

SLOPE: V = VERTICAL: H = HIGH ANGLE: M = MEDIUM ANGLE: L = LOW ANGLE PHOTO ROLL # MAYSAP- 5 - 6 FRAMES 2-1

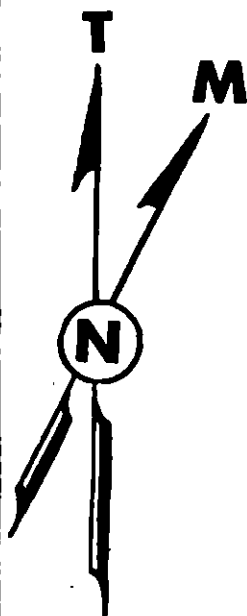
[illegible]

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

OG COMMENTS: NO PITS DUE TO BOULDER SUBSTRATE AND FINE GRAIN MATRIX WHICH ACTED AS A BARRIER TO OIL AND SHOVEL PENETRATION. MOST OIL OBSERVED ALONG THIS SUBDIVISION WAS IN THE FORM OF SCATTERED PATCHES OF AP IN THE HITZ

26 revised, May 7

BAP 1991
 DSKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV-23A
 DATE: APRIL 30 '91
 AIR P.#: EX 107-165-12



LEGEND

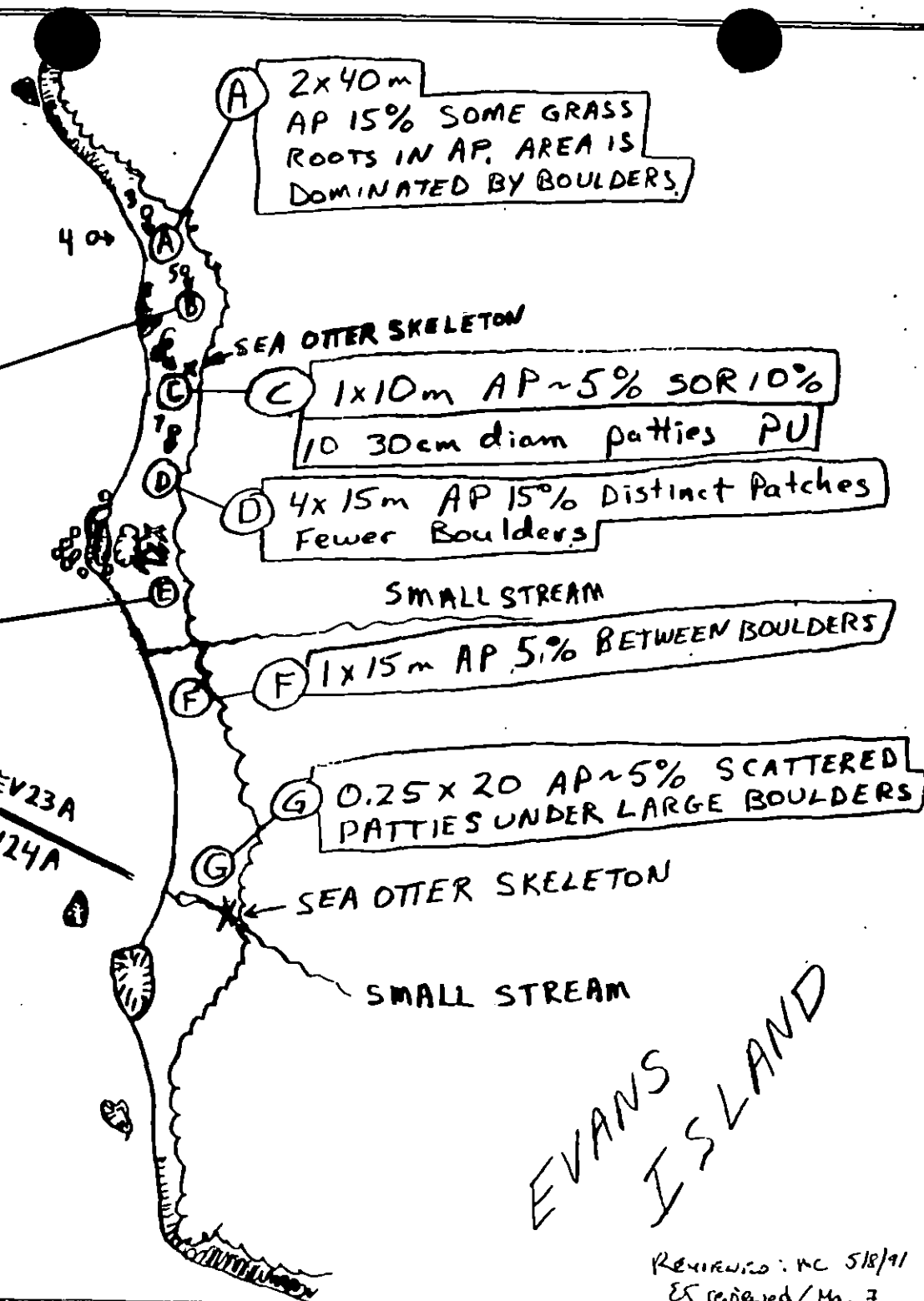
BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE

80 METERS
 ROUGHLY

SHELTER
 BAY

EV23A
 EV24A



REVIEWED: MC 5/18/91
 EX reviewed/May 7

NAVSAP BIOLOGICAL SUMMARY FORM

TEAM # 5

DATE 30 April 1991

Pg 1 of 2

SEGMENT # EV-23

TIDAL HEIGHT (Range) ~ +5 → +1.5

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 1-2'

WIND SPEED/DIRECTION 10-15 knots/N

PHOTOGRAPHS: ROLL # MRYSA 6

FRAME # 10

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

(A) Area is located in the UITZ on cobble and small boulders. Tar spot algae, filamentous greens and *Fucus* sporelings are present in the area. Within 1m below the site there are moderate barnacles and sparse → moderate *Fucus* (~10% of *Fucus* has maturing conceptacles) covering ~75% of the surface. *Gloiopeltis* (algae), *Scytosiphon* (algae), tar spot algae, rare juvenile mussels, moderate limpets and sparse *Littorina* are also present. Biota appears to be healthy.

(B) Area is in the angular cobble UITZ. No intertidal macro-biota was observed. Biota below site similar to biota below site A.

(C) Area is biologically similar to site B.

(D) Area is located in the UITZ. No intertidal macro-biota was observed in site. Within 1m below site (in the MITZ) biota is concentrated on boulder with ~50% cover including sparse barnacles and moderate *Fucus* (sporelings are present). There is <1% biota cover on the gravel.

Areas A → D are located on a single pocket beach. Little biota is located in the oiled areas. In the MITZ biota cover ranges from 50-75% on cobble and boulders and <1% on gravel. Biota appears to be healthy. An otter skeleton (dead >5 days) was found between sites B & C (see photo roll 6 frame 6). Both jaws had a full set of teeth. LITZ was covered by tide.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

OF SPECIES

TOTAL BIRDS

FISH OBSERVED SPECIES PRESENT

Eagles	1	1	
Seabirds			
Waterfowl			
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds			

LAND MAMMALS

MARINE MAMMALS

OBSERVED

SPECIES

OBSERVED

Sea Otters	2 - Skeletons > 5 days		
Pinnipeds (specify)			
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

Revised: MC 5/8/91

Rev'd 5/7/91

Team #5
Segment #EV-23
Subdivision A
Sea State 1-2'

Date 30 April 1991
Tidal Height ~ +5 $\Rightarrow$ +6.5
Biologist Crank
Wind Speed/Direction 10-15 knots/N

pg 2 of 2

Comments (cont)

(E) Area is located in the high UITZ. Filamentous green algae and black lichen were the only macro-biota observed within the site. One meter downshore of site Fucus covers ~50% of the boulders and cobble. Sporelings are present. Barnacles and juvenile mussels are sparse. Gravel surface has ~5% biota cover.

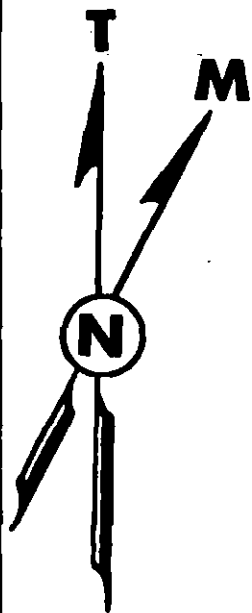
(F) Area is located in the UITZ. No intertidal macro-biota was observed within the site. Less than 1m below the site Fucus, sparse barnacles, tarspot algae, sparse juvenile mussels, moderate Littorina and moderate limpets cover ~75% of the available surface area.

(G) Area is located in the UITZ along north side of stream. Tarspot algae, sparse barnacles that sealed their inner plates when stimulated, sparse juvenile mussels and moderate Littorina & limpets are located w/ site. Area below site biologically similar to area below (F).

- Areas E $\Rightarrow$ G are located on a high angled beach. Little biota is found in the UITZ. Approx. 5 $\Rightarrow$ 75% biota cover is in the MITZ.

(UITZ not surveyed due to tide level). Two other skeletons^(total) were found on this subdivision, both have been dead longer than 5 days and both had a full set of teeth (see map for locations).

MAYBAP 1991
 OG SKETCH MAP: Bio Sketch Map
 GREG CHANEY: Crank
 TEAM 5
 SEGMENT: EV-23A
 DATE: APRIL 30 '91
 AIR P.#: EX 102-LGS-12

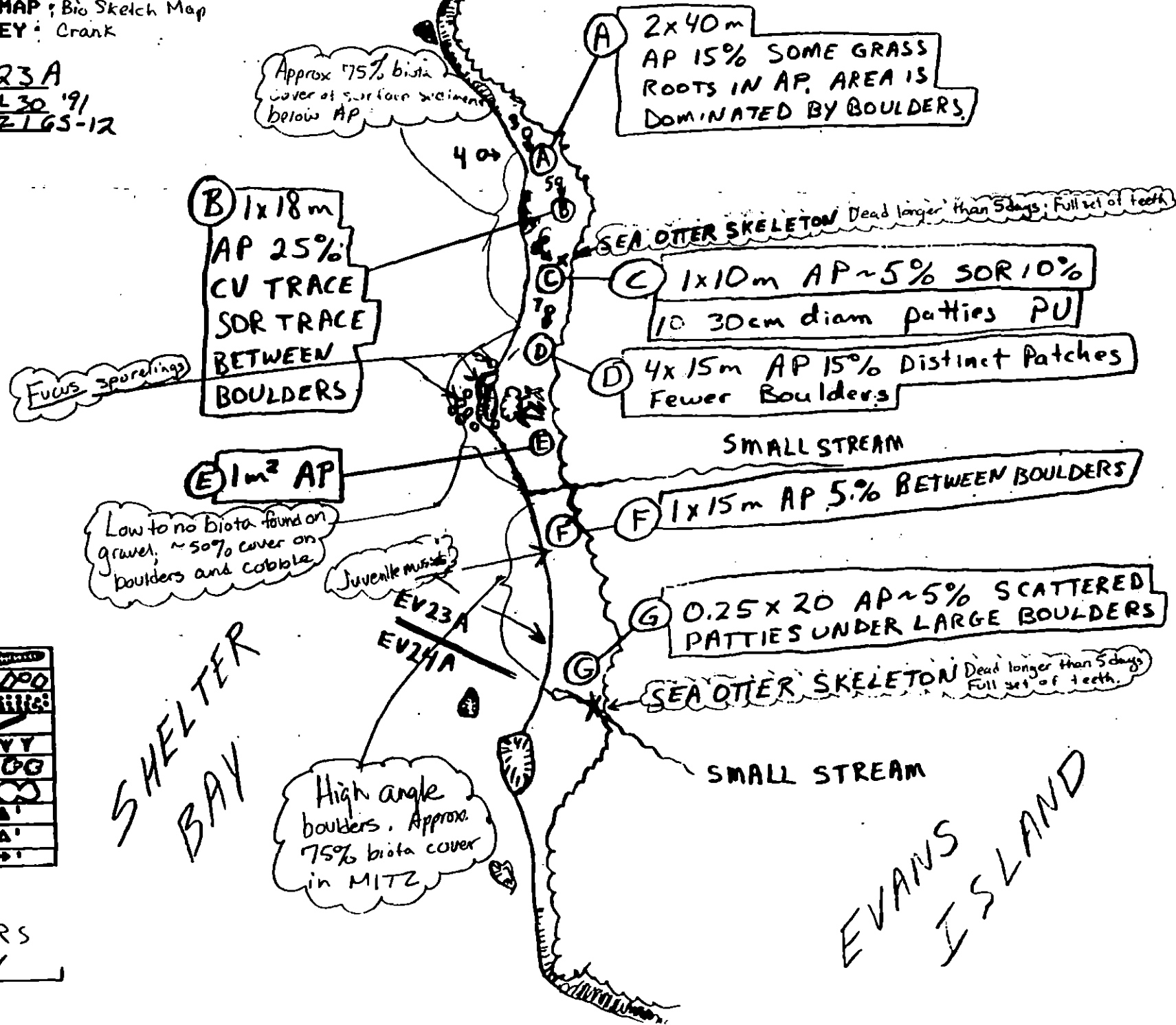


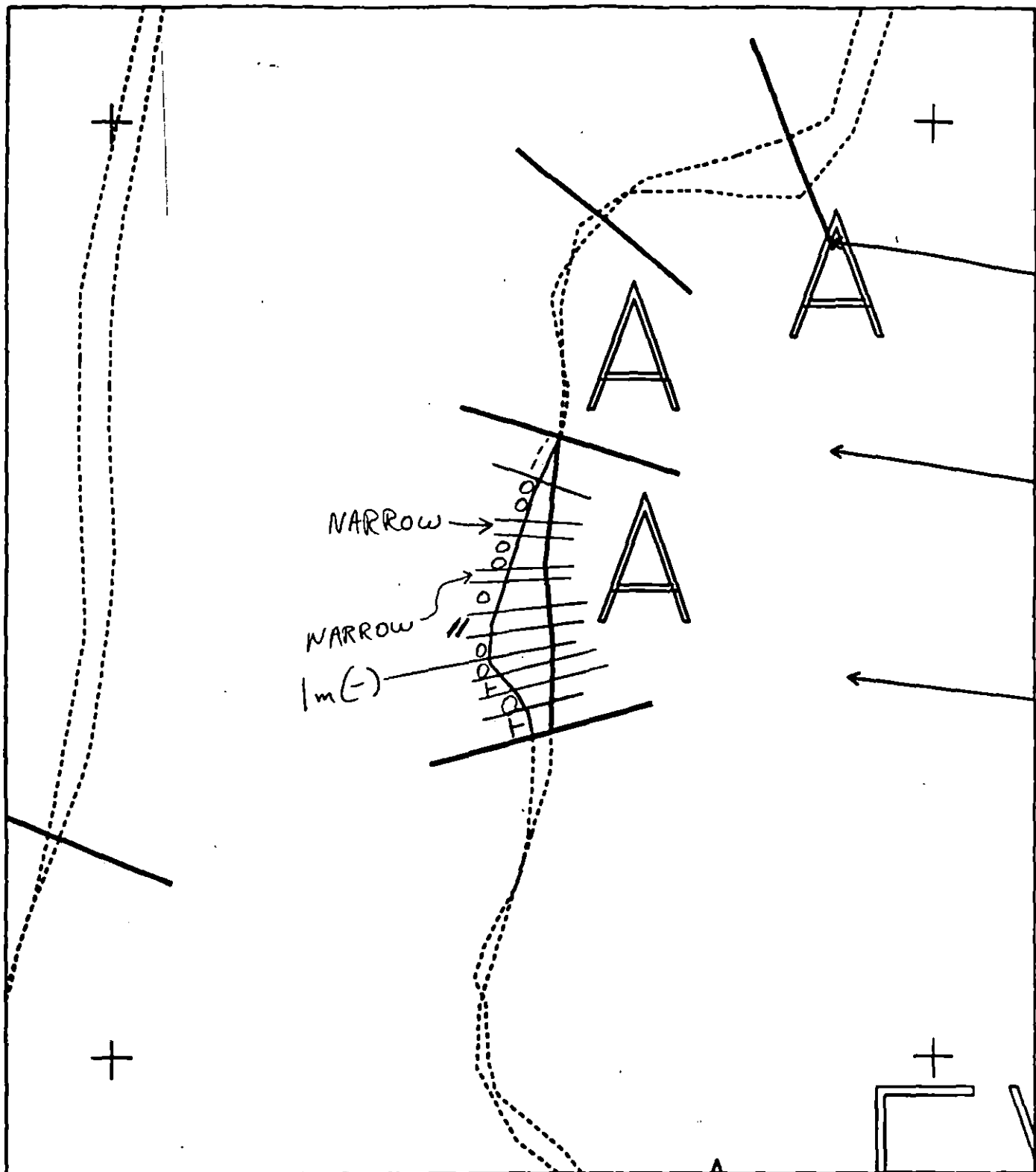
LEGEND

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

SCALE

80 METERS
 ROUGHLY





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

EV023 A
 ADEC Subsegment Length: 210m
 METERS
 0 100 200
 AK State Plane Zone 4
 pr0230



Subdivision Field Map
 Map Key: PUSEV023A
 Name: Greg Charney
 Date: April 30 '91
 Date Entered:

Reviewed: 5/8/91 MC
 EK revised, May 7

1991 MAYSAP EVALUATION

SEGMENT: EV 023 SUB: A REGION: PWS SURVEY DATE: 4/30/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

Revised from Data

5/17/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N) N

N

Y

Y

Manual Pickup (Check as Req.) _____

X

X

Spot Washing _____

Bio-Customblen Only _____

Bio-Inipol/Customblen _____

Other _____

Other _____

COMMENTS:

INITIAL: _____

TAG: MANUAL PICKUP OF EASILY ACCESSIBLE AP IN AREAS OF A B + D

FOSC: _____

TAG APPROVAL DATE: MAY 17 1991

FOSC APPROVAL DATE: 25 MAY 1991

ADEC *[Signature]*

FOSC *[Signature]*

EXXON *[Signature]*

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

USCG *[Signature]*

NOAA *[Signature]*

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT EV-23 SUBDIVISION A DATE 4/30/91

ADEC

NAME John Hayer SIGNATURE [Signature]

☐ NTR ☒ Treatment Recommended

Recommend manual pickup of AP in sections A-E as identified on sketch map. Much of this AP is in isolated patches and clearly visible for pickup crews. Good area for Chuga LRP manual crews.

EXXON

NAME Martinez N.J. SIGNATURE [Signature]

☒ NTR

Oil in the segment is minor weathering nicely. I don't believe it would be wise to send a crew in. Maybe CVC local response for debris pick up.

LANDMANAGER

NAME Steve WARD OF CVC SIGNATURE [Signature]

☐ NTR

Good Area for Chuga Local Response, Lots of Asphalt. Lots of spill generated trash manual treatment necessary.

USCG/NOAA

NAME Dreher / Hodges SIGNATURE [Signature]

☒ NTR

Widely scattered tar patches and oiled sediment in upper beach area. Some oil coat/coverage observed. No mobile oil or clean up required.

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 1

TEAM NO. 5

OG CHANEY

BIO CRANK

SEGMENT EV 23

ADEC HAYES

LANDMANAGER WARD for CVC

SUBDIVISION A

ON MARTINEZ

USCG/NOAA DREHER/HODGES

DATE April 30 1991

TIME 12:20 to 13:00

TIDE LEVEL +5 ft. to +6.5 ft.

ENERGY LEVEL: ☐ H ☐ M ☒ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 210 m

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

EST. OIL CATEGORY LENGTH:

W 15 m M 69 m N 35 m VL 91 m US 0 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				SOME NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A	P										BV	M	2	40	✓	✓			GRASS ROOTS
B	P			T	T						B	M	1	18		✓			BETWEEN BOULDERS
C	S			S							B	M	1	10		✓			AFTER PU
D	P										BGP	M	4	15		✓			DISTINCT PATCHES
E	C										B	M	1	7		✓			ONE PATCH AP
F	S										B	M	1	15		✓			BETWEEN BOULDERS
G	S										B	M	0.25	20		✓			SCATTERED

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 - 6 FRAMES 2-7

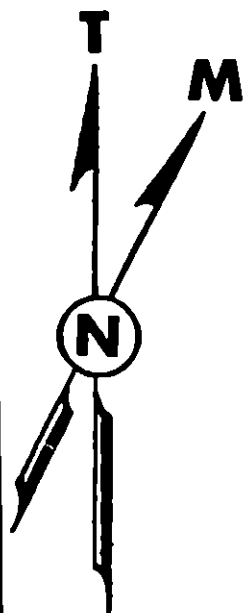
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER								OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO	S					UI	MI	LI			
									-										
									-										
									-										
									-										
									-										
									-										
									-										
									-										
									-										
									-										
									-										
									-										

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

OG COMMENTS: NO PITS DUE TO BOULDER SUBSTRATE AND FINE GRAIN MATRIX WHICH ACTED AS A BARRIER TO OIL AND SHOVEL PENETRATION. MOST OIL OBSERVED ALONG THIS SUBDIVISION WAS IN THE FORM OF SCATTERED PATCHES OF AP IN THE HITZ.

ES revised, May 7

MAY 1991
 OG SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV-23A
 DATE: APRIL 30 '91
 AIR P.#: EX102 LGS-12



LEGEND

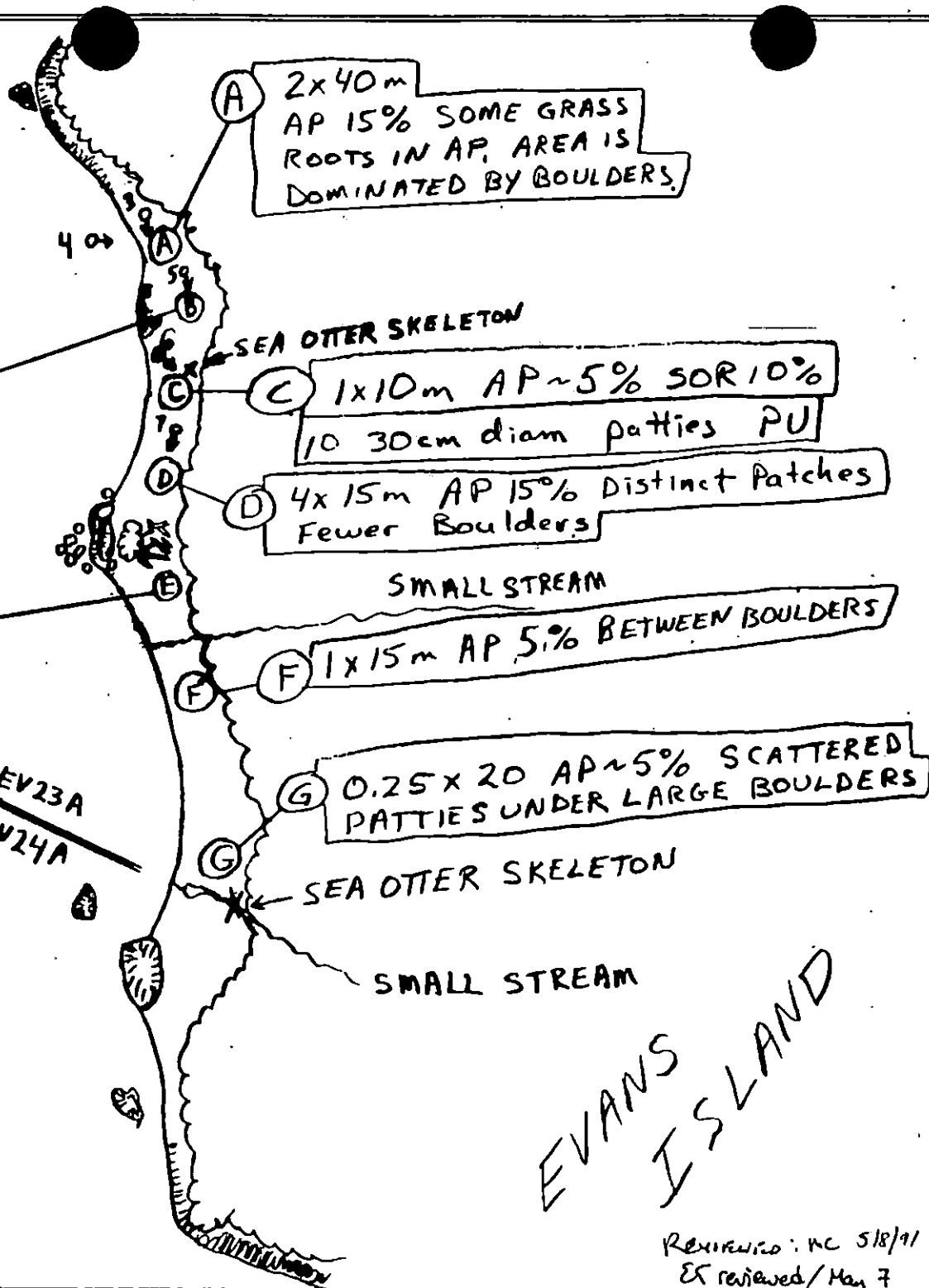
BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE

80 METERS
 ROUGHLY

SHELTER BAY

EV23A
 EV24A



Reviewed: KC 5/8/91
 EX reviewed May 7

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5

DATE

30 April 1991

Pg 1 of 2

SEGMENT # EV-23

TIDAL HEIGHT (Range) $\sim +5 \rightarrow +6.5$

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 1-2'

WIND SPEED/DIRECTION 10-15 knots/N

PHOTOGRAPHS: ROLL # MAYSAP 4

FRAME # 10

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

(A) Area is located in the UITZ on cobble and small boulders. Tar spot algae, filamentous greens and *Fucus* sporelings are present in the area. Within 1m below the site there are moderate barnacles and sparse $\rightarrow$ moderate *Fucus* (~10% of *Fucus* has maturing conceptacles) covering ~75% of the surface. *Gloiopeltis* (alga), *Scytosiphon* (algae), tar spot algae, rare juvenile mussels, moderate limpets and sparse *Littorina* are also present. Biota appears to be healthy.

(B) Area is in the angular cobble UITZ. No intertidal macro-biota was observed. Biota below site similar to biota below site A.

(C) Area is biologically similar to site B.

(D) Area is located in the UITZ. No intertidal macro-biota was observed in site. Within 1m below site (in the MITZ) biota is concentrated on boulder with ~50% cover including sparse barnacles and moderate *Fucus* (sporelings are present). There is <1% biota cover on the gravel.

Areas A $\rightarrow$ D are located on a single pocket beach. Little biota is located in the oiled areas. In the MITZ biota cover ranges from 50-75% on cobble and boulders and <1% on gravel. Biota appears to be healthy. An otter skeleton (dead >5 days) was found between sites B & C (see photo roll 4 frame 6). Both jaws had a full set of teeth. LITZ was covered by tide.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

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

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	2 - Skeletons >5 days		
Pinnipeds (specify)			
Es (specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed: MC 5/8/91

Team #5
 Segment # EV-23
 Subdivision A
 Sea State 1-2'

Date 30 April 1991
 Tidal Height $\sim +5 \rightarrow +6.5$
 Biologist Crank
 Wind Speed/Direction 10-15 knots/N

Comments (cont)

(E) Area is located in the high UITZ. Filamentous green algae and black lichen were the only macro-biota observed within the site. One meter downshore of site Fucus covers $\sim 50\%$ of the boulders and cobble. Sporelings are present. Barnacles and juvenile mussels are sparse. Gravel surface has $\sim 5\%$ biota cover.

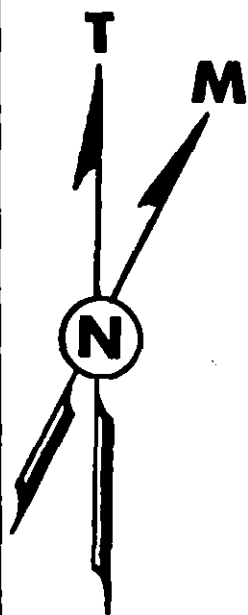
(F) Area is located in the UITZ. No intertidal macro-biota was observed within the site. Less than 1m below the site Fucus, sparse barnacles, tarspot algae, sparse juvenile mussels, moderate Littorina and moderate limpets cover $\sim 75\%$ of the available surface area.

(G) Area is located in the UITZ along north side of stream. Tarspot algae, sparse barnacles that sealed their inner plates when stimulated, sparse juvenile mussels and moderate Littorina & limpets are located w/ site. Area below site biologically similar to area below (F).

- Areas E $\rightarrow$ G are located on a high angled beach. Little biota is found in the UITZ. Approx. 5-75% biota cover is in the MITZ.

(UITZ not surveyed due to tide level). Two other skeletons^(total) were found on this subdivision, both have been dead longer than 5 days and both had a full set of teeth (see map for locations).

MAY 1991
 OG SKETCH MAP: Bio Sketch Map
 GREG CHANEY: Crank
 TEAM 5
 SEGMENT: EV-23A
 DATE: APRIL 30 '91
 AIR P.#: EX 102-165-12



LEGEND

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

SCALE

80 METERS
 ROUGHLY

SHELTER
 BAY

High angle
 boulders. Approx.
 75% biota cover
 in MITZ

Approx 75% biota
 cover at surface sediment
 below AP

2x40m
 AP 15% SOME GRASS
 ROOTS IN AP. AREA IS
 DOMINATED BY BOULDERS

B 1x18m
 AP 25%
 CV TRACE
 SDR TRACE
 BETWEEN
 BOULDERS

SEA OTTER SKELETON Dead longer than 5 days. Full set of teeth

C 1x10m AP ~5% SDR 10%
 10 30cm diam patties PU

D 4x15m AP 15% Distinct Patches
 Fewer Boulders

E 1m² AP

Low to no biota found on
 gravel, ~50% cover on
 boulders and cobble

Juvenile mussels

SMALL STREAM

F 1x15m AP 5% BETWEEN BOULDERS

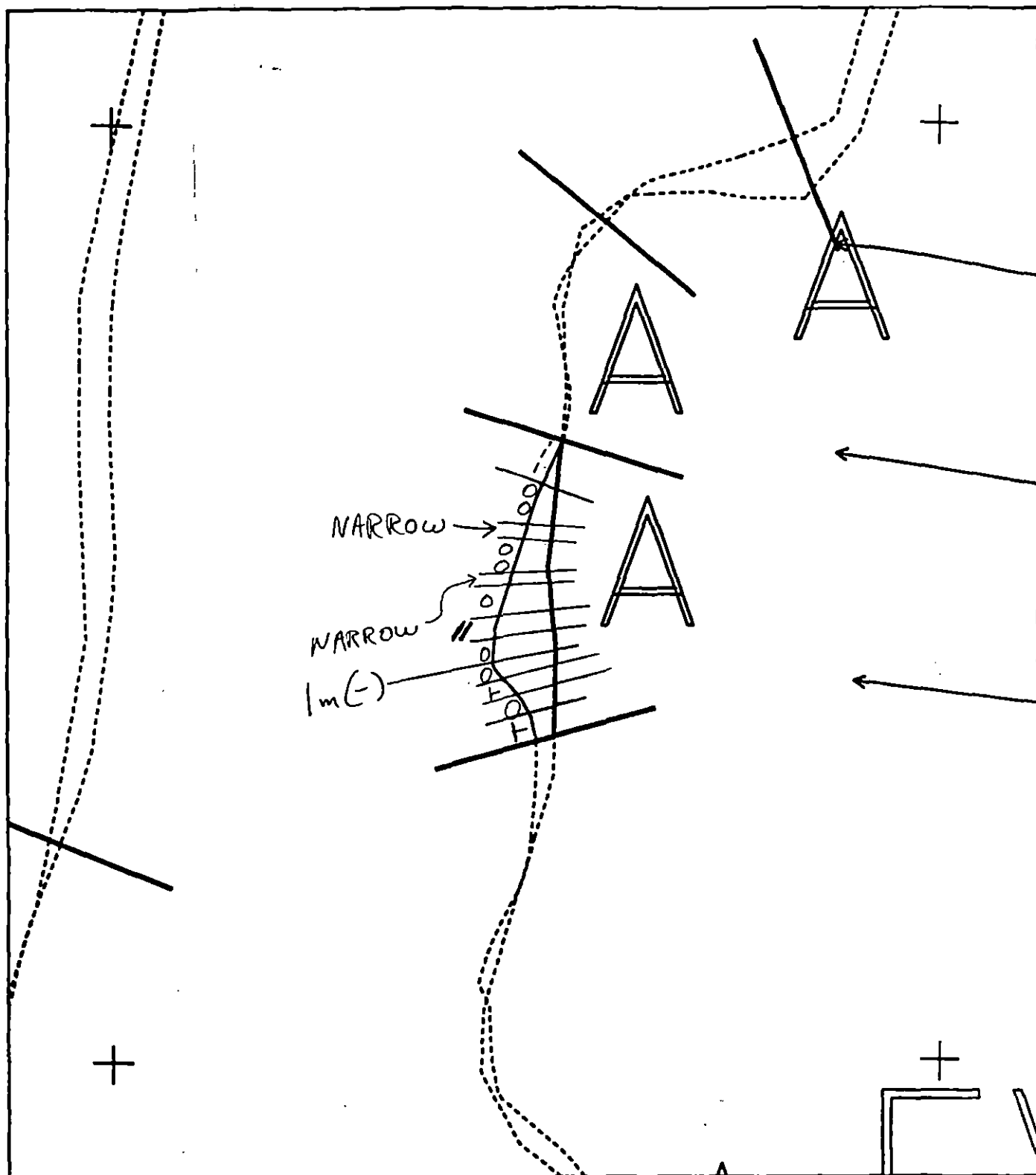
G 0.25x20 AP ~5% SCATTERED
 PATTIES UNDER LARGE BOULDERS

SEA OTTER SKELETON Dead longer than 5 days
 Full set of teeth

SMALL STREAM

EVANS
 ISLAND

EV23A
 EV24A



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

EV023 A

ADEC Subsegment Length: 210m

METERS

0 100 200

AK State Plane Zone 4
 EV023a



Subdivision Field Map

Map Key: PWSEV023A

Name: Greg Chaney

Date: April 30 '91

Data Entered:

REVIEWED: 5/8/91 MC
 EX Passed, May 7

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-24

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ EV-24 SUBDIVISION A (1 OF 1) DATE 4/19/90

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)
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. Anadromous stream at southern end of segment.

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 34 m: Narrow 29 m: V.Light 642 m: No Oil 0 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes removal of tarmats as shown on sketch map and bioremediation of area of surface cover to within 50M of uncatalogued anadromous stream. Work should be conducted between 5/15 and 7/10 based on anadromous stream constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

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

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

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

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

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

1H Remote release site

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

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

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

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

For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

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

Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

3N, 3P
3O, 3Q

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

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

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

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

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

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

Restrict all activity to essential minimum, especially air traffic.

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

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

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

6U Recreation: Tent sites (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 8/30)

7HH Finfish harvesting

Deer harvesting (8/15 to 2/28)

7JJ Invertebrate harvesting

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EV-24 SUBDIVISION: EV-24 DATE 4/19/90

NAME Michael Burkman SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS This segment Alternates from benches of shale slivers to narrow bands of boulder/rock shoreline, & ends at the north with a rock outcrop

Frequent bands & patches of asphalt patches thru out the segment. Silver stream in Scarpage water near some patches. Underlying gravel in boulder shoreline area was frequently cemented into asphalt patches

ADEC NAME John Hayes SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS * Ared stream in EV-25 approx. 32m. from oiling in EV-24.

① Low-Moderate pressure hot water deluge on boulder outcrop at S. end of segment. Work + mid tide to protect healthy focus bed below oiling. Oil at U.T.Z focus M.T.Z.

② 4 Bands of asphalt patches going N on segment from Bedrock Outcrop at S. beginning of segment. Manual removal with rakes + shovels. Map up + scrape up where bands extend into Matrix of boulders. (See sketch map.)

③ Bioremediate as finishing treatment M.+U.T.Z's after manual treatment.

LAND MANAGER

NAME James A. Barker SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

BEACH SEGMENT SOUTH END REVEALED STAIN ; ASPHALT PATCHES UNDER BOUNDER AND COBBLE. STARTED MOVING NORTH ASPHALT PATCH STARTED 2m x 30m GETTING SMALLER TO A 1m x 20m BAND THEN BECOMES BROKEN DISTRIBUTION. NORTHERN END OF SEGMENT REVEALS STAINING

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

OG Mike Foget NOAA Michael Buchman SEGMENT ST/ EV-24
 BIO KATHREN Conlin LAND REP JAMES A BARKER SUBDIVISION A (1 OF 1)
 EXXON Larry Olson ADEC John Hayes TIME 13:15 to 14:45
 TEAM NO. 11 TIDE LEVEL +3.6 DATE 4/19/90
 ST. SUBDIVISION LENGTH: 675 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 25 % C 35 % P 20 % G 10 % S 5 % M 2 % V 0 %
 SLOPE: Long 25 % Hang 70 % Vert 5 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 35 m N 30 m VL 610 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	N	NE	E	SE	SW	WS	S	SE	BU	U	M	U
ASPHALT PAVEMENT			✓		✓					✓		
POOLED												
COVER												
COAT			✓		✓					✓		
STAIN			✓		✓					✓		
MOUSSE												
PATTIES			✓		✓					✓	✓	
TARBALLS												
NO OIL									X			X

PAVEMENT H ☒ S 10 sq. m by 3 cmPATTIES/ TARBALLS 50 BAGSNEAR SHORE SHEEN? ☒ NO BR RW SL TL

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

Photographs:

Roll No. ST-11-3Frames 1

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR				PIT ZONE				ANALYSIS	DEPT (m)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UO	SW	WS	S	SE	BU	U	M	U				
1	25		X				0-10		X	X				X				N	-		C, PG
2	20					X	.		X			X			X			Y	10		P, G
3	30					X	.		X			X		X				Y	5		P, G
4	20					X	.		X					X				N	0		G
* 5	20				X		0-3		X			X		X				Y	10		P, G
6	20					X	.		X					X				N	-		P, G

COMMENTS The Southern End of the segment starts at a rock outcrop 32m

North of an ANAD stream. On this outcrop is 3m x 35m patchy distribution of coal on a high angle Boulder outcrop. The oiling tapers down to a splattered distribution asphalt patties. The width of the band increases because the shore zone changes to a low angle B/C Beach. The distribution of patties decreases up to the rock outcrop in the Northern part of the segment. To the North of this rock outcrop is a broken distribution of asphalt (2-32) this tapers down to a 1m x 20m patchy distribution of asphalt which again tapers down to a light stain.

REVIEWED SW DATE 4-21-90

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 04-15-90

SEGMENT ST/ EV-24 SUBDIVISION A (1 OF 1)

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UE	GA	GB	GC	GD	GE	GF	SU	UR	ME	LI				
7	20					X	.		X							X					N	5	P, G
8	20					X	.		X							X					N	5	P, G
9	60					X	.		X									X			N	-	P, G, S, M
* 10	20		X				0.2		X		X					X					Y	10	P, G
							.																
							.																
							.																
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* OILED INTERVAL < 5 CM IN PIT NOS. 5 AND 10 DOES NOT CONSTITUTE SUBSURFACE OIL COMMENTS

PIT NO. 10) Globular sheen on surface water

shore zone consists mostly of High angle b/c beach w/
some rock / Boulder outcrops

REVIEWED JW DATE 4-21-90

00 Mike Foget

SEGMENT EV-24

SUBDIVISION A

DATE 4 / 19 90

CHECKLIST

N Arrow
Approx. Scale
Seg/Sub Entry
Oil Dist.
Width
Length
% Cover
Substrate Character
Est. H/W/L/W/L
SSL
Profile Location(s)
Profile(s)
Plt Location(s)
Photo Location(s)

LEGEND

1 Δ
PH - No Subsurface Oil

2 Δ
PH - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oiled Vegetation

1 →
Photo location, direction,
and number

2/5

1m x 100 57/5 stain
splattered dist. in the
HITZ

1m x 20m asphalt AP/P
Patchy dist. among b/c
in the HITZ.

2m x 30m Asphalt
AP/B broken dist.
in the HITZ, among
the rock outcrop

2m x 100 57/5 stained
splattered distribution
in the HITZ (<<10%)

Low alk b/c beach
10m x 100m AP/B
distribution of asphalt patches
in the HITZ and HITZ. Translucent
sheen in HITZ in Pits.

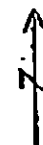
3m x 35m CV/B
Patchy distribution of tar/oil
cover in the HITZ w/ some
asphalt patches among the crevices
oil occurs on backside + underneath
of boulders + cobble, high alkalic
b/c beach, translucent sheen in Pits

ETCH MAP

Rock outcrop

Scale

100m



Legend

|||| - Bedrock / boulders

- Stream

↑ - trees

REMOVE PAVEMENT

REMOVE PAVEMENT

REMOVE PAVEMENT

10m x 200m P7/5, Patches w/ a
splattered distribution (<<10%) in
the HITZ

1m x 10m AP/P

ANAD STREAM

BIO HERE
NO CLOSER THAN
50M FROM ANAD.
STREAM

Oil Character Length (m): AP 160 PO 0 CV 35 CT 0 ST 480 MS 0 PT 0 TB 0 FL 0 NO 0

NEWHOLDS2400

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST/ EU-24 Subdivision A (1 of 1) Date (mo/day/yr) APRIL 19, 1990

Time (24 hr) 1327 Biologist KATHLEEN CONLAN

- (A) Substrate type and % of segments:
 (1) Bedrock 5 (2) Boulder 25 (3) Cobble 35 (4) Pebble 20 (5) Sand 15 (6) SM 0
- (B) Overall % cover of biota (% of segment): Dense 10 Moderate 85 Low 5
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

Photographs:
 Roll No. ST-11-3

Frames # 1

BARNACLES

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

GASTROPODS

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

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

Wildlife Observations/ General Comments:

5 SEAGULLS IN SHELTER BAY, ONE A MOTHER WITH PUP
 2 CORMORANTS JELLYFISH FLOATING IN BAY.
 NO SEOTERS 1 SEAL

Ecological Considerations:

BLENNY UNDER MID-INTERSTITIAL COBBLE. GELATINOUS EGG MASS (GASTROPOD?) ON COBBLE UNDERSURFACE
 AMPHIPODS, OLIGOCHAETES AMONGST COBBLES, PEBBLES
 ISOPODS, CENTIPEDE

TIDE LEVEL: LG

ECOLOGY MAP (1 of 1)

Resource Codes For
Entire Segment

7 - II

EV-2

STU-3

← #1 (OILED BOULDER)

UNCLASSIFIED
AND/OR
STREAM

EV-25

XXXX Wide

EV-24

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ADEC Segment Length: 705m

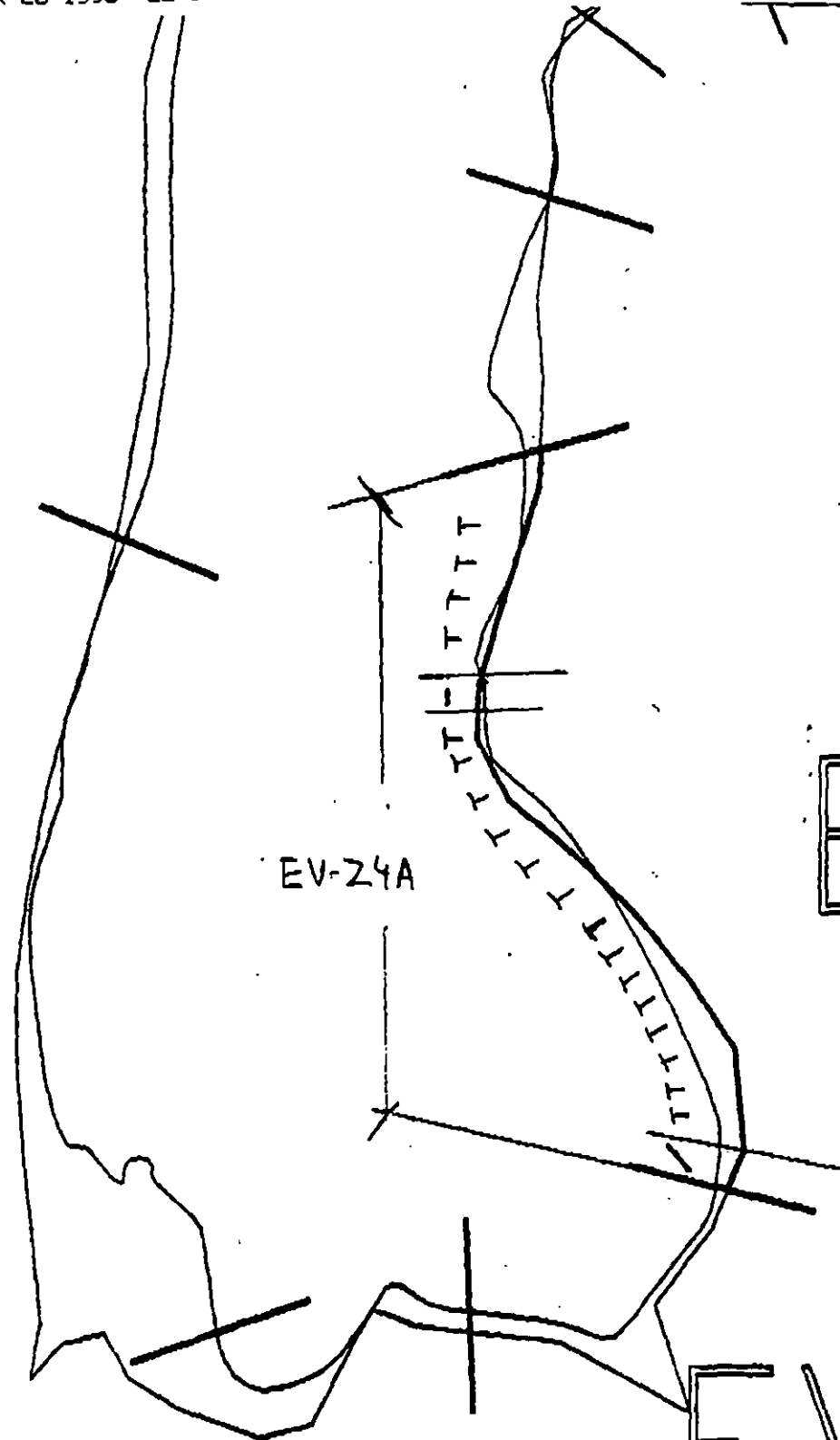
0 100 200 300
METERS

Map Key: *S. Bluestone*
PWS-193

Name: *K.E. Cowlan*

Date: *20 APRIL 1990*

Data Entered:



EV-2

EV-25

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

EV-24A

ADEC Segment Length: 705m



Map Key: PWS-193

Name: Mike Forster

Date: 4/14/20

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EV-24 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation	WORK BEFORE 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

NO CONSTRAINT. Not an ADF&G catalogued anadromous stream.

7II Subsistence: Deer Harvesting

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

OTHER ECOLOGICAL CONSIDERATIONS

If stream is determined to be anadromous, other ecological considerations apply. Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

TAG APPROVAL DATE 6/04/90.
ADEC Ray Morris
EXXON Amy Teal
NOAA Joseph
USCG G.A. JETER

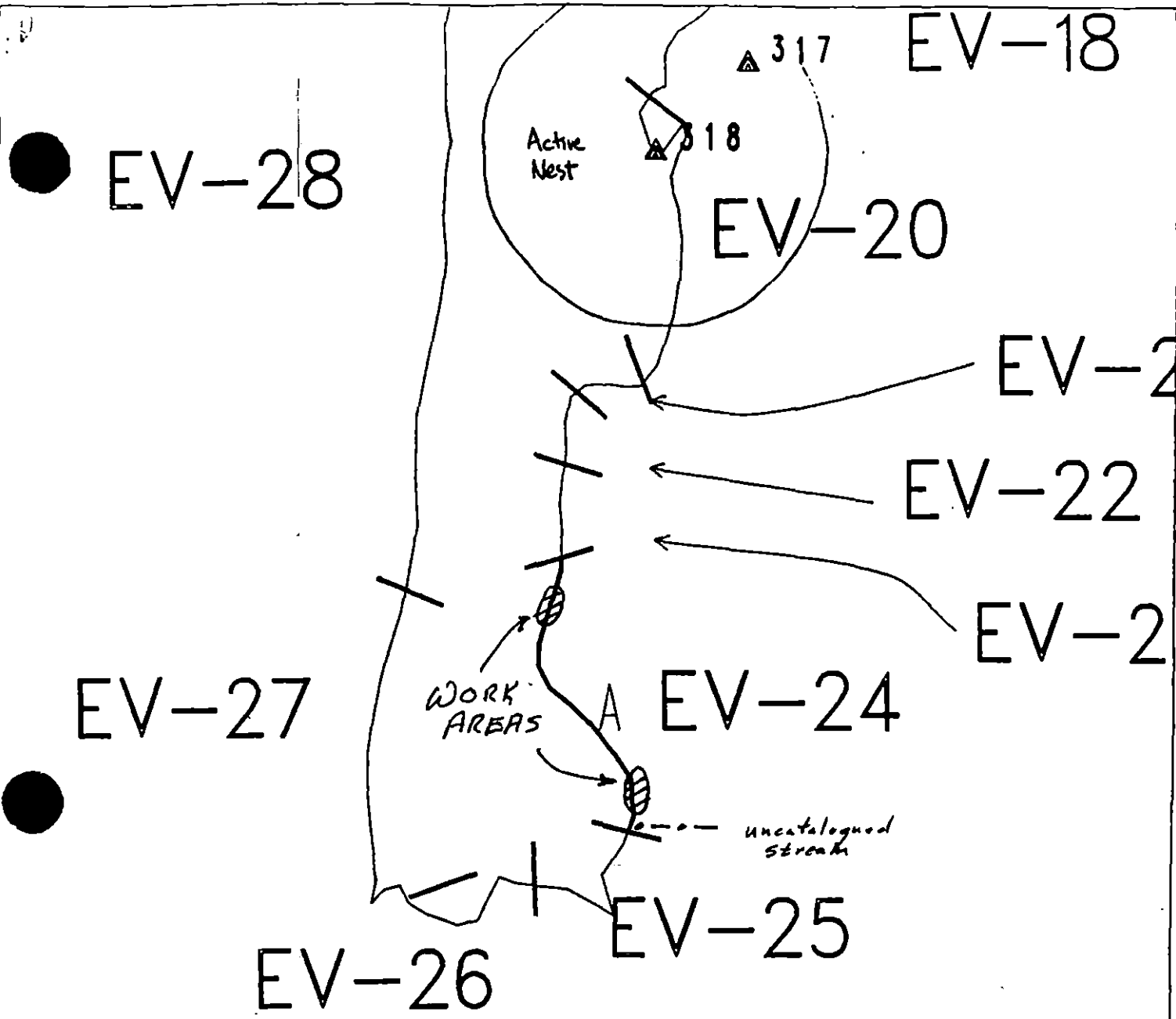
FOSC

DATE

Prepared By:

Date

6/3/90



Incorporates information from
USFWS Active Eagle Nest Maps
dated 6/1/90.



Exxon Company, USA
Map Key: PWS-EV-24
May 11, 1990



ECOLOGY MAP 6/3/90
SEGMENT EV-24
SUBDIVISION A (1 of 1)
METERS
0 348 696

★	Seabird Colony
▲	Eagle Nest

1 inch = 1142 feet

SHORELINE EVALUATION

SEGMENT ST/ EV-24 SUBDIVISION A (1 OF 1) DATE 4/19/90

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)
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. Anadromous stream at southern end of segment.

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. Holmes DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 34 m: Narrow 29 m: V.Light 642 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

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

+ PATTIES

COMMENTS: Recommended treatment includes removal of tarmats as shown on sketch map and bioremediation of area of surface cover to within 50M of uncatalogued anadromous stream. Work should be conducted between 5/15 and 7/10 based on anadromous stream constraints.

See Addendum dated 6/3/90

TAG COMMENTS:

TAG APPROVAL DATE: 5/4/90

DEC ART WEAVER
EXXON AMY TEAL
NOAA GARY PETRO
USCG G.A. REITER

FOSC:

DATE: 5-18-90

NOTIFY CVC 24 HRS PRIOR TO WORK.

SHORELINE EVALUATION

SEGMENT ST/ EV-24 SUBDIVISION A (1 OF 1) DATE 4/19/90

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)
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. Anadromous stream at southern end of segment.

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. Holmes DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 34 m: Narrow 29 m: V.Light 642 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes removal of tarmats as shown on sketch map and bioremediation of area of surface cover to within 50M of uncatalogued anadromous stream. Work should be conducted between 5/15 and 7/10 based on anadromous stream constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 5/4/90

ADEC Art Weiner
EXXON Andy Tarr FOSC: My L DATE: 5-18-90
NOAA Gary Petree
USCG G.A. Reiter G.A. Reiter NOTIFY CVC 24 HRS PRIOR TO WORK.

00 Mike Foget

SEGMENT EV-24

SUBDIVISION A

DATE 4 / 14 90

CHECKLIST

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

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

[CT/P]
Patched Distribution

[CT/S]
Spatched Distribution

Oil Vegetation

1 $\Rightarrow$

Photo location, direction, and number

SKETCH MAP

Scale

100m



1m x 100 57/5 stain
sattered dist. in the
HITZ

1m x 20m asphalt AP/P
Patched dist. among B/C
in the HITZ.

2m x 30m Asphalt
AP/B broken dist.
in the HITZ, among
the rock outcrop

R outcrop

2m x 100 57/5 stained
sattered distribution
in the HITZ (<10%)

Low angle B/C beach
10m x 100m AP/B
distribution of asphalt patches
in the HITZ and HITZ, translucent
sheen in HITZ in Piss.

3m x 35m CV/B

Patched distribution of tar/oil
cover in the HITZ w/ some
asphalt patches among the crevices;
oil occurs on backside + underneath
of boulders + rubble, high angle
B/C beach, translucent sheen in Piss

Rock outcrop

REMOVE PAVEMENT

REMOVE PAVEMENT

Legend

/// - Bedrock / boulders

- Stream

↑ - trees

10m x 200m P7/5, patches w/ a
sattered distribution (<10%) in
the HITZ

REMOVE PAVEMENT

BIO HOLE
~~At Cassin Point~~
~~Small From Area 2~~
STREAM

ANAD stream

Oil Character Length (m): AP 160 PO 0 CV 35 CT 0 ST 480 MS 0 PT 0 TB 0 FL 0 NO 0

REVISED 000000

ECOLOGY MAP (1 of 1)

Resource Codes For
Entire Segment

7 - II

EV-2

STU-3

← #1 (OILED BOULDER)

EV-25

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-24

ADEC Segment Length: 705m



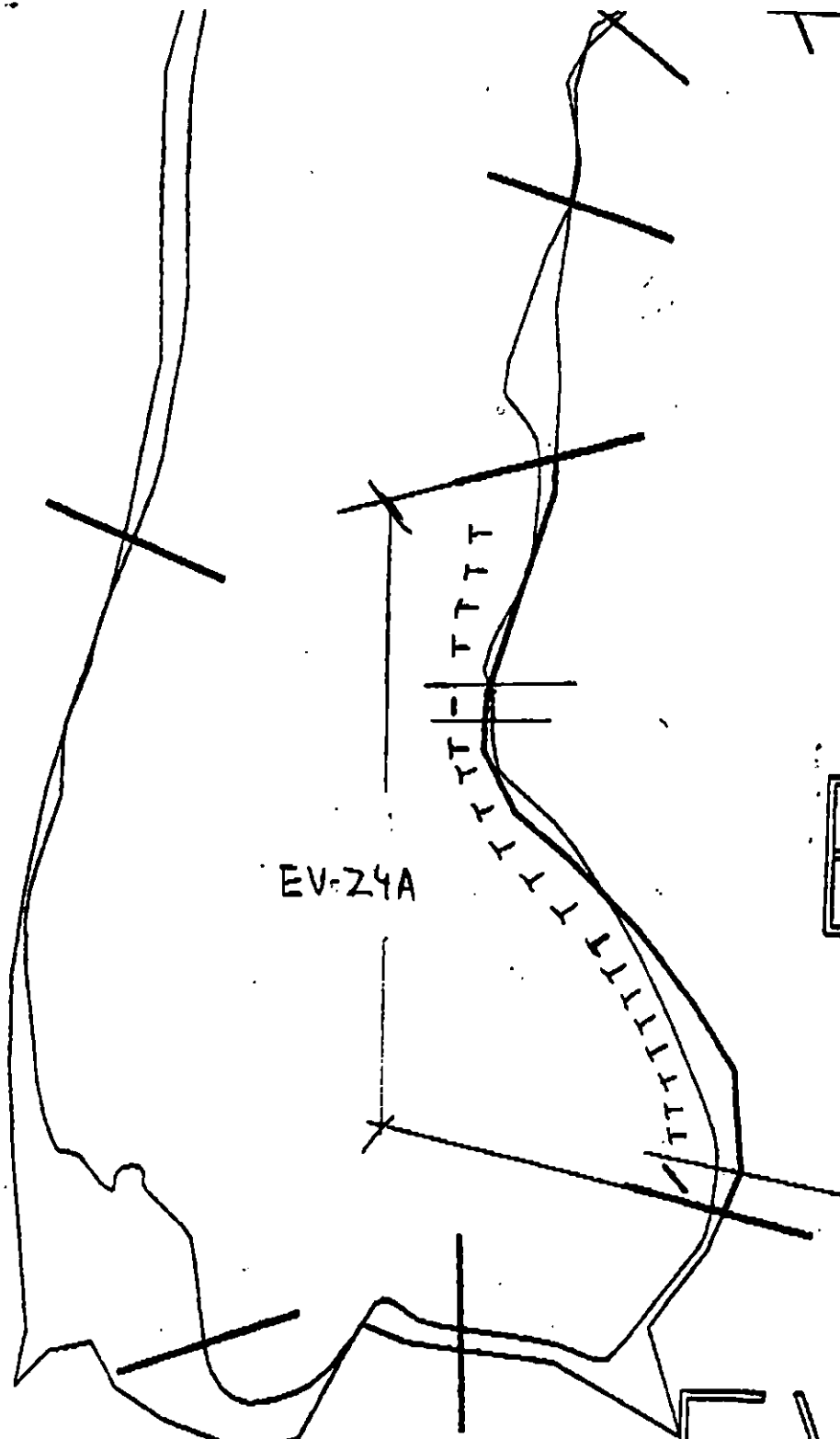
METERS

Map Key: *S. Blugame*
FWS-193

Name: *K.E. Cowles*

Date: *20 APRIL 1990*

Data Entered:



EV-2

EV-25

XXXX Wide

/// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EV-24A

ADEC Segment Length: 705m



Map Key: PWS-193

Name: Mike Forer

Date: 4/14/20

Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: EV 024 SUB: A REGION: PWS SURVEY DATE: 4/30/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Anadromous stream, 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)

Y

Manual Pickup (Check as Req.)

X

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: Remove asphalt at locations A, B, and C.

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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.

WAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT EV-24 SUBDIVISION A DATE 5/2 /91

ADEC

NAME

John Hayes

SIGNATURE

[Signature]

☐ NTR

☒ Treatment Recommended

Recommend manual pick up of AP in all areas over 20% coverage
Identified on sketch map. Beach and surface oiling are both readily
accessible and low energy. Segment borders EV-23 which also needs manual pickup.

EXXON

NAME

Martinez N.J.

SIGNATURE

[Signature]

☐ NTR

Area is recovering well, no signs of sub
surface. Areas A, B, C would benefit from
P.U. of Asphalt patches. Check for debris
good project for C.C. response.

LANDMANAGER

NAME

Steve Ward

OF

CVC

SIGNATURE

[Signature]

☐ NTR

Lots of manual can be done by Local Response
Asphalt stretches along most of Sub-division.
No Sub-Surface Located.

USCG/NOAA

NAME

DREHER/HODGES

SIGNATURE

[Signature]

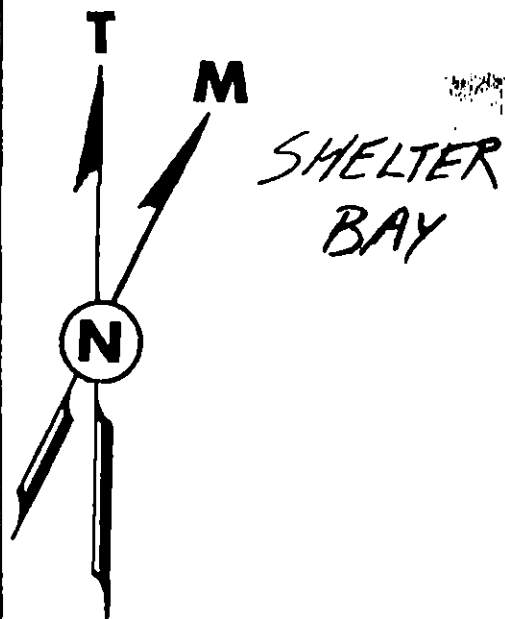
☒ NTR Very small amounts surface AP; very little chance of mobilization.

Occasional scattered tar patches with debris in upper area observed. Some
thick oiled sediment.

