

OIL SPILL PUBLIC INFO. CENTER



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[Shoreline evaluations, 1990].

QB-01 – SQ-05

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SHORELINE EVALUATION

SEGMENT ST/ QB-01 SUBDIVISION A (1 OF 1) DATE 4/28/90

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)
2M Herring spawning (4/1 to 6/15)
4LL National Parks
6U Recreation: Tent sites (6/1 to 9/15)
6V Recreation: Anchorages (6/1 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Hines DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 26 m: No Oil 934 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: May 5 1990

ADEC ART WEINER DATE 5-9-90
EXXON Mark McVitt DATE 5-9-90
NOAA Gary Petro
USCG GA BEITER

- ✓ 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 ✓ 19 Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/15)
 1E Main Bay Hatchery release (4/20 to 6/15)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannary Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I Gill net area (5/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (5/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- ✓ 2M Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 1, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 ---, 3Q Harbor seal and sea lion molting (5/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- ✓ 6U Recreation: Tent sites (5/1 to 9/15)
 ✓ 6V Anchorages (5/1 to 9/15)
 6W Forest Service cabins (5/1 to 9/15)
 6X Lodge (5/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7I Deer harvesting (5/15 to 2/28)
 7JJ Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2350

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / QB001 SUBDIVISION: A (ENTIRE SEGMENT) DATE 4/26/01

USCG
NAME

Jerry Schultz

SIGNATURE

Jerry Schultz

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC
NAME

Mike Ebel

SIGNATURE

Michael Ebel

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

QB-001-A : Two areas (one on each end of segment) were found to have very small splashes of oil. This was of no ~~substantive~~ substantive amount (very very light). No further impact recommended.

LAND MANAGER

NAME Mike Tetreau NPS

SIGNATURE

Mike Tetreau

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Good survey. Very light splashes of oil observed at each end of the segment. No oil observed where noted last year. Removal of remaining oil is not necessary.

13/63

SHORELINE OILING SUMMARY

REVISION 10

OG Randy Siegel USCG Jerry Schulte M. Ke Tatum (NPS) SEGMENT ST/ QB-1
 BIO Louis Sherman LAND REP Peter Zolner (CNU) SUBDIVISION A (LOF)
 EXXON Legend Herbst ADEC Mike Ebel TIME 10:40 10 11 30
 TEAM NO. 12 TIDE LEVEL +1.5' to 2.40' DATE 4 / 26 / 90
 EST. SUBDIVISION LENGTH: 1016 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 5 % B 5 % C 10 % P 35 % G 35 % S 10 % M 0 % V 0
 SLOPE: Long 60 % Hang 40 % Ven 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 2 m NO 1014

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	S	P	S	1	2	3	4	5	W	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 so - by 0PATTIES / TARBALLS 0 BANEAR SHORE SHEEN? ☒ NO BR RW SL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE 0#BAGS 0Photographs: NoneRoll No Frames

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	!!	SURFACE SUBSURF SEDIMENT
		0	0	0	0	0		U	U	1	2	3	4	5	W	U	M	U				
1	30					X	0.0		X						X					-	-	P, G
2	26					X	0.0		X						X					N	20	P
3	24					X	0.0		X						X					N	15	P
4	42					X	0.0		X						X					-	-	P
5	36					X	0.0		X						X					-	-	P, G, S
6	34					X	0.0		X							X				N	30	G, S

COMMENTS

Short segment consisting of pebble-gravel beach at head of Quartz Bay.
 An anadromous stream cut through the beach. Two splashes of coal were observed along the beach. No oiling observed in pits.

REVIEWED YW DATE 4/27/91

2/63

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 04

SEGMENT ST/ QB-1 SUBDIVISION A (2 OF 2)

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR	PIT ZONE				A N A	SCREEN (Y/N)	▽	SURFACE SUBSURFACE SEDIMENT
		OP	OR	OL	OF	NO		VO	VC		BU	U	M	U				
7	29					X	0-0		X		X					-	-	S
8	32					X	0-0		X			X				-	-	S
9	20					X	0-0		X		X					-	-	S
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COMMENTS

REVIEWED

Yw

DATE

3/63
4/23/9

SHORELINE ECOLOGICAL SUMMARY (Page 1 of 3)

Segment ST / QB-1 Subdivision A Date (mo / day / yr) 4/26/90

Time (24 hr) 1045-1130 Biologist SHARMA

(A) Substrate type and % of segment: SUBSTRATE
(1) Bedrock 5 (2) Boulder 5 (3) Cobble 10 (4) Pebble 35 (5) Sand 45 (6) gravel SA

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

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

Photographs:
Roll No.

Frames

BARNACLES

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

MYTILUS

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

GASTROPODS (ALICOLA, LITTORINA, LIMAEUS)

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

FUCUS

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

Wildlife Observations/ General Comments: 12 pairs Barnard's goldeneye, 10 pairs glaucous-winged gulls, 2 pairs Common merganser, 6 Steller's jays, 1 crow, varied thrush in forest, 1 belted kingfisher. This area, abraded during the '64 earthquake as evidenced by scree along the supratidal fringe. As in other segments in the area, there are discontinuous sparse edges.

Ecological Considerations: (cont.)
We received no information regarding resource sensitivities for this segment. See attached eco. map for location of possible anadromous stream. The biota of this segment cannot benefit from further human intrusion/disturbance.

9/63

QB-1

Shoreline Ecological Summary (cont.)
(Page 2 of 3)

Shorman
4/26/90

General Comments (cont.):

nearshore subtidally in shallow water, gently sloping fine-sediment beaches. Intertidal Comments are very similar for this segment as for BB-901. Solidum, Protodaca, Chiocordium shells, many drilled, on sandy beaches. Also an unusually great abundance of Podocampus. Primary bivalve predator appears to be Natuna - observed several Natuna shells + egg clusters. Beneath boulders are pricklebush, nemertean, limpets, Littorina, Idotea, Pagurus, Nereis. Abundant LTZ Enteromorpha on fine-sediment beaches. As elsewhere in this general area over the past few days, barnacle cyprid larvae have settled in great numbers but are only beginning to metamorphose into adult. Fucus and rupestra are recruiting well where adults are established. Newly recruited Littorina & limpets are common. Biotically, this segment appears quite normal & healthy - exactly what would be expected on the different substrate types (both diversity and abundance).

10/63

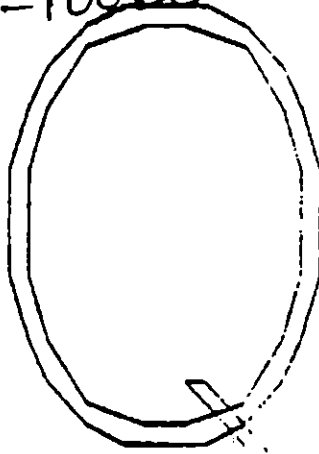
QB-1-A (1 of 1)

1A 1B
2M
4L
6U
EV

~~ANADROMOUS~~ Stream:

232-22-10050

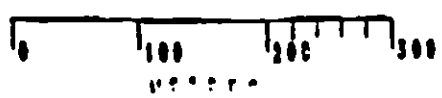
Anadromous
stream?



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

QB-1

ADEC Segment Length: 960m



Map Key: KEN-98

Name: _____

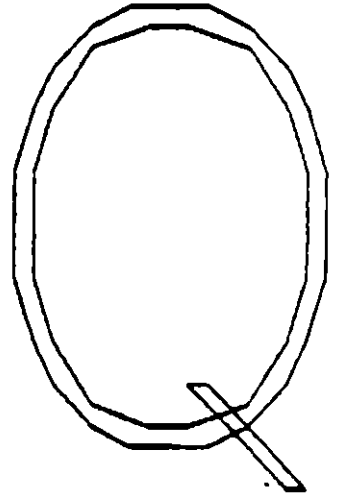
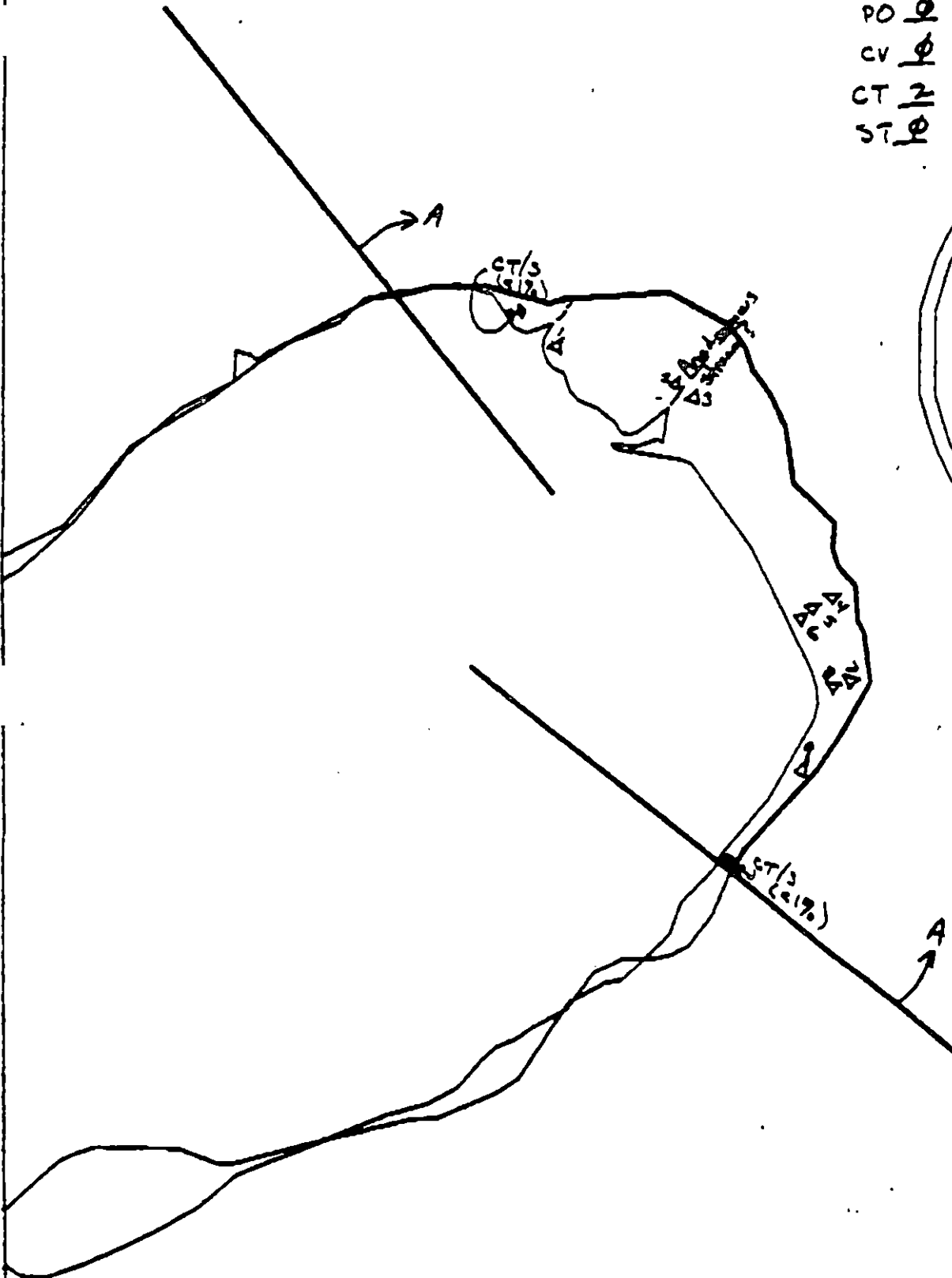
Date: _____

Date Entered: _____

11/63

Oil Character Length km:

AP ϕ	MS ϕ
PO ϕ	PT ϕ
CV ϕ	TB ϕ
CT $\underline{2}$	FL ϕ
ST ϕ	NO <u>1014</u>



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

QB-1

ADEC Segment Length: 960m

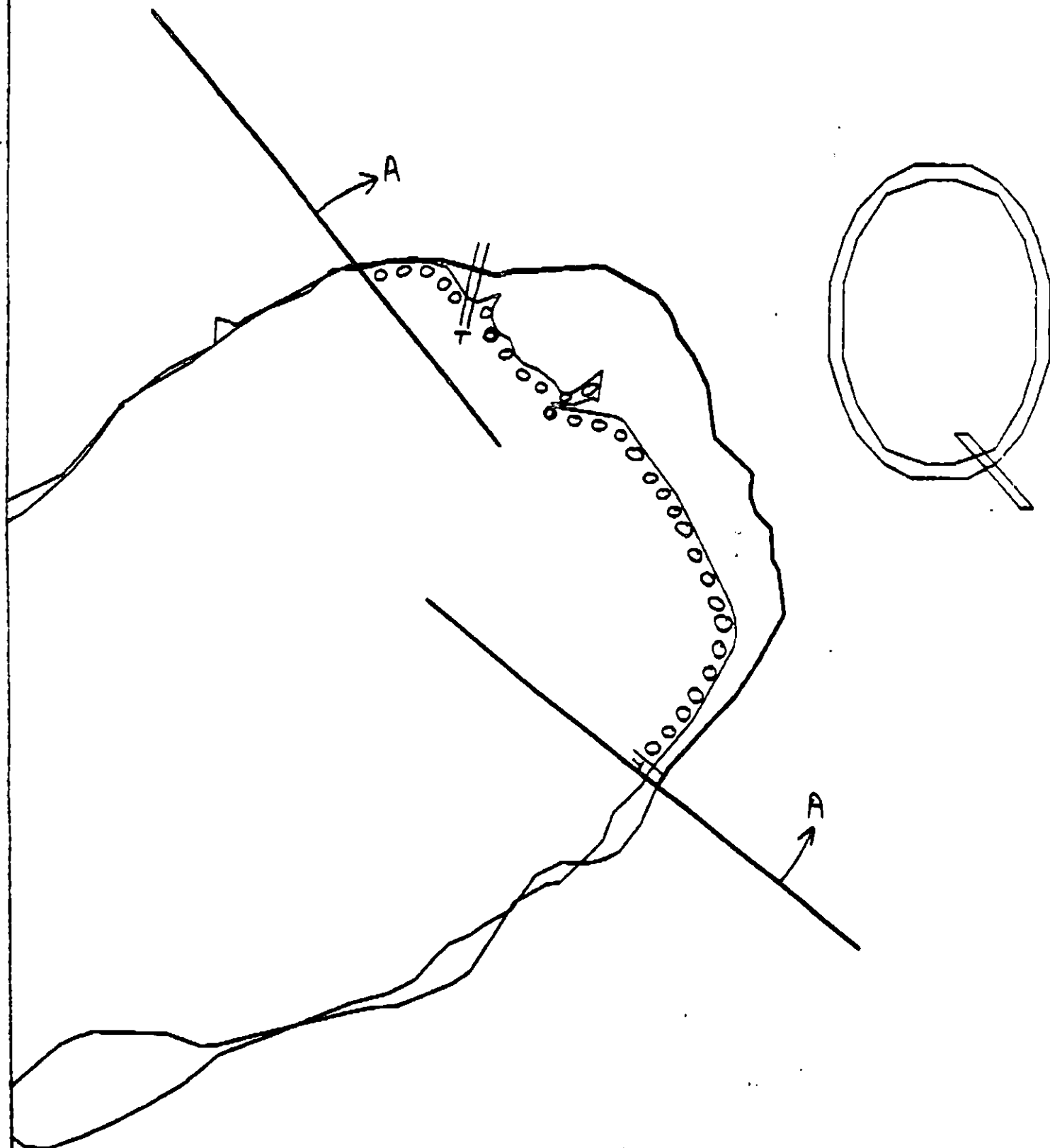


Map Key: KEN-98

Name: Robt. L. Langel

Date: 4/26/90

Date Entered: 4/6/92



XXXX Wide

//// Medium

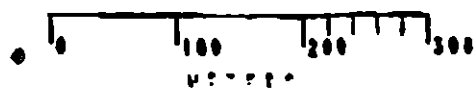
---- Narrow

TTTT Very Light

OOOO No Oil

QB-1

ADEC Segment Length: 980m



Map Key: KEN-98

Name: Early Stage

Date: 4/26/90

Data Entered:

5/63

SHORELINE EVALUATION

SEGMENT ST/ RB-01 SUBDIVISION A (1 OF 2) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Possible 3N,30 Harbor seal and sea lion pupping (5/15 to 7/1)
4GG Alaska State Wilderness Park
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles J. Himes DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 87 m: Narrow 0 m: V.Light 300 m: No Oil 268 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>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommend manual pickup of oiled trash and mousse and biore-
mediate subsurface oil in areas shown on sketch map. Bioremediation
should be conducted between 7/1 and 8/1 due to pinniped concerns. No
time constraints for manual pickup.

TAG COMMENTS:

TAG APPROVAL DATE: 5/4/90

ADEC Art WEAVER
EXXON Amy TEAL
NOAA Gary Peters
USCG ST. A. THEILER

FOSC: DATE: 5-9-90

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 (5/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (5/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass.
 Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m
 horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m
 vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from
 and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to
 treatment for confirmation of dates.
- 6U Recreation: Tent sites (5/1 to 9/15)
 6V Anchorages (5/1 to 9/15)
 6W Forest Service cabins (5/1 to 9/15)
 6X Lodge (5/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7H-H Finfish harvesting
 7I Deer harvesting (5/15 to 2/28)
 7J Invertebrate harvesting
 For Codes 7Z through 7J contact ADF&G and Chenega Corporation for specific dates, locations, and constraints

SEGMENT ST / RB-1 SUBDIVISION: A DATE 4/19/90

SCG/NOAA
NAME Miles Hayes SIGNATURE Miles Hayes

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

I agree with comments in both reports (geology and biology).
The only treatment that I would consider is bioremediation, particularly in the LITZ (east central portion) where the application should be accompanied by overturning cobbles, mixing fines, sediments, etc. The ridge in the center of the site (LITZ) is also a possible site for bioremediation.
Oil occurrence is controlled by sedimentation processes, with maximum occurrences: (a) in lee of large rock outcrop in center of area (a tombolo); and (b) in the sheltered eastern corner.

ADEC
NAME Russell Kaniba SIGNATURE Russell Kaniba

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS RB-1 A.

The heaviest oiling occurred in the north east corner of the core. I found a large black oil coating in the LITZ. The oiling was a thin 1 cm layer of mousse and slush below and between the cobbles and boulders. This area is directly below ADEC transect 30T-T. There was also a small band, shown on the sketch map 6 m x 30 m, in the lower MITZ. Some of this oil was found in the sand under the mousse. A small amount of asphalt/mousse was also located in the sediment.
- Manual pick up of the surface asphalt/mousse where possible. Bioremediation of the LITZ in the north east corner of the core after the cobbles have been turned over. Possible bioremediation of the small 6 m x 30 m band of oiling in the lower MITZ.

ADNR / DPOR
LAND MANAGER
NAME Roger L Mac Campbell SIGNATURE Roger L Mac Campbell

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

I generally concur with this report. This area is in the Grand Bay State Wilderness Park it has a high human use criterion. There is some oily tar mat material that can be picked up.
Otherwise I agree with Miles Hayes Comments (NOAA). LITZ is rich in intertidal life. Mussels bed area in LITZ between A and B should be avoided. Manual removal of oil may be called for by overturning cobbles & small rocks and removing sedimented sediment - mousse in interstitial spaces.

SHORELINE OILING SUMMARY

REVISION NO. 041

OG GILFILLAN HESMAN NOAA USCG MILES HAYES SEGMENT ST/ RB-001
 BIO JOHN RAIDER ADNR LAND REP ROGER MACCAMBER SUBDIVISION A (1 OF 2)
 EXXON JOHN DEAN ADEC RUSSEL KUNIBRE TIME 13:25 to 16:00
 TEAM NO. 17 TIDE LEVEL +3.5 to +2 DATE 4/19/90
 EST SUBDIVISION LENGTH: 940 m ☒ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SE to NW
 SURFACE SEDIMENTS: R 25 % B 50 % C 10 % P 10 % G 5 % S — % M — % V —
 SLOPE Lang 80 % Hang 10 % Vert 10 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W — m M 90 m N — m VL 600 m NO 250 m

SURFACE OIL

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

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒

TYPE _____

#BAGS _____

Photographs: "Trash" = 1 buoy (orange)

Roll No. ST-17-1Frames 1-8ST-17-2
1-5

SUBSURFACE OIL

PIT NO	PIT DEPTH (FT)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (V/M)	↓	SURFACE SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	US	1	2	3	4	5	W	U	M	N				
1	20					X	.	X							X				N	-	-	C/PGS
2	5		X				2.3	X			X				X				N	Y	4	C/PGR
* 3	12		X				3.8	X	X							X			N	Y	8	CB/GS
4	5					X	.	X								X			N	Y	2	B/GS
5	30					X	.	X							X				N		-	P-G/PGS
6	15	X					0.7	X			X				X				N	Y	7	B-C/GS

COMMENTS * Pit 3- believe to be UC, not completely sure due to water @ 8 cm.

Subdivision consists generally of boulder-cobble beach w/ metamorphic rock outcrops. Surface oiling occurs as dull black coat (can be scraped w/ fingernail). One area of surface mousse in bedrock crevasses ~1m x 1m. (see next page)

REVIEWED BAF DATE 21 Apr 90

SEGMENT ST/ RB-001 SUBDIVISION A (1 OF 2)

SUBSURFACE OIL (CONTINUED)

PIT NO	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR						PIT ZONE				A	N	SHEEN (Y/N)	!	SURFACE SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SP	BP	OP	OL	OF	NO	SU	U	M	U					
7	10					X	.		X						X					N	Y	7		B-G/GS
8	7	X					3.5		X				X		X					N	-	-		B/GSB
9	13	X					10-12		X				X		X					N	-	-		S/S
10	25					X	.		X						X					N	-	-		S-P/GS
11	35					X	.		X						X					N	-	-		P/PGS
12	30					X	.		X						X					N	-	-		PG/P.S
13	10					X	.		X									X	N	N	8			C-P/PG
14	15					X	.		X							X			N	-	-			B-C/PG
15	12		X				0-10		X				X			X			N	Y	8			B-C/KPS
16	13	X					4-6		X				X			X			N	-	-			B-C-P/SS
17	25					X	.		X						X				N	-	-			P.G/PG-S
18	30					X	.		X						X				N	-	-			P-G/PG-C
							.																	
							.																	

COMMENTS

Subsurface oiling in area of CT/P occurs as thin layer of mouse-like oil beneath boulders & cobbles. Subsurface oil appears to have a broken to patchy distribution. Bottoms of boulders/cobbles frequently have dark brown film when overturned (in area of CT/P only). Oiling generally confined to granule/pebble/sand mixture which fills the interstices beneath top layer of boulders & cobbles.

Surface mouse in Pit 15 & 16 area occurs generally as rim around boulder bases & extends into granule/pebble/cobble mixture beneath surface.

Pits 9, 10, 11, & 12 dug in granule bar down to paleosol-green-brown poorly sorted clay, sand & pebbles. Pit 9 has ~2 cm thick OP mouse layer atop paleosol, above & below mouse is clay.

REVIEWED FADATE 20 APR 90

SEGMENT ST/ KE-001

SUBDIVISION A

DATE 4 / 19 80

CHECKLIST

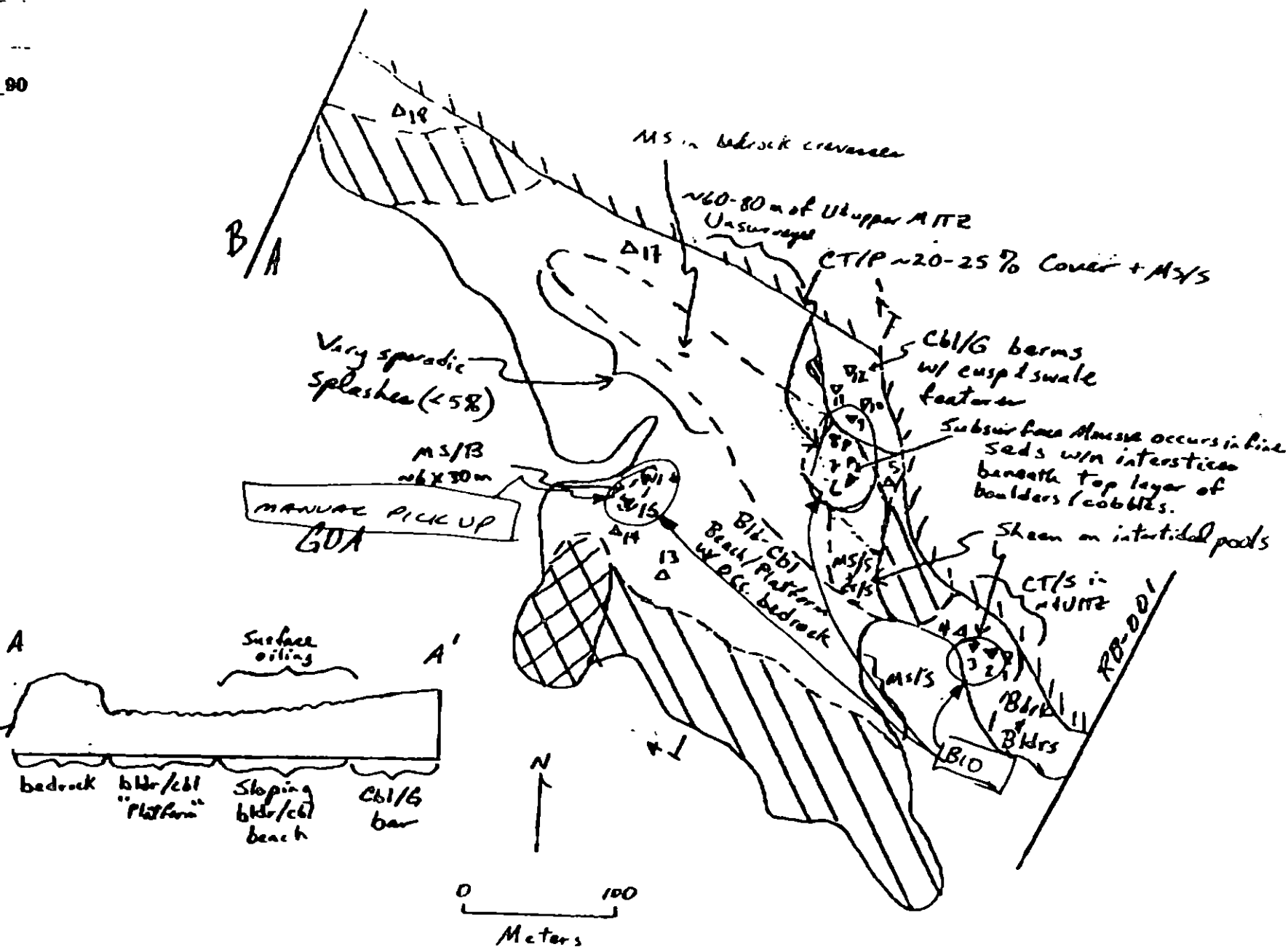
- _ N Arrows
 _ Approx. Scale
 _ Seg/Sub Endry
 _ Oil Dist.
 _ Width
 _ Length
 _ % Cover
 _ Substrate Character
 _ Est. HMLAWL
 _ Silt
 _ Profile Location(s)
 _ Profile(s)
 _ Pk Location(s)
 _ Profile Location(s)

LEGEND

- 1 
P1 - No Subsurface Oil
- 2 
P2 - Subsurface Oil
- 
Continuous Distribution
- 
Broken Distribution
- 
Pecdy Distribution
- 
Splashed Distribution
- 
Oiled Vegetation
- 1 
Photo location, direction,
and number

Estimated linearly, not
orig. constant line

SKETCH MAP



Revision 1

Old Character Length (m) AP _ _ _ PO _ _ CV _ _ CT 400 ST _ _ MS 30 PT _ _ TR _ _ FL _ _ NO 250

REMARKS:

SHORELINE ECOLOGICAL SUMMARY

REVISED 10/1/80

Segment ST / RB001 Subdivision A Date (mo / day / yr) 4/19/11

Time (24 hr) 13:20 Biologist DANIEL RAIOGA

(A) Substrate type and % of segments:
(1) Bedrock 25 (2) Boulder 50 (3) Cobble 10 (4) Pebble 5 (5) Sand 0 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 40 Moderate 35 Low 25 to none

(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. 1

Frames 1-8

BARNACLES

to Roll 11

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: - Glaucous Gulls (*Larus hyperboreus*) - roughly 4
Two Eagles sited; I believe they are mates and are nesting in the general area of
the most eastern section of the segment, but was not able to actually spot a nest.
In addition; One juvenile female spotted;

Ecological Considerations:

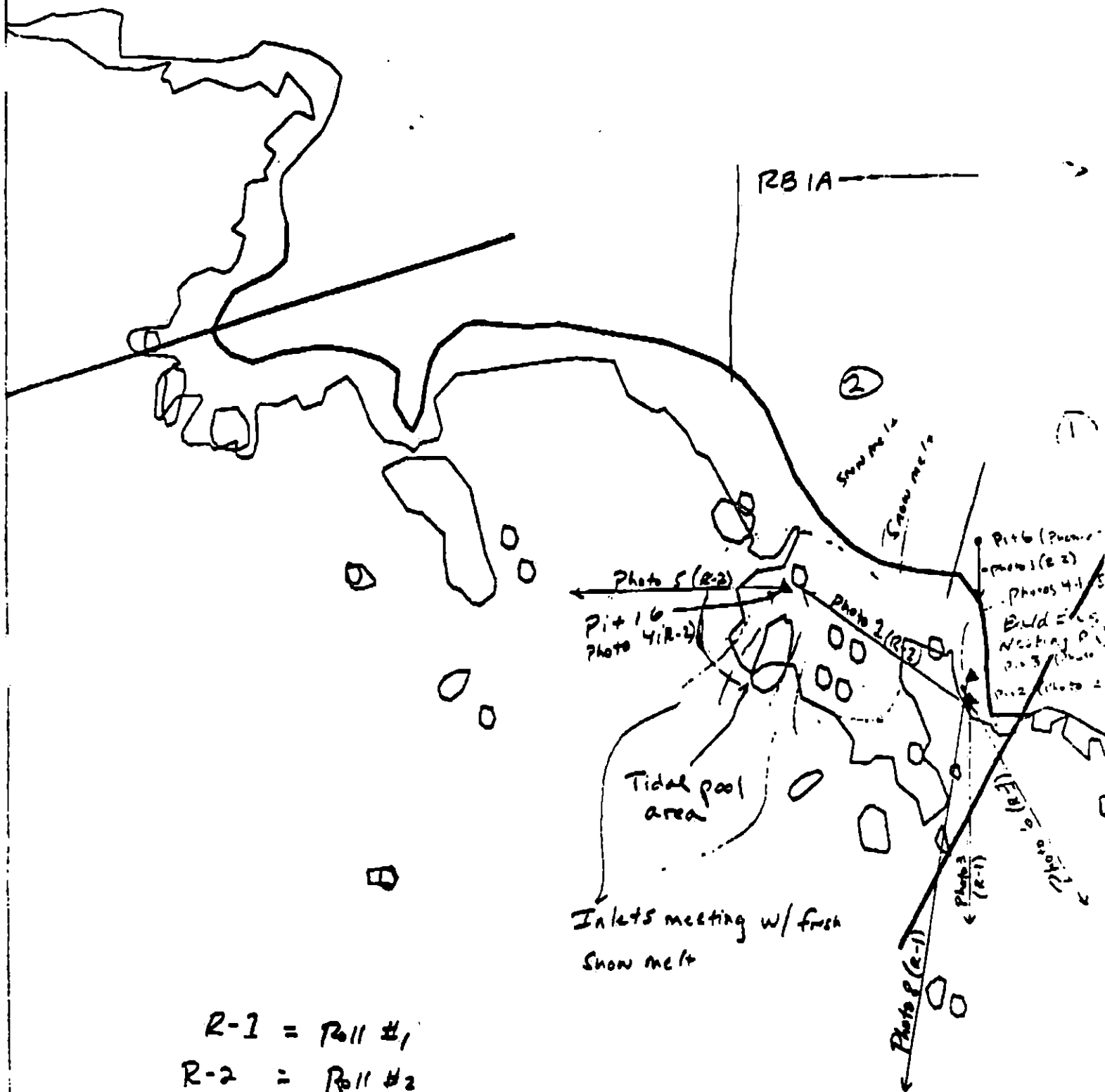
BN - Harbor Seal pupping

1/16A

REVISION TO RBCOLA
-Biology Section

4/20/90

- Text under "Wildlife Observation" has been altered to indicate that while two nesting eagles were sighted, no actual nest was found/seen. No "ST" is listed
- Text in map indicated a site for the bald eagle nest (indicated by a triangle ▲) in the eastern portion of the segment has been revised to say "Bald Eagle Nesting Pair" and indicated that general area in which they were sighted.



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

RB-1

ADEC Segment Length: 1387m



Map Key: KEN-101

Name: _____

Date: _____

Date Entered: _____

DATE 4/19/90 TIME 13:20 TIDE HEIGHT +3.5 - 12

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

FLORA:

SPECIES	UITZ	MITZ	LITZ	COMMENTS
BOSSIELLA/CORALLINA				
CALLIARTHRON/CORALLINA				
CLADOPHORA SPP				
COSTARIA SPP				
ENDOCLADIA MURICATA				
FILAMENTOUS GREENS		1, 2		
FILAMENTOUS REDS		1, 2		
GLOIOPELTIS FURCATA				
HALOSACCION GLANDIFORME				
LAMINARIA SPP				
LITHOTHAMNION				
NEREOCYSTIS SPP				
PORPHYRA SPP				
RALPHSIA/HILDENBRANDIA				
PHODOMELA LARIX				
RHOZOMENTA PALMATA		1, 2, 3		
SCYTOSIPHON SPP				
ULVA SPP	1, 2	1, 2		
ZOSTERA MARINA	1, 2	1, 2, 3		
ENTOROMORPHA				
FAUNA: ANTHOPLEURA SPP	1, 2	1		
(SEM) BALUNUS CARIOSUS	1, 2			Localized dense areas



BIOLOGICAL COMMENTS RB1A

DANIEL R. ...

TEAM 14

13 20 4/1/1

[SEE ENCLOSED MAP FOR LOCATION OF AREAS]

{Worked from +3.5 to +2 tide & could not enter LTZ}

-AREAL: RB1A

- Dense *Littorina sitkana* on bedrock and boulders in the MTE & UTE; this is the most dense example of *L. sitkana*, and *Littorina* in general, that I have witnessed up until now. Some areas were literally blanketed with *Littorina* such that you could not see the rock. Many of them were feeding off the relatively abundant brown kelp that died and had washed up shore.
- Dense *Littorina* eggs; on the bottom surface of many boulders in the MTE and UTE; again, the most profuse example I have seen up until now.
- Rare limpet → sparse → moderate; overall, sparse.
- Sparse to moderate focus on bedrock and boulders in the UTE and MTE.
- Much brown kelp washed up in upper MTE.
- Dense barnacles (*Semi-Balanus crenatus* + *B. glandula*) in UTE on bedrock and boulders.

AREA 2

- Profuse amount of Tidal pools with an abundant amount of flora + fauna; this is an extremely productive area and filled w/ green filamentous algae, *Enteromorpha*, *Rhodomenia palmata*, brown algae (kelp), *Enteromorpha*, *Porphyra* sp., chitons (*Katharina tunicata*, *Tonina* sp.), limpets, *Littorina sitkana* (w/ eggs present also), *Nucella lamellosa*, *Pagurus maclaughlinae*, *Leptasterias hexactis*,

RB 1A

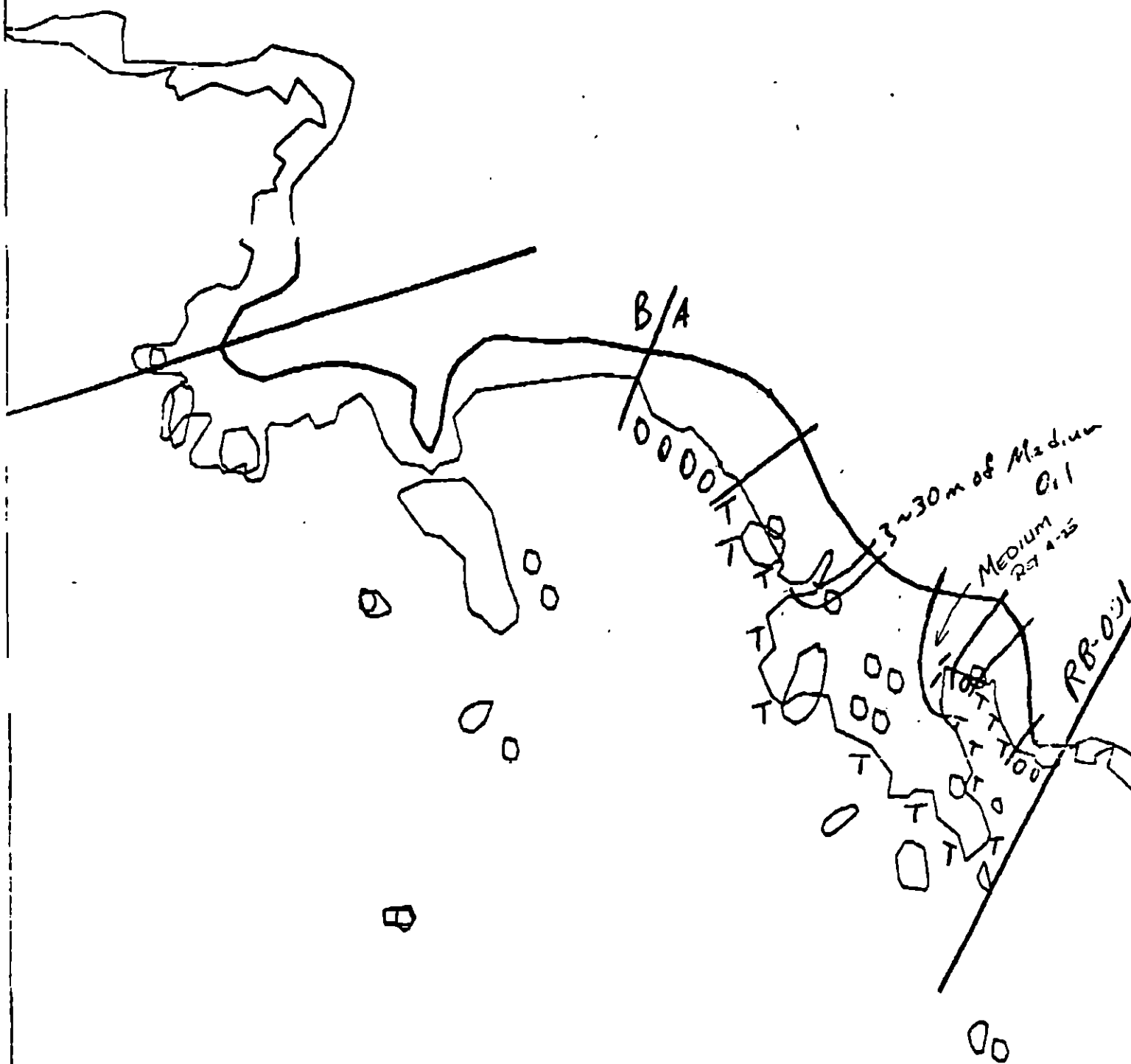
Gnoringosphaeroma oregonensis (profuse), *Ulva* spp.

- Dense barnacle spat (*Goni Ballanus*) on isolated boulders in upper MTZ
- *G. oregonensis* dense in tidal pools in MTZ/LITE underneath rocks
- Adult *Mytilus edulis*, dense on bedrock in MTZ
- Moderate *Fucus* in UTE + MTZ, adult, dense
- adult *Fucus* on boulders/bedrock in MTZ
- *Mytilus edulis* beds dense - juvenile + new recruits
- profuse green + red algae in the pools

— This moderately high energy beach has almost a plateau of bedrock which extends for several hundred meters out from the beach area/headlands and is filled with tidal pools. These pools have a great abundance of flora + fauna and do not appear to have had any direct damage (or, immediate damage) from the small amount of oil present, relatively speaking.

This area is quite ecologically sensitive and thus should be treated with great care if treated. Increased traffic flow could be devastating, esp for the dense littorina on the tops of many protruding boulders out on bedrock. Those areas which demand clean-up and are most accessible for foot traffic. There is a wide variety of fairly dense fauna + flora (*Littorina*, *Mytilus* + algae) which can be easily abused. Treatment of any kind (except localized and scout manual removal) may create more destruction than good that is gained.

APR-20-90 FRI 12:32



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

RB-1A

ADEC Segment Length: 1387m



Map Key: KEN-101

Name: G. Heggen

Date: 4-19-90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT RB-1 SUBDIVISION A (1 of 2)

WORK WINDOW

Manual Pickup

WORK 7/1 - 8/15

Bioremediation

WORK 7/1 - 7/31

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,O,P,Q

Harbor Seal & Sea Lion
Pupping and Mating

Closed to bioremediation before 7/1 and after 7/31.
Closed to all activities before 7/1 and after 8/15.

5T

Bald Eagle Nest

NO CONSTRAINT. USFWS 6/1/90 map indicates
no active nest within 400m of Segment BC-2 work
site.

OTHER ECOLOGICAL CONSIDERATIONS

Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

FOSC

Date

Prepared by

Date

6/13/90

6/12/90

RB-01

ACTIVE
NEST

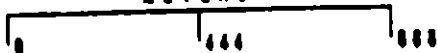
WORK
AREAS

B



Exxon Company, USA
Map Key: KEN-RB-1
May 17, 1990

ECOLOGY MAP
SEGMENT RB-1
SUBDIVISION A (1 of 2)
METERS



- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1457 feet

SHORELINE EVALUATION

SEGMENT ST/ RB-01 SUBDIVISION B (2 OF 2) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Possible	3N,30	Harbor seal and sea lion pupping (5/15 to 7/1)
----------	-------	--

4GG Alaska State Wilderness Park

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. If treatment is planned, special consideration should be given to the biological health and sensitivity of the area especially with regards to bioremediation.

SHPO SIGNATURE: Mark E. Adams DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 16 m: No Oil 716 m

Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

X No Treatment Recommended

Treatment Recommended

Manual Pickup

Bioremediation

Tarmat Removal

 Snare/Absorbent Booms

Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

Spot Washing: Wands

Beach Cleaner

Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/4/90

ADEC Art Weinger Sgt Weinger

EXXON AWAY TEAM 2/2

NOAA Gary Petras Gary Petras

USCG G.A. REITER 73 A. De

FOSC: DATE: 8-9-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / RB-1 SUBDIVISION: B DATE 4/18/90

USCG/NOAA

NAME Miles Hayes SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

I agree with CEC and his reports. We found very little oil in this section and I do not recommend any type of cleanup.

There are some large (20m spacing) mounds on well-sorted, coarse gravel in eastern half of section. We could not trench to bottom of these mounds, thus there is a possibility oil is buried there. However, the mounds appear to be intensely reworked by waves.

ADEC

NAME Russell Kumbie SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

The oily debris was picked up by the SSAT team.

ADNR / DPOR
LAND MANAGERNAME Roger L. McCampbell SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

I concur with SSAT team observations and recommendations for subdivision 9. Oiled debris (trash) picked up by team. Three oiled logs observed but insignificant at this location. Several other tracks and black bear tracks observed.

SHORELINE OILING SUMMARY

Revision 1

REVISION NO 34

OG GLENN HEYMAN ^{NDAI} ~~USGS~~ MILES HAYES SEGMENT ST/ RR-001
 BIO DAVID RADEA LAND REP ROGER McCAMPBELL SUBDIVISION B (2 OF 2)
 EXXON LOAN DEAN ADEC RUSSEL KUMURE ADNR TIME 16:00/18:30
 TEAM NO. 17 TIDE LEVEL +2 to +3.5 DATE 4/19/90
 EST SUBDIVISION LENGTH: 815 m ☒ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SE to NW
 SURFACE SEDIMENTS: R 30 % B 20 % C 10 % P 20 % G 15 % S 5 % M — % V —
 SLOPE Lang 40 % Hang 40 % Ven 20 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 15 m NO 800 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	S	P	R	1	2	3	4	5	SU	U	M	V
ASPHALT													
PAVEMENT													
POOLED													
COVER													
COAT				X		X				X	X		
STAIN													
MOUSE													
PATT													
TARB													
FILM													
NO OIL											X	X	

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

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

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE Garbage#BAGS L

Photographs:

Roll No ST-17-#2Frames 649

SUBSURFACE OIL

PIT NO	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				AN	SHEER (Y/N)	T	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	SU	U	M	V				
1	27					X	.		X						X				N	N	16	G/GP-G
2	40					X	.		X						X				N	-	-	P/P-G
3	30					X	.		X						X				N	-	-	G/GS
4	30					X	.		X						X				N	-	-	G/GS
5	27					X	.		X						X				N	-	-	G/GS
6	40					X	.		X						X				N	-	-	P-G/GPGS

COMMENTS

Coat in 2 areas only, 1) Not greater than 5m on rock faces as CT/S, and 2) on 3 drift trees in storm berm w/ very sporadic splashes on nearby cobbles and boulders. Remainder of subdivision B had no observed surface or subsurface oil.

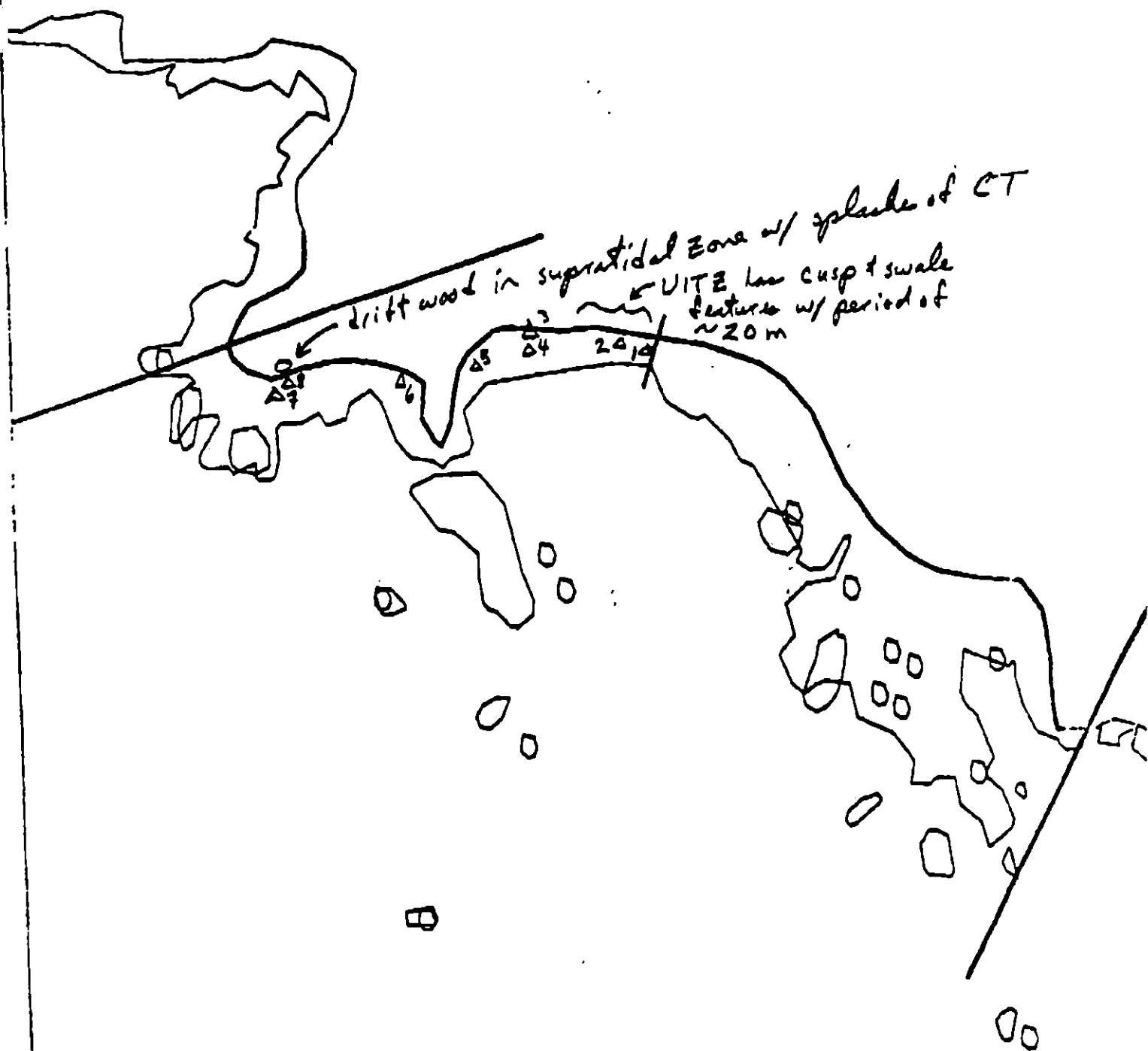
REVIEWED FAT DATE 21 Apr 90

REF: 626.041

SUBSURFACE OIL (CONTINUED)

COMMENTS

REVIEWED BAT DATE 7 Apr



In lieu of sketch

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

RB-1B

ADEC Segment Length: 1387m



Map Key: KEN-101

Name: G. Heyer

Date: 4-19-90

Date Entered:

SHORELINE ECOLOGICAL SUMMARY

REVISION 03.07.90

Segment ST / RB001 Subdivision B Date (mo / day / yr) 4 / 19 / 90Time (24 hr) 17:00 Biologist DANIEL TRAIDER

(A) Substrate type and % of segments:

(1) Bedrock 30 (2) Boulder 20 (3) Cobble 10 (4) Pebble 35 (5) Sand 5 (6) Silt 4(B) Overall % cover of biota (% of segment): Dense 7 Moderate 10 Low to None 83

(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 6 + 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:

- Herring Gull (1)
- Glaucous Gull (5)

Ecological Considerations:

3N - Harbor Seal Pupping 5/15 - 7/1

147A

REVISIONS TO RB001 - B
BIOLOGY SECTION

4/26/90

- Revision to "Shoreline Ecological Summary" sheet to indicate under "Ecological Constraints" section that ST (Bald Eagle Nests) should not be included
- Revision to map altering the indicated Bald Eagle nest to read as Bald Eagle nesting pair - so as not to indicate that a nest was sited, but that a pair of eagles (mated) were sited. The actual nest was never seen.

Daniel Raider
Biologist

DATE 4/19/90 TIME 13:20 TIDE HEIGHT 1.2 - 1.5

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

FLORA:

SPECIES	UITZ	MITZ	LITZ	COMMENTS
BOSSIELLA/CORALLINA				
CALLIARTHRON/CORALLINA				
CLADOPHORA SPP				
COSTARIA SPP				
ENDOCLADIA MURICATA				
FILMAENTOUS GREENS		1, 2		
FILAMENTOUS REDS		1, 2		
GLOIOPELTIS FURCATA				
HALOSACCION GLANDIFORME				
LAMINARIA SPP				
LITHOTHAMNION				
NEREOCYSTIS SPP				
PORPHYRA SPP				
RALPHSIA/HILDENBRANDIA				
PHODOMELA LARIX				
RHOZOMENIA PALMATA		1, 2, 3		
SCYTOSIPHON SPP				
ULVA SPP	1, 2	1, 2		
ZOSTERA MARINA	1, 2	1, 2, 3		
ENTOMORPHA				

FAUNA:

ANTHOPLEURA SPP	1, 2	1		
(SEM?) BALUNUS CARIOSUS	1, 2			localized dense areas
B. GLANDULA	1, 2	2		
BRYOZOANS				
CHITONS (other than K. TUNICATA)		1		
CLAMS				
CRABS				
DERMASTERIAS IMBRICATA				
KATHARINA TUNICATA	2	2		moderately dense, on many rocks
LEPTASTERIAS HEXACTIS		2, 3		in localized areas - dense
LIMPETS	1, 2, 3	1, 2, 3		moderate
LITTORINA SPP	1, 2, 3	1, 2, 3		Very dense in many areas & some eggs
NUCELLA SPP		2, 3		rare / sparse
PAGURUS SPP	1, 2	1, 2		moderate
PISASTER OCHRACEUS				
POLYCHAETES				
PYCNOPODIA HELIANTHOIDES				
SEARLESIA DIRA				
SERPULIDS				
SIPHONARIA THERSITES				
TEALIA				
Gnecim esphaeroma Oryzomys	2	2		moderately dense and found in shallow pools under rocks

DATE 4/19/90 TIME 17:00 TIDE HEIGHT +2 - + 3.5

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

SPECIES	UITZ	MITZ	LITZ	COMMENTS
FLORA: BOSSIELLA/CORALLINA				
CALLIARTHRON/CORALLINA				
CLADOPHORA SPP				
COSTARIA SPP				
ENDOCLADIA MURICATA				
FILMAENTOUS GREENS		2		
FILAMENTOUS REDS		1, 2		
GLOIOPELTIS FURCATA				
HALOSACCION GLANDIFORME				
LAMINARIA SPP				
LITHOTHAMNION				
NEREOCYSTIS SPP				
PORPHYRA SPP				
RALPHSIA/HILDENBRANDIA				
PHODOMELA LARIX	1, 2	1, 2		
RHOHOMENIA PALMATA				
SCYTOSIPHON SPP				
ULVA SPP		2		
ZOSTERA MARINA		1, 2		
ENTOROMORPHA				
FUCUS	1, 2	1, 2		
FAUNA: ANTHOPLEURA SPP				
(SEMI) BALUNUS CARIOSUS				
B. GLANDULA	1, 2	1, 2		
BRYOZOANS				
CHITONS (other than K. TUNICATA)	1	1		
CLAMS				
CRABS				
DERMASTERIAS IMBRICATA				
KATHARINA TUNICATA		1		
LEPTASTERIAS HEXACTIS				
LIMPETS				
LITTORINA SPP				
NUCELLA SPP				
PAGURUS SPP		1, 2		
PISASTER OCHRACEUS				
POLYCHAETES				
PYCNOPODIA HELIANTHOIDES				
SEARLESIA DIRA				
SERPULIDS				
SIPHONARIA THERSITES				
TEALIA				

APR-20-90 FRI 12:43

BIO-COMMENTS FOR RBTB

DANIEL RA.

TEAM 11

4/11/10, 11

[See map for AREA distinction]

- This beach was walked at a $+2$ to $+3.5$ tide and thus the Lower Intertidal Zone was not really visible but from the top and from a distance.

AREA 1

- Moderate adult *Mytilus Edulis* on bedrock in UTZ, dense localized packets w/ adult and juvenile mytilus. Packets (possibly 10 of roughly 1 meter x 5 cm in a long strip) of new *Mytilus edulis*, on bedrock in UTZ.
- Moderate focus on bedrock in UTZ.
- A large portion of the beach, especially that of Area 1, is sandy/pebbly beach consisting of little living biota and some ~~at~~ organic debris in stream burn area.
- The bedrock outcrops on either side of the sandy/pebbly beach consist of sparse to moderate vegetation & tundra.

AREA 2

- This area is similar to Area 1 and consists of a smaller sandy/pebbly beach with bedrock outcroppings on either side.
 - *Mytilus edulis* is more abundant in new settlement stage - Sparse to moderate on Bedrock in UTZ.

RB-1B

- Moderate adult barnacles on bedrock in localized patches and continuous along Southern face of bedrock in a band in the VITE for roughly 25 meters.
- dense focus on boulders and bedrock in M + VITE along Southern face of outcrop.
- Chitons, sparse
- Limpets, adults sparse; *Littorina Sitkana* + *Nucella lamellosa* sparse to rare on outcrop

Overall this section of the beach (RB-1B) has relatively much less biota as compared to RB-1A; all biota is found on the bedrock outcrops which frame the core.

RB 1B

RB 1A

AREA 2

AREA 1

Red - 50%

fur med.

in mtd

Photo 6 (R-2)

Photo 9 (R-2)

- dense mytilus (new & adult)
- dense barnacles (adult)
- some red mytilus in patches
- many barnacles
- moderate fouling

Small barnacles
dense med
anyhow (low)
at low tide
mod. fur
1 red & 1 fur
on bedrock
moderate mytilus
on bedrock

Eagle
nesting

R-2 = Roll 2

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

RB-1A

ADEC Segment Length: 1387m

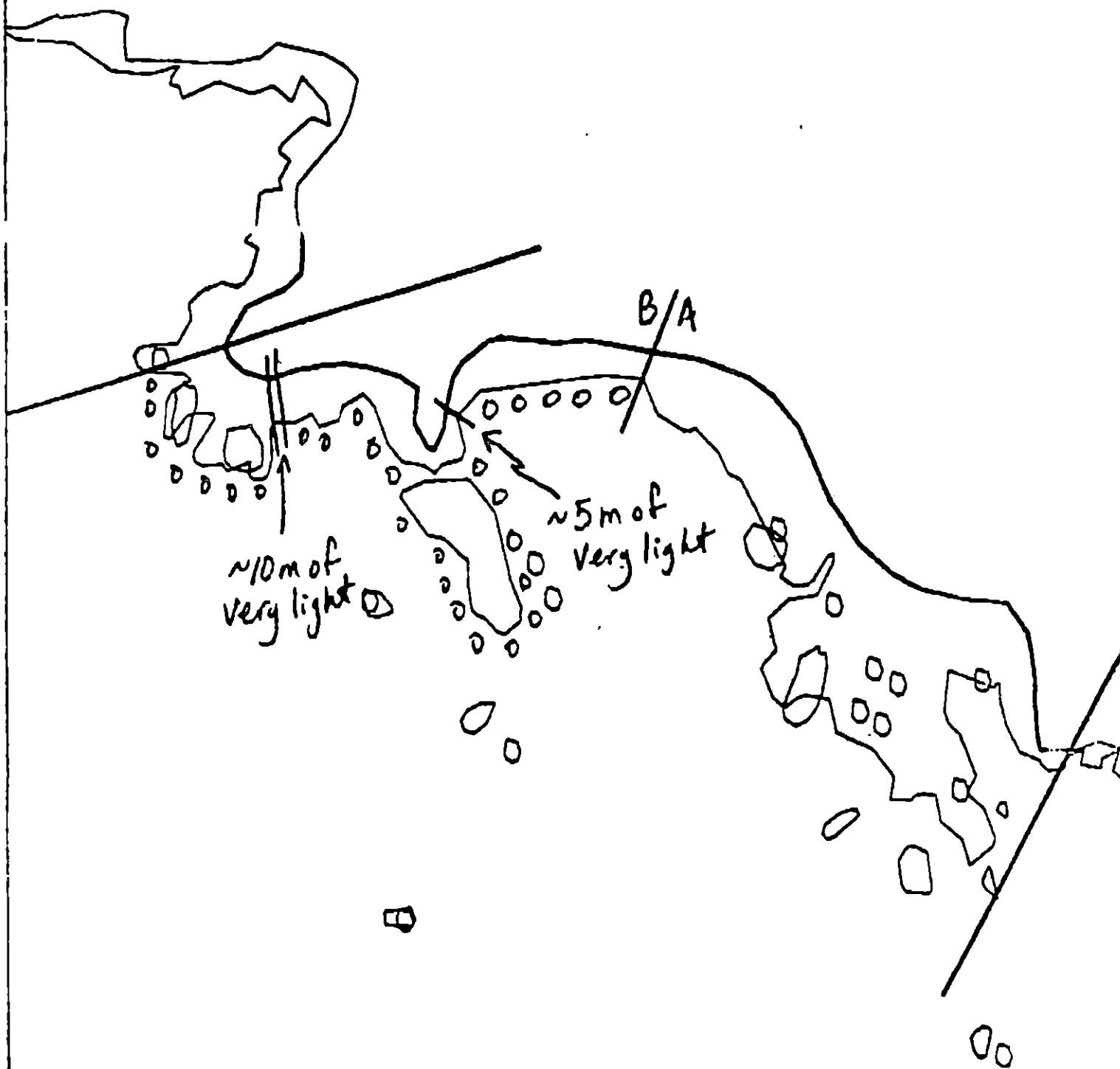


Map Key: KEM-101

Name: _____

Date: _____

Data Entered: _____



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

RB-1B

ADEC Segment Length: 1387m



Map Key: KEM-101

For Name: G. HEYMAN

Date: 4-19-90

By RNC 4-23-90

Data Entered: --

SHORELINE EVALUATION

SEGMENT ST/ RB-03 SUBDIVISION A (1 OF 1) DATE 4/10/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (4/15 to 7/31)

1B Salmon stream mouth - spawning (7/15 to 9/10)

8AA Sensitive Estuary

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. H. Jones DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 258 m: No Oil 402 m

Subsurface Oil Observed: Yes X No Maximum Depth 15 cm

(See note on OG Form,
Comments section)

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

 Manual Pickup

 Bioremediation

X Tarmat: Breakup

X Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

+ tarball

COMMENTS: Recommend tarmat removal as indicated on sketch map. Treatment should be conducted with consent of ADF&G Habitat Division due to Salmon stream constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/20/90.

ADEC ART WEINER Art Weiner

EXXON ANDY TAYLOR Andy Taylor

NOAA Burt Wesselt Burt Wesselt

USCG KENNETH KEANE Kenneth Keane

FOSC: W L DATE: 5-12-90

KODIAK ECOLOGICAL CONSTRAINTS

- 1A** Salmon stream mouth - fry outmigration (4/15 to 7/31)
1B Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)
 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** Kotol Bay Hatchery release
 Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H** Remote release site
- 1I** Gill net area
- 1J** Purse seine area
 Mainland, West side Kodiak, Shuyak & Moser/Olga Bay - 6/9 to 10/1.
 East side Kodiak, East side Afognak - 7/4 to 10/1.
- 1K** Purse seine hook-off
- 1L** Set net sites
 USFWS setnet uplands permit 5/15 to 9/15.
- For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M** Herring spawning (4/15 to 6/30)
 Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P** Harbor seal and sea lion pupping (5/10 to 6/30)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 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 8/31)
 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 8/1)
 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 (6/1 to 9/30)
- 7HH** Finfish harvesting
- 7II** Deer harvesting (8/1 to 1/7)
- 7JJ** Invertebrate harvesting
- 7KK** Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / RB-3A SUBDIVISION: A DATE 4/10/90

USCG
NAME R. Bryan Hurtle SIGNATURE R. Bryan Hurtle DCI

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

I agree with The Shoreline Oiling Summary Report For RB-03A subdivision A

ADEC
NAME Russell Kunitz SIGNATURE Russell Kunitz

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Out of 8 holes dug on the West side of the creek 3 produced light silver sand in the water. The sand from one of the holes could be traced to a pebble with droplets of mouse on it.

LAND MANAGER
NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

See next page

Land manager (Pat Korman) left
without signing the Comments form. He gave
verbal for "No Treatment Recommended". Pat
will be in Anchorage tomorrow (4/11/90) and I
will have him sign off then.

Ruby Siegel

4/10/90

SHORELINE OILING SUMMARY

REVISION NO. 00000

OG Randy USCG Regan Hirth SEGMENT ST/ RB-3A (1 sub)
 BIO Mike LAND REP Pit Norman (PWC) SUBDIVISION A
 EXXON John Deere ADEC Russell Kuntze TIME 08:00 to 09:15
 TEAM NO.: 17 TIDE LEVEL: -0.0 to -0.0 DATE 4/10/90
 EST. SUBDIVISION LENGTH: 8362 m 500m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 15 % B 10 % C 10 % P 10 % G 10 % S 30 % M 15 % V 0 %
 SLOPE: Long 60 % Hang 40 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W N/A m M N/A m N N/A m VL 850 m NO 450 m

SURFACE OIL

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

PAVEMENT: H (F) S 1 sq. m by 2 cm orPATTIES / TARBALLS 2 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

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

DEBRIS COLLECTED
☐ YES ☒ NOTYPE ---#BAGS 0

Photographs:

Roll No. ST-17-6Frames 28-30, 35, 36

SUBSURFACE OIL * See "Pit Comments" on p.2.

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OF	OR	OL	OF	NO		UO	UC	1	2	3	4	5	6	7	8	SU	U	M	U		
1	25					X	0-0		X									X					S,M
2	30					X	0-0		X									X					S,M
* 3	15				X		0-15		X			X						X					S,M
* 4	15				X		0-15		X			X						X					S,M
5	15					X	0-0		X									X					S,M
6	20					X	0-0		X									X					S,M

COMMENTS The Exxon listed length for segment RB-3 is 8362 meters. No length is listed for segment RP-3A, but I measured it at 8500 meters from ADEC's map. Of this, only 2 areas were oiled from ADEC's Sept/Oct 1989 survey (were inaccessible), and these were the only areas surveyed for SSAT. Surveyed length is 500 meters. The surveyed area consisted of bedrock cliffs and large sand/gravel beaches. An anadromous stream, 10-20 meters across and low flow at time of survey, flows over the largest beach. Very light oiling in this area.

SEGMENT ST/ RB-3A SUBDIVISION A

3

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	W	B	Y	GR	BR	BL	BU	U	M	L		
* 7	15				X		0-15		X			X				X					S, M
* 8	25				X		0-15		X			X				X					S, M
9	25					X	0-0		X								X				S
							.														
							.														
							.														
							.														
							.														
							.														
							.														
							.														
							.														
							.														
							.														
							.														

COMMENTS

* Water filled pit to about 15 cm below grade and a silver sheen was observed on the collected water. ~~No~~ No oiling of sediments was observed, so the oiled interval is not known.

REVIEWED BAT DATE 12 Feb 98

SEGMENT ST/ 3A

SUBDIVISION A

DATE 4 / 10 90

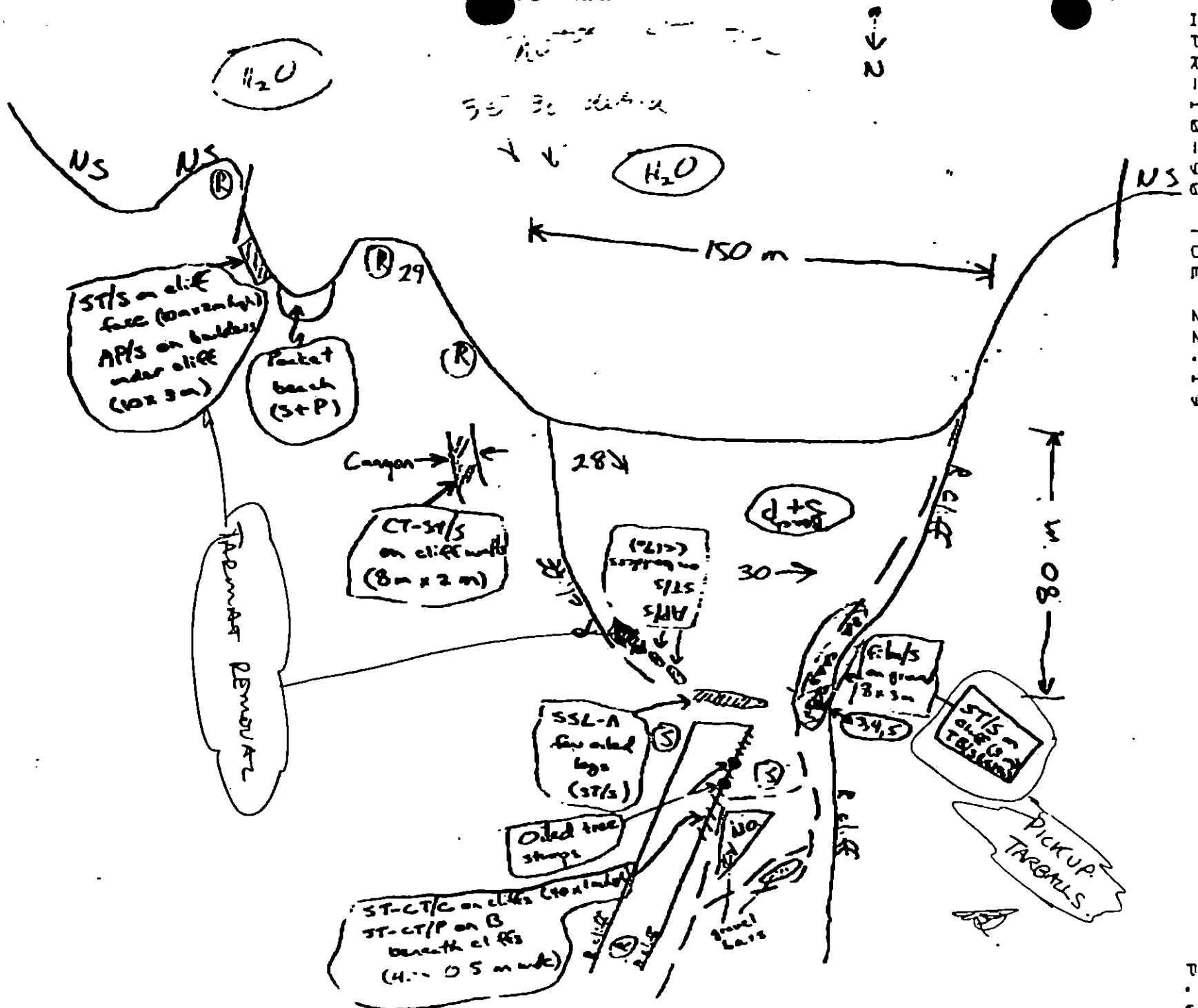
CHECKLIST

- N Arrow
- Approx. Scale
- Bag/Box Entry
- Oil Drl.
- Width
- Length
- % Cover
- Substrate Character
- Est. HAV/LAM
- SOL
- Profile Location(s)
- Photo(s)
- P/L Location(s)
- Photo Location(s)

LEGEND

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

SKETCH MAP



Oil Character Length (m): AP 10 PO N/A CV N/A CT 50 ST SL MS N/A PT N/A TB N/A FL 15 NO 430 450.

SHORELINE ECOLOGICAL SUMMARY

REVISION

Segment ST RB3A Subdivision A Date (mo / day / yr) 4/10/90

Time (24 hr) 0810-0920 Biologist M.H. Fawcett

(A) Substrate type and % of segments: (1) Bedrock 15 (2) Boulder 10 (3) Cobble 10 (4) Pebble 10 (5) Sand 40 (6) ^(fine gravel) 15

(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. ST-17-6

Frames 28-30, 35-36

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 PRESE

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 PRESE

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 PRESE

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 PRESE

Wildlife Observations/ General Comments:

1 set of river otter tracks beside stream, 1 mature eagle
see Attached sheet

Ecological Considerations:

1A

1B

8AA

RB3A-A

4/10/90

Rocky Bay

M. Fawcett

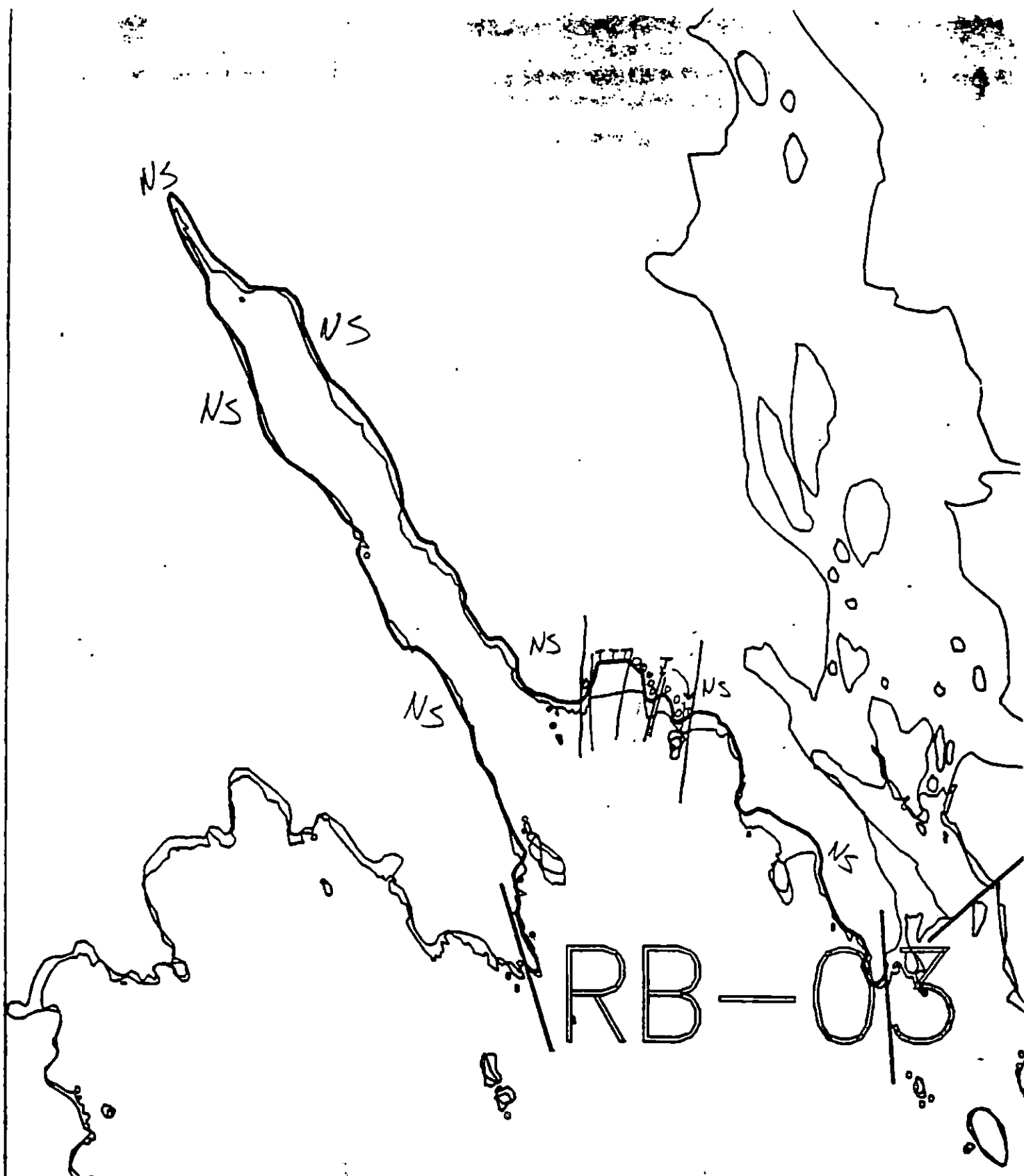
wildlife observations and General Comments

A very small stream said to be used by anadromous fish is in this subsection. No fry or other fish were seen. The stream mouth is on a fine sand beach in a cove with large outcrops and cliffs on either side. The beach is exposed to moderate to high wave energy from the southwest, and the biological community on the rocks is typical of fairly exposed shores. The star Pisaster ochraceus is particularly abundant in the LTZ, 70-80 specimens occurring in one aggregation near the stream mouth. Juvenile barnacles (Balanus glandula and B. cariosus) and spat (mostly Chthamalus) dominate the rock faces. Large, old B. cariosus are abundant in some areas but are being heavily preyed upon by the Pisaster. In general, the biota appears rich and healthy. Other starfish seen were Pycnopoda, Dermasterias and Leptasterias. Chitons and limpets are abundant, as are large anemones and 8 or 9 species of algae. On one area of UTZ bedrock, 60 percent or more of the ju (3-4mm) B. glandula in dense patches are dead.

RB3A-A

P. 2 of 2

but I also observed numerous nemertean worms feeding on barnacles in the same area.



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

RB-3A

ADEC Segment Length: 7748m



Map Key: KEN-103

Name: *Edy singh*

Date: *4/10/90*

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT RB-3 SUBDIVISION A (1 of 1)

WORK WINDOW

Tarmat Removal
Manual Pickup

OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous streams (242-31-10125 and 242-31-10130) are in Subdivision A. No constraint to manual pickup and tarmat removal.

1J Purse Seine Area

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.

OTHER ECOLOGICAL CONSIDERATIONS

Sensitive estuary. Avoid any unnecessary disturbance or damage to uncolled biota and substrate.

