

OIL SPILL PUBLIC INFO. CENTER



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EVOS
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1552
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S42
1991
v.39

[Shoreline evaluations, 1991].

Prince William Sound EV-50 to EV-59

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1991 MAYSAP EVALUATION

SEGMENT: EV 050 SUB: C REGION: PWS SURVEY DATE: 5/26/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Timothy A. Smith Date: 6/07/91

RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>N</u>	<u>N</u>	<u>Y</u>
Manual Pickup (Check as Req.)	<u> </u>	<u> </u>	<u>X</u>
Spot Washing	<u> </u>	<u> </u>	<u> </u>
Bio-Customblen Only	<u> </u>	<u> </u>	<u>X</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: DUE TO CONCERNS RAISED BY USFS, ADEC + CVC
1 FACT THAT RECOVERABLE AP + HSDR REMAINS, TREATMENT OF
THIS SUBDIVISION IS WARRANTED. REMOVE AP + HSDR
AS SHED A + F. 11/1

TAG APPROVAL DATE: JUNE 7 1991 FOSC APPROVAL DATE: 6/11/91

ADEC John Bauer

FOSC

EXXON Real

USCG Edmond

NOAA John

E. E. PAGE, CDR, USCG

CHIEF OF STAFF, FOSC

The State will evaluate the need to treat this subdivision John Bauer

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

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

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

SEGMENT EV 50

SUBDIVISION C

DATE MAY 24 1991

ENERGY LEVEL: ☐ H ☐ M ☒ L

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

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

TIDAL POOL SHEEN

EST. OIL CATEGORY LENGTH: W m M 40 m N 17 m VL 315 m NO 42 m US m

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

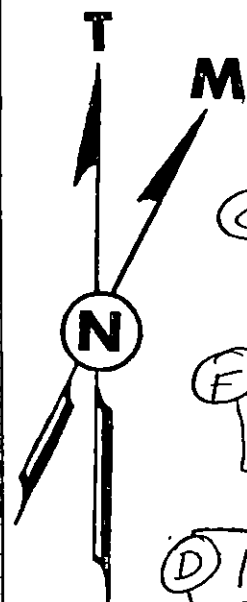
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 5 - 22 FRAMES 12-13

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

OG COMMENTS: LOCALIZED POCKETS OF AP AT AREAS (A) & (F).
MOST OF THE SUBDIVISION IS CHARACTERIZED BY RANDOM
SPLATTERS OF CT & CV WITH AN OCCASIONAL DISCONTINUOUS
"BATHTUB RING"

Revised: MC 6/1/91
~~revised~~ 5.30.92
 Revised

NSAP 1991
 OG SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV50C
 DATE: MAY 24 1991
 AIR P.#: PINC 005-122



G 2x145m SOR <1%
 CV 1% CT 2%
 F 3x40m AP <1%
 SOR <1% CT 15% ST 5%
 E 2x45m AP 2m²
 CT 5% AT BASE
 OF BOULDERS
 D 1x100m CV <1% CT 1%

LEGEND

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

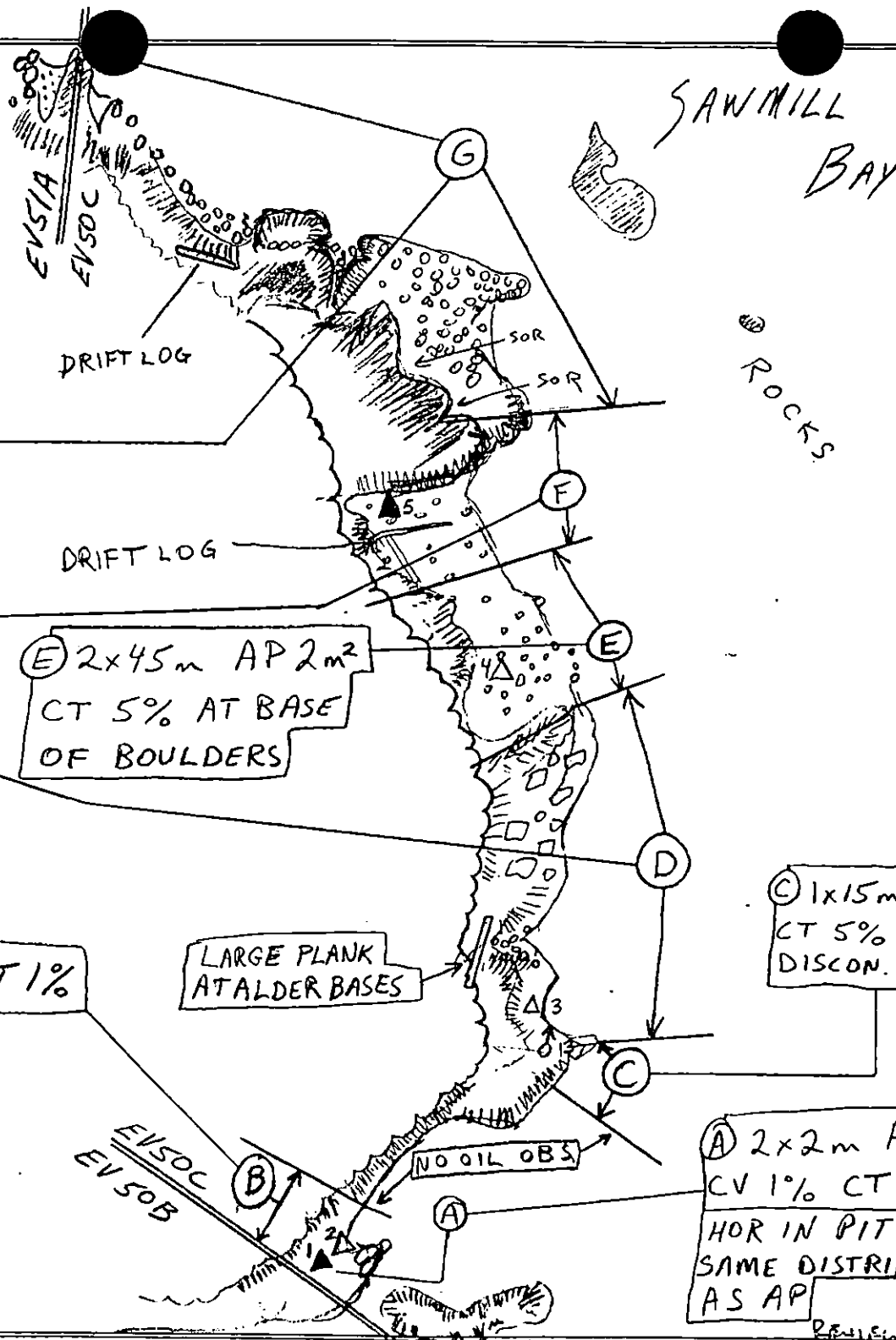
SCALE
 APPROXIMATELY 115m

B 4x25m CV 1% CT 1%

LARGE PLANK
ATALDER BASES

C 1x15m CV 5%
 CT 5% ST 5%
 DISCON. BAND

A 2x2m AP 25%
 CV 1% CT 5%
 HOR IN PIT 1
 SAME DISTRIBUTION
 AS AP



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5

DATE 24 May 1991

Pg 1 of 3

SEGMENT # EV-50

TIDAL HEIGHT(Range) +3 → +2

SUBDIVISION C

BIOLOGIST Crank

SEA STATE 1'

WIND SPEED/DIRECTION 5-10 / NE

PHOTOGRAPHS: ROLL #

FRAME #

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

(A) Area is in the MITZ. In small boulders a rare concentration of barnacles is present. Barnacles with oil contaminated shells were able to tightly seal their inner plates when stimulated. A rare concentration of juvenile mussels are present in the pebbles as well as far out. Adult mussel shells were present in the far out. Biotra cover is ~5%. In the MITZ there is a dense to moderate concentration of intertidal mussels. Many old shells are present, predatory gastropod drill holes are visible but whelks were not located. In the boulders and bedrock, barnacles are moderately concentrated. Littorina and limpets are dense with juvenile being the most abundant. Mussels are sparse and Fucus has a rare concentration with a few sparsely concentrated patches. Biotra cover is ~10%.

(B) Area is a broad band inclusive of area A. Within the site rarely concentrated mussels, rare to sparsely concentrated barnacles, patches of sparsely concentrated Fucus, moderate limpets and sparse Littorina are present. Biotra cover is ~10%. Area has the same MITZ as described for area A.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

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

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

Shoreline subdivision map showing important biological features attached.

Reviewed: MC/6/1/91 Reviewed M.B. 5/30/91

Team # 5

Segment # EV-50

Subdivision C

Sea State 1'

Date 24 May 1991

Tidal Height +3 → +2

Biologist Crank

Wind Speed / Direction 5-10 / NE

pg 2 of 3

Comments (cont.)

(C) Area is a band in the UITZ. There is a moderate to dense concentration of barnacles within the band. Barnacles with oil contaminated shells were able to tightly seal their inner plates when stimulated. Barnacle scars were present. Rare mussels were also present within the band. Biota cover is ~70%.

In the MITZ, there is a sparse concentration of Fucus, barnacles and mussels and a moderate concentration of Littorina and limpets. The majority of the mussel and gastropod populations are juvenile animals. Biota cover is ~30%.

(D) Area is located in the UITZ. Within the site there is a sparse concentration of Fucus, barnacles, Littorina and limpets. Biota cover varies from 10-20%.

In the MITZ, there is a patchy to continuous moderately concentrated Fucus. Post-spill age mussels are moderately concentrated around boulder and cobble bases. Littorina and limpets are dense; egg masses are present. Biota cover ~50%.

Reviewed M.B. 5/3/91

Team # 5

Segment # EV-50

Subdivision C

Sea State 1'

Date 24 May 1991

Tidal Height +3 → +2

Biologist Crank

Wind Speed / Direction 5-10 / NE

pg 3 of 1

Comments (cont.)

(E) Area is in the U1TZ. Rare barnacles are present in the site covering <1% of the surface sediments. Below the site, in the U2TZ, moderately concentrated barnacles and Fucus are rare to sparsely concentrated. mussels are present in the low U1TZ. Biota cover is 20%. In the MITZ, mussels and Fucus are sparse and barnacles, Littorina and limpets are moderate. Biota cover remains 40%.

(F) Area is in the U1TZ. Like area E, rare barnacles cover <1% of the surface sediments within the site. In the low U1TZ, below site, a sparse barnacle concentration covers ~20% of the sediments. The MITZ is similar to the MITZ in area E. Biota cover is 50%.

(G) Area is in the U1TZ, similar to area E. There are "oil shadows" in the black lichen, bare rock shaped like an oil drip showing through the lichen cover. The MITZ has the same species concentrations as area E. Also present are Scytosiphon and bladed green algae. The Fucus has epiphytic plants. Biota cover varies from 60 to 80%.

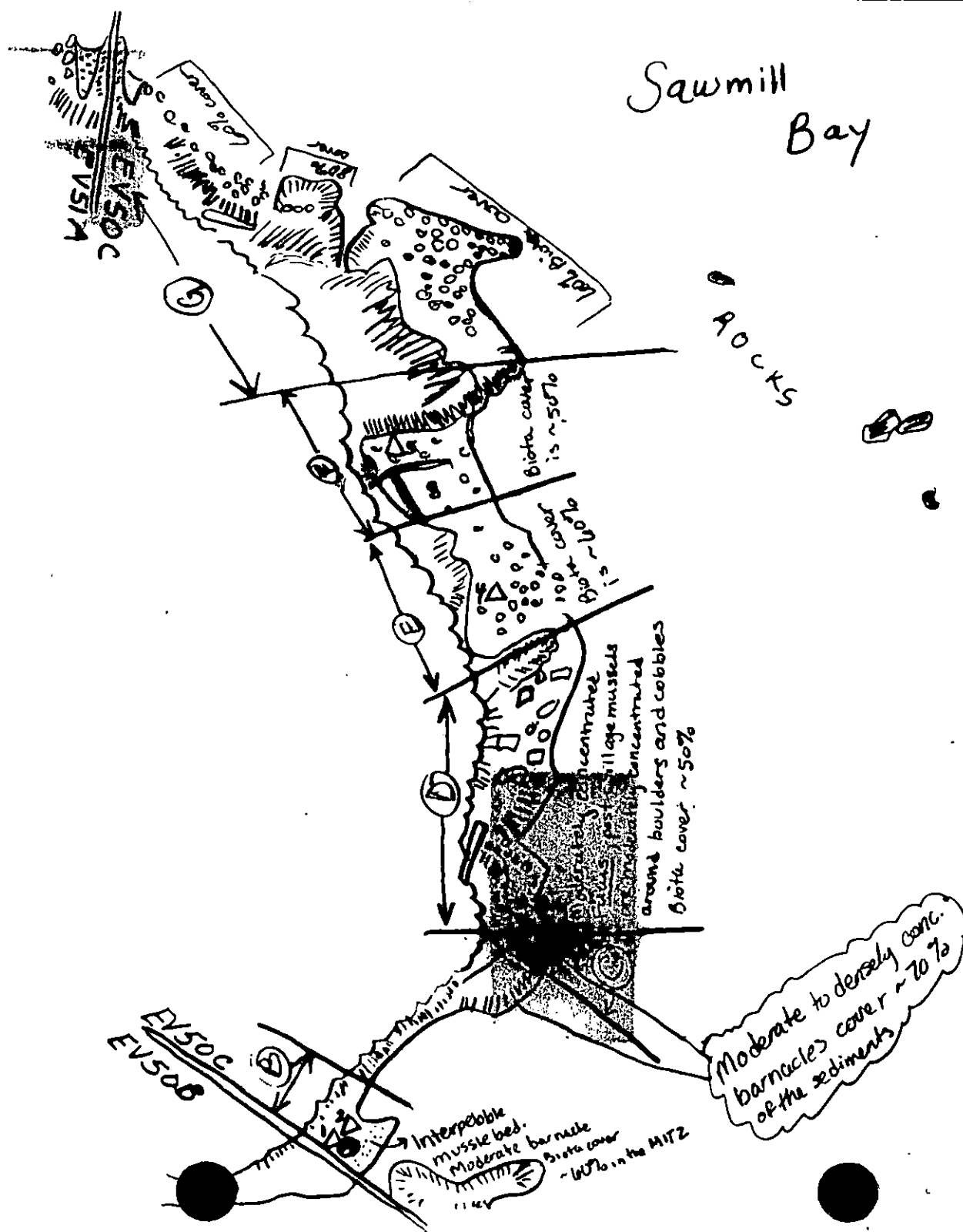
REVIEWED: 6/1/91 MC

REVIEWED M.B. 5/30/91

Bettles

Sawmill Bay

Reviewed M.B. 5/30/11



U.S. FISH AND WILDLIFE SERVICE (FWS)
SHORELINE ACTIVITY/BALD EAGLE IMPACT EVALUATION

Date 5/24/91 Shoreline Segment/Subdivision EV0500C

Shoreline activity Assessment Team Survey

Time - Begin

4:15 PM

Time - End

6:00 PM

FWS Observer

Surveyors/workers

Nest in view/monitored: ☒ Y ☐ N Adult in nest: Y ☐ N ☐ Unk

Adverse eagle response: Y ☒ N Adult left nest: Y ☒ N Unk.

Time

Type of human activity/eagle response

4:20 PM

A shoreline survey was conducted with the boat entrance from the south. 1 adult ^{marked EV0500C} and 1 juvenile were seen in the area. The adult was observed fishing and did land ^(50 yds.) near the nest marked active on the eagle survey map. No birds were located in the nest. Therefore the nest was not observed to be active.

Survey/work activities completed: ☒ Y ☐ N

Personnel withdrawn due to eagle conflict: Y ☒ N

Recommendations: If cleanup is done in the area, a monitor should be present in an offshore position.

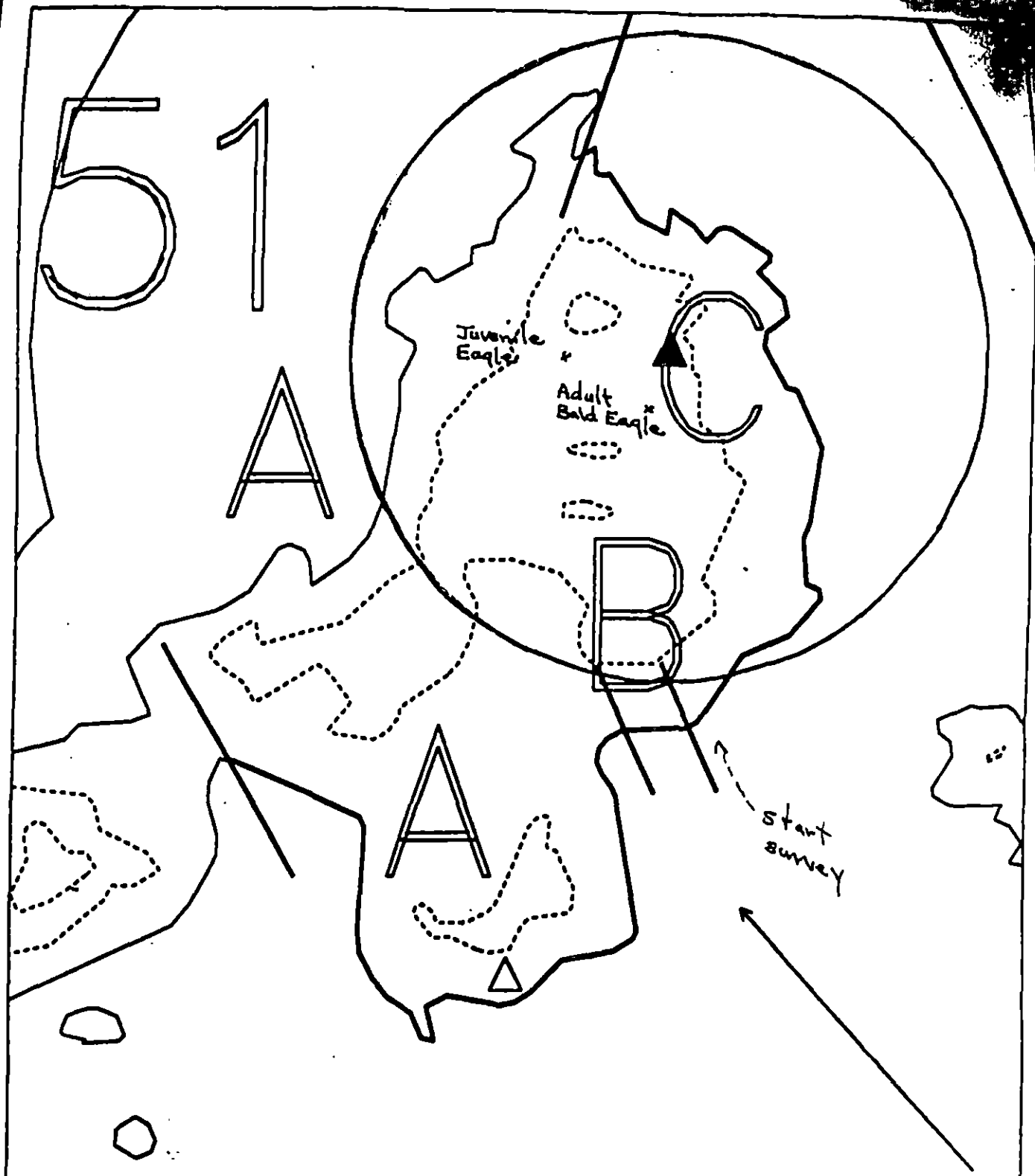
FWS Observer

Mike Luke

Date

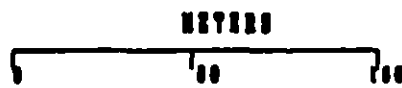
5/24/91

Reviewed M.B. 5/30/91



EV050

Segment Reference Map
Map Key: PVSEV050



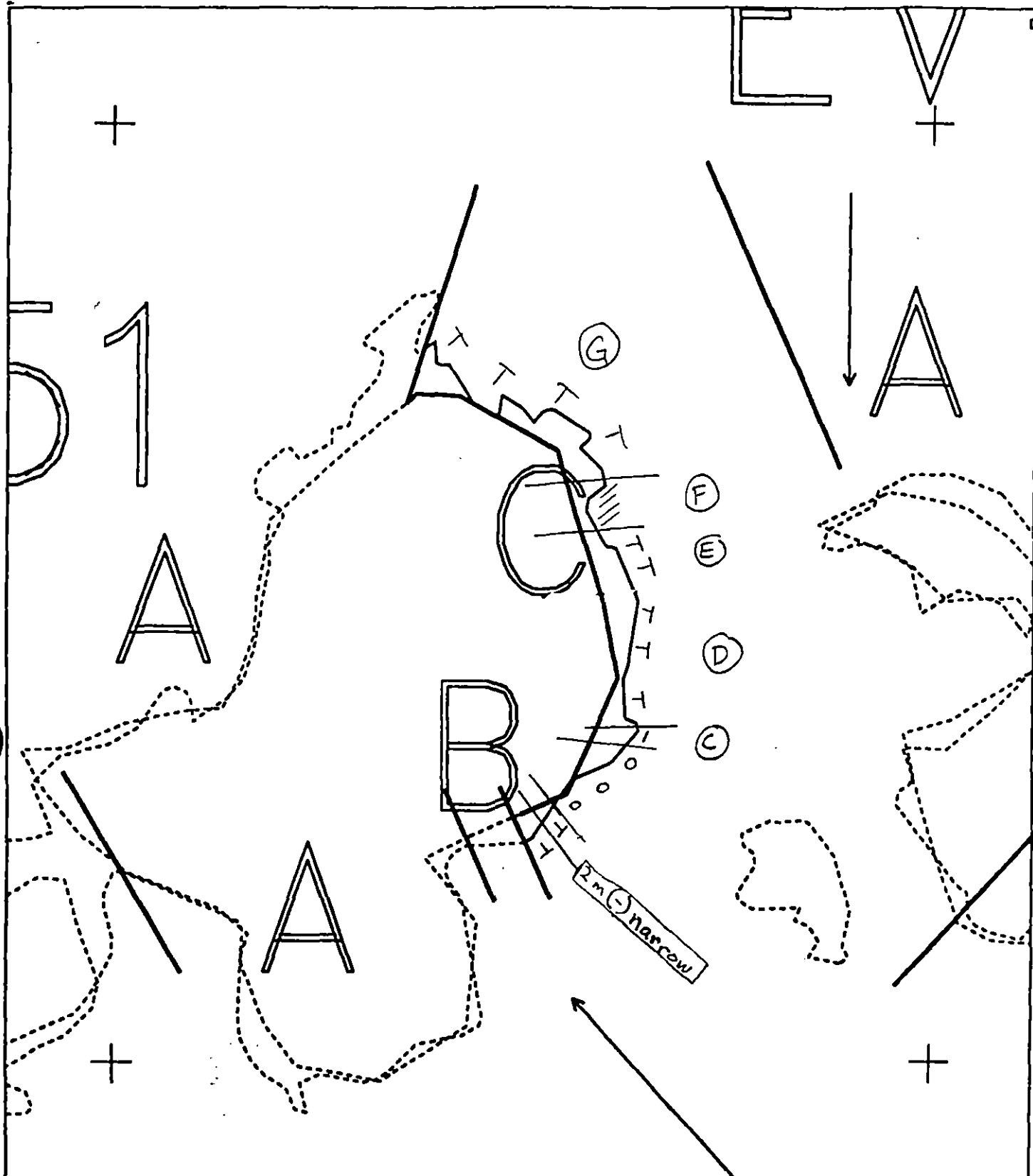
AR State Plane Zone 4
NAD83



EAGLE NEST

Surveyed 5/24/91
Mike Gabe

Reviewed M.B. 5/30/91



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

EV050 C
 ADEC Subsegment Length: 414m
 METERS
 0 100 200
 AK State Plane Zone 4
 prv030c

Subdivision Field Map
 Map Key: PWSEV050C
 Name: CHANEY
 Date: MAY 24 1991
 Date Entered:



REVIEWED: MC 6/1/91
 revised 5.30 ay

1991 MAYSAP EVALUATION

SEGMENT: EV 050 SUB: C REGION: PWS SURVEY DATE: 5/26/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

<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**

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

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

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

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

ADEC

NAME John Hayes SIGNATURE [Signature]

☐ NTR Recommend manual removal of ATP in areas A + F areas are accessible. area F will need additional rating following pickup where possible.

EXXON

NAME JOHN DEAN SIGNATURE [Signature]

☒ NTR NO OIL OBSERVED IN RECOVERABLE QUANTITIES, CHARACTER OR LOCATION.

LANDMANAGER

NAME Steve Warren OF CUC FS SIGNATURE [Signature]

☐ NTR COAST - COVER WITH SPRUCE NEEDLES ON ROCK FACES
SPOTTED ON ROCKS - BAND OF ASPHALT AROUND COVE IN UPTOWN
MANUAL REMOVAL - CHANGING LOCAL RESPONSE

NO BIO

USCG/NOAA

NAME DECKER / BEINE SIGNATURE CWO K. L. Decker [Signature]

☒ NTR Oiling observed was weathering to asphaltic state with only a remote possibility of remobilization and presents no danger to the environment.

The only significant oiling occurs as patches and traces in a boulder washing. The AP found was not severe.
see

TEAM NO. 5OG CHANEYBIO CRANKSEGMENT EV 50ADEC HAYESLANDMANAGER WARD for CUCSUBDIVISION CEXXON DEANUSCG/NOAA DREHER/CLINEDATE MAY 124 191TIME 16:10 to 17:30TIDE LEVEL 3.5 ft. to 2.5 ft.ENERGY LEVEL: ☐ H ☐ M ☒ LSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☒ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 4.14 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

TIDAL POOL SHEEN

EST. OIL CATEGORY LENGTH: W - m M 40 m N 17 m VL 315 m NO 42 m US - m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SO	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A	P				S	S					BP	L	2	2		✓			SAME REGION AS PIT 1
B					T	T					BRR	HV	4	25		✓			SPLATTERS
C					S	S	S				R	V	1	15		✓			DISCON. BAND
D					T	S					RB	HV	1	100		✓			RANDOM SPLATTERS IN BR
E	T				S						B	H	2	45		✓			BASE OF BOULDERS
F	T			T	P	S					BR	H	3	40		✓			
G				T	S	S					BR	H	2	145		✓			

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 - 22 FRAMES 12-13

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	12		✓						0 - 10	Y	—	—		✓			PC-PM	BEHIND BDR Ym
2	25							✓	-		24	N		✓			P-PG	
3	15							✓	-		—	—		✓			BC-BC	
4	13							✓	-		5	—		✓			BP-BPCG	
5	20				✓				0 - 10		—	—		✓			BC-BCG	
									-									
									-									
									-									
									-									

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

OG COMMENTS: LOCALIZED POCKETS OF AP AT AREAS (A) & (F).
 MOST OF THE SUBDIVISION IS CHARACTERIZED BY RANDOM
 SPLATTERS OF CT & CV WITH AN OCCASIONAL DISCONTINUOUS
 "BATH TUB RING."

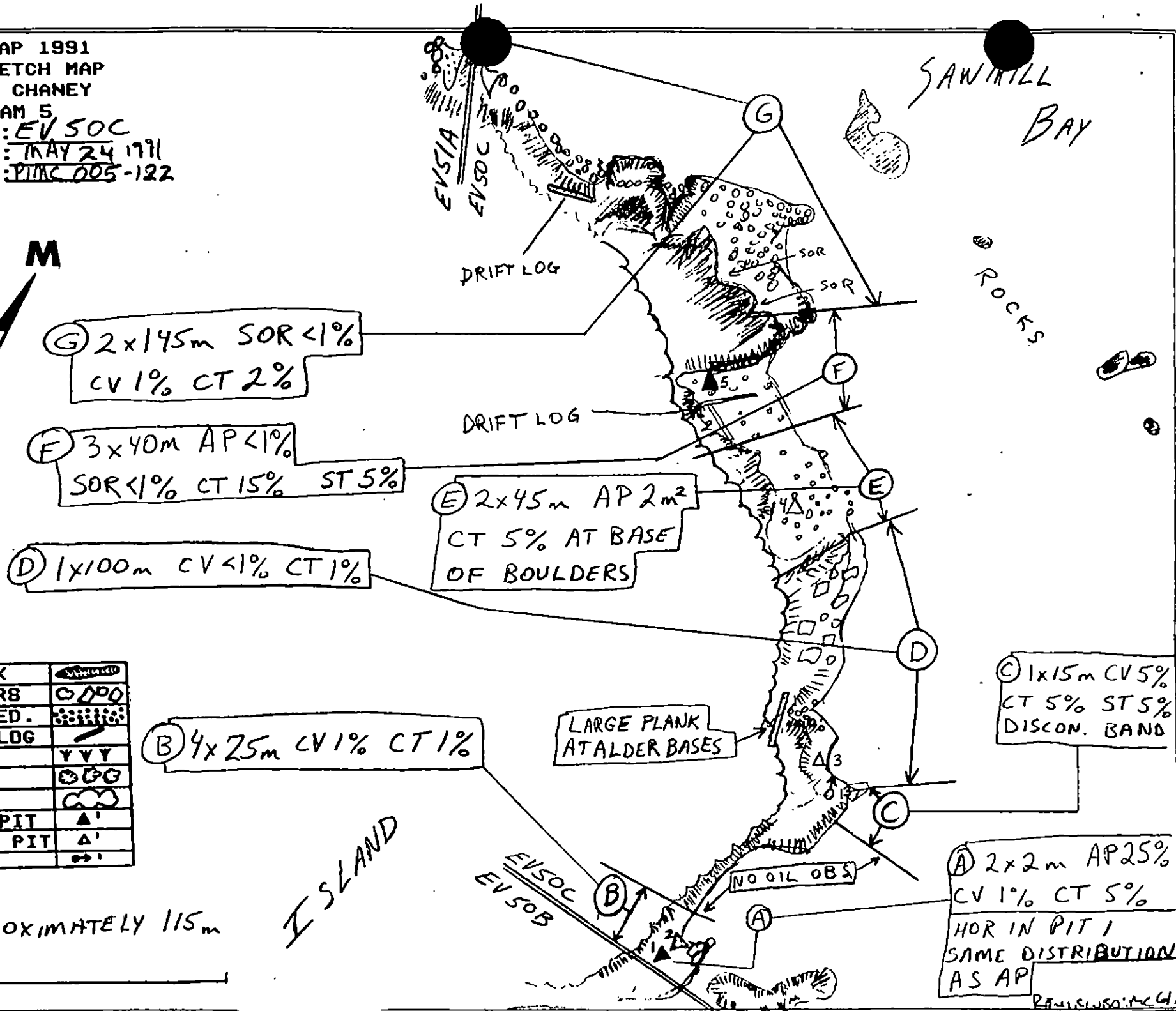
REVISOR: MC 6/1/91

REVISOR: S. 3049

REVISOR

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

ISLAND



MAYSAP BIOLOGICAL SUMMARY FORM

Pg 1 of 3

TEAM # 5

DATE 24 May 1991

SEGMENT # EV-50

TIDAL HEIGHT(Range) +3 → +2

SUBDIVISION C

BIOLOGIST Crank

SEA STATE 1'

WIND SPEED/DIRECTION 5-10 / NE

PHOTOGRAPHS: ROLL #

FRAME #

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

(A) Area is in the MITZ. In small boulders a rare concentration of barnacles is present. Barnacles with oil contaminated shells were able to tightly seal their inner plates when stimulated. A rare concentration of juvenile mussels are present in the pebbles adjacent to the MITZ. Adult mussel shells were present in the current. Biotin cover is ~5%. In the MITZ there is a dense to moderate concentration of intertidal mussels. Many old shells are present. predaceous *Littorina* and *Hydrobia* are visible but whelks were not located. In the boulders and seagrass, barnacles are moderately concentrated. *Littorina* and limpets are dense with juvenile *Littorina* the most abundant. Mussels are sparse and *Fucus* has a rare concentration with a few sparsely concentrated patches. Biotin cover is ~10%.

(B) Area is a broad area outside of area A. Within the site rarely concentrated mussels, rare to sparsely concentrated barnacles, patches of sparsely concentrated *Fucus*, moderate limpets and sparse *Littorina* are present. Biotin cover is ~10%. Area has the same MITZ as described for area A.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

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

LAND MAMMALS

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

Shoreline subdivision map showing important biological features attached.

Reviewed: MC/6/1/91 Reviewed M.B. 5/30/91

Team # 5
Segment # EV-50
Subdivision C
State 1'

Date 24 May 1991 pg 2 of 3
Tidal Height +3 → +2
Biologist Crank
Wind Speed / Direction 5-10 / NE

Comments (cont.)

(C) Area is a sand in the UITZ. There is a moderate to dense concentration of barnacles within the sand. Barnacles with oil contaminated shells were able to tightly seal their cover plates when stimulated. Barnacle scars were present. Live mussels were also present within the sand. Biota cover is ~70%.

In the MITZ, there is a sparse concentration of Fucus, barnacles and mussels and a moderate concentration of Littorina and limpets. The majority of the mussel and gastropod populations are juvenile animals. Biota cover is ~30%.

(D) Area is located in the UITZ. Within the site there is a sparse concentration of Fucus, barnacles, Littorina and limpets. Biota cover varies from 10-20%.

In the MITZ, there is a patchy to continuous moderately concentrated Fucus. Post-spill age mussels are moderately concentrated around boulder and cobble bases. Littorina and limpets are dense; egg masses are present. Biota cover ~50%.

Team # 5

Segment # EV-50

Subdivision C

Sea State 1'

Date 24 May 1991

pg 3 of 3

Tidal Height +3 $\rightarrow$ +2

Biologist Crank

Wind Speed / Direction 5-10 / NE

Comments (cont.)

(E) Area is in the UITZ. Rare barnacles are present in the site covering <1% of the surface sediments. In the site, Scytosiphon moderately concentrated barnacles and Fucus are rare to sparsely concentrated. mussels are present in the low UITZ. Biot cover is 50%. In the MITZ, mussels and Fucus are sparse and barnacles, Littorina and limpets are moderate. Biot cover remains 50%.

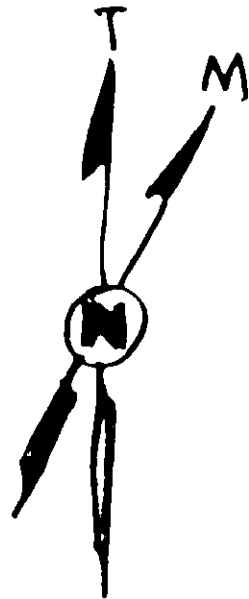
(F) Area is in the UITZ. Like area E, rare barnacles cover <1% of the surface sediments within the site. In the low UITZ, below site, a sparse barnacle concentration covers ~20% of the sediments. The MITZ is similar to the MITZ in area E. Biot cover is 50%.

(G) Area is in the UITZ, similar to area E. There are "oil shadows" in the black lichen, bare rock shaped like an oil drip showing through the lichen cover. The MITZ has the same species concentrations as area E. Also present are Scytosiphon and bladed green algae. The Fucus has epiphytic plants. Biot cover varies from 60 to 80%.

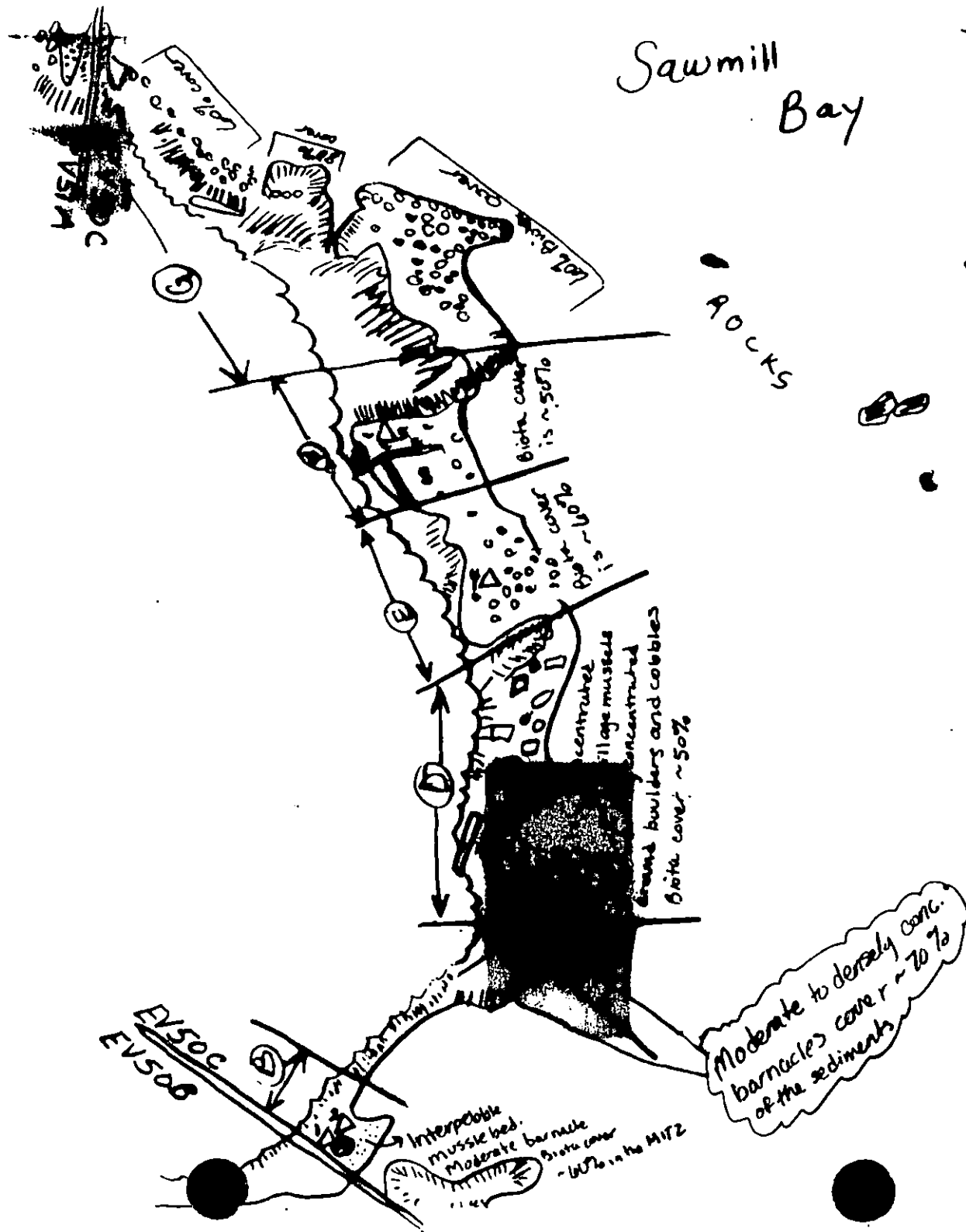
REVIEWED: 6/1/91 MC

Reviewed M.B. 5/30/91

MAYSAP 1991
 OG SKETCH MAP: BIO MAP
 CHANEY & CRANK
 TEAM 5
 SEGMENT: EV-50C
 DATE 24 May 1991



Island
 Bettles



Reviews M.B. 5/3/91

U.S. FISH AND WILDLIFE SERVICE (FWS)
SHORELINE ACTIVITY/BALD EAGLE IMPACT EVALUATION

Date 5/24/91 Shoreline Segment/Subdivision EV0500C

Shoreline activity Assessment Team Survey

Time - Begin
4:15 PM

Time - End
6:00 PM

FWS Observer _____

Surveyors/workers _____

Nest in view/monitored: ☒ Y ☐ N Adult in nest: Y ☐ N ☐ Unk

Adverse eagle response: Y ☒ N Adult left nest: Y ☒ N Unk.

Time

Type of human activity/eagle response

4:20 PM

A shoreline survey was conducted with
the boat entrance from the south. 1 adult
and 1 juvenile were seen in the area. The
adult was observed fishing and did land
near the nest marked active on the
eagle survey map. No birds were located
in the nest. Therefore the nest was
not observed to be active.

Survey/work activities completed: ☒ Y ☐ N

Personnel withdrawn due to eagle conflict: Y ☒ N

Recommendations: If cleanup is done in the area
a monitor should be present in an offshore
position.

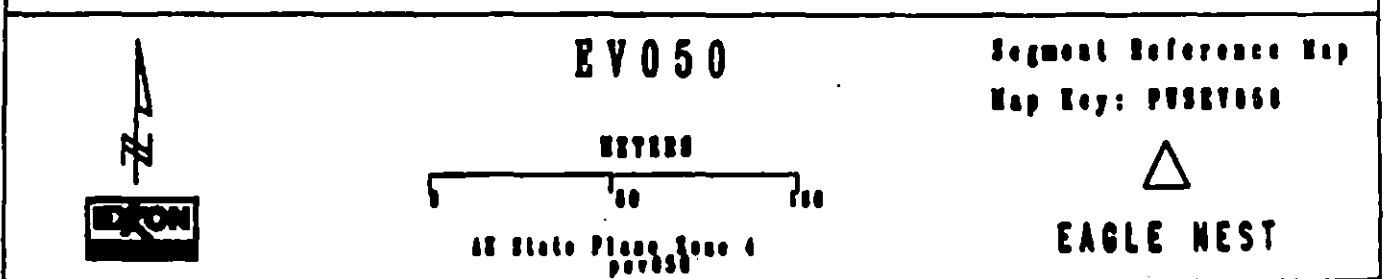
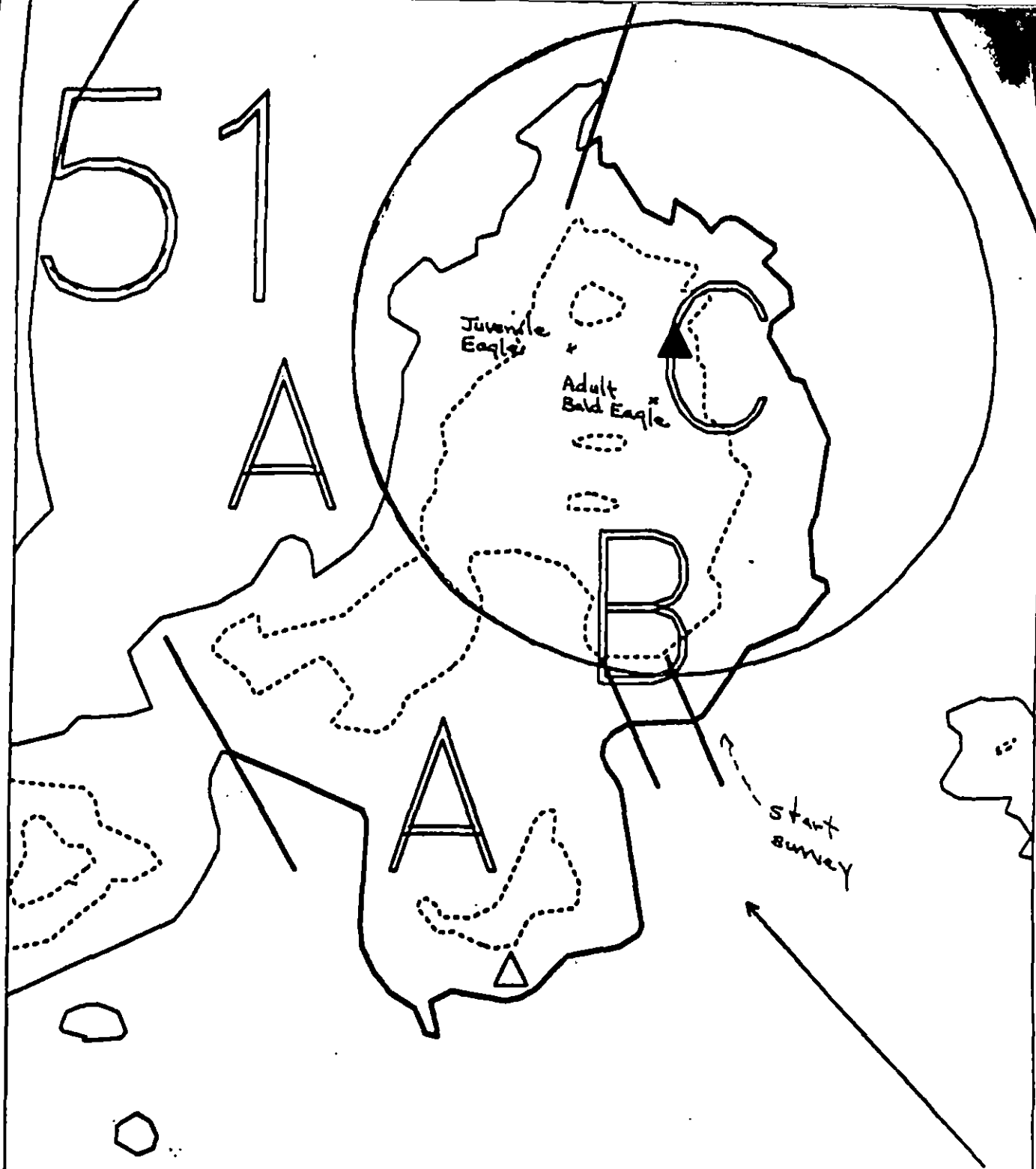
FWS Observer

Mike Luke

Date

5/24/91

Reviewed M.B. 5/31/91



Surveyed 5/24/91
Mike Luke

Reviewed M.B. 5/30/91

Reviewed: MC 6/1/9
revised 5.30 9/9

REGION: PRINCE WILLIAM SOUND

SEGMENT: EV-50

SUBDIVISIONS: A (1 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ EV-50 SUBDIVISION A (1 OF 3) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Sawmill Bay Hatchery release area (1F) - 4/15 to 6/1. Contact
ADF&G for exact dates. Deer harvesting (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid unnecessary disturbance
or damage to unoiled substrate and biota.

ARCHAEOLOGICAL CONSTRAINTS: If treatment is planned, a cultural re-
source evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 138 m: V.Light 18 m: No Oil 359 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ EV 50 SUBDIVISION: A/B/C DATE 3/30/90

NAME LARRY FLETCHER SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

AGREE WITH OG FORM.

DEC NAME DAVID M. SALE SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

1) SPOT WASHING OF OIL ON ROCK FACES AND CREVICES w/LOCAL
ABSORBENT MATERIAL TO AVOID FURTHER ENTRENCHMENT
MANUAL PICKUP OF TAIL MAT ON LOW ANGLE SHORE. BIOREMEDIATE
TREATMENT SAME AS ABOVE TO REDUCE COVER TO STAIN.

AND MANAGER NAME Leigh Carlson SIGNATURE Leigh Carlson

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Segment listed as priority 1 by PWSCA. Hatchery impacts listed in
PWS area plan. Treatment as suggested by ADEC above. Most of
impacted substrate too large for bioremediation

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

JG R. Martz USCG LARRY FLETCHER SEGMENT ST/ EV-50
 310 B. Smith LAND REP Larry Carlson SUBDIVISION A (1 OF 3)
 EXXON J. Eganowski ADEC Dave Sale TIME 08:00 to 11:00
 TIDE LEVEL: +1' to -1' DATE 03/30/90
 EST. SUBDIVISION LENGTH: 530 m ☒ Sun ☒ Clouds ☒ Fog ☒ Rain ☒ Snow
 PLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: _____ to Counter clockwise
 SURFACE SEDIMENTS: R 50 % B 15 % C 15 % P 15 % G 5 % S _____ % M _____ % V _____ %
 SLOPE: Long 25 % Hang 50 % Vert 25 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W _____ m M _____ m N 167 m VL 28 m NO 334 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	10	15	20	25	30	35	40	45	50	SU	U	M	U
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT			X					X			X		
STAIN													
MOUSSE													
PATTIES				X				X			X		
TARBALLS													
NO OIL										X		X	X

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS _____

 Photographs:
 Roll # 2, Frame # 11
 Roll No. ST-10-1
Frames 1, 2, 3

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UG	30	35	40	45	50	SU	U	M	U		
NONE																				

COMMENTS

No pits dug - subsurface penetration was mostly negligible
 oil present mostly as a coat on bed rock; PENETRATION INTO CREVICES AND FRACTURES ON BEDROCK
 Supratidal zone fairly well exposed. Oiled debris was negligible

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/28/90

Segment ST / EV 50 Subdivision all Date (mo / day / yr) 3 / 30 / 90Time 4 hr @ 0930 Biologist Lemon Page 1 of 2
Temp 4°C, wind 0, waves 0, snowing(A) Substrate type and % of segments:
(1) Bedrock 50 (2) Boulder 40 (3) Cobble 9 (4) Pebble 1 (5) Sand (6) Silt (B) Overall % cover of biota (% of segment): Dense ✓ Moderate Low

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

Photographs:

2 Roll No. 111+1 Frames 1-9

BARNACLES

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

NOT 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:

Enhydra lutra (sea otter) 8 of these reported from the boat. Skiff driver reported stellar sea lion Eumetopias swam under boat. 3 waterfowl

Ecological Considerations: Over high mid and low zones from Chthamalus barnacles, although Fucus, Halosaccion, Hedophyllum & all communities appeared generally healthy, showing recent growth, reproduction and new settlement. Echinoderms, mostly Solaster, were seen feeding on clams Saxidomus and just being the about every 3 meters along shore. Spirorbis and other serpulidae (Annelid) worms were seen regularly, the former at 40% coverage when a patch was found like

V 50
(continued)

3/30/90

Bio Bob Lemmon

Subtidal Laminarias covered about 80% as seen from the shore.
Katharina (chiton); Pododesmis capio (bivalve), Telia (anthozoa),
Oregonia gracilis (decapoda) were all found though scarce.
 Reproduction was observed in Fucus (conceptacles swelling)
Littorina setkana (laying eggs). Juvenile Fucus, mytilus, Balanus
 were seen ≤ 2 mm.

occasions, when pulling out loose bedrock clasts to look
 for oil down in the cracks; we found OLIGOCHAETE
 ANNELID worms; this is not where I would expect to find them.

OG R. Marty

SEGMENT ST/ EV-50

SKETCH MAP

SUBDIVISION _____

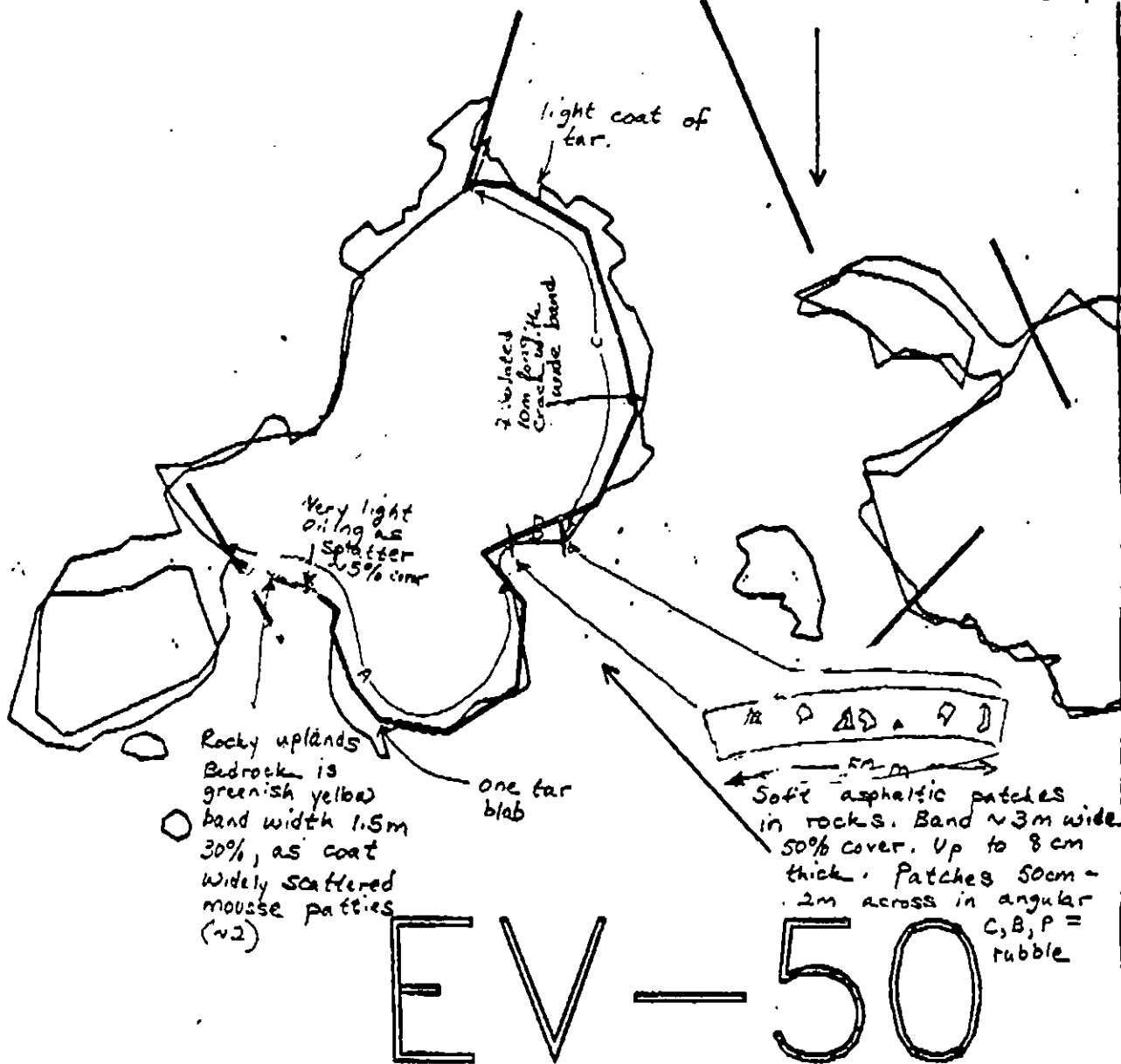
DATE 03/30/90

CHECKLIST

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

LEGEND

- 1 Pit - No Subsurface Oil
- 2 Pit - Subsurface Oil
- Continuous Distribution
- Broken Distribution
- Patchy Distribution
- Spashed Distribution
- Old Vegetation
- 1 Photo location, direction, and number



EV-50

ADEC Segment Length: 1141m



Map Key: PWS-249

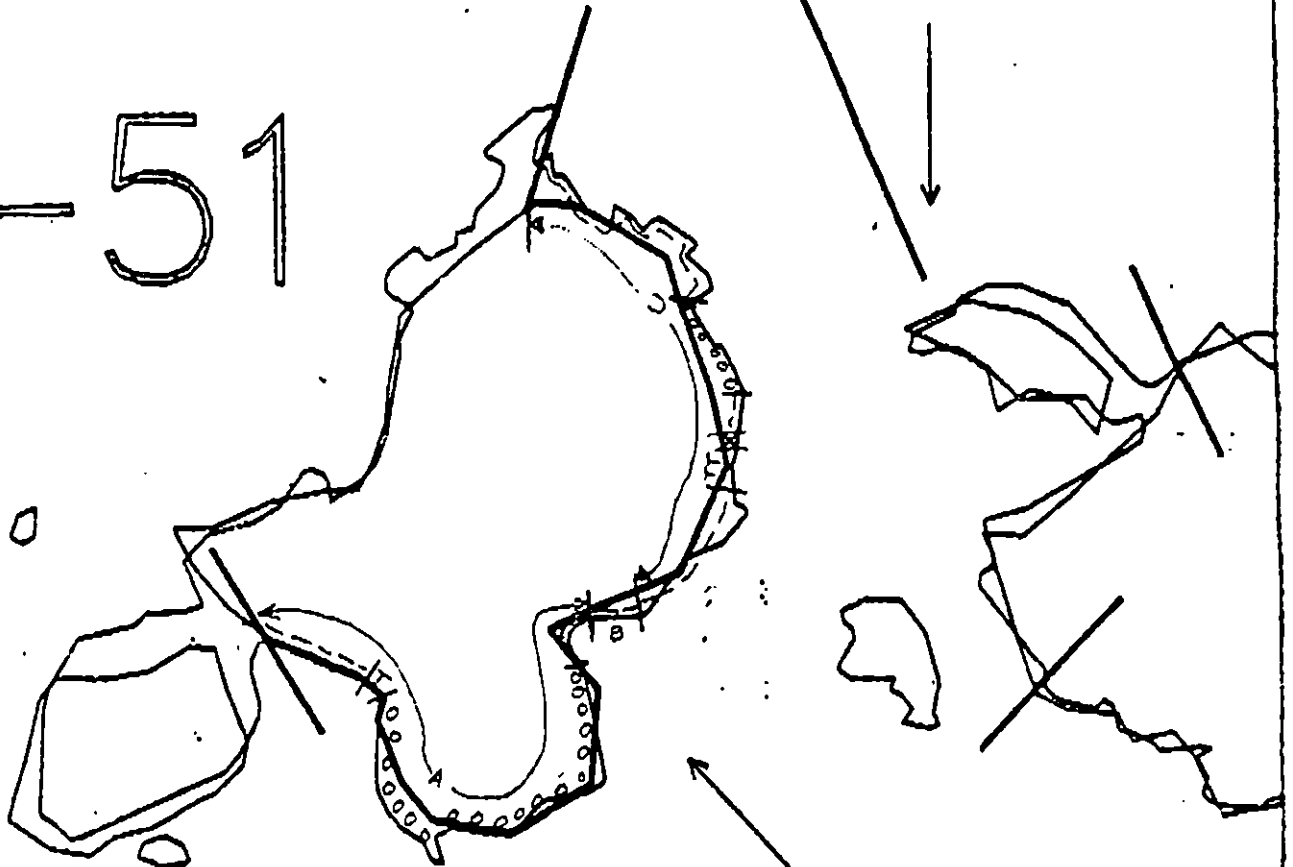
Name: Rich. Marty

Date: 03/30/90

Date Entered:

EV-

V-51



EXXON	MAP		
	LENGTHS		
EV-50A			
Narrow	0.9 = 185	167	
V. Light	0.15 = 22.5	28	
No	1.8 = 270	334	
EV-50B			
Narrow	0.2 = 30	37	
EV-50C			
Wide	0.1 = 15	19	
Narrow	2.4 = 360	445	
V. Light	0.2 = 30	37	
No	0.4 = 60	74	
		923	
		1141 m	

EV-50

XXX Wide
 /// Medium
 --- Narrow
 TTTT Very Light
 OOOO No

EV-50

APCC Segment Length: 1141m



Map Key: PWS-249

Name: Richard Marty

Date: 03/30/90

Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: EV-50

SUBDIVISIONS: B (2 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ EV-50 SUBDIVISION B (2 OF 3) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Sawmill Bay Hatchery release area (1F) - 4/15 to 6/1. Contact
ADF&G for exact dates. Deer harvesting (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid unnecessary disturbance
or damage to unoiled substrate and biota.

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 Re-
source Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 40 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 8 cm

RECOMMENDATIONS:

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

COMMENTS: Spot wash area of cover using wands and absorbents.
Breakup and remove tarmat. Bioremediate area of cover. Work after
6/1 based on constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

EGMENT ST/ EV 50 SUBDIVISION: A/B/C DATE 3/30/90

SCG
NAME LARRY FLETCHER SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
OMMENTS

AGREE WITH OG FORM.

DEC
NAME DAVID M. SALE SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
OMMENTS

- 1) SPOT WASHING OF OIL ON ROCK FACES AND CREVICES w/LOCAL
ABSORBENT MATERIAL TO AVOID FURTHER ENTRENCHMENT
MANUAL PICKUP OF TAIL MAT ON LOW ANGLE SHORE. BIOREMEDIATE
TREATMENT SAME AS ABOVE TO REDUCE COVER TO STAIN.

AND MANAGER
NAME Leigh Carlson SIGNATURE Leigh Carlson

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
OMMENTS

Segment listed as priority 1 by PWSCA. Hatchery impacts listed in
PWS area plan. Treatment as suggested by ADEC above. Most of
impacted substrate too large for bioremediation

RECEIVED

SHORELINE OILING SUMMARY

APR 01 1990

REVISION NO. 001200

CG R. Mary USCG LARRY FLETCHER SEGMENT STI EV-50B
 IO B. Lumber LAND REP Leigh Carlson SUBDIVISION B
 EXON J. Ezarski ADEC Dave Sale TIME 08:00 to 11:00
 E 10 TIDE LEVEL: +1' to -1' DATE 03/30/90
 ST. SUBDIVISION LENGTH: 37 m ☒ Sun ☒ Clouds ☒ Fog ☒ Rain ☒ Snow
 PLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: to Counterclockwise
 SURFACE SEDIMENTS: R 50 % B 15 % C 15 % P 15 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Long 25 % Hang 50 % Vert 25 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 37 m VL 0 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	R	B	P	S	SP	BP	OP	GP	TP	SV	U	M	V	
ASPHALT & PAVEMENT		X				X					X			
POOLED														
COVER		X						X			X			
COAT		X			X						X			
STAIN														
MOUSSE														
PATTIES														
TARBALLS														
NO OIL											X	X	X	

PAVEMENT: H F S 60 cm by 8 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. ST-10-1Frames 4, 5

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	SEC BP	DEL BP	FW	GT	SL	DEL TL	LEG	SU	U	M	U			
(1)	14	X				.	0 - 8		X		X					X				N	Poorly sorted, Angular G.S., P.S., etc.		
							.																
							.																
							.																
							.																
							.																

COMMENTS: This is the most oiled portion of the segment.
 Asphalt is formed in a thin veneer of angular
 sediments over yellow-green brecciated bedrock.
 Dark brown tarry cover in crevices and fractures

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / EV 50 Subdivision all Date (mo / day / yr) 3 / 30 / 90Time (hr) 0930 Biologist Lemon Page 1 of 2
Temp 4°C, wind 0, waves 0, snowing(A) Substrate type and % of segments:
(1) Bedrock 50 (2) Boulder 40 (3) Cobble 9 (4) Pebble 1 (5) Sand (6) Silt (B) Overall % cover of biota (% of segment): Dense ✓ Moderate Low

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

Photographs:

2 Roll No. 111+1 Frames 1-9

BARNACLES

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

NOT 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: Enhydra lutra (sea otter) 8 of these reported from the boat. Skiff driver reported Stellar sea lion Eumetopias swim under boat. 5 waterfowlEcological Considerations: Overall high mid and low zones from Chthamalus barnacles, although Fucus, Halosaccion, Hedophyllum; all communities appeared generally healthy, showing recent growth, reproduction and new settlement. Echinoderms, mostly Solaster, were seen feeding on clams Saxidomus and just being the about every 3 meters along shore. Spirorbis and other serpulidae (Annelid) worms were seen regularly, the former at 40% coverage when a patch was found like

V 50
(continued)

3/30/90

Bio Bob Lemon

Subtidal Laminarias covered about 80% as seen from the shore.
Katharina (chiton); Pododesmia cepia (bivalve), Telia (anthozoa),
Oregonia gracilis (decapoda) were all found though scarce.
 Reproduction was observed in Fucus (conceptacles swelling)
Littorina setkana (laying eggs). Juvenile Fucus, mytilus, Balanus
 were seen ≤ 2 mm.

occasions, when pulling out loose oiled bedrock clasts to look
 for oil down in the cracks; we found OLIGOCHAETE
 ANNELID worms; this is not where I would expect to find them.

OG: R. Marty

SEGMENT ST/ EV-50

SUBMISSION

DATE 03/30/90

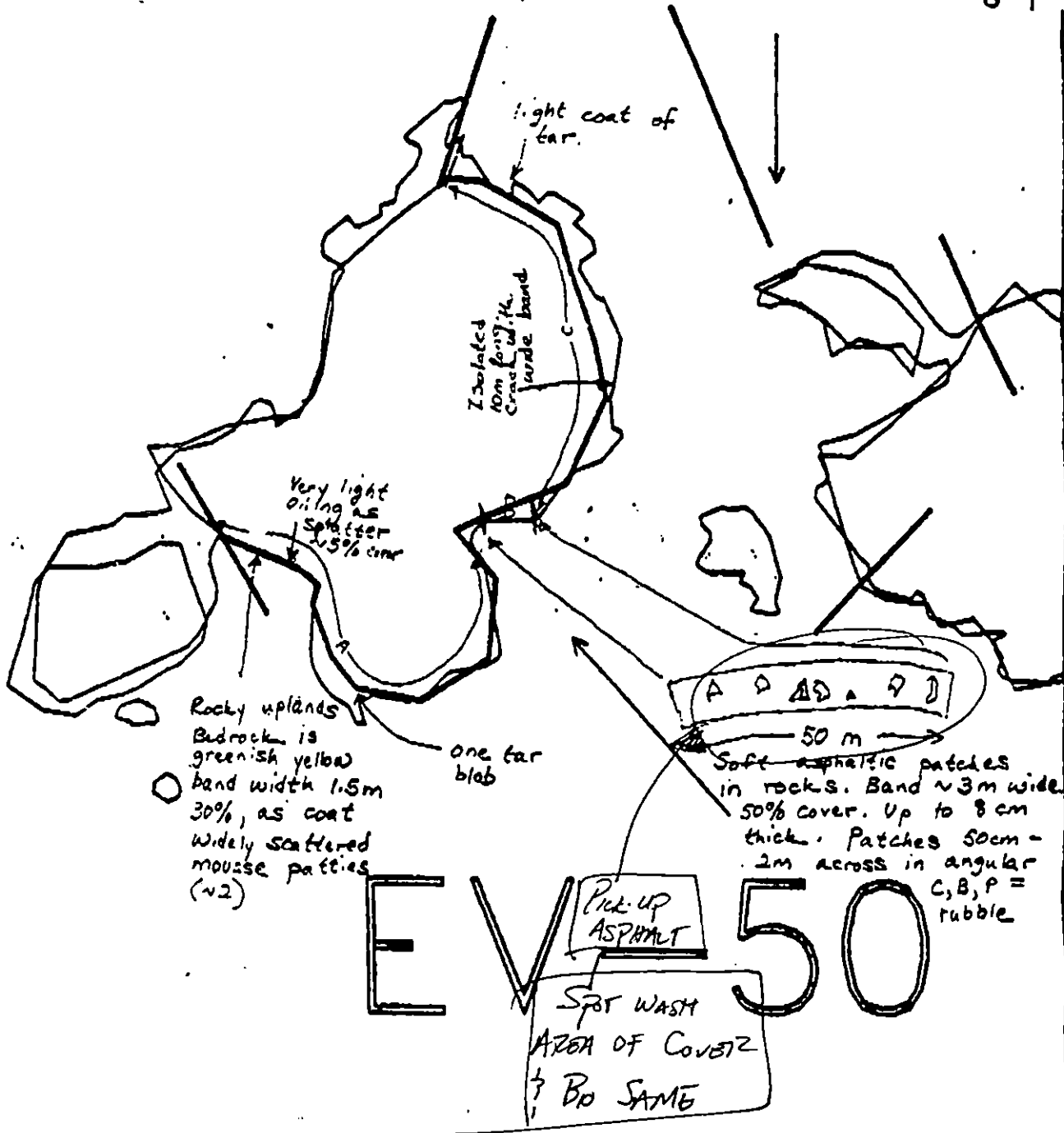
CHECKLIST

N Arrow
Approx. Scale
Background Bathy
Oil Dstl
Width
Length
% Cover
Substrate Character
Est. HMM/LWL
SSL
Profile Location(s)
Profile(s)
Pit Location(s)
Photo Location(s)

LEGEND

1 ▲
Pit - No Subsurface Oil
2 ▲
Pit - Subsurface Oil
Continuous Distribution
CT/C
CT/B
Broken Distribution
CT/P
Pitry Distribution
CT/S
Splashed Distribution
Dead Vegetation
Photo location, direction, and number

SKETCH MAP



EV-50

ADEC Segment Length: 1141m



Map Key: PWS-249

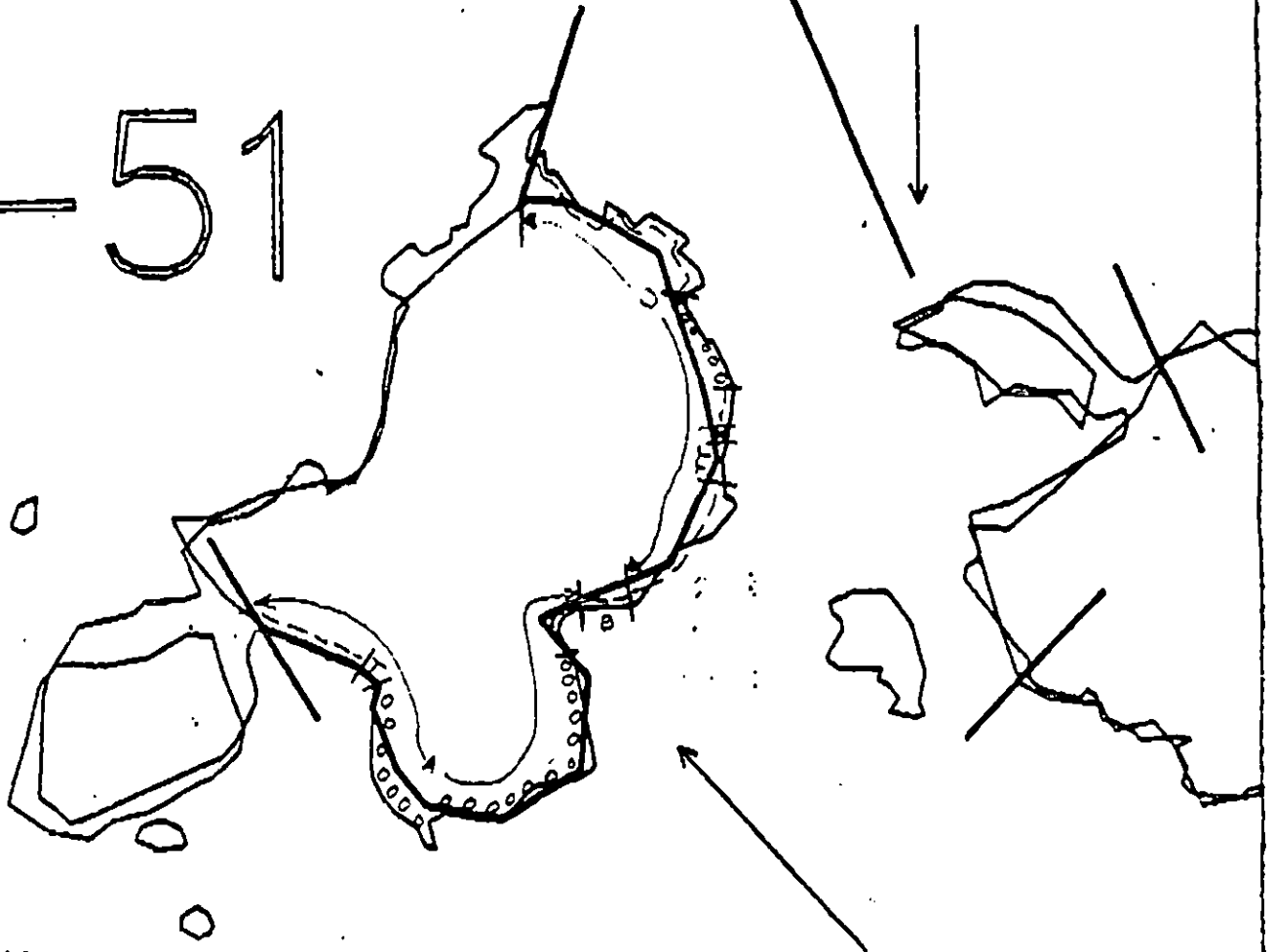
Name: Rich. Marty

Date: 03/30/90

Date Entered:

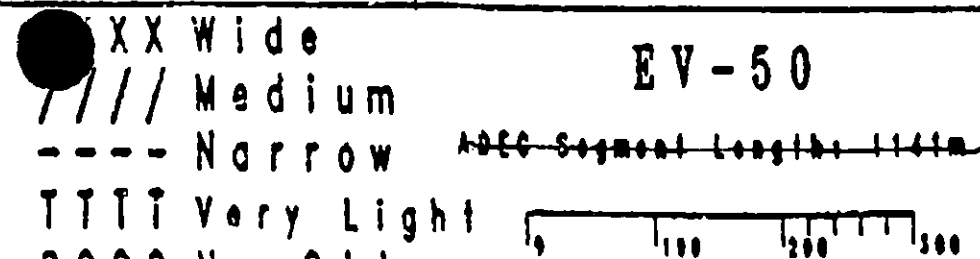
EV-

V-51



EV-50

EXXON	MAP		
	LENGTHS		
EV-50A			
Narrow	0.9	= 135	167
V. Light	0.15	= 22.5	28
No	1.8	= 270	334
EV-50B			
Narrow	0.2	= 30	37
EV-50C			
Wide	0.1	= 15	19
Narrow	2.4	= 360	445
V. Light	0.2	= 30	37
No	2.4	= 60	74
		923	1141 m



Map Key: PWS-249
 Memo: Richard Marty
 Date: 03/30/90
 Note: Released.

REGION: PRINCE WILLIAM SOUND

SEGMENT: EV-50

SUBDIVISIONS: C (3 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ EV-50 SUBDIVISION C (3 OF 3) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Sawmill Bay Hatchery release area (1F) - 4/15 to 6/1. Contact
ADF&G for exact dates. Deer harvesting (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid unnecessary disturbance
or damage to unoiled substrate and biota.

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 Re-
source Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 16 m: Medium 0 m: Narrow 296 m: V.Light 31 m: No Oil 70 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommend bioremediation of small area of surface cover.
Work after 6/1 based on constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

EGMENT ST / EV 50 SUBDIVISION: A/B/C DATE 3/30/90

SCG

AME LARRY FLETCHER SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

OMMENTS

AGREE WITH OG FORM.

DEC

AME DAVID M. SALE SIGNATURE [Signature]

☐ TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

OMMENTS

- 1) SPOT WASHING OF OIL ON ROCK FACES AND CREVICES w/LOCAL
ABSORBENT MATERIAL TO AVOID FURTHER ENTRENCHMENT
MINIMAL PICKUP OF TAR MAT ON LOW ANGLE SHORE. BIOREMEDIATE
TREATMENT SAME AS ABOVE TO REDUCE COVER TO STAIN.

AND MANAGER

AME Leigh Carlson SIGNATURE Leigh Carlson

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

OMMENTS

segment listed as priority 1 by PWSCA. Hatchery impacts listed in
PWS area plan. Treatment as suggested by ADEC above. Most of
impacted substrate too large for bioremediation

SHORELINE OILING SUMMARY

REVISION NO. 000000

OG R. Marty USCG LARRY FLETCHER SEGMENT STI EV-50
 BIO B. Lumber LAND REP Leigh Carlson SUBDIVISION C
 EXXON J. Egan ADEC Dave Sale TIME 08:00 to 11:00
 TENDR NO.: 10 TIDE LEVEL: +1 10 -1 DATE 03/30/90
 ES 000 BDIVISION LENGTH: 575 m ☒ Sun ☒ Clouds ☒ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: to Counterclockwise
 SURFACE SEDIMENTS: R 50 % B 15 % C 15 % P 15 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Long 2.5 % Hang 50 % Vert 2.5 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 19 m M 0 m N 445 m VL 37 m NO 74 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	W	M	N	VL	SP	BR	OR	OL	OP	OC	NO	NO	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT	X												X			
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
NO OIL													X	X	X	

PAVEMENT: H F 8 None sq. m by 0 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? ☒ BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	2		
Vegetation	0	1	
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE 0#BAGS 0

Photographs: Frame #1
 Roll No. ST-10-1
 Frames 6-9

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		CP	CR	CL	CF	HC		VO	UC	SO 10	SO 20	OR 10	OR 20	OL 10	OL 20	OP 10	OP 20	SU	U	M	LI		
	None						.																
							.																
							.																
							.																
							.																
							.																
							.																

COMMENTS Oil Distribution is highly discontinuous and in homogeneous
 this is difficult to successfully quantify on a form.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/25/90

Segment ST / EV 50 Subdivision a-11r Date (mo / day / yr) 3 / 30 / 90

Tide 24 hr 0930 Biologist Lemon Page 1 of 2
Temp 4°C, wind 0, waves 0, snowing

(A) Substrate type and % of segments:
(1) Bedrock 50 (2) Boulder 40 (3) Cobble 9 (4) Pebble 1 (5) Sand (6) Silt

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

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

Photographs: 2 Roll No. 1

11 + 1 Frames 1 - 9

BARNACLES

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

NOT 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:

Enchorda lutra (sea otter) 8 of these reported from the boat. Skiff driver reported Stellar sea lion Eumetopias swam under boat. 5 waterfowl

Ecological Considerations: Over high mid and low zones from Chthamalus holosoma, Hedophyllum & all communities appeared generally healthy, showing recent growth, reproduction and new settlement. Echinoderms, mostly Solaster, were seen feeding on clams Saxidomus and just being the about every 3 meters along shore. Spirorbis and other serpulidae (Annelid) worms were seen regularly, the former at 40% coverage when a patch was found like

IV 50
 continues)

3/30/90

Bio Boblman

Subtidal Laminarias covered about 80% as seen from the shaft.

Katharina (chiton); Pododesmia cepio (bivalve), Telia (anthozoa),

Oregonia gracilis (decapoda) were all found though scarce.