THE 9th

56 returned Mar 7

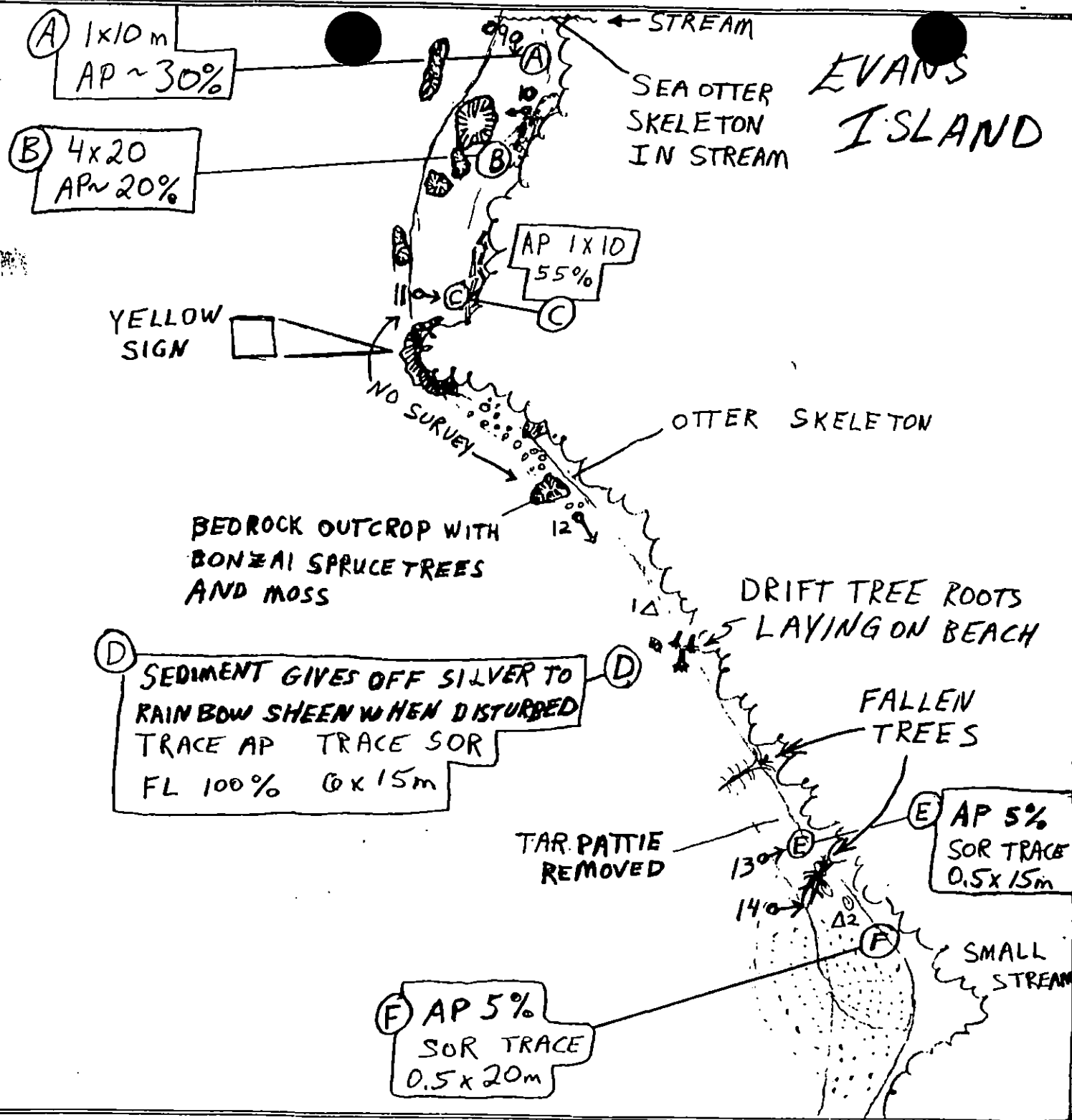
MAY 1991
 06 SHEET MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV-24A
 DATE: April 30 1991
 AIR P.#: EXDZ 16513



LEGEND

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

SCALE
 100 METERS
 ROUGHLY



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5

DATE 30 April 1991

pg 1 of 2

SEGMENT # EV-24

TIDAL HEIGHT (Range) +5 → +4

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 0

WIND SPEED/DIRECTION 5 knots / SE

PHOTOGRAPHS: ROLL #

FRAME #

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

(A) Area is in the SUPRA and high UIZ ~ 20 m south of EV-23A. Rye grass is sprouting within the site, no other intertidal biota found in site. Eagle feathers found in drift.

(B) Area is located in the lee of a rock outcrop in UIZ boulders, cobble and gravel. Rare *Fucus*, rare barnacles, rare *Littorina* and limpets are found w/ site covering ~5% of the available surface area. Below site on the rock outcrop *Fucus* is dominant with ~10% cover on lee side and ~75% cover on exposed side. North of rock there is a 1m x 2m sparse intergravel mussel bed.

(C) Area is located in SUPRA. Rye grass is sprouting w/ 10cm of tar pattie. No other macrobiota found w/ site. One meter below amphipods and isopods are found. Approx. 4m below site there is 30% *Fucus* cover on bedrock; conceptacles are maturing, sporelings are rare. Barnacles are rare.

(D) Area is located in the UIZ and MITZ on cobble and gravel under a drift log. No intertidal macro-biota was found in the gravel. On the cobble in the UIZ there were amphipods, barnacles and mussels ~1% biota cover. In the MITZ there are sparse barnacles with a new set and rare *Littorina* with juvenile *Littorina* present ~5% biota cover. On drift log there is a moderate concentration of *Fucus* with sporelings present and sparse barnacles ~60% biota cover and on nearby rock outcrop there are dense barnacles and rare mussels with ~80% biota cover.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles		1 - immature	
Seabirds			
Waterfowl		8	
Gulls/Kittiwakes		~35	
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	(1 - skeleton > 5 days old)		
Phocids (specify)			
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

Team #5

Date 30 April 1991

pg 2 of 2

Segment # EV-24

Tidal Height +5 $\rightarrow$ +4

Subdivision A

Biologist Crank

Sea State 0

Wind Speed / Direction 5 knots / SE

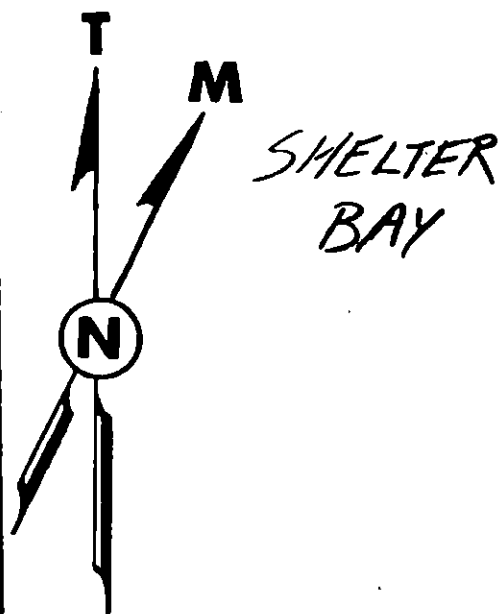
Comments (cont.)

(E) Area is a narrow band in the UITZ. Amphipods are the only macro-biota present. Five meters below site there is 9~20% biota cover including moderate barnacles with a new set, sparse Fucus, rare mussels (various age classes) and sparse Littorina (juveniles present).

(F) Area is located in the SUPRA and high UITZ. The rye grass is sprouting and the moss has fruiting bodies. Black lichen and amphipods are also present. Biota below site is similar to biota found below site 'E'.

The intertidal biota in this subdivision appears to be healthy. New recruitment is occurring within the barnacles, Fucus, mussels and Littorina populations. LITZ was covered by tide and therefore, not included in this survey. Sea otter skeleton (dead more than 5 days) was found in the SUPRA behind rock outcrop (see map for location). Both ^{upper and lower} jaws have a full set of teeth.

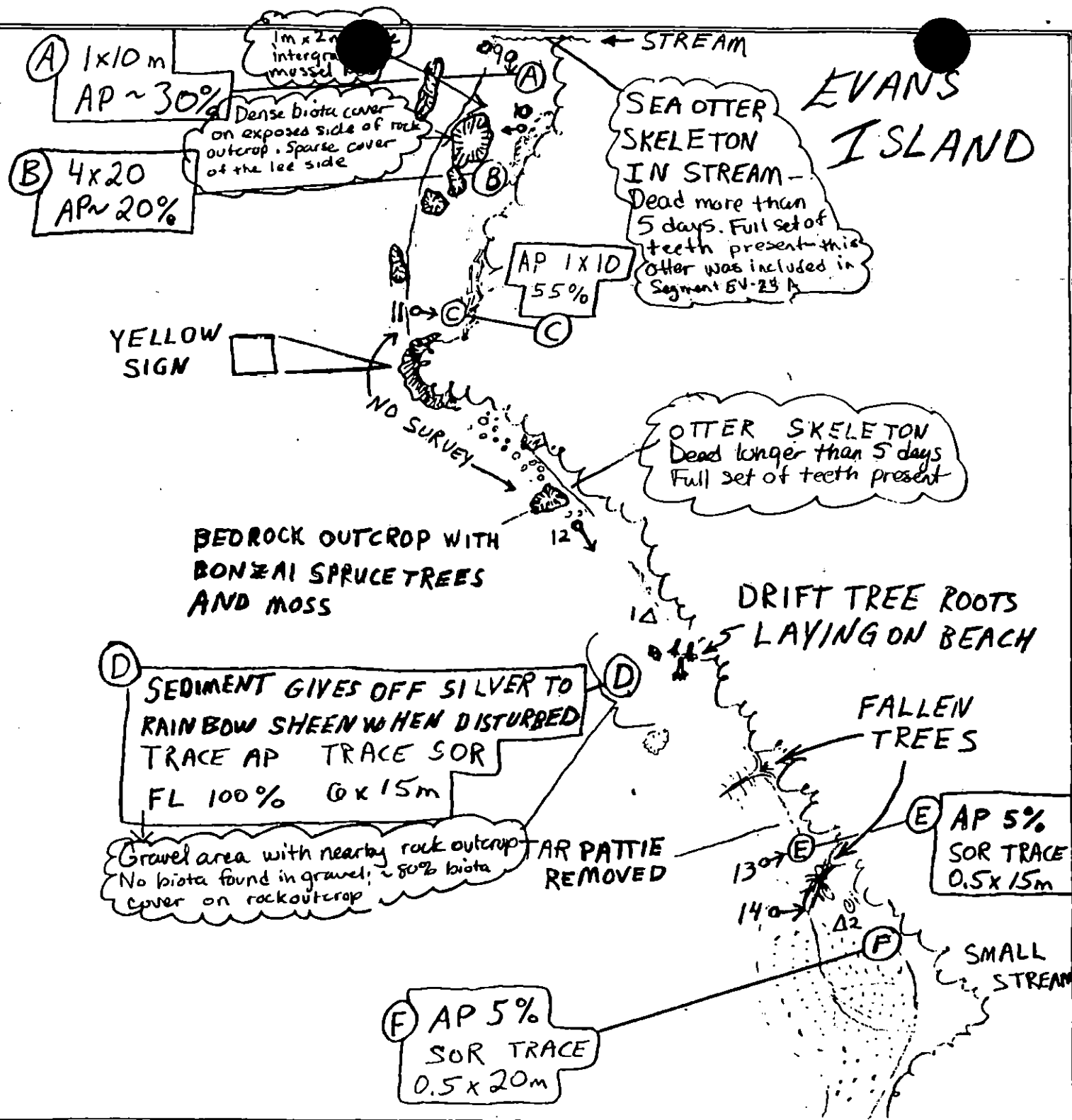
MAY 1991
 OG SKETCH MAP: Bio Map
 GREG CHANEY: Crank
 TEAM 5
 SEGMENT: EV-24A
 DATE: April 30 1991
 AIR P.#: 2002 16513

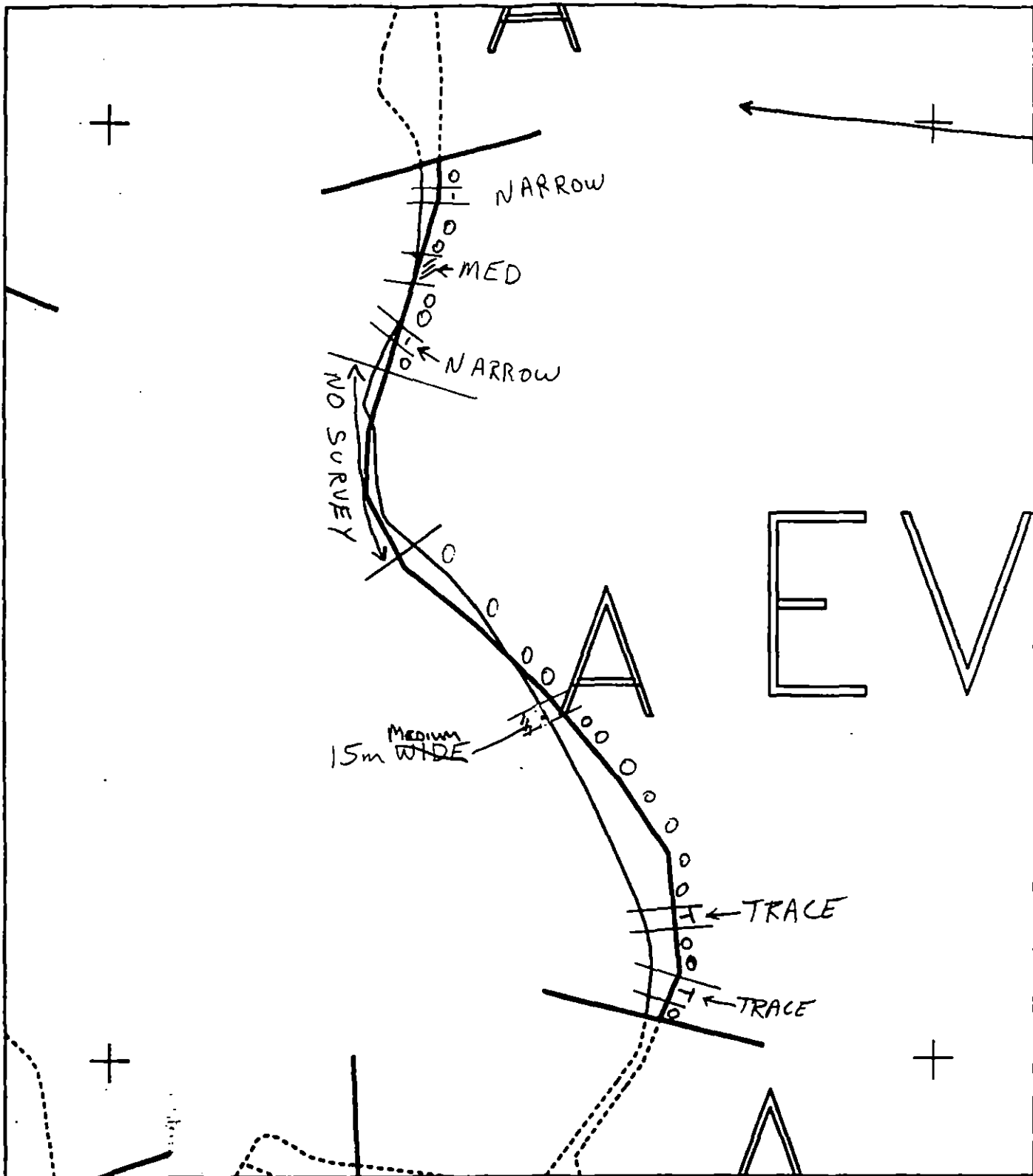


LEGEND

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

SCALE
 100 METERS
 ROUGHLY





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

EV024 A

ADEC Subsegment Length: 705m
 METERS

AK State Plane Zone 4
 prv024a



Subdivision Field Map

Map Key: PWSEV024A

Name: Greg Chaney

Date: April 30 1991

Date Entered:

Revised: MC 5/7/91

SK reviewed, May 7

1991 MAYSAP EVALUATION

SEGMENT: EV 024 SUB: A REGION: PWS SURVEY DATE: 4/30/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: Remove asphalt at locations A, B, and C.

TAG: Remove AP / HSOR AT A, B, + C.

FOSC:

TAG APPROVAL DATE: MAY 14 1991 FOSC APPROVAL DATE: 5/20/91

ADEC John Bauer FOSC E. E. PAGE

EXXON Real CHIEF OF STAFF, FOSC

USCG Z. M. Murphy CT

NOAA [Signature]

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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 EV-24 SUBDIVISION A DATE 5/2/91

ADEC

NAME John Hayes

SIGNATURE [Signature]

☐ NTR

☒ Treatment Recommended

Recommend manual pick up of AP in all areas over 20% coverage. Verified on sketch map. Beach and surface oiling are both readily accessible and low energy. Segment borders EV-23 which also needs manual pickup.

EXXON

NAME Martinez N.J.

SIGNATURE [Signature]

☐ NTR

Area is recovering well, no signs of sub surface. Areas A, B, C would benefit from P.V. of Asphalt patches. Check for debris good project for C.V.C. response.

LANDMANAGER

NAME Steve Ward

OF CVC

SIGNATURE [Signature]

☐ NTR

Lots of manual can be done by local response. Asphalt sketches along most of sub-division. No sub-surface located.

USCG/NOAA

NAME DREHER/HODGES

SIGNATURE [Signature]

☒ NTR

Very small amounts surface AP, very little chance of mobilization.

Occasional scattered tar patches with debris in upper area observed. Some thick oiled sediment.

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 1

TEAM NO. 5

OG CHANEY

BIO CRANK

SEGMENT EV-24

ADEC HAYES

LANDMANAGER WARD for CVC

SUBDIVISION A

ON MARTINEZ

USCG/NOAA DREHER/HODGES

DATE April 130 / 91

TIME 18:50 to 19:45

TIDE LEVEL +5 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: 565 m NEAR SHORE SHEEN: ☐ BR ☒ RB ☒ SL ☐ NONE

EST. OIL CATEGORY LENGTH: W 15 m M 35 m N 20 m VL 35 m NO 475 m US 140 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A	P										BG	M	1	10		✓			
B	P										BG	M	4	20		✓			
C	B										BG	M	1	10		✓			
D	T			T				C			CPG	M	6	15		✓	✓		
E	S			T							BG	M	0.5	15	✓	✓			Small patties between boulders under grass
F	S			T									0.5	20	✓	✓			

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 - 6 FRAMES 8-14

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	25							✓	-						✓		PG-PG	
2	30							✓	-						✓		BPG-PGB	
									-									
									-									
									-									
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									-									

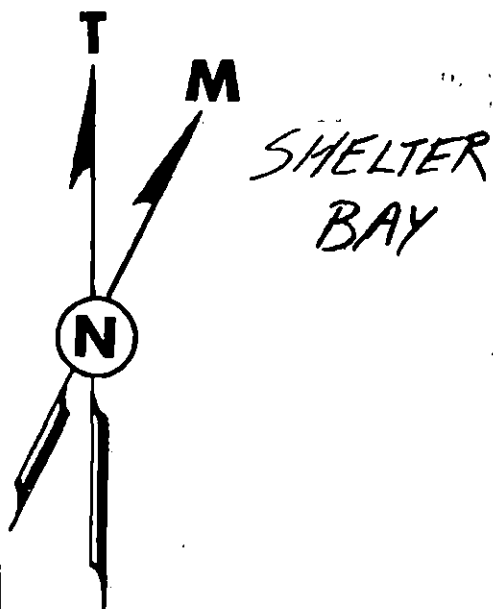
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS:

REMOVED MC 5/7/91

EG removed, May 7

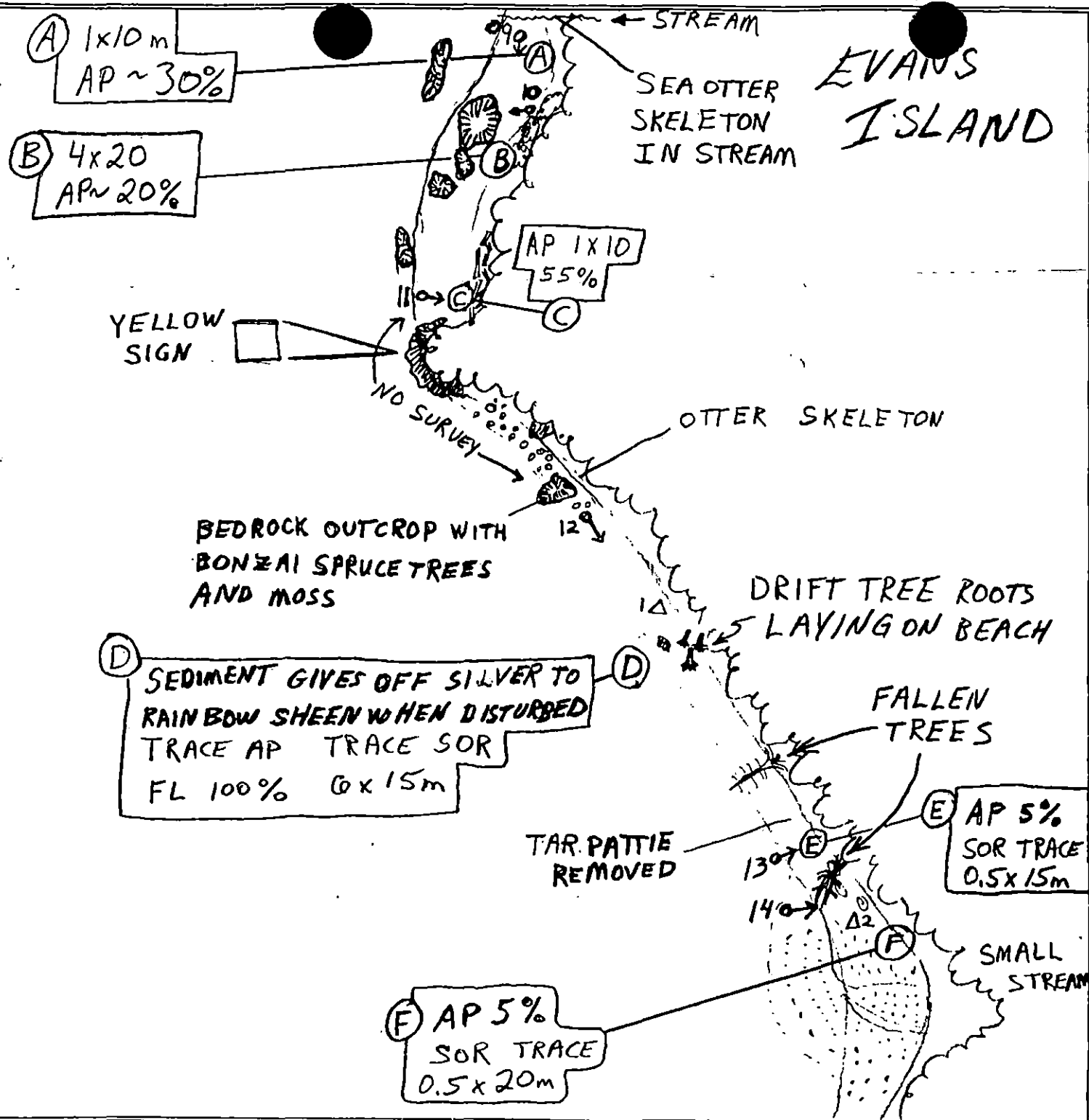
MAP 1991
 DRAFT MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV-24A
 DATE: April 30 1991
 AIR P.#: EXVDZ 16513



LEGEND

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

SCALE
 100 METERS
 ROUGHLY



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5

DATE 30 April 1991

pg 1 of 2

SEGMENT # EV-24

TIDAL HEIGHT (Range) +5 → +4

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 0

WIND SPEED/DIRECTION 5 knots / SE

PHOTOGRAPHS: ROLL #

FRAME #

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

(A) Area is in the SUPRA and high UIZ ~ 20 m south of EV-23A. Rye grass is sprouting within the site, no other intertidal biota found in site. Eagle feathers found in drift.

(B) Area is located in the lee of a rock outcrop in UIZ boulders, cobble and gravel. Rare *Fucus*, rare barnacles, rare *Littorina* and limpets are found w/ site covering ~5% of the available surface area. Below site on the rock outcrop *Fucus* is dominant with ~10% cover on lee side and ~75% cover on exposed side. North of rock there is a 1m x 2m sparse intergravel mussel bed.

(C) Area is located in SUPRA. Rye grass is sprouting w/ 10 cm of tar patch. No other macrobiota found w/ site. One meter below amphipods and isopods are found. Approx. 4m below site there is 30% *Fucus* cover on bedrock; conceptacles are maturing, sporelings are rare. Barnacles are rare.

(D) Area is located in the UIZ and MITZ on cobble and gravel under a drift log. No intertidal macro-biota was found in the gravel. On the cobble in the UIZ there were amphipods, barnacles and mussels ~1% biota cover. In the MITZ there are sparse barnacles with a new set and rare *Littorina* with juvenile *Littorina* present ~5% biota cover. On drift log there is a moderate concentration of *Fucus* with sporelings present and sparse barnacles ~60% biota cover and on nearby rock outcrop there are dense barnacles and rare mussels with ~80% biota cover.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles		1 - immature	
Seabirds			
Waterfowl		8	
Gulls/kittiwakes		~35	
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	(1 - skeleton > 5 days old)		
Pinnipeds (specify)			
Es (specify)			

Shoreline subdivision map showing important biological features attached.

Team #5

Segment # EV-24

Subdivision A

Sea State 0

Date 30 April 1991

Tidal Height +5 $\rightarrow$ +4

Biologist Crank

Wind Speed / Direction 5 knots / SE

pg 2 of 2

Comments (cont.)

(E) Area is a narrow band in the UITZ. Amphipods are the only macro-biota present. Five meters below site there is a ~20% biota cover including moderate barnacles with a new set, sparse Fucus, rare mussels (various age classes) and sparse Littorina (juveniles present).

(F) Area is located in the SUPRA and high UITZ. The rye grass is sprouting and the moss has fruiting bodies. Black lichen and amphipods are also present. Biota below site is similar to biota found below site 'E'.

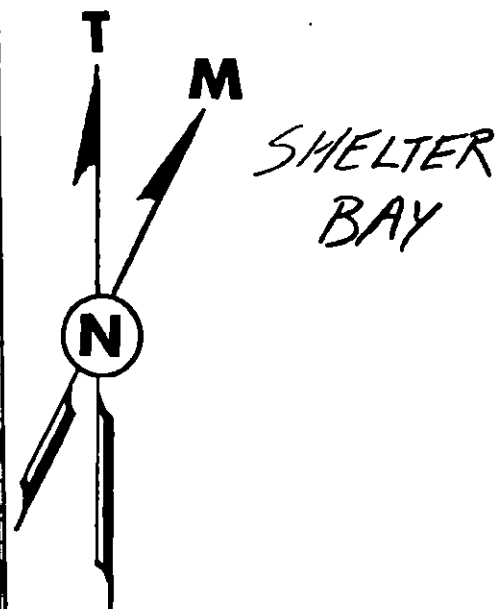
The intertidal biota in this subdivision appears to be healthy. New recruitment is occurring within the barnacles, Fucus, mussels and Littorina populations.

LITZ was covered by tide and, therefore, not included in this survey.

Sea otter skeleton (dead more than 5 days) was found in the SUPRA behind rock outcrop (see map for location).

Both ^{upper and lower} jaws have a full set of teeth.

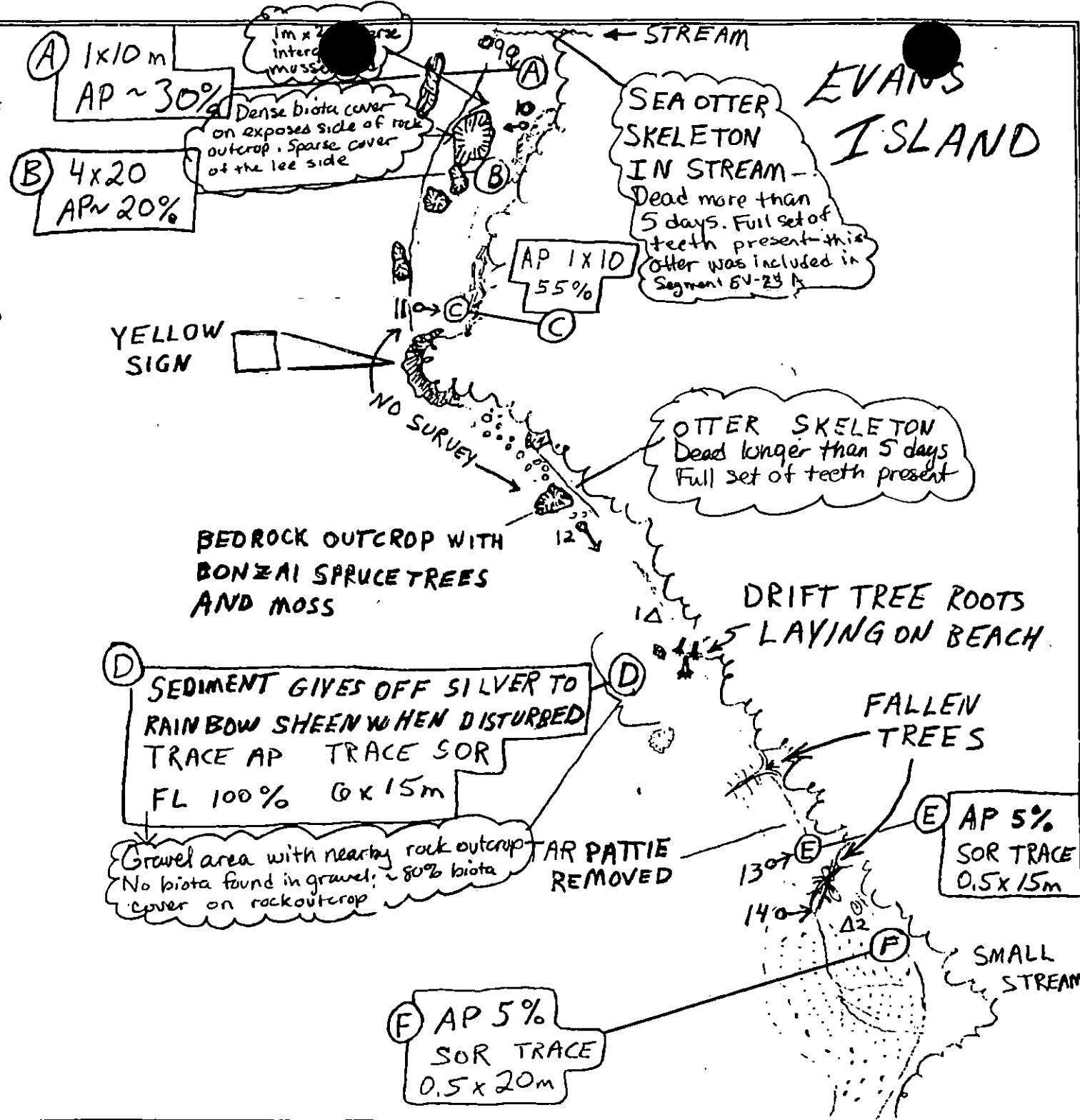
MA 1991
OG SKETCH MAP: Bio Map
GREG CHANEY: Crank
TEAM 5
SEGMENT: EV-24A
DATE: April 30 1971
AIR P.#: EXDZ 16513

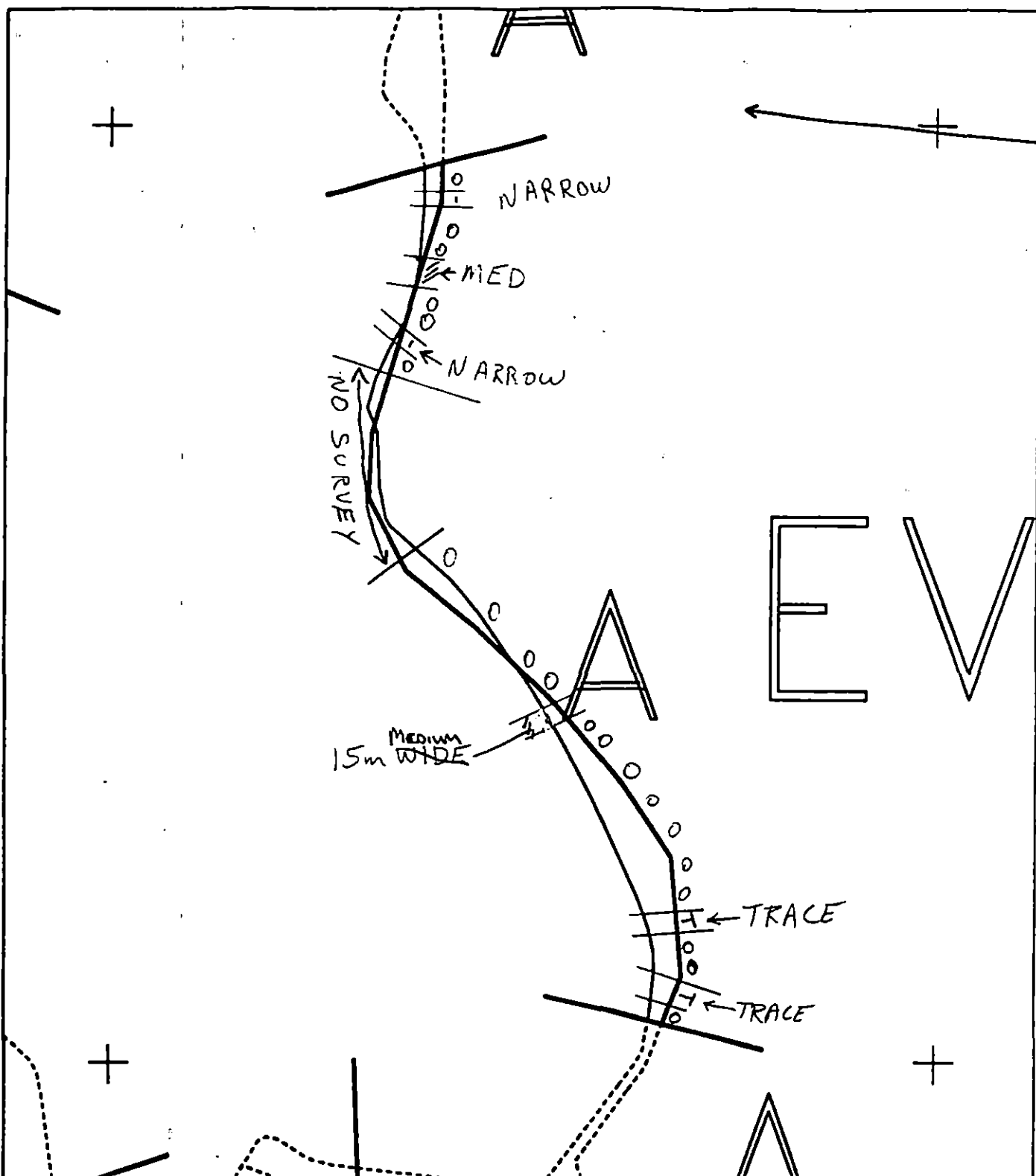


LEGEND

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

SCALE
100 METERS
ROUGHLY





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

EV024 A

ADEC Subsegment Length: 705m
 METERS

AK State Plane Zone 4
 prv024a



Subdivision Field Map
 Map Key: PWSEV024A
 Name: Greg Chancy
 Date: April 30 1991
 Date Entered:

REVISED: MC 5/7/91
 ES reviewed, May 7

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-25

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ EV-25 SUBDIVISION A (1 OF 1) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-40-16613

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

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

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 222m: Medium 36 m: Narrow 28 m: V.Light 40 m: No Oil 84 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual breakup and removal of tarmat in the areas shown on attached sketch map, 2) manual pickup of oiled debris. Work should be conducted between 5/15 and 7/10 based on salmon constraints.

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.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EV-25 SUBDIVISION: A DATE 04/08/90

ISCG

NAME Randolph W. Hubbard SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

I recommend the area clean up consist of washing the beach and removing the thick oil substance and filled area where surface appears to be.

ADEC

NAME J. LYNN MARTIN SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

AGREE WITH EXXON OPS. RECOMMENDATION FOR MANUAL REMOVAL OF TARMATS AND OILED AREAS. SEE MAP BY DOUG REPAIR OG.

LAND MANAGER

NAME DATRICK SELAWICK SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Manual Removal of Tarmats. I agree with but there is also saturated oil which is going to need a different type of cleaning. Breach.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/98

OG Reimer USCG Hubbard SEGMENT ST/ FV-25
 BIO Zamora LAND REP Selanoff SUBDIVISION
 EXXON Garcla ADEC Martin TIME 09:15:10 :33
 TEAM NO.: 16 TIDE LEVEL: +3.5 10 +6 DATE 4 / 8 / 90
 EST. SUBDIVISION LENGTH: 280 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Snow
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: South to North - East
 SURFACE SEDIMENTS: R 10 % B 20 % C 30 % P 30 % G 10 % S - % M - % V - %
 SLOPE: Lang 40 % Hang 10 % Vert - % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 120 m M 30 m N 10 m VL 40 m NO 90 m

SURFACE OIL

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

PAVEMENT: H (F) S 800 sq. m by 3 cm cmPATTIES / TARBALLS 1 BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT			DEBRIS COLLECTED ☐ YES - ☒ NO
	SM	MD	LG	
Logs				TYPE <u>-</u> #BAGS <u>-</u>
Vegetation				
Trash	X			
Debris				

Photographs:

Roll No. ST-16-6Frames 11-19

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	2C	2B	2P	2S	3C	3B	3P	3S	SU	U	M	U		
1	30					X	-													X			GP
2	20					X	-												X				GPC
3	20					X	-												X				GSP
4	20					X	-													X			GSP
5	26					X	-														X		GSM
6	36					X	-													X			GSP

COMMENTS Small Cove with rocky headlands on either side, fresh water stream and delta/tidal flats in center of Cove. Boulder and rubble along the rocky sections, patches and rubble across tidal flats. There is a sporadic sand on the rocks on the southeast rocky shore with occasional patches (local) in the MRE. The oiling increased toward the Southwest from a broken cover and patchy asphalt to a continuous cover and patchy asphalt, where the low angle beach shows the oiling change to a continuous asphalt (3cm) thick. This continuous pavement extends around the entire head of the Cove except for where the active stream is flowing. In a band 8-10m wide, below this is a broad area of patchy pavement (10-20%)(3cm). No Subsurface oil was found.

SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 03/22/80

SEGMENT ST/ EV-25 SUBDIVISION -

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	BR	GR	BL	GR	BL	GR	BL	GR	SU	U	M	U		
7	40					X	-													X			GSP
8	35					X	-												X				GSPCM
9	40					X	-													X			GP
							-																
							-																
							-																
							-																
							-																
							-																
							-																
							-																
							-																
							-																
							-																
							-																

COMMENTS

REVIEWED _____ DATE _____

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / EV 25 Subdivision — Date (mo / day / yr) 4 / 8 / 96
 Time (24 hr) 0925 ON 1035 OFF Biologist TONY ZAMORA

- (A) Substrate type and % of segments:
 (1) Bedrock (2) Boulder (3) Cobble (4) Pebble (5) Sand (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 5 Moderate 45 Low 50
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs: ST-16-U
 Roll No. ST-16-U

Frames 11-19

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

ASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

- 1 OTTER SPOTTED

- DENSE, SEXUALLY ACTIVE AMPHIBIANS IN MI.

- MANY EMPTY MUSSEL SHELLS (MOST DRILLED) IN MI, IN & AROUND STREAM.

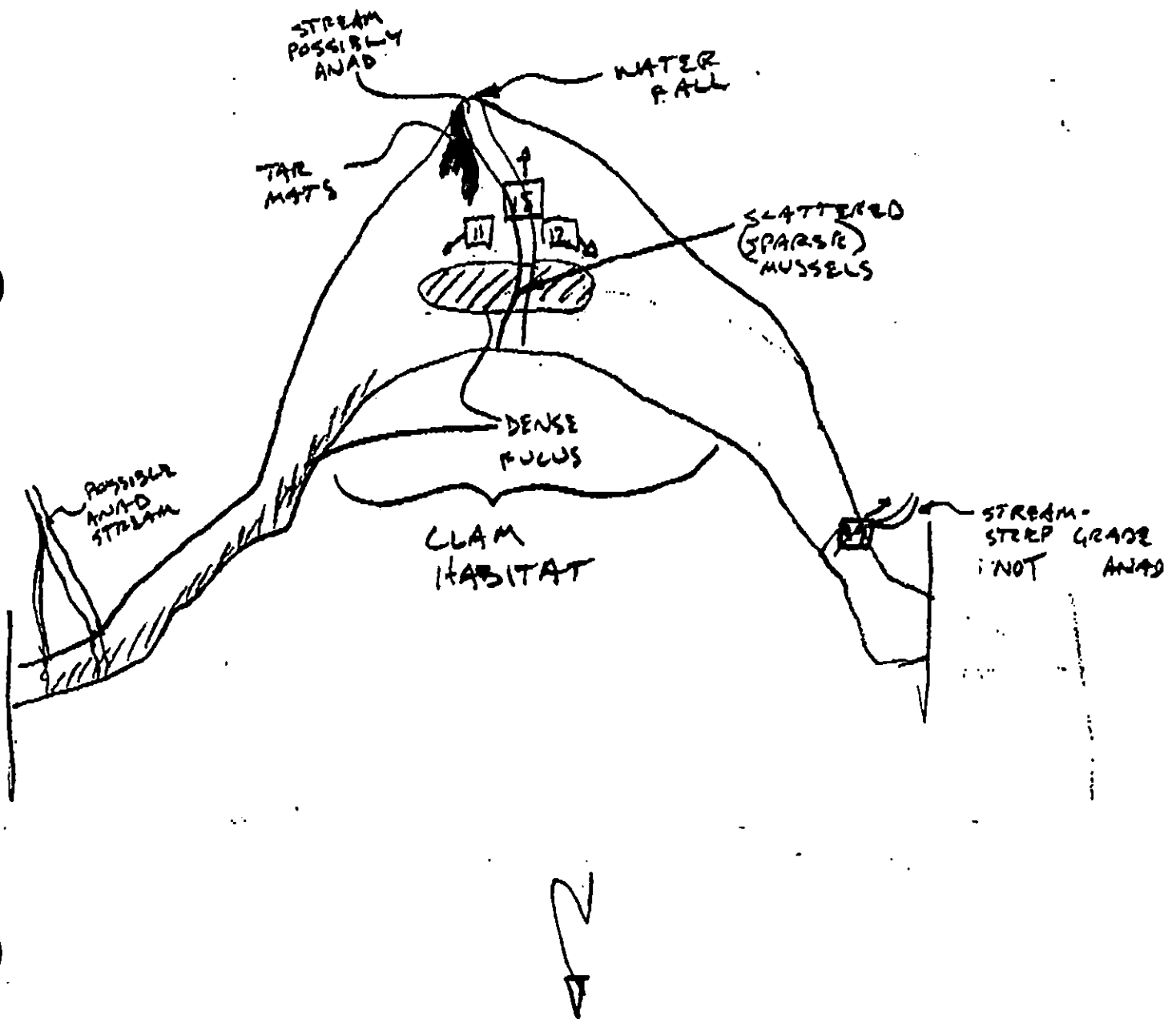
Ecological Considerations: FJ, 1A/B

- CLAM HABITAT (SOFT SILT/SAND) LOWER MI ON BEACH, CLAM FOUND
 (MYA TRUNCATA) ~ 8 cm.

- STREAM POSSIBLY ANADROMOUS - FED BY 5m HIGH WATERFALL. PINK SALMON MAY SPAWN NEAR INTERTIDAL.

EV 25

BIO-SCHEMATIC & PHOTOLocations



EV-2

EV-25

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-25

ADEC Segment Length: 410m



Map Key: PWS-194

Name: Reimer

Date: 4/8/90

Data Entered:



REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-26

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ EV-26 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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 73 m: V.Light 176 m: No Oil 126 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of oiled grass in area indicated on sketch map, 2) manual removal of tarmats in areas indicated on sketch map, and 3) manually rake and bioremediate areas indicated on sketch map. Work should be conducted between 5/1 and 8/14 due to deer harvesting constraint.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

SEGMENT ST / EV 26 SUBDIVISION: A DATE 4/26/90

USCG

NAME Shawn Maas SIGNATURE DC⁺ [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

RECOMMEND MANUAL REMOVAL ASPHALT/PAVEMENT
PATCHES AND TAR BALLS. VEGETATION NOTED IS DEAD AND
SHOULD BE REMOVED. BEACH R.P.S NOT MUCH R. GOOD
FOR TILLING OPERATION. BIORREMEDIATION

NO SUBSURFACE OILS NOTED

ADEC

NAME Dave Sale SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

① MANUALLY REMOVE TAR MAT AND OILED GRASSES AT
TOP (WITZ) OF BANK BETWEEN STROBES. LOOK FOR OTHER
TAR BALLS AT SAME TIME.

② MANUALLY REMOVE SEDIMENTS AND CLEAN LG. CORALS
STAINED/COATED ON S.E. SECTION OF SEGMENT.

③ CHECK SUTZ AFTER SNOW MELTS FOR OILED DEBRIS.

④ TILLING OF SEDIMENTS, NOT REMOVED IS RECOMMENDED

LAND MANAGER

NAME Don Kampkoff JR SIGNATURE Donald P. Kampkoff Jr

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

34 of 41

OG R. Marty USCG S. Mass SEGMENT ST/ EV-26
 BIO S. Lemen LAND REP D. Kampkraft SUBDIVISION A (A OF A)
 EXXON J. Garaschi ADEC D. Sale TIME 20:10 to 20:50
 TEAM NO. 10 TIDE LEVEL +0.32m to +0.4m DATE 25 April 90
 EST. SUBDIVISION LENGTH: 286 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 PLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 5 % B 10 % C 15 % P 25 % G 30 % S 3 % M 2 % V — %
 SLOPE: Long 100 % Hang — % Ven — % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W — m M — m N 57 m VL 169 m NO 59 m

SURFACE OIL

CHARACTER	DISTRIBUTION					OIL / FILM COLOR					IMPACTED ZONES				
	C	S	P	B	N	W	U	M	U		W	U	M	U	
ASPHALT PAVEMENT			P					P			P	P			
POOLED															
COVER		B						B			B				
COAT			S					S			S				
STAIN															
MOUSSE															
PATTIES			S					S			S				
TARBALLS			B					B			N				
FILM											O				
OIL											W		X	X	

PAVEMENT H F (S) 20 sq. m by 4 cm

PATTIES / TARBALLS 3 BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT	DID YOU COLLECT DEBRIS?
	SM MD LG	
Logs	X	
Vegetation	X	
Trash	X	
Debris	X	

YES ☒ NO ☐
 TYPE Misc.
 #BAGS 1-2

Photographs:

Roll No. ST 10/15

Frames 29-33

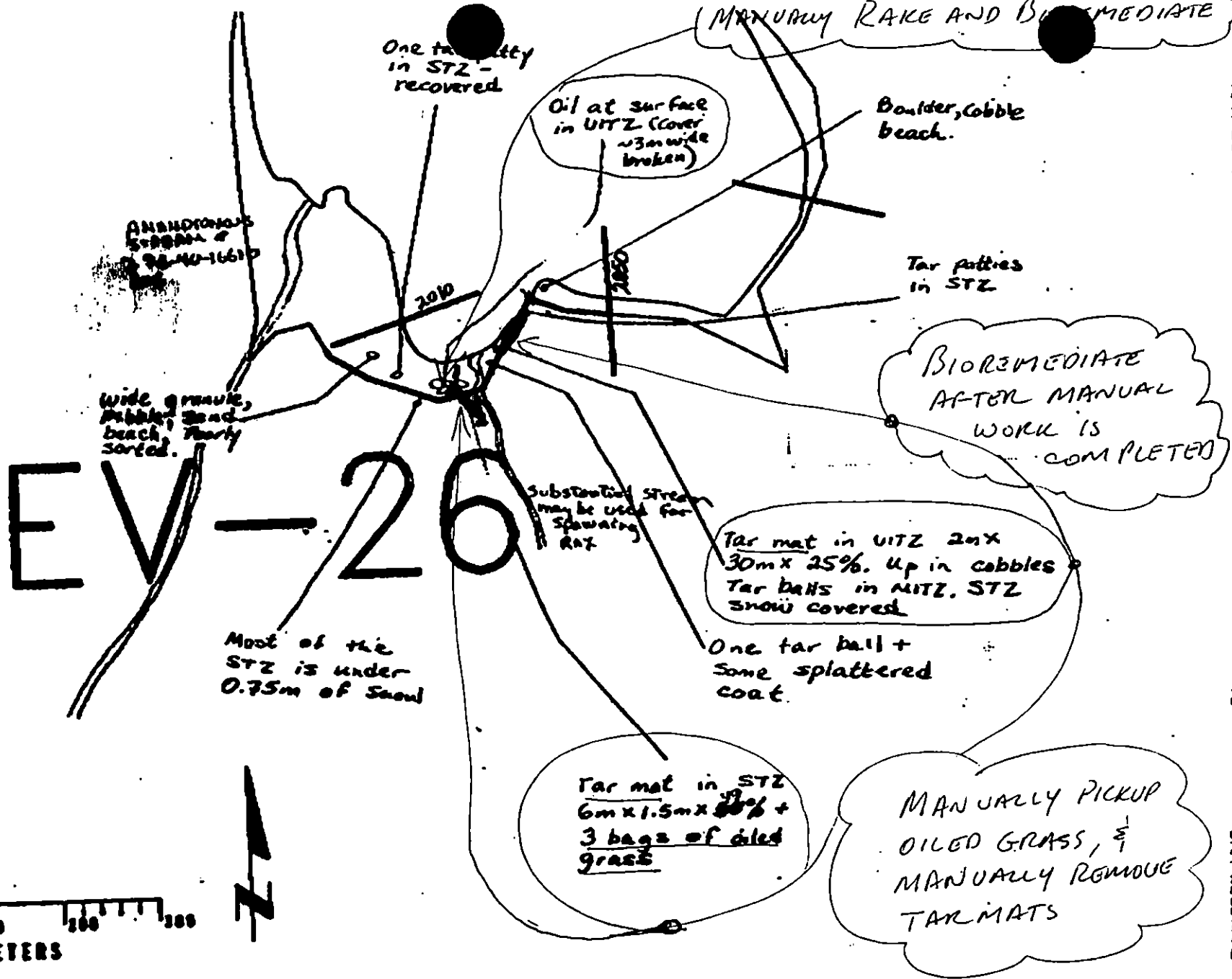
SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW	OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	Y	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OP	NO			W	U	M	U		W	U	M	U				
1	40				X		0.31	X			X			X				Y		N	PGS-GSM
2	25				X		0.31	X			X			X				Y		N	S-SV

COMMENTS

33041
 REVIEWED YH DATE 4-27-90

2. Marty
 ENTST/ EV-
 VISION A
 25 Apr 1990



408/41
 16/9/91

APR-26-1990 20:24 FROM BRISOS SEAHORSE TO DAN WOODWARD P.01

Factor Length [m]: AP 10 PO - CV 59 CT 168 ST - MS - PT 100 TB 1 FL - NO 59

SHORELINE ECOLOGICAL SUMMARY

Segment ST/10/26 Subdivision A Date (mo / day / yr) 4 / 25 / 90

Time (24 hr) 2010 - 2130 Biologist Lemon

REVISION: 001270

- (A) Substrate type and % of segments:
 (1) Bedrock 5 (2) Boulder 10 (3) Cobble 15 (4) Pebble 25 (5) Sand 37 (6) Silt 8
- (B) Overall % cover of biota (% of segment): Dense Moderate Low 15%
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
 Roll No. ST/10/15

Frames 29 - 33

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

3 Alcidae

1 gull

4 msa waterfowl

Many mya shells in low zone.
 Littering eggs in low zone

Ecological Considerations: A subsistence deer harvest area. A substantial stream (not 16610) would appear to be good for salmon spawning, see map.

370/41

EV-26

NO	0.3	45	59
VL	0.85	128	168
LT	0.3	45	59
		218	286

410/41

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-26

ADEC Segment Length: 375m



Map Key: PWS-195

Name: R. MartyDate: 25 April, 1990

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS**SEGMENT EV-25 SUBDIVISION A (1 of 1)****WORK WINDOW**Manual Pickup
Tarmat Removal**OPEN**Bioremediation Over 100m From Stream **WORK PRIOR TO 8/15**Bioremediation Less Than 100m From Stream **WORK PRIOR TO 7/10
(ADF&G MONITOR REQ.)****ARCHAEOLOGICAL STANDARD CONSTRAINT**

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS**1A,1B Salmon Stream**

ADF&G catalogued anadromous stream (226-40-16613) is 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.

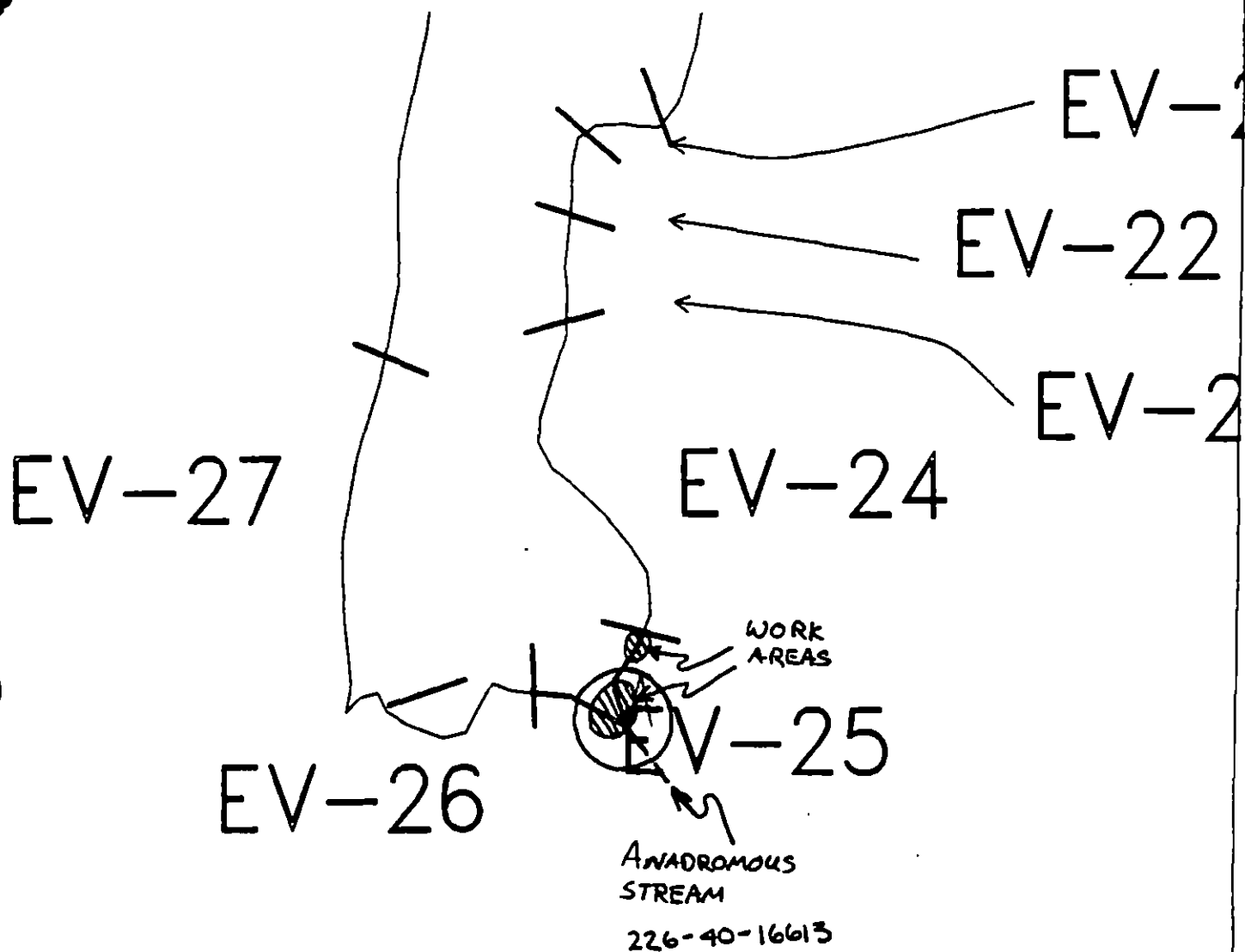
7II Subsistence: Deer Harvesting

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

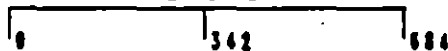
**SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (226-40-16613)
FOR ADDITIONAL CONSTRAINT INFORMATION**TAG ADDENDUM DATE 6/04/90ADEC RAY MORRIS
EXXON ANDY EAT
NOAA JASON TALBOT
USCG G.A. BARTONFOSC [Signature]DATE 6/7/90Prepared by: [Signature] JPPDate: 6/4/90



Exxon Company, USA
Map Key: PMS-EV-25
May 11, 1990



ECOLOGY MAP
SEGMENT EV-25
SUBDIVISION A (1 of 1)
METERS



★	Seabird Colony
▲	Eagle Nest

1 inch = 1122 feet

SHORELINE EVALUATION

SEGMENT ST/ EV-25 SUBDIVISION A (1 OF 1) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-40-16613

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

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

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 Hoffman DATE: 4/20/90

OILING CATEGORIZATION:

Wide 222m: Medium 36 m: Narrow 28 m: V.Light 40 m: No Oil 84 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual breakup and removal of tarmat in the areas shown on attached sketch map. 2) manual pickup of oiled debris. Work should be conducted between (5/15) and (7/10) based on salmon constraints.

See REVISION I, Addendum dated 6/3/90

[See Constraint Addendum 5/23/90]

TAG COMMENTS: ADD BIOREMEDIATION UP TO THE STREAM BANK
TO BE CLARIFIED / CONSTAINED BY ADF&G PRIOR TO
TREATMENT

TAG APPROVAL DATE: 4/20/90

ADEC ART WEINER
EXXON ANDY TET
NOAA BILL WISSELT
USCG KENNETH KIRBY

FOSC:

DATE: 5-1-90

Do not bioremediate Inw Lm's debris.

ASAP TAG REVIEW SHEET

Segment: EV 26 Subd: A Site: 1 Date
PRE-Review 11AUG90

Priority For Addressing In 1990

 HIGH X MEDIUM LOW NTR

Treatment

Recommended:

MANUAL REMOVE TARMAT

SUBSISTENCE: DEER HARVESTING

CLOSED TO B10 8/15

LIFTED as long as
as rep on site
THP

Priority Site For Reassessment In 1991

YES NO
X CG

YES NO
X ADEC

YES NO
X EXXON

YES NO
X LAND MGR

Manual Remove accessible moose
& B10

MODERATE
~~HIGH~~ PRIORITY

SEGMENT EV-26 SUBDIVISION A (71) DATED 8-1-90

MODIFICATION

1. REASON FOR MODIFICATION:

ASAP survey crew located on area 7 termat not treated during '90 summer cleanup.

2. SUGGESTED ADJUSTMENT TO WORK PLAN:

ASAP-YECO crew worked for approx. ⁴ hours on EV-26 partially removing ~~(termat)~~ termat/AP.
REMOVED 1.5 SUPER SACKS

3. TIMING ISSUES:

4. ADDITIONAL COMMENTS:

ADEC

BOB McCREARYRobert G. McCreary

EXXON

Randall K. Boyer

USCG

[Signature]

LAND MANAGER

Steve WARD

(if field rep is on scene)

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT EX-26

SUBDIVISION

(SITE 1)

A(171)DATED 8-1-90

MODIFICATION

1. REASON FOR MODIFICATION:

Moderate amount of tar/mat/AP remains on EX-26 which can be broken up into two areas of concern. Area #1 runs from stream on segment, ~~west~~ ^{East} to first prominent point. Area #2 runs from same prominent point to East boundary of segment.

2. SUGGESTED ADJUSTMENT TO WORK PLAN:

Remaining AP/Tar/mat warrants further treatment in 1990. Work would require a 10 person crew to manually remove remaining AP/Tar/mat. Upon completion of manual removal, raking and Customblon application is recommended.

3. TIMING ISSUES:

Although EX-26 requires further treatment in 1990, area is not considered to be extremely high priority.

4. ADDITIONAL COMMENTS:

VECO ASAP WORKED 4 HRS ON THE AP/B PATCHES BETWEEN COBBLES & BOULDERS AND WILL CONTINUE TO WORK POSSIBLY TOMORROW. 10 MAN CREW COULD SPEND 3-4 DAYS WORKING

ADEC BOB MC CREARYRobert G. McCreary

EXXON

Randall K. Boyer

USCG

[Signature]

LAND MANAGER

Steve Ward

(If field rep is on scene)

SEGMENT AS/ EV-26 SUBDIVISION: A SITE: 1 DATE 8 AUG 90

USCG

NAME Don Davis (USCG) SIGNATURE Don Davis

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

SEVERAL BROKEN STRIPS OF ASPHALT SURFACE OIL AND STAINS. RECOMMEND LOW PRIORITY TREATMENT IN 1990, WITH REASSESSMENT IN 1991. HEAVY AREA NOTED IN GUE AREA NEXT TO EV-25. MANY AREAS WILL REQUIRE HAND TROWEL REMOVAL OF AFFECTED AREAS, ESPECIALLY IN LARGE ROCK AREAS.

ADEC

NAME Bob McCreary SIGNATURE Robert B. McCreary

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Remaining AP warrants further treatment in 1990. Area in question runs from East side of stream in segment to East boundary of segment. Oiling is characterized by substantial amounts of AP/taromat. Approx. 50% of oiling in question was manually treated although treatment appeared to have been insufficient. Other 50% of AP/taromat was for some reason not manually treated. It was hit by a bicred. squad. Large rocks were moved to access AP/taromat with bio being applied directly to AP/taromat. Results were virtually no cleaning. ASAP VECO performed some manual removal in this area.

LAND MANAGER

NAME Steve Ward CVC SIGNATURE Steve Ward

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

There is enough oil to warrant further work in 90, this area was worked manually, but a lot of oil remains. It appears bio was applied over too much oil, a manual crew could do a lot of good in this area.

EXXON

NAME RANDALL K. BOYER SIGNATURE Randall K. Boyer

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

THE ASPHALT PAVEMENT HERE IS SUBSTANTIAL AND THE VECO ASAP CREW IS WORKING ON THIS AREA AND THIS SUBDIVISION WILL WARRANT A LOOK IN 1991. THE ASAP VECO CREW WILL SPEND ANOTHER DAY IN HERE AND STILL NOT COMPLETE.