FOSC

[Signature]

Date

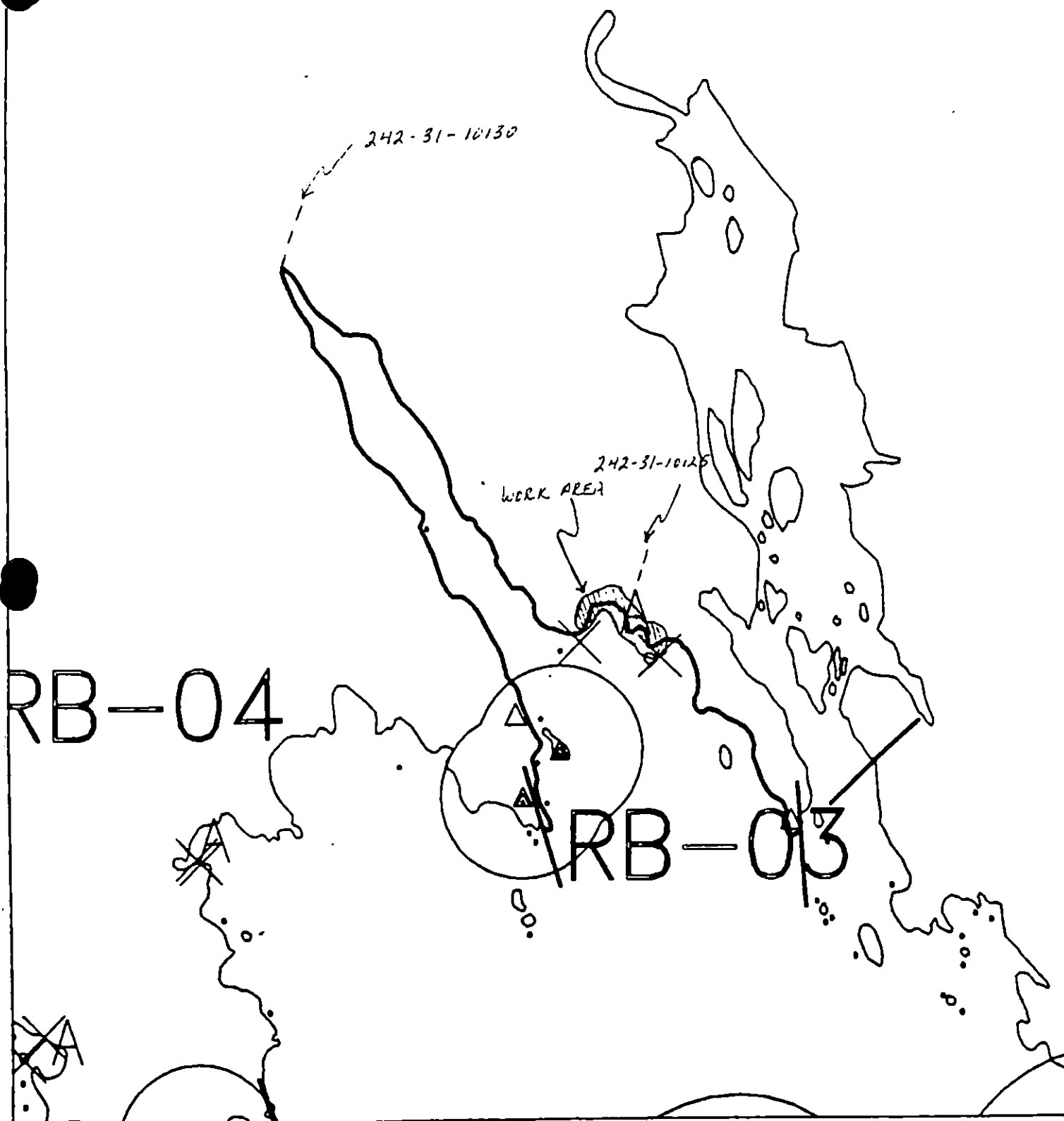
6/13/90

Prepared by

[Signature]

Date

6/12/90



Exxon Company, USA
Map Key: KEN-RB-3
June 10, 1990

ECOLOGY MAP
SEGMENT RB-3
SUBDIVISION A (_ of _)
METERS
0 873 1346

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

1 inch = 2209 feet

SHORELINE EVALUATION

SEGMENT ST/ RB-04 SUBDIVISION A (1 OF 1) DATE 4/10/90

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)

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

8AA Sensitive Estuary

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. H. Jones DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 60 m: No Oil 215 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

 Bioremediation

 Tarmat: Breakup

 Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommend manual pick up of oiled debris. Work should be
conducted after 6/30 due to herring spawning constraints and will re-
quire permission of ADF&G due to salmon spawning constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/20/90

ADEC Art Weiner

EXXON Andreas

NOAA Burt Weir

USCG Kenneth K. R. R.

FOSC: DATE: 5-12-90

KODIAK ECOLOGICAL CONSTRAINTS

1A
1B

Salmon stream mouth - fry outmigration (4/15 to 7/31)

Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)

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

Kotot Bay Hatchery release

Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.

1H

Remote release site

1I

Gill net area

1J

Purse seine area

Mainland, West side Kodiak, Shuyak & Moser/Oiga Bay - 6/9 to 10/1.

East side Kodiak, East side Afognak - 7/4 to 10/1.

1K

Purse seine hook-off

1L

Set net sites

USFWS setnet uplands permit 5/15 to 9/15.

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

2M

Herring spawning (4/15 to 6/30)

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

3N, 3P

Harbor seal and sea lion pupping (5/10 to 6/30)

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

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 8/31)

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

5S

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

Restrict all activity to essential minimum, especially air traffic.

5T

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

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

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

6U

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

6V

Anchorage (6/1 to 9/15)

6W

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

6X

Lodge (6/1 to 9/15)

6Y

Special use destination

7Z

Subsistence area: Salmon harvesting (6/1 to 9/30)

7HH

Finfish harvesting

7II

Deer harvesting (8/1 to 1/7)

7JJ

Invertebrate harvesting

7KK

Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / RB-4 SUBDIVISION: A DATE 4/10/90

USCG
NAME R. Bryan Harte SIGNATURE R. Bryan Harte

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

I agree with the Shoreline Oiling report

ADEC
NAME Russell Kenibe SIGNATURE Russell Kenibe

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

There was an oil coat on the rock face on the east of the stream, and some stain and coat on the cobble below.

LAND MANAGER
NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

See next page

SHORELINE OILING SUMMARY

OG Randy Siegel USCG Bryan Hittle SEGMENT ST/ RR-4 (1 subdivision)
 BIO Mike Fawcett LAND REP Pat Worman (PWC) SUBDIVISION A
 EXXON John Dean ADEC Russell Knabe TIME 09:30 to 11:00
 TEAM NO.: 17 TIDE LEVEL: +2.2 to +3.9 DATE 4/10/90
 EST. SUBDIVISION LENGTH: 600 m 150 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: NE to SE
 SURFACE SEDIMENTS: R 15 % B 10 % C 10 % P 15 % G 25 % S 25 % M 0 % V 0 %
 SLOPE: Long 10 % Hang 90 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W N/A m M N/A m N N/A m VL 16 m NO 134 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES				
	C	R	P	B	SP	BR	OR	OL	OF	SU	U	M	L	
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT		X		✓	X						X			
STAIN		X		✓	X						X			
MOUSSE				X						X	X			
PATTIES														
TARBALLS														
FILM														
NO OIL											X		X	X

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

PATTIES / TARBALLS 1 BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE —

#BAGS 0

Photographs:

Roll No. ST-17-6

Frames 32-34

SUBSURFACE OIL No pits dug - no indication of significant oiling

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	SA SP	OB PW	OY SL	DBR TL	LGR	SU	UI	MI	LI			
0							-														
							-														
							-														
							-														
							-														
							-														
							-														

COMMENTS

This segment is listed in the Exxon ~~database~~ along the tabulation as 6241 meters. Most of the segment was not surveyed by ADEC in 1989 or as part of the current survey, due to inaccessibility. Only 150 meters were surveyed as part of the current program. Very light oiling was observed.

UW Randy J
 SEGMENT ST/ RB-4
 SUBDIVISION A
 DATE 4 / 10 90

SKETCH MAP

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HW/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

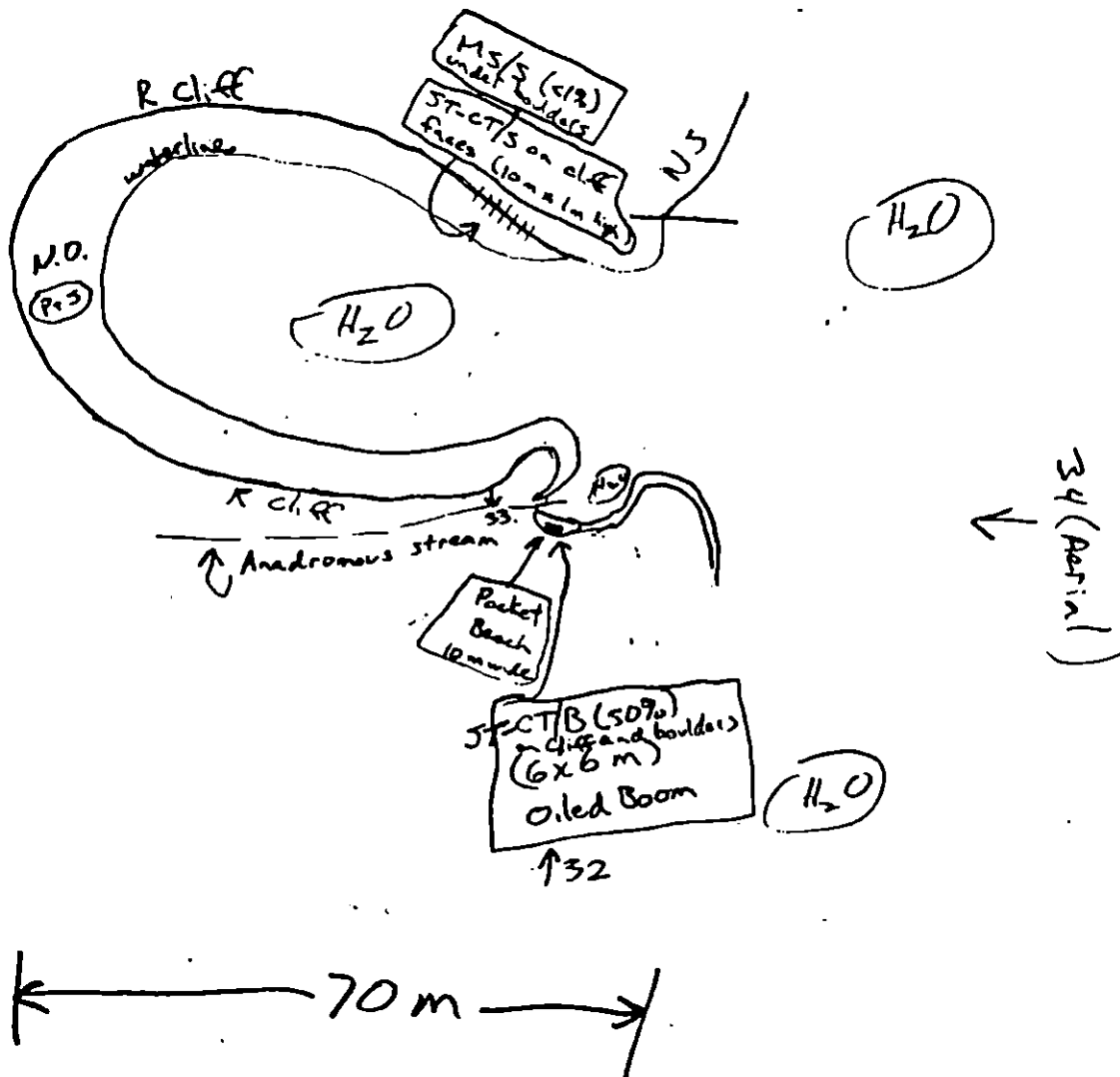
CT/P
 Patchy Distribution

CT/S
 Splashed Distribution

Oiled Vegetation

Photo location, direction, and number

Photos ST-17-6



Oil Character Length (m): AP N/A PO N/A CV N/A CT 16 ST 16 MS 2 PT N/A TB N/A FL N/A NO 134

SHORELINE ECOLOGICAL SUMMARY

Segment ST RB 4 Subdivision A Date (mo / day / yr) 4/10/90
 Time (24 hr) 0930-1030 Biologist M. H. Fawcett

- (A) Substrate type and % of segments:
 (1) Bedrock 15 (2) Boulder 10 (3) Cobble 10 (4) Pebble 15 (5) Sand 50 (6) Silt 0 (incl. gravel)
- (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. ST-17-6

Frames 31-34

BARNACLES

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

NOT PRESE

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 PRESE!

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 PRESEN

FUCUS

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

NOT PRESEN

Wildlife Observations/ General Comments:

See attached sheet

1 water ouzel in creek
 2 belted kingfishers
 several magpies

Coyote tracks near creek

Ecological Considerations:

1A
 1B
 8AA
 2M

RB4A

4/10/90

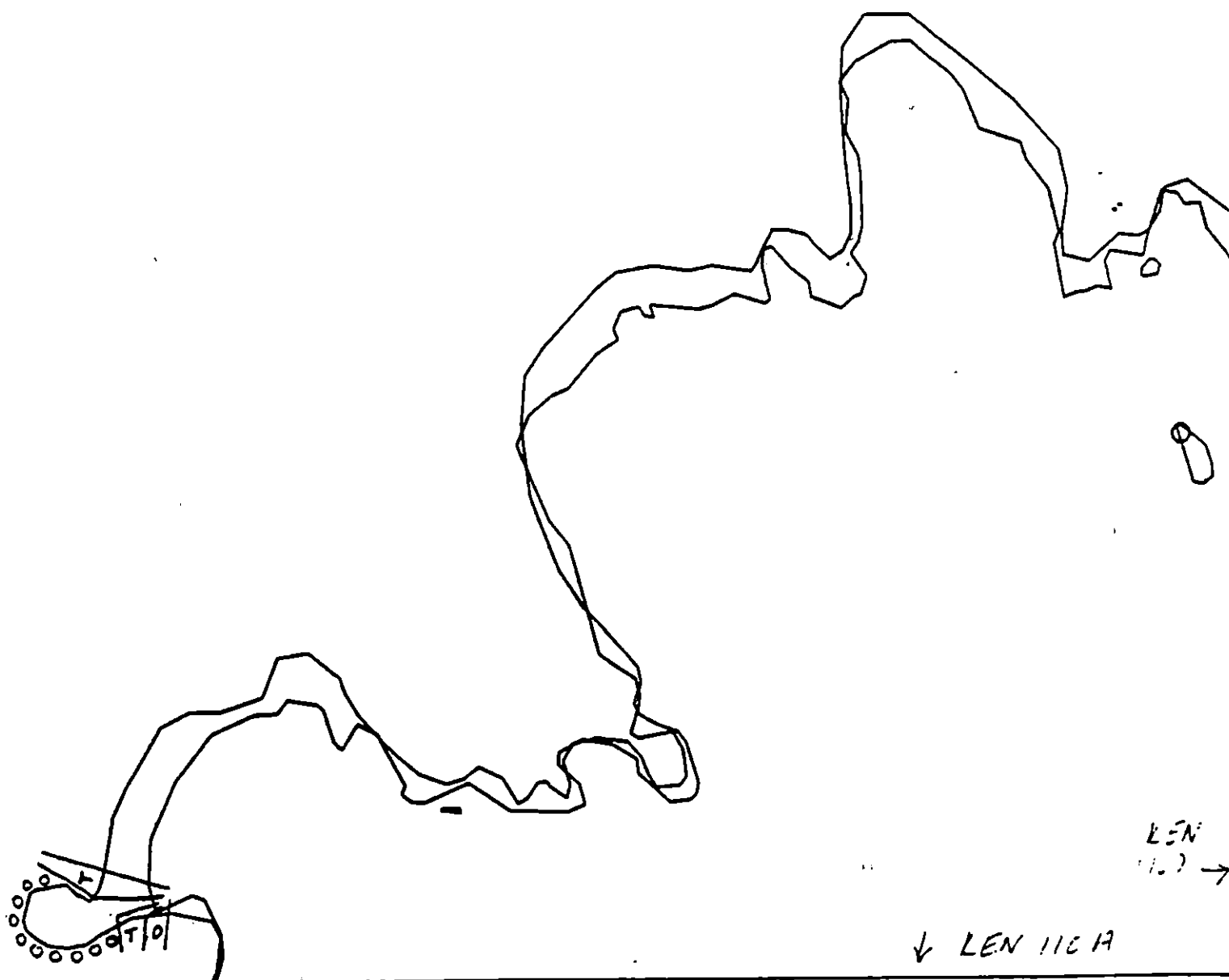
Rocky Bay

M. Fawcett

Wildlife Observations/General Comments

Most of this subsection consists of a biologically barren sand beach. The mouth of an anoxic fish stream (Scurvy Creek) lies on the southern end of the beach.

No fry or other fish were observed in the intertidal portion of the creek. Dense Fucus occurs on cocolos along the banks and around the stream mouth. On the bedrock cliffs and outcrops barnacles dominate the UTZ and MTZ, and algae (Fucus, Ulva, Cladomorpha?, Halosaccion, Rhodomyenia, Petrocelis, Laminaria) dominate the LTZ. Mussels are sparse overall, but there are dense patches in crevices, including recent (1-2mm) recruits. Recently recruited littorines and limpets also seen. In general, the intertidal community appears normal and healthy.



XXXX Wide

/// Medium

----- Narrow

TTTT Very Light

0000 No. 0:1

RB - 4

ADEC Segment Length: 1543m



Map Key: KEN-11.0c

Nome: Randy Cecil ⁸⁷ ~~88~~ -1

Date: 13 Apr 90

Data Entered:


$$L \rightarrow N \rightarrow \dots$$

↓ LEN 110A

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT RB-4 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous stream (242-32-10140) is in Subdivision A. No constraint to manual pickup.
1J	Purse Seine Area	No constraint to manual pickup.
2M	Herring Spawning	No constraint to manual pickup.
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

No disturbance to stream bed or banks. Restrict boat traffic to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to unrolled substrate and biota especially intertidal and subtidal algae and seagrass. Sensitive estuary.

FOSC

Al Faraghi

Date

6/15/90

Prepared by

J.P. Phillips

Date

6/14/90

RB-04

WORK AREA

242-32-10140

Active Nest

RB-04

Active Nest

Seabird Colony

Active Nest



Exxon Company, USA
Map Key: KEN-RB-4
June 10, 1990



ECOLOGY MAP
SEGMENT RB-4
SUBDIVISION A (1 of 1)
METERS
0 573 1147

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

1 inch = 1881 feet

SHORELINE EVALUATION

SEGMENT ST/ RB-005 SUBDIVISION A (1 OF 2) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T All Bald Eagle nests (3/1 to 6/1)
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1J Purse seine area (7/1 to 8/31)
ADF&G Stream # 242-32-10150 (Ps, 2/90)
7JJ Subsistence area: Invertebrate harvesting
8AA Sensitive estuary
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Anadromous stream and eagle nest are in adjacent subdivision and further then 1000m from work area.

SHPO SIGNATURE: Pete Dan O'Neil DATE: 5/18/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 158 m: No Oil 107 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>X</u> Spot Washing: <u>X</u> Wands
<u>X</u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommended treatment includes: 1) removal of tarmat, 2)
bioremediation of areas as indicated on sketch map. Work to be conducted
from 6/15 to 7/1 or after 8/31 due to purse seine constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 5-17-90

ADEC ART WILSON Art Wilson

Exxon AMORIM Reed

USCG G.A. REITER G.A. Reiter NOAA Gary Petrac Gary Petrac

FOSC W L DATE 5 June 90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

✓
1A
1B

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

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

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

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

1C

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

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

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

1D

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

1E

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

1F

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

1G

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

1H

Remote release site

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

AGENCY CONTACT PERSON: 1E

ADF&G Larry Peltz 424-3214

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

✓
1I

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

1J

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

1K

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

1L

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

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

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

2M

Herring spawning (4/1 to 6/15)

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

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

30, 3Q

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

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

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

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

ADF&G Don Calkins 267-2403

5R

Seabird colony (5/1 to 9/1)

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Roth 267-2206

✓
5T

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

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U

Recreation:

Tent sites (5/1 to 9/15)

6V

Anchorage (5/1 to 9/15)

6W

Forest Service cabins (5/1 to 9/15)

6X

Lodge (5/1 to 9/15)

6Y

Special use destination

7Z

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

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 267-2350

FIELD SHORELINE COMMENT SHEET

(2)

SEGMENT ST/ RB-005 SUBDIVISION: A DATE 4/27/76

USCG

NAME

SIGNATURE

☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

ADEC

NAME

Russell Kunibe

SIGNATURE

Russell Kunibe☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

The area of CTAP was a soft "asphalt like" rock. There was not too much
... the rock faces of improvement on some of the rock faces.

Recommended treatment: Manual pick up of the pattrain and mat. This is a very
low wave area. Spot washing of the rock faces as suggested by Pat
Norman.

LAND MANAGER

NAME

Pat Norman

SIGNATURE

Pat Norman☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

manual pick up of remaining surface and subsurface
Asphalt and mousse pattrain will work in this area, also
spot washing of the stained rock faces will improve
the overall appearance of this area.

①

FIELD SHORELINE CAMBOUT SHEET

SEGMENT - RB-5

SUBDIVISION - A

DATE - 30 April 90

NOAA

Miles D. Hayes

SIGNATURE

M. D. Hayes

□ -

☑ - TREATMENT SUGGESTED

This area is relatively clean, despite the Harvey oiling last year. An example of a good job of cleanup. The remaining thin tar mats should be treated by one of two methods:

- 1) Manual removal
- 2) Breakup and bioremediation.

I favor no. 1 because of low wave energy at site.

The scattered tar mats should be removed manually.

SHORELINE OILING-SUMMARY

REVISION NO: 04/13/89

(3)

OG NORMA BIGGAR USCG MILES HAYES SEGMENT ST/ RB-005
 BIO DAW RAIDER LAND REP PAT NORMAN SUBDIVISION A (1 OF 2)
 EXXON JOHN DEAN ADEC RUSSELL KUNIPPE TIME 7:00 to 8:15
 TEAM NO. 17 TIDE LEVEL 0 to -3 ft DATE 4/12/90
 EST. SUBDIVISION LENGTH: 750 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: NW to NE
 SURFACE SEDIMENTS: R 15 % B — % C 25 % P 30 % G 20 % S 10 % M — % V — %
 SLOPE: Long 85 % Hang 10 % Vert 5 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 465 m NG 285 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	IC	IB	IP	IS	SB	SB	SB	SB	SB	SB	SU	U	M	U
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT	W	X	X	A	X	X	X	X	X	X			X	
STAIN														
MOUSSE														
PATTIES														
TARBALLS				X		X							X	
FILM				X		X							X	
NO OIL											X			X

PAVEMENT H F S — sq. m by — cmMATS/PATTIES/TARBALLS 150 ? BAGSNEAR SHORE SHEEN? NO ☒ BR ☒ RW ☒ SL ☒ TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE —#BAGS —

Photographs:

Roll No. 4Frames 33, 34

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE-SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SB	SB	SB	SB	SB	SB	SU	U	M	U				
1	10					X	—		X							X					N	5	g-p
2	15					X	—		X							X					N	10	g-p
3	28					X	—		X									X				26	g-p
4	25					X	—		X							X							
5	8					X	—		X								X					6	
6	22					X	—		X								X						

COMMENTS

This is a very protected cove with a very low angle beach. The primary evidence of oil is a "mat" on the S side of the cove - the "mat" extends over a distance of about 45 m. Although it forms a recognizable surface, it contains very little oil (i.e., not DBR, SBL, or mousse inside) - Mat is 2 to 3 cm thick; it contributes a silver sheen to H₂O, and if ponded, a brown sheen develops. There's another 3x5 m area on a wave cut rock surface (even with beach sediments) near the HWL.

REVIEWED — DATE —

(1 OF 2)

REVIEWED _____ DATE _____

SEGMENT ST B-5

SUBDIVISION A

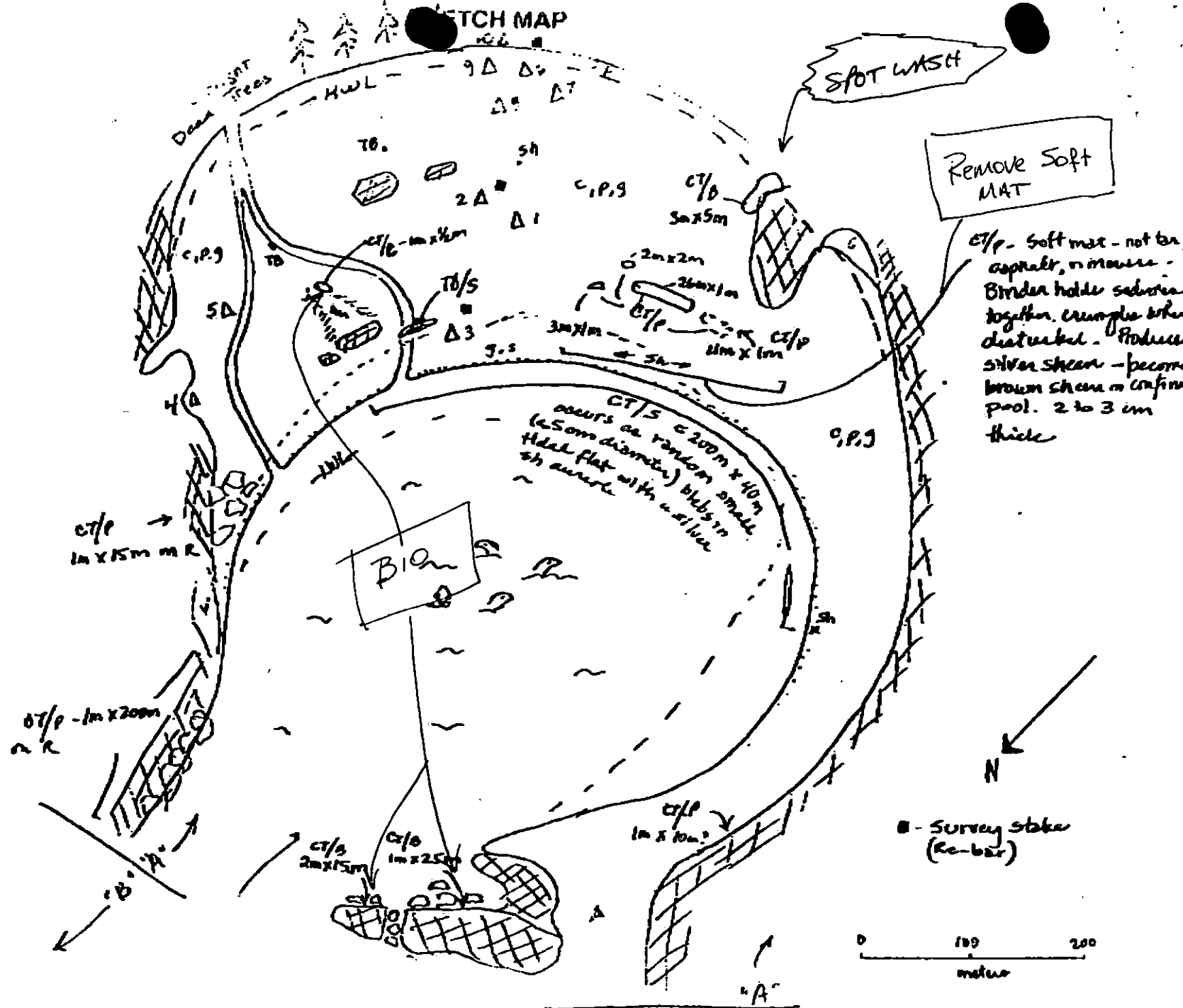
DATE 4/26/90

CHECKLIST

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

LEGEND

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



SHORELINE ECOLOGICAL SUMMARY

RELATION: 03/27/90

Segment ST / R8005 Subdivision A Date (mo / day / yr) 7/21/90Time (24 hr) 8:00 Biologist DANIEL RAIDER

(7)

(A) Substrate type and % of segments:

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

(B) Overall % cover of biota (% of segment): Dense 5 Moderate 5 Low 90

→ to none

(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. 4Frames 33, 34

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

- bulk of biota on bedrock and isthmus connecting larger island, as well as interior southwestern edge of subdivision

See Rio Comments Sheet and wildlife identification sheets following

Ecological Considerations:

1 (one bald Eagle observed, but did not identify nest location)

WB-1

71J

XAA

MOH - 27 April 1990

(12)

Birds Seen at RB-5

<u>name</u>	<u>#</u>	<u>comments</u>
1. Red-Breasted Merganser	- 12 ¹⁶ -	
2. Belted Kingfisher	- 1	
3. Mew Gull	- 2	
4. Bald Eagle	- 1	
5. Owl (Western Screech-?)	- 1	- sound only
6. Black Oyster Catcher	- 4	
7. Steller's Jay	- 1	
8. American Wigeon	- 2	- male & female
9. Three-Toed Woodpecker	- 2	- drumming
10. Common Raven	- 2	
11. Winter Wren	- dozens (?)	- by sound only
12. Glaucous-Winged Gull	- 2	
13. Harlequin Duck	- 3	
14. Red-Necked Grebe	- 2	
15. Song Sparrow	- 1	- sound only

Mammals Sited

1. Seals	- 9	- Wading in Bay, catching food off of bottom of muddy substrate
2. River Otter	- 1	- made way to bay from cave out of tidal zone

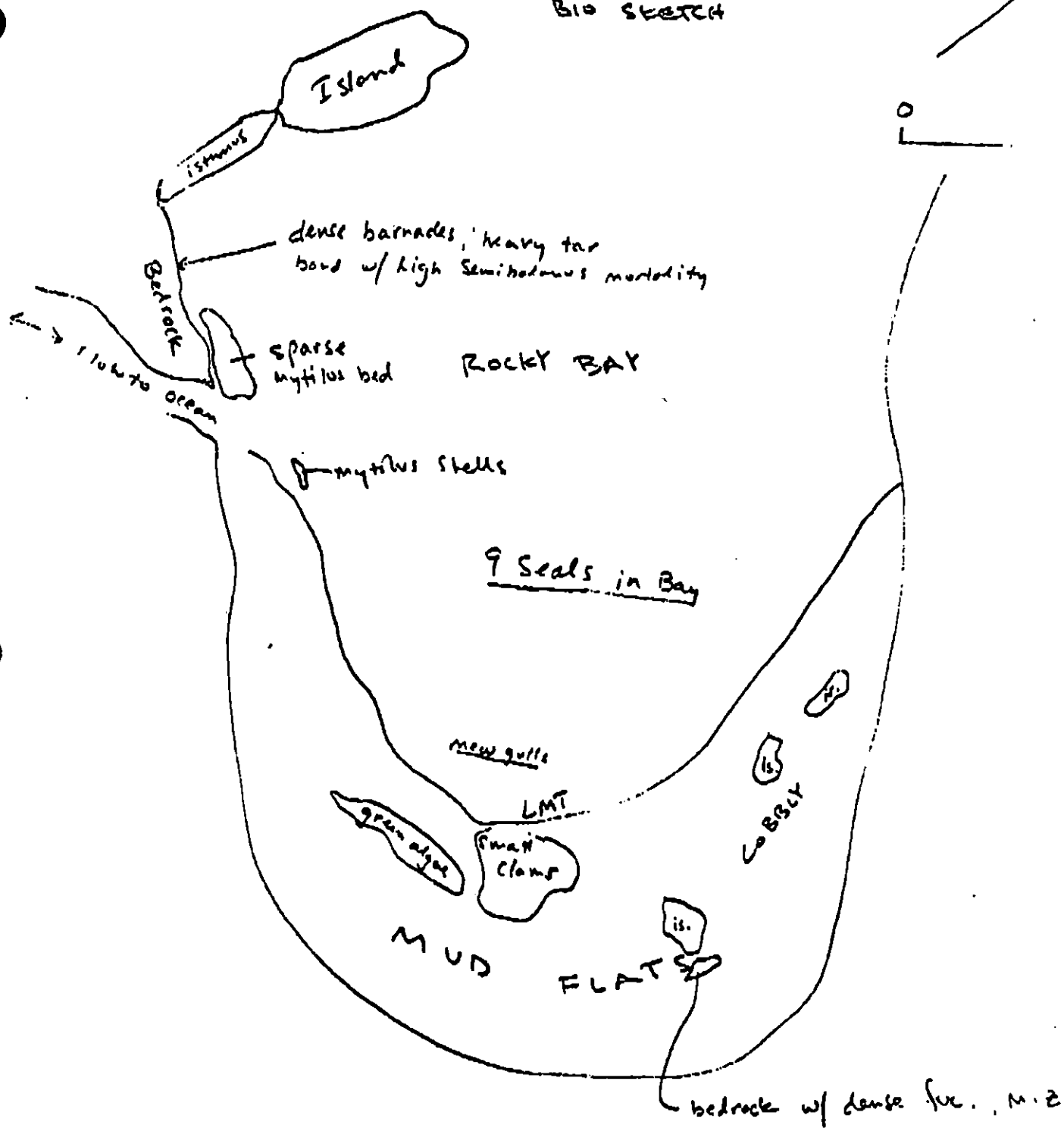
RB-005 A

TEAM 17 27 APRIL 1990

DANIEL RAIOR

BIO SKETCH

(10)



TEAM 17 29 APRIL 1990

DANIEL ZANDER

The majority of the biota contained in this small segment are located on the south western portion, near the island and inlet.

On the bedrock face in that southwestern portion has a dense population of barnacles, with a high proportion of mortality due to the bond of thick^{oil} coating from the mid-intertidal zone mark to that of the high intertidal zone line. I would attribute the death of the barnacles to suffocation by oil. There are present, however, a rare amount of oiled barnacles which are still alive. They were not coated with oil nearly as much as those that are dead.

In the mytilus (muscle bed) just east of the bedrock face is present a loose mat of sparse muscles. None appear to be dead; however, there is present, just 50 meters east of there, an abundance of muscle shells from dead, adult muscles.

There are present in the mud flat area a small number of relatively small clams (rogers - approximately 2.5 centimeters across). Just west

is on ore covered with green filamentous algae. In addition, those islands indicated in the mud flat area have dense barnacle populations, also with a ring of dead barnacles where oil was present and coated the bedrock.

There is a sparse amount of Ulva and filamentous green algae throughout the rest of the subdivision.

ECOLOGICAL MAP

RB-051

(SUBDIVISION 1-13)

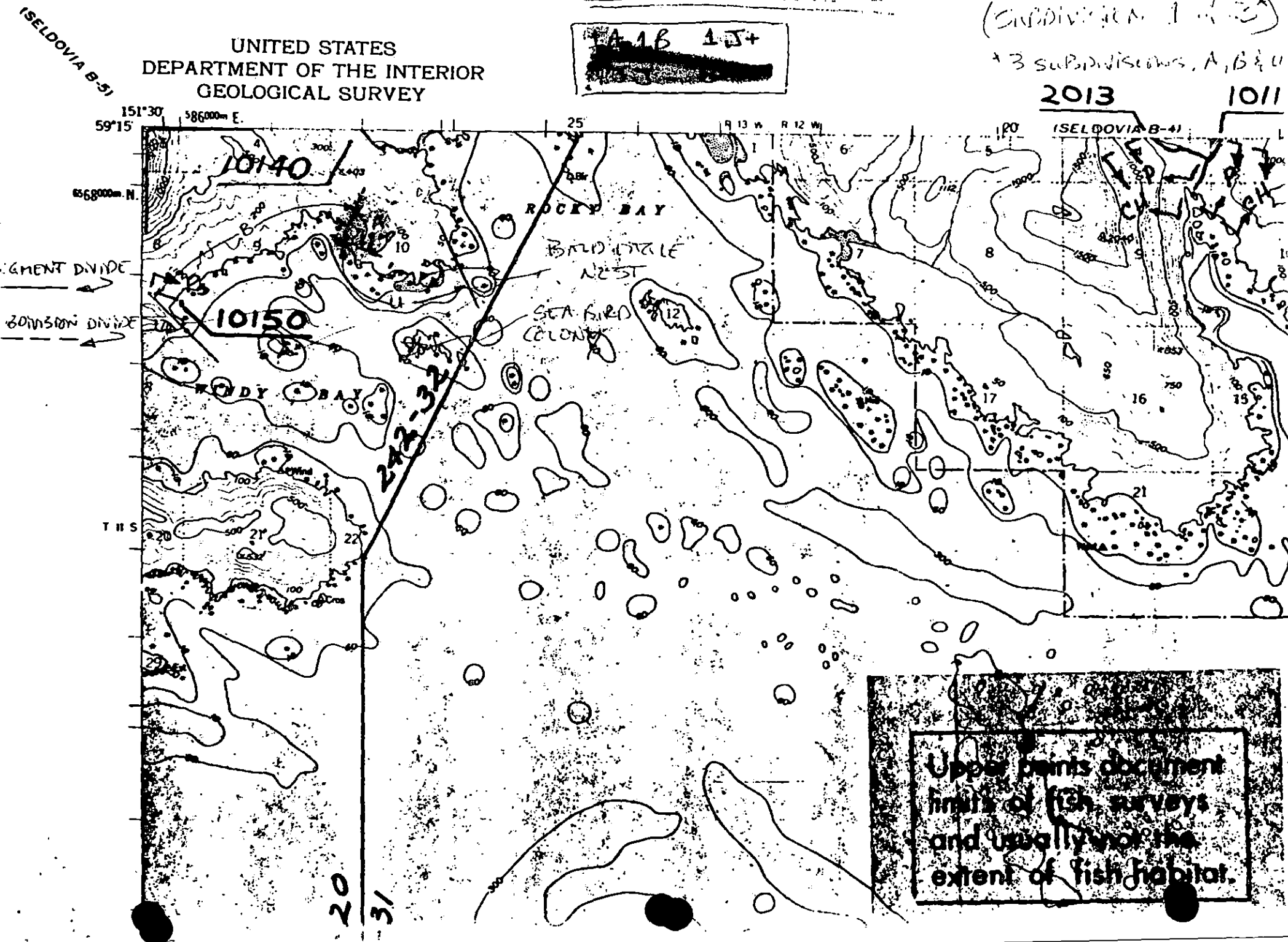
3 SUBDIVISIONS, A, B & C

2013

1011

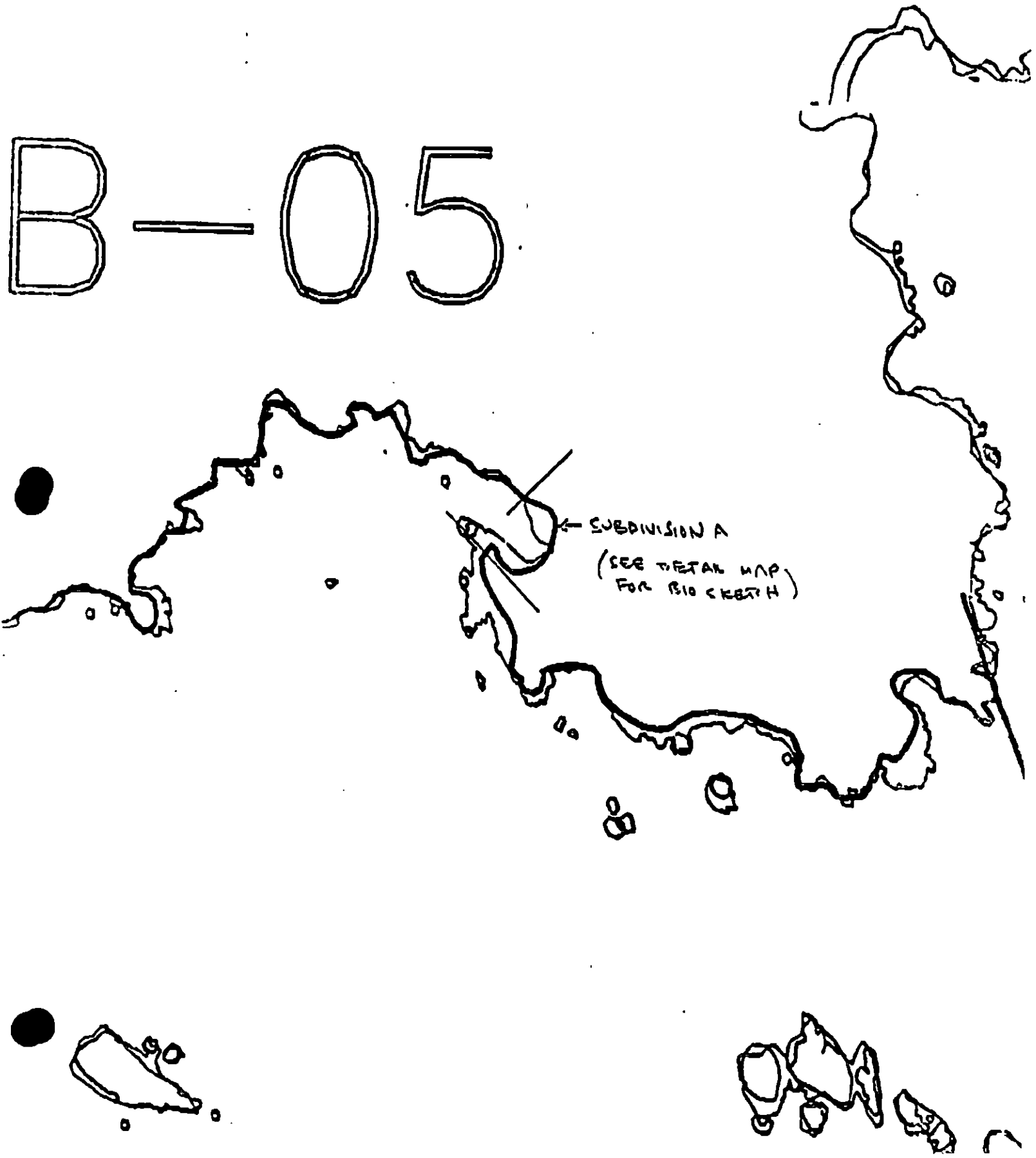
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

141B 15+



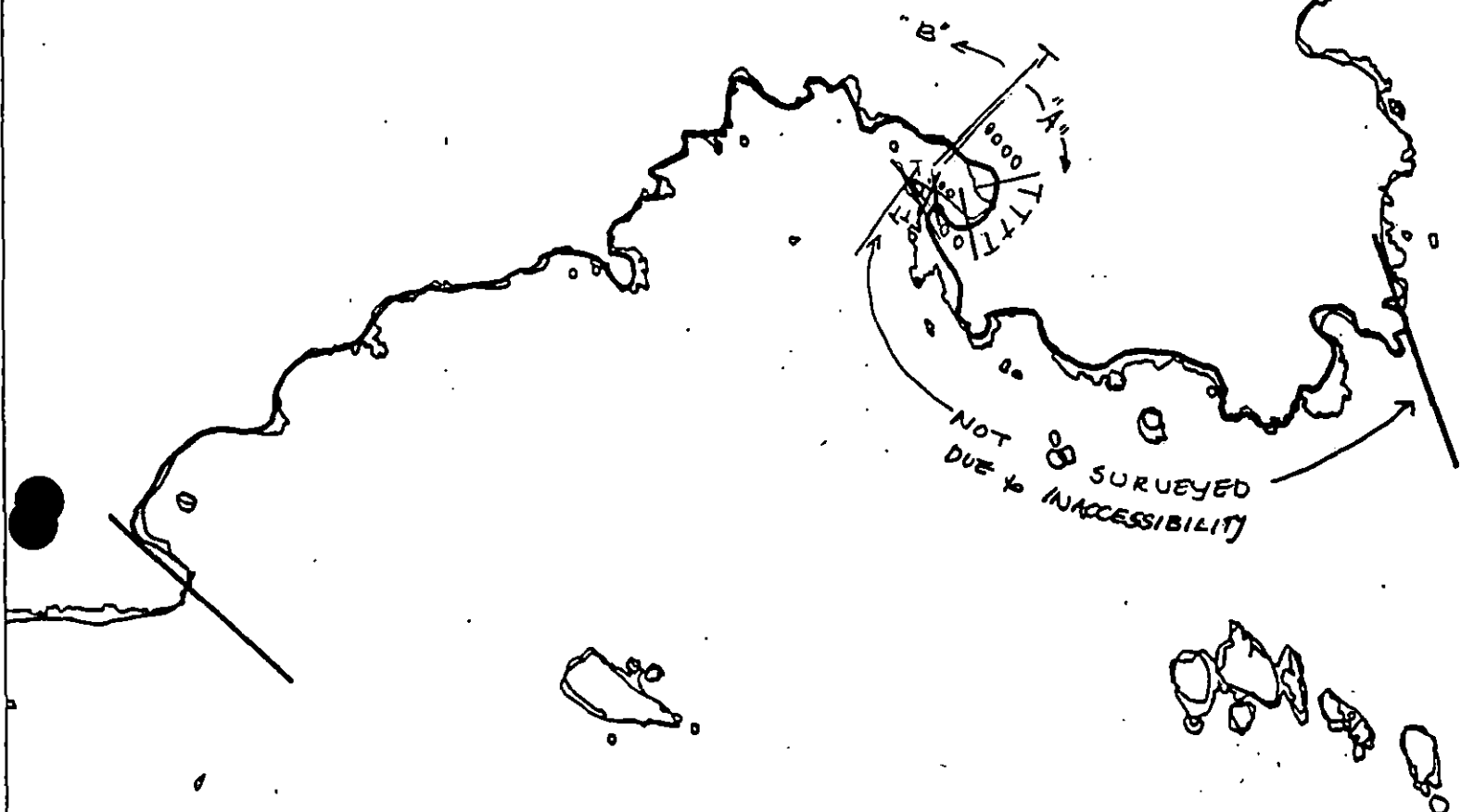
10

B-05



- 05





WR-05

R.B - 5

ADEC Segment Length: 5785m

A handwritten signature in black ink, appearing to be "N".

0000 No Oil

Name: N. BIGGAR

Date: 4/26/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT RB-005 SUBDIVISION A (1 of 1)

WORK WINDOW	
Tarmat Removal *Manual Pickup	OPEN
Spot Washing Bioremediation	WORK PRIOR TO 7/1

*Exxon Study Site #AH-1 - Do Not Remove Backshoe Stakes

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	NO CONSTRAINT. ADF&G catalogued anadromous streams (242-32-10140 and 10150) are in this segment but are more than 100m from the work areas.
1J	Purse Seine Area	No constraint to manual pickup and tarmat removal. Closed to bioremediation after 7/1.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS bald eagle impact assessment completed on 5/19/90 by Mary Portner indicates no active nests within 400m of the work area.
7JJ	Subsistence: Invertebrate Harvesting	No constraint to bioremediation, spot washing, manual pickup and tarmat removal per 6/11/90 conversation between Pat Norman/Port Graham Village Corp. and Rex Coulter/Exxon.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum after 7/1. This subdivision contains a sensitive estuary. Avoid any unnecessary disturbance or damage to uncolled biota and substrate, especially mud flats.

FOSC

Date

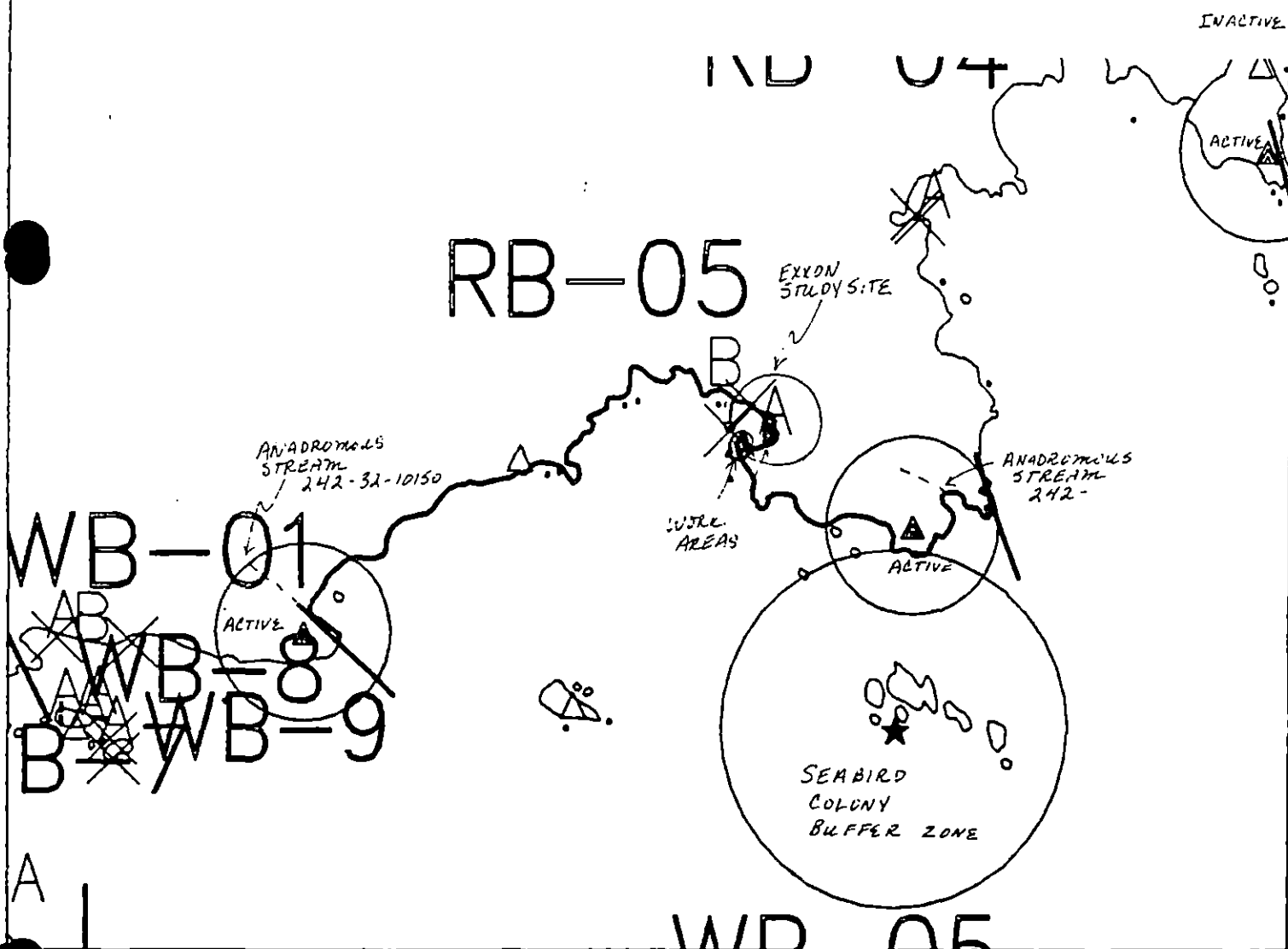
6-19-90

Prepared by

Date

6/16/90

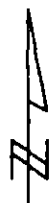
INCORPORATES INFORMATION
FROM BAZO 9.7662 SURVEY 5/19/90



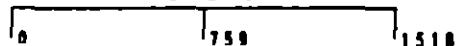
Exxon Company, USA

Map Key: KEN-RB-5

June 10, 1990



ECOLOGY MAP
SEGMENT RB-5
SUBDIVISION A (1 of 2)
METERS



★	Seabird Colony
▲	Active Eagle Nest
△	Inactive Eagle Nest

1 inch = 2490 feet

SHORELINE EVALUATION

SEGMENT ST/ RB-005 SUBDIVISION B (2 OF 2) DATE 4/27/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T All Bald Eagle nests (3/1 to 6/1)
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1J Purse seine area (7/1 to 8/31)
ADF&G Stream # 242-32-10150
7JJ Subsistence area: Invertebrate harvesting
8AA Sensitive estuary
2M Herring spawning (4/1 to 6/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unholed biota and substrate. Eagle nest further than 400m from work area - Anadromous stream further than 1000m from work area.

SHPO SIGNATURE: Rache Jean One DATE: 5/18/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 67 m: V.Light 358 m: No Oil 2883 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes: 1) manual pick up of patchy
mousse if accessible. Work to be conducted from 6/15 to 7/1 or after
8/31 due to Purse Seine and Herring constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 5/17/90

ADEC Art Weimer Art Weimer

EXXON Amor Gil Deal

USCG G.A. Reiter G.A. Reiter

NOAA Gary Petrac Louis Petrac

FOSC:

DATE: 6 June 90

use spot wash as necessary.

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

JA
1B

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

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

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

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

1C

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

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

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

1D

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

1E

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

1F

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

1G

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

1H

Remote release site

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

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

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

1I

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

1J

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

1K

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

1L

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

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

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

2M

Herring spawning (4/1 to 6/15)

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

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

30, 3Q

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

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

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

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

ADF&G Don Calkins 267-2403

5R

Seabird colony (5/1 to 9/1)

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Roth 267-2206

5T

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

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U

Recreation:

Tent sites (6/1 to 9/15)

6V

Anchorage (6/1 to 9/15)

6W

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

6X

Lodge (6/1 to 9/15)

6Y

Special use destination

7Z

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

7H

Finfish harvesting

7I

Deer harvesting (8/15 to 2/26)

Invertebrate harvesting

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

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

SEGMENT ST / RB-005 SUBDIVISION: B DATE 4/27/90NOAAMiles D. HughesSIGNATUREW.D. Hughes☒ - NO TREATMENT
RECOMMENDED☐

No treatment is recommended for
this segment.

ADECNAME Russell Kumbie SIGNATURE Russell Kumbie☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Manual pick up of the seaweed between boulders and rubble
spot washing of crab on rock faces.
shells.

LAND MANAGERNAME Pat Norman SIGNATURE Pat Norman☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

manual pick up and spot washing well work well
thru out subdivision B of RB-5

SHORELINE OILING SUMMARY

REVISION NO. 04/15/90

③

OG NORMA BIGGAR USCG (NOM) MILES HAYES SEGMENT ST/ RB-005
 BIO DAN RAIDER LAND REP PAT NORMAN (PG) SUBDIVISION B (2 OF 2)
 EXXON JOHN DEAN ADEC RUSSELL KUNIBE TIME 8:15 to 13:30
 TEAM NO. 17 TIDE LEVEL -5 to +5 DATE 4/27/90
 EST. SUBDIVISION LENGTH: 3500 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 50 % B 15 % C 20 % P 15 % G — % S — % M — % V — %
 SLOPE: Lang 25 % Hang 20 % Vert 55 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W — m M 0 m N 31 m VL 57 m NO 3212 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	C	B	P	S	SP	BR	OR	OL	OP	NO	SU	U	M	L
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT		0	Y	X	X						X	Y	0	
STAIN				X	X						X			
MOUSSE			X	Z				X	Z		X	Z		
PATTIES														
TARBALLS														
FILM														
NO OIL											0			0

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

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

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE —#BAGS —

Photographs:

Roll No. 4Frames 35-36

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CL)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SHEEN (YN)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OP	NO		UO	UC	SP	BR	OR	OL	OP	NO	SU	U	M	L				
1	40					X	—		X							X					N	32	p, c, g, b (8")
2	37					X	—		X							X					1	22	s, c, p, b (8")
3	46					X	—		X							X						44	p-g, c, s
4	23					X	—		X							X						10	b, g, p, c
5	45					X	—		X							X					Y	36	g, p
6	26				X		φ - φ		X				X				X					21	g, p, c

COMMENTS The most concentrated oil seen in this segment was in the area of the detailed map. There, mousse was collected underneath large (1/2 to 3 m diameter) boulders, in between them. In the same area, boulders were piled from last yr's cleanup, and the area under the boulders had not been cleaned and had a brown coating. No subsurface oil found. Very light spatter is common throughout the segment. Drip lines covered with pine needles.

REVIEWED BAT DATE 1 MAY 90

SHORELINE OILING SUMMARY (PAGE 2)

M1 VERSION 04.12.70

SEGMENT ST/ RB-005 SUBDIVISION B (2 OF 2)

(4)

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE SUBSURFACE SEDIMENTS		
		OP	OR	OL	OF	NO		UO	UC	5% SP	20% SP	40% SP	60% SP	80% SP	100% TL	SU	U	M	U						
7	20					X	.		X																
8	56						.											X				N			S.S. P. / S.F.
9	30						.											X							" "
10	30						.											X							P. / S.F.
11	23						.											X							S.S. P. / S.F.
12	40						.										X								S.S. P. / S.F.
13	30						.										X								S.S. P. / S.F.
14	53						.											X							S.S. P. / S.F.
15	25						.										X								S.S. P. / S.F.
16	28						.										X								S.S. P. / S.F.
17	40						.											X							S.S. P. / S.F.
18	46						.										X								S.S. P. / S.F.
19	46					✓	.		✓								X					✓			S.S. P. / S.F.
							.																		

COMMENTS

are also seen on the lee side of some boulders & rock interstices.

Coastline is very rugged, and can be walked only at a very low tide.

There are two broad beaches at the W. end, and several smaller pebbly beaches along the length.

Wave exposure is moderate to high.

REVIEWED BAT DATE 1 MAY 90

UG N. DUGAR

SEGMENT ST/ RB-005

SUBDIVISION B

DATE 4/27/90

SKETCH MAP

CHECKLIST

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

LEGEND

1 Δ
PH - No Subsurface Oil

2 Δ
PH - Subsurface Oil

$\boxed{CT/C}$
Continuous Distribution

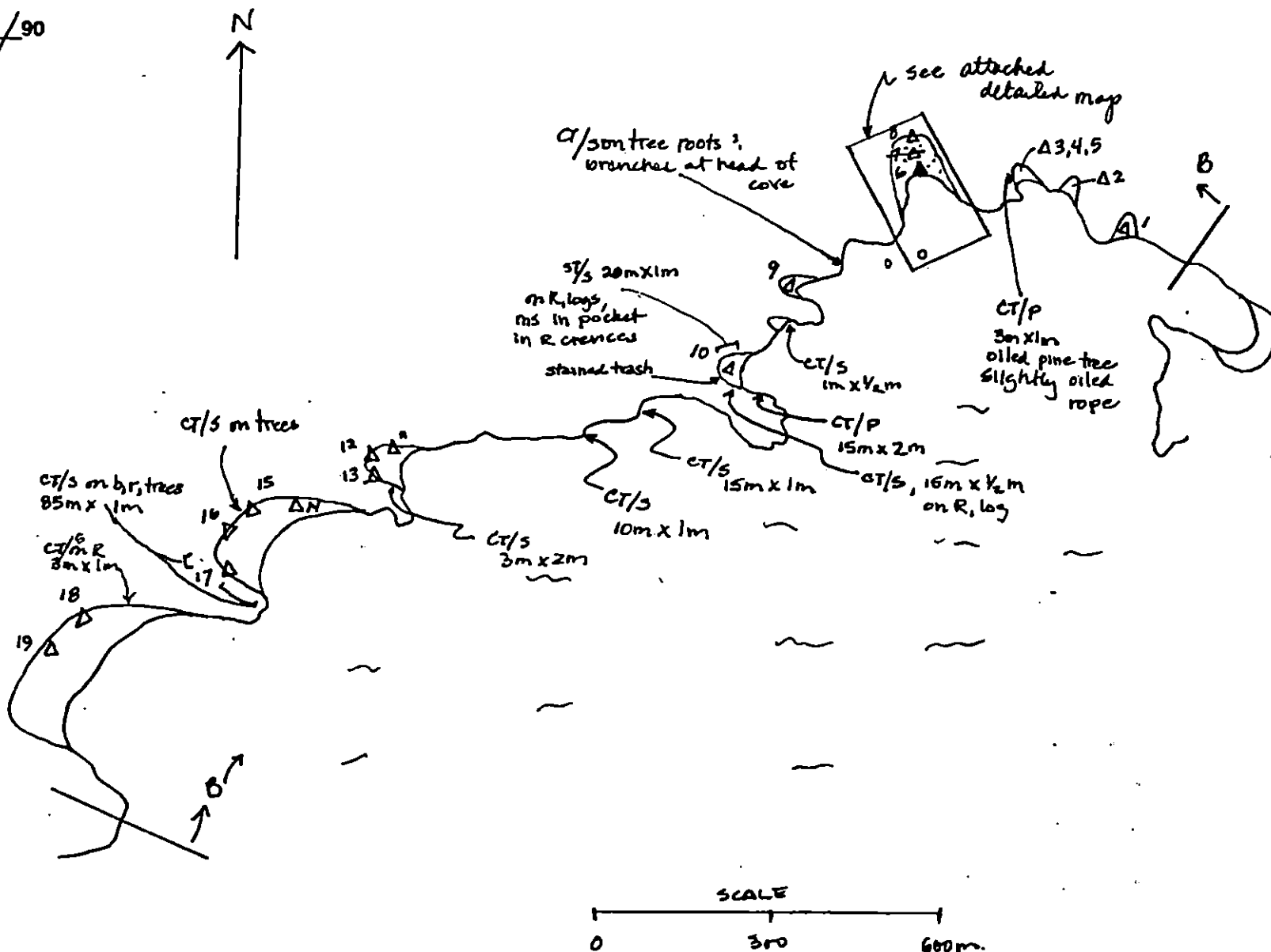
$\boxed{CT/B}$
Broken Distribution

$\boxed{CT/P}$
Patchy Distribution

$\boxed{CT/S}$
Splashed Distribution

$\lll$
Oiled Vegetation

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



Oil Character L (m): AP 0 PO 0 CV 0 CT 170 ST 42 MS 76

TB 0 FL 0 NO 3212

ENVIRON-22/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION 8/77 10

Segment ST/ RD 005 Subdivision B Date (mo / day / yr) 4/27/90

Time (24 hr) 7:00 Biologist DANIEL RAIDER

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

(B) Overall % cover of biota (% of segment): Dense 65 Moderate 10 Low 25

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

Photographs: 4
Roll No. 4

Frames 35 + 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:

SEE WILDLIFE IDENTIFICATION SHEET

VERY ABUNDANT BIOTA, TIDAL POOLS; FAUNA DIVERSITY IS HIGH; SEE COMMENTS.

Ecological Considerations:

AI - 1

W3 - 1

1A, B - 242 - 32 - 10150

+ J, J

& A, A

MOH - 27 April 1990

(12)

Birds Seen at RB-5

<u>name</u>	<u>#</u>	<u>Comments</u>
1. Red-Breasted Merganser	- ¹⁶ / 12 -	
2. Belted Kingfisher	- 1	
3. Mew Gull	- 2	
4. Bald Eagle	- 1	
5. Owl (Western Screech-?)	- 1	- sound only
6. Black Dragonfly Catcher	- 4	
7. Steller's Jay	- 1	
8. American Wigeon	- 2	- male & female
9. Three-Toed Woodpecker	- 2	- drumming
10. Common Raven	- 2	
11. Winter Wren	- dozens (?)	- by sound only
12. Glaucous-Winged Gull	- 2	
13. Harlequin Duck	- 3	
14. Red-Necked Grebe	- 2	
15. Song Sparrow	- 1	- sound only

Mammals

1. Harbor Seals	- 9	} These were also sighted for RB005A but occurred in a common zone for both RB005B + A.
2. River Otter	- 1	

This entire subdivision has a relatively dense mat of flora and fauna throughout the lower- and mid- intertidal zones. At points along the subdivision the surface of rocks could not be seen for stretches of 50 meters in the mid intertidal and (especially) lower intertidal zone. Because of the low tide, I was able to get a good view of both zones throughout the entire survey.

Some of the species seen are listed on the accompanying "Species List". Barnacles were by far the most profuse organism within the MITZ and brown algae / kelp (dominant spp. and *Alaria marginata*) dominated the LIZ to form a dense mat. *Fucus*, also present in the lower- and mid- IT zones was in dense colonies ranging from 50 to 300 meters long.

Interspersed throughout this coast line is a series of tidal pools in the bedrock within the mid- and upper- mid intertidal zone. These pools contain a rich and diverse abundance of flora and fauna, including: sea anemones, sculpins, algae and crustaceans.

Observations

2 of 2

- abundant insects throughout segment, on detritus and in soil
- *Mytilus* was very abundant throughout most of the segment in a 1st to 2nd year stage. Note that I classified *Mytilus* as "Moderate" even though it was truly abundant in some areas. The reasoning is thus: there were many "pockets" of dense *Mytilus*, but they did not appear to cover all potential habitat substrates; secondly, the last fifth of the subdivision had a great deal fewer, although pockets did still persist. While *Mytilus* was very abundant in some areas, on average of the total subdivision would most likely prove it to be moderate in population.
- *Pisaster ochraceus* appeared in dense clumps (10-15) on bedrock on crevices, in the shady cooler portions of the beach.
- Three immature *Pygospio heliothoe* observed.
- While there were dense mats of barnacles, ranging from 2 cm across and 5 cm high to less than 5 mm in diameter, there were areas where mortality (in a local "pocket" would reach 100%) it was especially true on bedrock and for smaller extremely dense groups, and for what appeared to be 1-2 year olds.

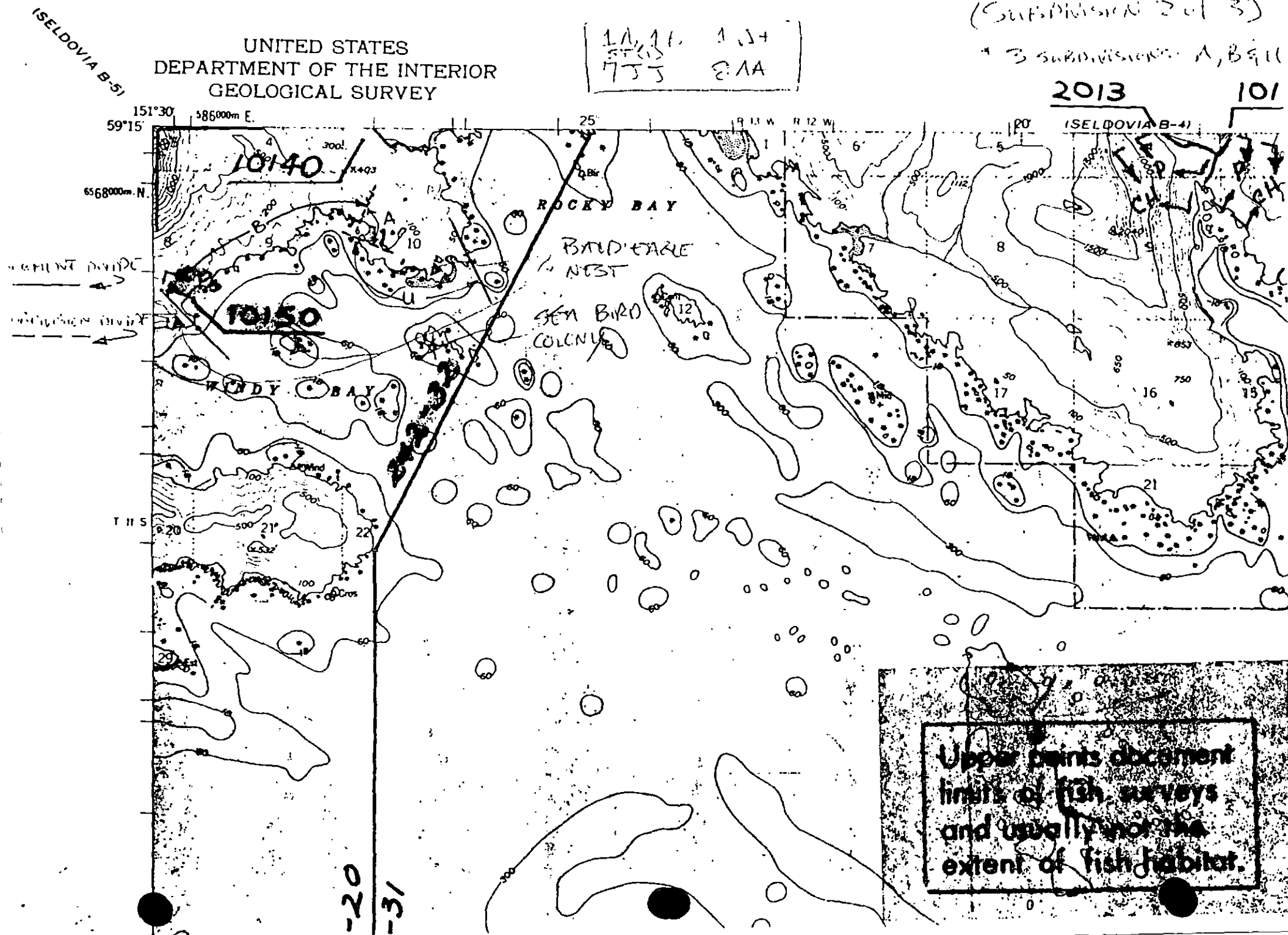
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

1A, 1B, 1C, 1D
755 8AA

R15-05-10
(SUBDIVISION 2 of 3)
3 SUBDIVISIONS: A, B, C

2013

101



RB-005 B

BIO SKETCH

TEAM 17. 27 APRIL 1990

DANIEL RADER

RB-05

RB-005 B

Dense Fucus (adult)
Laminaria spp. Alaria
marginata, Ulva spp.

Zostera
marina

Pit #8
35

Dense
Mytilus and Dense Fucus

Dense Scimitralanus
and Fucus (adult)

profuse Starkia

dense
Laminaria spp.

Dense Barnacles throughout
on bedrock & boulders in
MT2 & UT2; Many
dense mats of Mytilus
adults on boulder/bedrock
in UT2 & MT2

moderate
mytilus
- dense
barnacles

Tidal
pool w/
profuse
Anemone
and
fish

dense fucus
on boulder
in LT2

RB-005 A

SURVEYED

40

WB-05

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

RB-5

ADEC Segment Length: 5785m



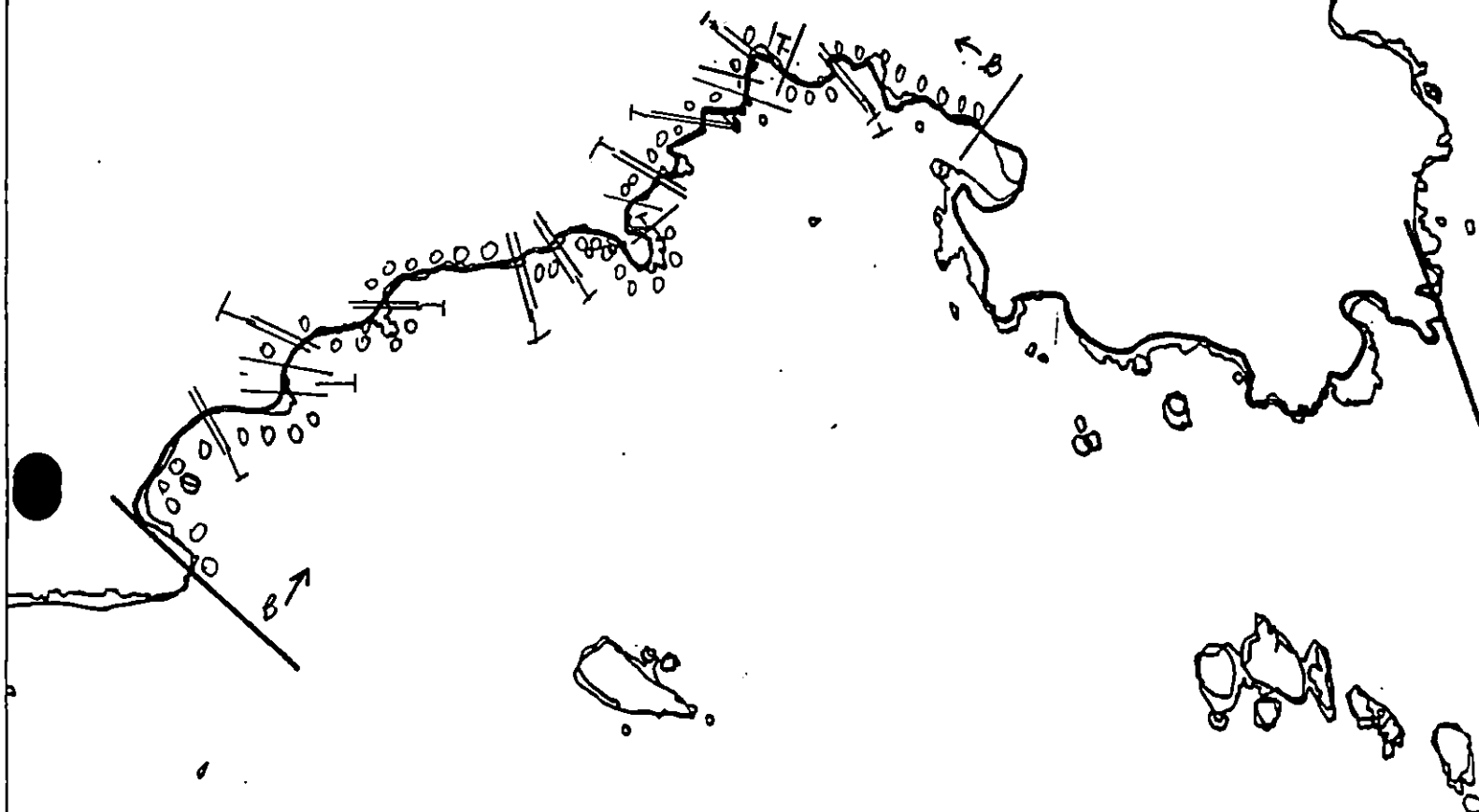
Map Key: KEN-105a

Name: _____

Date: _____

Data Entered: _____

RB-05



WR-05

XXXX Wide

RB-5

/// Medium

--- Narrow

ADEC Segment Length: 5785m

TTTT Very Light

0000 No Oil



Map Key: KEN-105a

Name: N. BIGGAR

Date: 4/27/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT RB-005 SUBDIVISION B (2 of 2)

WORK WINDOW	
Manual Pickup	OPEN
Spot Washing	WORK PRIOR TO 7/1

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous stream (242-32-10150) is in Subdivision B. No constraint to manual pickup and spot washing.
1J	Purse Seine Area	Closed to spot washing after 7/1. No constraint to manual pickup.
2M	Herring Spawning	No constraint to manual pickup and spot washing.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.
7JJ	Subsistence:	No constraint to manual pickup and spot washing as per conversation between Pat Norman/Port Graham Village Corp. and Rex Coulter/Exxon.
	Invertebrate Harvesting	

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum. Restrict boat traffic to essential minimum. Avoid any unnecessary disturbance or damage to unrolled substrate and biota especially intertidal and subtidal algae and seagrass. Sensitive estuary.

FOSC

Date

6-19-90

Prepared by

Date

6/16/90

RB-05

ANADROMOUS STREAM
(242-32-10150)

WORK
AREA

Active
Nest

Active
Nest

Seabird
Colony

WB 05



Exxon Company, USA



ECOLOGY MAP
SEGMENT RB-5
SUBDIVISION B (2012)
METERS

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

REVISION 1
6/23/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT RB-005 SUBDIVISION B (2 of 2)

WORK WINDOW	
Manual Pickup	OPEN
Spot Washing	WORK PRIOR TO 7/1

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, ~~PHONE 564-3274~~.

ARCHAEOLOGICAL INSPECTION/
CONSULTATION REQUIRED
PHONE: 564-3274
JP
6/23

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous stream (242-32-10150) is in Subdivision B. No constraint to manual pickup and spot washing.
1J	Purse Seine Area	Closed to spot washing after 7/1. No constraint to manual pickup.
2M	Herring Spawning	No constraint to manual pickup and spot washing.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.
7JJ	Subsistence:	No constraint to manual pickup and spot washing as per conversation between Pat Norman/Port Graham Village Corp. and Rex Coulter/Exxon.
	Invertebrate Harvesting	

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum. Restrict boat traffic to essential minimum. Avoid any unnecessary disturbance or damage to unrolled substrate and biota especially intertidal and subtidal algae and seagrass. Sensitive estuary.

FOSC W L Date 6-19-90

Prepared by J.P. Phillips Date 6/16/90

RB-05

ANADROMOUS STREAM
(242-32-10150)

WORK
AREA

Active
Nest

Active
Nest

Seabird
Colony

WB 05



Exxon Company, USA

ECOLOGY MAP
SEGMENT RB-5

SUBDIVISION B (2012)

METERS



Seabird Colony



Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ SE-41 SUBDIVISION A (1 OF 1) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Harbor seal and sea lion pupping (3N,P) - 5/15 to 7/1; and molting (3O,O) - 8/15 to 9/15; Seabird colony (5R) - 5/1 to 9/1. Limit boat and air traffic and other disturbance to essential minimum. Contact ADF&G habitat division prior to treatment.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Keep all disturbance to a minimum. Avoid unnecessary disturbance of substrate and biota. Treatment should be concluded (for entire segment) prior to May 15 unless ADF&G decides otherwise.

SHPO SIGNATURE: Charles E. Holden DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 501 m: Medium 109 m: Narrow 0 m: V.Light 1126m: No Oil 344 m
Subsurface Oil Observed: Yes X No Maximum Depth 40+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommend spot washing where pooled oil and cover found using wands and absorbents (see sketch map). Also recommend bio-remediation of areas indicated on map. Further recommend manual pickup of ~~turbates~~, oiled vegetation, and other debris, all work except BIO prior to 5/15. Recommend BIO after 7/1 but before 8/15. All work windows based on pupping/molting constraints.

* TAG COMMENTS: ALL TREATMENT TO OCCUR AFTER 7/1.

USE BACKHOE TO RAKE PEBBLES/CORBLE BERMS AND ROLL LARGER COBBLES + BOULDERS AS INDICATED ON SKETCH.