Reproduction was observed in Fucus (conceptacles swelling)

Littorina setkana (laying eggs). Juvenile Fucus, mytilus; Balanus
 were seen ≤ 2 mm.

occasions, when pulling out loosened oiled bedrock 'clasts' to look
 for oil down in the cracks; we found OLIGOCHAETE
 ANNELID worms; this is not what I would expect to find there.

OG: R. Marty

SEGMENT ST/ EV-50

SUBDIVISION

DATE 03/30/90

CHECKLIST

N Area
Aspect Scale
Seep/Soil Bank
Oil Dot
Width
Length
% Cover
Substrate Character
Est HMM/LWL
SSL
Profile Location(s)
Profile(s)
Pit Location(s)
Photo Location(s)

LEGEND

1 A

Pit - No Subsurface Oil

2 A

Pit - Subsurface Oil

Continuous Distribution

CT/C

Broken Distribution

CT/P

Partial Distribution

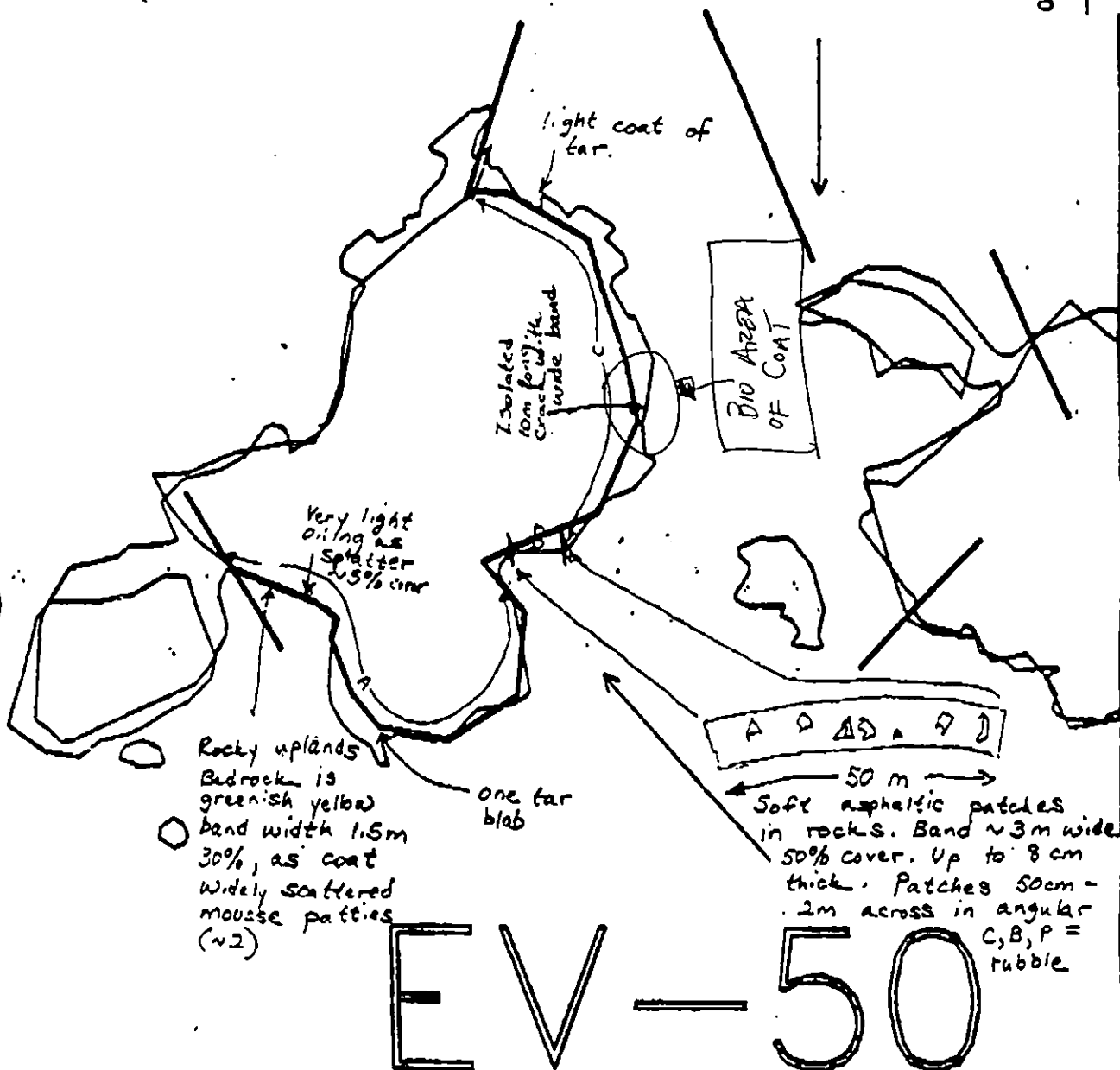
CT/S

Scattered Distribution

Old Vegetation

Photo location, elevation, and number

SKETCH MAP



EV-50

ADEC Segment Length: 1141m



Map Key: PWS-249

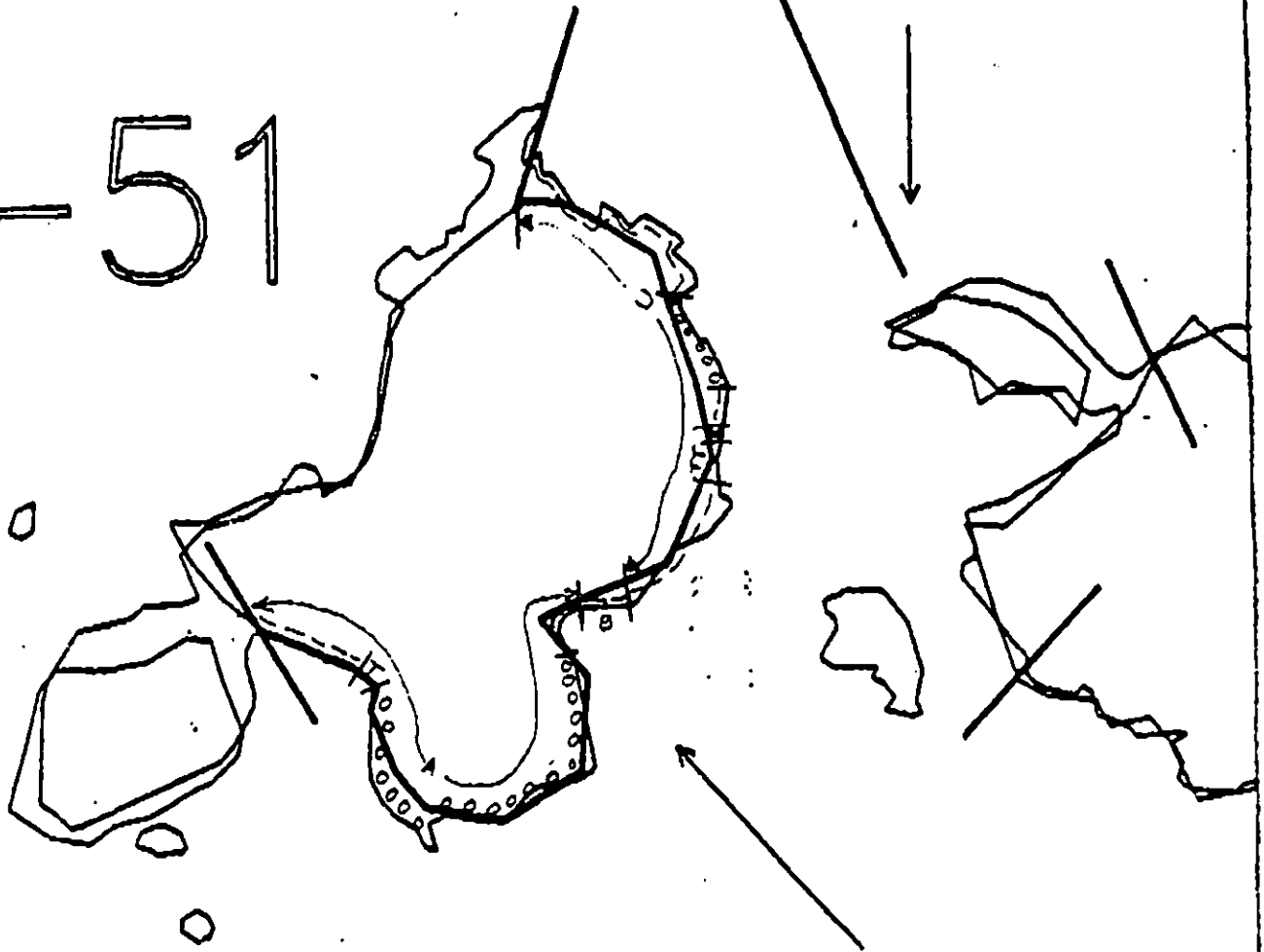
Name: Rich. Marty

Date: 03/30/90

Date Entered:

EV-

V-51



EV-50

EXXON	MAP LENGTHS	
EV-50A		
Narrow	0.9 = 135	167
V. Light	0.15 = 22.5	28
No	1.8 = 270	334
EV-50B		
Narrow	0.2 = 30	37
EV-50C		
Wide	0.1 = 15	19
Narrow	2.4 = 360	445
V. Light	0.2 = 30	37
No	0.4 = 60	74
	<u>923</u>	<u>1141 m</u>

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

EV-50

Atoll Segment Lengths: 1141m



Map Key: PWS-249
 Name: Richard Marty
 Date: 03/30/90

1991 MAYSAP EVALUATION

SEGMENT: EV 053 SUB: D REGION: PWS SURVEY DATE: 5/26/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: Apply Customblen and Inipol after removing asphalt at
locations C and E.

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____ FOSC APPROVAL DATE: _____

ADEC _____ FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

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

TEAM NO. 5 SEGMENT EV 53 SUBDIVISION D DATE MAY 26, 1991

ADEC

NAME

John Hoyer

SIGNATURE

[Signature]☐ NTR

☒ Treatment Recommended
 Recommend manual pickup in areas B, C, D, G, E work area to small oil work is light manual removal of AP between cobbles + boulders. Segment is on Better Island group area where other small sites have been recommended for work in 1991.

High human use + in vicinity of Sawmill Bay Hatchery.

EXXON

NAME

JOHN DEAN

SIGNATURE

[Signature]☒ NTR

Diving for the most part is TOTALLY INACCESSIBLE FOR RECOVERY. Rugged UNUSABLE AREA.

LANDMANAGER

NAME

Steve LWARD

OF CVC / FS

SIGNATURE

[Signature]☐ NTR

AP - Recoverable oil in Between Rocks

Heavy-Coast and Cores. Patches SOR / AP Between Rocks
 Sub-Surface needs cleaned - Chenega Local Resp.

NO-BIO.

USCG/NOAA

NAME

DREHER / CLINE

SIGNATURE

CWO H. L. Dreher

☒ NTR Observed heavy CT, CU, & S on boulders; very small amount of OP under a layer of hard weathered asphalt at the bottom edge of large boulders. This oil residue would be very time consuming and expensive to remove. This area is not a high human or animal use beach, therefore I recommend No Treatment. K&L

☐ NTR

Give me a break - this area is 21 mile directly across Sawmill Bay from Chenega Village. The area contains several large AP patches, notably sites C and E. Sites C, D, and E exhibited OP + HOR in the subsurface. Oil is both accessible + recoverable. Dave

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 5 - 22 FRAMES 5-11

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

Reviewed: MC 6/1/91
Reviewed 5.30 qy

YBAP 1991
 SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV53D
 DATE: MAY 24 1991
 AIR P.#: ~~PIM-C~~ 005-123

SAW MILL BAY



LEGEND

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

SCALE APPROXIMATELY
 50
 METERS

G 5x20m AP<1%

SOR 1%, CV 5%, CT 5%,
 ST 5%

No Field Data
 Assume:
 2x2m HOC

F 2x15m MS Trace
 CV 35% CT 5%
 GREEN ALGAE ON CV

E 5x17m AP 10%,
 MS TRACE, CV 10%,
 CT 10%, ST 5%

A 2x30m
 RANDOM SMALL
 SLATERS ON
 BOULDERS CT<1%

NO OIL
 OBSERVED

B 4x25m
 AP<1%, SOR<1%,
 CV 1% CT 5%
 ST 1%

C 5x20m AP 10%
 SOR 2% CV 30% CT 10%
 ST 5%

D 5x20m AP<1% SOR<1%
 CV 1% CT 5% ST 1%

BETTLES ISLAND

TEAM # 5

DATE 24 May 1991

SEGMENT # EV-53

TIDAL HEIGHT(Range) +5 → +3

SUBDIVISION D

BIOLOGIST Crank

SEA STATE 1'

WIND SPEED/DIRECTION 10 → 15 knots / NE

PHOTOGRAPHS: ROLL # 22

FRAME # 11

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

(A,G,H) Areas are located in the UITZ on steep angle boulder shorelines. Black lichen encrusts 30% of the sediments. Tar Spot algae is present. Rare concentrations of barnacles and *Fucus* are also present. Biota cover, excluding lichen, is ~1%.

In the MITZ there are: moderate concentrations of *Littorina* and limpets, most of the population are juveniles.

and sparse to moderate concentrations of *Fucus*.

Hildenbrandia (encrusting red alga) and barnacles. Biota cover is ~60%.

(B,C) Areas are in the UITZ on low angle boulder shorelines.

Within the sites, encrusting and filamentous green algae covers 70% of the sediments. Rare concentrations of barnacles,

Littorina, limpets and oligochaete worms cover <1% of the surface area. In the MITZ there are: moderate concentrations

of *Littorina* and limpets of various age classes, moderate to

sparse concentrations of barnacles and sparse *Fucus*.

Biota cover is approximately 50%.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

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

LAND MAMMALS

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

Shoreline subdivision map showing important biological features attached.

Reviewed: MC 6/1/91

Reviewed M.B. 5/30/91

Team # 5
Segment # EV-53
Subdivision D
Sea State 1'

Date 24 May 1991 pg 2 of 2
Tidal Height +5 → +3
Biologist Crank
Wind Speed / Direction 10 → 15 / NE

Comments (cont.)

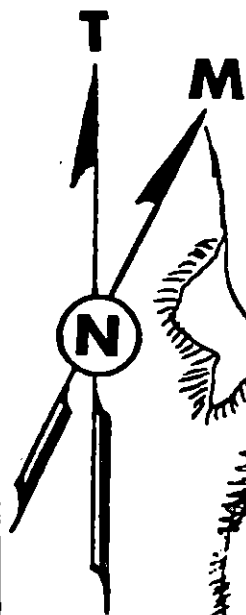
(D,E) Areas are located on a pocket beach in the UITZ. High in the site black lichen and encrusting green algae cover ~50% of the surface area. Low in the site, filamentous green covers 70% of the surface area. Barnacles cover ~5% of the sediments. Rare individual Littorina, limpets and mussels were also present. In the MITZ, the moderately concentrated barnacles are the dominant species. At the top of the MITZ there is a 1-2 m wide, rare to sparsely concentrated Fucus band. Moderately concentrated Littorina and limpets and sparsely concentrated mussels and Scytosiphon (alga) are found throughout the zone. Biota cover is 40%.

(F) Area is located on bedrock in the UITZ and the SUPRA. In the SUPRA, white, yellow and black lichen covers 70% of the surface area. In the UITZ filamentous green algae covers ~50% of the surface area. There is filamentous green algae growing over the oil see Photo MAYSAP-S-Roll # 22 Frame # 11. Moderate concentrations of barnacles and Fucus are the dominant fauna and flora of the MITZ, covering 80% of the surface sediments.

Reviewed M.C. 6/1/91
Reviewed M.B. 5/30/91

YBAP 1991
 OG SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV53D
 DATE: MAY 24 1991
 AIR P.#: PIM-C 005-125

SAWMILL BAY



LEGEND

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

SCALE APPROXIMATELY
 50
 METERS

Fucus zone -
 Biota cover ~60%

Fucus and
 barnacles cover ~80%
 of the surface sediment

Barnacles are the
 dominant species.
 Biota cover ~60%

Sparse concentrations
 of Fucus & barnacles.
 Biota cover ~50%

Fucus zone
 cover is ~60%

NO OIL
 OBSERVED

1-2 m wide rare to
 sparsely concentrated
 Fucus band

"Green Line"

ROCKS

ROCKS

EV53D

BETTLES ISLAND

Reviewed M.B. 9/30/91

U.S. FISH AND WILDLIFE SERVICE (FWS)
SHORELINE ACTIVITY/BALD EAGLE IMPACT EVALUATION

Date 5/24/91 Shoreline Segment/Subdivision EV053D

Shoreline activity Assessment Team Survey

Time - Begin

Time - End

FWS Observer

2:50 PM

4:00 PM

Surveyors/workers

Nest in view/monitored: Y ☒ N Adult in nest: Y ☒ Unk.

Adverse eagle response: Y ☒ N Adult left nest: Y ☒ Unk.

Time

Type of human activity/eagle response

3:30

This area was a small pocket beach
area which didn't have a lot of oil
damage. The eagle nest survey maps
did not show a nest in the area.
The survey work was observed from
off shore and no eagles or nests
were seen in the area.

Survey/work activities completed: ☒ Y ☐ N

Personnel withdrawn due to eagle conflict: Y ☒ N

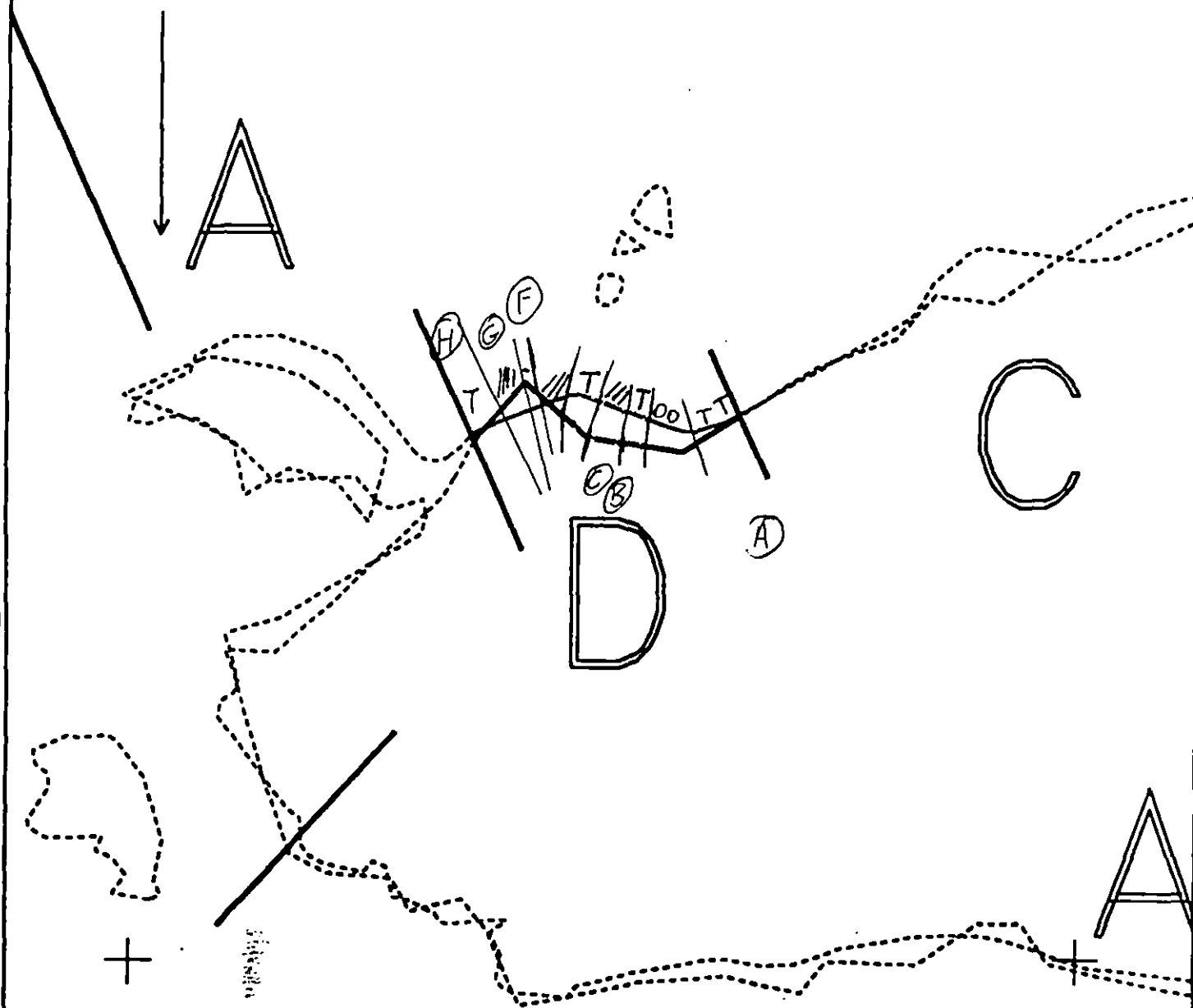
Recommendations: If cleanup is done the area
would be OK to clean without a monitor.

FWS Observer Mike Luke

Date 5/24/90

Reviewed M.B. 5/3/91

EV-54



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

EV053 D
 ADEC Subsegment Length: 202m
 METERS

0 100 200
 AK State Plane Zone 4
 pr053d



Subdivision Field Map
 Map Key: PWSEV053D
 Name: CHANEY
 Date: MAY 26 1991
 Date Entered:

Reviewed: 6/1/91 MC
 Revised 5.30 98

1991 MAYSAP EVALUATION

SEGMENT: EV 053 SUB: B REGION: PWS SURVEY DATE: 5/19/91ENVIRONMENTAL SENSITIVITIES:Work Window(s) RESTRICTED 3/1 - 9/15Ecological/Constraints (see page two for details) Eagle nest,
Fry release, Fish harvest area, Anadromous streamARCHAEOLOGICAL 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

X

Bio-Inipol/Customblen

Other _____

Other _____

COMMENTS:INITIAL: Manual pickup AP and HSOR at location D. Apply
Customblen at location 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.

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

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

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

TEAM NO. 5 SEGMENT EV-53 SUBDIVISION B DATE 5/19/91

ADEC

NAME

John Hayes

SIGNATURE

[Signature]

NTR

Manual removal of AP is identified on sketch map in areas B & D. OP sediments observed were below oil patches and need to be removed when surface oiling is picked up.

EXXON

NAME

JOHN DEAN

SIGNATURE

[Signature]

NTR

AREAS OF OP, AP HAS RECOVERABLE QUANTITIES. THIS AREA IS IN CLOSE PROXIMITY TO AND IS FREQUENTLY USED BY CHENEZA RESIDENTS

LANDMANAGER

NAME

Steve WARD

OF

CUC/FS

SIGNATURE

[Signature]

NTR

Several pockets of oil can be manually removed. This area is Bettles IS. close to Cheneza and the Hatchery at San. Jern. ALL oil that is assessable HAS to be removed. Sub-surface should be shoveled out as is not that deep. See OG Notes for Sub-surface and local. Very High use area. NO Bio-Cheneza Local Response.

USCG/NOAA

NAME

DREHER/GLINE

SIGNATURE

[Signature]

NTR

This segment does have several thick layers of sub surface OP that can be readily removed without doing environmental damage. It is a high use area due to its proximity to Cheneza Village. Assess by skiff-no problem. Recommend manual removal. 20 man hours. KPD

Significant subsurface oiling occurs in both pocket beaches, which probably should be treated. DGC

TEAM NO. 0

OG CHANEY

BIO **CRANK**

SEGMENT EV 53

ADEC HAYES

LANDMANAGER WARD for CUC

SUBDIVISION B

EXXON DEAN

USCG/NOAA DREHER/CLINE

DATE 11/19 / 91

TIME 09:30 to 10:00

TIDE LEVEL 4.0 ft. to 3.0 ft.

ENERGY LEVEL: ☐ H ☐ M ☒ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 95 m

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

EST. OIL CATEGORY LENGTH: W 0 m M 80 m N 15 m VL 0 m NO 2 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 - 19 FRAMES 11-13

[illegible]

SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE MORE PITS NOT PRACTICAL DUE TO

* NOTE: OIL ≤ 5 cm DEEP IS NOT SUBSURFACE Q_L BOULDERS

OG COMMENTS: (A) UNDER LARGE 0.25 to 1m ANGULAR Boulders PIT #1
LAYER OF OP SED, UNDER BOULDERS EXTENT DIFFICULT TO
DEFINE DUE TO IMMOBILE BOULDER LAYER, THIN DISCONTINUOUS
OP LAYER EQUAL TO AREA OF (A)

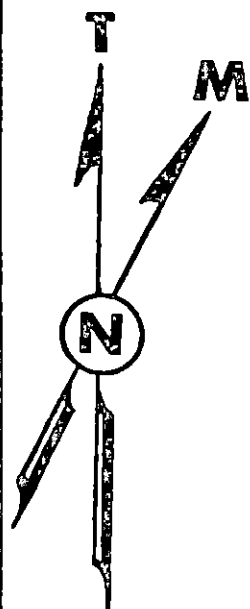
① ANOTHER THIN OP LAYER DISCONTINUOUS UNDER ANGULAR BOULDERS SIMILAR TO ① BUT ALSO ASSOCIATED WITH LOCALIZED AP PATCHES

REVISOR: M.C. 5/14/91
REVIEWED: F.W. 5/26/91

MAYSAP 1991
 OG SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV53 B
 DATE: MAY 19/1991
 AIR P.#: PIM-C 005-123

LOCATOR MAP

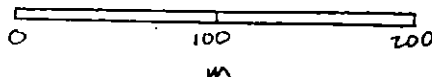
MAP 1 of 2



LEGEND

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

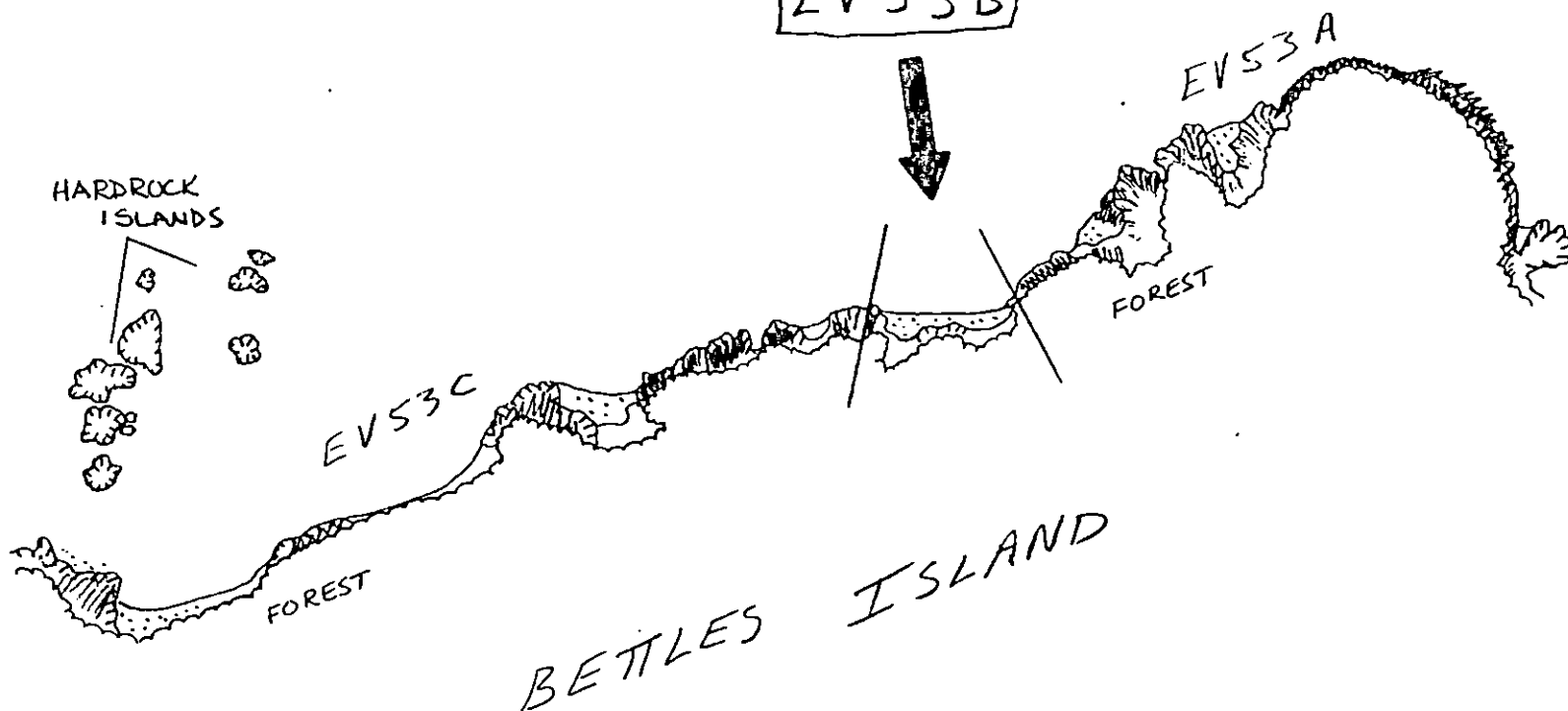
SCALE



SAWMILL BAY

SKETCH MAP PERSPECTIVE

EV53 B



BETTLES ISLAND

(A) 2x50m CV 40%
CT 30%

EV 53 B
MAP 2 of 2

GREG CHANEY
MAY 19 1991
TEAM 5
MAY SAP

(B) 4x40m SOR/H
5%

BETTLES ISLAND

(A)

EV 53A
EV 53B
HEAVIEST
CV

(C) 2x20m CV 5%
CT 10%

(C)

(D)

EV 53B
EV 53C

(D)

5x30m AP < 1%, CV < 1%, CT 1%
ST 10% Patches AP up to 15cm thick

SAWMILL BAY

130

REVIEWED: F.W. Slatyer
REVIEWED: M.C. Slatyer

TEAM # 5

DATE 19 May 1991

SEGMENT # EV-53

TIDAL HEIGHT (Range) +4 → +3

SUBDIVISION B

BIOLOGIST Crank

SEA STATE 0-1'

WIND SPEED/DIRECTION 5 knots / SE

PHOTOGRAPHS: ROLL #

FRAME #

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

- (A) Area is a band in the UITZ encrusting red and filamentous green algae cover ~100% of the sediments at the bottom margin of the site; and black lichen covers ~50% of the sediments at the top of the site. A rare concentration of barnacles, *Fucus* sporadic and moss cover ~1% of the sediments.
- (B) Area is a band in the MITZ, below site A, on a pebble beach with angular boulders. Epiphytic algae are dense on the sparse to moderately concentrated *Fucus*. *Halosaccion* and *Scytosiphon* algae are also present. Bladed red algae are rare. Barnacles have a sparse to moderate concentration and *Littorina* and limpets have a moderate concentration. Recruitment is occurring in the barnacle, *Littorina*, and limpet populations; the *Fucus* and *Littorina* are reproductively active. Biota cover 8%.
- (C) Area is located on a bedrock face in the UITZ. Barnacles are the dominant species. Adults, juveniles and spat are present. A rare concentration is also present. Biota cover is ~60%. The MITZ is similar to area B.
- (D) Area extends from the UITZ through the MITZ. The UITZ is similar to area A with pulmonate snails also being present. In the MITZ a moderate concentration of *Leathesia* is the dominant algal species. Epiphytic algae are rare (whereas in area B they were a *Fucus* is sparse on the beach and moderate on the headland bedrock. There are sparse concentrations of limpets, *Littorina*, *Nucella* and barnacles. Amphipods are common. There are more juvenile limpets present than adult limpets. Biota cover on the beach is ~20% and on the headland ~70%.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	
Seabirds			
Waterfowl	1	5	
Gulls/kittiwakes	1	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.

 REVISIONED: MC 5/24/91
 P. 5/24/91 P.M.

(A) 2x50m CV 40%
CT 30%

EV 53 B

GREG CHANEY/Crank
MAY 19 1991 Bio Map
TEAM 5
MAY SAP

BETTLES ISLAND

(B) 4x40m SOR/H
5%

WOODEN
TABLE

EV 53A
EV 53B
HEAVIEST
CV

Epiphytic algae
are the dominant
surface cover in
the MITZ

Epiphytic algae
are rare on this
beach

(C) 2x20m CV 5%
CT 10%

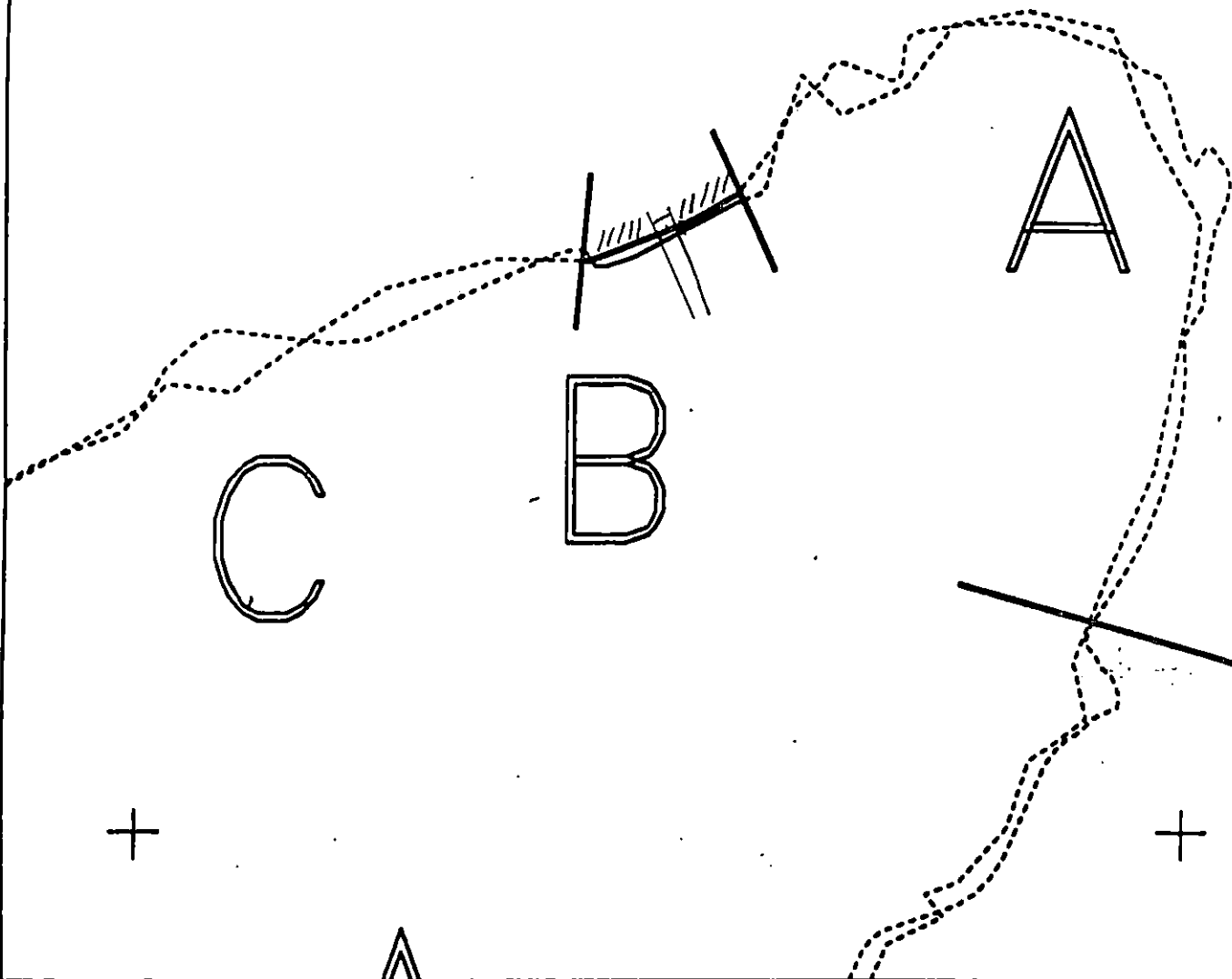
EV 53B
EV 53C

SAWMILL BAY

(D) 5x30m AP < 1%, CV < 1%, CT 1%
ST 10% Patches AP not thick

4

EN



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

EV053 B
ADEC Subsegment Length: 95m
METERS
0 100 200
AK State Plane Zone 4
pov053b



Subdivision Field Map
Map Key: PWSEV053B
Name: CHANEY
Date: MAY 19 1991
Data Entered:

REVIEWED: F.W. 5/26/91
REVISED: MC 5/24/91

1991 MAYSAP EVALUATION

SEGMENT: E/53 SUB: A REGION: PWS SURVEY DATE: ADCC SURVEY

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) _____

RECEIVED

JUL 18 1991

Ecological/Constraints (see page two for details) _____

ANCHORAGE A00/A

ARCHAEOLOGICAL CONSTRAINTS:

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

for SHPO Signature: Charles E. Thomas Date: 6/27/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N) _____

NY

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
ADCC (LETTER DATED JUNE 24 1991)FOSC: Remove recoverable material at areas B + C
with small work crew. Cover material + prevent material
is treated + properly removed -TAG APPROVAL DATE: June 26 1991FOSC APPROVAL DATE: 7/9/91ADCC John Bane

FOSC

E. E. PAGE, CDR, USCG

✓EXXON Asal

CHIEF OF STAFF FOSC

USCG Ed MaceThe State will evaluate the
need to treat this SubdivisionNOAA John Bane

→ UTR 4-26-90

PAGE ____ OF ____

OG _____

BIO _____

SEGMENT EV 53

SUBDIVISION A

DATE 6 / 11 / 91

ADEC J. VINCENT J. GINALIAS

LANDMANAGER HALL / CARLSON for ADNR

EXXON _____

USCG/NOAA _____

TIME 16:35 to 18:35

TIDE LEVEL $+6.25$ ft. to $+2.75$ ft.

ENERGY LEVEL: ☐ H ☒ M ☐ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 633 m

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

EST. OIL CATEGORY LENGTH: W m M 20 m N 3 m VL 105 m NO 510 m US X m

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

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

PHOTO ROLL # MAYSAP-

FRAMES

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

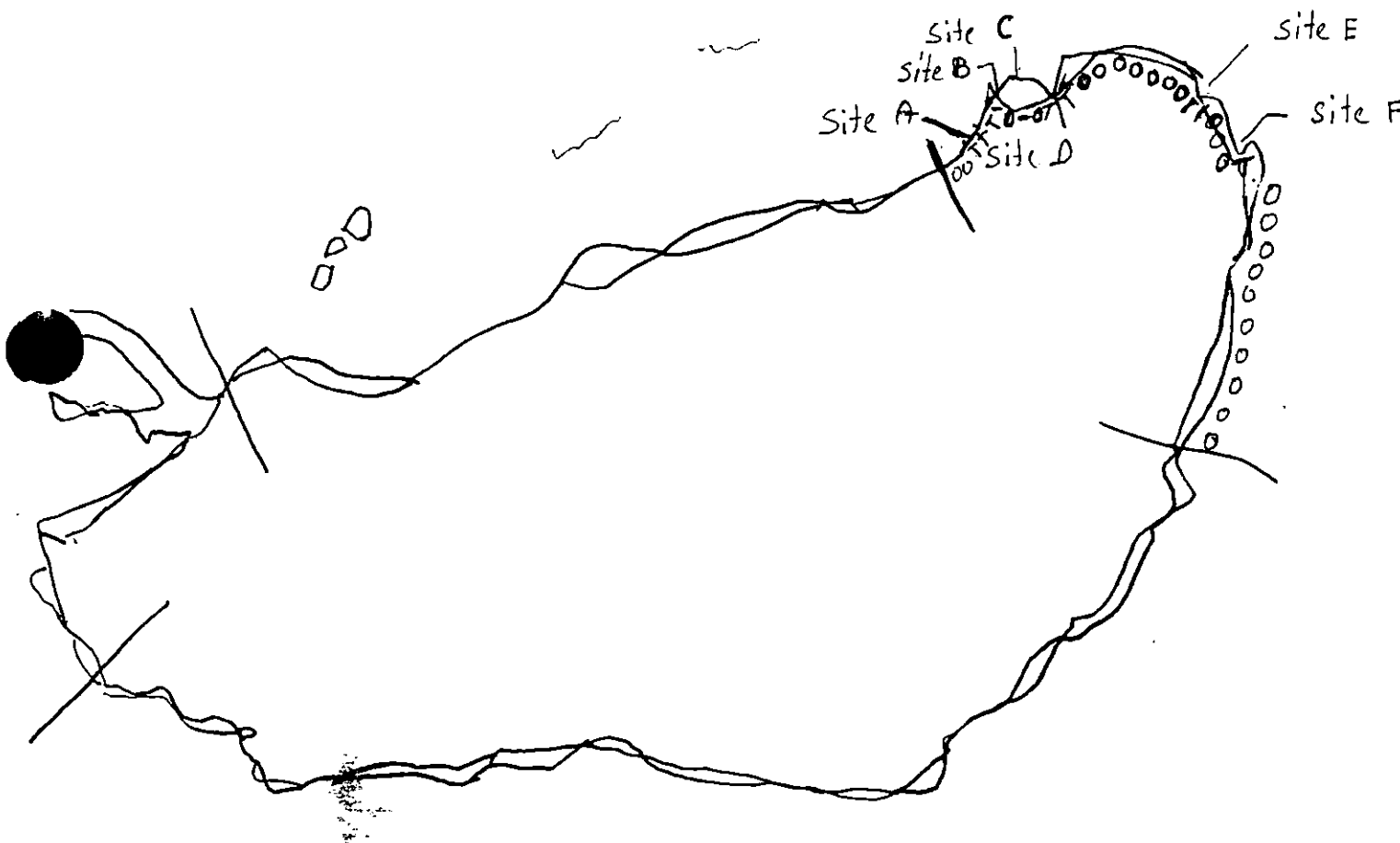
OG COMMENTS: LOCATION A IS A SMALL POCKET BEACH SURROUNDED BY BEDROCK OUTCROPS
LOCATION C IS A SMALL BOULDER POCKET BEACH SURROUNDED BY BEDROCK OUTCROPS
LOCATION D IS A SMALL B,C,P POCKET BEACH SURROUNDED BY R OUTCROPS.
LOCATION E IS A SMALL POCKET BEACH (R,B) SURROUNDED BY BEDROCK CLIFFS & OUTCROPS
TRACES OF OIL THROUGHOUT THIS SUBDIVISION.

TREATMENT RECOMMENDATION: MANUAL REMOVAL AS/MOUSSE, NOTABLY SITES "A" & "E". ACCESSIBLE BY SKIFF. IF CONSIDERED WITH SEGMENT EV 53 C (ADJACENT SEGMENT) SMALL CREW COULD COMPLETE BOTH SEGMENTS IN ONE DAY



H2O

1m x 0.25m MS/C, I



xxxx Wide

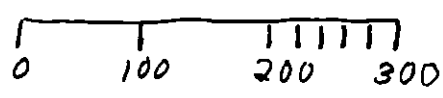
//// Medium

---- Narrow

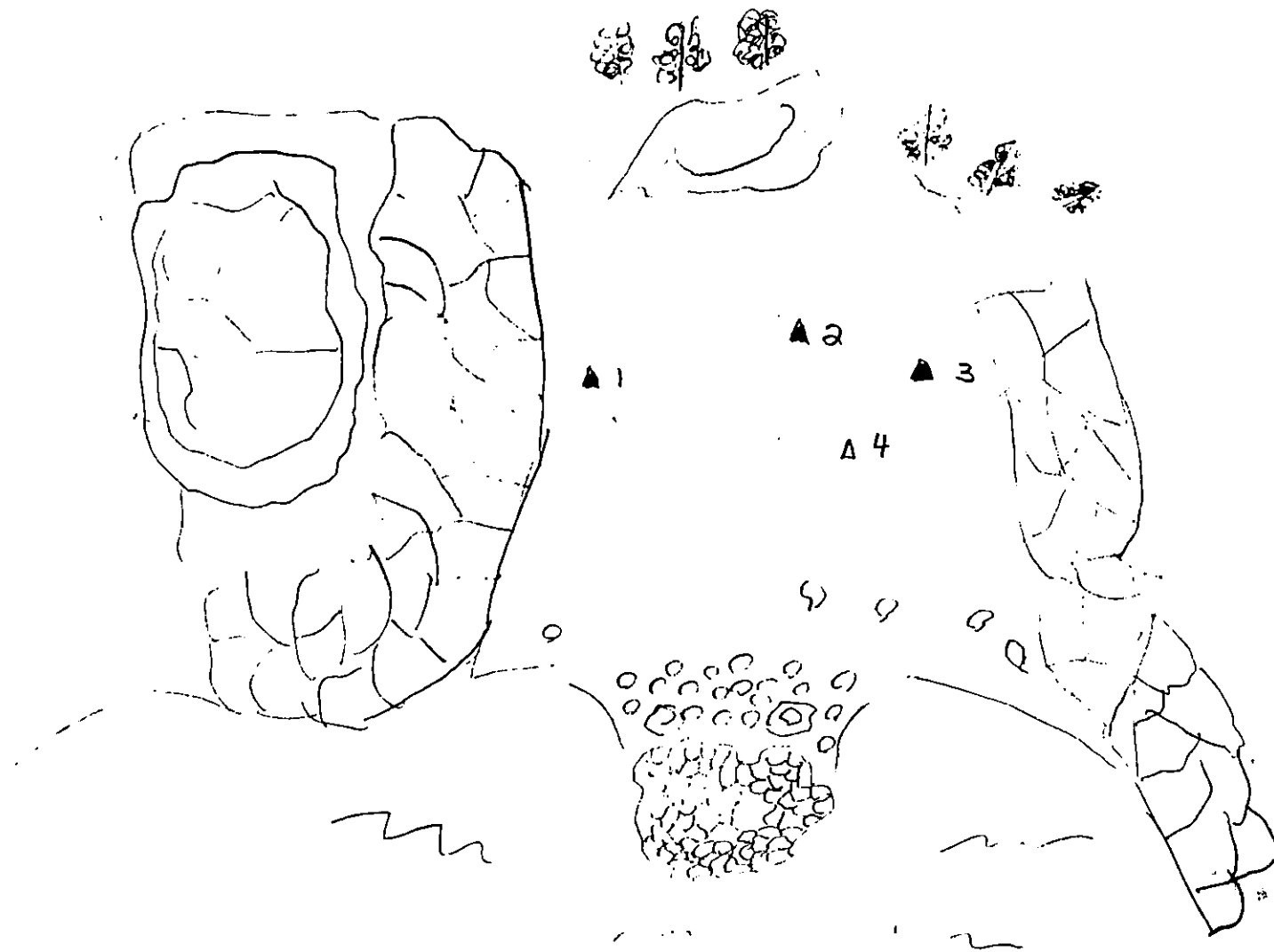
TTTT Very Light

oooo No Oil

EV-53 A



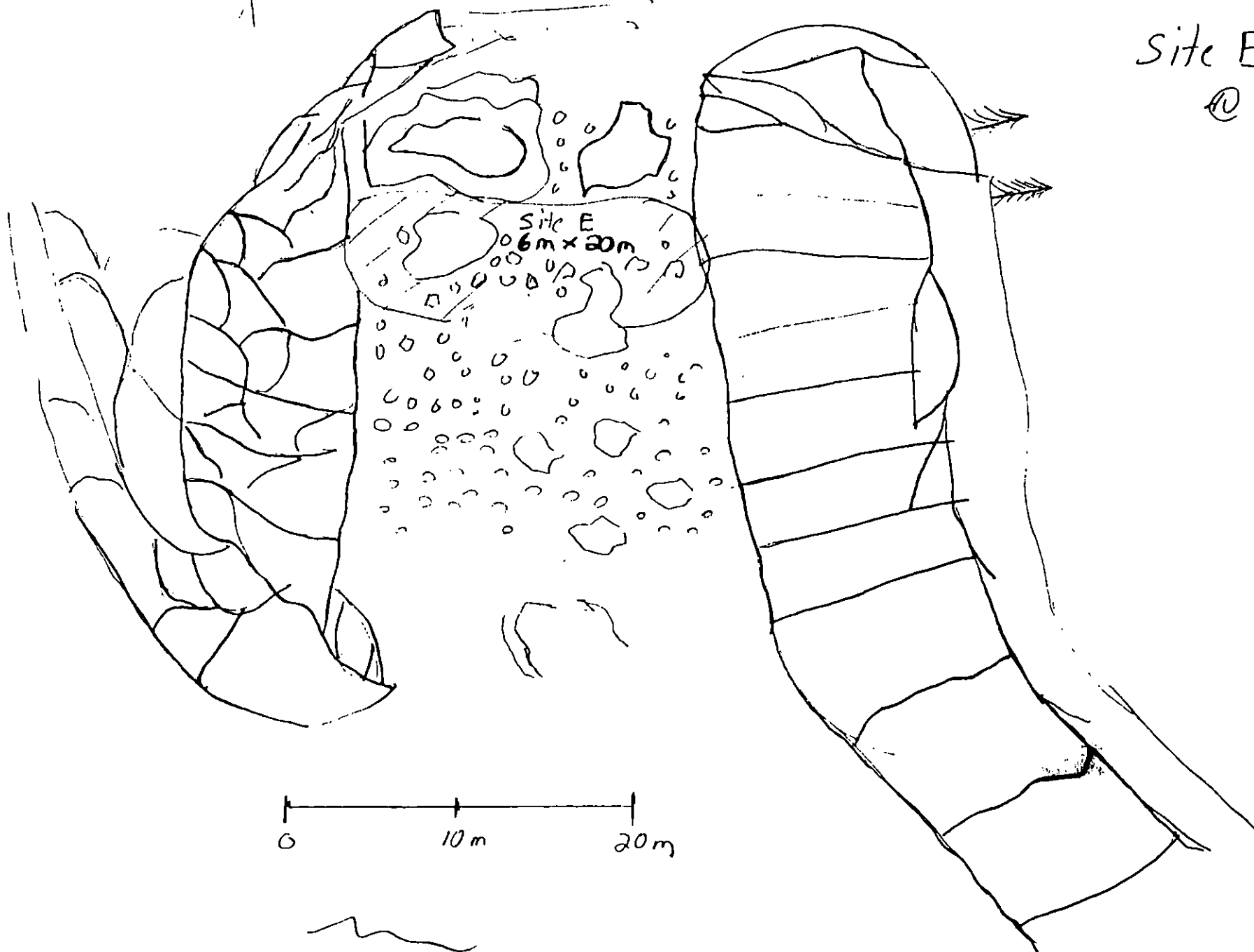
EV 53 A
Site A



EV 53 A

Site E

@



1991 MAYSAP EVALUATION

SEGMENT: EV 53 SUB: C REGION: PWS SURVEY DATE: ADEC SurveyENVIRONMENTAL SENSITIVITIES:

Work Window(s) _____

RECEIVED

JUL 18 1991

Ecological/Constraints (see page two for details) _____

ANCHORAGE A00/A

ARCHAEOLOGICAL CONSTRAINTS:If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.SHPO Signature: Charles E. Hines Date: 6/27/91

<u>RECOMMENDATIONS:</u>	<u>INITIAL</u>	<u>TAG</u>	<u>FOSC</u>
TREATMENT REQUIRED (Y or N)	_____	<u>N</u>	<u>Y</u>
Manual Pickup (Check as Req.)	_____	_____	<u>X</u>
Spot Washing	_____	_____	_____
Bio-Customblen Only	_____	_____	<u>X</u>
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 RECOVERABLE ASPHALT + MOUSTIE IN AREAS A + B. BLOWN + SPLASH CONCENTRATIONS ARE HARMFUL QUANTITIES OF OIL THAT MAY EASILY BE RECOVERED -TAG APPROVAL DATE: June 26 1991 FOSC APPROVAL DATE: 7/9/91

ADEC

FOSC

EXXON

USCG

NOAA

E. E. PAGE, CDR, USCG

The station staff has the need to conduct treatment on this subdivision

NTR 4-26-90
not included in MAYSAP

PAGE__ OF

BIO _____

SUBDIVISION C

DATE 6 19 191

TIDE LEVEL +5.0 ft. to +3.25 ft.

ENERGY LEVEL: ☐ H ☒ M ☐ L

SURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 449 m

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

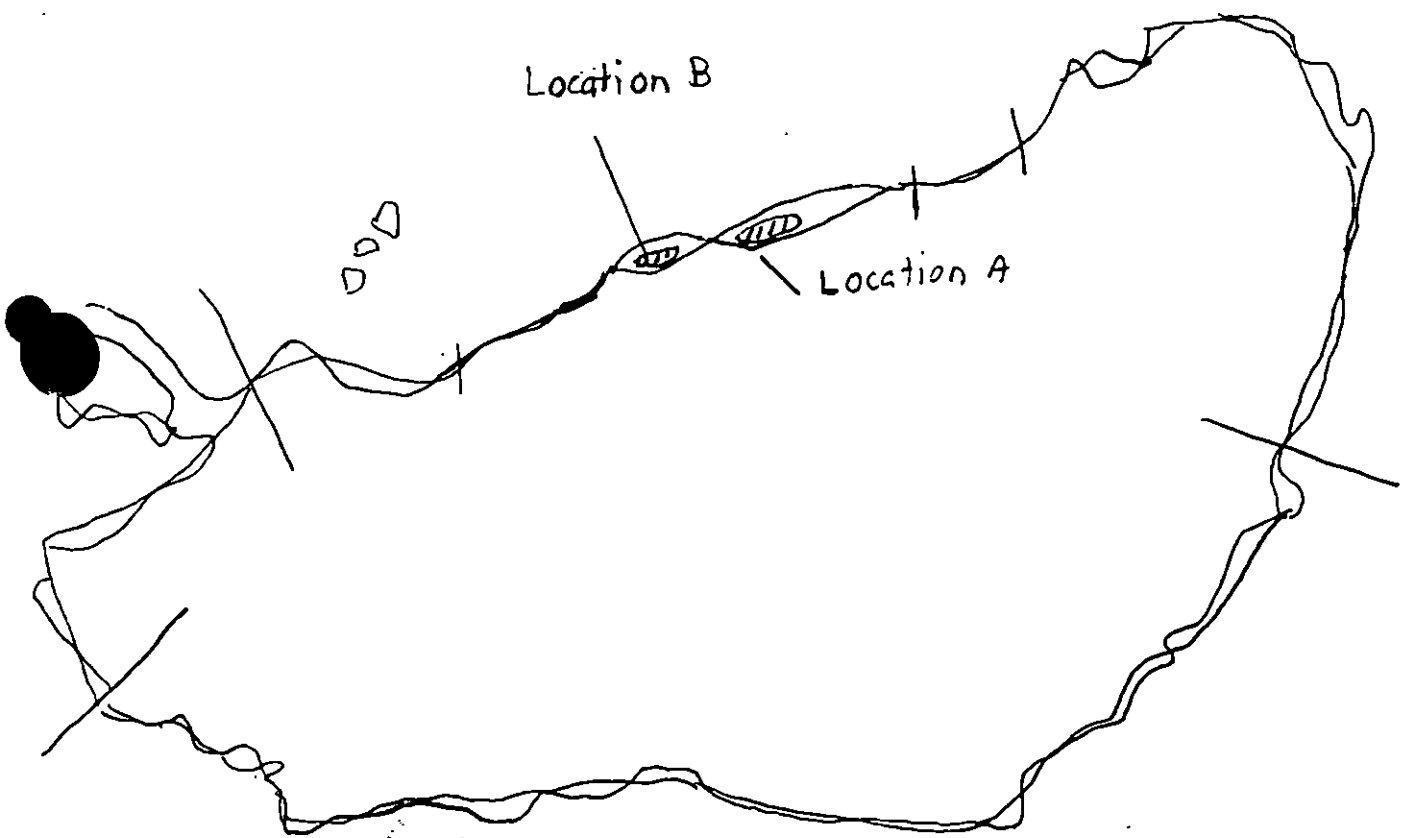
EST. OIL CATEGORY LENGTH: W_____m M_____m N_____m VL_____m NO_____m US_____m

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

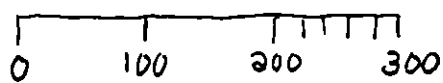
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- _____ - _____ FRAMES

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

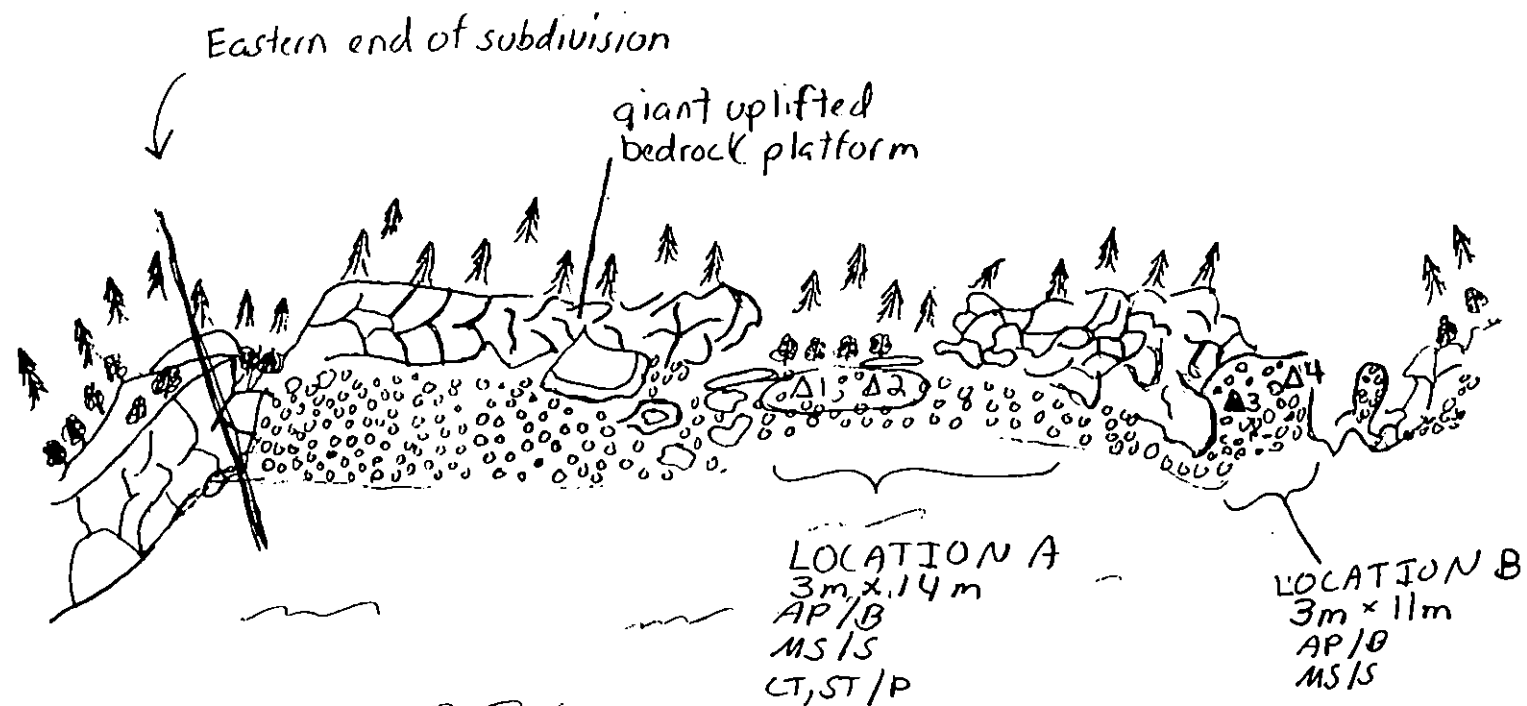
LOG COMMENTS: SEGMENT SHOWS AP/MS BAND ACROSS U172, PATCHY BUT EASILY DEFINABLE. BOULDER BEACH, OIL TENDS TO BE CAUGHT AMONGST/BENEATH BOULDERS. TREATMENT WOULD BE MANUAL REMOVAL IF SEGMENT CONSIDERED WITH EVS3A (ADJACENT) SMALL CREW COULD ADEQUATELY TREAT BOTH IN ONE DAY.



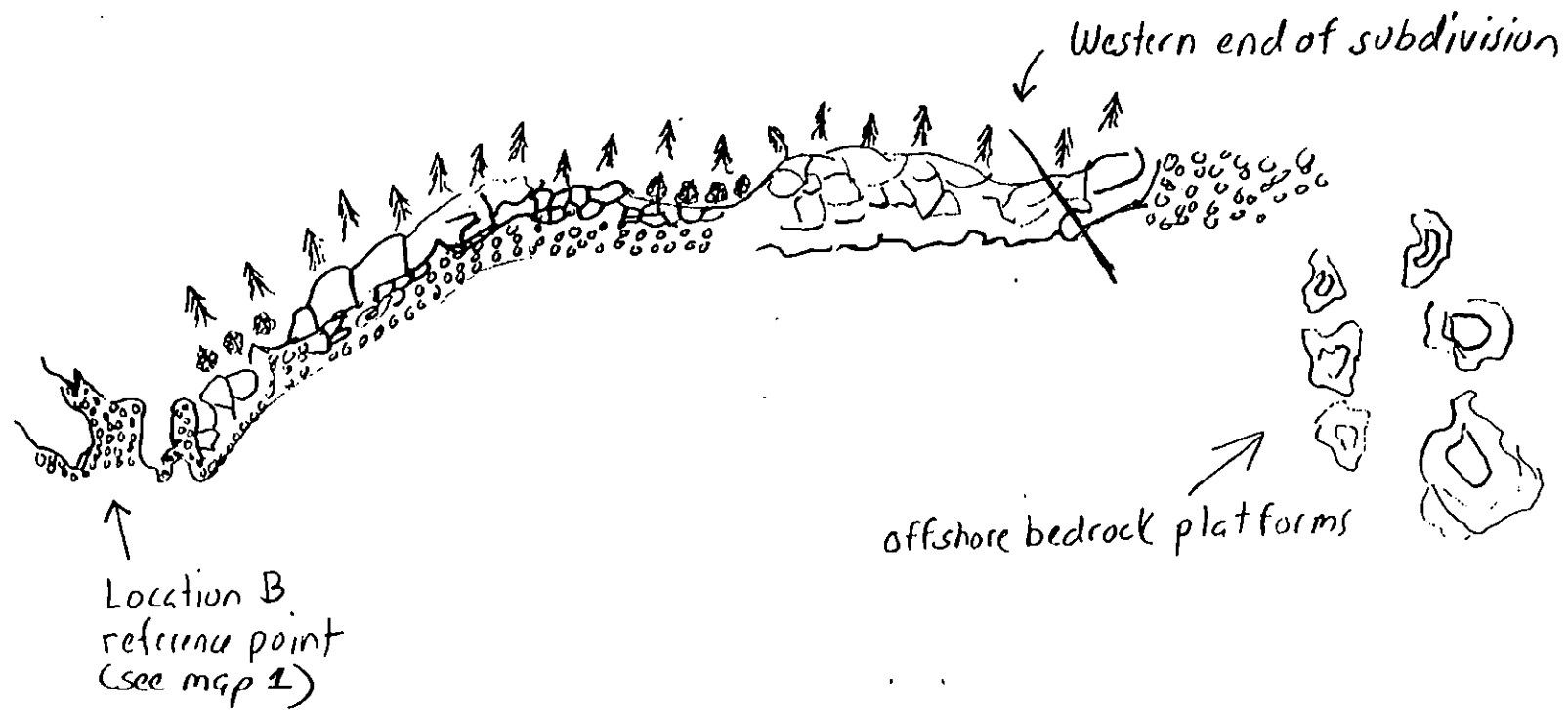
EV-53C



EV 55 C
MAP 1



EV 53 C
MAP 2



22

1991 MAYSAP EVALUATION

SEGMENT: E/53 SUB: A REGION: PWS SURVEY DATE: ADCC SurveyENVIRONMENTAL SENSITIVITIES:

Work Window(s) _____

RECEIVED

Ecological/Constraints (see page two for details) JUL 18 1991

ANCHORAGE A90/A

ARCHAEOLOGICAL CONSTRAINTS:If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.for SHPO Signature: Charles E. Hines Date: 6/27/91RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or 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
ADCC (LETTER DATED JUNE 24 1991)FOSC: Remove recoverable material at areas B + E
with small work crew. Cover material + prevent material
is transportable + possibly recoverable -TAG APPROVAL DATE: June 26 1991FOSC APPROVAL DATE: 7/9/91ADCC John Bauer

FOSC

E. E. PAGE, CDR, USCGEXXON Real

CHIEF OF STAFF, FOSC

USCG Ed M... ..NOAA John BauerThe Sub will evaluate the
need to treat this Subdivision
John Bauer

→ UTR 4-26-90

PAGE _____ OF _____

SEGMENT EV 53

SUBDIVISION A

DATE 6 / 11 / 91

ENERGY LEVEL: ☐ H ☒ M ☐ L

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

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

EST. OIL CATEGORY LENGTH: W m M 20 m N 3 m VL 105 m NO 510 m US X m

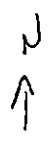
DISTRIBUTION: C = 91-100%; B = 51-90%; P = 11-50%; S = 1-10%; T = <1%

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

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

OG COMMENTS: LOCATION A IS A SMALL POCKET BEACH SURROUNDED BY BEDROCK OUTCROPS.
LOCATION C IS A SMALL BOULDER POCKET BEACH SURROUNDED BY BEDROCK OUTCROPS
LOCATION D IS A SMALL B,C,P POCKET BEACH SURROUNDED BY R OUTCROPS.
LOCATION E IS A SMALL POCKET BEACH (R,B) SURROUNDED BY BEDROCK CLIFFS & OUTCROPS
TRACES OF OIL THROUGHOUT THIS SUBDIVISION.

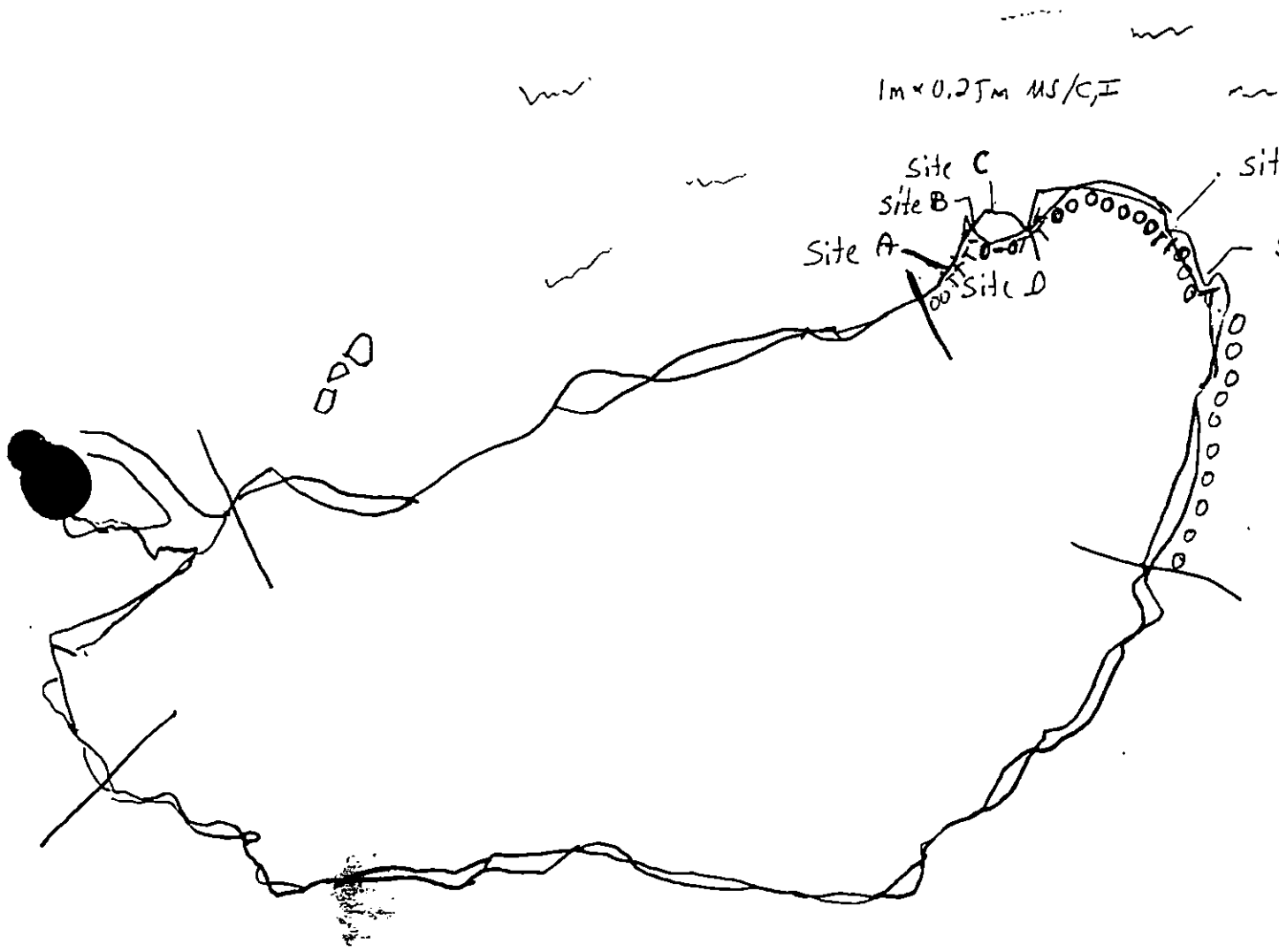
TREATMENT RECOMMENDATION: MANUAL REMOVAL AS/MOUSSE, NOTABLY SITES "A" & "E". ACCESSIBLE BY SKIFF. IF CONSIDERED WITH SEGMENT EV 53 C (ADJACENT SEGMENT) SMALL CREW COULD COMPLETE BOTH SEGMENTS IN ONE DAY.



H2O

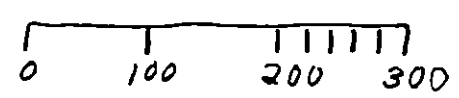
1m x 0.25m MS/C, F

Site C
Site B
Site A
Site D
Site E
Site F

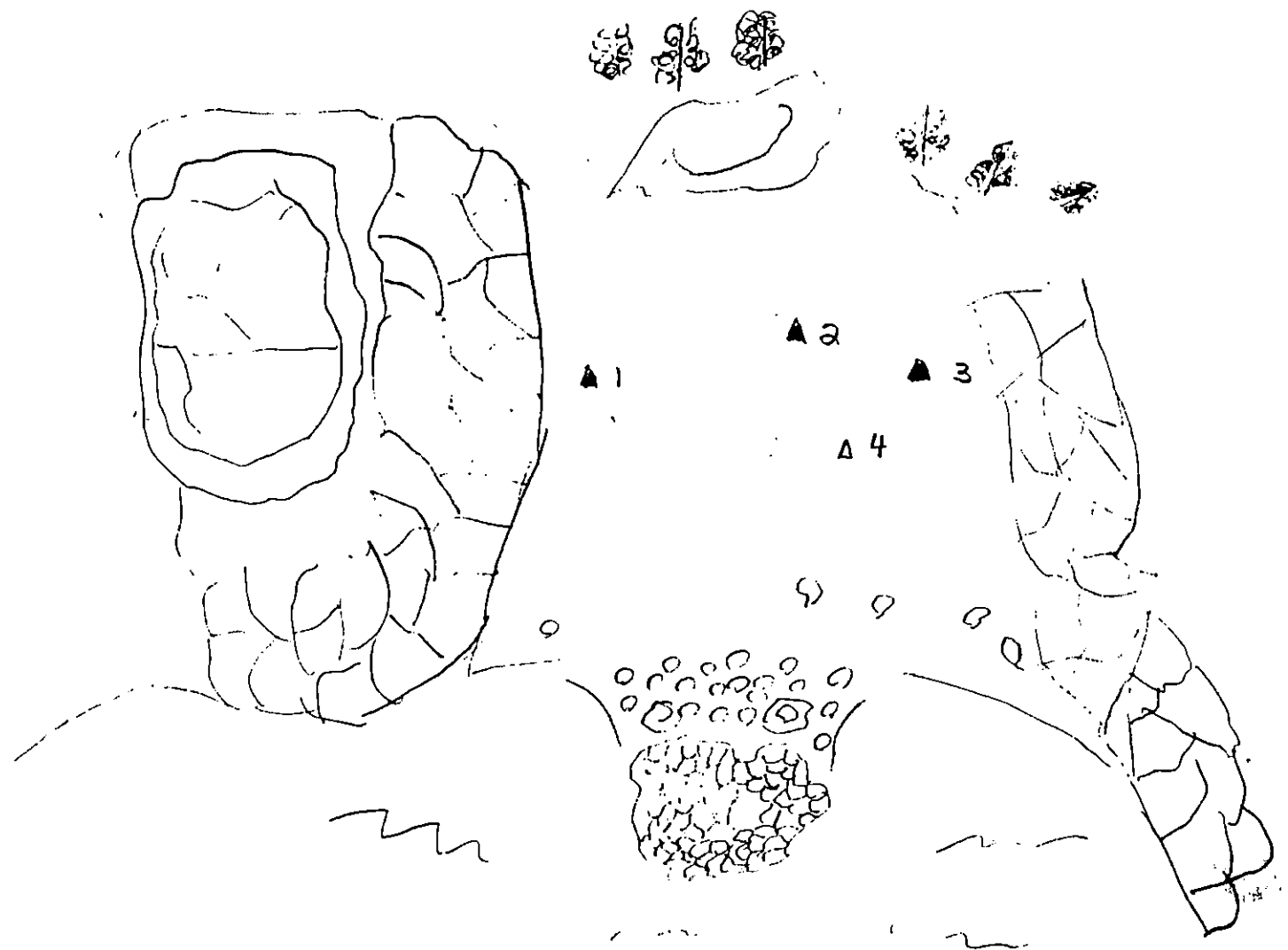


xxxx Wide
//// Medium
---- Narrow
TTTT Very Light
oooo No Oil

EV-53 A



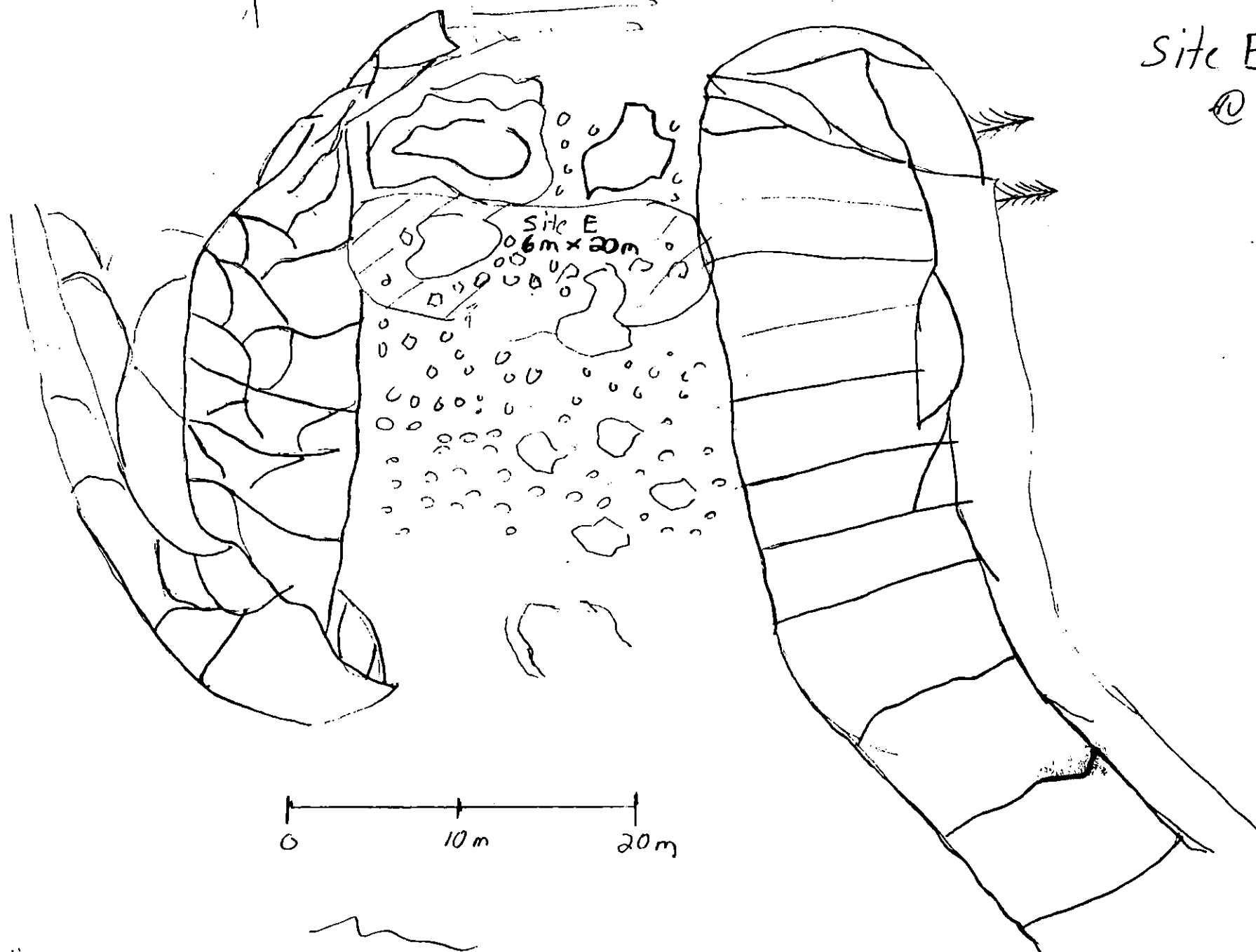
EV 53 A
Site A



EV 53 A

Site E

⑩



REGION: PRINCE WILLIAM SOUND

SEGMENT: EV-51

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ EV-51 SUBDIVISION A (1 OF 1) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Sawmill Bay Hatchery release area (1F) - 4/15 to 6/1. Consult ADF&G for exact dates. Deer harvesting (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 59 m: Narrow 16 m: V.Light 211 m: No Oil 788 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 20 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend removal of tarmat and bioremediate as indicated on attached sketch map. Treatment activities should be conducted between 6/1 and 8/15 based on above constraints.