SUPRATIDAL RESURVEY

OG Mann USCG Fazio SEGMENT ST/ EU 26 A
 REC Martensano SITE A TIME 10:40 to 11:20
 AM NO. X DATE 6/5/90
 TIDE LEVEL +6
 EST. SITE LENGTH: 286 m Sun ☐ Clouds ☒ Fog ☐ Rain ☐ Snow ☐
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 5 % B 10 % C 15 % P 25 % G 30 % S 15 % M 0 % V 0 %
 SLOPE: Lang 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH IN SITE: W 0 m M 0 m N 0 m VL 60 m NO 226 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES	
	/C	/B	/P	/S	SP	BR	OR	OL	OF	NO	UC	UB	SUPRA	UTZ
ASPHALT														
PAVEMENT														
POOLED														
COVER														
COAT														
STAIN														
MOUSSE														
PATTIES														
TARBALLS														
NO OIL														

PAVEMENT H F S 0 sq. m by 0 cm

PATTIES / TARBALLS 2 BAGS

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

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐

TYPE tarballs, trash

#BAGS 4

Photographs:

Roll No. —

Frames —

SUBSURFACE OIL *No pits dug because of vegetation cover.*

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM INTERVAL)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	▽	SURFACE
		OP	OR	OL	OF	NO		UC	UB	SP	BR	OR	OL	OF	NO	UC	UB	SU	U	M	LI				

COMMENTS

Oiled material (tarballs, trash, and vegetation) was present in the SUTZ on either side of the largest creek mouth (in work area). We picked most of this debris. No further treatment is suggested.

REVIEWED _____ DATE _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ EV 26 SUBDIVISION: A DATE 4/5/90

USCG

NAME Bm FAZIO SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

No clean-up is needed area just have few Turbell. and we collected them. -NTR-

ADEC

NAME Peter Montesano SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Segment shows scars from AP removal. Oiled debris and Spill related debris remained in SAITZ. we collected the debris.

LAND MANAGER

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED

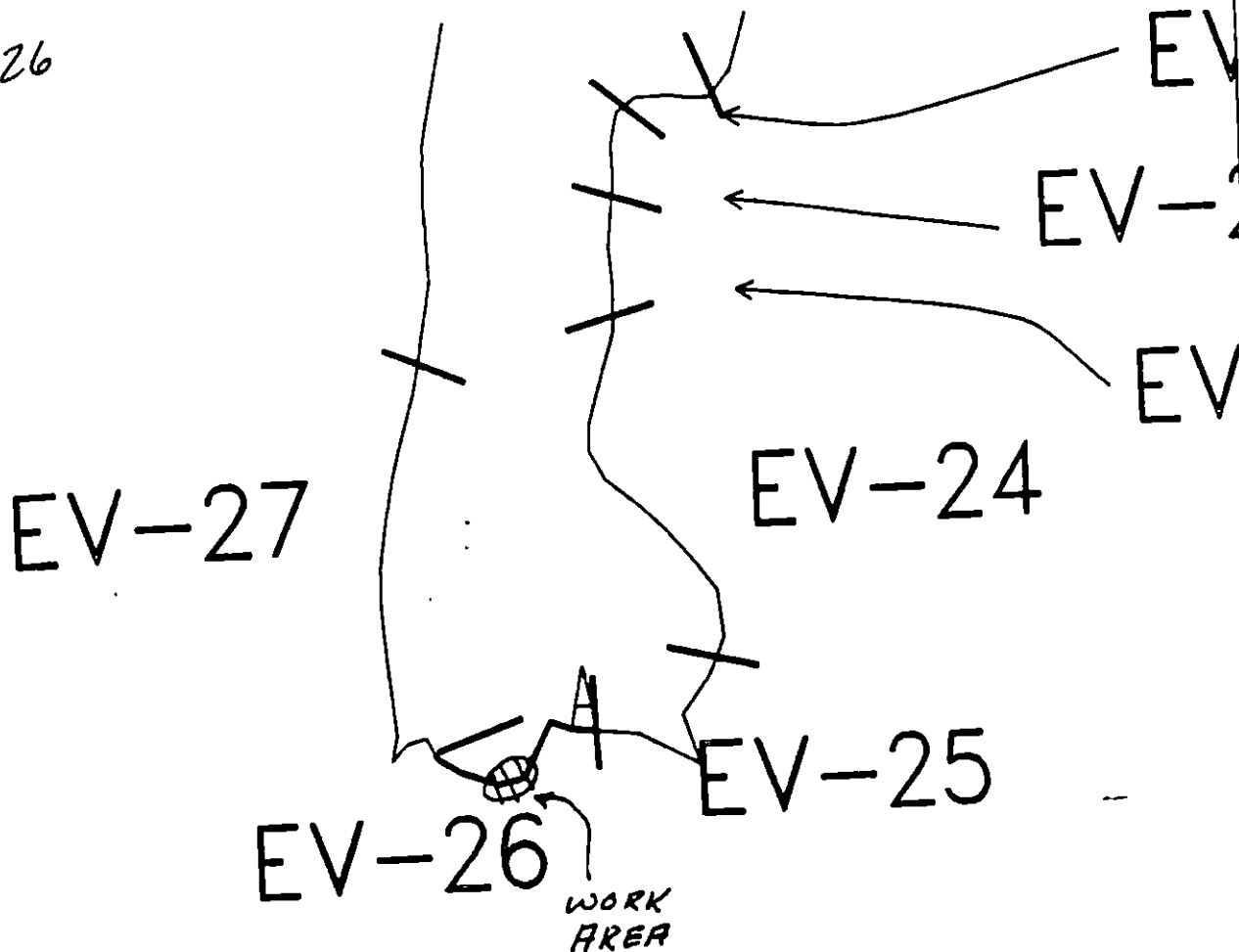
☐ TREATMENT SUGGESTED

COMMENTS

6/5/90

Supratidal Resurvey

EV-26



only debris was present
in SUTZⁱⁿ eye grass meadow here on
either side of creek mouth.
This debris collected 6/5/90 by Montesano
and Fazio (4 bags' worth)



Exxon Company, USA



ECOLOGY MAP
SEGMENT EV-26
SUBDIVISION A (1 of 1)
METERS

- ★ Seabird Colony
- ▲ Eagle Nest

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-40-16610

SEGMENT EV-27 SUBDIVISION A

WORK WINDOW	
Manual Pickup	OPEN

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (226-40-16610) is in Subdivision A. No constraint to manual pickup.

7II Subsistence: Deer Harvesting

No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to uncolled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM EV-27A
FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC

[Signature]
Prepared by *[Signature]*

Date

6/16/90

Date

6/14/90

EV-28

EV-20

EV-27

EV-24

ANADROMOUS
STREAM

WORK
AREA

EV-26

EV-25

ANADROMOUS STREAM EVALUATION



Exxon Company, USA
Map Key: PMS-EV-27
June 08, 1990



ECOLOGY MAP
SEGMENT EV-27
SUBDIVISION A (1 of 1)
METERS
0 358 717

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

1 inch = 1176 feet

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ EV-27 STREAM NO: 226-40-16610 DATE 4/26/90

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)

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. Subject stream is located within Subdivision A (1 of 1).

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

or

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

SHPO SIGNATURE: Rachel Jean Oren DATE: 5/18/90

Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

☒ No Treatment Recommended

☐ Treatment Recommended

☒ Manual Pickup

☐ Bioremediation

☐ Tarmat Removal

☐ Snare/Absorbent Booms

☐ Oil Snares (pom poms)

☐ Absorbents (pads, rolls, etc)

☐ Spot Washing: _____ Wands

☐ Beach Cleaner

☐ Other (see comments)

COMMENTS: SEE CONSTRAINTS ADDENDUM dated 6/14/90 RP

TAG COMMENTS: MANUAL PICKUP OF TAR PATTIES

TAG APPROVAL DATE: 5/9/90

ADEC ART WEINER Art Weiner

EXXON DAVID S. BROWN David S. Brown

NOAA Burt Wescott Burt Wescott

USCG D.D. ROME D.D. Rome

FOSC: W L DATE: 6-8-90

Notify CVC 24hrs prior to cleanup

ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND

SEGMENT: EV-27

STREAM NO: 226-40-16610

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ EV-27 STREAM NO: 226-40-16610 DATE 4/26/90

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)

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. Subject stream is located within Subdivision A (1 of 1).

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

X No Treatment Recommended

_____ Treatment Recommended

_____ Manual Pickup

_____ Bioremediation

_____ Tarmat Removal

_____ Snare/Absorbent Booms

_____ Oil Snares (pom poms)

_____ Absorbents (pads, rolls, etc)

_____ Spot Washing: _____ Wands

_____ Beach Cleaner

_____ Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

35/4

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ EV 027 SUBDIVISION: 166 10 DATE 4/26/90

USCG

NAME CWO MC MAHONSIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

1. MANUAL CLEAN-UP; REMOVE TAR PATCHES
(see map)

ADF-46

~~ADFC~~NAME TOM CROWLSIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

MANUAL REMOVAL OF BAND OF SPORADIC TAR FLOPS FROM
BOTH SIDES OF STREAMS.

LAND MANAGER

NAME _____

SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

3/4

ASC # 226-40-16610

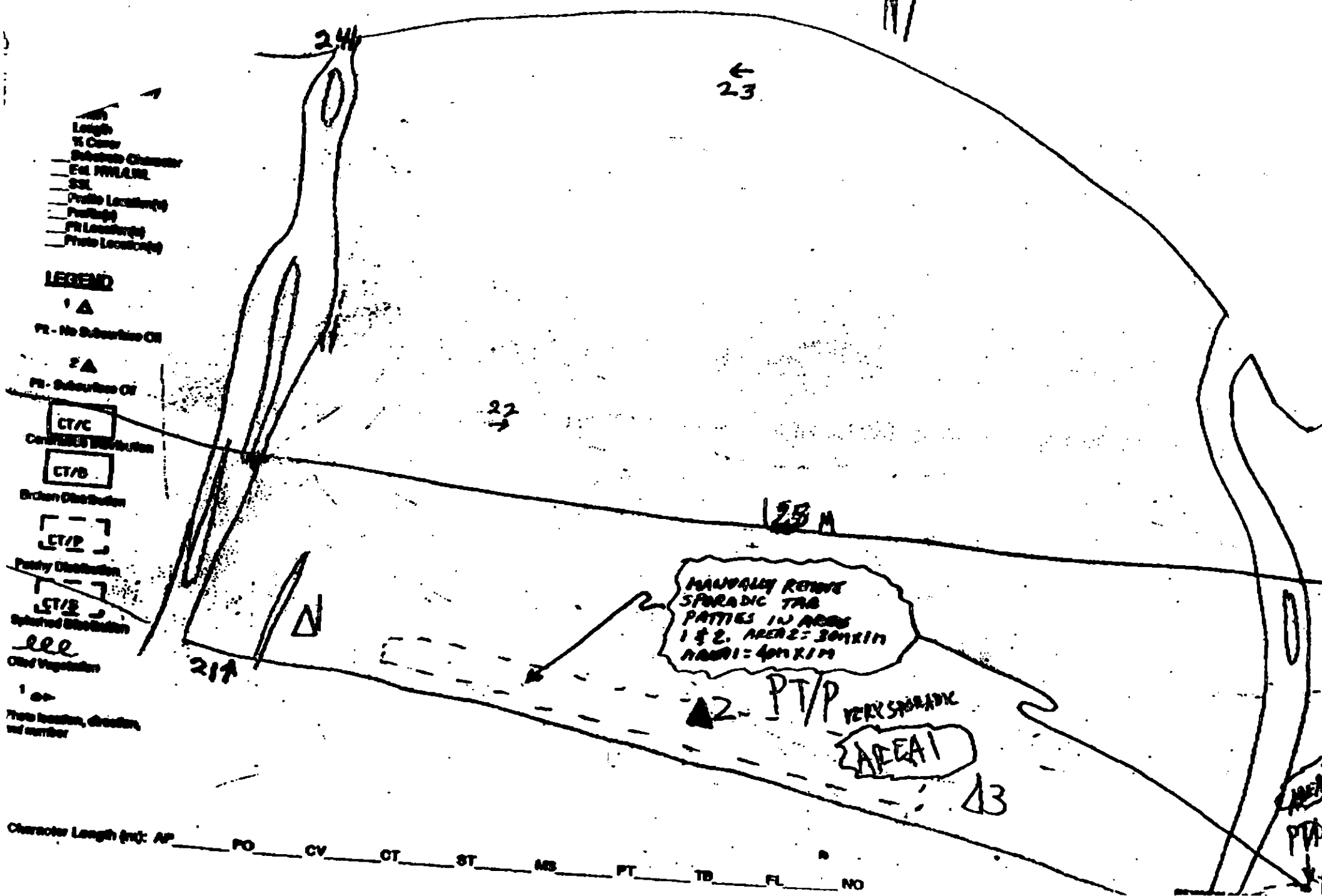
Segment EV-027

Observations A sporadic band of tar patties rings the high tide line adjacent to the two widely spaced mouths of this one stream. No subsurface oil was observed.

Treatment Recommendations Manually remove all tar patties.

SKETCH MAP

Film AS-15-6



- Length
- W. Corner
- Substrate Character
- Est. PPM/LM
- SSE
- Profile Location(s)
- Profile(s)
- PR Location(s)
- Photo Location(s)

LEGEND

- 1 Δ
- PT - No Substrate CH
- 2 Δ
- PT - Substrate CH
- CT/C
- Continuous Distribution
- CT/D
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Spotted Distribution
- eee
- Old Vegetation
- 1 ee
- Photo location, direction, and number

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

SUMMARY (ANAD.)

REVISION NO. 00

OG WILLIAM LEID USCG McMAHON SEGMENT ST/ EYD27 38/12
 BIO MICHAEL FAVRETT LAND REP TOM CROWE-ADEC STRAITS 5016510 OF
 EXXON GUS GARCIA ADPC MIKE WILSON TIME 11:35
 TEAM NO. 15 TIDE LEVEL +2.2 DATE 26 APR 90
 EST. SUBDIVISION LENGTH: 12.5 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R %B %C 15 %P 55 %Q 30 %S %M %V
 SLOPE: Long 100 % Hang % Vert % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W m M 4.5 m N m VL m NO 20

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	W	M	N	VL	W	M	N	VL	W	M	N	VL
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT												
STAIN												
MOUSE												
PATTIES			X				X		X			
TARBALLS												
FILM												
NO OIL									X	X	X	

PAVEMENT H F S sq. m byPATTIES/TARBALLS 30 BAGNEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

Did you collect DEBRIS

☐ YES ☒ NO

TYPE

#BAGS

Photographs:

Roll No. AS-15-6Frames 14-18

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	OS	NO		W	M	W	M	N	VL	W	M	N	VL			
1	35					X	.							X					N	P/G/C
* 2	25	X					0-2	X	X					X					N	G/P/C
3	30					X	.							X					N	P/G/C
							.													
							.													
							.													
							.													

COMMENTS * OILED INTERVAL < 5 cm IN PIT NO. 2 DOES NOT CONSTITUTE SUBSURFACE OIL

REVIEWED

TW

DATE 4-28-90

SEGMENT BY EV027

~~STREAM 226-90-16610~~

DATE 26 JUL 68

CHECKLIST

- ☐ M. Jones
- ☐ J. Brown
- ☐ J. Smith
- ☐ J. White
- ☐ J. Black
- ☐ J. Green
- ☐ J. Grey
- ☐ J. Gold
- ☐ J. Silver
- ☐ J. Bronze
- ☐ J. Copper
- ☐ J. Iron
- ☐ J. Steel
- ☐ J. Lead
- ☐ J. Zinc
- ☐ J. Nickel
- ☐ J. Tin
- ☐ J. Platinum
- ☐ J. Silver
- ☐ J. Gold
- ☐ J. Bronze
- ☐ J. Copper
- ☐ J. Iron
- ☐ J. Steel
- ☐ J. Lead
- ☐ J. Zinc
- ☐ J. Nickel
- ☐ J. Tin
- ☐ J. Platinum

LEGEND

- FD-302 (Rev. 11-27-70)

- 2A
FD-302a (Rev. 11-27-70)

CLAC

CHRYSLER

ETM.

Business Development

CTP

Early Morning

575

112

1. **Introduction**

1. **Introduction**

Advertiser:

•

SKETCH MAP

File AS-15-6

W

←
23

32

125

214

-2- PTV

VERY SHORTLY

STEAL

45

25 Character Length (eg: AP PO OV OT ST MS PT TR FL MS)

4/2/92

segment EV027

4/26/90

Stream 226-40-16610

Michael Fawcett

Ecological Summary

There are two streams at this site (see sketch), separated by a wide, shallow-slope beach of cobble, pebbles, and gravel. Dense barnacles and scattered *Fucus* occur in the UTZ. Little other intertidal biota exist except for a dense patch of mussels at the mouth of the larger (western) stream. Light scattered tar mats were found on the UTZ bank near the eastern stream. Manual removal recommended. There are no ecological constraints.

M. Fawcett

ECOLOGICAL MAP

1A, 1B

MT 1

AKADREMOUS
STREAM

226-40-16610
(P. 12/99)

LOCATED IN

EV-27-A
(1 of 1)

EV-26

EV

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-27

ADEC Segment Length: 822m



METERS



Map Key: PWS-198

Name: Reimer

Date: 4/9/90

Data Entered:

34/42

ADFG MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: 50 53 05 TS AVE SCH MMS PTA2 REGION: PVE KP,CI K,APMETHOD: Aerial Ground Base3 DATE: 4/26/9015 HIGH TIDE TIMES: 152621 TEAM RECORER: Tom Crow4 START TIME: 113016 HIGH TIDE HTS: 11.2'22 OBSERVERS: Mike Wilmer5 STOP TIME: 120817 LOW TIDE TIMES: 090123 AGENCY: ADFG ANPOSCAT6 SEGMENT #: EVO2718 LOW TIDE HTS: -3.624 PHOTOS TAKEN: Y (N)

7 STATION #:

19 TIDE HT AT SURVEY: +2

Roll #: Frames:

8 K-UNIT:

Ebb Slack Flood Slack

25 VIDEO TAKEN: Y (N) TAPES:

9 STAT AREA:

20 USGS QUAD:

Starts: Ends:

10 LAT:

21 LONG:

26 SAMPLES TAKEN: Y (N) None

12 SOURCE: Map Loren

Oil

13 LOCATION: SHELTER BAY

Sediment

14 DESCRIPTION:

Biological

Water

EXTENT OF OIL

27 SURFACE COVERAGE

SHORELINE				STREAM			
L	Y	N		L	Y	N	

28 SURFACE THICKNESS

29 PENETRATION

30 OVERALL OIL IMPACT: R VL (L) N N31 OIL TYPE: Pooled Mousse Top Asphalt Sticky Stain32 OILED DEBRIS: Y (N)33 SHORELINE TYPE: Hooded Low-lying Rocks Beach Cave34 WAVE EXPOSURE: High Moderate Low

35 SUBSTRATE TYPE: Bedrock Boulder Cobble

Gravel (X) Sand Mud/silt

36 CATALOGED ANAB. FISH SEAM? Y N

37 CATALOG #: 726-40-16610

38 STREAM NAME:

39 OIL IN STREAM BED? Y N

40 OIL ON STREAM BANK? 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: BOTH STREAM MOUTHS ARE OF SAME ORIGIN AS STREAM NUMBER 1IF SPITS OR FOLKS BEFORE DRIPPING INTO SHELTER BAY (SEE MAP)RECOMMEND MANUAL REMOVAL OF INTERMEDIATE TAE PATCHES(NO ENDROP)

38/42

EV 027

226-40-16610

4/26/90

SPORATIC
TAL FLOPS

SPORATIC TAL FLOPS

SHIELDED
GUN

FOR TAPPS

Same as
SPORATIC TALE

Same
stream

WINDOW

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-27

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ EV-27 SUBDIVISION A (1 OF 1) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-40-16610

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

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

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 26 m: No Oil 796 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: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

DRAFT

SEGMENT ST / EV-27 SUBDIVISION: _____ DATE 4/09/90

SCG NAME R. Hubbard SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC NAME J. LYNN MARTIN SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

RECOMMEND THAT ANAD SCAT CHECK OIL BESIDE
STREAM, TO DETERMINE WHETHER IT SHOULD BE
PICKED UP.

THE REST OF THE ~~SEG~~ SEGMENT NEEDS NO TREATMENT

LAND MANAGER

NAME DETROIT SEAWOEE SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

I would strongly suggest treatment be done here, becu.
the oil is ^{near} a salmon stream. I am not
too sure of Bioremediation and its effects but any kind of
attempt would be better than none.

SHORELINE OILING SUMMARY

REVISION NO. 000000

OG Reimer USCG Hubbard SEGMENT ST/ EV - 27
 BIO Zamora LAND REP Seleneff (Circ) SUBDIVISION WA POE
 EXXON Costa ADEC Martin TIME 09:10 to 10:30
 TEAM NO.: 6 TIDE LEVEL: +1 to +4 DATE 4 / 9 / 90
 EST. SUBDIVISION LENGTH: 776 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock SNOW
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: South to North
 SURFACE SEDIMENTS: R 5 % B 10 % C 25 % P 30 % G 25 % S 5 % M - % V - %
 SLOPE: Long 15 % Hang 15 % Vert - % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W - m M - m N - m VL 50 m NO 726 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	N	E	P	S	SW	SE	NE	NW	SU	U	M	U
ASPHALT PAVEMENT				X	X				X			
POOLED												
COVER				X	X				X			
COAT												
STAIN												
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL									X	X	X	

PAVEMENT: H ☒ S 2 sq. m by 1 cm

PATTIES / TARBALLS - BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris			

DEBRIS COLLECTED ☒ YES ☐ NO

TYPE Plastic / Petroleum

#BAGS 1

Photographs:

Roll No. ST-16-7

Frames 14-30

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OP	NO		UD	UC	SW	SE	NE	NW	SU	U	M	U		
1	40					X	.							X					PG
2	45					X	.								X				PGS
3	45					X	.								X				PGS
4	50					X	.							X					G
5	50					X	.							X					GP
6	50					X	.								X				GP

COMMENTS Western head of long embayment. Rocky shoreline with intermixed PG and CG beaches along the north side of the segment. A major fresh water stream and Delta (tidal flume) fills the center of the segment, mantled with pebbles, gravels and scattered cobbles. The northern end of the segment appears to have a grass covered back dune, however it was mostly snow covered. The only oil found in this segment was a band of sporadic pavement (12) 1 cm thick near the northern end, associated with a sporadic coating on pebbles and cobbles. The band was approximately 2 m wide and dissipated into a sporadic stain to the southwest. Total length 50 m

SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 08/20/90

SEGMENT ST/ EV-27 SUBDIVISION

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR	PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	NO		CU	U	NI	U		
7	60					X	.								X	GSP
8	40					X	.								X	GP
9	40					X	.					X				GP
10	35					X	.					X				GP
11	30					X	.								X	GSP
							.									
							.									
							.									
							.									
							.									
							.									
							.									
							.									
							.									
							.									
							.									

COMMENTS

REVIEWED _____ DATE _____

DATE 4 / 9 80

CHECKLIST

- ☒ ~~Know~~
- ☒ ~~Approx. Scale~~
- ☒ ~~Seagull Entry~~
- ☒ ~~Oil Dist.~~
- ☒ ~~Width~~
- ☒ ~~Length~~
- ☒ ~~% Cover~~
- ☒ ~~Substrate Character~~
- ☒ ~~Est. HMLA/VL~~
- ☒ ~~SSI~~
- ☒ ~~Profile Location(s)~~
- ☒ ~~Profile(s)~~
- ☒ ~~Pt Location(s)~~
- ☒ ~~Photo Location(s)~~

LEGEND

Fig - No Subsurface Oil

2 ▲
Fig - Subsurface Oil

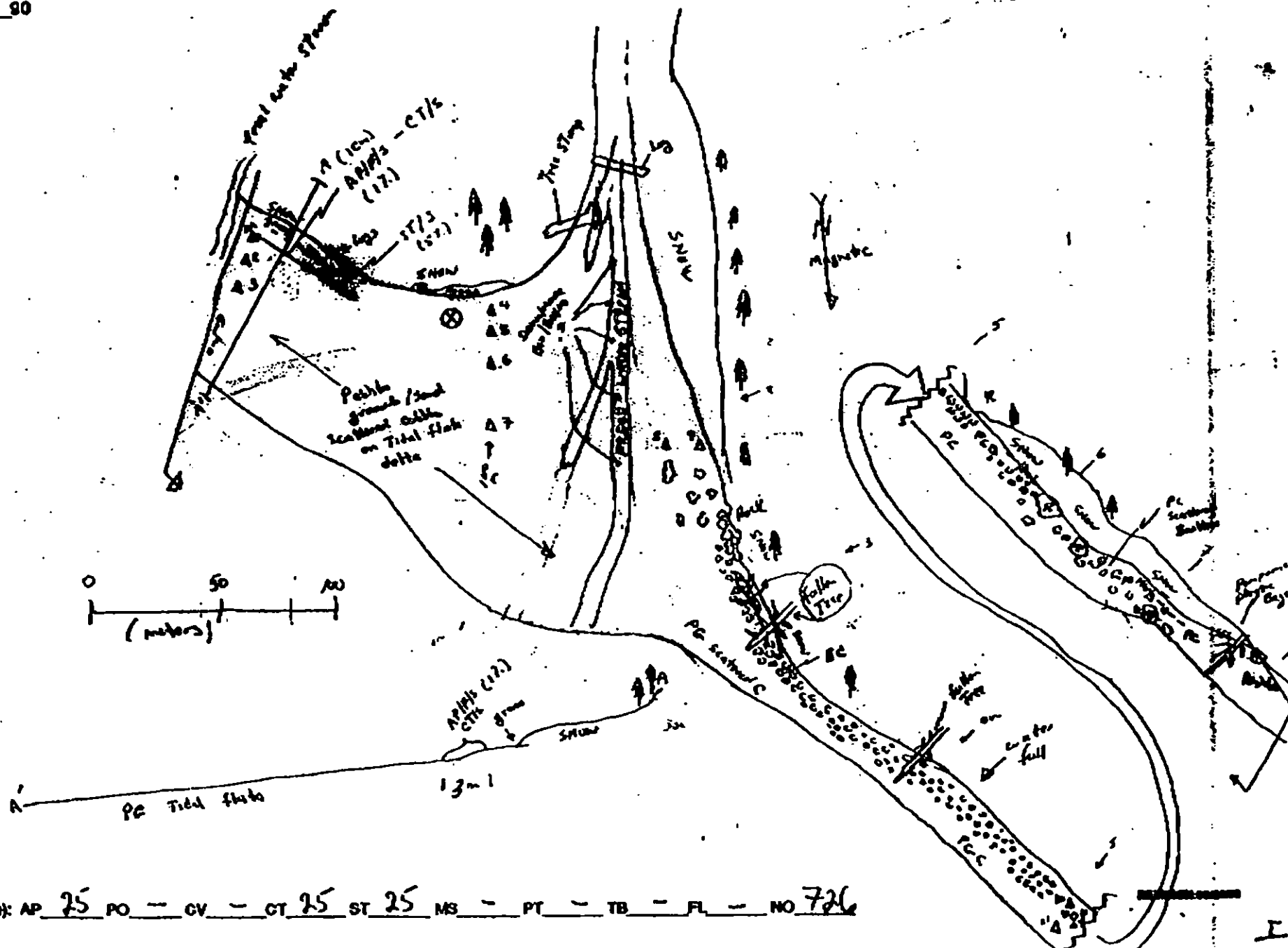
CT/C
Cover Loss Distribution

Broken Distribution

Patchy Distribution

Spinal Cord Distribution

Older Vegetation

**Photo location, direction,
and number**

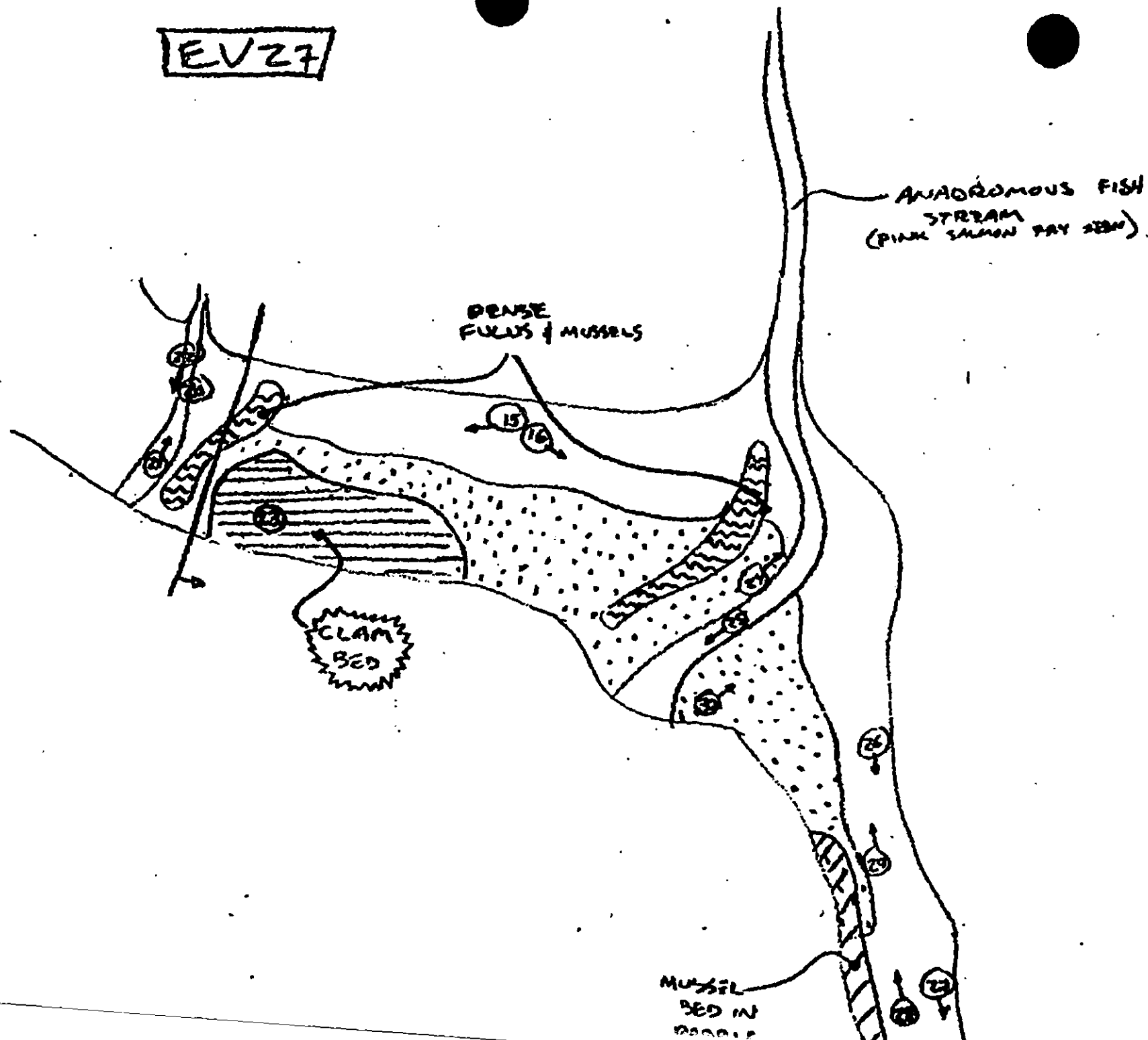
Oil Character Length (m): AP 25 PO -- CV -- CT 25 ST 25 MS -- PT -- TB -- FL -- NO 726

EXAM ON CIRCUIT

21

SUBAT TEM P.03

EV27



SHORELINE ECOLOGICAL SUMMARY

REVISION 02/82

Segment ST/EV 27 Subdivision 0900 ON Date (mo/day/yr) 4/9/90
 Time (24 hr) 1030 OFF Biologist TONY ZAMORA

- (A) Substrate type and % of segments:
 (1) Bedrock (2) Boulder (3) Cobble (4) Pebble (5) Sand (6) SR
- (B) Overall % cover of biota (% of segment): Dense 60 Moderate 20 Low 20
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)
- Photographs: Roll No. ST-16-7
 Frames 14-30

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/General Comments:

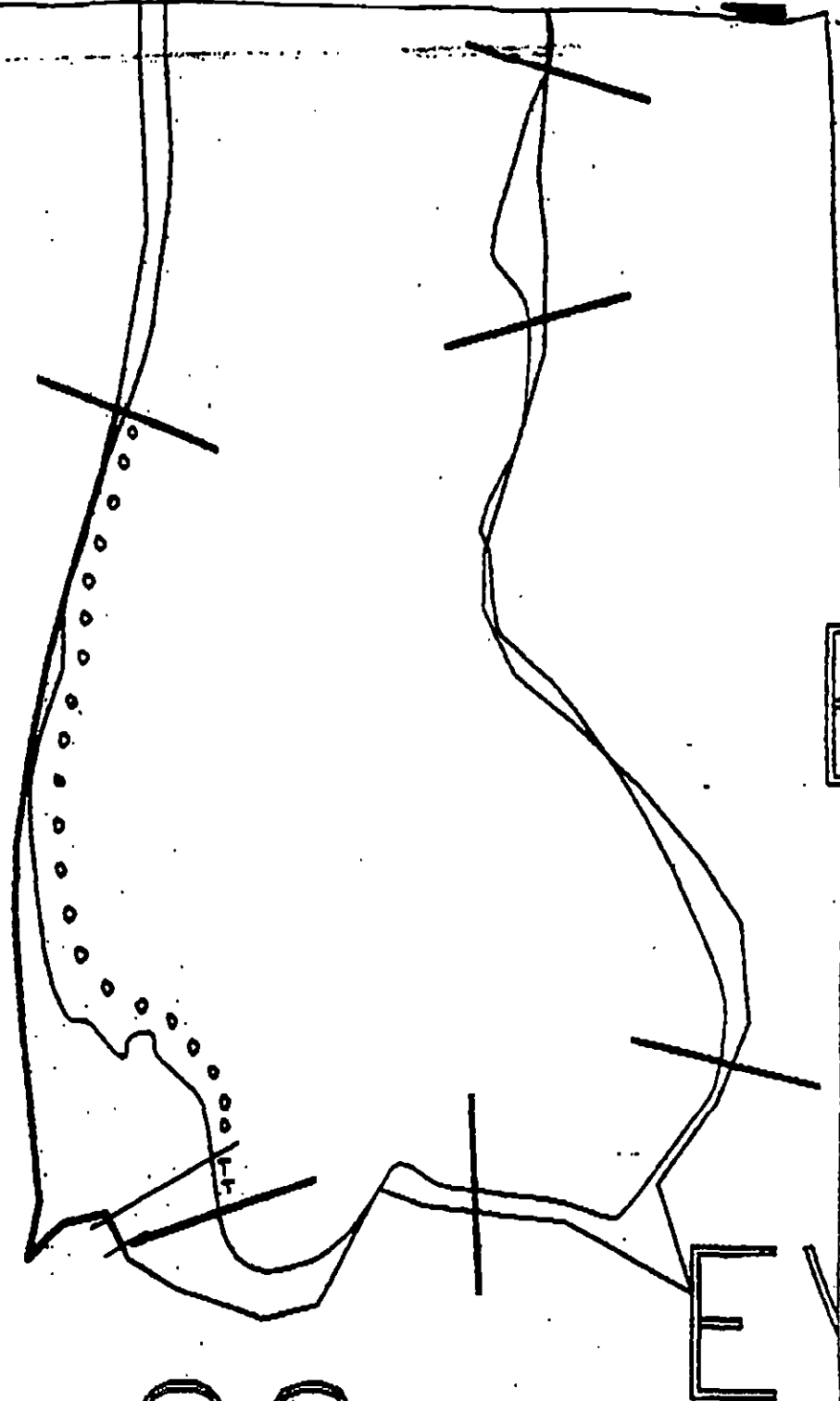
- DENSE CLAM BED - *P. STRIMMER*, *C. ANTHUS*, *MYA TRUNCATA*, *SARIDOMUS*.
- DENSE FUCUS NEAR / ALONGSIDE OF RIVER BED.
- DENSE BARNACLES (GAST UNOBSERVED, BUT I DIDN'T HAVE TIME TO LOOK WELL)
- MANY EMPTY MUSSEL SHELLS IN / AROUND STREAMS, LIVING MUSSELS RARE WITHIN FUCUS PATCHES.
- EAGLE, OTTERS SITED.
- MANY PITS IN CLAM BED INDICATE FEEDING AREA FOR OTTERS

ECOLOGICAL CONSIDERATIONS

7II, 7JJ, 1A/B (PINK SALMON FLY SEEN)

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.



EV-26

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-27

ADEC Segment Length: 822m



Map Key: PWS-196

Name: Reimer

Date: 4/9/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ EV-27 SUBDIVISION A (1 OF 1) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-40-16610

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

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

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

SHPO SIGNATURE: *[Signature]* DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 26 m: No Oil 796 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
☒ Removal	☐ Other (see comments)

COMMENTS: REMOVE ASPHALT + OILED TRASH

TAG COMMENTS:

TAG APPROVAL DATE: 4/20/90

ADEC ART WEINER *[Signature]*

EXXON ANDY GALE *[Signature]*

NOAA Burt Wescott *[Signature]*

USCG KENNETH KEANE *[Signature]*

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

Oil Character Length (m): AP 25 PO - CV - CT 25 ST 25 MS - PT - TB - FL - NO 726

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ EV-27 STREAM NO: 226-40-16610 DATE 4/26/90

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)

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. Subject stream is located within Subdivision A (1 of 1).

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

or

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

SHPO SIGNATURE: Rachel Jean Daen DATE: 5/18/90

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: <u> </u> Wands
☐ Tarmat Removal	☐ Beach Cleaner
	☐ Other (see comments)

COMMENTS:

TAG COMMENTS: MANUAL PICKUP OF TAR PATCHES

TAG APPROVAL DATE: 5/9/90

ADEC ART WEINER Art Weiner

EXXON AMY TAL Amy Tal

NOAA Burl Wescott Burl Wescott

USCG D.D. ROME D.D. Rome

FOSC: W L DATE: 6-8-90

Notify CVC 24hrs prior to cleanup

W

Film AS-15-6

244

←
23

22

125A

MANUALLY ROUTED
SPORADIC TAG
PATTIES IN AREA
1 & 2. AREA 2 = 30m x 1m
AREA 1 = 4m x 1m

P.T/P

VERY SENSITIVE

ZAFEA

43

100

PTV

LEGEND

1 ▲
P1 - No Subsurface CI

2 ▲
P2 - Subsurface CI

CT/C
Controlled Distribution

CT/B
Isolated Distribution

CT/P
Very Distribution

CT/E
Isolated Distribution

see
of Vegetation

is location, direction
marker

vector Length (in): AP _____ PO _____ CV _____ OT _____ ST _____ MS _____ PT _____ TD _____ FL _____ NO _____

34/9 00 William Rd
SEGMENT BY EV027

SKETCH MAP

STRAIR 225-10-10610

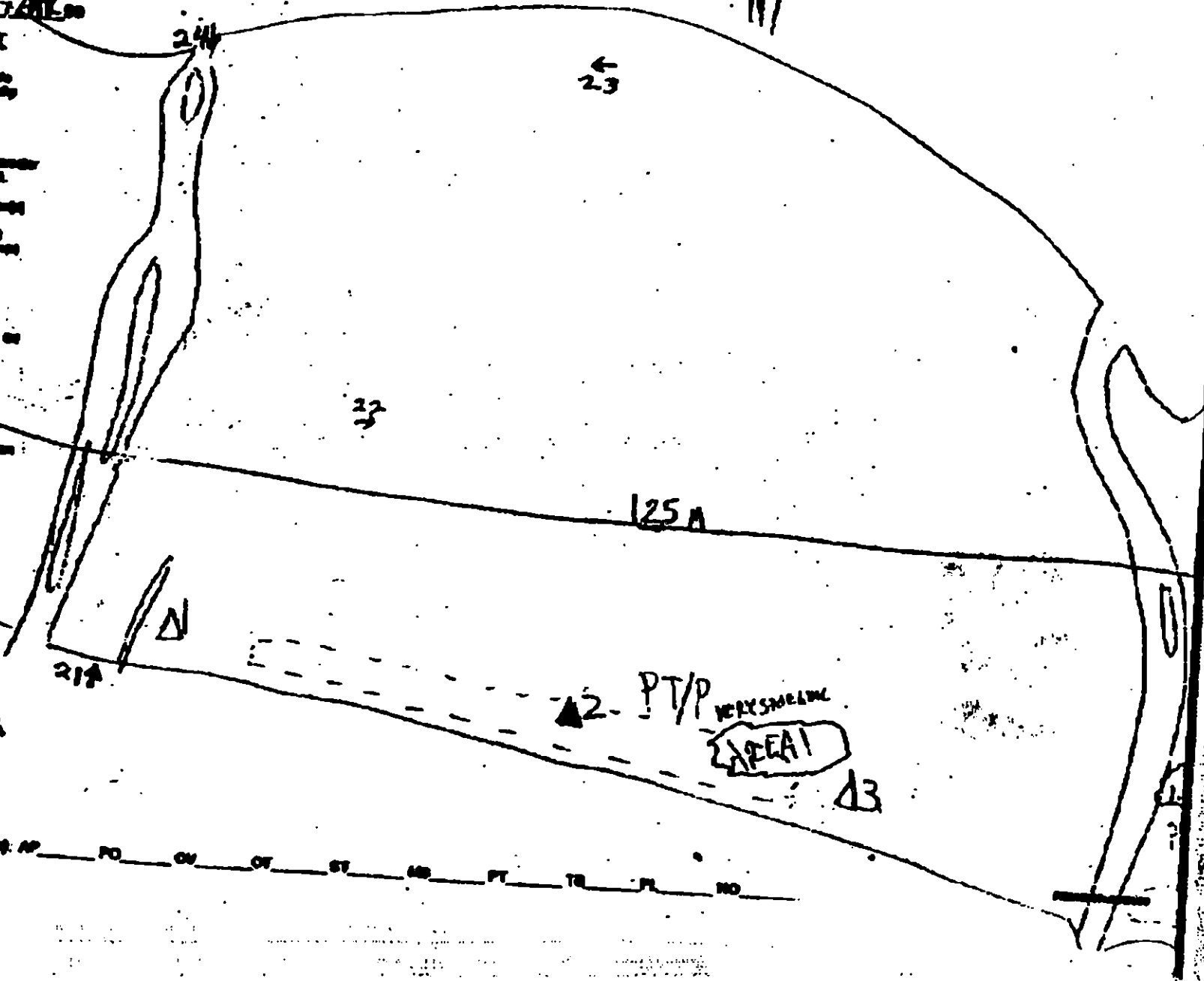
File AS-15-6

DATE 26 APR 68

- CHECKLIST
- ☐ N Area
 - ☐ Approx. Grid
 - ☐ Approx. Grid
 - ☐ on Map
 - ☐ Work
 - ☐ Graph
 - ☐ S. Class
 - ☐ Suburban Character
 - ☐ Dist. 1000 ft
 - ☐ 100
 - ☐ Public Landings
 - ☐ Public
 - ☐ Private Landings
 - ☐ Private Landings

LEGEND

- ▲ - No Suburban Ch
- ▲ - Suburban Ch
- CT/C
- CT/B
- Public Distribution
- CT/2
- Public Distribution
- CT/2
- Public Distribution
- ell
- Old Vegetation
- on
- Proclamation, District, and number



Character Length (sq. ft) AP PD OV OF ST MB PT TR PL NO

ECOLOGICAL MAP

1A, 1B
7II

ANADROMOUS
STREAM

226-40-16610
(Ps. 12/89)

LOCATED IN
EV-27-A
(1 of 1)

EV-26

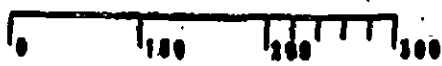
XXX Wide
/// Medium

EV-27

--- Narrow

ADEC Segment Length: 822m

TTTT Very Light



Map Key: PWS-198

Name: Reimer

Date: 4/9/90

Data Entered:

38/42

EV 027

226-40-16610

4/26/90

SPORADIC
TAL FLOPS

SPORADIC TAL FLOPS

SHELTER
CAY

FOR TAPPS

Base of
Sporadic Tal
Flops

MA
Stream

WINDOW

SHORELINE EVALUATION

SEGMENT ST/ EV-36 SUBDIVISION A (1 OF 1) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ST-2 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 unopened 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: 5/2/90

OILING CATEGORIZATION:

Wide 0 m: Medium 73 m: Narrow 0 m: V.Light 420 m: No Oil 1403 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/2/90
ADEC ART WENGER Det. Wenner
EXXON ANDY GENTZ
NOAA GARY PETROE
USCG KENNETH KEENE

FOSC: DATE: 6-19-90

SEGMENT **V-36**
 SUBDIVISION **A**
 DATE **4/22/90**

CHECKLIST

☐ N Arrow
☐ Approx. Scale
☐ Seg/Sub Entry
☐ On Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HML/LML
☐ SST
☐ Profile Location(s)
☐ Photo Location(s)
☐ Photo Location(s)

LEGEND

1 Δ
 Pt - No Subsurface Oil

2 Δ
 Pt - Subsurface Oil

$\square$ CT/C
 Continuous Distribution

$\square$ CT/B
 Broken Distribution

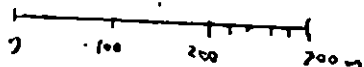
$\square$ CT/P
 Patchy Distribution

$\square$ CT/S
 Splashed Distribution

Oiled Vegetation

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

Scale



ETCH MAP

10m x 100m ST/S
 on Low angle B/C
 in the HITZ

5m x 100m CT/S w/
 Localized CT/P on O/R
 in the HITZ

10m x 100m CT/P
 on Low angle B/C
 in the HITZ

1m x 30m ST/S in HITZ on

2m x 50m CT/P in the HITZ of
 a Boulder/Rock shore zone

2m x 200m ST/S in the HITZ
 of a Low angle B/C beach

High angle B/C Beach

High angle O/R shore zone

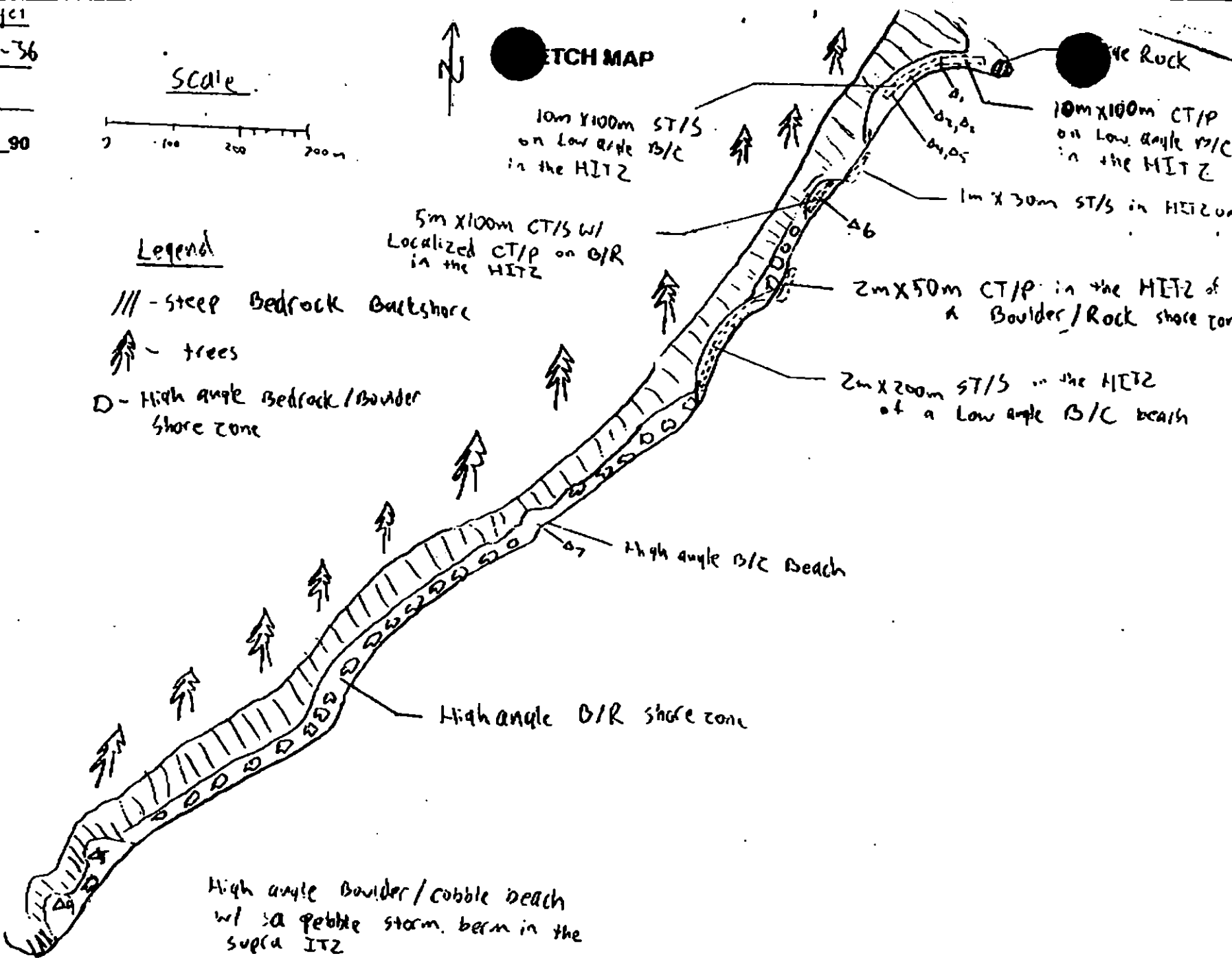
High angle Boulder/cobble beach
 w/ a pebble storm berm in the
 supra ITZ

Legend

/// - steep Bedrock Backshore

$\uparrow$ - trees

D - High angle Bedrock/Boulder
 shore zone



Oil Character Length (m): AP 0 PO 0 CV 0 CT 450 ST 130 MS 0 PT 0 TB 0 FL 0 NO 1404

EV-39

ECOLOGY MAP

EV-37

CONFIRMED
PRESENT

DEER CARCASS

UNOILED
DEER CARCASS INTERLITTORAL FRINGE

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EV-36

ADEC Segment Length: 1984m

0 100 200 300
METERS

Map Key: PWS-242d

Name: _____

Date: _____

Date Entered: _____

ECOLOGY MAP

XXXX Wide

//// Medium

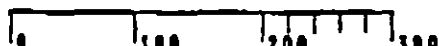
--- Narrow

TTTT Very Light

0000 No Oil

EV-36

ADEC Segment Length: 1984m


METERS

Map Key: PWS-242b

Name: _____

Date: _____

Data Entered: _____



ECOLOGY MAP (1 of 3)

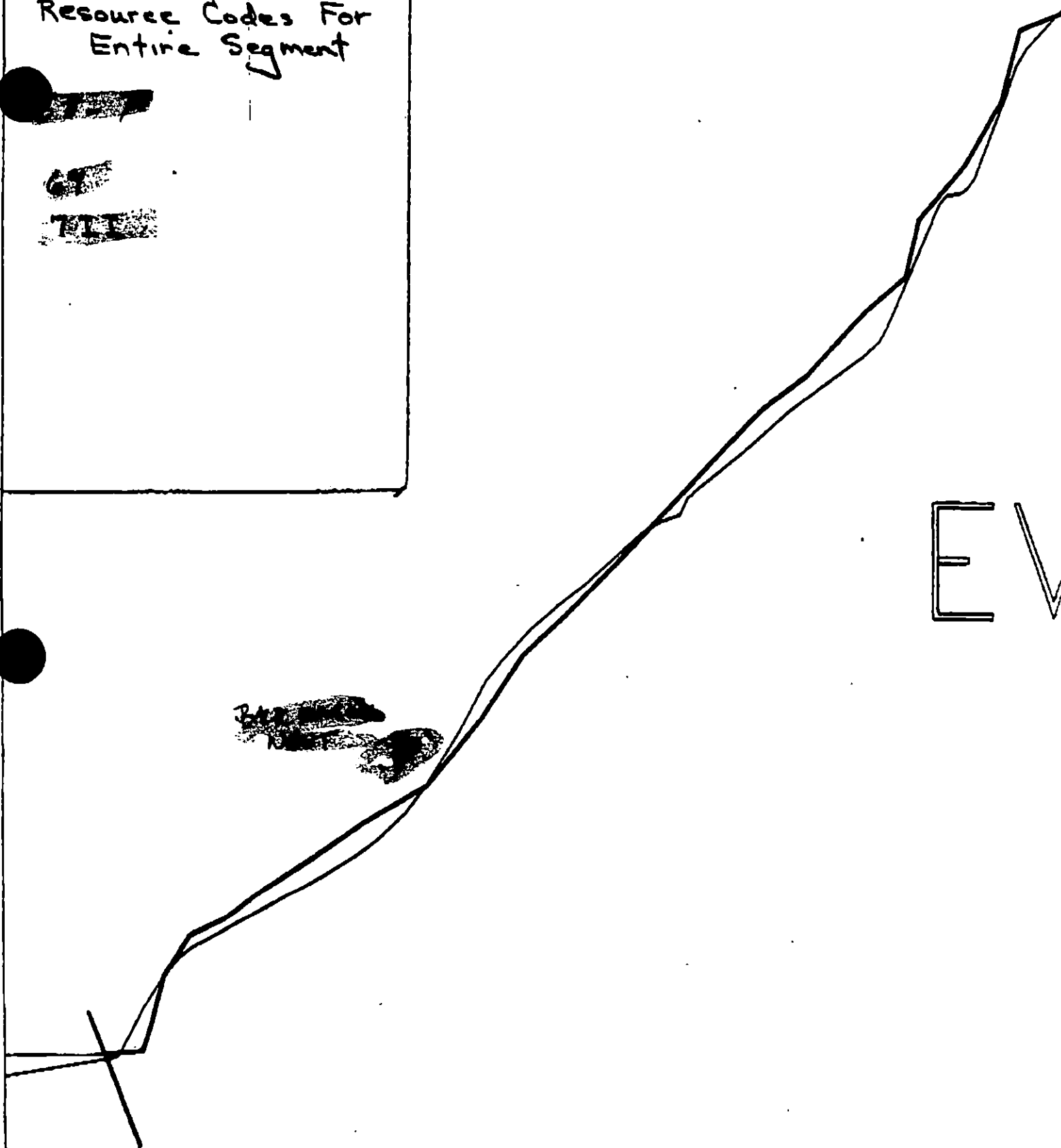
Resource Codes For
Entire Segment



TLE



EV



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EV-36

ADEC Segment Length: 1984m



Map Key: PWS-242a

Name: K.E. CONLAN

Date: 04/22/90

Data Entered:

~~Top~~

PWS-242d

← PWS-242a

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-36

ADEC Segment Length: 1984m

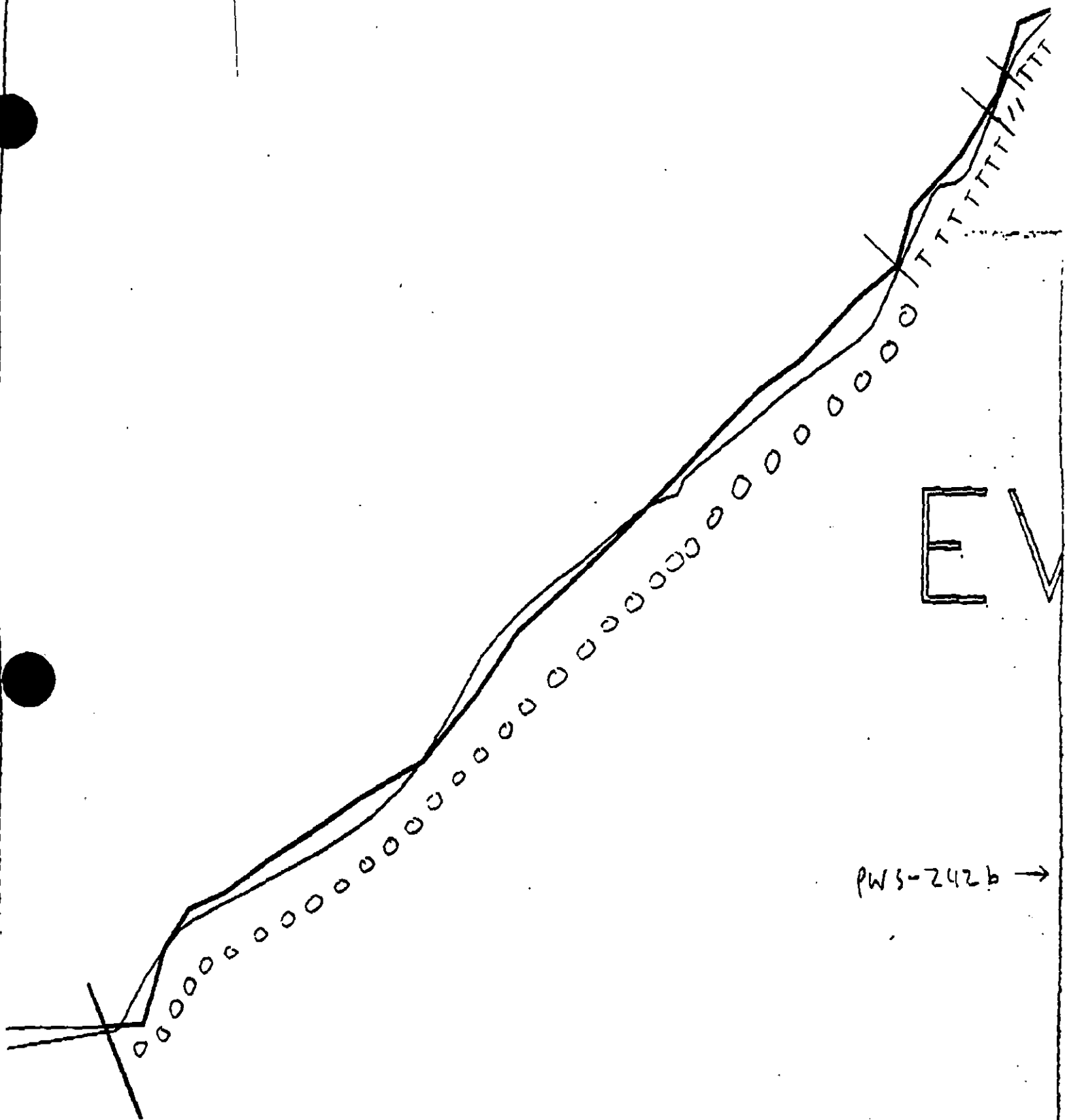


Map Key: PWS-242b

Name: Mike Foyet

Date: 4/22/90

Date Entered:



XXXX Wide

//// Medium

-- Narrow

TTT Very Light

0000 No Oil

EV-36

ADEC Segment Length: 1984m



Map Key: PWS-242a

Name: Mike Fager

Date: 4/22/90

Data Entered:

EV-39

EV-37

PWS-242b



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-36

ADEC Segment Length: 1984m



Map Key: PWS-242d

Name: Mike Coge

Date: 4/22/90

Data Entered:

1991 MAYSAP EVALUATION

SEGMENT: EV 036 SUB: A REGION: PWS SURVEY DATE: 4/28/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest,
Fish harvest area

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Charles E. Adams

Date: 5/8/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 8 1991

FOSC APPROVAL DATE: 5/13/91

ADEC

FOSC

EXXON

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

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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 EV-36 SUBDIVISION A DATE 4/28/91

ADEC

NAME John Hayer

SIGNATURE [Signature]

☐ NTR ☒ recommend treatment

Heaviest oiling here was observed on pinnately at N.E. point of segment. Because oiling here is difficult to locate and does not require substantial man treatment or mechanical work recommendations are for manual crew (Chaga LRP) to recover gross contamination at this pt. This is a high energy beach and weather should be watched closely during treatment. The rest of this segment does not require treatment but I do recommend re-survey of the pinnately in 1992. Points A+B on sketch map identify area recommended for treatment.

EXXON

NAME Martinez N.J.

SIGNATURE [Signature]

☐ NTR

SOR. in amongst boulders recoverable but difficult.

LANDMANAGER

NAME Steve W. Aro

OF CVC

SIGNATURE [Signature]

☐ NTR

there is oil enough surface and sub-surface to justify sending in Chaga LRP - OK if UECO crew this summer. This area is close to Chaga. Should be re-surveyed for sub-surface in Fall-91 and Spring 92.

USCG/NOAA

NAME DREHER/HODGES

SIGNATURE CWO K.L. Dreher

☐ NTR

Air temp. $\approx 40^{\circ}\text{F}$ - observed small pockets of sheening and recoverable quantities of oil. Recommend manual removal of deposits which will mobilize at higher ambient temperatures a release significant sheening.

oil spatter and some coating with pine needles observed. Large mussel bed with isolated far patches on upper right of beach. some surface and subsurface oil patches found.

5

MAYSAP SHORELINE OILING SUMMARY

PAGE ____ OF ____

TEAM NO.

OG CHANEY

BIO CRANK

SEGMENT EV 36

ADEC HAYES

LANDMANAGER WARD for CVC

SUBDIVISION A

EXXON MARTINEZ

USCG/NOAA DREHER/HODGES

DATE April 128, 191

TIME 18:30 to 19:45

TIDE LEVEL 3 ft. to 2 ft.

ENERGY LEVEL: ☒ H ☐ M ☐ LSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☐ RAIN ☐ SNOW

TOTAL LENGTH SHORELINE SURVEYED: 445 m

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

EST. OIL CATEGORY LENGTH: W 90 m M 20 m N 20 m VL 125 m NO 240 m US 455 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A	✓	T		T	P	P	S				RB	M	30	40		✓			AP & MS UNDER BOULDER
B	T			T	T						RB	M	20	50			✓		
C				T	T	S	S				RB	M	4	20		✓			
D						T	T				R	M	10	70		✓			
E						P	P				B	M	0.1	20		✓			
F						T	T				RB	H	5	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 - 4

FRAMES 13-18

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	10		✓						0-10	N	5	BR		✓			BC/BC	
2	25			✓					20-25	N	-	-		✓			BC/BC	
3	20							✓	-	-	-	-			✓		BC/BC	
4	25							✓	20-25	?	-	-			✓		BC/BCG	
5	40							✓	-	-	35	-		✓			PC/PC	
6	30							✓	-	-	-	-		✓			PC/PC	
									-	-	-	-						
									-	-	-	-						
									-	-	-	-						

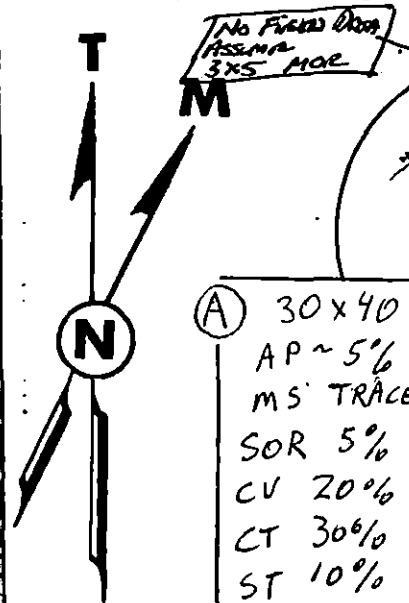
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS: (A) BASE OF CLIFF. PATCHES OF AP & MS UNDER LARGE BOULDERS (PARTIALLY POSSIBLY RECOVERABLE)
 AREA (B) IS ON THE ROCKY POINT. SEVERAL DISTINCT PATCHES OF ASPHALT WERE OBSERVED IN THIS REGION ALTHOUGH THERE ARE LARGE AREAS WITHOUT OIL. ASPHALT IS MIXED WITH MUSSELS.
 (C) LARGE BOULDERS WITH COAT & STAIN AND A COUPLE OF PATCHES OF SOR AT BOULDER BASES.