PRIOR TO BIOREMEDIATION

USE BACKHOE TO TILL /RAKE AREA OF DEPRESSION AS INDICATED ON SKETCH

TAG APPROVAL DATE: 4/13/90

ADEC JOHN BAUER FOSC: DATE: 5-1-90
EXXON ANDY TOL
NOAA Bugl Wescott Budden Jorgensen
USCG G.A. BEITER G.A. Butler

FIELD SHORELINE COMMENT SHEET

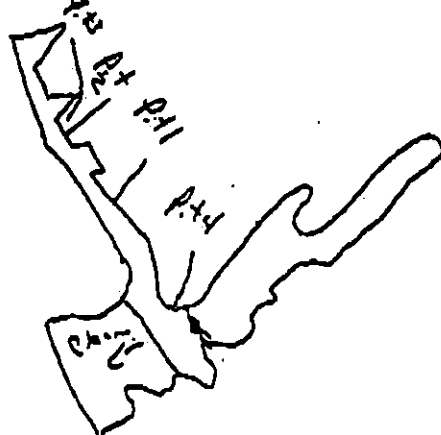
SEGMENT ST / SE 41 SUBDIVISION: new Subdivision DATE 31 March 90

USCG NAME James P. Gambin SIGNATURE James P. Gambin

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS



Oil in segment upper T.O. zone also debris, continuous coating in UTR. HEAVY oil coating N.E. corner upper T.O. zone
All Pits bath exception of No. 3 has 15-30 cm of oil contained.
Pit 4 Looks to be empty oil.
Due to seal pump start either way so on shore so
Every thing from mark south is clean

(See Next pg)

ADEC

NAME Brian K. FitzSimone SIGNATURE Brian K. FitzSimone

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

1
TZ: UCPB → CR/CR → UO → 40 cm } Shiny Black, Dark Brown
YSP → OP } 20-30m wide from NW corner of
segment to intersection with
TZ: BC → F.L.M. → UO → 25 cm } intertidal peninsula on NE corner
BC/PG → OP }
segment - very Gross Contamination throughout HIZ broken by bedrock
tidal headlands. Western 1/4 of heavily oiled zone is overlain with moderate size
debris (75 cm dia) in lower HIZ + upper HIZ - Will need mechanical assistance
moving boulders to access gross contamination for treatment - suggest HTP
With header floods 20 60m x 100m BC field in neck of peninsula
western end of soul island is saturated with dark Black shiny oil
See Back

LAND MANAGER

NAME Carol Huber USFS SIGNATURE Carol Huber

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Observations generally agree with ADEC and USCG (above)
oil appears to be very mobil, seeping out into a tidal pool.
This segment is a haulout area, oil is gross enough to
be picked up by seals and other mammals. (pooled oil observed)

UCC Observations continued:

SE-41

pit dug in this area contained @ 2.5-3.5 cm layer of
floating dark black shiny oil on top of H_2O with strong
petroleum smell (similar to conditions early last July!)

EEDS TREATMENT: Note: Entire NE exposure
segment is bordered by shallow subtidal area
with many sharp protruding rock outcrops making
approach difficult! Brian T. Fitzmaurice AOEC

SHORELINE OILING SUMMARY

Revision 1

REVISION NO. 03/23/90

OG B. Bernalund USCG J. Gamble SEGMENT ST/ SE-41
 BIO S. Schuster LAND REP C. Hubert SUBDIVISION A (10FI)
 EXXON C. Levine ADEC B. Fritzenberg TIME IT 40 to 1:00
 I NO: 1 TIDE LEVEL: -5 to +3 DATE 3/31/90
 EST. SUBDIVISION LENGTH: 1752 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 20 % B 40 % C 20 % P 15 % G 5 % S - % M - % V - %
 SLOPE: Long 70 % Hang 20 % Vert 10 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 366 m M 72 m N - m VL 990 m NO 330 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	C	D	F	R	BR	FW	OT	SL	TL	LR	SU	U	M	U
ASPHALT PAVEMENT														
POOLED				X	X						X			
COVER	V		X		V				X		X		L	
COAT	X								X		X			
STAIN			X						X		X			
MOUSSE				X	X						X			
PATTIES														
TARBALLS														
		X				X					X	X		
NO OIL											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	X		
Vegetation			X
Trash			
Debris	X		

DEBRIS COLLECTED

☐ YES ☒ NOTYPE -#BAGS -

Photographs:

Roll No. ST-1-1 & ST-1-2Frames 32-32 & 1

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW	OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OF	OR	OL	OF	NO			BR	FW	OT	SL	TL	LR	SU	U	M	U		
1	30	X	V				0-30	X						X	X					C/P
2	40		X				0-40	X						X	X					C/P
3	30		X				15-20	X						X			X			C/P/G
4	20	X					0-20	X		X					X					B/C/P
5	40				X		0-2	X		X							X			C/P/G/S
6	20					X		X							X					C/P/G
7	20																			
COMMENTS		X					8-14	X						X	X					C/P/G

Oil cover in north sector pocket beaches. Concentrated in W ends near surge line. Deep oiling (+40 cm). Large to Medium amount of oiled vegetation at SSL. Additionally, E headland pocket beach has cover of black (unweathered) oil in MI. Sediments saturated to +20 cm.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG B. Bernalund USCG J. Gamble SEGMENT ST/ SE-41
 BIO S. Schloster LAND REP C. Hubert SUBDIVISION ---
 EYXON C. Levine ADEC B. Fritzer TIME 10
 NO. 1 TIDE LEVEL: 10 DATE 3/31/90
 EST. SUBDIVISION LENGTH: 1752 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 20 % B 40 % C 20 % P 15 % G 5 % S --- % M --- % V --- %
 SLOPE: Long 70 % Hang 20 % Vert 10 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 366 m M 72 m N --- m VL 990 m NO 330 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	IC	IS	IP	IR	1	2	3	4	5	6	7	8	SU	U	M	U
ASPHALT PAVEMENT																
POOLED					X		X							X		
COVER			X							X			X		X	
COAT	X									X			X		X	
STAIN			X							X			X		X	
MOUSSE					X		X						X			
PATTIES																
TARBALLS																
M		X					X								X	X
NO OIL													X			X

PAVEMENT: H F S --- sq m by --- cmPATTIES / TARBALLS --- BAGSNEAR SHORE SHEEN? ☒ BR RW SL TL

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

DEBRIS COLLECTED
☐ YES ☒ NOTYPE ---#BAGS ---

Photographs:

Roll No. ST-1-1 & ST-1-2Frames 32-32

Field clarification on
anoxic conditions
revisited - DA
Deleted from
form

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-cm)	BELOW		OIL / FILM COLOR								PIT ZONE	A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UD	UC	1	2	3	4	5	6	7	8			
1	30	X					0-30	X						X		X				EIP
2	40		X				0-40	X						X		X				EIP
3	30		X				15-20		X					X			X			CIP/IG
4	20	X					0-20	X			X									"B/CIP
5	40				X		0-2		X		X									CIP/IG/IS
6	20					X			X								X			CIP/IG

7 20
COMMENTS

X 8-14 X X X CIP/IG

Oil cover in north sector pocket beaches. Concentrated in W ends near surge line. Deep oiling (40 cm). Large to Medium amount of oiled vegetation at SSL. Additionally, E headland pocket beach has cover of black (unweathered) oil in MI. Sediments saturated to + 20 cm.

SHORELINE ECOLOGICAL SUMMARY

REVISION 10-75

Segment ST / SE-41 Subdivision N/A Date (mo / day / yr) 3/31/93Time (24 hr) 1000-1200 Biologist S. Schroeter

- (A) Substrate type and % of segments:
 (1) Bedrock 44 (2) Boulder 40 (3) Cobble 14 (4) Pebble 1 (5) Sand 1 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 48 Moderate 22 Low 29
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (O)

Photographs:
Roll No. ST-1-1Frames N/A

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: Spotted seahorse (10-20); 100-200 gulls, 10-15 Oystercatchers; Heavily oiled upper + upper mid intertidal + eastern 1/3 of segment; birds eggs

Ecological Considerations: lower intertidal is densely populated w/ Fucus + red algae along entire segment. Laminaria & Alaria abundant on Eastern 2/3 of segment. Phyllospadix on low shore along sheltered western 1/3 of segment. Many Fucus + Mytilus recruits in upper + mid intertidal along eastern 2/3 of segment. Oil odor in low intertidal

3/31/90 Team 1 310 S. Schroter 2-11-1

Segment SE-41

Start 1000 : -1.0

END 1200 : +0.5

10-20 spotted seals hauled out on west side of Spit

~ 10 Common oyster catchers
several hundred gulls

Phylloscopus sibilatrix on 50% of shore below sheltered western section

Moderate to dense *Fucus* in low + mid intertidal. Remainder of coverage various red algae (*Gracilaria*, *Rhodoglossum*, *Gelidium*)

Eastern 2/3 of segment had very dense barnacles, mussels, + *Fucus* in mid + high intertidal with juveniles of all 3 organisms

Dense *Laminaria* + *Alaria* on bottom of low intertidal along eastern 2/3 of segment.
Stars present but rare in low intertidal

Western 1/3 of segment

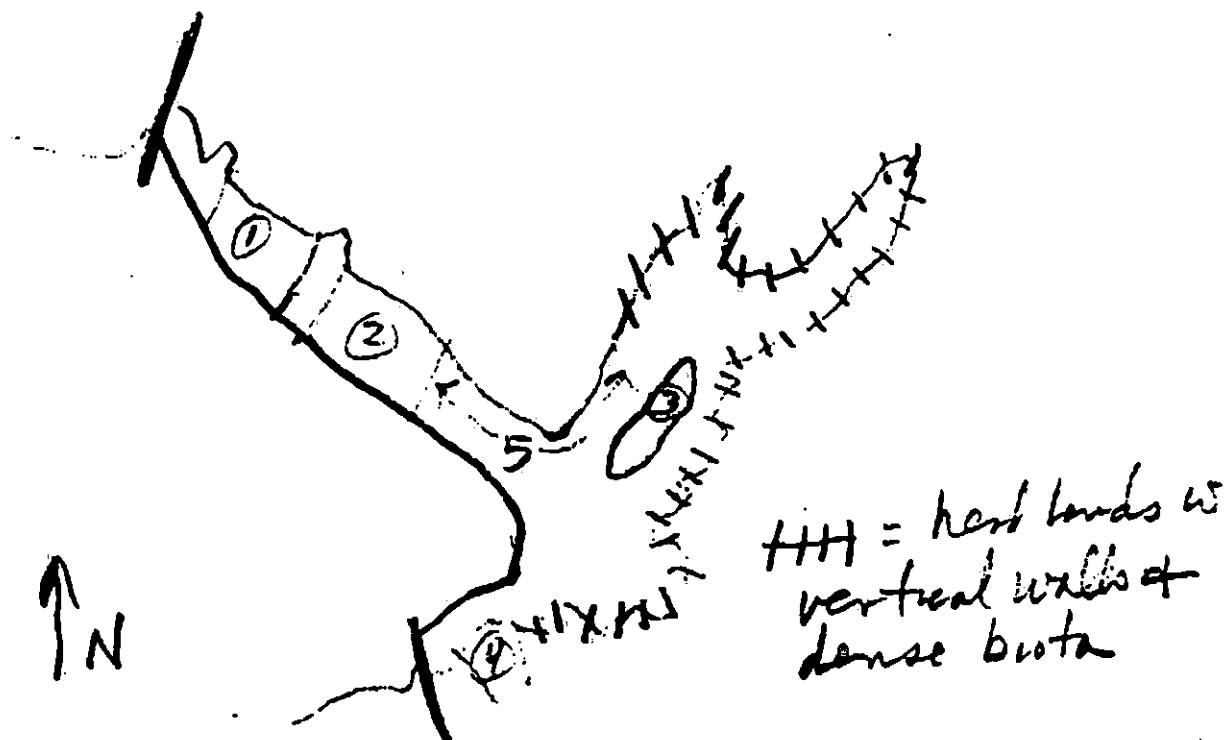
Heavily oiled upper + mid intertidal that were predominantly boulders + cobbles.

Barnacles, Mussels, *Gastropods* + *Fucus* rare with few recruits

3/31/90 Term 1 BIO S. Scorsen SE 41-2

Tide pool ~ 50-60m long dimension in upper intert.
(see diagram) contained dense Phyllospora + was
surrounded by dense populations of Mytilus (adults
recent recruits) + recently settled Fucus. Pool
also contained young Laminaria + abundant
Sarbs (Littorines, Margarita, Semla) +
Leptasterias

start 1000: -1.0
end 1200: +0.5



- ① Boulder/cobble - 0.1ab/degenerate U + M
- ② " " " "
- ③ Tide pool
- ④ Boulder/cobble degenerate U + M
- ⑤ Boulder/cobble degenerate U + M

OG land

SEGMENT 1

SUBDIVISION SE-LI

DATE 3/31/90

CHECKLIST

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

LEGEND

- 1 Δ Exposed Bedrock
- PH - No Subsurface Oil
- 2 Δ Oiled Zone Shaded
- PH - Subsurface Oil
- SSL where different than HWL

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

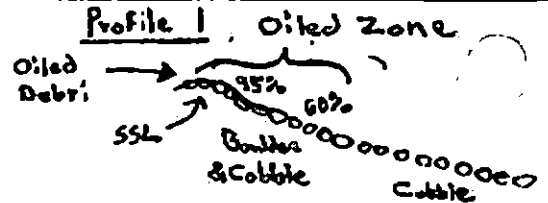
Oil Character 2 given if Transition...
Width (if length continuous) Length (L) & Width (W) given if patch

Pocket Beaches
Oil cover greatest in pocket beaches. Especially in West Curves & Storm Surge Line.

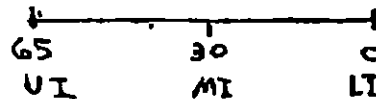
USE BACKHOE TO RAKE + ROLL BIRM + BOLDERS PRIOR TO BIO

End of Segment

ETCH MAP



SPOT WASH HANDWASH CV + PO in CREEKS



Not Surveyed

ALSO REMOVE DEBRIS

TILL/RAKE WITH BACKHOE PRIOR TO BIO

Black Oil (Unweathered) Sediments Saturated.

Approx. oil free at surface patchy oil in subsurface

End of Segment



Oil Character Length (m): AP _____ PO _____ CV 40 CT 450 ST 40 MS _____ PT _____ TB _____ FL 650 NO 200

(Note unsurveyed sector)

SE-41



77

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT SE-41 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup

CLOSED

Bioremediation

Spot Washing

Mechanical Tilling/Raking/Moving

Other Approved Treatment

CLOSED

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,O,P,Q

Harbor Seal & Sea Lion

Closed to bioremediation, spot washing, and mechanical tilling/raking/moving, and other approved treatments before 7/1 and after 7/31. Closed to manual pickup before 7/1 and after 8/15.

5R

Seabird Colony

Closed to all approved activities before 9/1.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum. Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts and bird colony. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

FOSC

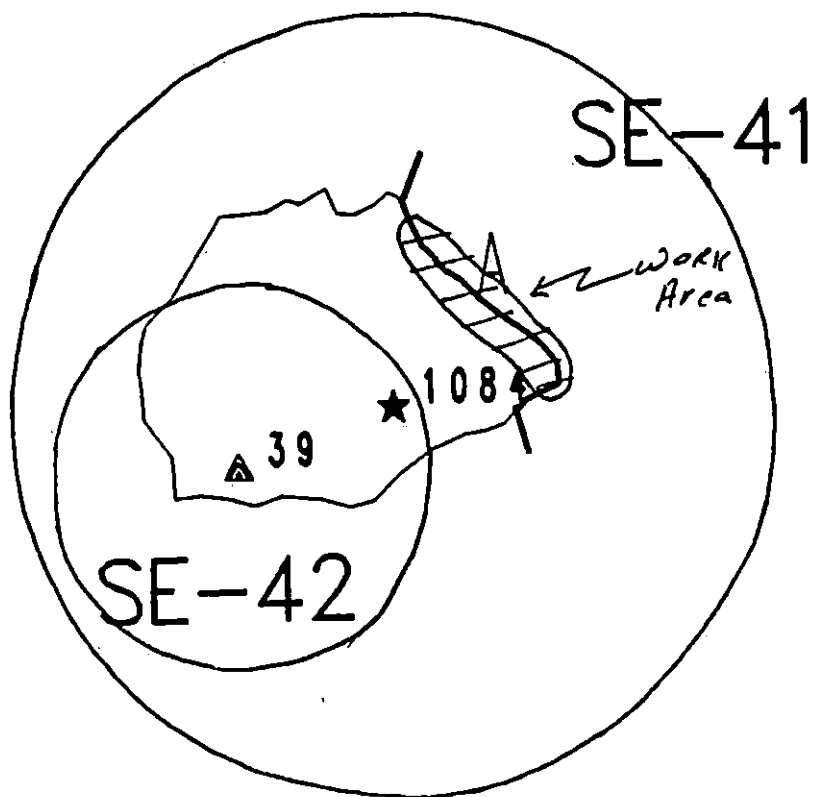
Date

Prepared by

Date

6/15/90

6/14/90



Exxon Company, USA
Map Key: PMS-SE-41
May 11, 1990



ECOLOGY MAP
SEGMENT SE-41
SUBDIVISION A (1 of 1)



- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1331 feet

SHORELINE EVALUATION

SEGMENT ST/ SE-42 SUBDIVISION A (1 OF 1) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5T Bald eagle nests (3/1 to 6/1)
5R Seabird colony (5/1 to 9/1)

See attached Ecological Constraints Sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid disturbance/damage to unoiled biota and substrate.

SHPO SIGNATURE: *Charles E. Hoff*

DATE: 4/12/90

OILING CATEGORIZATION:

Wide 42 m: Medium 88 m: Narrow 0 m: V.Light 0 m: No Oil 780 m
Subsurface Oil Observed: Yes X No Maximum Depth 75 cm

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> X </u> Snare/Absorbent Booms
<u> X </u> Treatment Recommended	<u> X </u> Oil Snares (pom poms)
<u> X </u> Manual Pickup	<u> X </u> Absorbents (pads, rolls, etc)
<u> X </u> Bioremediation	<u> X </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: The recommended treatment activities are as follows: 1) Manual tilling of storm berm (see attached sketch map) followed by spot washing and bioremediation, 2) Use of absorbent materials during and after tilling and spot washing and, 3) Bioremediation only in area shown on sketch map. Work should be conducted between 7/1 and 8/15 with approval from ADF&G and USFWS based on above constraints.

TAG COMMENTS:

TAG APPROVAL - BIOREMEDIATION SUBJECT TO ADF&G CLARIFICATION.

TAG APPROVAL DATE: 4/17/90

ADEC *Art Weaver*

EXXON *Andy Tear*

NOAA *Burt Wescott*

USCG *Kenneth Keane*

FOSC: *[Signature]*

DATE: 4-22-90

SHORELINE EVALUATION

SEGMENT ST/ SE 42 SUBDIVISION A (1 of 1) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Harbor seal and sea lion pupping (3N, 3P) - 5/15 to 7/1; harbor seal and sea lion
molting (3O, 3Q) - 8/15 to 9/15; ~~seal~~ bald eagle nests (5T) - 3/1 to 6/1; Seabird
colony (5R) - 5/1 to 9/1.

(3N, 3P)(3O, 3Q)

SUBDIVISION ECOLOGICAL CONSTRAINTS: Restrict boat and air traffic to
essential minimum. Contact ADFEG and USFWS prior to treatment. Treatment to
be completed prior to May 1~~st~~ or between July 1 and August 15 unless otherwise
approved by ADFEG and/or USFWS. (5T) Air approach and takeoff from and to seaward
only. Contact USFWS prior to treatment for confirmation of dates and avoidance minimums. Avoid
disturbance/damage to unoiled substrate and biota. (5R) Permit air traffic to essential minimum. Cultural
ment. ADFEG.

ARCHAEOLOGICAL CONSTRAINTS: If cultural resources are ment.
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).

OILING CATEGORIZATION:

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

RECOMMENDATIONS:

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

Comments: * MANUAL TILLING OF GRAZING BERM, FOLLOWED BY SPOT WASHING AND
BIOREMEDIATION. USE ABSORBENT MATERIALS DURING AND AFTER TILLING
AND SPOT WASHING. CLASS 3 WORK DONE. WORK 7/1-8/15 BASED
ON CONSTRAINTS.

TAG COMMENTS:

TAG APPROVAL DATE:

ADEC
EXXON Wm. Stahp
NOAA
USCG

FOSC: DATE:

PWS ECOLOGICAL CONSTRAINTS

SE-42

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

SEGMENT ST/ SE 42 SUBDIVISION: _____ DATE 3/31

USCG
NAME Robert Jensen SIGNATURE Robert Jensen

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Shoreline is accessible without putting workers or equipment at risk only during calm weather and low periods of wave action. Large area of oil found. However, it would be very difficult to put any heavy equipment on the shore area.

ADEC
NAME Roxann T. Hudnall SIGNATURE Roxann T. Hudnall

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

N + NW shore are heavily contaminated; Oil has penetrated to 60 cm in cobble/pebble substrate in places. Will require more than manual treatment.

LAND MANAGER
NAME U. S. Forest Service SIGNATURE Reo Taylor

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

No oil found on south side of Island. Encountered oil on N.W. shore, which continued all across N. shore - became thicker, more toxic, as proceeded east. Oil seeped out of stormy beam and was to depth of 3'. will be hard to treat.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/88

OG John T. Simpson USCG Bob Jensen SEGMENT ST/ SF-42 A (left)
 BIO John T. Simpson LAND REP Ed Keeley SUBDIVISION No. 50
 EXXON Jim Ellison ADEC Rebecca Hudmell TIME 09:12 to 13:30
 TEAM NO.: 2 TIDE LEVEL: +1' to +4' DATE March / 31 / 90
 EST. SUBDIVISION LENGTH: 3373 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: SE to N.W
 SURFACE SEDIMENTS: R 40 % B 30 % C 20 % P 10 % G - % S - % M - % V - %
 SLOPE: Long 30 % Hang 40 % Vert 30 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 50 m M 80 m N 0 m VL 0 m NO 1043 m
* 1200 m unknown

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	10	15	20	25	30	35	40	45	50	55	60	65	SU	UI	MI	LI
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL																

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

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

DEBRIS COLLECTED
☐ YES ☒ NOTYPE #BAGS

Photographs:

Roll No. ST-2-3Frames F 6-10

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	30	35	40	45	50	55	60	65	SU	UI	MI	LI		
1	80		X				5-75		X									X				No	ph / cs / sd / bd
2	45				X		5-25						X							X		No	"
			X				25-40		X				X							X		No	"
3	35				X		10-25		X				X								X	No	"
4	40					X	-												X			No	"
5	40					X	-													X		No	"

6 40
COMMENTS

X

X No

1

* Shoreline too steep to survey

Seal Island, SE-42, March 31, 1990

Segment SE-42 makes up the south, western and north coast of Seal Island between Green and Smith islands off the northeastern coast of Knight Island. The section is exposed to a relatively long fetch to the north and southwest, and to a moderate fetch to the west.

The shoreline consists of alternating headlands of angular bedrock and pocket coves of coarse sediments, cobbles/boulders/pebbles, often overlying bedrock ramps. Short sections of large angular boulders are often present as talus in front of bedrock cliffs, or as transition zones around the sides of headlands.

No oil was found on the south and west coasts of this island. Two coves were observed to contain oil within a 3 m wide seaward part of the uppermost storm berm, and within a 10 m wide band in the upper and middle intertidal zones. In the first case, brown, viscous oil has penetrated down to 75 cm in the pebble/cobble storm berm. The second band forms deposits around the base of boulders and cobbles including penetrations to depths of 25 cm. This band seems to 'outcrop' in the middle and upper intertidal zone and become buried

progressively deeper seaward.

Two small coves including pocket beaches of cobbles are located near the northeastern extremity of this segment. The northeastern cove includes a 3 m wide band of oiled storm berm, the cove adjacent to the west contains no oil.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / SE-42 Subdivision N/A Date (mo / day / yr) 03/31/90
 Time (24 hr) 1400 Biologist John Dixon

- (A) Substrate type and % of segments:
 (1) Bedrock 40 (2) Boulder 30 (3) Cobble 20 (4) Pebble 10 (5) Sand _____ (6) Silt _____
- (B) Overall % cover of biota (% of segment): Dense 50 Moderate 35 Low 35
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (O)

Photographs: Roll No. ST-2-2
 Frames 6-10

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

offshore. 2 oyster catchers in intertidal on pool rock. Saw lion 2 Harbor seal & many gulls

Ecological Considerations:

Segment is comprised of vertical cliffs & bedrock headland alternating with boulder-cobble pocket beaches. Dense biota on large stable surfaces produces striking banding patterns. Lower intertidal dominated by filamentous red algae, *Alaria* & *Fucus*; mid zone with abundant *Fucus* over large *Balanus crenatus* with large patches of dense *Mytilus* on horizontal surfaces. Boulder relatively depauperate, heavily scoured. Dense film of red-green algae in lowest areas but nearly 100% open space in higher areas. Moderate density of small limpets, littorinids, & ... Union seal & sea lion pupping & molting sites

T_{p1}:  0.75 um 80% coating on
BL, 1 CU
 T_{p2}:  0-20 um FL, 20-40% 80% coat
BL, 1 CU
 T_{p3}:  0-10 clean
10-25 FL / CU



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

SE-42

Total Segment Length: 1880



Map Key: PWS-525

Name: John R. SempelDate: March 31, 1990

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT SE-42 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	CLOSED
Bioremediation Spot Washing Other Approved Treatment	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Molting	Closed to bioremediation prior to 7/1 and after 7/31. Closed to manual pickup, spot washing, and other approved treatment prior to 7/1 and after 8/15
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.
5R	Seabird Colony	Closed to all activities; work site is less than 800m from seabird colony.

OTHER ECOLOGICAL CONSIDERATIONS

If seabird colony constraint is removed, other ecological considerations will apply.

FOSC

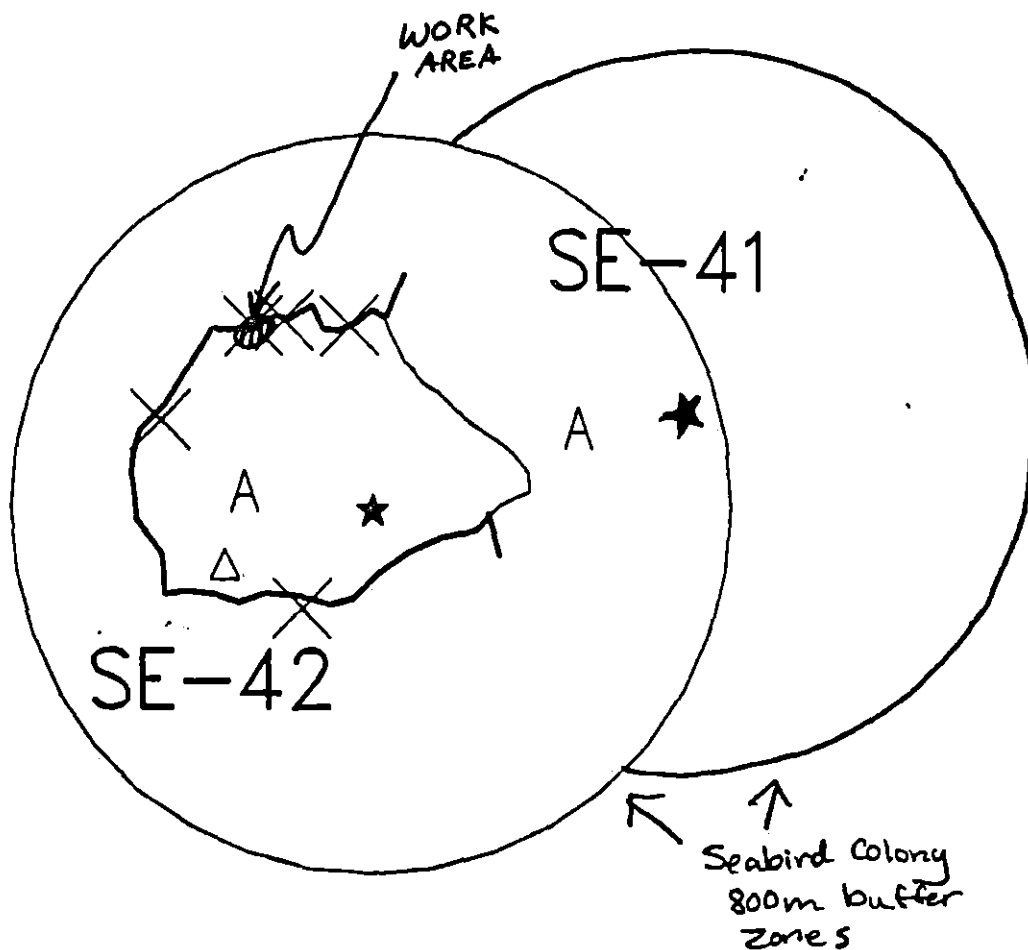
Prepared by

Date

Date

6/13/90

6/12/90



Exxon Company, USA

Map Key: PWS-SE-42

June 04, 1990



ECOLOGY MAP
SEGMENT SE-42
SUBDIVISION A (1 of 1)
METERS



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

ANADROMOUS FISH STREAM EVALUATION

K1-1

SEGMENT ST/SI-014 STREAM NO: 251-82-10090 DATE 5/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (4/15 to 7/31)
1B Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)
5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

SHPO SIGNATURE: Kachel Dean Weller DATE: 5/23/90

Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of mousse tarballs and patties as indicated on attached sketch map. Consult ADF&G (regarding stream) and USFWS (regarding eagle nest) for appropriate work window.

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/24/90.
ADEC ART WEINER
EXXON AMY GAT
NOAA Bruce Westcott
USCG M. J. Hall

FOSC: [Signature] DATE: 5/31/90

KODIAK ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (4/15 to 7/31)
 1B Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)
 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 Kotol Bay Hatchery release
 Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
- 1I Gill net area
- 1J Purse seine area
 Mainland, West side Kodiak, Shuyak & Moser/Olga Bay - 6/9 to 10/1.
 East side Kodiak, East side Afognak - 7/4 to 10/1.
- 1K Purse seine hook-off
- 1L Set net sites
 USFWS setnet uplands permit 5/15 to 9/15.
- For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/15 to 6/30)
 Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/10 to 6/30)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 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 8/31)
 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 6/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
- 6V Anchorages (6/1 to 9/15)
- 6W Forest Service cabins (6/1 to 9/15)
- 6X Lodge (6/1 to 9/15)
- 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (6/1 to 9/30)
- 7HH Finfish harvesting
- 7II Deer harvesting (8/1 to 1/7)
- 7JJ Invertebrate harvesting
- 7KK Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
- For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

18/25

SEGMENT ST/ 014 SI-004 SUBDIVISION: ASG# (BIG FORT) 251-82-10090 DATE 01 MAY 90

USCG
NAME Kerwin L. Dreher SIGNATURE CWO K. L. Dreher

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

~~ADEC~~ ADFG
NAME Edward W. Weiss SIGNATURE Edward W. Weiss

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

MANUAL PICKUP OF TRASH/POTTIES ON SOUTH SIDE
OF LAGOON UPPER TRAP AREA - RECOMMENDED.

~~LAND MANAGER~~ ADNR
NAME Michael [Signature] SIGNATURE Michael [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

This segment contains state lands proposed for future inclusion into Shuyak Island State Park and is an area of high recreational potential as well as providing wildlife habitat. Recent sign of brown bear, deer and one active eagle were observed. Also observed approximately 1/2 mi. south of this stream was an estimated 400' of yellow boom partially adrift. This was left from Exxon cleanup.

22/25
REVISION NO. 041290

SURFACE OIL

[illegible]

PATTIES / TARBALLS 3 **BAGS**

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

Did You Collect
DEBRIS
☐ YES ☒ NO
TYPE _____
#BAGS _____

Photographs:

Roll No.

Frames _____

SUBSURFACE OIL

[illegible]

COMMENTS NO PITS DUE DUE TO LACK OF OIL PENETRATION.

REVIEWED 7W DATE 5/3/90.

SEGMENT ST/ SL 604

STREAM 251-82-10090

DATE 5/1/90

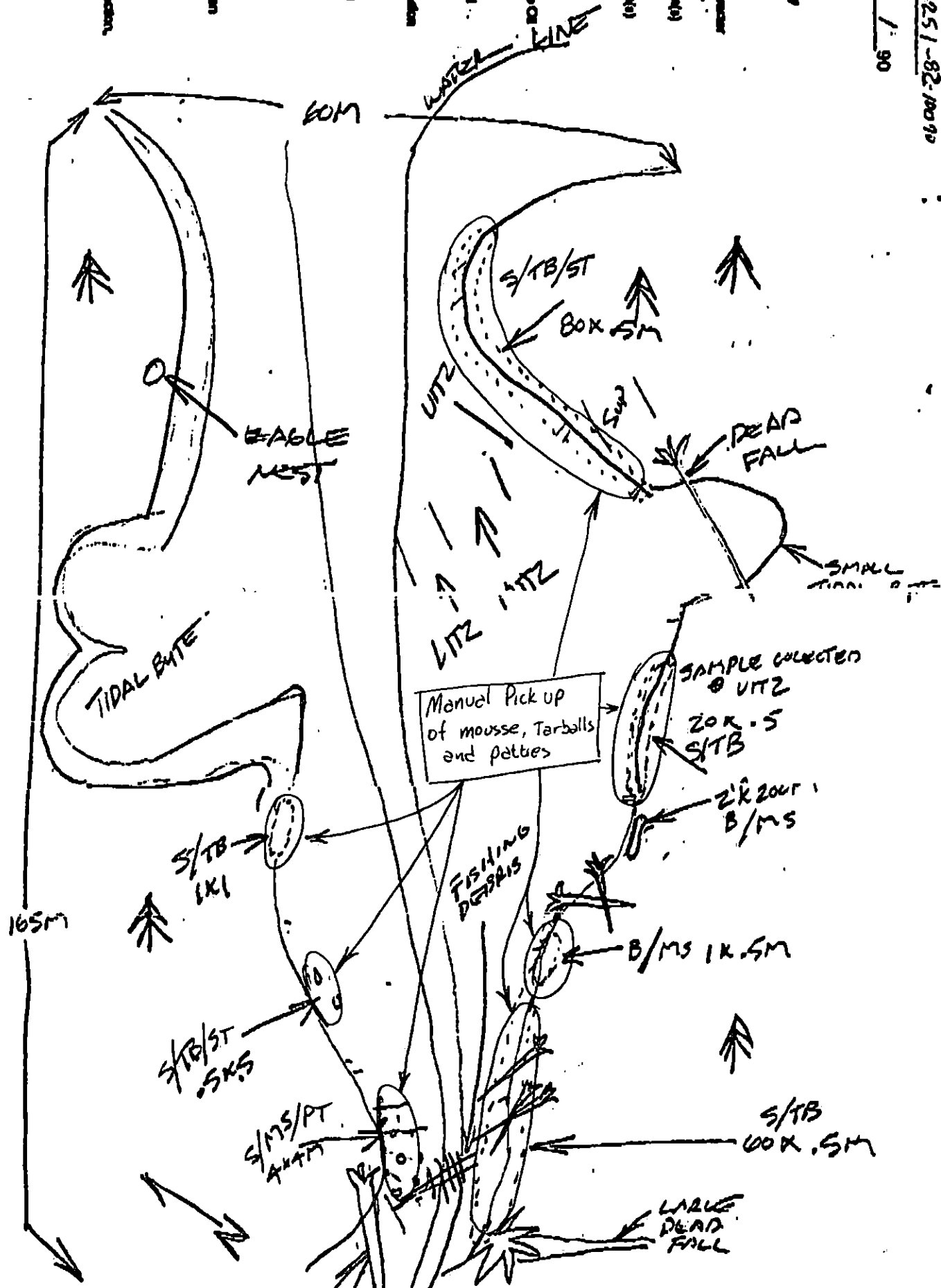
CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Say/Side Entry
- ☐ On Dial
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HTH/LAM
- ☐ SS
- ☐ Prey Location(s)
- ☐ Prey(s)
- ☐ Pre Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 A
- 2 A
- Pre-Substrate CI
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Spotted Distribution
- Dead Vegetation
- Photo location, direction, and number

Character Length (m): AP PO CV CT ST 20 MS 74 PT TB 74 FL NO



SKETCH MAP

REWORK-4/4/96

ADFG MULTI-ASSESSMENT DATA FORM

ANADSSAT

1 SURVEY TYPE: BS ☒ DS TS AVS SCHL MMS PTA2 REGION: PWS KP, CI ☒ KAPMETHOD: Aerial ☒ Ground Boat

3 DATE: 5/1/90

16 HIGH TIDE TIMES: 1

21 TEAM RECORDER: F. WEISS

4 START TIME: 1105

18 HIGH TIDE HTS: 1

22 OBSERVERS: KAL LARSON, K. CATCHLOW

5 STOP TIME: 1220

17 LOW TIDE TIMES: 1304

23 AGENCY: ADFG/WWC/EXXON/B

6 SEGMENT #: SI004-14

19 LOW TIDE HTS: .5

24 PHOTOS TAKEN: Y

7 STATION #:

10 TIDE HT AT SURVEY:

Roll #: Frames:

8 K-UNIT: K0101

9 Ebb Slack Flood Slack

25 VIDEO TAKEN: Y TAPES:

9 STAT AREA:

20 USCG QUAD:

Starts: Ends:

10 LAT:

11 LONG:

26 SAMPLES TAKEN: Y Number

12 SOURCE: Map Loran

011

13 LOCATION: ANDREAN BAY, SHUYAK ISLAND

Sediment

14 DESCRIPTION:

Biological

Water

EXTENT OF OIL

	SHORELINE				STREAM			
	L	H	M	S	L	H	M	S
27 SURFACE COVERAGE	250	1-2		3%	150	1		5%

36 CATALOGED ANAD. FISH STREAM? ☒ N

37 CATALOG #: 251-87-10090

38 STREAM NAME: BIG FORT CREEK

28 SURFACE THICKNESS

39 OIL IN STREAM BED? Y

29 PENETRATION

40 OIL ON STREAM BANKS? Y

30 OVERALL OIL IMPACT: N ☒ L M H

41 OIL ON BEACH ADJACENT TO MOUTH? (within 50 meters) Y

31 OIL TYPE: Pooled ☒ Tar Asphalt Sticky Stain

42 OIL WITHIN 1 MILE OF STREAM? Y

32 OILED DEBRIS? Y N

Where:

33 SHORELINE TYPE: Headland ☒ Low-lying Rocks Beach Cove

43 ANADROMOUS FISH PRESENT? Y N

34 WAVE EXPOSURE: High Moderate ☒ Low44 ANADROMOUS FISH OBSERVATION
Species Aerial Ground

35 SUBSTRATE TYPE: Bedrock Boulder 25 Cobble 35

Gravel 40 Sand Mud/silt

COMMENTS: SPORADIC SPLASHES/PATCHES AROUND SOUTH BANK OF LAGOON
BAND ~ 350 M x 1.5 M <10% COVERAGE WITHIN BAND.
BAND IS SPORADIC AT BEST RANGING DOWN TO SALASHY,

2A/25

Seq ID: SI-⁰¹⁴~~004~~ Subdiv: 251-8²-10090

Survey Date: 5/1/90

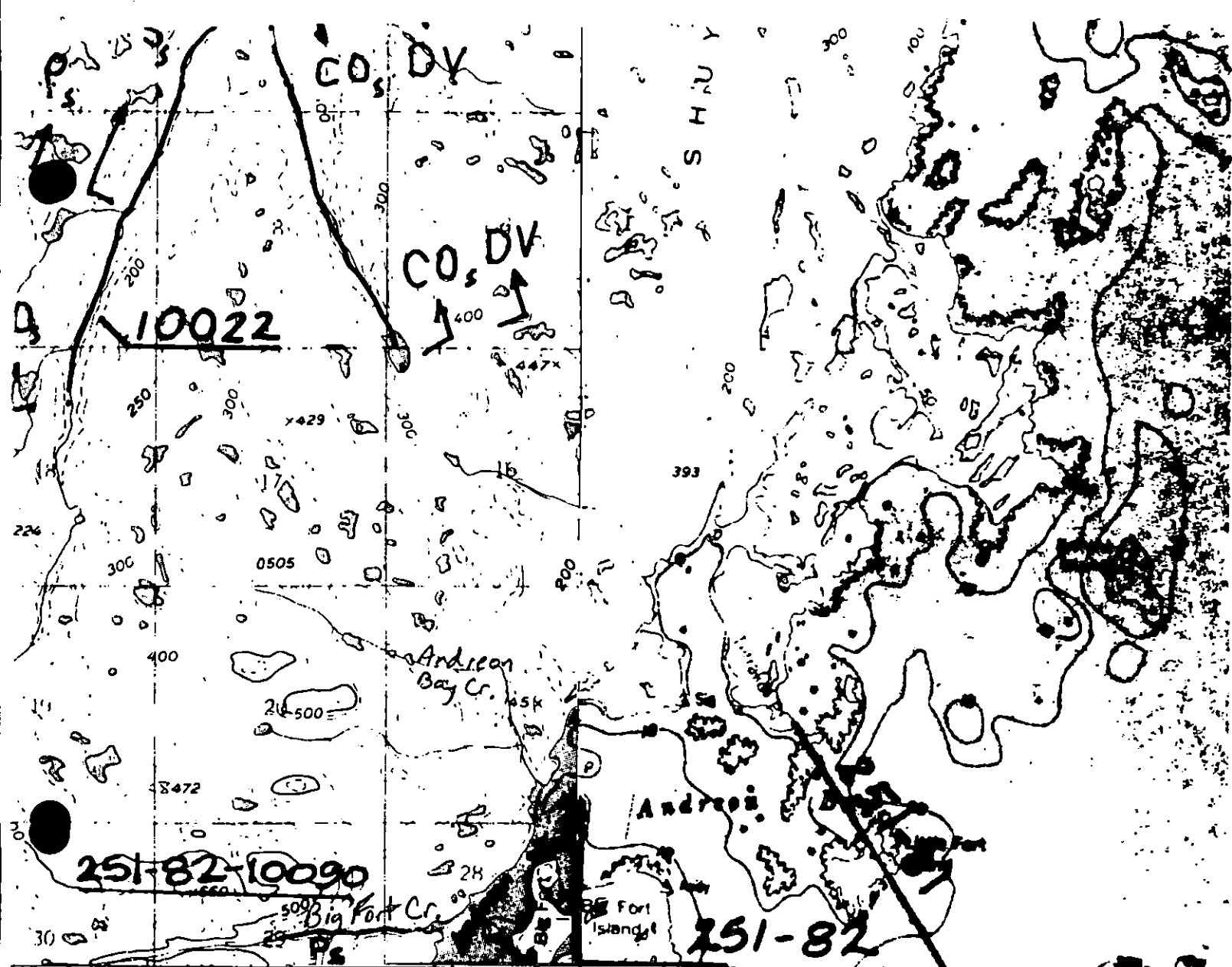
Comments by: Ken Critchlow

This site was lightly oiled along the upper edge of the UITZ. Tarballs, patties and steam were commonly observed along the south side of the stream. Tarballs were occasionally observed on the north side of the stream.

The intertidal biota, while healthy and unmoiled, was not particularly abundant. The oiled substrate was only populated by a few Littorinids.

The only apparent ecological constraints would be the presence of an active bald eagle nest on the north bank of the stream. Cleanup activity would certainly disturb the birds.

KR Critchlow



SHORELINE EVALUATION

SEGMENT ST/ SL-01 SUBDIVISION A (1 OF 5) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5R Seabird colony (5/1 to 9/1)
5T-3 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unhoiled biota and substrate. 5R - Seabird colony approximately 1/2 mile offshore of Segment A.

SHPO SIGNATURE: Charles E. Holmes DATE: 4/28/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 402 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> Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 24/26/20

ADEC John Bauer John Bauer
EXXON Amey Talm Amey Talm
NOAA Gary Petrac Gary Petrac
USCG Kenneth Komo Kenneth Komo

FOSC: 4 DATE: 5-8-70

PWS ECOLOGICAL CONSTRAINTS

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

SHORELINE OILING SUMMARY

REVISION NO. 03/23/90

OG K. DEBUSSCHERE ^{Memo} Jeffrey A. Glin SEGMENT ST/ SL-1
 BIO D. Reed LAND REP A SUBDIVISION A
 EXXON Tony Diaz ADEC Lori Stratton TIME 15:20 to 15:30
 TEAM NO.: 9 TIDE LEVEL: 3 to 3 FT DATE 4/15/90
 EST. SUBDIVISION LENGTH: 570 m ☐ Sun ☐ Clouds ☐ Fog ☐ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N (CLOCKWISE)
 SURFACE SEDIMENTS: R 100 % B 0 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 0 % Hang 0 % Vert 100 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 570 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	FC	FS	PS	NS	1	2	3	4	5	SU	U	ME	U
ASPHALT PAVEMENT POOLED													
COVER													
COAT		X				X					X		
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										X		X	X

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☐ YES ☒ NOTYPE —#BAGS —

Photographs:

Roll No. —Frames —

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	CP	NO		UO	UC	1	2	3	4	5	SU	U	ME	U		
							.													NO PITS:
							.													ISLAND IS
							.													BEDROCK
							.													
							.													
							.													

COMMENTS

SUBDIVISION CONSISTS OF A SMALL ISLAND TO THE SOUTH OF SQUIREL ISLAND - 100% BEDROCK - VERY LIGHT OILING ON VERTICAL CLIFF FACES.

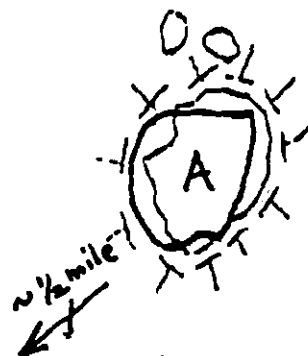
~~DE RRE~~

ECOLOGY MAP

↑ PWS
5260

Eagle
Nest

Eagle
Nest



* Seabird colony

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ST-SL-1-R

ADEC Segment Length: 6268

0 100 200 300
METERS 3

Map Key: PWS-5260

Name: K. DEBUSSCHER

Date: 4/5/90

Date Entered:

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/91

Segment ST / SL-1 Subdivision A Date (mo / day / yr) 04/05/90Time (24 hr) 1520-1530 Biologist D. Reed

(A) Substrate type and % of segments:

(1) Bedrock 100 (2) Boulder (3) Cobble (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. 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:

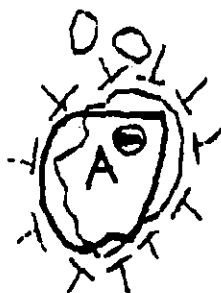
occasional dense patches of mussels
1 mature eagle

Ecological Considerations:

NONE

OIL MAP

↑ PWS
52-00



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ST-SL-1-A

ADEC Segment Length: 6268

100 200 300
METERS 3

Map Key: PWS-520a

Name: K. DERUSSCHER

Date: 4/5/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ SL-01 SUBDIVISION B (2 OF 5) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5R Seabird colony (5/1 to 9/1)
5T-3 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unhoiled biota and substrate. Contact ADF&G and USFWS prior to treatment to obtain a permit. Subdivision B is within 400m of 3 bald eagle nests in adjacent subdivisions.

SHPO SIGNATURE: [Signature] DATE: 9/29/90

OILING CATEGORIZATION:

Wide 45 m: Medium 15 m: Narrow 315 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 15+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) bioremediation of area of surface coat on beach areas indicated on attached sketch map. Work should be conducted after 6/1 and with the approval of ADF&G and USFWS regarding seabird colony and eagle nest constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/26/90
 ADEC JOHN BAWER
 EXXON AMY EAT
 NOAA GARY PATRAC
 USCG K. NORTH KEANE

FOSC: W L DATE: 5-9-90

PWS ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / SL-1 SUBDIVISION: B DATE 4/5/90

~~NAME~~
~~NAME~~

NAME Jeffrey Dahlin SIGNATURE Jeffrey Dahlin

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

There were strong currents off of the low intertidal sediments. The oil on the shoreline was in a wide band, from lower intertidal to upper intertidal. The oil was 5 to 15 cm deep in the sediments. The beach had numerous tracks of oil on it.

ADEC
NAME Lori Stratton SIGNATURE Lori Stratton

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Injected The medium to wide cover over cobbles and the oil film over surfaces could be spot washed with a shore crew, using hot water steam and cold water flush along with extensive carefully-placed booming material (Sansonb?). The porous substrate may be a consideration for constraint, as well as high angle + vertical areas. See Locations 1-3.

LAND MANAGER
NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

NO L.M.

SHORELINE OILING SUMMARY

REVISION NO. 15/7/90

OG K. GERSCHEN PIA Jeffrey A. L. SEGMENT ST/ SL-1
 BIO LAND REP SUBDIVISION 2
 EXXON ADEC Lori Stratton TIME 8:50 to 19:20
 TEAM NO.: 9 TIDE LEVEL: 2 to 3 FT. DATE 9/5/90
 EST SUBDIVISION LENGTH: 600 m ☐ Sun ☐ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 65 % B 10 % C 15 % P 10 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 30 % Hang 15 % Vert 5 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 40 m M 10 m N 550 m VL 0 m NO 0 m

SURFACE OIL

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

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

OILED DEBRIS	AMOUNT	
	SM	MD/LG
Logs		
Vegetation		
Trash		
Debris		

DEBRIS COLLECTED
☐ YES ☒ NOTYPE #BAGS

Photographs:

Roll No. ST-9-2Frames 11, 12, 13

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OS	NO		VO	VS	1	2	3	4	5	W	M	N	U		
1	5				X		0-5	X		X								X		P/S&H/D
2	25				X		0-15	X		X						X				P/S&H/D
3	20				X		0-10	X		X							X			C/P/S&H/D
4	25				X		0-10	X		X							X			P/S&H/D
5	20				X		0-5	X		X								X		C/S&P/H/D

COMMENTS - * oiled interval < 5 cm in fine sediments does not contribute subsurface oil.

- SUBDIVISION CONSISTS OF HIGH PHSIE TO VERTICAL ROCK OUTCROPS
 INTERSPERSED WITH LOW PHSIE & FINE-TO-COBBLE POCKET BEACHES
 MOST SIGNIFICANT OILING OCCURS IN THOSE POCKET BEACHES
 (LOCATIONS # 1, 2, 3) WHERE A CONTINUOUS OIL FILM IS PRESENT
 FROM L₁ TO L₂ AREA. A NEAR SHORE SHEEN WAS OBSERVED
 IN THE SAME AREA. THE DEPTH OF THE OIL PENETRATION COULD
 NOT BE DETERMINED BECAUSE WATER WAVE ACTION WAS PREVENTING IT.

Page 1 of REVIEWED DATE 4/10/90

ENVIRONMENTAL

DATE 4.5.80

CHECKLIST

M/Freq
 Approx. Scale
 Bag/Bin Size/ry
 CR Desc.
 Patch
 Length
 % Cover
 Substrate Character
 1st MFLA Alt.
 Size
 Profile Location(s)
 Profile(s)
 Frt Location(s)
 Frt to Locat(s)

LEGEND

1 
 Fit: An Unimodal Oil
 2 
 Fit: Skewed Oil

 Continuous Distribution

 Broken Distribution

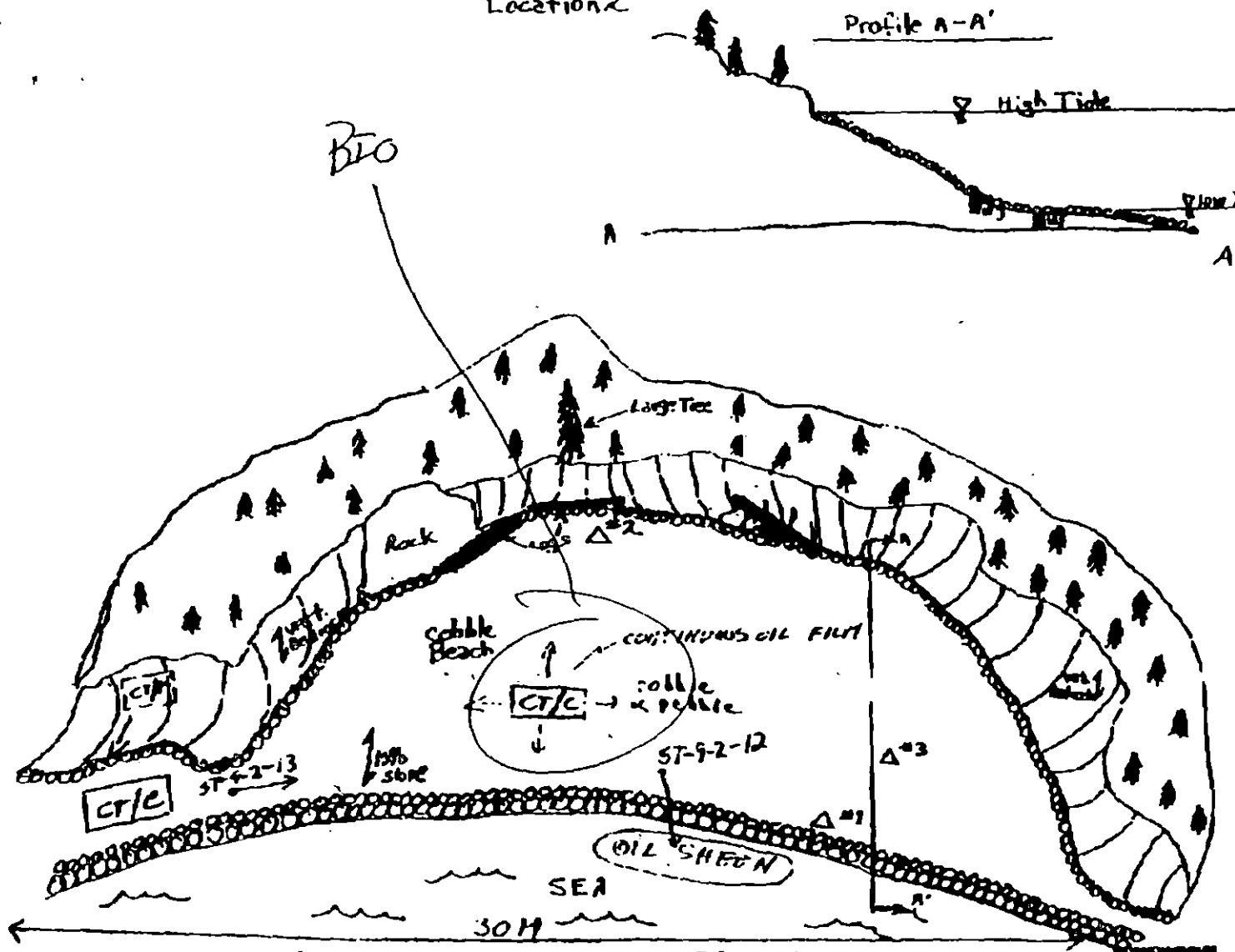
 Peaky Distribution

 Splashed Distribution
 Cited Vegetation
 3 
 Photo location, direction
 and number

Oil Character Length (in) AP 0 PO 0 CV 4 CT 5 ST 0 MS 0 PT 0 TB 0 FL 30 NO 0

SKETCH MAP

ST-SL-1-8.
Location 2



SHORELINE ECOLOGICAL SUMMARY

REVISION: 10/22

Segment ST / SL-1 Subdivision B Date (mo / day / yr) 04/

Time (24 hr) 1850-1920 Biologist D. REED

(A) Substrate type and % of segments:
(1) Bedrock 65 (2) Boulder 10 (3) Cobble 15 (4) Pebble 10 (5) Sand — (6) Silt —

(B) Overall % cover of biota (% of segment): Dense 20 Moderate 40 Low 40

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

Photographs: Roll No. ST-9-2

Frames 11, 12, 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:

NO OTTER, NO EAGLES

Ecological Considerations:

NONE

~~OIL MAP~~

ECOLOGY
MAP

END
ST-SL-1-2

↓ PWS SCOA

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ST-SL-1-B

ADEC Segment Length: ~~6368~~ 6368 m

0 100 200 300
METERS

Map Key: PWS-526b

Name: K. DEBESSCHER

Date: 4/5/90

Date Entered:

OIL MAP

ECOLOGY
MAP

↑
PWS
52-0

START
ST-SL-1-B

Eagle
Nest

Eagle
Nest

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ST-SL-1-B

ADEC Segment Length: ~~400m~~ 6368

0 100 200 300
METERS

Map Key: PWS-5260

Name: K. DEBUSSCHER

Date: 4/5/90

Data Entered:

OIL MAP

↑ PWS
52-0

START
ST-SL-1-B

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

ST-SL-1-B

ADEC Segment Length: ~~122m~~ 6368

0 100 200 300
METERS



Map Key: PWS-526a
Name: K. DEBUSSCHEP
Date: 4/5/90
Data Entered:

OIL MAP

END
ST-SL-1-B

↓ PWS 550A

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

ST-SL-1-B

ADEC Segment Length: ⁶³⁶⁸~~6377~~ m

0 100 200 300
METERS

Map Key: PWS-926b
Name: K. DEBYSSECK
Date: 4/5/90
Date Entered:

S = STRAT
W = WHLIS

STRAT
ST-SL 1-B

PIT #

1, 2, 3
STRETCH MAP

PWS
SP-G



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ST-SL-1-B

ADEC Segment Length: 6368



Map Key: PWS-526a

Name: K. G. RUSSELL

Date: 4/5/90

Date Entered:

S = SKIFF
W = WALK



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

ST-SL-1-B

ADEC Segment Length: 6368

0 100 200 300
 METERS

Map Key: PWS-526b
 Name: K. DEBUSSCHER
 Date: 4/5/90
 Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT SL-1 SUBDIVISION B (2 of 5)

WORK WINDOW	
Bioremediation	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5R Seabird Colony

NO CONSTRAINT. Work site is more than 800m from seabird colony.

5T Bald Eagle Nest

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

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

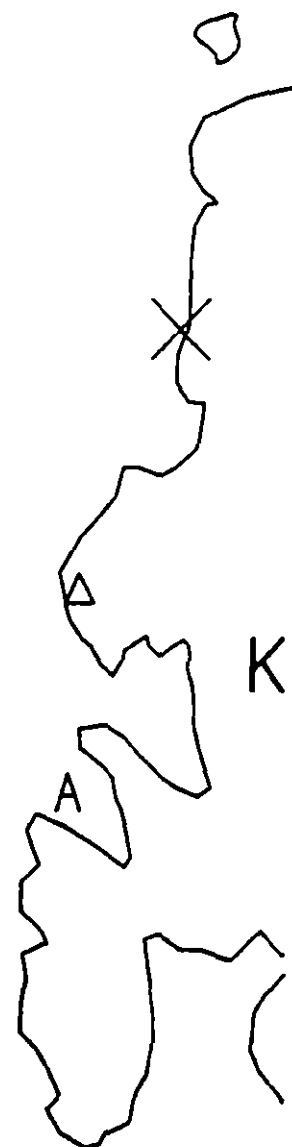
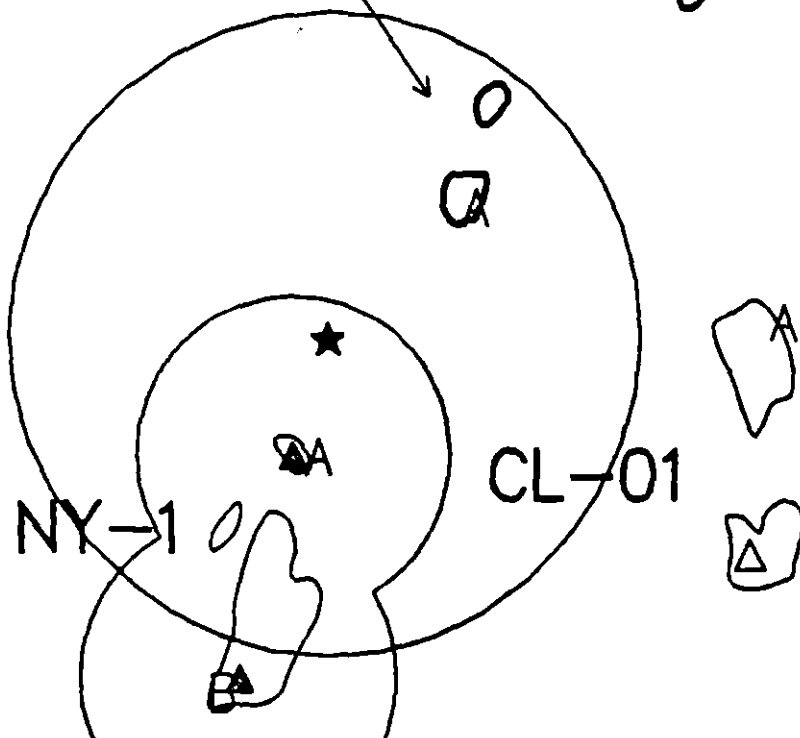
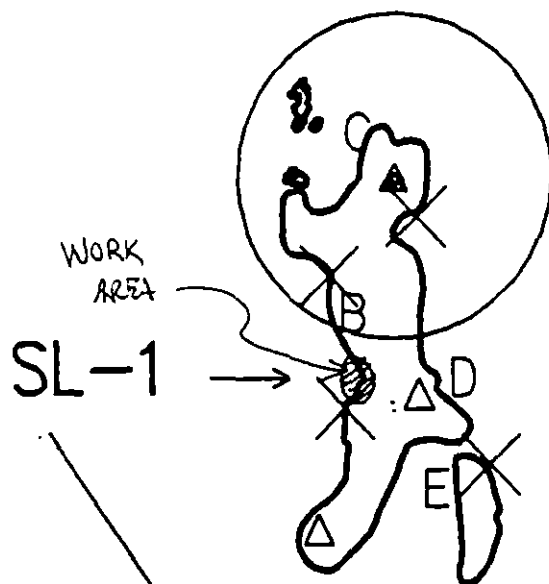
Date

6-12-90

Prepared by

Date

6/11/90



Exxon Company, USA
Map Key: PMS-SL-1
June 09, 1990



ECOLOGY MAP
SEGMENT SL-1
SUBDIVISION --- (--- of ---)
METERS
0 495 990

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

1 inch = 1624 feet

SEGMENT ST/ SL-01 SUBDIVISION C (3 OF 5) DATE 4/5/90

5R Seabird colony (5/1 to 9/1)
5T-3 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. 5T (3/1 to 9/1)

Wide_0_m: Medium_16_m: Narrow_94_m: V.Light_891_m: No Oil_0_m
Subsurface Oil Observed: Yes_____No_X_____Maximum Depth_____

<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> X </u> Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of tarmats and, 2) bioremediation of areas shown on attached sketch map. Work should be conducted after 6/1 and with the approval of ADF&G and USFWS regarding seabird colony and eagle nest constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/26/00.

ADEC	JOHN BAUER	John Bauer
EXXON	ANDY KEAL	Andy Keal
NOAA	GARY PETRAE	Gary Petrae
USCG	KEVIN WITH KEANE	Kevin With Keane

FOSC: DATE: 5-9-90

PWS ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ SK-1 SUBDIVISION: C DATE 4/6/90

~~NAME~~

NAME Jeffrey Dahl

SIGNATURE Jeffrey Dahl

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

This beach has a small 15m x 2m oil slick. In addition there is an unknown oil slick on the beach by a right-hand intersection. There is natural oil in the upper intertidal zone along the left-hand side of the beach, with a right-hand flow by the possibility of the oil slicking. This should be treated.

ADEC

NAME

Lori Stratton

SIGNATURE

Lori Stratton

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

This subdivision had broken, soft pavement (tarmac) as well as oil cover and coat on boulders and bedrock (location #2).

The tarmac area (about 50m²) should be manually shovelled up and removed since it is a 2 cm layer. (location #2).

The broken cover over 4x3m area (location #2) and cover on boulders (location #1) can be spot-treated with hot water/steam wash and cold water flush (especially the back side of boulders) with absorbent boom at water line.

Be aware of eagle nesting in loc. #2, above rock outcrop.

LAND MANAGER

NAME

SIGNATURE

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

No land M.

SHORELINE OILING SUMMARY

REVISION NO. 04/24

OG K. DEBUSSCHERE ^{NAM} Jeffrey Anli SEGMENT ST/ SL-1
 BIO LAND REP SUBDIVISION C
 EXXON Tony Diaz ADEC Lori Stratton TIME 19:20 to 20:20
 TEAM NO.: 9 TIDE LEVEL: 3 to 5 FT DATE 4/5/90
 EST. SUBDIVISION LENGTH: 1304 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 30 % B 10 % C 10 % P 10 % G 0 % S - % M - % V - %
 SLOPE: Long 20 % Hang 50 % Vert 30 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 5 m N 40 m VL 1259 m NO 0 m

SURFACE OIL

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

PAVEMENT: H F S 15 sq. m by 2 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. ST-9-2Frames 15, 16, 17

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UD	UC	SW	SE	GS	WS	S	SU	U	M	U		
LOC ① 1	40					X	.								X					P/P & S
2	40					X	.									X				G/S & G
LOC ② 3	20					X	.								X					P/THICKENIT/S&P/C
							.													
							.													
							.													

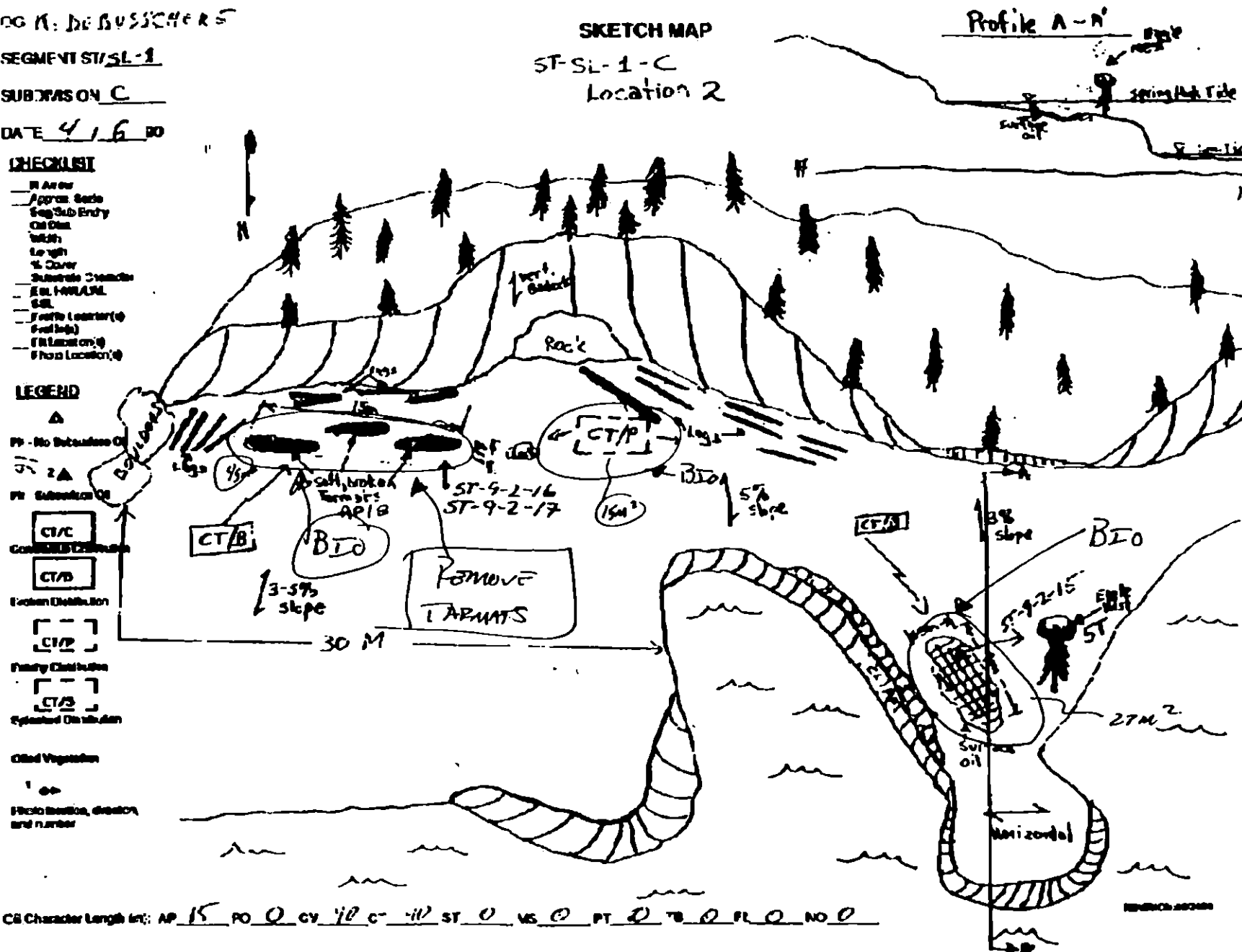
COMMENTS

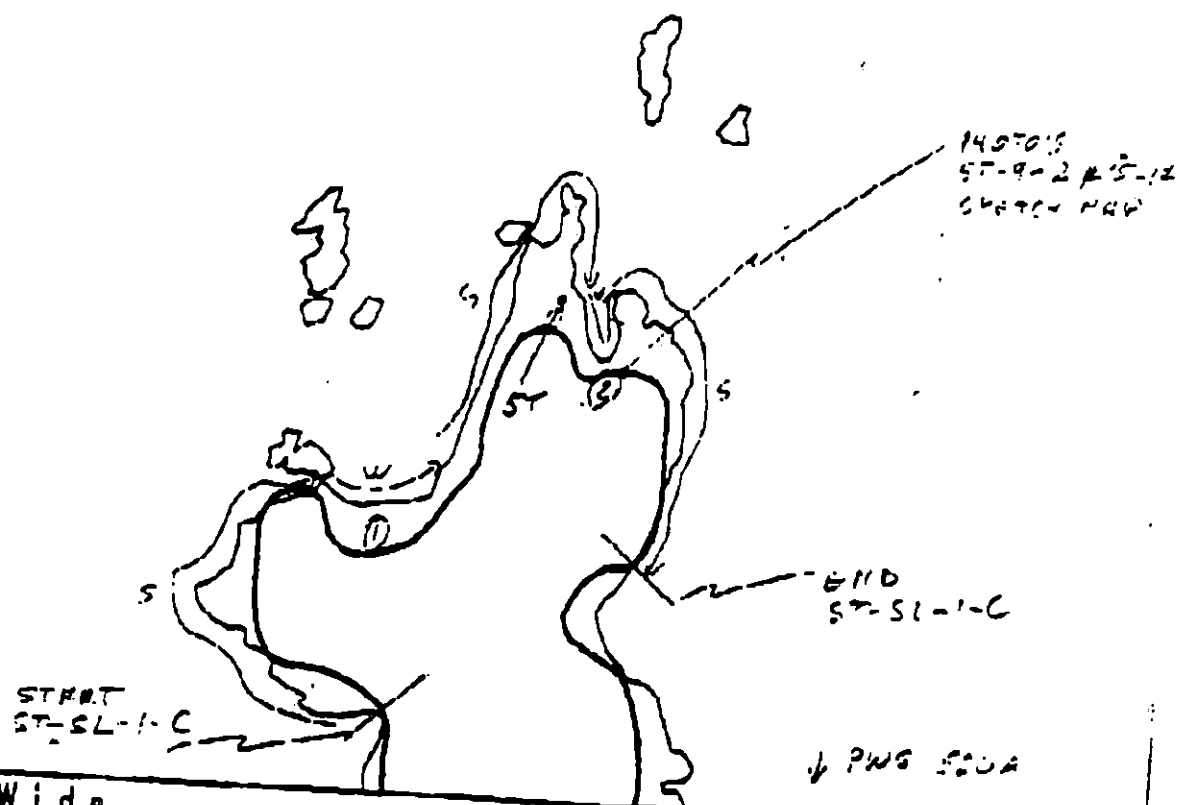
- SUBDIVISION CONSISTS OF HIGH ANGLE ROCK OUTCROPS AND 2 LARGE BERRIES
- OILING OVERALL CONSISTS OF COVER AND COATING. NOTE IN ②: H 15 SQ M ASPHALT PAVEMENT (DBR ON SURFACE; SBL IN PIT PR. ON THE E-SIDE OF THE COVE AND A MEDIUM COVER ON THE RT THE W-SIDE OF THE COVE. (COVER IS RIGHT UNDER EGGLE HE

Call Character Length Int: AP 15 PO 0 CY 10 C- 10 ST 0 MS 0 PT 0 TB 0 FL 0 NO 0

ST-SL-1-C
Location 2

Profile A-n'





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

ST-SL-1-C
ADEC Segment Length: 6368
100 200 300
METERS
17

Map Key: PWS-526b
Name: K-DEBORSCHEAR
Date: 4/5/90
Date Entered:

SHORELINE ECOLOGICAL SUMMARY

REVISED 01/01/90

Segment BT: SL-1 Subdivision C Date (mo / day / yr) 04/05/90

Time (24 hr) 1920-2020 Biologist D. REED

(A) Substrate type and % of segments:
(1) Bedrock 22 (2) Boulder 10 (3) Cobble 10 (4) Pebble 10 (5) Sand — (6) Silt —

(B) Overall % cover of biota (% of segment): Dense 30 Moderate 40 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 57-9-2

Frames 15, 16, 17

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

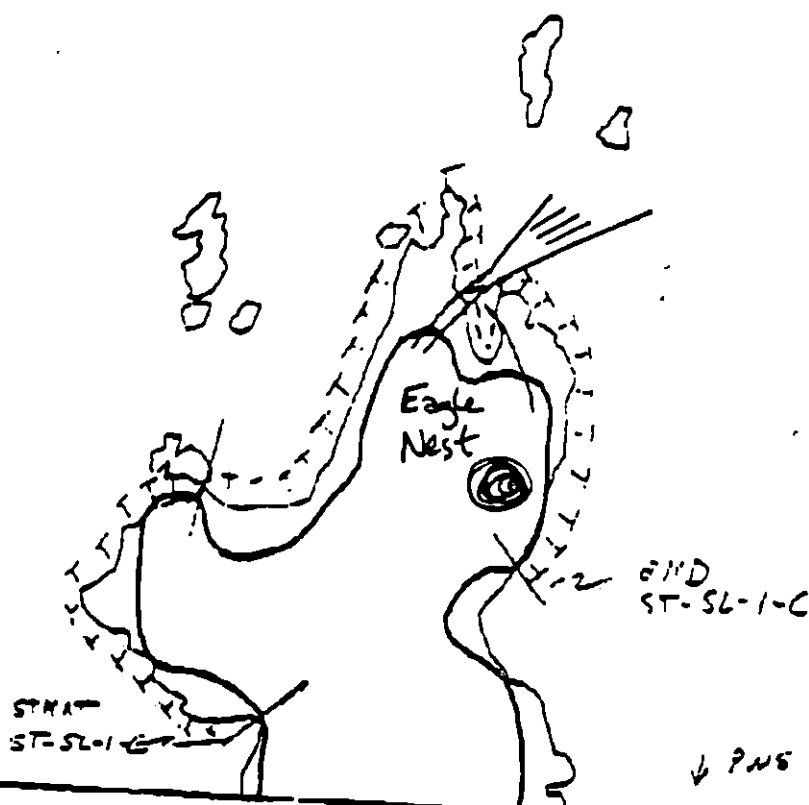
NOT PRESENT

Wildlife Observations/ General Comments:

1 OTTER, 1 MATURE STURGEON, 2 IMMATURES, 1 NEST.

Ecological Considerations:

EAGLE NEST located close to shore. The 10' intertidal zone below the nest has broken cover of oil.