TAG COMMENTS:

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EV51 SUBDIVISION: NONE A DATE 3/30/90

USCG

NAME LARRY FLETCHER SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

AGREE WITH OG FORM.

ADEC

NAME DAVID SALE SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

1 M. WIDE BAND IN MID-SEGMENT → BREAK UP TARMAT, LOOSEN AT
BIOREMEDIATE SUB SURFACE, TO AVOID MOBILE OIL SHEENING
DURING WARMER TEMPERATURES.

SAND/SHELL FRAGMENTS POCKET: REMOVE SAND AND BIOREMEDIATE
DEPTH NOT KNOWN SINCE TIDE WAS OVER POCKET.

ASPHALTIC OIL AT S. END OF SEGMENT: MANUAL REMOVAL OF ASPH.
AND BIOREMEDIATION AFTER TURNING; OR, REMOVAL OF SURFACE SED.

LAND MANAGER

NAME Leigh Carlson SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Hatchery impacts as listed in PWS area plan. Treatment as suggested
by ADEC above.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/80

OG B. Marty USCG LARRY FLETCHER SEGMENT ST/ EV-51
 BIO B. Simon LAND REP Leigh Carson SUBDIVISION A (1 OF 1)
 EXXON J. Ezerneki ADEC Dave Sale TIME 11:00 to 13:00
 TEAM NO.: 10 TIDE LEVEL: -0.3m to +1.5m DATE 03/30/90
 EST. SUBDIVISION LENGTH: 1215 m ☒ Sun ☒ Clouds ☒ Fog ☒ Rain ☒ Snow
 U.S. COAST DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: to Counterclockwise
 SURFACE SEDIMENTS: R 50 % B 15 % C 15 % P 15 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Long 52 % Hang 25 % Vert 25 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 33 m N 16.5 m VL 463 m NO 703 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		
POOLED																
COVER			✓	X								✓		✓		
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
OIL																

PAVEMENT: H F (S) 65 sq. m by 7 cmPATTIES / TARBALLS 1 BAGSNEAR SHORE SHEEN? NO BR RW SL / TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☒ YES ☐ NO

TYPE

#BAGS 1

Photographs:

Roll No. ST-20-2Frames 2-10 and 12

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR								PIT ZONE	A N A	SUBSURFACE SEDIMENTS
		OP	OK	OL	OF	NO		UD	UC	2C	2B	2P	2S	3C	3B	3P	3S			
(1)	28	X					0-8	X			X							X	N	S, G, V
(2)	0-6	X					0-6	X			X							X	N	S, G, V
(2)	6-20				X		6-20	X			X							X	Y	S, G, V (PEAT)

COMMENTS* OILED INTERVAL < 5 cm IN PIT NOS. 1 AND 2 DOES NOT CONSTITUTE SUBSURFACE OIL

SHORELINE ECOLOGICAL SUMMARY

REVISIONS 7/03/22/98

Segment ST/ EV 51 Subdivision all Date (mo / day / yr) 3/30/90Time (24 hr) 1330 Biologist Lemon

Substrate type and % of segments:

(1) Bedrock 50 (2) Boulder 40 (3) Cobble 10 (4) Pebble (5) Sand (6) Silt (B) Overall % cover of biota (% of segment): Dense Moderate ✓ Low

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

Photographs:

Roll No. 2Frames 2-10and 12

BARNACLES

Dense			Moderate			Sparse			Rare		
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	X	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
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	X	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS

Dense			Moderate			Sparse			Rare		
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	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
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	X	2	2	2	2	2	2	2
3	3	3	3	3	3	3	X	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments: 5 waterfowl1 bald eagle seen roosting, boat reported 4 more?A beach worm or skull was found in an area of 80% shell hash.5 Enhydra lutra reported (4 from the boat). (sea over)

Ecological Considerations:

over high mid and low zones From Chthamalus barnacles through Fucus, Halosaccus, Hedophyllum; all communities appeared generally healthy, in some cases showing recent growth, reproduction of new sets. Echinoderms, mostly Solaster, were seen about every 3 meters along the shore; the live ones about every 10 meters. Spirobus

at about 40% coverage when a patch was found on Fucus on a cobble. Subtidal Laminaria covered about 40% as seen the shift. Reproduction was observed in Fucus (conceptacles). Juvenile (approx 3mm) Balanus, Mytilus, and 1cm Fucus were seen. Some areas of Fucus (<10%) were stipes only, no blades; yet in that same patch juveniles were seen (seen from 4 roll 2).

There were occasional (<10%) pockets where the substrate was about 70% shell hash including Saxidomus and Protothaca (bivalves).

OG R. Marty

SEGMENT ST/ EV-51

SUBDIVISION All

DATE 03 / 30 / 90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Spg/Sub Entry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ NA Est. HAWAII
- ☒ SSL
- ☒ NA Profile Location(s)
- ☒ NA Profile(s)
- ☒ NA PH Location(s)
- ☒ NA 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

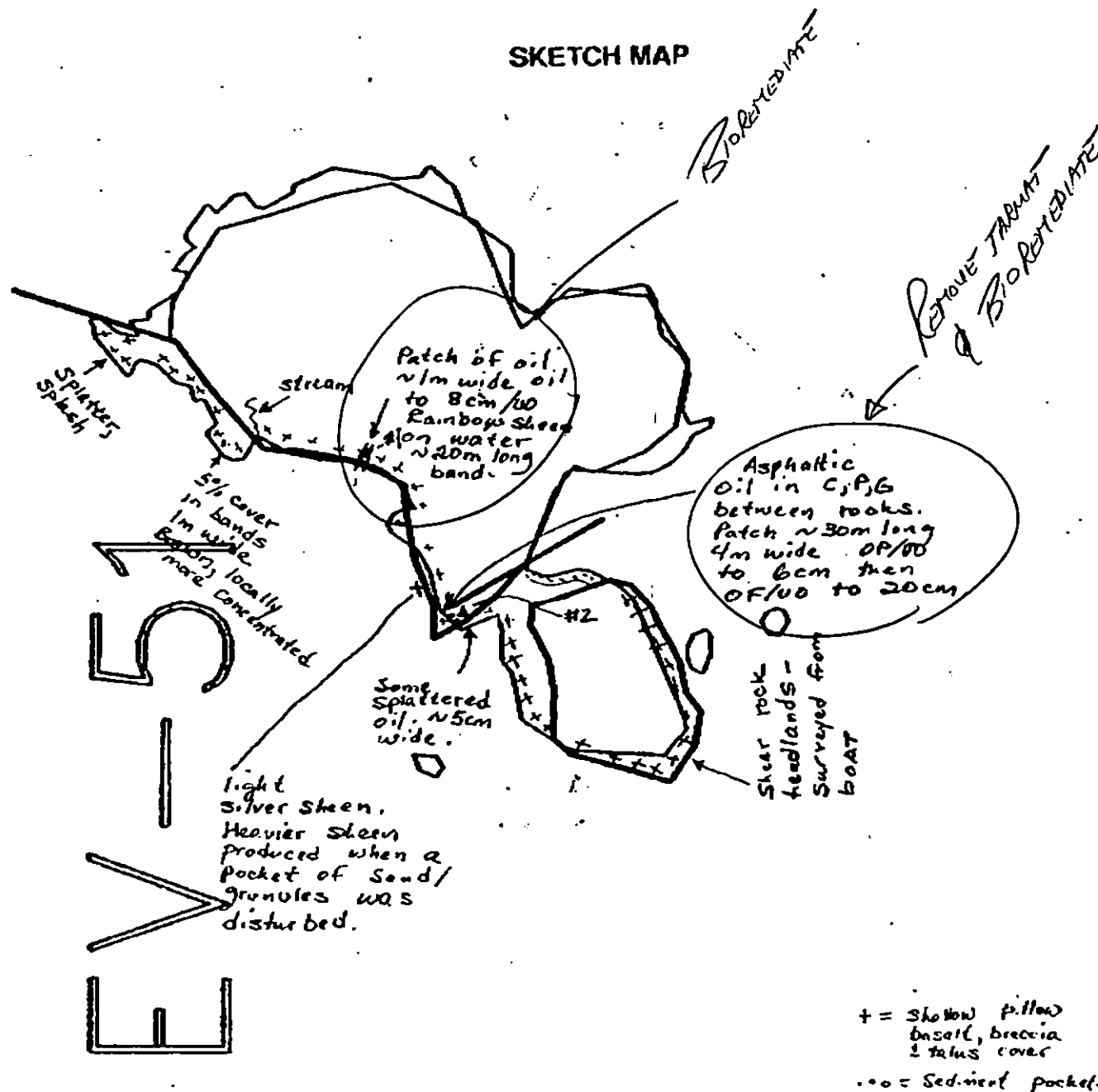
Splashed Distribution

Oiled Vegetation

1 →

Photo location, direction,
and number

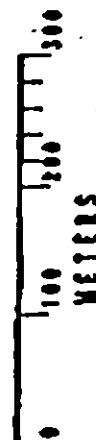
SKETCH MAP



+ = Shallow pillow
basalt, breccia
& talus cover
... = Sediment pockets

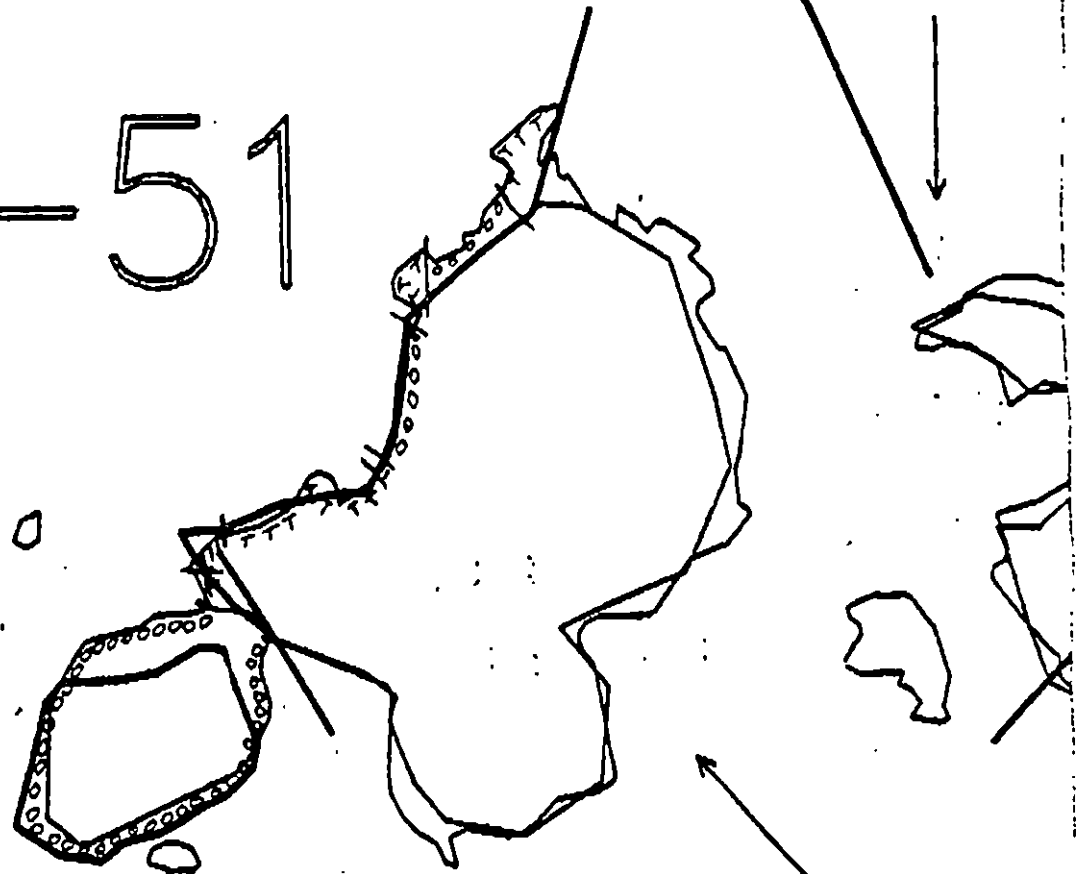
EV-51

ADEC Segment Length: 1214m



METERS

EV



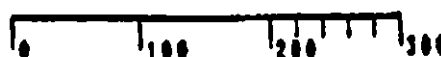
MEASURES LENGTHS		Adjusted →
VO	4.25"	703 m
VL	2.0"	463 m
N	0.1"	16.5 m
M	0.2"	33 m
	<u>7.35"</u>	<u>+ 33 m</u>
		1216 m

$$1'' = 150 \text{ m}$$

EV-50

EV-51.

ADEC Segment Length: 1214m



Map Key: PWS-251

Name: Richard Martin

Date: 03/30/90

Anti Paternal!

14

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EV-51 SUBDIVISION A (1 of 1)

WORK WINDOW	
Tarmat Removal	OPEN
Bioremediation Manual Raking	WORK 7/25 to 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1F	Sawmill Bay Hatchery Release	Subdivision closed to bioremediation and manual raking from 4/15 to 6/1. No constraint to tarmat removal.
1K	Purse Seine Hook-off	Subdivision closed to bioremediation and manual raking after 7/25. No constraint to tarmat removal.
7II	Subsistence: Deer Harvesting	Subdivision closed to bioremediation and manual raking after 8/15. No constraint to tarmat removal.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/25. 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 Morgan R. Morgan

EXXON Amy Tear Amy Tear

NOAA Joseph Talbot J. Talbot

USCG C.A. Reiter C.A. Reiter

FOSC

[Signature] Date 6/4/90

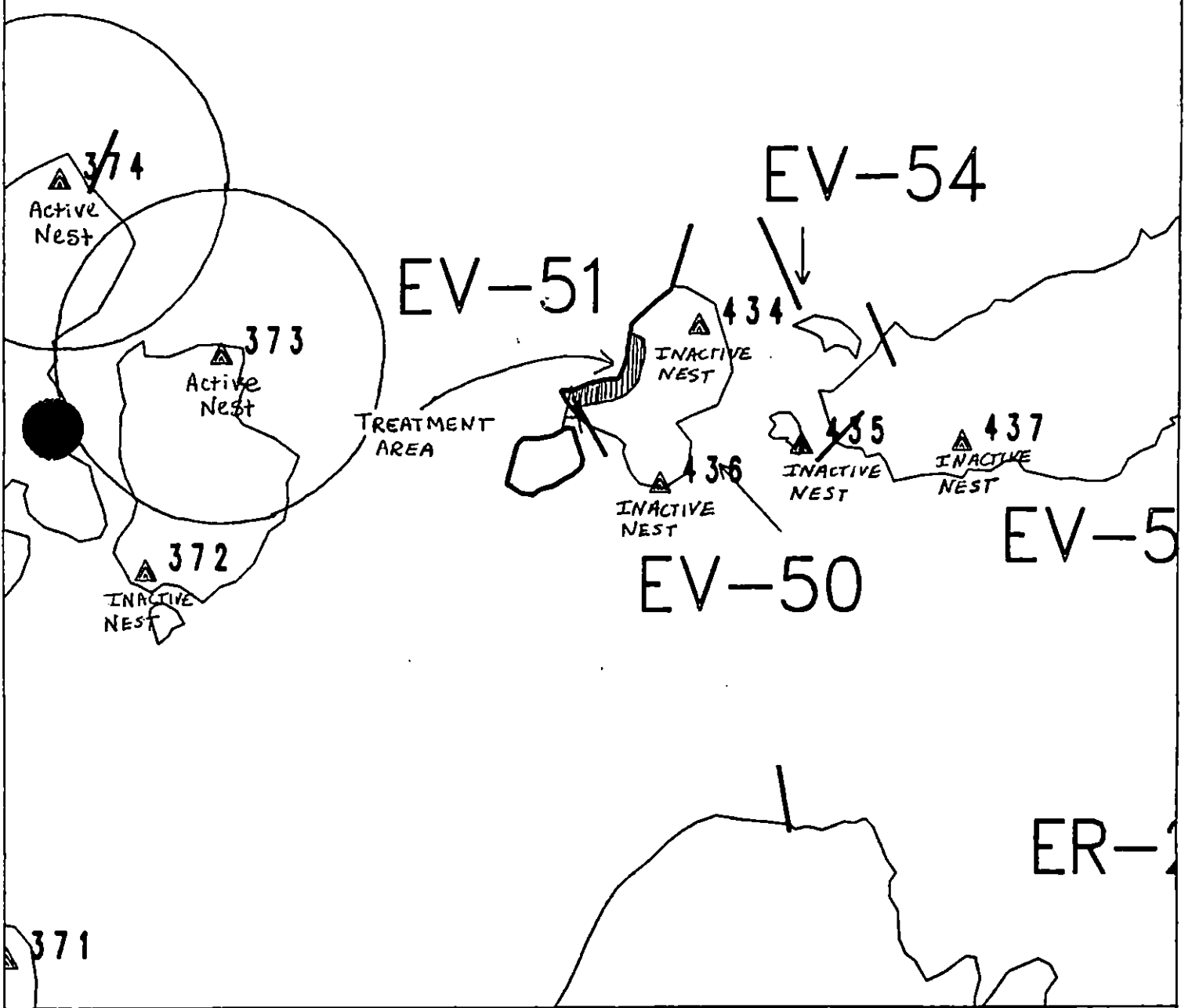
Prepared by

[Signature]

Date

6/3/90

* Incorporates USFWS bald eagle nest survey map data (6/11/90).



Exxon Company, USA
Map Key: PMS-EV-51
May 11, 1990



ECOLOGY MAP 6/3/90
SEGMENT EV-51
SUBDIVISION A (1 of 1)
METERS
0 374 748

- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1227 feet

SHORELINE EVALUATION

SEGMENT ST/ EV-51 SUBDIVISION A (1 OF 1) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Sawmill Bay Hatchery release area (1F) - 4/15 to 6/1. Consult ADF&G for exact dates. Deer harvesting (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Adams

DATE: 4/27/90

OILING CATEGORIZATION:

Wide 0 m: Medium 59 m: Narrow 16 m: V.Light 211 m: No Oil 788 m
Subsurface Oil Observed: Yes X No Maximum Depth 20 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend removal of tarmat and bioremediate as indicated on attached sketch map. Treatment activities should be conducted between 6/1 and 8/15 based on above constraints See Addendum dated 4/3/90 PP

RAKE PRIOR TO BIOREMEDIATION IN AREA OF PIT 1+2

TAG COMMENTS:

TAG APPROVAL DATE: 4/16/90

ADEC Al Kallen

EXXON ANDY TEAL

NOAA Bull Wescott

USCG G.A. REITER

FOSC:

DATE:

SHORELINE EVALUATION

SEGMENT ST/ EV-51 SUBDIVISION A (1 OF 1) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Sawmill Bay Hatchery release area (1F) - 4/15 to 6/1. Consult ADF&G for exact dates. Deer harvesting (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Adams DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 59 m: Narrow 16 m: V. Light 211 m: No Oil 788 m
Subsurface Oil Observed: Yes X No Maximum Depth 20 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend removal of tarmat and bioremediate as indicated on attached sketch map. Treatment activities should be conducted between 6/1 and 8/15 based on above constraints.

RAKE PRIOR TO BIOREMEDIATION IN AREA OF PIT 1+2

TAG COMMENTS:

TAG APPROVAL DATE: 4/16/90

ADEC Dr. Kellan
EXXON ANDY TEAL
NOAA Burl Wescott
USCG G.A. REITER

FOSC: D. S. G. L. DATE: 4-20-90

OG R. ty

SEGMENT ST/ EV-51

SUBDIVISION A11

DATE 03 / 30 / 90

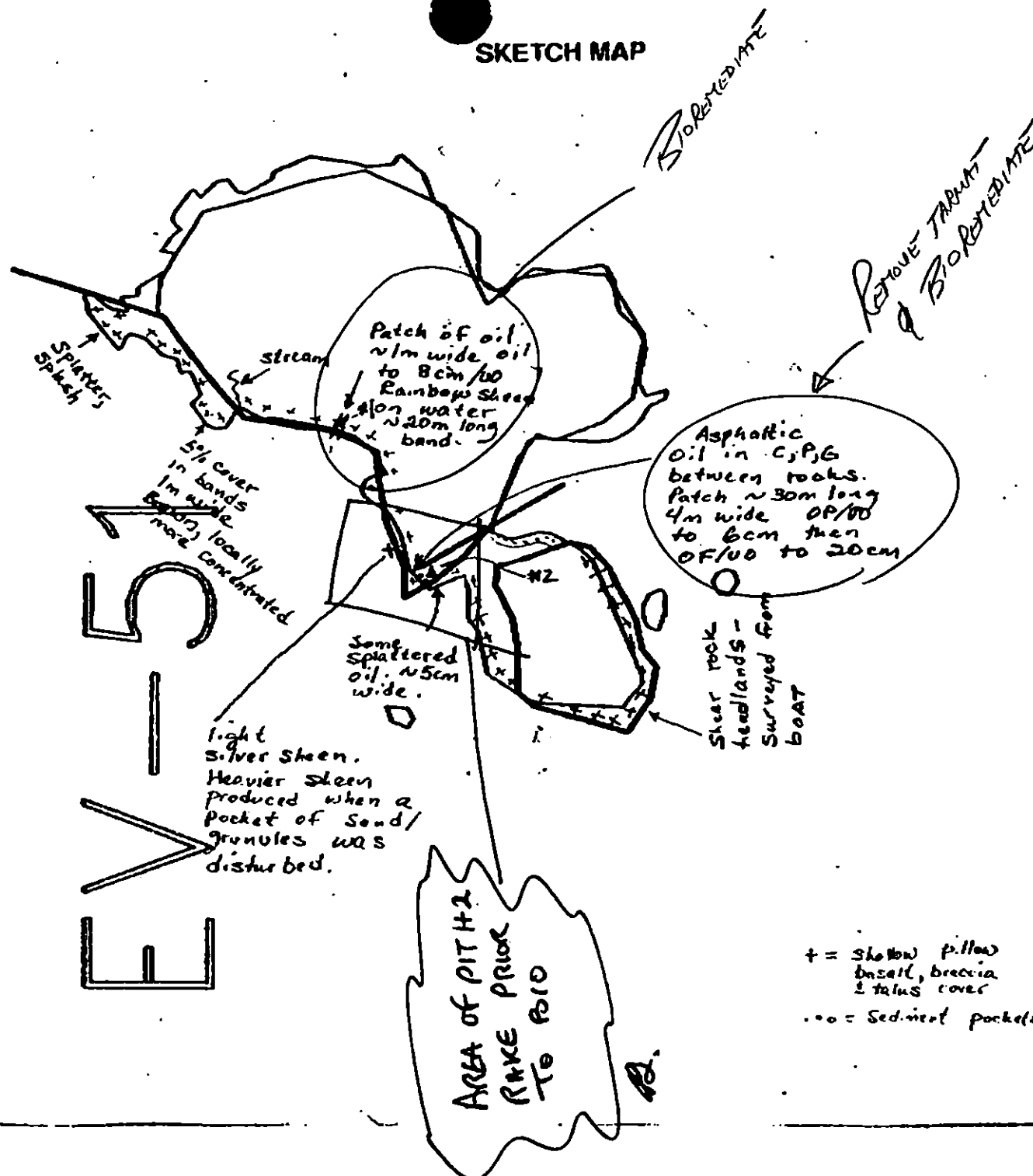
CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Substrate Boundary
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ NA Est. HWD/WD
- ☒ SS
- ☒ NA Profile Location(s)
- ☒ NA Photo Location(s)
- ☒ NA Photo Location(s)

LEGEND

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

SKETCH MAP



EV-51

ADEC Segment Length: 1216m



EV-51



MEASUREMENT		Adjusted
YO	4.25"	703 m
VL	2.0"	463 m
N	0.1"	165 m
M	0.2"	33 m
	<u>7.35"</u>	<u>+ 33 m</u>
		1216 m

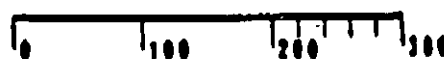
$$1'' = 150 \text{ m}$$

EV-50

XXX Wide
 /// Medium
 --- Narrow

ADEC Segment Length: 1214m

TTTT Very Light



Map Key: PWS-251

Name: Richard Martin

Date: 08/30/90

Date Entered:

14

1991 MAYSAP EVALUATION

SEGMENT: EV 051 SUB: A REGION: PWS SURVEY DATE: 5/24/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

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

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

ADEC

NAME _____

SIGNATURE _____

☐ NTR

If Treatment Recommended.

Good area for light manual pickup in area A+E, accessible + part of the Better Island group.

EXXON

NAME _____

SIGNATURE _____

☒ NTR

No oil observed in recoverable quantities or character.

LANDMANAGER

NAME _____

OF CVC / FS

SIGNATURE _____

☐ NTR

Like sub oil - thick oil on flat small area
Enough asphalt around sub. to warrant manual
pick-up. Change Local Response

NO BIO

USCG/NOAA

NAME _____

DREHER / CINE

SIGNATURE _____

Guo K. L. Disher

☒ ^{KRD} NTR

Observed small amounts of CV, CT, S; one or two very small pockets of AP in supra - no recoverable quantities. KRD

Oiling is confined mainly to CV + CT, although some AP patches exist. Little subsurface oil was located. Further work on this subdivision is probably unnecessary. DWR

TEAM NO. 5 OG CHANEY BIO CRANK SEGMENT EV 51
 ADEC HAYES LANDMANAGER WARD for USFS & CUC SUBDIVISION A
 EXXON DEAN USCG/NOAA DREHER/CLINE DATE MAY 124 191

TIME 17:30 to 19:30 TIDE LEVEL 3.0 ft. to 5.0 ft. ENERGY LEVEL: ☐ H ☐ M ☒ L

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

TOTAL LENGTH SHORELINE SURVEYED: 1074 m NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

EST. OIL CATEGORY LENGTH: W — m M 10 m N 12 m VL 493 m NO 559 m US — m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A	S			S	S	S					BC	M	4	10		✓			AP UNDER BLDRS
B					T	T					BR	H	1	50		✓			RANDOM SPATTERS
C					T	T					R	H	1	15		✓			RANDOM SPATTERS
D					T	T					B	H	1	350		✓			RANDOM DROPS
E	S				S	S					BCP	L	2	12		✓			SMALL PATCHES AP
F						S					BR	V	0.3	15		✓	✓		VERY SPORADIC BAND
G				T	T	T					BR	M	1	75		✓			SE. SIDE OF TOMBOLO

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 - 22 FRAMES 14-15

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	20	✓							0-5	Y	—	—		✓			BP-BGP	THROUGH AP
2	20							✓	—	—	—	—		✓			PG-PG	
3	15							✓	—	—	—	—		✓			BP-PG	
4	20							✓	—	—	—	—		✓			PG-PG	
5	20							✓	—	—	—	—		✓			PC-PC	
6	20							✓	—	—	—	—		✓			PG-PGC	
7	10							✓	—	—	8	N		✓			PG-M	
8	20							✓	—	—	—	—		✓			P-GM	
									—	—	—	—						

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

* OIL < 5cm DEEP IS NOT SUBSURFACE

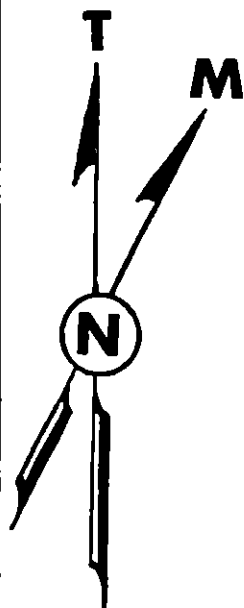
OG COMMENTS: PIT 1 THROUGH AP PATCH, OP DISCONTINUOUS DISTRIBUTION SAME AS AP IN AREA (A).

(D) RANDOM DROPS CT & CV ARE VERY HARD & PROBABLY PREDATE THE VALDEZ SPILL BUT THEY ARE MIXED WITH SOFT CT & CV WHICH LOOKS LIKE IT IS FROM THE VALDEZ SPILL.

(E) BEHIND OUTCROP, POCKET OF POORLY SORTED SEDIMENTS. SMALL PATCHES OF AP.

RAVENHILL 4/1/91 revised
5/30/91 ICG

AP 1991
 SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV51A
 DATE: MAY 24 1991
 AIR P.#: PIMCOOS-122

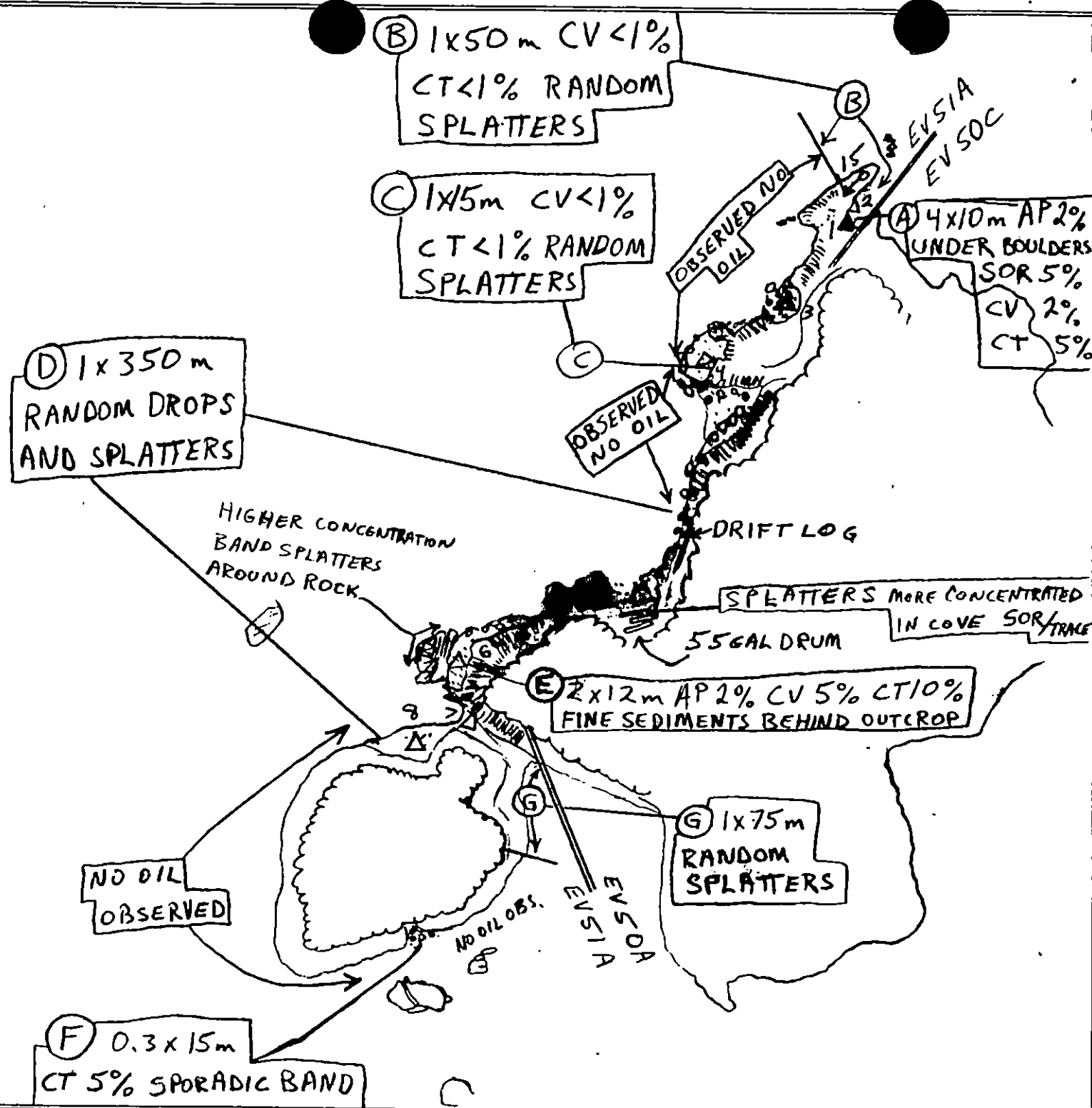


LEGEND

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

SCALE

85
 METERS



Revised: MC 6/1/91 (revised 5/30/91)

TEAM # 5

DATE 24 May 1991

SEGMENT # EV-51

TIDAL HEIGHT(Range) +2 → +5

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 1'

WIND SPEED/DIRECTION 5-15/NE

PHOTOGRAPHS: ROLL #

FRAME #

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

(A) Area is in the MITZ. Within the site, sparse concentrations of barnacles and rare concentrations of *Littorina*, limpets and mussels are present. Biota cover ~20%. The MITZ is a pebble beach. There is a moderately concentrated mussel bed. The bed appears to have had a dense concentration at one time. Many clam shells are present. There is a sparse concentration of barnacles and *Scirpophila* algae. Biota cover is ~30%.

(B) Area is located in the MITZ. Within the site, barnacles are the dominant species. They are sparse to moderately concentrated. *Littorina* and limpets are moderate with patches of dense concentration. *Fucus* is sparse and mussels are sparse to rare. Biota cover is 50%. In the MITZ on bedrock, algae covers 80% of the surface area.

(C) Area is in the MITZ. Barnacles cover ~20% of the surface sediments within the site. The MITZ is a pebble beach with low biota. Clam shells are abundant. On the rocky headlands algae cover is 40%.

Area is in the MITZ. Rare concentrations of barnacles, *Fucus*, *Littorina* and limpets are present. Biota cover is 1%. In the MITZ, along boulders and headlands there are sparse to moderate concentrations of *Fucus*, *Littorina* and limpets. Biota cover is 50%. In the pocket beach biota cover is 30%.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	Pink Salmon Fry
Seabirds			
Waterfowl			
Gulls/Kittiwakes/Tern	2	12	
Shorebirds			
Corvids	1		
Other Birds	1	1	

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters	4 (inc. 1 pup)		
Pinnipeds(specify)	1 Harbor Seal		
Whales(specify)	5 Seals		

Shoreline subdivision map showing important biological features attached.

 Reviewed: MC 6/1/91
 Reviewed M.B. 5/30/91

Team # 5

Segment # EV-51

Subdivision A

Sea State 1'

Date 24 May 1991

Tidal Height 12 $\Rightarrow$ 15

Biologist Crank

Wind Speed / Direction 5-15/NE

pg 2 of 2

Comments (cont.)

(E) Area is a pocket above D, located in the SUPRA. Black and white lichen cover $\sim 60\%$ of the bedrock surface; rye grass is sprouting in the pebble/granul matrix, covering $\sim 10\%$ of the surface area.

(F) Area is in the UITZ along a steep to vertical boulder shoreline. Ecological observations were made from the skiff. Within the site black lichen appeared to be the predominant species. Below the site, in the MITZ, there is a sparse concentration of barnacles and Fucus. Biota cover is $\sim 30\%$.

(G) Area is located in the UITZ and MITZ. High in the UITZ black lichen covers $\sim 50\%$ of the sediments. Low in the UITZ, there is a moderate to sparse concentration of Fucus; a sparse concentration of tur spot algae; a sparse to rare concentration of Littorina and limpets. Amphipods and isopods are present. Biota cover is $\sim 50\%$. In the MITZ, there are moderate Littorina and limpet concentrations and sparse Fucus, barnacle and mussel concentrations. Odonthalia and filamentous green algae are present. Biota cover is $\sim 30\%$.

Reviewed: MC 6/1/91

Reviewed M.B. 5/30/91



SAWMILL BAY

Biote cover on headland ~60%

Clam shells are abundant

MITZ
headlands
have ~90%
Biota cover -
Fucus is dominant

DRIFT LOG
30% Biota
55 GAL DRUM

30% Bista cover
DET

cover
BETTLES ISLAND

Birds cover
(5) ~ 30%.

EV50A
EV51A

Vertical
Rock wall

Non-physical border
Ecological observations
made from SKIFF. ~3570
delta cover

Reviews M.B. 3/22

85
METERS

U.S. FISH AND WILDLIFE SERVICE (FWS)
SHORELINE ACTIVITY/BALD EAGLE IMPACT EVALUATION

Date 5/24/91 Shoreline Segment/Subdivision EVOSIA

Shoreline activity Assessment Team Survey

Time - Begin

Time - End

FWS Observer

4:15 PM

6:00 PM

Surveyors/workers

Nest in view/monitored: ☒ Y N Adult in nest: Y N ☐ Unk.

Adverse eagle response: Y ☐ N Adult left nest: Y ☐ N Unk.

Time

Type of human activity/eagle response

4:20

No nests were found in EVOSIA.
However, the nest located in EVOSOC
was visible from the beach on EVOSIA.
No birds were observed in the nest
during the ground survey. However
1 adult did land about 50 yds.
from the nest as the crew was
working its way out of range and
sight of the nest.

Survey/work activities completed:

☒ Y N

Personnel withdrawn due to eagle conflict:

Y ☐ N

Recommendations: This site should have a monitor

because of the exposure to the beach, but
if a bird is nesting it is very well adapted
to its surroundings.

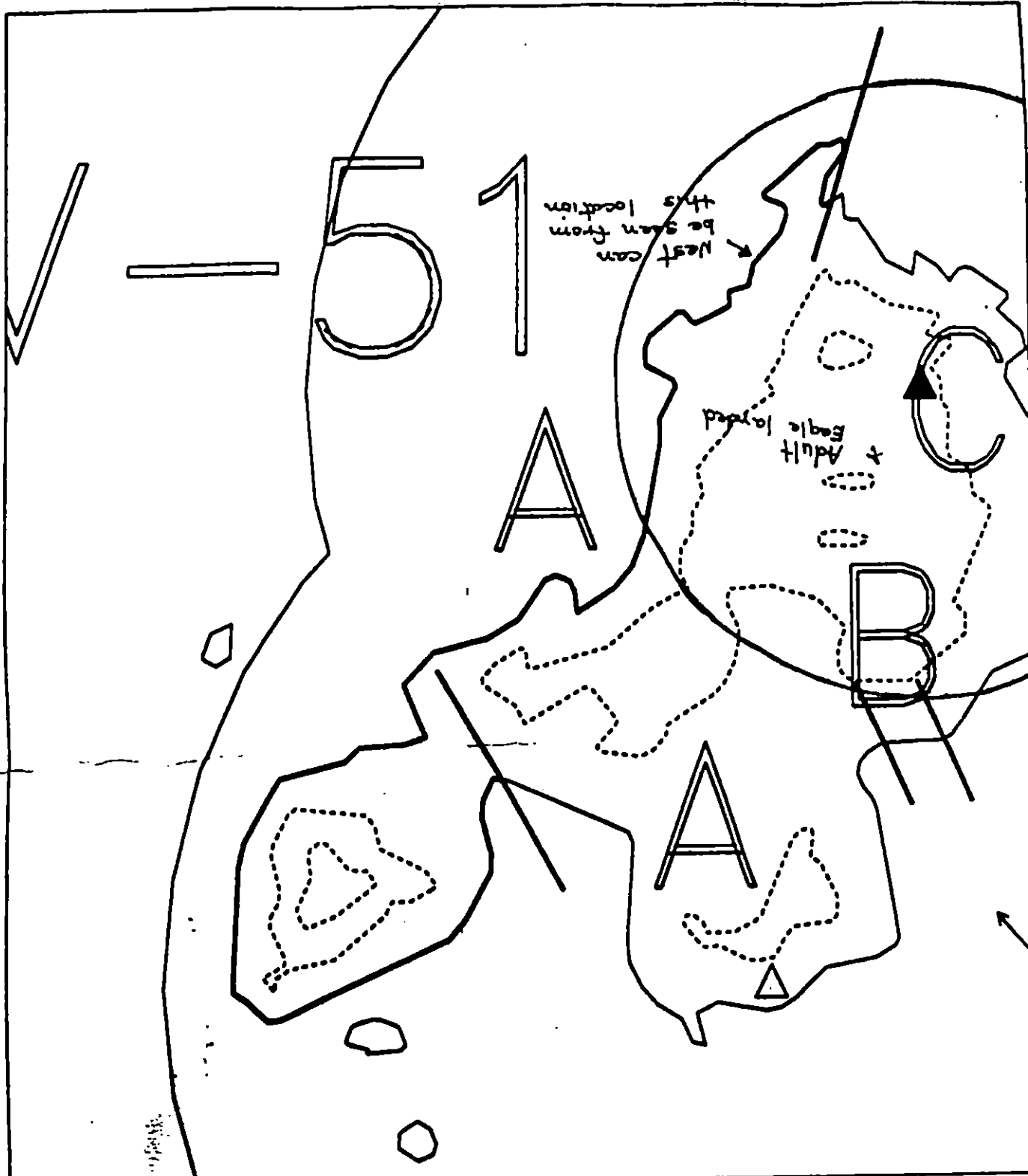
FWS Observer

Mike Luke

Date

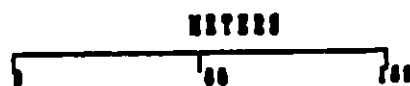
5/24/91

Reviewed M.B. 5/20/91



EV051

Segment Reference Map
Map Key: PUSXV051



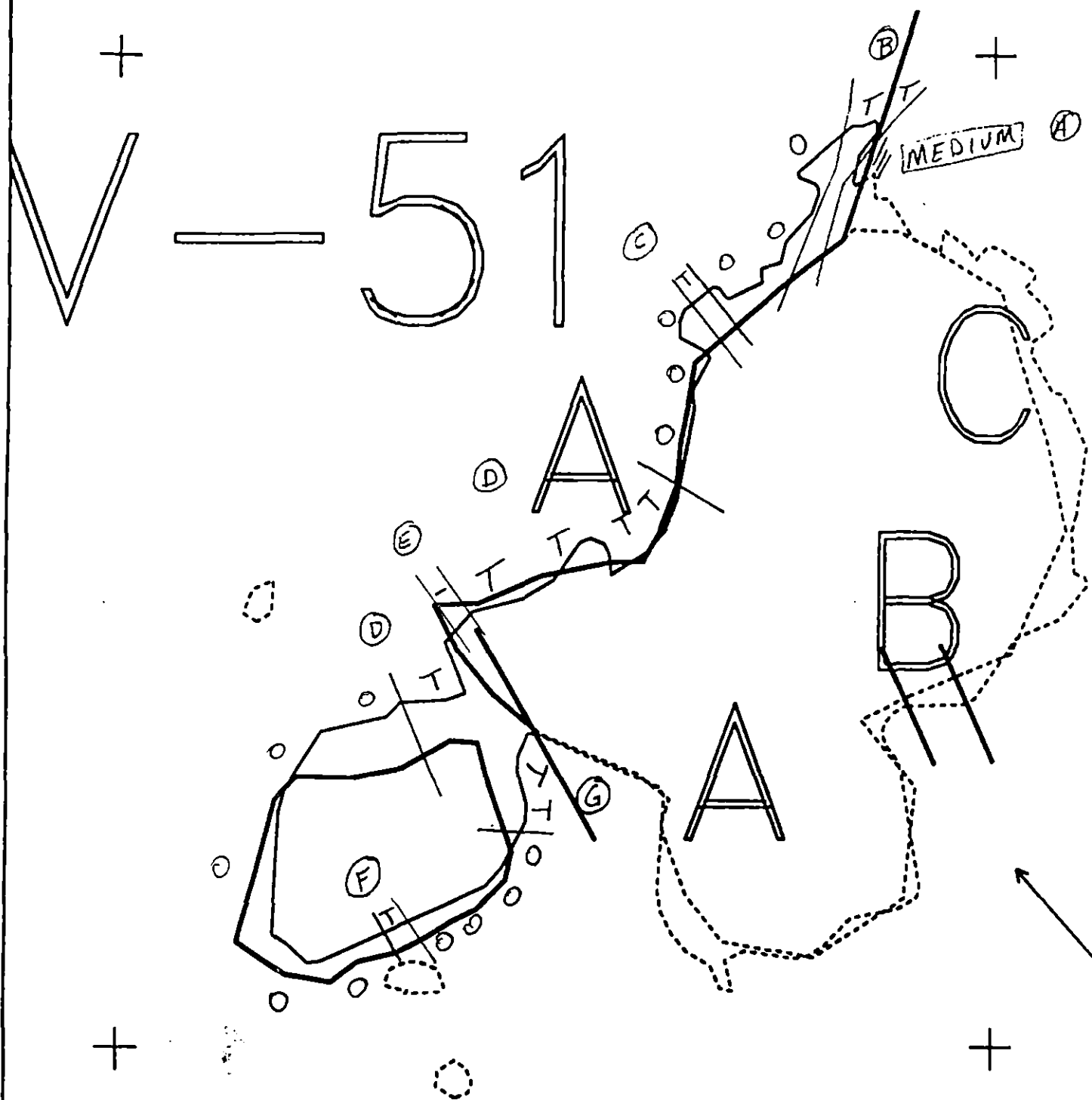
AS State Plane Zone 4
per cent



EAGLE NEST

Surveyed by: Mike Luke
5/24/91

Reviewed M.B. 5/31/91



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

EV051 A
 ADEC Subsegment Length: 1074m
 METERS

0 100 200
 AR State Plane Zone 4
 prv051a



Subdivision Field Map
 Map Key: PWSEV051A
 Name: CHANEY
 Date: MAY 24 1991
 Date Entered:

Reviewed: mc 6/1/91
 reviewed 5/30/91 kg

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EV-52 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation Manual Raking	WORK 6/1 to 7/25

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

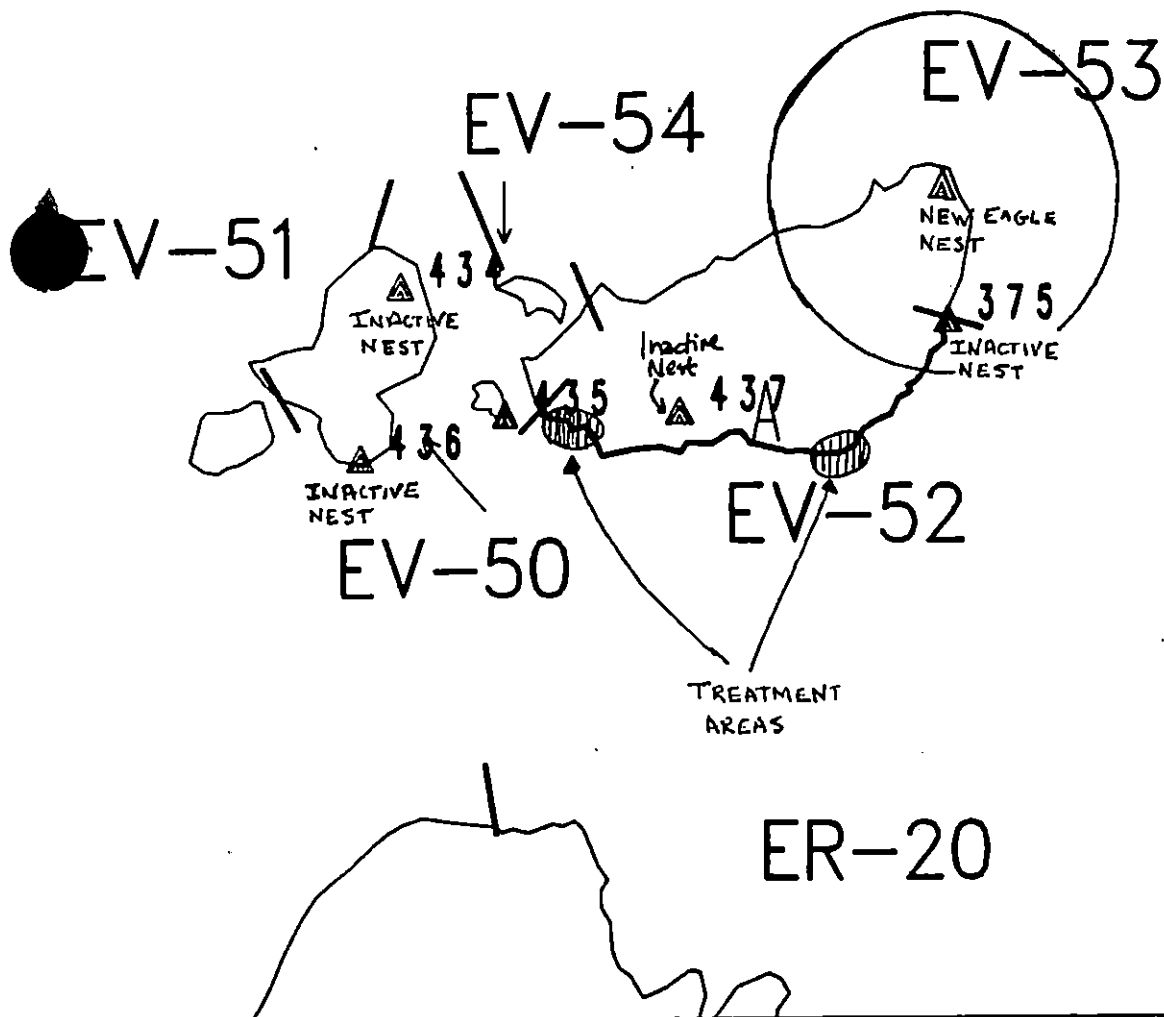
1F	Sawmill Bay Hatchery Release	No constraint to manual pickup. Closed to bioremediation prior to 6/1.
1K	Purse Seine Hook-off	No constraint to manual pickup; closed to bioremediation and manual raking after 7/25.
5T	Bald Eagle Nests	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup; closed to bioremediation and manual raking 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 uncollected biota and substrate.

TAG APPROVAL DATE 6/04/90
ADEC Ray Morris
EXXON Andy Test
NOAA Joseph Kellert
USCG C. H. Porter
FOSC [Signature] DATE 6/5/90
Prepared By: Andru May Date 6/4/90

* Incorporates USFWS
BALD EAGLE NEST SURVEY
MAP DATA 6/1/90



Exxon Company, USA
Map Key: PWS-EV-52
May 11, 1990



ECOLOGY MAP ^{6/3/90}
SEGMENT EV-52
SUBDIVISION A (1 of 1)
METERS
0 445 890

★ Seabird Colony
▲ Eagle Nest

1 inch = 1459 feet

SHORELINE EVALUATION

SEGMENT ST/ EV-52 SUBDIVISION A (1 OF 1) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Near Sawmill Bay Hatchery (1F) - 4/15 to 6/1; Active bald eagle nest (5T) - 3/1 to 6/1; Deer harvesting (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-oiled biota and substrate.

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

SHPO SIGNATURE: Charles Z. Adams DATE: April 11, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 697 m: V.Light 421 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>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u>X</u> Other (see comments)

COMMENTS: Recommend manual pickup of tar patties indicated on sketch map, as well as hand raking of pocket beaches where surface cover found; follow with bioremediation. Recommend work after 6/1 based on constraints.

SEE Addendum dated 6/4/90 JP

TAG COMMENTS:

TAG APPROVAL DATE: 4-11-90
ADEC John E. Baker
EXXON Andy Tetz
NOAA Bud Wesscott
USCG G.A. REITER

FOSC:

DATE: 4-28-90

SHORELINE EVALUATION

SEGMENT ST/ EV-52 SUBDIVISION A (1 OF 1) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Near Sawmill Bay Hatchery (1F) - 4/15 to 6/1; Active bald eagle nest (5T) - 3/1 to 6/1; Deer harvesting (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-oiled biota and substrate.

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

SHPO SIGNATURE: Charles Z. Adams DATE: April 11, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 697 m: V.Light 421 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>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u>X</u> Other (see comments)

COMMENTS: Recommend manual pickup of tar patties indicated on sketch map, as well as hand raking of pocket beaches where surface cover found; follow with bioremediation. Recommend work after 6/1 based on constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4-11-90
ADEC John E. Blum
EXXON Andy Tetz
NOAA Burl Wesscott
USCG G.A. REITER

FOSC: DATE: 4-28-90

OG Marty
 SEGMENT ST/ EV-52
 SUBDIVISION all
 DATE 03 / 31 / 90

SKETCH MAP

CHECKLIST

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

LEGEND

1 A
 PK - No Subsurface Oil

2 A
 PK - Subsurface Oil

CT/C
 Continuous Distribution

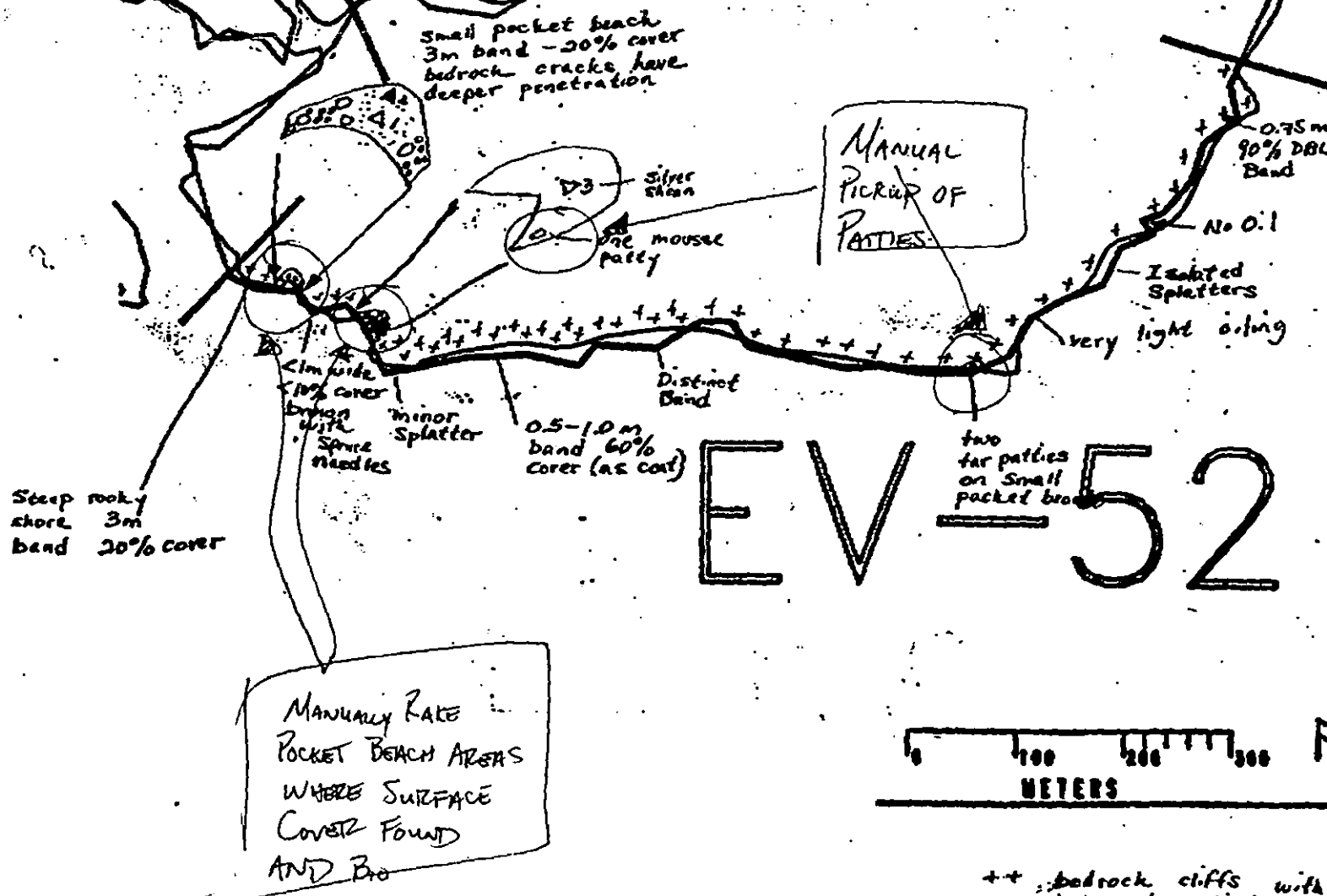
CT/B
 Broken Distribution

CT/P
 Patchy Distribution

CT/S
 Splashed Distribution

Oiled Vegetation

Photo location, direction, and number



Oil Character Length (m): AP PO CV CT 1161m ST MS PT TB FL NO

++ bedrock cliffs with high angle, vertical, or overhangs - Surveyed by Sk. TF
 REVISION 02/24/90

EV-54



	inches	unadj	adj
Narrow	4.3"	645m	713m
No	0.4"	60m	66.7m
Very Light	2.7"	405	448m
		1110 m	1227

EV-52

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

EV-52

ADEC Segment Length: 1227m



Map Key: PWS-252

Name: MARTY

Date: 4-1-90

Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ EV-53

SUBDIVISIONS: A (1 OF 4)

SHORELINE EVALUATION

SEGMENT ST/ EV-53 SUBDIVISION A (1 OF 4) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Near Sawmill Bay Hatchery (1F) - 4/15 to 6/1; Deer harvesting
(7II) - 8/15 to 2/28; Possible eagle nest in vicinity (5T). Con-
tact ADF&G to verify eagle nest location.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-
oiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS: If treatment is planned, a cultural re-
source evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 168 m: V.Light 0 m: No Oil 465 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: No treatment recommended due to only very spotty coat
on small area in upper intertidal. See Field Shoreline Comment
Sheet.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ EU-53 SUBDIVISION: A DATE 3/30/90

SCG

NAME LARRY FLETCHER SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME DAVID M. SAE SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Hatchery impacts listed in PWS area plan.

SHORELINE OILING SUMMARY

REVISION NO. 000000

OG R. Marty USCG LARRY FLETCHER SEGMENT ST/ EV-53
 BIO B. Lumb LAND REP Leigh Carlson SUBDIVISION A (1 of 4)
 EXXON J. Czarnicki ADEC Dave Sale TIME ~10:30 to ~12:00
 TEAM NO.: 10 TIDE LEVEL: 4.7' to DATE 03/31/90
 EST. SUBDIVISION LENGTH: 657 m ☒ Sun ☒ Clouds ☒ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: to Counterclockwise
 SURFACE SEDIMENTS: R 90 % B 10 % C 10 % P % G % S % M % V %
 SLOPE: Long % Hang 100 % Vert % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W m M m N 144 m VL m NO 513 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	AC	AB	AP	AS	1	2	3	4	5	SU	U	M	L
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT			X							X			
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										X		X	X

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

OILED DEBRIS	AMOUNT	
	SM	MD/LG
Logs	<u>2</u>	
Vegetation	<u>2</u>	
Trash		
Debris		

DEBRIS COLLECTED

☐ YES ☒ NOTYPE #BAGS

Photographs:

Roll No. 57/10/2Frames 18

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (Core - Core) (999-999)	BELOW	OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		SAT. OF	RES. OR	LOC. OF	EXT. OF	NO			UC 0-1	UC 1-2	UC 2-3	UC 3-4	UC 4-5	UC 5-6	UC 6-7	UC 7-8	SU	U	M	L		
	NONE						.															
							.															
							.															
							.															
							.															
							.															
							.															
							.															

COMMENTS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST / 10/EV 53 / Subdivision A Date (mo / day / yr) 3 / 31 / 90
 Time (24 hr) 0900 - 1000 Biologist Lemon Wind 10 mph

- (A) Substrate type and % of segments:
 (1) Bedrock 90% (2) Boulder 10% (3) Cobble _____ (4) Pebble _____ (5) Sand _____ (6) Silt _____
- (B) Overall % cover of biota (% of segment): Dense 80% Moderate _____ Low _____
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:

Roll No. ST/10/2Framer 18-M

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 deer sitting, 1 eagle sitting, 1 eagle nest sitting.
 This survey was made while shuffling by the shore since walking was not possible.
 Tide ranged from 0 to -1

Ecological Considerations: Nucella (gastropoda) were gathered in a crevice, locally dense.
 Below the fucus band was a 90% coverage of RHODOPHYTA.

OG P. Marty
 SEGMENT ST/ EV-53
 SUBDIVISION AII
 DATE 03/31/90

CHECKLIST

☐ N Arrow
☐ Approx. Scale
☐ Seg/Sub Bndy
☐ Oil Dtd.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HML/LWL
☐ SBL
☐ Profile Location(s)
☐ Profile(s)
☐ Pit Location(s)
☐ Photo Location(s)

LEGEND

1 Δ

PT - No Subsurface Oil

2 Δ

PT - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

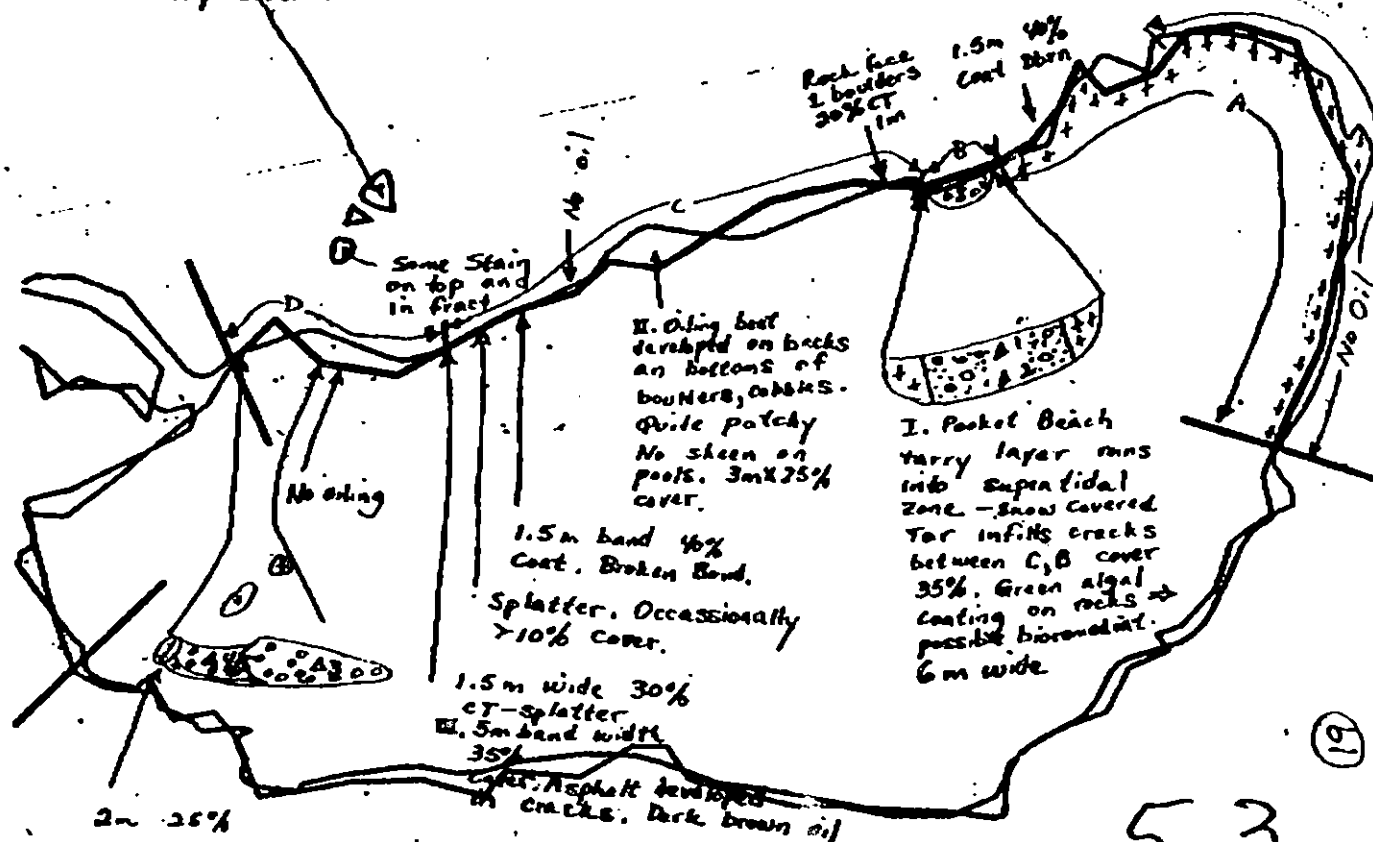
Oil Vegetation

1 →

Photo location, direction,
 and number

Y. 30% Cover
 10% Substrate
 10m x 10m - Green
 rocky substrate

SKETCH MAP



53
 EV-52

EV-53

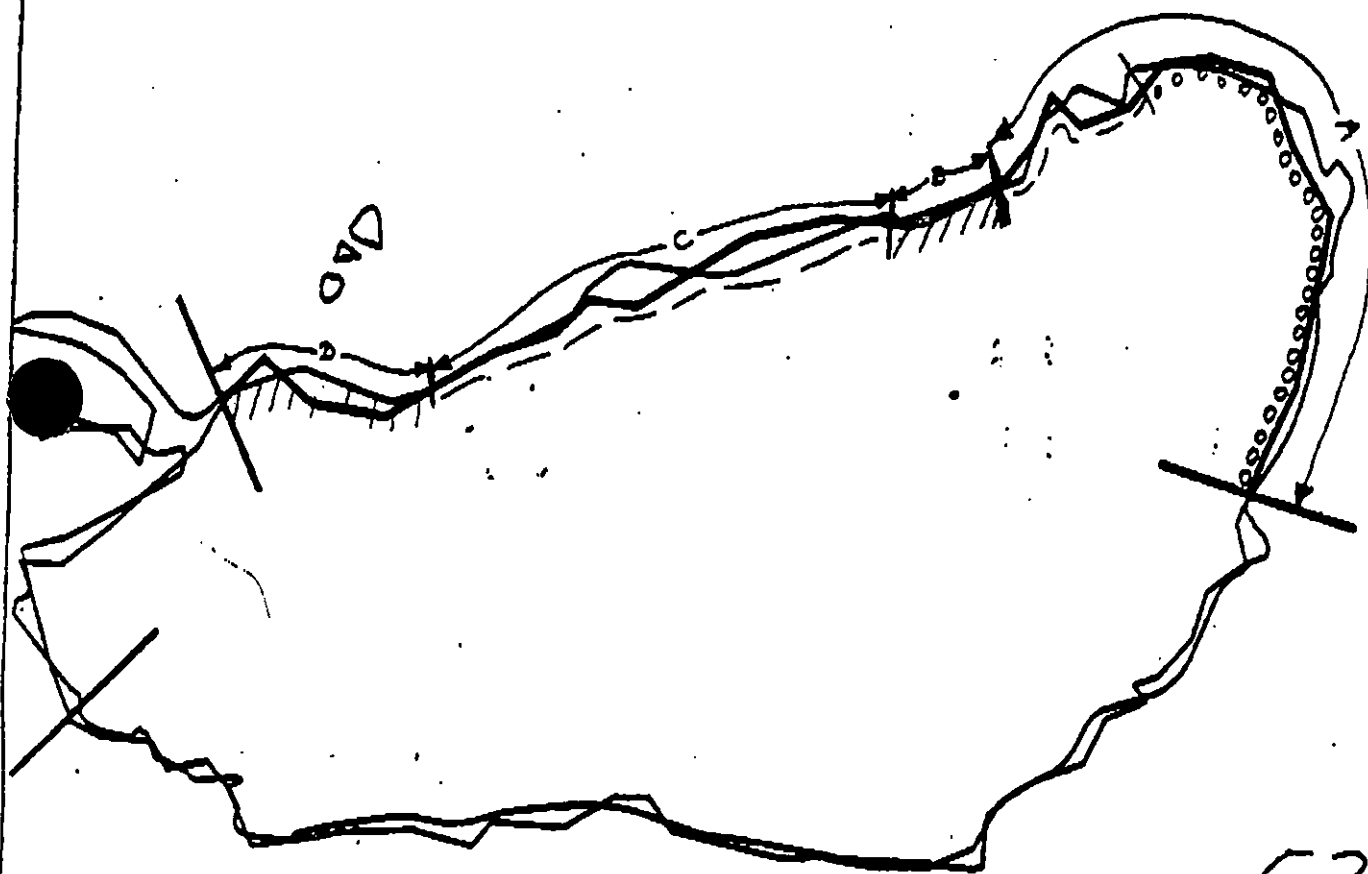
EC Segment Length: 1346m



Oil Character Length (m) AP PO CV CT 144m BT MS PT TB FL NO 513m
 B 64m
 C

Subseg.	incl	unadj.	normalized
A-No	3.2	480m	513m
Light	0.9	135m	144m
B Med.	0.4	60m	64m
C Light	2.8	420m	449m
D Med.	1.1	165m	176m
	9.4	1260m	1346m

EV-



53

EV-52

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-53

ADEC Segment Length: 1346m



Map Key: PWS-253

Name: R. Marty

Date: 3/31/90

Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ EV-53

SUBDIVISIONS: C (3 OF 4)

SHORELINE EVALUATION

SEGMENT ST/ EV-53 SUBDIVISION C (3 OF 4) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Near Sawmill Bay Hatchery (1F) - 4/15 to 6/1; Deer harvesting
(7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to
unoiied biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS: If treatment is planned, a cultural re-
source evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 400 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: No treatment recommended due to only light isolated
splatter in upper intertidal zone. See Field Shoreline Comment
Sheet.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EV-53 SUBDIVISION: C DATE 3/31/90**USCG**NAME LARRY FLETCHER SIGNATURE Larry R Fletcher☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED**ADEC**NAME DAVID M. SALE SIGNATURE David M Sale☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED**LAND MANAGER**NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Hatchery impacts listed in PWS area plan

SHORELINE OILING SUMMARY

REVISION NO. 000070

OG R. Mandy USCG LARRY FLETCHER SEGMENT ST/ EV-53
 BIO B. Smith LAND REP Laugh Carlson SUBDIVISION C (3 of 4)
 EXXON J. Czerniak ADEC Dave Sale TIME 10:30 to 12:30
 TEAM NO.: 10 TIDE LEVEL: <+7 ft to 11 DATE 03/31/90
 EST. SUBDIVISION LENGTH: 449 m ☒ Sun ☒ Clouds ☒ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: to Counterclockwise
 SURFACE SEDIMENTS: R 50 % B 25 % C 25 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 41 % Hang 60 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 449 m VL 0 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	1/8"	1/4"	1/2"	1"	16	32	64	128	256	512	1024	2048	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT			X							X				X		
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X		X	X

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	2		
Vegetation	0	2	
Trash			1
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. ST/0/3Frames 3-13

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm) (0-100)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		SPOT	OR	CL	OF	NO		UP	HC	16	32	64	128	256	512	1024	2048	SU	U	M	U		
<u>NONE</u>																							

COMMENTS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/23/90

Segment ST/10/EV53 Subdivision C Date (mo / day / yr) 3 / 31 / 90Time (24 hr) 1030 - 1100 Biologist Lemon

(A) Substrate type and % of segments:

(1) Bedrock 50 (2) Boulder 40 (3) Cobble 10 (4) Pebble _____ (5) Sand _____ (6) Silt _____(B) Overall % cover of biota (% of segment): Dense 80% Moderate _____ Low _____

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

Photographs:

Roll No. ST/10/3Frames 8 - 13

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: There are no new environmental constraints beyond those established.

Ecological Considerations: Between Fucus zone and water line was a band of 90% algae cover split between RHODOPHYTA and CHLOROPHYTA. Frame 9 of roll 3 shows this. In the high zone there were otherwise bare boulders that were 70% covered with a green algae fuzz, unidentifiable. This plant would colonize oiled rock right up to the oil, but not on the oil.