REVIEWED: F.W. 5/1/91

REVIEWED: M.C. 5/1/91

MAYSAP 1991
 OG SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV 36 A
 DATE: APRIL 28 1991
 AIR P.#: PIM COO5132



(A) 30x40
 AP ~ 5%
 MS TRACE
 SOR 5%
 CV 20%
 CT 30%
 ST 10%

(B) 20x50m
 AP > 1%
 CV > 1%
 CT > 1%

(C) 4x20
 SOR 2 PATCHES
 CV > 1%
 CT ~ 10%
 ST ~ 10%

5x5m
 CT TRACE
 ST TRACE

(E) 0.1 x 20 m
 CT 15%
 ST 10%
 IN LARGE BOULDERS

SURVEY TERMINATED
 DUE TO ROUGH WEATHER
 AND VERY LIGHT OILING
 CONDITIONS

LEGEND

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

SCALE 100 METERS
 APPROXIMATE

EVANS ISLAND

SMALL WATER FALL

FOREST

EAGLE NESTS

Rainbow and Silver Sheens in many tide pools

HOR 3x10

LOW JAGGED BOULDERS

(SEE ENLARGEMENT)

NO SURVEY DUE TO WILDLIFE CONCERN

INACCESSIBLE
 NO SURVEY

LATOUCHE PASSAGE

Reviewed: F.W. 5/1/91
 Reviewed: M.C. 6/1/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5

DATE 28 Apr '91

SEGMENT # EV 36

TIDAL HEIGHT(Range) +3 → +2

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 3'

WIND SPEED/DIRECTION 15/E

PHOTOGRAPHS: ROLL # MAYSAP 4

FRAME # 17

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

(A) Area is high in UITZ. Rare filamentous green algae no other intertidal biota present.

(B) Area is in MITZ directly below (A) on a rock bench. The bench is 80% covered with biota. There are dense mussels and *Fucus* (dominated 2 spp). There are sparse to moderate barnacles with tightly sealed inner plates. Moderate *Littorina* concentration and eggs present. Other algae includes *Scytosiphon*, *Ulva* and filamentous greens. Removal of present oil would not be not environmentally beneficial.(C) Area is located high in the UITZ, in a boulder field. No intertidal biota observed in area. Fifteen meters below site there is a 20% barnacle and *Fucus* cover.

(D) Area is located in the UITZ. Rare barnacle spot in vicinity of oil. No other macro-biota. Seven meters below site there is a 20% biota cover.

(E) Area is located in UITZ. Filamentous green algae present of 80% surface. Black and white lichen present on top of boulders. Limpets are sparse. Rare barnacles 1/2 m down from area and a 20% biota cover 5 m below area.

(F) Area is located in large boulder field in the UITZ. There are rare *Fucus* sporlings, sparse limpets and rare barnacle recruits.

There are 2 confirmed Eagle nest ~50 m apart, southern one is active. Fifteen eagles were in vicinity during survey - fresh deer carcass was present on adjacent beach.

WILDLIFE OBSERVATIONS: Areas surveyed are wildlife sensitive due to Eagle constraints,

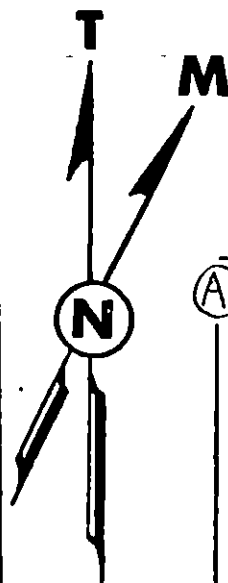
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	15	
Seabirds			
Waterfowl	1	1	
Gulls/Kittiwakes	2	8	
Shorebirds			
Corvids			
Other Birds	1	2	

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

Shoreline subdivision map showing important biological features attached.

MAYBAP 1991
 OG SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV 36 A
 DATE: APRIL 28 1991
 AIR P.#: PIM C005132



LEGEND

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

SCALE 100 METERS
 APPROXIMATE

EVANS ISLAND

SMALL WATER FALL

4x20
 SOR 2 PATCHES
 CV > 1%
 CT ~ 10%
 ST ~ 10%

20x50m
 AP > 1%
 CV > 1%
 CT > 1%

(ENLARGEMENT)

Rock Bench
 With Dense
 Biota cover - intrusive cleanup
 would not be net environmentally
 beneficial

RAINBOW AND
 SILVER SHEENS
 IN MANY TIDE POOLS

HOR 3x10

5x5m
 CT TRACE
 ST TRACE

0.1x20m
 CT 15%
 ST 10%
 IN LARGE
 BOULDERS

SURVEY TERMINATED
 DUE TO ROUGH WEATHER
 AND VERY LIGHT OILING
 CONDITIONS

INACCESSIBLE
 NO SURVEY

FOREST

This area is wildlife sensitive
 due to Eagle constraints

Deer was lying down in the SUPRA
 Walked through area w/o surveying. Did not
 want to spook animal
 NO SURVEY DUE TO WILDLIFE CONCERN

LOW JAGGED
 BOULDERS

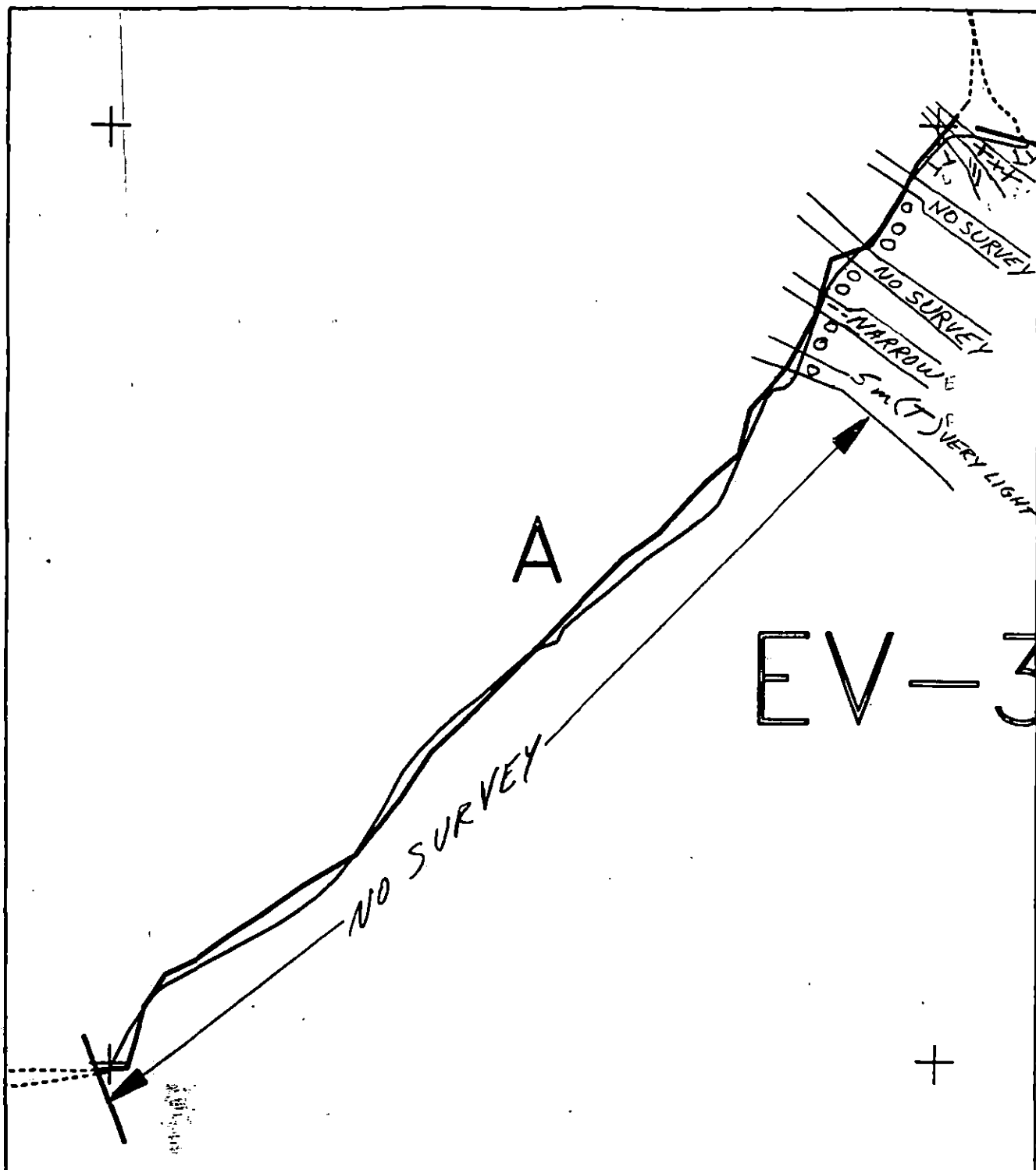
SEA
 STACK

(SEE
 ENLARGEMENT)

EAGLE
 NESTS

Active
 Nest

Dense Mussels
 and Fucus beds



XXXX	Wide	EV036 A ADEC Subsegment Length: 1000m METERS 0 200 400 AK State Plane Zone 4 proj38na	 	Subdivision Field Map
////	Medium			Map Key: PWSEV036Aa
----	Narrow			Name: <u>Greg Chaney</u>
TTTT	Very Light			Date: <u>April 28 '91</u>
0000	No Oil			Date Entered:

REVIEWED: F.W. 5/1/91
 REVIEWED: M.C. 5/1/91

1991 MAYSAP EVALUATION

SEGMENT: EV 036 **SUB:** A **REGION:** PWS **SURVEY DATE:** 4/28/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest,
Fish harvest area

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ **Date:** _____

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

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

ADEC _____ **FOSC** _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT EV-36 SUBDIVISION A DATE 4/28/91

ADEC

NAME John Haver

SIGNATURE [Signature]

☐ NTR ☒ recommend treatment

Heaviest oiling here was observed on pirovatory at N.E. point of segment. Because oiling here is difficult to locate and does not require substantial man treatment or mechanical work recommendations are for manual crew (Chesapeake LRP) to recover gross contamination at this pt. This is a high energy beach and weather should be watched closely during treatment. The rest of this segment does not require treatment but I do recommend treatment of the pirovatory in 1992. Points A+B on sketch map identify area recommended for treatment.

EXXON

NAME Martinez N.J.

SIGNATURE [Signature]

☐ NTR

SOR. no significant boulders recoverable but difficult.

LANDMANAGER

NAME Steve Waco

OF CVC

SIGNATURE [Signature]

☐ NTR

there is oil Enough surface and sub-surface to justify sealing in Chesapeake LRP - OR A UECU CREW this summer. this area is close to Chesapeake. Should be reversed for sub-surface in Fall-91 and Spring 92.

USCG/NOAA

NAME DREHER/HODGES

SIGNATURE CWO K.L. Ducker

☐ NTR

Air temp. $\approx 40^{\circ}\text{F}$ - observed small pockets of sheening and recoverable quantities of oil. Recommend manual removal of deposits which will mobilize at higher ambient temperatures a release significant sheening.

oil spatter and some coating with pine needles observed. Large mussel bed with isolated far patches on upper right of beach. some surface and subsurface oil patches found.

PAGE 1 OF 1

SEGMENT EV 36

SUBDIVISION 4

DATE April, 28, 1911

ENERGY LEVEL: ☒ H ☐ M ☐ L

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

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

W 40 m M 20 m N 20 m VL 125 m NO 240 m US 1455 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. 4

FRAMES 13-18

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

(PARTIALLY
POSSIBLY
RECOVERABLE)

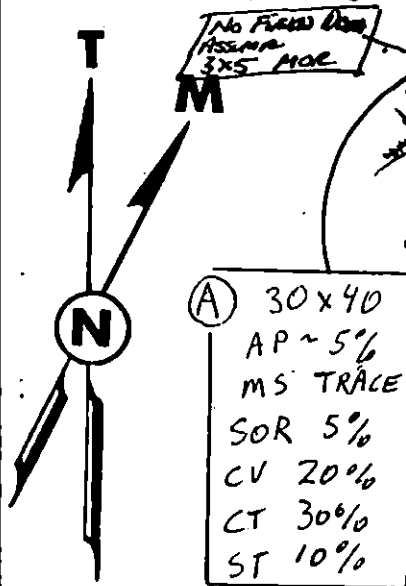
OG COMMENTS: (A) BASE OF CLIFF, PATCHES OF ASPHALT UNDER LARGE BOULDERS ^{POSSIBLY} RECOVERABLE. AREA (B) IS ON THE ROCKY POINT. SEVERAL DISTINCT PATCHES OF ASPHALT WERE OBSERVED IN THIS REGION ALTHOUGH THERE ARE LARGE AREAS WITHOUT OIL. ASPHALT IS MIXED WITH MUSSELS.

(C) LARGE BOULDERS WITH COAT & STAIN AND A COUPLE OF PATCHES OF SOR AT BOULDER BASES.

REVIEWED: F.W. 5/1/91

REVIEW: M.C. 5/19/

MAYSAP 1991
 OG SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV 36 A
 DATE: APRIL 28 1991
 AIR P.#: PIMC005132



LEGEND

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

SCALE 100 METERS
 APPROXIMATE

EVANS ISLAND

SMALL WATER FALL

MOR 3x10

RAINBOW AND SILVER SHEENS IN MANY TIDE POOLS

EAGLE NESTS

(SEE ENLARGEMENT)
 LOW JAGGED BOULDERS
 SEA STACK

NO SURVEY DUE TO WILDLIFE CONCERN

FOREST

INACCESSIBLE
 NO SURVEY

LATOUCHE PASSAGE

5x5m
 CT TRACE
 ST TRACE

0.1 x 20m
 CT 15%
 ST 10%
 IN LARGE BOULDERS

SURVEY TERMINATED
 DUE TO ROUGH WEATHER
 AND VERY LIGHT OILING
 CONDITIONS

(ENLARGEMENT)
 20x50m
 AP >1%
 CV >1%
 CT >1%

4x20
 SOR 2 PATCHES
 CV >1%
 CT ~10%
 ST ~10%

A 30x40
 AP ~5%
 MS TRACE
 SOR 5%
 CV 20%
 CT 30%
 ST 10%

Reviewed: F.W. 5/1/91
 Reviewed: M.C. 5/1/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5

DATE 28 Apr '91

SEGMENT # EV 36

TIDAL HEIGHT(Range) +3 → +2

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 3'

WIND SPEED/DIRECTION 15/E

PHOTOGRAPHS: ROLL # MAYSAP 4

FRAME # 17

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

(A) Area is high in UITZ. Rare filamentous green algae no other intertidal biota present.

(B) Area is in MITZ directly below (A) on a rock bench. The bench is 80% covered with biota. There are dense mussels and *Fucus* (dominated 2 spec). There are sparse to moderate barnacles with tightly sealed inner plates. Moderate *Littorina* concentration and eggs present. Other algae includes *Scytosiphon*, *Ulva* and filamentous greens. Removal of present oil would not be net environmentally beneficial.(C) Area is located high in the UITZ, in a boulder field. No intertidal biota observed in area. Fifteen meters below site there is a 20% barnacle and *Fucus* cover.

(D) Area is located in the UITZ. Rare barnacle spot in vicinity of oil. No other macro-biota. Seven meters below site there is a 20% biota cover.

(E) Area is located in UITZ. Filamentous green algae present at 81c surface. Black and white lichen present on top of boulders. Limpets are sparse. Rare barnacles 1/2 m down from area and a 20% biota cover 5m below area.

(F) Area is located in large boulder field in the UITZ. There are rare *Fucus* sporlings, sparse limpets and rare barnacle recruits.

There are 2 confirmed Eagle nest ~50 m apart, southern one is active. Fifteen eagles were in vicinity during survey - fresh deer carcass was present on adjacent beach.

WILDLIFE OBSERVATIONS Areas surveyed are wildlife sensitive due to Eagle constraints,

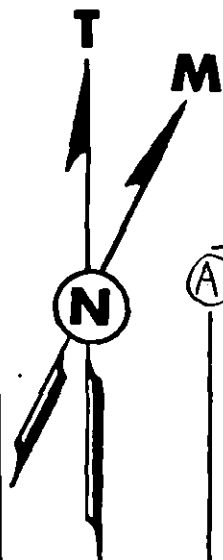
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	15	
Seabirds			
Waterfowl			
Gulls/Kittiwakes	1	1	
Shorebirds	2	2	
Corvids			
Other Birds	1	2	

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

Shoreline subdivision map showing important biological features attached.

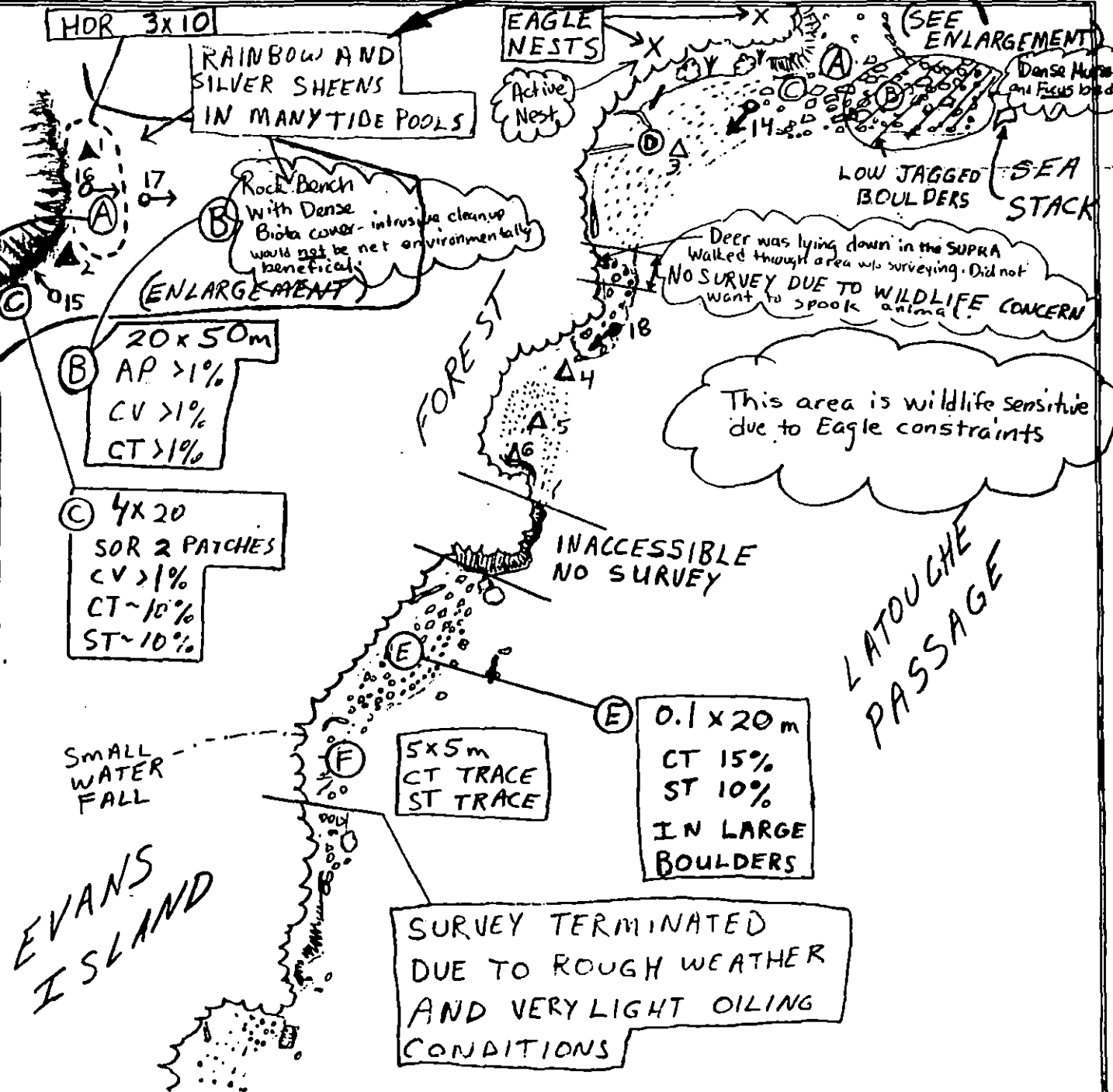
MAYBAP 1991
 OG SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV 36 A
 DATE: APRIL 28 1991
 AIR P.#: PIM 005132

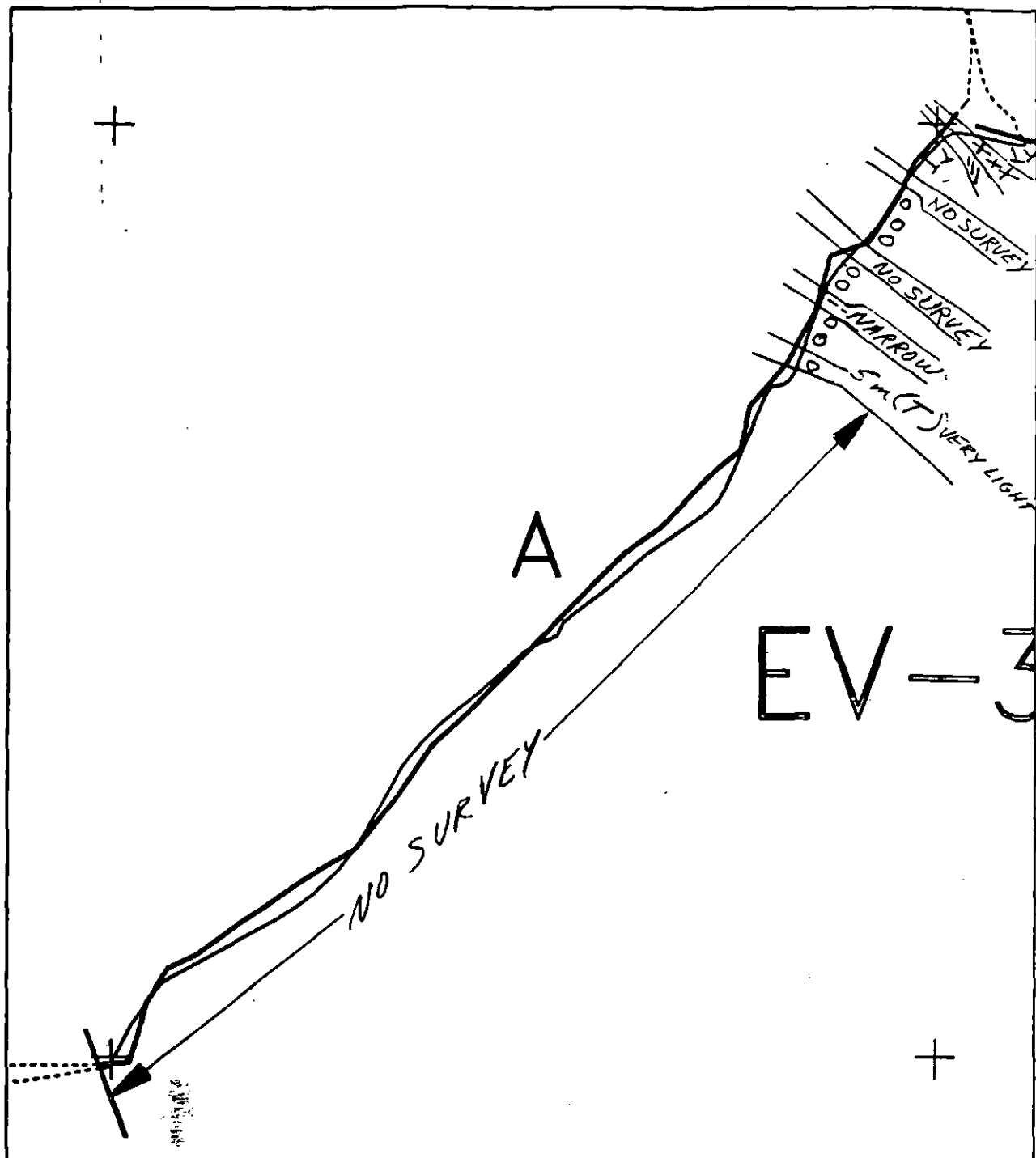


LEGEND

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

SCALE 100 METERS
 APPROXIMATE





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

EV036 A
 ADEC Subsegment Length: 1000m
 METERS
 0 200 400
 AK State Plane Zone 4
 pr036a



Subdivision Field Map
 Map Key: PWSEV036Aa
 Name: Greg Chaney
 Date: April 28 '91
 Date Entered:

REVIEWED: F.W. 5/1/91
 REVIEWED: M.C. 5/1/91

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-28

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ EV-28 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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 156 m: V.Light 1153 m: No Oil 476 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 5 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of tar patties in area indicated on sketch map, and 2) manual raking and bioremediation of area indicated on sketch map. No specific working time constraints identified.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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

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

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

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

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

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

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

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

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

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

1H Remote release site

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

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

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

1I Gill net area (5/7 to 8/31)

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

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

1L Set net sites (5/11 to 7/25)

Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or 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 Harbor seal and sea lion pupping (5/15 to 7/1)

3O, 3Q Harbor seal and sea lion molting (5/15 to 9/15)

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

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

ADF&G Don Calkins 267-2403

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Roth 267-2206

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

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation: Tent sites (5/1 to 9/15)

6V Anchorages (5/1 to 9/15)

6W Forest Service cabins (5/1 to 9/15)

6X Lodge (5/1 to 9/15)

6Y Special use destination

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

71H1 Finfish harvesting

71H2 Deer harvesting (5/15 to 2/25)

71H3 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

SEGMENT ST/ EVO28 SUBDIVISION: A DATE 4/26/90

USCG

NAME Sharon Mass. SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

RECOMMEND MANUAL REMOVAL OF OILY PARTIES SOUTH
END OF BEACH.

SUBSURFACE DRIVING NOTED NORTH END OF BEACH. P-G'S,
FURTHER EVALUATION, POSSIBLE SALMON STREAM CLOSE
BY.

ADEC

NAME Dave Sale SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

MANUAL REMOVAL OF OILY PARTIES AND OILED SEDIMENT
NEXT TO STREAM; ON N. END OF SEGMENT. OILED
PEBBLES/GRAVELS TO 5 CM., IN ANAEROBIC SEDIMENTS. REMOVAL
WOULD BE TOP LAYER.

② TILTING OF SEDIMENTS THAT ARE NOT REMOVED WOULD
HELP WEATHERING.

LAND MANAGER

NAME Don Kompoff Jr SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

21041

SHORELINE OILING SUMMARY

REVISION NO. 04-10-88

OG R. Marty USCG S. Mass SEGMENT ST/ EV-28
 BIO B. Lemon LAND REP D. Kempcraft SUBDIVISION A (A OF A)
 EXXON J. Garasch ADEC D. Sale TIME 18:25 to 20:10
 TEAM NO. 10 TIDE LEVEL +1.15m - +0.32m DATE 25 / April / 90
 EST. SUBDIVISION LENGTH: 1742 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 15 % B 20 % C 15 % P 30 % G 15 % S 15 % M — % V — %
 SLOPE: Long 90 % Hang 10 % Vert — % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W — m M — m N 130 m VL 1151 m NO 406 m

SURFACE OIL

CHARACTER	DISTRIBUTION					OIL / FILM COLOR					IMPACTED ZONES			
	R	B	C	P	S	1	2	3	4	5	SW	U	M	U
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT				P	S					P			P	
STAIN					S					S			S	
MOUSSE														
PATTIES					P					P			P	
TARBALLS														
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	No	AMOUNT		
		SM	MD	LG
Logs	X			
Vegetation	X			
Trash	X			
Debris	X			

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE Misc.#BAGS 1-2

Photographs:

Roll No. 57/10/ASFrames 2-7, 28

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	B E E K (Y/N)	Y	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OP	NO		US	US	1	2	3	4	5	SW	U	M	U				
1	35		X				0-52	X				X			X				Y	Y	33	GC-SV
2	38					X		X							X				Y	N	33	SG-SG

COMMENTS Some subsurface oiling in a 20m x 2m band in boulders at the northern end of the segment otherwise oiling consists of very widely scattered splatter and tar patties.

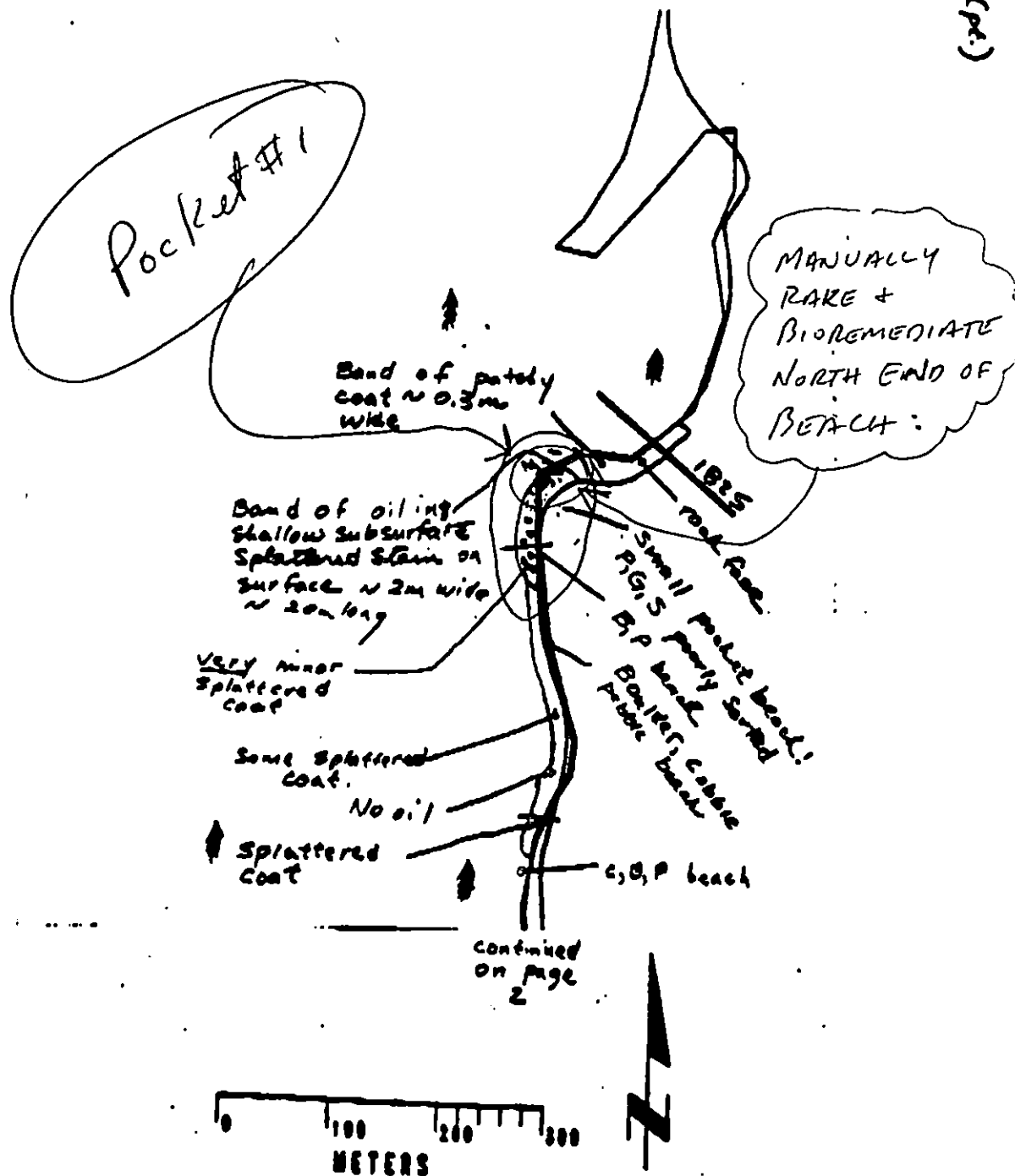
REVIEWED GHDATE 4-28-90

SEGMENT SVI EV-28 (pt.)

SUBDIVISION A

DATE 25 Apr 1990

EV-28



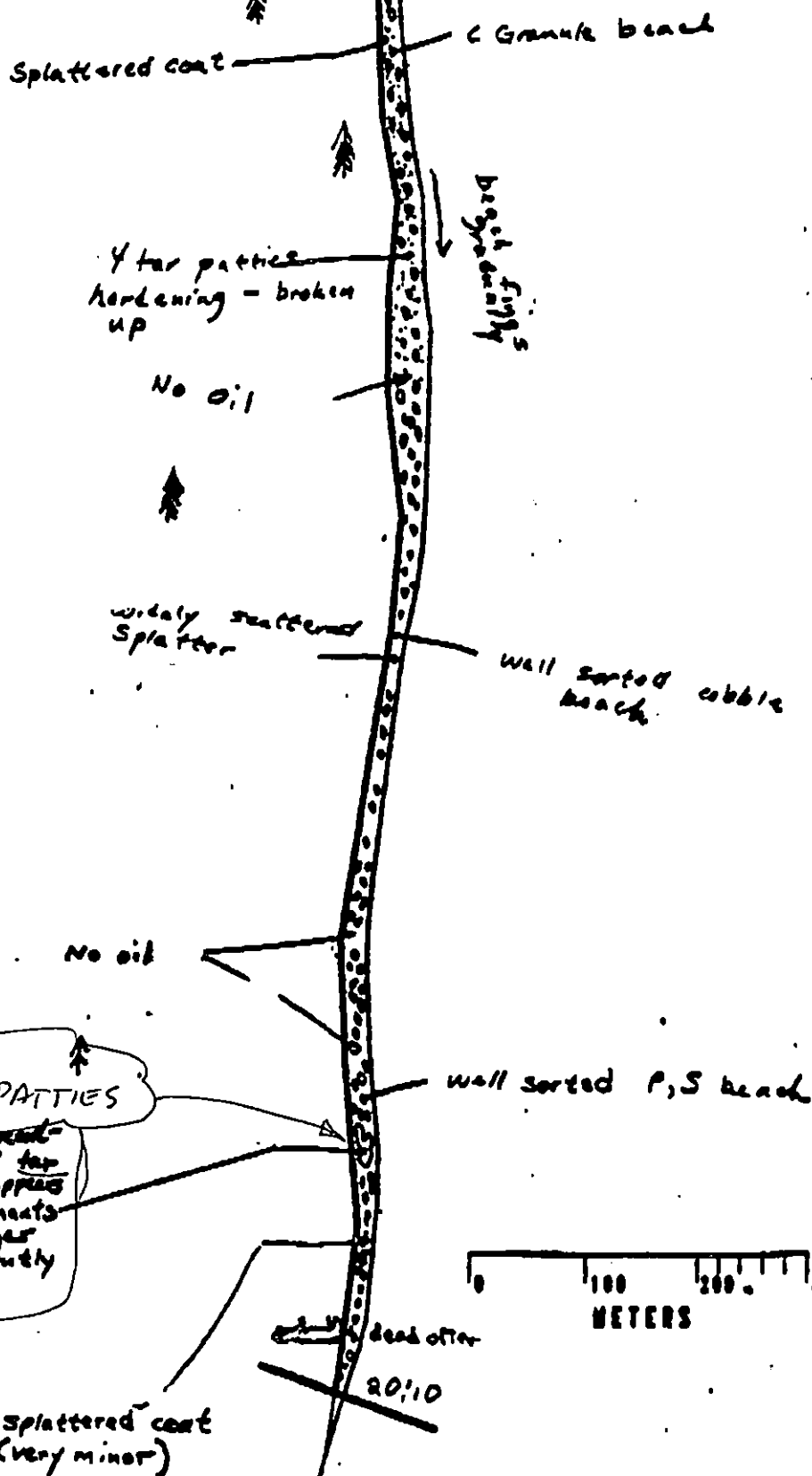
1/2

220/41

On Character Use AP PO CV CT/200 ST 100 MS NO 406

OG R. MurtySEGMENT SV/ EV-28(p)SUBDIVISION ADATE 25 Apr 1990

EV-28

Continued from
Page 1

234/41

SHORELINE ECOLOGICAL SUMMARY

REVISION: 000000

Segment ST/10/24 Subdivision A Date (mo/day/yr) 4/25/90
 Time (24 hr) 1825-2020 Biologist Lemon

- (A) Substrate type and % of segments:
 (1) Bedrock 15 (2) Boulder 20 (3) Cobble 15 (4) Pebble 20 (5) Sand 30 (6) Silt _____
- (B) Overall % cover of biota (% of segment): Dense _____ Moderate _____ Low 30%
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

Photographs:
 Roll No. ST/10/15

Frames 27, 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: Fucus is in reproductive condition, Littorina eggs present.
 2 sealions
 1 dead otter 70 meter from s. end.
 1 + 2 dead flatfish

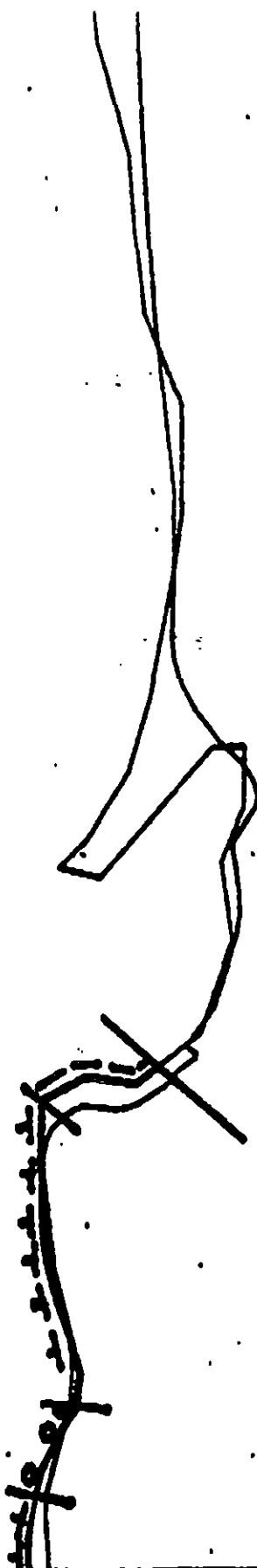
Ecological Considerations:

is a subsistence deer-harvest area.

Water is relatively clear. Large raft of ice went in and out of bay during the day.
 The deeper into the bay we go the lower all zones become displaced; This paper boat represents the north end of the segment where oil occurs.
 The south end of the segment had noticeably more barnacles in the 1-2 mm size; clearly a fresh set.

27 of 41

NO	3.0	450	486
VL	7.1	1085	1151
L	0.8	120	130
		1635	1767



24/47

↓ PWS 197A 1/2

XXXX Wide

/// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EV-28

ADEC Segment Length: 1785m

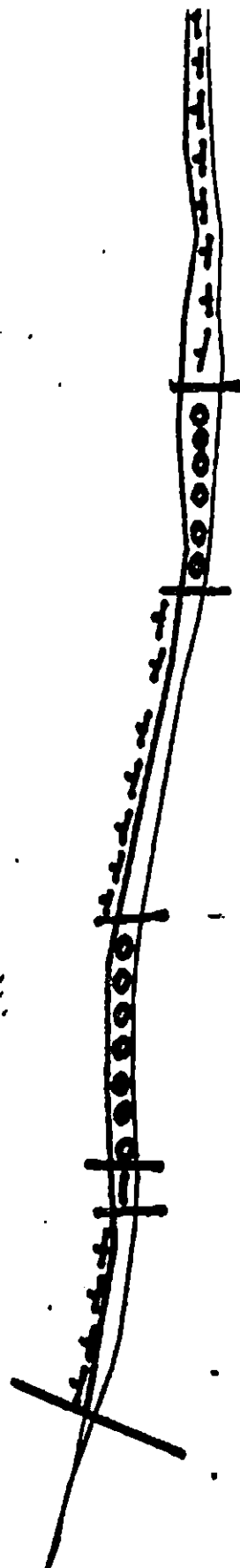


Map Key: PWS-197b

Name: R. MartyDate: 25 April 1990

Date-Entered:

PWS
1978



25 of 41
2/2

XXXX Wide

V/// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EV-28

ADEC Segment Length: 1785m



Map Key: PWS-1978

Name: R. Marty

Date: 25 April 1990

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EV-28 SUBDIVISION A (1 of 1)

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

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

7II Subsistence: Deer Harvesting

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

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 5/29/90.
ADEC Art Weiner Art Weiner
EXXON Andy Tish Andy Tish
NOAA B. W. ... B. W. ...
USCG G.A. REITER G.A. Reiter

FOSO

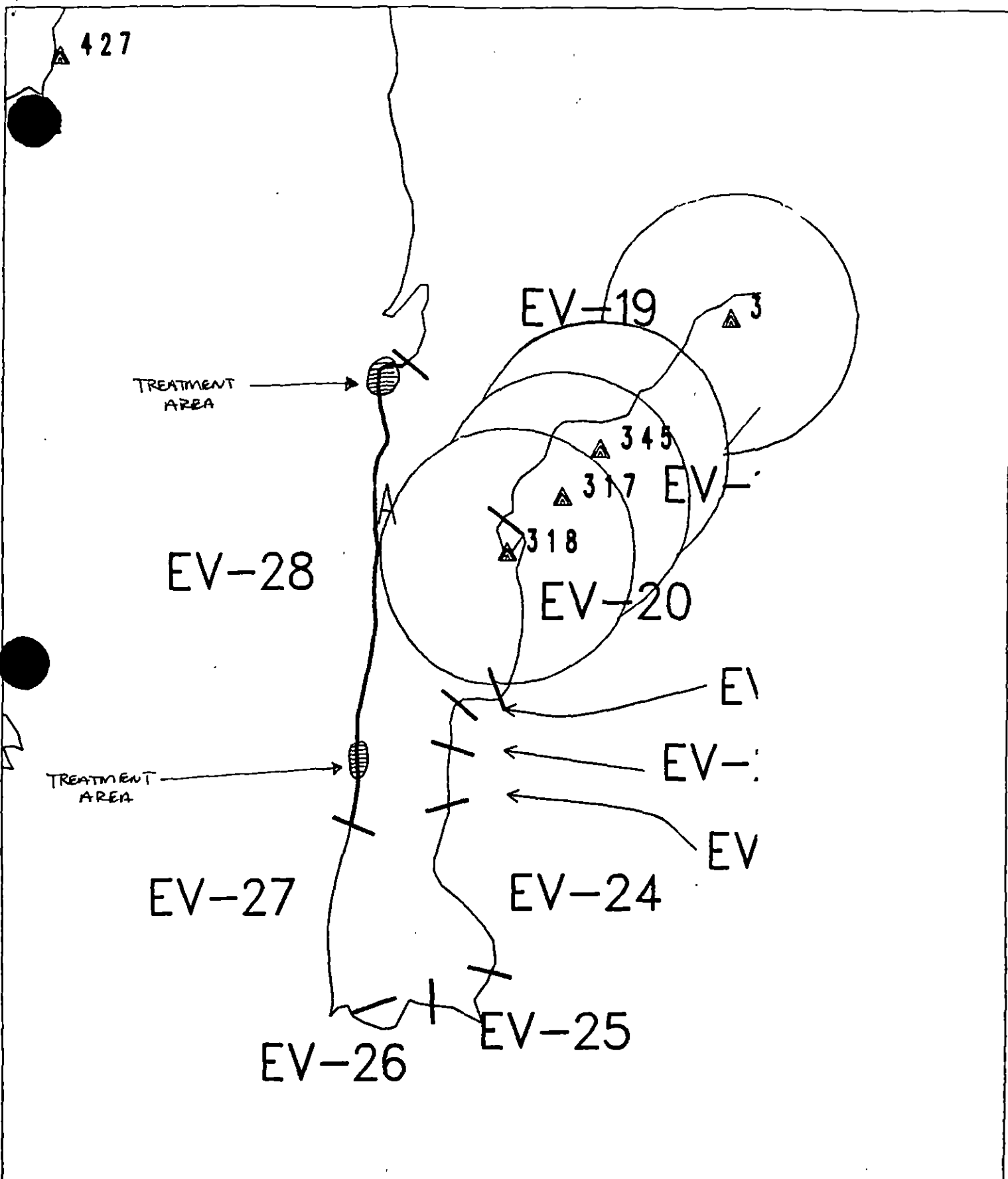
DATE

MAY 29 1990

Prepared By: Andrea Meyer wrk

Date

5/27/90



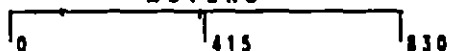
Exxon Company, USA
 Map Key: PWS-EV-28
 May 11, 1990



ECOLOGY MAP SEGMENT EV-28

SUBDIVISION A (1 of 1)

METERS



Seabird Colony



Eagle Nest

1 inch = 1362 feet

SHORELINE EVALUATION

SEGMENT ST/ EV-28 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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: A. David M. Nabors DATE: 5/9/90

OILING CATEGORIZATION:

Wide_0_m: Medium_0_m: Narrow_156_m: V.Light_1153_m: No Oil_476_m
Subsurface Oil Observed: Yes_X No_____ Maximum Depth_5_cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of tar patties in area indicated on sketch map, and 2) manual raking and bioremediation of area indicated on sketch map. No specific working time constraints identified.

→ See Constraint Addendum dated 5/27/90 w/

TAG COMMENTS: _____

TAG APPROVAL DATE:

ADEC	Art Weiken	Art Weiken
EXXON	ANDY TEAR	Andy Tear
NOAA	Burl Warrick	Burl Warrick
USCG	D. D. ROME	D. D. Rome

FOSC: W L DATE: 5-18-90

NOTIFY CNO 24 HRS IN ADVANCE OF WORK.

SHORELINE EVALUATION

SEGMENT ST/ EV-28 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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 Mc Mahon DATE: 5/9/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 156 m: V.Light 1153 m: No Oil 476 m
Subsurface Oil Observed: Yes X No Maximum Depth 5 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of tar
patties in area indicated on sketch map, and 2) manual raking and
bioremediation of area indicated on sketch map. No specific working
time constraints identified.

TAG COMMENTS:

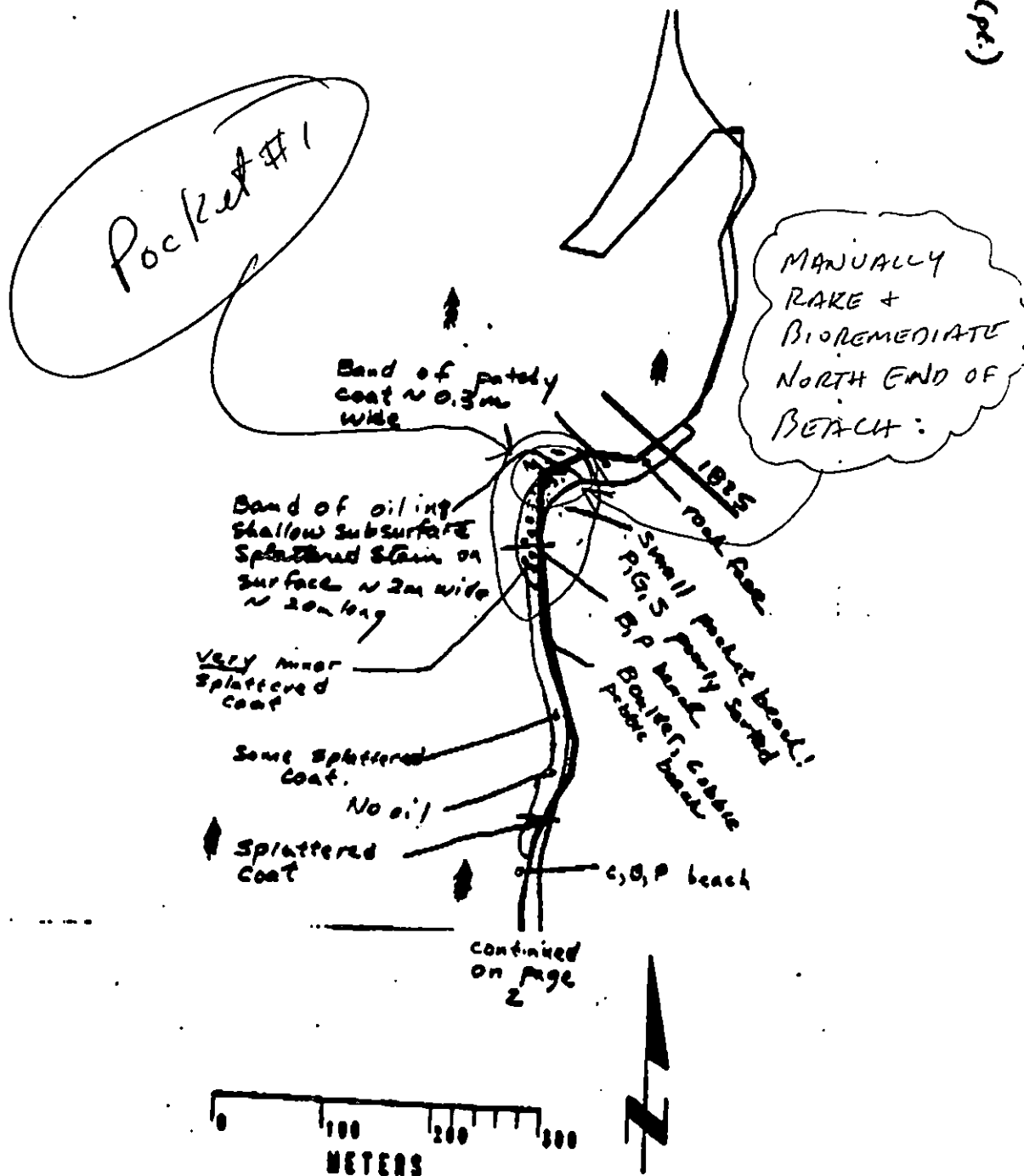
TAG APPROVAL DATE: 5/9/90
ADEC Art Weiden
EXXON Andy Teal
NOAA Burt Wescott
USCG D.D. Rome

FOSC: W L DATE: 5-18-90

NOTIFY CVC 24 HRS IN ADVANCE OF WORK.

SEGMENT SU/ EV-28 (pk.)
SUBMISSION 1
DATE 25 April 98

EV-28



1/2

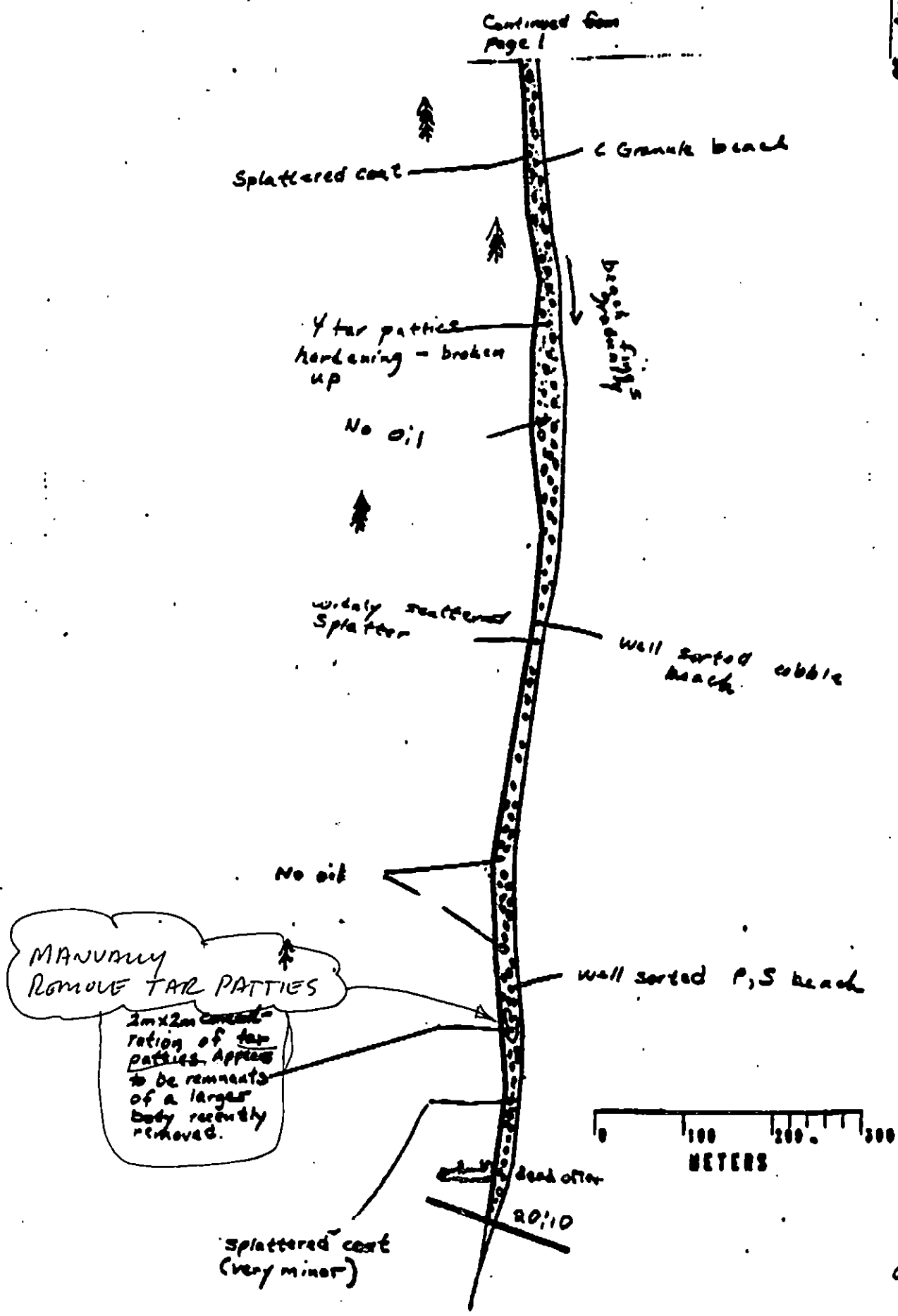
22041

On Character Line
AP
PO
CV
CT/200 ST/100 MS
BO TO
FL
NO 406

OO: K. Marty
SEGMENT SV EV-28 (P)
SUBDIVISION A
DATE 25 Apr 1990

EV-28

Continued from
Page 1



23441

NO	3.0	450	486
VL	7.1	1005	1151
L	0.8	120	130
		1635	1767



24/47

↓ PWS 197A 1/2

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

000 No Oil

EV-28

ADEC Segment Length: 1785m

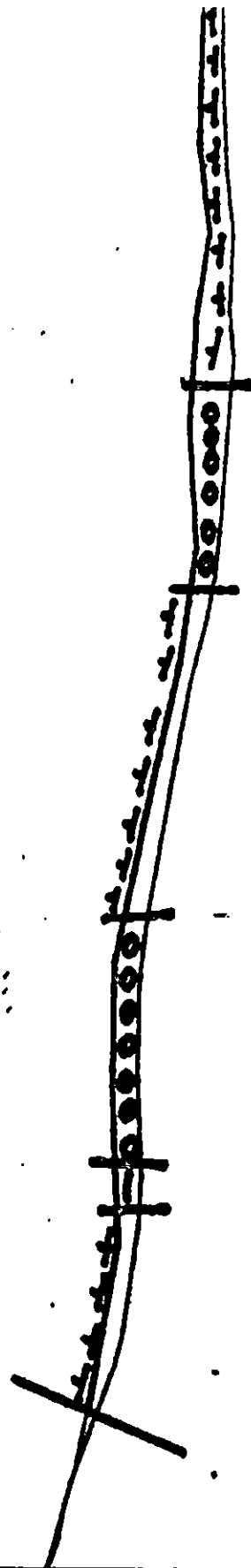


Map Key: PWS-197b

Name: R. MartyDate: 25 April 1990

Date-Entered:

PWS
1978



25 of 41
2/2

XXXX Wide

/// Medium

--- Narrow

TTT Very Light

0000 No Oil

EV-28

ADEC Segment Length: 1785m



Map Key: PWS-1978

Name: R. Marty

Date: 25 April 1990

Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: EV 039 SUB: A REGION: PWS SURVEY DATE: 4/29/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest,
Fish harvest area, Subsistence, deer harvesting

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

SHPO Signature: Charles E. H. Dimes Date: 5/9/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: Manual pickup of AP, HSOR/OP followed by Bio at locations
A, C, D, E, F

TAG: ADD AREA B

FOSC: NO BIO - DUE TO LAND MANAGER'S
CONCERNS / COMMENTS NOTED ON REPORT
DATED 5/11/91. IF CVC RECONSIDERS ADVISE
ME AND I'LL REVISIT THIS ISSUE - LL

TAG APPROVAL DATE: MAY 9 1991 FOSC APPROVAL DATE: 5/13/91

ADEC: [Signature] FOSC: [Signature]

EXXON: [Signature] E. E. PAGE, CDR, USCG
CHIEF OF STAFF, FOSC

USCG: [Signature]

NOAA: [Signature]

1991 MAYSAP EVALUATION

SEGMENT: EV 039 SUB: A REGION: PWS SURVEY DATE: 4/29/91

ENVIRONMENTAL SENSITIVITIES:

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

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

Y

Manual Pickup (Check as Req.)

X

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

X

COMMENTS:

INITIAL: Manual pickup of AP, HSOR/OP followed by Bio at locations
A, C, D, E, F

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5

SEGMENT EV-39

SUBDIVISION A

DATE 4/28/91

ADEC

NAME

John Hayes

SIGNATURE

[Signature]

☐ NTR

Treatment Recommended
Oiling observed here by our survey team was similar to conditions I observed here last fall. Most of the oil was found on the lee side of boulders among the pebble matrix or as distinct isolated patches of AP in 5-10 cm. depth on top of bedrock. I recommended continuing treatment here that 1990 crew started to remove remaining gross contamination that persists here. The OP subsurface in the USTR is generally 10 cm. and recoverable. Additionally I recommend re-treatment following treatment to determine if subsurface oiling is still in USTR.

EXXON

NAME

Martinez, Al

SIGNATURE

[Signature]

☐ NTR

Agree with OG's comments some may be recoverable but tedious. Difficult access due to exposure, grade of beach + off-shore rocks. May be good site for CVC Team.

LANDMANAGER

NAME

Steve WARD

OF CVC

SIGNATURE

[Signature]

☐ NTR

Lots of Sub + Sub Surface Oil. This area has been worked for 2 yrs. It still needs lots of manual work. This was a High Substance Area for us in Cheney. Some Demo Logs for Fire Work this area until cleaned continues to be considered a Dead zone and we can't use it. Lots of work needed. Work in 91 - Survey again in 92.

USCG/NOAA

NAME

DREHER / HODGES

SIGNATURE

[Signature]

☐ NTR

Under adverse weather conditions considerable brown sheening was observed. Recoverable quantities of AP was observed. Probable that at higher ambient temperatures and direct sunlight these deposits will mobilize.

Some saturated oil pockets up to 3 cm in depth. many areas of oiled sediment is specific segments of the beach. All pits in the lower inner tidal area were clean with no sheening. Oil cont/coverage w/ pine needles observed. Eagle carcass found.

51

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 2

TERM NO.

OG CHANEY

BIO CRANK

SEGMENT EV 39

ADEC HAYES

LANDMANAGER WARD

for CVC

SUBDIVISION A

EXXON MARTINEZ

USCG/NOAA DREHER/HODGES

DATE April 12, 1991

TIME 07:45 to 09:40

TIDE LEVEL -2 ft. to 0 ft.

ENERGY LEVEL: ☒ H ☐ M ☐ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 455 m

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

EST. OIL CATEGORY LENGTH:

W 35 m M - m N - m VL 25 m NO 306 m US 11 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOH	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A				S							BRG	M	6	15					SILVER SHEEN IN TIDAL
B	S										BRG	M	3	10					POOLS
C	S			S	S	P	P				BRG	M	20	20					
D	S			S	P	P	P				BRG	M	20	10					
E	S			S	P	P					BRG	M	25	105					
F	P			S	P						BRG	M	20	20					

DISTRIBUTION: C = 91-100%; B = 81-90%; P = 11-50%; S = 1-10%; T = <1%

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

PHOTO ROLL # MAYSAP-

5 - 3 13-22
- 4 FRAMES 1-4

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	20							✓	-		10	N		✓			PG-PG	
2	15	✓	✓						0-8	Y	1			✓			P&B-P&BR	BETWEEN BOULDERS
3	30						✓		-	Y	10	S			✓		BP-BP	
4	15						✓		-	Y	10	S			✓		BP-BP	
5	10	✓							0-10	N				✓	✓		BP-BPR	UNDER BOULDER
6	10		✓						0-7					✓			BG-BG	BETWEEN BOULDERS
7	25		✓						7-10	N				✓			BG-BG	
8	10								10-15	Y				✓			PG-PB	
NEXT PAGE									-									

NEXT PAGE

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

OG COMMENTS:

IN REGION OF (A) HOR CONDITION SEEMS CONCENTRATED IN A 6x15m BAND BETWEEN LARGE BOULDERS. SILVER SHEEN IN TIDAL POOLS, SMALL POCKETS ARE RECOVERABLE.