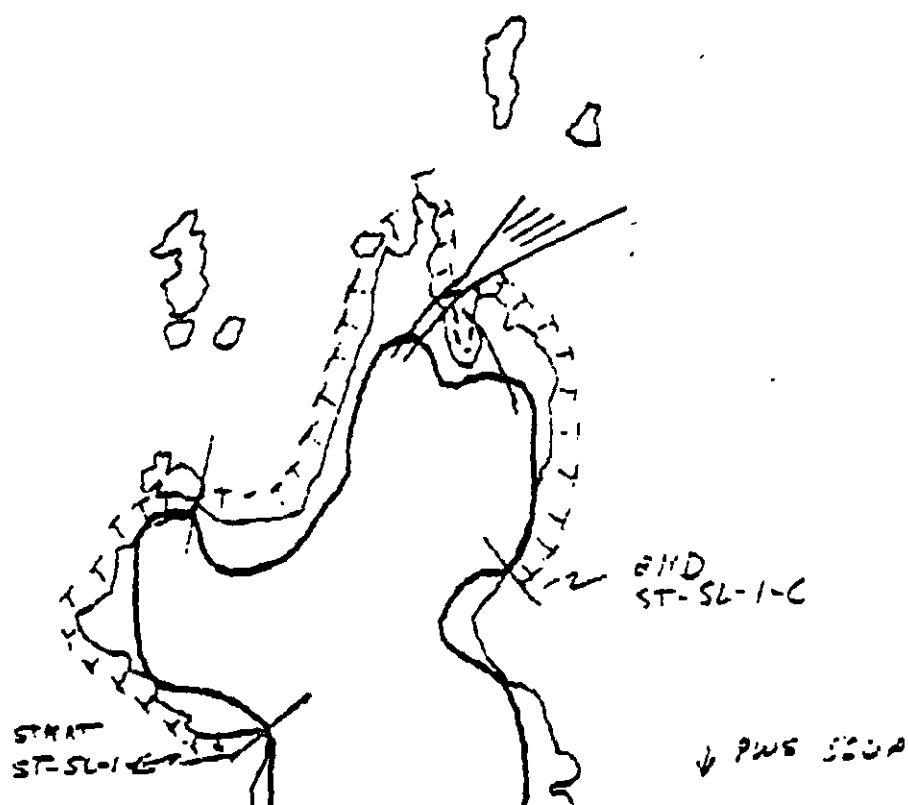
0000 No Oil

57-81-1-C

ADCC Segment Length: ~~42.0m~~ 63.28



Data Entered:



57-56-1-C

6348

ADEC Segment Length: ~~447m~~ 450m

0 100 200 300
METERS 18

0000 No Oil

Name: K. DEBUSSY

0010: 4/5/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT SL-1 SUBDIVISION C (3 of 5)

WORK WINDOW	
Tarmat Removal	CLOSED
Bioremediation	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Molting	NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G.
5R	Seabird Colony	No constraint to tarmat removal and bioremediation. Colony is more than 800m from work area.
5T	Bald Eagle Nest	USFWS 6/1/90 map indicates an active nest in Subdivision C. Closed to tarmat removal and bioremediation within 400m of active nest.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

DATE

6-10-90

Prepared By:

J.P. Phillips

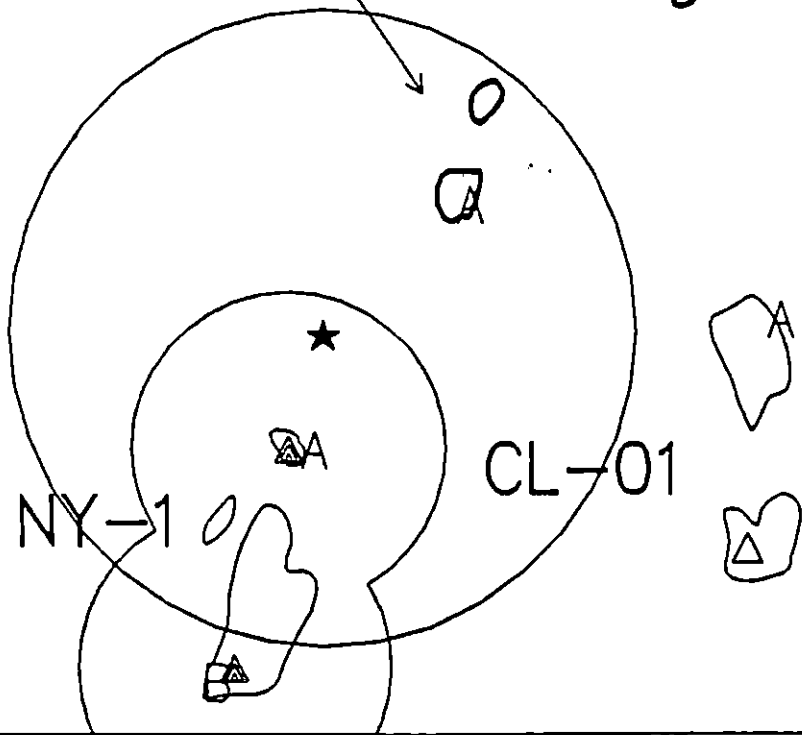
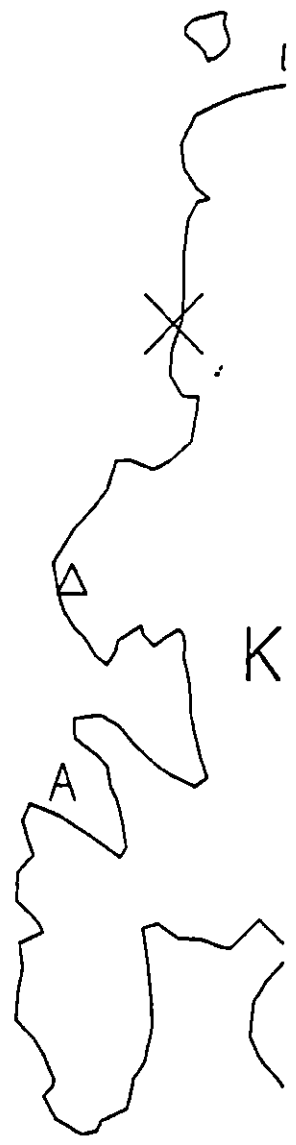
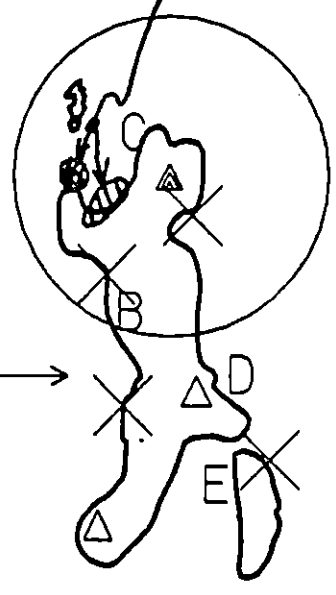
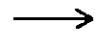
Date

6/10/90

X

WORK
AREAS

SL-1



Exxon Company, USA
Map Key: PWS-SL-1
June 04, 1990



ECOLOGY MAP
SEGMENT SL-1
SUBDIVISION C (3 of 5)
METERS
0 438 876

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

1 inch = 440 feet

SHORELINE EVALUATION

SEGMENT ST/ SL-01 SUBDIVISION D (4 OF 5) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5R Seabird colony (5/1 to 9/1)
5T-3 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. (5T) One bald eagle nest in Subdivision D; second bald eagle nest within 400m of Subdivision D in adjacent Subdivision (C).

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

OILING CATEGORIZATION:

Wide 282 m: Medium 0 m: Narrow 22 m: V.Light 466 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 30+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) bioremediation of areas shown on attached sketch map. Work should be conducted after 6/1 and with the approval of USFWS and ADF&G regarding seabird colony and eagle nest constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/26/90
ADEC JOHN BAUER
EXXON AMN TEAL
NOAA GARY PETRAE
USCG KENNETH KEANE

FOSC: W L DATE: 5-9-90

PWS ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / SL-1 SUBDIVISION: D DATE 4/6/90

NOC
~~1988~~

NAME Jeffrey R. Hille SIGNATURE Jeffrey R. Hille

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

The sediment in this subdivision have left oil and are continuously going of shore. The beach was also oiled. The sediment oil ranged from 2-20 cm from low in the tide to high in the tide. A 1-2 m long area the substrate oil was ~~black and~~ ^{black and} saturated. This layer ~~was~~ ^{was} from 5-10 cm.

ADEC
NAME

Lori Stratton SIGNATURE Lori Stratton

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

- The subdivision consists of oil coat and cover, ~~and~~ penetrating from 5 to 20 cm into sediments. Oil sheen offshore and in dug pits indicate mobile oil, so that it should be treated (Location 1-3)
- To treat some of the penetrating oil and oil film, hot water wash could be applied, with good booming techniques. Spot-washing on boulders for oil cover would be feasible in Location 2, 3+4. Bioturbation are sparse.
- Subsurface oil in location 4 cannot be easily treated without disturbing surface sediments.

LAND MANAGER

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

No L.M.

SHORELINE OILING SUMMARY

REVISION NO. 00-00-00

OG K. DEBUSSCHE John D. Dillin SEGMENT ST/ 56-1
 BIO D. B. 20 LAND REP None SUBDIVISION D
 EXXON 100V D187 ADEC Long S. Stratton TIME 7:20 8:25
 TEAM NO.: 9 TIDE LEVEL 3.5 to 6.0 DATE 4/6/90
 EST. SUBDIVISION LENGTH: 1050 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 50 % B 10 % C 15 % P 20 % G 5 % S 21 % M - % V - %
 SLOPE: Long 40 % Hang 20 % Vert 40 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 130 m M 0 m N 10 m VL 910 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	W	M	N	VL	W	M	N	VL	W	M	N	VL
ASPHALT PAVEMENT												
POOLED												
COVER		X						X			X	
COAT			X				X				X	
STAIN												
MOUSSE												
PATTIES												
TARBALLS												
FILM	X						X		X	X	X	
NO OIL									X			

PAVEMENT: H F S 8 sq m by 4 cmPATTIES / TARBALLS 4 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

LOC 1 2 3LOC 4

DEBRIS COLLECTED

☐ YES ☒ NOTYPE -#BAGS -

Photographs:

Roll No. ST-9-2Frames 18 → 21

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW				OIL / FILM COLOR				PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OF	OR	OL	OF	NO		W	M	N	VL	W	M	N	VL	W	M	N	VL		
1	15				X		0.5	X				X				X					P/G & S (H ₂ O)
2	30				X		.									X					C/P/G/S - 111 COR-
3	10				X		0.10	X				X				X					C/P/G/S (H ₂ O) - 111 OVER
4	30				X		.									X					P/G & S
5	50				X		0.20	X				X				X					P
6	20				X		0.20	X				X				X					P/G & S (H ₂ O)

COMMENTS

- * oiled interval of <5cm in fine sediments does not constitute subsurface oil.
- SUBDIVISION CONSISTS OF HIGH ANGLE TO VERTICAL ROCK OUTCROPS AND LOW ANGLE PEBBLE BENCHES
 - MOST SIGNIFICANT OILING IS IN LOCATION # 1, 3 & 4: CONTINUOUS OIL FILM FROM LE TO ME. IN LOCATION # 4 A SUBSURFACE LAYER OF OIL-SATURATED SEDIMENTS IS PRESENT IN THE LE.
 - A NEAR SHORE SHEEN WAS OBSERVED IN THOSE 3 LOCATIONS.

Page 1 of 2.1REVIEWED DIL DATE 4/10/90

SEGMENT ST/ SL-1 SUBDIVISION D

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OP	OR		US	US	Y	Y	Y	Y	Y	Y	SW	U	NS	U		
LOC ① 7	15				X		0-15	X			X								X		P/G&S (H ₂ O)
8	25				X		0-5	X			X								X		P/G&S
		X					5-8		X	X									X		
LOC ④ 9	30				X		0-8	X			X							X			P/G&S/C/G&S/LOC
							8-10		X									X			
10	30				X		0-30	X			X					X					P(H ₂ O)
							.														
							.														
							.														
							.														
							.														
							.														
							.														
							.														
							.														
							.														

COMMENTS

* oiled interval < 5 cm. in fine sediments does not constitute subsurface oil.

2.2

REVIEWED DK DATE 4/10/90

DATE 9/16/ 90

CHECKLIST

- M. Rouse
Apprent. Stacks
309/381 Bndry
On Del.
March
1 or 2
N. Conn.
Substrate Character:
Eg. HPLC/VL
S.M.
Profile Location(s)
Profile(s)
In Literature
Photo & scale (if)

LEGEND

- 1 
 P10- K10 Subsurface Oil
 2 
 P11- Subsurface Oil
 CT/C
 Unrestricted Distribution
 CT/B
 Unrestricted Distribution
 LT/P
 Priority Distribution
 LT/S
 Expedited Distribution
 Oil and Vegetables
 1 
 From location, direction
 and number

On Character length (in) AP 0 PO 0 CV 30 CT 70 ST 0 MS 0 PT 0 TB 0 FL 30 NO 0

•SKETCH MAP

9T-SL-1-D

Location 1

Profile A-A'

Mean High Tide

Low Tide

Bio

32

SEA

304

Large
Rock

SHORELINE ECOLOGICAL SUMMARY

REVISION: 10/8/90

Segment ST / 54-1 Subdivision D Date (mo / day / yr) 04/06/90

Time (24 hr) 0720-0815 Biologist D. REED

(A) Substrate type and % of segments:
(1) Bedrock 50 (2) Boulder 10 (3) Cobble 15 (4) Pebble 20 (5) Sand 5 (6) Silt —

(B) Overall % cover of biota (% of segment): Dense 10 Moderate 50 Low 40

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

Photographs Roll No. 5T-9-2

Frames 18, 19, 20, 21

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

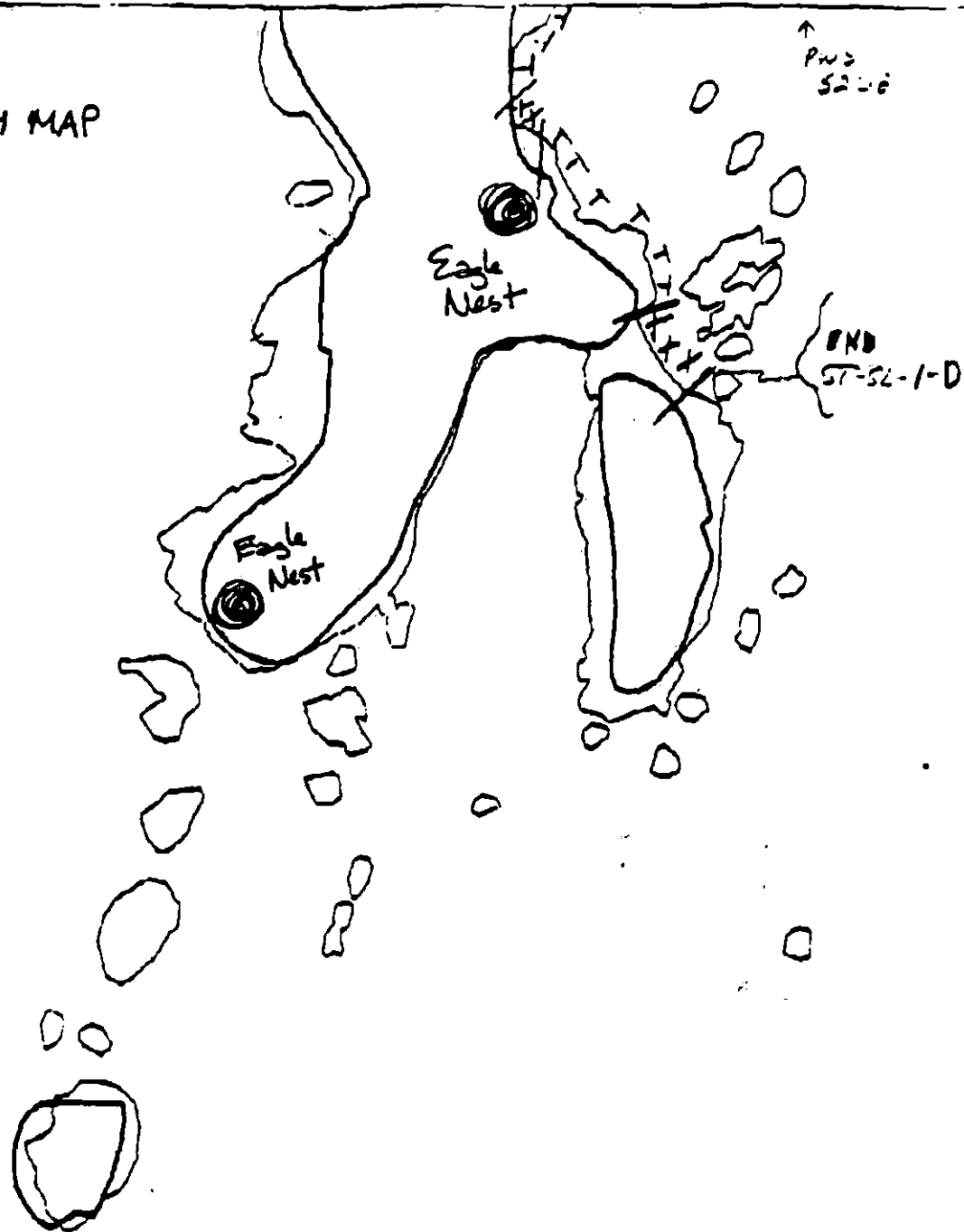
4 EMBLES. mussels and littorine snails common in oiled cobbles, most were alive.

Ecological Considerations:

Significant amounts of subsurface oil found on pocket beaches in this segment. Biota on these beaches relatively sparse. Some mussels and littorine snails in relatively low numbers. Ecological impact of cleaning these beaches would probably be minimal. 28

~~011-71112~~

ECOLOGY MAP



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ST-52-1-D

ADEC Segment Length: 638

0 100 200 300
METERS

Map Key: PWS-5260

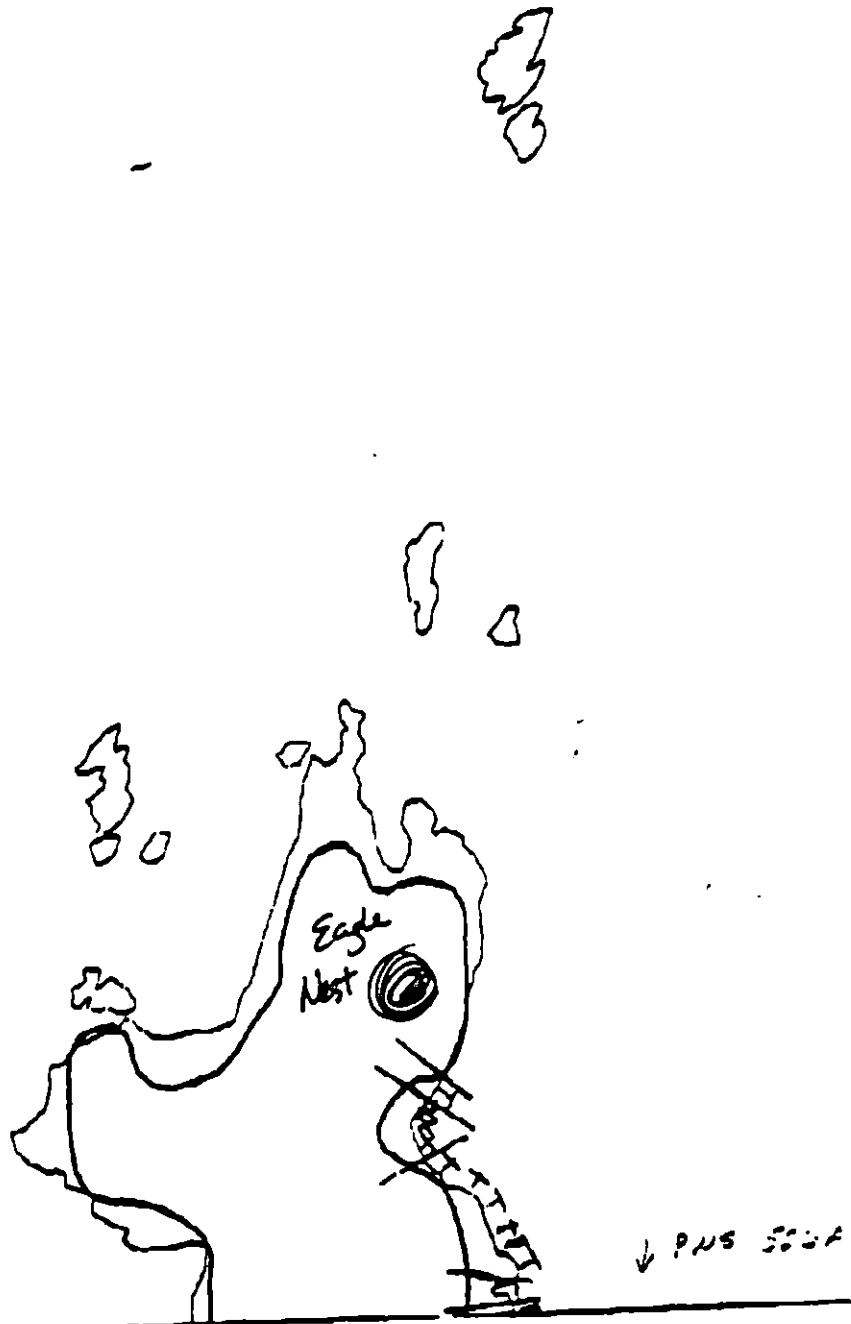
Name: K. DEWESCHER

Date: 4/6/90

Date Entered:

~~78-1111~~

ECOLOGY MAP



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

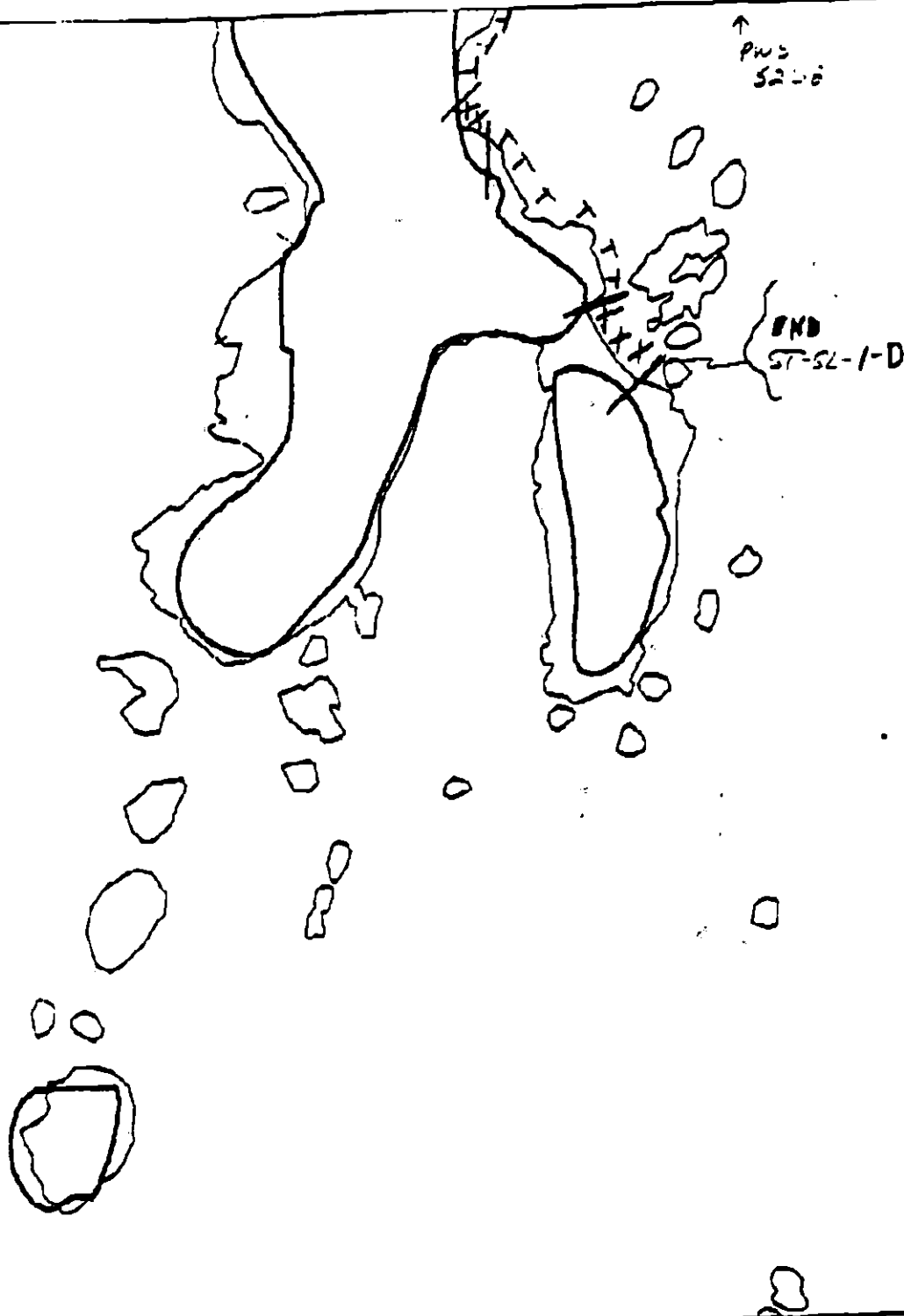
ST-SL-1-D

ADEC Segment Length: 8363



Map Key: PWS-5260
Name: GERVIL CREEK
Date: 4/8/90
Data Entered:

OIL MAP



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ST-SL-1-D

ADEC Segment Length: ~~2000~~ 638

0 100 200 300
METERS

Map Key: PWS-526a

Name: K. DERUSCHKE

Date: 4/6/90

Date Entered:

016 14RP



↓ PWS 500A

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

ST-SL-1-D

ADEC Segment Length: 6368



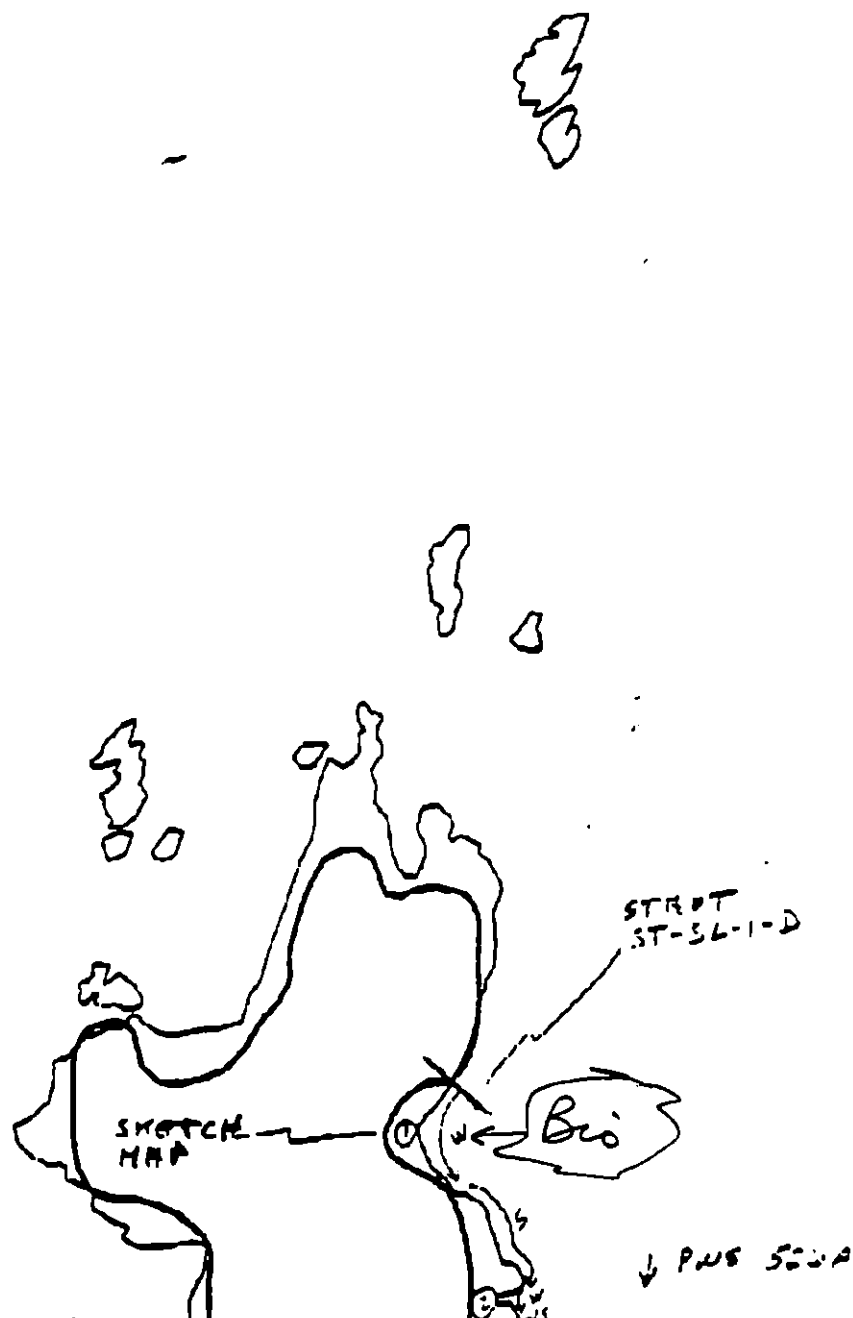
Map Key: PWS-526b

Name: K. VERGICHER

Date: 4/6/90

Data Entered:

S - SKIFF
W - WALK



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ST-SL-1-D

ADEC Segment Length: 6368

0 100 200 24 300
METERS

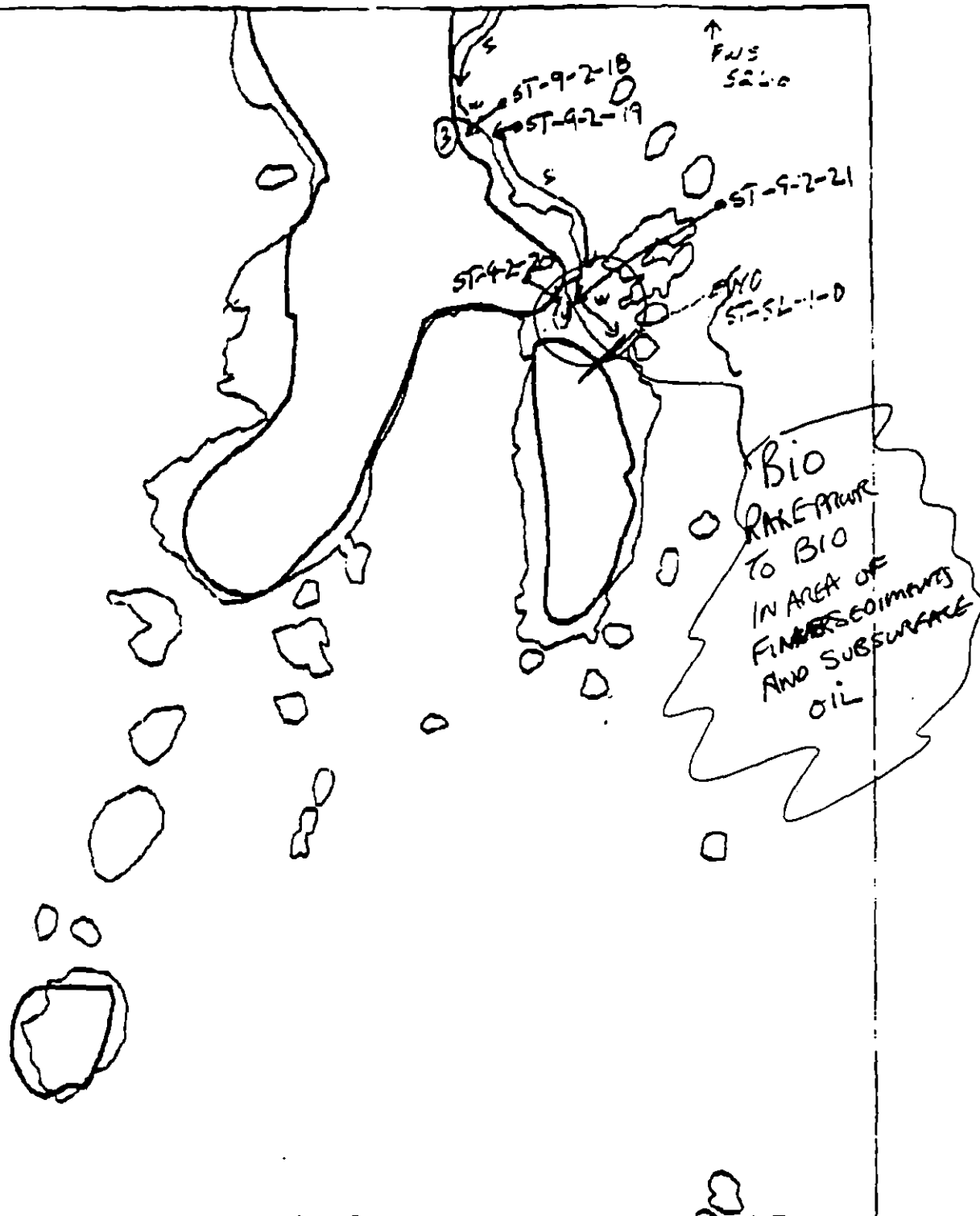
Map Key: PWS-520b

Name: K. DE RUSSCHER

Date: 11/6/90

Data Entered:

S = SWEEP
W = WALK



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ST-SL-1-D

ADEC Segment Length: 6368



Map Key: PWS-526a

Name: H. DRUSSCHAK

Date: 4/6/90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT SL-1 SUBDIVISION D (4 of 5)

WORK WINDOW	
Bioremediation	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Molting	NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G.
5R	Seabird Colony	NO CONSTRAINT. Work site is more than 800m from seabird colony.
5T	Bald Eagle Nest	USFWS 6/1/90 map indicates an active nest in Subdivision D. Closed to bioremediation within 400m of active nest. No constraint to bioremediation more than 400m from active nest.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

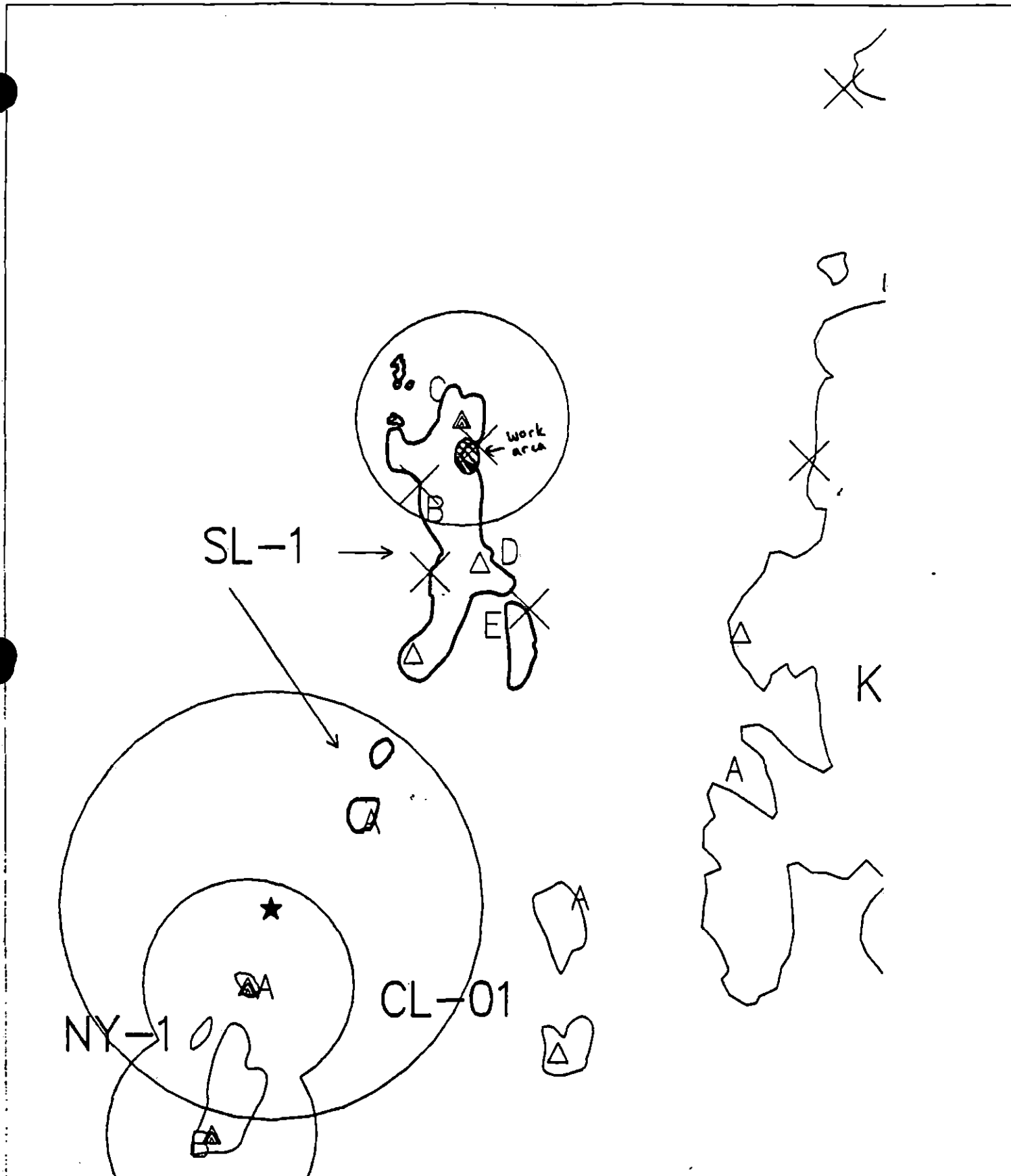
Date

6-10-90

Prepared by

Date

6/10/90

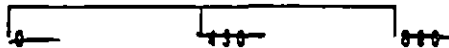


Exxon Company, USA

Map Key: PLS-SL-1

June 04, 1990

ECOLOGY MAP
SEGMENT SL-1
SUBDIVISION D (4 of 5)
METERS



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

~~1 inch = 1110 feet~~

SHORELINE EVALUATION

SEGMENT ST/ SL-01 SUBDIVISION E (5 OF 5) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5R Seabird colony (5/1 to 9/1)
5T-3 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Do not trample or otherwise damage mussel beds. (5T) Eagle nest in Subdivision E; second bald eagle nest within 400m of Subdivision E in adjacent Subdivision (D).

SHPO SIGNATURE: Charles F. Adams DATE: 4/28/90

OILING CATEGORIZATION:

Wide 25 m: Medium 0 m: Narrow 176 m: V.Light 1499 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> </u> Tarmat: <u> </u> Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommended treatment includes bioremediation of area
shown on attached sketch map. Work should be conducted after 6/1 and
with the approval of ADF&G and USFWS regarding seabird colony and
eagle nest constraints.

TAG COMMENTS: MONITOR TO ASSESS THE NEED FOR MOUSSE PICKUP
PRIOR TO B.O.

TAG APPROVAL DATE: 4/26/90
ADEC JOHN BAUER
EXXON ARMY TEST
NOAA GARY PETRAE
USCG KENNETH KEANE

FOSC: WJL DATE: 5-9-90

PWS ECOLOGICAL CONSTRAINTS

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

SEGMENT ST / SL-1 SUBDIVISION: E DATE 4/6/90

NAME

~~NAME~~NAME J. L. L. L.

SIGNATURE

J. L. L. L.☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTEDCOMMENTS There was very little oil present in this segment, most of the oil was
light (surface) located on the boulders not boulders

ADEC

NAME

Lori Stratton

SIGNATURE

Lori Stratton☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

The oil is mobile - since rainbow sheen was observed
being released from sediments at shore/water line when
the water was stirred up. The oil in sediments should be
treated so that it is not mobile and not sheering into water.
Method?

In beach narrow coat could be spot-washed off of boulders and boulders
well.

LAND MANAGER

NAME

SIGNATURE

☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

NO L.M.

6

SHORELINE OILING SUMMARY

REVISION NO. 02/200

OG K. DEBUSSCHERE ¹⁰⁰⁰ Jeffrey DeHlin SEGMENT ST/ SL-1
 BIO D. Reed LAND REP Jeffrey DeHlin SUBDIVISION E
 EXXON Tony Diaz ADEC Lori Stratton TIME 15:00 to 18:25 9:00
 TEAM NO.: 3 TIDE LEVEL: 3 to 5-6 DATE 4/5/10 4/6/10
 EST. SUBDIVISION LENGTH: 2844 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 80 % B 10 % C 5 % P 5 % G 0 % S — % M — % V — %
 SLOPE: Long 15 % Hang 35 % Vert 50 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 10 m M 0 m N 350 m VL 2484 m NO 0 m

SURFACE OIL

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

PAVEMENT: H P S f sq. m by 2 cmPATTIES / TARBALLS 4 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 NONE

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	1	2	3	4	5	6	SU	U	M	V		
1	50					X	.											X			P (H ₂ O)
2	15					X	.											X			P (H ₂ O)
3	20				X		0.3	X				X						X			C/G & S (H ₂ O)
4	20				X		0.3	X				X						X			C/G & S (H ₂ O)
5	30	X					0.1	X				X						X			B & C / S & P

COMMENTS

- SUBDIVISION IS MAINLY HIGH ANGLE / VERTICAL ROCK WITH POCKET BEACHES.
- OILING IS VERY LIGHT EXCEPT FOR LOC. (2): CONTINUOUS FILM.

2

SHORELINE ECOLOGICAL SUMMARY

Segment ST/ SL-7

Subdivision E

Date (mo / day / yr) 04/05/90

04/06/90

Time (24 hr) 1530-1600

0825-0900

Biologist D. REED

(A) Substrate type and % of segments:

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

(B) Overall % cover of biota (% of segment): Dense 20 Moderate 50 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 NONE

BARNACLES

Dense

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

Moderate

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

Sparse

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

Rare

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

NOT PRESENT

MYTILUS

Dense

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

Moderate

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

Sparse

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

Rare

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

NOT PRESENT

GASTROPODS

Dense

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

Moderate

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

Sparse

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

Rare

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

NOT PRESENT

FUCUS

Dense

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

Moderate

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

Sparse

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

Rare

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

NOT PRESENT

Wildlife Observations/ General Comments:

8 OTTERS, 2 immature eagles ≈ 20 DUCKS,

OCCASSIONAL Dense patches of mussels on bedrock.

Ecological Considerations:

AT LOCATION ① ON GIS MAPS FUCUS AND MUSSEL SPAT found growing on tax balls.

ECOLOGY
MAP

END
ST-SL-1-E

Eagle Nest

START
ST-SL-1

Eagle Nest

XXX Wide

/// Medium

--- Narrow

● TT Very Light

000 No Oil

ST-SL-1-E

6368

ADEC Segment Length: ~~100m~~



Map Key: PWS-5260

Name: K. DEBUSSCHERE

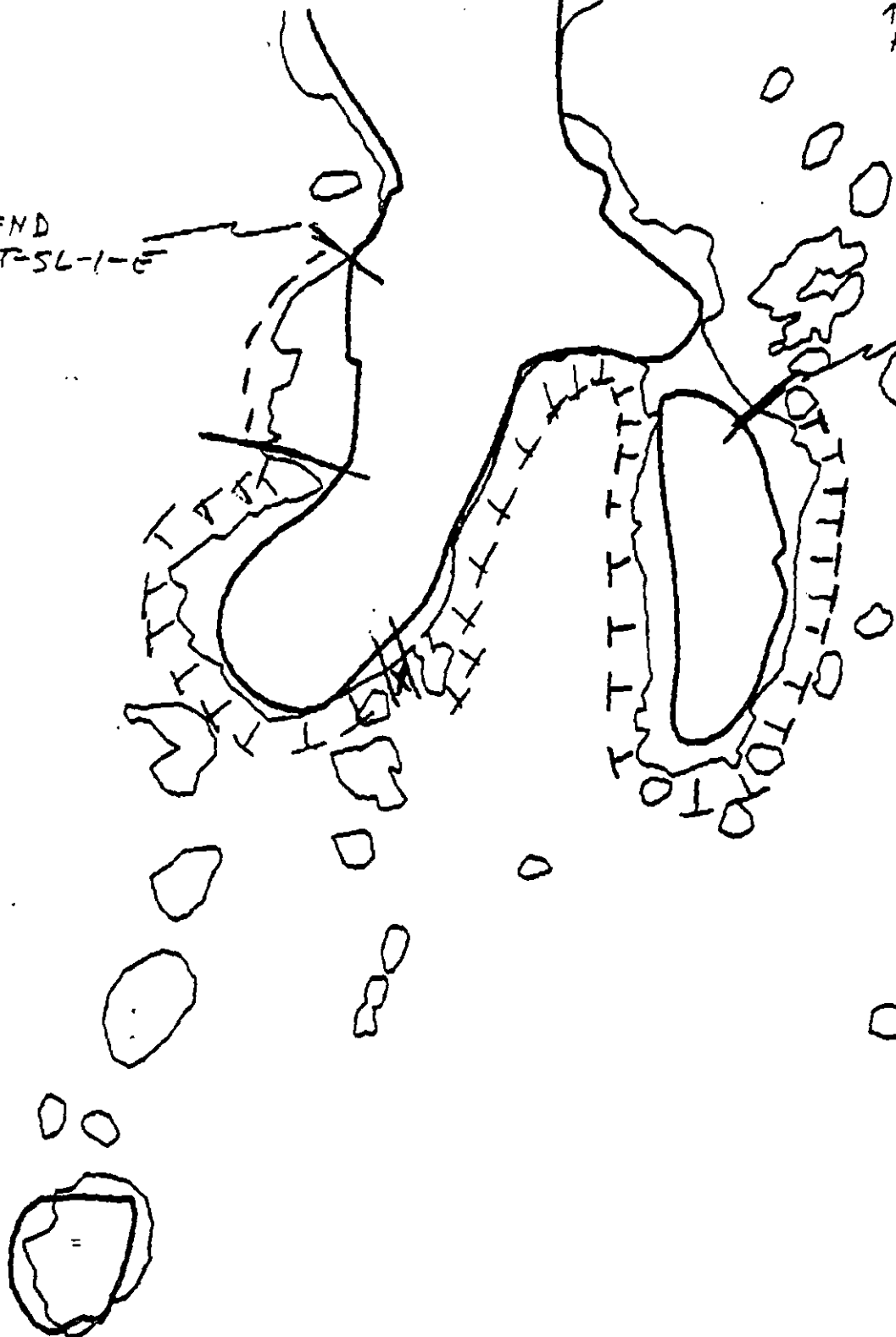
Date: 4/6/90

Date Entered:

END
ST-SL-1-E

↑ PWS
5200

START
ST-SL-1



XXXX Wide

/// Medium

-- Narrow

TT Very Light

0000 No Oil

ST-SL-1-E

6368

ADEC Segment Length: ~~1000~~ m



Map Key: PWS-5200

Name: K. DEBUSSCHER

Date: 4/6/90

Date Entered:

W - WALK

PWS
ST-6

END
ST-SL-1-E

PIT # 1

START
ST-SL-1-G

PIT # 3

310
Here

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ST-SL-1-E

ADEC Segment Length:

6368

0 100 200 300
METERS

Map Key: PWS-528a

Name: K. DEBUSCHER

Date: 4/6/90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT SL-1 SUBDIVISION E (5 of 5)

WORK WINDOW	
Bioremediation	OPEN

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Molting	NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G.
5R	Seabird Colony	NO CONSTRAINT. Work site is more than 800m from seabird colony.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision E work site.

OTHER ECOLOGICAL CONSIDERATIONS

Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. Avoid any unnecessary disturbance or damage to unrolled blots and substrate. Do not trample or otherwise damage mussel beds.

FOSC

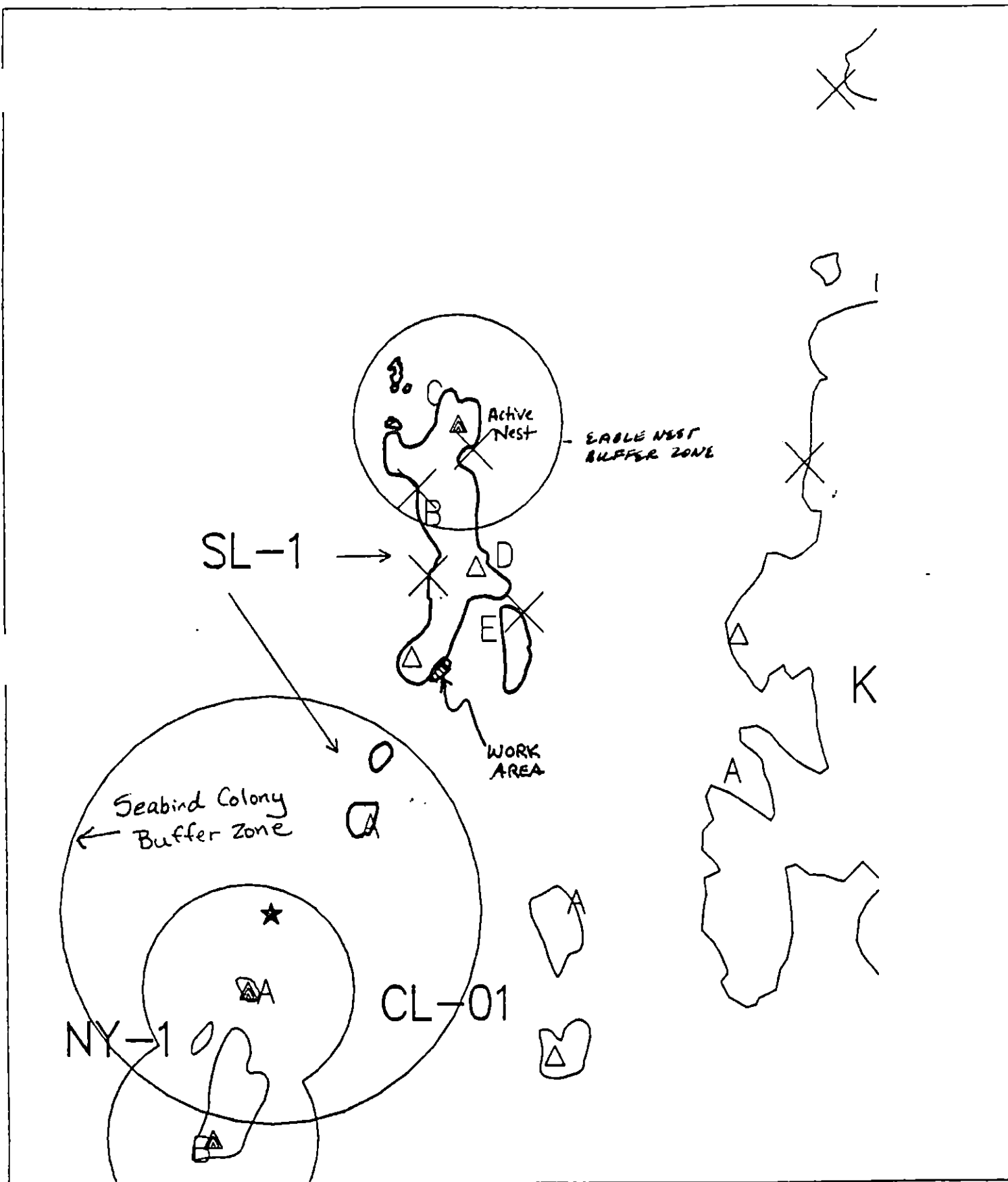
Date

6-10-90

Prepared by

Date

6/10/90



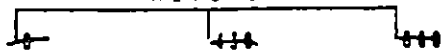
Exxon Company, USA

Map Key: PWS-SL-1

June 04, 1990



ECOLOGY MAP
SEGMENT SL-1
SUBDIVISION E (5 of 5)
METERS



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

1 inch = 1410 feet

SHORELINE EVALUATION

SEGMENT ST/ SM-05 SUBDIVISION A (1 OF 2) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
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)
5R Seabird Colony (5/1 to 9/1)
5T All bald eagle nests (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)-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 damage to unoiled intertidal and subtidal algae and seagrass.
Contact ADF&G and USFWS prior to treatment.

SHPO SIGNATURE: Shada E. Dimes DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 223 m: V.Light 234 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 50 +cm

RECOMMENDATIONS:

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

COMMENTS: The recommended treatment activities are as follows: 1) Manual pick up of oiled debris, 2) *Mechanical relocation of SUITZ storm berm in area shown on attached sketch map followed by bioremediation, 3) Use of snare/absorbent booms, snares, absorbents, etc. during and after mechanical tilling, and 4) Bioremediation of other areas as shown on sketch map. Work should be conducted prior to 5/15 or after 7/1 and before 8/15 based on above constraints unless otherwise approved by ADF&G and USFWS (5R and 5T).

TAG COMMENTS:

RELOCATE STORM BERMS INDICATED TO UITZ.

TAG APPROVAL DATE: 4/17/90.

ADEC Art Wenger Art Wenger
EXXON Andy Trol Andy Trol
NOAA Burt Wescott Burt Wescott
USCG Kenneth Keane Kenneth Keane

FOSC: [Signature] DATE: 4-12-90

Treat as above, but include least intrusive methods as possible + increase degree of intrusiveness ~~to remove debris~~ as least practical to effect clean-up.

PWS ECOLOGICAL CONSTRAINTS

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

SEGMENT ST / SM 05 A+B SUBDIVISION: _____ DATE 4-1-90

USCG

NAME James C Gambill SIGNATURE James C. Gambill☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Heavy oil founded in storm berm, along with oil vegetation;
 Post. be bring in bobcat feces down storm berm and bio.

ADEC

NAME Brian K. FitzSimons SIGNATURE Brian K. FitzSimons☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

1. Beach due east of Pier Point Beach - Extremely deep high tide
 believed to be covering old oiled HITZ - Behind sheltered ~~BR~~ outcroppings
 covered boulder/cobbles at HITZ extend underneath new 4-5' berms
 on sides of sheltered areas - HITZ BC → st/et surface

2. Pier Pt. Beach and Quail Beach: HITZ BC - CT Rchy } uo
ITZ - SUITZ: Heavily oiled vegetation & CG BC - OR-C } 400

3. Pier Pt Beach appears to have been overbin with large boulders
 burying oiled sediments - Reevaluate

LAND MANAGER

NAME Carol S Huber SIGNATURE Carol S Huber☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Beach ^{remains} heavily oiled in storm berms
 Oil is leaching out and could become
 even more mobil with warmer weather.
 Segment is source of several valuable natural
 resources: Bald eagle nests, seabird colony,
 and is a haul out area for pinnipeds.
 Beach is also under nomination and tent

SHORELINE OILING SUMMARY

REVISION NO. 03/22/93

OG B. Berglund USCG J. Gamble SEGMENT ST/ SM-5A
 PIN S. Schroeder LAND REP C. Hinkert (NFS) SUBDIVISION A
 CON C. Levine ADEC B. Fritzsims TIME 12:44 to 2:00
 TEAM NO.: 1 TIDE LEVEL: +0.2 to 1.5 DATE 4/1/90
 EST. SUBDIVISION LENGTH: 720 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 35 % B 45 % C 15 % P 5 % G — % S — % M — % V — %
 SLOPE: Long 25 % Hang 50 % Vert 25 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W — m M — m N 190 m VL 240 m NO — m

SURFACE OIL

Not Surveyed 300

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	B	P	R	W	Y	OR	GR	BL	PK	SL	OT	SU	U	M	L
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT	X												X			
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL															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. ST-1-2Frames None

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-DIN)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UO	W	Y	OR	GR	BL	PK	SU	U	M	L		
1	30					X	—		X									X			B/C/P
2	15					X	—		X									X			B (Rolled Boulders)
3	50		X				0-50	X				X				X					C
4	50	X					3-50	X			X					X					C/P/G
							—														
							—														

COMMENTS

Portions of Subdivision were not surveyed or surveyed from SKIFF due to poor landing areas and moderately heavy seas. However, these areas are probably not heavily oiled (probably patchy coat along HWL). At the location of profile 2 the storm berm is heavily oiled to a depth of > 50 cm. Beach area appears dynamic i.e., surface boulders & sediments appear recently reworked. Winter storm profile. Oil may be exposed.

SHORELINE ECOLOGICAL SUMMARY

SM-USA+B-1

REVISION: 02/27/90

Segment ST / SM-05A+B Subdivision N/A Date (mo / day / yr) 4/1/90

Time (24 hr) 1240 to 1310 Biologist S. Schroeter

(A) Substrate type and % of segments:
(1) Bedrock 20 (2) Boulder 47 (3) Cobble 16 (4) Pebble 16 (5) Sand 1 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 25 Moderate 20 Low 55

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

Photographs: Roll No. ST-1-2

Frames None

BARNACLES

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

MYTILUS

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

ASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

Tidal Range examined 0.0 to +14.0
all zones visited. 3 bald eagles west end of Segment. Approx. 10 Common
Oyster catchers; No pinnipeds observed. 1 dead, an adult sex other on Q3x6 beam
No sensitivity designations.
Ecological Considerations: Found 26% of segment was bedrock + 74% Boulder
Cobble pocket beaches. Pocket beaches were depauperate; most
the biota were on the bedrock sections where they occurred in
moderate to dense patches. There were very dense patches of
Balanus crenatus & moderate densities of recruits in the mid & upper
intertidal on bedrock. *Katharina tunicata* was common in patches of
clear spaces amongst the *B. crenatus*. Pocket beach just west of Que
1 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Date: 4-1-98 Bif: S. Schröter OG: Bret Berglund

Segment is composed of ~ 26% Bedrock + 74% Boulder/Cobble pocket beaches. The mid & high intertidal of the pocket beaches are depauperate + The low intertidal has mainly Ulva/Enteromorpha + Porphyra. The bedrock sections have moderate to high density of barnacles, mussels, + Fucus. Balanus crenatus is particularly abundant in the mid & low intertidal. Alaria also occurred in moderate densities in the mid & low intertidal. Katharina tunicata were notable in bare spaces amongst the B. crenatus in the mid & low intertidal.

There were sparse to moderate densities of Notoacmea, Littorina saxatilis on boulders overlaying the bedrock. Gastropods were rare on & under boulders & cobbles in the pocket beaches.

Alaria, Laminaria saccharina + L. setchellii were abundant just below the 0.0 tide level

Tide levels examined 7, 8, 9

OG B. Berglund
 SEGMENT ST/ SM-5
 SUBDIVISION A
 DATE 4/1/90

SKETCH MAP

CHECKLIST

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

LEGEND

1 Δ
 Pit - No Subsurface Oil

2 Δ
 Pit - Subsurface Oil

CT/C
 Continuous Distribution

CT/B
 Broken Distribution

CT/P
 Patchy Distribution

CT/S
 Splashed Distribution

Oiled Vegetation

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

$\star$ Bedrock

CT/C $\leftarrow$ Oil Character
 W2 $\leftarrow$ width
 95% $\leftarrow$ % cover

PICKUP
 OILED VEGETATION

MECHANICAL
 RESCUE
 SITE FROM BERM
 TO (PIT) BIO

Profile 2
 storm berm heavily oiled
 to > 50 cm depth
 pit 3
 HWL - pit 4
 SSL
 Boulders
 Cable

50m
 VI MI LI

UITZ
 A.

Profile 1
 Band of
 Oil at HWL CT/P
 sediments below boulders
 un-oiled.
 Un-oiled
 Boulders
 pit 1
 pit 2

25m
 VI MI LI

Meters
 0 100 200 300

Oil Character Length (m): AP PO CV CT 420 ST MS PT TB FL NO

Not Surveyed: 300

REVISION 02/000

OG B. J. J. J.
 SEGMENT ST/ S/M-5
 SUBDIVISION A
 DATE 4/1/90

TCH MAP

CHECKLIST

☒ N Arrow
☒ Approx. Scale
☒ Seg/Sub Bndry
☒ Oil Dist
☒ Width
☒ Length
☒ % Cover
☒ Substrate Character
☒ Est. HWL/SSL
☒ Profile Location(s)
☒ Photo(s)
☒ Pk 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
 Patchy Distribution

CT/S
 Splashed Distribution

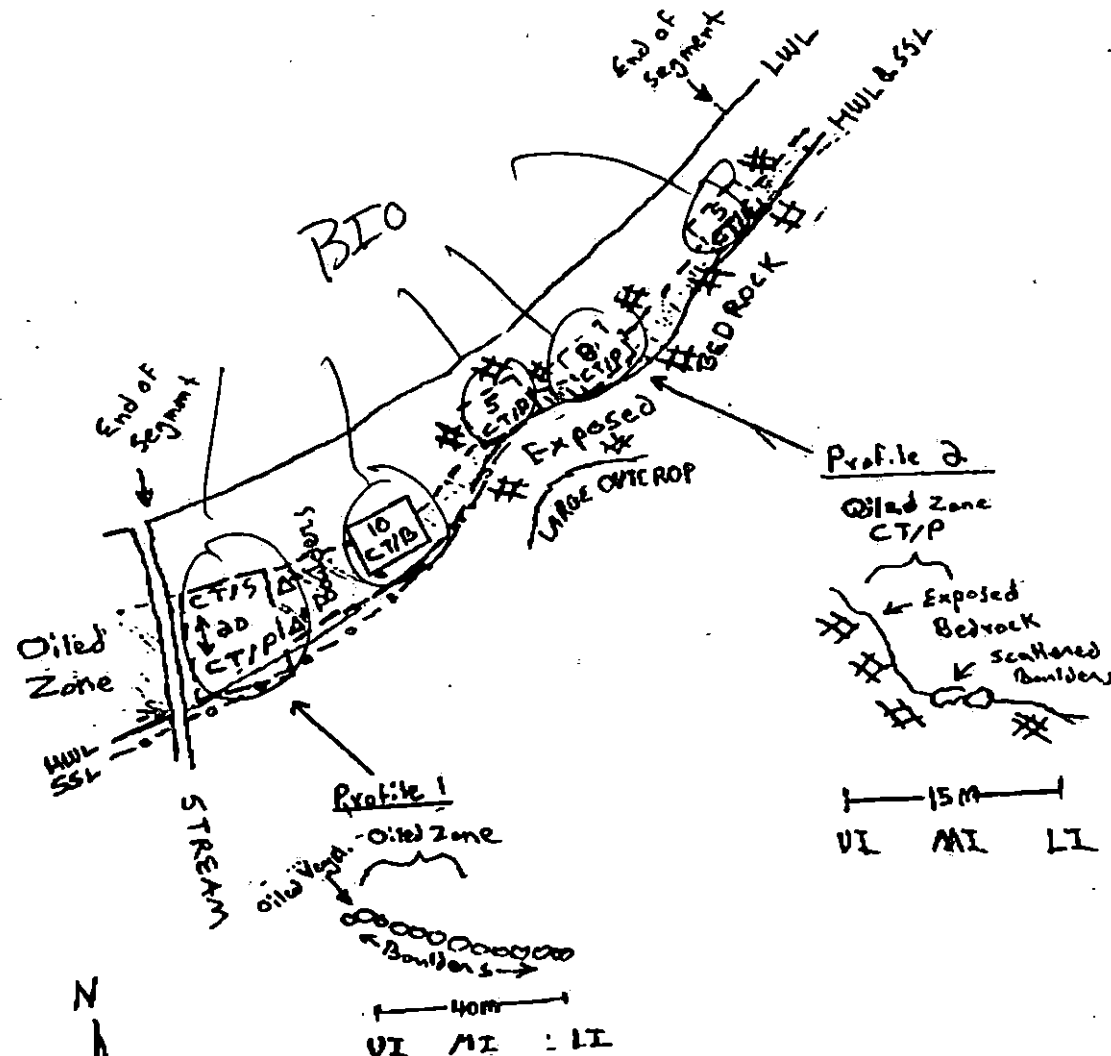
Oiled Vegetation

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

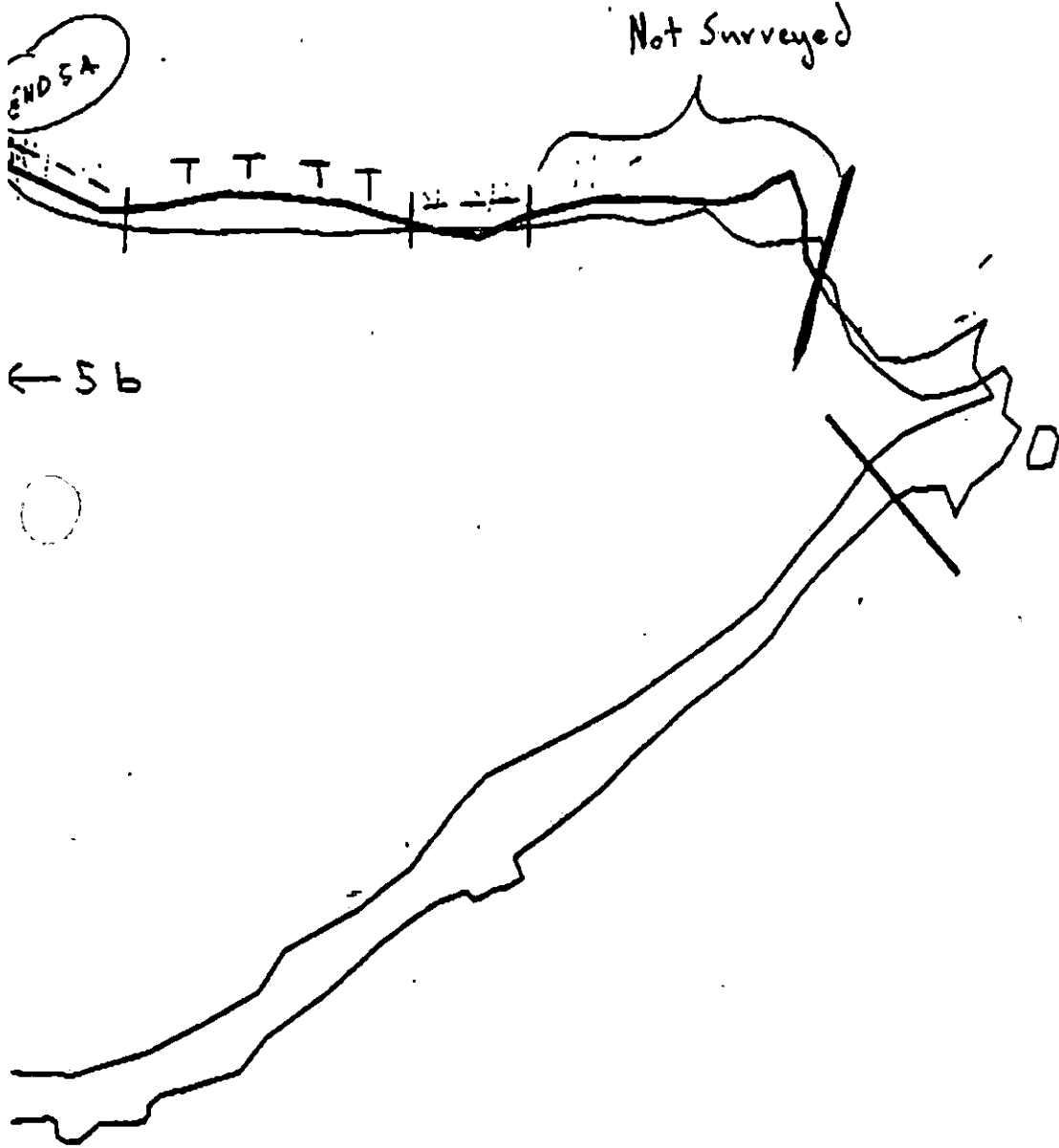
Exposed
 Bedrock

CT/B $\leftarrow$ Oil Character
 20 $\leftarrow$ Width (m)

0 100 200 300
 Meters (Along Shore)



Oil Character Length (m): AP PO CV CT 600 ST MS PT TB FL NO



SM-

← PWS 528A

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

SM-5(A)

ADEC Segment Length: 1858m



Map Key: PWS-528b

Name: B. Berglund

Date: 4/1/90

Date Entered:

SEGMENT SM-5 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup Less Than 400m From Active Nest	CLOSED
Manual Pickup More Than 400m From Active Nest	WORK AFTER 7/1 AND PRIOR TO 8/15
Bioremediation Less Than 400m From Active Nest	CLOSED
Bioremediation More Than 400m From Active Nest	WORK 7/1 to 7/31
Other Approved Treatment & Mechanical Relocation Less Than 400m From Active Nest	CLOSED
Other Approved Treatment & Mechanical Relocation More Than 400m From Active Nest	WORK AFTER 7/1 AND PRIOR TO 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M	Herring Spawning	Closed to bioremediation and mechanical relocation prior to 6/15.
3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Molting	Closed to bioremediation prior to 7/1 and after 7/31. Closed to manual pickup, mechanical relocation, and other approved treatment prior to 7/1 and after 8/15.
5R	Seabird Colony	NO CONSTRAINT. Work site is more than 800m from seabird colony.
5T	Bald Eagle Nest	USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to manual pickup, bioremediation, mechanical relocation, and other approved treatment within 400m of active nest. No constraint to manual pickup, bioremediation, mechanical relocation, and other approved treatment more than 400m from active nest.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. Restrict boat traffic to essential minimum. Avoid any unnecessary disturbance or damage to unrolled substrate and biota especially intertidal and subtidal algae and seagrass.

FOSC

Date

6/16/90

Prepared by

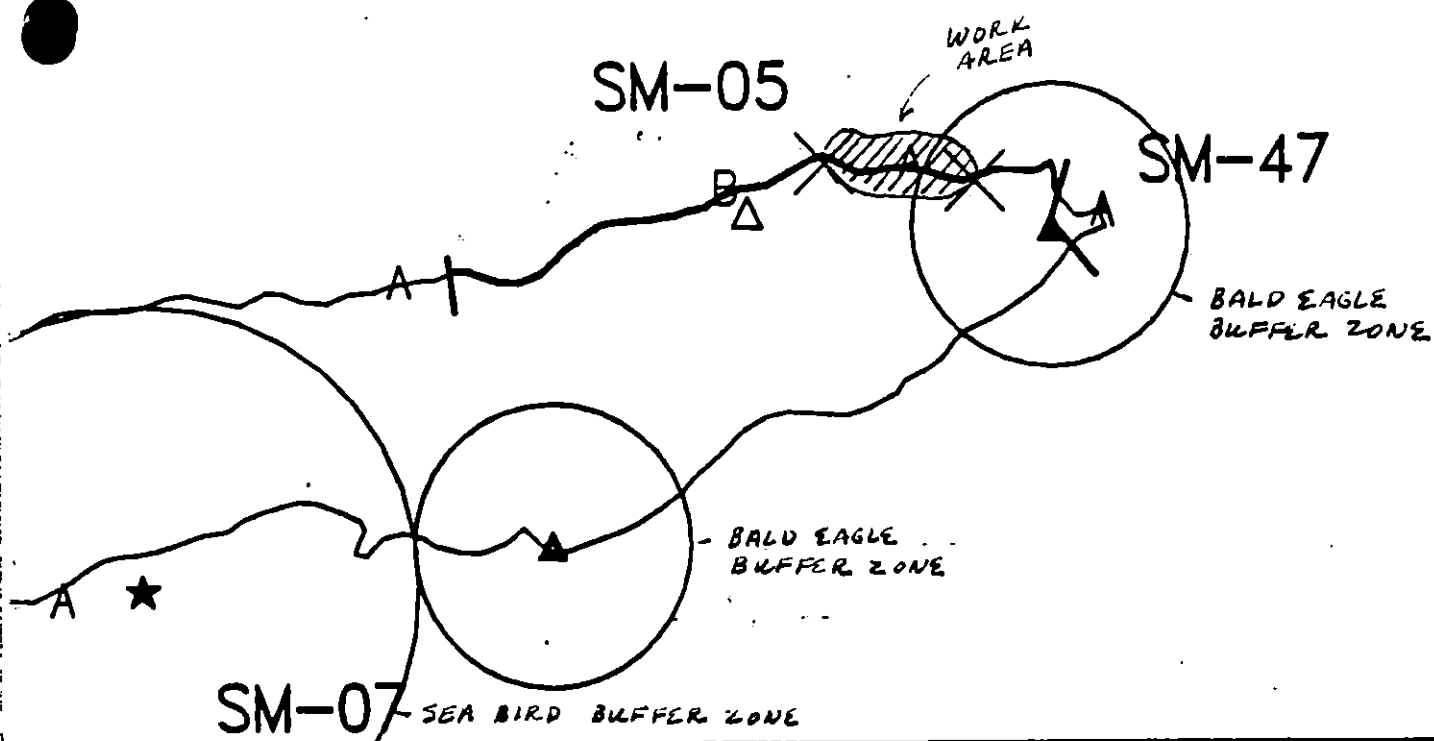
Date

6/14/90

711

Subsistence: Deer
Harvesting

Closed to bioremediation, mechanical relocation and other approved treatment after 8/15. No constraint to manual pickup.



Exxon Company, USA
Map Key: PWS-SH-5
June 09, 1990



ECOLOGY MAP
SEGMENT SM-5
SUBDIVISION A (1 of 2)
METERS
0 501 1123

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

1 Inch = 1842 feet

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT SM-5 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	CLOSED
Bioremediation Mechanical Relocation Other Approved Treatment	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M	Herring Spawning	Closed to bioremediation and mechanical relocation prior to 6/15.
3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Molting	Closed to bioremediation prior to 7/1 and after 7/31. Closed to manual pickup, mechanical relocation, and other approved treatment prior to 7/1 and after 8/15.
5R	Seabird Colony	Closed to all activities; work site is less than 800m from seabird colony.
5T	Bald Eagle Nest	USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to manual pickup, bioremediation, mechanical relocation, and other approved treatment within 400m of active nest. No constraint to manual pickup, bioremediation, mechanical relocation, and other approved treatment more than 400m from active nest.
7II	Subsistence: Deer Harvesting	Closed to bioremediation, mechanical relocation and other approved treatment after 8/15. No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

If eagle nest and seabird colony constraints are removed, other ecological considerations will apply.

FOSC

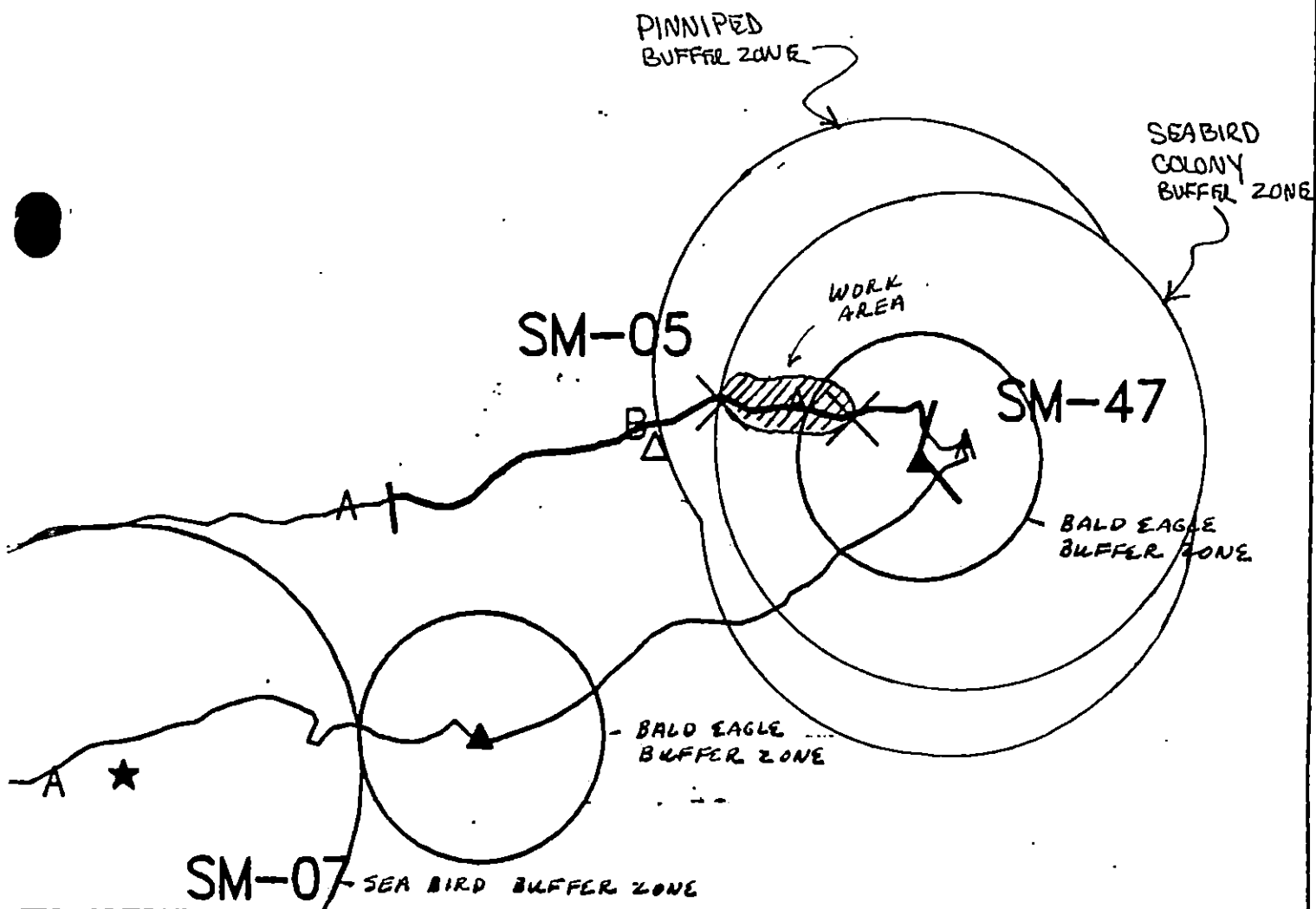
Date

7-14-90

Prepared by

Date

7/13/90



Exxon Company, USA
Map Keys PWS-91-5
Line No. 1001



ECOLOGY MAP
SEGMENT SM-5
SUBDIVISION A (1 of 2)
METERS
0 100 200

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

1 inch = 1849 feet

SHORELINE EVALUATION

SEGMENT ST/ SM-05 SUBDIVISION B (2 OF 2) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
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)
5R Seabird Colony (5/1 to 9/1)
5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15) 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 damage to unoiiled intertidal and subtidal algae and seagrass.
Contact ADF&G and USFWS prior to treatment.

SHPO SIGNATURE: Charles F. Johnson DATE: 4/17/90

OILING CATEGORIZATION:

Wide 81 m: Medium 424 m: Narrow 178 m: V.Light 319 m: No Oil 179 m
Subsurface Oil Observed: Yes X No Maximum Depth 50+ cm

RECOMMENDATIONS:

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

COMMENTS: The recommended treatment activities are as follows: 1) Manual pick up of oiled debris, 2) *Mechanical relocation of SUITZ storm berm in area shown on attached sketch map followed by bioremediation, 3) Use of snare/absorbent booms, snares, absorbents, etc. during and after mechanical tilling, and 4) Bioremediation of other areas as shown on sketch map. Work should be conducted prior to 5/15 or after 7/1 and before 8/15 based on above constraints unless otherwise approved by ADF&G and USFWS (5R and 5T).

TAG COMMENTS:

MOVE COBBLES IN UITZ/SUITZ IN AREAS INDICATED TO ACCESS
SUBSURFACE OIL. USE MECHANICAL MEANS AS NECESSARY.