OG R. EV-53
 SEGMENT ST/ EV-53

SUBDIVISION AI

DATE 03 / 31 / 90

CHECKLIST

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

LEGEND

1 Δ
 Pit - No Subsurface Oil

2 Δ
 Pit - Subsurface Oil

CT/C
 Continuous Distribution

CT/B
 Broken Distribution

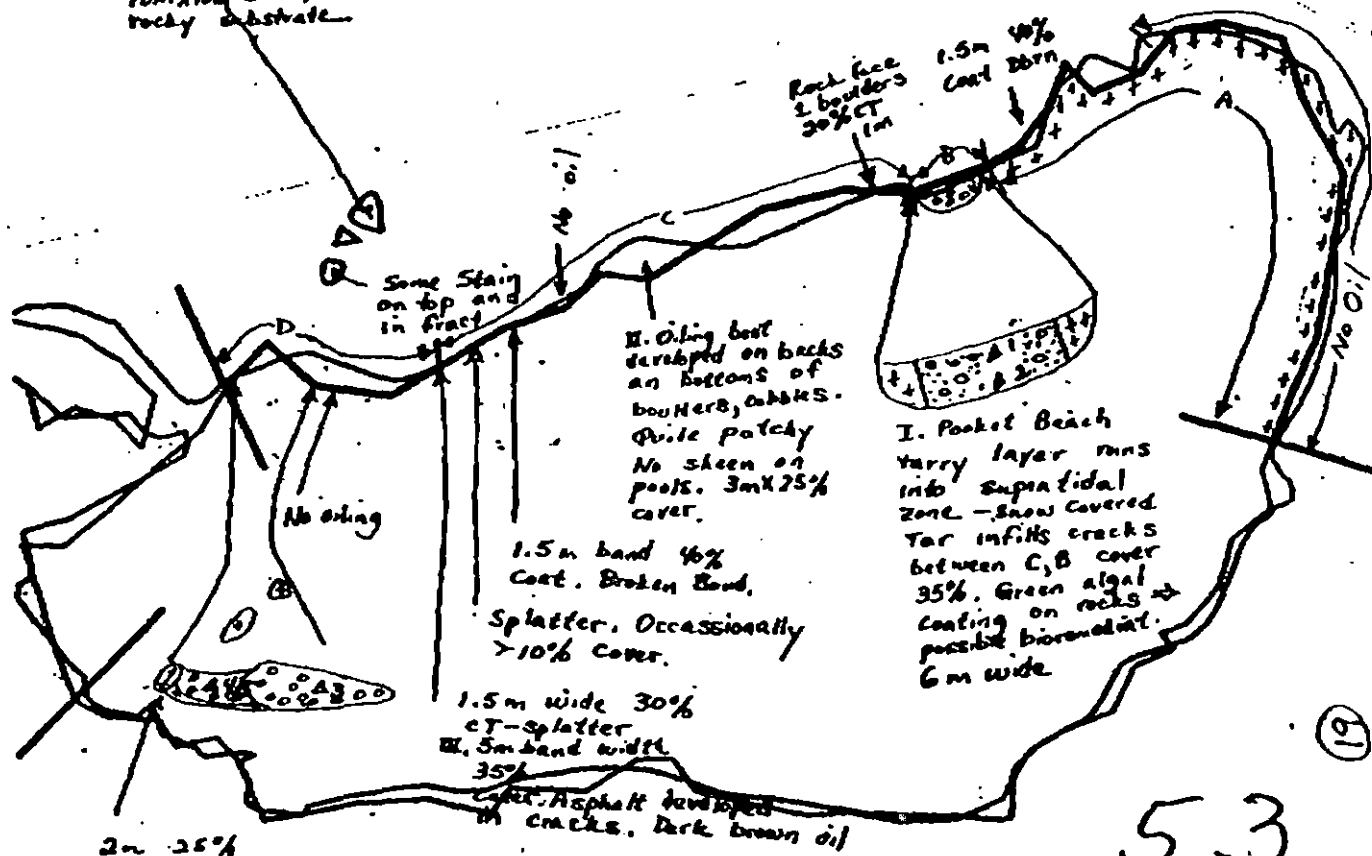
CT/P
 Patchy Distribution

CT/S
 Splashed Distribution

Oiled Vegetation

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

Y. 30% Cover
 10% Stain
 10m x 10m - brown
 rocky substrate



~~EV-52~~

EV-53

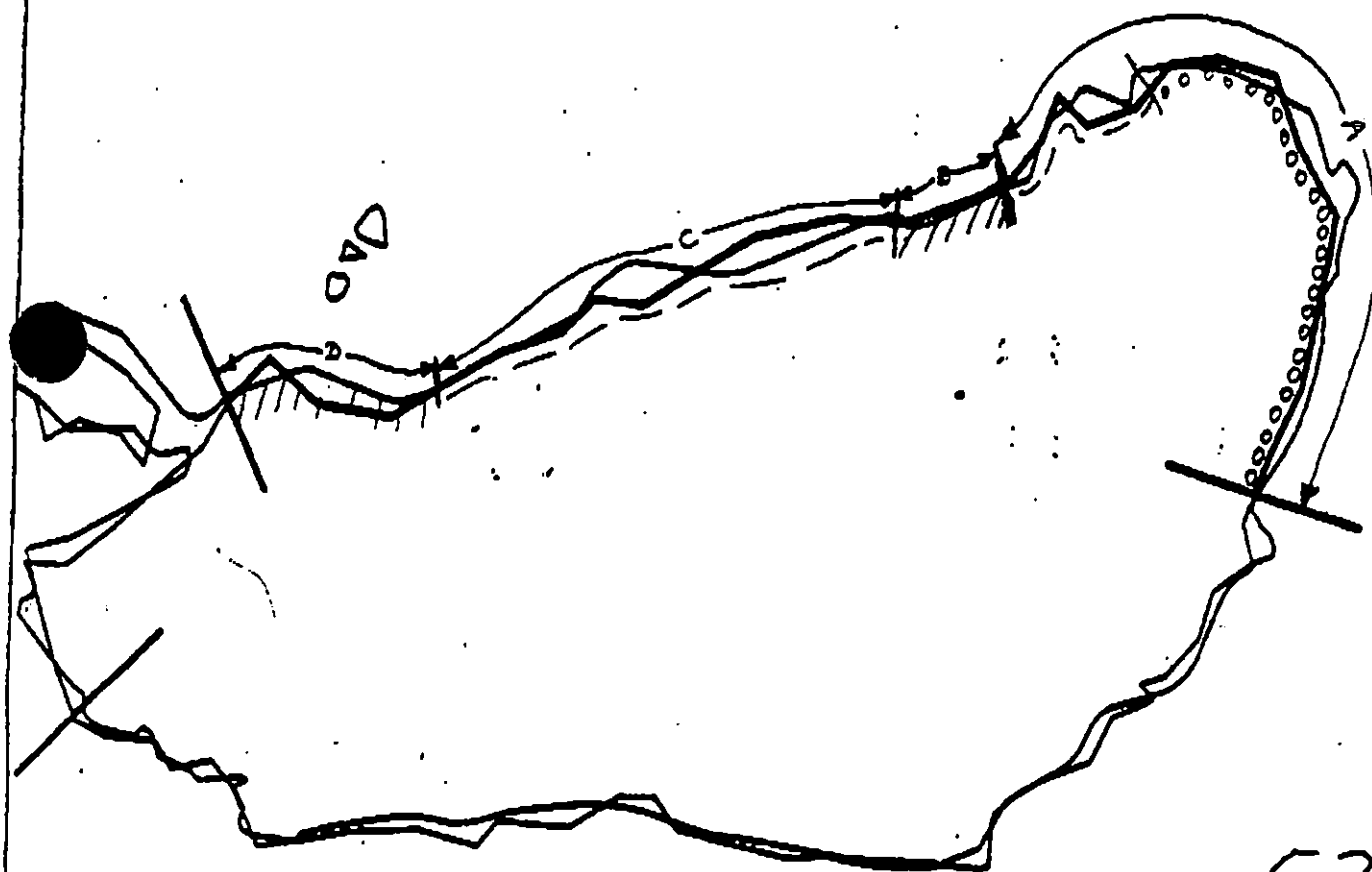
EC Segment Length: 1346m



Oil Character Length (m) MAP Asphalt pool cover cont stain moose
B 64m PO CV CT 144m ST MS PT TB FL NO 513m

Subseg.	incl	unadj.	normalized
A-No	3.2	480m	513 m
Light	0.9	135m	144m
B Med.	0.4	60m	64m
C Light	2.8	420m	449m
D Med.	1.1	165m	176m
	9.4	1260m	1346m

EV-



53

EV-52

EV-53

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ADEC Segment Length: 1348m



Map Key: PWS-253

Name: R. Marty

Date: 3/31/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EV-53 SUBDIVISION B (2 of 4)

WORK WINDOW	
Tarmat Removal	OPEN
Bioremediation	WORK 6/1 TO 7/25

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1F	Sawmill Bay Hatchery Release	No constraint to tarmat removal; closed to bioremediation prior to 6/1.
1K	Purse Seine Hook-off	No constraint to tarmat removal; closed to bioremediation after 7/25.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates an active nest within 400m of Subdivision B work site, however, access to work site granted by USFWS (5/12/90 survey by Mike Lockhart.
7II	Subsistence: Deer Harvesting	No constraint to tarmat removal; closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE

ADEC Roy Morris R. Morris
EXXON ANDY TEAL WH Kelley
NOAA _____
USCG _____

FOSC

Date

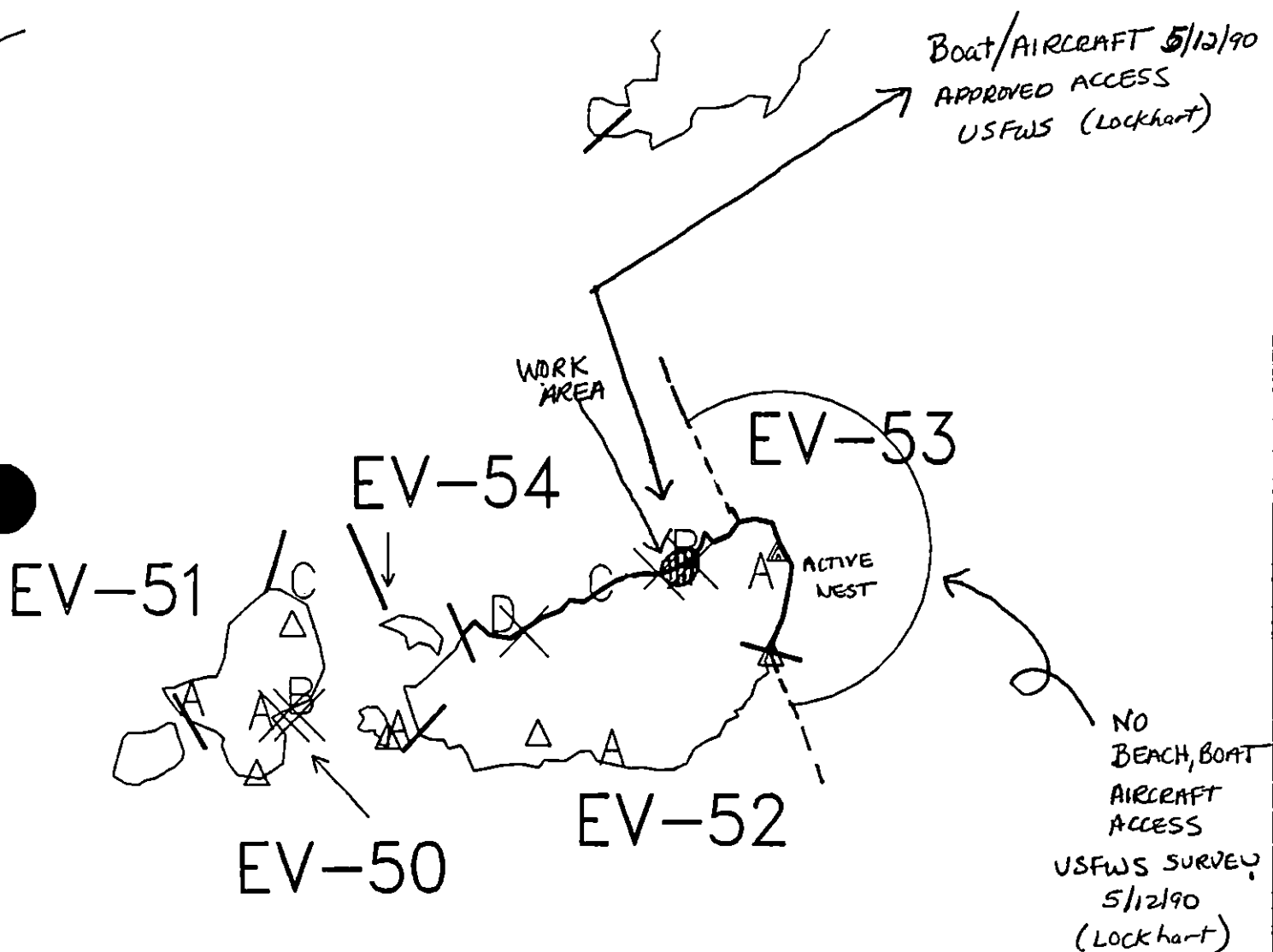
8 June 90

Prepared by

J.P. Phillips

Date

6/7/90



ECOLOGY MAP
SEGMENT EV-53
SUBDIVISION B (2014)

METERS

0 437 874

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

1 inch = 1434 feet



Exxon Company, USA
Map Key: PWS-EV-53
June 04, 1990

SHORELINE EVALUATION

SEGMENT ST/ EV-53 SUBDIVISION B (2 OF 4) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Near Sawmill Bay Hatchery (1F) - 4/15 to 6/1; Deer harvesting
(7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance of unoiled
substrate and biota during cleanup.

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 Re-
source Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: Charles H. Hines DATE: April 11, 1990

OILING CATEGORIZATION:

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

RECOMMENDATIONS:

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

COMMENTS: Manually remove pavement from pocket beach and biore-
mediate. See sketch map.

See ADDENDUM dated 6/7/90 JPP

TAG COMMENTS:

TAG APPROVAL DATE: 4/11/90

ADEC JOHN BAUER
EXXON ANDY TORR
NOAA Brig. Wesscott
USCG G.A. REITER

FOSC: MyL

DATE: 4-26-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EV-53 SUBDIVISION D (4 of 4)

WORK WINDOW

Manual Pickup
Tarmat Removal

OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1F	Sawmill Bay Hatchery Release	No constraint to manual pickup and tarmat removal.
1K	Purse Seine Hook-off	No constraint to manual pickup and tarmat removal.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

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 unrolled blots and substrate.

TAG APPROVAL DATE 6/04/90
ADEC Ray McCar's R. McCar's
EXXON Andy Tetz Real
NOAA Joseph T. Tetz Real
USCG JOHN F. FLETCHER GAD

FOSC

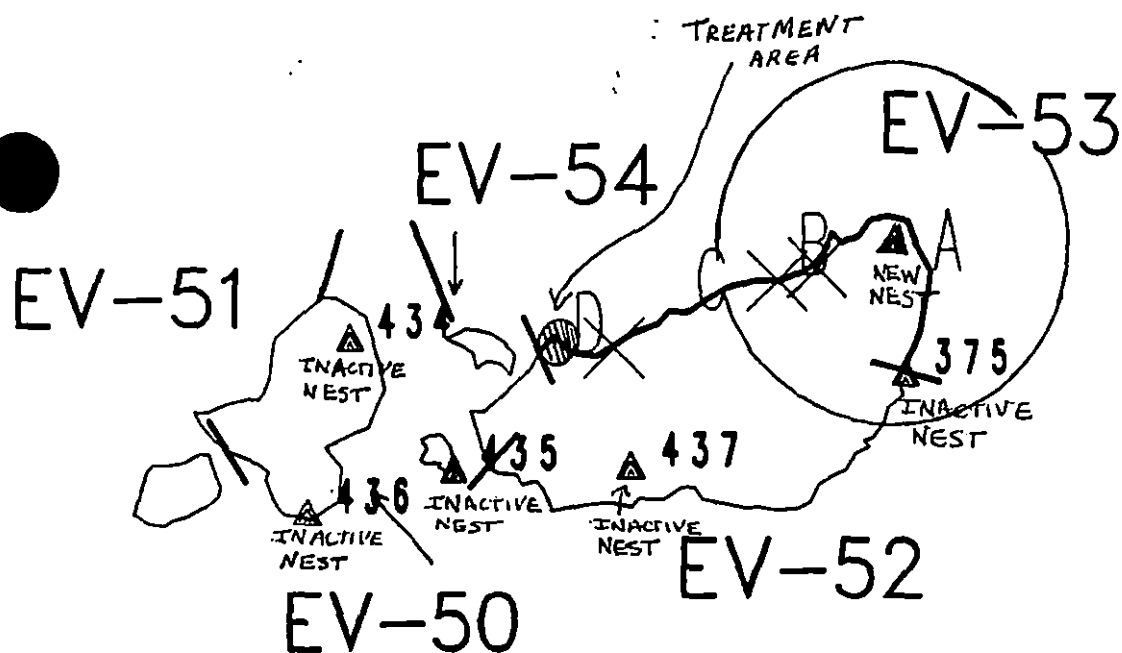
DATE

Prepared By: Anden Mely

Date

6/3/90

* Incorporates USFWS
Eagle Nest Survey
Map 6/1/90.



FR-20



Exxon Company, USA
Map Key: PMS-EV-53
May 11, 1990

ECOLOGY MAP^{6/3/90}
SEGMENT EV-53
SUBDIVISION D (4-014)

METERS



- | | |
|---|----------------|
| ★ | Seabird Colony |
| ▲ | Eagle Nest |

1 inch = 1434 feet

SHORELINE EVALUATION

SEGMENT ST/ EV-53 SUBDIVISION D (4 OF 4) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Near Sawmill Bay Hatchery (1F) - 4/15 to 6/1; Deer harvesting (7II)
8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-
oiled biota and substrate.

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

SHPO SIGNATURE: Mark 3/4/90 DATE: April 11, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 202 m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 12 +cm

RECOMMENDATIONS:

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

COMMENTS: Manually remove oiled debris and tarmats.

See Addendum dated 6/3/90

TAG COMMENTS:

TAG APPROVAL DATE: 4/11/90.

ADEC

EXXON

NOAA

USCG

JOHN BAUER

ANDY TBL

Burl Westcott

G.A. KEITER

FOSC:

DATE: 4-26-90

SHORELINE EVALUATION

SEGMENT ST/ EV-53 SUBDIVISION A (1 OF 4) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Near Sawmill Bay Hatchery (1F) - 4/15 to 6/1; Deer harvesting (7II) - 8/15 to 2/28; Possible eagle nest in vicinity (5T). Contact ADF&G to verify eagle nest location.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-oiled biota and substrate.

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

SHPO SIGNATURE: Charles E. H. Jones DATE: April 11, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 168 m: V.Light 0 m: No Oil 465 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: No treatment recommended due to only very spotty coat on small area in upper intertidal. See Field Shoreline Comment Sheet.

TAG COMMENTS:

TAG APPROVAL DATE: 4/11/90
ADEC JOHN BAUER
EXXON ANDY TOLZ
NOAA Buy 1 Weisott
USCG G.A. REITER

FOSC: D. L. DATE: 4-26-90

OG R. [redacted]
 SEGMENT ST/ EV-53
 SUBDIVISION All
 DATE 03 / 31 / 90

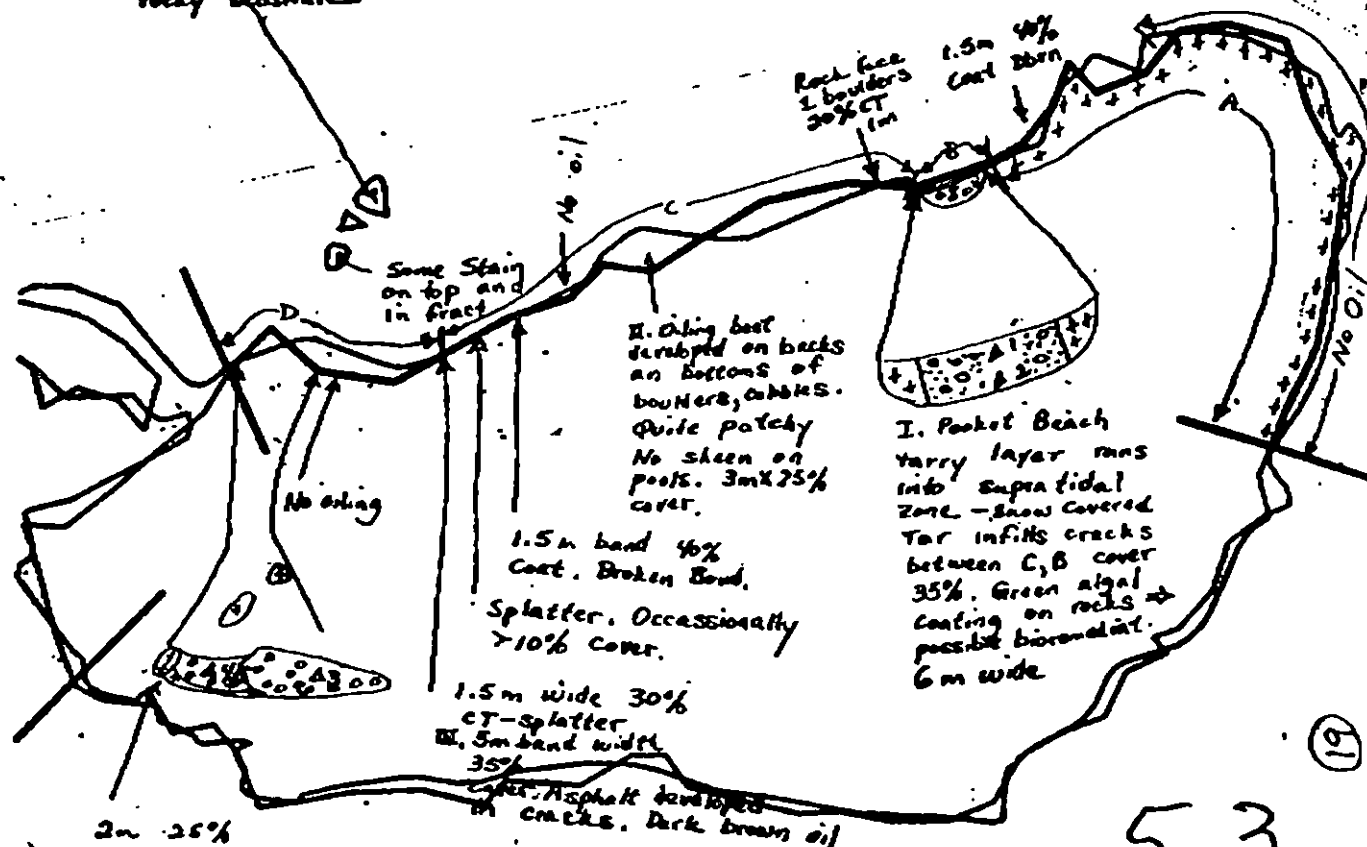
CHECKLIST

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

LEGEND

1 No Subsurface Oil
 2 Subsurface Oil
 CT/C
 Continuous Distribution
 CT/D
 Broken Distribution
 CT/P
 Patchy Distribution
 CT/S
 Splashed Distribution
 Oil'd Vegetation
 1 Photo location, direction, and number

X. 30% Cover
 10% Stain
 10m x 10m - brown
 rocky substrate
 SKETCH MAP



53
 EV-52

EV-53

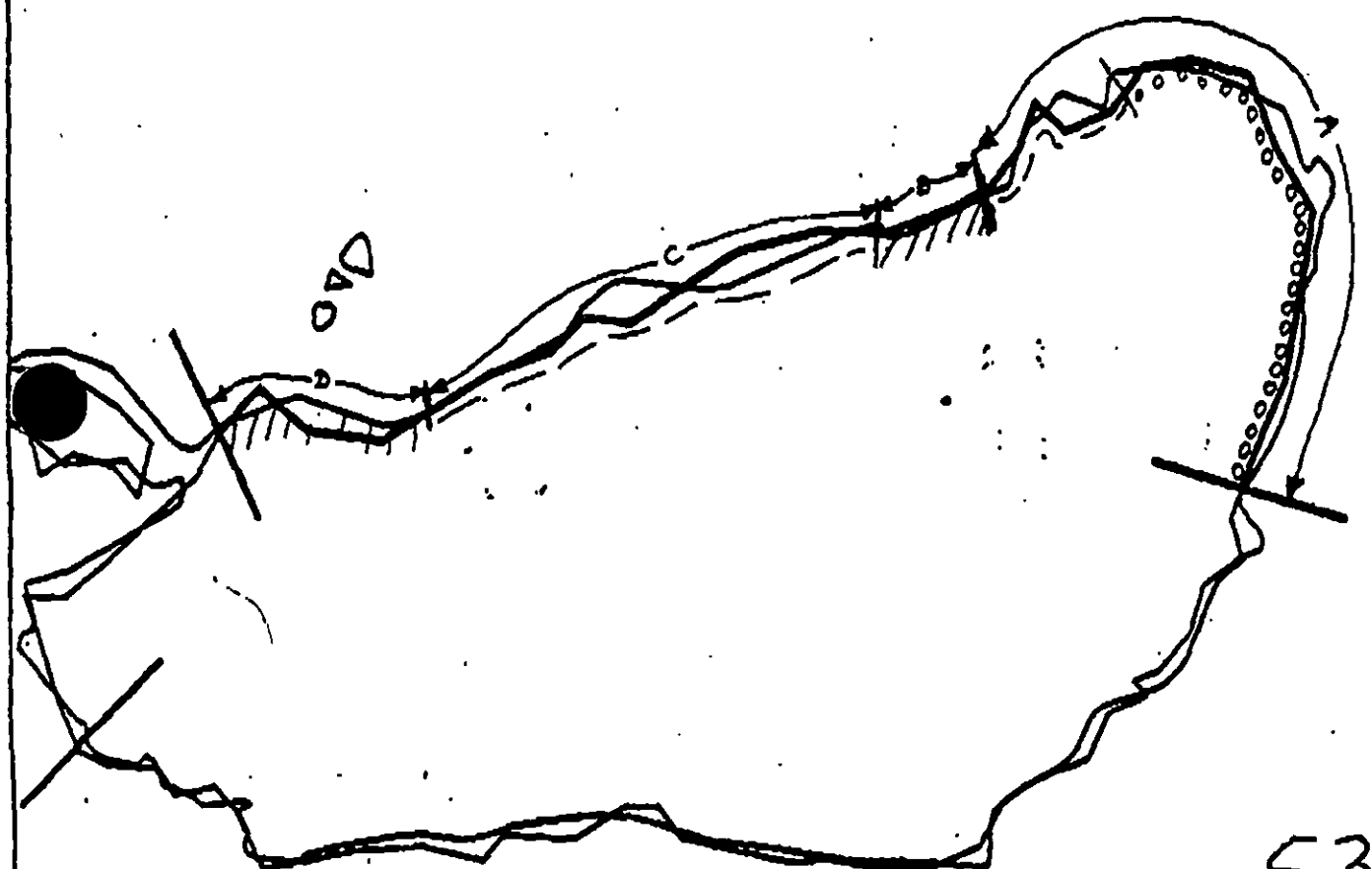
EC Segment Length: 1340m



Oil Character Length (m) AP PO CV CT 144m ST MS PT TB FL NO 513m
 B 64m
 C

Subseg.	incl	unadj.	normalized
A-No	3.2	480m	513m
Light	0.9	135m	144m
B Med.	0.4	60m	64m
C Light	2.8	420m	449m
D Mid.	1.1	165m	176m
	9.4	1260m	1346m

EV-



53

EV-52

XXXX Wide

EV-53

● // Medium

--- Narrow

ADEC Segment Length: 1346m

TTTT Very Light

0000 No Oil



Map Key: PWS-253

Name: R. Marty

Date: 3/31/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ EV-53 SUBDIVISION B (2 OF 4) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Near Sawmill Bay Hatchery (1F) - 4/15 to 6/1; Deer harvesting
(7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance of unoiled
substrate and biota during cleanup.

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 Re-
source Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: Charles H. Hiner DATE: April 11, 1990

OILING CATEGORIZATION:

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

RECOMMENDATIONS:

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

COMMENTS: Manually remove pavement from pocket beach and biore-
mediate. See sketch map.

TAG COMMENTS:

TAG APPROVAL DATE: 4/11/90

ADEC

EXXON

NOAA

USCG

JOHN BAUER

ANDY TATE

BUSI WESGOTT

G.A. REITER

JOHN BAUER

ANDY TATE

BUSI WESGOTT

G.A. REITER

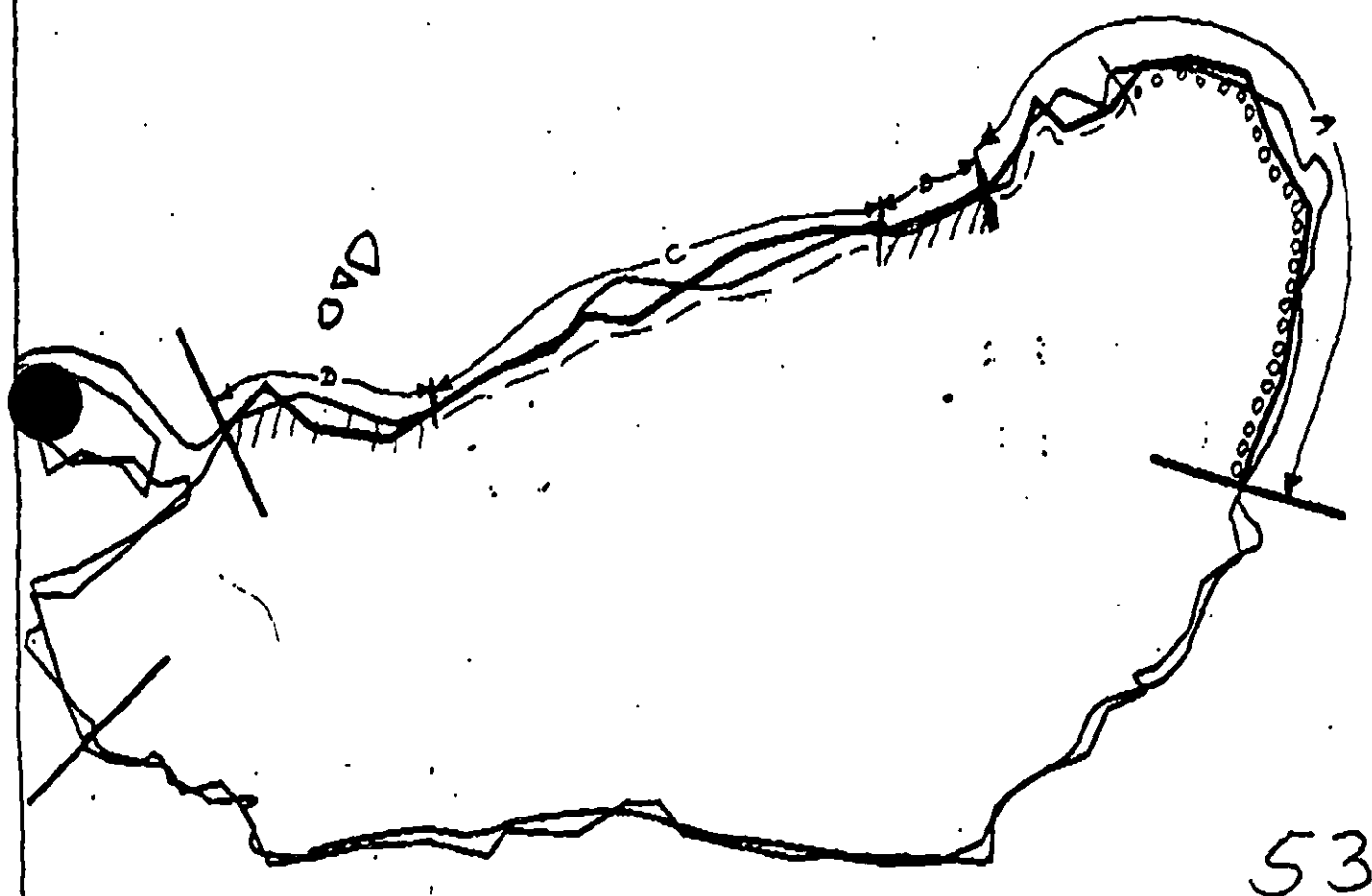
FOSC:

DATE: 4-26-90

[illegible]

Subseg.	inch	unadj.	normalized
A-No	3.2	480m	513m
Light	0.9	135m	144m
B Med.	0.4	60m	64m
C Light	2.8	420m	449m
D Med.	1.1	165m	176m
	8.4	1260m	1346m

EV-



EV-52

XXXX Wide

EV-53

/// Medium

---- Narrow

ABEC Segment Length: 1346m

TTTT Very Light

0000 No Oil



Map Key: PW8-253

Name: R. Marty

Date: 3/31/90

Note: P.16

SHORELINE EVALUATION

SEGMENT ST/ EV-53 SUBDIVISION C (3 OF 4) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Near Sawmill Bay Hatchery (1F) - 4/15 to 6/1; Deer harvesting
(7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to
uncoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS: If treatment is planned, a cultural re-
source evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: Charles Z. Hume DATE: April 11, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 400 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: No treatment recommended due to only light isolated
splatter in upper intertidal zone. See Field Shoreline Comment
Sheet.

TAG COMMENTS:

TAG APPROVAL DATE: 4/11/90
ADEC JOHN BAUER
EXXON ANDY TATE
NOAA Burl Wescott / Burt Wescott
USCG B.A. Reiten G.A. BEITER

FOSC: DATE: 4-26-90

OG P. Marty
SEGMENT ST/ EV-53

SUBDIVISION AI

DATE 03/31/90

CHECKLIST

- ☐ H Area
- ☐ Approx. Scale
- ☐ Seg/Sub Bndy
- ☐ Oil Dist
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LWL
- ☐ SST
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

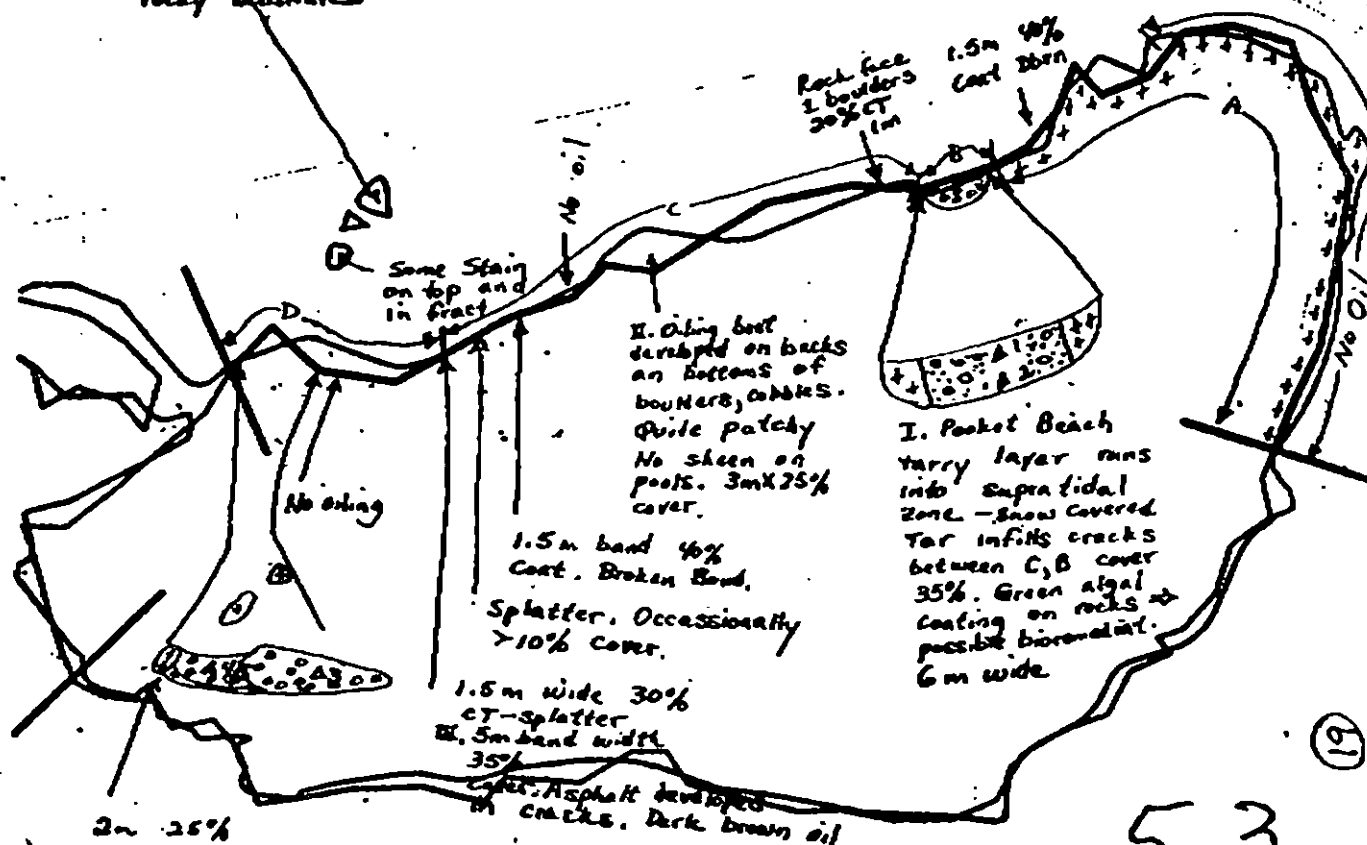
CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oiled Vegetation

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

II. 30% Cover
10% Stain
10m x 10m - Brown
rocky substrate



53
EV-52

EV-53

EC Segment Length: 1346m



Oil Character Length (m) AP PO CV CT 144m ST MS PT TB FL NO 513m

REVISION 230400

Subseg.	inch	undj.	normalized
A-No	3.2	480m	513m
Light	0.9	135m	144m
B Med.	0.4	60m	64m
C Light	2.8	420m	449m
D Med.	1.1	165m	176m
	8.4	1260m	1346m

EV-



EV-52

XXXX Wide

// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-53

ADEC Segment Length: 1346m



Map Key: PWS-253

Name: R. Marty

Date: 3/31/90

SHORELINE EVALUATION

SEGMENT ST/ EV-53 SUBDIVISION D (4 OF 4) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Near Sawmill Bay Hatchery (1F) - 4/15 to 6/1; Deer harvesting (7II)
8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-
oiled biota and substrate.

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

SHPO SIGNATURE: Paul E. Hoffman DATE: April 11, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 202 m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 12 +cm

RECOMMENDATIONS:

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

COMMENTS: Manually remove oiled debris and tarmats.

TAG COMMENTS:

TAG APPROVAL DATE: 4/11/90.
ADEC JOHN BAUER John Bauer
EXXON ANDY TBL Andy TBL FOSC: DATE: 4-26-90
NOAA Burl Wescott Burl Wescott
USCG G.A. KEITER G.A. Keiter

OG Party
 SEGMENT ST/ EV-53
 SUBDIVISION A11
 DATE 03 / 31 / 90

CHECKLIST

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

LEGEND

1 Δ
 Pit - No Subsurface Oil

2 Δ
 Pit - Subsurface Oil

CT/C
 Continuous Distribution

CT/B
 Broken Distribution

CT/P
 Patchy Distribution

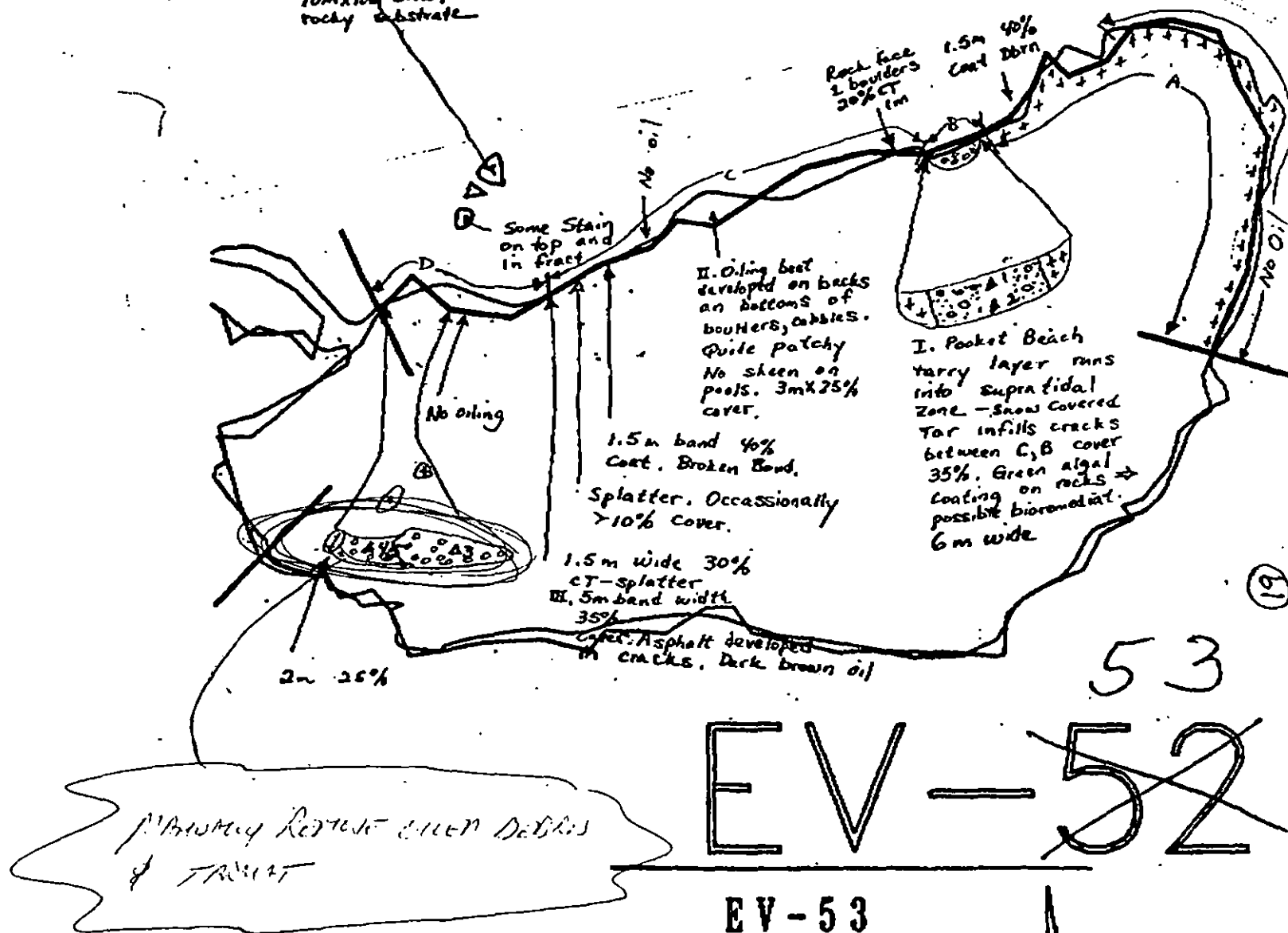
CT/S
 Splashed Distribution

Oiled Vegetation

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

II. 30% Cover
 10% Stain
 10m x 10m - brown
 rocky substrate

SKETCH MAP

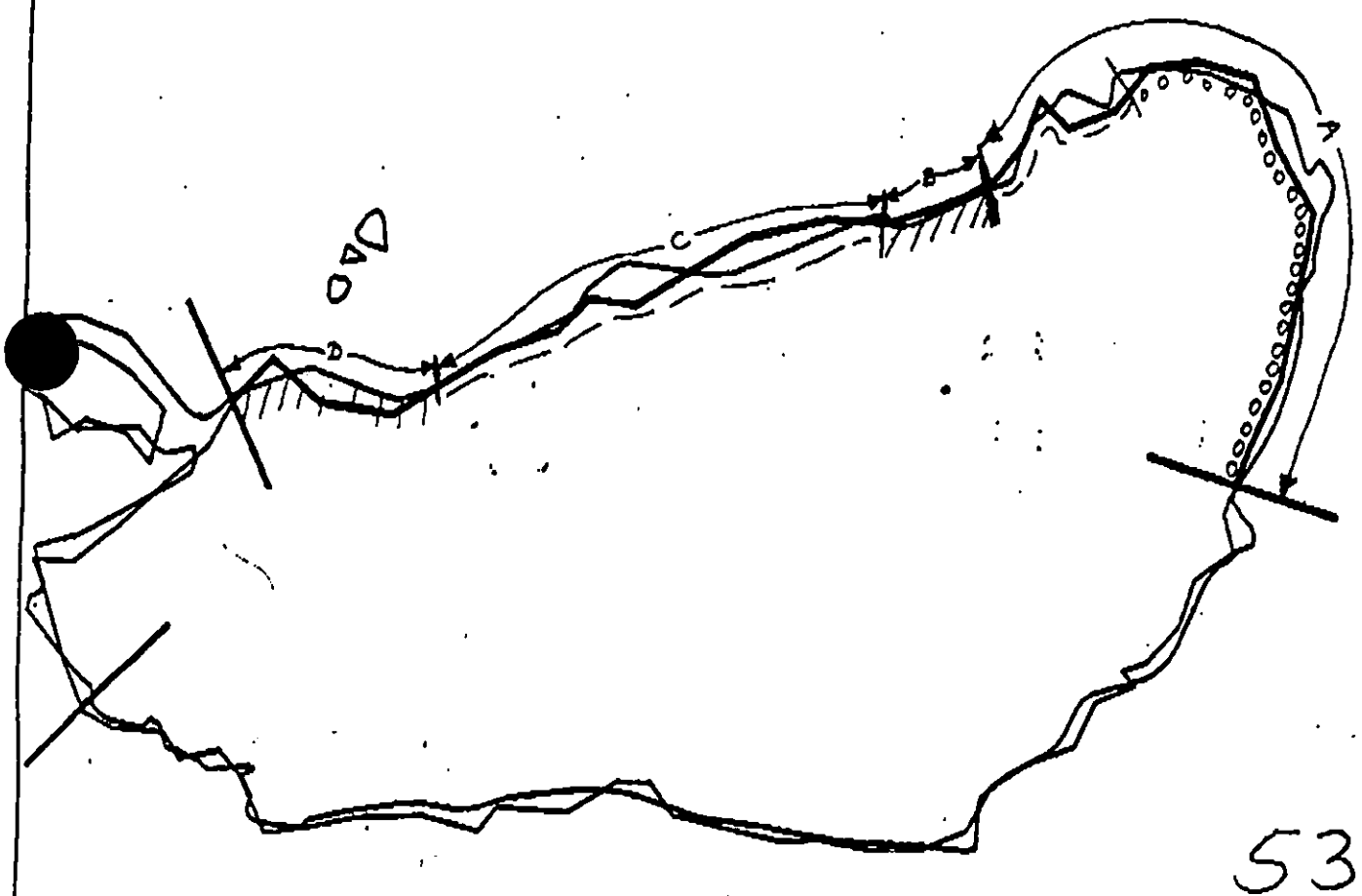


Oil Character Length (m) MAP Asphalt pool cover coat stain mosses
 PO CV CT 144m ST MS PT TB FL NO 513m

B 64m
 C

Subseg.	inch	unadj.	normalized
A-No	3.2	480m	513m
Light	0.9	135m	144m
B Med.	0.4	60m	64m
C Light	2.8	420m	449m
D Mid.	+1.1	+165m	176m
	8.4	1260m	1346m

EV-



EV-52

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-53

ADEC Segment Length: 1346m



Map Key: PWS-253

Name: R. Marty

Date: 3/31/90

1991 MAYSAP EVALUATION

SEGMENT: EV 053 SUB: B REGION: PWS SURVEY DATE: 5/19/91ENVIRONMENTAL SENSITIVITIES:Work Window(s) RESTRICTED 3/1 - 9/15Ecological/Constraints (see page two for details) Eagle nest,
Fry release, Fish harvest area, Anadromous streamARCHAEOLOGICAL 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.). *TKB*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			
Bio-Customblen Only	<u>X</u>	<u>X</u>	<u>X</u>
Bio-Inipol/Customblen			
Other			
Other			

COMMENTS:

of EASILY ACCESSIBLE
 INITIAL: Manual pickup AP and HSOR at location D. Apply
Customblen at location D.

TAG: ADD MANUAL P/U OF EASILY ACCESSIBLE AP/HSOR
AT LOCATION B.

FOSC: _____

TAG APPROVAL DATE: JUNE 6 1991FOSC APPROVAL DATE: 6/10/91ADEC *[Signature]*FOSC *[Signature]*E. E. PAGE, CDR, USCG
CHIEF OF STAFF, FOSCEXXON *[Signature]*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.

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

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

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

MAYSAP FIELD SHORELINE COMMENT SHEET

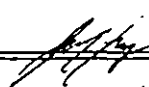
TEAM NO. 5 SEGMENT EV-53 SUBDIVISION B DATE 5/19/91

ADEC

NAME

John Hayer

SIGNATURE

☐ NTR

Manual removal of AP is identified on sketch map in areas B + D OP sediments observed were below oil patches and need to be removed when surface oiling is picked up.

EXXON

NAME

JOHN DEAN

SIGNATURE

☐ NTR

AREAS OF OP, AP has RECOVERABLE QUANTITIES. THIS AREA IS IN CLOSE PROXIMITY TO AND IS FREQUENTLY USED BY CHENEQA RESIDENTS

LANDMANAGER

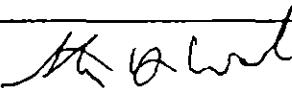
NAME

Steve WARD

OF

CUC/FS

SIGNATURE

☐ NTR

Several pockets of oil can be manually removed. This area is Bettles IS. close to Cheneqa and the Hatchery at San Juan. ALL oil that is assessable has to be removed. Sub-surface should be shoveled out as is not that deep. See OG Notes for Sub-surface and local ^{very} High use area. NO Bio-Cheneqa Local Response.

USCG/NOAA

NAME

DREHER/CLINE

SIGNATURE

W.H.D. Dreher☐ NTR

This segment does have several thick layers of sub surface OP that can be readily removed without doing environmental damage. It is a high use area due to its proximity to Cheneqa Village. Assess by skiff - no problem. Recommend manual removal. 20 man hours. KPD

Significant subsurface oiling occurs in both pocket beaches, which probably should be treated. DWC

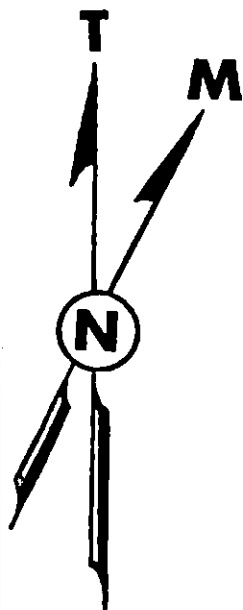
REVISOR: M.C. 5/26/91
REVIEWED: F.W. 5/26/91

SAP 1991
 SKETCH MAP
 GREG CHANEY
 TEAM 5

SEGMENT: EV53B
 DATE: MAY 19/99
 AIR P.#: PIM-C 005-123

LOCATOR MAP

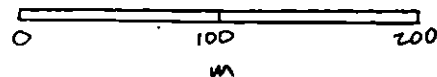
MAP 1 of 2



LEGEND

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

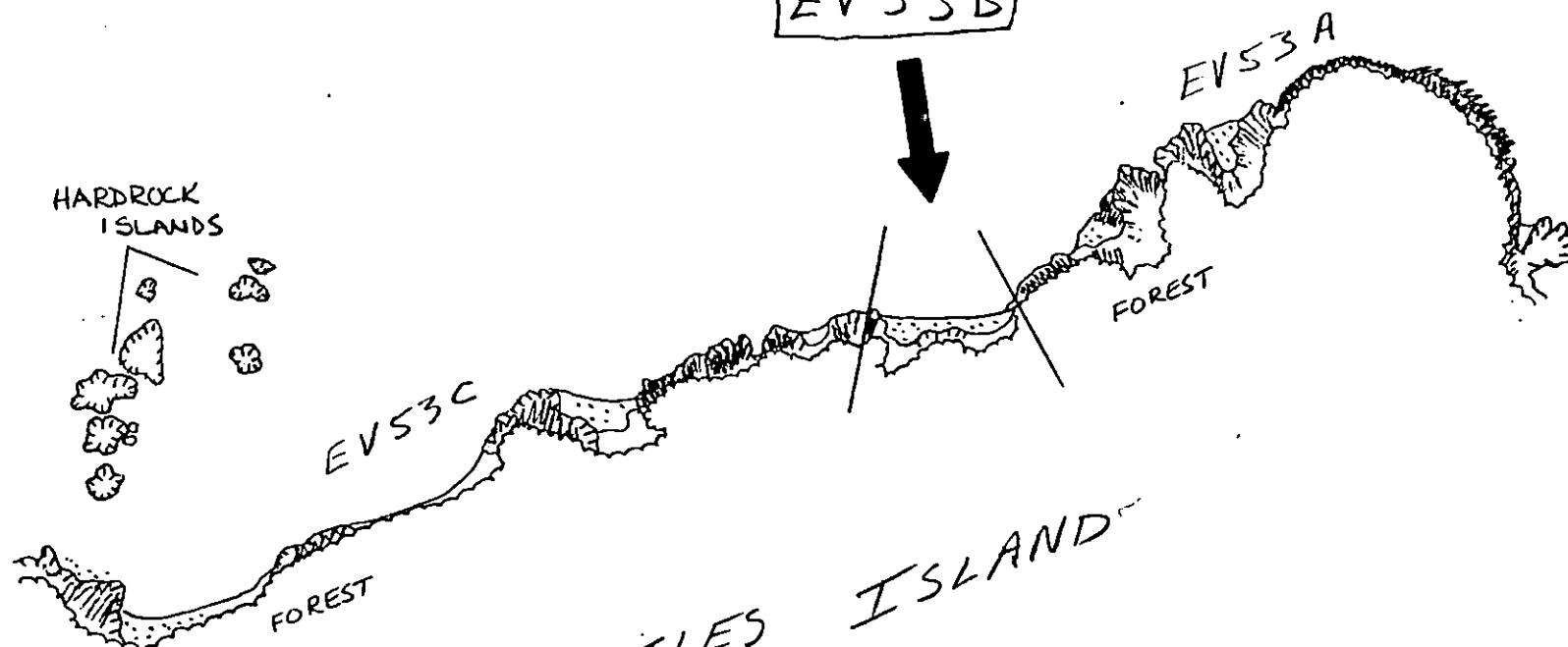
SCALE



SAWMILL BAY

SKETCH MAP PERSPECTIVE

EV53B



BETTES ISLAND

REVIEWED: Fw 5/14/99

(A) 2x50m CV 40%
CT 30%

EV 53 B
MAP 2 of 2

GREG CHANEY
MAY 19 1991
TEAM 5
MAY SAP

BETTLES ISLAND

(B) 4x40m SOR/H
5%

WOODEN
TABLE

(A) EV 53A
EV 53B
HEAVIEST
CV

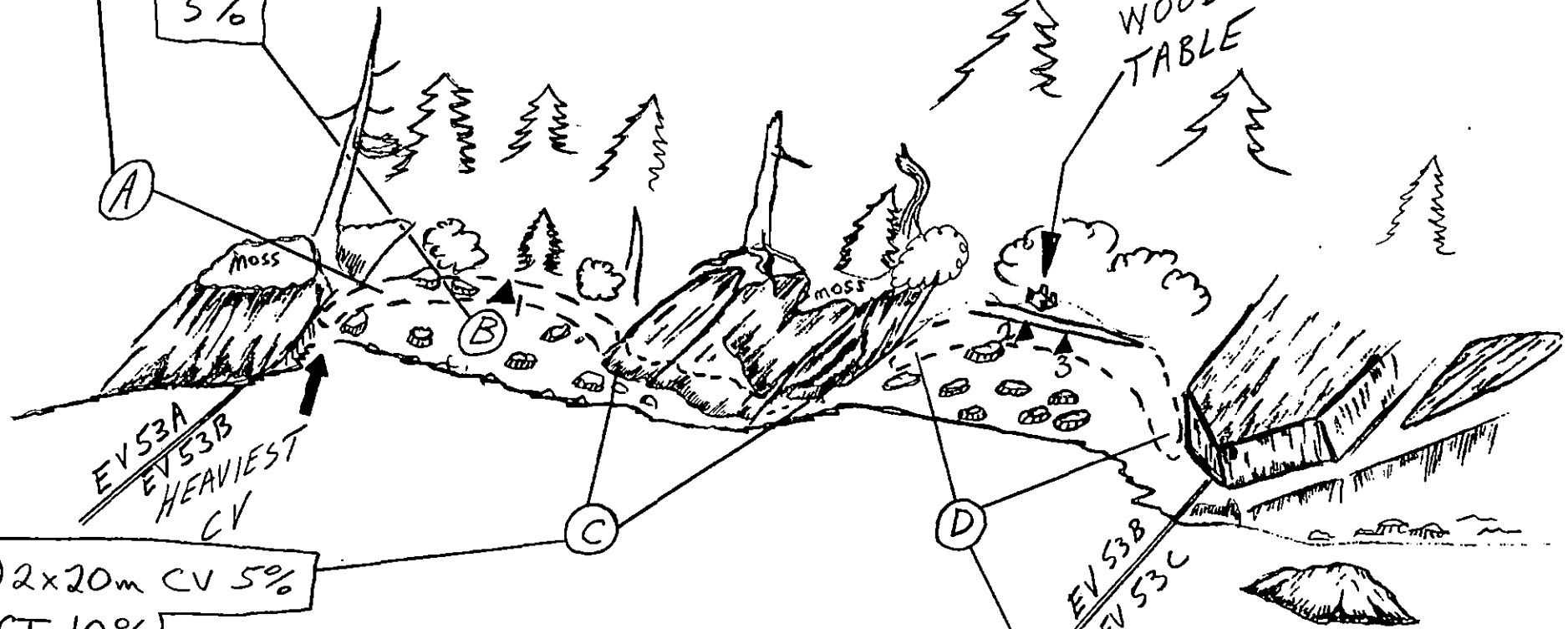
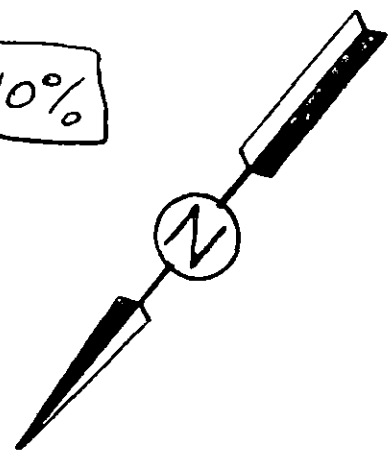
(C) 2x20m CV 5%
CT 10%

EV 53B
EV 53C

SAWMILL BAY

(D) 5x30m AP < 1%, CV < 1%, CT 1%
ST 10% Patches AP up to 15cm thick

REVIEWED: F.W. Stachy
REVIEWED: MC 5/26/91



HAYSAP BIOLOGICAL SUMMARY FORM

pg 1 of 1

TEAM # 5

DATE 19 May 1991

SEGMENT # EV-53

TIDAL HEIGHT (Range) +4 → +3

SUBDIVISION B

BIOLOGIST Crank

SEA STATE 0-1'

WIND SPEED/DIRECTION 5 knots / SE

PHOTOGRAPHS: ROLL #

FRAME #

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

(A) Area is a band in the UITZ, encrusting red and filamentous green algae cover ~60% of the sediments at the bottom margin of the site; and black lichen covers ~50% of the sediments at the top of the site. A rare concentration of barnacles, *Fucus* sporlings and moss cover ~1% of the sediments.

(B) Area is a band in the MITZ, below site A, on a pebble beach with angular boulders. Dominant epiphytic algae are dense on the sparse to moderately concentrated *Fucus*. Halosaccion and *Scytosiphon* algae are also present. Bladed red algae are rare. Barnacles have a sparse to moderate concentration and *Littorina* and limpets have a moderate concentration. Recruitment is occurring in the barnacle, *Littorina*, and limpet populations; the *Fucus* and *Littorina* are reproductively active. Biota cover 80%.

(C) Area is located on a bedrock face in the UITZ. Barnacles are the dominant species. Adult, juveniles and spat are present. A rare concentration is also present. Biota cover is ~40%. The MITZ is similar to area B.

(D) Area extends from the UITZ through the MITZ. The UITZ is similar to area A with pulmonate snails also being present. In the MITZ a moderate concentration of *Neornithis* is the dominant algal species. Epiphytic algae are rare (whereas in area B they were dense). *Fucus* is sparse on the beach and moderate on the headland bedrock. There are sparse concentrations of limpets, *Littorina*, *Nucella* and barnacles. Amphipods are common. There are more juvenile limpets present than adult limpets. Biota cover on the beach is ~20% and on the headland ~70%.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	
Seabirds			
Waterfowl	1	5	
Gulls/Kittiwakes	1	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: MC 5/24/91
P: -4 5/26/91 DM

(A) 2x50m CV 40%
CT 30%

EV 53 B

GREG CHANEY, Crank
MAY 19 1991 Bio Map
TEAM 5
MAY SAP

BETTLES ISLAND

(B) 4x40m SOR/H
5%

WOODEN
TABLE

EV 53A
EV 53B
HEAVIEST
CV

Epiphytic algae
are the dominant
surface cover in
the MITZ

(C) 2x20m CV 5%
CT 10%

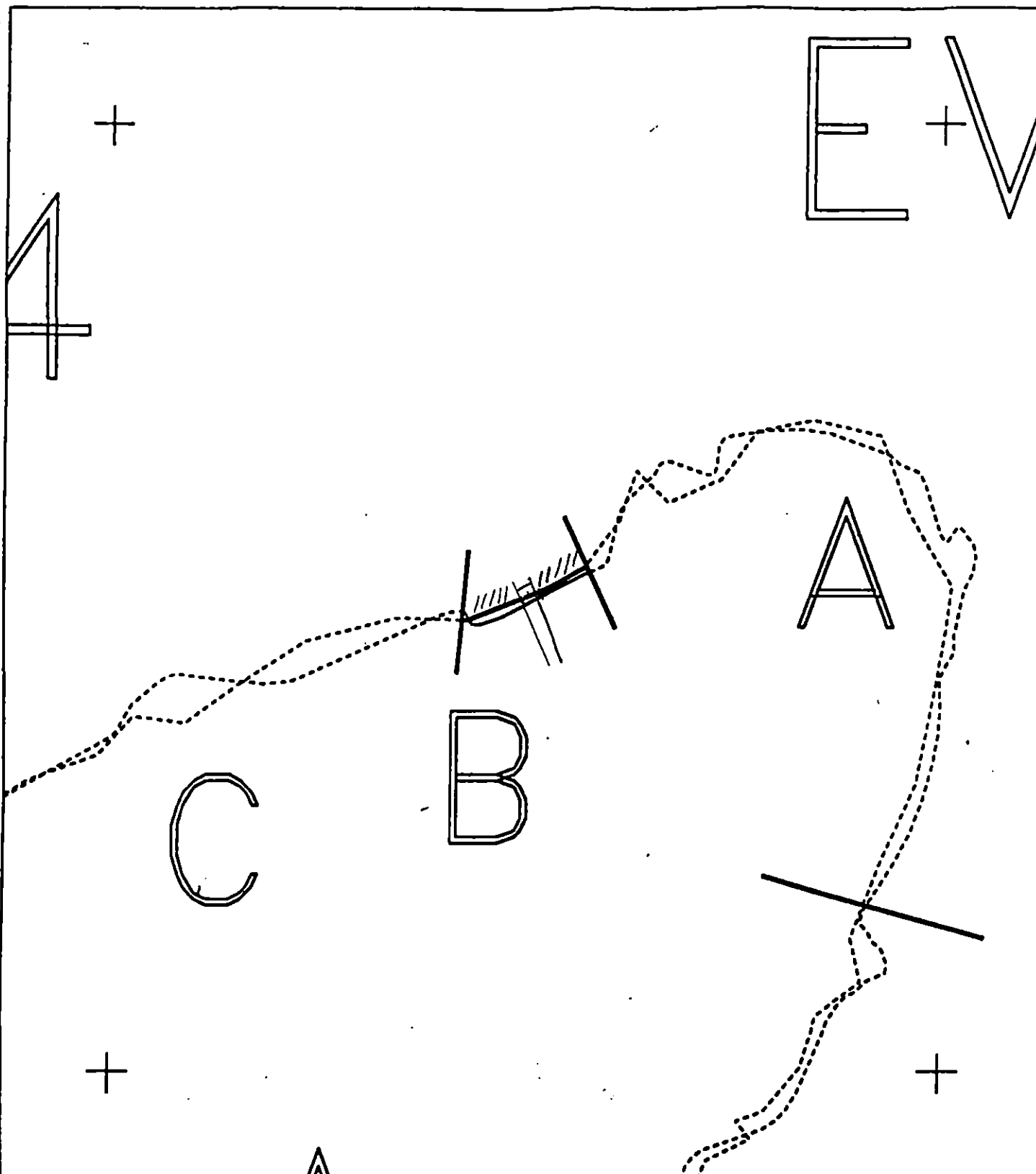
Epiphytic algae
are rare on this
beach

EV 53B
EV 53C

SAWMILL BAY

(D) 5x30m AP < 1%, CV < 1%, CT 1%
ST 10% Patches AP up to 15cm thick

130



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

EV053 B
 ADEC Subsegment Length: 95m
 METERS
 0 100 200
 AK State Plane Zone 4
 prv053b



Subdivision Field Map
 Map Key: PWSEV053B
 Name: CHANEY
 Date: MAY 19 1991
 Date Entered:

REVIEWED: F.W. 5/26/91
 REVISED: MC 5/24/91

1991 MAYSAP EVALUATION

SEGMENT: EV 053 SUB: D REGION: PWS SURVEY DATE: 5/26/91ENVIRONMENTAL SENSITIVITIES:Work Window(s) RESTRICTED 8/15 - 9/15Ecological/Constraints (see page two for details) Fry release,
Fish harvest area, Subsistence - Deer harvestingARCHAEOLOGICAL 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.). TMB*Timothy A Smith for SHPO 6/07/91*RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>Y</u>	<u>Y</u>	<u>Y</u>
Manual Pickup (Check as Req.)	<u>X</u>	<u>X</u>	<u>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>Y</u>
Other	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>

COMMENTS:INITIAL: Apply Customblen and Inipol after removing asphalt at
locations C and E.TAG: FOSC: TAG APPROVAL DATE: June 7 1991FOSC APPROVAL DATE: 6/12/91ADEC *John Bane*FOSC *E. E. Page*EXXON *Beal*E. E. PAGE, CDR, USCG
CHIEF OF STAFF, FOSCUSCG *Z. M. Maysap*NOAA *John*

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

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

MAYSAP FIELD SHORELINE COMMENT SHEET

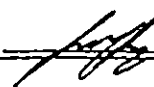
TEAM NO. 5 SEGMENT EV 53 SUBDIVISION D DATE MAY 26, 1991

ADEC

NAME

John Hager

SIGNATURE

☐ NTR

☒ ~~Treatment Recommended~~
 Recommend manual picking in areas B, G, D, G, E work area for small oil work is light manual removal of AP between cobbles + boulders. Segment is on Better Island group area where other small sites have been recommended for work in 1991.

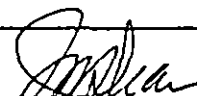
High human use + in vicinity of Sawmill Bay Hatchery.

EXXON

NAME

JOHN DEAN

SIGNATURE

☒ NTR

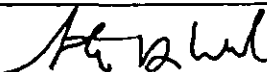
DIVING FOR THE MOST PART IS TOTALLY INACCESSIBLE FOR RECOVERY. Rugged UNUSABLE AREA.

LANDMANAGER

NAME

Steve WARDOF CVC / FS

SIGNATURE

☐ NTR

AP - Recoverable oil in Between Rocks

Heavy-Cast iron Cores. Patches SOR / AP Between Rocks
 Sub-Surface needs cleaned - Chenega Local Resp.

No-Bio.

USCG/NOAA

NAME

DREHER / CLINE

SIGNATURE

CWO K. L. Dreher

☒ NTR Observed heavy CT, CU, & S on boulders; very small amount of OP under a layer of hard weathered asphalt at the bottom edge of large boulders. This oil residue would be very time consuming and expensive to remove. This area is not a high human or animal use beach, therefore I recommend No Treatment. KLL

☐ NTR

Give me a break - this area is a 1 mile directly across Sawmill Bay from Chenega Village. The area contains several large AP patches, notably sites C and E. Sites C, D, and E exhibited OP + HOR in the subsurface. Oil is both accessible + recoverable. Dore

TEAM NO. _____

OG CHANEYBIO CRANKSEGMENT EV 53ADEC HAYESLANDMANAGER WARD for USFS & CUCSUBDIVISION DEXXON DEANUSCG/NOAA DREHER/CLINEDATE MAY 24 /91TIME 14:45 to 16:00TIDE LEVEL +5 ft. to +3 ft.ENERGY LEVEL: ☐ H ☐ M ☒ LSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☒ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 202 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W - m M 57 m N 15 m VL 100 m NO 30 m US - 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					B	H	2	30		✓			SPLATTERS BLDRS VERY SMALL
B	T			T	S	S	S				B	H	4	25		✓			
C	S			S	P	S	S				BR	H	5	20		✓			BOULDERS
D	T			T	S	S	S				B	H	5	20	✓	✓			
E	S	T			S	S	S				B	H	5	17	✓	✓			POOLED MS Photos 9, 10
F	T				P	S					R	V	2	15	✓	✓			MS IN CRX, GREEN ALGAE ONLY
G	T			S	S	S	S				BR	H	5	20		✓			
H					T	T					BR	H	5	25		✓			DRIPS SPLATTERS

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 - 22 FRAMES 5-11

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	15	✓							6 - 10									
2	15		✓						10-15	N	—	—		✓			B-CPGB	Between Bldrs
3	15	✓							0-5	Y	5	5		✓			B-CBP	
4	10							✓	0-10	Y	—	—		✓			B-CPGB	
5	15		✓						0-5	Y	—	—		✓			B-CPGM	
6	15							✓	—		—	—			✓		B-BCPM	
									—									
									—									

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

OG COMMENTS: PIT #1 THROUGH AP LAYER BETWEEN LARGE BOULDERS
 EXTENT OF OP DIFFICULT TO DETERMINE DUE TO LIMITED PIT DIGGING
 OPPORTUNITIES. AREA (D) NOT MUCH SURFACE COVERAGE BUT UNDER BOULDERS
 HEAVY COAT AND COVER IS COMMON. SMALL PATCHES SOR/H AP BETWEEN
 BOULDERS. (E) OVER 8m² AP PATCHES WITH LOCALIZED POOLED MOUSSE
 (PHOTOS 9, 10)

REVIEWED: MC 6/1/91

reviewed 5.30.94

SAP 1991
 OG SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: EV53D
 DATE: MAY 24 1991
 AIR P.#: PIM-C 005-123

SAWMILL BAY



DRIPS &
 SPLATTERS
 (H) 5x25m
 CT < 1%
 CV < 1%

(G) 5x20m AP < 1%
 SOR 1%, CV 5%, CT 5%
 ST 5%

No Field Data
 Assume: 2x2m HOS

(F) 2x15m MS Trace
 CV 35% CT 5%
 GREEN ALGAE ON CV

(E) 5x17m AP 10%,
 MS TRACE, CV 10%,
 CT 10%, ST 5%

(A) 2x30m
 RANDOM SMALL
 SLATTERS ON
 BOULDERS CT < 1%

LEGEND

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

SCALE APPROXIMATELY
 50
 METERS

No Field Data
 Assume: 2x5m OP

(C) 5x20m AP 10%
 SOR 2% CV 30% CT 10%
 ST 5%

(D) 5x20m AP < 1% SOR < 1%
 CV 1% CT 5% ST 1%

(B) 4x25m
 AP < 1%, SOR < 1%,
 CV 1% CT 5%
 ST 1%

NO OIL
 OBSERVED

BETTLES ISLAND

TEAM # 5

DATE 24 May 1991

SEGMENT # EV-53

TIDAL HEIGHT(Range) +5 → +3

SUBDIVISION D

BIOLOGIST Crank

SEA STATE 1'

WIND SPEED/DIRECTION 10 → 15 knots / NE

PHOTOGRAPHS: ROLL # 22

FRAME # 11

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

(A,G,H) Areas are located in the UITZ on steep angle boulder shorelines. Black lichen encrusts 30% of the sediments. Tar Spot algae is common. Rare concentrations of barnacles and Fucus are also present. Biota cover, excluding lichen, is ~1%. In the MITZ there are: moderate concentrations of Littorina and limpets, most of the population are juveniles, and sparse to moderate concentrations of Fucus, Hildenbrandia (encrusting red alga) and barnacles. Biota cover is ~60%.

(B,C) Areas are in the UITZ on low angle boulder shorelines. Within the sites, encrusting and filamentous green algae covers 70% of the sediments. Rare concentrations of barnacles, Littorina, limpets and oligochaete worms cover <1% of the surface area. In the MITZ there are: moderate concentrations of Littorina and limpets of various age classes, moderate to sparse concentrations of barnacles and sparse Fucus. Biota cover is approximately 50%.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

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

LAND MAMMALS

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

Shoreline subdivision map showing important biological features attached.

 Reviewed: MC 6/1/91
 Reviewed: M.B. 5/30/91

Team # 5

Segment # EV-53

Subdivision D

Sea State 1'

Date 24 May 1991

Tidal Height +5 → +3

Biologist Crank

Wind Speed / Direction 10 → 15 / NE

pg 2 of 2

Comments (cont.)

(D,E) Areas are located on a pocket beach in the UITZ.

High in the site black lichen and encrusting green algae cover ~50% of the surface area. Low in the site, filamentous green, covers 70% of the surface area.

Barnacles cover ~5% of the sediments. Rare

individual Littorina, limpets and mussels were also present.

In the MITZ, the moderately concentrated barnacles are

the dominant species. At the top of the MITZ there is

a 1-2 m wide, rare to sparsely concentrated Fucus band.

Moderately concentrated Littorina and limpets and sparsely

concentrated mussels and Scytosiphon (algae) are found

throughout the zone. Biota cover is 60%.

(F) Area is located on bedrock in the UITZ and the SUPRA.

In the SUPRA, white, yellow and black lichen covers

70% of the surface area. In the UITZ filamentous green algae covers ~50% of the surface area.

There is filamentous green algae growing over the oil see Photo MAYSAP-S-Roll # 22 Frame # 11.

Moderate concentrations of barnacles and Fucus

are the dominant fauna and flora of the MITZ,

covering 80% of the surface sediments.

RAVILURS: M.C. 6/1/91

Reviewed M.B. 5/30/91

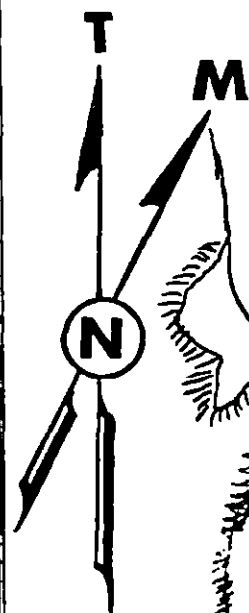
SAP 1991
OG SKETCH MAP
GREG CHANEY
TEAM 5

SEGMENT: EV53D

DATE: MAY 24 1991

AIR P.#: PIM-C 005-125

SAWMILL BAY



LEGEND

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

SCALE APPROXIMATELY
50
METERS

Reviews M.B. 9/30/91

"Green line"

1-2 m wide rare to
sparsely concentrated
Fucus band

Fucus zone -
Biota cover ~60%

Fucus and
barnacles cover ~50%
of the surface sediment

ROCKS

Barnacles are the
dominant species.
Biota cover ~60%

Sparse concentrations
of Fucus & barnacles.
Biota cover ~50%

Fucus zone.
Cover is ~60%

NO OIL
OBSERVED

ROCKS

BETTLES ISLAND

U.S. FISH AND WILDLIFE SERVICE (FWS)
SHORELINE ACTIVITY/BALD EAGLE IMPACT EVALUATION

Date 5/24/91 Shoreline Segment/Subdivision EV053D

Shoreline activity Assessment Team Survey

Time - Begin

Time - End

FWS Observer 2:50 PM

4:00 PM

Surveyors/workers _____

Nest in view/monitored: Y ☒ N Adult in nest: Y ☒ Unk.

Adverse eagle response: Y ☒ N Adult left nest: Y ☒ Unk.

Time

Type of human activity/eagle response

3:30 This area was a small pocket beach
area which didn't have a lot of oil
damage. The eagle nest survey maps
did not show a nest in the area.
The survey work was observed from
off shore and no eagles or nests
were seen in the area.

Survey/work activities completed: ☒ Y ☐ N

Personnel withdrawn due to eagle conflict: Y ☒ N

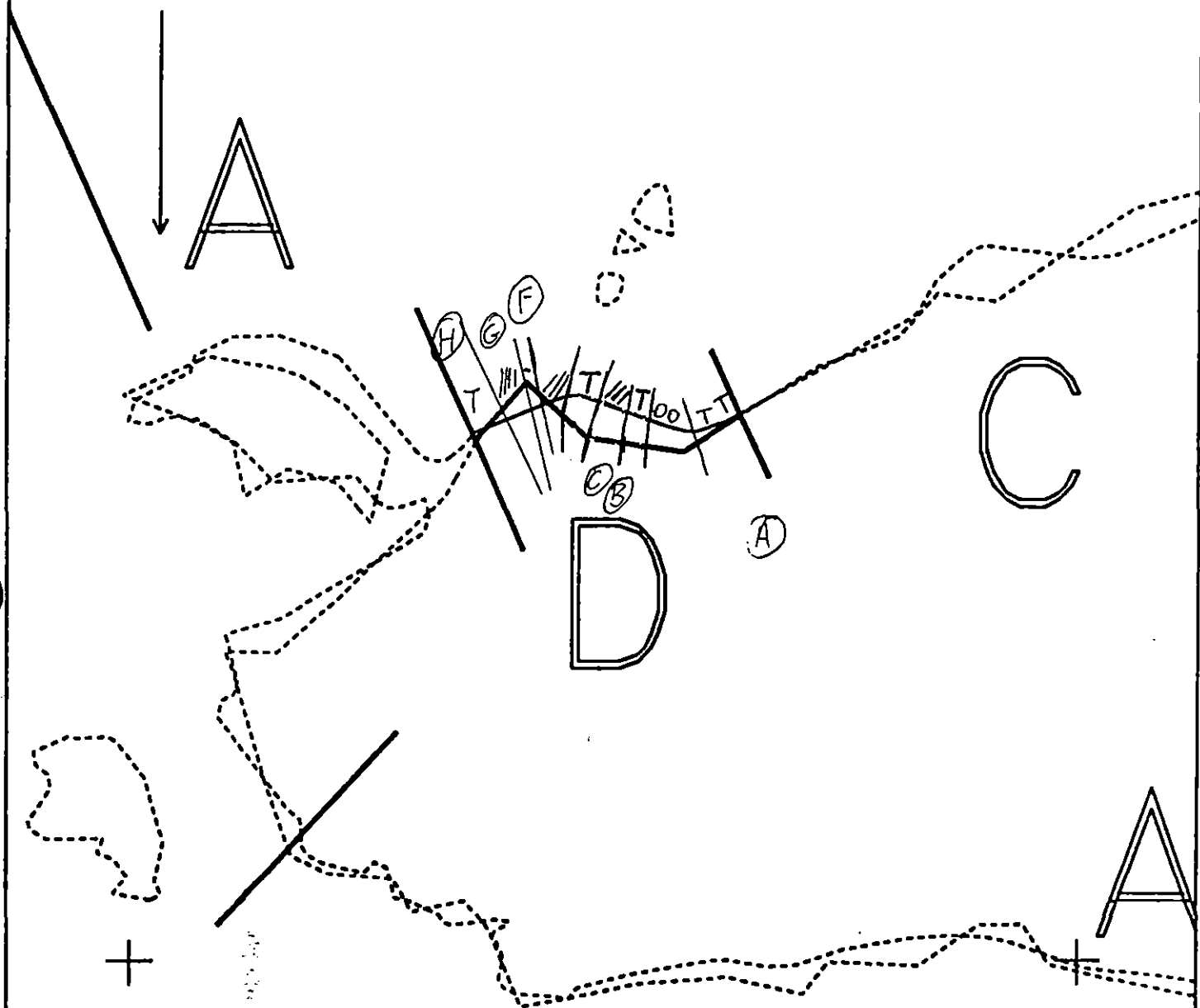
Recommendations: If cleanup is done the area
would be OK to clean without a monitor.

FWS Observer Mike Luke

Date 5/24/90

Reviewed M.B. 5/30/91

EV-54



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

EV053 D
 ADEC Subsegment Length: 202m
 METERS
 0 100 200
 AK State Plane Zone 4
 pr053d

Subdivision Field Map
 Map Key: PWSEV053D
 Name: CHANEY
 Date: MAY 26 1991
 Date Entered:



Reviewed by: 6/1/91 MC
 Revised 5.30 98

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-54

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ EV-54 SUBDIVISION A (1 OF 1) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1F Sawmill Bay Hatchery release (4/15 to 6/1)
6V Recreation: Anchorages (6/1 to 9/15)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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 329 m: Narrow 0 m: V.Light 96 m: No Oil 262 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 removal of asphalt and tar patties, 2) manual pick up of oiled debris, 3) bioremediation of areas shown on attached sketch map. Work should be conducted after 6/1 based on hatchery release constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
 1D Esther Hatchery release (4/15 to 6/1)
 1E Main Bay Hatchery release (4/20 to 5/10)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to unholed intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 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-54 SUBDIVISION: _____ DATE 3/31/90**USCG**NAME LARRY FLETCHER SIGNATURE Larry R Fletcher☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

1. MANUALLY REMOVE OILED DEBRIS.
2. MANUALLY REMOVE TAR PATCHES.
3. MANUAL REMOVE ASPHALT LAYER.

ADECNAME DAVID M. SALE SIGNATURE David M Sale☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

- ① remove manually surface asphalt layer
- ② aerate & bioremediate where subsurface is more contaminated.
- ③ manual removal of oiled BEACH SEDIMENTS IN TOMBOLO (TIDAL SPIT OF LAND)

LAND MANAGERNAME Leigh Carlson SIGNATURE Leigh Carlson ADNR☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Hatchery impacts listed in PWS area plan.