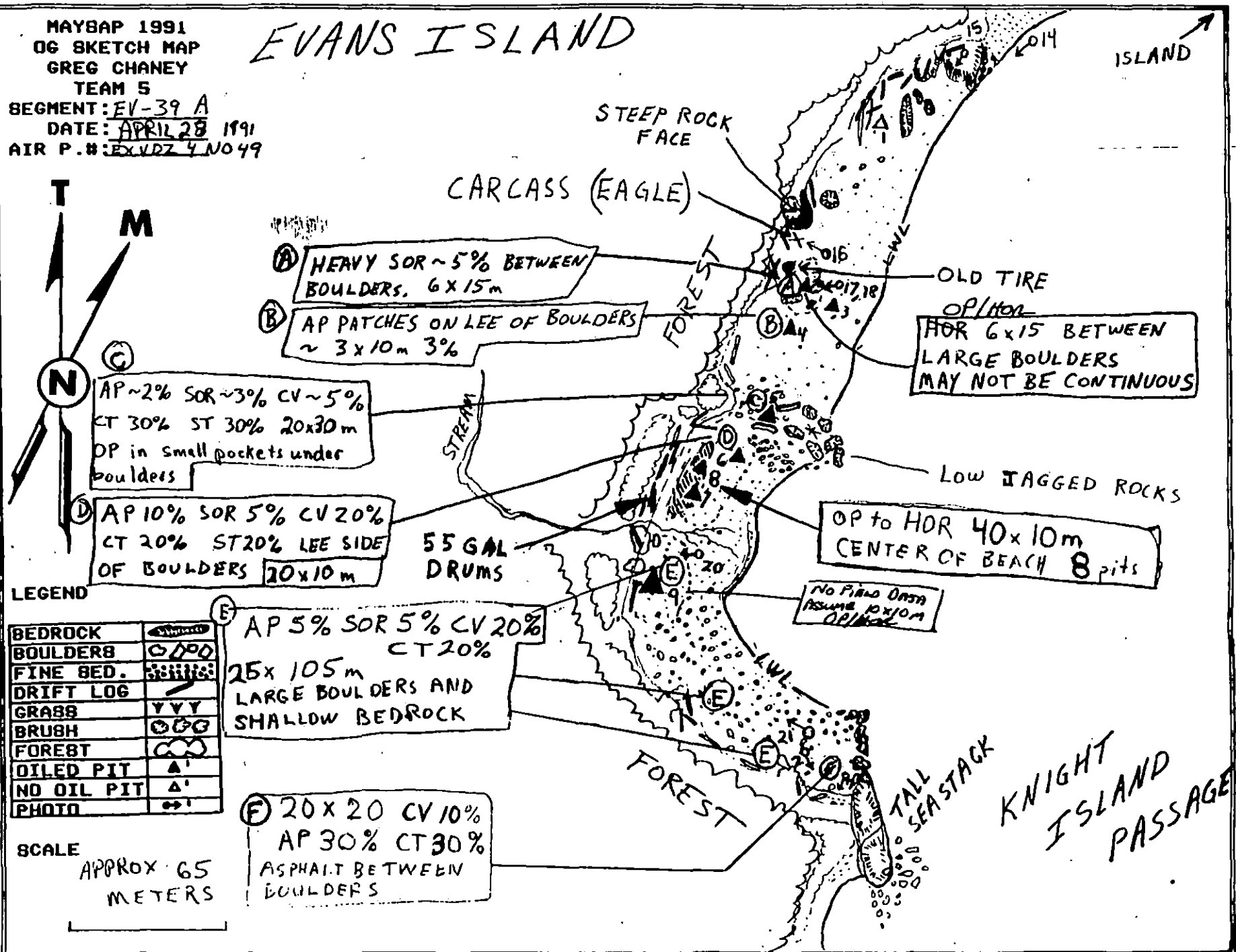
GENERALLY WHERE AP IS INDICATED IT OCCURS IN DISCRETE POCKETS BETWEEN BOULDERS. IN MOST CASES RECOVERABLE QUANTITIES EXIST BUT THEY WOULD BE TEDIOUS TO REMOVE.

REVIEWED: F.W. 5/1/91 NEXT PAGE

REVIEWED: M.C. 5/1/91

MAYBAP 1991
 06 SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV-39 A
 DATE: APRIL 28 1991
 AIR P.N. EXVDZ 4 N049

EVANS ISLAND



REVIEWED: F.W. 5/1/91
 REVISED: M.C. 5/1/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #5

DATE 28 Apr '91

pg 1 of 3

SEGMENT # EV-39

TIDAL HEIGHT (Range) -1.5 → +1.5

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 13'

WIND SPEED/DIRECTION 10-15 knots / E

PHOTOGRAPHS: ROLL # MAYSAP 3

FRAME # 16, 22

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

(A) Area is located in the U12. There are rare barnacles on the boulders, inner plates not sealing well. Fucus on the upper end of rock bench and 1-2 cm long segmented worms in the gravel.

Rock bench below site has healthy moderate Fucus with maturing conceptacles; dense Littorina. There are many anemones in tidepools. On the small boulders below rock bench barnacles are moderately concentrated.

(B) Area is located in the U12. Rare barnacles located in site not tightly sealing their inner plates when stimulated. Below site low in MITZ barnacles are moderate density, inner plates tightly sealed when stimulated and spat is present. Fucus has mature conceptacles. Littorina and limpet concentrations range from moderate to sparse.

(C) Area is located in a rock bench from SUPRA to high MITZ. Customblan pellets are present cracks: crevices. Yellow, white and black lichen is present on rock's upper surface. The lichens appear healthy. Barnacles are rare; Littorina and limpets are sparse in the U12. High in the MITZ Fucus sporlings are present as are rare mussels. Littorina and limpet concentrations increase to moderate. Barnacles throughout site appear healthy and tightly sealing inner plates. In the MITZ below site there is healthy sparse Fucus with mature conceptacles. Gloiopeletis is moderately concentrated in small patches. Barnacle concentrations increase to moderate

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2 (one dead)	
Seabirds			
Waterfowl	2	14	
Gulls/Kittiwakes			
Shorebirds			
Corvids			
Other Birds	2	2	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters		Deer Seat	
Pinnipeds (specify)	3 - Seals + 1 (hid)		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

Team #5
Segment EV-39
Subdivision A
Sea State 3'

Date 28 Apr '91
Tidal Height -1.5 $\rightarrow$ +1.5
Biologist Crank
Wind Speed/Direction 10-15 knots/E

pg 2 of 3

Comments (cont)

- (D) Area is located in the UITZ among boulders and cobble. Exposed B/C surfaces have a filamentous green algae coat. Segmented worms (2cm long) are present. No other macro-biota present in upper/mid portion of area. Along the lower edge of the site barnacles are sparse and are tightly sealing their inner plates. Limpets and Littorina are found in moderate concentrations in tide pools. Mussels are rare. Below site in MITZ biota same as found in (C).
- (E) Area located in SUPRA and UITZ. Oil is present in rye grass root system but less greasy feeling than oil found on rocks. Rye grass is sprouting and appears to be unaffected by present oil. UITZ boulders are covered with filamentous green algae. Sparse barnacle are present low in area, they tightly seal their inner plates. A small patch of Enteromorpha and Ulva (algae) is present in a tidepool. Biota below area in MITZ same as found in (C).
- (F) Area is in UITZ ~~to high~~ MITZ. CVC rep. reported in 1989 contaminated rye grass was removed from this area. Area has not re-established itself although root system still partially visible see Photo # MAY 3/22. Filamentous green algae covers B/C. In the UITZ barnacles; Littorina are rare. In the high MITZ there is heavy barnacle recruitment and dense Fucus with maturing conceptacles. Gloiopeltis (algae) is moderate

Team #5

Date 28 Apr '91

Segment EV-39

Tidal Height -1.5 $\rightarrow$ +1.5

Subdivision A

Biologist Crank

Sea State 3'

Wind Speed/Direction 10-15 knots/E

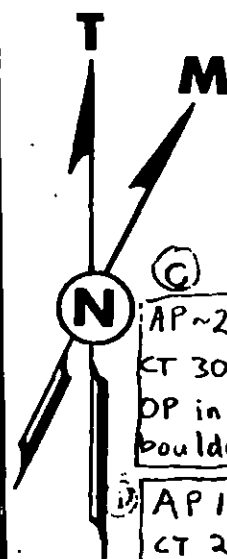
Comments (cont)

Dead Bald Eagle found high in UITZ. Skeleton was complete including talons and beak. Eye were gone. Residual flesh was present. No oil observed on feathers. See Photo roll MAY 3 frame 16.

There is a moderate to dense Fucus band in the MITZ continuing into LITZ. Conceptacles are maturing. The LITZ is rich and diverse. LITZ biotic community is continuous throughout subdivision. There is heavy barnacle recruitment (new set present). Clams include Prototheca, Saxidomus and cockles. Mussels, juvenile eels, hermit crabs, peanut worms, Littorina, limpets, Nucella (whelk), Nucella eggs, Odonthalia^(sh), Coralline algae, Searlesia (whelk) and tar spot algae are present. Biotic cover is 50-80%. The lesser percentage is on the cobble near stream. Organisms appear to be healthy and recruitment is present.

MAYBAP 1991
 OG SKETCH MAP: Bio Map
 GREG CHANEY Crank
 TEAM 5
 SEGMENT: EV-39 A
 DATE: APRIL 28 1991
 AIR P.#: EXVDZ 4 NO 49

EVANS ISLAND



LEGEND

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

SCALE

APPROX 65
METERS

E AP 5% SOR 5% CV 20%
CT 20%
25x 105m
LARGE BOULDERS AND
SHALLOW BEDROCK

F 20x 20 CV 10%
AP 30% CT 30%
ALGAL BETWEEN
BOULDERS

A HEAVY SOR ~ 5% BETWEEN
BOULDERS. 6x 15m

B AP PATCHES ON LEE OF BOULDERS
~ 3x 10m 3%

C AP ~ 2% SOR ~ 3% CV ~ 5%
CT 30% ST 30% 20x 30m
OP in small pockets under
boulders

D AP 10% SOR 5% CV 20%
CT 20% ST 20% LEE SIDE
OF BOULDERS 20x 10m

CARCASS (EAGLE)
Complete skeleton, no
obvious oil observed on feathers

STEEP ROCK
FACE

Small Pine
Stream

55 GAL
DRUMS

FOREST

FOREST

OLD TIRE

HOR 6x 15 BETWEEN
LARGE BOULDERS
MAY NOT BE CONTINUOUS

LOW TAGGED ROCKS

OP to HOR 40x 10m
CENTER OF BEACH 8 ft

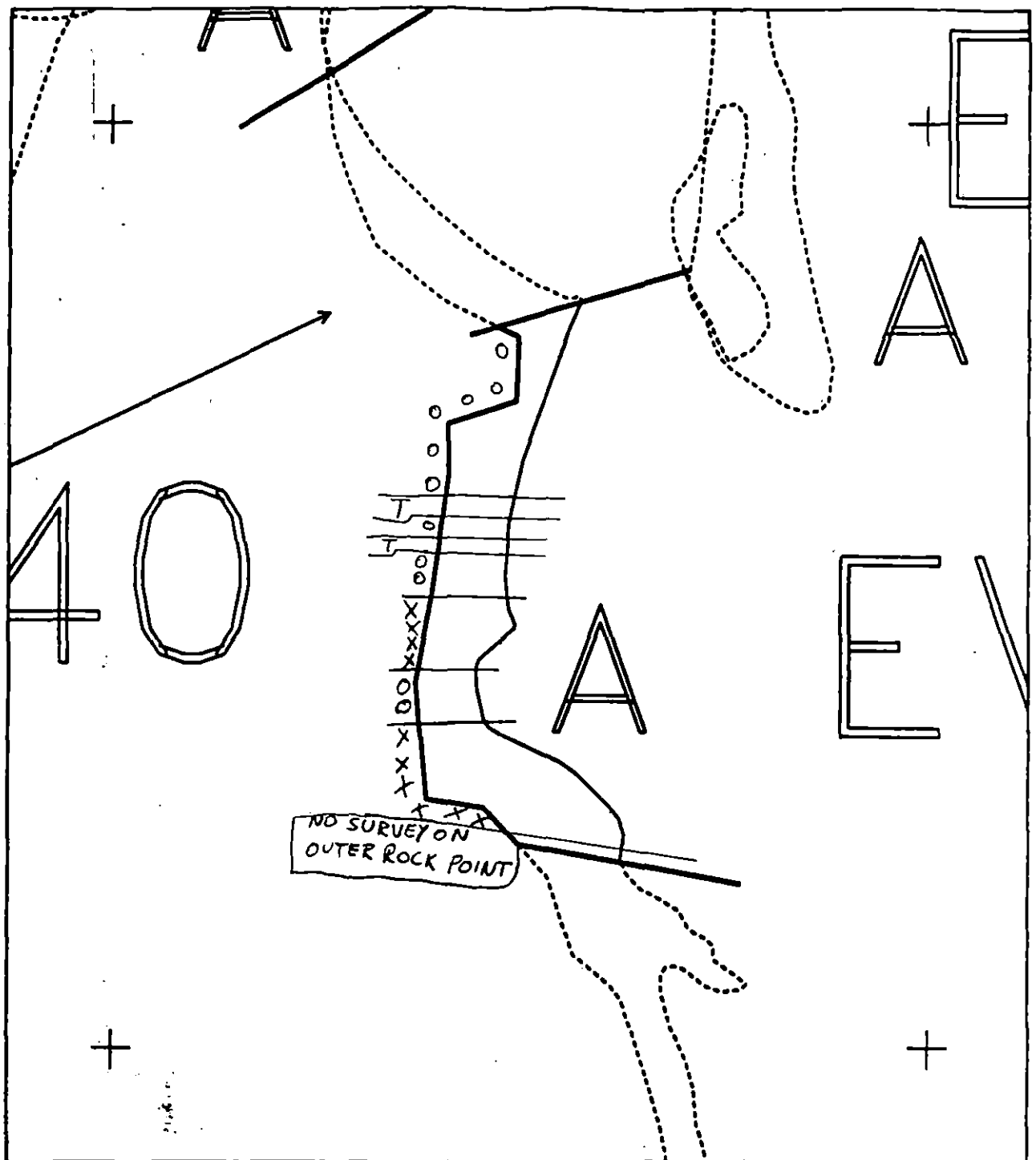
Subdivision has a rich, diverse, healthy
algal and animal community in the
LITZ. Recruitment is occurring in the
barnacles; *Fucus* populations.

TALL
SEASTACK

KNIGHT
ISLAND
PASSAGE

1989 rye grass
removed no signs of

ISLAND



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

EV039 A
 ADEC Subsegment Length: 400m
 METERS
 0 100 200
 AK State Plane Zone 4
 prv039a

Subdivision Field Map
 Map Key: PWSEV039A
 Name: GREG CHANEY
 Date: APRIL 28 91
 Date Entered:

REVIEWED: F.W. 5/1/91
 REVIEWED: M.C. 5/1/91

SUPPLEMENTAL

1991 MAYSAP EVALUATION

SEGMENT: EV 39 SUB: A REGION: PWS SURVEY DATE: JULY 4 - Field crewENVIRONMENTAL SENSITIVITIES:Work Window(s) SAME

RECEIVED

Ecological/Constraints (see page two for details) SAME

JUL 18 1991

ARCHAEOLOGICAL CONSTRAINTS:

ANCHORAGE-A00/A

Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time. PHONE 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.).

Rachel Jean Daler

7/11/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other MECHANICAL TILLING

Other

COMMENTS:

INITIAL:

TAG: ADD MECHANICAL TILLING OF SUBSURFACE OIL TO THE SOUTH OF AREA D (10X40 HOR) IF FEASIBLE (TO BE DETERMINED BY WORK SQUAD) NOT TO BE MULTIPLE TILLING OR TIDE DEPENDENT. FOLLOWED BY INIPOL OF TILLED AREA

FOSC:

TAG APPROVAL DATE: July 10 1991FOSC APPROVAL DATE: 7/11/91ADEC: [Signature]

FOSC

EXXON: [Signature]

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

USCG: [Signature]NOAA: [Signature]

MAYBAP 1991
 DG SKETCH MAP
 GREG CHANEY
 TEAM 5

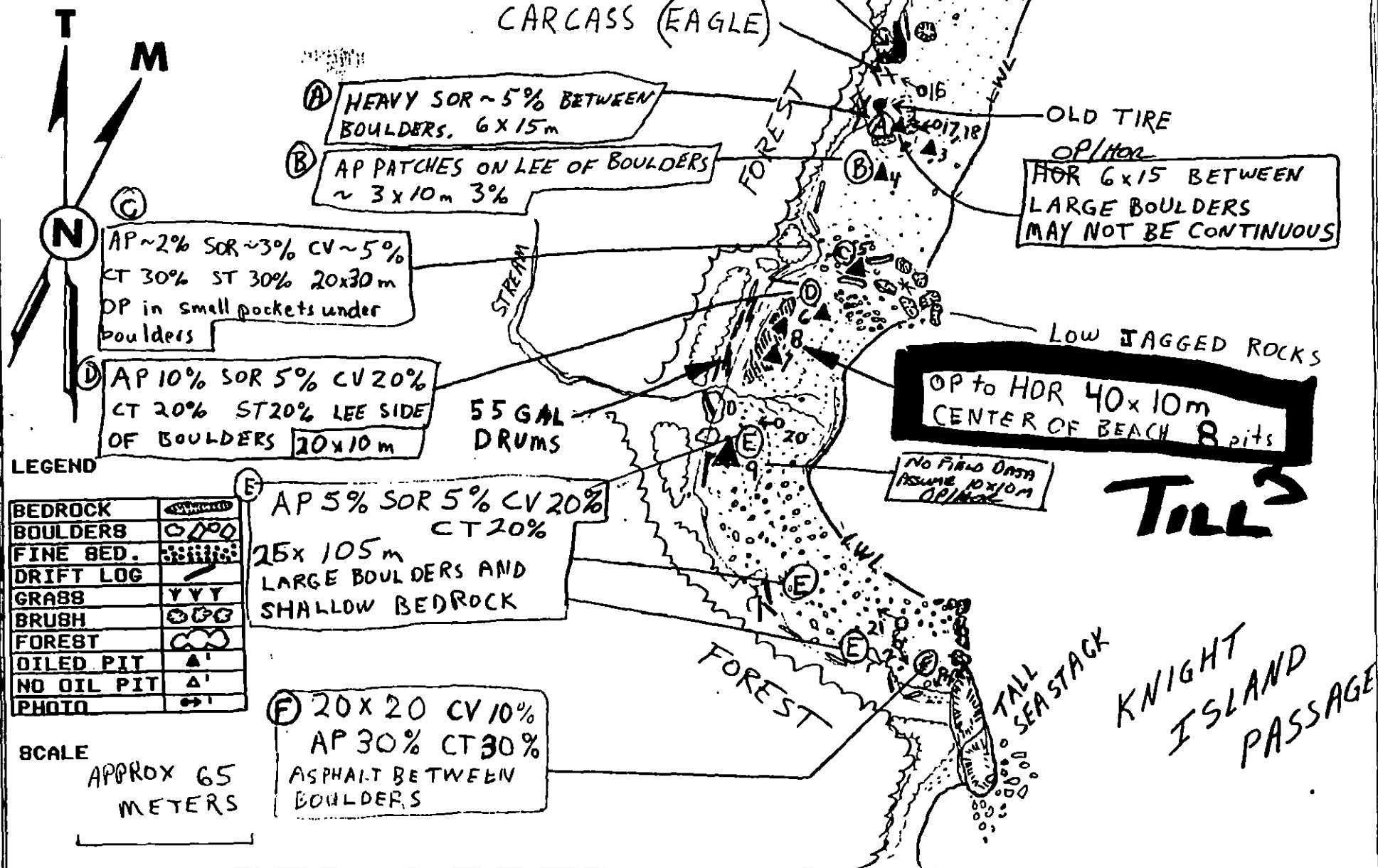
SEGMENT: EV-39 A

DATE: APRIL 28 1991

AIR P.#: EXVDZ 4 NO 49

EVANS ISLAND

ISLAND



REVIEWED: F.W. S/1/91
 REVISED: M.C. 5/1/91

SUPPLEMENTAL 1991 MAYSAP EVALUATION

SEGMENT: EV 39 SUB: A REGION: PWS SURVEY DATE: JULY 4 - Field Crew

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) SAME

RECEIVED

Ecological/Constraints (see page two for details) SAME

JUL 18 1991

ARCHAEOLOGICAL CONSTRAINTS:

ANCHORAGE-A00/A

Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time. PHONE 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.).

Rachel Jean Dale

7/11/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N) _____

Y

Y

Manual Pickup (Check as Req.) _____

Spot Washing _____

Bio-Customblen Only _____

Bio-Inipol/Customblen _____

Other MECHANICAL TILLING _____

X

X

Other _____

COMMENTS:

INITIAL: _____

TAG: ADD MECHANICAL TILLING OF SUBSURFACE OIL TO THE SOUTH OF AREA D (10X40 HOR) IF FEASIBLE (TO BE DETERMINED BY WORK SQUAD) NOT TO BE MULTIPLE TILLING OR TIDE DEPENDENT. FOLLOWED BY INIPOL OF TILLED AREA

FOSC: _____

TAG APPROVAL DATE: July 10 1991

FOSC APPROVAL DATE: 7/11/91

ADEC [Signature]

FOSC [Signature]

EXXON [Signature]

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

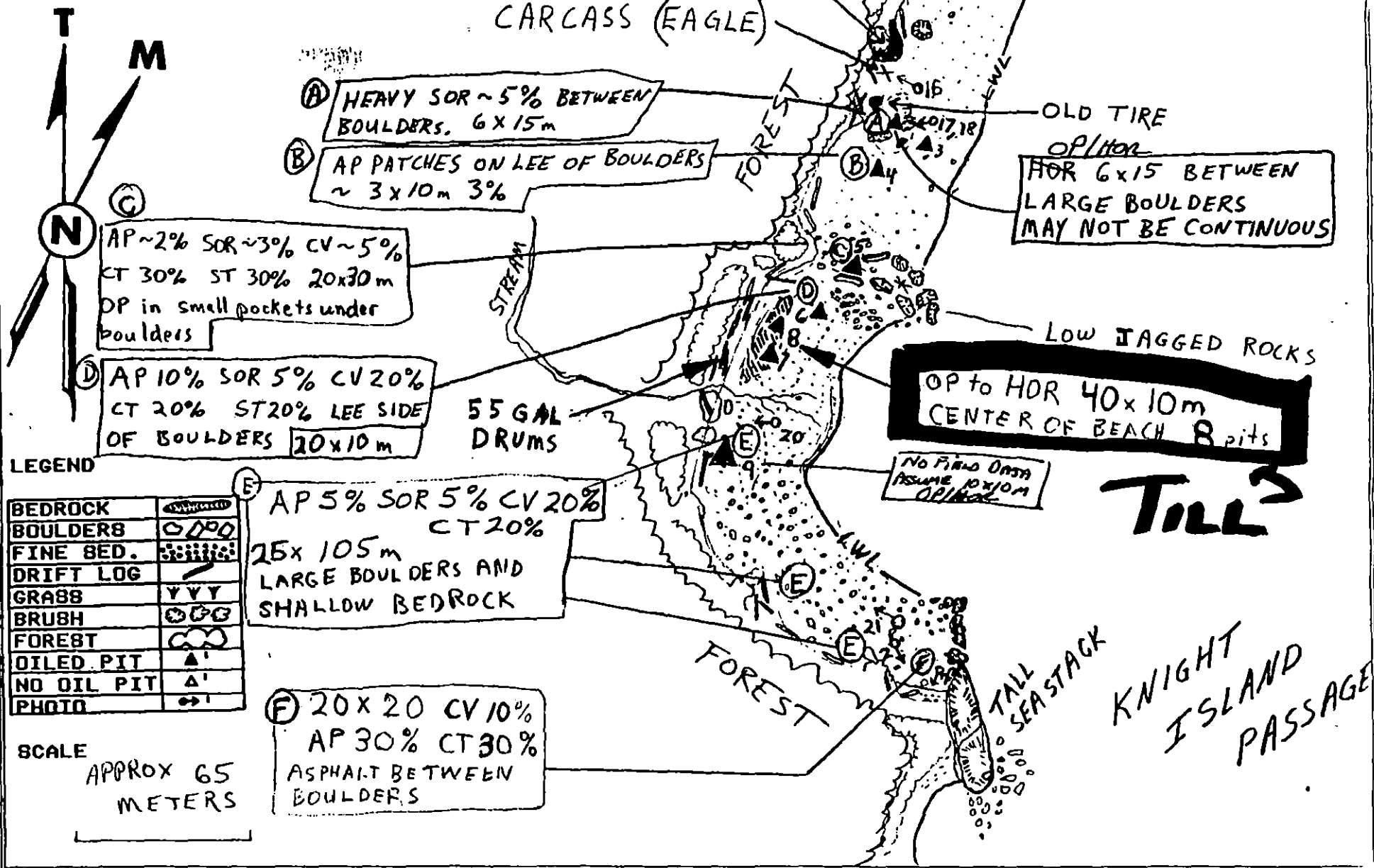
USCG T. J. Murphy LT

NOAA [Signature]

MAYBAP 1991
 OG SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV-39 A
 DATE: APRIL 28 1991
 AIR P.#: EXVDZ 4 NO 49

EVANS ISLAND

ISLAND



REVIEWED: F.W. S./h.
 REMISO: M.C. 5/1/91

ASAP TAG REVIEW SHEET

Segment: EV39 Subd: A Site: 1 Date
PRE-Review 11 AUG 90

Priority For Addressing In 1990

☒ HIGH ☐ MEDIUM ☐ LOW ☐ NTR

Treatment
Recommended:

MANUAL PICKUP TAR / AP & BIO
(SUB SURFACE OIL PRESENT TO 8-10 CM)

OG SHEET - EV 039
COMMENT SHEET - EBO 39

THE OG SHEET DOES NOT
AGREE WITH COMMENTS.

Priority Site For Reassessment In 1991

YES ☒ NO ☐ YES ☒ NO ☐ YES ☒ NO ☐ YES ☒ NO ☐
CG ADEC EXXON LAND MGR
& NOAA

TAG 13 AUG 90

TAG TRIP

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/ EV-39 Subd.: A Site: _____ Date: 8-7-90 1990

Conditions Observed: Despite previous work completed during summer of '90, extremely heavy oiling persists. Through out southern half of segment. Tar, Coat, Power, AP, OP, OR, and OE oiling is widespread in boulder fields, areas of beachrock, and cobble/pebble beaches.

Followup Recommendations: Further manual removal of gross contamination AP, OP subsurface oil and sediments is recommended. Area will require some combination of HP, HND washing and possibly mechanical equipment. Will aid the oil-stressor cleanup this area requires. Bioremediation should follow above treatment(s).

Completed by Pickup Crew: ☐ YES ☒ NO

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

DEC

Bon McCree
(name)

Robert G. Miller
(signature)

Comments: It should be noted that EV-39 is an extremely heavily oiled segment which will be very difficult to treat. I recommend full on site TAG review to determine the methods for accomplishing this difficult cleanup.

Exxon

John Dean
(name)

[Signature]
(signature)

Comments: I AGREE THIS SEGMENT SHOULD CARRY A HIGH PRIORITY FOR ADDITIONAL WORK IN '90. I FURTHER AGREE TO REQUEST CLASS III EVALUATION BY TAG.

USCG

Don Davis
(name)

[Signature]
(signature)

Comments: High pressure hot water washing appears the only effective method of removal in large rock outcrop and boulder areas. Definite assessment and sampling prior to 1990 cleanup should be made.

Land Rep.

Steven Ward
(name)

[Signature]
(signature)

Comments: Follow up Recommendations and this is an area of High use Area for the people on Chenier- mining- Fishing- recreation- Gathering- Log pile for Fire Wood.

[illegible][illegible]

James L.

oil was found in 4 areas associated with large boulders/cobbles in a broken distribution

REVISION NO. 7/27/94

SEGMENT AS / EB-031 SUBDIVISION: A SITE: 1 DATE 8-7-90

USCG

NAME David C. Davis, NOAA
Don Davis, USCG

SIGNATURE David C. Davis

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Very thick, residual oiling of boulders, interstitial sediment & bedrock which will be difficult to treat. Further work is recommended for 1990. This would be a higher priority reassessment for 1991.

DEC

NAME Bob McCready

SIGNATURE Robert G. McCready

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Despite previous work completed during summer of 1990, extremely heavy oiling persists. Throughout southern half of segment. Tar, AP, OP, OR, Coat, and lower is widespread in haulover fields, areas of bedrock, and cottle/gravel beaches. Further manual, mechanical, HP HW washing, followed by bioremediation has been recommended. Area is very heavily oiled and should receive full TAG review.

MANAGER

NAME Steve Waco, EVC

SIGNATURE Steve Waco

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

there is a lot of oil still here to be removed.

Sub-Surface Priority Site. High use for Chaeta Residents
Monthly Fishing - etc.

XXON

NAME John Dean

SIGNATURE John Dean

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

I AGREE WITH NOAA/USCG COMMENTS ABOVE.

CLASS III TAG REVIEW HAS BEEN RECOMMENDED.

DIVISION A

DATE 4/21/90

CHECKLIST

- ☐ H Area
- ☐ Approx. Scale
- ☐ Map/Photo Study
- ☐ On Site
- ☐ When
- ☐ Length
- ☐ W. Cover
- ☐ Substrate Character
- ☐ EOL NUMBER
- ☐ SCL
- ☐ Photo Location(s)
- ☐ Position(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

Pt - No Substrate Cl

2 Δ

Pt - Substrate Cl

CT/C

Continuous Distribution

CT/B

Discrete Distribution

CT/P

Patchy Distribution

CT/S

Spotted Distribution

Other Vegetation

1 →

Photo location, direction, and number

Scale BIO LOCATION MAP REAPPLICATION I

100m

DATE 7/17/90

EVANS
ISLAND

8/7/90

10x3
CT/P ON BOLLUSES & BEDROCK

SPWSS

8/7/90
FL 120
ST 120
CV 110
CT 120
US 186
NO 210

2x30m
CT/B CV/B
ST/B CV/P

PIT 1

FILM
10x9m
ST/B

20x20m
CT/B CT/P
ST/B ST/P

20x20m

PIT 2

BOLLERS

On Character Length (m): AP 40 PO 10 CV 60 CT 80 ST 230 MS 0 PI 0 TB 0 FL 0 NO 0

90-06-26 17:02 OMEGA CORP.

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/ EV-39 Subd.: A Site: _____ Date: 8-7-90 1990

Conditions Observed: Despite previous work completed during summer of '90, extremely heavy oiling persists through out southern half of segment. Tar, Crat, Lower, AP, OP, CR, and OE oiling is widespread in boulder fields, areas of bedrock, and cobble/pebble beaches.

Followup Recommendations: Further manual removal of gross contamination OP, CR, where possible oil/sediments is recommended. Area will require some combination of HP HUL washing and possibly mechanical equipment will aid the extensive cleanup this area requires. Bioremediation should follow above treatment(s).

Completed by Pickup Crew: ☐ YES ☒ NO

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

ADEC Bob McCleary (name)

Robert G. McCleary (signature)

Comments: It should be noted that EV-39 is an extremely heavily oiled segment which will be very difficult to treat. I recommend full on site TAG review to determine what methods for accomplishing this difficult cleanup.

Exxon John Dean (name)

John Dean (signature)

Comments: I AGREE THIS SEGMENT SHOULD CARRY A HIGH PRIORITY FOR ADDITIONAL WORK IN '90. I FURTHER AGREE TO REQUEST CLASS III EVALUATION BY TAG.

USCG DDO Davis (name)

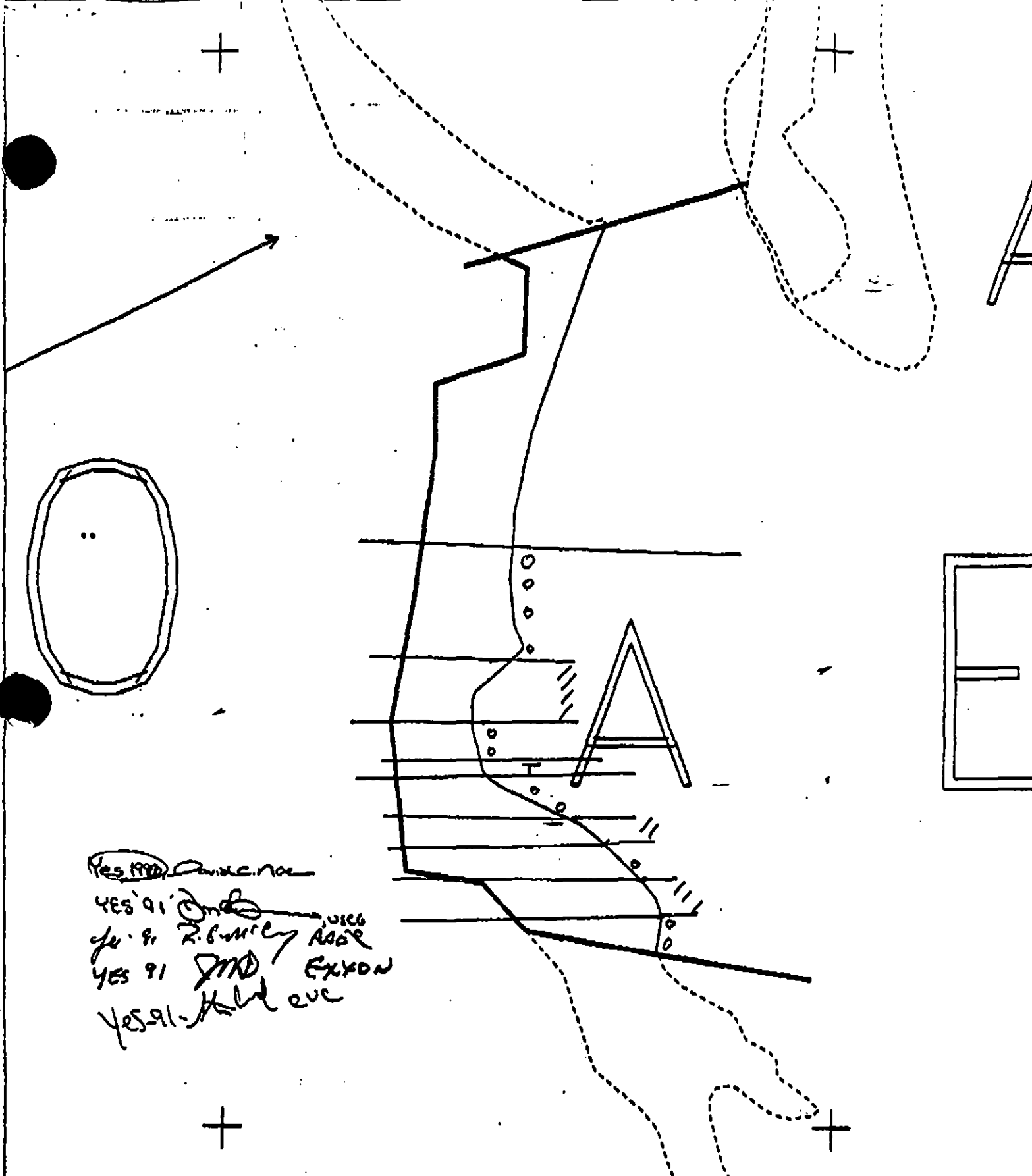
DDO Davis (signature)

Comments: HIGH PRIORITY HOT WATER WASHING APPROX 200 YDS THE ONLY EFFECTIVE METHOD OF REMOVAL IS LONG RANGE OUTWASH AND BOULDER AREA. DEFICIT ASSESSMENT AND SCHEDULING FOR 1990 CLEANUP SHOULD BE MADE.

Land Rep. Steven Ward CUC (name)

Steven Ward (signature)

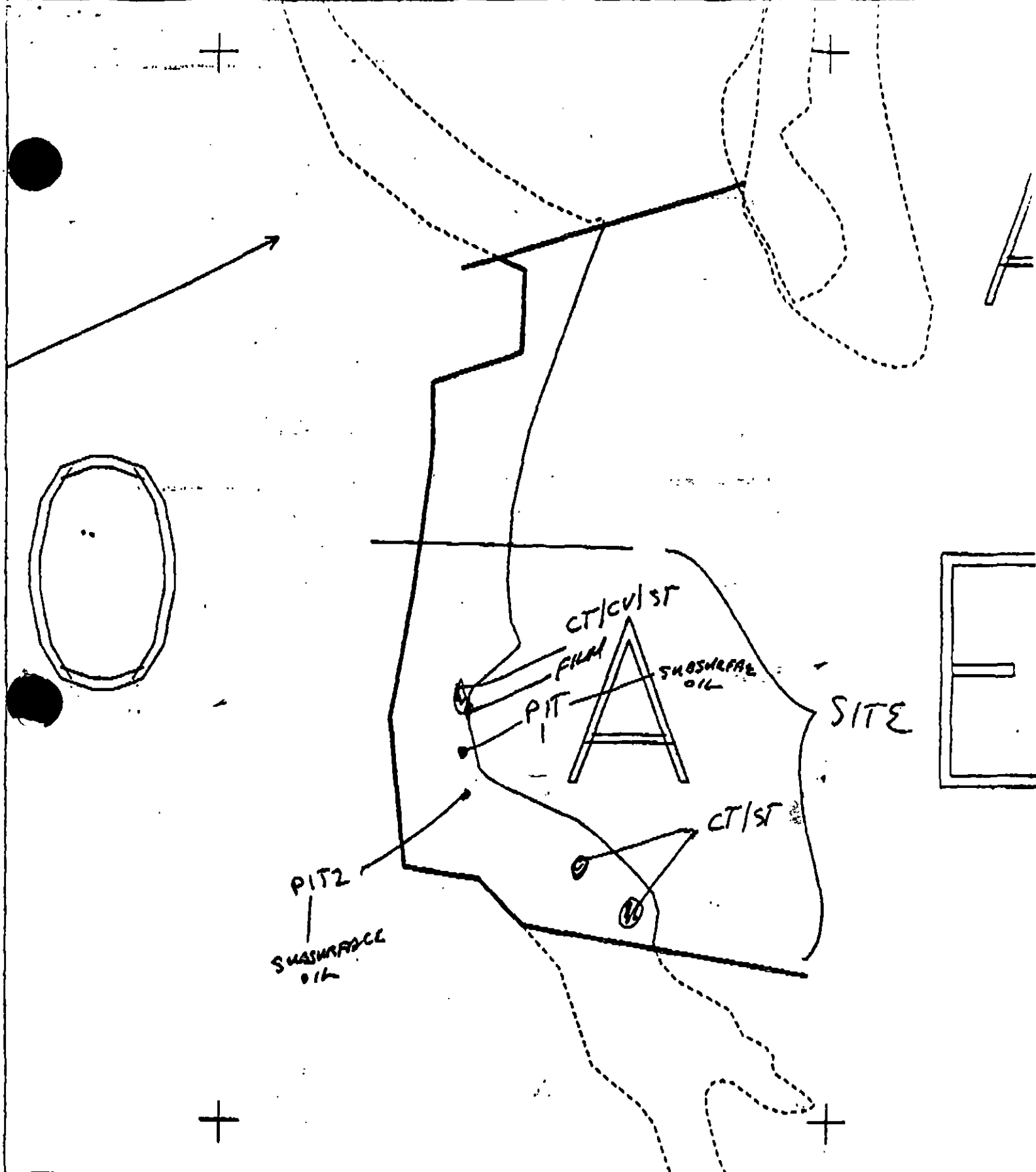
Comments: Follow up Recommendations and this is or was a High use AREA for the people or Chengen-Hunting-Fishing-Nearby Gathering-Lug Pole Fire Wood.



XXXX	Wide	EV-39 A	Subdivision Field Map
//	Medium	ADEC Subsegment Length: 466m	Map Key: PWSEV-39A
----	Narrow	METERS	Name: <u>NAKASHIMA</u>
TTTT	Very Light	0 73 146	Date: <u>8/7/90</u>
0000	No Oil	AK State Plane Zone 4 1:2874	Data Entered:

947-390

EXON



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

EV-39 A

ADEC Subsegment Length: 466m
 METERS

0 73 146

AK State Plane Zone 4 1:2874
 pev-39a



Subdivision Field Map

Map Key: PWSEV-39A

Name: NAKASHIMA

Date: 8/7/90

Data Entered:

GENERAL DATA

SEG ID: EB039 SBDV: A SITE: 1 TEAM: 3 DATE: 8/7/90
SITE LGTH 280 OIL CATEGORIES: W - M 60 N - VL 10 NO 210 U 186
1991 REASSESSMENT: USCG: Y ADEC: Y LONGR: Y EXXON: Y

SURFACE DATA

CHAR #: 1 OIL CHAR: CV OIL DIST: CONT - BRKN 30 PTCH 30 SPLH -
TIDAL ZONE: SU - UI X MI - LI -

CHAR #: 2 OIL CHAR: CT OIL DIST: CONT - BRKN 70 PTCH 50 SPLH -
TIDAL ZONE: SU - UI X MI - LI -

CHAR #: 3 OIL CHAR: ST OIL DIST: CONT - BRKN 70 PTCH 40 SPLH 10
TIDAL ZONE: SU - UI X MI - LI -

CHAR #: 4 OIL CHAR: FL OIL DIST: CONT - BRKN - PTCH 20 SPLH -
TIDAL ZONE: SU - UI X MI - LI -

CHAR #: 5 OIL CHAR: NO OIL DIST: CONT - BRKN - PTCH - SPLH -
TIDAL ZONE: SU X UI - MI X 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

SUBSURFACE DATA

PAGE 2 OF 2SEGMENT ID: EB-039 SUBDIV: A SITE: 1PIT # 1 PIT DEPTH 20 OIL CHARACTER OF OIL INTVAL: FROM 8 TO 10
CLEAN BELOW: Y PIT ZONE: SU - UI X MI - LI -SUBSURF SEDIMENT: BRK - BLD X COB X PEB X GRN X SAN - MUD - VEG -PIT # 2 PIT DEPTH 10 OIL CHARACTER OR OIL INTVAL: FROM 8 TO 10CLEAN BELOW: Y PIT ZONE: SU - UI X MI - LI -SUBSURF SEDIMENT: BRK - BLD - COB X 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

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-36

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ EV-36 SUBDIVISION A (1 OF 1) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 73 m: Narrow 0 m: V.Light 420 m: No Oil 1403 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 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
- 30, 3Q** Harbor seal and sea lion pupping (5/15 to 7/1)
 Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R** Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S** Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T** All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U** Recreation: Tent sites (8/1 to 9/15)
6V Anchorages (8/1 to 9/15)
6W Forest Service cabins (8/1 to 9/15)
6X Lodge (8/1 to 9/15)
6Y Special use destination
- 7Z** Subsistence areas: Salmon harvesting (5/1 to 9/30)
7HH Finfish harvesting
7II Deer harvesting (8/15 to 2/28)
7JJ Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

SEGMENT ST / EU-36 SUBDIVISION: A (1001) DATE 8-22-90

NOAA

NAME Michael Buchman SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Only light stain observed at northern end of segment

ADEC

NAME John Hayes SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

*Only oil observed were light to very light
stain bands U.I.T.Z. Northern half of segment.*

LAND MANAGER

NAME Steve Ward-Chenesh SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

SHORELINE OILING SUMMARY

REVISION NO. 04-13-90

OG Mike Foget USGS Mike Buchman SEGMENT ST/ EV-36
 BIO Kathleen Conlin LAND REP Steve Ward CVC SUBDIVISION A (1 OF 1)
 EXXON Larry Olson ADEC John Hayes TIME 7:00 to 8:30
 TEAM NO. 11 TIDE LEVEL +4.2 DATE 4/23/90
 EST. SUBDIVISION LENGTH: 184 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock 3m vel+ rock Backshore
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 40 % B 50 % C 5 % P 5 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 20 % Hang 50 % Vert 30 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 100 m N 0.50 m VL 430 m NO 1404 m

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

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

Photographs:

Roll No. 0

Frames 0

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR				PIT ZONE				AN A	DEBRIS (GAL)	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	1	2	3	4	SU	U	M	U			
1	30					X	-		X					X				N	-	C, P, C
2	25					X	-		X					X				N	-	P, G, C
3	40					X	-		X					X				N	-	P, B
4	20					X	-		X					X				N	-	P, C
5	35					X	-		X					X				N	-	P, C
6	40					X	-		X					X				N	-	P, C

COMMENTS

Light staining and coating was observed in the Northern Part of the Segment in the HITZ among Boulders and Bedrock. Most of the Coat and stain was observed on the Protected Part of the Rock and Boulders, No oiling was observed in the Southern part of the Segment

REVIEWED JW DATE 4-23-90

OG: Mike Tugel
 SECT: EV-36
 SUBDIVISION: A
 DATE: 4/22/90

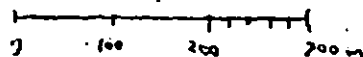
CHECKLIST

- N Arrow
- Approx. Scale
- Seg/Sub Bndry
- On Dist
- Width
- Length
- % Cover
- Substrate Character
- Est HML/LML
- SSL
- Profile Location(s)
- Profile(s)
- Pt Location(s)
- Photo Location(s)

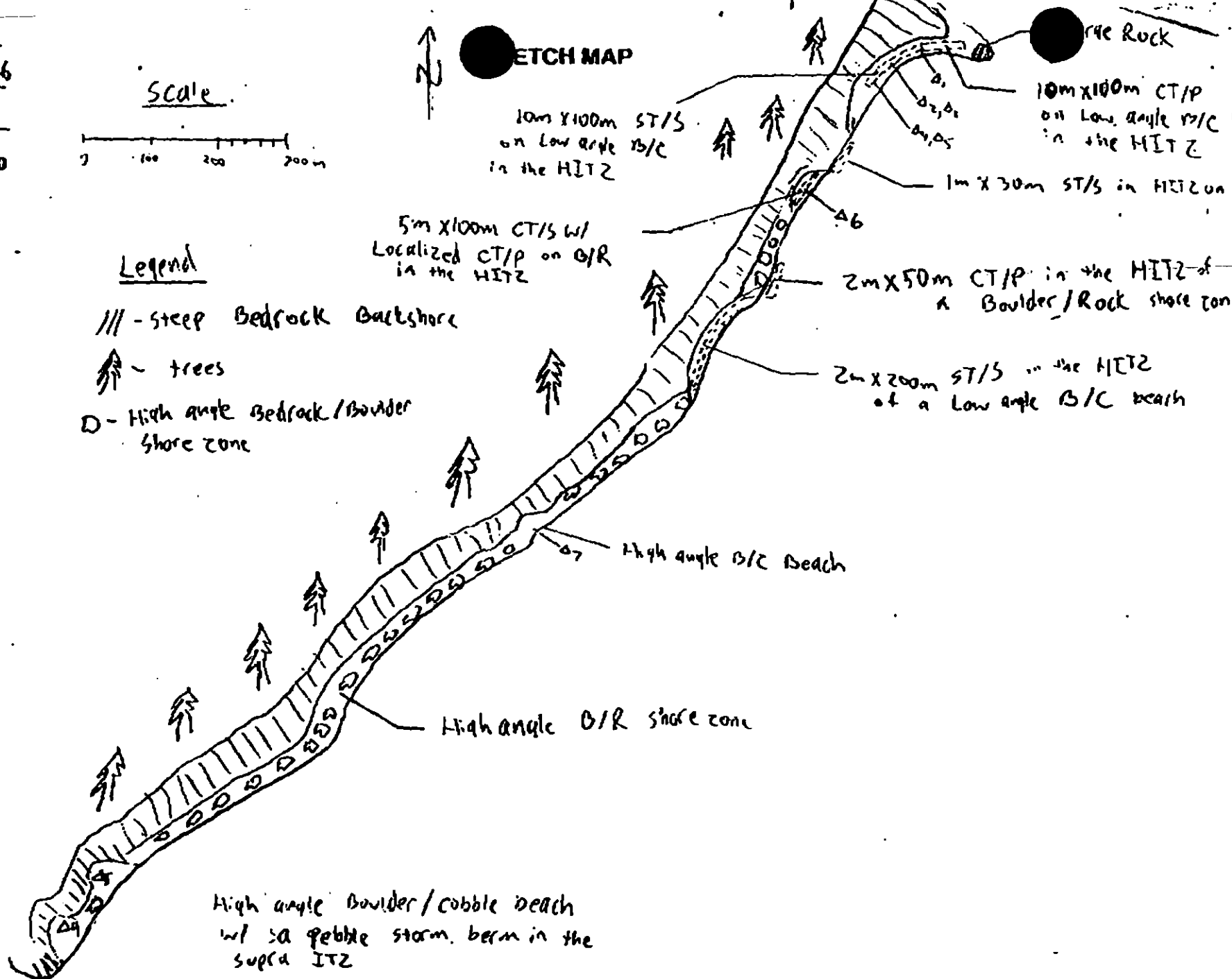
LEGEND

- 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
- Oiled Vegetation
- 1 ●
Photo location, direction, and number

Scale



ETCH MAP



Oil Character Length (m): AP 0 PO 0 CV 0 CT 450 ST 130 MS 0 PT 0 TB 0 FL 0 NO 1404

NEWSON 832498

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/71

Segment ST / EU-36 Subdivision A (10E1)

Date (mo / day / yr) 04/22/90

Time (24 hr) 0700-0930 Biologist K. CONLAN

(A) Substrate type and % of segments:

(1) Bedrock 40 (2) Boulder 50 (3) Cobble 5 (4) Pebble 5 (5) Sand 0 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 35 Moderate 40 Low 25

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

Photographs:

Roll No. —

Frames —

BARNACLES

Dense
XU 2 3 4 5 6
XM 2 3 4 5 6
1L 2 3 4 5 6

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

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

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

NOT PRESENT

MYTILUS

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

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

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

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

NOT PRESENT

GASTROPODS

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

Moderate
XU 2 3 4 5 6
XM 2 3 4 5 6
1L 2 3 4 5 6

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

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

NOT PRESENT

FUCUS

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

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

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

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

NOT PRESENT

Wildlife Observations/ General Comments:

AMPHIPODS, DECAPODE CRUSTACEANS AMONGST GRAVEL IN STREAM RUNOFF AT MTZ

Ecological Considerations:

2 STELLAR JAYS
3 BALD EAGLES. (1 ADULT, 1 JUV.)
1 TALL HARLEQUIN DUCK.

EV-39

ECOLOGY MAP

EV-37

CONFIRMED
PRESENT

UNOILED
DEER CARCASS INFRA-LITTORAL FRINGE

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-36

ADEC Segment Length: 1984m



Map Key: PWS-242d

Name: _____

Date: _____

Data Entered: _____

ECOLOGY MAP

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-36

ADEC Segment Length: 1984m



Map Key: PWS-242b

Name: _____

Date: _____

Data Entered: _____

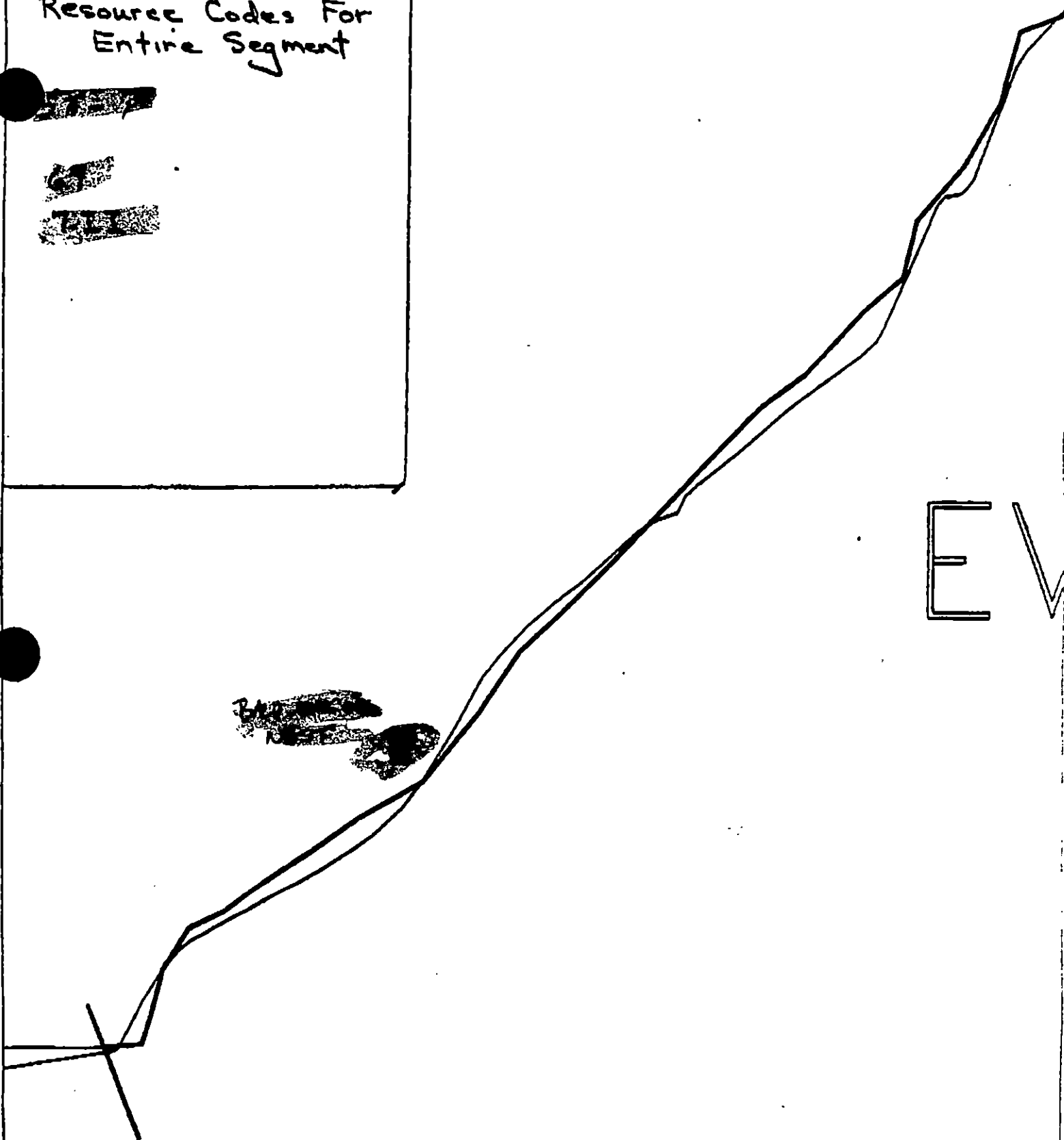
ECOLOGY MAP (1 of 3)

Resource Codes For
Entire Segment

~~XXXX~~

~~////~~

~~----~~



EV

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EV-36

ADEC Segment Length: 1984m

0 100 200 300

METERS



Map Key: PWS-242a

Name: K.E. CONLAN

Date: 04/22/90

Data Entered:

AFR-22-1990 22:40 FROM PACIFIC SEAHORSE

TO 01#---0019075643771# P.07

PWS-242d

← PWS-242a

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-36

ADEC Segment Length: 1984m

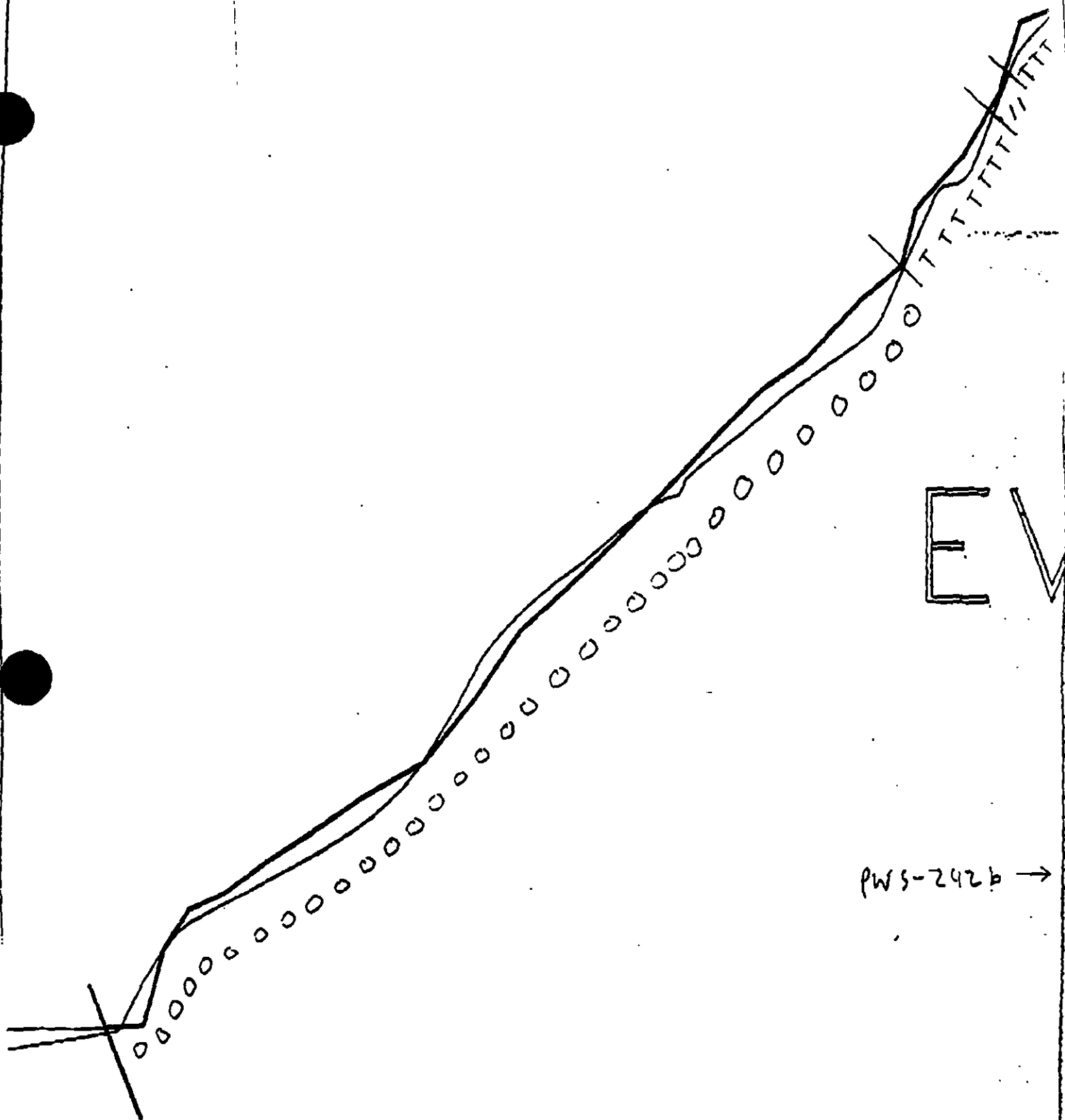
0 100 200 300
METERS

Map Key: PWS-242b

Name: Mike Roget

Date: 4/22/90

Date Entered:



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

EV-36

ADEC Segment Length: 1984m



Map Key: PWS-242a

Name: Mike Foyer

Date: 4/22/90

Data Entered:

EV-39

EV-37

PWS-242b



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EV-36

ADEC Segment Length: 1984m



Map Key: PWS-242d

Name: Mike Cogger

Date: 4/22/90

Data Entered:

ASAP TAG REVIEW SHEET

Segment: EV 37 Subd: A Site: 1 Date
PRE-Review 11 AUG 90

Priority For Addressing In 1990

☒ HIGH ☐ MEDIUM ☐ LOW ☐ NTR

Treatment

Recommended: MANUAL PICKUP - AP & BIO

~~OG SHEET DOES NOT REFLECT~~
~~HEAVY SOR AS PER COMMENT.~~
~~HEAVY COAT STAIN - COVERED W/ BIO~~

Priority Site For Reassessment In 1991

YES/ NO YES/ NO YES/ NO YES/ NO
☒ CG ☐ ☒ ADEC ☐ ☒ EXXON ☐ ☒ LAND MGR ☐
NOAA

~~TAG~~
13 AUG 90

TAG TRIP

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/ EV-37 Subd.: A Site: _____ Date: 8-1-90 1990

Conditions Observed: Heavy oiling persists throughout northern beach on EV-37. Oiling is AP, CP, OR, and OF and occurs in boulder fields, bedrock, and cobble/pebble beach

Followup Recommendations: Area is similar to EV-39A. Further manual or grass contamination of grass contaminates AP, CP, and OR subsurface sediments is recommended. Area will require some combination of HP HUI washing and possibly the use of mechanical equipment. Bioremediation should follow a proper recommended treatment.

Completed by Pickup Crew: ☐ YES ☒ NO

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

DEC

Bob McReady
(name)

Robert F. McReady
(signature)

Comments: Like EV-39, EV-37 will be extremely difficult to effectively treat. A creative combination of treatment techniques will be required.

Exxon

JOHN DEAN
(name)

[Signature]
(signature)

Comments: I AGREE WITH RECOMMENDATIONS ABOVE AND FURTHER RECOMMEND A CASE III ASSESSMENT BY TAG IN CONJUNCTION W/ 39-A

USCG

DON DEVIS, JR.
(name)

[Signature]
(signature)

Comments: AGREE WITH ALL COMMENTS AND RECOMMENDATIONS

Land Rep.

Steve WALKER CUC
(name)

[Signature]
(signature)

Comments: Follow up Recommendations above. High use Area For the People of Shengon. Hunting, Fishing, Deer Gathering - Log pile for Firewood

SEGMENT AS / EV-37 SUBDIVISION: A SITE: 1 DATE 8-7-90

IS

NAME David C. Noe NOAA
Don O'Leary, USCG

SIGNATURE

David C. Noe / Don O'Leary☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

A very complex area of heavy, residual oil. Treatment is recommended for 1990 season, with high priority for 1991 reassessment.

DEC

NAME Bob McCarty

SIGNATURE

Robert B. McCarty☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Heavy oiling persists throughout northern beach on EV-3. Oiling is AP, Coat, Cover, Tar, OP, OR, and OF and occurs in boulder fields, beachrock, and cobble/pebble beach. Area will require HP HW washing, manual removal, mechanical removal and tilling followed by bioremediation. This segment has heavy oiling and will require a creative mix of treatment methods to adequately remove oil.