TAG APPROVAL DATE: 4/17/90
ADEC Art Weiner Dgt Weiner
EXXON Arny TOL Arny TOL
NOAA Burt Werner Burt Werner
USCG KENNETH KEANE Arny TOL

FOSC: DATE: 4-22-90

Treat as above, but include least intrusive
method as possible & increase degree of intrusiveness
as best possible & practical to effect clean-up.

FIELD SHORELINE COMMENT SHEET

Page 4 of 6

SEGMENT ST SM 05 A+B SUBDIVISION: _____ DATE 4-1-90

USCG

NAME James C Cambill SIGNATURE James C. Cambill

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

HEAVY oil found in storm berm, along with oil uptake/absorption.
Poss. to bring in bobcat feces down storm berm and bio.

ADEC

NAME Brian K. FitzSimons SIGNATURE Brian K. FitzSimons

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

1. Beach due east of Pier Point Beach - Extremely deep high tide
is believed to be covering old oiled HITZ - Behind sheltered BR outcroppings
covered boulder/cobbles at HITZ extend underneath new 4-5' berms
both sides of sheltered areas - HITZ BC → silt surface

2. Pier Pt. Beach and Quail Beach: HITZ BC - CT Patchy } uo
HITZ - SUITZ: Heavily oiled vegetation & CG BC - OR-C } 400

3. Pier Pt Beach appears to have been overlain with large boulders
burying oiled sediments - Reevaluate

LAND MANAGER

NAME Carol S Huber SIGNATURE Carol S Huber

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

Beach heavily oiled in storm berms
Oil is leaching out and could become
even more mobil with warmer weather.
Segment is source of several valuable natural
resources: Bald eagle nests, seabird colony,
and is a haul out area for pinnipeds.
Beach is also under nonpoint line designation and tent

REVISION NO. 03/21/90

TOTAL P.02

SHORELINE OILING SUMMARY

REVISION NO. 03/22/88

OG B. Berglund USCG J. Gamble SEGMENT ST/ SM-5 B
 BIO S. Schroeder LAND REP C. Hubert (WES) SUBDIVISION B (2 of 2)
 ION C. Levine ADEC B. Fritzsims TIME 2:00 to 4:00
 M NO: 1 TIDE LEVEL: +1.8 to +5.5 DATE 4/1 / 1 / 90
 EST. SUBDIVISION LENGTH: 1194 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 20 % B 30 % C 35 % P 20 % G 5 % S — % M — % V — %
 SLOPE: Long 6.5 % Hang 20 % Vert 15 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 60 m M 504 m N 180 m VL 300 m NO 150 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	1C	1B	1P	1S	2	3	4	5	6	7	8	9	SU	U	M	L
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT	1	2	3			1-3							1-3			
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM	✓					✓							✓			
NO OIL													X		X	X

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation		X	
Trash			
Debris			

DEBRIS COLLECTED ☐ YES ☐ NOTYPE —#BAGS —

Photographs:

Roll No. ST-1-2Frames 8-12

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	OP	NO		UO	VO	1	2	3	4	5	6	7	8	SU	U	M	L		
1	40					X	—		X									X					B/C / P/G
2	8	X					5-8	X		X								X					P/G
3	50		X				0-50	X		X								X					C
4	50	X					5-50	X		X								X					P/G/S
5	36		X				5-36	X		X								X					P/G
6	30	X					0-30	X		X								X					C/G

COMMENTS

SEGMENT ST/ 5 SUBDIVISION B

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SP	SN	SO	SA	SB	SC	SU	U	M	U		
7	30	X					5-30	X		X						X					C/G
8	30	X					0-30	X		X						X					C/G
9	30					✓	.										X				B/C/G
10	30	X					0-25	X		X						X					C/P/G/S
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COMMENTS

Surface oil light in many places but underlying sediments may be heavily oiled. This is very likely in the storm burn sediments of pocket beaches. Beach profile appears to have shifted dramatically with winter storms redistributing surface sediments.

REVIEWED MF DATE 4-7-90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/23/90

Segment ST / 5A-05A Subdivision N/A Date (mo / day / yr) 4/1/90Time (24 hr) 1340 to 1410 Biologist S. Schroeter

- (A) Substrate type and % of segments:
 (1) Bedrock 20 (2) Boulder 47 (3) Cobble 16 (4) Pebble 16 (5) Sand 1 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 25 Moderate 20 Low 55
- (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-1-2
Roll No. ST-1-2Frames None

BARNACLES

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

MYTILUS

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

IASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

Tidal Range examined 0.0 to +14.0
 all zones visited. 3 bald eagles west end of Segment. Approx. 10 Common
 Oyster catchers; No pinnipeds observed. 1 dead, another sex other on oyster bar
 No sensitivity designations

Ecological Considerations:

About 26% of segment was bedrock + 74% Boulder
 Cobble pocket beaches. Pocket beaches were depauperate; most of
 the biota were on the bedrock. Section where they occurred in
 moderate to dense patches. There were very dense patches of old
Balanus crenatus & moderate densities of recruits in the mid & upper
 intertidal on bedrock. *Katharina tunicata* was common in patches of
 clear spaces amongst the *B. crenatus*. Pocket beach just west of dual
 boulder ~ 4' N boulder added since late August, 1989. R.C.V.

Segment, J111-05 H15 1 cam 1

Date: 4-1-98 Bio: S. Schröter OG: Bret Borglund

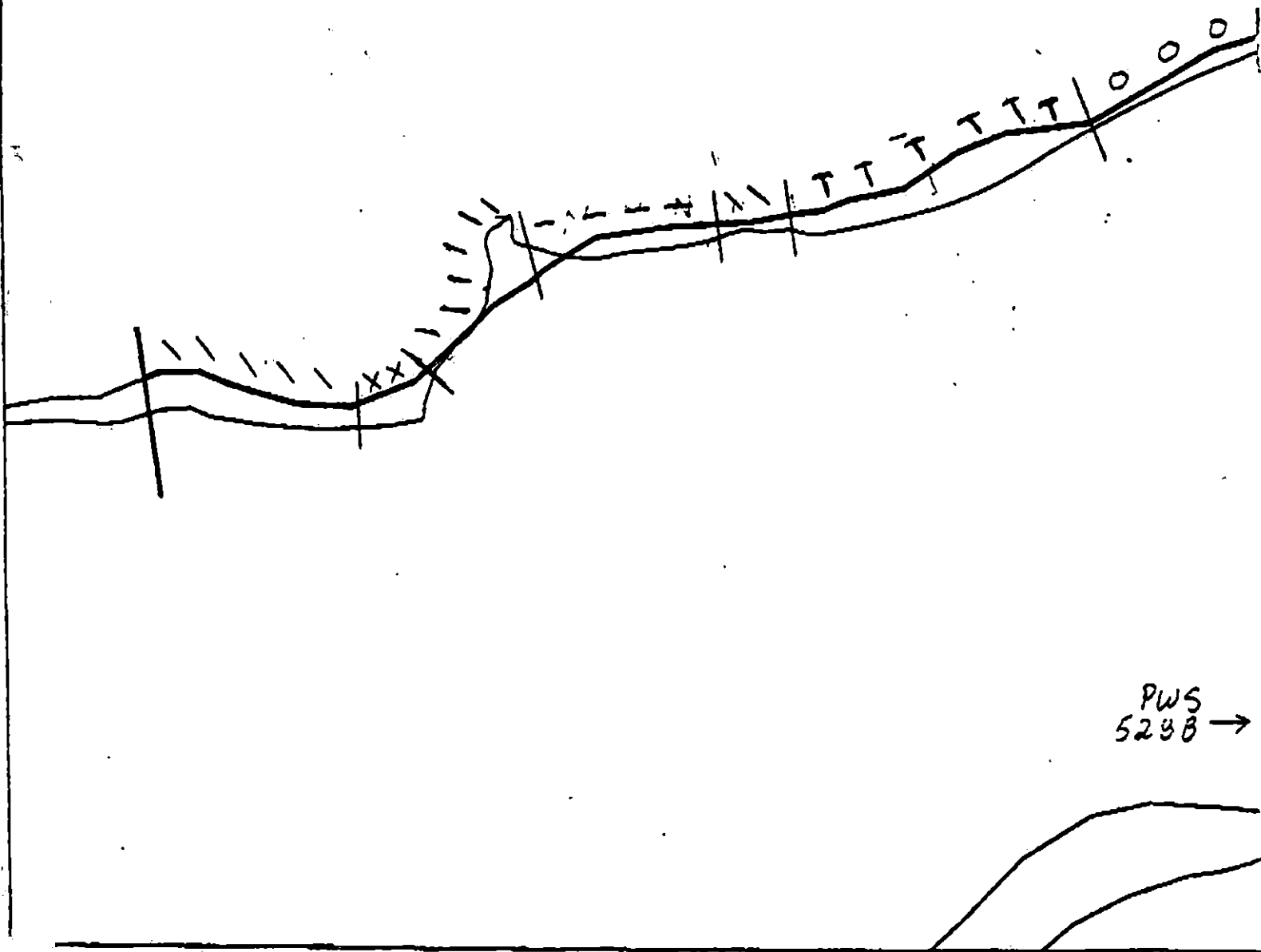
Segment is composed of ~ 26% Bedrock + 74% Boulder/Cobble pocket beaches. The mid & high intertidal of the pocket beaches are depauperate + The low intertidal has mainly Ulva/Enteromorpha + Porphyra. The bedrock sections have moderate to high densities of barnacles, mussels, + Fucus. Balanus cariosus is particularly abundant in the mid & low intertidal. Alaria also occurred in moderate densities in the mid & low intertidal. Katharina tunicata were notable in bare spaces amongst the B. cariosus in the mid + low intertidal.

There were sparse to moderate densities of Notoacmea sur + Littorina sittkana on boulders overlaying the bedrock. Gastropods were rare on & under boulders + cobbles in the pocket beaches.

Alaria, Laminaria saccharina + L. setchellii were abundant just below the O.C tide level

Tide levels examined >, O.C

SM-05



PWS
5238 →

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

SM-5 B

ADEC Segment Length: 1958m

0 100 200 300

Map Key: PWS-528a
Name: B. Berglund
Date: 4/1/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT SM-5 SUBDIVISION B (2 of 2)

WORK WINDOW

*Manual Pickup More Than 800m From Seabird Colony	WORK 7/1 to 8/15
*Manual Pickup Less Than 800m From Seabird Colony	CLOSED
Bioremediation More Than 800m From Seabird Colony	WORK 7/1 to 7/31
Bioremediation Less Than 800m From Seabird Colony	CLOSED
Mechanical Relocation & Other Approved Treatment More Than 800m From Seabird Colony	WORK 7/1 to 7/31
Mechanical Relocation & Other Approved Treatment Less Than 800m From Seabird Colony	CLOSED

*Exxon 'A' Study Site #AP-1 - Do Not Remove Stakes From Back of Intertidal Zone

ARCHAEOLOGICAL MONITOR REQUIRED ON SITE.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M	Herring Spawning	Closed to bioremediation, mechanical relocation, and other approved treatment prior to 6/15. No constraint to manual pickup.
3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Mating	Closed to bioremediation prior to 7/1 and after 7/31. Closed to manual pickup, mechanical relocation and other approved treatment prior to 7/1 and after 8/15.
5R	Seabird Colony	Closed to manual pickup, bioremediation mechanical relocation, and other approved treatment less than 800m from seabird colony. No constraint to manual pickup, bioremediation, mechanical relocation and other approved treatment more than 800m from seabird colony.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision B work site.
7II	Subsistence: Deer Harvesting	Closed to bioremediation, mechanical relocation, and other approved treatment after 8/15. No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. Restrict boat and air traffic and beach disturbance to essential minimum. Avoid any unnecessary disturbance or damage to unrolled substrate and biota especially intertidal and subtidal algae and seagrass.

FOSC

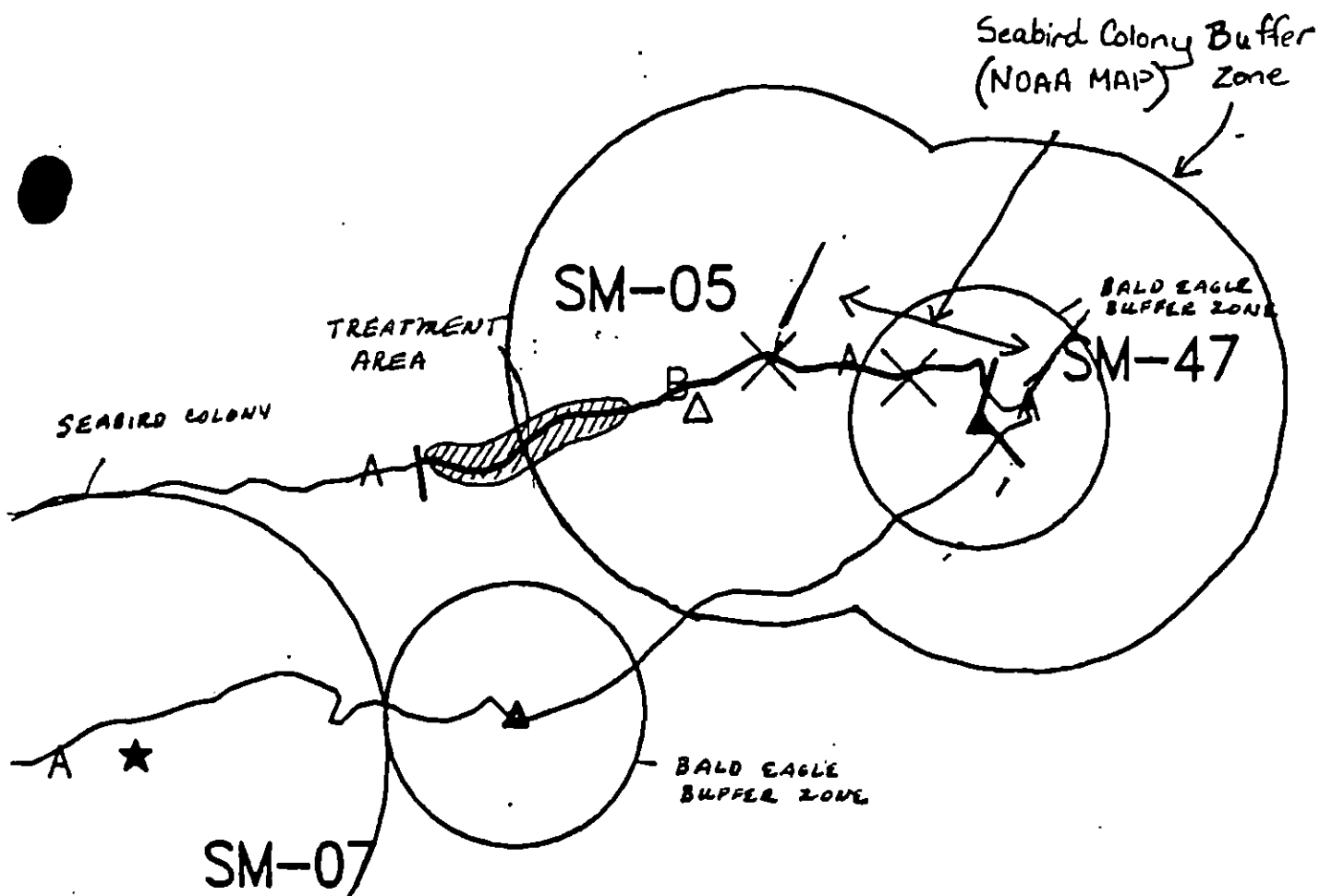
Date

6/14/90

Prepared by

Date

6/14/90



Exxon Company, USA
Map Keys PLS-SH-5
June 09, 1990

ECOLOGY MAP
SEGMENT SM-5
SUBDIVISION B (2 of 2)
METERS
0 501 1123

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

1 inch = 1842 feet

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT SM-5 SUBDIVISION B (2 of 2)

WORK WINDOW	
Manual Pickup*	OPEN
Bioremediation Mechanical Relocation Other Approved Treatment	WORK TO 8/15

*Exxon 'A' Study Site #AP-1 - Do Not Remove Stakes From Back of Intertidal Zone**ARCHAEOLOGICAL MONITOR REQUIRED ON SITE.**

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M	Herring Spawning	Closed to bioremediation, mechanical relocation and other approved treatment prior to 6/15. No constraint to manual pickup.
3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Molting	No constraint to manual pickup, mechanical relocation and other approved treatment more than 800m from haulout.
5R	Seabird Colony	No constraint to manual pickup, bioremediation, mechanical relocation and other approved treatment per 7/10/90 letter from USFWS to Otto Harrison.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision B work site.
7II	Subsistence: Deer Harvesting	Closed to bioremediation, mechanical relocation, and other approved treatment after 8/15. No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. Restrict boat and air traffic and beach disturbance to essential minimum. Avoid any unnecessary disturbance or damage to unloiled substrate and biota, especially intertidal and subtidal algae and seagrass.

FOSC

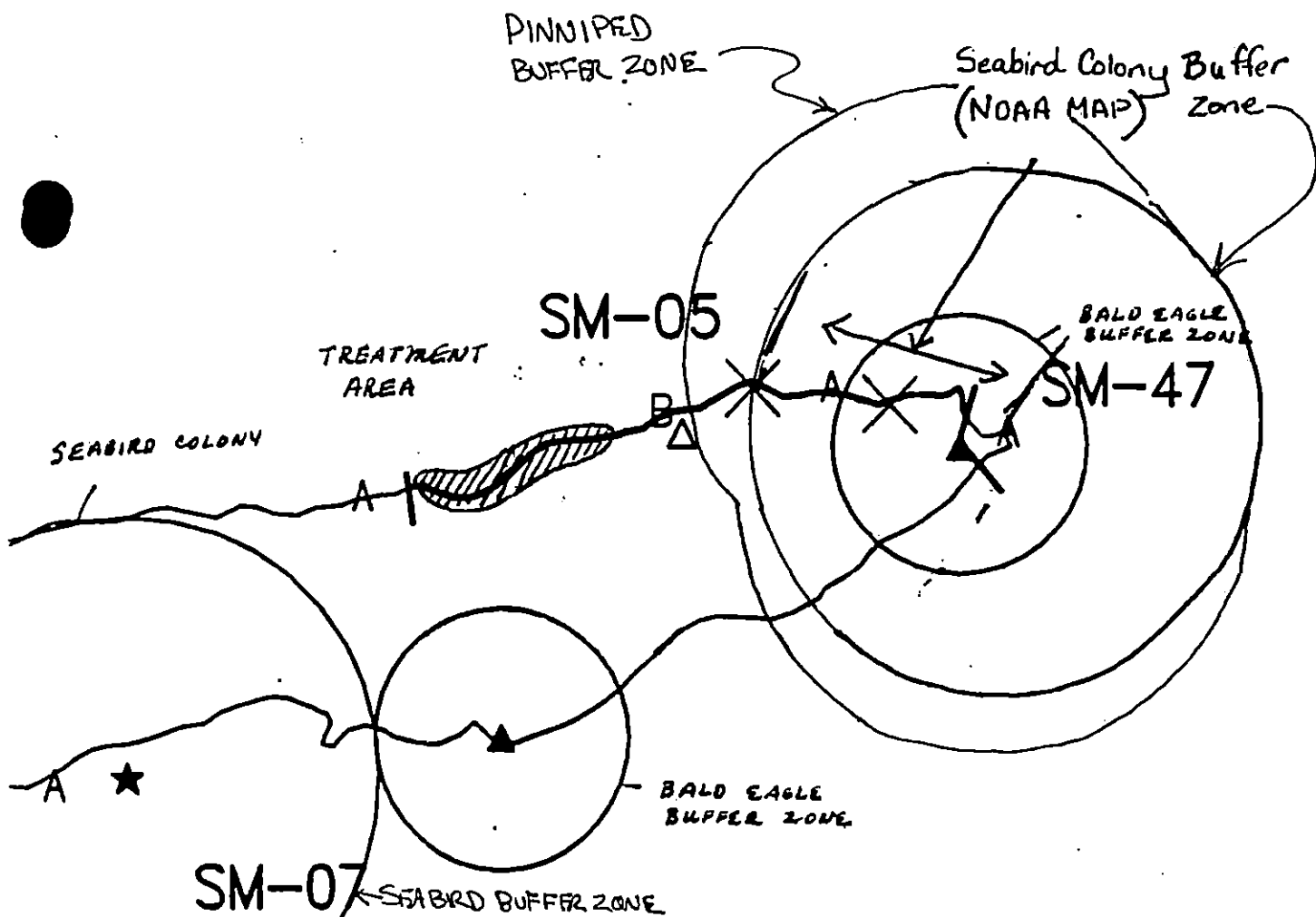
Date

7-14-90

Prepared by

Date

7/13/90



Exxon Company, USA
Map Key: PMS-91-5
June 09, 1990

ECOLOGY MAP SEGMENT SM-5 SUBDIVISION B (2 of 2)

METERS



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

1 inch = 1642 feet

SHORELINE EVALUATION

SEGMENT ST/ SM-06 SUBDIVISION A (1 OF 3) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature] DATE: 5/3/90

OILING CATEGORIZATION:

Wide 419 m: Medium 440 m: Narrow 344 m: V.Light 378 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 75+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pick up of oiled vegetation 2) bioremediation of areas shown on attached sketch map, and
*3) mechanical relocation of SUTZ storm berm followed by bioremediation
Use snare/absorbent booms, oil snares and absorbent pads, rolls during
and after mechanical treatment. Work should be conducted after 6/15 due
to herring constraints.

TAG COMMENTS: USE SPOT WASH + SORBENTS DURING RISING TIDE

5/1/90
TAG APPROVAL DATE: [Signature]
ADEC JOHN BAUER
EXXON ANDY TEAL
NOAA GARY POTTER
USCG KENNETH KETTING

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

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 15m06 SUBDIVISION: A DATE 02/22/90

USCG

NAME James C. Gambill

SIGNATURE James C. Gambill

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

HEAVY OIL in storm berm, and middle Inter-Tidal zone Ranging 15-75C. Deep in all Pts. Lot of oil Vegetation on beach and Debris, maybe have some one to cut and look to see what Type Treatment is best. SEE EXHIBIT Picture Roll 2 Frames 15 16.

ADEC

NAME Brian K. FitzSimons

SIGNATURE Brian K. FitzSimons

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Subsegment A is characterized by Rocky headlands with numerous pocket bays 75 to 150 meters long. Four pocket beaches were surveyed in this subsegment. Eastern 1/2 of Beach #2 is xxb and contains an 80 meter wide band of Black Shiny, sticky fat. Coat from HITZ to HITZ. HITZ Berm: CB → Surface film 730cm
The HITZ berm is extremely high - Huge drift logs black shoreward advance of HITZ berm - behind and underneath logs is extremely heavily oiled Cobble/pe which extends shoreward underneath snow bank & seaward underneath logs. I suspect these oiled sediments continue seaward underneath berm - 75cm deep. Treatment: Possibly move HITZ berm seaward via equipment & allow high energy exposure treat oiled sediments. See Attached

LAND MANAGER

NAME Carol S. Huber

SIGNATURE Carol S. Huber

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Oil is generally heavy & deep in storm berms. Surface oil noted in protected areas, very black and strong oil odor. Oil leaching down into lower tidal zone. Saturated sediment found in mid tidal zone (discontinuous). Occasional thick patches of oil mousse in mid and upper tidal zones.

AD EC Observations / Comments continued

SM006A

Pocket Beach #2.

HITZ to MIZ

xxx B → surrounded by C, GP at base } coated with
fractured BR
shiny Black/Brown oil. Moderate Gradient.

Very Difficult to treat, with questionable effect.

Pocket Beach #3.

Extremely high HITZ berm → light film

HITZ P.T: CB (NO) → 15cm ↓
CP → OP → OR 60cm ↓ } UO

Reevaluate HITZ berm - suspect heavy oil
4' feet below surface

Pocket Beach #4

Approximately 150m long beach

Test pit mid beach at base of HITZ berm

C → NO → 50cm ↓
CP } FL with patches Mousse → UO ↓
C 25cm

HITZ Berm: film on cobbles to @ 15cm depth

No gross contamination observed - suspect
oil at greater, unobserved depths.

Resource sensitivities include:

SM-06A

tent sites
special use destination
bald eagle nests
seabird colony
herring spawning

7/11

SHORELINE OILING SUMMARY

REVISION NO. 01/22/88

OG B. Berglund USCG J. Gamble SEGMENT ST/ SM-6
 BIO S. Schreiner LAND REP C. Huber (NES) SUBDIVISION A-1052
 EXXON C. Levine ADEC B. Fritzsims TIME 10:30 to 1:40
 TEAM NO.: 1 TIDE LEVEL: +6 to +1.2 DATE 4/2/90
 EST. SUBDIVISION LENGTH: 1332 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 40 % B 40 % C 17 % P 3 % G — % S — % M — % V — %
 SLOPE: Long 20 % Hang 35 % Vert 35 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 380 m M 282 m N 295 m VL 325 m NO — m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	S	P	R	1	2	3	4	5	6	7	8	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
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	X		
Trash			
Debris			

DEBRIS COLLECTED

☐ YES ☒ NOTYPE —#BAGS —

Photographs:

Roll No. ST-1-2Frames 14-16

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR								PIT ZONE	A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	6	7	8			
1	60		X				0-60	X		X								X		B/C
2	50					X			X										X	C/P
3	60		X				40-60	X					X					X		C
4	30		X				0-30	X		X								X		B/P
5	20		X				0-20	X		X								X		C/P
6	30		X				5-30	X		X								X		C/P

COMMENTS

SEGMENT ST/ 6 SUBDIVISION A

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UD	UC	1/2" B	1/2" Y	1/2" G	1/2" B	1/2" Y	1/2" G	BU	U	M	L		
7	30					X	.		X									X			C/P
8	66		X				15-60	X		X							X				C/P/G/S
9	40					X	.		X							X					C/P
10	30				X		0-5		X		X						X				C
11	75				X		40-75	X			X					X					C/P/G
12	40				X		20-40	X			X						X				C/P
							.														
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COMMENTS

Oil is generally located near the HWL. In pocket beaches oil is generally concentrated at, and/or behind the storm berm. Berms appear heavily oiled beneath the surface based on pits (oil in pore spaces of subsurface sediments). In steeper sections (non pocket beaches/cliff sections) oil coats tops of talus boulders and underlying surface sediments.

+ Cracks in Bedrock

The middle intertidal zone is relatively oil free. Probably due to winter storms reworking, overturn and redistributing boulders in this zone. The coast line has high wave exposure (high energy coast). Consequently the beach sediments are relatively dynamic.

REVIEWED HH DATE 4-5-90

SHORELINE ECOLOGICAL SUMMARY.

REVISION: 08/22/90

Segment ST / SM 06A Subdivision A Date (mo / day / yr) 4/2/98
 Time (24 hr) 1830 Biologist S. Schroeter

- (A) Substrate type and % of segments:
 (1) Bedrock 21 (2) Boulder 40 (3) Cobble 32 (4) Pebble 5 (5) Sand 0 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 50 Moderate 25 Low 25
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults: (X), new settlement (3)

Photographs: Roll No. ST-1-2
 Frames None

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments: No sensitive taxa listed. Oyster catches (2-3 per 200 m of shore) concentrated on bedrock areas. 1 bull eagle

Ecological Considerations: High proportion of dense due to heavy cover of Halosaccus, Rhodysmum, Iridia, & Alaria in mid & low intertidal & small in mid & low intertidal. Moderate densities of gastropods & barnacles in mid intertidal
Tidal range observed > +1.0

Segment: SMØ6A

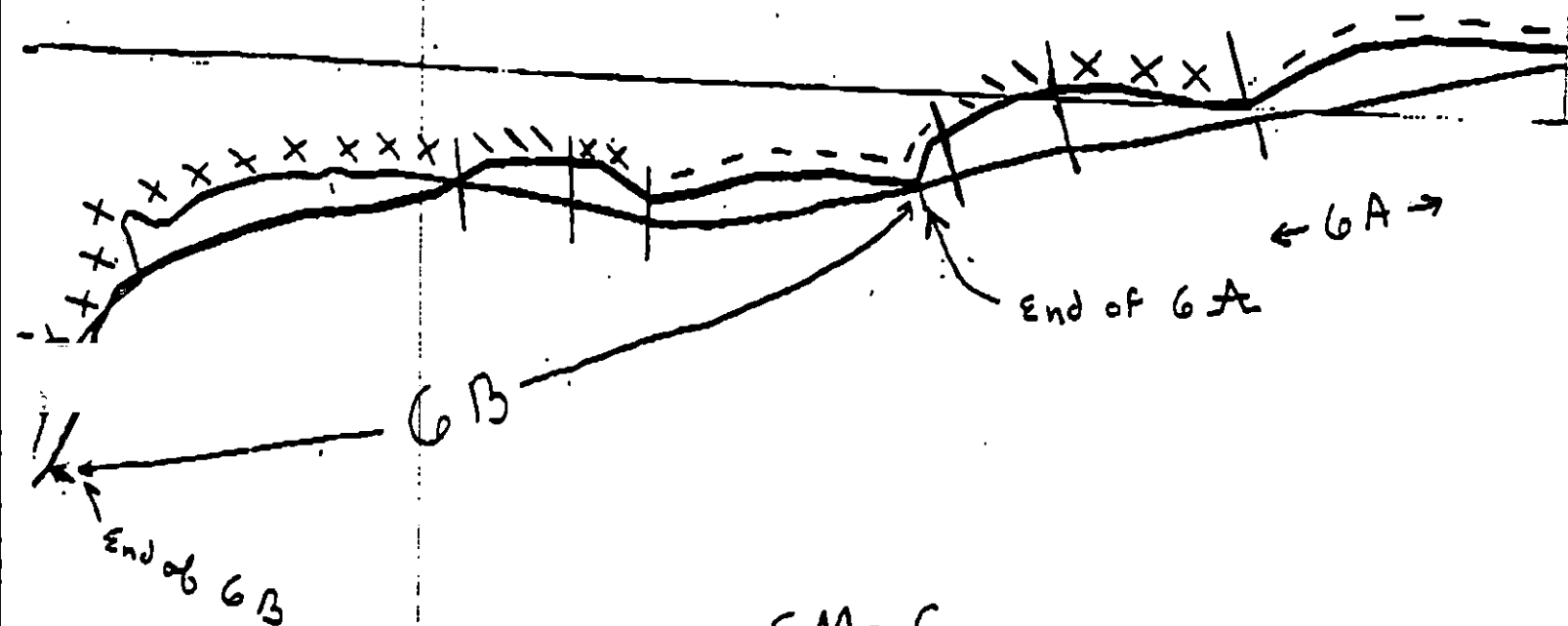
Date: 4/2/90

Bio: S. Schweder

ØB: B. Berglund

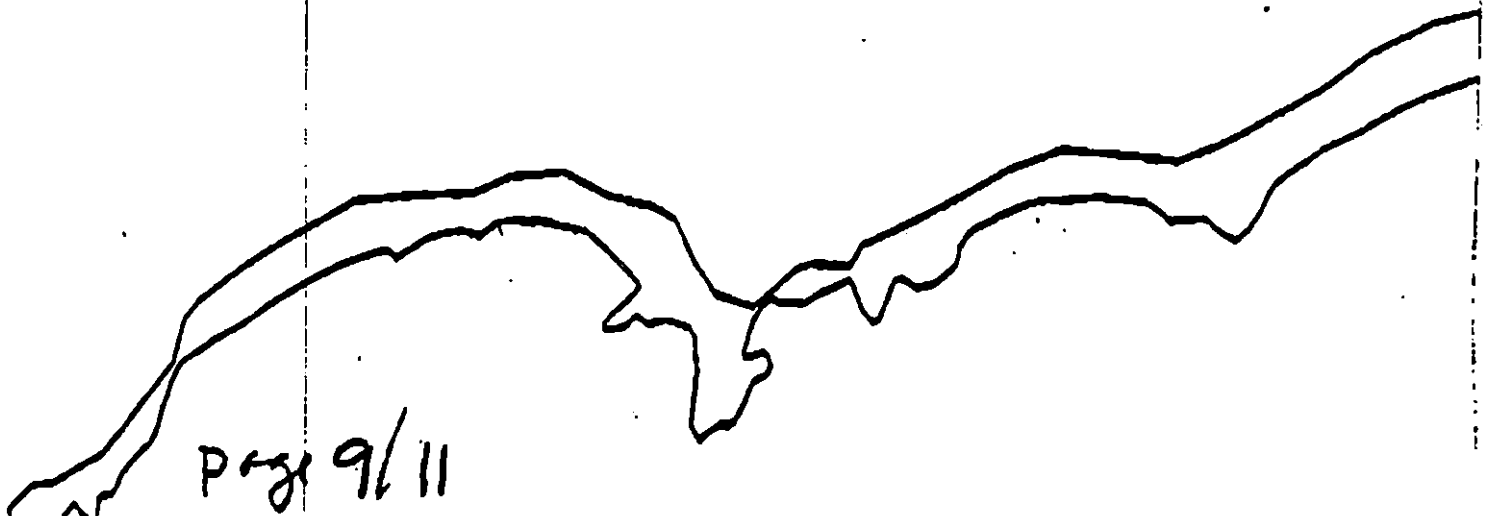
Segment composed of small boulder/cobble + large talus pocket beaches separated by relatively short (generally < 100m) head lands. Densest biota was in the head lands, but the boulder/cobble + talus pocket beaches also had dense biota. The boulder/cobble pocket beaches were much more densely populated than those on SMØ5A. This may be due to them being much smaller + more sheltered; hence the boulders + cobbles may be more stable. There were dense concentrations of 0.6-8 cm Katharina tunicata among cleared areas + S. cariosus beds in the mid + low-upper intertidal. Moderate abundances of Alaria recruits + adults in the mid + low intertidal. Moderate to dense concentrations of Tridacna + Rhodoglossum in low-mid + low intertidal. Few large stars, except for the occasional P. ochraceus in mid + ^{low} upper intertidal pools. Occasionally dense patches of Siphonaria on Fucus in mid-intertidal. Epiactis were common in mid + low-upper tide pools + among S. cariosus in mid intertidal. Anthopleura elegantissima in occasionally dense concentrations in mid + upper intertidal pools. Gastropods (L. sitkana + N. scuta) in moderate to dense patches under boulders + cobbles in mid intertidal. Many L. sitkana egg masses. Occasional patches of Streblospio (D. 1-1.5 cm) in tide pools.

SM-06



SM-G

"Pasted Section"



SM-06

GA₂ →
Connects with
GA₁ →

Note: see pasted sections.
↓ It would be nice to work with maps that covered a larger area and doesn't require guess work.

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

SM-8A₂

ADEC Segment Length: 3908m



METERS

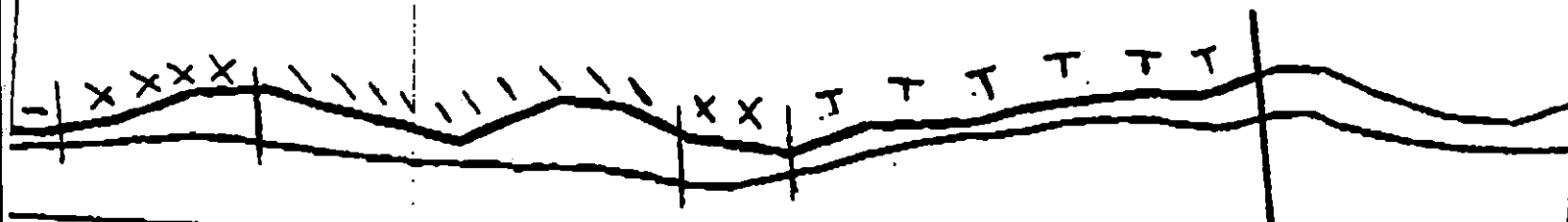


Map Key: PWS-8820
Name: _____
Date: _____
Data Entered: _____

Date 5/11

← GA₁

← connects with GA₂



XXXX Wide

—// Medium

-- Narrow

TTTT Very Light

0000 No Oil

Done 11/11

SM-6A₁

AOEC Segment Length: 3908m



Map Key: PWS-6821

Name: B. Berglund

Date: 4/2/90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

- SEGMENT SM-6 SUBDIVISION A (1 of 3)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation Spot Washing Mechanical Relocation Other Approved Treatment	WORK AFTER 6/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M	Herring Spawning	Subdivision closed to bioremediation, spot washing, mechanical relocation and other approved treatments work before 6/15. No constraint to manual pickup.
5R	Seabird Colony	No constraint. Work site is more than 800m from colony.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat traffic to essential minimum. Avoid damage to unholed intertidal and subtidal algae and seagrass before 6/15. Avoid any unnecessary disturbance or damage to unholed biota and substrate.

FOSC

DATE

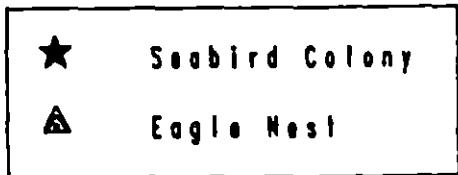
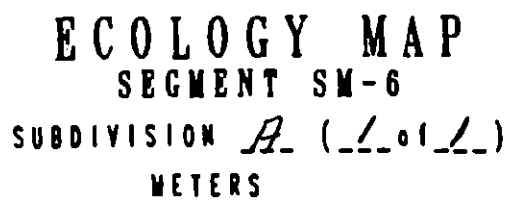
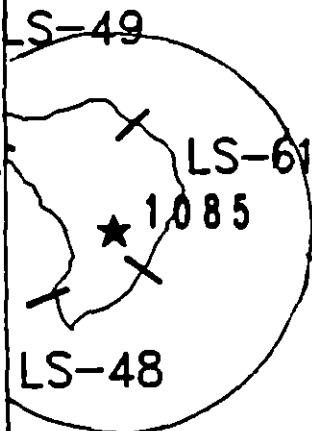
6.10.90

Prepared By:

P. Phillips

Date

6/9/90



SHORELINE EVALUATION

SEGMENT ST/ SM-06 SUBDIVISION B (2 OF 3) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature] DATE: 5/3/90

OILING CATEGORIZATION:

Wide 561 m: Medium 302 m: Narrow 0 m: V. Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 75+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) mechanical relocation of
SUTZ storm berm followed by bioremediation in area shown on attached
sketch map, 2) manual pick up of oiled vegetation, 3) bioremediation
of other areas shown on attached sketch map. Work should be conducted
after 6/15 based on herring constraints.

TAG COMMENTS: USE SPOT WASH WITH SORBENTS DURING RISING TIDE
FOLLOWING RELOCATION.

TAG APPROVAL DATE: 5/8/90

ADEC JOHN BAUER

EXXON ANDY TEAL

NOAA GARY PETERSON

USCG KENNETH KEDDIE

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

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / Sonob SUBDIVISION: B DATE 22 APR 90

USCG

NAME James S. Garbini SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

HEAVY oiling in storm berm and upper intertidal zone and mid intertidal zone.
Lots of boulders with oil sticking, even in cracks. SEE EXXON PICTURES ROUTE FROM 17, 18, 19,
23, 24, 25, 26, 27, 28

ADEC

NAME Brian K. FitzSimons SIGNATURE Brian K. FitzSimons

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS Eastern end of segment bordered by vertical headlands which
have a 2-3 meter band of skin/peel. ~~There is~~ "1. $\frac{BC}{BR}$ } Black shiny oil, ^{coat} strong
toluene smell $\rightarrow$ MITZ $\frac{xxx}{BR}$ }
covered with oil $\frac{vertically fractured BR}{MITZ to LITZ: \frac{xxx}{BR}}$ } Surrounded at base by cobbles
ie:  T. W.

These conditions exist on eastern portion of segment + show
Much Oil: Very Difficult to Treat - reevaluate! (See Attache)

LAND MANAGER

NAME Carol S. Huber SIGNATURE Carol S. Huber

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Oil is generally heavy & deep in storm berms. Belie.
continuous in storm berm. Surface oil notes
in protected areas, which was "fresh" ie black
and strong smelling. Some oil leaching in
lower intertidal zone. Oil saturated sediment
found in mid intertidal zone. Occasional
thick patches of oil mousse in mid and up
intertidal zones. (over) [Done 6/11]

Tent sites
special use destination
bald eagle nests
seabird colony
herring spawning

SM 00-B



Page 7/11

SM006B east to West.

HITZ Berm along entire segment is heavily oiled

*1. Beach directly east of SM006 COREXIT Test site and separated by vertical headlands.

Low HITZ / High HITZ

B/C surrounded at bases with #6 - saturated with black shiny oil

Low MITZ : 1500 ^{Time} hrs

1. Sheen observed around boulders at tide line - Rainbow/Silver sheen

2. 5 meters shoreward from tide water

Surface: Cobble with Film Resting on pebble/sand sediments.

Turned Cobble over and observed strands of dark brown/black mobile oil on undersurface of Cobble and pockets of black mobile oil in Pebble sands. 15-25cm depth O.P.C. U.O.

SM006 B

#2. Beach containing area of SM006 COREXIT Test #4.

HITZ Berm entire length of beach saturated to undetermined depth - 75cm

60m x 24m area to east of COREXIT Test site: BC
CPB } Saturated with Black shiny oil from HI
BR to HITZ

~~Sheen~~ Sheen observed at tidewater

MITZ at center of COREXIT Test.

Pit depth 55cm } BC surface NO
PCG → OP Black Oil } UO → C throughout test site

Beach adjacent to and west of COREXIT Test site: Black coated Cobble Boulder throughout area
HITZ to MITZ

MITZ → Test Pit:

B → Black Shiny Coat
S } Saturated Black - Strong
Sulphur smell at 55cm
Oil pools as it drains out of sediments into pit

Page 8/11

SHORELINE OILING SUMMARY

REGION NO. 03/2/88

OG B. Devaland USCG J. Gamble SEGMENT ST/ SM-16
 BIO S. Schreiner LAND REP C. Hubes (NFS) SUBDIVISION B (2 of 2)
 EXXON C. Leving ADEC B. Fritzsime TIME 13:46 to 17:00
 TEAM NO.: 3 TIDE LEVEL: 1.2 to +6 DATE 4/2/90
 EST. SUBDIVISION LENGTH: 115 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: (A) to E
 SURFACE SEDIMENTS: R 30 % B 60 % C 10 % P — % G — % S — % M — % V — %
 SLOPE: Long 45 % Hang 70 % Vert 25 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 505 m M 310 m N — m VL — m NO — m

SURFACE OIL

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

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			X
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE —#BAGS —

Photographs:

Roll No. ST-1-2Frames 17-28

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR										PIT ZONE					A N A	SUBSURFACE SEDIMENTS
		OF	OR	OL	OF	NO				1	2	3	4	5	6	7	8	9	10	SU	U	M	L	U		
1	15		X				0-5		X	X										X						B, C
2	10		X				0-10		X	X										X						B, G
3	75		X				25-75		X				X							X						B, C
4	15	X					0-15		X		X									X						B, C
5	30		X				0-30		X		X										X					B, P
6	70		X				15-55		X	X											X					B, C, P

7-28 15
COMMENTS

X

X

X

G

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/78

Segment ST / SMOGB Subdivision B Date (mo / day / yr) 4/2/90Time (24 hr) 1514 Biologist S. Schroeder(A) Substrate type and % of segments:
(1) Bedrock 17 (2) Boulder 38 (3) Cobble 38 (4) Pebble 5 (5) Sand 0 (6) Silt 0(B) Overall % cover of biota (% of segment): Dense 58 Moderate 25 Low 25

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

Photographs:
Roll No. ST-1-2Frames 19, 20, 21, 22, 23

BARNACLES

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

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

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

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

NOT PRESENT

MYTILUS

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

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

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

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

NOT PRESENT

GASTROPODS

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

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

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

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

NOT PRESENT

FUCUS

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

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

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

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

NOT PRESENT

Wildlife Observations/ General Comments: No sensitivities listed. ~4-5 oyster catch per 200 m of shore. Brown bear on western end of subdivision

Ecological Considerations: High proportion of dense biota due to heavy halosaccin / Odonthalia / Rhodomydium in mid intertidal + Iridaea / Alaria in low-mid + low intertidal. Oil smell, rumbling sheering of oil intertidal w/ gravel in mid + upper-low intertidal on western 100-200 m of subdivision. However the were moderate to dense concentrations of f. s. + k. longj. eg sponge, + Nucella on boulders, especially the oil areas.

Segment: Sm 6B Bio: S. Schroeter
Date: 4/2/98 OG: B. Berglund

Biologically, this segment was very similar to Sm 6A. The substrate was also very similar. One smell noted when turning boulders & cobbles in the mid & low intertidal; In one instance there was moderately dense oil mixed with gravel in the upper-low intertidal on a Boulder/Cobble pocket bench about 100 m west of the boundary between Subdivisions A & B. Rainbow sheen was commonly observed in mid & low intertidal in Boulder/Cobble pocket benches. Other notable observations:

- 1) moderate densities of light yellow bryozoan + sporadic polychaetes under boulders
- 2) Nucella lamellosa + N. lima were common in mid-intertidal among boulders + occasional occurred in dense patches
- 3) 2-3 cm Leptasterias were common under boulders in pocket benches. No other stars observed in this subdivision.
- 4) Dense patches of K. tunicata (6-8 cm) among S. cariosus in mid & lower-upper intertidal

Page 3/111

OG berglund
 SEGMENT ST/ SM-G
 SUBDIVISION B
 DATE 4/2/90

CHECKLIST

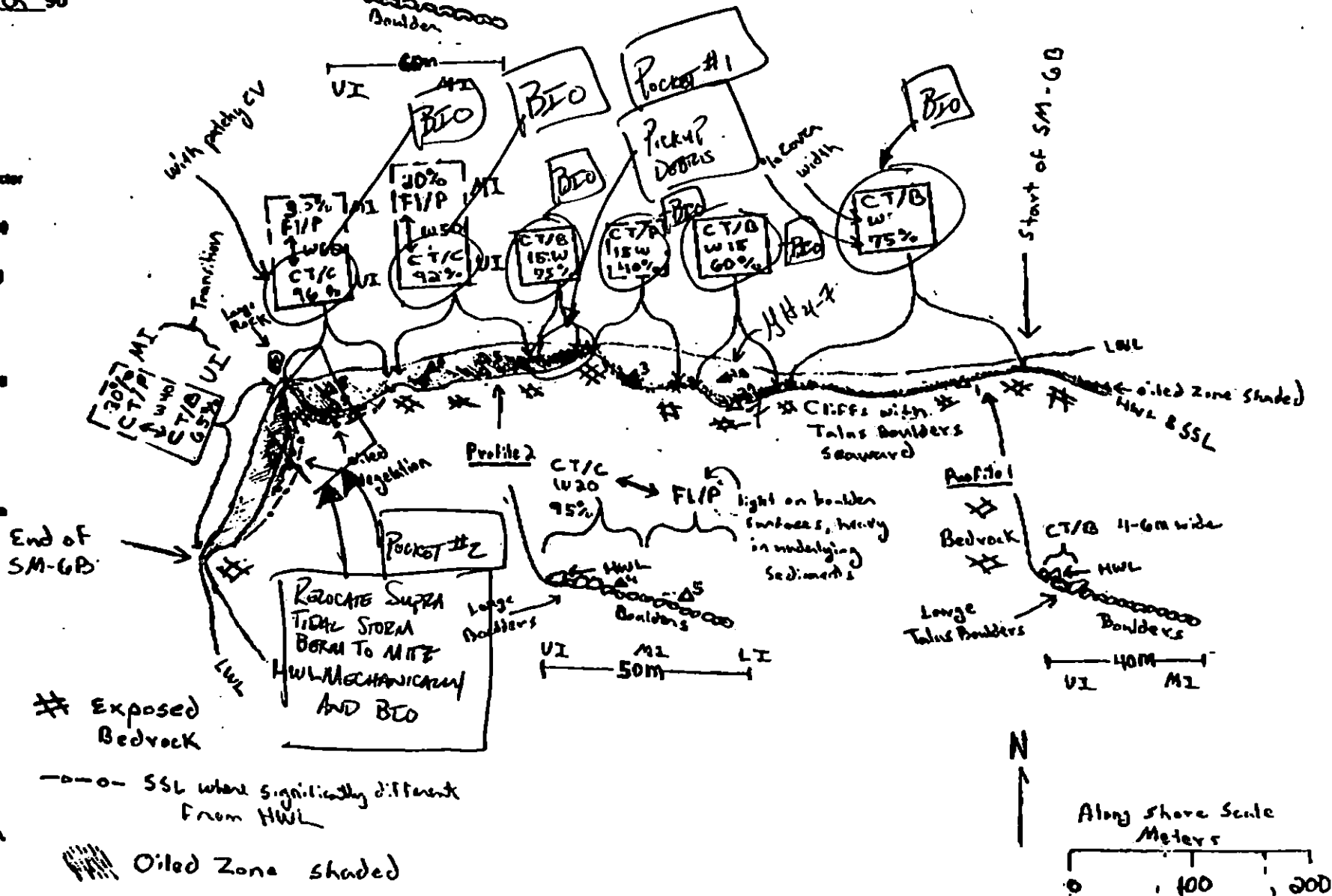
- ☐ N Area
- ☐ Approx. Scale
- ☐ Subplot Body
- ☐ Oil Dist
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Ext. HML/AML
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Photo(s)
- ☐ Photo Location(s)

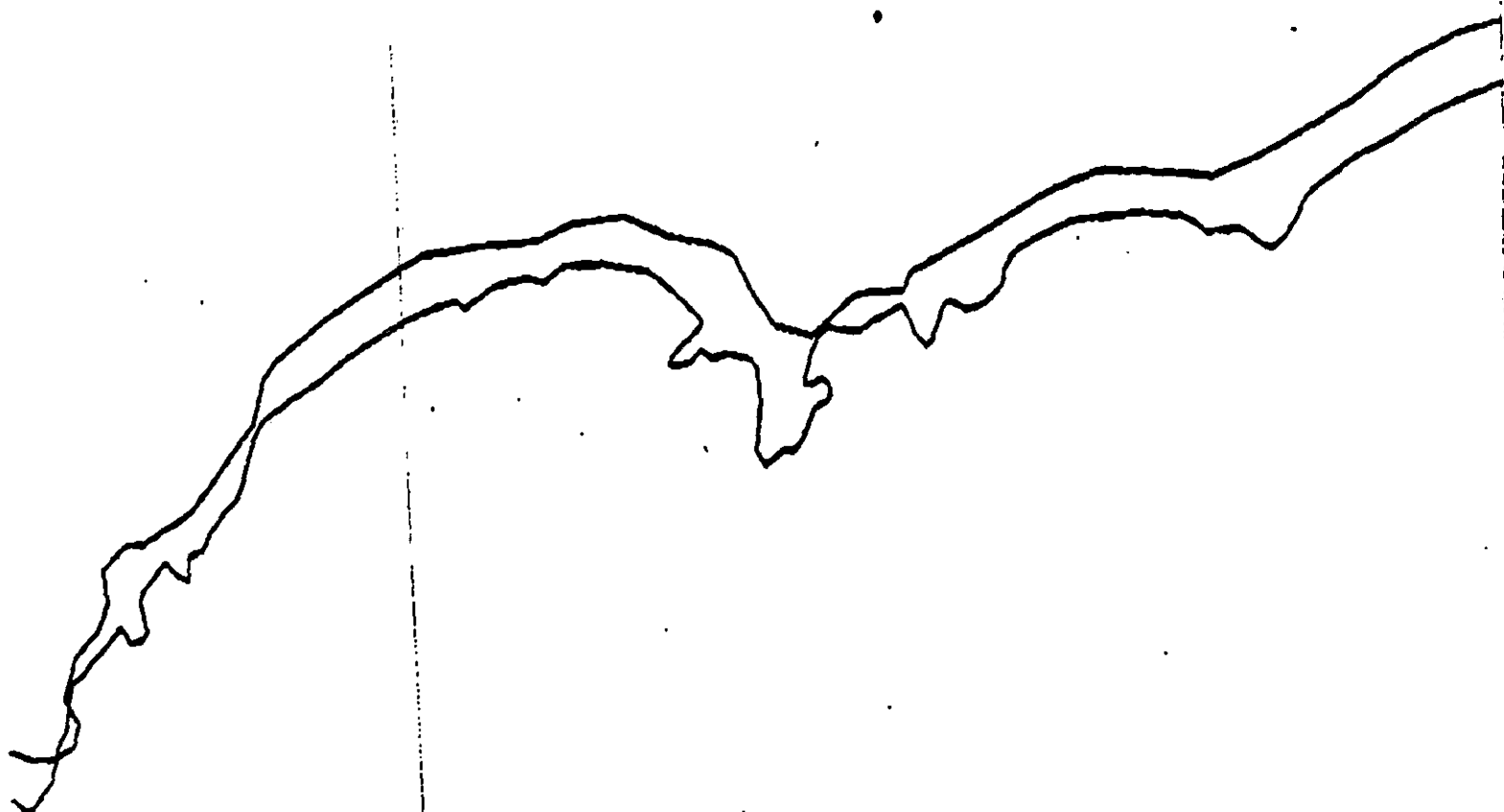
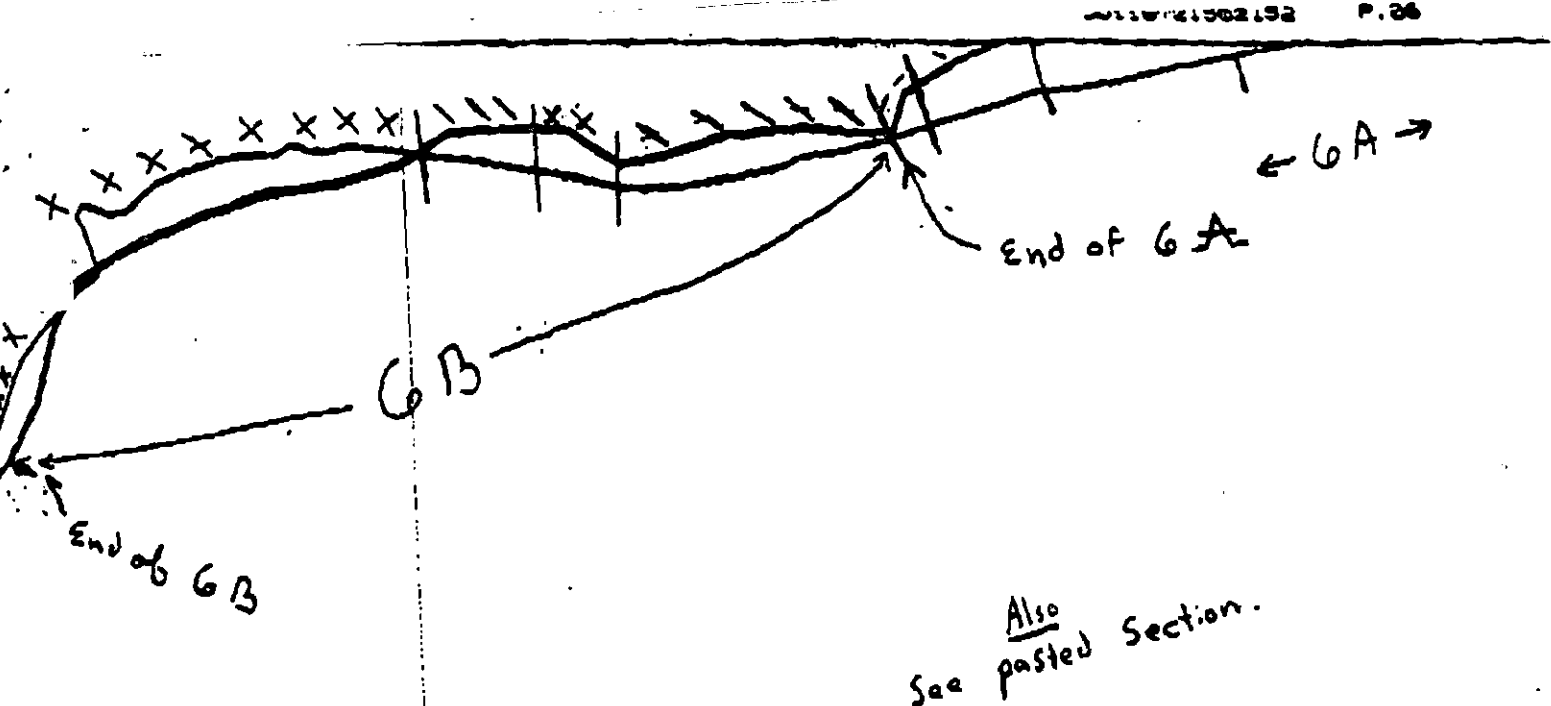
LEGEND

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

Profile 3

SKETCH MAP





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

SM-6

ADEC Segment Length: 3908m



Map Key: PWS-632b

Name: _____

Date: _____

Date Entered: _____

SHORELINE EVALUATION

SEGMENT ST/ SM-06 SUBDIVISION C (3 OF 3) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

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

6y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature] DATE: 5/3/90

OILING CATEGORIZATION:

Wide 1064 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 381 m
Subsurface Oil Observed: Yes X No Maximum Depth 75+ cm

RECOMMENDATIONS:

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

COMMENTS: Manual pick up of oiled debris. *Use mechanical equipment
to relocate storm berm to MITZ. Spot wash using pom poms to control
oil sheen followed by bioremediation. Work should be conducted after
6/15 due to herring constraints.

TAG COMMENTS: USE SPOT WASH WITH SORBENTS DURING RISING TIDE
FOLLOWING RELOCATION

TAG APPROVAL DATE: 5/1/90.

ADEC JOHN BAUER [Signature]

EXXON ANDY [Signature] [Signature]

NOAA GARY [Signature] [Signature]

USCG KENNETH [Signature] [Signature]

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

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

DRAFT

SEGMENT ST / 11-06 SUBDIVISION: Team 2 area DATE 4/2

NAME Robert Jensen SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS
Surface & subsurface oil found along the entire segment. Scattered debris covered with oil was easily seen at top of storm berm. Numerous sample pits revealed oil ranging from 25 to 40 cm in depth. Shore is accessible for work crews depending on weather conditions.

ADEC NAME Rowann T. Hudnall SIGNATURE Rowann T. Hudnall

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS
Surface contamination throughout segment ranging from splattered tar spots to pooled mousse. Subsurface oil throughout segment from supratidal storm berm to lower mid intertidal zone. ~~Oil is~~ Subsurface oil is liquid and penetrates the sediments to greater than 35 cm in places.

LAND MANAGER NAME G. S. Ford SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS
Found bands of black - fresh appearing oil throughout segment
Oil found to depths of 35-40 cm - could be deeper in spots where unable to dig due to boulders
Some oil seen in pools

REVISION NO. 03/21/88

SHORELINE OILING SUMMARY

REVISION NO. 00/000

OG John T. Simpson USCG Bole Jensen SEGMENT ST/ 57-06
 BIO John Dixon LAND REP Lee Keeler SUBDIVISION C
 EXXON Jim Ellison ADEC Rouven Hudmatt TIME 10:20 to 17:30
 TEAM NO: 2 TIDE LEVEL: +6' to +5' DATE Apr 12 / 1990
 EST. SUBDIVISION LENGTH: 1761 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N.E.
 SURFACE SEDIMENTS: R 25 % B 25 % C 35 % P 13 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 60 % Hang 40 % Vert 0 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 990 m M 0 m N 0 m VL 0 m NO 771 m

SURFACE OIL

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

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

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

DEBRIS COLLECTED
☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. ST-2-3 F1-27
ST-2-4 F1-29
 Frames ST-2-5 F1-29
ST-2-6 F1-6

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW	OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO			UO	UC	2 1/2	3	4	5	6	7	8	SU	U	M		
1	30		X				0 - 25		X					X			X			No	pe/cd	
2	40		X				0 - 25		X	0				X			X			No	"	
3	30		X				0 - 25		X	0				X				X		"	"	
4	40		X				10 - 30		X	0				X				X		"	"	
5	45		X				20 - 35		X	0				X					X	"	"	
6	30		X				10 - 30	X	"	0				X					X	"	"	

COMMENTS

See attached pit descriptions sheet
 every oil depth $\leq$ 5 cm in pebbles, does not constitute
 subsurface oiling.

Page 1 of 1REVIEWED 00:15 DATE 10-1990

SEGMENT ST/ SM-06 SUBDIVISION C

SUBSURFACE OIL (CONTINUED)

grains (x) on water table (0)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR							PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UO	1	2	3	4	5	6	7	BU	U	M	U		
8	35		X				0 - 35	X					X				X				NO	pl/cr
9	30		X				10 - 30	X		0			X				X				/	"
10	35		X				15 - 35	X		0			X					X			"	" pl/s/cl
11	35	X					10 - 35	X		0			X					X			"	"
12	40		X				20 - 40		X	0			X						X		"	cb/pl
13	40				X		25 - 30		X				X						X		"	pl/sd
14	40		X				0 - 40	X					X				X				"	pl/cr
15	20		X				0 - 15	X					X				X				"	"
16	25		X				0 - 25	X					X					X			"	pl/cr/red
17	35		X				0 - 30		X				X						X		"	cl/pl/sd
* 18	20		X				0 - 10		X				X						X		"	pl/sd/cl
19	60		X				0 - 60	X					X				X				"	pl/cr
20	80				X		20 - 75		X			X					X				"	"
21	55		X				15 - 55	X					X					X			"	"

COMMENTS

oil depth ≤ 5 cm for all conditions
subsurface oil.

REVIEWED _____ DATE _____

SEGMENT ST/ Sm-26 SUBDIVISION C

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-in)	BELOW		OIL / FILM COLOR							PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UO	1	2	3	4	5	6	7	SU	U	M	U		
22	40	X					15-40	X					X							X	No	pe/o
23	35				X		10-30		X			X								X	"	" / sd
24	35		X				0-35	X					X				X				"	pe / sd / cl
25	45		X				20-45	X					X					X			"	"
26	45				X		10-45	X				X								X	"	"
27	35				X		0-35	X				X					X				"	pe / cl / sd
28	35		X				0-35	X					X					X			"	cl / cl / sd
29	45		X				20-45	X					X							X	"	cl / sd / cl
							.															
							.															
							.															
							.															
							.															
							.															
							.															

COMMENTS

oil depth ≤ 5 cm does not constitute
subsurface oil.

REVIEWED DATE

OG of True Sample

SEGMENT ST/ Sg-J-C

SUBDIVISION C

DATE April 2, 1990

CHECKLIST

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

LEGEND

1 Δ
PI - No Subsurface Oil

2 Δ
PI - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patched Distribution

CT/S
Splashed Distribution

Oiled Vegetation

1 →
Photo location, direction, and number

SKETCH MAP

Legend

Bedrock Headland, talus

cobble / boulder / pebble beach

platy pebble / cobble beach

width length

20, 250

CV/B

60% 1cm

50, 250

20cm

Average depth of penetration

20, 250

CV/B

60% 1cm

50, 250

20cm

20, 240

CV/B

60% 1cm

40, 240

30cm

10, 60

CV/B

50% 1cm

10, 40

CV/B

60% 0.5cm

24, 40

50cm

25, 150

CV/B

50% 0.5cm

25, 340

CV/B

60% 1cm

35, 240

CV/B

60% 1cm

15, 150

CV/B

50% 0.5cm

25, 150

CV/B

50% 0.5cm

25, 340

CV/B

60% 1cm

15, 150

CV/B

50% 0.5cm

25, 150

CV/B

50% 0.5cm

25, 340

CV/B

60% 1cm

15, 150

CV/B

50% 0.5cm

25, 150

CV/B

50% 0.5cm

25, 340

CV/B

60% 1cm

15, 150

CV/B

50% 0.5cm

25, 150

CV/B

50% 0.5cm

25, 340

CV/B

60% 1cm

15, 150

CV/B

50% 0.5cm

25, 150

CV/B

50% 0.5cm

25, 340

CV/B

60% 1cm

15, 150

CV/B

50% 0.5cm

25, 150

CV/B

50% 0.5cm

25, 340

CV/B

60% 1cm

15, 150

CV/B

50% 0.5cm

25, 150

CV/B

50% 0.5cm

25, 340

CV/B

60% 1cm

15, 150

CV/B

50% 0.5cm

25, 150

CV/B

50% 0.5cm

25, 340

CV/B

60% 1cm

15, 150

CV/B

50% 0.5cm

25, 150

CV/B

50% 0.5cm

25, 340

CV/B

60% 1cm

15, 150

CV/B

50% 0.5cm

25, 150

CV/B

50% 0.5cm

25, 340

CV/B

60% 1cm

15, 150

CV/B

50% 0.5cm

25, 150

CV/B

50% 0.5cm

25, 340

CV/B

60% 1cm

15, 150

CV/B

50% 0.5cm

25, 150

CV/B

50% 0.5cm

25, 340

CV/B

60% 1cm

15, 150

CV/B

50% 0.5cm

25, 150

CV/B

50% 0.5cm

25, 340

CV/B

60% 1cm

15, 150

CV/B

50% 0.5cm

25, 150

CV/B

50% 0.5cm

25, 340

CV/B

60% 1cm

15, 150

CV/B

50% 0.5cm

25, 150

CV/B

50% 0.5cm

25, 340

CV/B

60% 1cm

15, 150

CV/B

50% 0.5cm

25, 150

CV/B

50% 0.5cm

25, 340

CV/B

60% 1cm

15, 150

CV/B

50% 0.5cm

25, 150

CV/B

50% 0.5cm

25, 340

CV/B

60% 1cm

15, 150

CV/B

50% 0.5cm

25, 150

CV/B

50% 0.5cm

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CV/B

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CV/B

60% 1cm

15, 150

CV/B

50% 0.5cm

25, 150

CV/B

50% 0.5cm

25, 340

CV/B

60% 1cm

15, 150

CV/B

50% 0.5cm

25, 150

CV/B

50% 0.5cm

25, 340

CV/B

60% 1cm

15, 150

CV/B

50% 0.5cm

25, 150

CV/B

50% 0.5cm

25, 340

CV/B

60% 1cm

15, 150

CV/B

50% 0.5cm

25, 150

CV/B

50% 0.5cm

25, 340

CV/B

60% 1cm

15, 150

CV/B

50% 0.5cm

25, 150

CV/B

50% 0.5cm

25, 340

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/78

Segment ST / SM-06 Subdivision "C" Date (mo / day / yr) 04/02/90
 Time (24 hr) 1730 Biologist John Dixon

- (A) Substrate type and % of segments:
 (1) Bedrock 25 (2) Boulder 26 (3) Cobble 35 (4) Pebble 42 (5) Sand 2 (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 20 Moderate 30 Low 50
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (O)

Photographs: 572-3 | 7-4 | 2-
 Roll No. | |
 Frames 1-9 | 11-13 | 1-5,

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 Bald eagle, 1 sea lion offshore, several ravens. Dead sea urchin in oiled debris in storm berm. Unbaited deer carcass in upper intertidal lodged in crevice. Oil splattered into mid intertidal boulder. Oil on limpet shells & their egg cases (yep!).

Ecological Considerations: This subdivision is made up of a series of bedrock & talus headlands interspersed with with Boulder-cobble beaches, where the beach is made up of cobble & pebbles armor a sand/gravel substrate. There is very little biota in the mid & high intertidal. In the low & mid level there is generally 20-40% cover of Filicinaria algae w. the Fucus, Alaria, Rhodomena on larger boulders & bedrock. There is a halo of larger algae on small boulders behind on terraces & the density of barnacles & gastropods increases noticeably. In the mid zone Baccaria is prominent but 10-50% are dead tests. The pulmonate limpet Siphon is very abundant in the mid-high zone. Newly recruited limpets of E. are locally dense. There are several likely small herbivores

Smith Island, SM-6-C, April 2, 1990

Segment SM-6 includes 3.9 km of the northwestern coast of Smith Island. It was surveyed on April 2, 1990 by both teams starting at opposite ends. Subdivision C extends 1.7 km starting at the western extremity of the segment. It is exposed to a relatively long fetch to the northwest and a moderate fetch window.

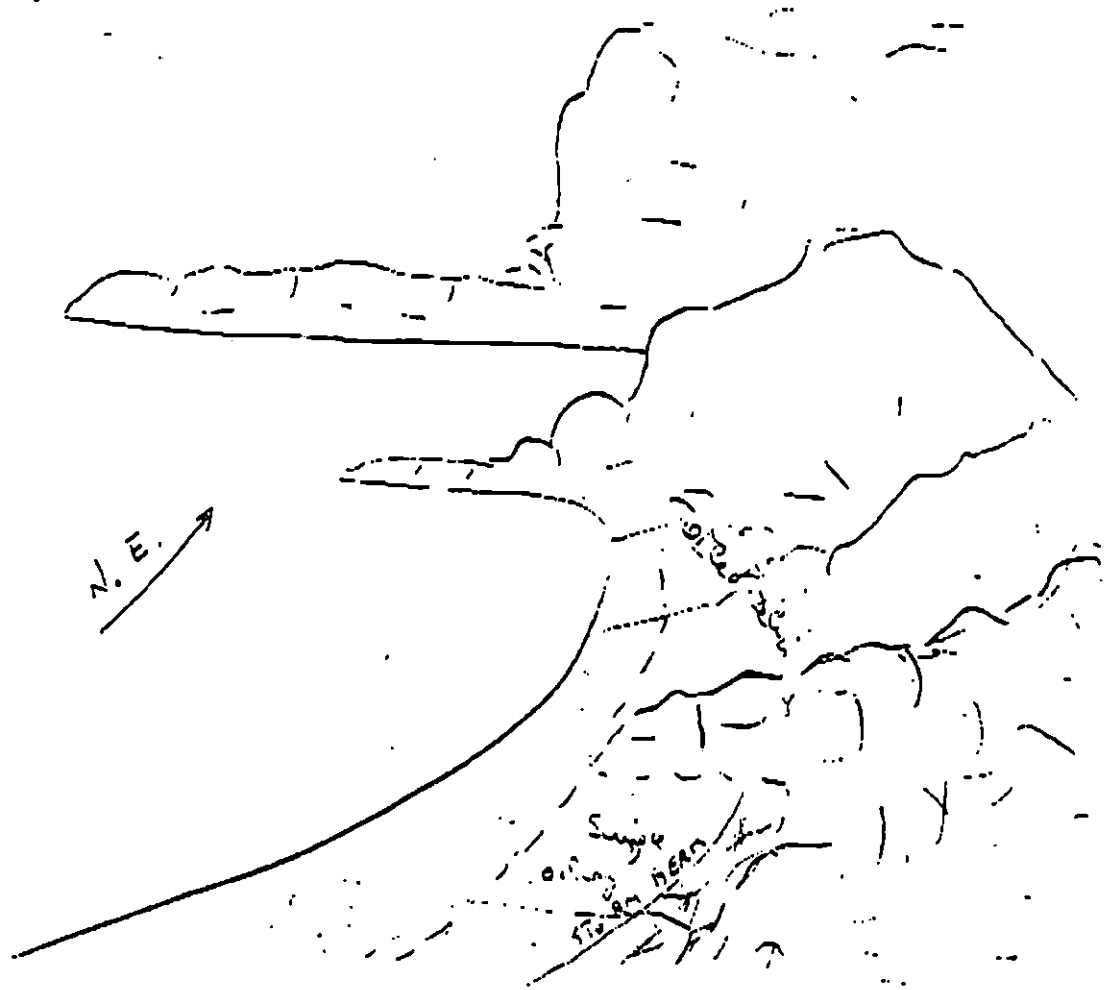
The shoreline of SM-6-C is composed of alternating sections of bedrock cliffs, low fractured bedrock bluffs, talus of large angular boulders, boulder/cobble beaches and pebble/cobble beaches. At the southwestern extremity, the shoreline consists of a section of angular boulder talus and a narrow cove of angular boulders between bedrock headlands, backed by bedrock cliffs. The boulder cove shows a 10 m wide band of oil at the base of boulders over the upper and middle intertidal zone, with a cover of about 60% and an average oil thickness of 0.5 cm. A few small areas of sheen in tidal pools were noted, and an oiled boom and other oiled debris rest in the backshore area.

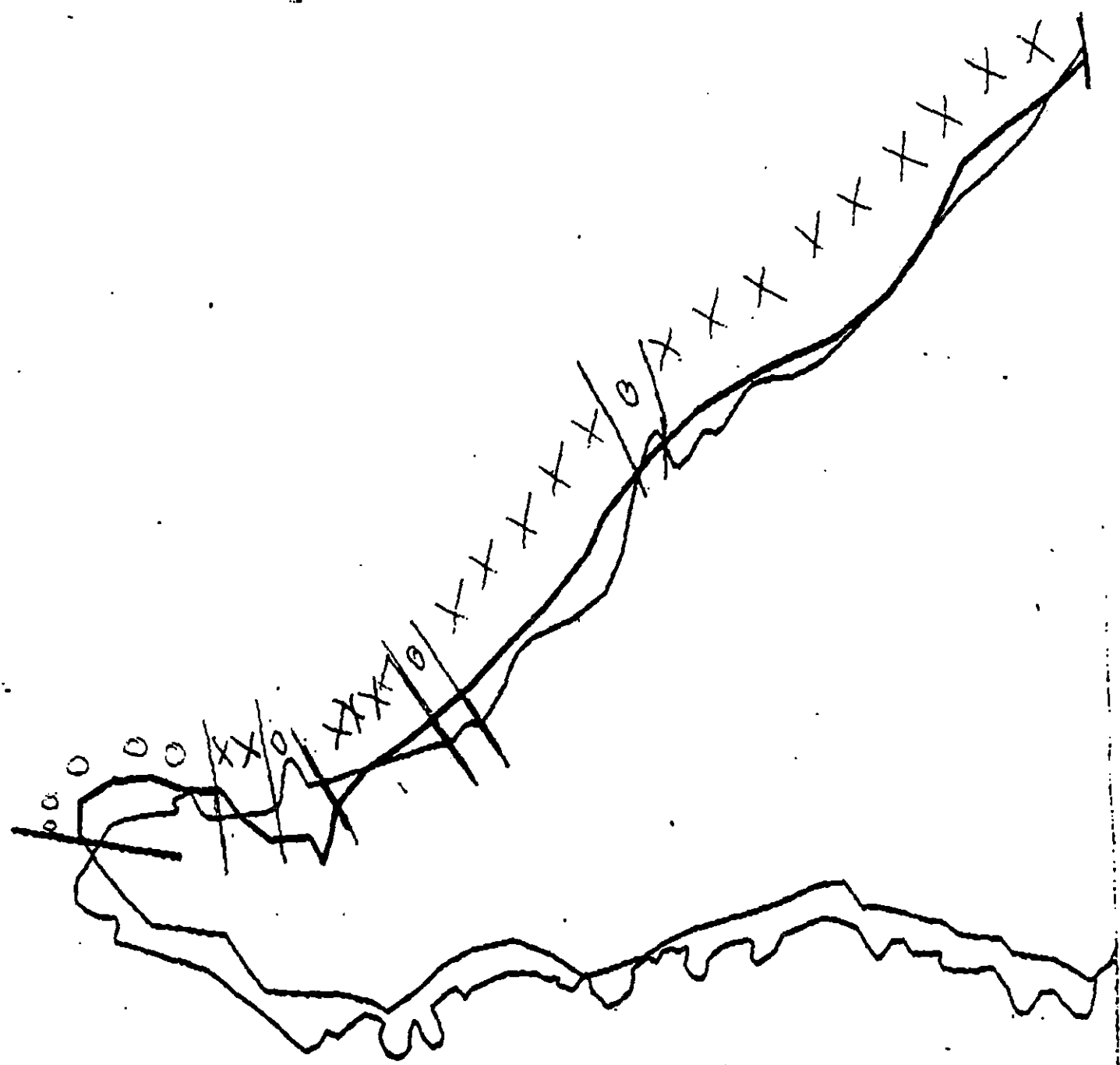
Further to the east, a cobble/boulder beach has a considerable cover of oil in the upper and middle intertidal zone. Subsurface oil is also present and extends from under the storm berm area where it is thickest seaward to the low intertidal zone where it is buried under about 10 cm of clean sediments. A similar pattern was noted in the central and eastern parts of the cove. East of the next headland, pebbles and cobbles become more platy and a cove located there shows a very well developed storm berm. Surface oil extends from the front of the storm berm to the middle intertidal zone, and subsurface oil extends further seaward. This band of oil seems to become more narrow and thin to the east before picking up again 200 m west of the end of this subdivision. In this area, surface oil cover is narrower but

... P 9-515

subsurface oil is still present to depths of about 40 cm throughout the upper intertidal zone and part of the middle intertidal zone.

Don-Maria Sempels
Segment SM-6
Subdivision C
April 3/1990





XXXX Wide
 /// Medium
 - - Narrow
 T..T Very Light
 0000 No Oil

SM-6-C

ADEC Segment Length: 3908m



Map Key: PWS-6820
 Name: San Juan Sound
 Date: Apr 23 / 1990
 Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

- SEGMENT SM-6 SUBDIVISION C (3 of 3)

WORK WINDOW

Manual Pickup

OPEN*

Bioremediation

Spot Washing

Mechanical Relocation

Other Approved Treatment

WORK AFTER 6/15*

*Exxon study site on SM-6C. Do not remove backshore stakes.