Manual removal of asphalt and oiled drift material;
Possible bioremediation in smaller substrates

SHORELINE OILING SUMMARY

REVISION NO. 02/89

OG R. Maty USCG LARRY FLETCHER SEGMENT ST/ EV-54
 BIO S. Lander LAND REP Leigh Carson SUBDIVISION A
 EXXON J. Gerneth ADEC Dave Sale TIME 12:00 to 13:15
 TEAM NO.: 10 TIDE LEVEL: +3 to +7 DATE 03/31/90
 EST. SUBDIVISION LENGTH: 1123 m ☐ Sun ☐ Clouds ☒ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to NE
 SURFACE SEDIMENTS: R 50 % B 30 % C 15 % P 5 % G — % S — % M — % V — %
 SLOPE: Long 20 % Hang 30 % Vert 50 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W — m M 361 m N — m VL 155 m NO 607 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	A	B	P	S	100% OP	75% OP	50% OP	25% OP	10% OP	SW	U	M	L
ASPHALT PAVEMENT		X				X					X	X	
POOLED													
COVER													
COAT			X			X					X		
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL													

PAVEMENT: H F B 260 sq. m by 5 cmPATTIES / TARBALLS 1 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			X
Debris			

DEBRIS COLLECTED

☒ YES ☐ NO

Pre Exxon Valdez tar

TYPE Valdez tar#BAGS 1

Photographs:

Roll No. 55/10/3Frames 17-34 out 36

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm) (0-100)	BELOW	OIL / FILM COLOR										PIT ZONE	A N A	SUBSURFACE SEDIMENTS
		PRE-OP	POST-OP	CL. OL	CL. OF	NO			1	2	3	4	5	6	7	8	9	10			
1	25					X	.												X	Y	Peat
2	9	X					0-4	X											X	Y	Gravel peat
3	5	X					0-2	X											X	Y	Same
							.														
							.														
							.														

COMMENTS

Note: There are two generations of tar in this segment. The older generation has moss growing on the surface and is quite hard $\Rightarrow$ pre Exxon Valdez. The Exxon tar remains soft.

* oil @ ≤ 5 cm does not constitute subsurface oil.

Team 10
EV54A

SHORELINE ECOLOGICAL SUMMARY

REVISION: 10/20/90

Segment ST / 10 Subdivision A Date (mo / day / yr) 3 / 31 / 90

Time (24 hr) 1430 to 1515 Biologist Lemon

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

(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 (O)

Photographs: ST/10/3
Roll No. Team 10 roll 3

Frames 31-34 and 36

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

lower zones observed from skiff and wading and appeared to be sparse just like higher zones. Tide rose from 6' to 7' during this survey.

Ecological Considerations:

SHORELINE ECOLOGICAL SUMMARY

REVISION: 10/22/90

Team 10 A
 Segment ST/EV54 Subdivision A cont'd. Date (mo/day/yr) 3-31-90
 Time (24 hr) 1300-1430 Biologist Lemon

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

Photographs: ST/10/3
 Roll No. 3
 Frames 17-30

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: 1 waterfowl, 1 beachworm, 1 skate egg case. S.W. corner of peninsula had what appeared an otter haulout. A dump site is on the S.E. corner of the peninsula. Some Tar balls appeared to be pre '89, one was photographed and collected; another had terrestrial moss growing on the tar.

Ecological Considerations: The Survey started with a +3' and rising Tide, ending w/ a +6' tide. The lower zones could not be directly observed by walking but were observed from the skiff and shore down through the very clear water. A re-Survey would add little new information. Environmental sensitivities need no change. The west facing bedrock is moderately rich in life relative to the greater part of EV54B. A photos were taken of oiled barnacles and mussels roll 3 Frames 19 and 20. The otter haulout might be a new sensitivity to consider.

OG Rich M

SEGMENT ST/ 54

SUBDIVISION A (no previously designated)

DATE 03/31/90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Det.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. 1000 L/W
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PFI Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
PFI - No Subsurface Oil

2 Δ
PFI - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

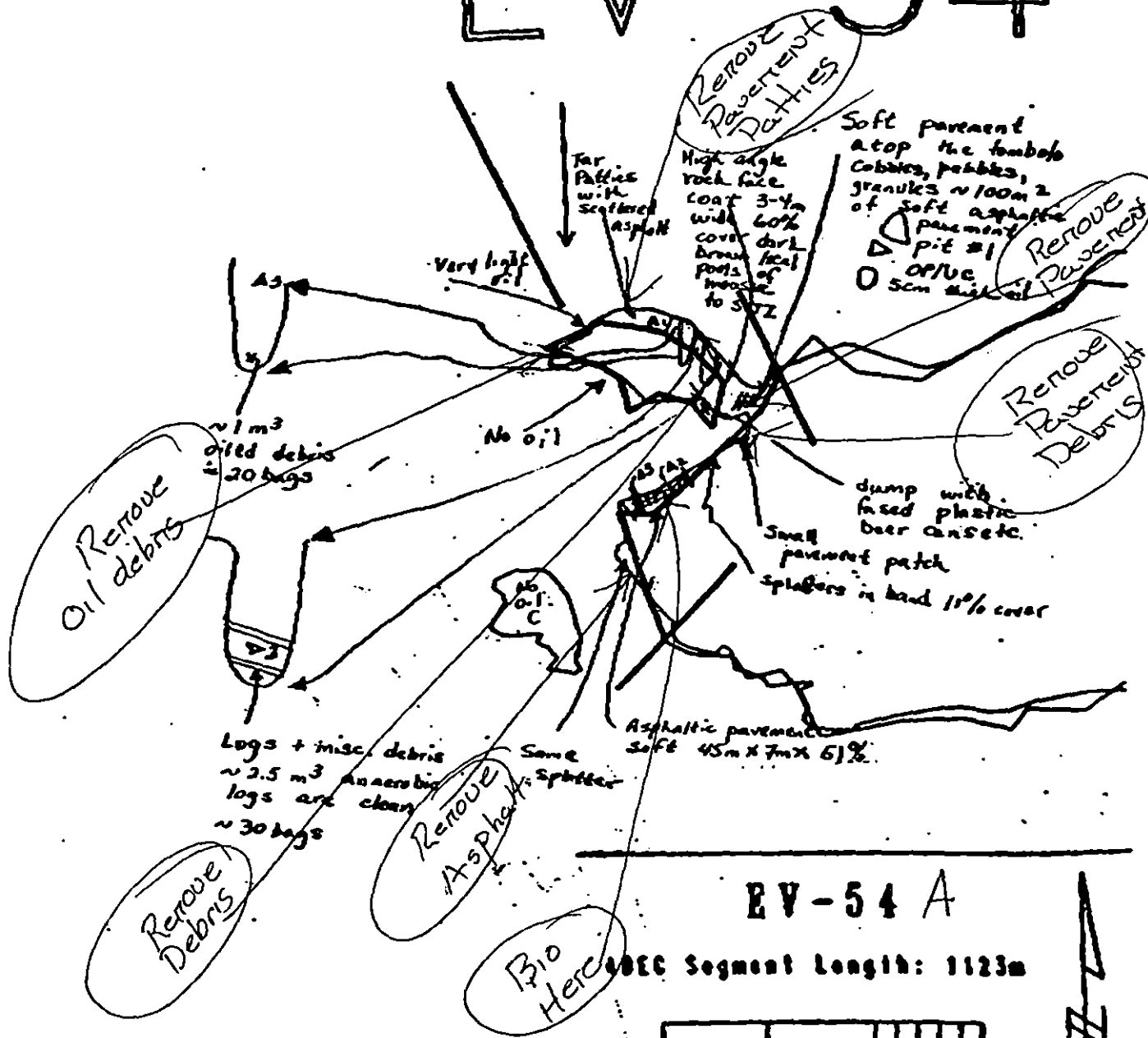
CT/S
Splashed Distribution

Oil Vegetation

1 →
Photo location, direction,
and number

SKETCH MAP

EV-54



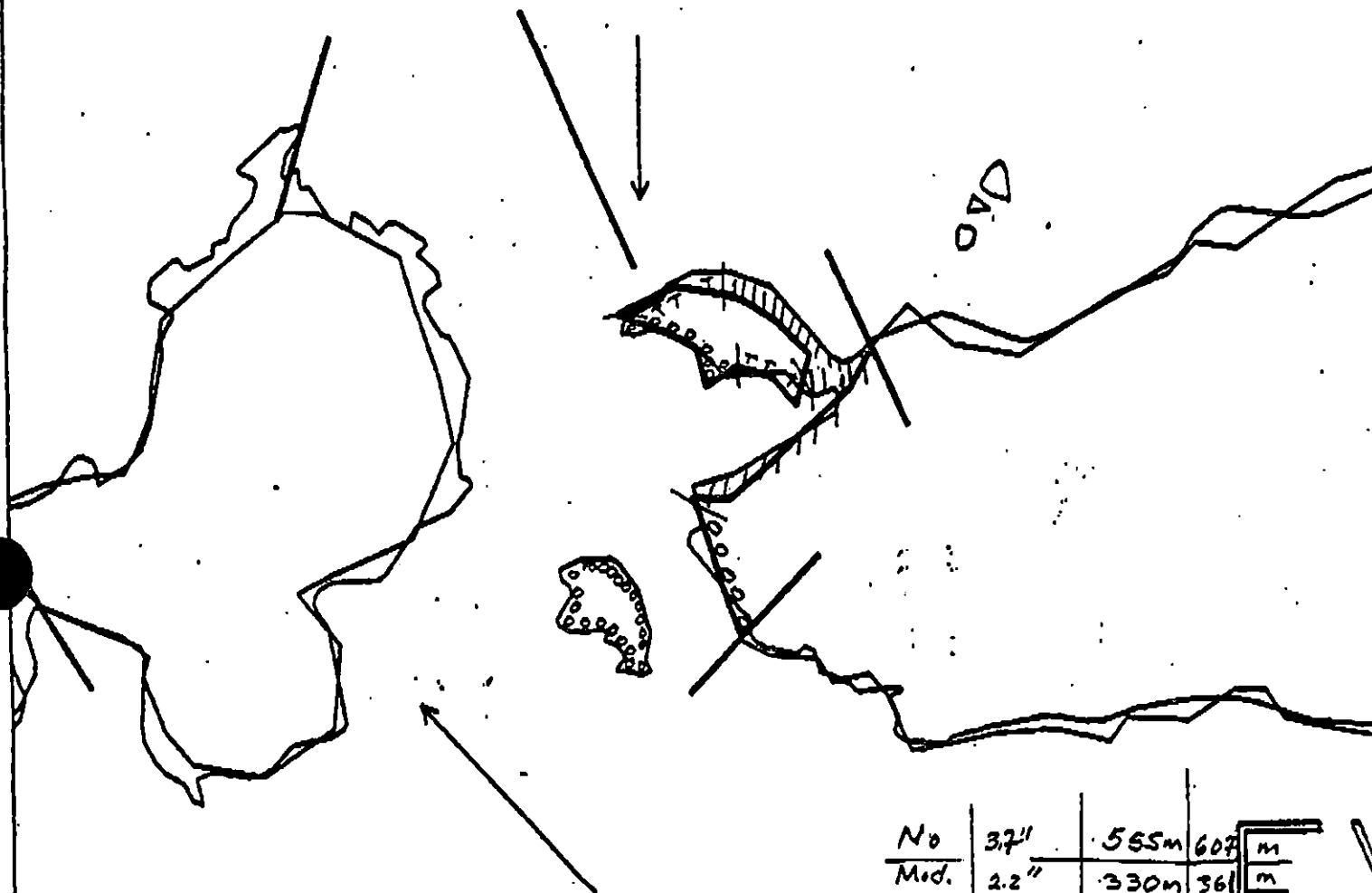
EV-54 A

1000 Segment Length: 1123m



Oil Character Length (m): AP 361 PO CV CT 155 ST MS PT TB FL NO Some

EV-54



No	37"	555m	607	m
Mid.	2.2"	330m	361	m
V. L.	0.95"	142m	155	M
		1027m	1123	

EV-50

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

EV-54 A

ADEC Segment Length: 1123m



Map Key: PWS-254

Name: _____

Date: _____

Date Entered: _____

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EV-54 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation	WORK 6/1 TO 7/25

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1F	Sawmill Bay Hatchery Release	No constraint to manual pickup and tarmat removal; closed to bioremediation prior to 6/1.
1K	Purse Seine Hook-off	No constraint to manual pickup and tarmat removal; closed to bioremediation after 7/25.
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 and tarmat removal; closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 6/04/90
ADEC RAY MORGAN
EXXON ANDY CAR
NOAA THOMAS
USCG G.A. BEITER

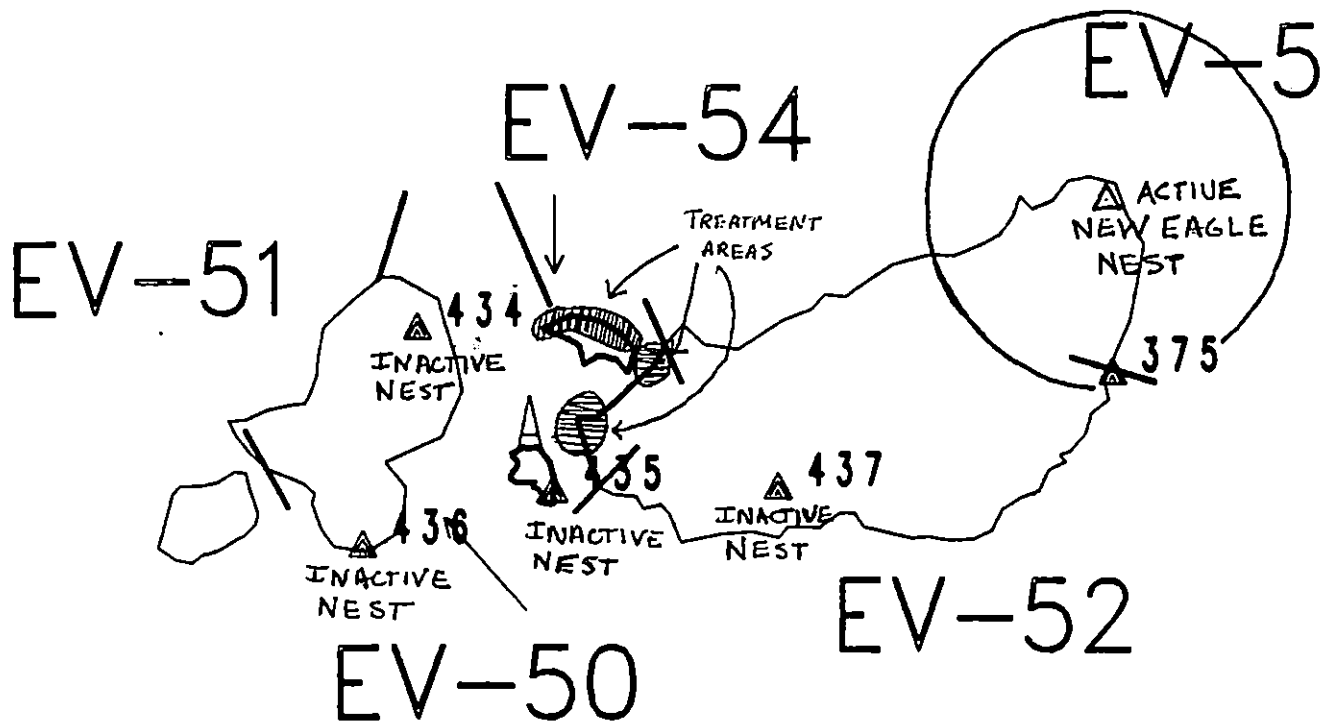
FOSC

DATE

Prepared By:

Date

6/3/90



* Incorporates USFWS
eagle nest survey
data (6/11/90 map)



Exxon Company, USA
Map Key: PMS-EV-54
May 11, 1990



ECOLOGY MAP 6/3/90
SEGMENT EV-54
SUBDIVISION A (1 of 1)
METERS
0 351 702

★ Seabird Colony
▲ Eagle Nest

1 inch = 1151 feet

7

SEGMENT ST/ EV-54 SUBDIVISION A (1 OF 1) DATE 3/31/90

1F Sawmill Bay Hatchery release (4/15 to 6/1)
6V Recreation: Anchorages (6/1 to 9/15)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Homan DATE: 4/25/90

OILING CATEGORIZATION:

Wide_0_m: Medium_329_m: Narrow_0_m: V.Light_96_m: No Oil_262_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 removal of asphalt and tar patties, 2) manual pick up of oiled debris, 3) bioremediation of areas shown on attached sketch map. Work should be conducted after 6/1 based on hatchery release constraints.

See Addendum dated 6/3/90 /JP

TAG COMMENTS: _____

FOSC: *h L* DATE: 5-3-90

SHORELINE EVALUATION

SEGMENT ST/ EV-54 SUBDIVISION A (1 OF 1) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1F Sawmill Bay Hatchery release (4/15 to 6/1)
6V Recreation: Anchorages (6/1 to 9/15)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

OILING CATEGORIZATION:

Wide 0 m: Medium 329 m: Narrow 0 m: V. Light 96 m: No Oil 262 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of asphalt and tar patties, 2) manual pick up of oiled debris, 3) bioremediation of areas shown on attached sketch map. Work should be conducted after 6/1 based on hatchery release constraints.

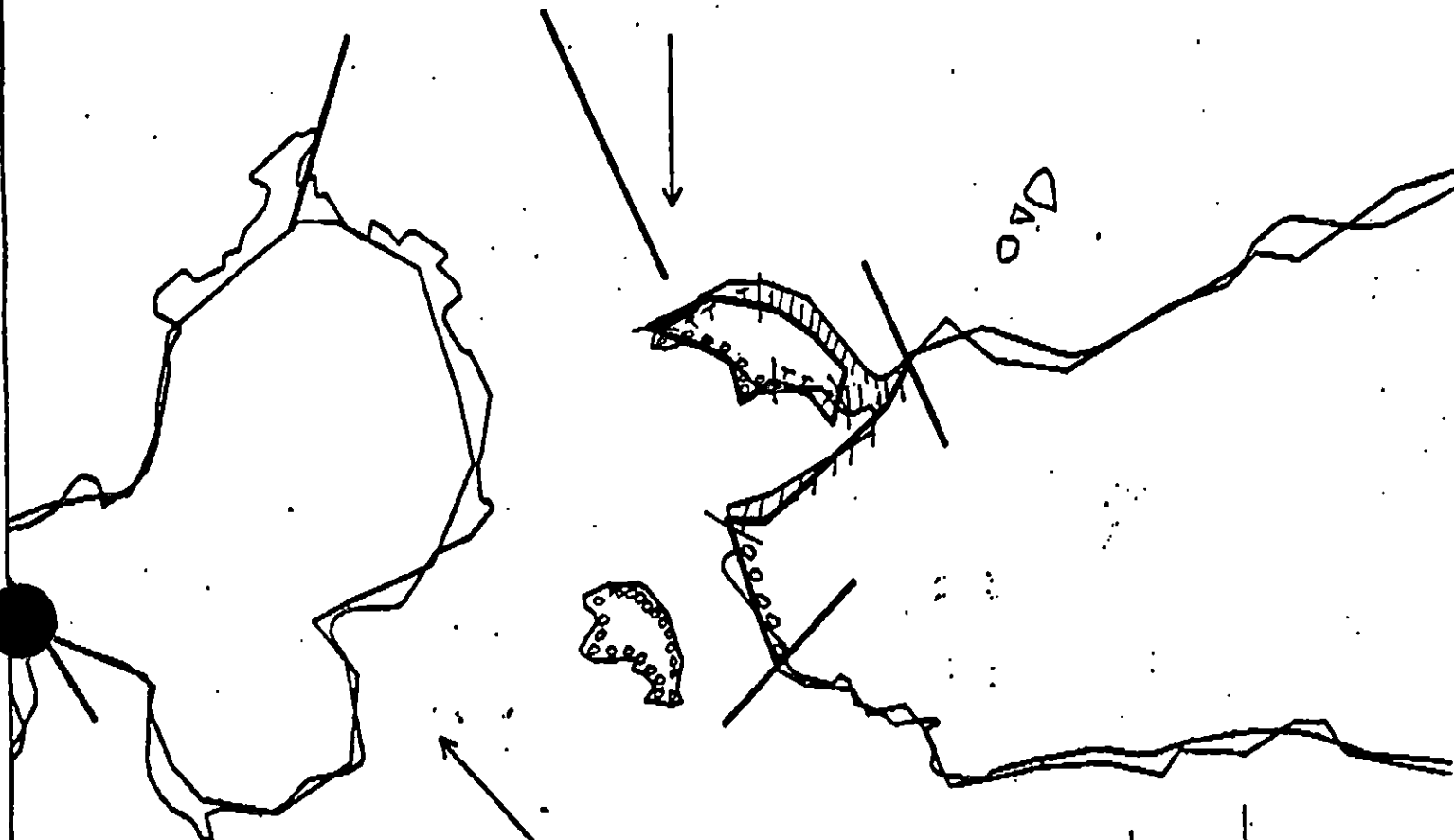
TAG COMMENTS:

TAG APPROVAL DATE: 4/24/90
ADEC Art Weiner
EXXON Bob Tse
NOAA Joseph Talbot
USCG M. J. Hall

FOSC: W L DATE: 5-3-90



EV-54



EV-50

No	37"	555m	607	m
Mid.	2.2"	330m	361	m
V. L.	0.95"	142m	155	M
		1027m	1123	

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

EV-54 A

ADEC Segment Length: 1123m



Map Key: PWS-254

Name: _____

Date: _____

Date Entered: _____

1991 MAYSAP EVALUATION

SEGMENT: EV 054 SUB: A REGION: PWS SURVEY DATE: 5/18/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

If 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: [Signature] Date: 6/17/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: _____

TAG: MANUAL P/U OF EASILY ACCESSIBLE AP/HBOR
AT LOCATION B, I AND J

FOSC: _____

TAG APPROVAL DATE: JUNE 6 1991 FOSC APPROVAL DATE: 6/10/91

ADEC [Signature] FOSC [Signature]

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

USCG [Signature]

NOAA [Signature]

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

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

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT EV-54 SUBDIVISION A DATE 5/18/91

ADEC

NAME

John Hayes

SIGNATURE

[Signature]

☐ NTR

Treatment Recommended

☒ TREATMENT RECOMMENDED

Survey team observed surface + subsurface oiling on this segment. Recommend small manual crew manually remove patches of AP in areas K, J, I, + B as identified on sketch map. In addition recommend areas with SOR/HIM be raked and grass contamination removed. Oiling observed in fissure caves here has not weathered since ASAP survey. Beach is accessible + moderate to high energy.

EXXON

NAME

JOHN DEAN

SIGNATURE

[Signature]

☒ NTR

MANUAL RETRIEVAL WOULD YIELD VERY MINIMUM RECOVERY OF OIL. SOME AREAS SUCH AS AOR BETWEEN BEDROCK OUTCROPS AND SOME AREAS OF COVER WOULD MOST LIKELY BENEFIT FROM BIO-REMEDIATION. HOWEVER LAND MANAGER SPECIFIES "NO BIO."

LANDMANAGER

NAME

Steve WARD

OF CVC/FS

SIGNATURE

[Signature]

☐ NTR

There are numerous areas in this sub-division that need further manual treatment, there have been lots of people doing manual here before and have almost finished lots of oil to be easily recovered in areas K, J, I, + B, this area is not weathering at all and needs to be cleaned, Chenequa Local Response.

NO BIO. close to Chenequa

USCG/NOAA

NAME

DREHER/CLINE

SIGNATURE

[Signature]

☒ NTR

KRLD

Observed very small amounts of residual inert oil, located in very inaccessible talus and sharp, angular cobble/pobble. It would be economically and environmentally unsound to attempt further removal. KRLD

☐ NTR

The Northwest-facing beach denoted by sites C-G contains significant subsurface oiling. Sites I, J, + K occur on a steep rocky headland. The heavy cover in this location is somewhat protected and does not appear to be weathering effectively. Although access to this area is somewhat restricted, treatment of the high % cover and the subsurface oiling is recommended. DWC

[Signature]

TEAM NO. 5

OG CHANEY
ADEC HAYES
EXXON DEAN

BIO CRANK
LANDMANAGER WARD for USFS & CUC
USCG/NOAA DREHER/CLINE

SEGMENT EV 54
SUBDIVISION A
DATE MAY, 18 191

TIME 09:00 to 10:45 TIDE LEVEL 2.5 ft. to -2 ft. ENERGY LEVEL: ☐ H ☐ M ☒ L

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

TOTAL LENGTH SHORELINE SURVEYED: 608 m NEAR SHORE SHEEN: ☐ BR ☐ RB ☒ SL ☐ NONE

EST. OIL CATEGORY LENGTH: W 0 m M 93 m N 73 m VL 120 m NO 322 m US 500 m

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 5 - 19 FRAMES 6-7

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		
1	25							✓	-		10	10		✓			P-PGM	
2	33							✓	-		-	-		✓			P-PG	
3	15			✓					0-10	Y	5	BR		✓			CB-CPG	BEDROCK FISSURE
4	30							✓	-		2.5	N		✓			CPG-CPG	
									-									
									-									
									-									
									-									
									-									

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

OG COMMENTS: THE MOST OIL RETAINED IN THE SEGMENT IS CAUGHT BETWEEN BEDROCK OUTCROPS. OIL INTENSITY CHANGES DRAMATICALLY OVER SHORT DISTANCES. AREAS (C15) RETAIN THE HIGHEST OIL DENSITIES. POCKETS OF RESIDUAL AP & SOR WERE OBSERVED IN PROTECTED POCKETS AS INDICATED ON THE SKETCH MAP.

REVISED: MC 5/24/9,
REVISED: F.W. 5/28/9

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

SEGMENT: EV 54 A
DATE: MAY 18 1991
AIR P.#: PIM-C 005-122
PIM-C 005-123

SAWMILL BAY

55 GAL
DRUM

TREES

⑩ 10x15m AP<1% SOR<1%
CV 5% CT 2%

⑪ 1x18m AP 10%
CV 80% FISSURE
COVE

① 4x50m AP<1% CT 10%
SOR/H 5% CV 40%

EV 54A
EV 54D

⑨ 1x40m CV 5% CT 10%
ON BEDROCK

① 1x10m CV 2% CT<1%

③ FISSURE IN BEDROCK
10x3m SOR/M 40%
CV 5% & PIT #3 MOR SAME EXTENT

② 4x15m AP 10% CV 5%
IN LARGE ANGULAR BOULDERS

④ 2x50m SOR<1%, CV 1%, CT<1%

⑥ 2x20m SOR 10% CV 5% CT 5%

⑤ 5x30m CT & SOR<1%

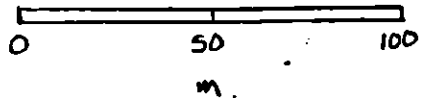
④ 4x15m SOR & CV
DRIPS ON BOULDERS

⑦ 3x20m SOR/H 20% CV 2%

LEGEND

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

SCALE



NO
SURVEY
THIS
ISLAND

FALLEN TREES

BETTLES
ISLAND

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

MAYSAP BIOLOGICAL SUMMARY FORM

pg 1 of 3

TEAM # 5

DATE 18 May 1991

SEGMENT # EV-54

TIDAL HEIGHT (Range) +2.5 → -1

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 2-3

WIND SPEED/DIRECTION 15-20 knots / S

PHOTOGRAPHS: ROLL #

FRAME #

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

(A) Area is located in the MITZ. Rare concentrations of *Glycinix litis*, barnacles, mussels and *Fucus* sporlings and a sparse concentration of *Littorina* cover ~5% of the surface area. The MITZ is split into two pockets below the site. In the south pocket *Fucus* is sparsely concentrated and in the northwest pocket *Fucus* is moderately concentrated. In both pockets barnacles and mussels are sparse. *Littorina* and limpets are in patches of moderate concentration, hermit crabs are abundant and clam shells (*Prototheca* and *Trexus*) are present. Biota cover in the south pocket is ~20% and in the north pocket ~60%. The LITZ was not exposed when surveying this site.

(B) Area is a 4m band in the UITZ. Throughout the site filamentous green algae and black lichen cover ~30% of the surface area. At the bottom margin of the site barnacles covering <1% of the sediments are present. Within 1m below the site, in the MITZ, sparse *Fucus*, barnacles, *Littorina* and limpets; abundant filamentous green algae, hermit crabs and oligochaete worms are present. Percent biota cover varies from 50% on the east side of the site to 30% on the west. The LITZ has 50% biota cover. The same species found in the MITZ are present as well as sparse amounts of bladed red algae and sea lettuce (*Ulva*). A clam bed is present.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

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

LAND MAMMALS

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

Shoreline subdivision map showing important biological features attached.

P. J. Egan, NM

Team # 5
Segment # EV-54
Subdivision A
Sea State 2-3'

Date 18 MAY 1991 pg 2 of 3
Tidal Height +2.5 $\rightarrow$ -1'
Biologist Crank
Wind Speed / Direction 15-20 knots / W

Comments (cont.)

- (C) Site is located in the UITZ, adjacent to the east side of site B. Biota is consistent with that found in B. The MITZ has a 30% biota cover.
- (D) Area is located in the UITZ on angular cobble and boulder. Encrustose green algae and black lichen cover ~80% of the surface area. Tar spot algae and barnacles cover <1%. In the MITZ and LITZ below the site, sparse Fucus with mature conceptacle, sparse Littorina with various age classes, a rare concentration (entirely of post-spill age) mussels and a sparse to moderate concentration of adult, juvenile and spat barnacles cover ~50% of the sediments.
- (E) Area is located in the UITZ. Sparsely concentrated barnacles cover ~20% of the surface area. The MITZ is similar to area D. The LITZ has a low rocky outcrop ~6m long. The outcrop has a moderate Fucus concentration and bladed red and green algae. Biota cover on outcrop ~90%. Outcrop should not be stepped on as the bladed red & green algae can be easily torn.
- (F, G, J, K, L) Areas are located in the UITZ on separate pocket beaches. No intertidal macrobiota was found within the sites. In the MITZ barnacles are the dominant species with a sparse to moderate concentration. Sparse concentrations of mussels and Littorina are also present. (Littorina scutulata is much more common than L. sitkana). Area K also has a sparse Fucus concentration. Biota cover is ~50. The LITZ has a slimy cover of filamentous and bladed green algae with sparse amounts of Fucus and bladed red algae. Limpets are moderate with several age classes found. Searlesia (whelk) is also present. Biota cover is ~80%.

Team #5
Segment #EV-54
Subdivision A
Sea State 2-3'

Date 18 MAY 1991 pg 3 of 3
Tidal Height +2.5 $\rightarrow$ -1'
Biologist Crank
Wind Speed / Direction 15-20/W

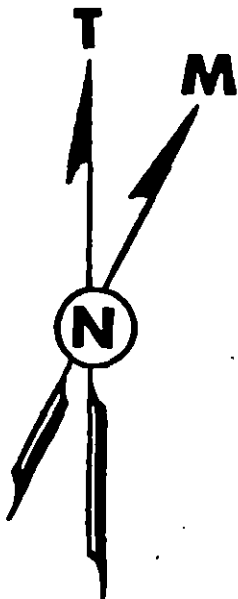
Comments (cont.)

- (H) Area is located in the UITZ along the bedrock side of a small pocket beach. Within the site there are sparse barnacles and juvenile mussels moderately concentrated in long cracks in the bedrock. A rare to sparse concentration of Littorina are also present. Biota cover is 20%. Directly below the site barnacles are moderate (adult and spat); mussels are sparse (various ages); Fucus is rare and limpets are moderate. Biota cover is ~60%. In the LITZ the same biota is found, but Fucus is dense and bladed red and green algae is present. Biota cover is 80%. On the beach, between the bedrock sides, there is a moderately concentrated mussel bed in the MITZ and a clam bed in the LITZ with Prototheca, Saxidomus, Trexus and Hiatella clams.
- (I) Area is located high in the UITZ among drift Fucus in a small pocket beach. No other macro-biota is present in the site. The MITZ has a 70% cover of moderate to densely concentrated barnacles, Littorina and limpets. The LITZ has a dense Fucus cover with bladed red and green algae. Biota cover is 80%.

Between sites B & C, mature Fucus plants in the UITZ were entirely red. The fleshy part of the plant was firm and did not dissolve when squeezed as a decaying plant would. The plants appear to be alive but are not reproductively active. The Fucus in the MITZ below were not red and had maturing conceptacles.

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

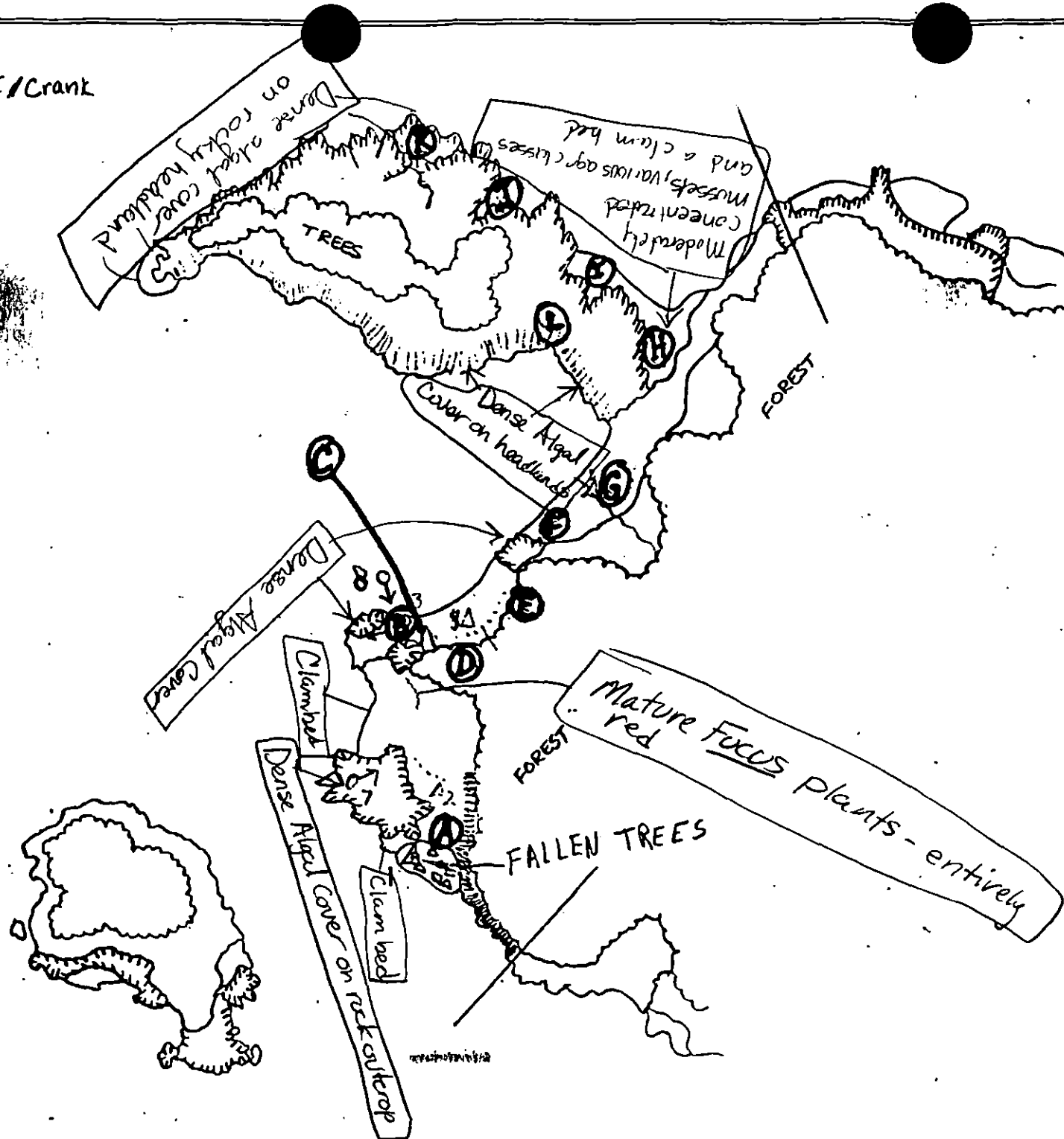
SEGMENT: EV 54 A
 DATE: MAY 18/99/
 AIR P.#: PIM-C 005-122
 PIM-C 005-123

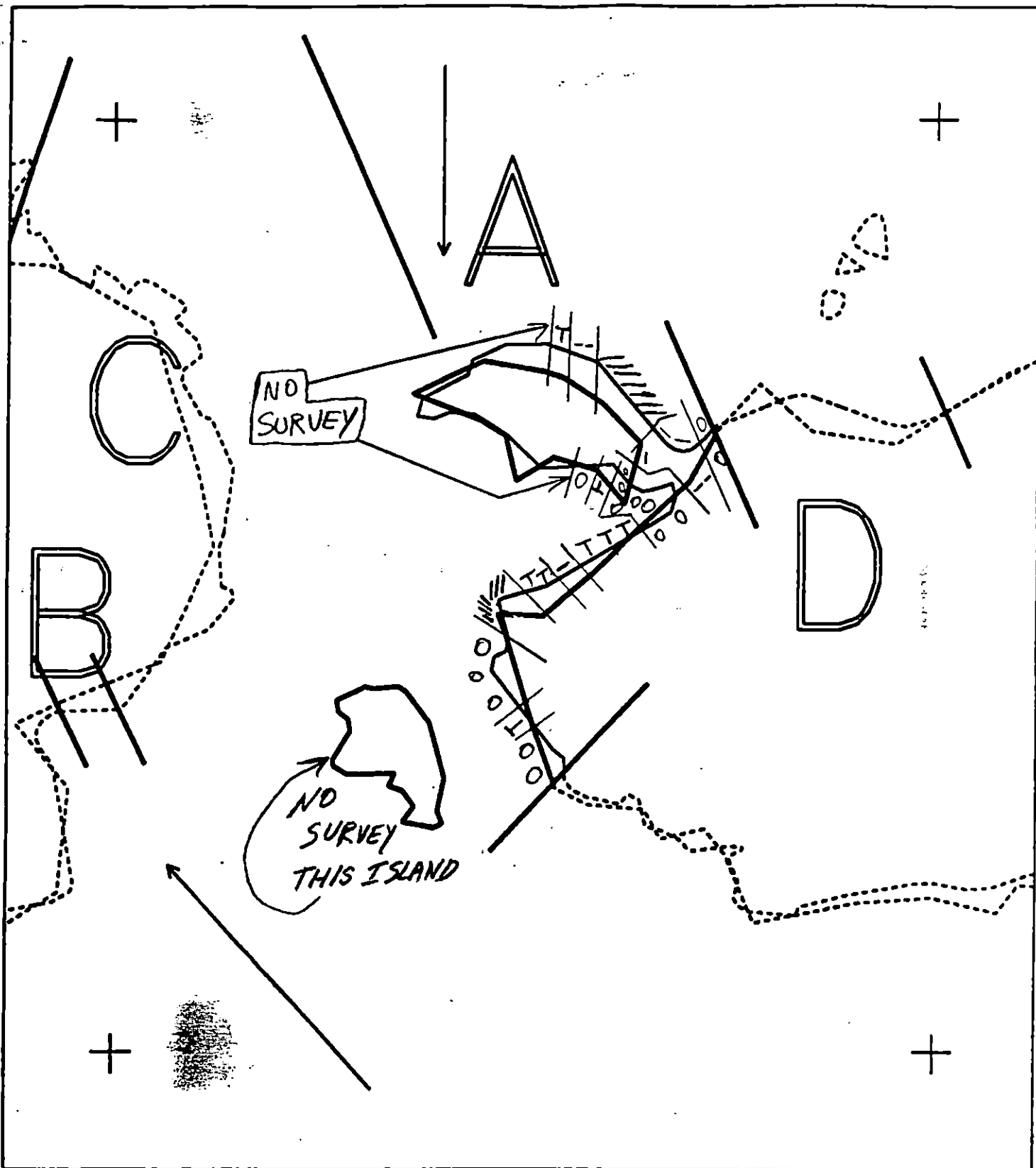


LEGEND

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

SCALE





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

EV054 A
 ADEC Subsegment Length: 1108m
 METERS
 0 100 200
 AK State Plane Zone 4
 pr054a



Subdivision Field Map
 Map Key: PWSEV054A
 Name: CHANEY
 Date: MAY 17 1971
 Date Entered:

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

1991 MAYSAP EVALUATION

SEGMENT: EV 054 SUB: A REGION: PWS SURVEY DATE: 5/18/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC

FOSC

EXXON

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

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

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT EV-54 SUBDIVISION A DATE 5/28/91

ADEC

NAME

John Hayes

SIGNATURE



NTR

☒ TREATMENT RECOMMENDED
TREATMENT RECEIVED

Survey team observed surface + subsurface oiling on this segment. Recommend small manual crew manually remove patches of GP in areas K, J, I-B as identified on sketch map. In addition recommend areas with SOR/H.M be raked and gross contamination removed. Oiling observed in future covers here has not weathered since A.P.P. survey. Beach is accessible + moderate to high energy.

EXXON

NAME

JOHN DEAN

SIGNATURE



NTR

MANUAL RETRIEVAL WOULD YIELD VERY MINIMUM RECOVERY OF OIL. SOME AREAS SUCH AS AOR BETWEEN BEDROCK OUTCROPS AND SOME AREAS OF COVER WOULD MOST LIKELY BENEFIT FROM BIO-REMEDIATION. HOWEVER LAND MANAGER SPECIFIES "NO BIO."

LANDMANAGER

NAME

Steve WARDOF CVC/FS

SIGNATURE



NTR

there are numerous areas in this sub-division that need further manual treatment. there have been lots of people doing manual here before and there almost finished lots of oil to be easily recovered. in areas K-J-I-B, this area is not weathering at all and needs to be cleaned. Chenequa Local Response.

NO BIO. close to Chenequa.

USCG/NOAA

NAME

DREHER/CLINE

SIGNATURE



NTR

Observed very small amounts of residual inert oil, located in very inaccessible talus and sharp, angular cobble/pobble. It would be economically and environmentally unsound to attempt further removal. KRD



NTR

The Northwest-facing beach denoted by sites C-G contains significant subsurface oiling. Sites I, J, & K occur on a steep rocky headland. The heavy cover in this location is somewhat protected and does not appear to be weathering effectively. Although access to this area is somewhat restricted, treatment of the high % cover and the subsurface oiling is recommended. DWC

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

SEGMENT: EV 54 A
DATE: MAY 18 1991
AIR P.#: PIM-C 005-122
PIM-C 005-123

SAWMILL BAY

55 GAL
DRUM

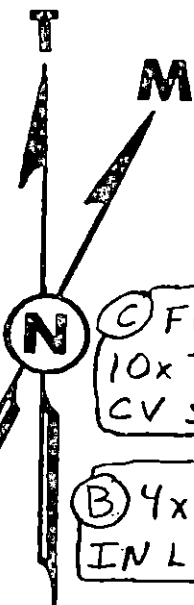
TREES

FISSURE
COVE

EV 54D

EV 54A
ON BED ROCK

FOREST



C FISSURE IN BED ROCK
10x3m SOR/M 40%
CV 5% & PIT #3 MOR SAME EXTENT

L 1x10m CV 2% CT < 1%

B 4x15m AP 10% CV 5%
IN LARGE ANGULAR BOULDERS

2x50m SOR < 1%, CV 1%, CT < 1%

F 2x20m SOR 10% CV 5% CT 5%

E 5x30m CT & SOR < 1%

A 4x15m SOR & CV
DRIPS ON BOULDERS

D 3x20m SOR/H 20% CV 2%

FOREST

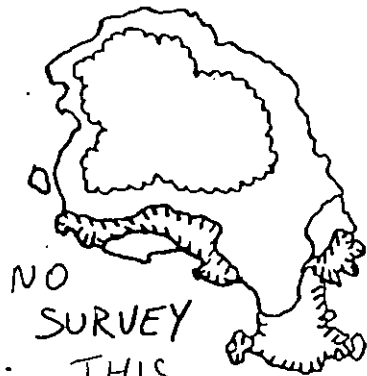
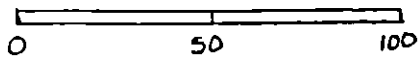
FALLEN TREES

BETLES
ISLAND

LEGEND

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

SCALE



NO
SURVEY
THIS
ISLAND

EV 54A
EV 52A

TEAM # 5

DATE 18 May 1991

SEGMENT # EV-54

TIDAL HEIGHT (Range) +2.5 → -1

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 2-3+

WIND SPEED/DIRECTION 15-20 knots / S

PHOTOGRAPHS: ROLL #

FRAME #

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

(A) Area is located in the UITZ. Rare concentrations of *Glyptothorax*, carinates, *Musculina* and *Fucus* sporadically with a sparse concentration of *Littorina* cover ~5% of the surface area. The MITZ is split into two pockets below the site. In the south pocket *Fucus* is sparsely concentrated and in the northwest pocket *Fucus* is moderately concentrated. In both pockets barnacles and mussels are sparse, *Littorina* and limpets are in patches of moderate concentration, hermit crabs are abundant and clam shells (*Protothaca* and *Trexus*) are present. Biota cover in the south pocket is ~20% and in the north pocket ~60%. The LITZ was not exposed when surveying this site.

(B) Area is a 4m band in the UITZ. Throughout the site filamentous green algae and black lichen cover ~30% of the surface area. At the bottom margin of the site barnacles covering <1% of the sediments are present. Within 1m below the site, in the MITZ, sparse *Fucus*, barnacles, *Littorina* and limpets; abundant filamentous green algae, hermit crabs and oligochaete worms are present. Percent biota cover varies from 50% on the east side of the site to 30% on the west. The LITZ has 50% biota cover. The same species found in the MITZ are present as well as sparse amounts of bladed red algae and sea lettuce (*Ulva*). A clam bed is present.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

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

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

Shoreline subdivision map showing important biological features attached.

Rec'd 5/24/91 JM

Team # 5
Segment # EV-54
Subdivision A
Sea State 2-3'

Date 18 MAY 1991 pg 20
Tidal Height +2.5 $\rightarrow$ -1'
Biologist Crank
Wind Speed / Direction 15-20 knots /

Comments (cont.)

- (C) Site is located in the UITZ, adjacent to the east side of site B. Biota is consistent with that found in B. The MITZ has a 30% biota cover.
- (D) Area is located in the UITZ on angular cobble and boulder. Encrustose green algae and black lichen cover ~80% of the surface area. Tar spot algae and barnacles cover <1%. In the MITZ and LITZ below the site, sparse Fucus with mature conceptacle, sparse Littorina with various age classes, a rare concentration (entirely of post-spill age) mussels and a sparse to moderate concentration of adult, juvenile and spat barnacles cover ~50% of the sediments.
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Team #5
Segment #EV-54
Subdivision A
Sea State 2-3'

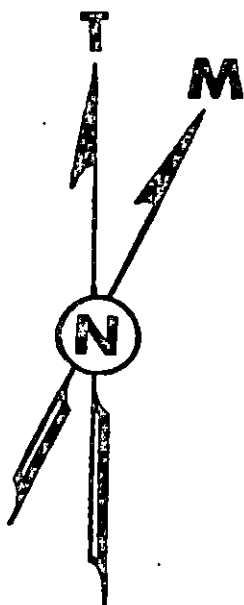
Date 18 MAY 1991 pg 3
Tidal Height +2.5 $\rightarrow$ -1'
Biologist Crank
Wind Speed / Direction 15-20/W

Comments (cont.)

- (H) Area is located in the UITZ along the bedrock side of a small pocket beach. Within the site there are sparse barnacles and juvenile mussels moderately concentrated in long cracks in the bedrock. A rare to sparse concentration of Littorina are also present. Biota cover is 20%. Directly below the site barnacles are moderate (adult and spat); mussels are sparse (various ages); Fucus is rare and limpets are moderate. Biota cover is ~60%. In the LITZ the same biota is found, but Fucus is dense and bladed red and green algae is present. Biota cover is 80%. On the beach, between the bedrock sides, there is a moderately concentrated mussel bed in the MITZ and a clam bed in the LITZ with Protothaca, Saxidomus, Trexus and Hiatella.
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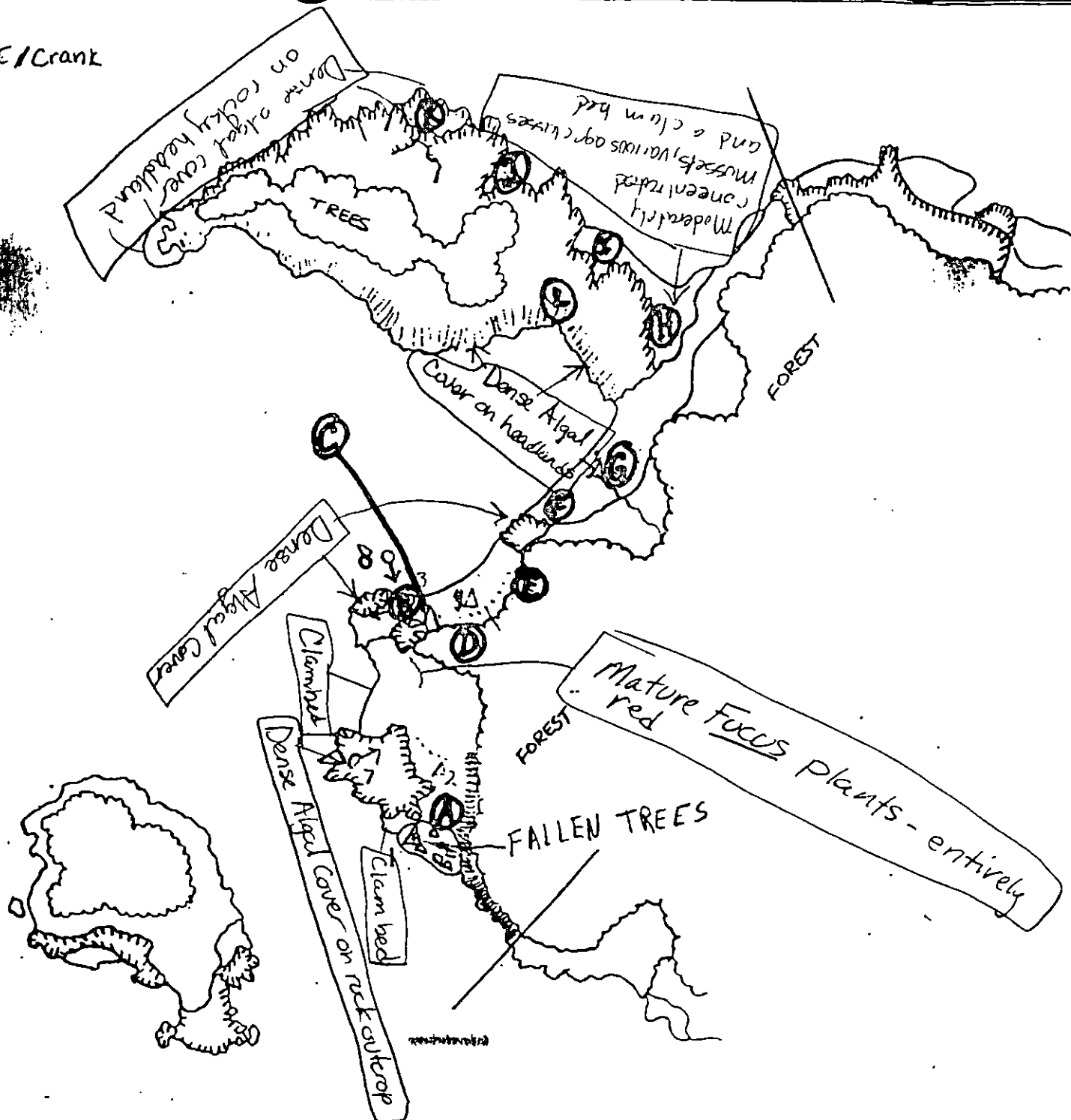
Between sites B & C, mature Fucus plants in the UITZ were entirely red. The fleshy part of the plant was firm and did not dissolve when squeezed as a decaying plant would. The plants appear to be alive but are not reproductively active. The Fucus in the MITZ below were not red and had maturing conceptacles.

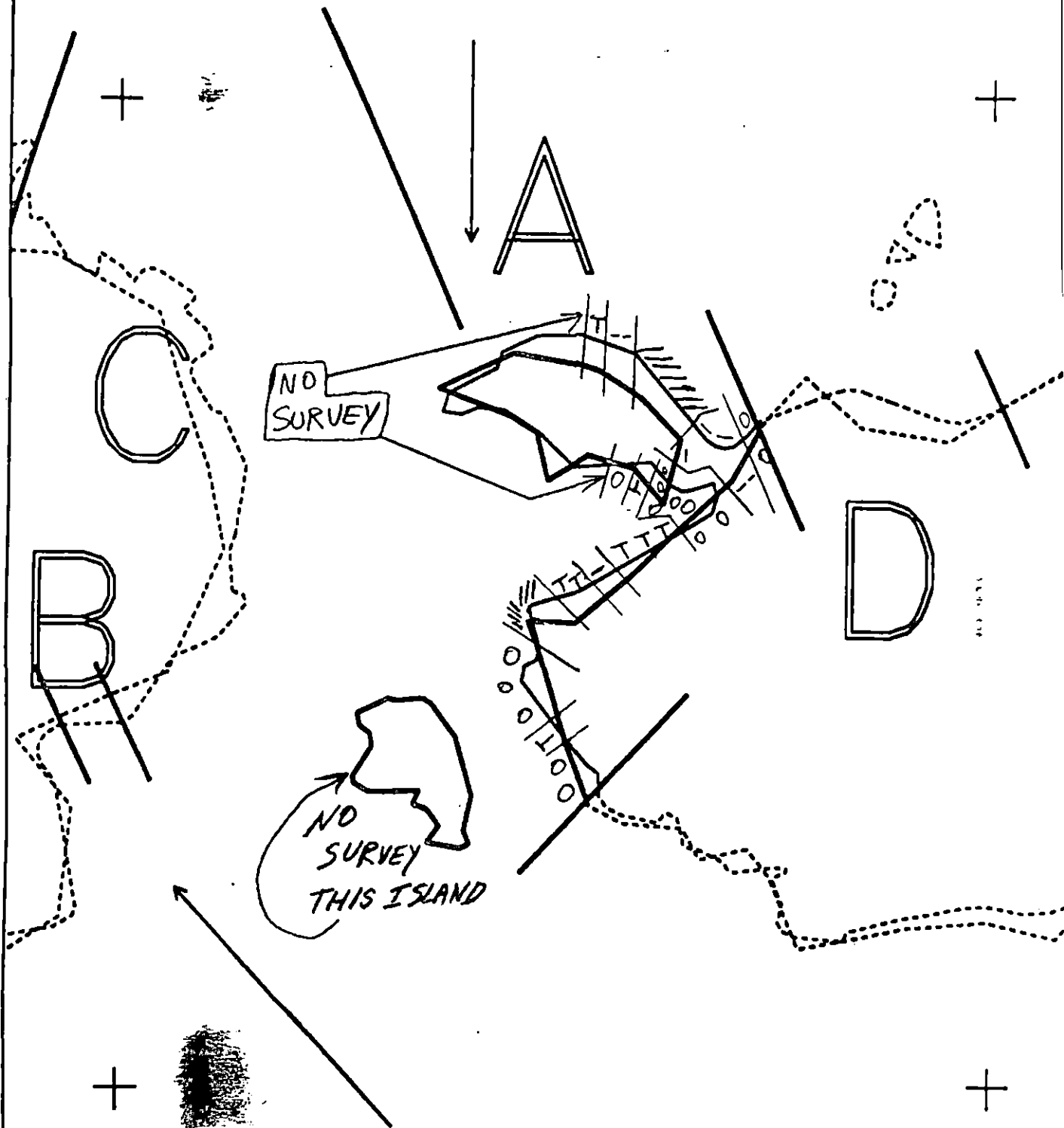
SEGMENT: EV 54 A
DATE: MAY 18 1991
AIR P.#: PIM-C 005-122
PIM-C 005-123



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

A horizontal number line with arrows at both ends. It has three major tick marks labeled 0, 50, and 100. The line is divided into two equal segments by the tick mark at 50.





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

EV054 A
 ADEC Subsegment Length: 1100m
 METERS
 0 100 200
 AK State Plane Zone 4
 pr0540

Subdivision Field Map
 Map Key: PWSEV054A
 Name: CHANEY
 Date: MAY 17 1977
 Date Entered:



REVIEWED: MK 5/24/77
 REVISED: F.W. 5/24/77

ASAP

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT EV-54 SUBDIVISION A DATED 7-31-90

MODIFICATION CLASS I CLASS II ✓ CLASS III

1. REASON FOR MODIFICATION

Found Mossy area in small bedrock pocket area that needs to be picked up.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

Remove mossy areas indicated on sketch Map + spread custom blend.

3. TIMING ISSUES

ADEC [Signature]

EXXON [Signature]

USCG [Signature]

LAND MANAGER [Signature] (If field rep is on scene)

ASAP

SEGMENT AS / EV-54 SUBDIVISION: A SITE: 1 DATE 7/31/90

SCG

NAME MSTC MICHAEL D. BROWN SIGNATURE Michael D. Brown☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: IF SEGMENT IS CUSTOM BLEND BIOD 1990

ADEC

NAME John Hayes SIGNATURE John Hayes☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Low PriorityTo assess effectiveness of bio. treatment recommended on work plan modification sent in.

LAND MANAGER

NAME DOUGLAS GIBSON SIGNATURE Douglas Gibson☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: if segment receives minor amount of manual cleanup and bioremediation in 1990

EXXON

NAME Martinez N.G. SIGNATURE Nicholas G. Martinez☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Some light manual pick up + bio should remove the remaining oil

SEGMENT AS EV-54 SUBDIVISION: A SITE: 2 DATE 7/31/90**USCG**NAME MSTC Michael D. Brown SIGNATURE Michael D. Brown☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

IF SEGMENT HAS CUSTOM BLEND BIO completed 1990**ADEC**NAME John Hayes SIGNATURE John Hayes☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Low PriorityTo assess effectiveness of bio. treatment recommended on work plan modification sent in.**LAND MANAGER**NAME DOUGLAS GIBSON SIGNATURE Douglas Gibson☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

if segment receives minor amount of manual cleanup and bioremediation in 1990**EXXON**NAME Martinez MJ SIGNATURE Martinez MJ☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Light manual work + bio should remove remaining oil.

SEGMENT AS / EV-54 SUBDIVISION: A SITE: 3 DATE 7/31/90**USCG**NAME MSPR Michael D. Brown SIGNATURE Michael D. Brown☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

IF SEGMENT IS CUSTOM BLEND BIOD FOR 1990**ADEC**NAME John Hayes SIGNATURE John Hayes☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Low PriorityTo assess effectiveness of bio. treatment recommended on work plan modification sent in.**LAND MANAGER**NAME DOUGLAS GIBSON SIGNATURE Douglas Gibson☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

if segment receives minor amount of manual cleanup and bioremediation in 1990**EXXON**NAME Martinez N.D. SIGNATURE Nicholas J. Martinez☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Light manual work + bio should remove remaining oil.

SEGMENT AS EV-54 SUBDIVISION: A SITE: 4 DATE 7/31/90**NSCG**NAME NSC Michael D. BrownSIGNATURE Michael D. Brown☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

IF SEGMENT IS CUSTOM BLEND B100 IN 1990**ADEC**NAME John HayerSIGNATURE John Hayer☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Low PriorityTo assess effectiveness of bio. treatment recommended in work plan modification sent in.**LAND MANAGER**NAME DOUGLAS GIBSONSIGNATURE Douglas Gibson☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

if segment receives minor amount of manual cleanup and bioremediation in 1990**EXXON**NAME Martinez M.J.SIGNATURE Martinez M.J.☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Light manual work + bio should remove remaining oil.

ASAP SHORELINE OILING SUMMARY

PAGE 1 OF

TEAM NO. ONELEAD MARTINEZSEGMENT AS EV-3OG ReimerUSGS BROWNSUBDIVISION AADEC HAYESLAND REP GIBSONTOTAL NO. SITES 4DATE 7/31/90TIME 8:55 to 10:23TIDE LEVEL 6 to 6.5TOTAL EST LENGTH OF SHORELINE SURVEYED: 365 mSURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ SnowOIL CATEGORY LENGTH: W 0 m M 230 m N 75 m VL 0 m NO 60 m US 0 m

SURFACE OIL

SITE 1

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT			X			X		
S.O.R.			I/X			I/X		
POOLED								
COVER		X	X			X		
COAT		X				X		
STAIN								
MOUSSE				I		I		
PATTIES/T.B.								
FILM								
NO OIL					X		X	X
EST. SITE LENGTH							75m	

SITE 2

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT				F		F		
S.O.R.			I			I		
POOLED								
COVER		X				X		
COAT			X			X		
STAIN								
MOUSSE			I			I		
PATTIES/T.B.								
FILM								
NO OIL					X		X	X
EST. SITE LENGTH							80m	

SITE 3

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT								
S.O.R.			X				X	
POOLED								
COVER								
COAT								
STAIN								
MOUSSE								
PATTIES/T.B.								
FILM								
NO OIL					X	X		X
EST. SITE LENGTH							80m	

SUBSURFACE OIL

SITE NO.	PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER				OILED INTERVAL (CM-CM)	CLEAN BELOW (Y/N)	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS
			OP	OR	OF	NO			SU	UI	MI	LI	
1	1	8		H			0-5	Y		H			B-PG
2	1	4		X			0-4	Y			X		BC-PG-ROCK
	2	10		M			0-8	Y		M			C-PG
3	1	15				X	-				X		PG-GSP
4	1	10		X			0-3	Y		X			C-PG

Photographs:

Roll No. ASAP-01-01Frames 1-3

heaviest oiled area

COMMENTS

The oil character has not changed much since the Spring survey - Some of the oiling was reclassified to SOR from AP. There appears to have been little to no manual work done on this segment, some of the pockets on site 1-2, 4 would be applicable to Bio.

Reviewed
F.W.

REVISION NO. 7/27/90

SEGMENT AS/ EV-54 SUBDIVISION A

SURFACE OIL (CONTINUED)

SITE 4

SITE

SITE

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SUM	M	L	
ASPHALT			F	F	F			
S.O.R.			X		X			
POOLED								
COVER		X	X	X	X			
COAT			X	X	X	X		
STAIN								
MOUSSE				I	I			
PATTIES/T.B.								
FILM								
NO OIL					X		X	
EST. SITE LENGTH					130m			

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SUM	M	L	

SUBSURFACE OIL (CONTINUED)

[illegible]

COMMENTS

Reviewed
F.W.

OG inex
 SEGMENT STI EV-54-A

SUBDIVISION A

DATE July 31 90

CHECKLIST

- ☐ 1st Aerial
- ☐ Aerial Scale
- ☐ Top/Sub Study
- ☐ On Chart
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HMLAVE
- ☐ SCL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pt Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 Δ
- Pt - No Substrate Cl
- 2 Δ
- Pt - Substrate Cl
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Scattered Distribution
- leeee
- Other Vegetation
- 1 $\rightarrow$
- Photo location, direction, and number



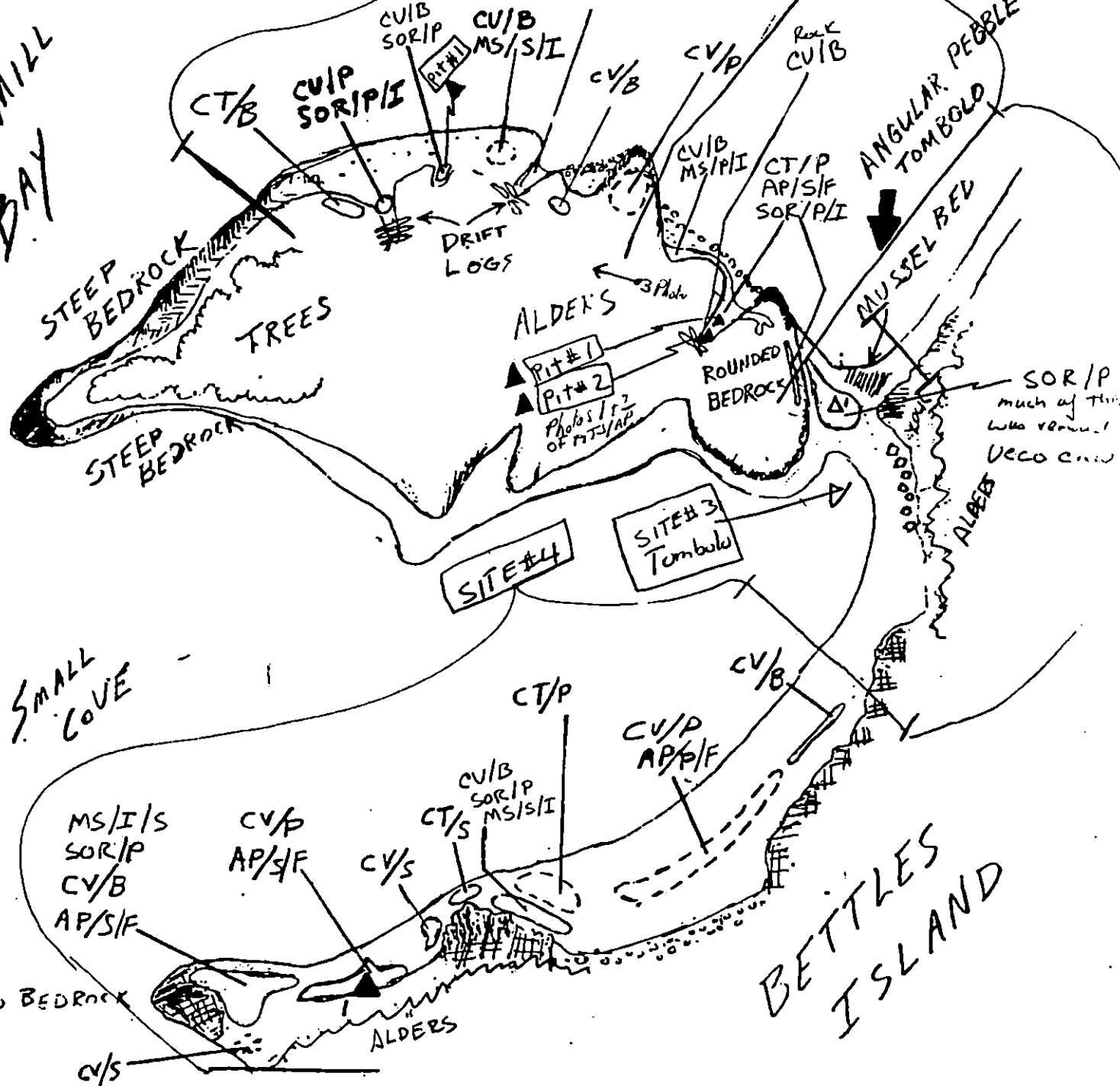
SAWMILL BAY

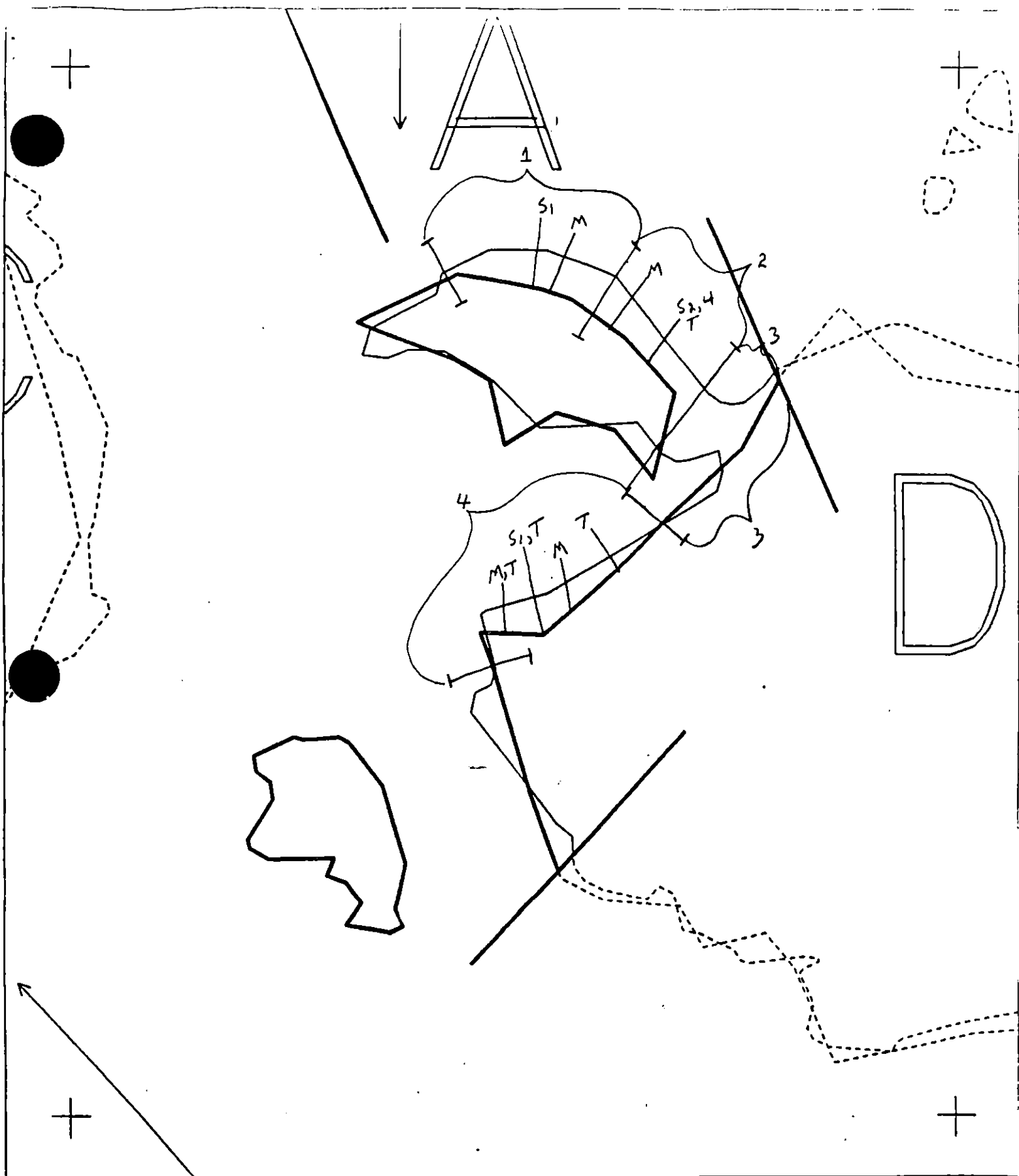
OFF SHORE ROCK

SKETCH MAP

AP/P

SITE #2





XX
 ////

 TTTT
 0000

Wide
 Medium
 Narrow
 Very Light
 No Oil

EV-54 A

ADEC Subsegment Length: 1108m

METERS

0 66 132

AK State Plane Zone 4 1:2500



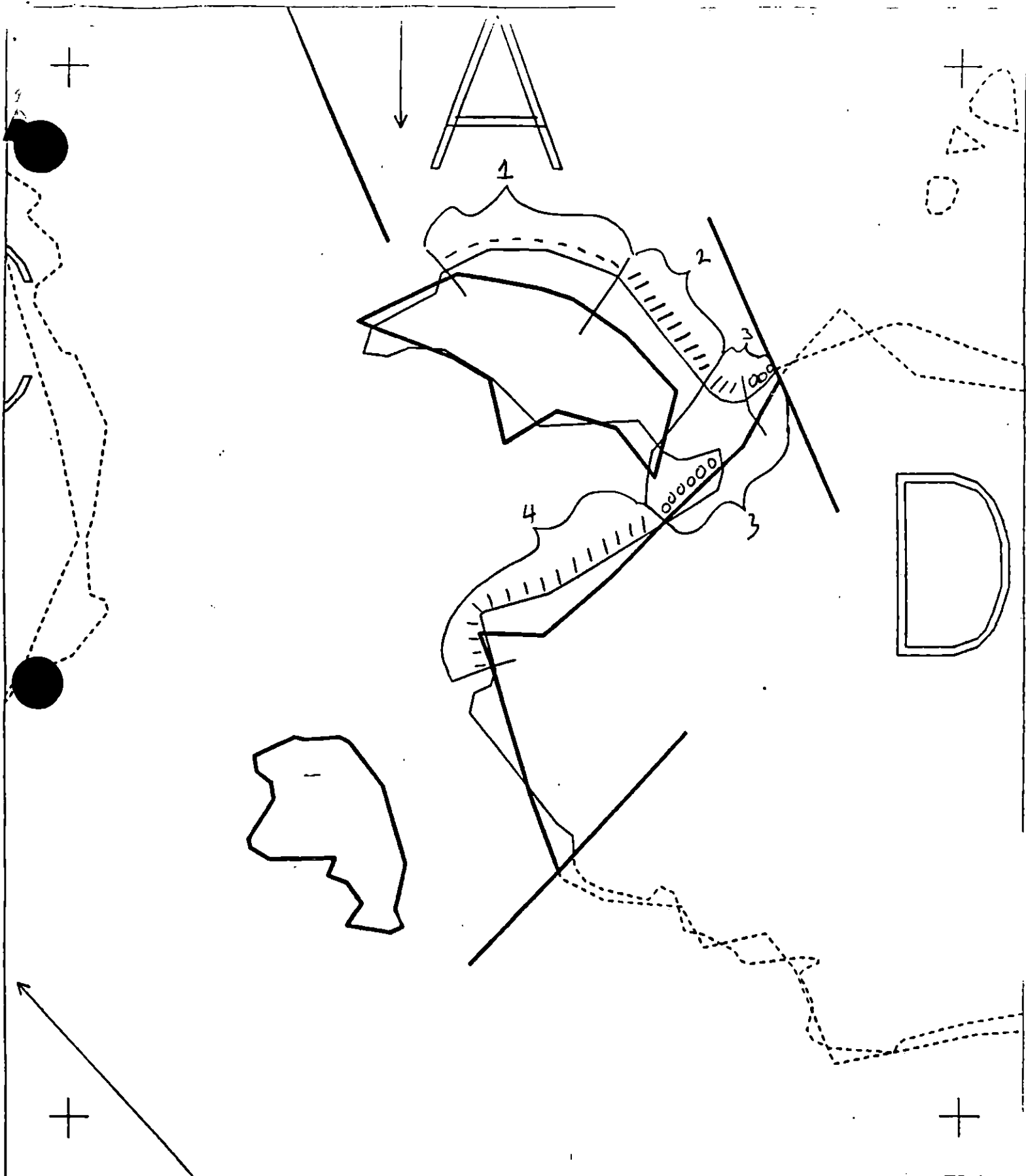
Subdivision Field Map

Map Key: PWSEV-54A

Name: Reimer

Date: 7/31/90

Data Entered:



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

EV-54 A
 ADEC Subsegment Length: 1108m
 METERS
 0 66 132
 AK State Plane Zone 4 1:2500
 nov-54a



Subdivision Field Map
 Map Key: PWSEV-54A
 Name: Reimer
 Date: 7/31/90
 Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-57

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ EV-57 SUBDIVISION A (1 OF 1) DATE 4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1F Sawmill Bay Hatchery release (4/15 to 6/1)
5T-3 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 149 m: V.Light 234 m: No Oil 5997 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 8/10)
 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 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)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EV-57 SUBDIVISION: A DATE 4/2

USCG

NAME Michael Buchman SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME John Hayes SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Team walked all pocket beaches and skiffed vertical bedrock shoreline.
Only oiling observed was a discontinuous tar band in 4 areas
of segment. Band was 6cm - 1m w/ weathered almost to stain.
Recovered 2 full bags of oil spill related from this
segment. No treatment recommended.