AND MANAGER

NAME Steve Ward CMC

SIGNATURE

Steve Ward☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Lots of surface oil - lots of sub surface oil -

High priority for 90 and 91 -

High use area for Chenega, Hunting Fishing, etc -

XXON

NAME John Dean

SIGNATURE

John Dean☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

/ AGREE WITH TEAM COMMENTS

Scale

100m

8/7/90

PWS

EVANS ISLAND

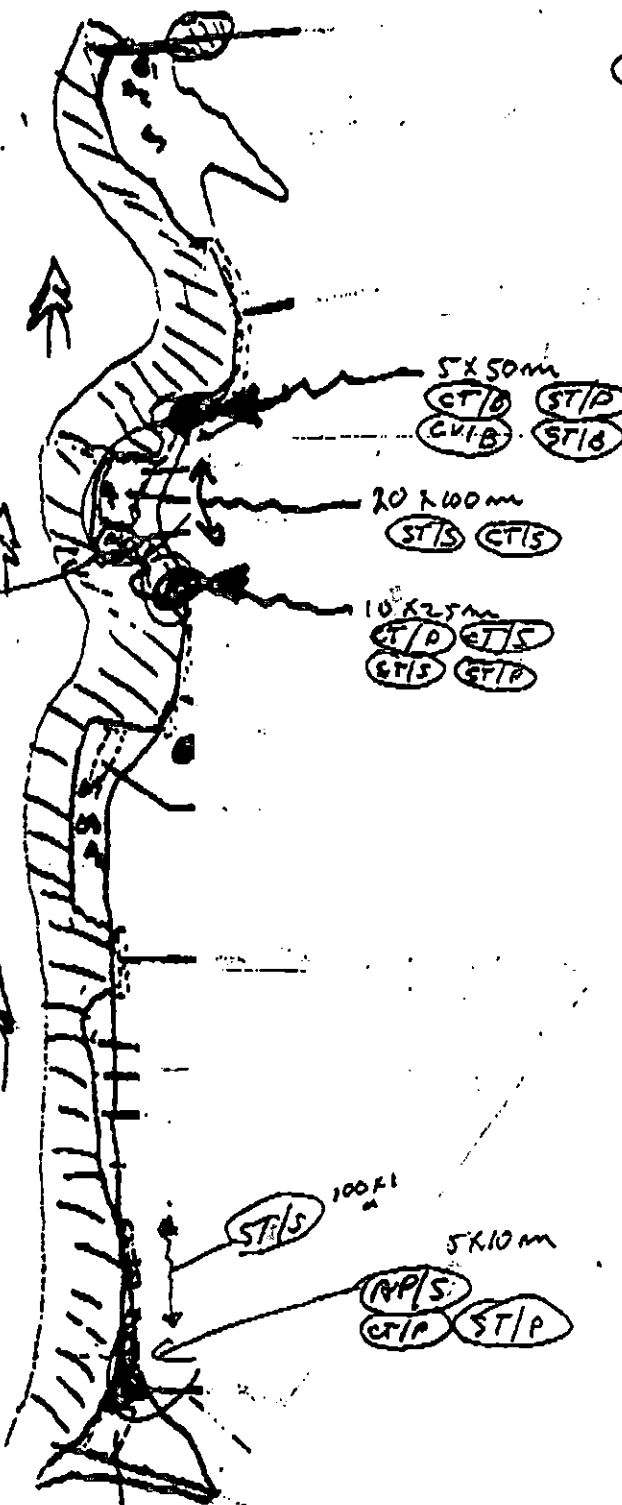


MANUAL
RAKE PRIOR
TO BIO

SKETCH MAP

Legend

- trees
- steep
- Rocky backshore
- Large Rock outcrop



1872

1 Rock H2T2

Loops in Supra

and rainbow
on 15/12

the H2T2

H2T2

in

rock

OG Mike Fogel

SEGMENT 37

SUBDIVISION A

DATE 4/21/90

CHECKLIST

- ☐ No Area
- ☐ Approx. Scale
- ☐ Say/Side Study
- ☐ On Out
- ☐ Watch
- ☐ Large
- ☐ To Center
- ☐ Substrate Orientation
- ☐ E.M. H2T2/18
- ☐ SSI
- ☐ Purple Locating
- ☐ Purple Locating
- ☐ Purple Locating

LEGEND

1

2. No Substrate On

2

3. Substrate On

CT/C

CT/C

CT/C

CT/C

CT/C

CT/C

MANUAL
Pickup
of
old
V&V

10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460 470 480 490 500 510 520 530 540 550 560 570 580 590 600 610 620 630 640 650 660 670 680 690 700 710 720 730 740 750 760 770 780 790 800 810 820 830 840 850 860 870 880 890 900 910 920 930 940 950 960 970 980 990 1000

A EV-37

Yes 91 *On the map, NOAA*
 Yes 91 *Dnes .USG*
 Yes 91 *H.W. CUC*
 Yes 91 *JMD EXXON*
 Yes 91 *R.B. May*

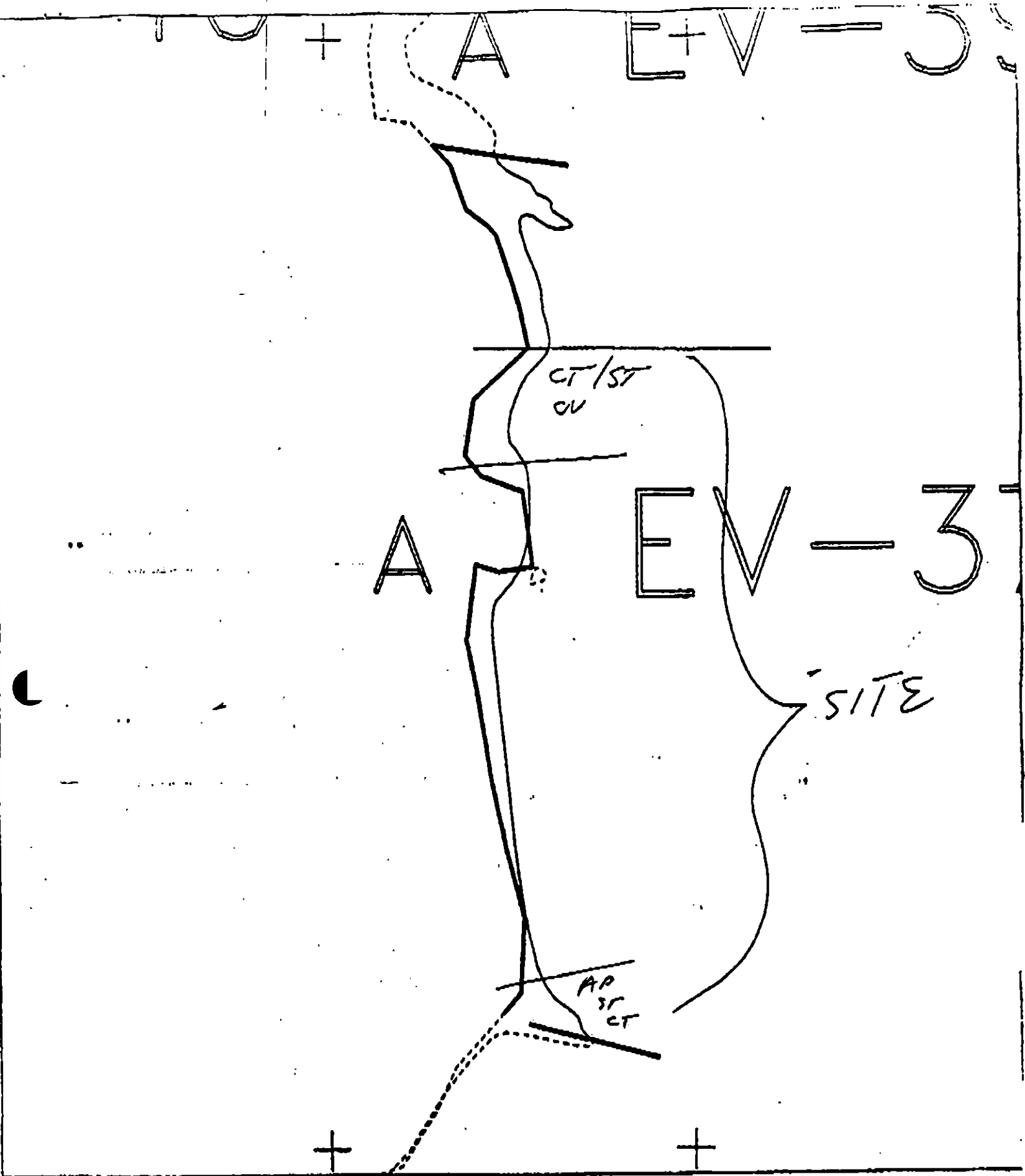


X Wide
 . . . / Medium
 --- Narrow
 TTTT Very Light
 0000 No Oil

EV-37 A
 ADEC Subsegment Length: 1235m
 METERS
 0 150 311
 AK State Plane Zone 4 1:0130
 per-37a

Subdivision Field Map
 Map Key: PWSEV-37A
 Name: NAKASHIMIT
 Date: 8/7/90
 Data Entered:





~ K Wide
 / / / Medium
 - - - - - Narrow
 T T T T Very Light
 0 0 0 0 No Oil

EV-37 A
 ADEC Subsegment Length: 1235m
 METERS
 0 150 311
 AK State Plane Zone 4 1:8130
 DEW-37a



Subdivision Field Map
 Map Key: PWSEV-37A
 Name: NAKASHIMA
 Date: 8/7/90
 Date Entered:

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/ EV-37 Subd.: A Site: _____ Date: 8-17-90 1990

Conditions Observed: Heavy oiling persists throughout northern beach on FI-3. Oiling is AP, Chat, Cane, Tar, OP, OR, and OF and occurs in boulder fields, bedrock, and cobble/pebble beach.

Followup Recommendations: Area is similar to FI-39A. Further manual or gross contamination of gross contamination AP, OP, and OR subsurface sediments is recommended. Area will require some combination of HP H/W washing and possibly the use of mechanical equipment. Bioremediation should follow a proper recommended treatment.

Completed by Pickup Crew: ☐ YES ☒ NO

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

EC Bob McReady Robert E. McReady
(name) (signature)

Comments: Like FI-39, FI-37 will be extremely difficult to effectively treat. A creative combination of treatment techniques will be required.

Bxxon JOHN DEAN J Dean
(name) (signature)

Comments: I AGREE WITH RECOMMENDATIONS ABOVE AND FURTHER RECOMMEND A CASE III ASSESSMENT BY TAG IN CONJUNCTION W/ 39-A

USCG Don Davis Don Davis
(name) (signature)

Comments: Agree with all comments and recommendations.

Land Rep. Steve Wagon Steve Wagon
(name) (signature)

Comments: Follow up Recommendations and High Use Area for the People of the region. Hunting, Fishing, Deer Gathering - Log, Pile Box Fire Wood

GENERAL DATA

SEG ID: EV-37 SBOV: A SITE: 1 TEAM: 3 DATE: 8-7-90
SITE LGTH 955 OIL CATEGORIES: W M N VL NO U
1991 REASSESSMENT: USCG: Y ADEC: Y LDMGR: Y EXXON: Y

SURFACE DATA

CHAR #: 1 OIL CHAR: AP OIL DIST: CONT BRKN PTCH SPLH 10
TIDAL ZONE: SU UI X MI LI

CHAR #: 2 OIL CHAR: CV OIL DIST: CONT BRKN 50 PTCH 35 SPLH 25
TIDAL ZONE: SU UI X MI LI

CHAR #: 3 OIL CHAR: CT OIL DIST: CONT BRKN 50 PTCH 35 SPLH 25
TIDAL ZONE: SU UI X MI LI

CHAR #: 4 OIL CHAR: ST OIL DIST: CONT BRKN 50 PTCH 85 SPLH 225
TIDAL ZONE: SU UI X MI LI

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

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

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

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

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

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

ASAP DATA ENTRY FORM

SUBSURFACE DATA

PAGE 2 OF 2SEGMENT ID: EV-37 SUBDIV: A SITE: 1PIT # 0 PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

SITE 3

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT			X			X		
S.O.R.								
POOLED								
COVER		X	X	X		X		
COAT		X	X	X		X		
STAIN		X	X	X		X		
MOUSSE								
PATTIES/T.B.								
FILM								
NO OIL					X		X	X
EST. SITE LENGTH					955m			

[illegible][illegible]

SUBSURFACE OIL

[illegible]

Photographs

2011 NC ~~CP~~

Frames 4

COMMENTS

MENTS
- OIL CONFINED TO THE NORTH & SOUTH ENDS OF THE SITE AS CUT/ST/AP
IN LARGE BOULDERS IN FRONT OF AND TO THE LEE OF VERTICAL ROCK OUTCROPS

WORK PLAN ADDENDUM

Segment EV 37

Subdivision A

Dated 07/16/90

MODIFICATION

1. REASON FOR MODIFICATION

ADDITION MANUAL WORK EFFORT REQUIRED.

2. ADJUSTMENT TO WORK PLAN

MANUAL PICK UP OF MOUSSE, POOLED OIL, + ASPHALT PATCHES

SHPO APPROVAL NEEDED YES _____
NO X

SHPO SIGNATURE _____

TAG APPROVAL DATE 07/16/90

ADEC Ray Morris R. Morris

EXXON ANDY TEAL Andy Teal

NOAA Burl Wescott Burl Wescott

USCG G.A. REITER G.A. Reiter

FOSC ML DATE 7-16-90

ASAP Follow-Up Recommendations
TAG Recommendations - August 13, 1990

<u>SEGMENT</u>		
CH-09	B Site 1	Manual pickup of tarmats, rake and bioremediate* H.P. <i>B.</i>
	Site 2	Manual pickup of tarmats, rake and bioremediate* H.P.
EL-52	B	NTR
EL-55	A	Manual till - mop up mobile oil with snare and bioremediate - low priority
EL-56	C	Storm berm relocation (mechanical if necessary)
EL-58	C	NTR - Reassessment in '91
EL-58	D	Customblen application and reassessment in '91
ER-07	A Site 1	NTR
	Site 2	Manual pickup of tarmat and bioremediation (low priority)
EV-05	A	Limited manual pickup followed by bioremediation - Customblen (low priority)
EV-05	B	Manual pickup of mousse/AP followed by bioremediation. Manual till in heaviest areas if necessary (H.P.)
EV-12	A	Access and remove heaviest concentration of AP/OP/HOR manual removal followed by bioremediate
EV-15	A	Manual removal of MS/AP/OP/HOR where accessible - bioremediate (H.P.)
EV-26	A	Manual removal of AP and bioremediate (M.P.)
EV-37	A	Manual pickup of OP/HOR sediments (relocate armor to access)
EV-39	A	Bioremediate
FL-01	A	NTR - work done
GR-301	B Site 1	Manual pickup of mousse (H.P.)
	Site 2	NTR
	Site 3	NTR
GR-301	B New Site	Manual pickup of mousse (H.P.)
KN-07	A	Manual pickup of AP/OP/mousse and bioremediate (H.P.) both areas
KN-08	A	Manual pickup followed by bioremediation (L.P.)
KN-201	A	Manual removal of AP followed by bioremediation (M.P.)
KN-211	E Site 1	Manual pickup of oiled debris at stream mouth next to small pool, use chain saw as necessary to access.
	Site 2	NTR
	Site 3	NTR
	Site 4	NTR
KN-400	A Site 1	Manual removal of accessible AP followed by rake and bioremediation (L.P.)
	Site 3	NTR
KN-404	A	Bioremediate and assessment in '91
KN-405	A	Further TAG evaluation - bioremediate and assessment in '91
NK-02	A	Manual pickup AP/mousse - bioremediation (M.P.)
PD-04	A	Manual pickup of mousse patties and bioremediation, Inipol and Customblen (M.P.)
PN-01	A	Manual pickup of AP and bioremediation (L.P.)

* ANADROMOUS STREAM CONSTRAINT

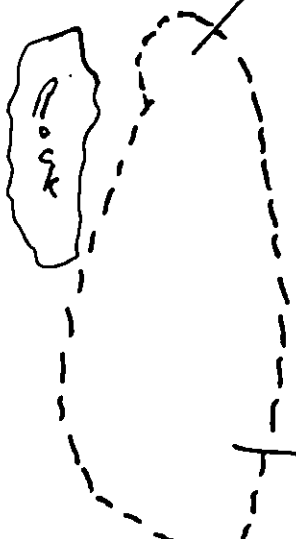
TAG		DATED	<u>Aug 15 1990</u>
EXXON	<u>Andy Teatz</u>	(See attached Archaeological Constraintsheet)	^{work} 8/16/90
ADEC	<u>Raymond R. [unclear]</u>		
USCG	<u>Robert [unclear]</u>	FOSC	<u>[Signature]</u>
NOAA	<u>Burl Wescott</u>	DATED	<u>17 August 1990</u>

work with land manager in effecting the above

EV 37 A

Manually
remove
OP lense

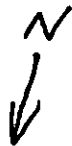
08/13



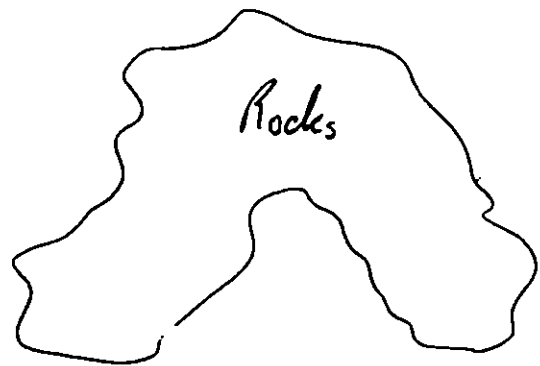
70' x 25'
OP lense

Beach.

Water.



Rocks



1991 MAYSAP EVALUATION

SEGMENT: EV 037 SUB: A REGION: PWS SURVEY DATE: 4/28/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest,
Fish harvest area, Subsistence, deer harvesting

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

SHPO Signature: Charles E. Holmes

Date: 5/8/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: Manual pickup AP-HSOR/OP followed by Bio at locations
A, B, C, D

TAG: USCG MONITOR WILL COORDINATE AN ASSESSMENT OF THE
AREAS INDICATED ON THE ATTACHED SKETCH TO DETERMIN
IF SMALL PATCHES OF AP ARE PRESENT AND REQUIRE PICKUP
DURING SITE TREATMENT.

FOSC: NO BIO! THIS IS DUE TO CVC'S OBJECTION
TO THE USE OF BIO AS NOTED IN CVC MEMO
DATED 5/11/91. IF CVC RECONSIDERS, SO WILL I.

TAG APPROVAL DATE: 4/18/91

FOSC APPROVAL DATE: 5/13/91

ADEC

FOSC

EXXON

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

USCG

NOAA

1991 MAYSAP EVALUATION

SEGMENT: EV 037 SUB: A REGION: PWS SURVEY DATE: 4/28/91

ENVIRONMENTAL SENSITIVITIES:

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

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

Y

Manual Pickup (Check as Req.)

X

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

X

Other _____

Other _____

COMMENTS:

INITIAL: Manual pickup AP-HSOR/OP followed by Bio at locations
A, B, C, D

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT EV-37 SUBDIVISION A DATE 4 / 28 / 91

ADEC

NAME Johanna Hays SIGNATURE [Signature]

- ☐ NTR ☒ Treatment Recommended
- Oiling conditions here are similar to EV-39A although border between UETZ + MITZ is more heavily oiled here. Recommend continuing treatment here that began in 1990. Due to poor access mechanical treatment is not feasible here. Recommend work crews manually remove gross contamination that persists in matrix of boulders and on bedrock at sites A, B, GAE and on + below cobbles at sites H, I + G.
- Also recommend re-treatment following treatment of this heavily oiled site.

EXXON

NAME Martinez Nid SIGNATURE [Signature]

- ☐ NTR Worked this beach last summer, very difficult working slow tedious. Beach is exposed to high energy.

LANDMANAGER

NAME Steve WARD OF CVC SIGNATURE [Signature]

- ☐ NTR Lots of Surface and Sub-Surface. This should be removed. Difficult to work in this area between lg boulders, but the people in Chenega have worked there 2 yrs know. Also numerous UECOWS have done good work there, just not enough. This area has been and will continue to be considered a Dead Zone by the Village of Chenega. AREA used to be the Sub-Surface for Benches deep and logs for fire wood.

USCG/NOAA

NAME Dreher/Hodges SIGNATURE CWO K. L. Hodges

- ☐ NTR Densely oiled cobble flakes in small 3 m band observed. Oiled sediment and some large tar patties. Pits showed pore oil and sheen. Dense mussel bed on far left beach in lower inner tidal. It would be difficult, if not impossible, to remove this existing oil. Oil isolated primarily in upper (to mid) inner tidal areas.

TIME 09:50 to 11:15 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: 238 m NEAR SHORE SHEEN: ☐ BR ☐ RB ☒ SL ☐ NONE

EST. OIL CATEGORY LENGTH: W 110 m M 71 m N - m VL - m NO 57 m US 993 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
SKETCH 1	A	P		P	S						PC	M	4	8		✓			LARGE CLASTS, SOME CORALLINE
	B	T		S	P	P					BR	M	15	20		✓	✓		
	C	P			S						BR	M	6	3	✓	✓			
	D	S		S	P	P					BR	M	10	40	✓	✓			
	E	S		S	P	P					B	M	15	20		✓			
SKETCH 2	F	T			P	P	P				BR	M	7	30		✓			
	G	P		S	S	S					BR	M	10	10		✓			
	H	T		T	S	S					B	M	10	20		✓			
	I			S	S	S					BR	M	5	30		✓			

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 - 4

FRAMES 5-12

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		
SKETCH 1	1	20	✓						0-15	Y	-	-		✓			BC-BC	
	2	15		✓					5-15	N		R			✓		BC-BCR	
	3	15	✓						0-10	Y		R	✓				BPC-BPC	
	4	10		✓					0-10	Y		R		✓			BPC-BPC	
	5	20			✓				18-20	N		BR			✓		PG-PGR	
	6	35						✓	-				✓				P-PC	
	7	40						✓	2-	Y	5	SR			✓		CB-CPV	
SKETCH 2									-									
									-									

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

OG COMMENTS: THIS SURVEY WAS CONDUCTED IN HEAVY RAIN AND WIND. THIS CONDITION MADE OBSERVING LIGHT OIL DIFFICULT. ALONG HIGH INTERTIDAL, AP AND SOR WERE OBSERVED AT BOULDER BASES. AP PATCHES WERE OFTEN RECOVERABLE BUT IT WOULD BE TEDIOUS.

REVISED: F.W. 5/1/91
REVISED: MC 5/1/91

MAYSAP 1991
OG SKETCH MAP
GREG CHANEY
TEAM 5

SEGMENT: EV 37 A
DATE: APRIL 28 1991
AIR P.N.: 6-11-81 EXVDZ 4/10/91

MAGNETIC NORTH

10x40m
D AP 10%
SOR 10%
CV 15%
CT 15%

AP AT BASE OF LARGE
BOULDERS ON SHALLOW
BED ROCK

4x8m
A AP 15% CV 10%
HEAVY SOR 15%
AP Poorly Formed

C AP 30% CV 10%
6x3m OP CORRESPONDS
SHALLOW BED ROCK

15x20m
B CT 30% CV 30%
HEAVY SOR 2% AP 1%
LARGE BOULDERS

OP
HOR-OR
TRIANGLE
10x15m

EVAN'S ISLAND

No Field Data
Assume
5x5m MOR

E
LARGE 15x20m
BOULDERS AP ~5%
CV 10%
CT 30%
ST 20%
SOR ~5%

SKETCH
MAP #1 of 2

EV 37

KNIGHT ISLAND PASSAGE

REVIEWED: F.W. 5/1/91
REVISOR: MC 5/1/91

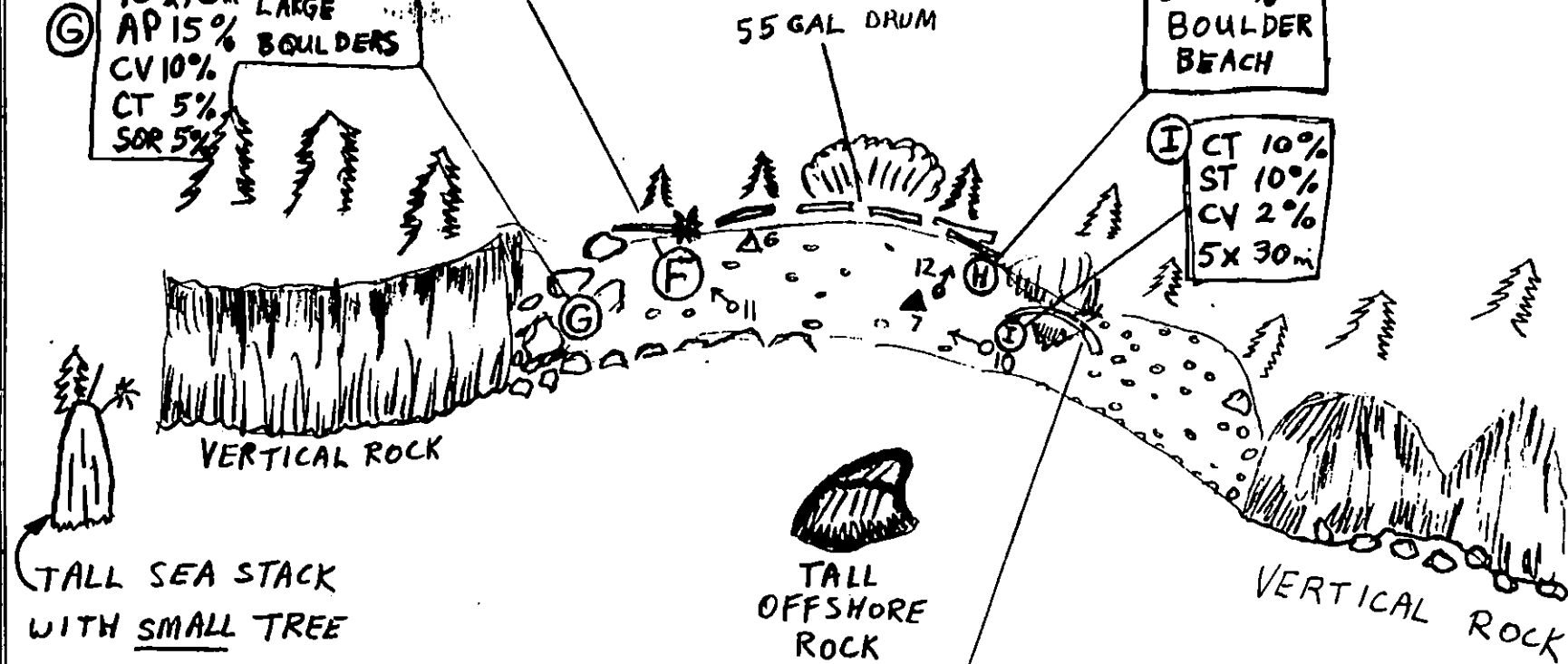
(F) 7x30m BOULDERS
AP TRACE BEDROCK
CV 30%
CT 20%
ST 20%

(G) 10x10m LARGE BOULDERS
AP 15%
CV 10%
CT 5%
SOR 5%

MAYBAP 1991
OG SKETCH MAP
GREG CHANEY
TEAM 5
SEGMENT: EV37A
DATE: Apr 28 1991
AIR P.H: 6-11-89 EXVDZ 4 No 49
VERY EDGE PARTIAL.

(H) 10x20m
AP Few Patties
SOR Trace
CT 10%
ST 10%
BOULDER BEACH

(I) CT 10%
ST 10%
CV 2%
5x30m



TALL SEA STACK
WITH SMALL TREE
ON TOP

TALL
OFFSHORE
ROCK

VERTICAL ROCK

CURVED
DRIFT
LOG

MAGNETIC NORTH
APPROXIMATELY

SKETCH
MAP #2 of 2

REVIEWED: F.W. 5/1/91
REVISIONS: M.C. 5/1/91

MAYSAP BIOLOGICAL SUMMARY FORM

pg 1 of 3

TEAM # 5

DATE 28 Apr '91

SEGMENT # EV-37

TIDAL HEIGHT(Range) +1.5 → +5.5

SUBDIVISION A

BIOLOGIST C. rank

SEA STATE 3 → 4

WIND SPEED/DIRECTION ~15 knots/E

PHOTOGRAPHS: ROLL #

FRAME #

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

(A) Area is in the SUPRA + UITZ. Rye grass sprouting and white and black lichen present in SUPRA. In UITZ 2cm long segmented worms present. No other macro-biota observed in area.

(B) Area is in UITZ. Filamentous green algae covers boulders. Healthy rare barnacles on boulder bases. No other macro-biota observed in area. Cystodites shells present.

(C) Area is boulder field high in UITZ and SUPRA. Mosses are healthy and have reproductive structures. Black lichen present. Filamentous green algae over boulder bases. 2cm long segmented worms present under veneer. No other macro-biota observed in area. Ten meters downshore Fucus begins.

(D) Area is in UITZ boulder field. Filamentous green algae cover boulder surfaces. There is a pocket of Enteromorpha in a small tidepool. Rare concentrations of limpets observed on oil CT. Area <1m from upper MITZ where barnacles cover ~30% of sediments and Fucus (mature sporlings) are present.

(E) Area is in UITZ. Rare barnacles, rare Littorina and limpets, and segmented worms present. Filamentous green algae covers boulder bases. Directly below site there is a dense 7m x 4m intergravel/cobble mussel bed.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	3	1 dead Herring
Seabirds			
Waterfowl	1	>60	
Gulls/kittiwakes	1	1	
Shorebirds			
Corvids	1	5	
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	1		
Pinnipeds(specify)	6- Harbor Seals		
	7- Seals		
Whales(specify)			

Shoreline subdivision map showing important biological features attached.

SKETCH
MAP #2 of 2

MAYBAP 1991
 06 SKETCH MAP: BioMap
 GREG CHANEY; Crank
 TEAM 5
 SEGMENT: EV 37A
 DATE: APRIL 28, 1991
 AIR P.N.: 6-11-89 EXVDZ 41649

MAGNETIC NORTH

10x40m
 (D) AP 100%
 SOR 10%
 CV 15%
 CT 15%

AP AT BASE OF LARGE
 BOULDERS ON SHALLOW
 BEDROCK

4x8m
 (A) AP 15% CV 10%
 HEAVY SOR 15%
 AP Poorly Formed

(C) AP 30% CV 10%
 6x3m OP CORRESPONDING
 SHALLOW BEDROCK

(B) 15x20m
 CT 30% CV 30%
 HEAVY SOR 2% AP 1%
 LARGE BOULDERS

HOR-OR
 TRIANGLE
 10x15m

EVAN'S ISLAND

MITZ ~40% biota cover
 being recruited by *Fucus*
 and barnacles

Dense Mussel
 bed 7x4m

(E) LARGE 15x20m
 BOULDERS AP ~5%
 CV 10%
 CT 30%
 ST 20%
 SOR ~5%

Rich and diverse LITZ
 with ~80% biota cover
 on boulders and outcrops

SKETCH
 MAP #1 of 2

KNIGHT ISLAND PASSAGE

Team #5

Date 28 Apr '91

pg 2 of 3

Segment EV-37

Tidal Height +1.5 $\rightarrow$ +5.5

Subdivision A

Biologist Crank

Sea State 3 $\rightarrow$ 4'

Wind Speed/Direction ~15 knots / E

Comments (continued)

Areas A $\rightarrow$ E are located on a single beach. The LITZ is rich and diverse with ~80% biotic cover on boulders and rock outcrops and ~5% cover on small boulders and cobble. Organisms present include: Fucus (stipes-only and plants with mature conceptacles), coralline algae, black chiton (Katharina tunicata), Ulva, filamentous green algae, Palmaria (alga), Odonthalia (alga - 2 spp), Desmarestia (alga), Anemonas, Nucella (whelk), Littorina, limpets, Scytosiphon (alga), juvenile eels, and a moderate barnacle concentration (new set present). The MITZ is dominated by barnacles (heavy recruits), Fucus (rare sporelings) and Gloiopeltis (alga). Biota cover ~40%. The intertidal biota appears to be healthy.

(F) Area is located in SUPRA, LITZ and high MITZ. There is a runoff stream in area. The ~~runoff~~ grass is sprouting. Moss, white and black lichen are present. Filamentous ~~green~~ algae cover B/C and the base of rock outcrop. Rare barnacles are present, animals did not seal their inner plates when stimulated. Customblen casings present.

(G) No intertidal biota observed in site. Two meters below site there is a moderate Fucus concentration near runoff stream, sporelings are present. Sparse barnacles near runoff ~30% or animals not tightly sealing inner plates.

Team #5

Segment EV-37

Subdivision A

Sea State 3 $\rightarrow$ 4'

Date 28 Apr '91

Tidal Height +1.5 $\rightarrow$ +5.5

Biologist Crank

Wind Speed / Direction ~15 knots / E

pg 3 of 3

(H) Area is in the SUPRA and UITZ. Rye grass is sprouting.

Filamentous green algae cover Bk at bottom margin of site.

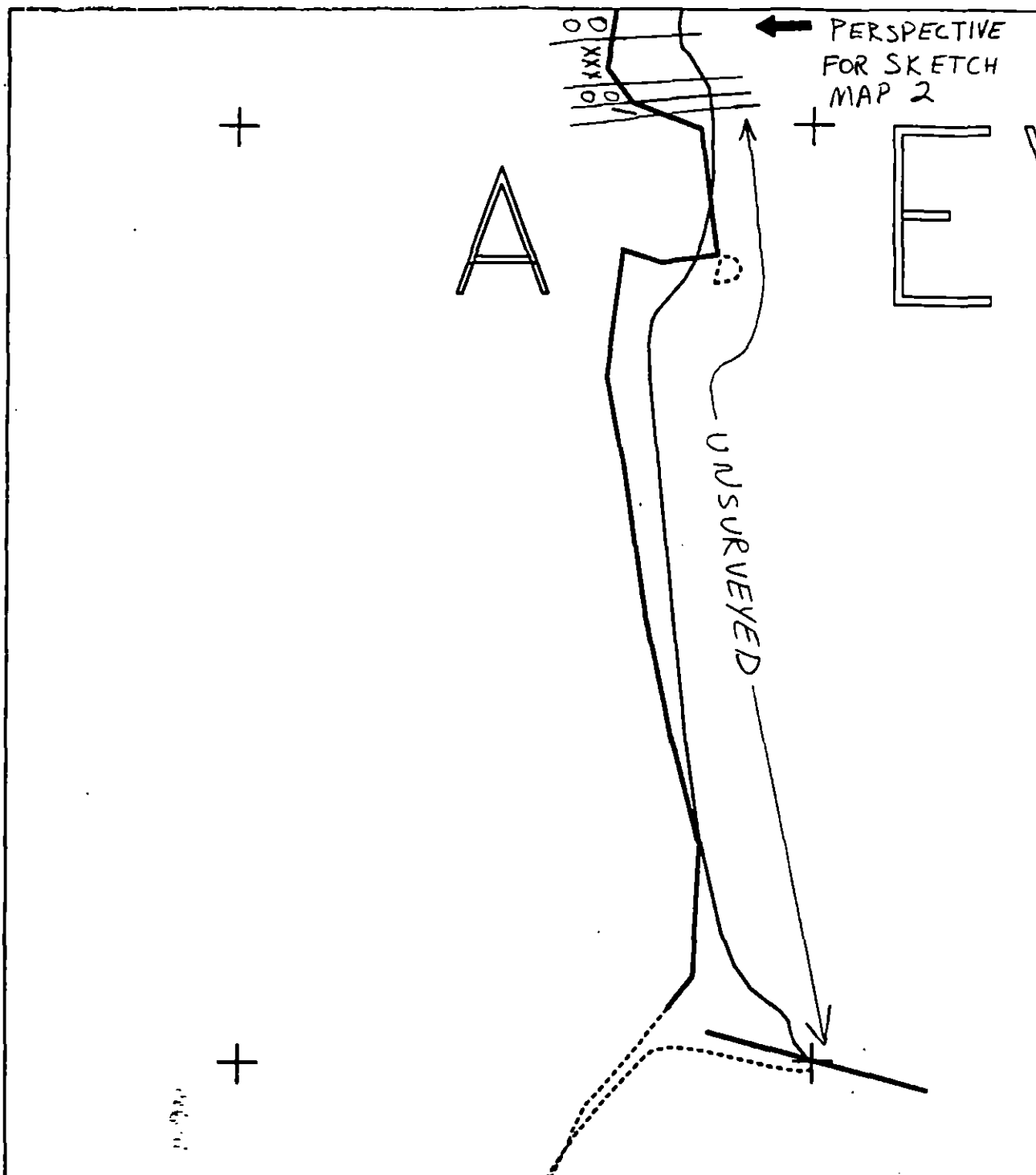
No other macro biota within site. Biota rare for ~15m downslope then

Fucus begins.

(I) Area is located in UITZ boulders. Filamentous green algae covers boulders.

Rare barnacles, including recruits, and Littorina are present within site. Two meters below site in the MITZ barnacles are moderate.

Areas F $\rightarrow$ I are located on a single pocket beach. A pair of Bald Eagles were flushed by helicopter - possible nest in vicinity. Tide had covered LITZ during survey. The MITZ has ~30% biotic cover dominated by barnacles, Fucus, mussels and Gloiopeltis (alga). Littorina are moderately concentrated. MITZ biota appear to be healthy.



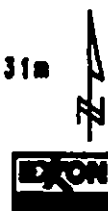
XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

EV037 A

ADEC Subsegment Length: 1231m

METERS

0 100 200
 AK State Plane Zone 4
 proj83700



Subdivision Field Map

Map Key: PWSEV037Aa

Name: GREG CHANEY

Date: APRIL 28 1991

Date Entered:

REVISED: F.W. 5/1/91

REVIEWED: M.C. 5/1/91

1991 MAYSAP EVALUATION

SEGMENT: EV 037 SUB: A REGION: PWS SURVEY DATE: 4/28/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest,
Fish harvest area, Subsistence, deer harvesting

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

SHPO Signature: Charles R. H. Hines Date: 5/8/91

RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>Y</u>		<u>Y</u>
Manual Pickup (Check as Req.)	<u>X</u>		<u>Y</u>
Spot Washing			
Bio-Customblen Only			
Bio-Inipol/Customblen	<u>X</u>		<u>No</u>
Other			
Other			

COMMENTS:

INITIAL: Manual pickup AP-HSOR/OP followed by Bio at locations
A, B, C, D

TAG: USCG MONITOR WILL COORDINATE AN ASSESSMENT OF THE
AREAS INDICATED ON THE ATTACHED SKETCH TO DETERMIN
IF SMALL PATCHES OF AP ARE PRESENT AND REQUIRE PICKUP
DURING SITE TREATMENT.

FOSC: NO BIO! THIS IS DUE TO CVC'S OBJECTION
TO THE USE OF BIO AS NOTED IN CVC MEMO
DM 5/11/91. IF CVC RECONSIDERS, SO WILL I.

TAG APPROVAL DATE: MAY 8 1991

FOSC APPROVAL DATE: 5/13/91

ADEC [Signature]

FOSC

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

EXXON [Signature]

USCG [Signature]

NOAA [Signature]

*see next
+map for
Additional
Shoreline
to EV37-A

PERSPECTIVE
FOR SKETCH
MAP 2

A

E

DID NOT
SURVEY

UNSURVEYED

unsurveyed

ASAP - AP, CT
ST - WHITE

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

EV037 A

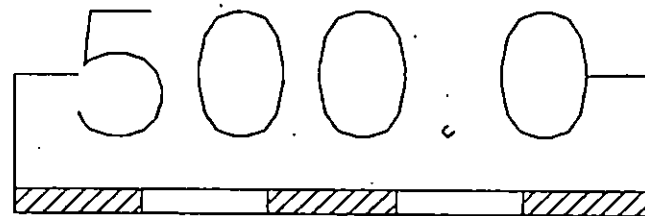
ADEC Subsegment Length: 1231m
METERS

5 100 200
AK State Plane Zone 4
9903700

Subdivision Field Map
Map Key: PVSEV037A
Name: GREG CHANEY
Date: APRIL 28 1991
Date Entered:

DID NOT
SURVEY THIS AREA

2 - NW end missed by ASAP MS, OP, OR in boulders?
6 - not identified by TAG, recommended re-assess



1 - CT, CV, ST in boulders - U

1 - ST, CT - D to ID - U

1 - CT, ST - U

A

EV037

AP, CT, ST - 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.

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. 5 SEGMENT EV-37 SUBDIVISION A DATE 4/28/91

ADEC

NAME John Hays SIGNATURE [Signature]

- ☐ NTR ☒ Treatment Recommended
- Oiling conditions here are similar to EV-39A although border between UST 2 + MITZ is more heavily oiled here. Recommend continuing treatment here that began in 1990. Due to poor access mechanical treatment is not feasible here. Recommend work crews manually remove gross contamination that persists in matrix of boulder and on bedrock at sites A, B, GAE and on + below cobbles at sites H, I + G.
- Also recommend reassessment following treatment of this heavily oiled site.

EXXON

NAME Martinez Nul SIGNATURE [Signature]

- ☐ NTR
- Worked this beach last spring, very difficult working slow tedious. Beach is exposed to high energy.

LANDMANAGER

NAME Steve WARD OF CVC SIGNATURE [Signature]

- ☐ NTR
- Lots of surface and sub-surface. This should be removed. Difficult to work in this area between lg boulders, but the people in Chenega have worked there 2 yrs know. Also numerous veco crews have done good work there, just not enough. This area has been and will continue to be considered a dead zone by the village of Chenega. Area used to be high subsistence for berries, deer and logs for fire wood.

USCG/NOAA

NAME Dreher/Hodges SIGNATURE [Signature]

- ☐ NTR
- Densely oiled cobble flakes in small 3 m band observed. Oiled sediment and some large tar patties. Pits showed pore oil and sheen. Dense mussel bed on far left beach in lower inner tidal. It would be difficult, if not impossible, to remove this existing oil. Oil isolated primarily in upper (to mid) inner tidal areas.

5 MAYSAF SHORELINE OILING SUMMARY PAGE 1 OF 1

TEAM NO. 5

OG CHANEY BIO CRANK

SEGMENT EV 37

ADEC HAYES LANDMANAGER WARD for CVC

SUBDIVISION A

EXXON MARTINEZ USCG/NOAA DREHER/HODGES

DATE April 28/91

TIME 09:50 to 11:15 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: 238 m NEAR SHORE SHEEN: ☐ BR ☐ RB ☒ SL ☐ NONE

EST. OIL CATEGORY LENGTH: W 110 m M 68 m N - m VL - m NO 57 m US 993 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
SKETCH 1	A	P			P	S					PC	M	4	8		✓			LARGE CLASTS, SOME CONCRETE
	B	T			S	P	P				BR	M	15	20		✓	✓		
	C	P			S						BR	M	6	3	✓	✓			
	D	S			S	P	P				BR	M	10	40	✓	✓			
SKETCH 2	E	S			S	S	P	P			B	M	15	20		✓			
	F	T			P	P	P				BR	M	7	30		✓			
	G	P			S	S	S				BR	H	10	10		✓			
	H	T			T	S	S				B	M	10	20		✓			
	I				S	S	S				BR	M	5	30		✓			

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 # MAYSAF-

5 - 4

FRAMES 5-12

SKETCH 1

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

OG COMMENTS: THIS SURVEY WAS CONDUCTED IN HEAVY RAIN AND WIND. THIS CONDITION MADE OBSERVING LIGHT OIL DIFFICULT. ALONG HIGH INTERTIDAL, AP AND SOR WERE OBSERVED AT BOULDER BASES. AP PATCHES WERE OFTEN RECOVERABLE BUT IT WOULD BE TEDIOUS.

REVISED: F.W. 5/1/91
REVISED: MC 5/1/91

MAYSAP 1991
 OG SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV 37 A
 DATE: APRIL 28/1991
 AIR P.#: 6-11-89 EX VPZ 4 No 49

MAGNETIC NORTH

① 10x40m
 AP 10%
 SOR 10%
 CV 15%
 CT 15%

AP AT BASE OF LARGE
 BOULDERS ON SHALLOW
 BEDROCK

② 4x8m
 AP 15% CV 10%
 HEAVY SOR 15%
 AP Poorly Formed

③ AP 30% CV 10%
 6x3m OP CORRESPONDS
 SHALLOW BEDROCK

④ 15x20m
 CT 30% CV 30%
 HEAVY SOR 2% AP 1%
 LARGE BOULDERS

OP
 HOR-OR
 TRIANGLE
 10x15m

EVANS ISLAND

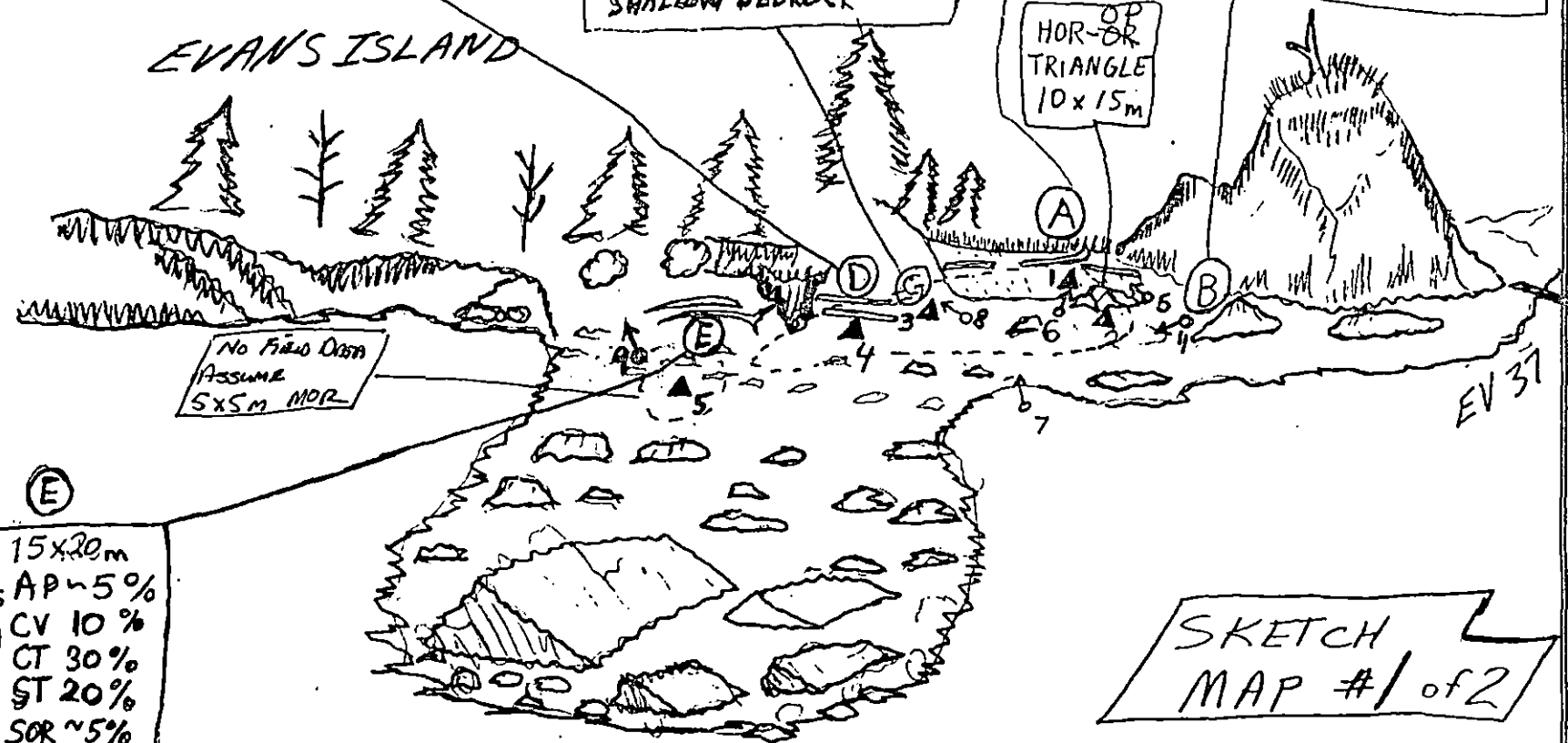
No Field Data
 Assume
 5x5m MOR

⑤ LARGE 15x20m
 BOULDERS AP ~5%
 CV 10%
 CT 30%
 ST 20%
 SOR ~5%

SKETCH
 MAP #1 of 2

KNIGHT ISLAND PASSAGE

REVIEWED: F.W. 5/1/91
 REVISION: MC 5/1/91



MAYSAP 1991
 OG SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV37A
 DATE: April 28, 1991
 AIR P.#: 6-11-89 EXVDZ 4 No 49
VERY EDGE PARTIAL.

(F) 7x30m BOULDERS
 AP TRACE BEDROCK
 CV 30%
 CT 20%
 ST 20%

(G) 10x10m LARGE
 AP 15% BOULDERS
 CV 10%
 CT 5%
 SOR 5%

(H) 10x20m
 AP Few Patties
 SOR Trace
 CT 10%
 ST 10%
 BOULDER
 BEACH

(I) CT 10%
 ST 10%
 CV 2%
 5x30m

55 GAL DRUM

VERTICAL ROCK

TALL SEA STACK
 WITH SMALL TREE
 ON TOP

TALL
 OFFSHORE
 ROCK

VERTICAL ROCK

CURVED
 DRIFT
 LOG

MAGNETIC NORTH
 APPROXIMATELY

SKETCH
 MAP #2 of 2

REVIEWED: F.W. 5/1/91
 REVISIONS: M.C. 5/1/91

MAYSAP BIOLOGICAL SUMMARY FORM

pg 1 of 3

TEAM # 5

DATE 28 Apr '91

SEGMENT # EV-37

TIDAL HEIGHT(Range) +1.5 → +5.5

SUBDIVISION A

BIOLOGIST C rank

SEA STATE 3 → 4'

WIND SPEED/DIRECTION ~15 knots/E

PHOTOGRAPHS: ROLL #

FRAME #

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

(A) Area is in the SUPRA: UITZ. Rye grass sprouting and white and black lichen present in SUPRA. In UITZ 2cm long segmented worms present. No other macro-biota observed in area.

(B) Area is in UITZ. Filamentous green algae covers boulders. Healthy rare barnacles on boulder bases. No other macro-biota observed in area. Customblen shells present.

(C) Area is boulder field high in UITZ and SUPRA. Mosses are healthy and have reproductive structures. Black lichen present. Filamentous green algae over boulder bases. 2cm long segmented worms present under veneer. No other macro-biota observed in area. Ten meters downshore Fucus begins.

(D) Area is in UITZ boulder field. Filamentous green algae cover boulder surfaces. There is a pocket of Enteromorpha in a small tidepool. Rare concentrations of limpets observed on oil CT. Area <1m from upper MITZ where barnacles cover ~30% of sediments and Fucus (mature, sporlings) are present.

(E) Area is in UITZ. Rare barnacles, rare Littorina and limpets, and segmented worms present. Filamentous green algae covers boulder bases. Directly below site there is a dense 7m x 4m intergravel/cobble mussel bed.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	3	1-dead Herring
Seabirds			
Waterfowl	1	760	
Gulls/kittiwakes	1	1	
Shorebirds			
Corvids	1	5	
Other Birds			

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters	1		
Pinnipeds(specify)	6- Harbor Seals		
	7- Sealions		
Whales(specify)			

Shoreline subdivision map showing important biological features attached.

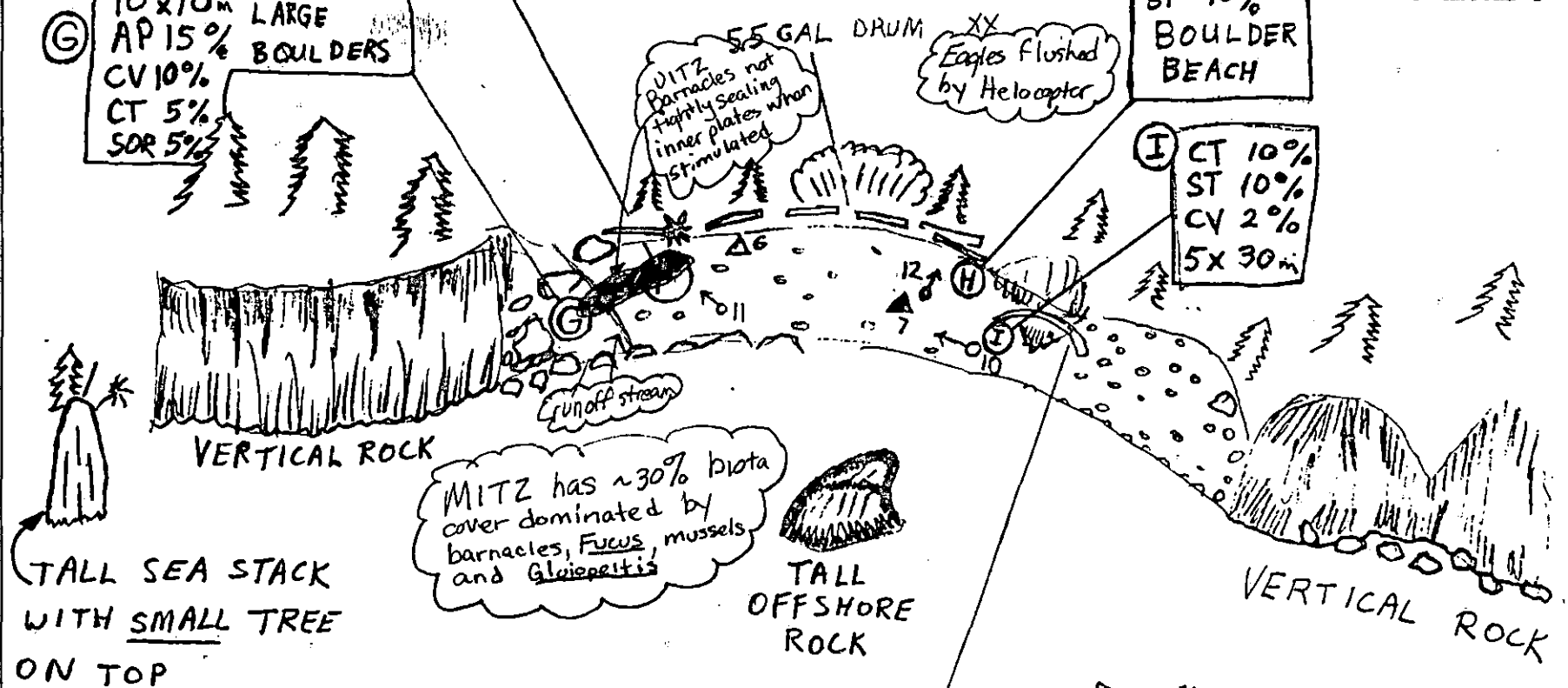
(F) 7x30m BOULDERS
AP TRACE BEDROCK
CV 30%
CT 20%
ST 20%

(G) 10x10m LARGE BOULDERS
AP 15%
CV 10%
CT 5%
SOR 5%

MAYSAP 1991
OG SKETCH MAP & Bio Map
GREG CHANEY; Crank
TEAM 5
SEGMENT: EV37A
DATE: Apr. 128 1991
AIR P.#: 6-11-89 EXVDZ 4 No 49
VERY EDGE PARTIAL.

(H) 10x20m
AP Few Patties
SOR Trace
CT 10%
ST 10%
BOULDER BEACH

(I) CT 10%
ST 10%
CV 2%
5x30m



SKETCH
MAP #2 of 2

MAYSAP 1991
OG SKETCH MAP: Bio Map
GREG CHANEY: Crank
TEAM 5

SEGMENT: EV 37A
DATE: APRIL 28, 1991
AIR P.#: 6-11-87 EXVDZ 4N649

MAGNETIC NORTH

10x40m
D AP 10%
SOR 10%
CV 15%
CT 15%

AP AT BASE OF LARGE
BOULDERS ON SHALLOW
BEDROCK

4x8m

A AP 15% CV 10%
HEAVY SOR 15%
AP Poorly Formed

C AP 30% CV 10%
6x3m OP CORRESPONDS
SHALLOW BEDROCK

B 15x20m
CT 30% CV 30%
HEAVY SOR 2% AP > 1%
LARGE BOULDERS

HOR-OR
TRIANGLE
10x15m

EVANS ISLAND

MITZ ~40% biota cover
being recruited by *Fucus*
and barnacles

Dense Mussel
Bed 7x4m

E LARGE 15x20m
BOULDERS AP ~5%
CV 10%
CT 30%
ST 20%
SOR ~5%

Rich and diverse LITZ
with ~80% biota cover
on boulders and outcrops

SKETCH
MAP #1 of 2

KNIGHT ISLAND PASSAGE

Team #5

Date 28 Apr '91

Pg 2 of 3

Segment EV-37

Tidal Height +1.5 $\rightarrow$ +5.5

Subdivision A

Biologist Crank

Sea State 3 $\rightarrow$ 4'

Wind Speed/Direction ~15 knots / E

Comments (continued)

Areas A $\rightarrow$ E are located on a single beach. The LITZ is rich and diverse with ~80% biotic cover on boulders and rock outcrops and ~5% cover on small boulders and cobble. Organisms present include: Fucus (stipes-only and plants with mature conceptacles), coralline algae, black chiton (Katherina tunicata), Ulva, filamentous green algae, Palmaria (alga), Odonthalia (alga - 2 spp), Desmarestia (alga), Anemonas, Nucella (whelk), Littorina, limpets, Scytosiphon (alga), juvenile eels, and a moderate barnacle concentration (new set present). The MITZ is dominated by barnacles (heavy recruits), Fucus (rare sporelings) and Gloiopeltis (alga). Biota cover ~40%. The intertidal biota appears to be healthy.

(F) Area is located in SUPRA, UITZ and high MITZ. There is a runoff stream in area. The rye grass is sprouting. Moss, white and black lichen are present. Filamentous green algae cover B/c and the base of rock outcrop. Rare barnacles are present, animals did not seal their inner plates when stimulated. Custom blen casings present.

(G) No intertidal biota observed in site. Two meters below site there is a moderate Fucus concentration near runoff stream, sporelings are present. Sparse barnacles near runoff ~30% of animals not tightly sealing inner plates.

Team #5

Date 28 Apr '91.

pg 3 of 3

Segment EV-37

Tidal Height +1.5 $\rightarrow$ +5.5

Subdivision A

Biologist Crank

Sea State 3 $\rightarrow$ 4'

Wind Speed / Direction ~15 knots / E

(H) Area is in the SUPRA and UITZ. Rye grass is sprouting.

Filamentous green algae cover Bk at bottom margin of site.

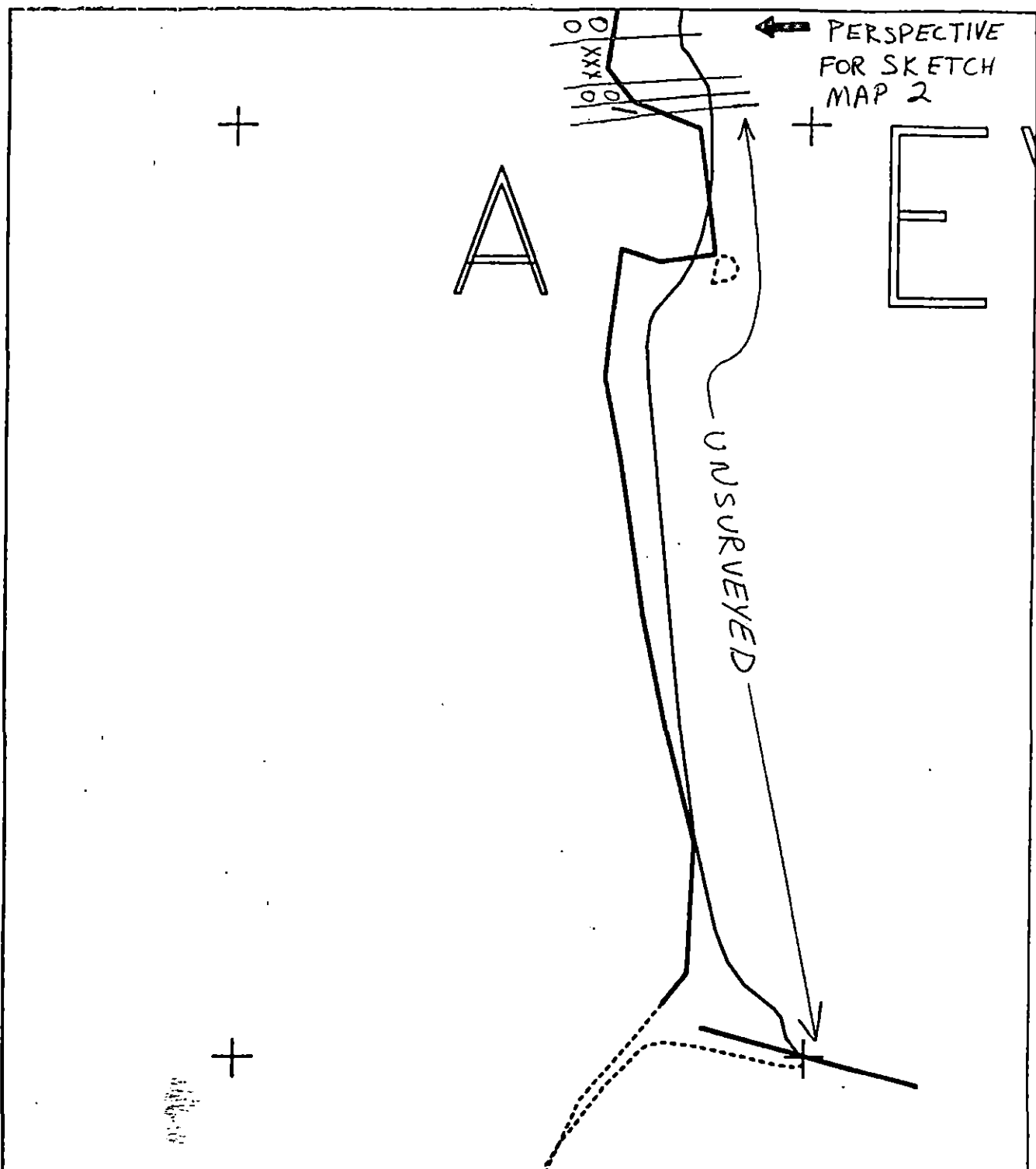
No other macro biota within site. Biota rare for ~15m downslope then

EULUS begins.