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

No constraint to manual pickup. Closed to bioremediation and other approved treatment prior to 6/15.

5R Seabird Colony

NO CONSTRAINT. Seabird colonies in adjacent segments are more than 800m from work area.

5T Bald Eagle Nest

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

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat traffic to essential minimum. Avoid any unnecessary disturbance or damage to unrolled substrate and biota especially intertidal and subtidal algae and seagrass.

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

FOSC

DATE

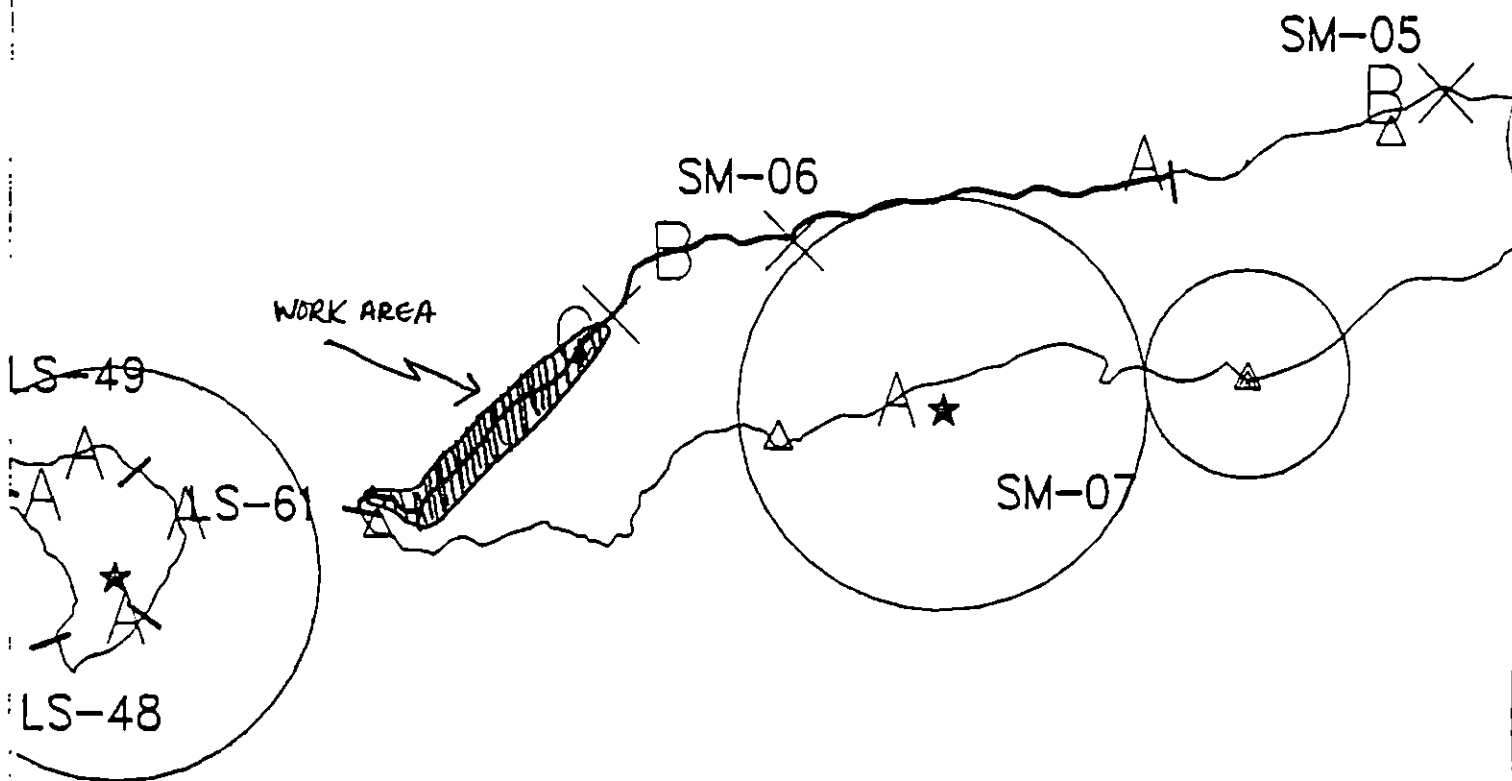
6-10-90

Prepared By:

JP Phillips

Date

6/9/90



Exxon Company, USA
Map Key: PWS-S-6
June 04, 1990



ECOLOGY MAP
SEGMENT SM-6
SUBDIVISION C (3 of 3)
METERS
0 765 1529

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

1 inch = 2509 feet

SHORELINE EVALUATION

SEGMENT ST/ SM-07 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5T Eagle nests (3/1 to 6/1)
5R Seabird colony (5/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint Sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid damage to uncoiled intertidal and subtidal algae and seagrass.
Contact ADF&G and USFWS prior to treatment.

SHPO SIGNATURE: *Charles E. Hume* DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 4058m: No Oil 2032 m
Subsurface Oil Observed: Yes X No Maximum Depth 75 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of debris along storm berm, and ~~bioremediation of area shown on attached sketch map.~~ Work should be conducted between 7/1 and 8/15 with approval from ADF&G and USFWS(5R) based on above constraints.

TAG COMMENTS:

SMALL AREA INDICATED FOR BIO DOES NOT WARRANT MOBILIZATION

TAG APPROVAL DATE: 4/17/90
ADEC *Art Weir* *Det Weir*
EXXON *Andy Teitz* *Real* FOSC: *[Signature]* DATE: 4-22-90
NOAA *Burlewscott* *Burlewscott*
USCG *Kenneth Keane* *[Signature]*

PWS ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

3/10/1 / 804 8

SEGMENT ST / SM-07 SUBDIVISION: _____ DATE 4/1

USCG NAME Robert Jensen SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS Small
Some ~~patches~~ patches of oil debris with petroleum ~~odor~~ found in the middle of Smith Is at the storm berm level. This debris was covered with large logs & other weathered material. would require handwork to carry out (sawing, etc). Most of this section looks very good.

ADEC NAME Rowann T Hudnall SIGNATURE Rowann T. Hudnall

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS
Splashes of stained rocks found in storm berm suggest continued natural cleaning w/monitoring

LAND MANAGER

NAME U.S. Forest Service SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED - Low Priority
COMMENTS Continued Natural Cleaning.

Small amount of stained rocks found in/near storm berm - occasionally on larger boulders.

Occasional patches of old vegetation in/around storm berm.

Found 2 deer skeletons. 1 head to feet
neither oiled. Felt it D.D. 1 backbone parts

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG San Francisco USCG Boh Jones SEGMENT ST/ SM-07
 BIO John Dixon LAND REP Leo Kullen SUBDIVISION No Subdivision (100)
 EXXON Jim Ellison ADEC Russell Hudnell TIME 12:47 to 16:57
 TEAM NO: TIDE LEVEL: 0' to +6 1/2' DATE April 1 1990
 EST. SUBDIVISION LENGTH: 7185 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 30 % B 35 % C 30 % P 4 % G — % S 1 % M — % V — %
 SLOPE: Long 40 % Hang 40 % Vert 30 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W — m M — m N — m VL 2475 m NO 4707 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	IC	IB	IP	IS	SR	BR	FW	LY	SP	DR	TL	LR	SU	UI	MI	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT		X								X			X			
STAIN				X		X							X			
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X	X	X	X

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	X		
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE —#BAGS —

Photographs:

Roll No. ST-2-2Frames F-24-27

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	ORL RW	OT EL	TLT LRT	SU	UI	MI	U				
1	75					X	.		X								X			No	cb	
2	75		X				30 - 75		X	X								X		"	cb	
3	60					X	.		X										X	"	cb	
4	75					X	.		X								X			"	cb	
5	75					X	.		X									X		"	cb	
6	75					X	.		X										X	"	cb	

COMMENTS

Note 1) very patchy stain on subsurface cb less than 10% by area of individual cobble, less than 10% of cobble.

Note 2): Unable to dig pit in area of maximum contamination (10,10 CH/B) as the oil patch lies under a cover of large clean logs.

SM-7 p 40, 8

Smith Island, SM-7, April 2, 1990

Segment SM-7, a 7.2 km long section of shoreline forms the south coast of Smith Island. The fetch is long to the south, although it is partially blocked by the presence of Seal, Green and Montague islands. The shoreline geomorphology reflects the generally high wave energy environment with relatively well sorted cobble pocket beaches and steep and high storm berms. The shoreline consists of alternating sections of bedrock cliffed headlands, heavily fractured low bedrock bluffs, boulder talus, boulder/cobble beaches on the east part and cobble beaches on the central and eastern parts.

Oil occurs in two forms: 1) as a partial stain on bedrock surfaces and cobbles, with less than 10% coverage of individual cobbles (by area) and less than 10% of the cobbles stained in that manner; and 2) two small patches, one 5 x 5 m of patchy coating of the cobble surfaces in the upper intertidal zone among oiled debris and a 10 x 10 m patch of surface cover (70% coverage, 1 cm thick maximum) above the upper storm berm under an abundant cover of large logs debris (see map for location). The occurrence of oil decreases towards the west.

Test pits were dug at two locations and revealed no oil, or very small stains on subsurface cobbles to depths of 75 cm. The patch with the most oil referred to above could not be investigated further as it occurs under a thick cover of large logs. In all test pits, the substrate did not change with depth, and consisted of moderately well sorted cobbles with very few pebbles.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/ SM-07 Subdivision N/A Date (mo / day / yr) 04/01/90
 Time (24 hr) 1235- Biologist John Dixon

- (A) Substrate type and % of segments:
 (1) Bedrock 30 (2) Boulder 35 (3) Cobble 30 (4) Pebble 4 (5) Sand 1 (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 15 Moderate 20 Low 65
- (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	X	X	2	2	2	2	X	X	X
3	3	3	3	3	3	3	3	3	X	X	X
4	4	4	4	4	4	4	4	4	X	X	X
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

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

NOT PRESENT

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

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

Wildlife Observations/ General Comments:

10 Harbor seals hauled out on rock point 1 Km from E end of segment. 4 Bald eagles overheard. 20 Ravens. Harbor seals offshore. 2 oyster catchers near W end of segment.

Ecological Considerations:

This segment is made up of cliffs & rock outcrops interspersed with extensive areas of boulder & cobble beach. Boulders & cobble are round & scoured. Below n + 4' level the moveable substrates are covered with filamentous green algae. Very little else in habitat. This habitat, where cobbles are partially protected by bedrock outcrops, there is a sparse cover of barnacles & mussel. The cliffs & outcrops show the zonation typical of the area: *Verrucaria* band high, moderate barnacle cover in the U.I., *B. carolinensis* & *Fucus* dominant in the M.I. & *Alaria* & red algae most abundant in the L.I. (near harbor seal)

OG Form 7a Impuls
SEGMENT ST/SM-27

SUBDIVISION NONE

DATE Apr. 12/1990

CHECKLIST

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

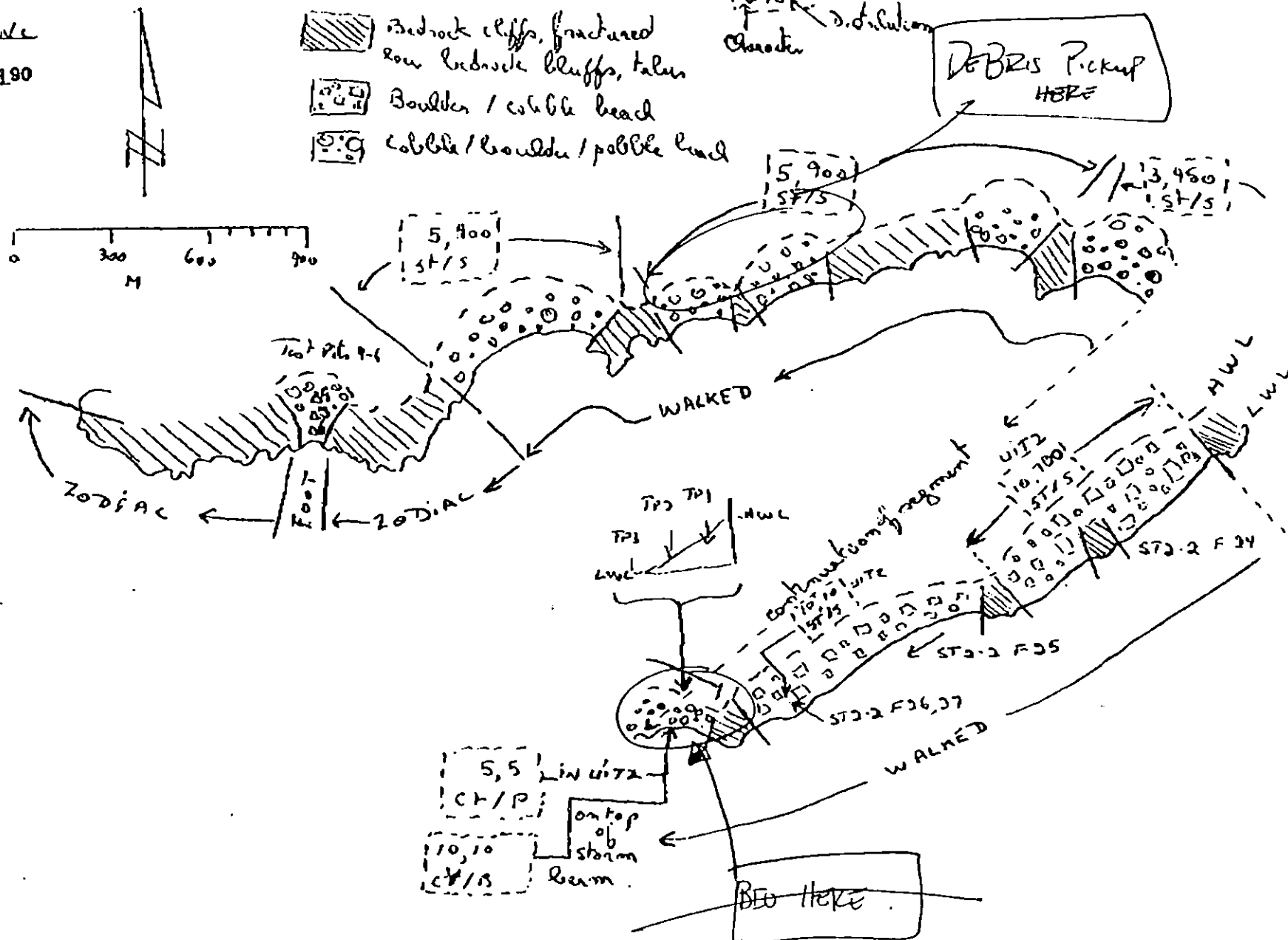
LEGEND

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

Legend

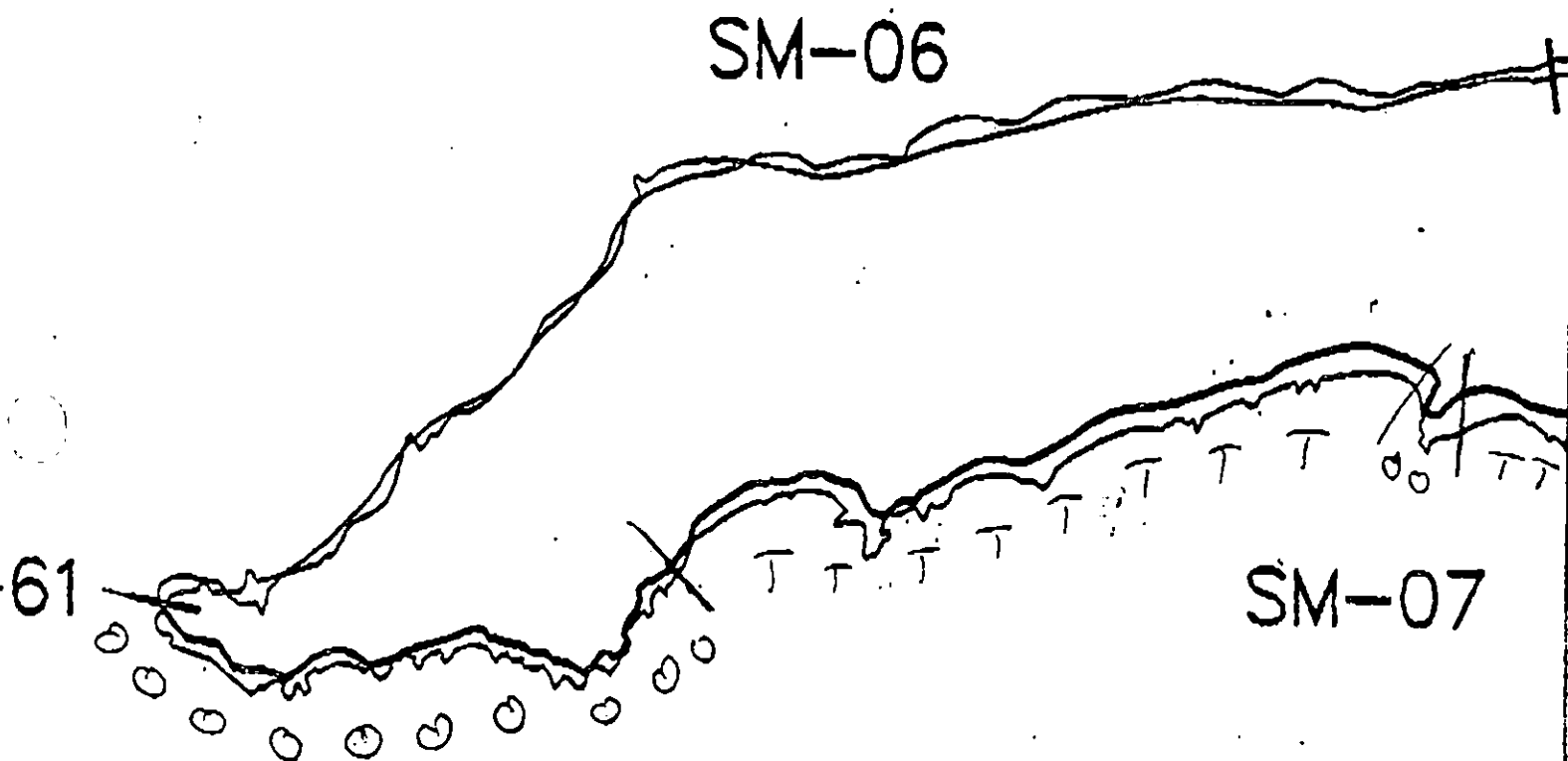
- Bedrock cliffs, fractured
low bedrock bluffs, talus
- Boulder / cobble beach
- Cobble / boulder / pebble beach

SKETCH MAP



Oil Character Length (m): AP PO CV CT 15 ST 2460 MS PT TB FL NO 4707

REVISION: 03/24/90



(XX Wide
 /// Medium
 --- Narrow
 TTTT Very Light
 ADEC Segment Length: 7182m

SM-7

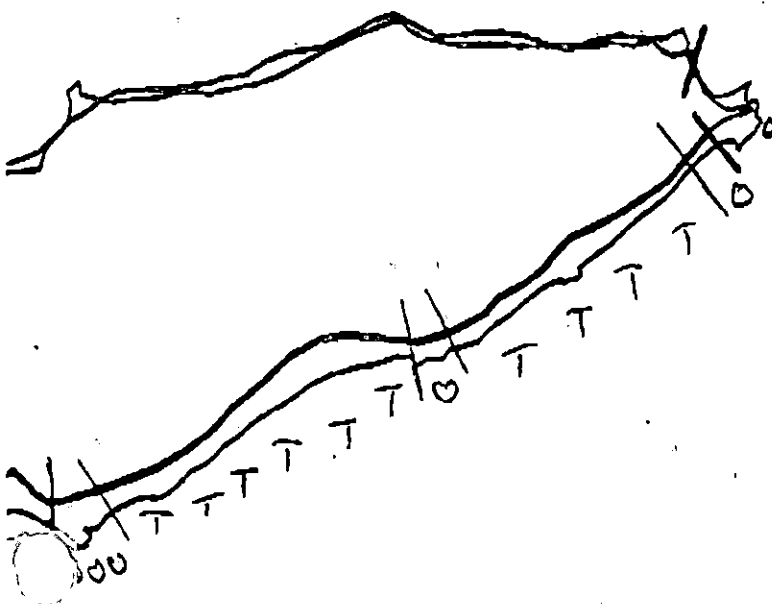
Map Key: PWS-683a

Name: _____

Date: _____

SM-05

SM-47



X Wide

/// Medium

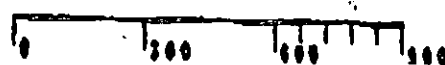
--- Narrow

TTT Very Light

000 N - 0:1

SM-7

ADEC Segment Length: 7152m



Map Key: PWS-683b

Name: _____

Date: _____



ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT SM-7 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M	Herring Spawning	No constraint to manual pickup.
3N,O,P,Q	Harbor Seal & Sea Lion	Closed to manual pickup from 5/15 to 7/1. No constraint to manual pickup ^{from} 7/1 to 8/15.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.
5R	Seabird Colony	Closed to manual pickup; work site is less than 800m from seabird colony.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Restrict boat and air traffic and beach disturbance to essential minimum.

Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. Avoid any unnecessary disturbance or damage to unrolled blots and substrate.

FOSC

[Signature]

Date

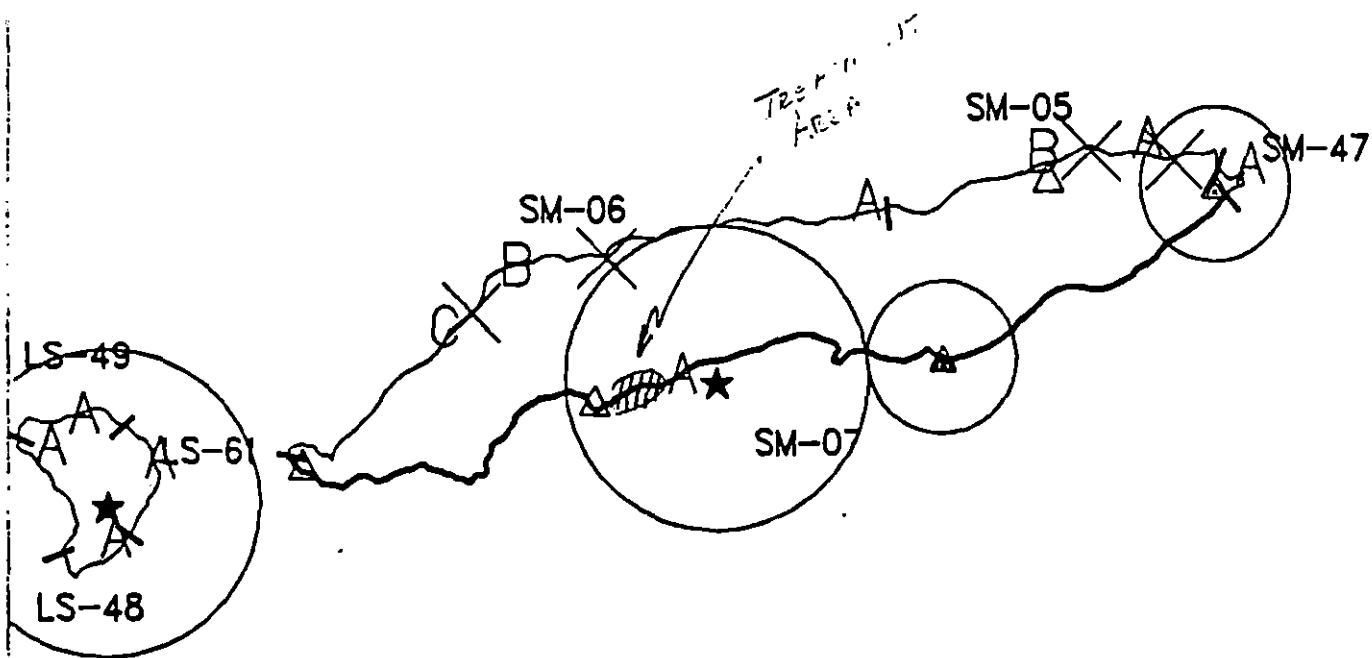
6/12/90

Prepared by

[Signature]

Date

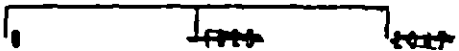
6/12/90



Exxon Company, USA
Map Key: PWS-S-7
June 04, 1990



ECOLOGY MAP
SEGMENT SM-7
SUBDIVISION A (1 of 1)
METERS



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

1 inch = ~~333~~ feet

SHORELINE EVALUATION

SEGMENT ST/ SM-47 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; Seabird colony (5R) - 5/1 to 9/1;
Harbor seal and sea lion pupping (3N, 3P) - 5/15 to 7/1 and molting (3O,
3Q) - 8/15 to 9/15; Subsistence area for deer harvesting (7II) - 8/15 to
2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

(2M) Restrict boat traffic to essential minimum. Avoid damage to unoiled
intertidal and subtidal algae and seagrass. Contact ADF&G for specific
dates and locations. (3N,P,O,Q) Restrict boat and air traffic to
essential minimum. Contact ADF&G and USFWS prior to treatment. Treatment
to be completed prior to 5/15 or between 7/1 and 8/15 unless otherwise
approved by ADF&G and/or USFWS. (5R) Restrict air travel to essential
minimum. Contact ADF&G and USFWS prior to treatment.

SHPO SIGNATURE: Charles F. Hume DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 230 m: No Oil 128 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

Date 4/14/90 Date 4-20-90
ADEC Art Warner Art Warner FOSC
EEXON ANDY TETZ
USCG G.A. REIER G.A. Reier
NOAA Burt Wasscott Burt Wasscott

SEGMENT ST/ SM047 A SUBDIVISION: _____ DATE 4-1-90NAME James C. Gambill SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Just some stained rock

ADEC
NAME Brian K. FitzSimons SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Only patchy stain/coat observed on Boulder/Rock
surface

LAND MANAGER
NAME Carol S. Huber SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Very high energy beach: Some staining
of cobbles/boulders noted. Very patchy
coating. Recommend continued natural
cleaning and monitoring.

REVISION NO. 08/21/88

SHORELINE OILING SUMMARY

REVISION NO. 03/28/88

OG B. Berglund USCG J. Gamble SEGMENT ST/ SM 47A
 BIO S. Schvett LAND REP C. Hinder (NES) SUBDIVISION A
 KON C. Levine ADEC B. Fritsimans TIME 11:40 to 12:25
 AM NO.: 1 TIDE LEVEL: 1.0 to 0.0 DATE 4/1/90
 EST. SUBDIVISION LENGTH: 518 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: _____ to _____
 SURFACE SEDIMENTS: R 40 % B 40 % C 15 % P 10 % G _____ % S _____ % M _____ % V _____ %
 SLOPE: Long 40 % Hang 30 % Vert 30 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W _____ m M _____ m N _____ m VL 303 m NO 218 m

SURFACE OIL

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

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

PATTIES / TARBALLS _____ BAGS

NEAR SHORE SHEEN? ☒ BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. 54-1-2

Frames 8

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR								PIT ZONE	A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		DO	UC	1	2	3	4	5	6	7	8			
1	30					\	.		\									\		B/C/P/G
2	30					\	.		\									\		B/C/P/G
3	20					\	.		\									\		B/C/P/G
							.													
							.													
							.													

COMMENTS

Occasional splatters or drips on tops of boulders or in cracks of bedrock. Oiling limited to a small zone in the UE near the end of the point. No subsurface penetration found. Shallow bedrock.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST / SM-07A Subdivision N/A Date (mo / day / yr) 4/1/90
Time (24 hr) 12:40 14:40 Biologist S. Schroeter

Substrate type and % of segments:

(1) Bedrock 40 (2) Boulder 47 (3) Cobble 10 (4) Pebble 3 (5) Sand 0 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 40 Moderate 40 Low 20

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

Photographs: Roll No. ST-1-2

Frames None

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

TROPODS

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: edge nest ~ 500m SW of SM-07A
no pinnipeds or others seen Sensitivity: Section & harbor seal pupping & molting
tent site, special use designation, herring spawning

Ecological Considerations: SM-07A surveyed at tide levels 70.0 so that
all 3 zones (U, M, L) were observed. This small segment
was predominantly bedrock & boulder & had moderate to dense
concentrations of barnacles, mussels, gastropods & Fucus in
the mid & upper intertidal.

Date: 4-1-90 Bio: S. Schroeter OG: Bret Borglund
Tide levels > 1.0

This segment was predominantly bedrock + boulder + had dense biota in most of the 3 tidal zones.

Some notable observations:

- (1) Moderate densities of Katharina tunicata among Bicuciosus in the mid intertidal
- (2) high densities of Halosaccus recruits on bedrock in the low + middle intertidal
- (3) Moderate to high densities of Alaria recruits in the mid + low intertidal zones + in pools in the high intertidal
- (4) Pisaster ochraceus in mid + high intertidal pools
- (5) Solaster dawsoni in mid intertidal pool

APR-02-1990 23:00 FROM DON BOLLINGER 2152 TO SCAT P.08

Page 9 of 9

OG Berglund
SEGMENT ST/ 47
SUBDIVISION A
DATE 4 / 1 / 90

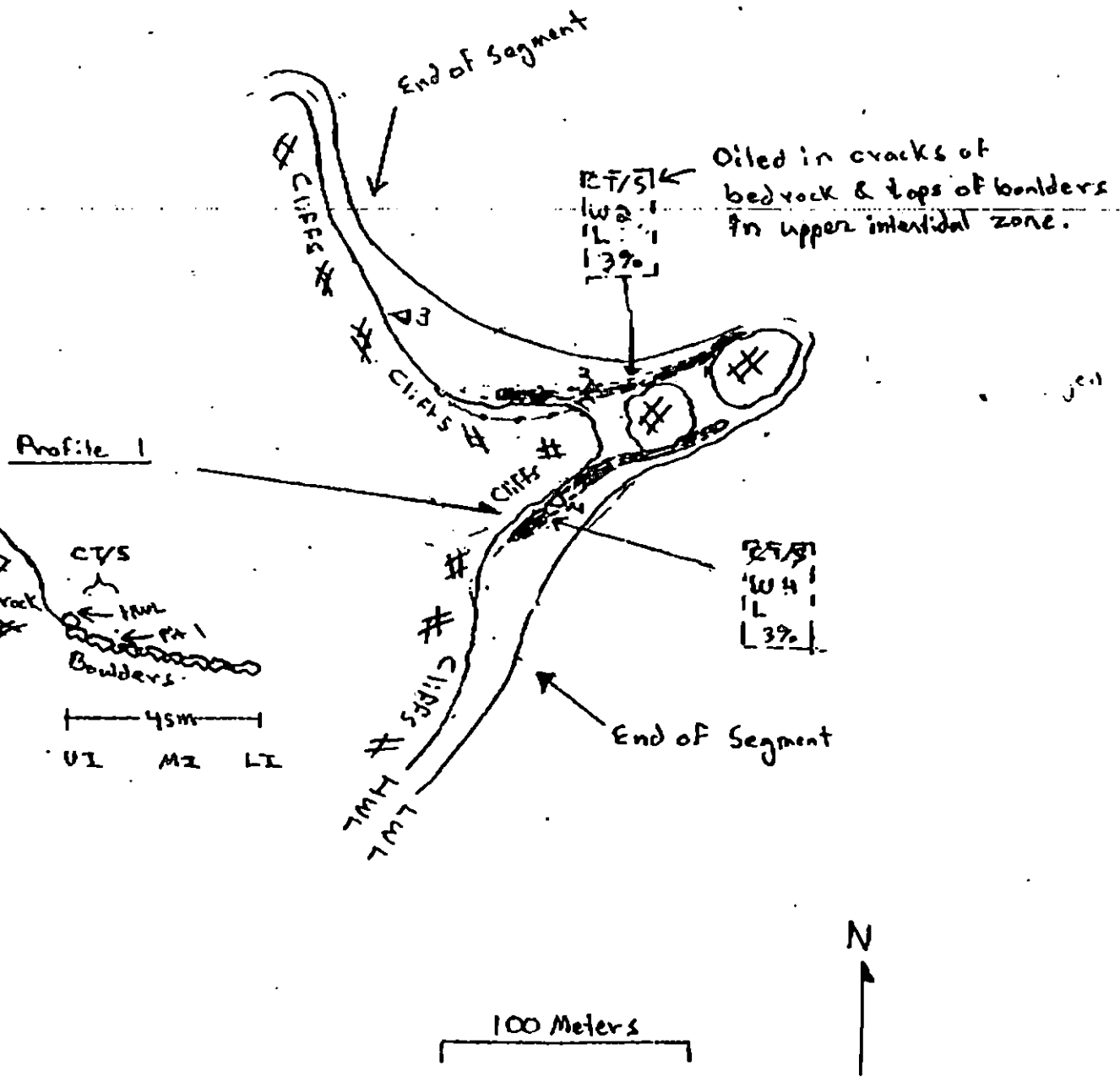
CHECKLIST

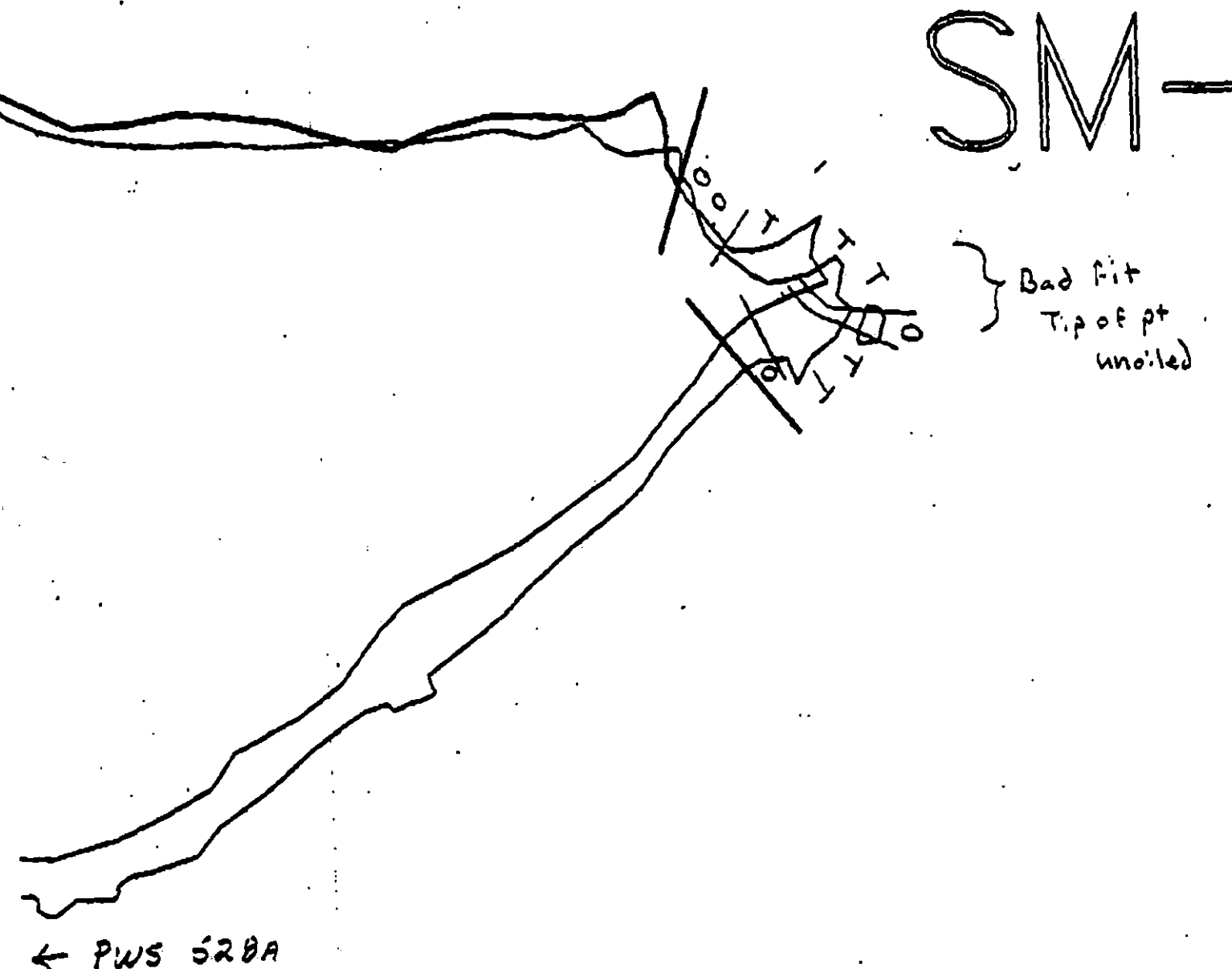
- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWLA/WL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 Δ
Pit - No Subsurface Oil
- 2 Δ
Pit - Subsurface Oil
- $\square$ CT/C
Continuous Distribution
- $\square$ CT/B
Broken Distribution
- $\square$ CT/P
Patchy Distribution
- $\square$ CT/S
Splashed Distribution
- $\square$ Oiled Vegetation
- 1 $\square$
Photo location, direction, and number
- --- oiled zone
- $\times$ Exposed Bedrock
- --- SSL if different than HWL
- $\square$ CT/S
W 4
L 20
% 30
oil character width length % cover

SKETCH MAP





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

SM-47A

ADEC Segment Length: 1958m



Map Key: PWS-5286

Name: B. Berglund

Date: 4/1/90

Data Entered:

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

6Y Recreation: Special use destination

SUBDIVISION ECOLOGICAL CONSTRAINTS:

SHPO SIGNATURE: Charles J. Jones DATE: 5/3/90

Wide 0 m: Medium 9 m: Narrow 0 m: V.Light 6 m: No Oil 55 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 45 cm

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

COMMENTS: Recommend bioremediation of areas of surface and subsurface oil as indicated on sketch map. No specific ecological time constraints identified.

MANUAL RAKE DOWN STORM BERM TO VITZ AREA TO B.O.

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/3/20
ADEC Art Weiner Art Weiner
EXXON Amyson Amyson
NOAA Gary P. Jones Gary P. Jones
USCG Kenneth K. Jones Kenneth K. Jones

FOSC: ML DATE: 5-8-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/1)
 1E Main Bay Hatchery release (4/20 to 6/10)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I Gill net area (8/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (8/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (8/1 to 9/15)
 6V Anchorages (8/1 to 9/15)
 6W Forest Service cabins (8/1 to 9/15)
 6X Lodge (8/1 to 9/15)
 Special use destination
- 7Z Subistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7H Deer harvesting (8/15 to 2/28)
 JJ 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/ SP-19 SUBDIVISION: A DATE 4-23-96

USCG

NAME AEC Vandepelt SIGNATURE AEC Vandepelt

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

I recommend no treatment, high energy area.

ADEC

NAME Michelle Baer SIGNATURE M Baer

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

By pits #5 and #6, rake area down to MITZ to expose OR layer @ 10-30 cm then fertilize.

By pits #1 and #2, use small machinery to till SUTZ and UITZ and bring area to MITZ. This will expose the buried OF layer continuing below 45 cm.

On B field to SE corner of beach, no treatment is recommended due to the high wave energy and difficult access.

LAND MANAGER

NAME Carol S Huber SIGNATURE Carol S Huber

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Recommend continued natural cleansing. High energy area.

*Resource sensitivity - Special Use Designation
Plentiful deer sign on beach.*

OG J. Springer USCG R. Vandepels SEGMENT ST/ SP-19
 BIO P. Crank LAND REP C. Huber SUBDIVISION A (1 OF 1)
 EXXON T. Tenblin ADEC M. Boer TIME 19:53 to 20:45
 TEAM NO. 5 TIDE LEVEL +3.10 +5 DATE 04/22/90
 EST. SUBDIVISION LENGTH: 178 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 5 % B 25 % C 50 % P 15 % G 5 % S 0 % M 0 % Y 0
 SLOPE: Long 90 % Hang 10 % Vert 0 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 40 m N 0 m VL 10 m NO 128

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0

PATTIES / TARBALLS 0 B.

NEAR SHORE SHEEN? (NO) BR RW SL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris			

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐

TYPE 0

#BAGS 0

Photographs:

Roll No. ...

Frames ...

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				A	N	A	SHEEN (Y/N)	!	SURF/ SUBSUR SEDIME
		CP	OR	OL	CP	NO		NO	UC	1	2	3	4	5	SU	U	M	L						
1	45				X		15-45	X		X					X									CP/C
2	30				X		10-30	X		X						X								CP/C
3	40					X	.		X							X								P/P
4	20				X		10-20	X				X			X									CP/C
5	30	X					10-30	X		X					X									CP/C
6	30	X					10-25		X	X					X									P/P

COMMENTS most oil is buried within the storm berm and probably underlies its entire length. There is a coat of oil on boulders on the east end of the beach where wave energy is deflected by the headland.

REVIEWED 7W DATE 4/24/90

00 J Springer
 SEGME 1 SP-19
 SUBDIVISION A
 DATE 04/22/00

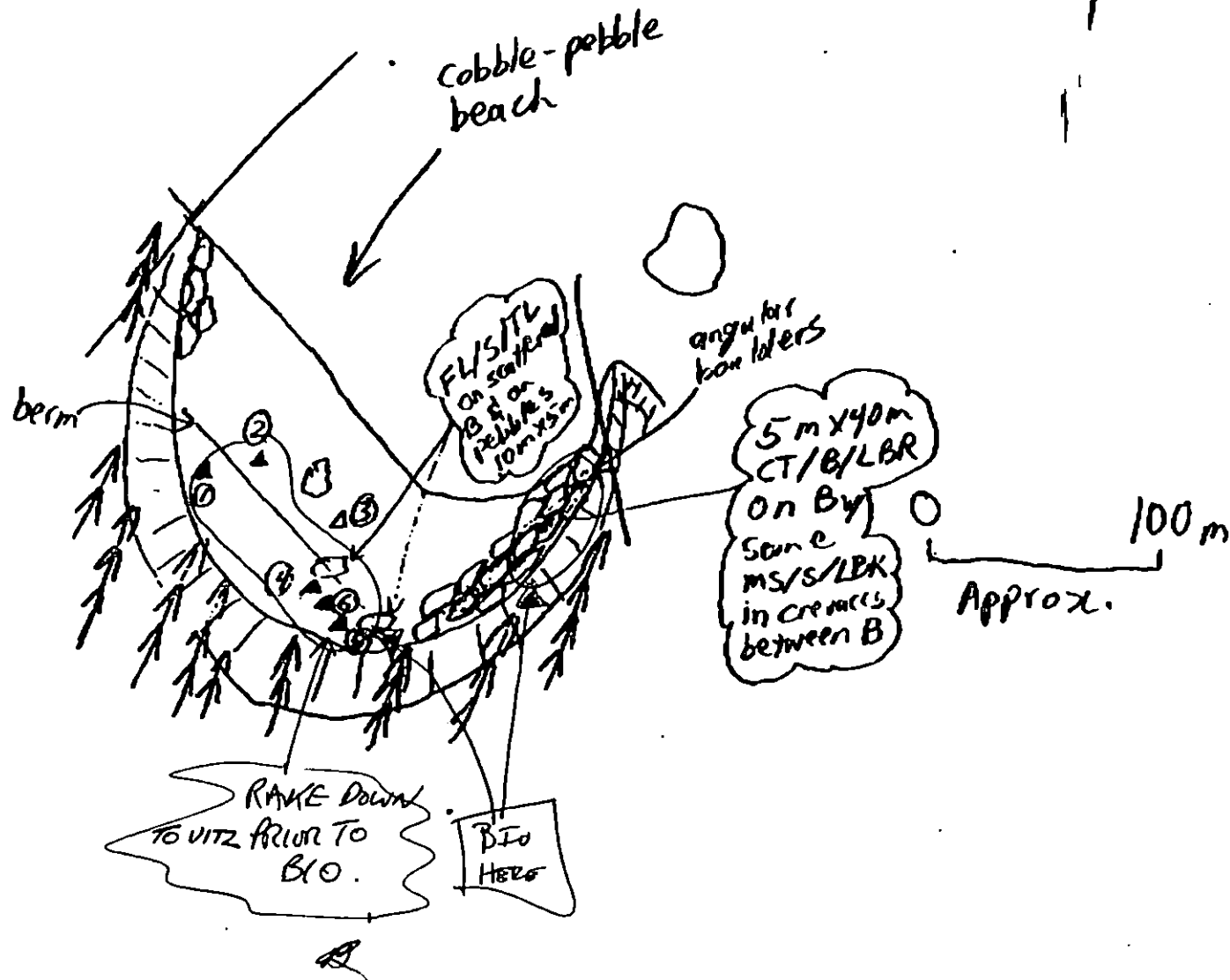
SKETCH MAP

CHECKLIST

- ☐ M Area
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Det.
- ☐ Whip
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWA/LWA
- ☐ SSI
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

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



Oil Character Length (m): AP _____ PO _____ CV _____ CT 40 ST _____ MS _____ PT _____ TB _____ FL 10 NO 128

SHORELINE ECOLOGICAL SUMMARY

Segment ST-5P-19 Subdivision A Date (mo / day / yr) 4/22/90Time (24 hr) 2000-2045 Biologist Crankpg 1 of 2

(A) Substrate type and % of segments:

(1) Bedrock S (2) Boulder 2S (3) Cobble 50 (4) Pebble S (5) Sand S (6) Gr(B) Overall % cover of biota (% of segment): Dense 2 Moderate 10 Low 90

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

Photographs:

Roll No. ST-5-7Frames 1

BARNACLES

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

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

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

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

NOT PRESENT

MYTILUS

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

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

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

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

NOT PRESENT

3

GASTROPODS

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

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

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

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

NOT PRESENT

FUCUS

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

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

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

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

NOT PRESENT

3

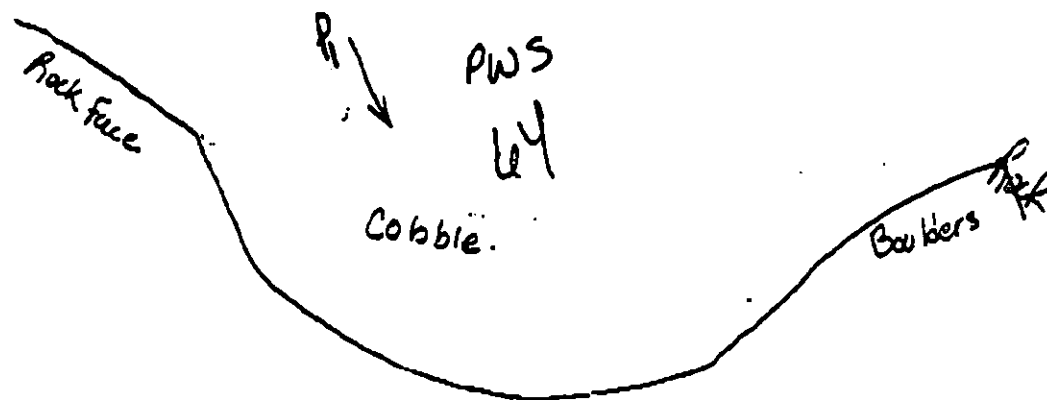
Wildlife Observations/ General Comments:

Deer Tracks - appears to have had high recent use.

Ecological Considerations:

W- Special Use Destination

Segment: ST/SP 19A Length: 178m Biologist: Crank
 Date: 4/22/90 Time: 2000-2045 Tide Height: +3 → +5

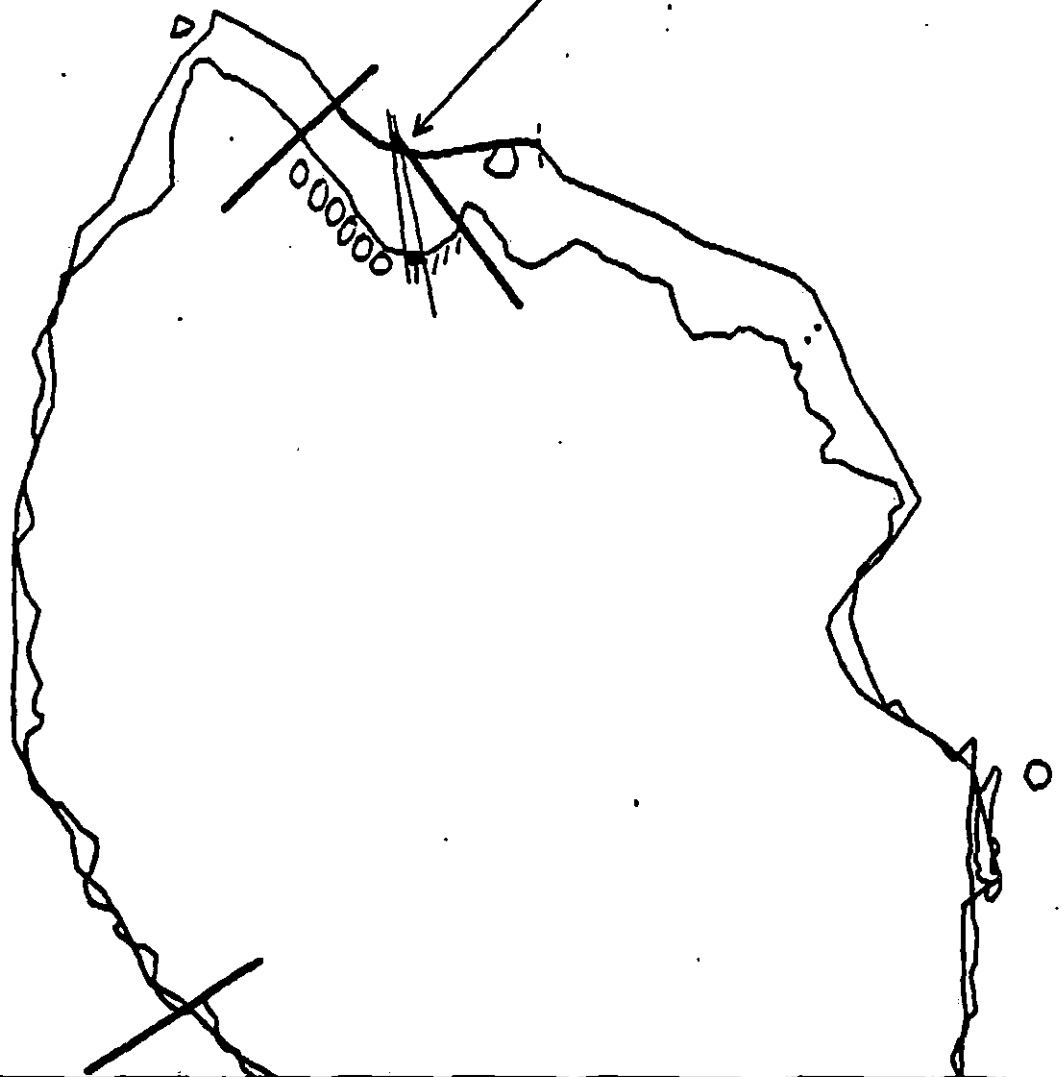


Comments

- Subdivision is primarily a cove with a cobble beach and low biotic cover.
- Deer tracks are prevalent throughout the SUPRA. There is a path from uplands to beach with dense tracks. Indicates heavy deer traffic.
- Along boulders on East side there are small patches of mussels. Recruitment is occurring in the cracks in the boulders. Mortality < 1%. Littorina are dense and continuous; limpets are sparse.
- Barnacle scarring accounts for 5% of LITZ rock and boulders; Mortality is 5-10% in unvoiled areas. 10-20% in oiled substrate.
- Headland algal coverage in LITZ similar to SP44C:
 - Odontalia
 - Cryptosiphonia
 - Alaria
 - Filamentous Greens
 - Ulva
 - Rhodomenia palmata.

Sheep talis with deer prints

SP-



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

SP-19

ADEC Segment Length: 178



Map Key: PWS-531

Name: James Spri

Date: 4/22/90

Date Entered:

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT SP-19 SUBDIVISION A DATED 7-31-90

MODIFICATION CLASS I CLASS II CLASS III X

1. REASON FOR MODIFICATION

STORM BERM RELOCATION WITH 6 PERSON SQUAD WILL TAKE SEVERAL DAYS,
BEACH IS ACCESSIBLE TO TRACK HOB USED BY SQUAD 10,
THERE ARE NO ECOLOGICAL CONSTRAINTS WHICH USE OF MECHANICAL EQUIPMENT
WOULD ~~DISRUPT~~ IN DISRUPT.
MECHANICAL RELOCATION OF BERM WOULD BE MORE EFFECTIVE W/ EXPOSING OILED
MATERIALS.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

ADD MECHANICAL RELOCATION OF STORM BERM;

3. TIMING ISSUES

NONE

Sent 7-31-90 @ 845/AM

Post-It™ brand fax transmittal memo 7671		# of pages >
To <u>FOSC</u>	From <u>Squad 10</u>	
Co. <u> </u>	Co. <u>Public Service</u>	
Dept. <u> </u>	Phone # <u>872-150-0654</u>	
Fax # <u>907-263-1236</u>	Fax # <u>872-150-2536</u>	

Post-It™ brand fax transmittal memo 7671		# of pages >
To <u>Bill Stillings</u>	From <u>Squad 10</u>	
Co. <u>EXXON</u>	Co. <u>Public Service</u>	
Dept. <u>OPS</u>	Phone # <u>872-150-0654</u>	
Fax # <u> </u>	Fax # <u>872-150-2536</u>	

ADEC Peter S. Frantz

EXXON J. K. Martin

USCG Don Hansen, LTJG, USCG

LAND MANAGER (If field rep is on scene)

WORK PLAN ADDENDUM

Segment SP-19

Subdivision A

Dated 8/2/90

MODIFICATION

1. REASON FOR MODIFICATION

- Joint request from field monitors

2. ADJUSTMENT TO WORK PLAN

- Add mechanical relocation of storm berm

SHPO APPROVAL NEEDED YES X
NO _____

SHPO SIGNATURE Rachel Jan Dale 2 Aug/90
STANDARD CONSTRAINT APPLIES

TAG APPROVAL DATE 8/2/90
ADEC JOHN BAUER John Bauer
EXXON ANDY TAN Andy Tan
NOAA Burt Wasscott Burt Wasscott
USCG D.D. ROME D.D. Rome

FOSC [Signature] DATE 8/8/90

SHORELINE EVALUATION

SEGMENT ST/ SP-43 SUBDIVISION A (1 OF 2) DATE 4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6Y Recreation: Special use destination

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Adams DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 105 m: Narrow 8 m: V.Light 0 m: No Oil 464 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

X Bioremediation

 Tarmat Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommend manual pickup of pom pom and bioremediation of
area shown on sketch map. No specific ecological time constraints
identified.

TAG COMMENTS: MANUAL REMEDIATION OF MOUND IF POSSIBLE
PRIOR TO BIO.

TAG APPROVAL DATE: 5/4/90

ADEC ART WENGER

EXXON ANN TEAL

NOAA Gary Petrac

USCG G.A. REITER

FOSC: my L DATE: 5-9-90

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

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

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

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

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

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

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

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

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

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

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

1H Remote release site

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ADF&G Don Calkins 267-2403

5P 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

6M 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)

7H Finfish harvesting

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

7J Invertebrate harvesting

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

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ SP 43 SUBDIVISION: A DATE 4-24-91

USCG

NAME AEC Vandepels SIGNATURE AEC Vandepels☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

ADEC

NAME Michelle Baer SIGNATURE Mbaer☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

DOM: Classic β shadow of oiling under and between β s.
 Oiling lies in upper 3 cm of pebbles. Recommend removal
 of mousse splashes with shovels ^{where possible} removal of snare boom.
 Bioremediation is questionable ~~for~~ for these conditions.
 Exxon representative denied access to field
 notes for this segment.

LAND MANAGER

NAME Carol S Huber SIGNATURE Carol S Huber☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Recommend continued natural
 cleansing. Oiled area confined to large
 boulders and bedrock outcrops which
 would not lend itself to low impact
 clean up. Does not appear to be mobil-
 izing leaching out into LITZ.
 Resource sensitivities - Tent sites and
 special use destination.
 Remove oiled pom poms in Storm Berr.

OG J. Springer USCG R. Vandepels SEGMENT ST/ SP-43
 BIO P. C. Smith LAND REP C. Huber SUBDIVISION A 1 OF 2
 EXXON T. Tambila ADEC M. Baer TIME 07:10:00
 TEAM NO. 5 TIDE LEVEL -1/2 TO +1/2 DATE 04/23/90
 EST. SUBDIVISION LENGTH: 550 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 10 % B 75 % C 10 % P 5 % G 0 % S 0 % M 0 % V 0
 SLOPE: Long 40 % Hang 50 % Vert 10 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 100 m N 5 m VL 0 m NO 445

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0

PATTIES / TARBALLS 0

NEAR SHORE SHEEN? (NO) BR RW SL

OILED DEBRIS	AMOUNT			DID YOU COLLECT DEBRIS?
	SM	MD	LG	
Logs				YES ☒ P Per. Po. TYPE <u>Can. M.</u> for <u>PO</u> #BAGS <u>1</u>
Vegetation				
Trash				
Debris		X		

Photographs:

Roll No. ST-S-7

Frames 2-4

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					BELOW	OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	SUR SUBS SED
		OF	OR	OL	OP	NO		1	2	3	4	5	N	M	V	L			
*1	30					X		X					X						CF

COMMENTS

* Pit 1 material has a very peculiar odor something like we diesel but medicinal. TL film on pebbles is not crua

REVIEWED 7W 4/25/91
DATE

0. J. 5p1 ci

EGMENT ST/ 5r-43

UBDIVISION A

DATE 04/23/60

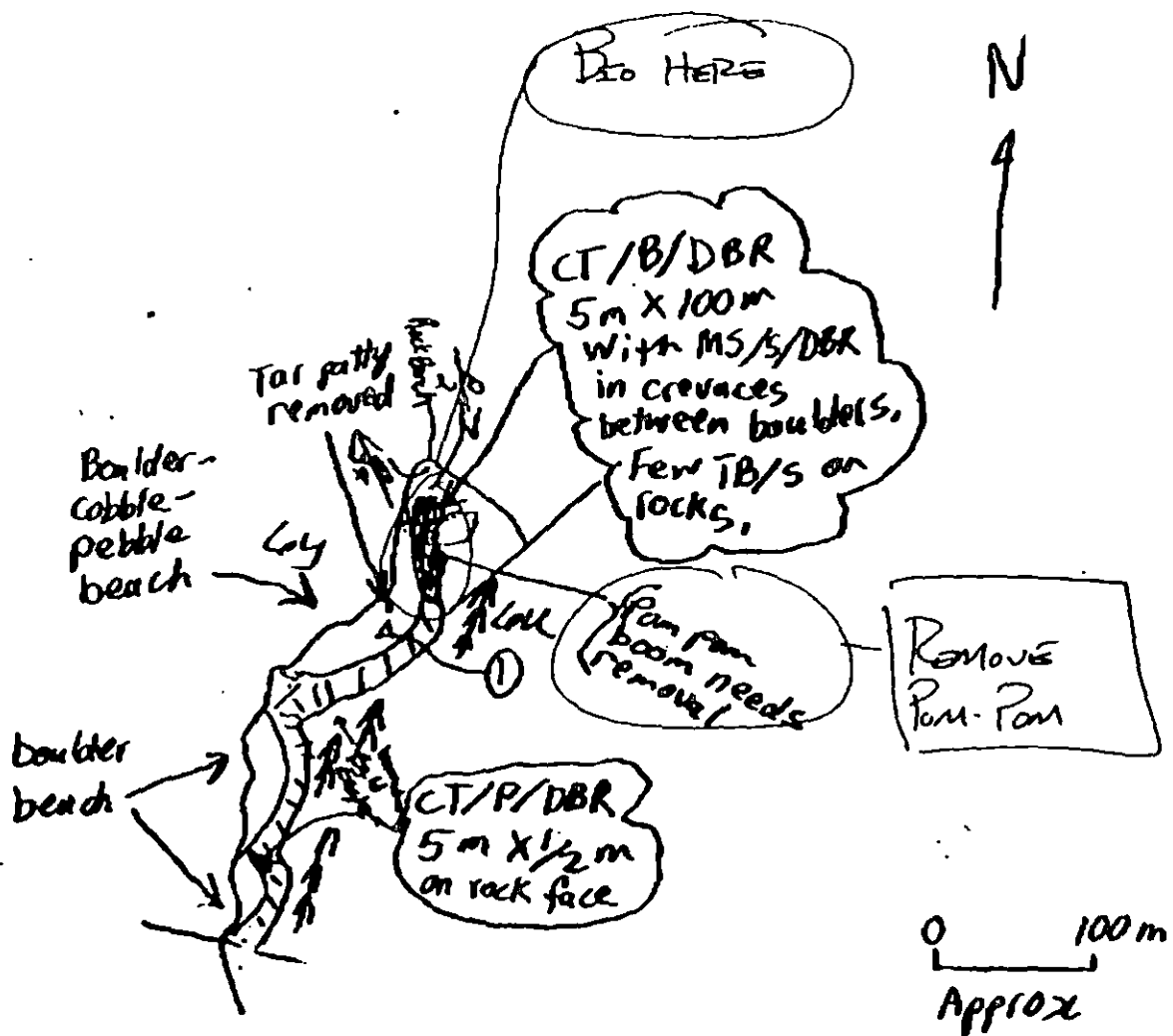
CHECKLIST

- ☐ N Area
- ☐ Approx. Size
- ☐ Substrate
- ☐ Oil Out
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LVL
- ☐ SCL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PH Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 Δ
- PH - No Substrate Oil
- 2 Δ
- PH - Substrate Oil
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Spotted Distribution
- lll
- Clad Vegetation
- 1 @
- From location, direction, and number

SK H MAP



Oil Character Length (m): AP PO CV CT 105 ST MS PT TB FL NO 445

000000000000

SHORELINE ECOLOGICAL SUMMARY pg 1 of 2

REVISION 201

Segment ST/SP 43 Subdivision A Date (mo/day/yr) 4/23/90

Time (24 hr) 0715-0815 Biologist [initials] Length: 550m
Tide/HgU: -1/2 to +1/2 ft

- (A) Substrate type and % of segments:
(1) Bedrock 10 (2) Boulder 75 (3) Cobble 10 (4) Pebble 5 (5) Sand (6) SL
- (B) Overall % cover of biota (% of segment): Dense 15 Moderate 35 Low 50
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

Photographs:
Roll No. ST-5-7

Frames 2, 3, 4

BARNACLES

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

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 PRESE

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 PRES

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 PRES

Wildlife Observations/ General Comments:

1-Raven
School. Pink smelts - about 300 individuals
17-Geese
1-Immature Bald Eagle

-Dense continuous algal cover in LIT2.

-Fucus fronds reproductive

-less than 1% Mussel mortality

-On LIT2 Rock 30% Barnacle mortality on oiled substrate, mostly juveniles - 15%

Ecological Considerations:

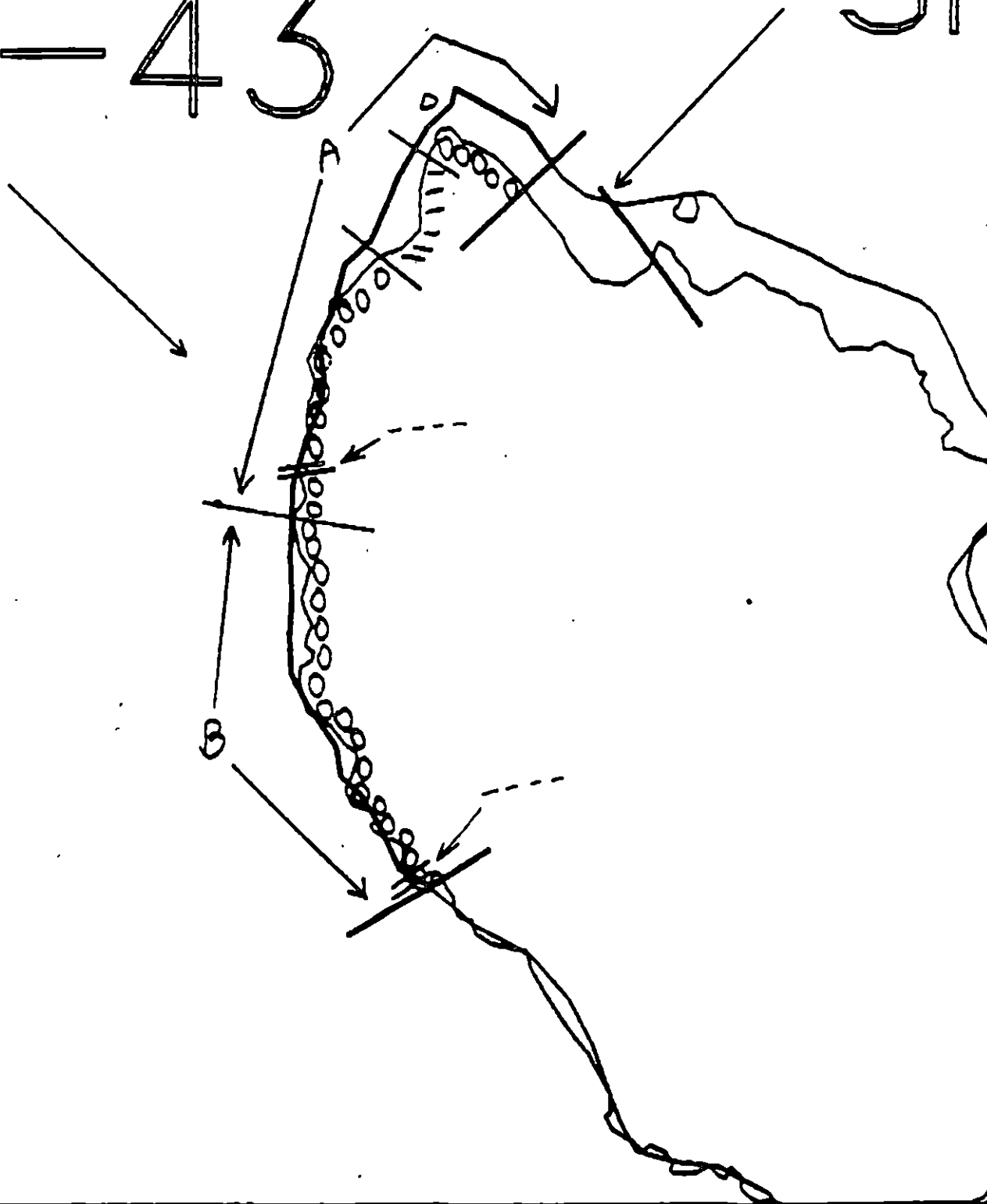
64-Special Use Designation
64-Tent Sites

Barnacle mortality on un-oiled surface.
-Rock Bench area used by eating clams, oysters, scallops.

Rock Bench, forming North border of segment, has dense mussels.
beds: LIT1, MIT2 and a rich, hilly tidepool area in LIT2 - distal.

SP-43

SF



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

SP-43

ADEC Segment Length: ⁹⁸⁹~~475~~m



Map Key: PWS-532

Name: James Spring

Date: 4/23/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ SP-43 SUBDIVISION B (2 OF 2) DATE 4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6Y Recreation: Special use destination

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles J. Hines DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 9 m: V.Light 0 m: No Oil 389 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/4/90
ADEC ART WENGER Art Wenger
EXXON ANDY TEN Andy Ten FOSC: W/L DATE: 5-9-90
NOAA GARY PETROG Gary Petrog
USCG G.A. PETER G.A. Peter

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/15)
 1E Main Bay Hatchery release (4/20 to 6/15)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I Gill net area (5/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (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 uncultivated intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Rothy 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (8/1 to 9/15)
 6V Anchorages (8/1 to 9/15)
 6W Forest Service cabins (8/1 to 9/15)
 6X Lodge (8/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7II Deer harvesting (8/15 to 2/28)
 7JJ Invertebrate harvesting
 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 267-2350

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ SP-43 SUBDIVISION: B DATE 4-24USCGNAME AEC Vandepelt SIGNATURE AEC Vandepelt☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTEDADECNAME Michelle Barr SIGNATURE MBarr☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

No oiling found throughout most of segment.
OT on southend of beach on surface only. leave
cleaning to high wave energy of area.

Exxon representative denied access to field
notes for this segment.

LAND MANAGERNAME Carol S Huber SIGNATURE Carol S Huber☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Recommend continued natural
cleansing for this high energy area.
Resource sensitivity - tent sites, special
use destination.

OG J. Springer USCG R. Vandepels SEGMENT ST/ SP-43
 BIO P. Frank LAND REP C. Huber SUBDIVISION B (2 OF)
 EXXON T. Tamplin ADEC M. Baer TIME 08:00 to 08:40
 TEAM NO. 5 TIDE LEVEL +1/2 TO +2 DATE 04/23/90
 EST. SUBDIVISION LENGTH: 439 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 25 % B 5 % C 40 % P 20 % G 10 % S 0 % M 0 % V 0 % C
 SLOPE: Long 55 % Hang 25 % Vert 20 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ Hig
 OIL CATEGORY LENGTH: W 0 m M 0 m N 15 m VL 0 m NO 42

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0

PATTIES / TARBALLS 0 E

NEAR SHORE SHEEN? (NO) BR RW SL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ N

TYPE 0

#BAGS 0

Photographs:

Roll No. ...

Frames ...

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	↓	SURF/ SUBSURF SEDIMENT
		OP	OR	OL	OF	NO		SO	SC	1	2	3	4	5	BU	M	U	L				
1	30					X	.		X						X							P/F
2	30					X	.		X						X							CP/F
3	30					X	.		X								X					PG/
							.															
							.															
							.															

COMMENTS

REVIEWED 7W DATE 4/29/91

SEGMENT

SP-43

SUBDIVISION

B

DATE 04/23/80

CHECKLIST

- ☐ N Angle
- ☐ Approx. Scale
- ☐ Day/Sea Entry
- ☐ OS Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HAZEL/BL
- ☐ DBL
- ☐ Profile Location(s)
- ☐ Photo(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

PT - No Subsurface Oil

2 Δ

PT - Subsurface Oil

CT/C

Coastal Distribution

CT/D

Broken Distribution

CT/P

Patchy Distribution

CT/B

Splashed Distribution

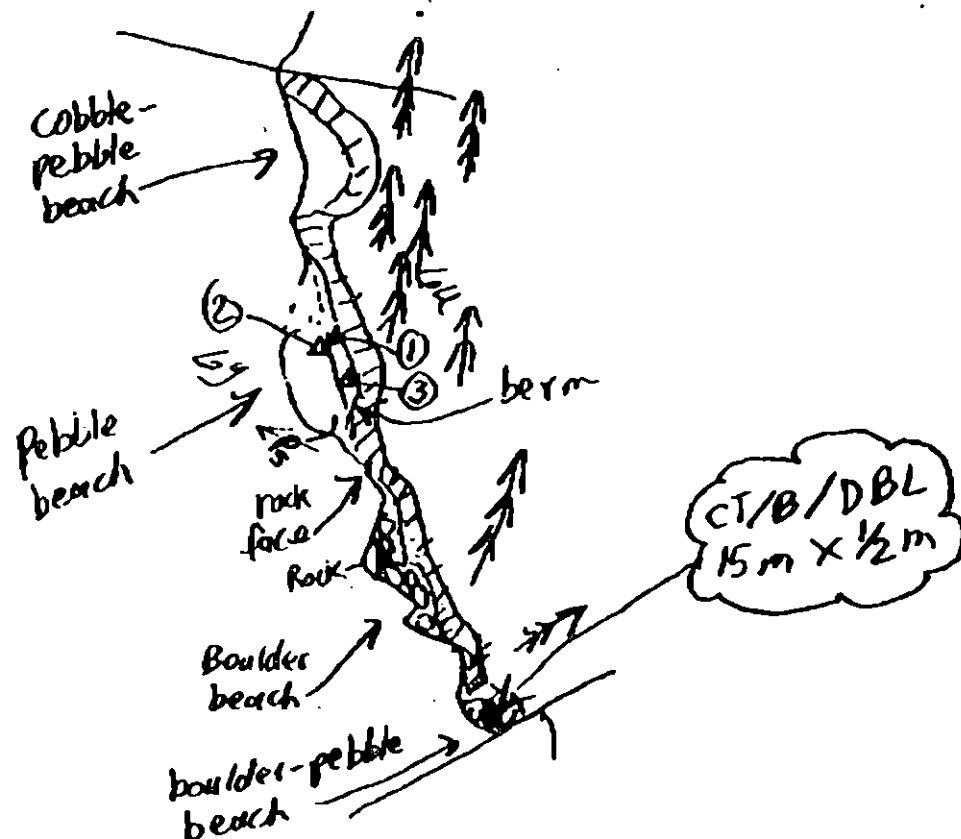
lll

Clad Vegetation

1 00

Photo location, direction,
and number

SKETCH MAP



OS Character Length (m):

AP

PO

CV

CT

15

ST

MB

PT

TB

FL

NO

424

SHORELINE ECOLOGICAL SUMMARY

Segment ST/SP 43 Subdivision B

Date (mo / day / yr) 4/23/90

Time (24 hr) 0815-0845 Biologist Crank

Length: 439 m

Tile Height: $+1/2 \rightarrow +2$ ft

(A). Substrate type and % of segments:

(1) Bedrock 25 (2) Boulder 5 (3) Cobble 40 (4) Pebble 20 (5) Sand 10 (6) Silt

(B) Overall % cover of biota (% of segment): Dense 15 Moderate 25 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-5-7

Frames 5

BARNACLES

X	Dense M	1L		1U	Moderate <u>(1M)</u>	1L		1U	Sparse 1M	X		M	Rare 1M	1
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 PRES

MYTILUS

[illegible]

NOT PRES

3

GASTROPODS

1	2	Dense	1L	1U	1M	2	3	Moderate	1U	1M	1L	1U	1M	Rare	1L
3	4	5	1	2	2	4	5	2	2	2	2	2	2	2	2
6	7	8	2	3	3	6	7	3	3	3	3	3	3	3	3
9	10	11	3	4	4	8	9	4	4	4	4	4	4	4	4
12	13	14	4	5	5	10	11	5	5	5	5	5	5	5	5
15	16	17	5	6	6	12	13	6	6	6	6	6	6	6	6

NOT PRES

FUCUS

[illegible]

NOT PRES

Wildlife Observations/ General Comments:

1-Gulf

1. Station

- Springing made up 75% of present patchy Fucus pop.
- Low to no benthic coverage on pebble & sand beach - suspected energy too high for most bio.
- Moderate benthic coverage in VIT - 14.17%

Headlands, seen in L172

- long. per. us. canini scoring feces
in LIT. < 1%.

- Less than 1% mussel mortality, burials
- 10% bivalve mortality on both oiled and uniled surfaces.