LAND MANAGER

NAME Steve Wardenchew SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 06/13/90

OG Mike Foget NOAA Mike Buckman SEGMENT ST/ EV-57
 BIO Kathleen Conlin LAND REP Steve Ward CVC SUBDIVISION A (1 OF 1)
 EXXON Larry Olson ADEC John Hayes TIME 7:00 to 10:00
 TEAM NO. 11 TIDE LEVEL -1' to +6' DATE 4/23/90
 EST. SUBDIVISION LENGTH: 7112 m ☐ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Rocky backshore on vert. Rock shoreline mostly forested back shore
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 20 % B 20 % C 25 % P 25 % G 10 % S 0 % M 0 % V 0 %
 SLOPE: Long 70 % Hang 20 % Vert 10 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 120 m VL 220 m NO 6772 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	10	15	17	18	20	25	30	35	40	45	50	55	SU	U	M	V
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN			X	X		X								X		
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X		X	X

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

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

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE see map#BAGS 2

Photographs:

Roll No. 0Frames 0

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	20	25	30	35	40	45	50	SU	U	M	U						
1	25					X	.		X									X					N	-		P, G, S
2	30					X	.		X									X					N	-		P, G
3	30					X	.		X										X				N	-		P, M
4	30					X	.		X									X					N	-		P, R
5	5					X	.		X									X					N	-		P, R
6	25					X	.		X										X				N	-		P, M

COMMENTS

Shore zone consists mostly of low angle cobble / pebble beaches, w/ some high angle beaches and steep boulder / rock shore zones. oiled debris was removed from the supra ITZ (see map). Also some staining was observed in the HITZ see map along high angle to R shore zones

REVIEWED Tw DATE 4-23-90

SEGMENT ST/ EV-57 SUBDIVISION A (1 OF 1)

REVISION 0412-00

[illegible]

REVIEWED *[Signature]* DATE 4-23-90

OG M. Foyet
 SEGMENT ST/ EV-57

SUBDIVISION A

DATE Y 123 90

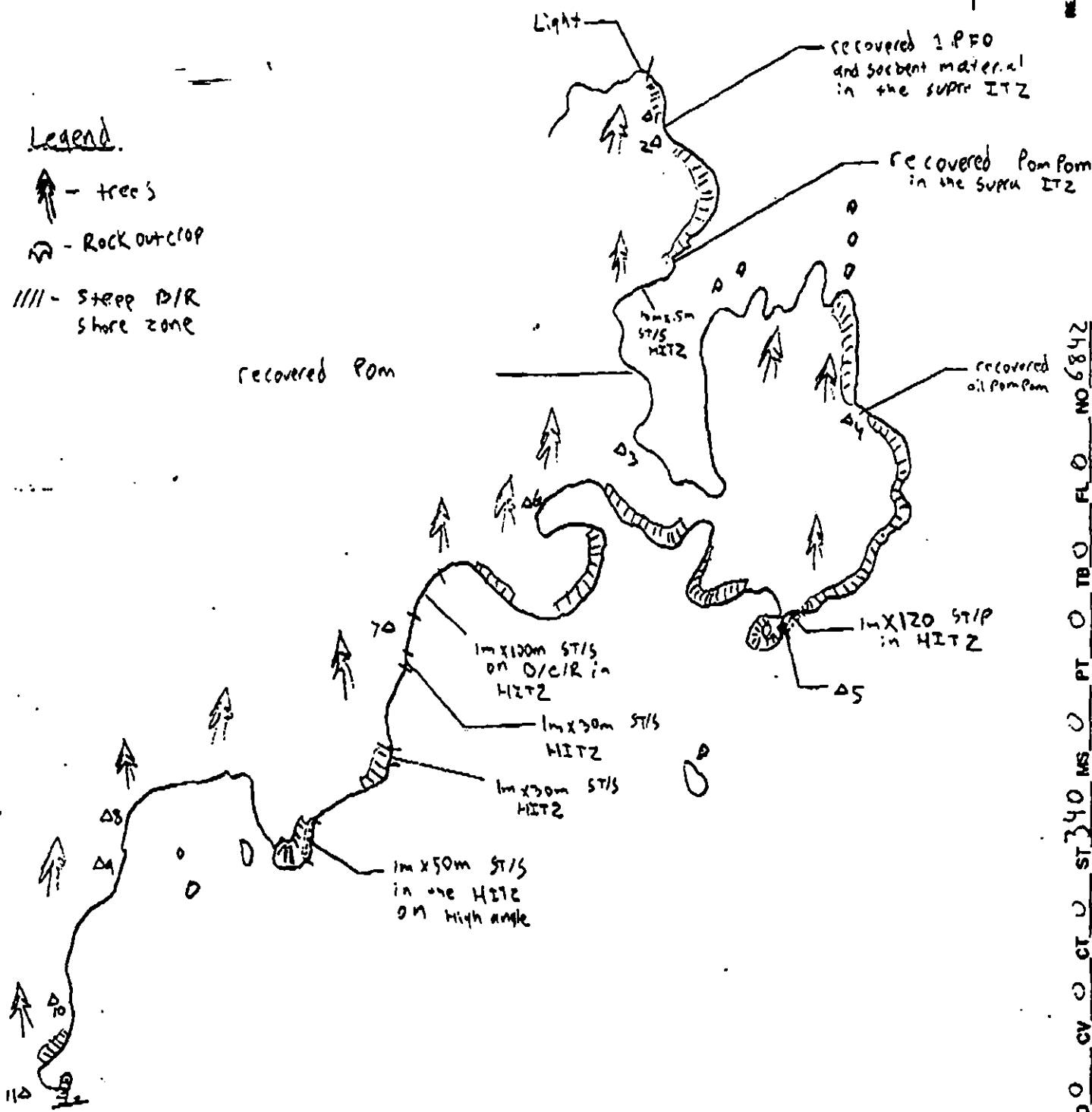
CHECKLIST

- ☐ M. Area
- ☐ Approx. Scale
- ☐ Sub/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWA/AMA
- ☐ SSI
- ☐ Profile Location(s)
- ☐ Profile(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 Stippled Distribution
- Oiled Vegetation
- 1 $\bullet$ Photo location, direction, and number

SKETCH MAP



Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 340 MS 0 PT 0 TB 0 FLO NO 6842

SHORELINE ECOLOGICAL SUMMARY

REVISION: 0322

Segment ST/EV-57 Subdivision A (1 OF 1) Date (mo/day/yr) 04/23/90Time (24 hr) 0630-1004 Biologist K. CONLAN

(A) Substrate type and % of segments:

(1) Bedrock 20 (2) Boulder 20 (3) Cobble 25 (4) Pebble 25 (5) Sand 10 (6) Silt 0(B) Overall % cover of biota (% of segment): Dense 30 Moderate 60 Low 10

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

Photographs:

Roll No. —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:

3 SEA OTTERS
 6 BALT EAGLES
 1 BEAR

NUMEROUS CROWS, GULLS (BONAPARTE, GLAUCOUS)

2 CANADA GOOSE

Ecological Considerations:

2 LAND OTTERS

4 MERGANSERS

PWS-256 c



EV

PWS-256 b



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-57

ADEC Segment Length: 7112m



Map Key: PWS-256d

Name: Mike Foget

Date: 4/23/90

Date Entered:

PWS-256d.

PWS-256a

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-57

ADEC Segment Length: 7112m

0 100 200 300
METERS

Map Key: PWS-256b

Name: Mike Fogge

Date: 4/23/90

Data Entered:

PWS-256c ↑

EV-

PWS-256b →

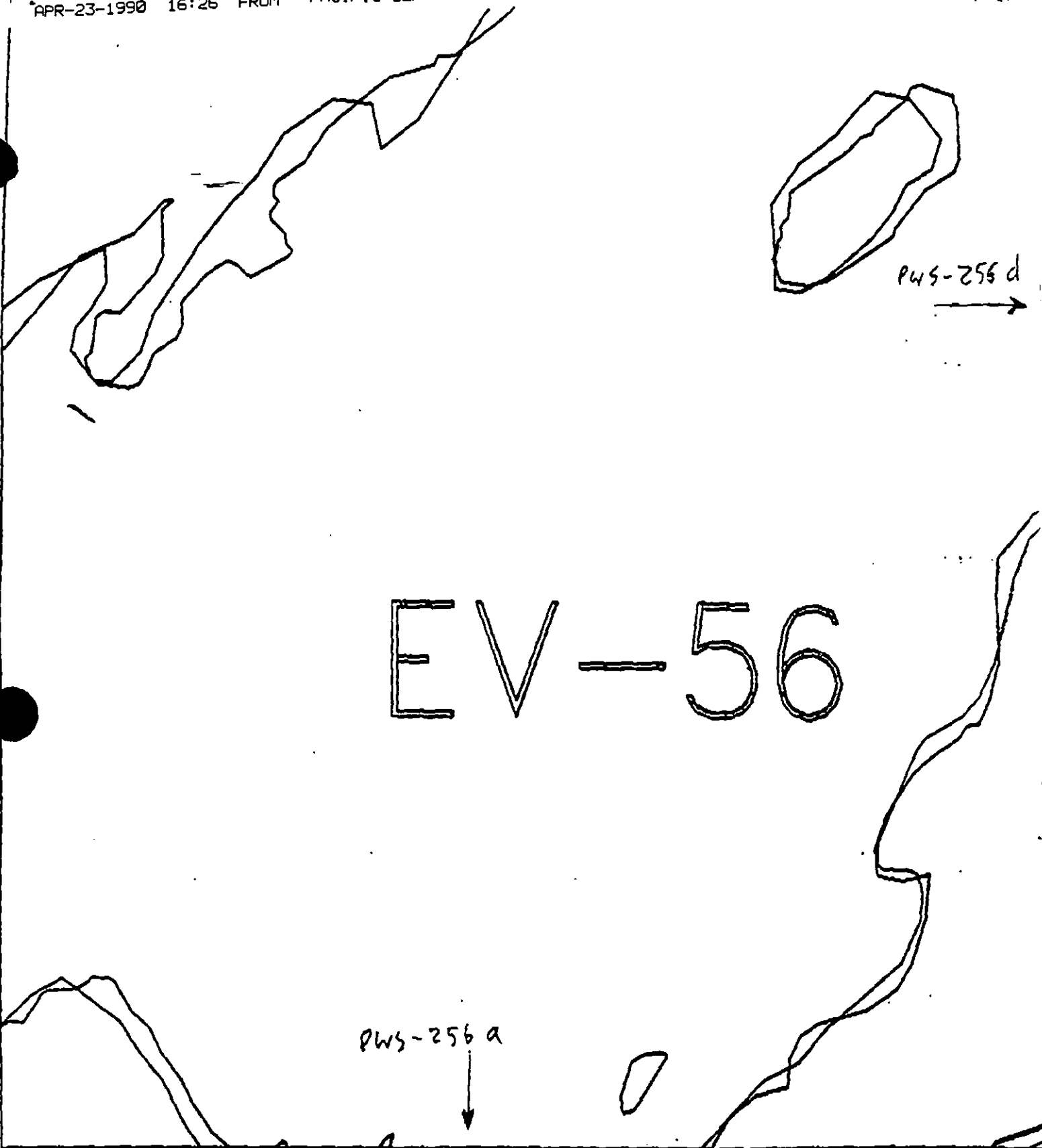
XXXX Wide
/// Medium
--- Narrow
TTTT Very Light
0000 No Oil

EV-5.7

ADEC Segment Length: 7112m



Map Key: PWS-256a
Name: Mike Foye
Date: 4/23/90
Date Entered:



EV-56

PWS-256 d
→

PWS-256 a
↓

XXXX Wide

//// Medium

--- Narrow

TTT Very Light

0000 No Oil

EV-57

ADEC Segment Length: 7112m



Map Key: PWS-256c

Name: Mike Fogel

Date: 4/23/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ EV-57 SUBDIVISION A (1 OF 1) DATE 4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1F Sawmill Bay Hatchery release (4/15 to 6/1)
5T-3 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Jones DATE: 5/3/90

OILING CATEGORIZATION:

Wide_0_m: Medium_0_m: Narrow_149_m: V.Light_234_m: No Oil_5997_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: 5/3/90.
ADEC ART WEINER Art Weiner
EXXON AMY TEAL Amy Teal
NOAA GARY PETRAE Gary Petrae
USCG KENNETH KEANE Kenneth Keane

FOSC: ML DATE: 5-18-80

OG M oyet

SEGMENT ST/ EV-57

SUBDIVISION A

DATE Y / 23 / 90

CHECKLIST

- ☐ M Area
- ☐ Approx. Scale
- ☐ Map/Sub Bathy
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LWL
- ☐ SSI
- ☐ 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
Spatched Distribution

Oil Vegetation

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

SKETCH MAP

Legend

- $\uparrow$ - trees
- $\sim$ - Rock outcrop
- //// - Steep D/R shore zone

scale



REVISIONS

recovered Pom

Light

recovered 1 PFO and solvent material in the super ITZ

recovered Pom Pom in the super ITZ

recovered oil Pom Pom

1m x 120 ST/P in HITZ

1m x 100m ST/S on D/C/R in HITZ

1m x 30m ST/S HITZ

1m x 30m ST/S HITZ

1m x 50m ST/S in the HITZ on high angle

Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 340 MS 0 TB 0 FLO NO 6842

PWS-256 c



EV

PWS-256 b



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-57

ADEC Segment Length: 7112m



Map Key: PWS-256d

Name: Mike Foget

Date: 4/23/90

Date Entered:



PWS-256d.

PWS-256a

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-57

ADEC Segment Length: 7112m

0 100 200 300
METERS

Map Key: PWS-256b

Name: Mike Fogge

Date: 4/23/90

Data Entered:

EV-56

PWS-256 d

PWS-256 a

XXXX Wide

//// Medium

--- Narrow

TTT Very Light

0000 No Oil

EV-57

ADEC Segment Length: 7112m



Map Key: PWS-256c

Name: Mike Foget

Date: 4/23/90

Data Entered:

PWS-256c ↑

PWS-256b →

EV-

EV-5.7

XXXX Wide

/// Medium

--- Narrow

T.TTT Very Light

0000 No Oil

ADEC Segment Length: 7112m



Map Key: PWS-256a

Name: Mike Foye

Date: 4/23/90

Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-58

SUBDIVISIONS: A

SHORELINE EVALUATION

SEGMENT ST/ EV-58 SUBDIVISION A (1 of 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Near Sawmill Bay Hatchery (1F)- 4/15 to 6/1; Finfish
Harvesting (7HH)- Chenega and ADF&G to provide dates; Deer
Harvesting (7II)- 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

ARCHAEOLOGICAL CONSTRAINTS: If treatment is planned, a cul-
tural resource evaluation is required prior to shoreline
treatment.

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

0 m Wide, 0 m Medium, 0 m Narrow, 14 m V. Light, 128 m No Oil
Subsurface Oil Observed X Yes No Maximum Depth 2 cm

RECOMMENDATIONS:

 X No Treatment Recommended
 Treatment Recommended
 Manual Pickup Snare Booms/Sorbents Tarmat Breakup/Removal
 Bioremediation SPOT WASHING Other
 Wands
 Beach Cleaner

Comments: Recommended no treatment as only very light, sporadic
surface oiling found here. Please see field shoreline comment
sheet.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / 58-A SUBDIVISION: A+B DATE 3/30/90

USCG NOAA

NAME GARY SHIGENAKA

SIGNATURE Gary Shigenaka

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

58A-1 OVERCAST AND SNOWING BUT GOOD ACCESS TO ALL PORTIONS OF BEACH. EVIDENCE OF OILING VERY SPORADIC WITH PATCHY OILED SPOTS MANIFESTED BY SILVER SHEEN. THESE WERE LIMITED TO A 4-5 M BAND IN THE MID-INTERTIDAL ZONE. AREA RICHLY POPULATED BY AMPHIPODS, LIMPETS, SNAILS, MYTILUS, BARNACLES, HERMIT CRABS, ANNELID WORMS, AND STARFISH. GOOD NEW GROWTH OF FUCUS. BEACH APPEARS TO BE HEALTHY AND OIL IMPACTS MINIMAL.

58A-2 WAS ROCKY HABITAT WITH HEAVY ALGAL GROWTH (FUCUS AND FILAMENTOUS RED). LIGHT POPULATIONS OF BARNACLES AND LIMPETS, LOTS OF SNAILS IN TIDPOOLS. LOTS OF MUSSEL SHELLS BUT FEW LIVE ORGANISMS. ONLY EVIDENCE OF OILING ON THIS STREET WAS A SHEEN IN A POOL STIRRED BY BOAT.

ADMINISTRATIVE NOTES - EQUIPMENT ISSUED IS MORE THAN ADEQUATE, BUT SUGGEST SUPPLYING OF RITE-IN-RAIN BOOKS AND MECHANICAL PENCILS. (THANKS TOM C.)

ADEC

NAME John Hayes

SIGNATURE John Hayes

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

In assessing Island we found two small patches of oil film with a maximum pt. of 3 cm. saturation. Island had healthy colonies of fucus, mussels, and barnacles. Recommend no treatment for this area with the exception being manual removal of oiled substrate. Reserve Sensitive area because of Port San Juan Hatchery in vicinity. No mechanical treatment that would produce sheens or have adverse impact on healthy beach front. Two small patches of oil approx 50cm x 20cm located in M&T2 see map for exact location. We also noted 3 tan stains on rocks in U&T2 max. thickness was 2mm. NO treatment rec. as stains were weathering well.

LAND MANAGER

NAME

SIGNATURE

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Mike Foget ^{NOAA} USCG Gary Shigenake SEGMENT ST/ EV-58A
 BIO Richard Ambrose LAND REP — SUBDIVISION 1 (1 of 2)
 EXXON Larry Olson ADEC John Hayes TIME 8:30 to 10:00
 TEAM NO.: 11 TIDE LEVEL: -1 to -2 DATE 3/30/90
 EST. SUBDIVISION LENGTH: 180 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Vertical rocky uplands w/ forest covering to SU
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 20 % B 10 % C 40 % P 30 % G — % S — % M — % V — %
 SLOPE: Long 60 % Hang 40 % Vert — % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W — m M — m N — m VL 30 m NO 150 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	IC	IB	IP	IS	SEL BR	SEL RW	SEL SL	SEL TL	SEL LBT		SU	UI	MI	U
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT				X	X								X	
STAIN														
MOUSSE														
PATTIES														
TARBALLS														
FILM				✓	✓								✓	
NO OIL											✓	✓		✓

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			
Debris	X		

DEBRIS COLLECTED

☒ YES ☐ NOTYPE Oil Pom-pom#BAGS —

Photographs:

Roll No. ST-11-1Frames 2 to 5

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UC	UC	SEL BR	SEL RW	SEL SL	SEL TL	SEL LBT		SU	UI	MI	U		
1	20				X		0-2	X	X									X			C, M
2	20				X		0-2	X	X									X			C, M
3	30					X	.											X			C, M
							.														
							.														
							.														

COMMENTS

Beach is a high angle beach w/ a dark grey angular shale oil is located in the mid intertidal and is very light in oiling. The two Areas w/ oil are located in the center of the beach. Both zones are approximately 15 m x 2 m (L x W).

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / EVO58A Subdivision 1 Date (mo / day / yr) 3 / 30 / 90

Time (24 hr) 0830 Biologist Ambrose

- (A) Substrate type and % of segments:
 (1) Bedrock 20 (2) Boulder 10 (3) Cobble 40 (4) Pebble 30 (5) Sand — (6) Silt —
- (B) Overall % cover of biota (% of segment): Dense 10 Moderate 60 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 (⊙)

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	X	2	2	2	X	X	2	2	2	2	2
3	X	3	3	3	X	3	3	3	3	3	3
4	4	4	4	X	X	4	4	4	4	4	4
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 Otters, 1 crow, 1 Harlequin Duck.

lots of empty bivalve shells, sea stars. Rich intertidal biota.

Ecological Considerations:

None specified by code on list. Fucus is abundant and would be sensitive to trampling.

OG M. Fogel

SEGMENT ST/ EU-58A

SUBDIVISION 1 (1 of 2)

DATE 3 / 30 / 90

CHECKLIST

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

LEGEND

1 ▲

Pit - No Subsurface Oil

2 ▲

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

1 ➡

Photo location, direction,
and number

SKETCH MAP

Scale

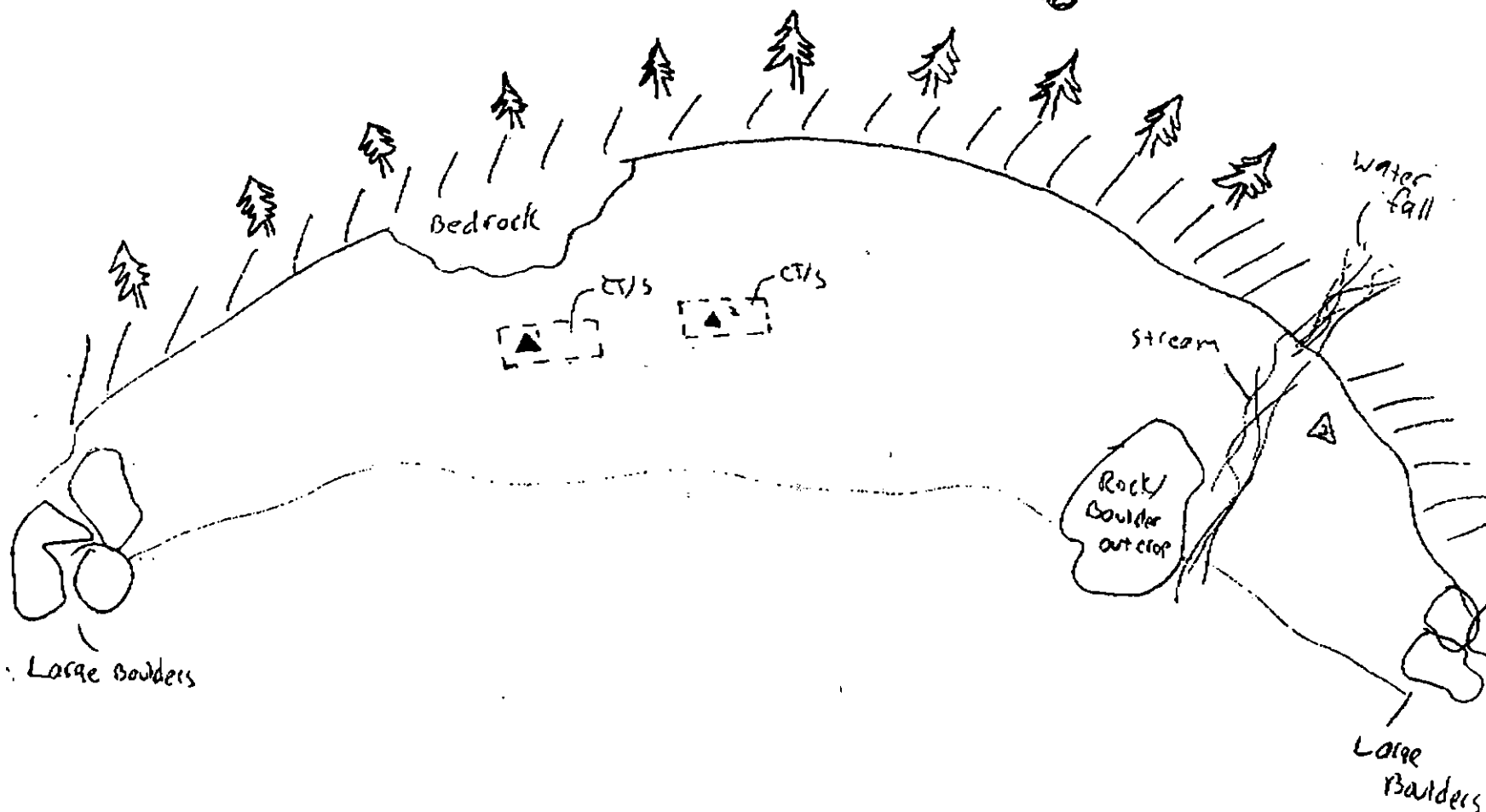
10 m

Legend

/// - rocky backshore

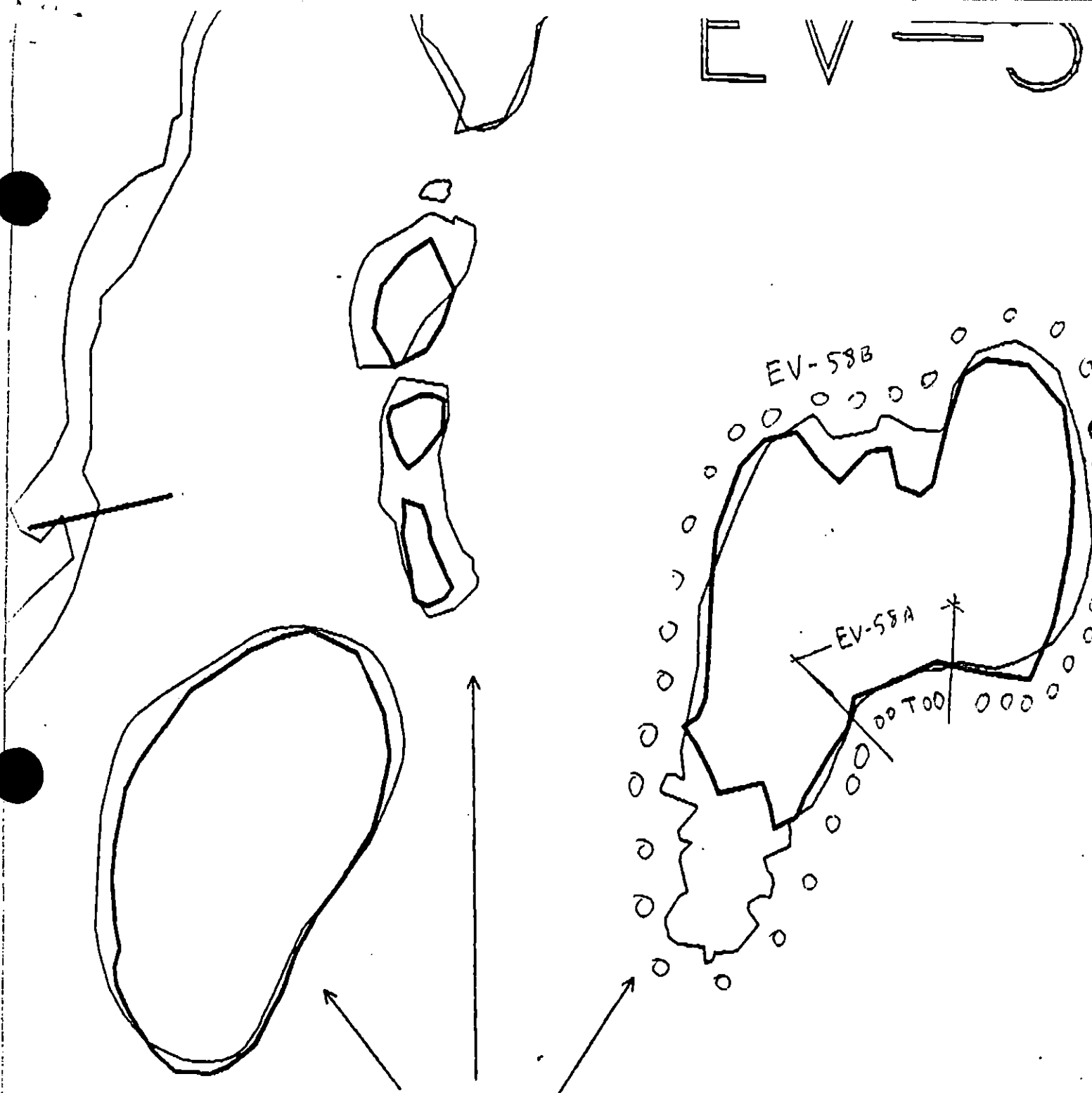
▲ - tree

○ - rock / boulder



Oil Character Length (m): AP PO CV CT 30 ST MS PT TB FL NO 270

EV-58



EV-58

XXXX Wide

//// Medium

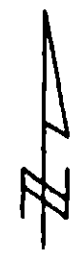
--- Narrow

TTTT Very Light

0000 No Oil

EV-58

ADEC Segment Length: 4589m



Map Key: PWS-257a

Name: Mike Fogel

Date: 3/30/90

Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-58

SUBDIVISIONS: B

SHORELINE EVALUATION

SEGMENT ST/ EV-58 SUBDIVISION B (2 of 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Near Sawmill Bay Hatchery (1F)- 4/15 to 6/1; Finfish
Harvesting (7HH)-Chenega and ADG&G to provide dates; Deer
Harvesting (7II)- 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

ARCHAEOLOGICAL CONSTRAINTS: If treatment is planned, a cul-
tural resource evaluation is required prior to shoreline
treatment.

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

0 m Wide, 0 m Medium, 0 m Narrow, 0 m V. Light, 1605m No Oil
Subsurface Oil Observed Yes X No Maximum Depth _____

RECOMMENDATIONS:

X No Treatment Recommended
____ Treatment Recommended
____ Manual Pickup _____ Snare Booms/Sorbents _____ Tarmat Breakup/Removal
____ Bioremediation SPOT WASHING _____ Other
____ Wands
____ Beach Cleaner

Comments: No treatment recommended for this subdivision as no
oil was found. Please see field shoreline comment sheet (attached).

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Mike Foget ^{NOAA} USCG Gary Shigenaka SEGMENT ST/ EV-58 B.
 BIO Richard Ambrose LAND REP --- SUBDIVISION 2 (2 of 2)
 EXXON Larry Olson ADEC John Hayes TIME 10:00 to 10:40
 TEAM NO.: 11 TIDE LEVEL: +2' to -0.5' DATE 3/30/90
 EST. SUBDIVISION LENGTH: 1800 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 15 % P 10 % G 5 % S 5 % M 5 % V --- %
 SLOPE: Lang 35 % Hang 65 % Vert --- % WAVE EXPOSURE: ☐ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W --- m M --- m N --- m VL --- m NO 1800 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	B	P	S	SBL BR	DBL RW	GY SL	DBH TL	LBR	SU	UI	ME	U
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT													
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										X	X	X	X

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

PATTIES / TARBALLS --- BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE ---

#BAGS ---

Photographs:

Roll No. ---

Frames ---

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS	
		OP	OR	OL	OF	NO		UO	UC	SBL BR	DBL RW	GY SL	DBH TL	LBR	SU	UI	M	U				
1	20					X	-		X							X						P, M
1	15					X	-		X								X					P, S, M
							.															
							.															
							.															
							.															

COMMENTS

Mostly high angle Rock, Boulder Shore zone, w/ some Boulder cobble shale beaches. Walked approximately 300 meters of beach on the N. side of the island. No oil was observed with two observation pits located on the North shore of the Island

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/EV058 Subdivision B Date (mo / day / yr) 3/30/90

Time (24 hr) 1000 hrs Biologist Ambrose

- (A) Substrate type and % of segments:
 (1) Bedrock 40 (2) Boulder 20 (3) Cobble 15 (4) Pebble 10 (5) Sand 10 (6) Silt 5
- (B) Overall % cover of biota (% of segment): Dense 10 Moderate 60 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. —
 Frames —

BARNACLES

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

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

NOT PRESENT

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

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	X	X	2	2	2	2	2	2
3	3	3	3	X	X	3	3	3	3	3	3
4	4	4	4	X	X	4	4	4	4	4	4
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 Otters and several gulls seen.

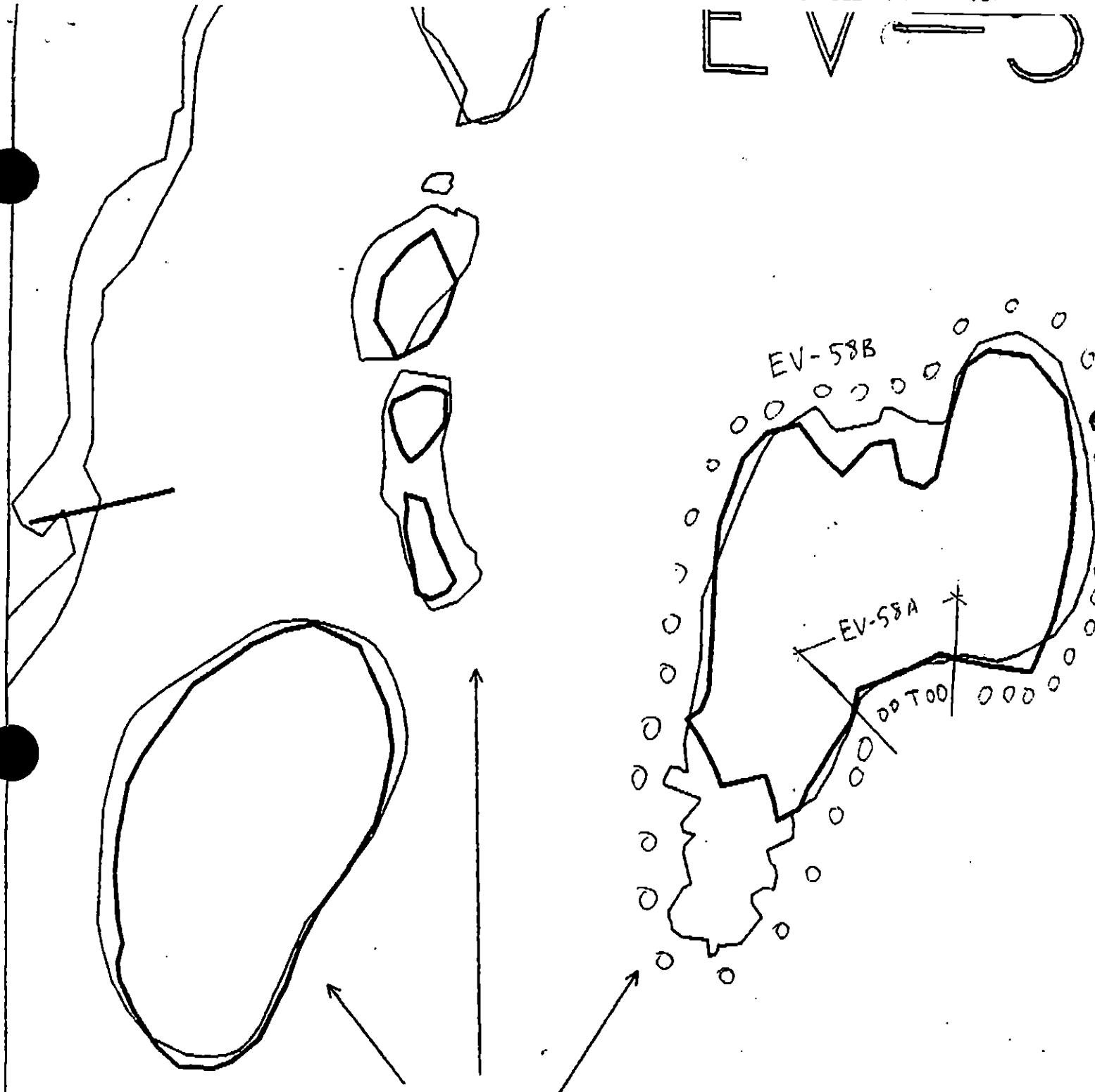
Lots of empty clam and mussel shells, some eelgrass in tidal pool. Rich intertidal biota.

Ecological Considerations:

1F, 7HH and 7II - no specific location is relevant.

*Note: only about 300 m of beach actually walked; Fucus could be observed from boat, but not other species.

EV-58



EV-58

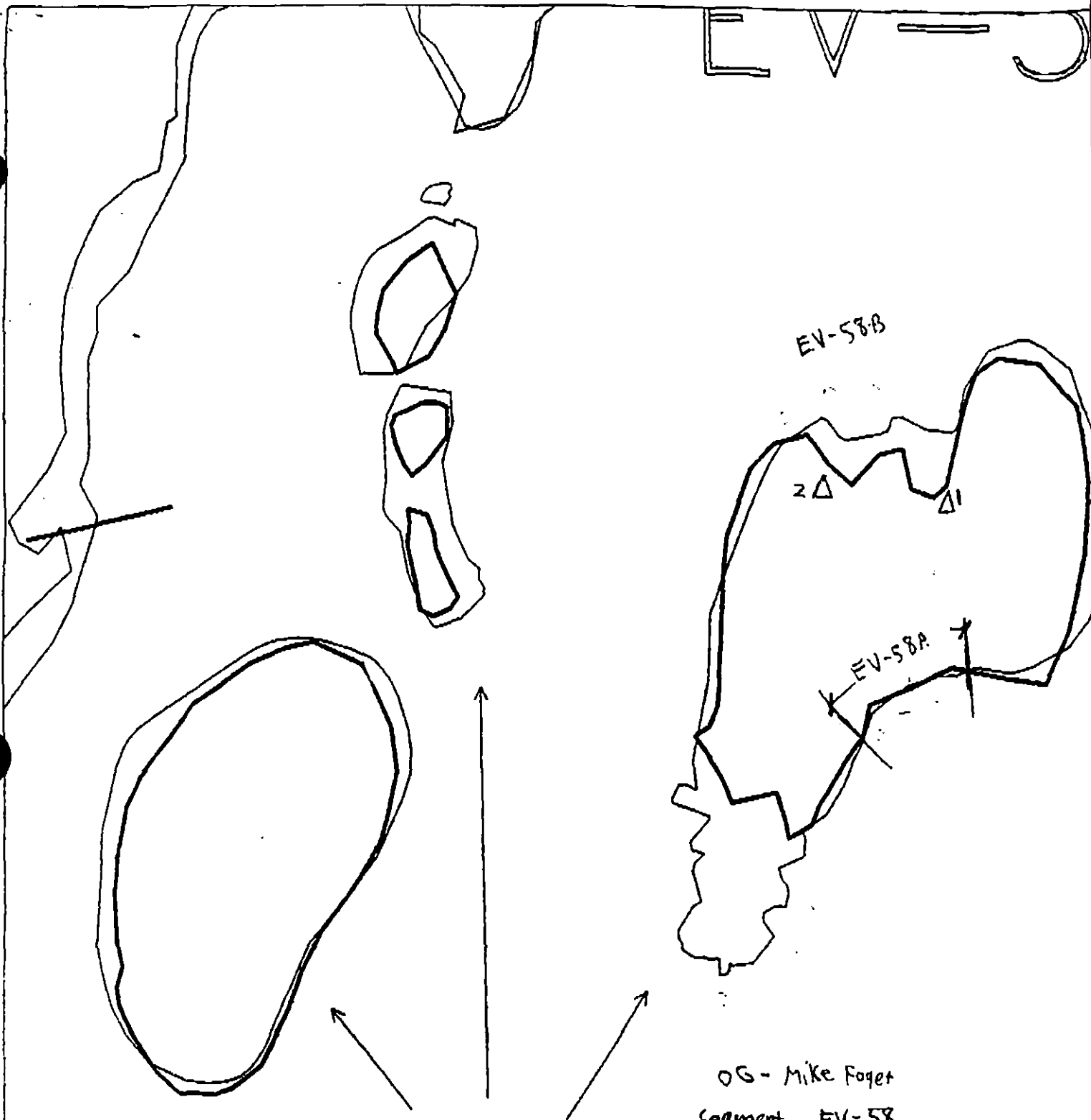
XXXX Wide
//// Medium
--- Narrow
TTTT Very Light
0000 No Oil

ADEC Segment Length: 4589m

0 100 200 300
METERS

Map Key: PWS-257a
Name: Mike Fogel
Date: 3/30/90
Date Entered:

EV-58



OG - Mike Foget
 Segment - EV-58
 Subsegment-B (2 of 2)

Legend

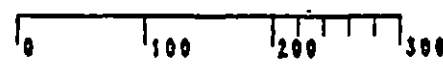
1Δ P+ - No Substrate Oil

EV-58

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

EV-58

ADEC Segment Length: 4589m



METERS

Scale: 210 meters



Map Key: PWS-257a
 Name: Mike Foget
 Date: 3/30/90
 Data Entered:

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / 58-A SUBDIVISION: A & B DATE 3/20/90

WAC renumbered from A1-A2 to A & B

USCG NOAA

NAME GARY SHIGENAKA

SIGNATURE Gary Shigenaka

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

OVERCAST AND SNOWING BUT GOOD ACCESS TO ALL PORTIONS OF BEACH. EVIDENCE OF OILING VERY SPORADIC WITH PATCHY OILED SPOTS MANIFESTED BY SILVER SHEEN. THESE WERE LIMITED TO A 4-5M BAND IN THE MID-INTERTIDAL ZONE. AREA RICHLY POPULATED BY AMPHIPODS, LIMPETS, SNAILS, MYTILUS, BARNACLES, HERMIT CRABS, ANNELID WORMS, AND STARFISH. GOOD NEW GROWTH OF FUCUS. BEACH APPEARS TO BE HEALTHY AND OIL IMPACTS MINIMAL.

58A-B WAS ROCKY HABITAT WITH HEAVY ALGAL GROWTH (FUCUS AND FILAMENTOUS RED). LIGHT POPULATIONS OF BARNACLES AND LIMPETS, LOTS OF SNAILS IN TIDEPOOLS. LOTS OF MUSSEL SHELLS BUT FEW LIVE ORGANISMS. ONLY EVIDENCE OF OILING ON THIS STREET WAS A SHEEN IN A POOL STIRRED BY BOAT.

ADMINISTRATIVE NOTES - EQUIPMENT ISSUED IS MORE THAN ADEQUATE, BUT SUGGEST SUPPLYING OF RITE-IN-RAIN BOOKS AND MECHANICAL PENCILS. (THANKS TOM C.!)
 RITE-IN-RAIN BOOKS AND MECHANICAL PENCILS.

ADEC

NAME John Hayes

SIGNATURE John Hayes

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

In assessing Island we found two small patches of oil film with a maximum oil of 3 cm. saturation. Island had healthy colonies of fucus, mussels, and barnacles. Recommend no treatment for this area with the exception being manual removal of oiled substrate. Reserve Sensitive area because of Pt San Juan Hatchery in vicinity. No mechanical treatment that would produce sheens or have adverse impact on healthy beach present.

Two small patches of oil approx 20cm x 20cm located in M12 are map for exact location. We also noted 3 thin stains on rocks in U12 max. thickness was 2mm. NO treatment rec. for stains were weathering well.

LAND MANAGER

NAME _____

SIGNATURE _____

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

SHORELINE EVALUATION

SEGMENT ST/ EV-58 SUBDIVISION A (1 of 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Near Sawmill Bay Hatchery (1F) - 4/15 to 6/1; Finfish
Harvesting (7HH) - Chenega and ADF&G to provide dates; Deer
Harvesting (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

ARCHAEOLOGICAL CONSTRAINTS: If treatment is planned, a cul-
tural resource evaluation is required prior to shoreline
treatment.

SHPO SIGNATURE: Charles Z. Adams DATE: 4/6/90

OILING CATEGORIZATION:

0 m Wide, 0 m Medium, 0 m Narrow, 14 m V. Light, 128m No Oil
Subsurface Oil Observed X Yes No Maximum Depth 2cm

RECOMMENDATIONS:

X No Treatment Recommended
 Treatment Recommended
 Manual Pickup Snare Booms/Sorbents Tarmat Breakup/Removal
 Bioremediation SPOT WASHING Other
 Wands
 Beach Cleaner

Comments: Recommended no treatment as only very light, sporadic
surface oiling found here. Please see field shoreline comment
sheet.

TAG COMMENTS:

TAG APPROVAL DATE: 4/6/90

ADEC JOHN BAUER
EXXON ANDY TEAL
DAA Burl Wescott
USCG G.A. REITER

FOSC:

DATE: 4-19-90

OG Mill ~~oget~~

SEGMENT ST/ EU-58A

SUBDIVISION 1 (1 of 2)

DATE 3 / 30 / 90

CHECKLIST

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

LEGEND

- 1 ▲
Pit - No Subsurface Oil
- 2 ▲
Pit - Subsurface Oil
- CT/C
Continuous Distribution
- CT/B
Broken Distribution
- CT/P
Patchy Distribution
- CT/S
Splashed Distribution
- Oiled Vegetation
- 1 ●→
Photo location, direction, and number

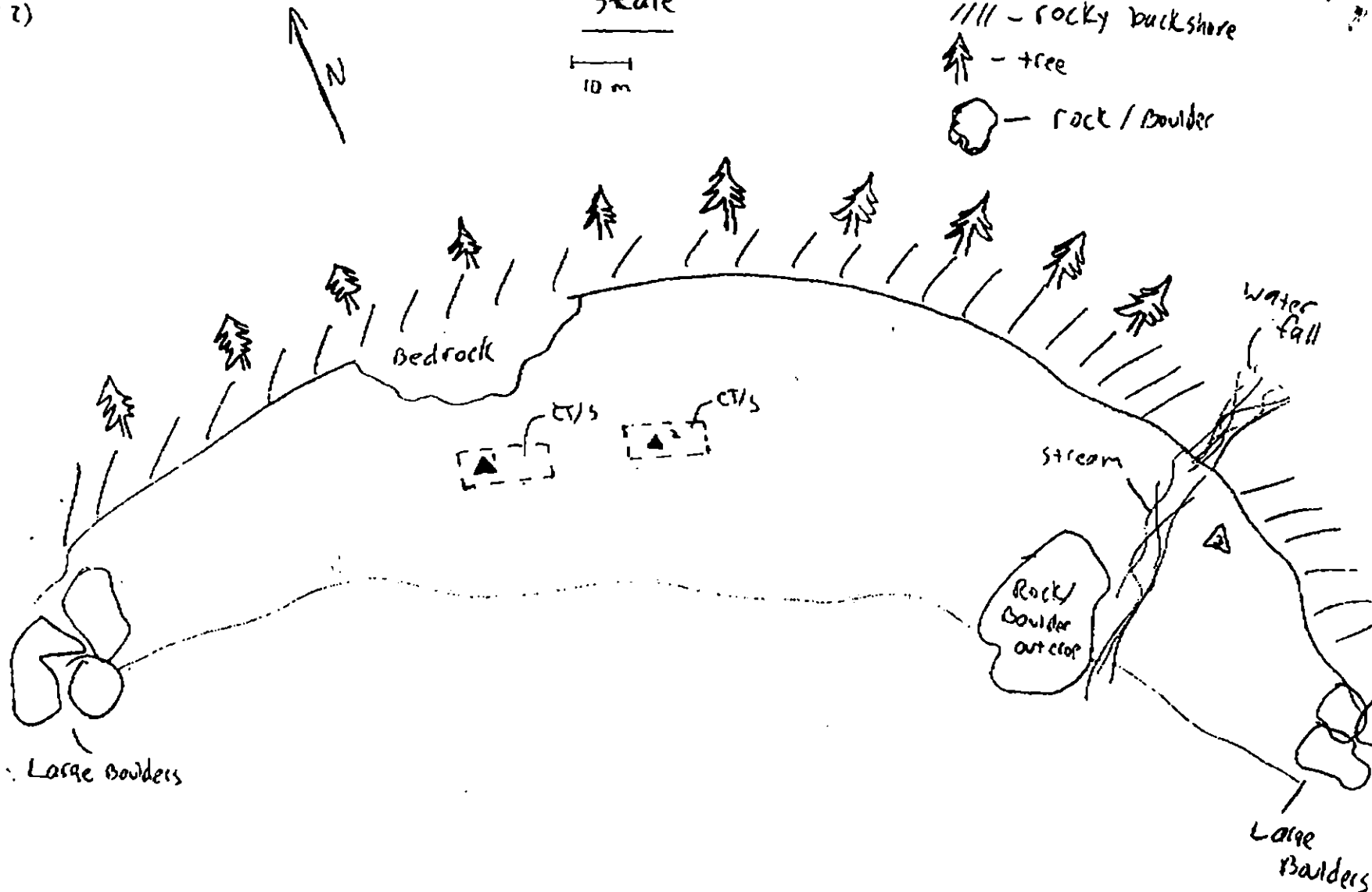
SKETCH MAP

Scale

10 m

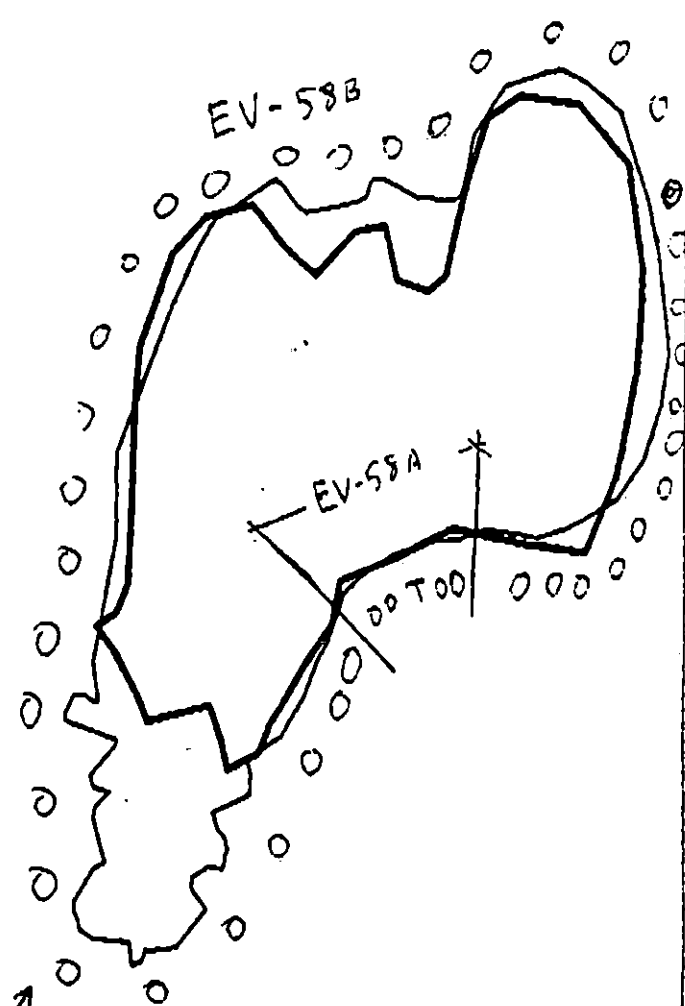
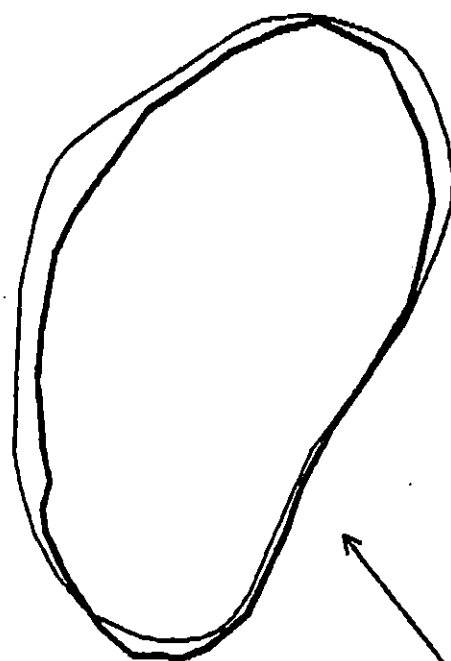
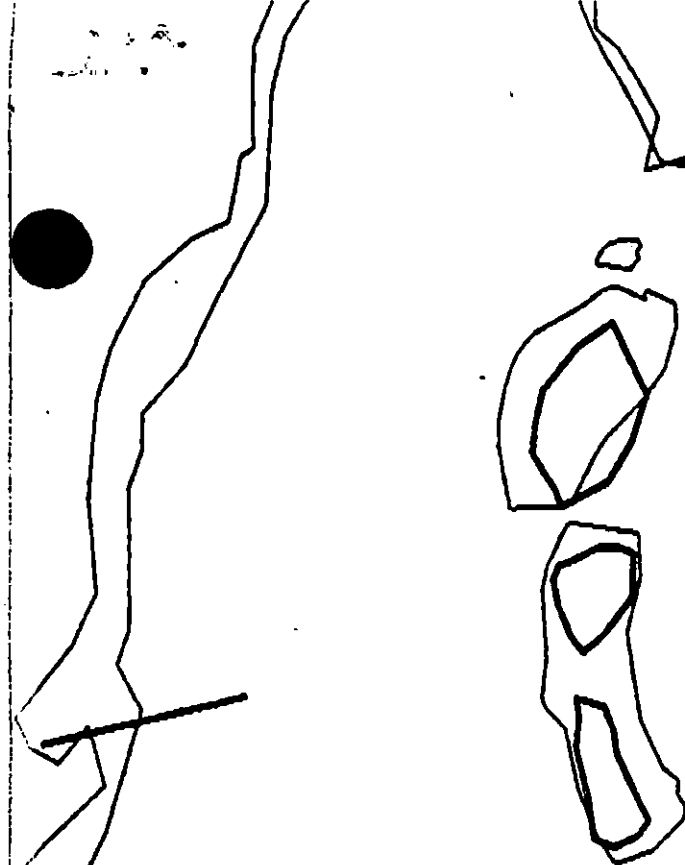
Legend

- /// - rocky backshore
- ▲ - tree
- - rock / boulder



Oil Character Length (m): AP PO CV CT 30 ST MS PT TB FL NO 270

EV-58



EV-58

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

EV-58

ADEC Segment Length: 4589m



Map Key: PWS-257a
Name: Mike Fogel
Date: 3/30/90
Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ EV-58 SUBDIVISION B (2 of 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Near Sawmill Bay Hatchery (1F)- 4/15 to 6/1; Finfish
Harvesting (7HH)-Chenega and ADG&G to provide dates; Deer
Harvesting (7II)- 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

ARCHAEOLOGICAL CONSTRAINTS: If treatment is planned, a cul-
tural resource evaluation is required prior to shoreline
treatment.

SHPO SIGNATURE: Charles E. Horner

DATE: 4/6/90

OILING CATEGORIZATION:

0 m Wide, 0 m Medium, 0 m Narrow, 0 m V. Light, 1605m No Oil
Subsurface Oil Observed Yes X No Maximum Depth _____

RECOMMENDATIONS:

X No Treatment Recommended
____ Treatment Recommended
____ Manual Pickup ____ Snare Booms/Sorbents ____ Tarmat Breakup/Removal
____ Bioremediation SPOT WASHING ____ Other
____ Wands
____ Beach Cleaner

Comments: No treatment recommended for this subdivision as no
oil was found. Please see field shoreline comment sheet (attached).

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/6/90

ADEC

JOHN BAUER

EXXON

ANDY TATE

DAA

Burl Wescott

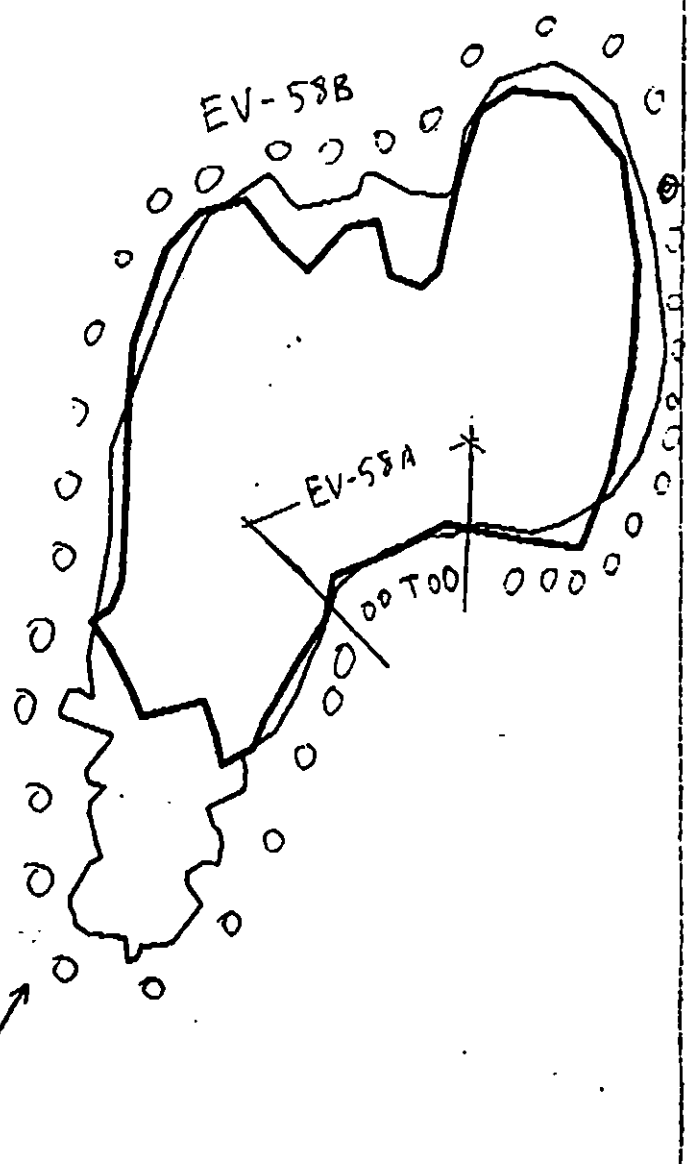
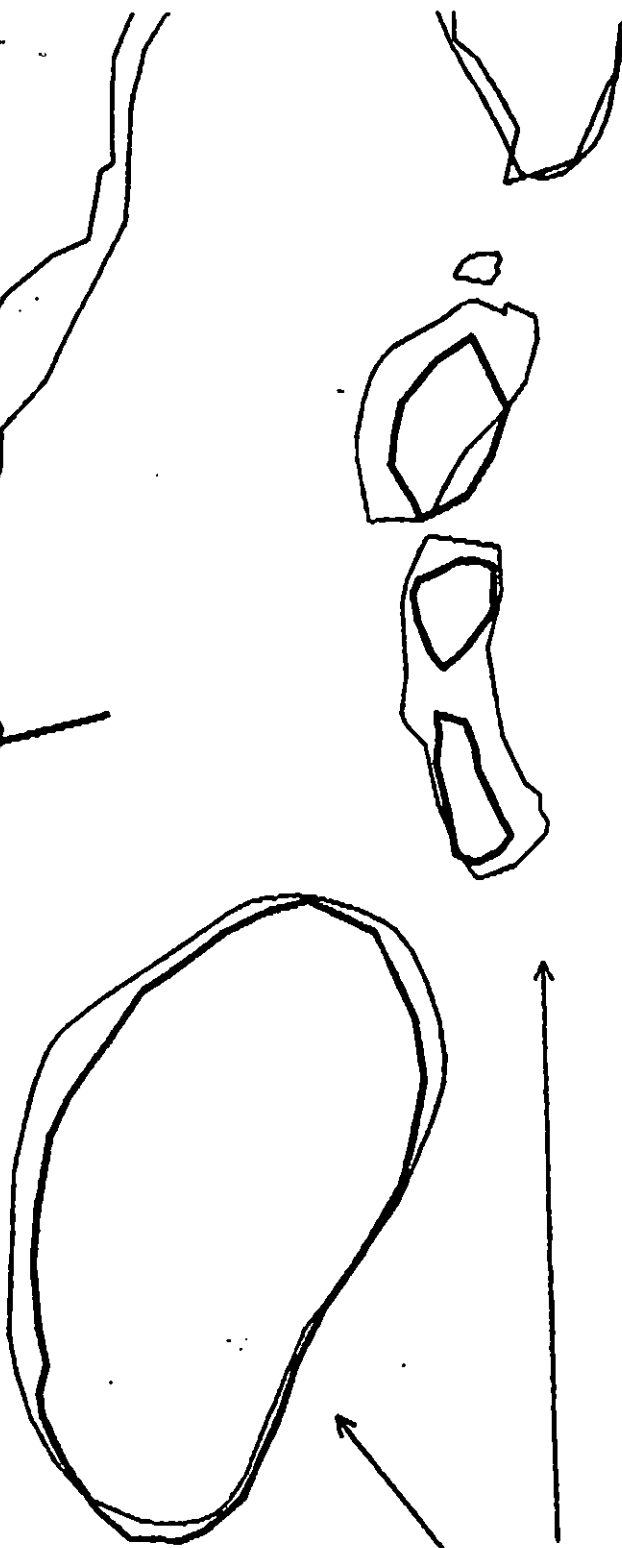
SCG

G.A. KETTER

FOSC: M L

DATE: 4-19-90

EV-58



EV-58

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-58

ADEC Segment Length: 4589m



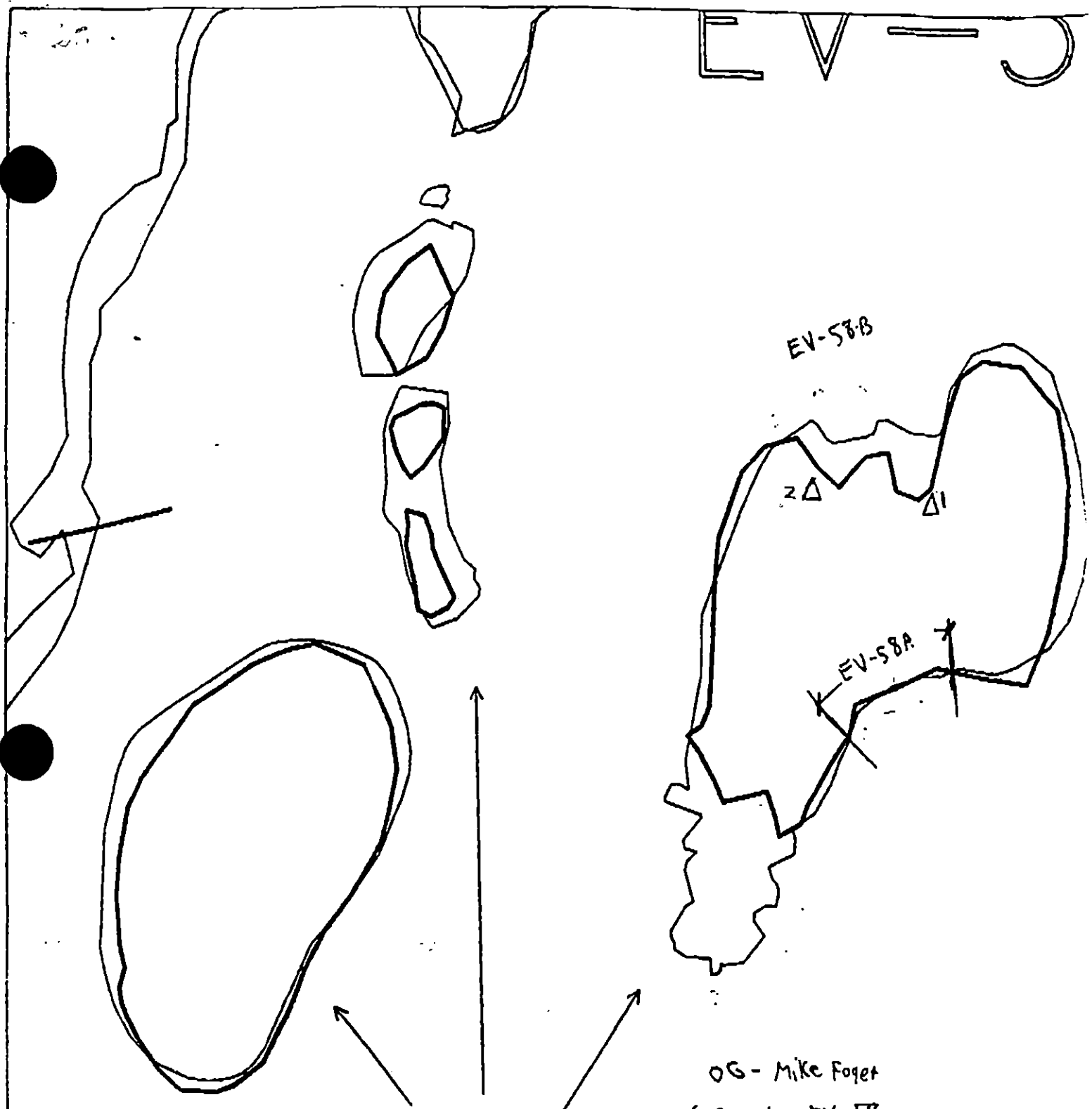
Map Key: PWS-257a

Name: Mike Fogel

Date: 3/30/90

Date Entered:

EV-58



OG - Mike Foget
Segment - EV-58
Subsegment-B (2 of 2)

Legend

1 Δ Pit - No Substrate Oil

EV-58

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

EV-58

ADEC Segment Length: 4589m



Map Key: PWS-257a
Name: Mike Foget
Date: 3/30/90
Data 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*	PERMIT REQUIRED

*REQUIRES LAND MANAGER'S APPROVAL

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. Subdivision is closed to bioremediation less than 100m from stream without ADF&G authorization. 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 uncollected biota and substrate.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (226-40-16613)

FOR ADDITIONAL CONSTRAINT INFORMATION

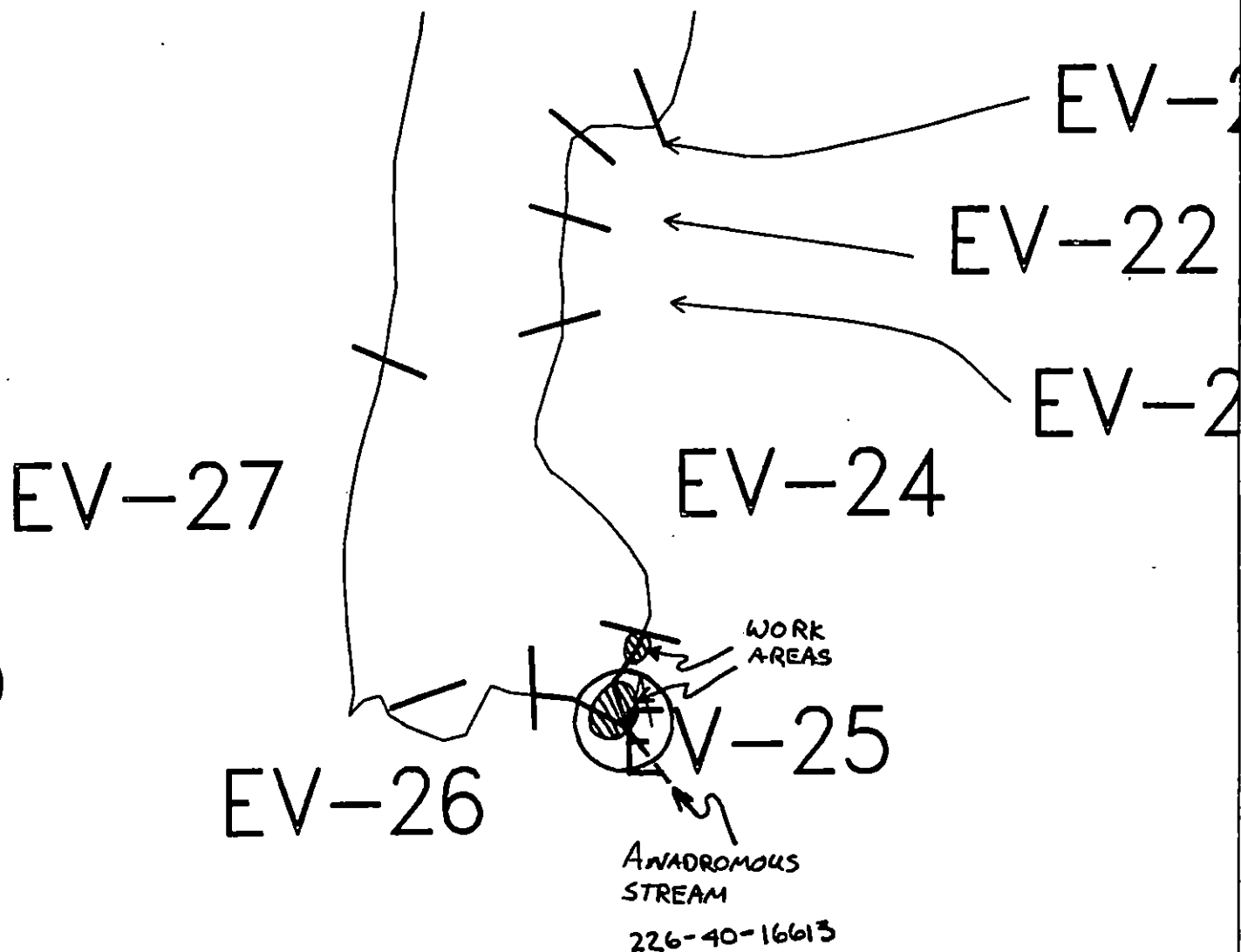
TAG ADDENDUM DATE 5/24/90
ADEC ART WEINER
EXXON ANDY TEAR
NOAA BURROUGHS
USCG W. J. HALL

FOSC my L

DATE 5-24-90

Prepared by: Arden Meyer WPK

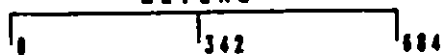
Date: 5/23/90



on Company, USA
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 J. H. [Signature]

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:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

X Bioremediation

X Tarmat: X Breakup

X Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommended treatment includes 1) manual 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 Constraint Addendum 5/23/90] LUK

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

DEC

ART WEINER

EXXON

ANDY TEN

NOAA

Bud Wesscott

USCG

KENNETH KRAMER

FOSC: [Signature]

DATE: 5-1-90

Do not bioremediate IAW Lm's design.

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 Z. Hume

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:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

X Bioremediation

X Tarmat: X Breakup

X Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommended treatment includes 1) manual 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:

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 Art Weiner

EXXON ANDY TET

NOAA Bud Wesoff Bud Wesoff

USCG KENNETH KEANE

FOSC:

DATE: 5-1-90

Do not bioremediate IAW Lm's desires.

SEGMENT ST/ EV-25

SUBDIVISION

DATE 4 / 8 90

CHECKLIST

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

LEGEND

1 Δ
Pk - No Subsurface Oil

2 Δ
Pk - Subsurface Oil

CT/C
Continuous Distribution

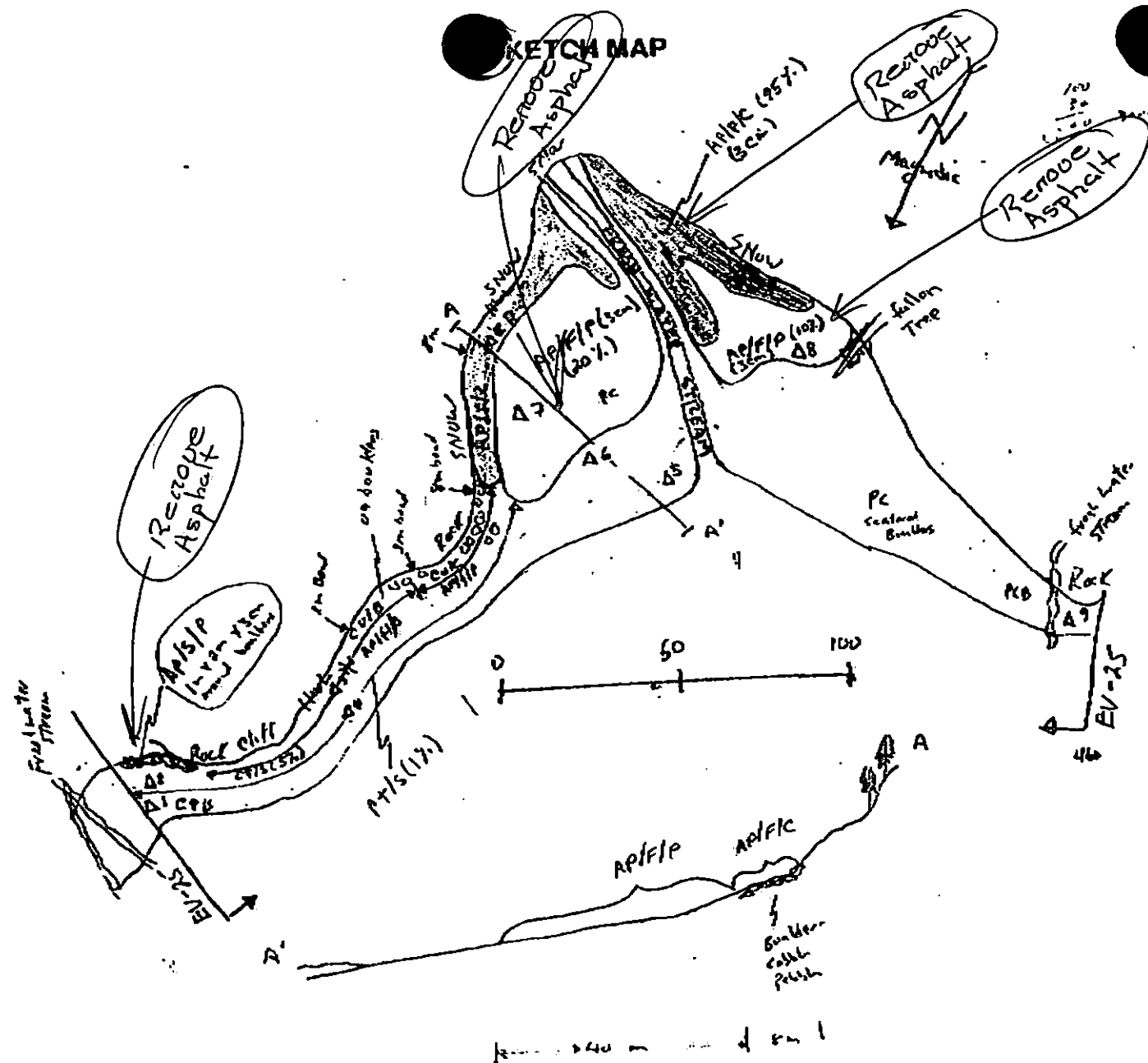
CT/B
Broken Distribution

CT/P
Patched Distribution

CT/S
Splashed Distribution

Oiled Vegetation

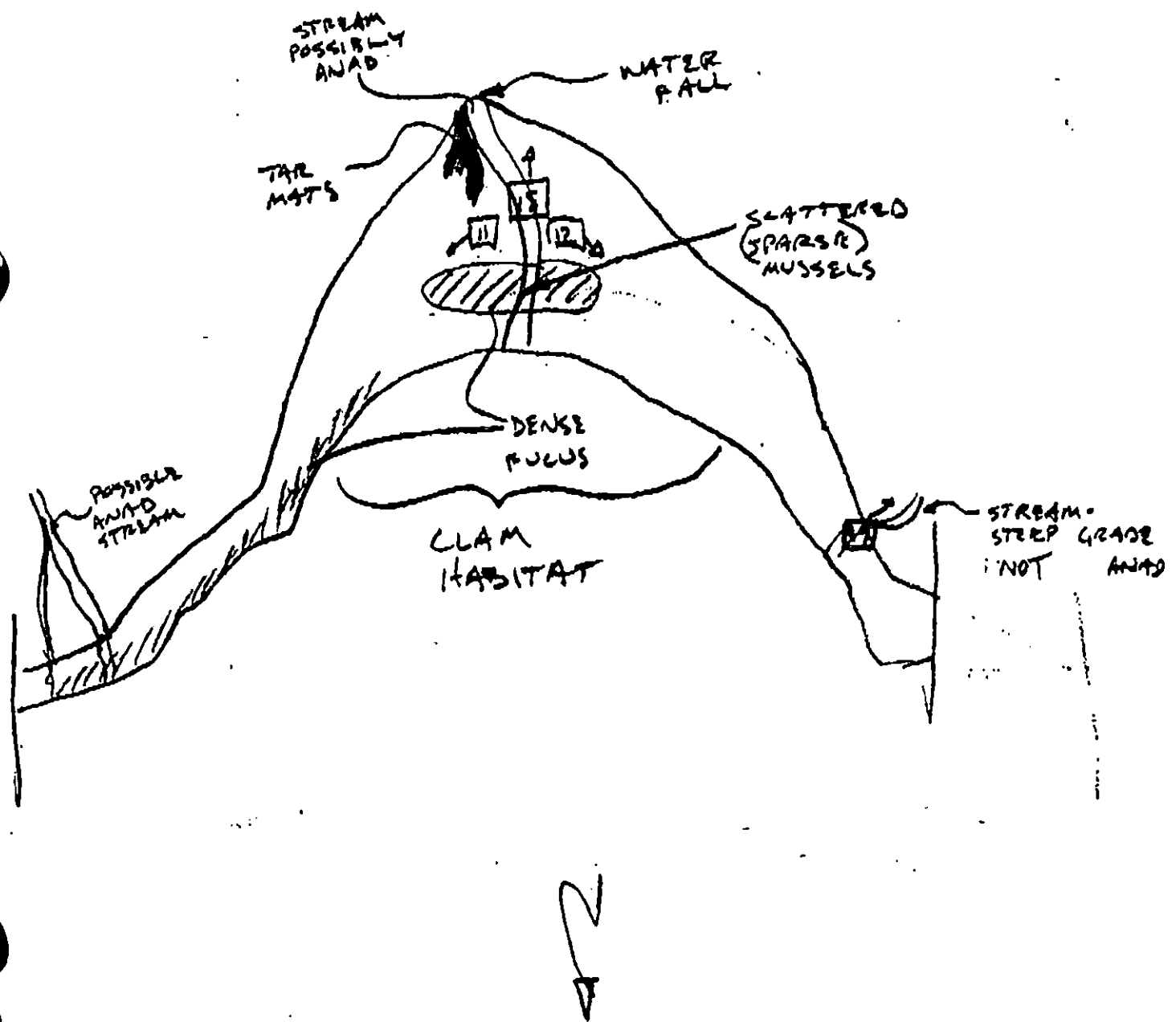
1 $\Rightarrow$
Photo location, direction, and number



Oil Character Length (m): AP 120 PO — CV 100 CT 75 ST — MS — PT 150 TB — FL — NO 80

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

0 100 200 300
METERS

Map Key: PWS-194

Name: Reimer

Date: 4/8/90

Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: EV 025 SUB: A REGION: PWS SURVEY DATE: 5/2/91

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)

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**

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. 6 SEGMENT EV-025-A SUBDIVISION A DATE 05/02/91

ADEC/ADFTG

NAME Aimee Weseman

SIGNATURE

Aimee Weseman

☐ NTR ☒ Treatment Recommended. This stream/beach area is a good example of where very intrusive clean-up techniques, not only did no discernable harm, but greatly enhanced the area's speedy recovery from the oil contamination, to a healthy biological state see Exxon, NOAA comments. Thousands of pounds of oily sediments (surface & subsurface) were removed in 1990 & the area does not look at all disturbed & is quite healthy & stable. To complete treatment-removal of remaining AP sediments in areas B & C along the stream bank. Since the survey was rushed (approx 30 min) I was unable to discern if the gravel tongue midstream still contains oil. This area could be explored & filled, if necessary, at the same time.