(I) Area is located in UITZ boulders. Filamentous green algae covers boulders.

Rare barnacles, including recruits, and Littorina are present within site. Two meters below site in the MITZ barnacles are moderate.

Areas F $\rightarrow$ I are located on a single pocket beach. A pair of Bald Eagles were flushed by helicopter - possible nest in vicinity. Tide had covered LITZ during survey. The MITZ has ~30% biotic cover dominated by barnacles, FUCUS, mussels and Gloiopeltis (alga). Littorina are moderately concentrated. MITZ biota appear to be healthy.



XXXX	Wide	EV037 A ADEC Subsegment Length: 1231m METERS 0 100 200 AK State Plane Zone 4 per037ac	Subdivision Field Map Map Key: PWSEV037Ac Name: <u>GREG CHANEY</u> Date: <u>APRIL 28 1991</u> Date Entered:
////	Medium		
----	Narrow		
TTTT	Very Light		
0000	No Oil		

REVISED: F.W. 5/1/91
 REVIEWED: M.C. 5/1/91

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-37

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ EV-37 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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 480 m: Narrow 0 m: V.Light 453 m: No Oil 302 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 30+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of oiled vegetation, 2) removal of tarmats, and 3) bioremediation where shown on sketch map. Work should be conducted after 6/1 and with USFWS approval based on eagle nest constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)**
1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)**
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/15)**
1E Main Bay Hatchery release (4/20 to 6/15)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I Gill net area (6/7 to 8/31)**
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)**
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)**
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)**
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)**
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Rothy 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)**
Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation:**
6V 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/ EU-37 SUBDIVISION: A (1061) DATE 4-21-90

IOAA

NAME Michael - Buchman SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS Northern end of segment has a raised shelf with oiled debris. First beach on the northern end has noticeably heavier coating, especially toward the south end of the beach. Shells were seen in tide pools. Poor colonization was observed below oiling in the south end of this beach. Staining & coating continued thru out segment. Southern tip was an area of 19 state slabs with considerable coat of oil on lower portions of in cracks, and asphalt in underlying rock. Oil in pits 5 & 6 were naturally degrading.

ADEC

NAME John Hayes SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS
 ① HWHP Wash URTZ
 ② Manual Cleanup of pattles + oiled vegetation URTZ + STZ
 ③ Bio. on cobble beaches in MITZ
 See sketch map. Treatment suggested for Northern, mid, + Southern portions of segment indicated on map.

LAND MANAGER

NAME Steve Warr-Chenega SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS manual clean-up and Hi-Pressure Wash.

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

OG Mike Roget NOAA Mike Buchman SEGMENT ST/ EV-37
 BIO Kathleen Conlin LAND REP Steve Ward c/vc SUBDIVISION A (1 OF 1)
 EXXON Larry Olson ADEC John Hayes TIME 16:30 to 18:30
 TEAM NO. 11 TIDE LEVEL 1.5 DATE 4/21/90
 EST. SUBDIVISION LENGTH: 1255 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock steep rocky backshore
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 50 % B 20 % C 15 % P 10 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Long 40 % Hang 20 % Vert 40 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 540 m N 0 m VL 420 m NO 295 m

SURFACE OIL

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

PAVEMENT H (F) S 10 sq. m by 5 cmPATTIES / TARBALLS (0) BAGSNEAR SHORE SHEEN? (0) BR RW SL TL

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

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE (0)#BAGS (0)

Photographs:

Roll No. ST 11-3Frames 32-34

SUBSURFACE OIL * OILED INTERVAL < 5 cm IN PIT 5 DOES NOT CONSTITUTE SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR							PIT ZONE				A N A	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS	
		OP	OR	OL	OF	NO		VO	VC	SOL PR	SOL FR	OT	SL	DR	TL	LR	SU	U	M	L					
1	20		X				0-10		X								X					N	-		C, P, C
2	10				X		0-10		X								X					N	-		C, P, R
3	30					X	.		X								X					N	-		C, P, C
4	30					X	.		X								X					N	-		C, P, C
5	30				X		0-10		X							X						N	-		P.
6	30	X					0-30	X		/			X			X						Y	20		C, P

COMMENTS Most of the oiling was observed in the northern end of the segment. The Northern most Pocket beach contained CT/B tar in the upper and MIZ among the boulders and rock with some asphalt and cover in the crevices. There is a continuous stain on the rocky headland between the 1st & second Pocket beach. This 2nd Northernmost beach is a low angle B/C beach with a 25m x 100m CT/B area with some subsurface oiling (Pit # 5). South of this B/C beach is a Boulder/Rock outcrop w/ a 10m x 70m CT/B with some asphalt in the crevices and rainbow sheen observed in the tide pool.

REVIEWED JW DATE 4-25-90

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 04-12-90

SEGMENT ST/ EV-37 SUBDIVISION A (1 OF 1)

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM - CM)	BELOW		OIL / FILM COLOR							PIT ZONE				A N A	SCREEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS	
		OP	OR	OL	OF	NO		VO	UC	50L BR	50L RW	50L BL	50L TL	50L LB	SU	UI	M	U							
7	20					X	.		X							X						N	-		C, G, C
8	30					X	.		X							X						N	-		G, C
9	25					X	.		X							X						N	-		P, G, C
10	30					X	.		X							X						N	-		P, G, P, C
11	40					X	.		X							X						N	-		C, P, G, P
12	30					X	.		X								X					N	-		C, P, G, P
13	40					X	.		X							X						N	30		C, P, G, C
14	30		X				0-10		X				X		X							N	-		C, P, C
							.																		
							.																		
							.																		
							.																		
							.																		
							.																		
							.																		

COMMENTS

Staining continues south of this beach on the rocky headland. The middle of the segment contains some staining in the HITZ. The south end of the segment contains a 10m x 40m CT/P on high angle B/R with some localized CV/B and asphalt between the crevasses in the boulder/rock. There is also some oiled vegetation and logs in the supra ITZ. The southern end of the segment contains a 5m x 100m CT/P among low angle boulders / bedrock in the HITZ.

REVIEWED JW DATE 4-25-90

REVISIONS

Of Character Length (m): AP 10 PO 0 CV 0 CT 520 ST 430 MS 0 FT 0 TB 0 FL 0 NO 295

OG M.K. Foyet
SEGMENT ST/ 37
SUBDIVISION A
DATE 4 / 2 / 90

CHECKLIST

- ☐ N. Area
- ☐ Approx. Scale
- ☐ Seg/Sub Body
- ☐ Oil Dist.
- ☐ When
- ☐ Length
- ☐ Substrate Character
- ☐ Est. HTH/LTH
- ☐ S/S
- ☐ Profile Location(s)
- ☐ Photo Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 Δ Pt. No Substrate Oil
- 2 Δ Pt. Substrate Oil
- CT/C Continuous Distribution
- CT/B Broken Distribution
- CT/P Patchy Distribution
- CT/S Spotted Distribution
- Oil Vegetation

MANUAL PICKUP OF OILED VEU
Photo location, direction, and number

Legend

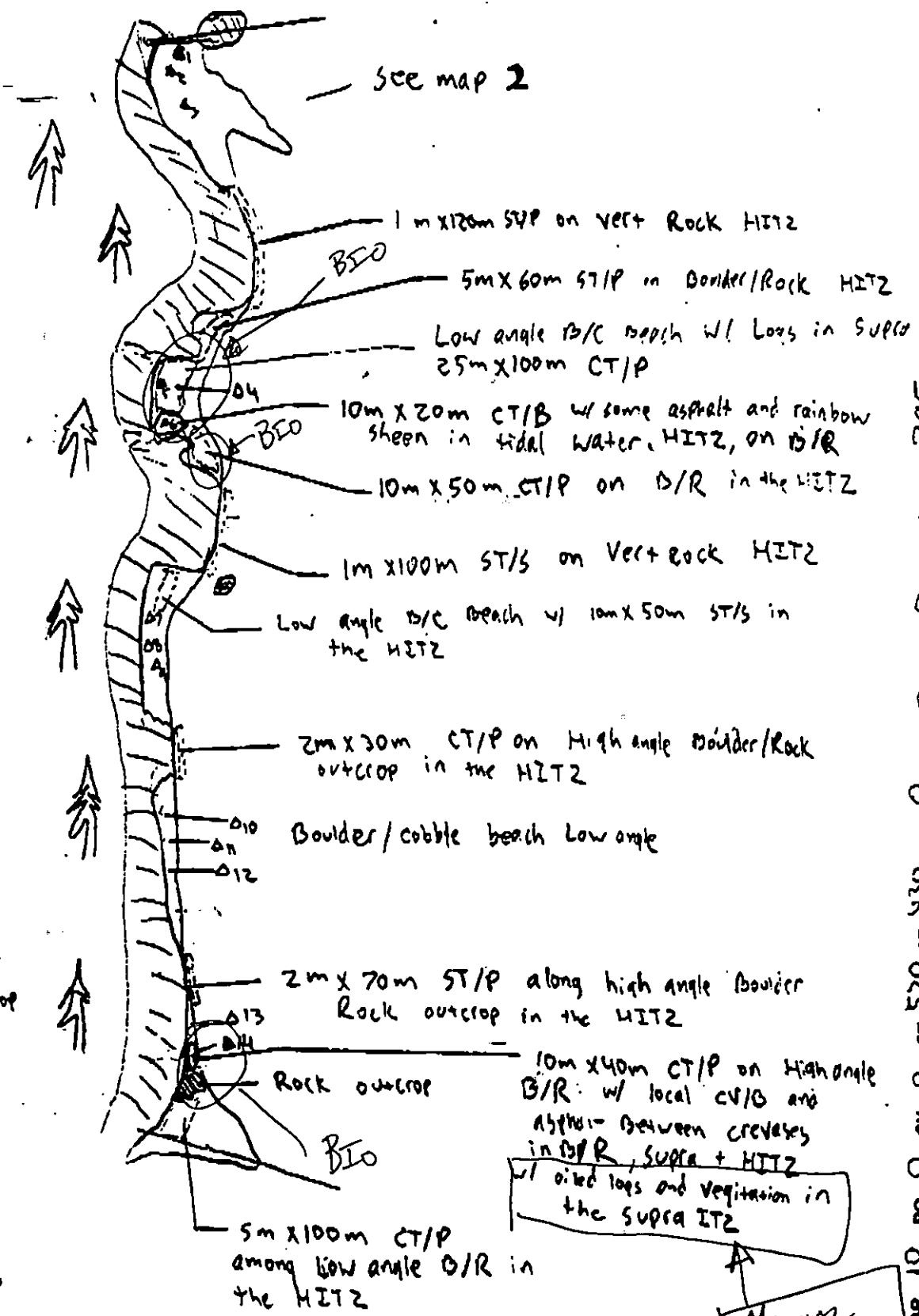
- ↑ - trees
- /// - steep Rocky backshore
- - Large Rock outcrop

scale

100m

N

SI H MAP I



OG 111KE 10401

SEGMENT EV-37

SUBDIVISION A

DATE 4 / 21 90

CHECKLIST

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

LEGEND

1 Δ
Pi - No Subsurface Oil

2 Δ
Pi - Subsurface Oil

CT/C
Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S
Splashed Distribution

Oiled Vegetation

1 ●
Photo location, direction, and number

Scale
10m

TCH MAP 2.

10m x 15 CT/P w/ asphalt between cracks on B/R outcrop in the HITZ

BFO
HITZ

CT/B 10m x 15m w/ asphalt between cracks on B/R outcrop in the HITZ

Bedrock outcrop

2m x 40m CT/P on Rock outcrop in the HITZ

Pocket B/C Beach
Low angle

10m x 100m CT/P on O/C in the HITZ
Low angle

BFO

Pebble storm berm with drift logs and fucus

Legend

Pickup OILED VEG.

/// - steep rocky backshore/rock outcrop

○ - Large Boulder outcrop

↑ - trees

15m x 20m CT/B w/ some asphalt between cracks in the HITZ on Boulder / Rock and surf HITZ

10m x 20m CT/B w/ some asphalt between cracks in the HITZ on Boulder / Rock and surf HITZ

MANUAL ASPHALT REMOVAL

see MAP 1

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

REVISION: 00/04/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/ EU-37 Subdivision A (1 of 1) Date (mo / day / yr) 04/21/90Time (24 hr) 1638-1830 Biologist KATHLEEN CONLAN(A) Substrate type and % of segments:
(1) Bedrock 50 (2) Boulder 20 (3) Cobble 15 (4) Pebble 10 (5) Sand 5 (6) Silt 0(B) Overall % cover of biota (% of segment): Dense 50 Moderate 30 Low 20

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

Photographs: Roll No. ST11-3Frames 32-34

BARNACLES

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

2 SEALS & BALD EAGLES; NUMEROUS (TOTAL OF ~50) GULLS
 FLEW OVERHEAD, NORTHWARDS FROM SHALLOW BAY AT VILLAGE

Ecological Considerations:

EV-3

STII-3
32 →

ECOLOGICAL MAP (1 OF 1)

RESOURCE CODES FOR ENTIRE
SEGMENT:

ST-1

III

(PIT # 6)

33,
34 →

EV-3

BIRD EAGLE NEST

Confirmed present
21 April 1990 Two adults seen.

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

EV-37

ADEC Segment Length: 1255m



Map Key: PWS-243
Name: K.E. CONLAN
Date: 21 APRIL 1990
Data Entered:

EV-3

EV-37A

XXXX Wide

//// Medium

----- Narrow

TTTT Very Light

0000 No Oil

EV-37A

ADEC Segment Length: 1255m



Map Key: PWS-243

Name: Mike Fogel

Date: 4/21/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EV-37 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup and Tarmat Removal Inside Eagle Nest Buffer Zone	CLOSED
Manual Pickup and Tarmat Removal Outside Eagle Nest Buffer Zone	OPEN
Bioremediation and Manual Raking Inside Eagle Nest Buffer Zone	WORK PRIOR TO 7/25
Bioremediation and Manual Raking Outside Eagle Nest Buffer Zone	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1K	Purse Seine Hook-off	No constraint to manual pickup and tarmat removal; closed to bioremediation and manual raking after 7/25.
5T	Bald Eagle Nest	USFWS 6/1/90 map indicates an active nest in Subdivision B. Closed to manual pickup, tarmat removal, bioremediation and manual raking within USFWS eagle nest buffer zone established 5/12/90 by Mike Lockhart. No constraint to manual pickup, tarmat removal, bioremediation, and manual raking outside eagle nest buffer zone.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup and tarmat removal; closed to bioremediation and manual raking after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

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

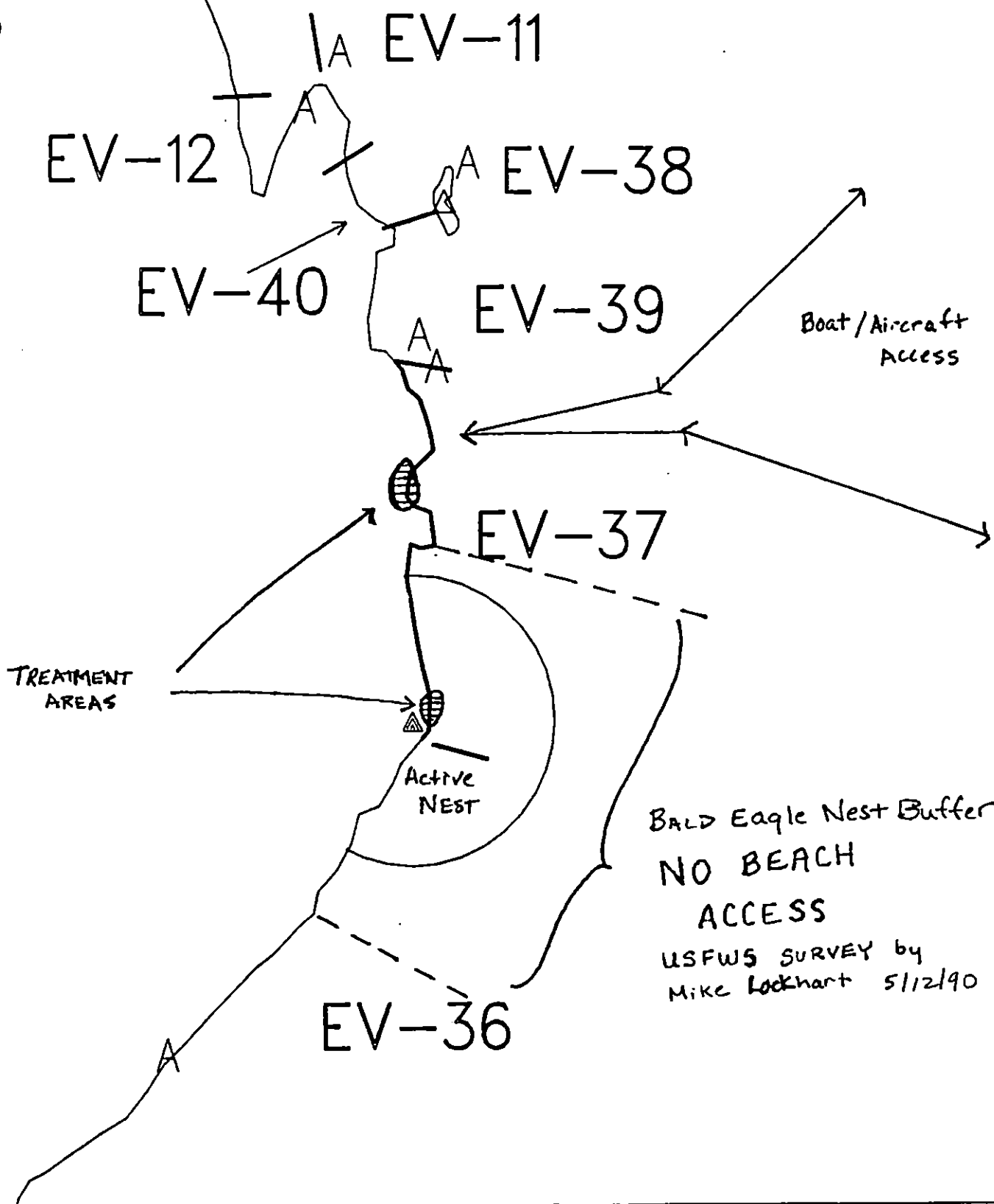
TAG APPROVAL DATE _____
ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC

Date

7 June 1990

-14



Exxon Company, USA
Map Key: PMS-EV-37
June 04, 1990

ECOLOGY MAP
SEGMENT EV-37
SUBDIVISION A (1 of 1)
METERS
0 351 702

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

1 inch = 1152 feet

SHORELINE EVALUATION

SEGMENT ST/ EV-37 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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. Dwyer DATE: 5/3/90

OILING CATEGORIZATION:

Wide 0 m: Medium 480 m: Narrow 0 m: V.Light 453 m: No Oil 302 m
Subsurface Oil Observed: Yes X No Maximum Depth 30+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of oiled vegetation, 2) removal of tarmats, and 3) bioremediation where shown on sketch map. Work should be conducted after (6/1) and with USFWS approval based on eagle nest constraints.

See Constraint Addendum 6/1/90 WJK

TAG COMMENTS: MANUALLY RAKE/TILL AREA OF TPG PRIOR TO EO

TAG APPROVAL DATE: 5/3/90

ADEC ART WENGER

EXXON ANDY TOL

NOAA GARY PATRICK

USCG KENNETH HEINE

FOSC: ML DATE: 5-18-90

NOTIFY CWT 24 HRS IN ADVANCE OF WORK

SHORELINE EVALUATION

SEGMENT ST/ EV-37 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles J. Adams DATE: 5/3/90

OILING CATEGORIZATION:

Wide 0 m: Medium 480 m: Narrow 0 m: V.Light 453 m: No Oil 302 m
Subsurface Oil Observed: Yes X No Maximum Depth 30+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of oiled vegetation, 2) removal of tarmats, and 3) bioremediation where shown on sketch map. Work should be conducted after 6/1 and with USFWS approval based on eagle nest constraints.

TAG COMMENTS: MANUALLY RAKE/TILL AREA OF TP 6 PRIOR TO B.O.

TAG APPROVAL DATE: 5/3/90
ADEC ART WENGER Dist. Admin
EXXON ANDY TSM
NOAA GARY PETRAE
USCG KENNETH KEANE

FOSC: DATE: 5-18-90
NOTIFY CVC 24 HRS IN ADVANCE OF WORK

OG M.V. Foy et
 SEGMENT ST/ EV-37
 SUBDIVISION A
 DATE 4/21/90

- CHECKLIST**
- ☐ M. Area
 - ☐ Approx. Scale
 - ☐ Seg/Sub Entry
 - ☐ On Dist.
 - ☐ Width
 - ☐ Length
 - ☐ % Cover
 - ☐ Substrate Character
 - ☐ Est. INTL/ML
 - ☐ SSR
 - ☐ Patches Location(s)
 - ☐ Patches(s)
 - ☐ Patches Location(s)
 - ☐ Photos Location(s)

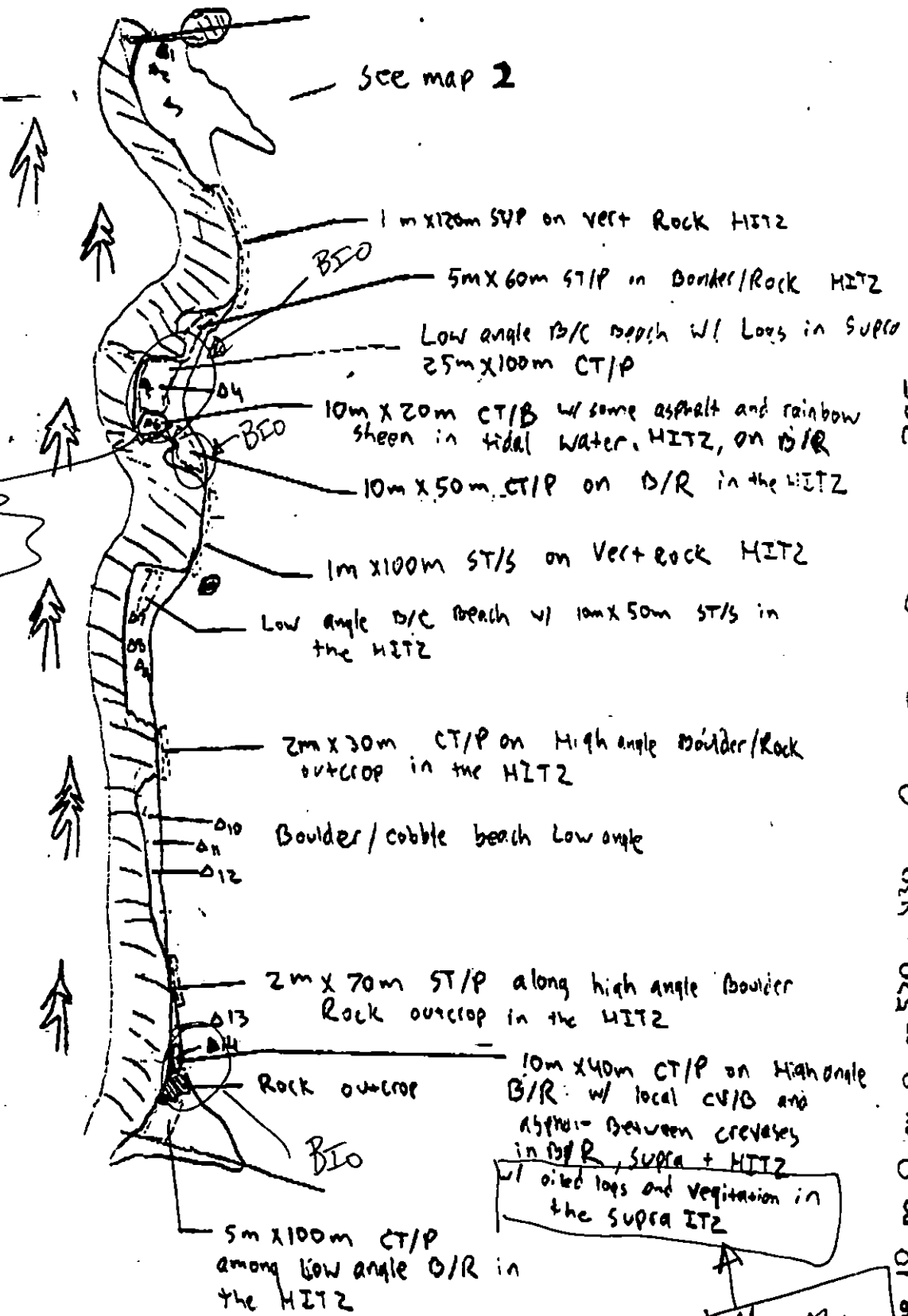
LEGEND

- 1. Δ Pt. No Substrate On
- 2. Δ Pt. Substrate On
- ☐ CT/C Conscious Distribution
- ☐ CT/O Broken Distribution
- ☐ CT/P Patchy Distribution
- ☐ CT/S Spotted Distribution
- ☐ C/ve Vegetation

MANUAL
 Pickup
 of
 oiled
 VEU

SKETCH MAP

MANUAL
 RAKE PRIOR
 TO BIO



Of Character Length (m): AP 10 PO 0 CV 0 CT 520 ST 430 MS 0 PT 0 TB 0 FL 0 NO 295

OG Mike Royel

SEGMENT EV-37

SUBDIVISION A

DATE 4 / 21 90

CHECKLIST

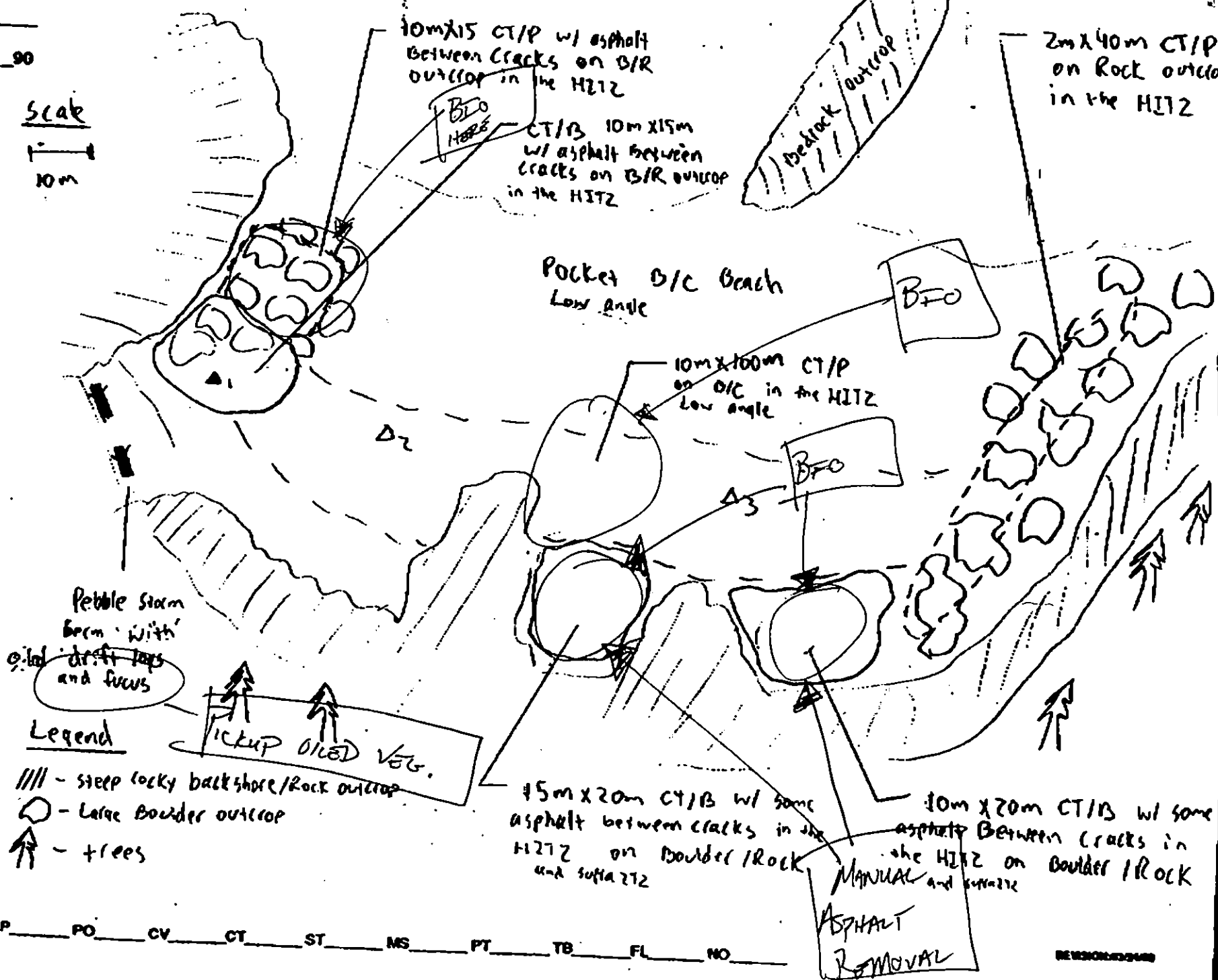
- H Area
- Approx. Scale
- Seg/Sub Entry
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Ext. H/W/L/A/V
- SSL
- Profile Location(s)
- Profile(s)
- Pt Location(s)
- Photo Location(s)

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

Scale
10m

SWITCH MAP 2.



see Map 1

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

REVISION 03/90

ST11-3
32 →

ECOLOGICAL MAP (1 OF 1)

RESOURCE CODES FOR ENTIRE
SEGMENT:

ST-1

TL

(PIT # 6)

33, 34 →

EV-3

~~BIRD EVIDENCE~~

Confirmed present
21 April 1990 Two adults seen.

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-37

ADEC Segment Length: 1255m



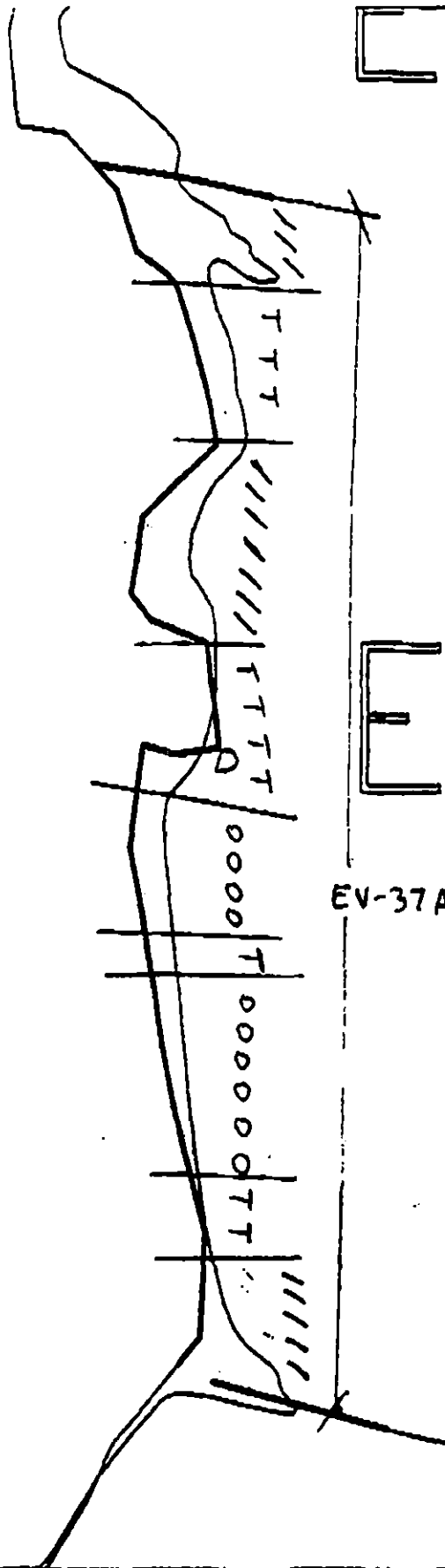
Map Key: PWS-243

Name: K.E. CONLAN

Date: 21 APRIL 1990

Data Entered:

EV-3



EV-3

EV-37A

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

EV-37A

ADEC Segment Length: 1255m



Map Key: PWS-243
 Name: Mike Fogel
 Date: 4/21/90
 Data Entered:

1991 MAYSAP EVALUATION

SEGMENT: EV 038 SUB: A REGION: PWS SURVEY DATE: 4/28/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest,
Fish harvest area

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Charles E. H. Jones Date: 5/10/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 10 1991

FOSC APPROVAL DATE: 5/15/91

ADEC

FOSC

EXXON

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

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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 EV-38 SUBDIVISION A DATE 4/28/91

ADEC

NAME John Hays SIGNATURE [Signature]

- ☒ NTR EV-38 only partially surveyed as Eagle was flushed from nest 3 miles as we began to survey. Oiling observed was CR/CV on bedrock + lee of boulders. CVC + I concurred that island did not need treatment in 1990 as remaining oiling on island may continue to weather.

EXXON

NAME Martinez M.J. SIGNATURE [Signature]

- ☒ NTR No recoverable or treatable oil noted in area surveyed. Survey cut short due to nesting eagles. Talking with Land Manager Steve Ward, local resource Carol Wilson + ADEC Rep John Hays this area has ~~not~~ needed treatment since Summer 90.

LANDMANAGER

NAME Steve Ward OF CVC SIGNATURE [Signature]

- ☒ NTR No History of Sub-Surface oil. No oil in pits dug. Survey stopped due to Eagle Nesting. This area has a light band of broken oil on Rock faces around entire island. oil is mostly on vertical faces.

USCG/NOAA

NAME Dreher / Hedges SIGNATURE [Signature]

- ☒ NTR Very little spatter was found in areas of large rocks. No recoverable oil. oil 'bleached' spots were discovered on large lichen rocks.

DATE April 28 1911

EST. OIL CATEGORY LENGTH: W m M m N m VL 85 m NO 70 m US 289 m

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

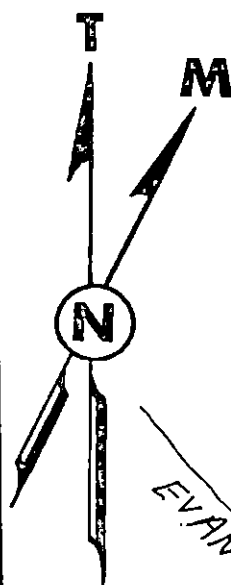
PHOTO ROLL # MAYSAP-

5 - 3 FRAMES 7-12

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

REMARKS: M.C. 5/5/91

MAYSAP 1991
 OG SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV-38A
 DATE: APRIL 29 91
 AIR P.#: PIM-C 006-12



EVANS ISLAND

Survey Stopped
 Due To Eagle
 Disturbance

TREES & BRUSH

EAGLE'S NEST
 (ACTIVE)

LEGEND

BEDROCK	
BOULDER8	
FINE SED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE
 APPROX 65
 METERS

REVIEWED: F.W. 5/2/91
 REVISION: N.C. 5/5/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5

DATE 28 Apr '91

SEGMENT # EV-38

TIDAL HEIGHT(Range) -1 → -1.5

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 1-2

WIND SPEED/DIRECTION 5-10 knots / E

PHOTOGRAPHS: ROLL # MAYSAP # 3

FRAME # 10, 11

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

(A) Area on rock face ranging vertically from SUPRA to MITZ. In the SUPRA there are oil drips on the rock that have "peeled off" leaving a "reverse shadow" in the black lichen (see Photo Roll #3 Frame 10:11. In the UITZ there is a barnacle band 1m wide. Top of band is contaminated with oil. About 30-40% of the shells are empty. At the bottom of the band a new set is present. There is a thin (2cm) band of mussels at the base of rock following a crevice. Littorina and limpets are sparse.

(B) Area is in a UITZ boulder pocket. Within the site barnacles are Littorina are rare. One meter below site in the MITZ there is a moderately concentrated mussel population and barnacles increase to sparse. There is a dense Fucus bed 5m NW of site and the LITZ is rich including Semibalanus (Horn barnacles), Katania tunicata (black chitons), Ulva, Halosaccus (algae).

(C) Unable to investigate - flushed eagle from nest so we left the beach. NOAA rep. reported heavy barnacle recruitment in vicinity. OG reported area very similar to (B).

Active Bald Eagle Nest. Rich LITZ with 80-90% biota coverage including the algae Palmaria, Fucus, Ulva, Odonthalia, Halosaccus, filamentous greens and Desmarestia. Animals included juvenile eels, bryozoans, clams, barnacles and sea stars Leptasterias and Pycnopodia. With such a rich healthy LITZ and sensitive Eagle site net environmental benefit would be minimal if present oil was treated.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

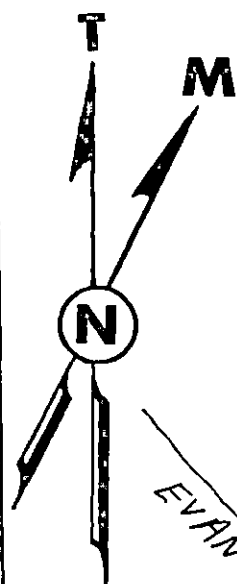
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2 - Active Nest	
Seabirds	1	3	
Waterfowl			
Gulls/kittiwakes	1	5	
Shorebirds			
Corvids	1	4	
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

Reviewed MBS 5/4/91

MAYSAP 1991
 OG SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV-38A
 DATE: APRIL 28 91
 AIR P.#: PIM-C 006-12



LEGEND

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

SCALE

APPROX 65
 METERS

EVANS ISLAND

Survey Stopped
 Due To Eagle
 Disturbance

Did not survey - Eagle
 Flushed and team left beach

TREES & BRUSH

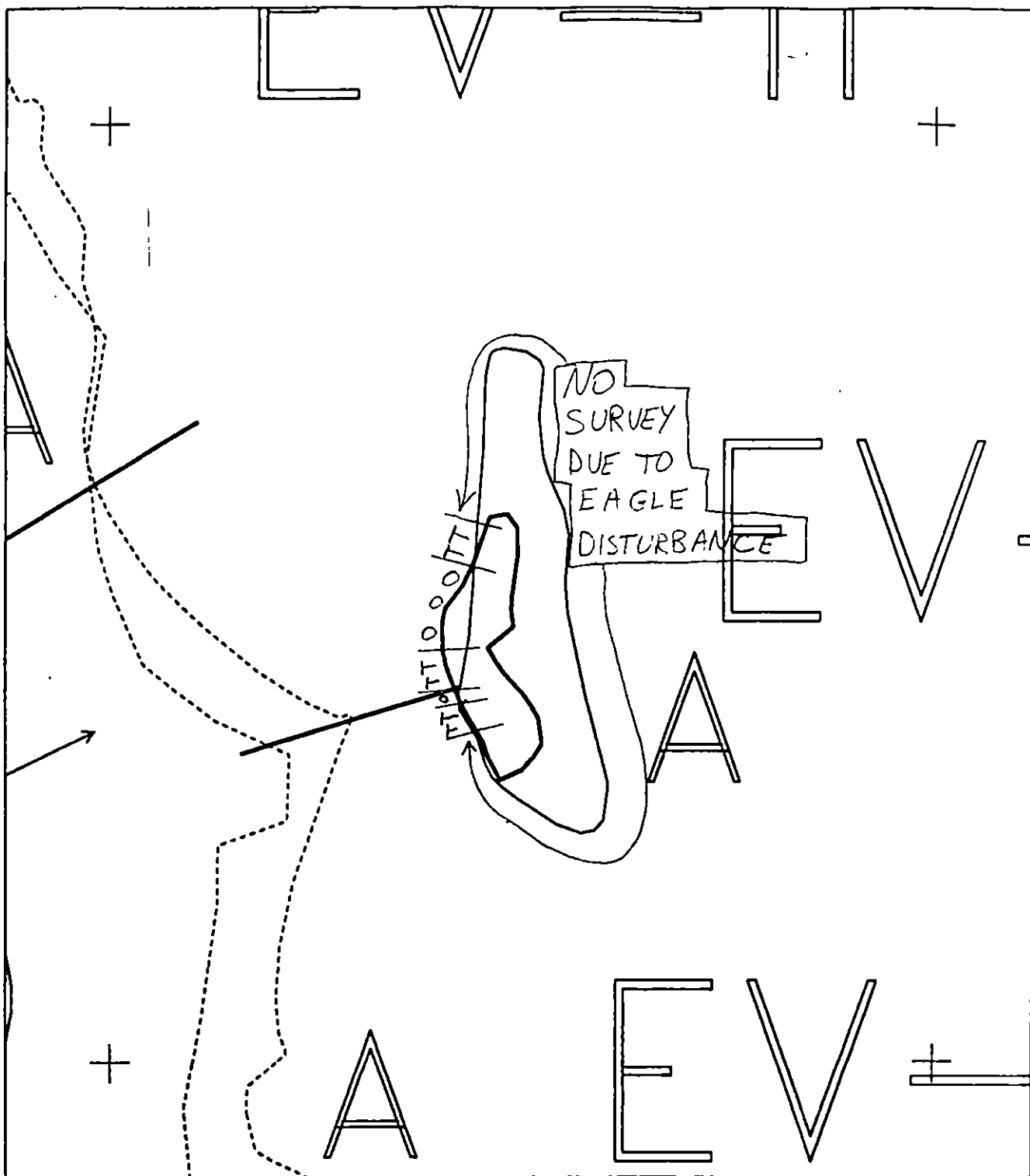
EAGLE'S NEST
 (ACTIVE)

KNIGHT
 ISLAND
 PASSAGE

10m below
 has clam bed

Rich, dense
 LITZ

Reviewed MB 5/4/91



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

EV038 A

ADEC Subsegment Length: 444m
 METERS

0 100 200
 AK State Plane Zone 4
 pcv038a



Subdivision Field Map
 Map Key: PWSEV038A
 Name: GREG CHANEY
 Date: APRIL 28 91
 Date Entered:

REVIEWED: F.W. 5/2/91
 REVIEWED: M.C. 5/5/91

1991 MAYSAP EVALUATION

SEGMENT: EV 038 SUB: A REGION: PWS SURVEY DATE: 4/28/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest,
Fish harvest area

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC

FOSC

EXXON

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

USFWS FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT EV-38 SUBDIVISION A DATE 4/28/91

ADEC

NAME John Hays SIGNATURE [Signature]

- ☒ NTR EV-38 only partially surveyed as Eagle was flushed from nest 3 times as we began to survey. Oiling observed was CR/CV on bedrock + lee of boulders. CVC + I concurred that island did not need treatment in 1990 as remaining oiling on Island may continue to weather.

EXXON

NAME Martinez N.J. SIGNATURE [Signature]

- ☒ NTR No recoverable or treatable oil noted in area surveyed. Survey cut short due to nesting eagles. Talking with Land Manager Steve Ward, local resource Carol Wilson + ADEC Rep John Hays this area has ~~not~~ needed treatment since Summer 90.

LANDMANAGER

NAME Steve Ward OF CVC SIGNATURE [Signature]

- ☒ NTR NO History or Sub-Surface oil. NO oil in pits dug. Survey stopped due to Eagle nesting. this area has a light band of broken oil on Rock faces Around Entire Island. oil is mostly on Vertical Faces.

USCG/NOAA

NAME Dreher / Hodges SIGNATURE [Signature]

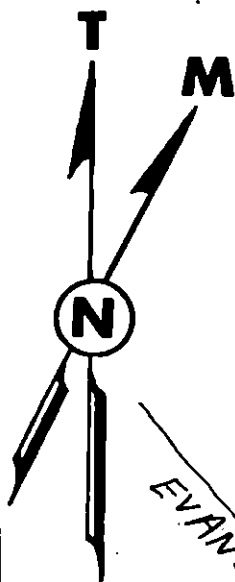
- ☒ NTR very little spatter was found in areas of large rocks. No recoverable oil. Oil 'bleached' spots were discovered on large lichen rocks.

PHOTO ROLL # MAYSAP- 5 - 3 FRAMES 7-12

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

REVISED: F.W. 5/2/91
REVISOR: M.C. 5/5/91

MAYBAP 1991
 OG SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV-38A
 DATE: APRIL 28 91
 AIR P.#: PIM-C 006-12



LEGEND

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

SCALE

APPROX 65
 METERS

Survey Stopped
 Due To Eagle
 Disturbance

12

9

10

TREES & BRUSH

EAGLE'S NEST
 (ACTIVE)

KNIGHT
 ISLAND
 PASSAGE

Reviewed: Feb 5/4/91
 Rechecked: M.C. 5/5/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5

DATE 28 Apr '91

SEGMENT # EV-38

TIDAL HEIGHT(Range) -1 → -1.5

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 1-2

WIND SPEED/DIRECTION 5-10 knots / E

PHOTOGRAPHS: ROLL # MAYSAP # 3

FRAME # 10, 11

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

(A) Area on rock face ranging vertically from SUPRA to MITZ. In the SUPRA there are oil drips on the rock that have "peeled off" leaving a "reverse shadow" in the black lichen (see Photo Roll # 3 Frame 10:11. In the UITZ there is a barnacle band 1m wide. Top of band is contaminated with oil. About 30-40% of the shells are empty. At the bottom of the band a new set is present. There is a thin (2cm) band of mussels at the base of rock following a crevice. Littorina and limpets are sparse.

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(C) Unable to investigate - flushed eagle from nest so we left the beach. NOAA rep. reported heavy barnacle recruitment in vicinity. OG reported area very similar to (B).

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(With such a rich healthy LITZ and sensitive Eagle site net environmental benefit would be minimal if present oil was treated.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

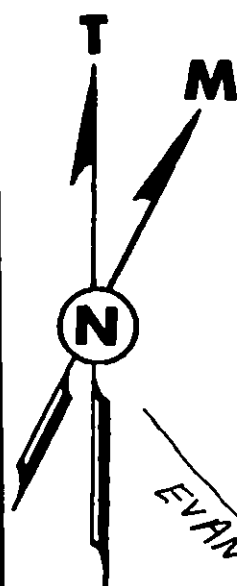
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Gulls/kittiwakes	1	5	
Shorebirds			
Corvids	1	4	
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

Reviewed MB 5/4/91

MAYBAP 1991
 OG SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV-38A
 DATE: APRIL 28 91
 AIR P.#: PIM-C 006-12

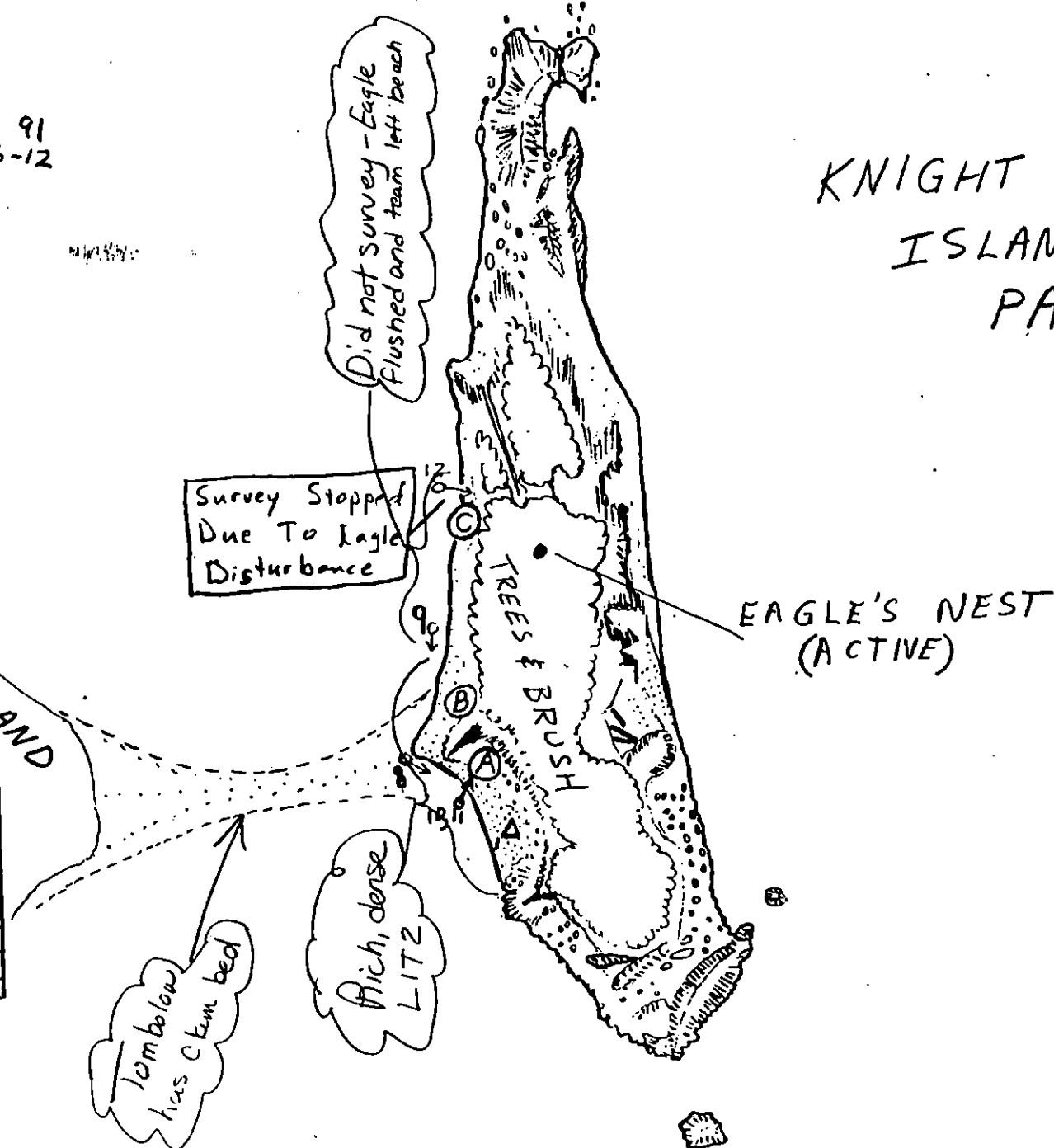


LEGEND

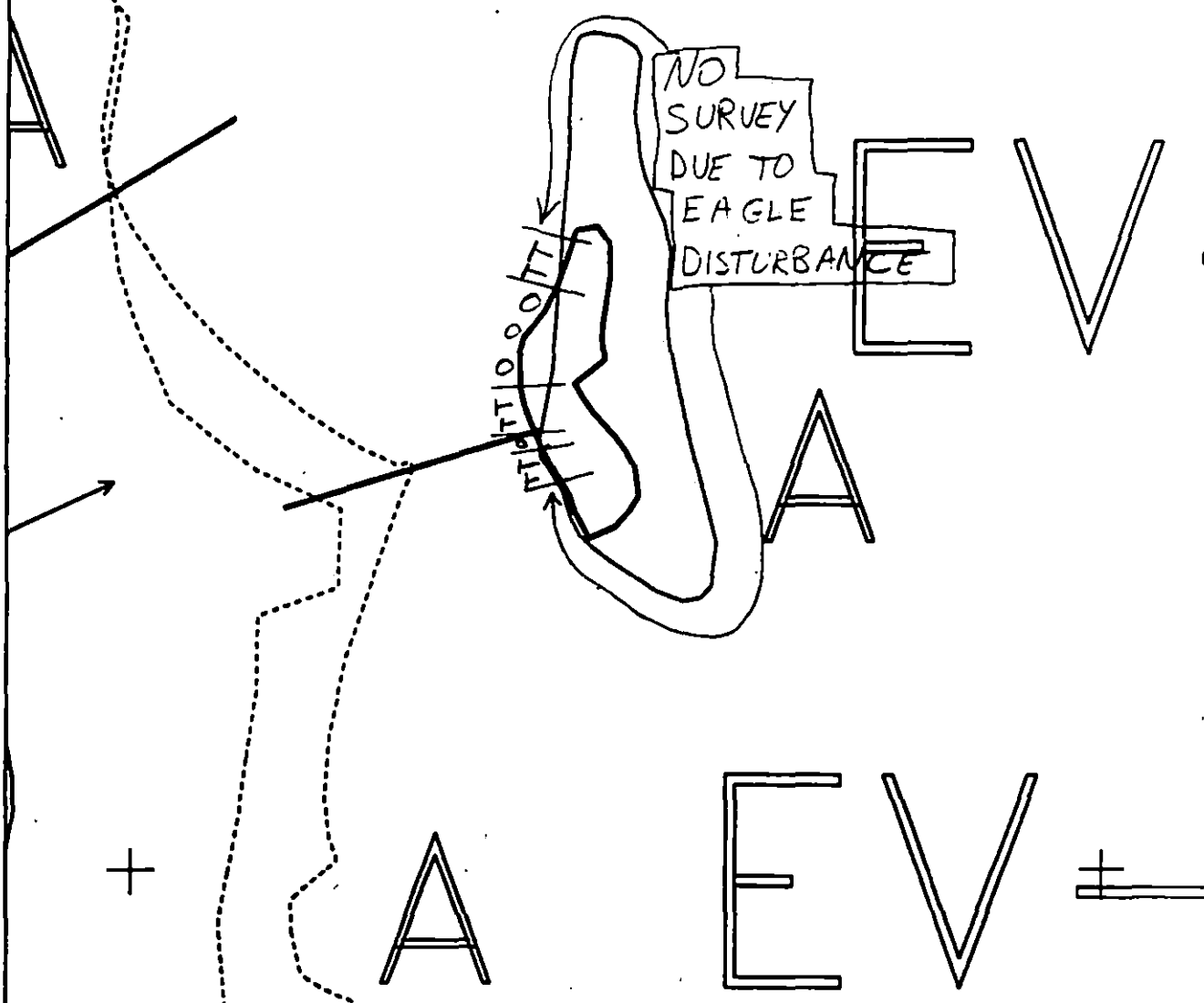
BEDROCK	
BOULDER	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE

APPROX 65
 METERS



KNIGHT
 ISLAND
 PASSAGE



XXXX	Wide	EV038 A ADEC Subsegment Length: 444m METERS AK State Plane Zone 4 pr038a	 	Subdivision Field Map
////	Medium			Map Key: PWSEV038A
----	Narrow			Name: <u>GREG CHANEY</u>
TTTT	Very Light			Date: <u>APRIL 28 '91</u>
0000	No Oil			Date Entered:

REVIEWED: F.W. 5/2/91
 REVIEWED: M.C. 5/5/91

SUPPLEMENTAL

1991 MAYSAP EVALUATION

SEGMENT: EV38 SUB: A REGION: PWS SURVEY DATE: ADEC Survey

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) _____

RECEIVED

Ecological/Constraints (see page two for details) _____

JUL 18 1991

ANCHORAGE-A00/A

ARCHAEOLOGICAL CONSTRAINTS:

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

for SHPO Signature: Charles F. Holmes

Date: 6/27/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N) _____

N

N

Manual Pickup (Check as Req.) _____

Spot Washing _____

Bio-Customblen Only _____

Bio-Inipol/Customblen _____

Other _____

Other _____

COMMENTS:

INITIAL: _____

TAG: TAG DOES NOT BELIEVE TREATMENT OR A TAG RE-EVALUATION IS WARRANTED BASED ON THE INFORMATION PRESENTED BY ADEC (LETTER DATED JUNE 24 1991)

FOSC: Remove Percutaneous Mousse in Area A: OIL TOO LIMITED TO WARRANTING CLEANUP - RF

TAG APPROVAL DATE: June 26 1991 FOSC APPROVAL DATE: 7/9/91

ADEC John Bauer

FOSC

E. E. PAGE, CDR, USCG

CHIEF OF STAFF FOSC

EXXON Real

USCG Edna

NOAA John

The State will evaluate the need to conduct treatment at this subdivision
John Bauer

PAGE ____ OF ____

BIO _____

SEGMENT EV 038

LANDMANAGER Carlson/Hall for ADNR

SUBDIVISION A

XXON _____

USCG/NOAA _____

DATE 6, 11, 91

TIME 10 : 10 to 11 : 05

TIDE LEVEL 0.0 ft. to 25 ft.

ENERGY LEVEL: ☐ H ☒ M ☐ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 400 m

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

EST. OIL CATEGORY LENGTH: W 12 m M 0 m N 0 m VL 40 m NO 343 m US 0 m

[illegible]

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

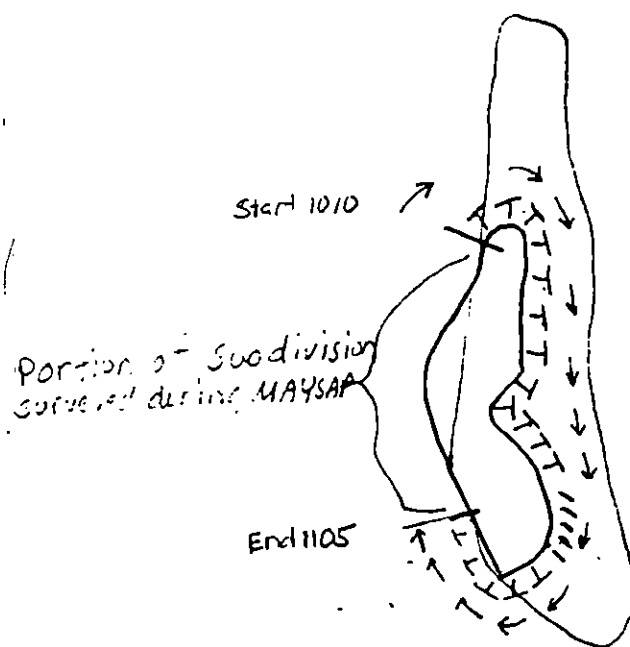
SLOPE: V = VERTICAL: H = HIGH ANGLE: M = MEDIUM ANGLE: L = LOW ANGLE PHOTO ROLL # MAYSAP- - FRAMES

[illegible]

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

OG COMMENTS:

LIGHT COAT/SKIN ON BEDROCKS ISOLATED PATCH OF MOUSSE/MSOR
CATCH IN SEDIMENTS AND ON BEDROCK PLATFORM SE SIDE OF
ISLAND.



(26)

6/11/91
 Ray Finney

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

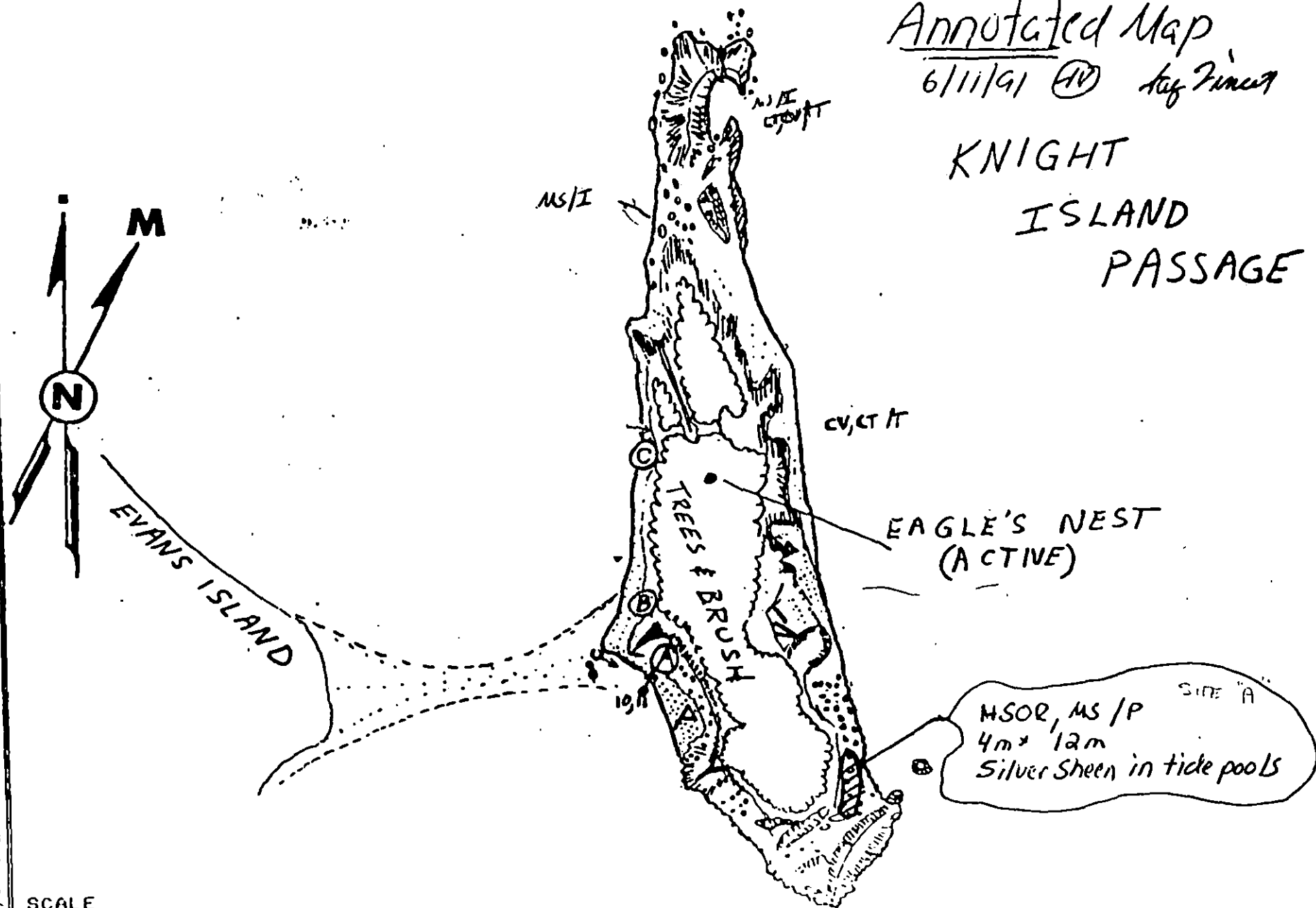
EV038 A

0 100 200



Annotated Map
6/11/91 (AV) *by Finer*

KNIGHT ISLAND PASSAGE



REVIEWED: F. J. S. / 4
REVISION: M. C. 5/5/11

SCALE
APPROX 5
METERS

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-38

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ EV-38 SUBDIVISION A (1 OF 1) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T-1 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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 292 m: V. Light 13 m: No Oil 140 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 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
- ✓ 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (8/1 to 9/15)
 6V Anchorages (8/1 to 9/15)
 6W Forest Service cabins (8/1 to 9/15)
 6X Lodge (8/1 to 9/15)
 6Y Special use destination
- 7Z 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

SEGMENT ST/ EU-38 SUBDIVISION: A (1 of 1) DATE 4-20-90

NOAA

NAME Michael J. Johnson SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS Island with a lg rock outcrop on the northern tip & headlands on the southern end. These are separated by a saddle which may be in wave wash at high tide. NEARLY ALL the shoreline is uplifted, tilted SLATE SLABS. High wave and sun exposure along the EAST side. Splatter stain with drips was seen along the south west side. The saddle had a stain to coast thru out. Stain band was observed north of beach on eastern side, and continued with increasing intensity to coast on the rock wall to the south of beach and around to the southern tip. It diminished to stain from southern tip around to western side. Oiling on eastern side is dried & highly weathered. One fissure south of beach on east side had noticeably heavier coat with drips

ADEC

NAME John Hayes SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Observed bands of stain + light coat of tar in U.I.T.Z. Island is N. of Evans and gets moderate to high exposure. No treatment recommended weathering & reducing oiling to stain.