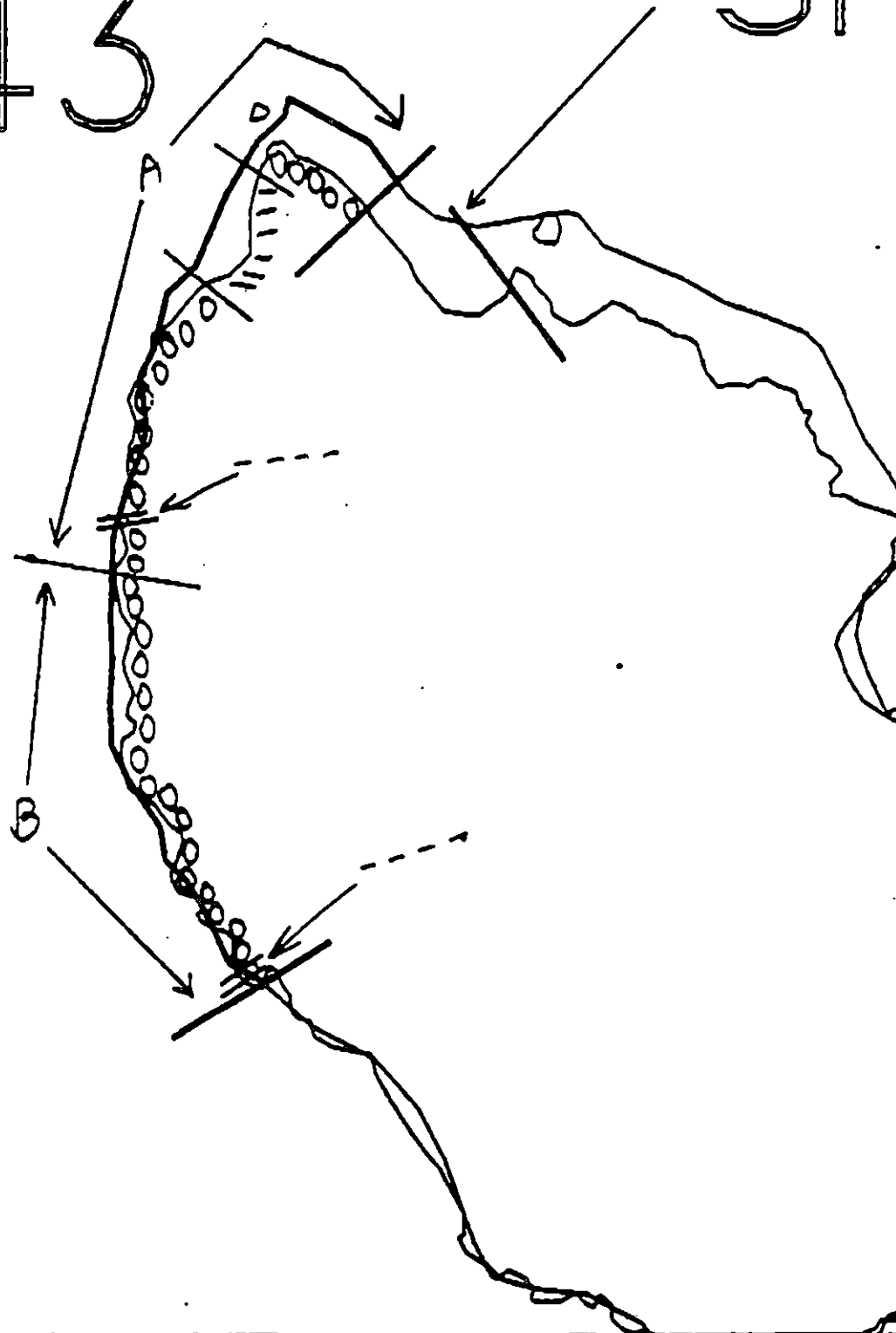
Ecological Considerations:

UU: Tortoise

47. Special Use Description

SP-43

SF



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

SP-43

ADEC Segment Length: ⁹⁸⁹~~975~~m

0 100 200 300
METERS

Map Key: PWS-532

Name: James Springs

Date: 4/23/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ SP-44 SUBDIVISION A (1 OF 3) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: *Charles G. Hoffman* DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 319 m: V.Light 82 m: No Oil 309 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

X No Treatment Recommended
 Treatment Recommended
 Manual Pickup
 Bioremediation
 Tarmat Removal

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/4/90

ADEC Art Wenger

EXXON Andy Ger

NOAA Gary Petree

USCG G.A. Reiter

FOSC: W L DATE: 5-9-90

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

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

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

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

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

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

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

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

1E Main Bay Hatchery release (4/20 to 6/10)

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

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

1H Remote release site

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ADF&G Don Calkins 267-2403

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Roth 267-2208

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

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation: Tent sites (8/1 to 9/15)

6V Anchorages (8/1 to 9/15)

6W Forest Service cabins (8/1 to 9/15)

6X Lodge (8/1 to 9/15)

6Y Special use destination

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

7-HH Finfish harvesting

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

7JJ Invertebrate harvesting

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

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / SP-44 SUBDIVISION: A DATE 4-23-

USCG

NAME AEC Vandepelt SIGNATURE AEC Vandepelt

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME Michele Baer SIGNATURE M Baer

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

The areas that contained oil were B fields or ^{headlands} ~~beaches~~ and difficult to access. The area is all high energy, most of the oil is ST ~~only~~ with occasional CT.

LAND MANAGER

NAME Carol S Huber SIGNATURE Carol S Huber

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Recommend continued natural cleansing for rocky headlands as well as high energy beaches. (Inert stain/coat)
Debris pickup for beach area only
treatment recommended.
Resource sensitivity - Special Use Destination

OG J. Springer USCG R. Vandepels SEGMENT ST/ SP-44
 BIO P. Crank LAND REP C. Huber SUBDIVISION A (1 OF 3)
 EXXON T. Tamblin ADEC M. Baer TIME 18:00 to 19:05
 TEAM NO. 5 TIDE LEVEL +1 TO +1 1/2 DATE 04/22/90
 EST. SUBDIVISION LENGTH: 745 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: NW to SE
 SURFACE SEDIMENTS: R 40 % B 25 % C 20 % P 10 % G 3 % S 2 % M 0 % V C
 SLOPE: Long 25 % Hang 35 % Vert 40 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 300 m N 225 m VL 80 m NO 420

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0

PATTIES / TARBALLS 0 BA

NEAR SHORE SHEEN? NO BR RW SL

OILED DEBRIS	AMOUNT			DID YOU COLLECT DEBRIS?
	SM	MD	LG	
Logs				YES ☒ NO ☐
Vegetation				
Trash		X		
Debris				
				TYPE <u>poly p.</u>
				#BAGS <u>1</u>

Photographs:

Roll No. ...

Frames ...

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE SUBSURF SEDIMENT
		OP	OR	OL	OF	NO		NO	DE	1	2	3	4	5	SV	W	M	U				
1	35					X	.		X							X						CG/P
2	20					X	.		X							X						BC/C
							.															
							.															
							.															
							.															

COMMENTS Stain & coat among boulders in upper intertidal zone of beach. Several pom poms were collected and some remain.

REVIEWED JW DATE 4/24/90

W. 1117

SEGMENT ST/ 44

SUBMISSION A

DATE 04/22/00

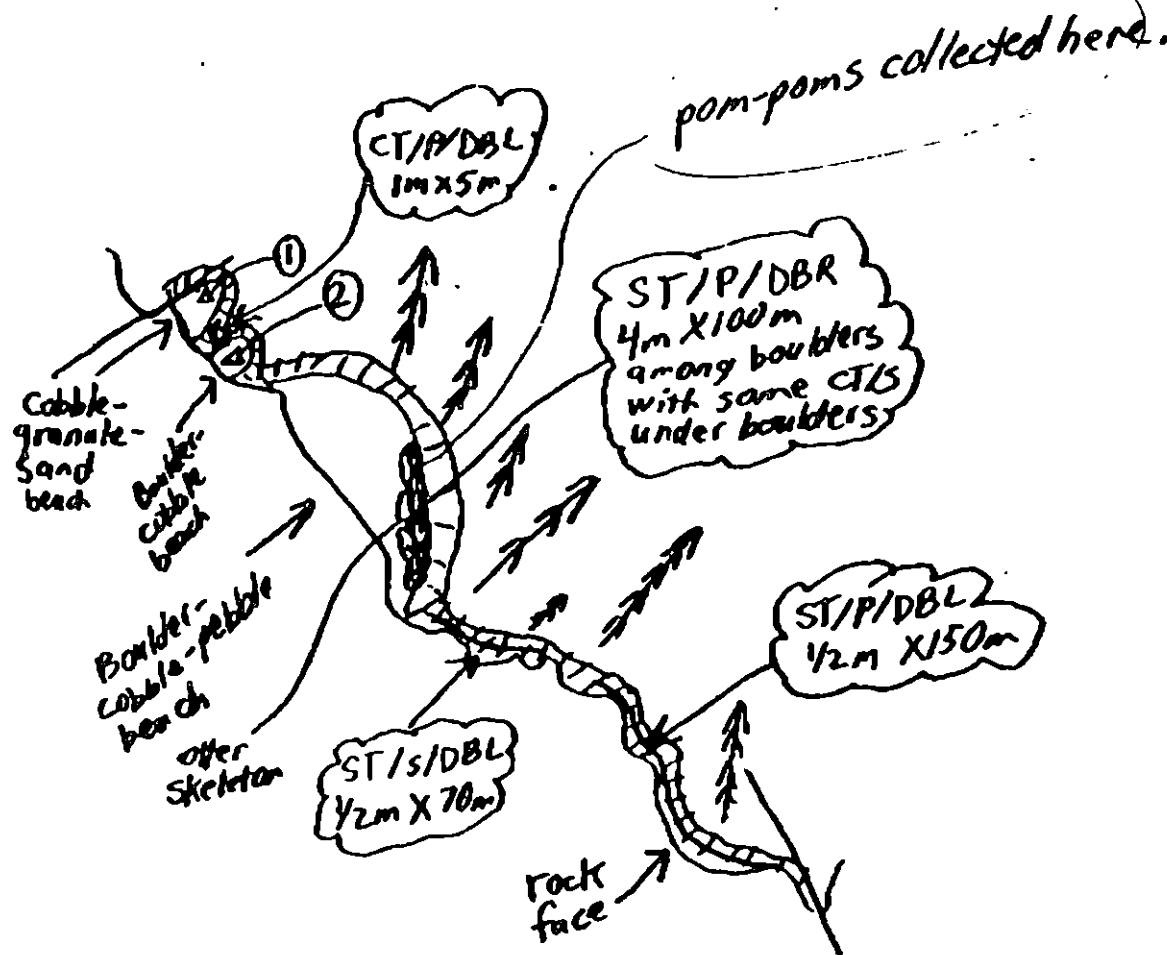
CHECKLIST

- ☐ N Area
- ☐ Approx. Scale
- ☐ Egg/Sub Body
- ☐ Cl. Dia.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LML
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PH Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 Δ
- PH - No Substrate Cl
- 2 Δ
- PH - Substrate Cl
- CT/C
- Continuous Distribution
- CT/D
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Splashed Distribution
- lll
- Clad Vegetation
- 1 <=>
- Photo location, direction, and number

SKETCH MAP



0 100m
Approx

Cl Character Length (m): AP _____ PO _____ CV _____ CT 5 ST 320 MS _____ PT _____ TB _____ FL _____ NO 420

REVISIONS

SHORELINE ECOLOGICAL SUMMARY

pg 1 of 2

Segment ST SP44 Subdivision A Date (mo/day/yr) 4/22/90

Time (24 hr) 1800 - Mr. Biologist Crank

- (A) Substrate type and % of segments:
 (1) Bedrock 40 (2) Boulder 25 (3) Cobble 20 (4) Pebble 10 (5) Sand 3 (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 40 Moderate 10 Low 50
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)
 Photographs: No photos
 Roll No. _____
 Frames _____

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

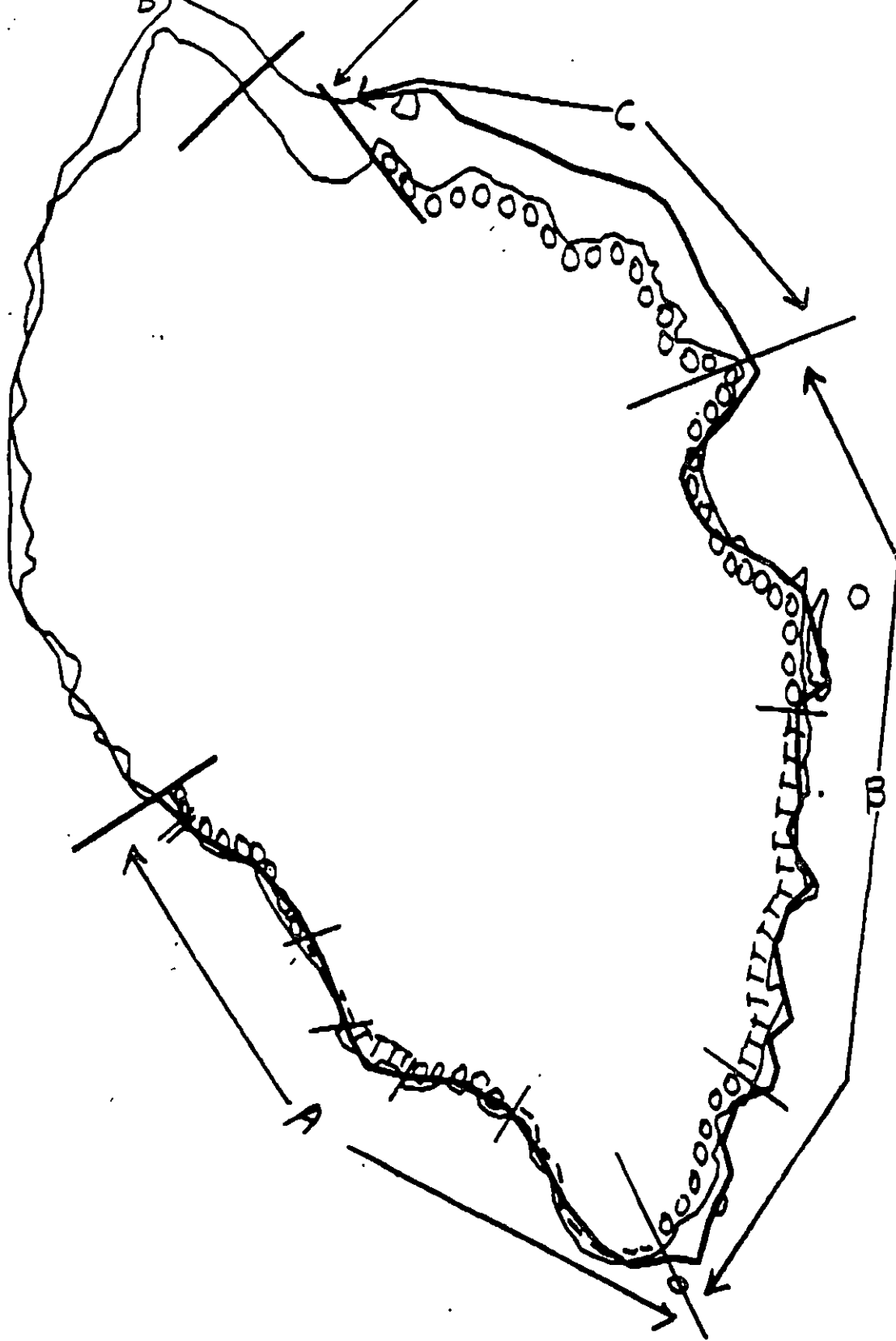
- Other bones. See Qy Map
 5 - Otters
 3 - Seals
 3 - Eagles
 1 - Duck
 2 - Cormorant

- 8 - Gulls
 3 - Pigeon Gulls/terns
 1 - Crow

Ecological Considerations:

WY-Special Use Designation

- Comments: - LITZ dense algae cover
 - Disproportionally 1m Mussel band along rock: k with less than 1% mortality, barnacles in cracks: cerastes.
 - Fucus fronds reproductive.
 - Area appears healthy.



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

SP-44

ADEC Segment Length: 2373
2170m

0 100 200 300
METERS



Map Key: PWS-533

Name: James Spring

Date: 04/22/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ SP-44 SUBDIVISION B (2 OF 3) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Humer DATE: 5/5/90

OILING CATEGORIZATION:

Wide_0_m: Medium_0_m: Narrow_0_m: V.Light_399_m: No Oil_655_m
Subsurface Oil Observed: Yes X No Maximum Depth 70 cm

RECOMMENDATIONS:

 X No Treatment Recommended
 Treatment Recommended
 Manual Pickup
 Bioremediation
 Tarmat Removal

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/4/20.

ADEC ART WEINER Art Weiner

EXXON *Amv 1542*

NOAA Gary Petrac Ray Petrac

USCG G.A. REITER G.A. Reiter

FOSC:

DATE:

DATE: 5-21-90

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / SP-44 SUBDIVISION: B DATE 4-23-77

USCG

NAME AEC Vandepels SIGNATURE AEC Vandepels

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME Mickule Baer SIGNATURE M Baer

☒ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

By pit ~~#5~~ and #4, area could be filled to expose OF layer at 65-70cm. ^{in the hole} Due to the high energy of the beach and small layer of oiling, I would consider this beach of low priority for treatment.

LAND MANAGER

NAME Carol S Huber SIGNATURE Carol S Huber

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Continued natural cleansing recommended. This is a very high energy beach. Minor amount of oil found mostly inert stain.
Resource sensitivity - Special Use Destination. Deer sign plentiful on beaches.

OG J. Springer USCG R. Vandepels SEGMENT ST/ SP-44
 BIO P. Crank LAND REP C. Huber SUBDIVISION B 12 OF 3
 EXXON T. Tamblin ADEC M. Borer TIME 19:05 to 19:50
 TEAM NO. 5 TIDE LEVEL +1 TO +2 DATE 04/22/90
 EST. SUBDIVISION LENGTH: 1000 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 50 % B 15 % C 20 % P 15 % G 0 % S 0 % M 0 % V 0
 SLOPE: Long 15 % Hang 40 % Ven 45 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 500 m NO 500

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0

PATTIES / TARBALLS 0 BA

NEAR SHORE SHEEN? (NO) BR RW SL T

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

Photographs:

Roll No. _____

Frames _____

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR				PIT ZONE				ANALYSIS	SURFACE SUBSURF SEDIMENT
		OP	OR	OL	OF	NO		US	UC	1	2	3	4	W	U	M	N		
1	30					X	.	X						X					P/BP
2	50					X	.	X							X				BP/PE
3	50					X	.	X						X					CP/CL
4	70				X		65-70	X	X						X				CP/CL
							.												
							.												

COMMENTS Subsurface oil on northernmost beach is buried un. 65 cm of clean material.

REVIEWED JW DATE 4/24/92

00 J. ... inger
 SEGMENT ST/ SP-44
 SUBDIVISION B
 DATE 04/22/60

CHECKLIST

☐ N Arrow
☐ Approx. Scale
☐ Seg/Sub Study
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HWL/VL
☐ SBL
☐ Profile Location(s)
☐ Profile(s)
☐ Pl Location(s)
☐ Photo Location(s)

LEGEND

1 Δ
 Pl - No Subsurface Oil

2 Δ
 Pl - Subsurface Oil

CT/C
 Concentrated Distribution

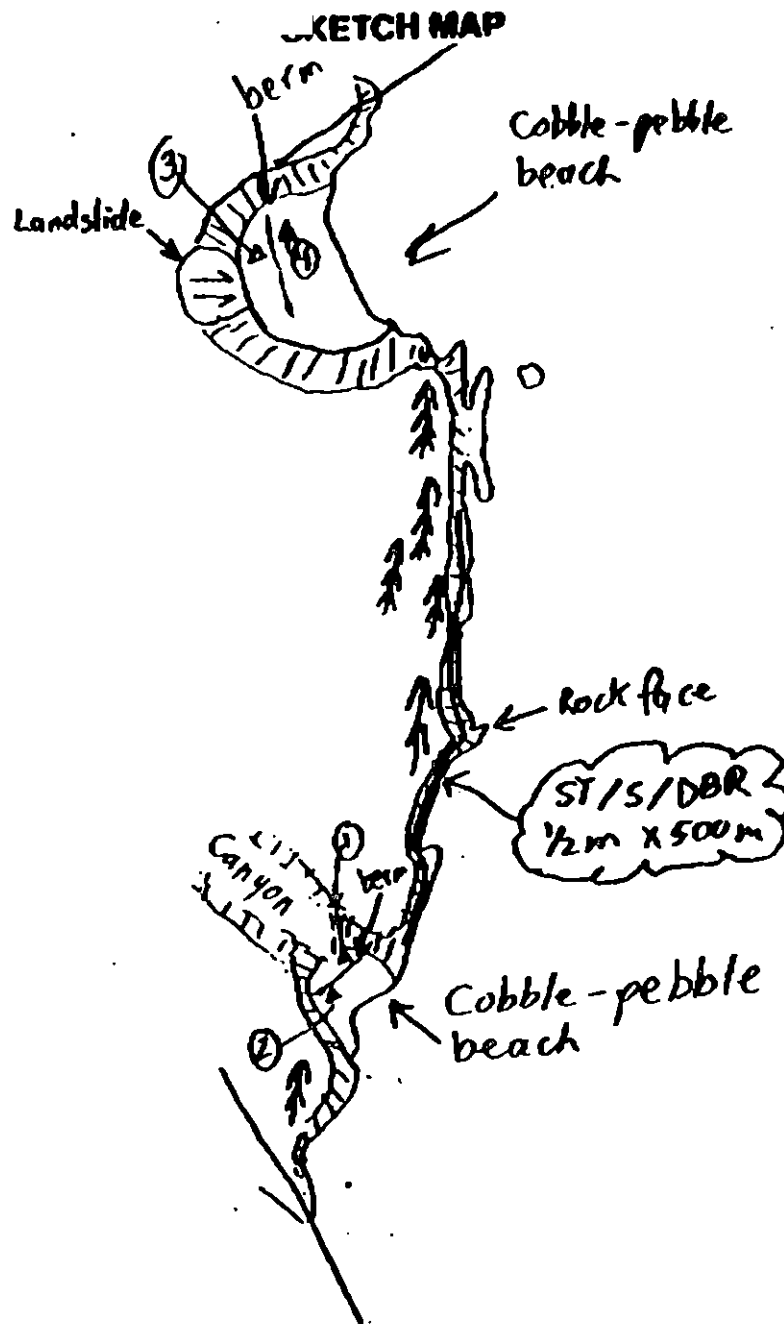
CT/B
 Broken Distribution

CT/P
 Patchy Distribution

CT/S
 Spotted Distribution

lll
 Other Vegetation

1 00
 Photo location, direction,
 and number



Oil Character Length (m): AP _____ PO _____ CV _____ CT _____ ST 500 MB _____ PT _____ TD _____ FL _____ NO 500

SHORELINE ECOLOGICAL SUMMARY

Segment ST SP 44 Subdivision B Date (mo / day / yr) 4 / 22 / 90Time (24 hr) 1405-1455 Biologist CrankPg 1 of 2

- (A) Substrate type and % of segments:
 (1) Bedrock 50 (2) Boulder 15 (3) Cobble 20 (4) Pebble 15 (5) Sand (6) SA
- (B) Overall % cover of biota (% of segment): Dense 35 Moderate 15 Low 50
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs: No photos
Roll No. Frames

BARNACLES

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

NOT PRESE

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 PRESE

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 PRESE

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 PRESE

Wildlife Observations/ General Comments:

5 other - includes 1 pup

4 Seal - 3 of them watched activity on beach.

1 Gull

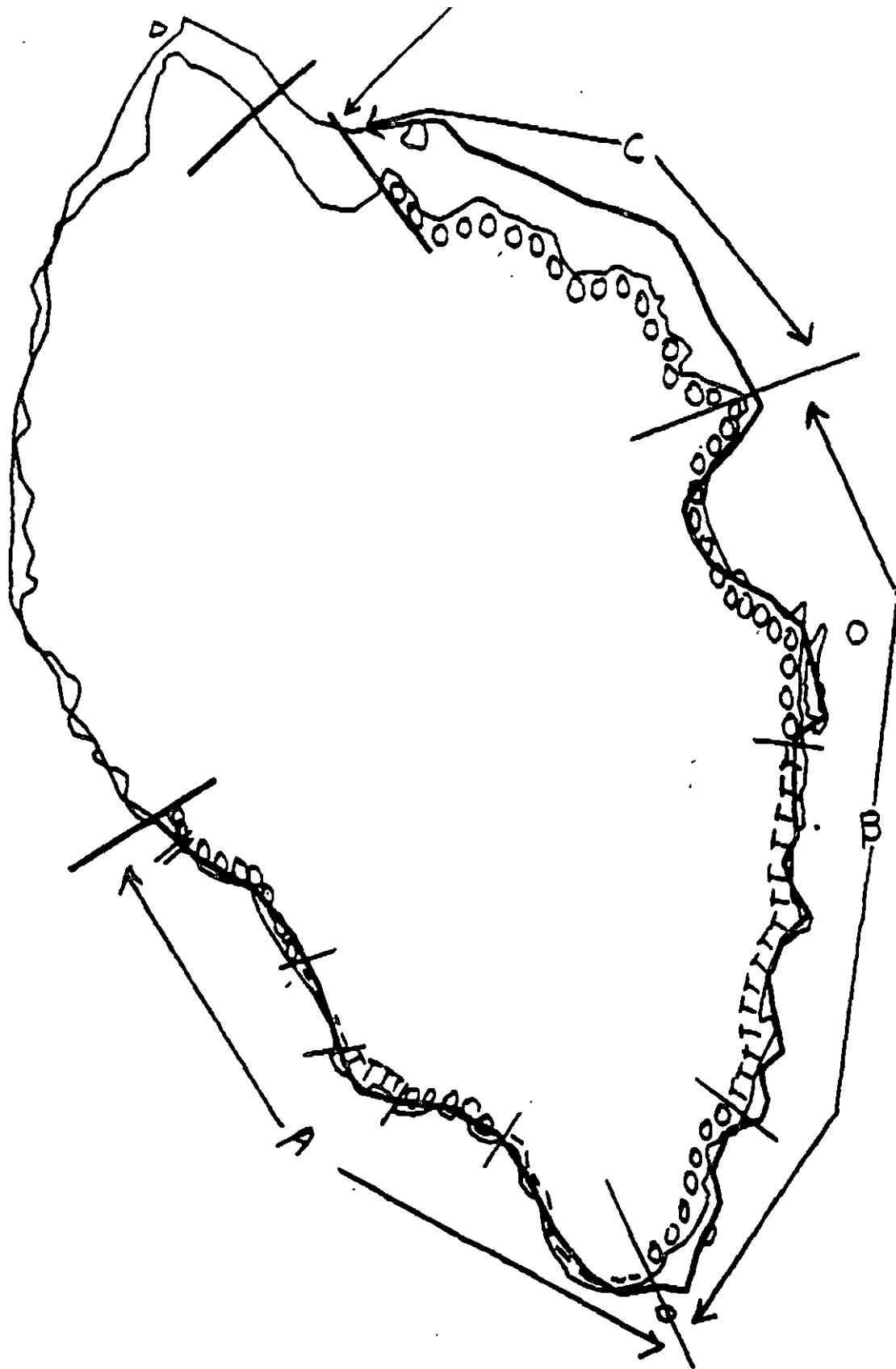
Ecological Considerations:

64-Special Use Destination

1-Eagle Deer tracks

- Area similar to SP44A with an increase in mussel concentration

- 5% Barnacle sea on VIT2/MIT2 Row



S

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

SP-44

ADEC Segment Length: 2373
2470m



Map Key: PWS-533

Name: James Spring

Date: 04/22/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ SP-44 SUBDIVISION C (3 OF 3) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE Charles E. Johnson DATE: 5/5/90

OILING CATEGORIZATION:

Wide_0_m: Medium_0_m: Narrow_0_m: V.Light_0_m: No Oil_415_m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

 X No Treatment Recommended
 Treatment Recommended
 Manual Pickup
 Bioremediation
 Tarmat Removal

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 3/4/90.

ADEC ART WENNER Art Wenner

EXXON Amoy TANK 

NOAA Gary Peterson

USCG G.A. HEITER / G.A. Heiter

FOSC: KL DATE: 5-9-90

DATE: 5-9-90

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/1)
 1E Main Bay Hatchery release (4/20 to 6/10)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I Gill net area (8/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (8/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3Q, 3O Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31).
 Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (8/1 to 8/15)
 6V Anchorages (8/1 to 9/15)
 6W Forest Service cabins (8/1 to 9/15)
 6X Lodge (8/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7I Deer harvesting (8/15 to 2/28)
 7JJ Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2358

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / SP-44 SUBDIVISION: C DATE 4-23-9**USCG**NAME AEC Vandepols SIGNATURE AEC Vandepols☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED**ADEC**NAME Michelle Baer SIGNATURE M Baer☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

*No oil found. Rocks in front of beach prevented access.
Assessment was from skiff only.*

LAND MANAGERNAME Carol S Huber SIGNATURE Carol S Huber☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

No oil observed.

OG J. Springer USCG R. Vandepels SEGMENT ST/ SP-44
 BIO P. Frank LAND REP C. Huber SUBDIVISION C (3 OF)
 EXXON T. Tamblin ADEC M. Baer TIME 19:52 19:53
 TEAM NO. 5 TIDE LEVEL +3 DATE 04/22/90
 EST. SUBDIVISION LENGTH: 628m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: SW to NE
 SURFACE SEDIMENTS: R 80 % B 10 % C 5 % P 5 % G 0 % S 0 % M 0 % V 0
 SLOPE: Long 10 % Hang 60 % Vert 30 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 628

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0

PATTIES / TARBALLS 0

NEAR SHORE SHEEN? NO BR RW SL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒

TYPE 0

#BAGS 0

Photographs:

Roll No. _____

Frames _____

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SHEEN (Y/N)	!	SURF / SUBSURF SEDIME
		OP	OR	OL	OP	NO		GO	UC	1	2	3	4	GO	U	M	U				

COMMENTS No pits dug. Difficult access - drove by in boat.

REVIEWED W

DATE 4/24/9

00 J. Springer
SEGMENT ST/ SP-44

SUBDIVISION C

DATE 04, 22/80

CHECKLIST

- ☐ H Area
- ☐ Approx. Size
- ☐ Significant Entry
- ☐ Oil Out
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. WAVELENGTH
- ☐ SBL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pt Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

Pt - No Substrate Oil

2 Δ

Pt - Substrate Oil

CT/C

Continuous Distribution

CT/B

Spoken Distribution

CT/P

Pointy Distribution

CT/S

Splashed Distribution

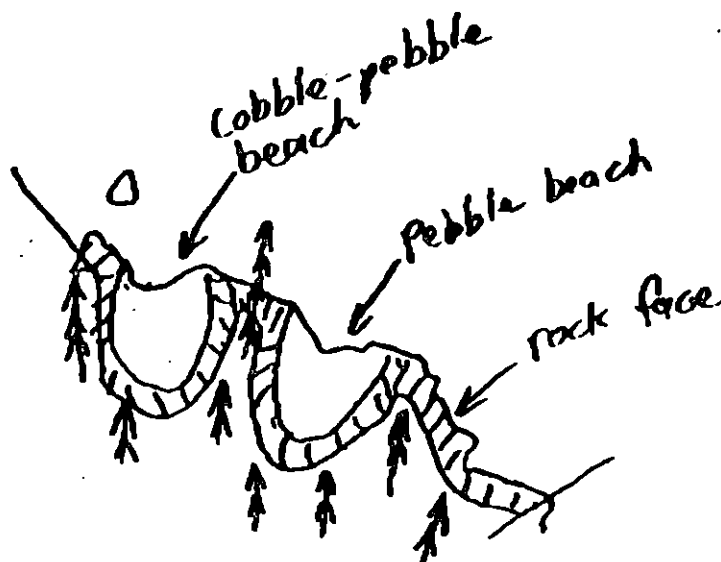
lll

Clad Vegetation

1 <

Photo location, direction,
and number

SKETCH MAP



0 100m
Approx

SHORELINE ECOLOGICAL SUMMARY

Segment ST SP 44 Subdivision C Date (mo / day / yr) 4 / 22 / 90
 Time (24 hr) 1955-2000 Biologist CranL Length: 428 m
 Tide Height: +3 ft pg 1 of 1

- (A) Substrate type and % of segments:
 (1) Bedrock 80 (2) Boulder 10 (3) Cobble 5 (4) Pebble 5 (5) Sand (6) SL
- (B) Overall % cover of biota (% of segment): Dense 35 Moderate 10 Low 55
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)
 Photographs: No photos
 Roll No.
 Frames

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

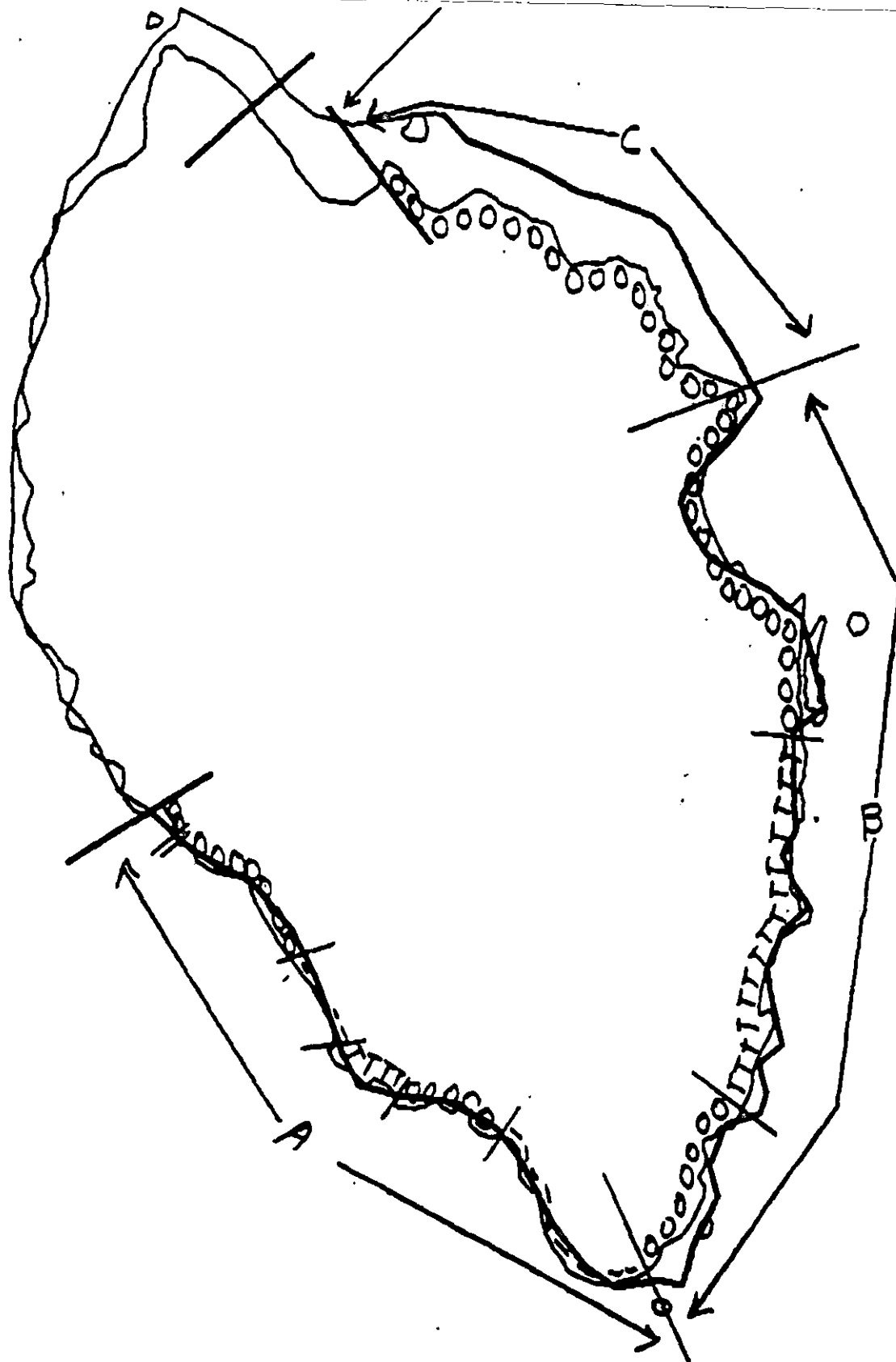
Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

- Headlands skiff surveyed 10-20 m out.
 - Subdivision distribution like SP44 A.
 - Mussel distribution not observed.
- Ecological Considerations:
 Did not land on boulders due to difficult access, therefore no data available for boulders, cobble, pebbles.
- 6Y - Special Use Designation

- Other Algal species in L1
- 1) Rhodomela palmata
 - 2) Alaria
 - 3) Ulva
 - 4) Lithothamnion
 - 5) Filamentous Greens



S

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

SP-44

ADEC Segment Length: 2373
2170m



Map Key: PWS-533

Name: James Spring

Date: 04/22/90

Date Entered:

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Seabird colony (5R) - 5/1 to 9/1; Active bald eagle nests (5T) -
3/1 to 6/1; Tent sites (6U) - 6/1 to 9/15. Limit air traffic and
general disturbance to essential minimum. Air approach and takeoff
to seaward only. Contact ADF&G Habitat Division prior to treat-
ment. Possible anadromous stream. Consult with ADF&G for verifica-
tion.

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

SHPO SIGNATURE: Charles E. Holmes DATE: April 12, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 2938m: No Oil 3307 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> <u> </u> Removal	<u> </u> Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/12/90
ADEC JOHN BAUER
EXXON ANDY TSE
NOAA Burl Wescott
USCG M.J. HALL

FOSC:

DATE: 4-19-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / SQ-001 SUBDIVISION: SQ-001A DATE 4/1/90

~~NAME~~
NAME Jeffrey Rablin SIGNATURE Jeffrey Rablin

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Thin band of oil at the upper Intertidal area. The band was intermittent throughout area.

ADEC
NAME Lori Stratton SIGNATURE Lori Stratton

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Observed VL to Narrow oil impact in a band at UI along rock faces. Splashes of oil was also too intermittent for treatment. Band was inaccessible for treatment, and not refloatable. SQ-001 is all one subdivision. Sensitive Salmon Stream is present in segment to be aware of.

LAND MANAGER
NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

NAT'L FOREST REP NOT AVAILABLE

SHORELINE OILING SUMMARY

REVISION NO. 06/28/92

OG K: DEBUSSCHERE ~~USCG~~ ^{MSA} Jeffery ~~Adlin~~
 BIO ~~Dan~~ REED LAND REP
 EXXON Tony Diaz ADEC Lori Stratton
 EAM NO.: 9 TIDE LEVEL: 0 to 6 FT DATE 9/1/90
 ST. SUBDIVISION LENGTH: 6452 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 45 % B 45 % C 5 % P 3 % G 2 % S <1 % M <1 % V <1 %
 SLOPE: Long 5 % Hang 55 % Vert 40 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 3226 m NO 3226 m

SURFACE OIL

CHARACTER	DISTRIBUTION					OIL / FILM COLOR					IMPACTED ZONES			
	10	15	20	25	30	35	40	45	50	55	SU	U	M	U
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT														
STAIN	X						X						X	
MOUSSE														
PATTIES														
TARBALLS				X			X					X		
ILM														
NO OIL											-		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. ST-9-1Frames 20

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	35	40	45	50	55	SU	U	M	U		
1	50					X	.								X					P & DEBRIS / C / P
2	30					X	.									X				P / G & S / C / G
3	40					X	.									Y				P / G P & S (4,0)
							.													
							.													
							.													

COMMENTS

SUBDIVISION WAS MOSTLY OBSERVED BY SKIFF; SHORELINE WAS
 LARGELY INACCESSIBLE; STEEP BOULDER BEACHES & CLIFFS
 LOCATION ⑤ IS A LARGE LAGOONAL AREA WITH SEVERAL STREAMS
 FLOWING OUT
 OILING CONSISTS OF A NARROW BAND OF 1 CONTINUOUS(OIL)
 STRAIN

SHORELINE ECOLOGICAL SUMMARY

REVISION: 0372.00

Segment ST/ SQ1 Subdivision A Date (mo / day / yr) 04/01/90Time (24 hr) 13:35-14:15 Biologist DAN REED

- (A) Substrate type and % of segments:
 (1) Bedrock 45 (2) Boulder 45 (3) Cobble 5 (4) Pebble 3 (5) Sand 2 (6) Silt 41
- (B) Overall % cover of biota (% of segment): Dense 40 Moderate 30 Low 30
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (O)
- Photographs: ST-9-1
 Roll No. ST-9-1
 Frames 20

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

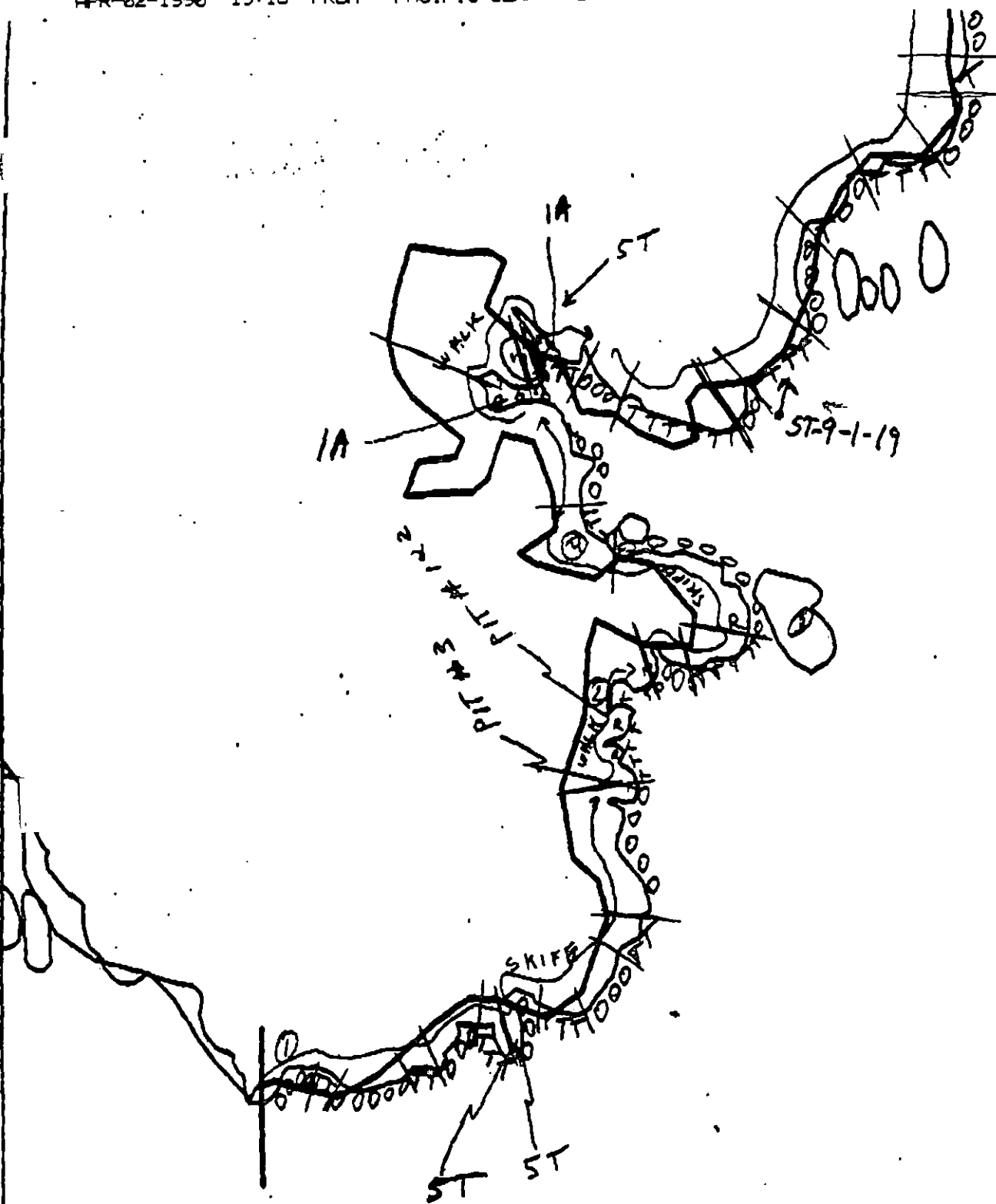
Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

NOT PRESENT

Wildlife Observations/ General Comments:

9 mature Bald Eagles, 1 immature, 3 NESTS, 2 stream mouths likely salmon spawning streams.

Ecological Considerations:



XXXX Wide

SQ-1

// Medium

--- Narrow

ADEC Segment Length: 6452m

TTTT Very Light

0000 No Oil

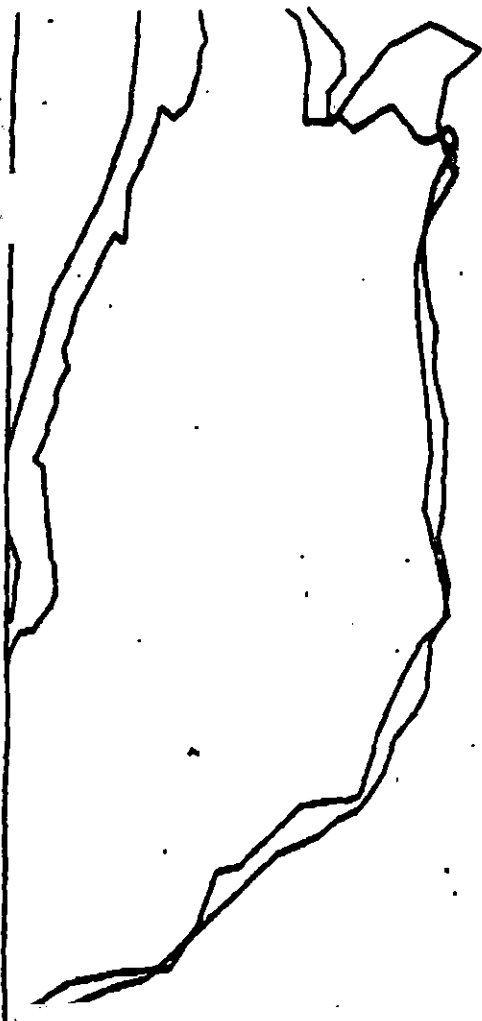


Map Key: PWS-0740

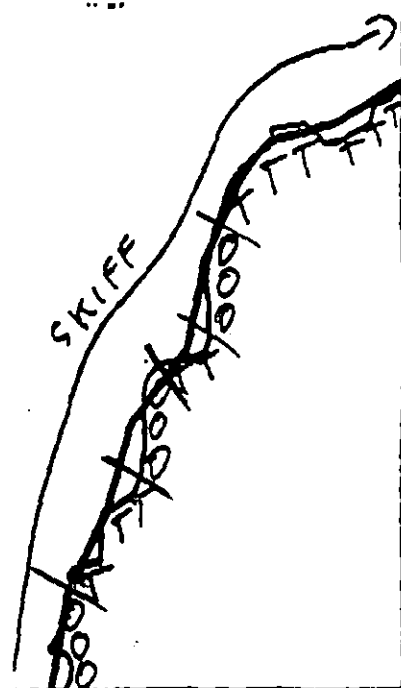
Name: K. DERUSSCHER

Date: 4/1/90

Date Entered:



SQ-



XXXX Wide

// Medium

--- Narrow

TTTT Very Light

0000 No Oil

SQ-1

ADEC Segment Length: 6452m

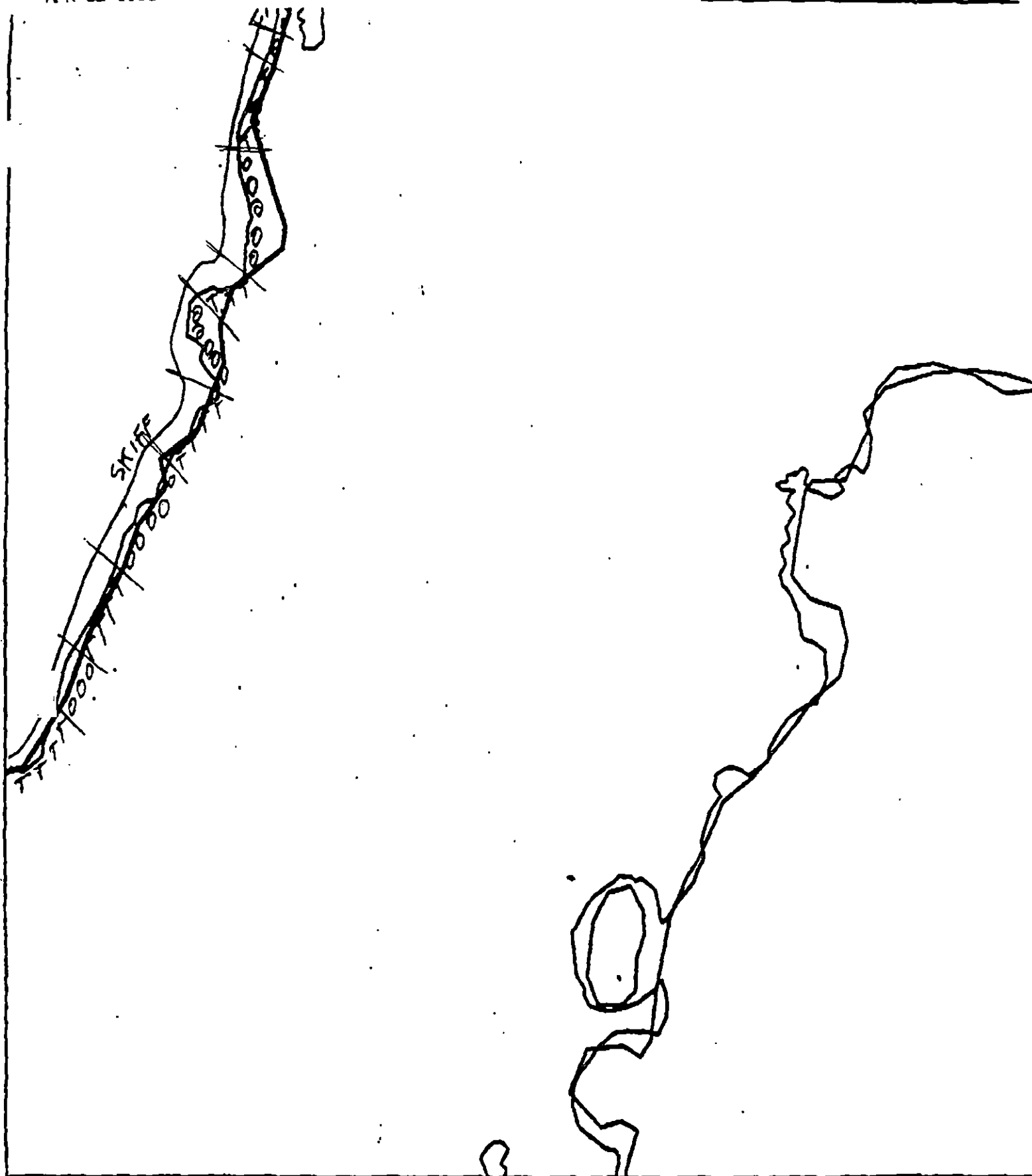


Map Key: PWS-674c

Name: K. DEDUSCHENKO

Date: 4/1/90

Date Entered:



XXXX Wide

SQ-1

// Medium

--- Narrow

ADEC Segment Length: 8452m

TTTT Very Light

0000 No Oil

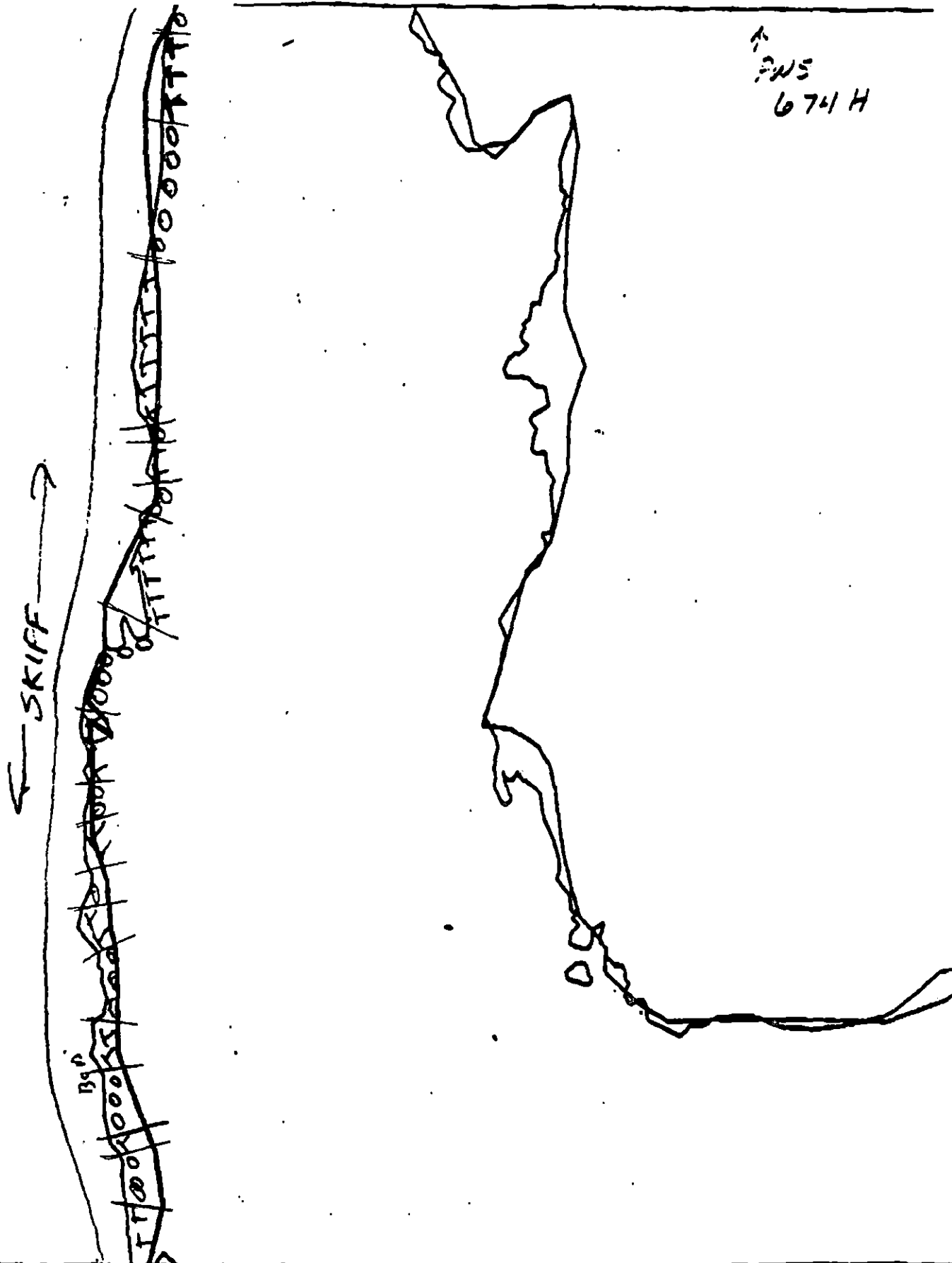


Map Key: PWS-874d

Name: K. DEBOSSCHERF

Date: 4/1/90

Date Entered:



↑
PWS
6741 H

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

SQ-1

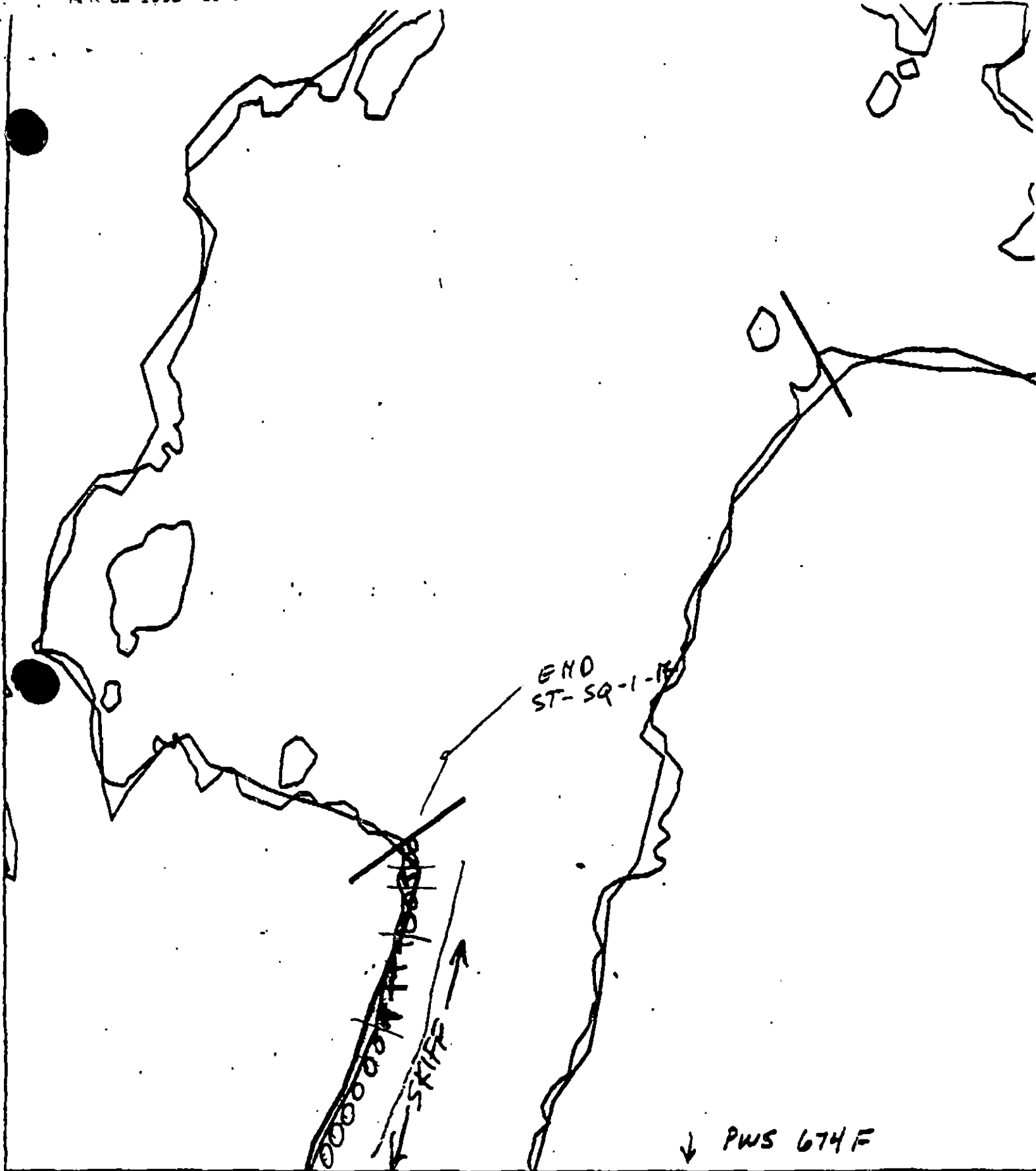
ADEC Segment Length: 6452m



Map Key: PWS-6741

Name: K. DEBUSSCHEDate: 4/1/90

Date Entered:



XXXX Wide

SQ-1

/// Medium

--- Narrow

ADEC Segment Length: 6452m

TTTT Very Light

0000 No Oil

0 100 200 300
METERS

Map Key: PWS-674h.

Name: K. DERUSSCHEREDate: 4/1/90

Date Entered:

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid unnecessary disturbance of unoiled substrate and biota.

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

OILING CATEGORIZATION:

Wide 0 m: Medium 91 m: Narrow 923 m: V.Light 1592m: No Oil 1449 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>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: Bioremediate areas of coat in locations 3 & 8. Pick up debris in location 3 as indicated on sketch map. Bioremediation not recommended for boulders and vertical rock faces. Work after 6/1 based on eagle nesting.

TAG COMMENTS:

TAG APPROVAL DATE: 4/14/90
ADEC John P. Acker
EXXON Andy T. K. FOSC: Y DATE: 4-22-90
NOAA Barl Weccott
USCG G.A. Reiter

PWS ECOLOGICAL CONSTRAINTS

SQ-02-A

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / SQ-2 SUBDIVISION: SQ-2A DATE 4/2/90

104A

NAME Jeffrey Doherty SIGNATURE Jeffrey Doherty

☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

~~There are still areas where there are significant amounts of oil, Location 2 & 8 (see map) had oil under the boulders that could cause sheering. It is a very sheltered environment. The oil was under the boulders. In location 8 (see map) oil was sheering of the bottom of the sediment. It appeared as if the area had been cleaned with high pressure hot wash last year. Some of the rocks were here of all life.~~

ADEC

NAME Lori Stratton SIGNATURE Lori Stratton

☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

This subdivision has broken medium coat of weathered oil (in location #8). It is apparent that hot water wash was used here last year. Mussel and barnacle + fucus populations are very sparse, so possibly steam spot washing may remove surface coats. (with blanket) Bioremediation may treat oil behind boulders. It may be too weathered to be removed and needs to be looked at when temperatures rise to see if the oil becomes softer. Sheen was observed coming off of sediments in water.

LAND MANAGER

NAME OVER SIGNATURE

☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

NAT'L FOREST REP. NOT AVAILABLE

SQ-2A

(Cont. ADEC comments:)

- In Location #2 the narrow broken coat on boulders should be manually cleared if possible. The subsurface oil was observed and indicates that is in one spot, so it should be removed manually from behind boulders by wiping + digging away the sediments.
- At Location #3, indications of oil were observed at SU[#], but ice and snow prohibited search. Survey of the area under logs and subsurface sediments after thaw should be conducted to determine the extent of oiling.

Louie Stratton 4/2/90

SHORELINE OILING SUMMARY

REVISION NO. 03/22/98

OG K. DEBOSSCHERE ^{NAME} Jeffrey Dehlin SEGMENT ST/ SQ-2
 RIO D. Reed LAND REP Subdivision A (1 of 1)
 XXON Tony Diaz ADEC Lori Stratton TIME 10:20 to 13:20
 TEAM NO.: 9 TIDE LEVEL: 6 to 1 FT DATE 4/12/90
 EST. SUBDIVISION LENGTH: 5893 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 25 % B 40 % C 15 % P 15 % G 3 % S 2 % M 1 % V 1 %
 SLOPE: Long 60 % Hang 20 % Vert 20 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 236 m N 1473 m VL 2593 m NO 1591 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	R	B	P	S	SP	OR	OL	OP	NO	TL	LR	LA	SU	U	M	L
ASPHALT PAVEMENT																
POOLED																
COVER		X			X								X			
COAT		V		O _x	O _v		X		O	X	O					
STAIN																
MOUSSE				X								X			X	
PATTIES																
TARBALLS				X		V						X		X		
FILM			X					X								X
NO OIL																

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

LOCK 7/10/1

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	X		
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE #BAGS

Photographs:

Roll No. ST-9-1Frames 20-728

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	SP BP	OR FW	OL TL	OF TL	NO LR	SU	UR	MS	U			
1	±40					X	-										X			C/G		
2	±30					X	-										X			G/C/S & G (H ₂ O)		
3	±50		X				0.20		X				X			X				(B) C/B		
4	±30					X	-									X				G		
5	±40					X	-									X				G/G & S		
6	±40					X	-										X			G/S/C/S & G		

COMMENTS

- SEGMENT IS DOMINATED ROCKY HEADLANDS AND POCKET BEACHES.
 - MOST SIGNIFICANT OILING IS IN LOCATION ⑧ - BEACH SHOW EVIDENCE OF PREVIOUS TREATMENT - OIL SHEEN WAS PRESENT IN H₂O - PIT IN LOWER INTERTIDAL DID NOT REACH OILED SEDIMENTS BUT OIL SHEEN DEVELOPED IN PIT 1 - OIL IN UPPER INTERTIDAL WAS VERY WEATHERED - LOCATION ⑧ IS LOW ENERGY / PROTECTED ENVIRONMENT.

REVIEWED DATE 4-9-90

SHORELINE OILING SUMMARY (PAGE 2 of 11)

REVISION 03/22/90

SEGMENT ST/ SQ-2 SUBDIVISION A

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	BR	BL	FR	FL	GR	GL	TR	TL	SU	U	M	L		
LOC ① [7	±15					X	.											X					G/G & S
8	±15					X	.											X					G/G & S
LOC ⑤ [9	±40					X	.													X			G/S (H ₂ O) & G
10	±30					X	.											X					C/B
LOC ⑦ [11	±20					X	.											X					C/G & P & C
12	±30					X	.													X			P/C/S/H & G
LOC ⑧ [13	±30					X	.											X					P & C/G & P & S
14	±15				X		5-15	X			X									X			C & P/H ₂ O/G & P
							.																
							.																
							.																
							.																
							.																
							.																
							.																

COMMENTS

LOCATION ⑦ HAS POTENTIAL OF OILED LOGS IN SU

REVIEWED JW DATE 4-4-90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / SQ2 Subdivision A Date (mo / day / yr) 04/02/90
 Time (24 hr) 1020-1315 Biologist Reed

- (A) Substrate type and % of segments:
 (1) Bedrock 25 (2) Boulder 40 (3) Cobble 15 (4) Pebble 15 (5) Sand 5 (6) Silt _____
- (B) Overall % cover of biota (% of segment): Dense 30 Moderate 30 Low 40
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
 Roll No. ST-9-1
 Frames 20 → 28

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

3 RIVER OTTERS, 1 sea OTTER, 2 mature eagles
 LOCATION ⑧ on computer map site APPEARED to have been treated by
 hot-water. FUCUS and mussels DEAD in these areas, AND FEW SIGNS OF

Ecological Considerations:

NEW COLONIZATION.

NO STREAMS IN THIS SECTION.

OG K. DESSCHER

SEGMENT ST/SA-2

SUBDIVISION A

DATE 4, 2 90

CHECKLIST

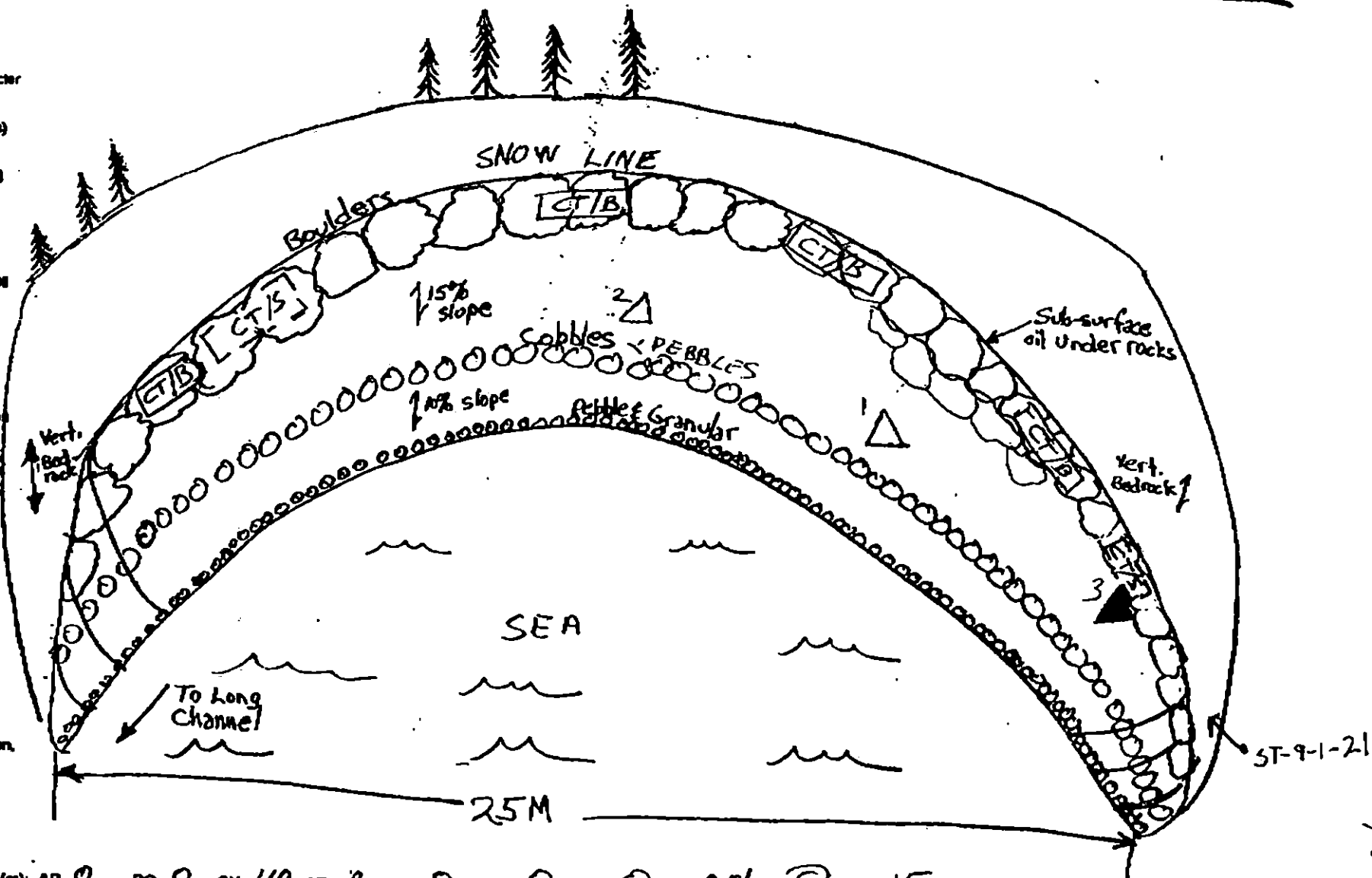
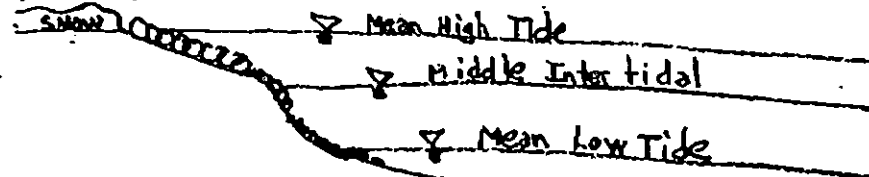
- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bdry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HW/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PH Location(s)
- ☐ Photo Location(s)

LEGEND

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

SNOW MAP
SA-2 (Location 2)

Profile



Oil Character Length (m): AP 0 PO 0 CV 40 CT 2 ST 0 MS 0 PT 0 TB 0.01 FL 0 NO 15

REVISION: 03/24/90

3/11

DATE 4, 2/90

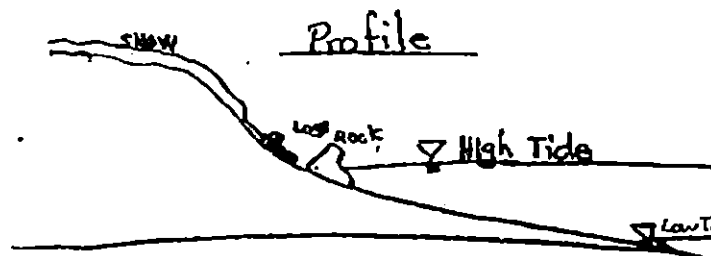
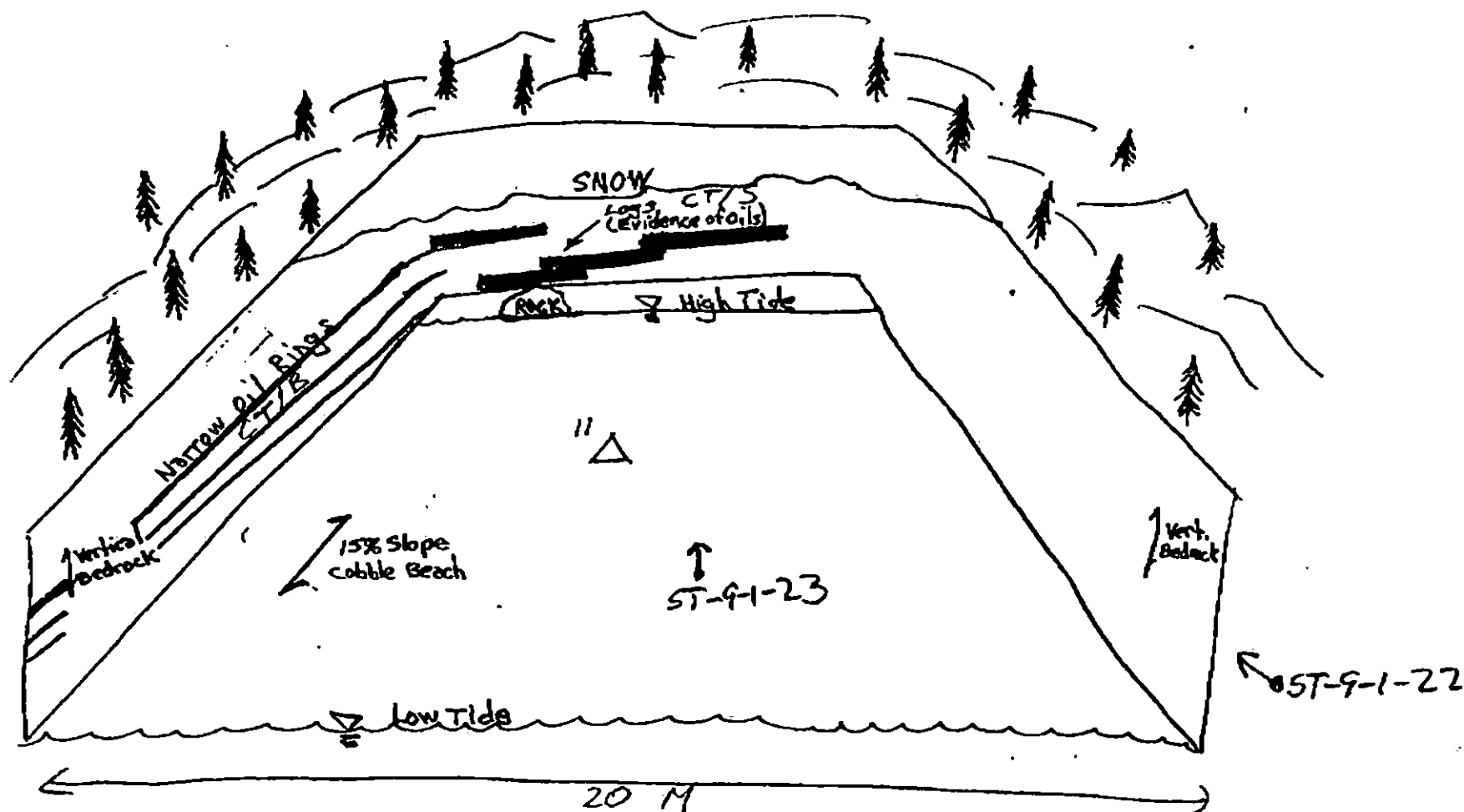
CHECKLIST

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

LEGEND

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

SKETCH MAP
(Location 7)



Oil Character Length (m): AP 0 PO 0 CV 0 CT 15 ST 0 MS 0 PT 0 TB 0 FL 0 NO 35

PCE 1051011-03/24/99

HPR-05-1390 12:20 FROM HUBERTH TIDE TO 14-00013075643771# P.02

DATE 4, 2 90

CHECKLIST

_____ N Arrow
 _____ Approx. Scale
 _____ Seg/Sub Endry
 _____ Oil Dist
 _____ Width
 _____ Length
 _____ % Cover
 _____ Substrate Character
 _____ Est. HAVL/VWL
 _____ SSL
 _____ Profile Location(s)
 _____ Profile(s)
 _____ PR Location(s)
 _____ Photo Location(s)

LEGEND

1 Δ
PK - No Solution Oil.