This 'more harm than good argument' is getting old & lacks validity in many cases.

EXXON

NAME RANDALL K. BOYER

SIGNATURE

Randall K. Boyer

☒ NTR I HAVE HEARD COMMENTS FROM ALL AGENCIES THAT AN EXCELLENT CLEAN UP EFFORT OCCURED ON THIS SUBDIVISION IN 1980. THE RESULTS ARE APPARENT. SCATTERED PILES OF AP WERE IDENTIFIED ALONG BOTH STREAM BANKS. THE VECO CREW COLLECTED THESE CONCENTRATIONS OF SURFACE OILING. THIS SUBDIVISION IS ENVIRONMENTALLY HEALTHY AND SIGNS OF WILDLIFE WERE ALL AROUND IN SHELTER BAY. CERTAINLY SOME OF THE LARGEST FLOCKS OF DUCKS I HAVE SEEN IN THE SOUND.

LANDMANAGER

NAME CHARLES SELANOFF OF CHENEBA BAY

SIGNATURE

Charles Selanoff

☐ NTR Due to the short time spent there because of tide-level, a heavy abundance of oil was observed plus a lot of oil sheen. More time should be surveyed in this area. But more manual clean-up should be highly utilized.

USCG/NOAA

NAME CWO R. SPURR/Rebecca Hoff

SIGNATURE

RT Spurr / Rebecca Hoff

☒ NTR This cove looks very healthy biologically, with a diversity of biota. A few patches of asphalt were picked up & remaining surface oil represents negligible threat to biological resources.

This survey was rushed due to incoming tide, more time should have been allowed to completely survey this segment and possibly identify additionally oiled areas.

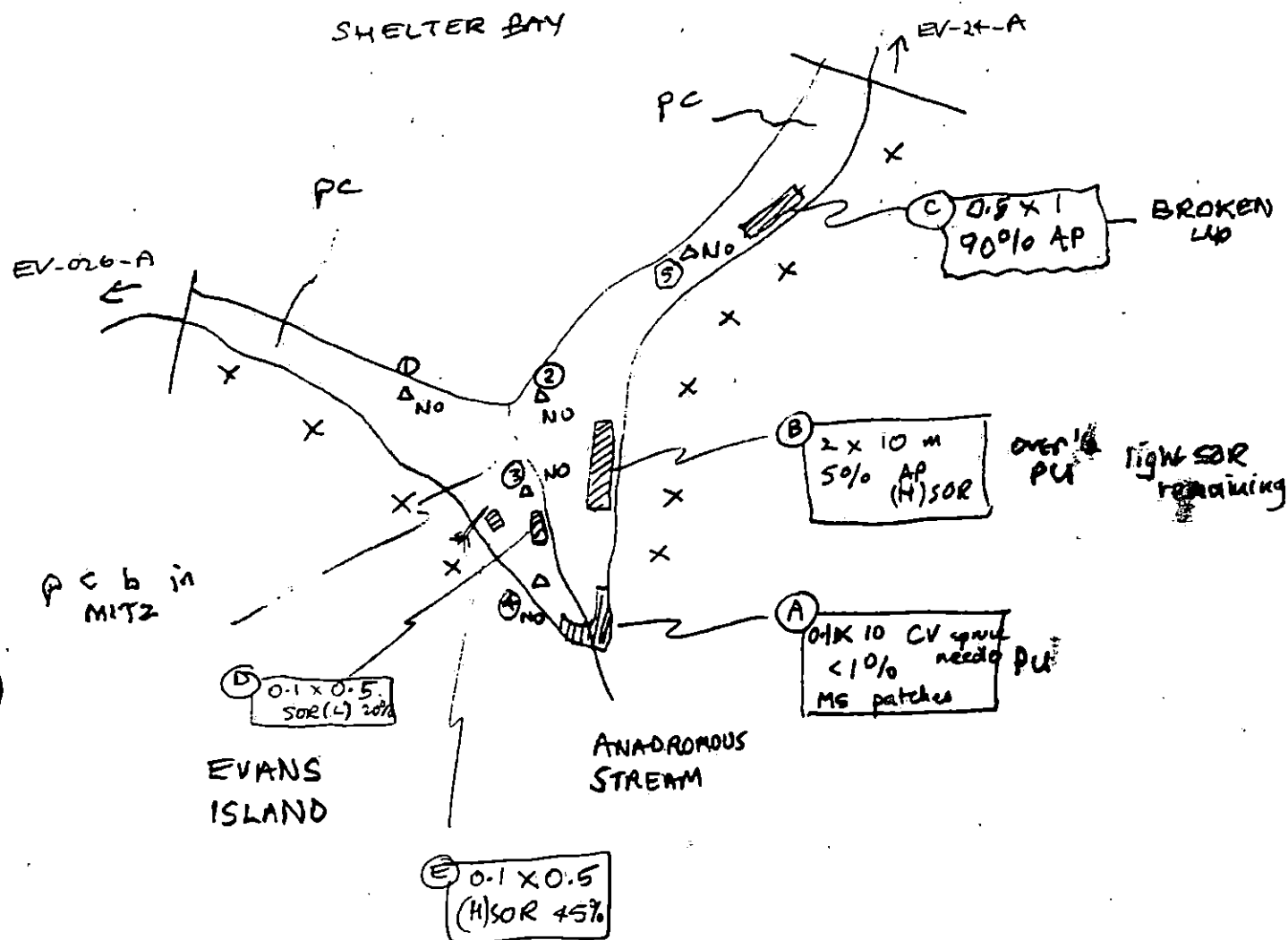
Revised: MC 5/9/91
revised KG 5/11/91

xx Bedrock

0 meters 50



EV-025-A 05/02/91
OG Map D.I. Little
1235-1315



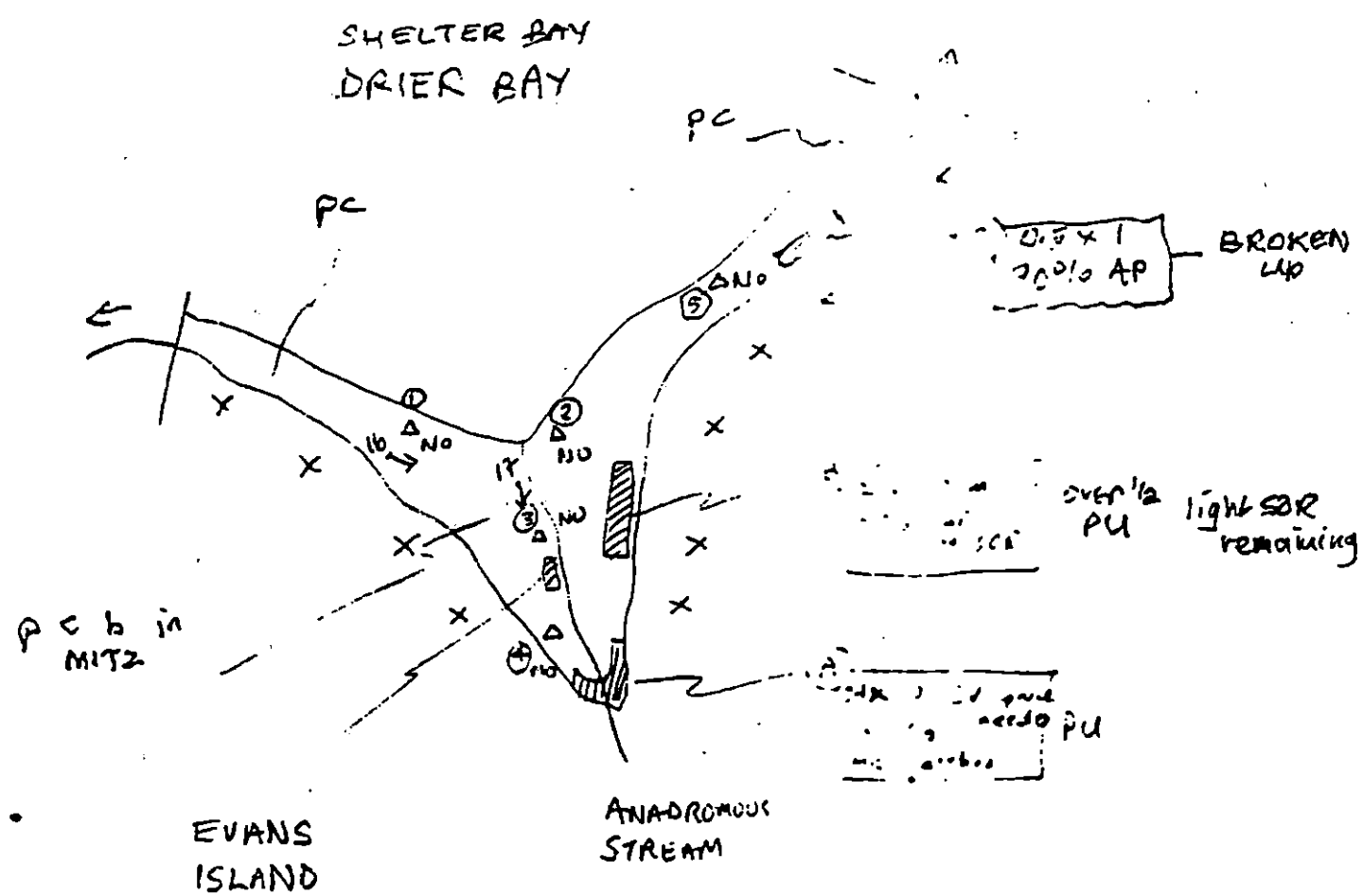
#	PIT	TD	oil	clean below	W/T	sed's	sheen	zone
①	20	N	4	—	P-gs	—	LITZ	
②	20	N	4	18	gp-spld	—	LITZ	
③	15	N	4	15	pg-gs	—	MITZ	
④	20	N	4	—	cg-sg	—	UITZ	
⑤	15	N	4	10	pcg-gsp	—	MITZ	

REVIEWED: 5/9/91 MY
reviewed 5/31

Mapap 6-05 # 16-17

xx Bedrock

EY-025-A 05/02/91
OG Map D.I. Little
1235-1315



#	PIT	TD	oil	clays below	W/T	sed's	sheen	zme
①	20	N	4	—	P-gs	—	LITZ	
②	20	N	4	18	gp-sphal	—	LITZ	
③	15	N	4	15	pg-gs	—	MITZ	
④	20	N	4	—	cg-sg	—	UITZ	
⑤	15	N	4	10	pcg-gsp	—	MITZ	

NAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 DATE 5/2/91
 SEGMENT # EV-025 TIDAL HEIGHT (Range)
 SUBDIVISION A BIOLOGIST T. R. Schroeder
 SEA STATE 2-3 ft chop WIND SPEED/DIRECTION N-NE 30 mph +
 PHOTOGRAPHS: ROLL # FRAME #

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

(A, B, D & E) = AP and (H) SOR located on steep graded beach. Very little vegetation located on the immediate area. Thick bed of fucus kelp and sporlings located on eastern portion of subdivision, but thins out considerably as it approaches the anadromous stream. Mussels, limpets, littorine snails and egg masses present, but not very numerous. Could not observe LITZ, but in this long bay and protected corner of the bay, this portion of the intertidal zone should be very productive.

The steep grade of shoreline and narrow cove could result in extensive damage to biological communities if intensive cleanup methods are used to remove oil.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl	3	34	
Gulls/Kittiwakes	1	1	
Shorebirds	1	2	
Corvids			
Other Birds	1	20	

LAND MAMMALS

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

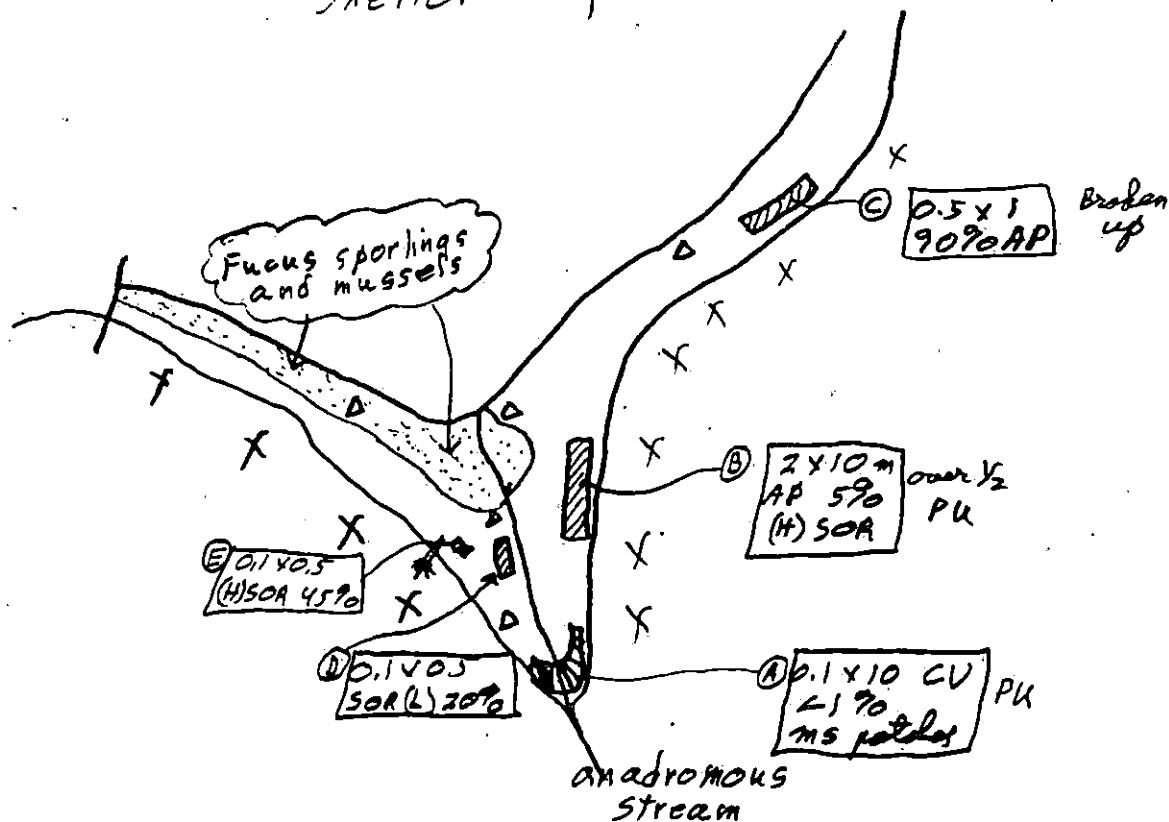
Shoreline subdivision map showing important biological features attached.

0 25 50
meters

N
↑

EV-025-A 5/2/91
Bio. Map T.R. Schroeder
1235-1315

Shelter Bay



ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ EV-25 A STREAM NO: 226-40-16613 DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
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 in Subdivision A (1 of 1).

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature] DATE: 5/8/90

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)

COMMENTS: Recommended treatment includes removal of pavement and manual pickup of patties as indicated on sketch map. *Bioremediate area of pits #2 and 3, first approved by ADF&G. Work should be conducted between 5/15 and 7/10 based on anadromous stream constraints.

TAG COMMENTS: REMOVE ANY OILED DEBRIS / UNATTACHED OILED VEGETATION.
MONITOR TO ASSESS SUITZ

TAG APPROVAL DATE: 5/17/90
ADEC Art W. Goren FOSC: [Signature] DATE: 5-18-90
EXXON Andy Tan
NOAA Gary Petros
USCG G.A. Reiter

NOTIFY CVC 24 HRS IN ADVANCE OF WORK

00 CALL LARSON

SEGMENT ST/ EV-25 A

226-46-16613

STREAM

DATE 1 90

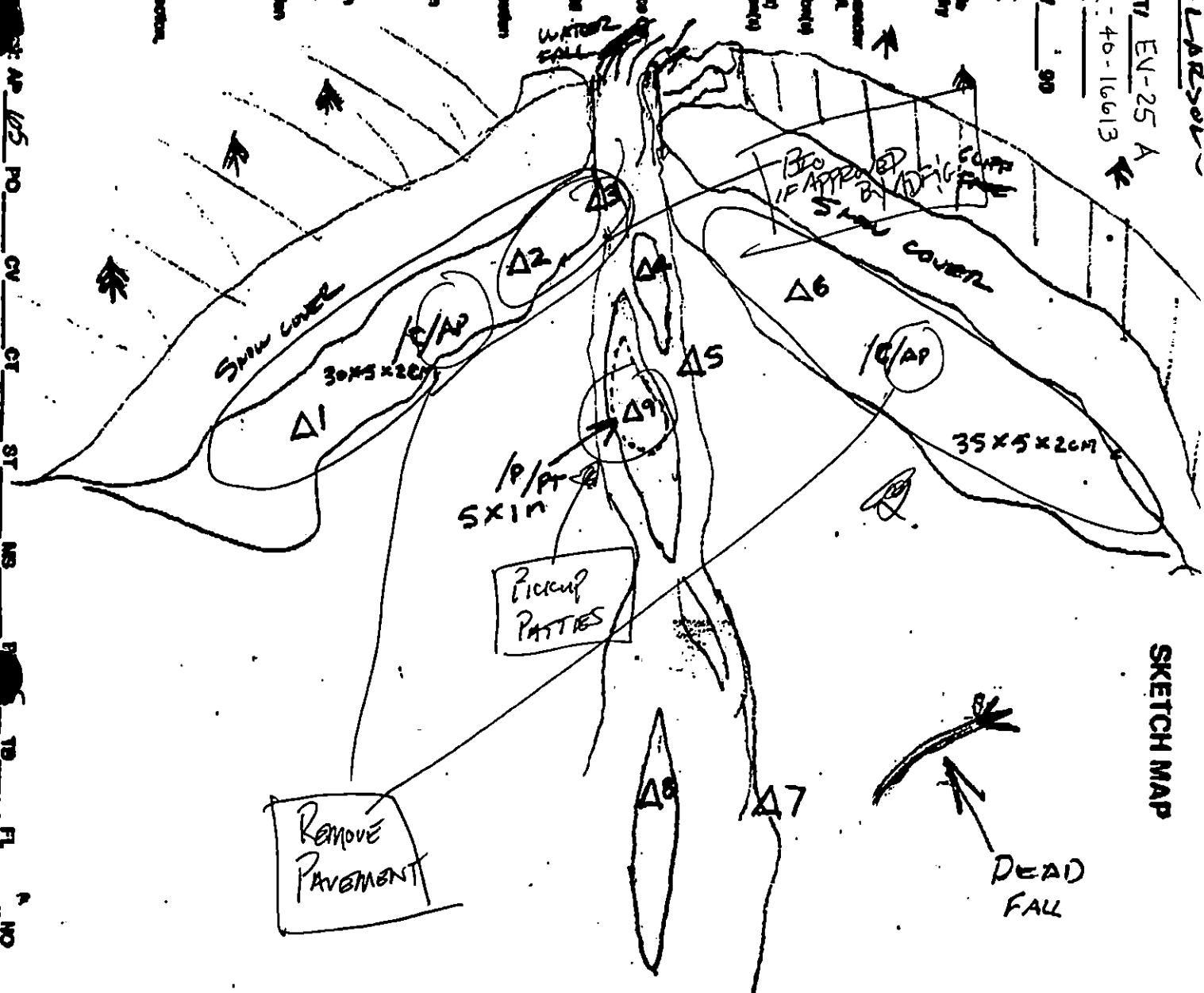
CHECKLIST

- ☐ M. Aves
- ☐ Mammals
- ☐ Reptiles
- ☐ Amphibians
- ☐ Fish
- ☐ Invertebrates
- ☐ Plants
- ☐ Fungi
- ☐ Mosses
- ☐ Lichens
- ☐ Soil
- ☐ Sediment
- ☐ Water
- ☐ Air
- ☐ Noise
- ☐ Light
- ☐ Temperature
- ☐ Humidity
- ☐ Wind
- ☐ Clouds
- ☐ Precipitation
- ☐ Moon
- ☐ Stars
- ☐ Planets
- ☐ Comets
- ☐ Meteors
- ☐ Asteroids
- ☐ Satellites
- ☐ Rockets
- ☐ Spacecraft
- ☐ Astronauts
- ☐ Space Stations
- ☐ Planets
- ☐ Stars
- ☐ Galaxies
- ☐ Universe

LEGEND

- ☐ 1. No Substrate
- ☐ 2. Substrate of
- ☐ 3. Substrate of
- ☐ 4. Substrate of
- ☐ 5. Substrate of
- ☐ 6. Substrate of
- ☐ 7. Substrate of
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- ☐ 93. Substrate of
- ☐ 94. Substrate of
- ☐ 95. Substrate of
- ☐ 96. Substrate of
- ☐ 97. Substrate of
- ☐ 98. Substrate of
- ☐ 99. Substrate of
- ☐ 100. Substrate of

SKETCH MAP



On Character Line: AP 105 PO CV CT ST NB P TB FL NO

48 PHOTOLOG

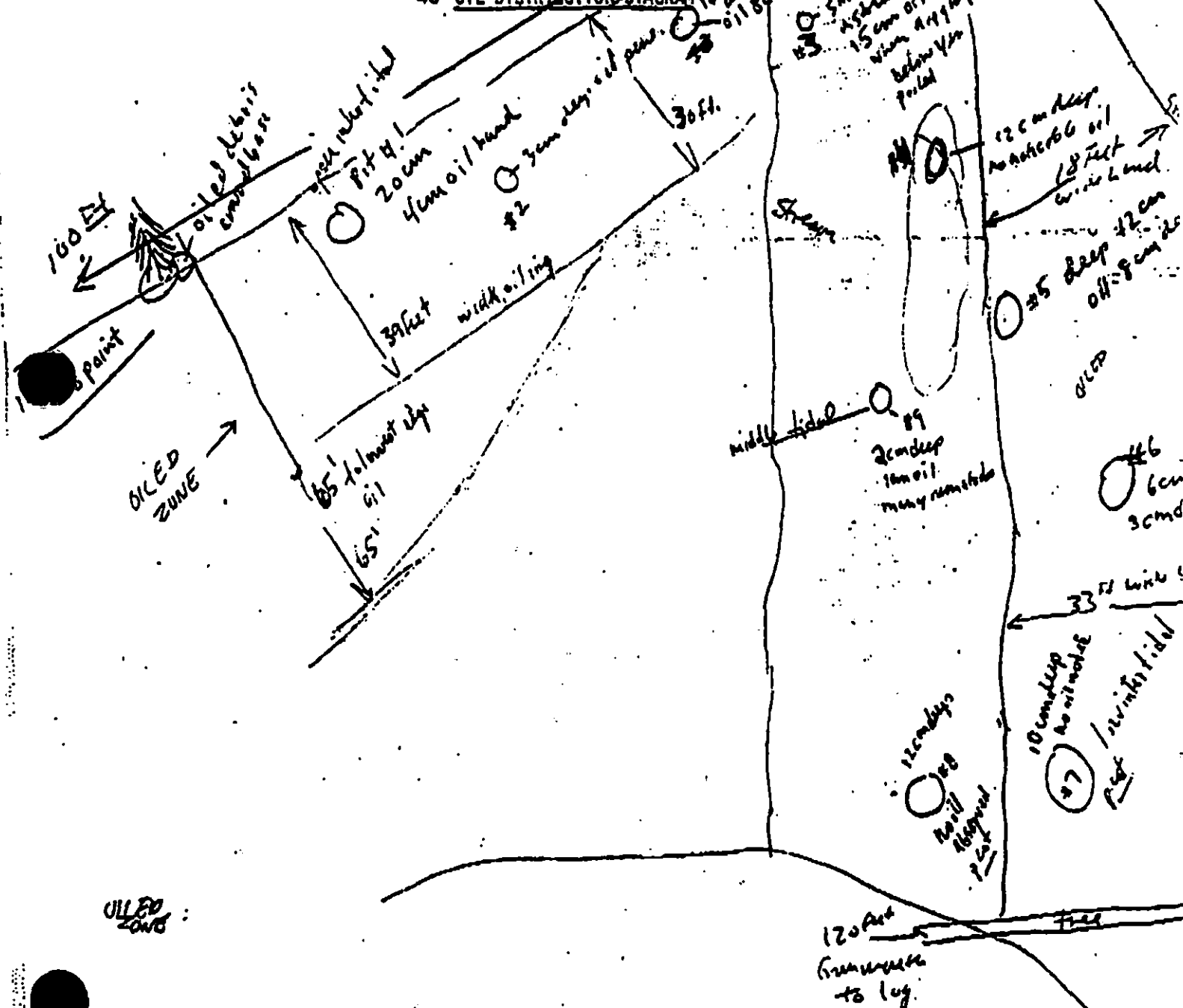
FRAME(S)

DESCRIPTION

Wetland

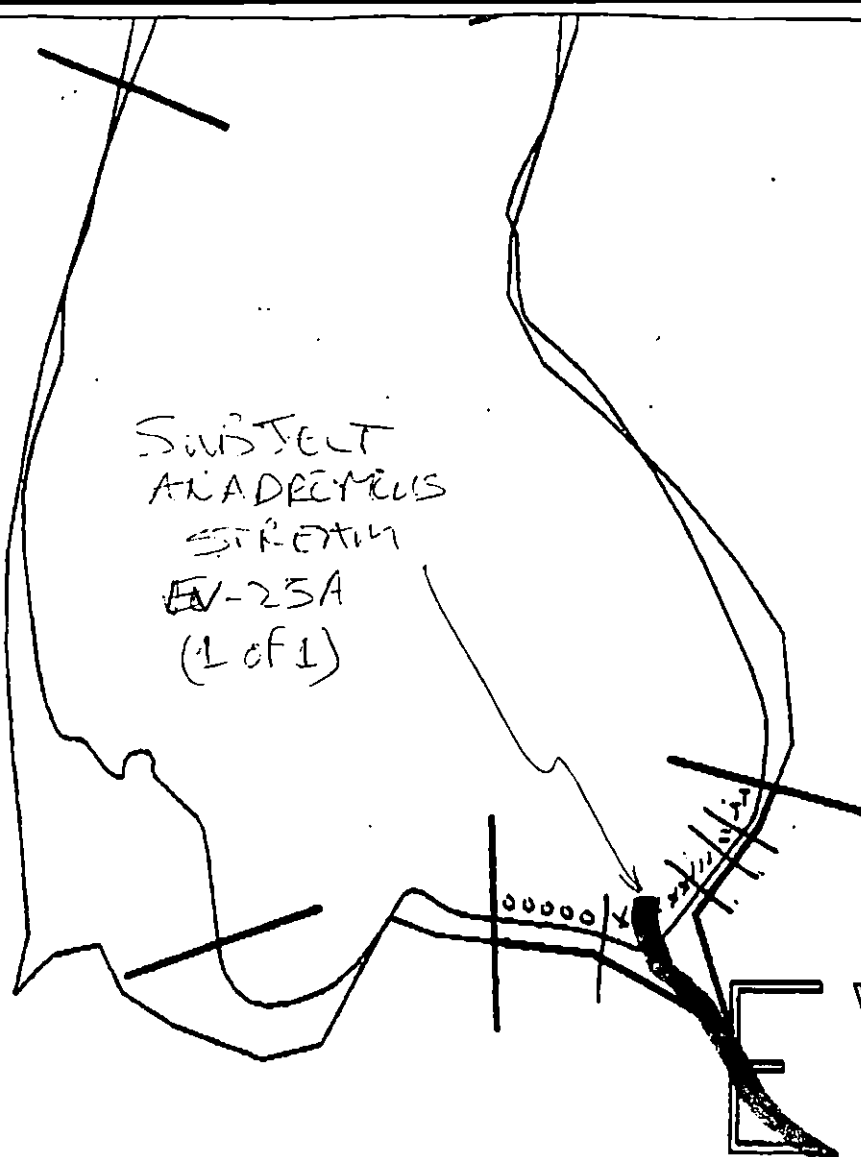
Shovel removal of crustal layers of asphalt along zone shown on map. Remove all oil & vegetation in debris noted. Use of 4 inch deep stream cleaner with other pump from the single section to remove material. Shovel work near GSFDS beyond the area where the smaller gravel has withered. NO BIOREMEDIATION RECOMMENDED - Use larger rocks with absorbent & throw at hi tide mark. Do not remove oil when washing or use absorbent on sand. Spot steam cleaning / line stream edge with pump/porn.

48 OIL DISTRIBUTION DIAGRAM



Comments by Ken Gitchell:
I agree with ADFEG's recommendations KRC

Sample taken
Photo frame # and
show direction.



EV-2

EV-25

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

EV-25

ADEC Segment Length: 410m



Map Key: PWS-194

Name: Reimer

Date: 4/8/90

Date Entered:

SB

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-40-16613

SEGMENT EV-25 SUBDIVISION A

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation More than 100m From Stream	WORK PRIOR TO 8/15
Bioremediation Less Than 100m From Stream	WORK PRIOR TO 7/10 (ADF&G MONITOR REQ.)

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (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

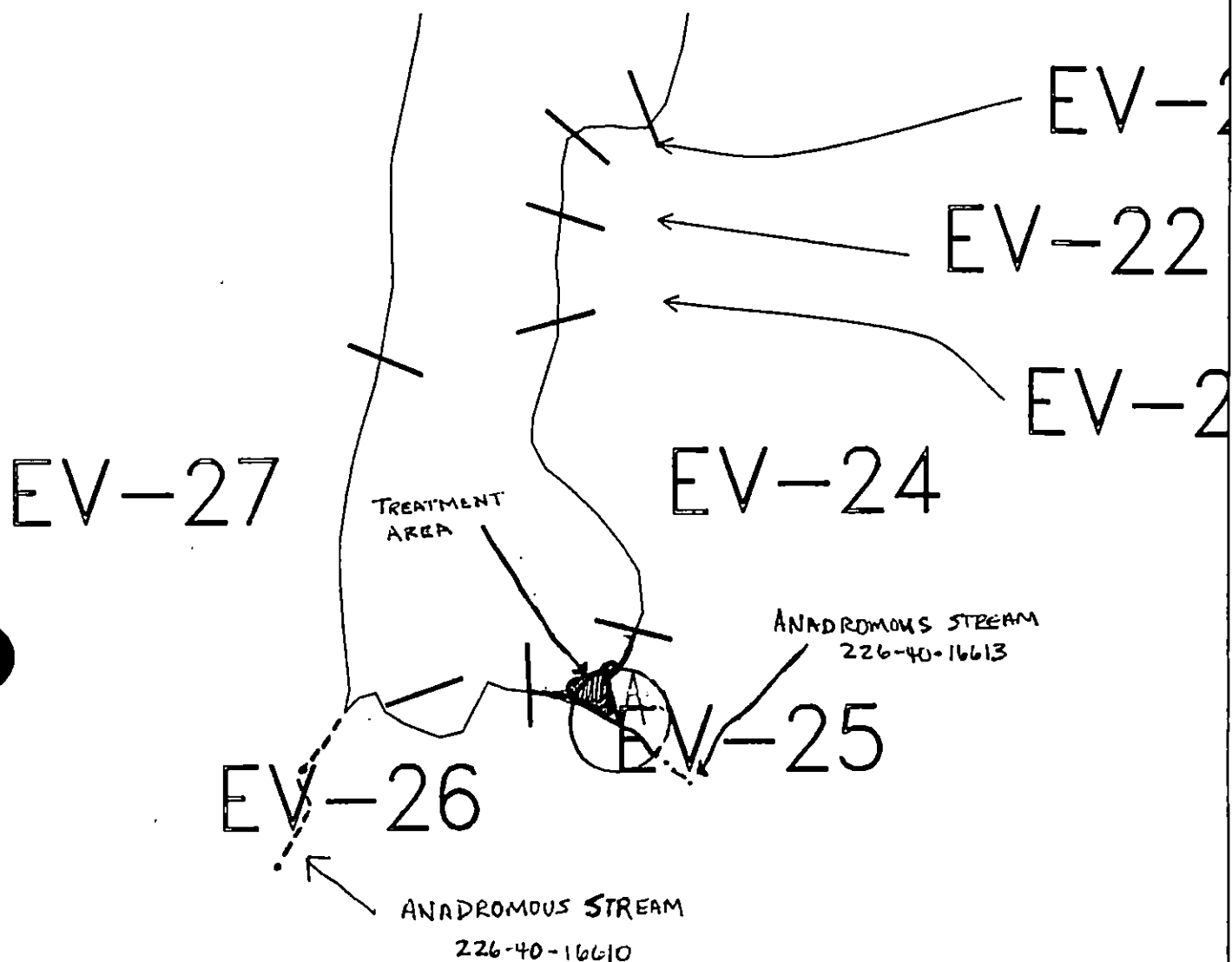
Closed to bioremediation after 8/15. No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. No flushing of pollutants or sediments into stream drainage; do not allow Inipol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Restrict boat and air traffic and beach disturbance to essential minimum. Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM EV-25A
FOR ADDITIONAL CONSTRAINT INFORMATION

FOSC W. J. L. Date 6-10-90



ANADROMOUS FISH STREAM EVALUATION (226-40-16613)



Exxon Company, USA
Map Key: PMS-EV-25



ECOLOGY MAP
SEGMENT EV-25
SUBDIVISION A (1 of 1)
METERS

★ Seabird Colony
△ Eagle Nest

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ EV-25 A STREAM NO: 226-40-16613 DATE 4/20/90

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 unoiiled biota and substrate. Subject stream is located in Subdivision A (1 of 1).

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature] DATE: 5/8/90

Surface 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)

COMMENTS: Recommended treatment includes removal of pavement and manual pickup of patties as indicated on sketch map. *Bioremediate area of pits #2 and 3, first approved by ADF&G. Work should be conducted between (5/15) and (7/10) based on anadromous stream constraints.

See Addendum Dated 6/8/90 w/12

TAG COMMENTS: REMOVE ANY OILED DEBRIS / UNATTACHED OILED VEGETATION
MONITOR TO ASSESS SUITZ

TAG APPROVAL DATE: 5/17/90

DEC Art Wilson FOSC: DATE:
XON Andy Chan
NOAA Gary Petrac
USCG G.A. REITER

1991 MAYSAP EVALUATION

SEGMENT: EV 025 SUB: A REGION: PWS SURVEY DATE: 5/2/91

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: Rachel Ann Owen Date: 5/17/11

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

N

2

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Custombien

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 7 1991

FOSC APPROVAL DATE: 12 5 MAY 1991

ADEC

EXXON

USCG

NOAA

FOSC

~~E. E. PAGE, CDR, USCG~~

~~CHIEF OF STAFF, FOSC~~

→ The state will evaluate the need for further treatment.

**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. 6 SEGMENT EV-025-A SUBDIVISION A DATE 05/02/91

ADEC/ADFTG

NAME Aimee Weseman SIGNATURE Aimee Weseman

☒ **Treatment Recommended.** This stream/beach area is a good example of where very intrusive clean-up techniques, not only did no discernable harm, but greatly enhanced the area's speedy recovery from the oil contamination, to a healthy biological state see Exxon, NOAA comments. Thousands of pounds of oily sediments (surface & subsurface) were removed in 1990 & the area does not look at all disturbed & is quite healthy & stable. To complete treatment-removal of remaining AP sediments in areas B & C along the stream bank. Since the survey was rushed (approx 30 min) I was unable to discern if the gravel tongue midstream still contains oil. This area could be explored & tilled, if necessary, at the same time. This 'more harm than good' argument "is getting old & lacks validity in many cases."

EXXON

NAME RANDALL K. BOYER SIGNATURE Randall K. Boyer

☒ **NTR** I HAVE HEARD COMMENTS FROM ALL AGENCIES THAT AN EXCELLENT CLEAN UP EFFORT OCCURED ON THIS SUBDIVISION IN 1990. THE RESULTS ARE APPARENT. SCATTERED PIECES OF AP WERE IDENTIFIED ALONG BOTH STREAM BANKS. THE VECO CREW COLLECTED THESE CONCENTRATIONS OF SURFACE OILING. THIS SUBDIVISION IS ENVIRONMENTALLY HEALTHY AND SIGNS OF WILDLIFE WERE ALL AROUND IN SHELTER BAY. CERTAINLY SOME OF THE LARGEST FLOCKS OF DUCKS I HAVE SEEN IN THE SOUND.

LANDMANAGER

NAME CHARLES SELAUOFF OF CHENECA BAY SIGNATURE Charles Selauoff

☐ **NTR** Due to the short time spent there because of tide-level, a heavy abundance of oil was observed plus a lot of oil sheen. more time should be surveyed in this area. But more manual clean-up should be highly utilized.

USCG/NOAA

NAME CWO R. SPURR/Rebecca Hoff SIGNATURE R. Spurr / Rebecca Hoff

☒ **NTR** This cove looks very healthy biologically, with a diversity of biota. a few patches of asphalt were picked up & remaining surface oil represents negligible threat to biological resources. This survey was rushed due to incoming tide, more time should have been allowed to completely survey this segment and possibly identify additionally oiled areas.

PAGE 1 OF 2

SEGMENT EV-025

SUBDIVISION A

DATE 05 / 02 / 91

ENERGY LEVEL: ☐ H ☐ M ☒ L

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

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

EST. OIL CATEGORY LENGTH: W 1 m M 1 m N 2 m VL 20 m NO 388 m US 1 m

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

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

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

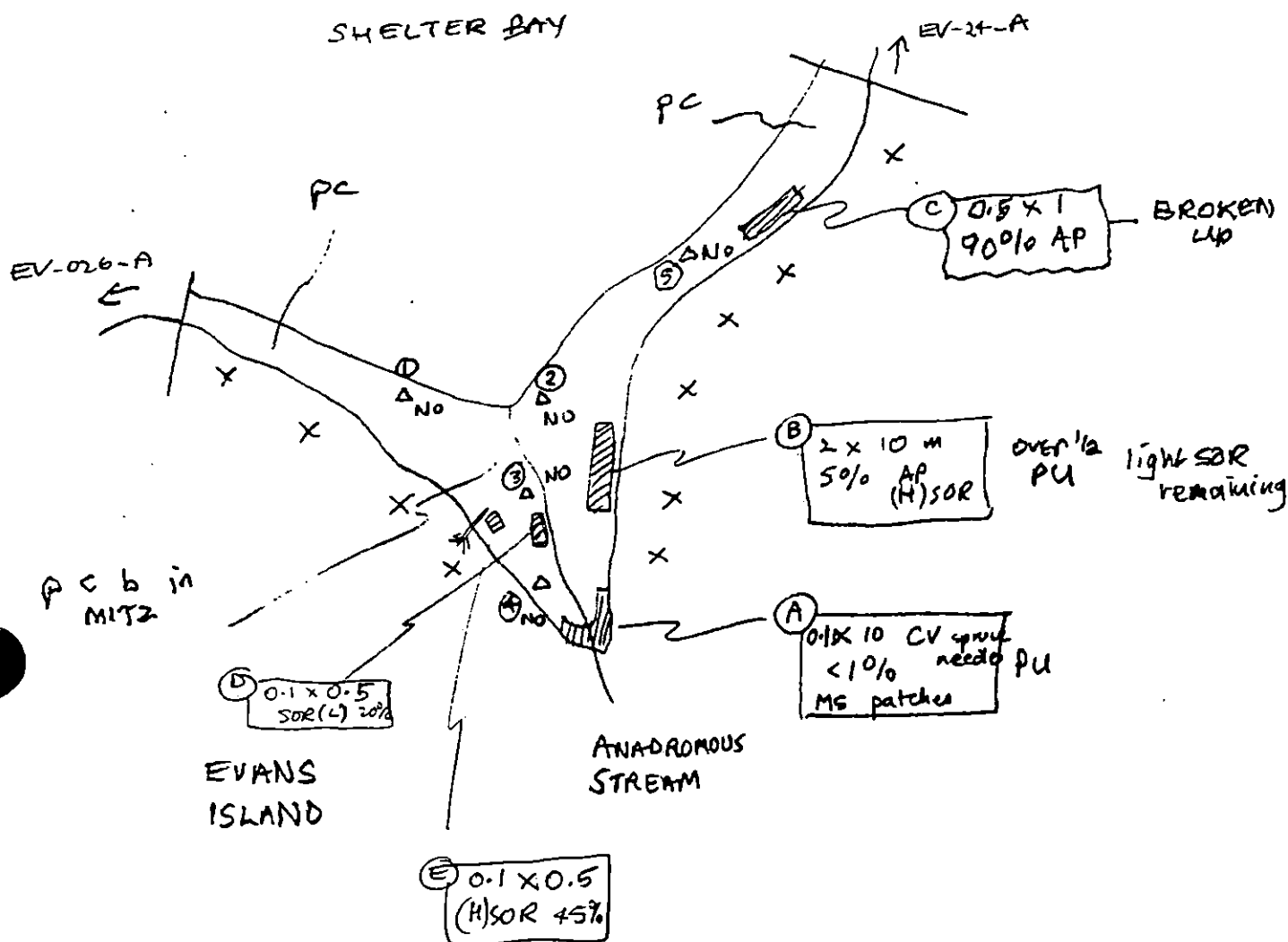
Surface oil was observed at five small spots, the most extensive of which (A + B) were partially picked up. Rims around boulders and very occasional cover were not treated. Location E was further round to the east and was not removed due to time constraints.

No subsurface oil was observed.

REVISED: MC 5/9/91
revised KG 5/8/91

0 meters 50

EV-025-A 05/02/91
OG-Map D.I. Little
1235-1315



#	PIT	TD	oil	clean below	w/t	seeds	sheen	zone
①	20	N	Y	—	P-gs	—	LITZ	
②	20	N	Y	18	gp-spread	—	LITZ	
③	15	N	Y	15	pg-gs	—	MITZ	
④	20	N	Y	—	cgs-sg	—	UITZ	
⑤	15	N	Y	10	pcg-gsp	—	MITZ	

REVIEWED: 5/9/91 MK
reviewed 5/8/91 KG

Manpap 6-05 # 16-17

↑

05/02/91

CG Map

D. J. Little

1235-1315

SHELTER BAY
DRIER BAY

PC

PC

0.5 x 1
200% AP

BROKEN
LIP

A C b in
MITZ

over 1/2
PU light SDR
remaining

[Faint handwritten notes at the bottom of the page]

ANADROMOUS
STREAM

EVANS
ISLAND

#	PIT	TD	oil	clean below	w/t	seeds	sheen	zinc
①	20	N	Y	—	P-gs	—	LITZ	
②	20	N	Y	18	gp-spread	—	LITZ	
③	15	N	Y	15	pg-gs	—	MITZ	
④	20	N	Y	—	cgs-sg	—	UITZ	
⑤	15	N	Y	10	pcg-gs	—	MITZ	

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6

DATE 5/2/91

SEGMENT # EV-025

TIDAL HEIGHT (Range)

SUBDIVISION A

BIOLOGIST T. R. Schroeder

SEA STATE 2-3 ft chop

WIND SPEED/DIRECTION N-NE 30 mph +

PHOTOGRAPHS: ROLL #

FRAME #

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

(A, B, D & E) = AP and (H) SQA located on steep graded beach. Very little vegetation located in the immediate area. Thick bed of fucus kelp and sporlings located on eastern portion of subdivision, but thin out considerably as it approaches the anadromous stream. Mussels limpets, littorine snails and egg masses present, but not very numerous. Could not observe LITZ, but in this long bay and protected corner of the bay, this portion of the intertidal zone should be very productive.

The steep grade of shoreline and narrow cove could result in extensive damage to biological communities if intrusive cleanup methods are used to remove oil.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl	3	34	
Gulls/kittiwakes	1	1	
Shorebirds	1	2	
Corvids			
Other Birds	1	20	

LAND MAMMALS

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

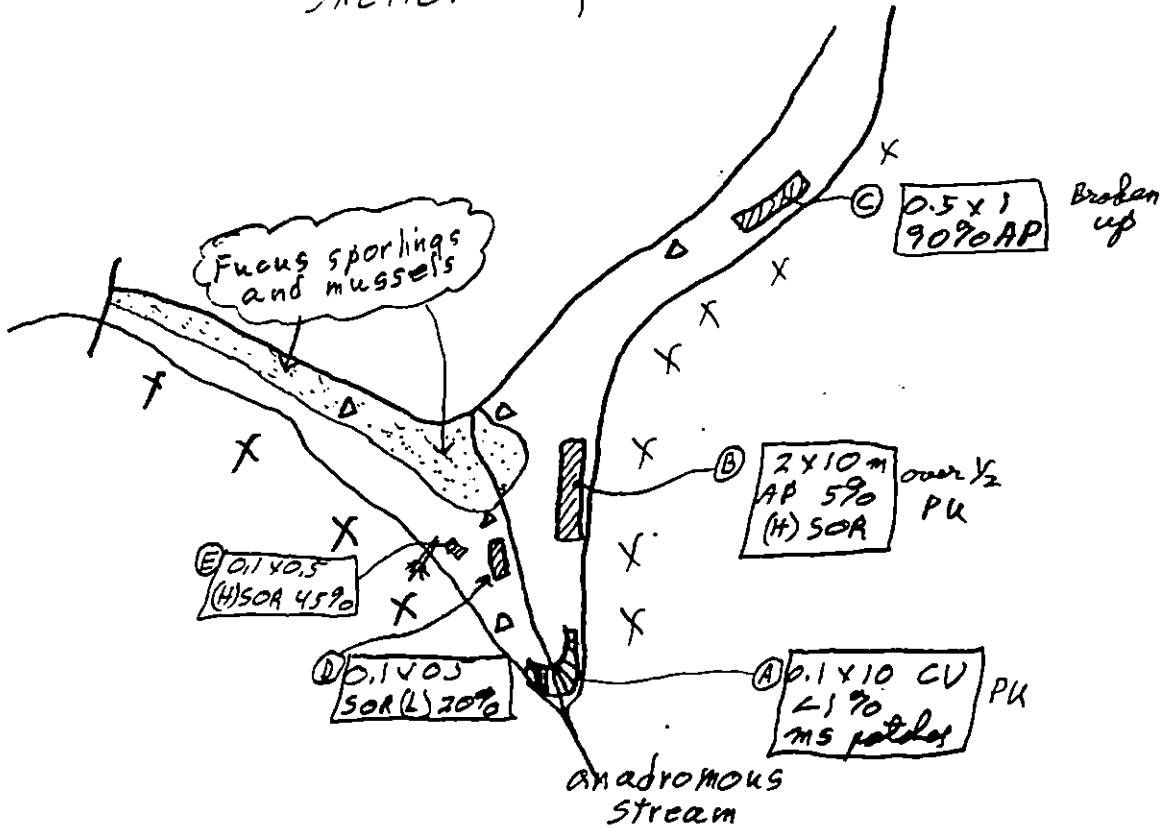
relieve subdivision map showing important biological features attached.

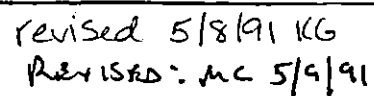
0 25 50
meters



EV-025-A 5/2/91
Bio. Map T.R. Schroeder
1235-1315

Shelter Bay





ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND

SEGMENT: EV-25 A

STREAM NO: 226-40-16613

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ EV-25 A STREAM NO: 226-40-16613 DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiiled biota and substrate. Subject stream is located in Subdivision A (1 of 1).

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

Subsurface Oil Observed: Yes X No _____ Maximum Depth 10 cm

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 pavement and manual pickup of patties as indicated on sketch map. *Bioremediate area of pits #2 and 3, first approved by ADF&G. 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 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

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 (6/1 to 9/15)

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

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

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

6Y Special use destination

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

Finfish harvesting

Deer harvesting (8/15 to 2/28)

Invertebrate harvesting

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

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EV-026 ^{ASC #} SUBDIVISION: 226-40-16613 DATE 4-20-90

USCG
NAME Kevin L. Droher SIGNATURE Kevin L. Droher

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

ADFG
~~ADEC~~
NAME Aimee Weseman SIGNATURE Aimee Weseman

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Manual removal of oiled vegetation & debris
Manual removal (shovel) of asphalt layer along both sides of stream
larger material can be wiped & put aside
removal of smaller material would be facilitated by use of 4-wheeler with trail
average thickness of asphalt layer - 4cm
place string of pom-poms along edge of stream when treating
Spot wash boulders & large rocks on right side facing down stream beyond area
where smaller gravels & cobbles end.
Boom & recover oil when washing or use absorbent material at base of

~~LAND-MANAGER~~ ADFG
NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

treated area.
No bioremediation recommended.

SHORELINE OILING SUMMARY (ANAD)

11/5
REVISION NO. 501

OG CAL LARSON USCG DREHER, CWE SEGMENT ST/ EV-025
 BIO KEN CRITCHLOW LAND REP STREAM 216-40-16613 (OF
 EXXON DARRELL YOE ADFOR K. GUSTIN-AIMEE WISEMAN TIME 13:40 10/4:45
 TEAM NO. 14 TIDE LEVEL #4 H DATE 4/20/90
 EST. SUBDIVISION LENGTH: 100 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 5 % B 5 % C 70 % P 20 % G 2.5 % S 2.5 % M 5 % V 5
 SLOPE: Long 100 % Hang 5 % Vert 5 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 65 m M 5 m N 5 m VL 5 m NO 30

SURFACE OIL

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

PAVEMENT H F (S) 650 sq. m by 2PATTIES / TARBALLS BAGNEAR SHORE SHEEN? (NO) BR RW SL TI

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

Did You Collect DEBRIS
☐ YES ☒ NOTYPE #BAGS

Photographs:

ANAD-14-

Roll No. 1Frames 19-36

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 SUBSURFA SEDIMENT
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	SU	U	M	L				
* 1	20	✓					0-4	✓		✓					✓					N	N	FB, GR, SD
* 2	16	✓					0-8	✓		✓					✓					N	N	FB, GR
* 3	15	✓					0-10	✓		✓					✓				✓	Y	Y	PP, GR, S
* 4	12					✓									✓					N	N	FB, GR, SD
* 5	12					✓		✓		✓					✓				✓	N	N	FB, GR, SD
* 6	6	✓					0-3	✓		✓					✓							PP, GR, SD

COMMENTS BROWN PATCHES TO CONTAINS IN UITE. VARYING THICKNESS 2-3 CM.SMALL HOBBIING TRAPED IN LITE FIBERS BEDSNOW OBSERVED AT SITE OVER LAPPING OIL.LARGE FULUS BED COVERING BOTTOM HALF OF COVER

* OILED INTERVAL < 5 cm IN PIT NOS. 1, 2, 3, 6 AND 9 DOES NOT CONSTITUTE SUBSURFACE OIL.

REVIEWED JW DATE 4-24-9

SEGMENT ST/ EV 025 - STREAM 226-40-16613 (2 OF 2)

[illegible]

COMMENTS

REVIEWED JW DATE 4-24-90

OG CALLARSON

SEGMENT ST/

STREAM

DATE / / 90

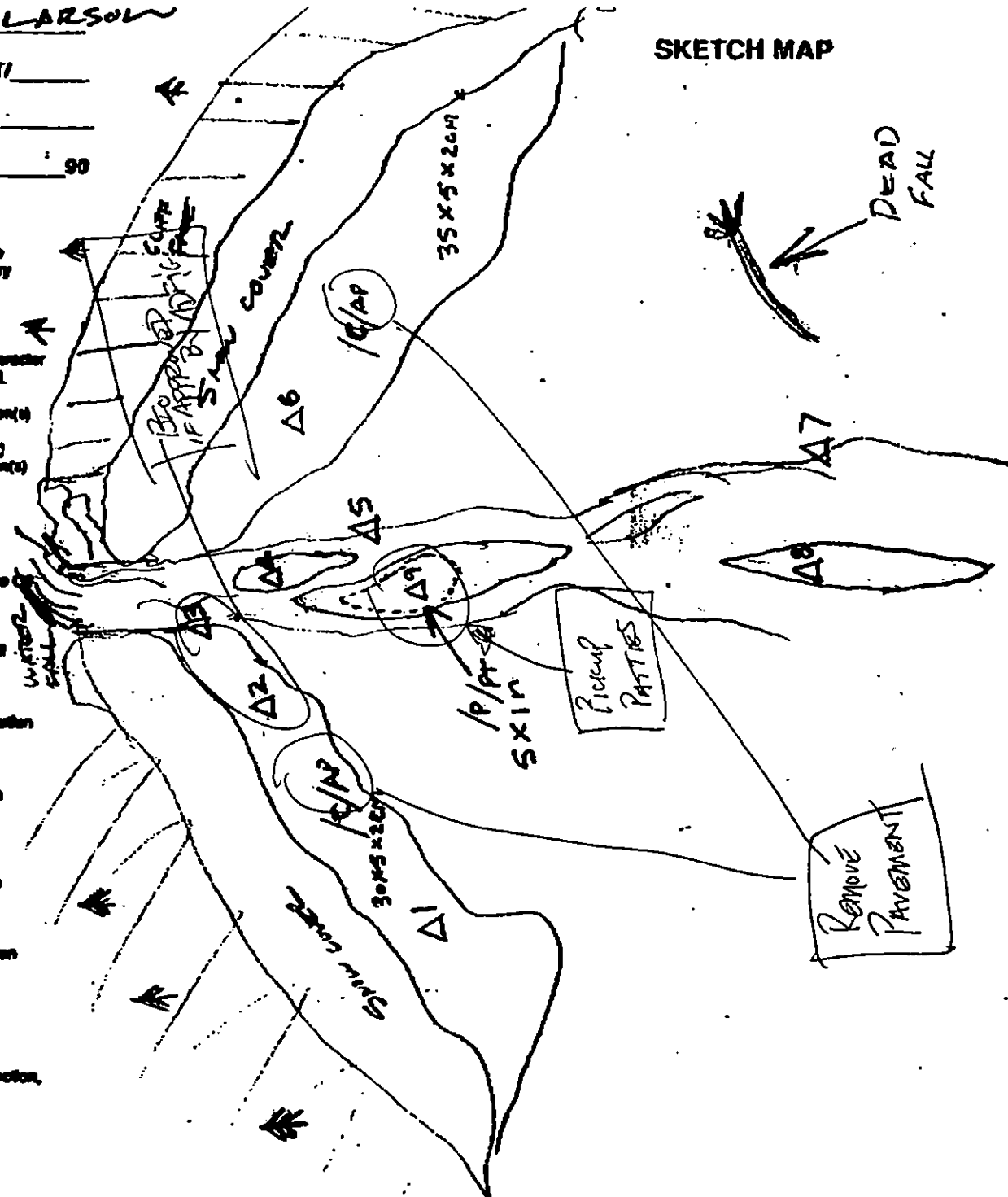
SKETCH MAP

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ On Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWA/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ P/L Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 Δ
- PH - No Subsurface CI
- 2 Δ
- PH - Subsurface CI
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Spashed Distribution
- lll
- Cilled Vegetation
- Photo location, direction, and number



Of Character Length (in): AP 105 PO CV CT ST MS 5 TB FL NO

ADFG MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS SS DS TS AVS SCH HHS PTA2 REGION: PWS KP, CI X, APMETHOD: Aerial Ground Boat3 DATE: 4-20-9018 HIGH TIDE TIMES: 121 TEAM RECORDER: B. Gustri4 START TIME: 134519 HIGH TIDE HTS: 122 OBSERVERS: A. Weisman5 STOP TIME: 144017 LOW TIDE TIMES: 123 AGENCY: APFG6 SEGMENT #: CV2516 LOW TIDE HTS: 124 PHOTOS TAKEN: Y (1)

7 STATION #: _____

19 TIDE HT AT SURVEY: _____

Roll #: _____ Frames: _____

8 K-UNIT: _____

Ebb Slack Flood Slack

25 VIDEO TAKEN: (1) N TAPES: 90RL6.001 SSS

9 STAT AREA: _____

20 USCG GUAD: _____

Start: 1015 End: 1178

10 LAT: _____

11 LONG: _____

26 SAMPLES TAKEN: Y (1) Number12 SOURCE: Map Loran

Oil _____

13 LOCATION: EVANS Is.

Sediment _____

14 DESCRIPTION: _____

Biological _____

Water _____

EXTENT OF OIL

27 SURFACE COVERAGE

SHORELINE				STREAM			
L	Y	H	S	L	Y	H	S
100	25-30						

28 CATALOGED ANAD. FISH BREAK? (1) N37 CATALOG #: 226-40-16613

38 STREAM NAME: _____

28 SURFACE THICKNESS

3cm	8cm	3cm	1cm	1cm	
3cm	8cm	15cm	15cm	3cm	

39 OIL IN STREAM BED? (1) N

27 PENETRATION

40 OIL ON STREAM BANKS? (1) N

30 OVERALL OIL IMPACT: N VL L M H

41 OIL ON BEACH ADJACENT TO MOUTH? (1) N31 OIL TYPE: Pooled Emulsified Tar Asphalt Slimy Stain

(within 50 meters)

42 OIL WITHIN 1 MILE OF STREAM? (1) N32 OILED DEBRIS: (1) N

Where: _____

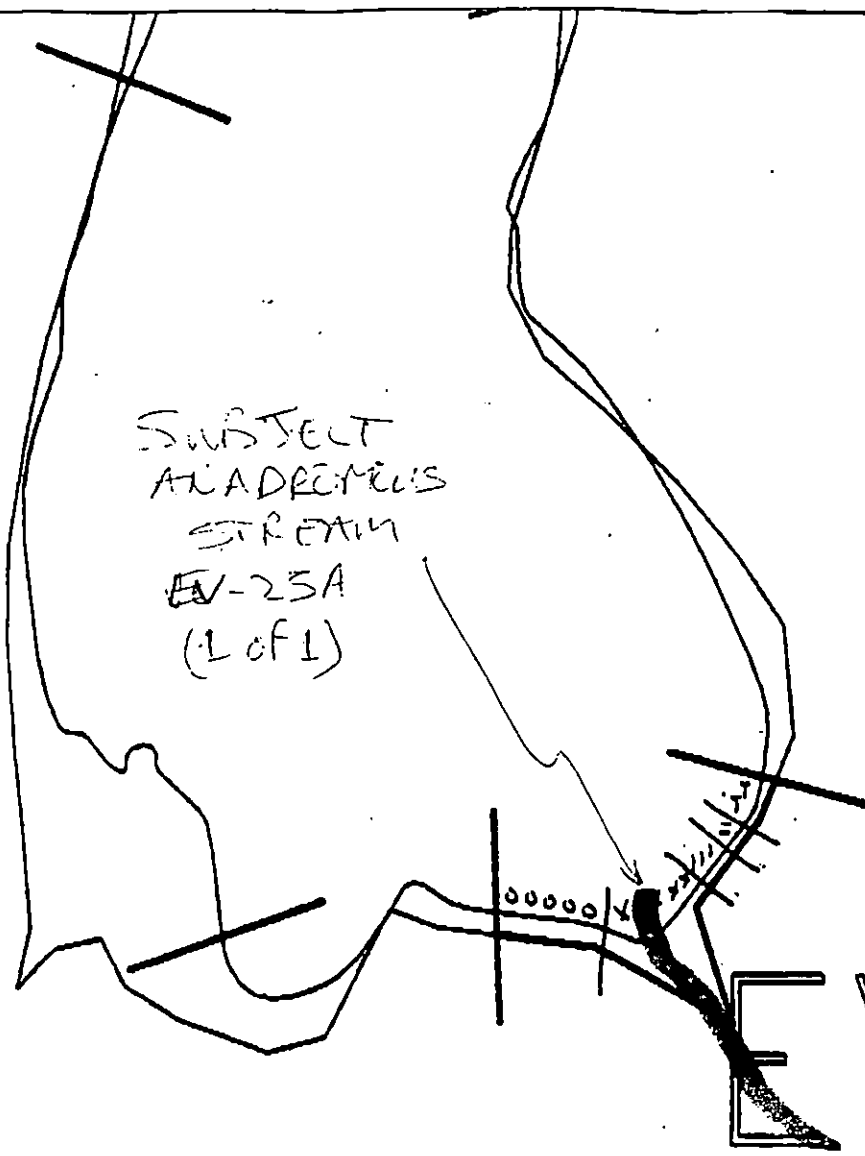
33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cove
Lagoon Marsh

43 ANADROMOUS FISH PRESENT? Y N

34 WAVE EXPOSURE: High Moderate Low44 ANADROMOUS FISH OBSERVATION
Species Aerial Ground35 SUBSTRATE TYPE: Bedrock _____ Boulder 5% Cobble 70%Gravel 25 Sand _____ Mud/silt _____

Species	Aerial	Ground

COMMENTS: Large areas of tar mats primarily upper intertidal extending down into
middle intertidal. Most of Evans Is. has been visited.
penetration of oil varies 4-16cm. from high tide mark to stream
edge in width in most cases. Shovel removal/primary means of
cleanup.
NOFL. from BSED - larger rock boulder oiled intensively.



EV-2

EV-25

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

EV-25

ADEC Segment Length: 410m



Map Key: PWS-194

Name: Reimer

Date: 4/8/90

Data Entered:

(51)

WORK PLAN ADDENDUM

Segment EV-25

Subdivision A

Dated 7/18/90

MODIFICATION

1. REASON FOR MODIFICATION

- Joint request from field monitors.

2. ADJUSTMENT TO WORK PLAN

- Send in manual crew to remove/break up oiled sediments at the west end of the segment. (see attached sketch)
- Bioremediate following manual pick up.

SHPO APPROVAL NEEDED YES X
NO

SHPO SIGNATURE Reedel don Dora 7/20/90
STANDARD CONSTRAINT APPLIES

TAG APPROVAL DATE 07/19/90

ADEC RAY MORRIS R. Morris

EXXON ANDY TEAL Andy Teal

NOAA Burt Wescott Burt Wescott

USCG G.A. REITER G.A. Reiter

FOSC ML DATE 7-24-90

Ensure land manager is aware of this addendum.

✓

08 Kamer
SEGMENT ST/ EVAS

SUBDIVISION A

DATE 7, 1 90

CHECKLIST

- ☐ Name
- ☐ Approx. Scale
- ☐ Seg/Div Entry
- ☐ OS Data
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HAV/LWL
- ☐ SSL
- ☐ Profile (Sketch/pt)
- ☐ Profile(s)
- ☐ P/L Location(s)
- ☐ Photo Location(s)

LEGEND

1A

P/L - Substrate C/L

2A

P/L - Substrate C/L

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Spotted Distribution

CCCC

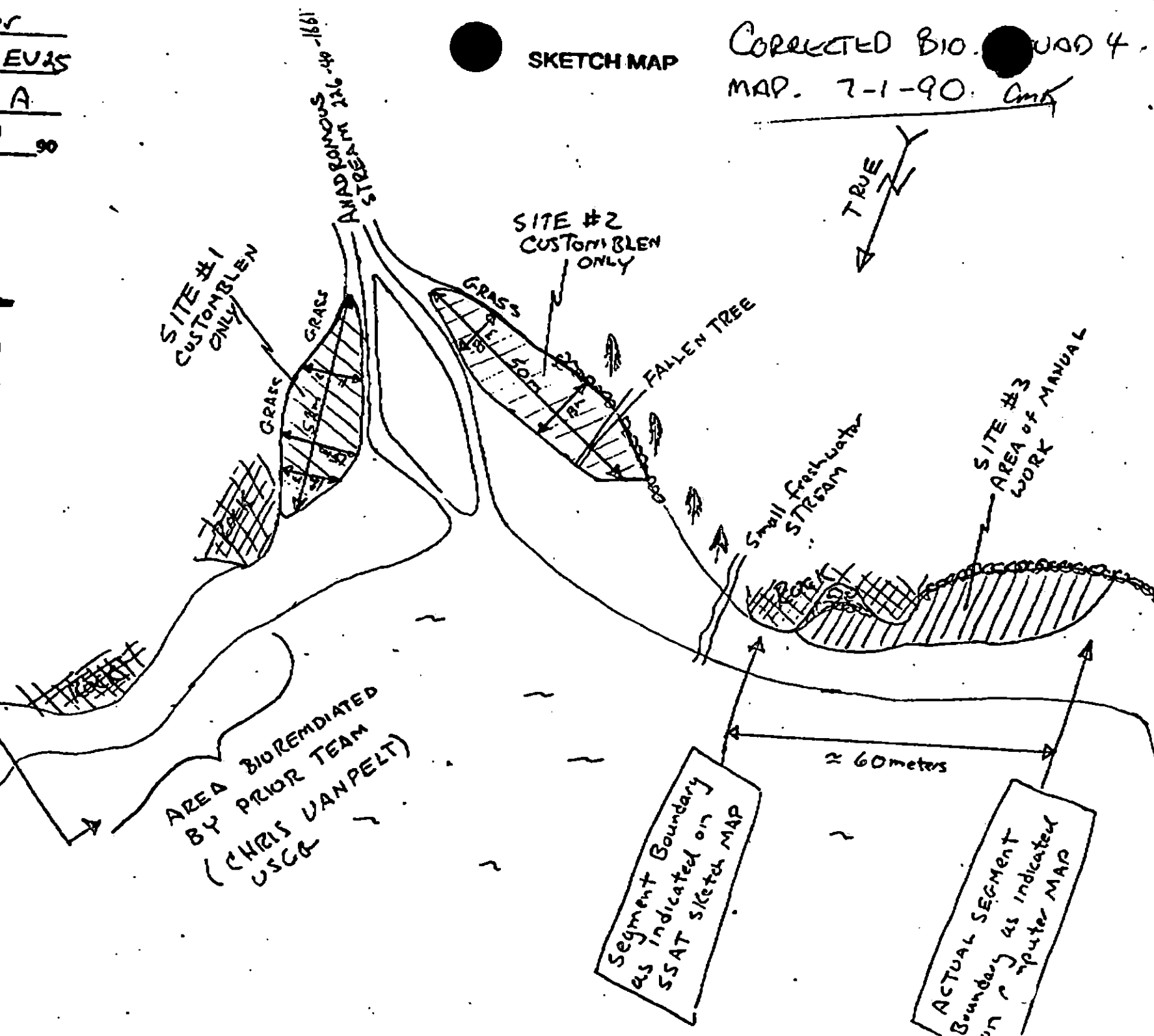
Old Vegetation

100

Photo location, direction,
and number

SKETCH MAP

CORRECTED BIO. UND 4
MAP. 7-1-90. Amk



SECTION SV EV-25

SUBMISSION

DATE 7/18/80

CHECKLIST 3/7

- ☒ Name
- ☒ Approx. Scale
- ☒ Key Sub Body
- ☒ On Dist.
- ☒ Width
- ☒ Length
- ☒ X Cover
- ☒ Substrate Character
- ☒ Ext. VIB/ASL
- ☒ SSA
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Photo Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ

PI - All Subsurface CI

2 Δ

PI - Subsurface CI

CT/C

Central Distribution

CT/B

Broken Distribution

CT/D

Partial Distribution

CT/S

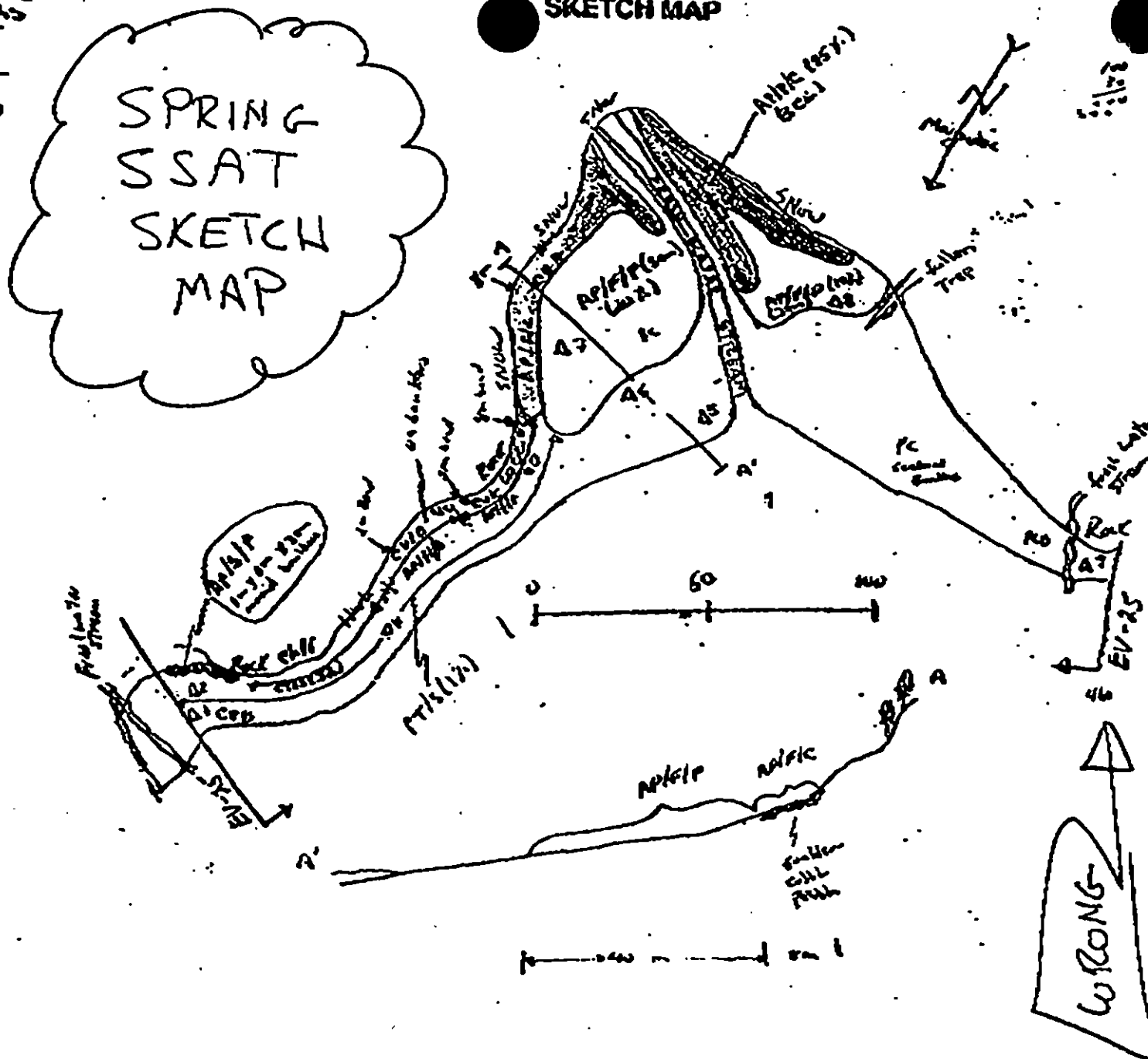
Spaced Distribution

Cited Vegetation

1 Δ

Photo location, direction, and number

SKETCH MAP



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

SECTION

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT EV-25SUBDIVISION ADATED 7/1/90

MODIFICATION

1. REASON FOR MODIFICATION

after about one hour of manually rolling rocks on this site in the UTZ, it became apparent that under the boulder/cobble cover there was a band $\approx 60m \times 3m$ W of a combination of Mousse, OP-OR sed to an average depth of ground 7cm. All of us were in agreement that the remaining manual work to be done was beyond the scope of a bio crew. The band had a 1/B distribution.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

Send in manual crew to clean under the band described above (also refer to attached sketch map from OG). Bioremediate after manual treatment.

Stream # 226-40-16613

K. 3. TIMING ISSUES ADFG Anal stream nearby ($\approx 60m$ from site); 1A; 1B; 7II; Permit required (we had Tomi Crow's approval from ADFG); Bioremediation less than 100m from stream; work prior to 7/10/90 — ADFG monitor required.

Addendum #1 approved by TAG and FOSC 5/24/90.

Addendum #2 approved by TAG and FOSC 6/04/90.

ADEC

Michael G. Elsh

EXXON

Mr. K. K. K.

USCG

Mr. D. D.

LAND MANAGER

(if field rep is on scene)

Mike Elshansky (CUC, send on for signature)

Bioremediation has been demobilized for the anadromous site portion of this segment 7/1/90. This adjacent site is further to the west of the demobilized stream area.

EV-25A Status Report 7/1/90

On the afternoon of 7/1/90 members of Squad 4 Bio Team demobilized the Anadromous portion of EV-25A after manually working (raking, breakup) and applying Customblen.

We then surveyed the remainder of the segment to the west and discovered an area of substantial oiling not indicated on the work order. This was due to a misplacement of the segment boundary on the SSAT. (See attached sketch map.) We then began manual work required on this portion of the segment.

After rolling rocks and removing/breaking up oiled sediments, it was determined that the manual work involved was beyond the scope of the Bio team as far as equipment and time considerations, etc.

I recommend a manual squad be brought in to complete the work needed to prepare the segment for bioremediation. All monitors involved are in agreement with this recommendation.

The area on the east side of the segment indicated on the work order for bioremediation was treated previously in conjunction with the treatment of EV-24 as determined by USCG monitor present during treatment of this site.

ADFG: Tom Crow
ADEC: Mike Ebel *ME*
CVC: Mike Eleshansky
USCG: Chris Van Pelt *CVP*
OG : Doug Reimer *DR*
Exxon: Chris Katsimpalis *CK*
OOPS: David Bellow

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EV-26 SUBDIVISION A (1 of 1)

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

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

7II Subsistence: Deer Harvesting

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

OTHER ECOLOGICAL CONSIDERATIONS

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

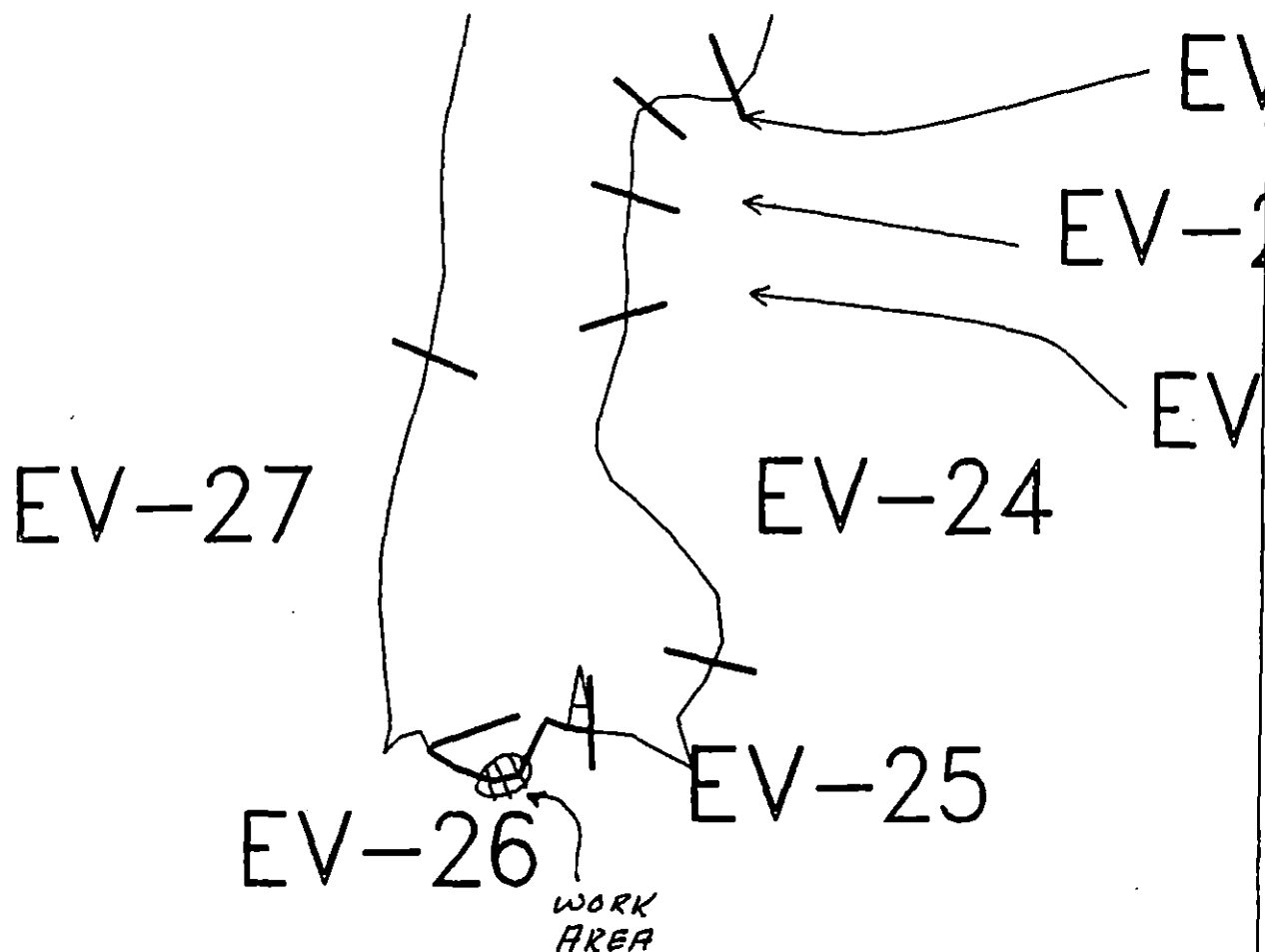
TAG APPROVAL DATE 5/29/90
ADEC Art Weiner
EXXON Art TEAL
NOAA B. Wescott
USCG G.A. REITER

FOSC

DATE MAY 29 1990

Prepared By: Andra Meyer WK

Date 5/27/90



Exxon Company, USA
Map Key: PWS-EV-26
May 11, 1990



ECOLOGY MAP
SEGMENT EV-26
SUBDIVISION A (1 of 1)
METERS
0 353 706

★ Seabird Colony
△ Eagle Nest

1 inch = 1158 feet

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: J. Daniel McManis DATE: 5/11/90

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:

<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 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.