LAND MANAGER

NAME Steve Owen - Chyn Corp SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Light oil band - Weather should clean stain

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

OG MIKE FOLET ~~Michael Buchanan~~ SEGMENT ST/ EV-38
 BIO KATHLEEN CORBIN LAND REP STEVE WARD SUBDIVISION A (1 OF 1)
 EXXON LARRY OLSON ADEC John Hayes TIME 18:30 to 19:20
 TEAM NO. 77 TIDE LEVEL 3.2 DATE 4/20/90
 EST. SUBDIVISION LENGTH: 277 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 70 % B 20 % C 5 % P 5 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 10 % Hang 30 % Vert 60 % WAVE EXPOSURE: ☐ Low ☒ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 480 m VL 10 m NO 287 m

SURFACE OIL

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

PAVEMENT H ☒ S 0 sq. m by 0 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? ☒ BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒

TYPE 0

#BAGS 0

Photographs:

Roll No. _____

Frames _____

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR						PIT ZONE				A	N	A	S	(M)	V	F	SURFACE - SUBSURFACE SEDIMENTS	
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	6	7	8	SU	U									M
1	30					X	-		X									X										C
2	30					X	-		X								X											C
3	20					X	-		X										X									G, P, G
4	20					X	-		X										X									P, G, C
5	20					X	-		X								X											C, P, G, C
							-																					

COMMENTS shore zone consists mostly of steep high angle Boulder / Rock with a few pocket B/C Beaches. There is a patchy distribution of tar/coat along the south western end of the Island. Tar coating also occurs in a rock valley on the Northern Part of the Island. All oiling occurs in the HITZ on rock/Boulder face. NO subsurface oiling was discovered. The Northern and eastern Parts of the Island have a high wave exposure, while the Western and Southern Parts of the Island have a medium wave exposure

REVIEWED JW DATE 4-23-90

OG Mik met
 SEGMENT ST/ EV-38
 SUBDIVISION A
 DATE 4, 20 90

SL CH MAP

CHECKLIST

☐ N Arrow
☐ Approx. Scale
☐ Seg/Sub Body
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HML/LWL
☐ 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

Oiled Vegetation

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

Scale

100m

Legend

$\circ$ - Boulders

$\uparrow$ - trees

/// - steep bedrock/boulder
 shore zone

Wave
 Exposure
 medium

3m x 50m CT/P
 on High angle
 O/C Beach

2m x 50m CT/P in rock
 valley HITZ

Wave exposure High

10m x 15m CT/P in HITZ on
 O/C saddle

1m x 10m ST/P on
 HITZ on Vert Rock

High angle O/C Beach

1m x 80m ST/P along
 High angle O/R shore
 zone in the HITZ

1m x 250m CT/P
 on High angle O/R
 shore zone in the HITZ

3m x 50m CT/P around O/R
 in the HITZ

Oil Character Length (m): AP 0 PO 0 CV 0 CT 425 ST 80 MS 0 PT 0 TB 0 FL 0 NO 287

REVISION 02/2000

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / EU-38 Subdivision A (1 OF 1) Date (mo / day / yr) 09/20/90

Time (24 hr) 1835-1920 Biologist KATHLEEN CONLAN

(A) Substrate type and % of segments:
(1) Bedrock 70 (2) Boulder 20 (3) Cobble 5 (4) Pebble 5 (5) Sand 0 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 70 Moderate 20 Low 10

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

Photographs:
Roll No. _____

Frames _____

BARNACLES

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

NOT PRESENT

Wildlife Observations/ General Comments:

1 BALD EAGLE ; 1 SEA OTTER
1 MAGPIE

Ecological Considerations:

ECOLOGY MAP (1 of 1)

RESOURCE CODES FOR
ENTIRE SEGMENT:

EV-11

EV-3

EV-39

BIRD EAGLE NEST

EV-38

XXXX Wide

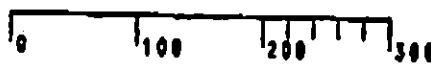
//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ADEC Segment Length: 777m


METERS

Map Key: PWS-244

Name: _____

Date: _____

Data Entered: _____

EV-11

EV-3

EV-39

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EV-38A

ADEC Segment Length: 777m


METERS

Map Key: PWS-244

Name: Mike FogelDate: 4/20/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ EV-38 SUBDIVISION A (1 OF 1) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. H. Dine DATE: 5/3/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 292 m: V. Light 13 m: No Oil 140 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/3/90

ADEC Art Weener Art Weener

EXXON Amy Galt Amy Galt

NOAA Gary Petras Gary Petras

USCG Kenneth Keane Kenneth Keane

FOSC: WJL DATE: 5-18-90

OG M. Forget

SEGMENT ST/ EV-38

SUBDIVISION A

DATE 4 / 20 90

SKETCH MAP

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bdry
- ☐ OB Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LVL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pli Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 Δ
Pl - No Subsurface Off
- 2 Δ
Pl - Subsurface Off
- $\square$ CT/C
Continuous Distribution
- $\square$ CT/B
Broken Distribution
- $\square$ CT/P
Patchy Distribution
- $\square$ CT/S
Spotted Distribution
- $\bullet \rightarrow$
Photo location, direction, and number

Scale

100m

Legend

- $\circ$ - Boulders
- $\uparrow$ - trees
- /// - steep Bedrock/Boulder shore zone

Wave Exposure medium

2m x 50m CT/P in rock valley HITZ

Wave exposure High

10m x 15m CT/P in HITZ on B/C saddle

3m x 50m CT/P on High angle B/C Beach

1m x 10m ST/P on HITZ on Vert Rock

High angle B/C Beach

1m x 80m ST/P along High angle B/R shore zone in the HITZ

1m x 250m CT/P on High angle B/R shore zone in the HITZ

3m x 50m CT/P along B/R in the HITZ

Oil Character Length (m): AP 0 PO 0 CV 0 CT 425 ST 80 MS 0 PT 0 TB 0 FL 0 NO 287

REVISION: 02/20/90

ECOLOGY MAP (1 of 1)

RESOURCE CODES FOR
ENTIRE SEGMENT:

EV-11

EV-3

EV-39

EAGLE NEST

XXXX Wide

//// Medium

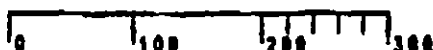
---- Narrow

TTTT Very Light

0000 No Oil

EV-38

ADEC Segment Length: 777m


METERS

Map Key: PWS-244

Name: _____

Date: _____

Data Entered: _____

EV-11

EV-3

EV-39

XXXX Wide

//// Medium

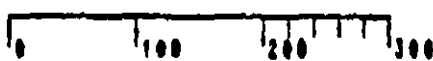
---- Narrow

TTTT Very Light

0000 No Oil

EV-38A

ADEC Segment Length: 777m


METERS

Map Key: PWS-244

Name: Mike FogetDate: 4/20/90

Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-39

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ EV-39 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Adjacent segment with eagle nest.

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 110 m: Medium 154 m: Narrow 32 m: V.Light 170 m: No Oil 0 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 30 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend bioremediation of areas shown on sketch map, and manual pickup of mousse patties and oiled vegetation/debris where indicated. No specific ecological time constraints identified.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/1)
 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
- 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- ✓ 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7HJ 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/ EU-39 SUBDIVISION: A (of 1) DATE 4-21-90

NOAA

NAME Michael Buchman SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

This segment is largely stained and coated cobble beaches with frequent rock outcrops that are coated also. One lg tilted, uplifted slate bench in the middle had noticeably greater oiling. Pits ~~near~~ in this area were saturated with fairly unweathered oil. Tide pools had silver to rainbow sheen. Small patches (~ 1/2 m²) of asphalt were observed in wave shadows of outcrops/boulders along the beach. North of there northern & southern ends had bedrock shelves with oil debris/vegetation. Degree of oiling increased in southern end of segment. Frequent patches of asphalt between boulders & in pea-gravel overlying bedrock. Sheens in tide pools were common here too. Poor colonization was observed in the southern end & below the middle bench.

This area would be appropriate for hot water pressure washing & possibly bioremediation.

ADEC

NAME John Hayes SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Heavily oiled segment in UITZ, also areas of oiled vegetation + small oil patches in SITZ.

① HWHP with a HW Deluge in addition

② Manual Removal of Oiled Vegetation + patches

③ Map up of any trapped free oil after HWHP wash. ^{between boulders}

④ Bioremediate following extensive washing + manual work.

* Segment (as I recall) only had manual treatment last season.

LAND MANAGER

NAME Steve Dares-Chenequa Corp. SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

- Hot Water Pressure Washing -

- monitor for oil in water -

SHORELINE OILING SUMMARY

REVISION NO. 04/12/90

OG Mike Foyet NOAA Mike Buchman SEGMENT ST/ EV-39
 BIO Kathleen Conlin LAND REP Steve Ward CVC SUBDIVISION A (1 OF 1)
 EXXON Larry Olson ADEC John Hayes TIME 14:30 to 16:30
 TEAM NO. 11 TIDE LEVEL +3.3 DATE 4/21/90
 EST. SUBDIVISION LENGTH: 478 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 40 % B 20 % C 30 % P 10 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 70 % Hang 20 % Vert 10 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 180 m M 120 m N 30 m VL 148 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	N	W	P	S	SP	BR	DR	GR	BL	LG	SU	U	M	V
ASPHALT PAVEMENT			X			X					X	X		
POOLED														
COVER		X				X					X	X		
COAT		X	X	X		X					X	X	X	
STAIN				X		X					X	X		
MOUSSE														
PATTIES			X			X					X	X		
TARBALLS														
FILM														
NO OIL														X

PAVEMENT H F S 3 sq. m by 10 cm(PATTIES) TARBALLS 10 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

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

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐
Pom Pom

TYPE: Oiled PFD

#BAGS 1

Photographs:

Roll No. ST11-3Frames 14-31

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SHEEN (Y/N)	DEPTH (cm)	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OP	NO		UO	UC	SP	BR	DR	GR	BL	LG	SU	U	M	V				
1	50					X	-		X							X					N	40	C, P, S
2	30					X	-		X								X				N	20	P, C
3	30					X	-		X							X					N	-	P, R
4	15					X	-		X							X					N	-	P, R
5	25	X					5-10		X			X				X	X				N	-	C, P, C
6	35					X	-		X							X					N	-	C, P, C

COMMENTS Segment was heavily oiled. The Northern end of the segment had CT/P oiled vegetation in the supra ITZ, with some ST/S staining and some asphalt patties occurring in between Boulder/Cobble crevases. In the middle of the segment there is a large rock outcrop which extends through the LITZ. Just north of this is a 50 m rocky Cobble/Boulder Beach with some CT/P stain and asphalt in between the Boulder/rock/cobble crevases. There is also some patchy subsurface oiling in the HITZ in the Cobble (Pit #5, #7)

REVIEWED W DATE 4-23-90

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 04/12/90

SEGMENT ST/ EV-39 SUBDIVISION A (1 OF 1)

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW		OIL / FILM COLOR							PIT ZONE				A N A	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS	
		OP	OR	OL	OF	NO		UD	UG	SL	BR	OR	OL	BL	DR	TL	LR	SU	U	M					U
7	25		X				5 - 8		X					X			X					N	-		C, P, C
8	25		X				.		X								X					N	-		C, P, C
9	20	X					5 - 10		X					X			X					N	-		C, P, R
10	40	X					20 - 30		X					X			X					N	-		C, P, C
11	50					X	.		X								X					N	-		C, P
12	60					X	.		X								X					N	-		C, P
13	15		X				2 - 5		X					X					X			N	-		C, G, C
14	15					X	.		X										X			N	10		C, G, C
15	30		X				15 - 25		X					X			X					N	-		P, C
16	10		X				7 - 10		X					X			X					Y	5		P, R
17	30		X				20 - 25		X					X			X					N	-		G, C
18	15	X					0 - 15	X						X			X					N	-		C, R
19	15		X				0 - 3		X					X			X					N	-		C, G, C
20	30					X	.		X								X					N	-		P

COMMENTS

The Rock Bench outcrop which extends to the LITZ in the middle of the segment was heavily oiled, this had a CTIP on the exposed Boulder / Rock with cover and asphalt on the Protected areas on this outcrop. A rainbow sheen was observed in tide pools on the outcrop. The Boulder Field just south of the large rock outcrop also had CTIP oiling on the exposed Boulder face w/ cover and asphalt in the crevases. The Low angle C/B/P beach south of the rock outcrop and North of the stream had a ST/S staining in the upper and HETZ w/ some subsurface OR and OL oiling (pits #10, 13, 15). The Southern Part of the segment (S. of the stream) consists of bedrock and large boulders. This area was heavily oiled w/ CT/B tar distribution on the exposed rock + boulder face and asphalt with cover in the crevases. This area also contains some oiled vegetation and logs in the Supra ITZ.

REVIEWED

JW DATE 4-23-90

OG PAKE ROGET
 SEGMENT ST/ EV-39
 SUBDIVISION A
 DATE 4 / 21 90

CHECKLIST

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

LEGEND

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

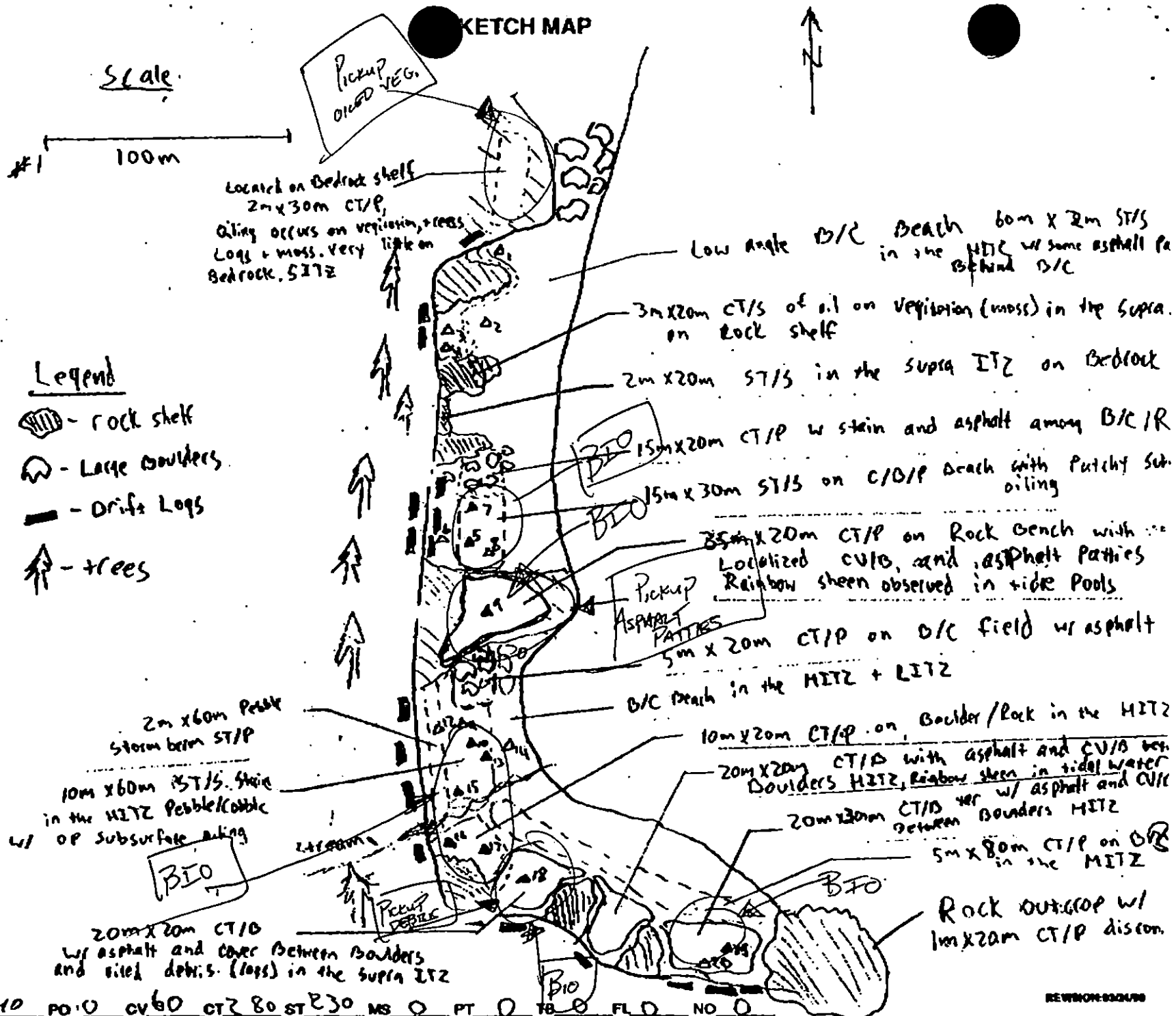
Legend

[Rock Shelf]
 [Large Boulders]
 [Drift Logs]
 [Trees]

212
28

Oil Character Length (m): AP 40 PO 0 CV 60 CT 80 ST 230 MS 0 PT 0 TB 0 FL 0 NO 0

SKETCH MAP



REVISION: 03/04/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/80

Segment ST / EV-39 Subdivision A (10E1) Date (mo / day / yr) 04/21/90

Time (24 hr) 122-1630 Biologist KATHLEEN CONLAN

(A) Substrate type and % of segments:
(1) Bedrock 40 (2) Boulder 20 (3) Cobble 30 (4) Pebble 10 (5) Sand 0 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 40 Moderate 20 Low 46

(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 11-3

Frames 14-31

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

1 SEAL

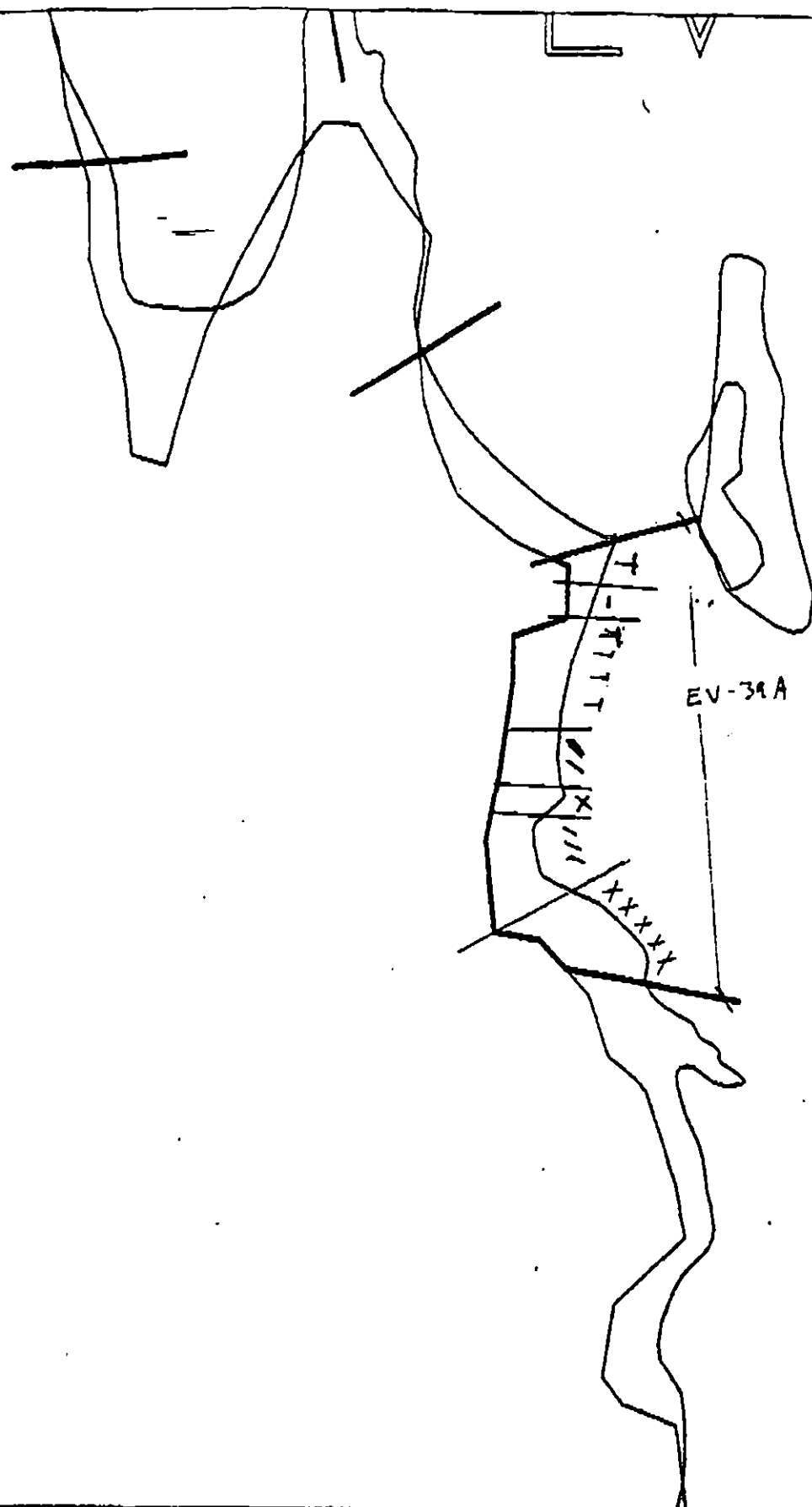
OLIGOCHAETES
AMPHIPODS

IN GRAVEL IN STREAM RUNOFF

ABUNDANT OLIGOCHAETES IN WRACK (WHICH IS OILED)

Ecological Considerations: HEAVILY) BUT NO AMPHIPODS.





EV-

EV-

EV-

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

EV-39A

ADEC Segment Length: 478m



Map Key: PWS-245
Name: Mike Foget
Date: 4/21/90
Data Entered: -

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EV-39 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation Manual Raking Spot Washing	WORK 6/1 TO 7/25

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1K	Purse Seine Hook-off	No constraint to manual pickup; closed to bioremediation, manual raking, and spot washing after 7/25.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup; closed to bioremediation, manual raking, and spot washing after 8/15.

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 uncolled biota and substrate.

TAG APPROVAL DATE 6/04/90.
ADEC Ray Monars
EXXON ANDY TEAL
NOAA Joseph Tallant
USCG C.A. FETER

FOSC

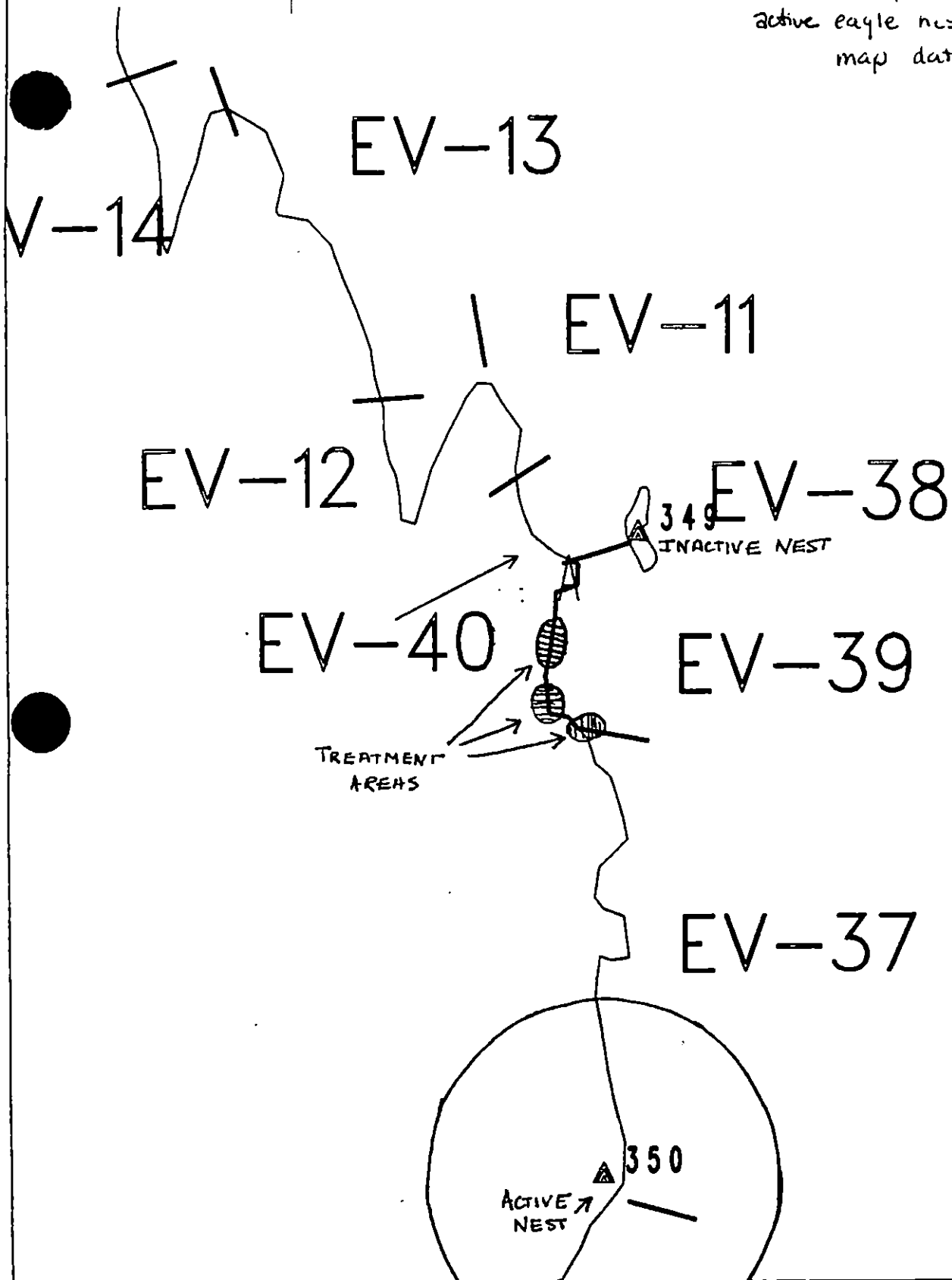
DATE

Prepared By: Anders Meyer

Date

6/3/90

Incorporates USFWS
active eagle nest survey
map data (6/1/90)



Exxon Company, USA

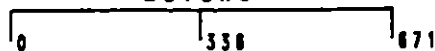
Map Key: PMS-EV-39

May 11, 1990



ECOLOGY MAP ^{6/3/90}
SEGMENT EV-39
SUBDIVISION A (1 of 1)

METERS



- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1101 feet

SHORELINE EVALUATION

SEGMENT ST/ EV-39 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Adjacent segment with eagle nest.

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. Dorman

DATE: 5/3/90

OILING CATEGORIZATION:

Wide 110 m: Medium 154 m: Narrow 32 m: V. Light 170 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 30 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend bioremediation of areas shown on sketch map, and manual pickup of mousse patties and oiled vegetation/debris where indicated. (No specific ecological time constraints identified.)

SEE Addendum dated 6/3/90

TAG COMMENTS: MANUAL PICKUP OF ASPHALT + MOUSSE, MANUAL RAKING PRIOR TO BIO AS INDICATED ON SKETCH, SPOT WASH WHERE FEASIBLE PRIOR TO BIO.

TAG APPROVAL DATE: 5/3/90.

ADEC ART WEAVER
EXXON ANDY TEAL
NOAA GARY STRAIN
USCG KENNETH KATHE

FOSC: W L

DATE: 5-18-90

NOTIFY CEC 24 HRS PRIOR TO WORK

SHORELINE EVALUATION

SEGMENT ST/ EV-39 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Adjacent segment with eagle nest.

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles J. J. J. J.

DATE: 5/3/90

OILING CATEGORIZATION:

Wide 110 m: Medium 154 m: Narrow 32 m: V. Light 170 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 30 cm

RECOMMENDATIONS:

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

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

COMMENTS: Recommend bioremediation of areas shown on sketch map, and manual pickup of mousse patties and oiled vegetation/debris where indicated. No specific ecological time constraints identified.

TAG COMMENTS: MANUAL PICKUP OF ASPHALT + MOUSSE, MANUAL RAKING PRIOR TO BIO AS INDICATED ON SKETCH, SPOT WASH WHERE FEASIBLE PRIOR TO BIO.

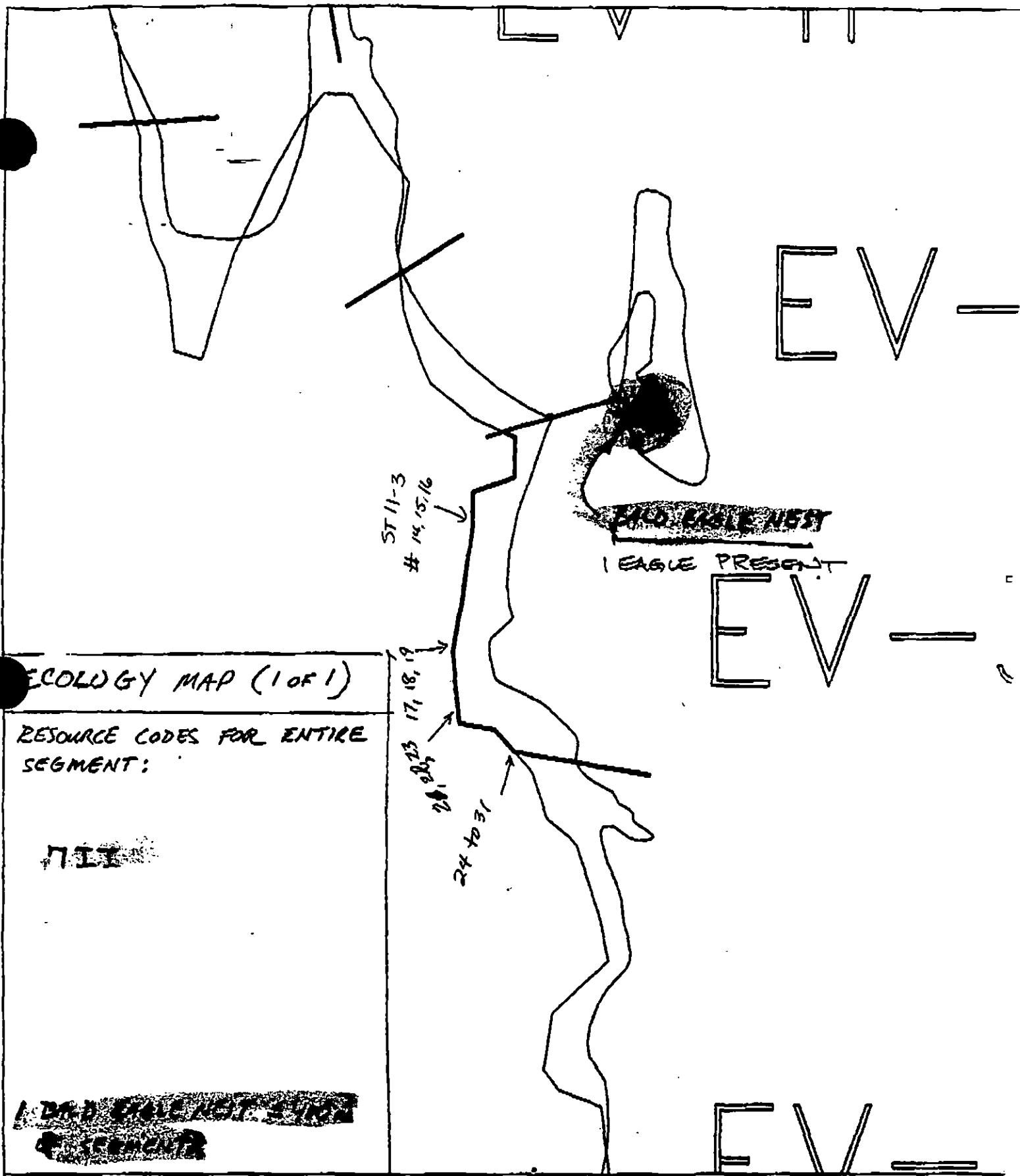
TAG APPROVAL DATE: 5/3/90.

ADEC ART WEINER
EXXON ANDY TEAL
NOAA GARY PATRICK
USCG KENNETH KETTING

FOSC:

DATE: 5-18-90

NOTIFY CMC 24 HRS PRIOR TO WORK



ECOLOGY MAP (1 OF 1)

RESOURCE CODES FOR ENTIRE SEGMENT:

711

~~EAGLE NEST~~
~~EAGLE PRESENT~~

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

EV-39

ADEC Segment Length: 478m

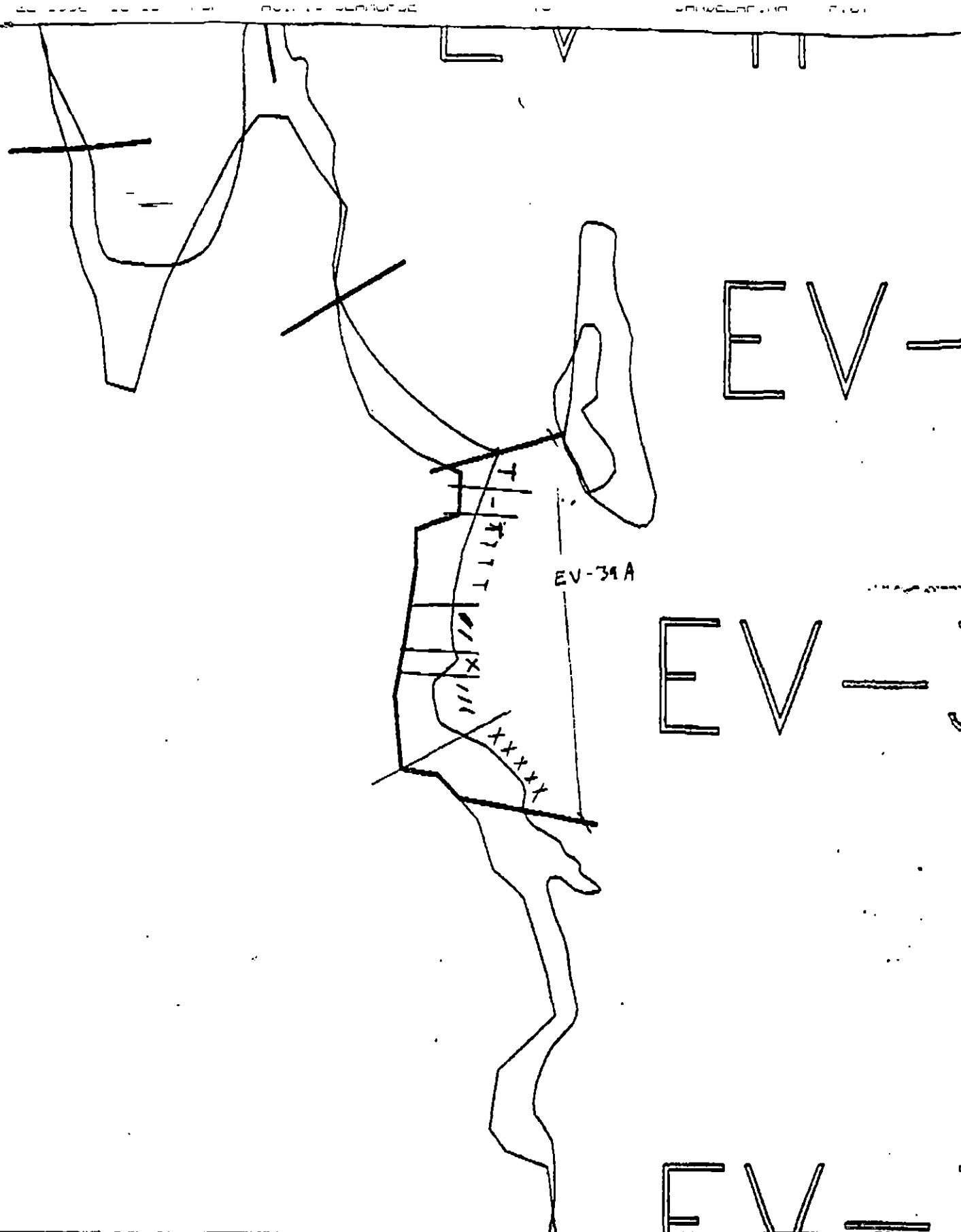


Map Key: PWS-245

Name: _____

Date: _____

Data Entered: .



EV-

EV-

EV-

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

EV-39A

ADEC Segment Length: 478m



Map Key: PWS-245

Name: Mike Foget

Date: 4/21/90

Data Entered: .

WORK PLAN ADDENDUM

Segment EV-39

Subdivision A

Dated 6/16/90

MODIFICATION

1. REASON FOR MODIFICATION

REQUEST FROM FIELD FOR EXTENSION OF MANUAL TREATMENT AREA BEYOND THAT WHICH WAS INDICATED ON THE TAG SKETCH.

2. ADJUSTMENT TO WORK PLAN

EXTEND MANUAL PICKUP OF MOUSSE AND ASPHALT PATCHES PRIOR TO BIO.
(SEE ATTACHED SKETCH).

SHPO APPROVAL NEEDED YES ✓
NO X

SHPO SIGNATURE [Signature] 6/19/90

TAG APPROVAL DATE 6/16/90

ADEC Ray Morris R. Morris

EXXON ANDY TEAL Teal

NOAA Joseph Talbott [Signature]

USCG G.A. REITER G.A. Reiter

FOSC [Signature] DATE 7-10-90

Mike Toget
STATION ST/ EV-39

SUBDIVISION A

DATE 4 / 21 90

P.3

CHECKLIST

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

LEGEND

1 Δ
Pht - No Subsurface Oil

2 Δ
Pht - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Streaked Distribution

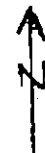
Oiled Vegetation

1 →
Photo location, direction, and number

Scale

100m

SKETCH MAP



- Legend
- rock shelf
 - Large boulders
 - Drift Logs
 - trees

2m x 60m Pebble storm berm ST/P
10m x 60m ST/S. Stain in the HIZT Pebble/Cobble w/ OP subsurface oiling

20m x 20m CT/B w/ asphalt and cover between boulders

Localized on bedrock shelf
2m x 30m CT/P
Oiling occurs on vegetation, trees
Logs + moss. Very light on bedrock. SITZ

Low angle B/C Beach 60m x 2m in the HIZT w/ some behind B/C

3m x 20m CT/S of oil on vegetation (moss) in th on rock shelf

2m x 20m ST/S in the supra ITZ on C

15m x 20m CT/P w stain and asphalt among
15m x 30m ST/S on C/D/P beach with Put oiling

35m x 20m CT/P on Rock bench. Localized CV/B. and asphalt Pa Rainbow sheen observed in tide pool

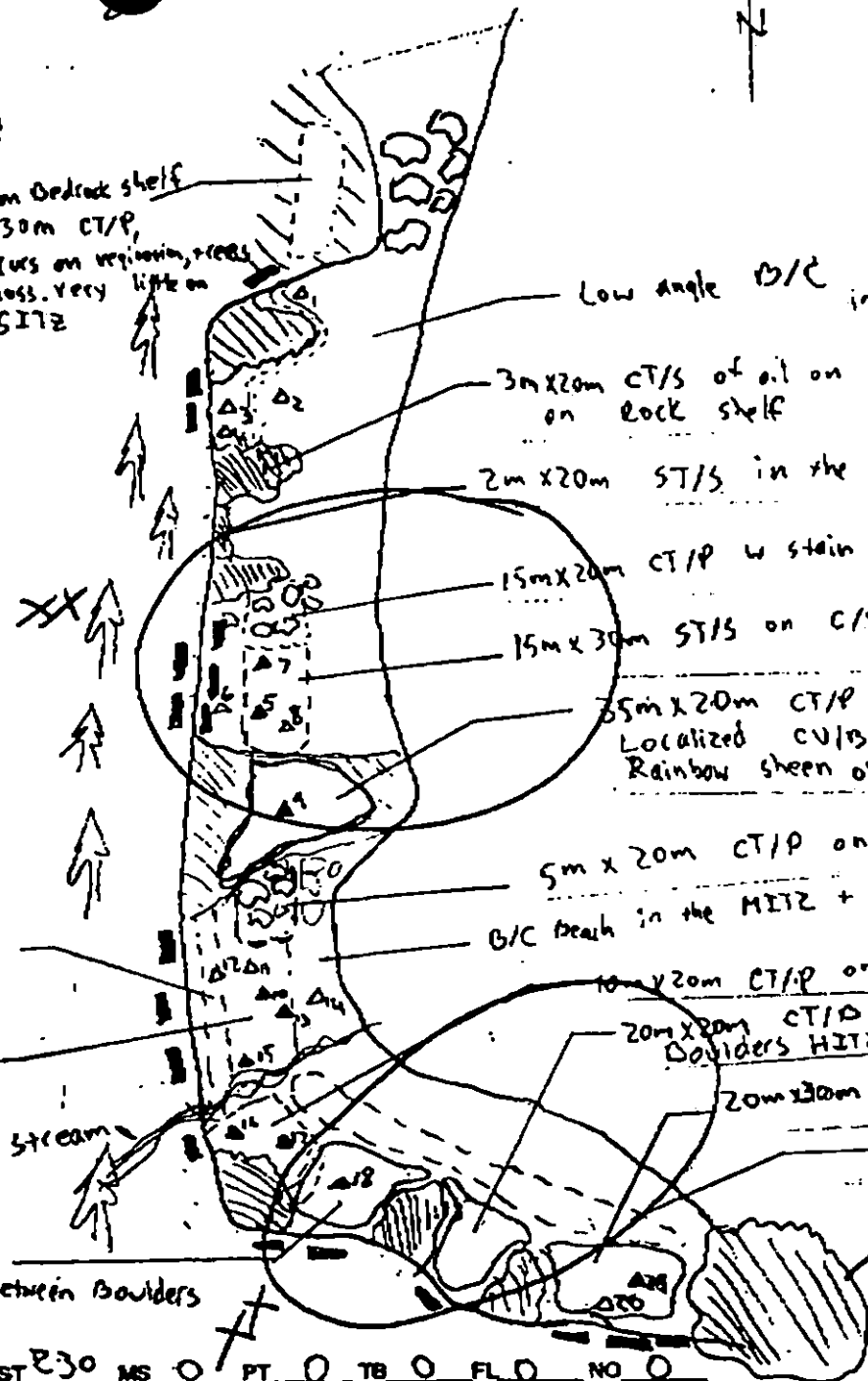
5m x 20m CT/P on B/C field w/ a B/C beach in the HIZT + LITZ

10m x 20m CT/P on Boulder/Rock in the
20m x 20m CT/B with asphalt and c boulders HIZT, Rainbow sheen in tide

20m x 30m CT/B w/ w/ asphalt between boulders HI

5m x 80m CT/P in the M

Rock outcrop
1m x 20m CT/P



Oil Character Length (m): AP 40 PO 10 CV 60 CT 2 80 ST 2 30 MS 0 PT 0 TB 0 FL 0 NO 0

REVISION

1991 MAYSAP EVALUATION

SEGMENT: EV 039 SUB: A REGION: PWS SURVEY DATE: 4/29/91ENVIRONMENTAL SENSITIVITIES:Work Window(s) RESTRICTED 3/1 - 9/15Ecological/Constraints (see page two for details) Eagle nest,
Fish harvest area, Subsistence, deer harvesting

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

SHPO Signature: Charles E. Himes Date: 5/9/91RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>Y</u>	<u>Y</u>	<u>Y</u>
Manual Pickup (Check as Req.)	<u>X</u>	<u>X</u>	<u>Y</u>
Spot Washing	<u> </u>	<u> </u>	<u> </u>
Bio-Customblen Only	<u> </u>	<u> </u>	<u> </u>
Bio-Inipol/Customblen	<u>X</u>	<u>X</u>	<u>NO!</u>
Other	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>

COMMENTS:INITIAL: Manual pickup of AP, HSOR/OP followed by Bio at locations
A, C, D, E, FTAG: ADD AREA BFOSC: NO BIO - DUE TO LAND MANAGER'S
CONCERNS / COMMENTS NOTED ON REPORT
DATED 5/11/91. IF CVC RECONSIDERS ADVISE
ME AND I'LL REVISIT THIS ISSUE - CECTAG APPROVAL DATE: MAY 9 1991FOSC APPROVAL DATE: 5/13/91ADEC [Signature]FOSC [Signature]EXXON [Signature]E. E. PAGE, CDR, USCG
CHIEF OF STAFF, FOSCUSCG [Signature]NOAA [Signature]

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

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

MAYSAP FIELD SHORELINE COMMENT SHEET

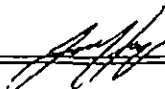
TEAM NO. 5SEGMENT EV-39SUBDIVISION ADATE 4/29/91

ADEC

NAME

John Hayes

SIGNATURE

☐ NTR

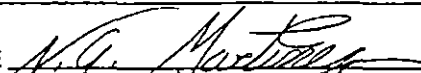
Treatment Recommended
Oiling observed here by our survey team was similar to conditions I observed here last fall. Most of the oil was found on the lee side of boulders among the pebble matrix or as distinct isolated patches of AP in 5-10 cm. depth on top of bedrock. I recommend continuing treatment here that 1990 crews started to remove remaining gross contaminations that persists here. The OP subsurface in the URTZ is generally 10 cm. or recoverable. Additionally I recommend reassessment following treatment to determine if subsurface oiling is still in URTZ.

EXXON

NAME

Martinez Al

SIGNATURE

☐ NTR

Agree with OGs comments some may be recoverable but tedious. Difficult access due to exposure, grade of beach + off-shore rocks. May be good site for CVC Team.

LANDMANAGER

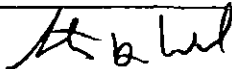
NAME

Steve Ward

OF

CVC

SIGNATURE

☐ NTR

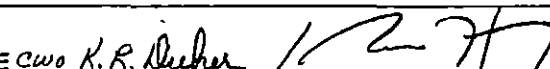
Lots of Sub + Sub Surface oil. This Area has been worked the 2 yrs. It still needs lots of manual at least. This was a High Substane Area for us in Chenesh. Areas Dem. Loss for Fire work this Area until cleaned continues to be considered a Dead zone and we can't use it. Lots of work needed work in 91 - Survey again in 92.

USCG/NOAA

NAME

DREHER/HODGES

SIGNATURE

☐ NTR

Under adverse weather conditions considerable brown sheening was observed. Recoverable quantities of AP was observed. Probable that at higher ambient temperatures and direct sunlight these deposits will mobilize.

Some saturated oil pockets up to 3 cm in depth. many areas of oiled sediment is specific segments of the beach. All pits in the lower inner tidal area were clean with no sheening. Oil cont/covrage w/ pine needles observed. Eagle carcass found.

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 2

TEAM NO. 57OG CHANEYBIO CRANKSEGMENT EV 39ADEC HAYESLANDMANAGER WARDfor CVCSUBDIVISION AEXXON MARTINEZUSCG/NOAA DREHER/HODGESDATE April 28, 1991TIME 07:45 to 09:40TIDE LEVEL -2 ft. to 0 ft.ENERGY LEVEL: ☒ H ☐ M ☐ LSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☒ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 455 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☒ SL ☐ NONEEST. OIL CATEGORY LENGTH: W 135 m M — m N — m VL 25 m NO 306 m US 11 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE V H M L	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A				S							BRG	M	6	15		✓			SILVER SHEEN IN TIDAL
B	S										BRG	M	3	10		✓			POOLS
C	S			S	S	P	P				BRG	M	20	20					
D	S			S	P	P	P				BRG	M	20	10		✓			
E	S			S	P	P					BRG	M	25	105		✓	✓		
F	P				S	P					BRG	M	20	20		✓	✓		

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

3

13-22

FRAMES 1-4

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE- SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	20							✓	-		10	N		✓			PG-PG	
2	15	✓	✓						0-8	Y	1			✓			PG-B-PGBR	BETWEEN BOULDER:
3	30							✓	-	Y	10	S			✓		BP-BP	
4	15							✓	-	Y	10	S		✓			BP-BP	
5	10	✓							0-10	N				✓	✓		BP-BPR	UNDER BOULDER
6	10		✓						0-7					✓			BG-BG	BETWEEN BOULDER
7	25		✓						7-10	N				✓			BG-BG	
8	15								10-15	Y				✓			PG-PB	
NEXT PAGE									-									

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

OG COMMENTS:

IN REGION OF (A) HOR CONDITION SEEMS CONCENTRATED IN A 6x15m BAND BETWEEN LARGE BOULDERS. SILVER SHEEN IN TIDAL POOLS, SMALL POCKETS ARE RECOVERABLE.

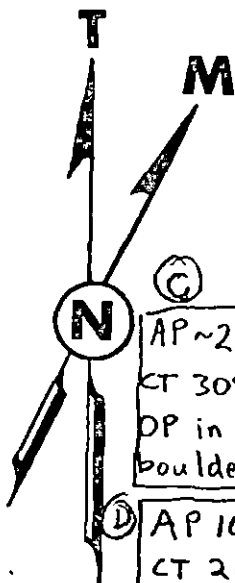
GENERALLY WHERE AP IS INDICATED IT OCCURS IN DISCRETE POCKETS BETWEEN BOULDERS. IN MOST CASES RECOVERABLE QUANTITIES EXIST BUT THEY WOULD BE TEDIOUS TO REMOVE.

REVIEWED: F.W. 5/1/91 NEXT PAGE
REVIEWED: M.C. 5/1/91

MAYSAP 1991
 OG SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV-39 A
 DATE: APRIL 28 1991
 AIR P.#: EXVDZ 4 NO 49

EVANS ISLAND

ISLAND



LEGEND

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

SCALE

APPROX 65 METERS

(A) HEAVY SOR ~ 5% BETWEEN BOULDERS, 6x15m

(B) AP PATCHES ON LEE OF BOULDERS ~ 3x10m 3%

(C) AP ~ 2% SOR ~ 3% CV ~ 5%
 CT 30% ST 30% 20x30m
 OP in small pockets under boulders

(D) AP 10% SOR 5% CV 20%
 CT 20% ST 20% LEE SIDE OF BOULDERS 20x10m

(E) AP 5% SOR 5% CV 20%
 CT 20%
 25x105m
 LARGE BOULDERS AND SHALLOW BEDROCK

(F) 20x20 CV 10%
 AP 30% CT 30%
 ASPHALT BETWEEN BOULDERS

STEEP ROCK FACE

CARCASS (EAGLE)

OLD TIRE

OP/HOR
 HOR 6x15 BETWEEN LARGE BOULDERS
 MAY NOT BE CONTINUOUS

LOW TAGGED ROCKS

OP to HOR 40x10m
 CENTER OF BEACH 8 pits

NO FIELD DATA
 ASSUME 10x10m
 OP/HOR

FOREST

TALL SEASTACK

KNIGHT ISLAND PASSAGE

REVIEWED: F.W. 5/1/91
 REVISED: M.C. 5/1/91

MAYSAP BIOLOGICAL SUMMARY FORM

pg 1 of 3

TEAM #5

DATE 28 Apr '91

SEGMENT # EV-39

TIDAL HEIGHT (Range) -1.5 → +1.5

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 3'

WIND SPEED/DIRECTION 10-15 knots / E

PHOTOGRAPHS: ROLL # MAYSAP 3

FRAME # 110, 22

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

(A) Area is located in the U1TZ. There are rare barnacles on the boulders, inner plates not sealing well. Fucus on the upper end of rock bench and 1-2 cm long segmented worms in the gravel.

Rock bench below site has healthy moderate Fucus with maturing conceptacles; dense Littorina.

There are many anemones in tidepools. On the small boulders below rock bench barnacles are moderately concentrated.

(B) Area is located in the U1TZ. Rare barnacles located in site not tightly sealing their inner plates when stimulated. Below site low in MITZ barnacles are moderate density, inner plates tightly sealed when stimulated and spat is present. Fucus has mature conceptacles. Littorina and limpet concentrations range from moderate to sparse.

(C) Area is located in a rock bench from SUPRA to high MITZ. Customblen pellets are present cracks; crevices. Yellow, white and black lichen is present on rock's upper surface. The lichens appear healthy. Barnacles are rare; Littorina and limpets are sparse in the U1TZ. High in the MITZ Fucus sporlings are present as are rare mussels. Littorina and limpet concentrations increase to moderate. Barnacles throughout site appear healthy and tightly sealing inner plates. In the MITZ below site there is healthy sparse Fucus with mature conceptacles. Gloiopeletis is moderately concentrated in small patches. Barnacle concentrations increase to moderate.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2 (one dead)	
Seabirds			
Waterfowl	2	64	
Gulls/Kittiwakes			
Shorebirds			
Corvids			
Other Birds	2	2	

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters		Deer seal	
Pinnipeds (specify)	3 - Seals (2 + 1 hood)		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

Team #5

Date 28 Apr '91

pg 2 of 3

Segment EV-39

Tidal Height -1.5 $\rightarrow$ +1.5

Subdivision A

Biologist Crank

Sea State 3'

Wind Speed/Direction 10-15 knots/E

Comments (cont)

- (D) Area is located in the UITZ among boulders and cobble. Exposed B/C surfaces have a filamentous green algae coat. Segmented worms (2cm long) are present. No other macro-biota present in upper; mid portion of area. Along the lower edge of the site barnacles are sparse and are tightly sealing their inner plates. Limpets and Littorina are found in moderate concentrations in tidepools. Mussels are rare. Below site in MITZ biota same as found in (C).
- (E) Area located in SUPRA and UITZ. Oil is present in rye grass root system but less greasy feeling than oil found on rocks. Rye grass is sprouting and appears to be unaffected by present oil. UITZ boulders are covered with filamentous green algae. Sparse barnacle are present low in area, they tightly sealed their inner plates. A small patch of Enteromorpha and Ulva (algae) is present in a tidepool. Biota below area in MITZ same as found in (C).
- (F) Area is in UITZ to high MITZ. C.V.C rep. reported in 1989 contaminated rye grass was removed from this area, Area has not re-established itself although root system still partially visible see Photo # MAY 3/22. Filamentous green algae covers B/C. In the UITZ barnacles; Littorina are rare. In the high MITZ there is heavy barnacle recruitment and dense Fucus with maturing conceptacles. Gloiopeltis (algae) is moderate.

Team #5

Date 28 Apr '91

Segment EV-39

Tidal Height $-1.5 \rightarrow +1.5$

Subdivision A

Biologist Crank

Sea State 3'

Wind Speed/Direction 10-15 knots / E

Comments (cont)

Dead Bald Eagle found high in UITZ. Skeleton was complete including talons and beak. Eye were gone. Residual flesh was present. No oil observed on feathers. See Photo roll MAY 3 frame 16.

There is a moderate to dense Fucus band in the MITZ continuing into LITZ. Conceptacles are maturing.

The LITZ is rich and diverse. LITZ biotic community is continuous throughout subdivision. There is heavy barnacle recruitment (new set present). Clams include Prototheca, Saxidomus and cockles. Mussels, juvenile eels, hermit crabs, peanut worms, Littorina, limpets, Nucella (whelk), Nucella eggs, Odonthalia^(aka), Coralline algae, Searlesia (whelk) and tar spot algae are present. Biotic cover is 50-80%. The lesser percentage is on the cobble near stream. Organisms appear to be healthy and recruitment is present.

MAYSAP 1991

OG SKETCH MAP: Bio Map

GREG CHANEY, Crank

TEAM 5

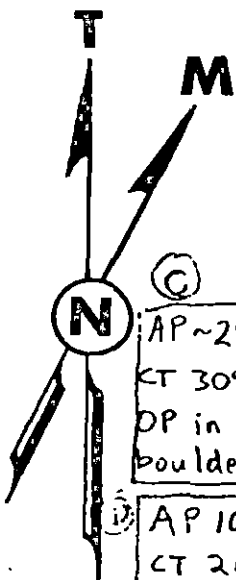
SEGMENT: EV-39 A

DATE: APRIL 28 1991

AIR P.#: EXVDZ 4 N049

EVANS ISLAND

ISLAND



① HEAVY SOR ~5% BETWEEN BOULDERS, 6x15m

② AP PATCHES ON LEE OF BOULDERS ~ 3x10m 3%

③ AP ~2% SOR ~3% CV ~5%
CT 30% ST 30% 20x30m
OP in small pockets under boulders

④ AP 10% SOR 5% CV 20%
CT 20% ST 20% LEE SIDE
OF BOULDERS 20x10m

⑤ AP 5% SOR 5% CV 20%
CT 20%

25x105m
LARGE BOULDERS ARE
SHALLOW BEDROCK

⑥ 20x20 CV 10%
AP 30% CT 30%
ASPHALT BETWEEN
BOULDERS

LEGEND

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

SCALE

APPROX 65
METERS

STEEP ROCK
FACE

CARCASS (EAGLE)
Complete skeleton, no
obvious oil observed on feathers

STREAM
Small
Pink
Salmon
Stream

55 GAL
DRUMS

STEEP ROCK
FACE

HOR 6x15 BETWEEN
LARGE BOULDERS
MAY NOT BE CONTINUOUS

LOW TAGGED ROCKS

OP to HOR 40x10m
CENTER OF BEACH 8 ft

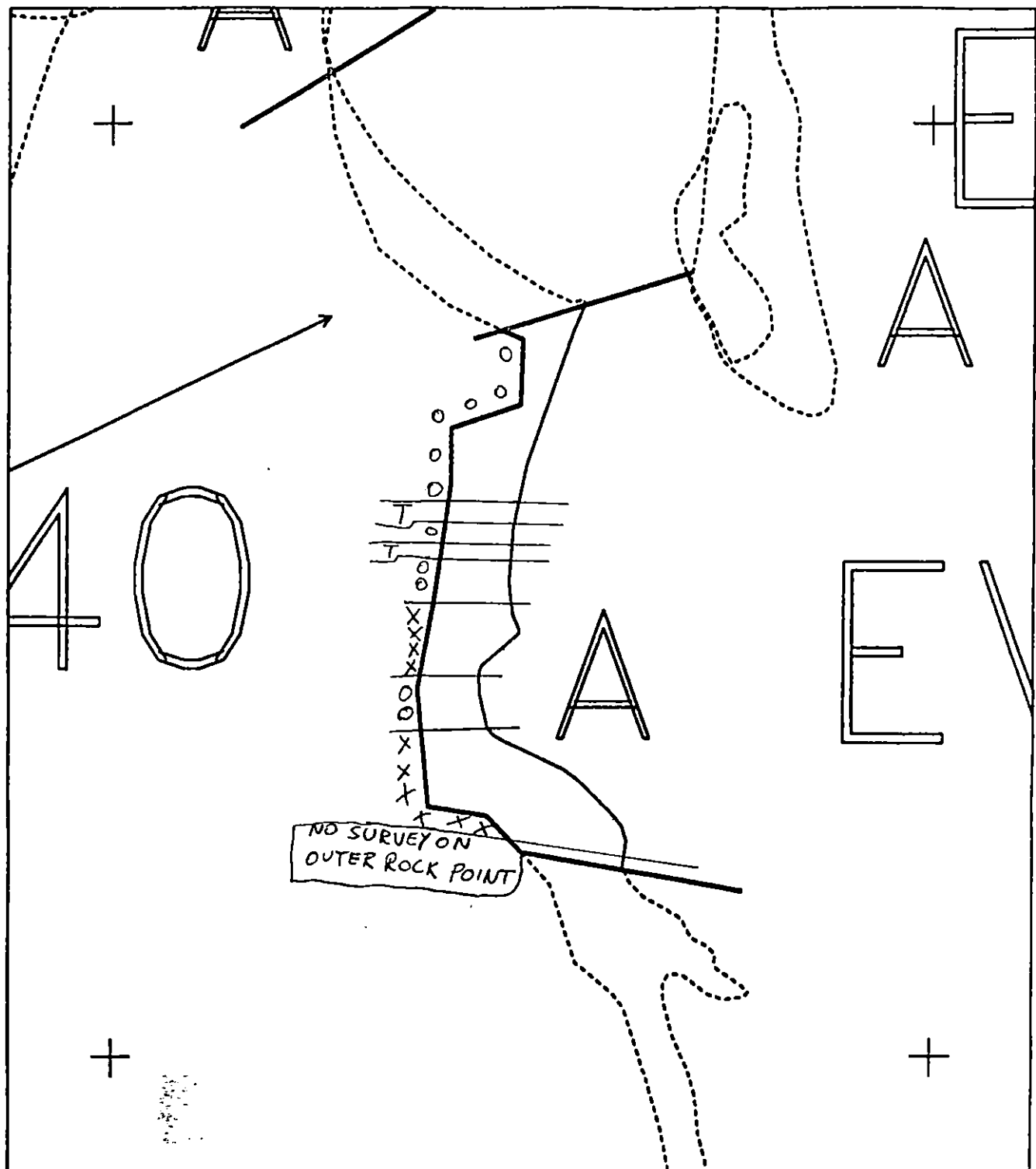
Subdivision has a rich, diverse, healthy
algal and animal community in the
LITZ. Recruitment is occurring in the
barnacles; *Fucus* populations.

FOREST

TALL
SEA STACK

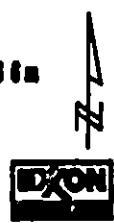
KNIGHT
ISLAND
PASSAGE

1989 rye grass
removed no signs of



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

EV039 A
 ADEC Subsegment Length: 486m
 METERS
 0 100 200
 AK State Plane Zone 4
 pr0390



Subdivision Field Map
 Map Key: PWSEV039A
 Name: GREG CHANEY
 Date: APRIL 28 91
 Date Entered:

REVIEWED: F.W. 5/1/91
 REVIEWED: M.C. 5/1/91

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