See Constraint Addendum 5/27/90 wmk

TAG COMMENTS: MONITORS TO ASSESS SUITZ DUE TO SNOW COVER

TAG APPROVAL DATE: 5/11/90

ADEC Art Wagner
EXXON Andy Kerr
NOAA Joseph Talbot
USCG D.D. Rome

FOSC: W L DATE: 5-18-90

NOTIFY CDR 24 HRS IN ADVANCE OF WORK

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: J. David McMahon DATE: 5/11/90

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:

<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 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: MONITOR TO ASSESS SUIT2 DUE TO SNOW COVER

TAG APPROVAL DATE: 5/11/90

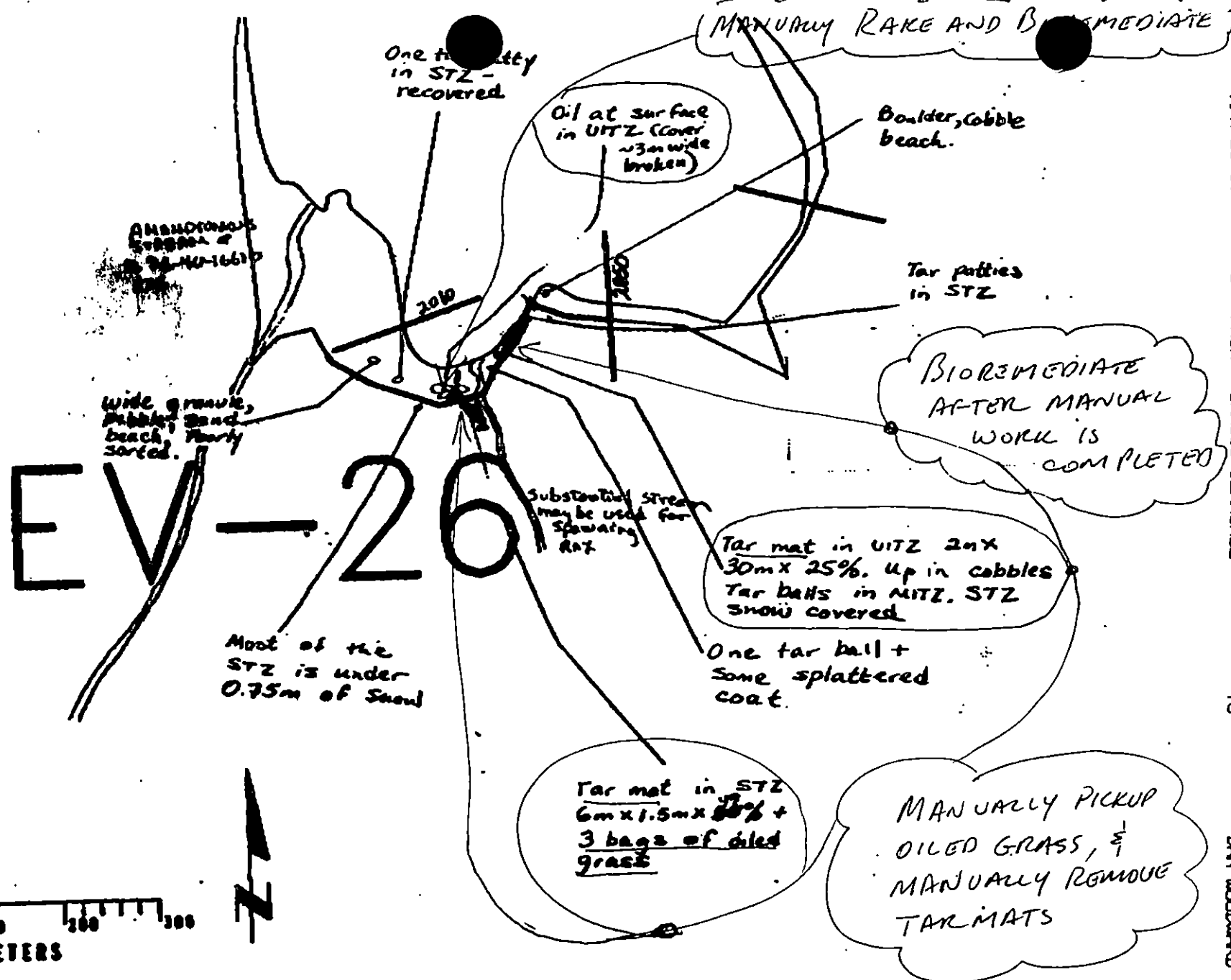
ADEC Art Weiner
EXXON Andy Galt
NOAA Joseph Talbott
USCG D.D. Rome

FOSC: DATE: 5-18-90

NOTIFY CDR 24 HRS IN ADVANCE OF WORK

R. Marty
ENTST/ EV
VISION A
25 Apr 1990

APR-26-1990 20:24 FROM BRGOS SEAHORSE TO DAN WOODWARD P. 01



408/41

sector Length (m): AP 10 PO - CV 59 CT 168 ST - MS - PT 100 TB 1 FL - NO 59



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. Marty

Date: 25 April, 1990

Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: EV 026 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)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

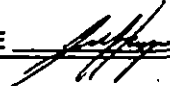
TEAM NO. 5 SEGMENT EV-26 SUBDIVISION A DATE 4/30/91

ADEC

NAME

John Huger

SIGNATURE



NTR

☒ Treatment Recommended

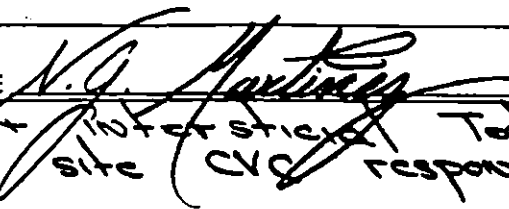
Manual pickup recommended in Sections A+B of sketch map, section B has a 10x40m band in the UITZ that was ^{not} identified during 1990 ASAP and should be picked up this season. Beach is accessible and low energy. Good project for Chrysa crew.

EXXON

NAME

Martinez N.J.

SIGNATURE



NTR

Lt A/P Scattered + interstitial Tachous
trial work. Possible site (CVC) response group
could address.

LANDMANAGER

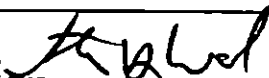
NAME

Steve WARD

OF

CUK

SIGNATURE



NTR

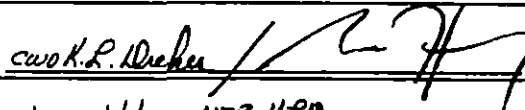
Good Area For Chrysa Local Response. Tachous Work But
A Lot of oil can be Recovered. thick oil in between
Cobbles extending 100ft or more along UIT.
No PHS Dig.

USCG/NOAA

NAME

DREHER / HODGES

SIGNATURE



NTR

Observed only minute patches of ^{AP} at base of angular cobbles - NTR. N20

2 meter band width of oiled sediment debris on left portion of beach. Scattered
oil patches in upper binn area.

DATE April ³⁰ 1 / 19 91

REVIEWED CD 180 MAY
ESTIMATED, May 9

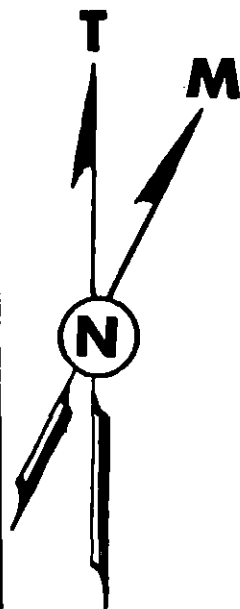
BAP 1991
 SKETCH MAP
 GREG CHANEY
 TEAM 5

SEGMENT: EV 26 A
 DATE: April 30 1991
 AIR P.H.: EX VDE 165 13

ELTER BAY

MAP 1 OF 2

NOTE: AREAS A & B ARE ON
 MAP 2.



LEGEND

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

SCALE
 25 METERS
 ROUGHLY

EVANS ISLAND
 FOREST

PU
 3 PATTIES
 SOR TRACE
 10x20m

5 PATTIES AP PU

(E) 0.5x30m
 2% SOR

(C) 1x20m
 TRACE AP
 TRACE CT

(D) 0.5x5m
 20% AP

HITZ 1m BAND SEAWEED

REVIEWED CP 10 MAY

SEE
 MAP 2

MAYBAP 1991
OG SKETCH MAP
GREG CHANEY
TEAM 5
SEGMENT: EV26A
DATE: APRIL 30 1991
AIR P.#: EXVPE LGS-12

MAP 2 of 2

PU 2m² AP

EVANS ISLAND

BAND
TAPERS
OUT

SMALL
WATER
FALL

SILVER
SHEEN
IN TIDAL
POOLS

SHELTER
BAY

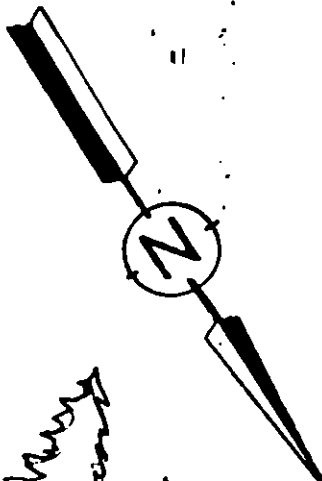
(A) BAND OF AP IN HITZ.
DISTINCT PATCHES AND
PATTIES BETWEEN AND
UNDER BOULDERS
3x40 15%

(B) BAND TAPERS OUT
DISTINCT BUT
INFREQUENT PATCHES.
0.5x40m <10%

10 METERS

ROUGHLY

25 revised, May 9



TEAM # 5

DATE 30 April 1991

SEGMENT # EV-26

TIDAL HEIGHT (Range) +3.5 → +3.0

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 located along the boulders in the UITZ. There is ~1% biota cover in the site including: Oligachate worms, filamentous green algae, *Fucus* sporelings, rare barnacles, rare *Littorina* and rare limpets. Approx. 2m below site in the MITZ there is an intercobble mussel with a moderate concentration; a moderate concentration of barnacles with a new set present; sparse *Fucus*, limpets and *Littorina*; many *Littorina* egg masses; Sculpin (fish) eggs; ribbon worms and hermit crabs. ~30% biota cover. Herring spawn was found on drift *Fucus*.

(B) Area is a thin band high in the UITZ. Filamentous green algae and amphipods were the only biota found. Below site ~20% biota cover with barnacles dominant. Other scat with predominately mussel shells found below site.

(C) Area is in the UITZ. There is <1% biota cover with rare barnacles (spat present) and *Fucus* sporelings. Approx 1m below site there is 20% cover with sparse barnacles, rare *Fucus*, tar spot algae, rare → sparse intercobble mussels, sparse *Littorina*, moderate limpets and tufted algae.

(D) Area is ~5m south of runoff stream in the UITZ. There is <1% biota cover by filamentous green algae. Two meters below site there is a sparse 15m x 2m patch of *Fucus*. Five meters below biota is similar to that described below area 'c'.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2	
Seabirds			
Waterfowl	1	~55	
Gulls/kittiwakes	1	~80	
Shorebirds	1	3	
Corvids			
Other Birds			

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)	1 - Harbor Seal		
_____les (specify)			
_____les (specify)			

Shoreline subdivision map showing important biological features attached.

Team #5

Segment EV-26

Subdivision A

Sea State 0

Date 30 April 1991

Tidal Height $\sim +3.5 \rightarrow +3.0$

Biologist Crank

Wind direction/speed 5 knots/SE

pg 2 of:

Comments (cont.)

(E) Area is located high in the UITZ. There is $<1\%$ biota cover with filamentous green algae and oligochaete worms.

Two meters below site is a moderate Fucus band 3m wide (sporelings are present) and sparse barnacles. Biota cover is $\sim 40\%$.

Ten meters below site is also covered $\sim 40\%$ by sparse to moderate barnacles (new set present) and a moderate intercooie mussel bed.

(F) Area is located ~ 70 m west of anad. stream in the UITZ.

There is $\sim 20\%$ biota cover in the site with Fucus and barnacles. Below site biota cover $\sim 50\%$ with Fucus, barnacles and mussels. There is a clam bed starting $\sim 4'$ tide level with Prototheca, Macoma and Saxidomus. Area below site is utilized by shorebirds.

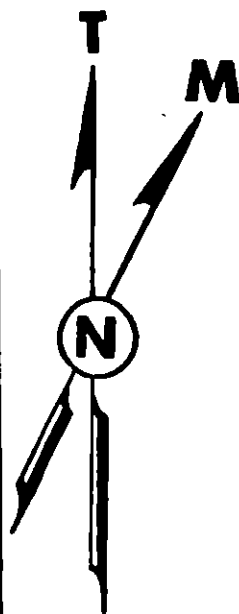
The biota in this subdivision appears to be healthy. Reproduction and recruitment is occurring. Littorina and Sculpin eggs are present as well as Fucus sporelings, barnacle spat and juvenile mussels.

MAP 1991
 OG SKETCH MAP & Bio Map
 GREG CHANEY & Crunk
 TEAM 5
 SEGMENT: EV 26 A
 DATE: April 30 1991
 AIR P.N. EX VDE 165 13

WELTER BAY

MAP 1 OF 2

NOTE: AREAS A & B ARE ON
 MAP 2.

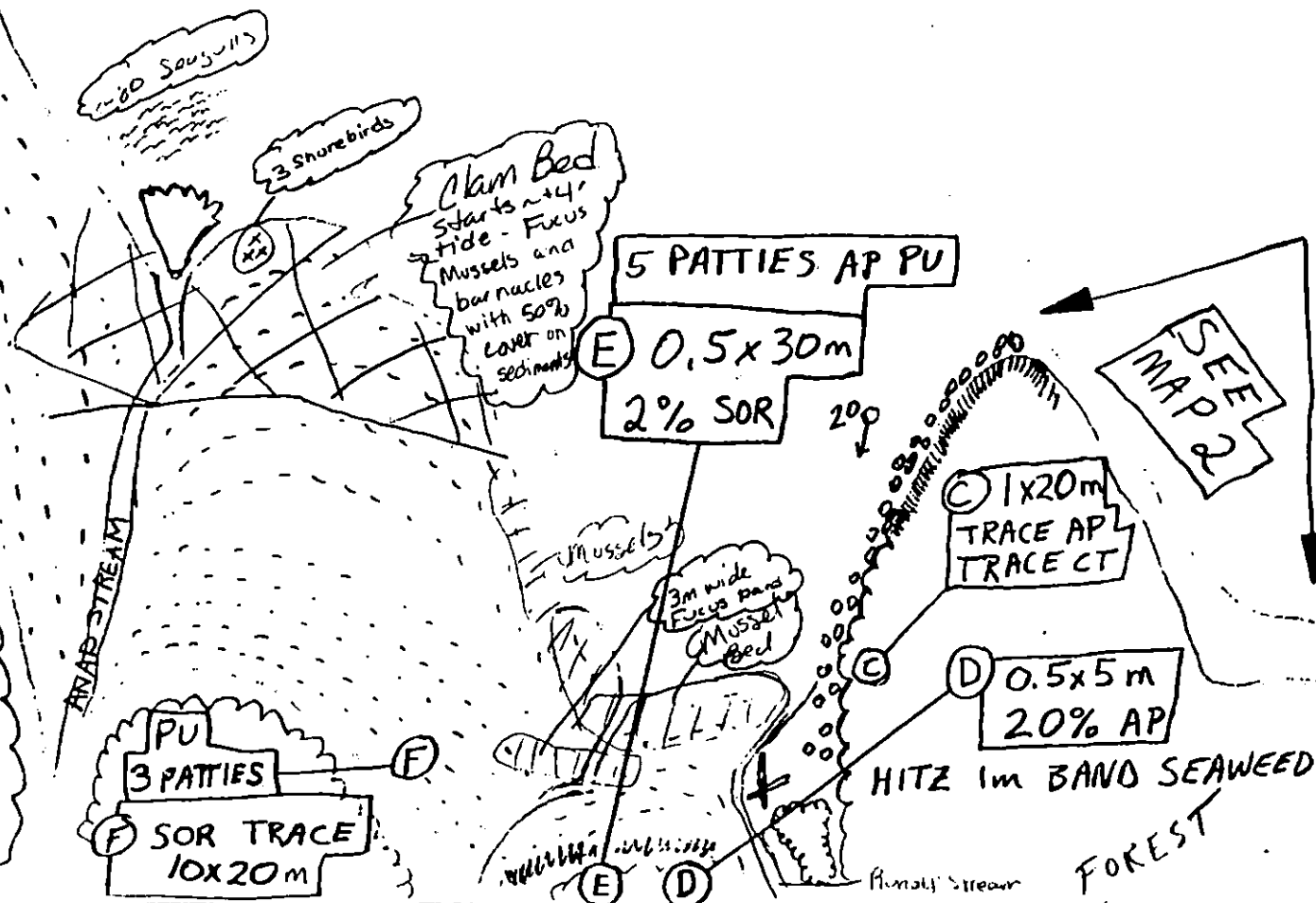


LEGEND

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

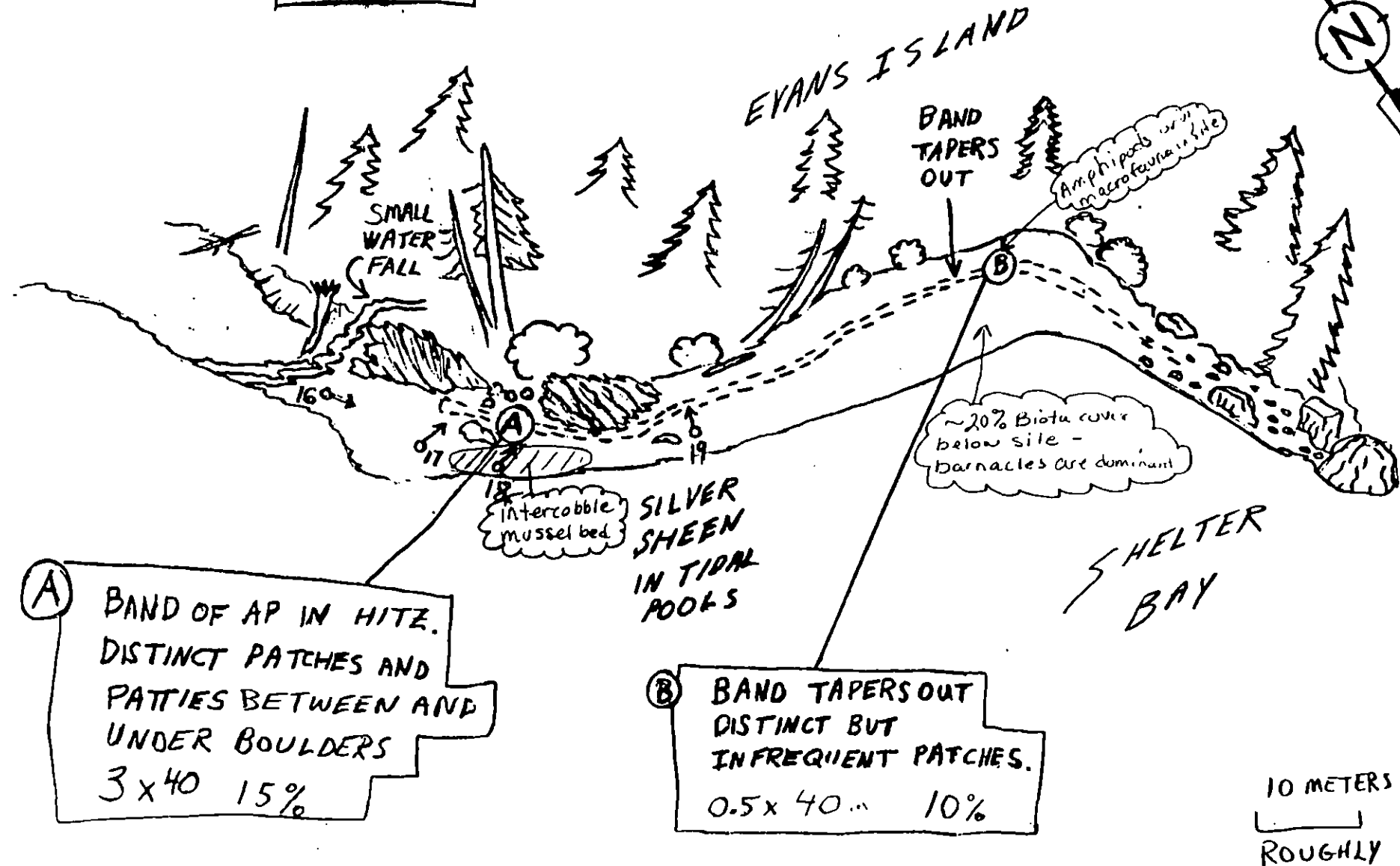
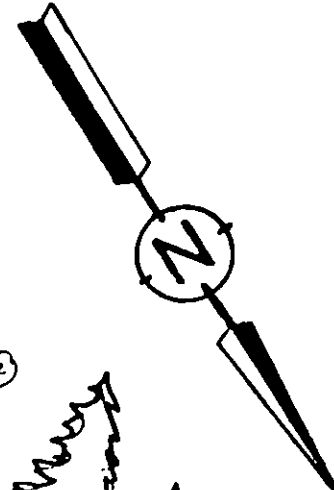
SCALE
 25 METERS
 ROUGHLY

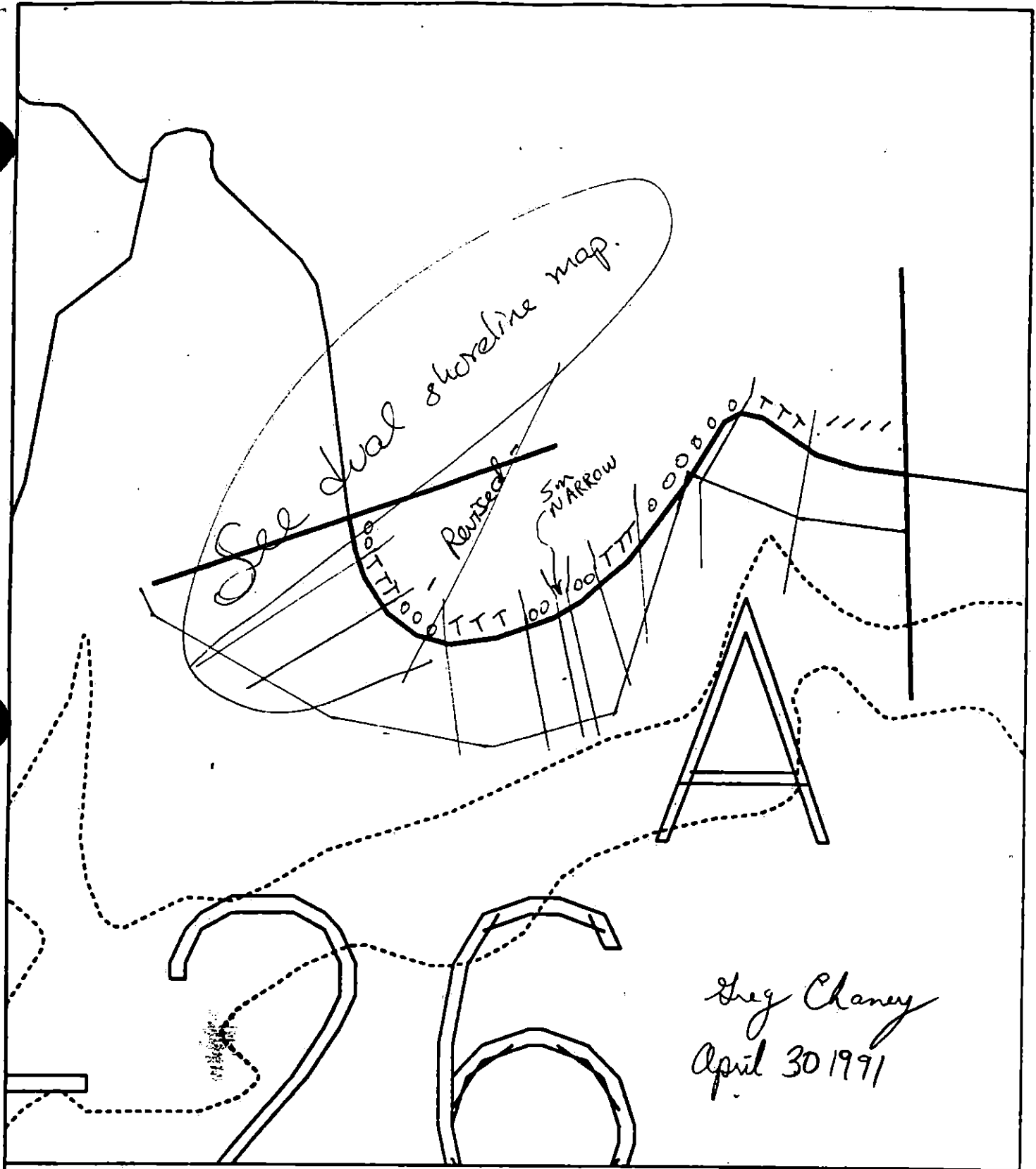
EVANS ISLAND
 FOREST



MAP 2 of 2

Pu 2^m 2 AP

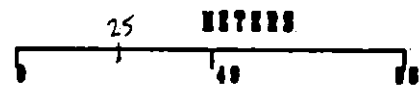




See dual shoreline map.

EV026

Segment Reference Map
Map Key: PUSREV026



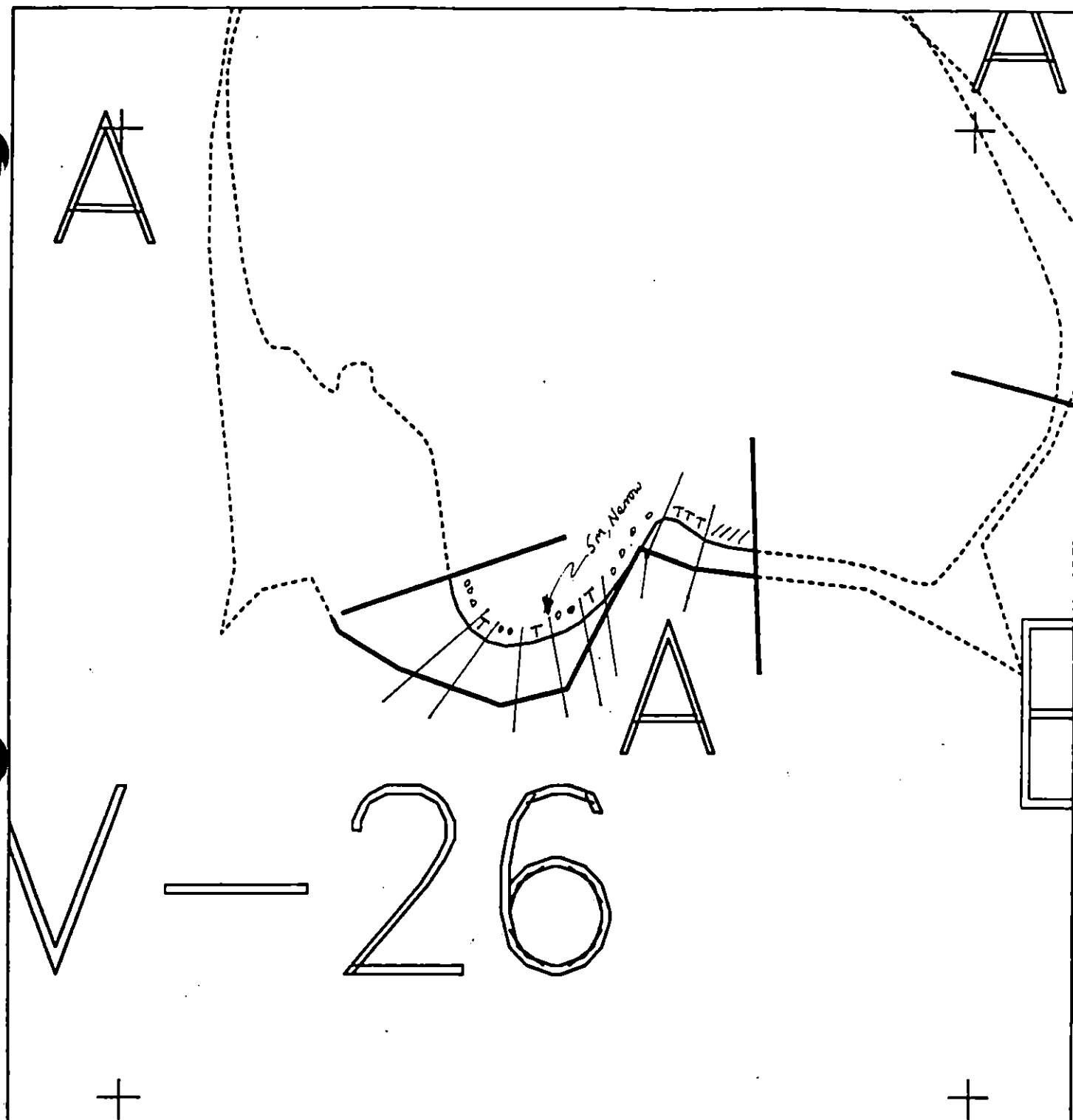
AK State Plane Zone 4
PUSREV026



EAGLE NEST

Greg Chaney
April 30 1991

ES revised May 9



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

EV026 A
 ADEC Subsegment Length: 375m
 METERS
 0 100 200
 AK State Plane Zone 4
 par0260

Subdivision Field Map
 Map Key: PWSEV026A
 Name: G. CHANEY
 Date: April 30, 1991
 Date Entered:

Es raised: May 9
 REVIEWED CD 12 MAY

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ EV-59

SUBDIVISIONS: A

SHORELINE EVALUATION

SEGMENT ST/ EV-59 SUBDIVISION A* DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Near Sawmill Bay Hatchery (1F)- 4/15 to 6/1; Deer Harvesting (7II)- 8/15 to 2/28; Finfish Harvesting (7HH)- Chenega and ADF&G to provide actual dates.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

0 m Wide, 0 m Medium, 0 m Narrow, 0 m V. Light, 4560 m No Oil
Subsurface Oil Observed Yes X No Maximum Depth _____

RECOMMENDATIONS:

X No Treatment Recommended
____ Treatment Recommended
____ Manual Pickup _____ Snare Booms/Sorbents _____ Tarmat Breakup/Removal
____ Bioremediation SPOT WASHING _____ Other
____ Wands
____ Beach Cleaner

Comments: No treatment recommended as no oil was found in this subdivision. Please note attached field shoreline comment sheet.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
OAA _____
USCG _____

FOSC: _____ DATE: _____

*Subdivision covers entire segment.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Mike Foort ^{NOAA} USCG Gary Shiganaka SEGMENT ST/ EV-59
 BIO Richard Ambrose LAND REP John Hayes SUBDIVISION
 EXXON Larry Olson ADEC John Hayes TIME 10:40 to 12:00
 TEAM NO.: 11 TIDE LEVEL: -0.5 to 1.0 DATE 3/30/90
 EST. SUBDIVISION LENGTH: 4591 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock The N. end of the segment contains a grassy area
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 10 % B 30 % C 30 % P 20 % G 10 % S — % M — % V — %
 SLOPE: Long 40 % Hang 60 % Vert — % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W — m M — m N — m VL — m NO 4591 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	C	B	P	S	SB BR	DBL RW	GY SL	DBR TL	LR	SU	UI	M	U	
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT														
STAIN														
MOUSSE														
PATTIES														
TARBALLS														
FILM														
NO OIL										X	X	X	X	

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE #BAGS

Photographs:

Roll No. Frames

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	5BL BR	DEL RW	GY SL	DBR TL	LR	SU	U	M	U					
1	20					X	-		X								X					C, P, M	
2	30					X	-		X								X					P, M	
3	40					X	-		X								X					P, M	
							-																
							-																
							-																

COMMENTS

Segment is mostly High angle Boulder Beach with large shale cobbles. Most of the segment was surveyed by boat, Four beaches were surveyed by foot. No oil was observed from the boat or by foot. The N end of the segment contained a low angle Cobble Shale beach w/ a low grassy backshore. The rest of the segment contained a steep rocky focused backshore.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/EV059 Subdivision none Date (mo / day / yr) 3/30/90

Time (24 hr) 1040 hrs Biologist Ambrose

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

(B) Overall % cover of biota (% of segment): Dense 5 Moderate 35 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 (3)

Photographs:
Roll No. ST-11-1

Frames 1

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:

*
7 others, 2 gulls, 21 Harlequin ducks, 3 eagles, 2 deer, 1 great blue heron, 1 cormorant, 1 loon or merganser. Lots of empty clam shells on flat beach. A few small patches with dense Mytilus recruits.

Ecological Considerations:

1F, 7HH, 7II - no specific location is relevant.

* Note: Most of the segment surveyed by boat; Fucus could be observed from the boat, but not other species.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EU-59 SUBDIVISION: EU-59 DATE 3/30/90

USCG NOAA

NAME GARY SHIGENAKA SIGNATURE Gary Shigenaka

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

BEACH CHARACTERIZED BY SHALE COBBLE AND BOULDERS. ENTIRE SEGMENT WAS CLEAN, NO SIGN OF OILING. FUCUS, SNAILS, BARNACLES, GOOD RECRUITMENT OF JUVENILE MYTILUS. LOTS OF WILDLIFE. OTTERS, BIRDS, (DUCKS, EAGLES), DEER.

ADEC

NAME John Hayes SIGNATURE John Hayes

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

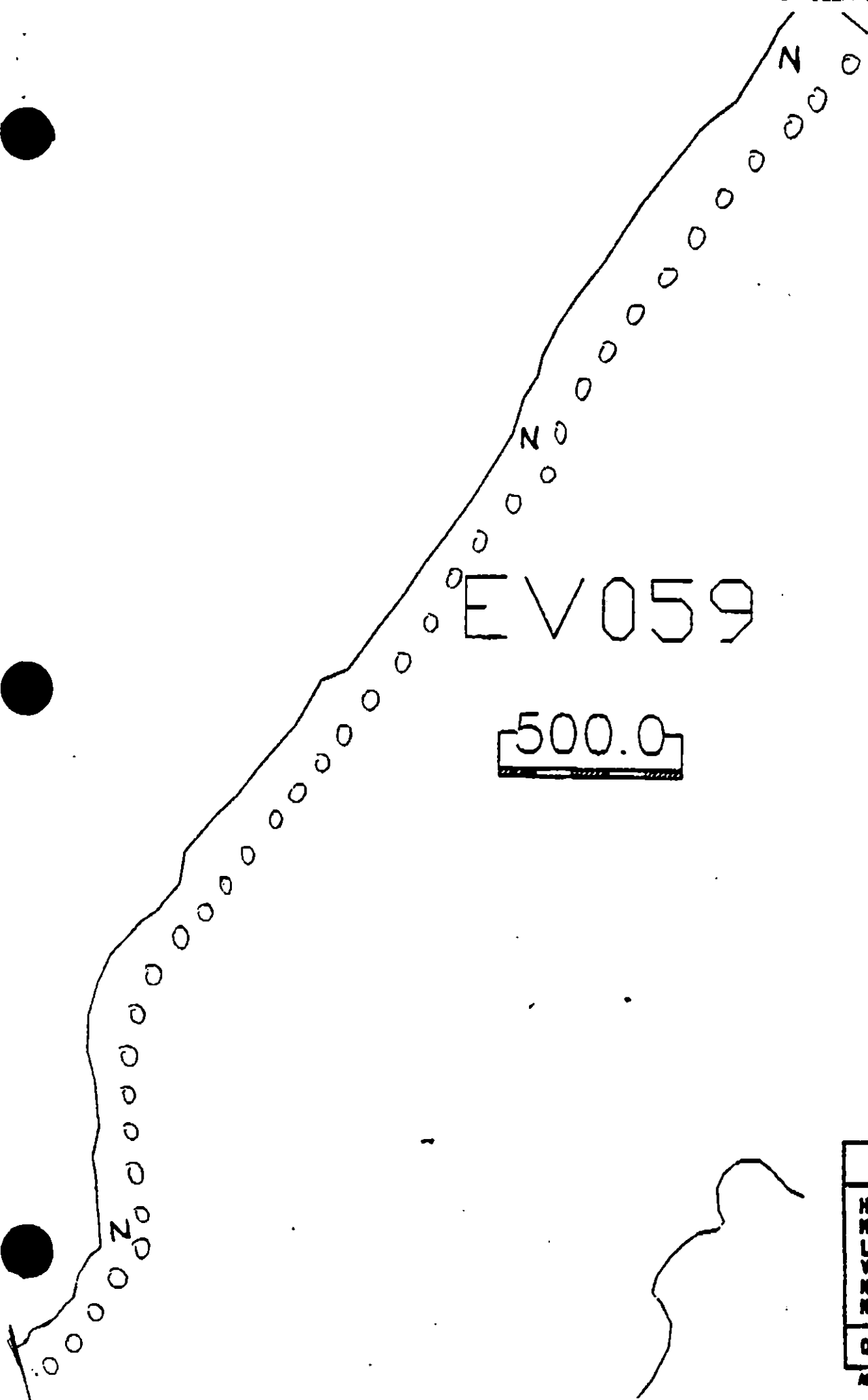
We found no trace of oil or subsurface oil on this segment. No treatment ~~recommended~~ recommended on this segment. Healthy low angle beach, Deer, ducks and Bald Eagles present. Fucus, murels and barnacles all doing well and not stained.

LAND MANAGER

NAME _____ SIGNATURE _____

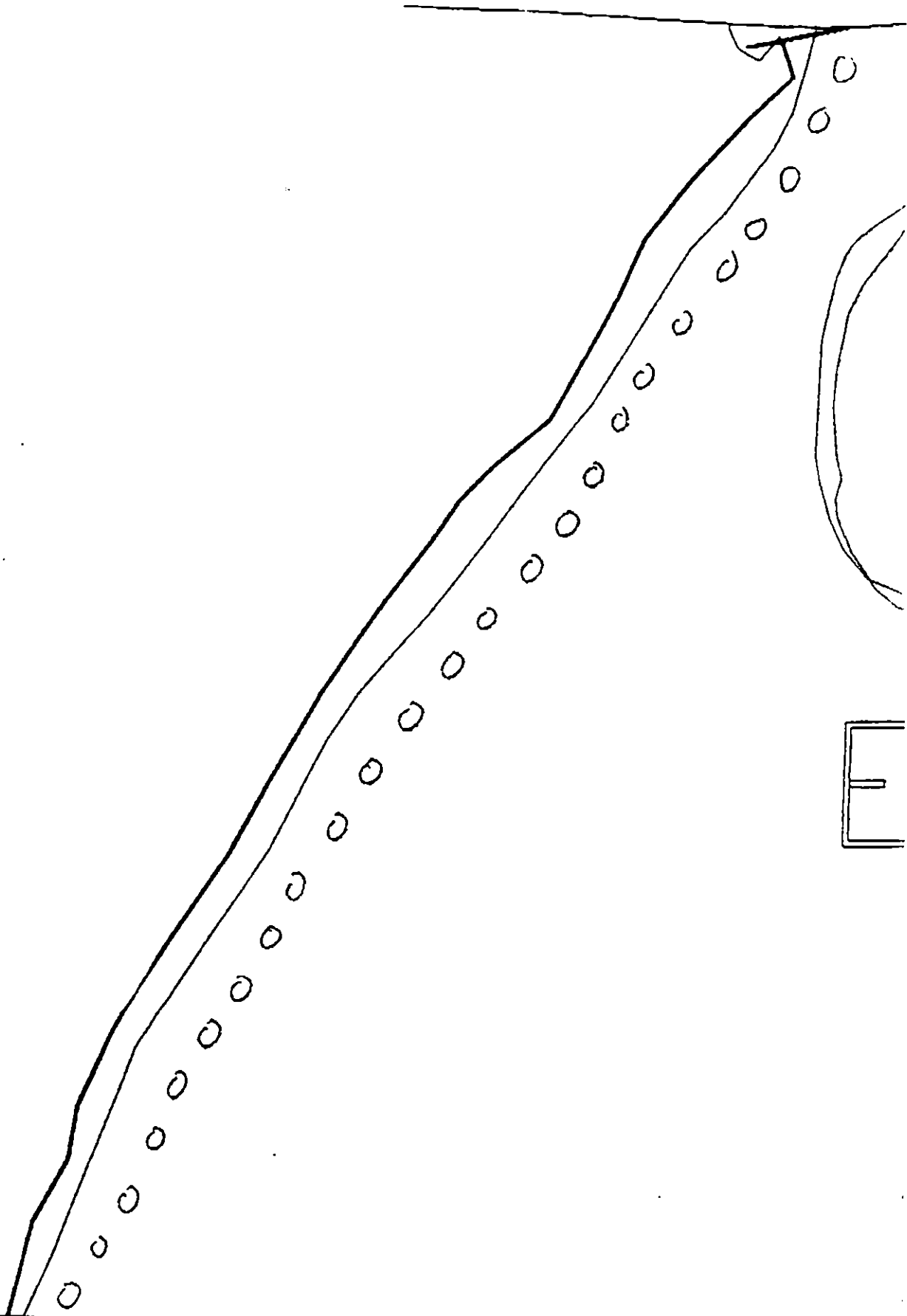
☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED



OILING

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



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-59

ADEC Segment Length: 4591m

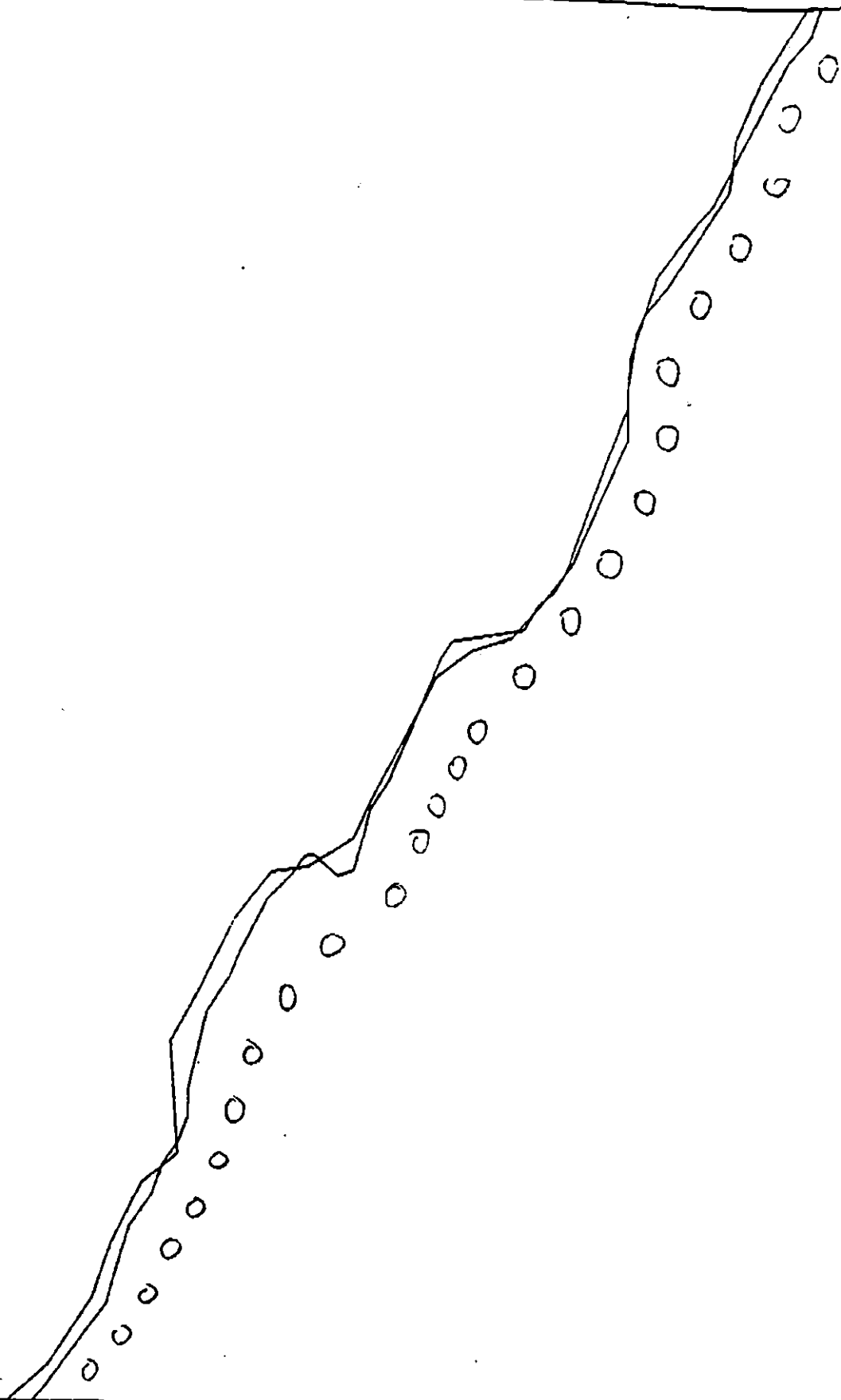


Map Key: PWS-258h

Name: Mike Foyet

Date: 3/30/90

Data Entered:



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EV-59

ADEC Segment Length: 4591m

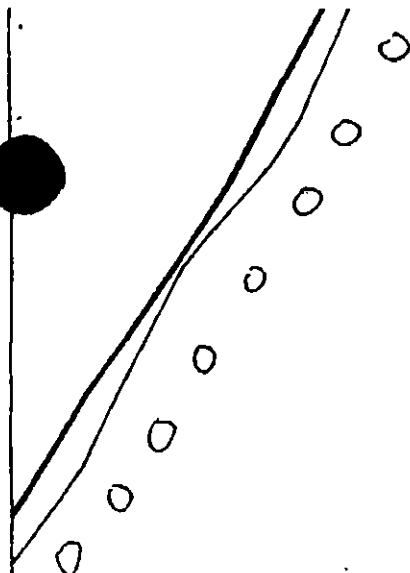


Map Key: PWS-2581

Name: Mike Fogar

Date: 3/30/90

Data Entered:



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

EV-59

ADEC Segment Length: 4591m



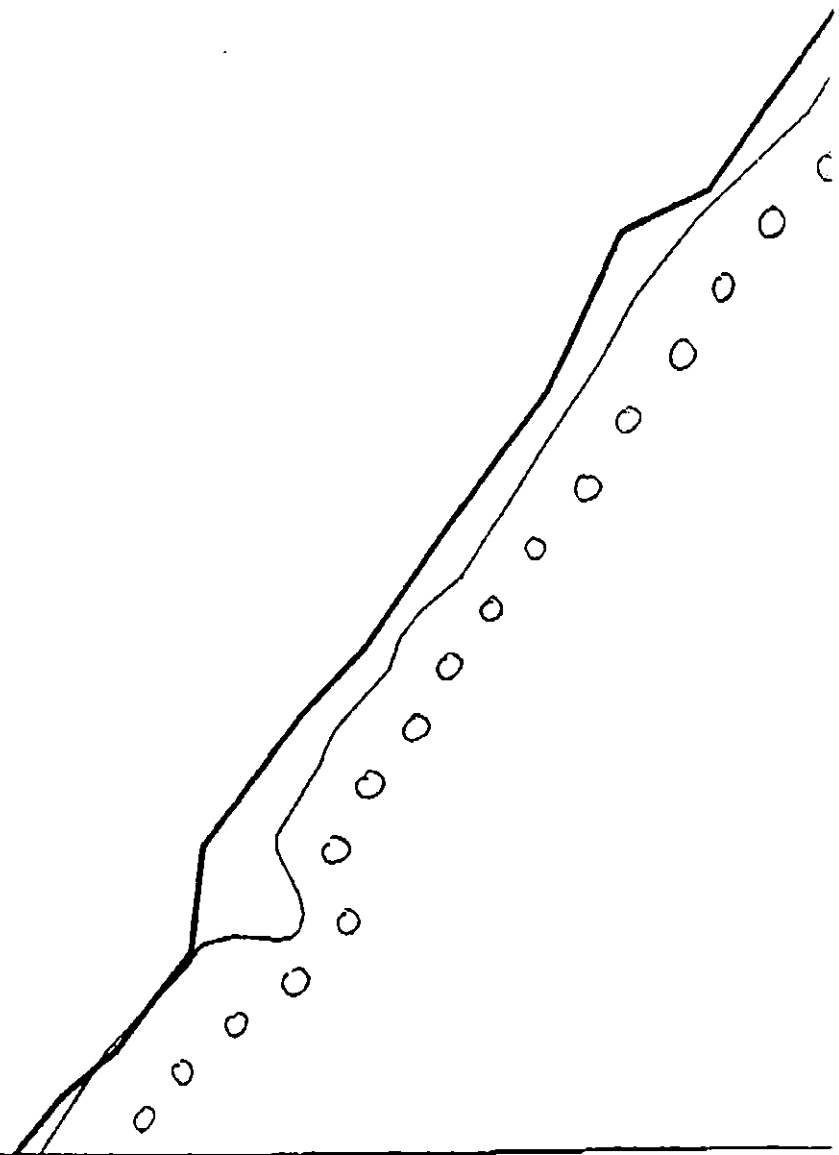
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Name: Mike Foyt

Date: 3/30/90

Data Entered:

EV-59



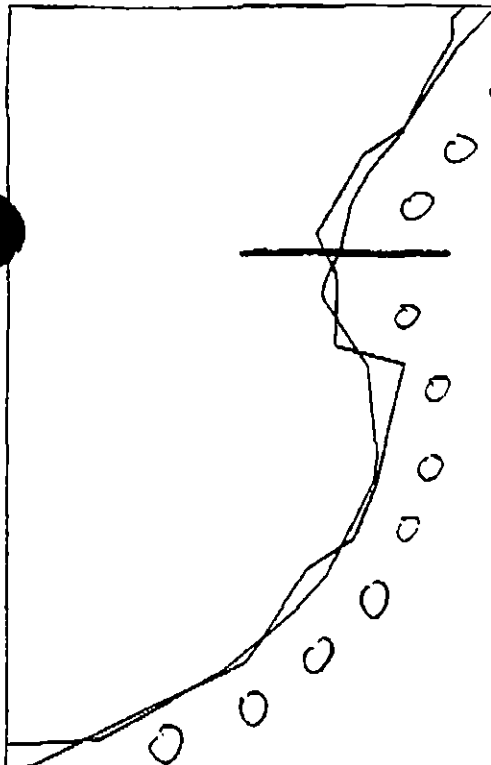
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

EV-59

ADEC Segment Length: 4591m



Map Key: PWS-258d
Name: Mike Foyet
Date: 3/30/90
Data Entered:



ER-02

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EV-59

ADEC Segment Length: 4591m

0 100 200 300

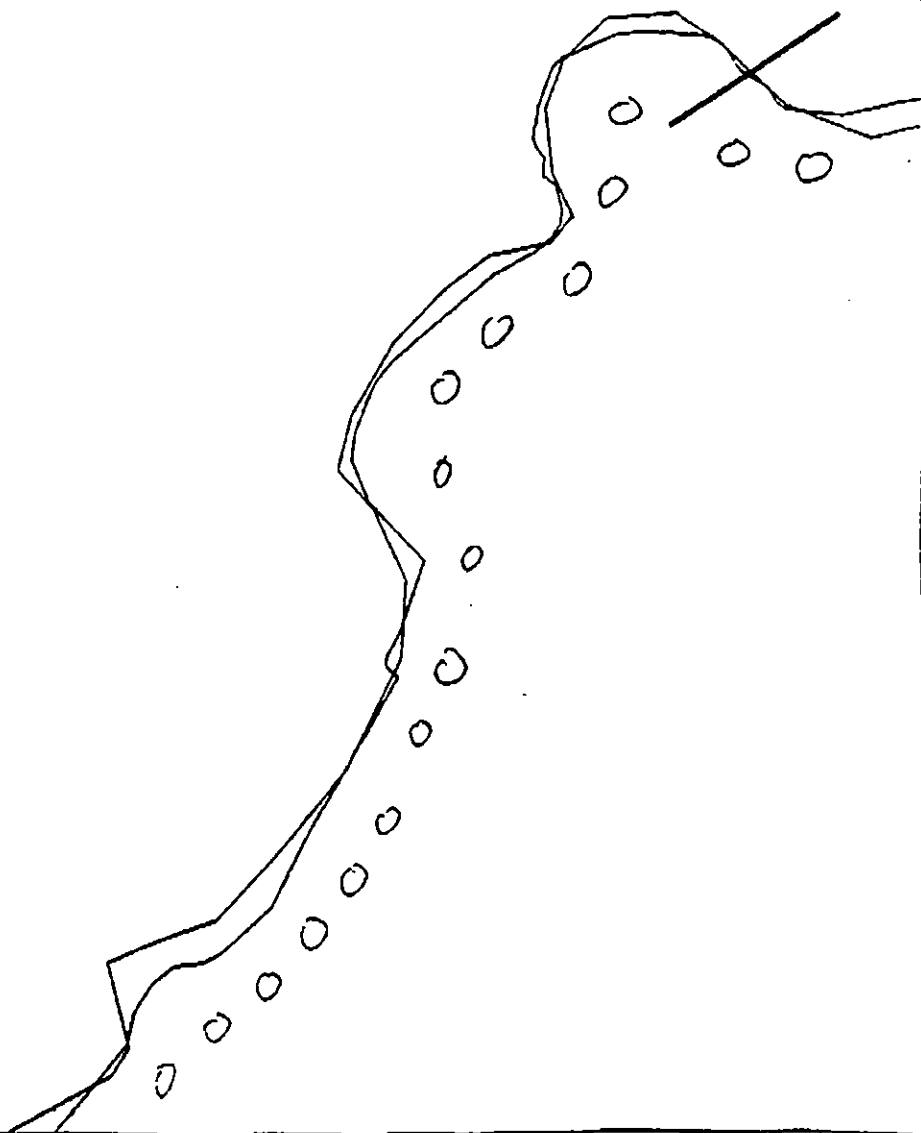
METERS

Map Key: PWS-258c

Name: Nike Foget

Date: 3/30/90

Data Entered:



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-59

ADEC Segment Length: 4591m

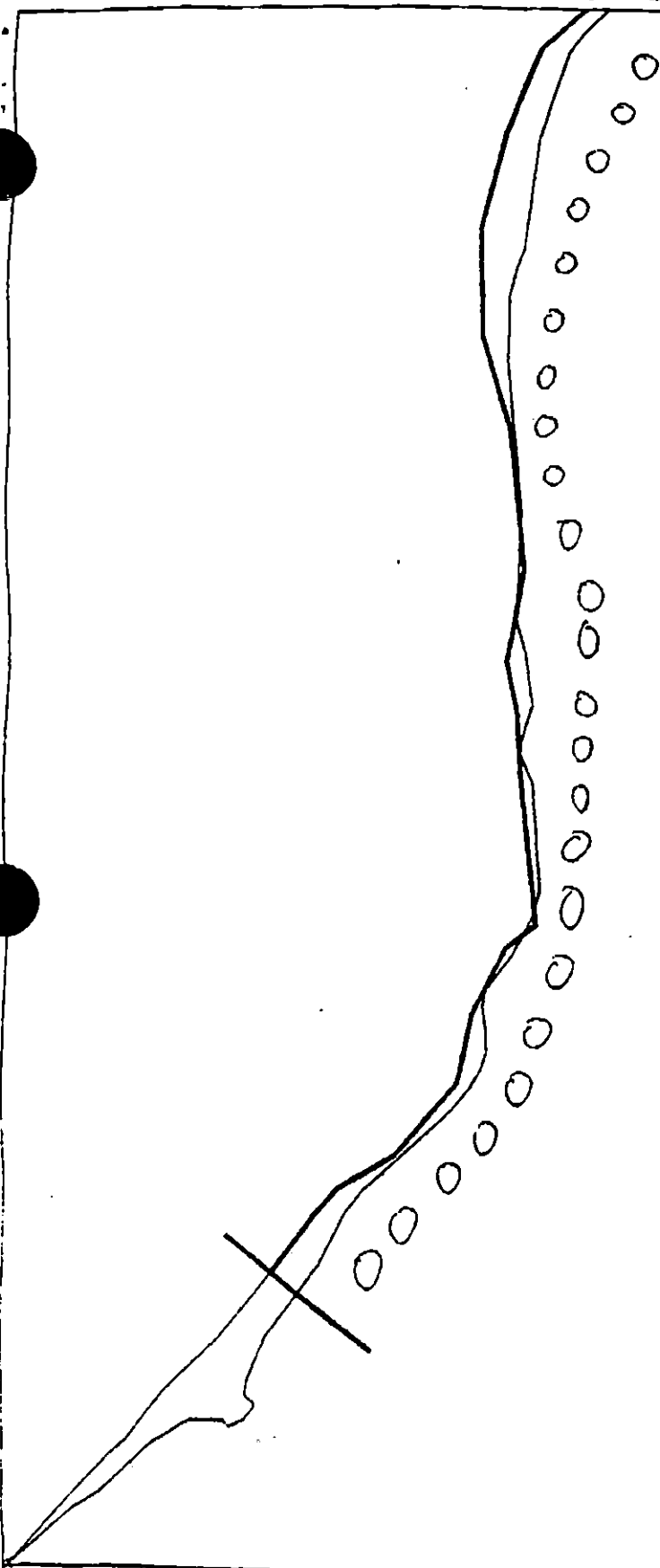


Map Key: PWS-258b

Name: Mike Foyet

Date: 3/30/90

Data Entered:



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EV-59

ADEC Segment Length: 4591m

0 100 200 300

METERS

Map Key: PWS-258a

Name: Mike Fogel

Date: 5/30/90

Data Entered:



SHORELINE EVALUATION

SEGMENT ST/ EV-59 SUBDIVISION A* DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Near Sawmill Bay Hatchery (1F) - 4/15 to 6/1; Deer Harvesting (7II) - 8/15 to 2/28; Finfish Harvesting (7HH) - Chenega and ADF&G to provide actual dates.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

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

SHPO SIGNATURE: Charles Z. Adams DATE: April 5, 1990

OILING CATEGORIZATION:

0 m Wide, 0 m Medium, 0 m Narrow, 0 m V. Light, 4560 m No Oil
Subsurface Oil Observed Yes X No Maximum Depth

RECOMMENDATIONS:

X No Treatment Recommended
 Treatment Recommended
 Manual Pickup Snare Booms/Sorbents Tarmat Breakup/Removal
 Bioremediation SPOT WASHING Other
 Wands
 Beach Cleaner

Comments: No treatment recommended as no oil was found in this subdivision. Please note attached field shoreline comment sheet.

TAG COMMENTS: Concur

TAG APPROVAL DATE: 4/5/90

ADEC JOHN BAKER John Baker

EXXON ANDY TEAL Andy Teal

DAA Burl Wescott Burl Wescott

SCG G.A. REITER G.A. Reiter

FOSC: WJL DATE: 4-19-90

*Subdivision covers entire segment.

EV059

500.0

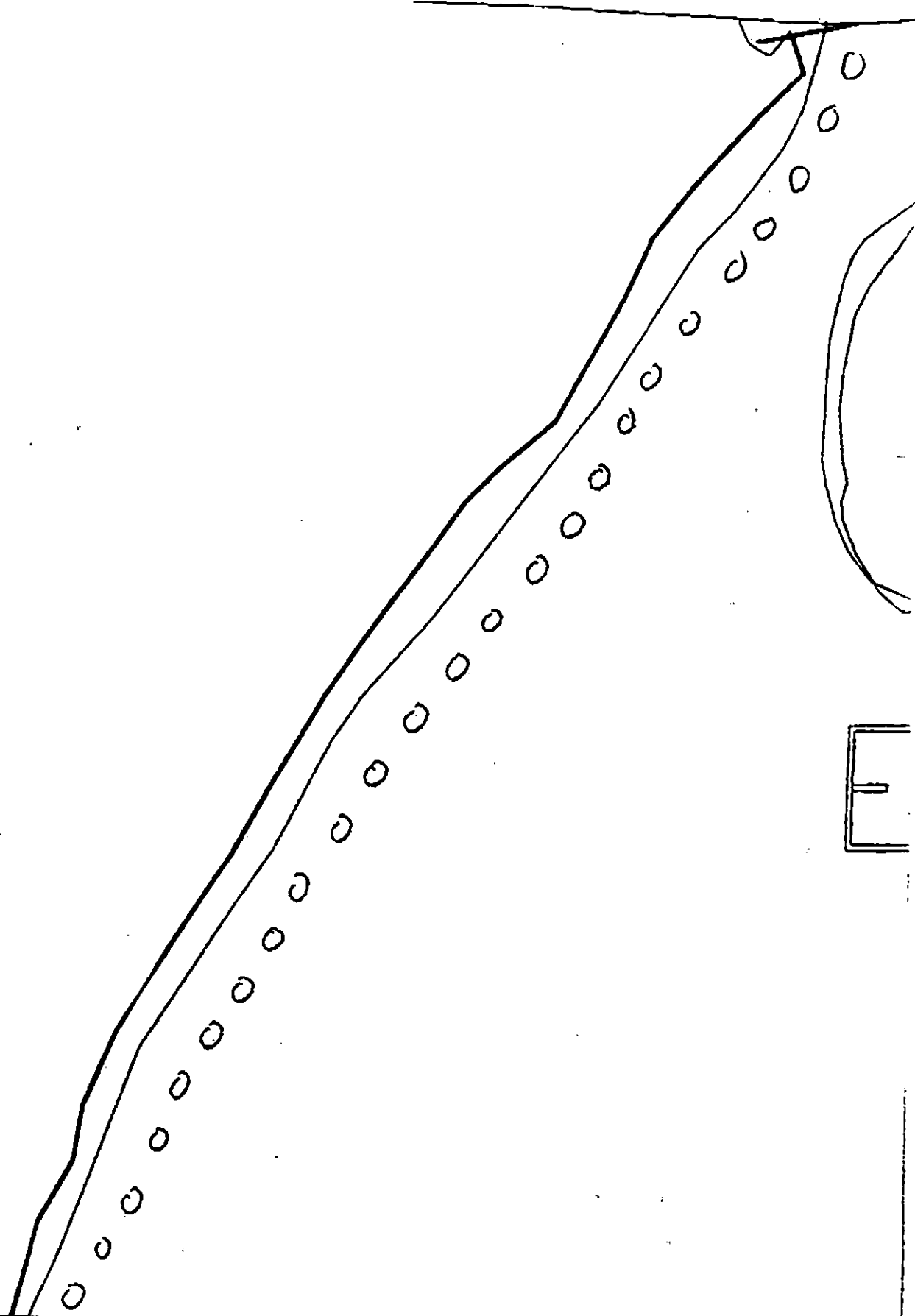


OILING

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

Distance In Meters

AMEC Sep/Oct 1988 Survey



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-59

ADEC Segment Length: 4591m

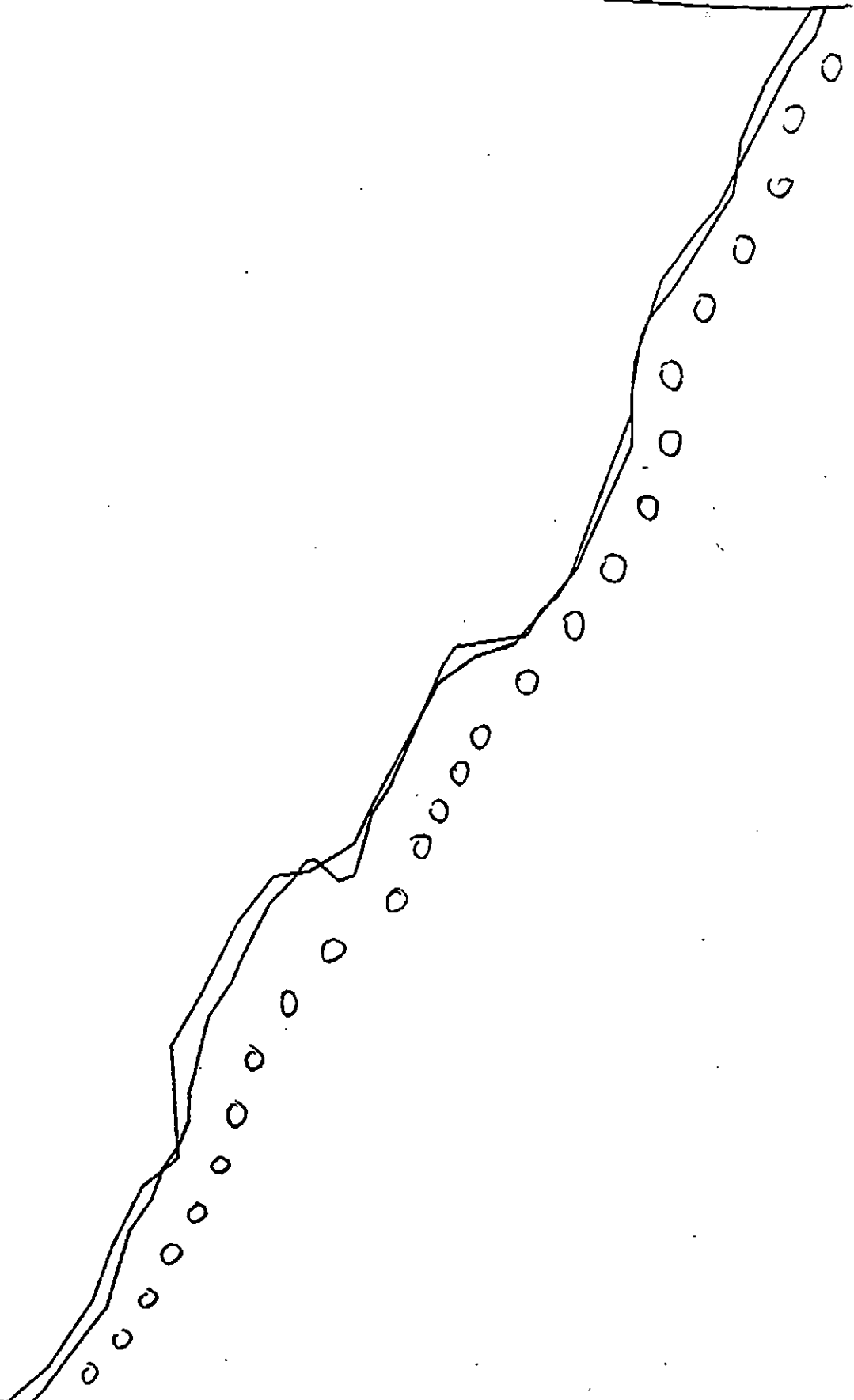


Map Key: PWS-258h

Name: Mike Foyet

Date: 3/30/90

Data Entered:



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-59

ADEC Segment Length: 4591m

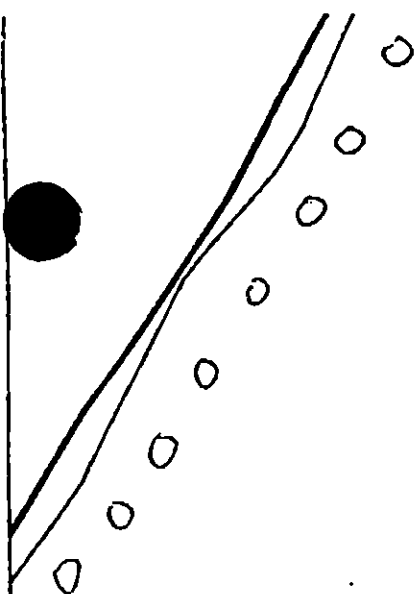


Map Key: PWS-2581

Name: Mike Foster

Date: 3/30/90

Date Entered:



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EV-59

ADEC Segment Length: 4591m



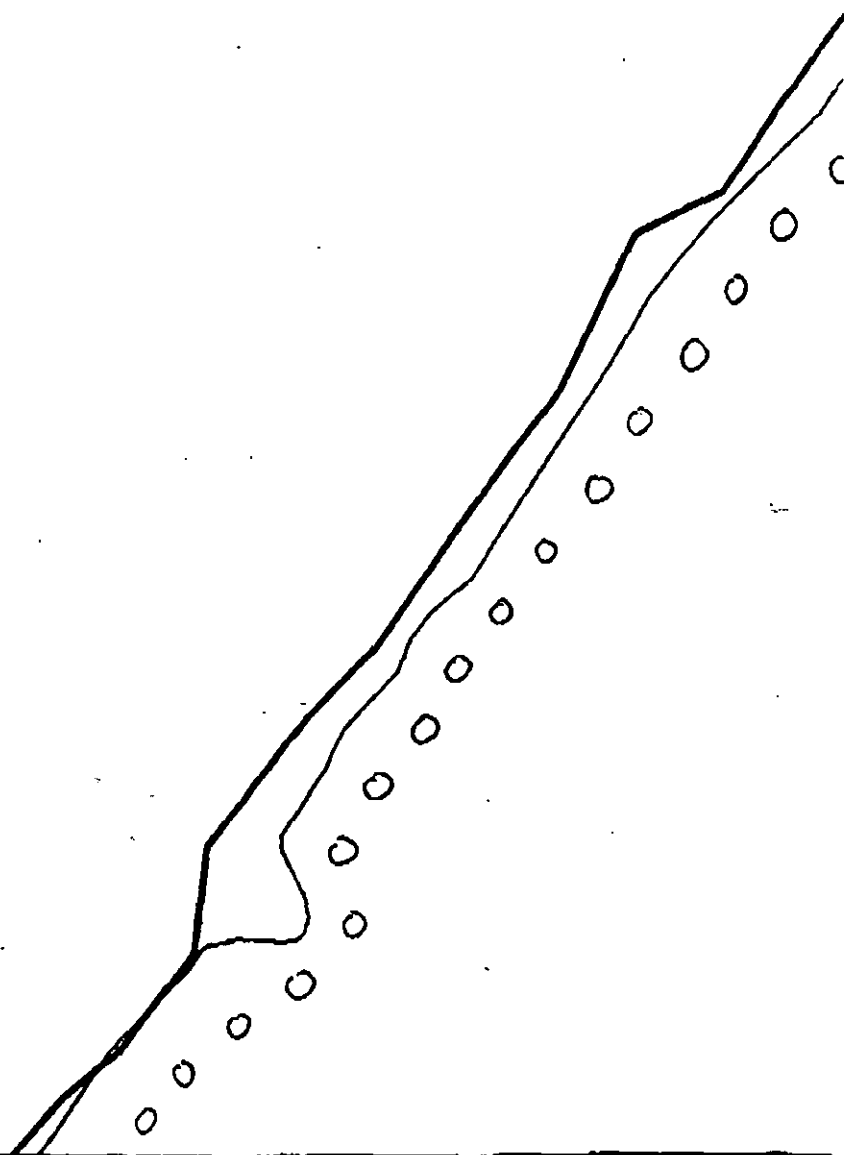
Map Key: PWS-258e

Name: Mike Foget

Date: 3/30/90

Data Entered:

EV-59



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EV-59

ADEC Segment Length: 4591m

0 100 200 300
METERS

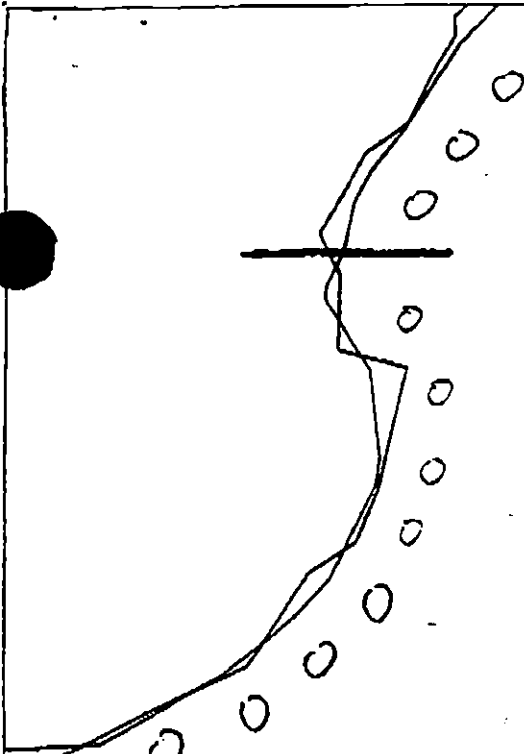


Map Key: PWS-258d

Name: Mike Foyet

Date: 3/30/90

Data Entered:



ER-02

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EV-59

ADEC Segment Length: 4591m

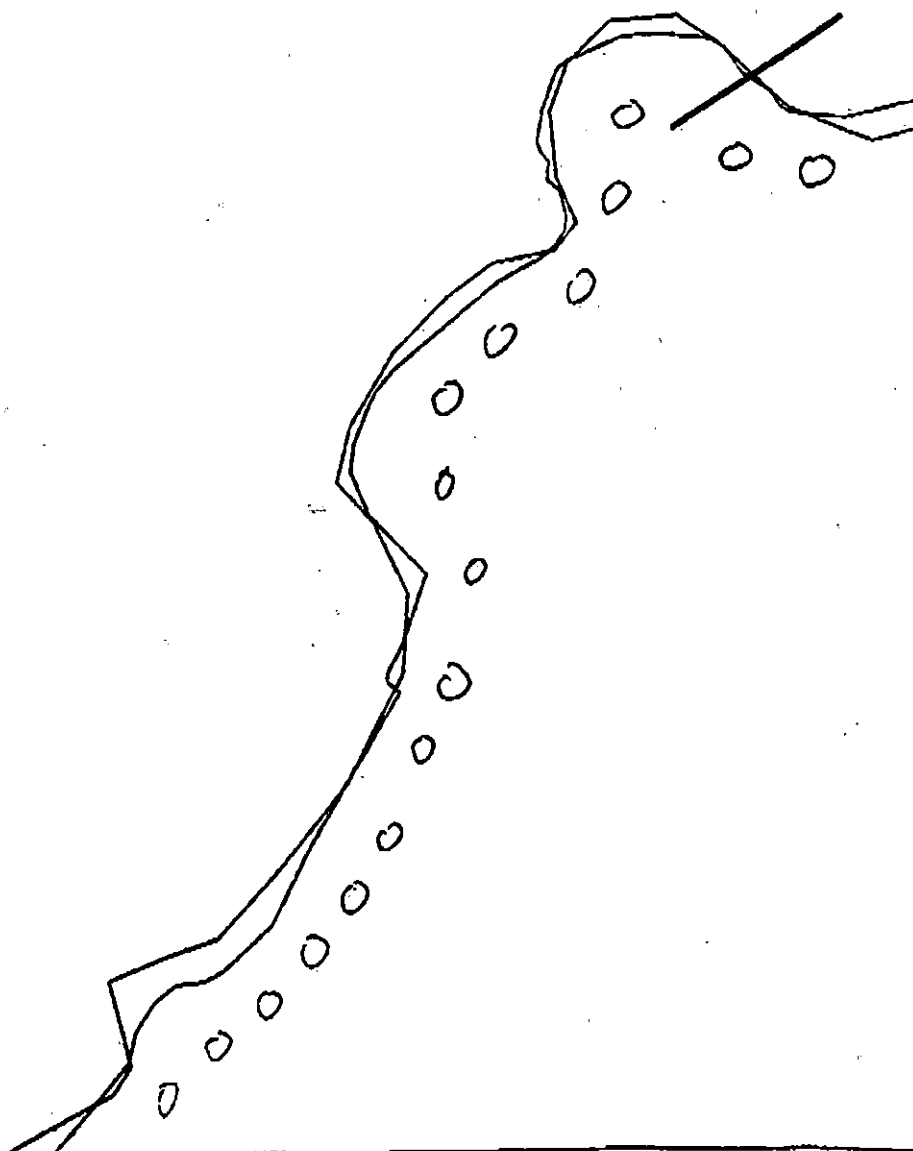
0 100 200 300
METERS

Map Key: PWS-258c

Name: Nike Foget

Date: 3/30/90

Data Entered:



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EV-59

ADEC Segment Length: 4591m



Map Key: PWS-258b

Name: Mike Foyet

Date: 3/30/90

Data Entered:

ARLIS
Alaska Resources
Library & Information Services
Anchorage, AK