2 ▲
P11 - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P

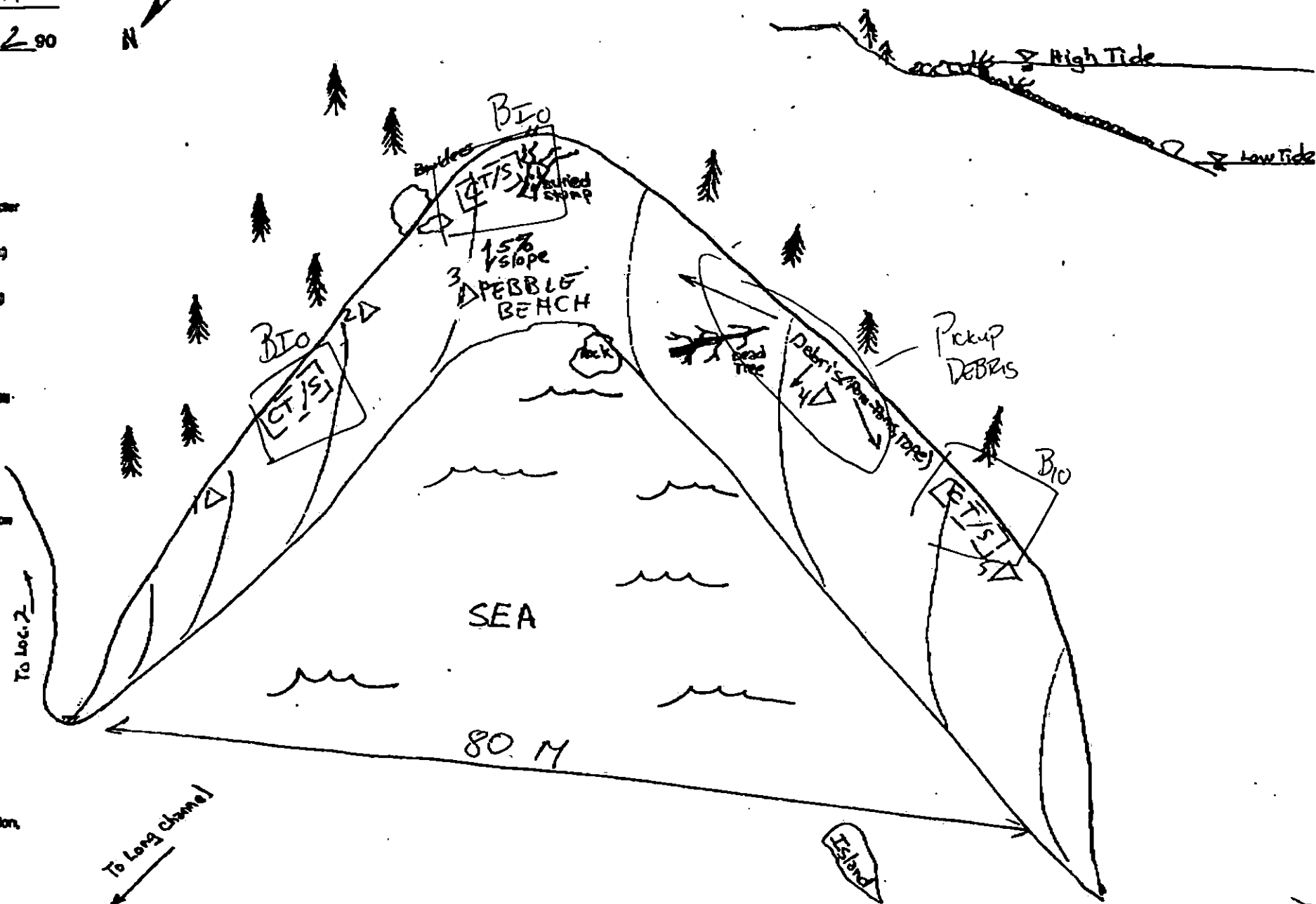
Punchy Distribution

CT/S
Splashed Distribution

Old Vegetarian

Photo location, direction,
and number

SEARCH MAP
ST-SQ-2 (Location 3)



Oil Character Length (m): AP 2 PO 0 CV 0 CT 0 ST 0 MS 0 PT 0 TB 3 FL 0 NO 117

REVISION: 4/24/90

11/4

OG K. DEBUSSCHERE

SEGMENT ST/ SQ-2

SUBDIVISION H

DATE 4 / 2 / 90

CHECKLIST

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

LEGEND

1 Δ

Pht - No Subsurface Oil

2 Δ

Pht - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

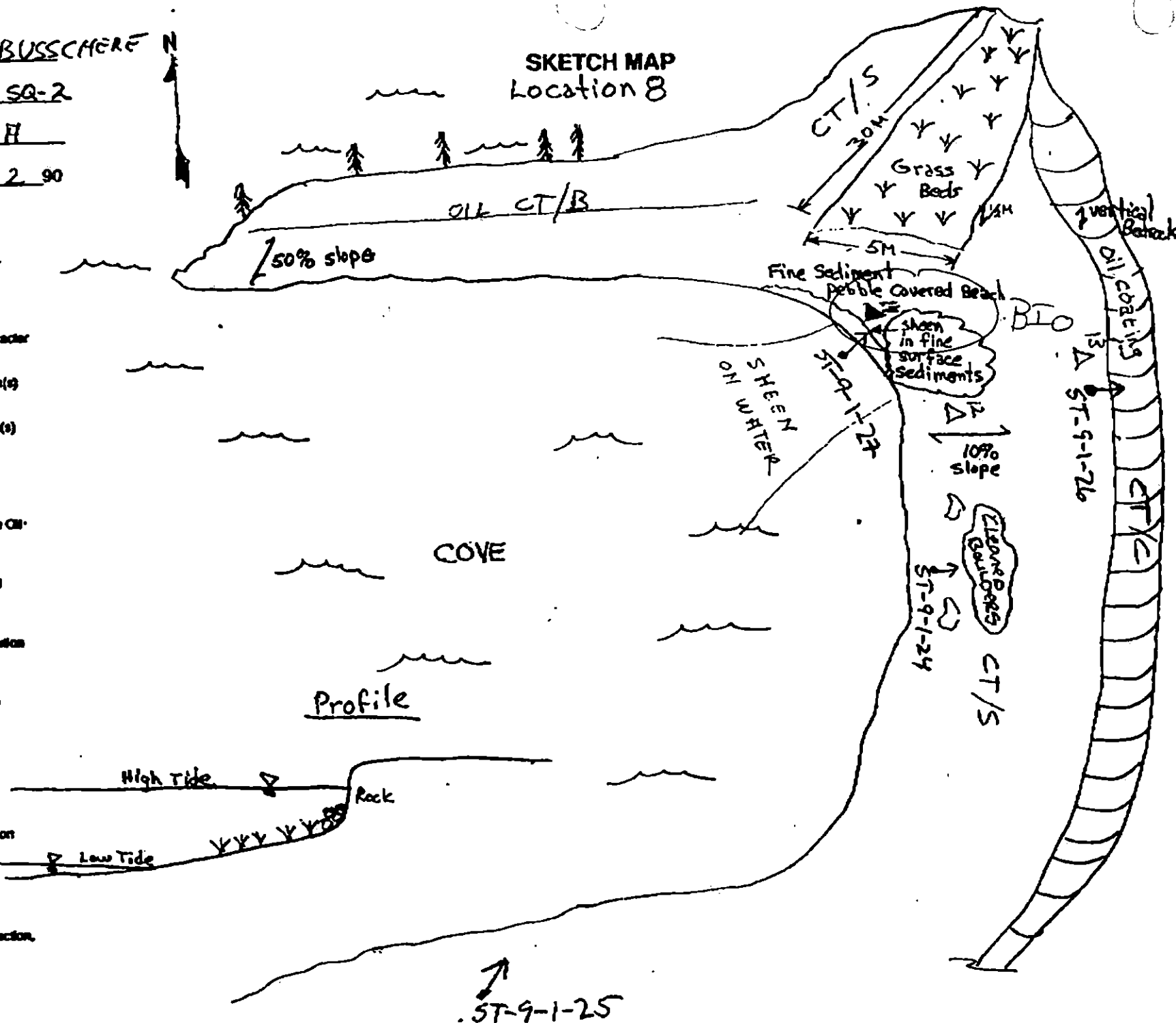
Oiled Vegetation

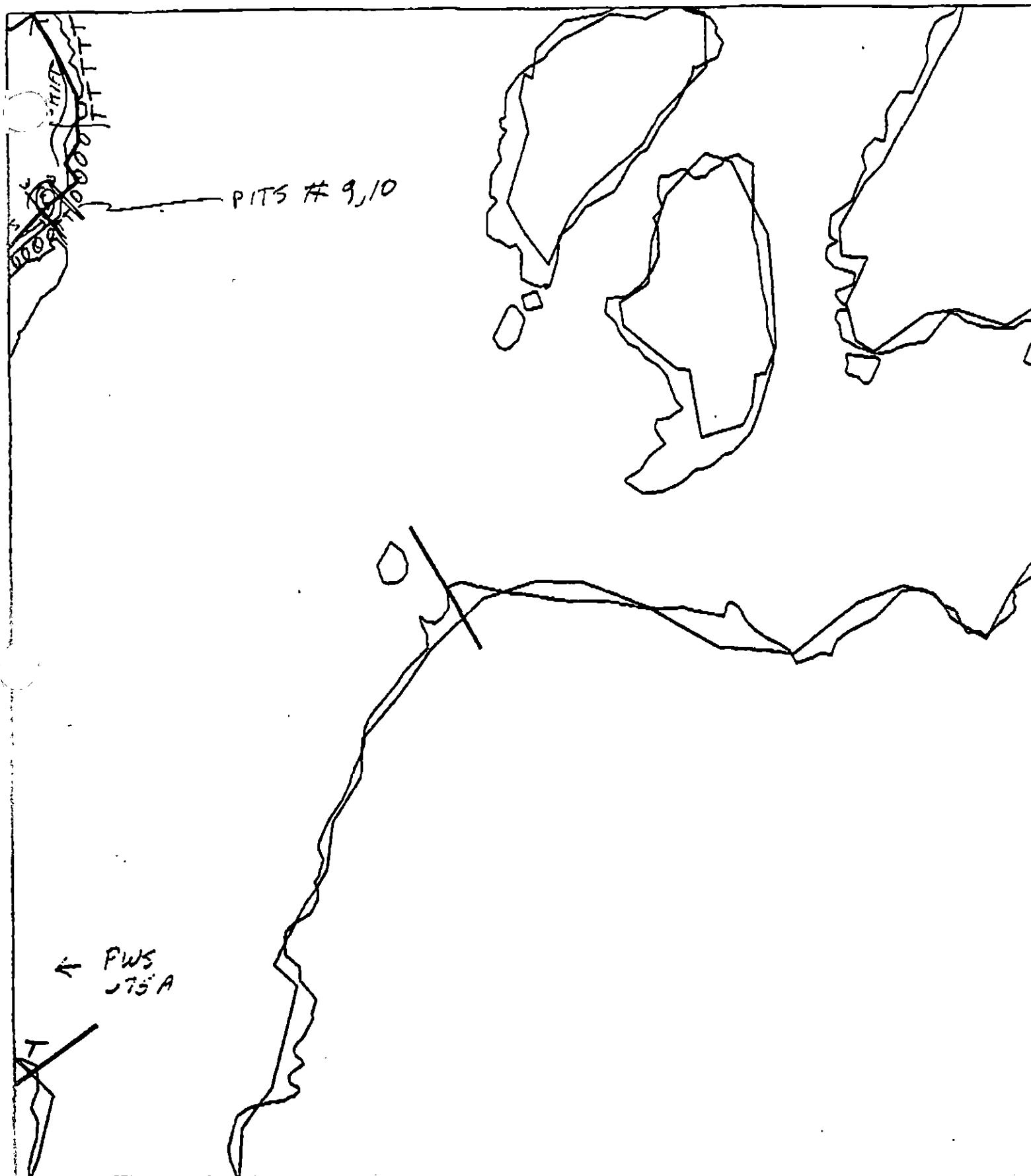
1 ●→

Photo location, direction,
and number

SKETCH MAP

Location 8





XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

ST-SQ-2-A

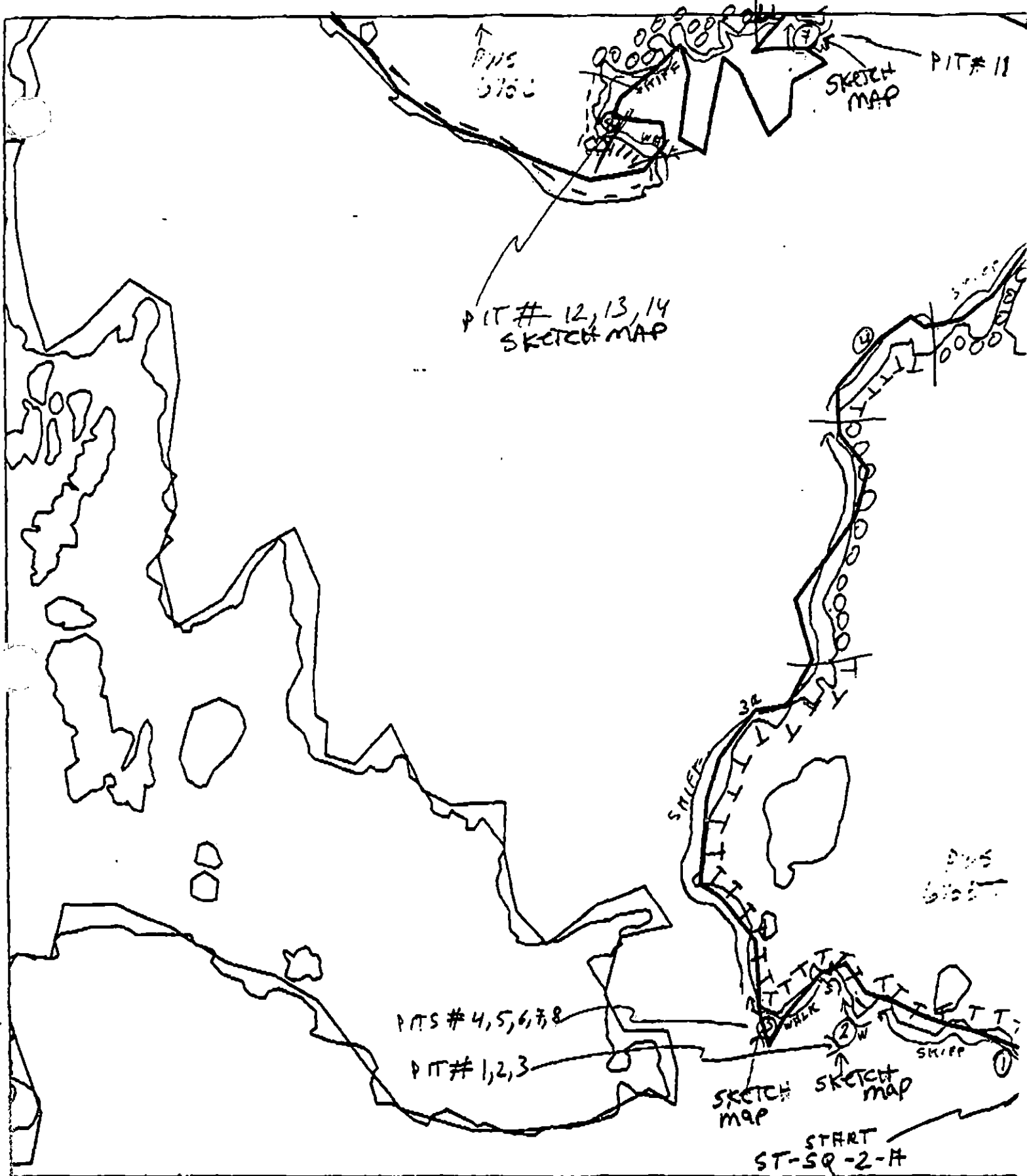
ADEC Segment Length: 5893m



Map Key: PWS-675b

Name: H. DEBUSSCHE RGDate: 4/2/90

Data Entered:



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

ST-SQ-2-H

ADEC Segment Length: 5893m

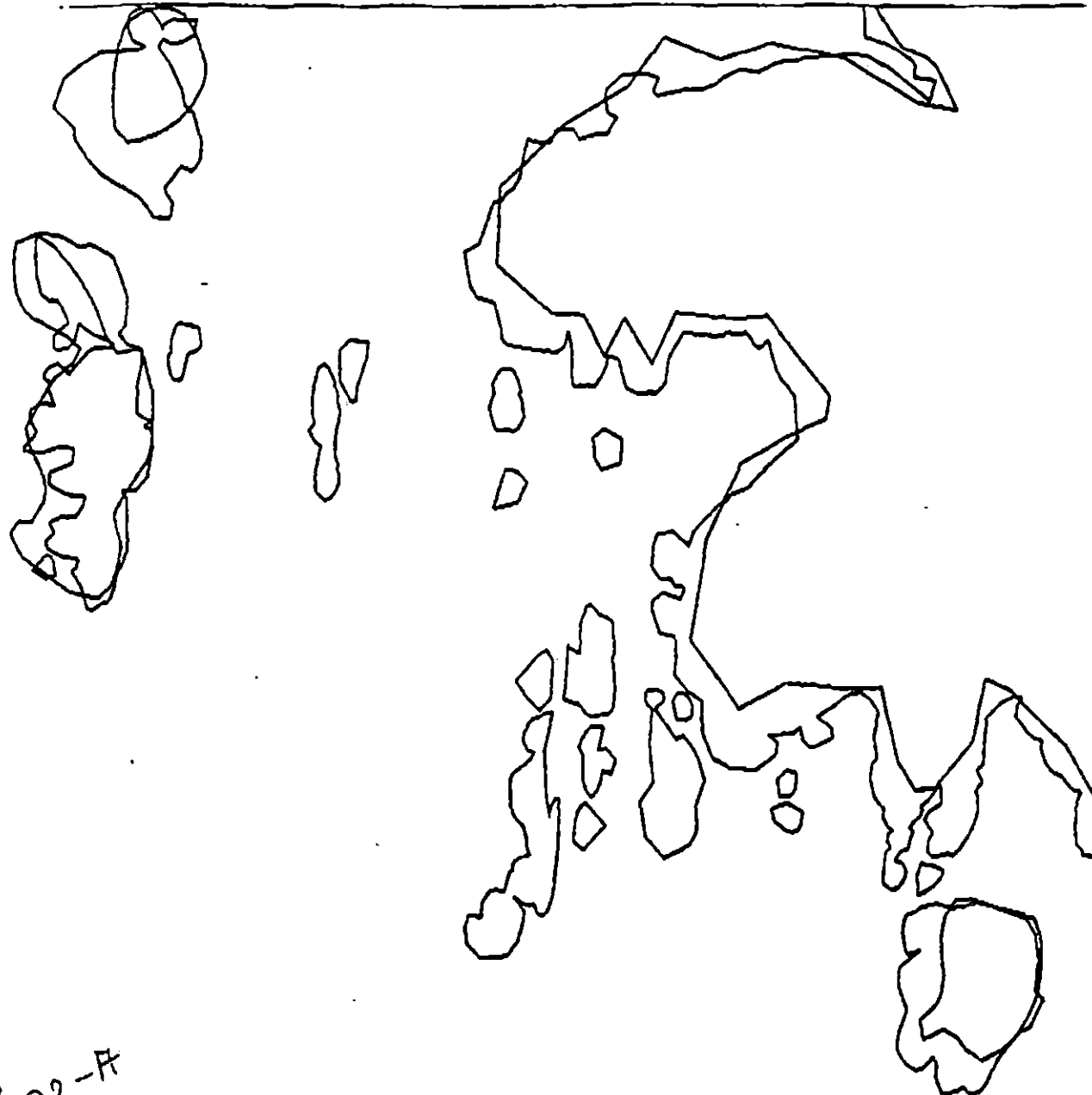


Map Key: PWS-675a

Name: K. DEBUSSCHEKE

Date: 4/2/90

Data Entered:



END
ST-SQ2-A

SQ-2

ST-91-28

↓ PWS 675A

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ST-SQ-2-A

ADEC Segment Length: 5893m



Map Key: PWS-675c

Name: K. DEBUSSCHERE

Date: 4/2/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT SQ-2 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

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

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

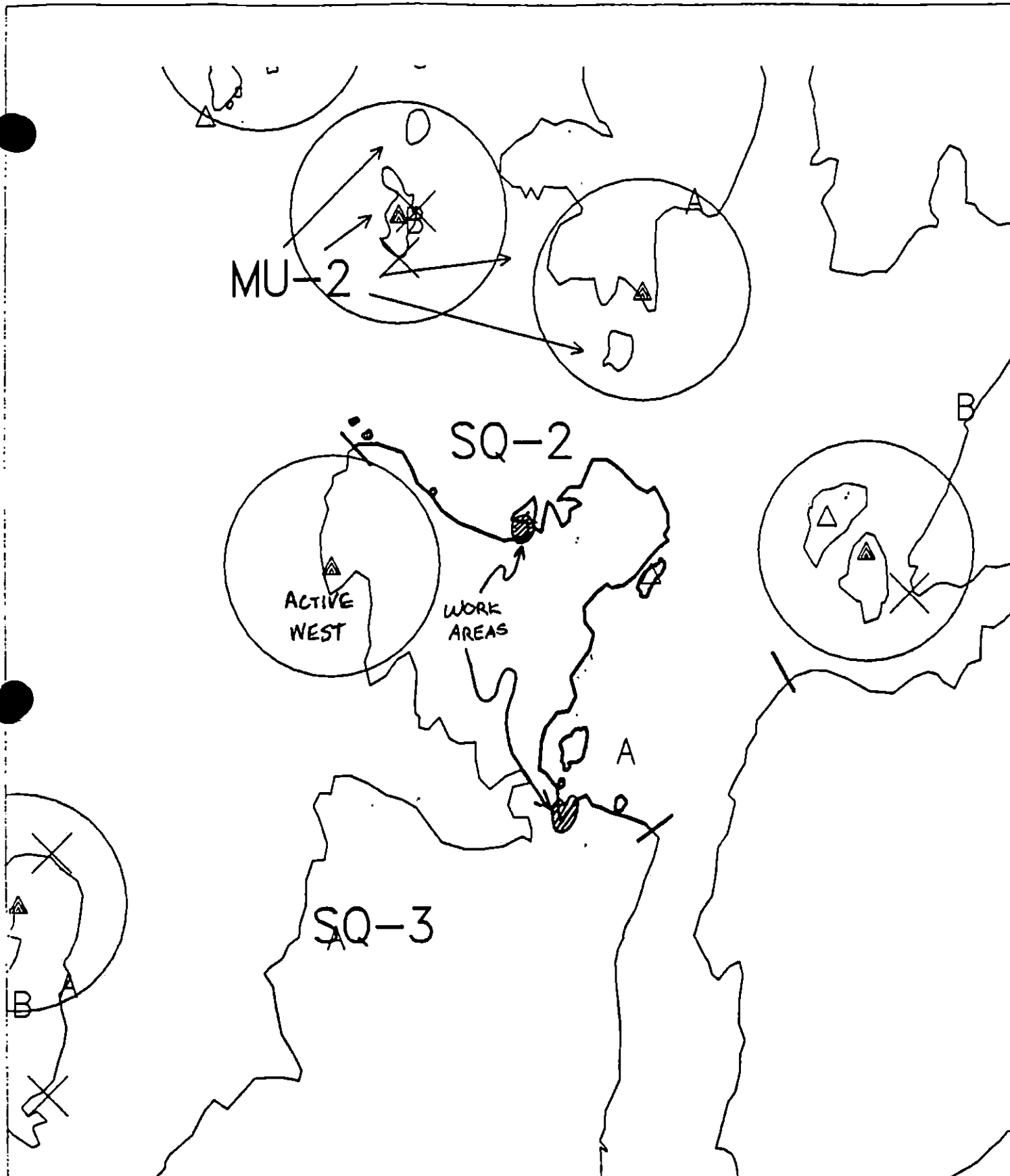
DATE 6-10-90

Prepared By:

J. P. Phillips 6-10-90

Date

6/10/90



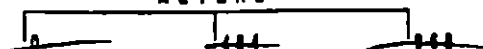
Exxon Company, USA

Map Key: PWS-SQ-2

June 04, 1990



ECOLOGY MAP
SEGMENT SQ-2
SUBDIVISION A (1 of 1)
METERS



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

1 inch = 1587 feet

SHORELINE EVALUATION

SEGMENT ST/ SQ-03 SUBDIVISION A (1 OF 1) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Holmes DATE: 4/23/80

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 251 m: No Oil 5806 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> <u> </u> Beach Cleaner
<u> </u> <u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: _____

TAG COMMENTS:_____

TAG APPROVAL DATE: 2/21/90

ADEC ART WEINER Det. Weiner

EXXON Amoy Gate Road

NOAA Sam Wescott Boulder Harbor

USCG KENNETH KEANE

FOSC: 115 DATE: 4-27-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / SQ-003 SUBDIVISION: A DATE 4/9/90

NAME

Jeffrey Rablin

SIGNATURE

Jeffrey Rablin☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

The beaches are mostly bedrock and boulders. There were a few shallow areas with pebbles/cobble beaches. The oil was on few places on the shoreline at the head of the largest segment.

NAME

LORI STRATTON

SIGNATURE

Lori Stratton☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

No treatment recommended due to lack of significant oiling.

Area consisted of tarball splashes intermittent, band of very light broken oil coat on vertical bedrock. Segment was ^{approx.} 50% bedrock, 50% cobble + pebbles with vertical ^{bedrock} and pocket beaches. Starfish population was dense in most areas.

NAME

LAND MANAGER

SIGNATURE

☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

SHORELINE OILING SUMMARY

REVISION NO. 03/25/88

OG W. DEBUSSCHERE ^{MAN} Jeffrey A. H. L. SEGMENT ST/ SD - 3
 BIO DAN REED LAND REP NONE SUBDIVISION R (1041)
 EXXON TONY D. 22 ADEC Lon Stratton TIME 8:00 to 10:15
 TEAM NO.: 9 TIDE LEVEL: -0.5 to 4 DATE 4/9/90
 EST. SUBDIVISION LENGTH: 6873 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 35 % B 35 % C 20 % P 10 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 30 % Hang 55 % Ver 15 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 220 m NO 6653 m

SURFACE OIL

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

PAVEMENT: H F S 0 sq. m by 0 cmPATTIES / TARBALLS 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. _____

Frames NONE

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-OM)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OP	NO		UO	UO	25	25	25	25	25	SU	U	M	U		
1	20					X	.										X			P/G & S
							.													
							.													
							.													
							.													
							.													

COMMENTS

SEGMENT IS DOMINATED BY HIGH RIBBLE ROCKY SHORELINE -
 SOME POCKET BARCHES

OIL: LOCATION ② & ③ VERY LIGHT: TARBALLS/S

" ⑤ & ⑥ " " : CONT/B AT HIGH TIDE LINE

= A OILING IS MINIMAL

2

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST / SA3 Subdivision A Date (mo / day / yr) 04/09/90Time (24 hr) 0800-1015 Biologist D. REED

(A) Substrate type and % of segments:

(1) Bedrock 35 (2) Boulder 35 (3) Cobble 20 (4) Pebble 10 (5) Sand 4 (6) Silt(B) Overall % cover of biota (% of segment): Dense 40 Moderate 25 Low 35

(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 NONE

BARNACLES

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

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

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

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

NOT PRESENT

MYTILUS

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

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

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

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

NOT PRESENT

GASTROPODS

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

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

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

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

NOT PRESENT

FUCUS

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

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

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

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

NOT PRESENT

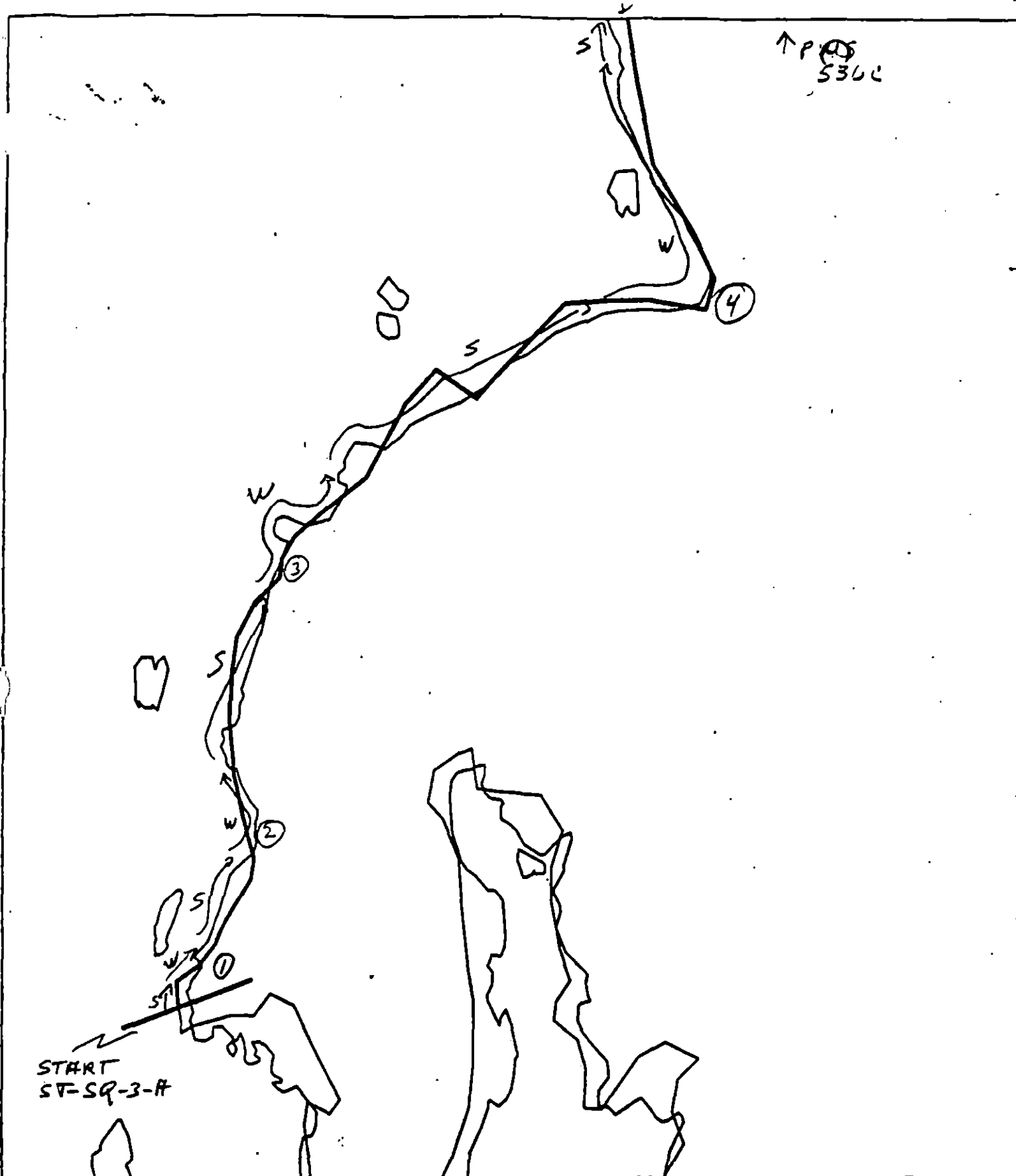
Wildlife Observations/ General Comments:

2 SEA OTTERS + 1 SEA OTTER pup. ~ 50 DUCKS (Eiders, GOLDEN EYES, SCATTERS)
1 BALD EAGLE.

HIGH DENSITIES OF SEA STARS (Pycnopodia) ON COBBLE/PEBBLE BEACHES.

Ecological Considerations:

None. little oil.



↑ PWS
5360

START
ST-SQ-3-H

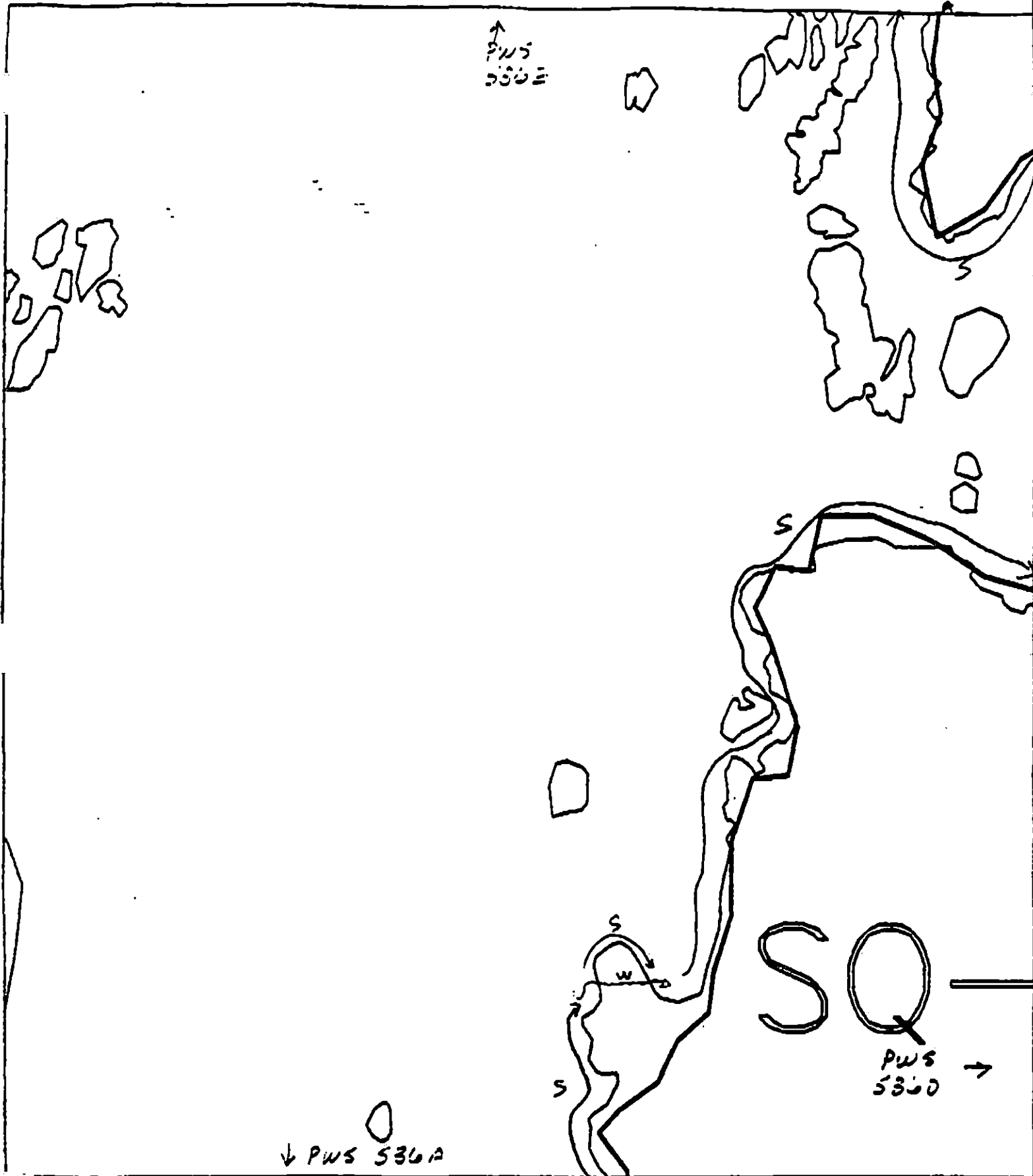
XXXX Wide
 /// Medium
 --- Narrow
 TTTT Very Light
 0000 No Oil

ST-SQ-3-H

ADEC Segment Length: 6873m



Map Key: PWS-5360
 Name: K. DEBUSSCHERE
 Date: 4/9/90
 Data Entered:



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ST-SQ-3-H

ADEC Segment Length: ~~400m~~ 6873

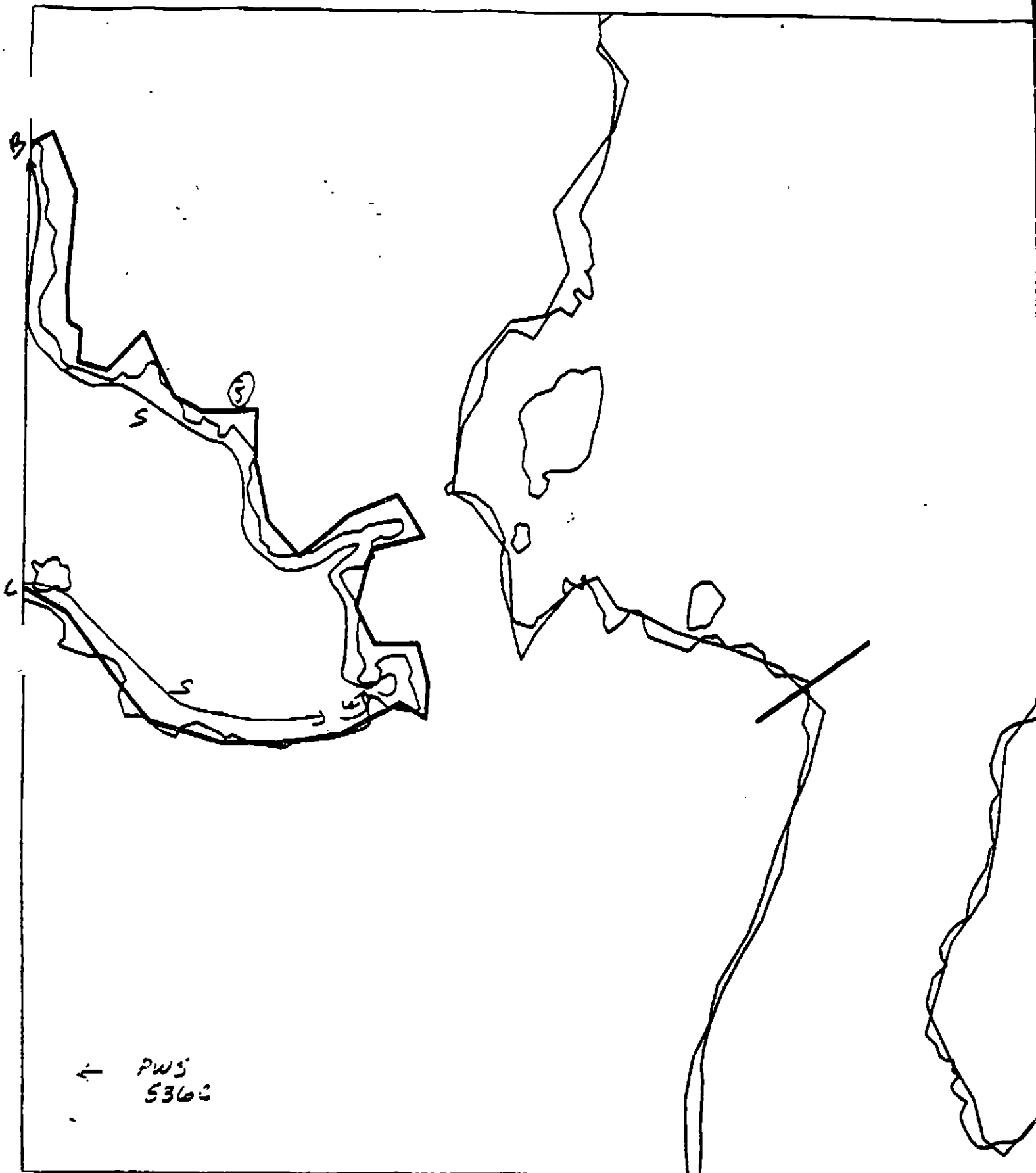


Map Key: PWS-536c

Name: K. DERUSSCHEN

Date: 4/9/90

Data Entered:



← PWS
5362

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ST-SQ-3-R

ADEC Segment Length: ~~2000~~ 6873 m



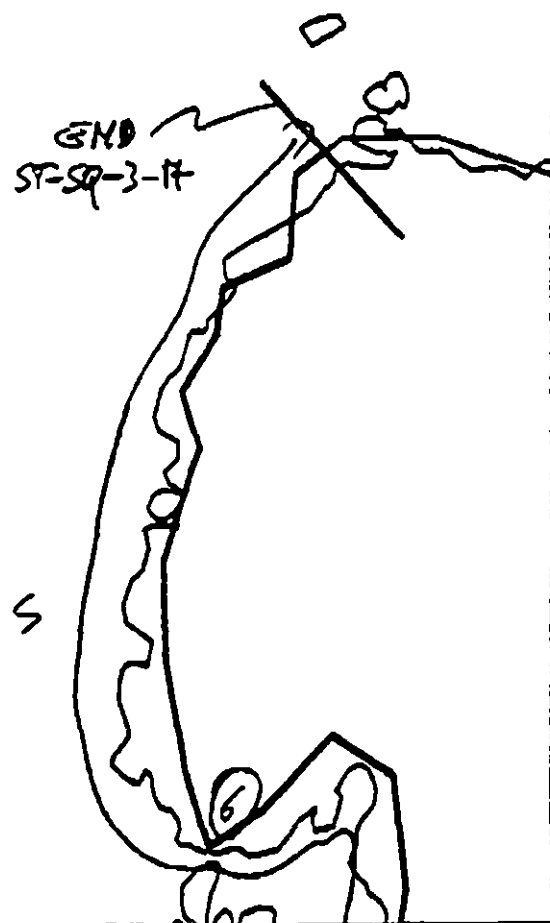
Map Key: PWS-536d

Name: K. DEBUSSCHERE

Date: 4/9/90

Date Entered:

MU-2



↓ PWS 5362

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ST-SQ-3-17

ADEC Segment Length: ~~1000m~~ 6873



Map Key: PWS-5360

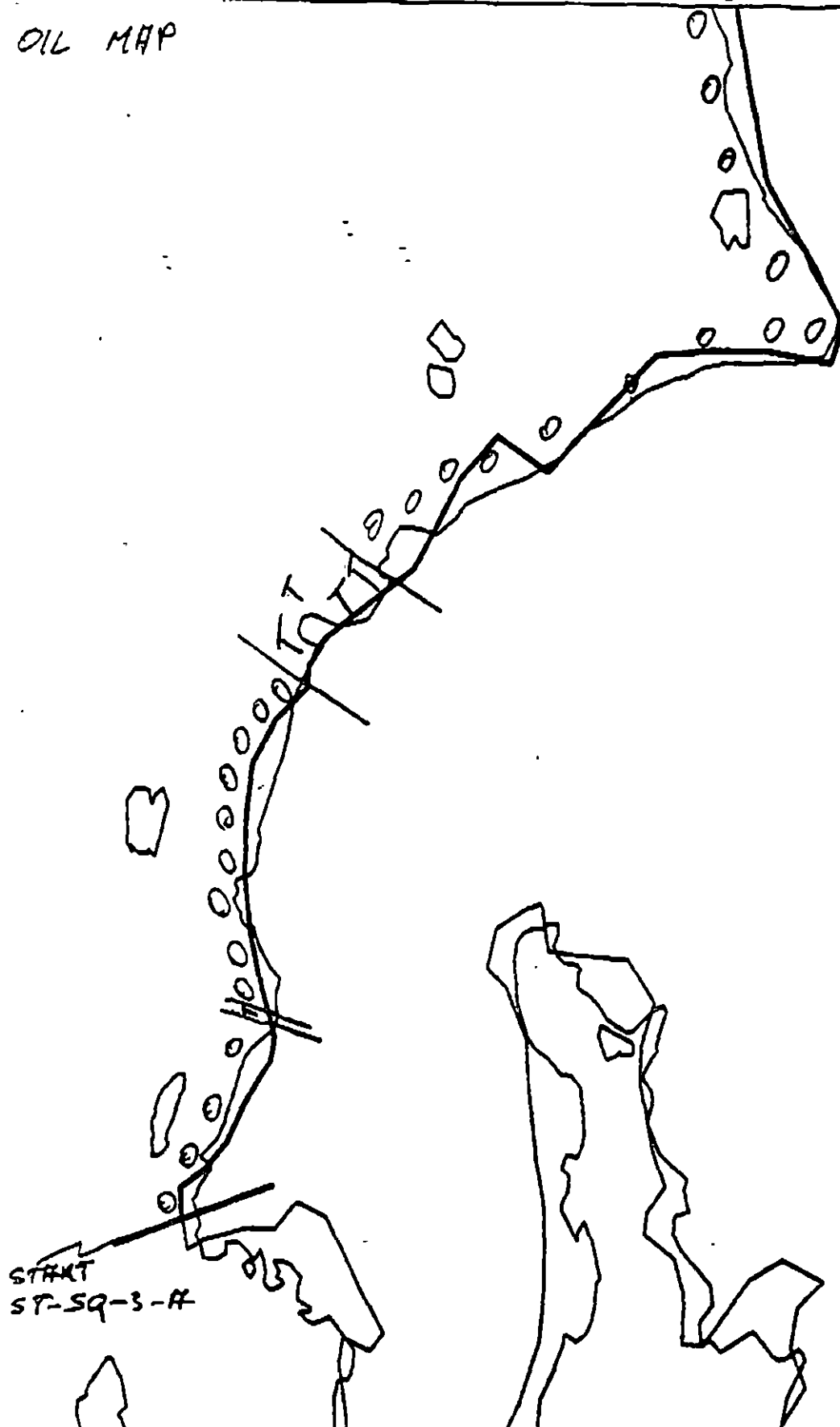
Name: K. DEBUSS CHERK

Date: 4/9/90

Data Entered:

OIL MAP

↑ PWS
5366



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

ST-SQ-3-A

ADEC Segment Length: ~~6873~~ 6873



Map Key: PWS-5366

Name: K. DEBUSSCHERE

Date: 4/9/90

Date Entered:

OIL MAP

↑
PWS
536E

↓ PWS 536A

PWS
536D →

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ST-SQ-3-H

ADEC Segment Length: 6873

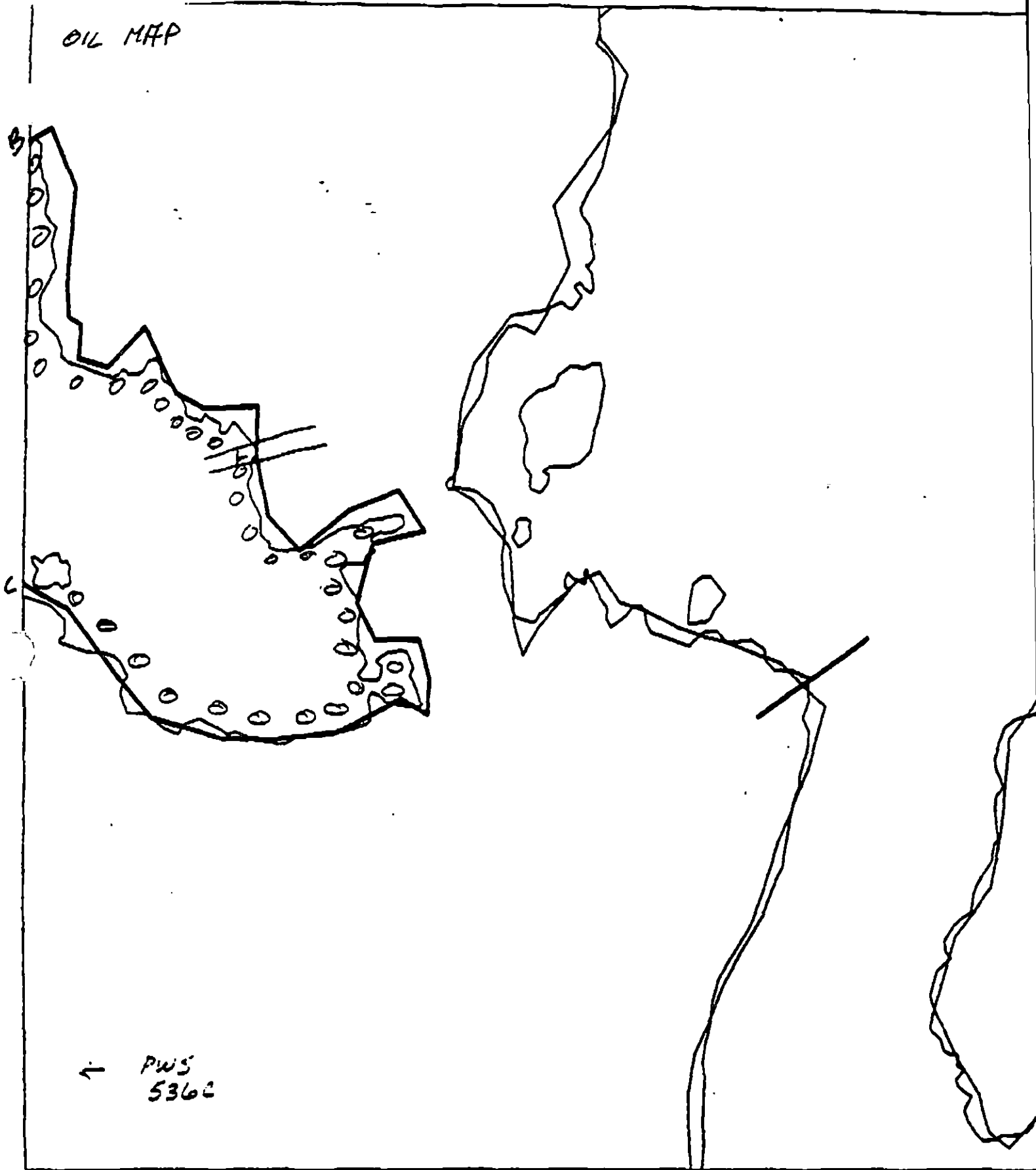
0 100 200 300
METERS

Map Key: PWS-536c

Name: K. DEBUSSCHERDate: 4/9/90

Date Entered:

OIL MAP



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ST-SQ-3-A

ADEC Segment Length: ~~6873~~

0 100 200 300
8 METERS

Map Key: PWS-536d

Name: K. DESBOUSS CHANCE

Date: 4/9/90

Date Entered:

OIL MAP

MU-2

END
ST-SQ-3-A

↓ PWS 5360

XXXX Wide

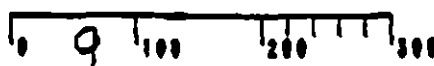
//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ST-SQ-3-A

ADEC Segment Length: ~~6873~~ 6873

 METERS

Map Key: PWS-5360

Name: K. DEAUSSCHER

Date: 4/9/90

Date Entered:

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Do not damage to mussel beds.

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 1147m: V.Light 771 m: No Oil 151 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS: NO TREATMENT RECOMMENDED DUE TO ENVIRONMENTAL
SENSITIVITIES INDICATED (MUSSEL BEDS).

TAG APPROVAL DATE: 4/19/90.
ADEC Art Weimer Art Weimer
EXXON Ann Tan Ann Tan
NOAA Bull Weimer Bull Weimer
USCG Kenneth Kenna Kenneth Kenna
FOSC: [Signature] DATE: 4-25-90

PWS ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / SQ-4 SUBDIVISION: A DATE 4/2/90

NOAA

~~XXXXXX~~NAME Jeffrey Oaklin SIGNATURE Jeffrey Oaklin☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS The heaviest oil was on Bedrock in an area of extremely high mussel concentrations. The rest of the subdivision was not as concentrated as Location 2.

ADEC NAME Lori Stratton SIGNATURE Lori J. Stratton☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Narrow coat of oil could be removed by hot water wash but a dense population of mussels were present that would be impacted at L.I. Not enough oil presence and high mussel population warrants NO treatment.

LAND MANAGER

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

14 Forest Service Rep. Not Available

SHORELINE OILING SUMMARY

REVISION NO. 00/00/00

OG K. DERUSSCHER ^{MAN} 1988 Jeffrey A. Hill SEGMENT ST/ 50-4
 BIO D. REED LAND REP FOREST. SERVICE/NOT AVAL SUBDIVISION H-110F2
 EXXON Tony Diaz ADEC Lori Straton TIME 13:55 to 15:20
 TEAM NO.: 49 TIDE LEVEL: 1 to 2 FT DATE 4/1/2/190
 EST. SUBDIVISION LENGTH: 2278 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 25 % B 30 % C 25 % P 20 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 30 % Hang 60 % Ven 10 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 1448 m VL 680 m NO 150 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OR / FILM COLOR						IMPACTED ZONES			
	C	B	P	R	Y	OR	GY	BL	LN	SU	U	M	U	
ASPHALT PAVEMENT POOLED														
COVER		VX				VX					X	V		
COAT		X				X					X			
STAIN														
MOUSSE														
PATTIES														
TARBALLS				X				X			X			
FILM														
NO OIL										X			X	

 PAVEMENT: H F S sq. m by cm

 PATTIES / TARBALLS 1 BAGS

 NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

 DEBRIS COLLECTED
☐ YES ☒ NO

 TYPE

 #BAGS

Photographs:

 Roll No. ST-9-1

 Frames 29

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-DM)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UG	UC	1	2	3	4	5	SU	U	M	U		
1	±30					X	-								X					P/G
2	±35					X	-									X				P/C/G
3	±40					X	-								X					P/G/P
4	±60					X	-									X				P/G
5	±50					X	-								X					P/G/C
							-													

COMMENTS

- SUBDIVISION DOMINATED BY HIGH ANGLE SHORELINE
- OILING CONSISTS MAINLY OF A NARROW BAND OF CONTAMINATION ON CLIFF AND BOULDER FACES

SHORELINE ECOLOGICAL SUMMARY

REVISION 02/2000

Segment ST/ 544 Subdivision A Date (mo/day/yr) 04/02/90Time (24 hr) 1400-1520 Biologist DAN REED

(A) Substrate type and % of segments:

(1) Bedrock 25 (2) Boulder 30 (3) Cobble 25 (4) Pebble 20 (5) Sand (6) Silt (B) Overall % cover of biota (% of segment): Dense 25 Moderate 30 Low 40

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

Photographs:

Roll No. ST-9-1Frames 29

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

Dense mussel beds sporadic on horizontal bedrock. often occurring in zones of light → medium oil.

Ecological Considerations:

Horizontal mussel beds often below more vertical rock coated with oil. Mussels sensitive to foot traffic AND TO POTENTIAL RUNOFF from cleaning.

- 6 -

Date Entered:

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 765 m: No Oil 205 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/90
ADEC Art Wernert
EXXON Andy Ten
NOAA Bill Wescott
USCG Kenneth Keane

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

PWS ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / SQ-4 SUBDIVISION: B DATE 4/2/90~~NAME~~NAME Jeffrey DublinSIGNATURE Jeffrey Dublin☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTEDCOMMENTS Boring !! Vertical Rock with very little oil.**ADEC**

NAME

Lori Stratton

SIGNATURE

Lori f. Stratton☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Very light coat of oil in bands across vertical and high angle bedrock/boulder rock faces. Oil is weathered highly and not significantly refloatable; ∴ No treatment is recommended.

LAND MANAGER

NAME

SIGNATURE

☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Forest Service Rep Not Available

SHORELINE OILING SUMMARY

REVISION NO. 02/89

OG K. DEBUSSCHERE ^{MMA} ~~WFO~~ Jeffrey A. H. SEGMENT ST/ SD-4
 BIO D. REED LAND REP FOREST SERVICE UNAVAIL SUBDIVISION B (2 OF 2)
 EXXON Tony Diaz ADEC Lori Stratton TIME 15:20 to 15:40
 TEAM NO.: 9 TIDE LEVEL: 2 to 3 DATE 4/12/90
 EST. SUBDIVISION LENGTH: 1024 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 90% B 10% C 0% P 0% G 0% S 0% M 0% V 0%
 SLOPE: Long 0% Hang 10% Vert 90% WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 6 m N 0 m VL 700 m NO 200 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	R	B	P	S	W	Y	OR	GR	BL	BU	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 sq. m by cr

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 NO PHOTOS

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-OR)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	W	Y	OR	GR	BL	BU	U	M	U		
							.													NO PITS
							.													BECAUSE
							.													- INACCESSIBLE
							.													- VERTICAL CLIFF
							.													
							.													

COMMENTS

SUBDIVISION DOMINATED BY SHEER CLIFF
 NO OIL OBSERVED

SHORELINE ECOLOGICAL SUMMARY

REVISION 02/22/90

Segment ST SQ4 Subdivision B Date (mo/day/yr) 04/02/90Time (24 hr) 1520-1540 Biologist D. Reed(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 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. Frames No Photos

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

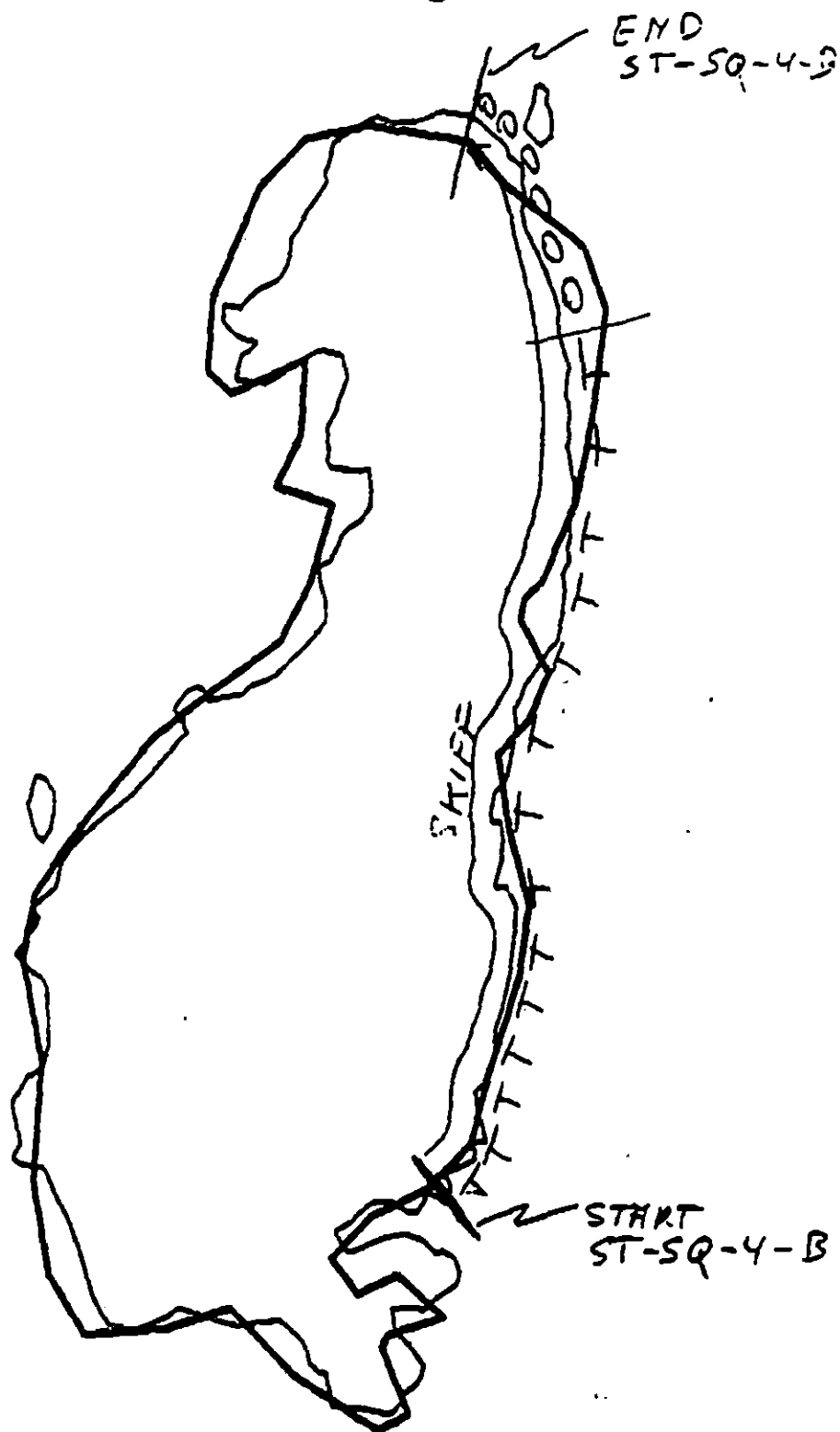
NOT PRESENT

Wildlife Observations/ General Comments:

steep vertical cliffs, light oil. Fucus looks in bad shape in mid zone & (area of cleaning?) lots of Dead Galanus in mid zone. FEW BIRDS

Ecological Considerations:

NONE



XXXX Wide

//// Medium

--- Narrow

TTTT Very narrow

ST-SQ-4-B

ADEC Segment Length: 3302

Map Key: PWS-537

Name: K. DEBUSSCHER

4/2/00

SHORELINE EVALUATION

SEGMENT ST/ SO-05 SUBDIVISION A (1 OF 2) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T All bald eagle nest (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)
6Y Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature] DATE: 4/13/90

OILING CATEGORIZATION:

Wide 0 m: Medium 126 m: Narrow 62 m: V.Light 458 m: No Oil 3239 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommend bioremediation of areas shown on sketch map. Work
should be conducted before 8/15 and requires permission from USFWS
prior to treatment due to eagle nesting constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/13/90
ADEC JOHN BAUER [Signature]
EXXON Amoy Gtz [Signature] FOSC: [Signature] DATE: 4-22-90
NOAA Burt Wescott [Signature]
USCG G.A. REITER G.A. Reiter

PWS ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage.
 No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior
 to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
- 1D Esther Hatchery release (4/15 to 6/1)
- 1E Main Bay Hatchery release (4/20 to 5/10)
- 1F Sawmill Bay Hatchery release (4/20 to 5/10)
- 1G Cannery Creek Hatchery release (4/21 to 6/1)
- 1H Remote release site
- 1I Gill net area (6/7 to 8/31)
- 1J Purse seine area (7/21 to 9/30)
- 1K Purse seine hook-off (7/20 to 9/30)
- 1L Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to 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
- ✓ 7I Deer harvesting (8/15 to 2/28)
- 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / SD-5 SUBDIVISION: A DATE 4/2/90~~NAME~~NAME Jeffrey DahlinSIGNATURE Jeffrey Dahlin☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Most sections of this subdivision had very light oil, however, Location 2 (Saemop) had a 10 meter wide band of oil extending ≈ 100 m with liquid subsurface oil. ~~This location is~~

ADEC

NAME

Lori Stratton

SIGNATURE

Lori Stratton☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

At Location #2 This medium continuous coat at UI should be treated. It extends across boulders for about 200 meters and is up to 20 cm wide. The ~~oil~~ surface oil could be spot-washed with lambda units. Other areas in the subdivision have very light oil coats and do not warrant treatment.

Location #2 The subsurface oil could be manually removed with shovels since it is not very deep under surface (about 5 cm). Sparse population of mussels + barnacles are present.

LAND MANAGER

NAME

SIGNATURE

☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

NAT'L FOREST REP NOT AVAILABLE

SHORELINE OILING SUMMARY

REVISION NO. 03/22/89

OG K. DERUSSCHERE ^{NOVA} USCG Tellus Dahlia SEGMENT ST/ SQ 5
 BIO Dan Reed LAND REP Subdivision 11 OF 2
 EXXON Long Beach ADEC Lori Stratton TIME 16:00 to 17:15
 TEAM NO.: 9 TIDE LEVEL: 3 to 5 DATE 4 / 12 / 90
 EST. SUBDIVISION LENGTH: 3936 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 50 % B 35 % C 10 % P 5 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 40 % Hang 30 % Vert 30 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 200 m N 0 m VL 480 m NO 3256 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	N	E	S	W	1	2	3	4	SU	U	M	L
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT	X	X		V	V	X			X	V		
STAIN												
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL									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. ST-9-1Frames 30, 31, 32

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	UO	1	2	3	4	5	6	7	SU	U	M	L		
* 1	15	X					0.5	X	X								X					(C) P/G & c/s
2	40					X	.										X					G
							.															
							.															
							.															
							.															

COMMENTS * OILED INTERVAL < 5 cm IN PIT NO. 1 DOES NOT CONSTITUTE SUBSURFACE OIL.

SUBDIVISION DOMINATED BY CLIFF AND NARROW BOULDER BEACHES

SIGNIFICANT OILING IN LOCATION (2): CONTINUOUS BAND OF COATING IN UPPER INTERTIDAL (± 5M WIDE) → SUBSURFACE OILING UNDER BOULDERS. A BAND OF COAT/S ABOVE AND UNDER THE 5M CONTINUOUS OILING

_____ N Arrow
 _____ Approx. Scale
 _____ Seg/Sub Bathy
 _____ Oil Dist.
 _____ Width
 _____ Length
 _____ % Cover
 _____ Substrate Character
 _____ Eq. HWA/LA/WL
 _____ SOL
 _____ Profile Location(s)
 _____ Profile(z)
 _____ PH Location(s)
 _____ Photo Location(s)

PA - No Subscriptions On

2 ▲
Pg - Subsurface Oil

CT/C
Continued Distribution

CT/B
Broken Distribution

CT/P

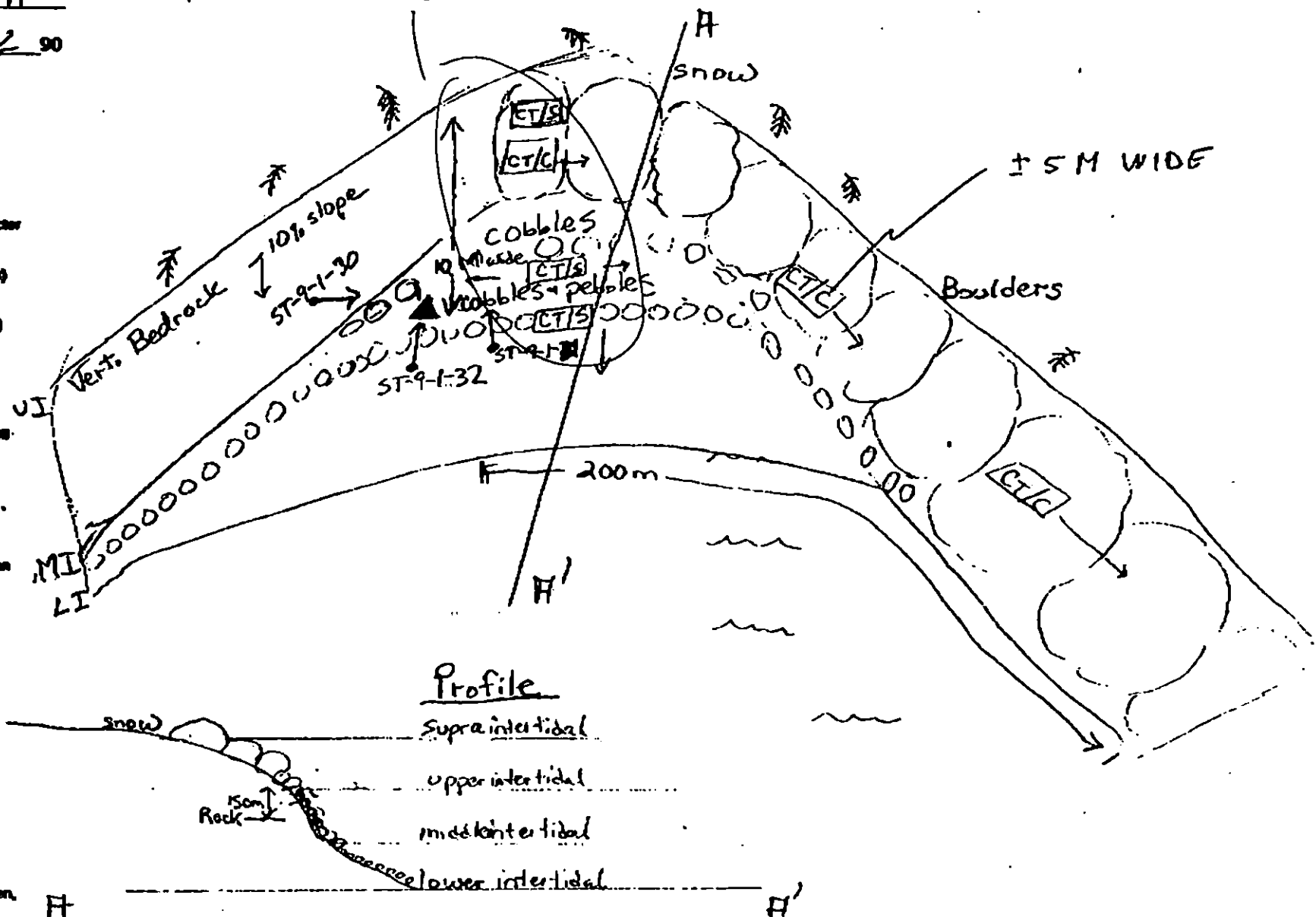
Patchy Distribution

CT/S
Sealed Distribution

Other Vegetation

**Photo location, direction,
and number**

SKETCH MAP
ST-SQ-5A (Location 2)



Oil Character Length (in): AP 0 PO 0 CV 0 CT 200 ST 0 MS 0 PT 0 TB 0 FL 0 NO 50

KEYWORD CLUES

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST / 325 Subdivision A Date (mo / day / yr) 04/02/90Time (24 hr) 1555-1715 Biologist D. Reed(A) Substrate type and % of segments:
(1) Bedrock 50 (2) Boulder 35 (3) Cobble 10 (4) Pebble 5 (5) Sand (6) Silt (B) Overall % cover of biota (% of segment): Dense 40 Moderate 30 Low 30

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

Photographs: ST-9-1
Roll No. 30, 31, 32Frames 30, 31, 32

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

3 EAGLES, 1 SEA OTTER, 1 RIVER OTTER, several DUCKS
Dense mussel beds on some cobble beaches.

Ecological Considerations:

NONE.

↑ PWS
538A

END
ST-SQ-5-17

PR #2

↓ PWS 538A

XXXX Wide

//// Medium

--- Narrow

TTTT Very

ST-SQ-5-17

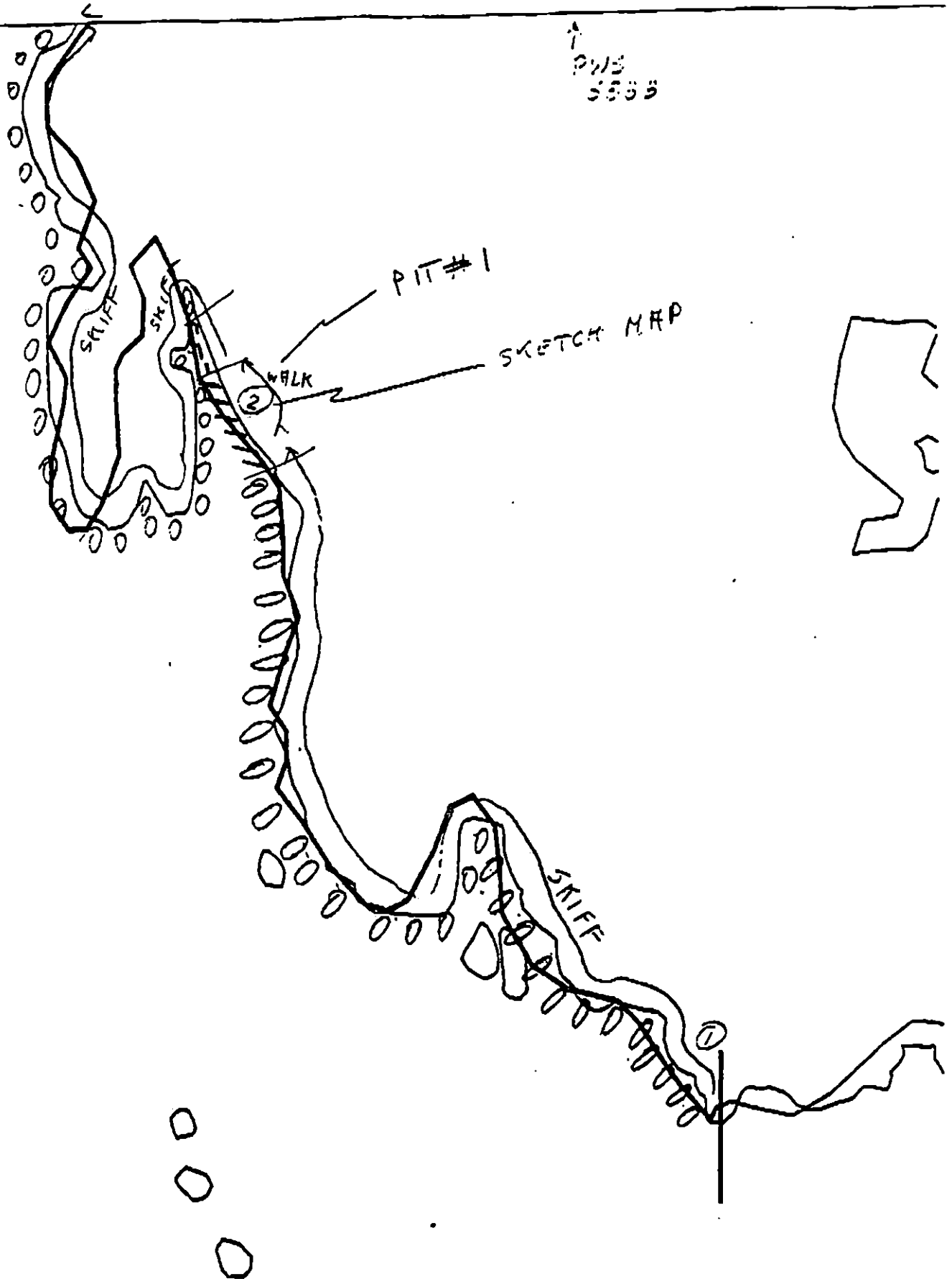
ADEC Segment Length: 6905

Map Key: PWS-538b

Name: K. DEBUSSCHERE

Date: 4/2/90





XXXX Wide
 /// Medium
 --- Narrow
 TTTT

ST-SQ-5-H

ADEC Segment Length: 6905



Map Key: PWS-538a

Name: K. DEBUSSCHERE

Date: 4/2/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT SQ-5 SUBDIVISION A (1 of 2)

WORK WINDOW	
Bioremediation	WORK PRIOR TO 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.
7II	Subsistence: Deer Harvesting	Closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Restrict boat and beach disturbance to essential minimum after 8/15.

FOSC

DATE 6-10-90

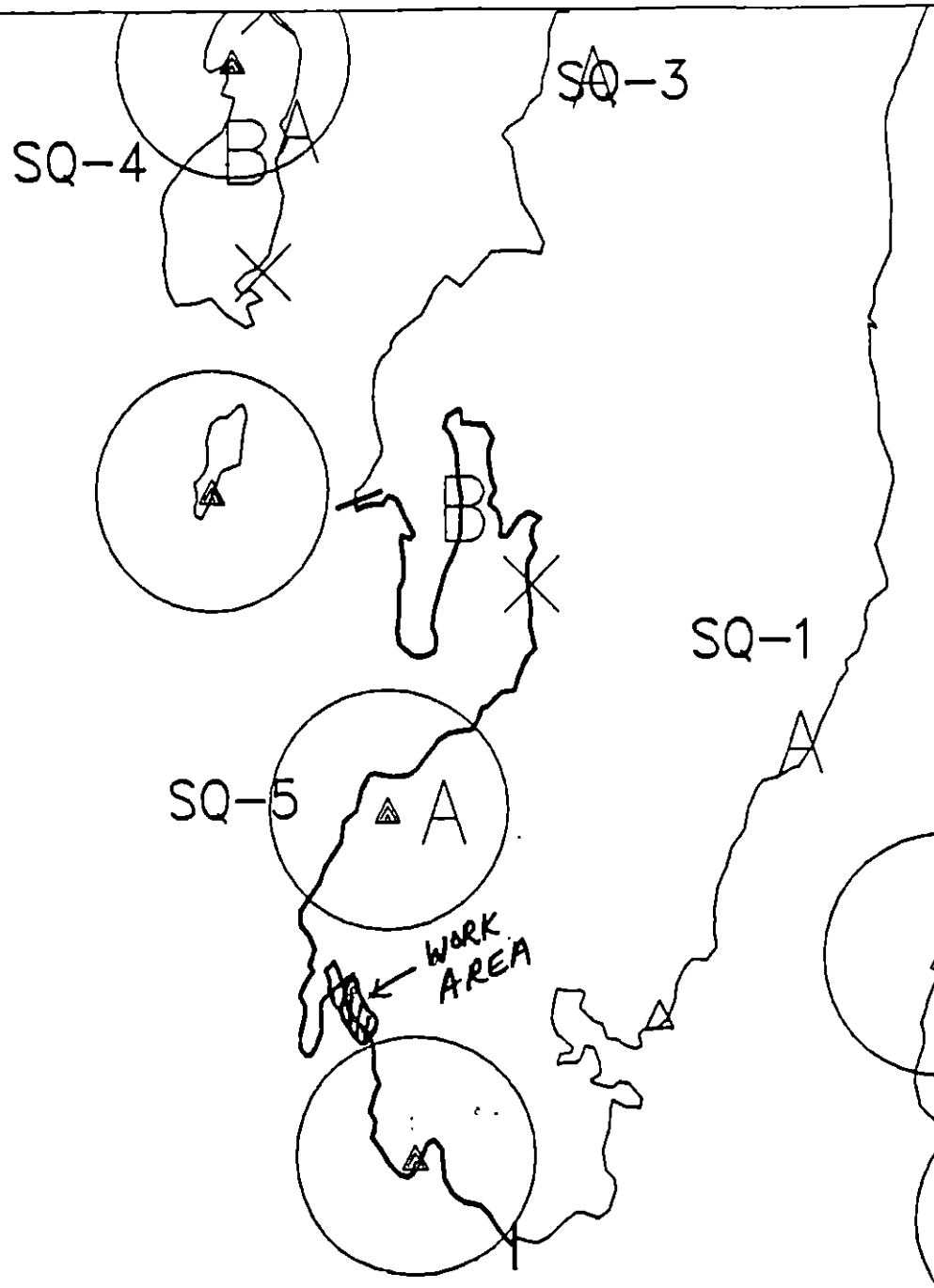
Prepared By:

J.P. Phillips

6-10-90
Ann

Date

6/10/90



Exxon Company, USA
Map Key: PWS-SQ-5
June 04, 1990



ECOLOGY MAP
SEGMENT SQ-5
SUBDIVISION A (1 of 2)
METERS
0 1000 1000

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

~~1 inch = 1756 feet~~

SHORELINE EVALUATION

SEGMENT ST/ SQ-05 SUBDIVISION B (2 OF 2) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T All bald eagle nest (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)
6Y 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.

SHPO SIGNATURE: *Charles Z. Adams* DATE: 4/8/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 2670 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/18/90
ADEC JOHN BAUER
EXXON ANDY TALL FOSC: *[Signature]* DATE: 4-22-90
NOAA Bruce Wierwille
USCG G.A. REITER

PWS ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

COMMENT ST / SQ-5 SUBDIVISION: B DATE 4/2/90

~~NOAA~~

NAME Jeffery D. Allen SIGNATURE Jeffery D. Allen

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS no oil

ADEC

NAME Lori Stratton SIGNATURE Lori Stratton

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

No oil was observed.

LAND MANAGER

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Forest Service Rep Not Available

SHORELINE OILING SUMMARY

REVISION NO. 02/22/90

TO K. DEBUSSCHERE ^{NOVA} ~~1988~~ Johny Doherty SEGMENT ST/ SQ 5
IO DEH REED LAND REP FOREST SIC REP UNRAIL SUBDIVISION B (20F2)
 EXXON TOBY DIAZ ADEC LOFI-STATION TIME 17:15 to 17:40
 TEAM NO.: 90 TIDE LEVEL: 5 to 6 FT DATE 4/12/90
 EST. SUBDIVISION LENGTH: 2969 m ☐ Sun ☐ Clouds ☐ Fog ☐ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 40 % B 40 % C 10 % P 8 % G 2 % S <1 % M - % V - %
 SLOPE: Long 20 % Hang 55 % Vert 35 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 2969 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	B	P	N	1	2	3	4	5	SU	U	M	L
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 NONE

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	1	2	3	4	5	SU	U	M	L		
							.													NO PITS
							.													BECHUSE
							.													- MOSTLY INACCESSIBLE
							.													- NO INDICATION OF
							.													BURIED OIL
							.													

COMMENTS

SUBDIVISION IS DOMINATED BY CLIFF AND STEEP BOULDER
 BEACHES
 NO OIL OBSERVED

SHORELINE ECOLOGICAL SUMMARY

REVISION: 10/23/90

Segment ST / SA5 Subdivision B Date (mo / day / yr) 04/02/90

Time (24 hr) 1715-1740 Biologist D. Reed

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

(B) Overall % cover of biota (% of segment): Dense 35 Moderate 35 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 NONE

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

7/5

FUCUS

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

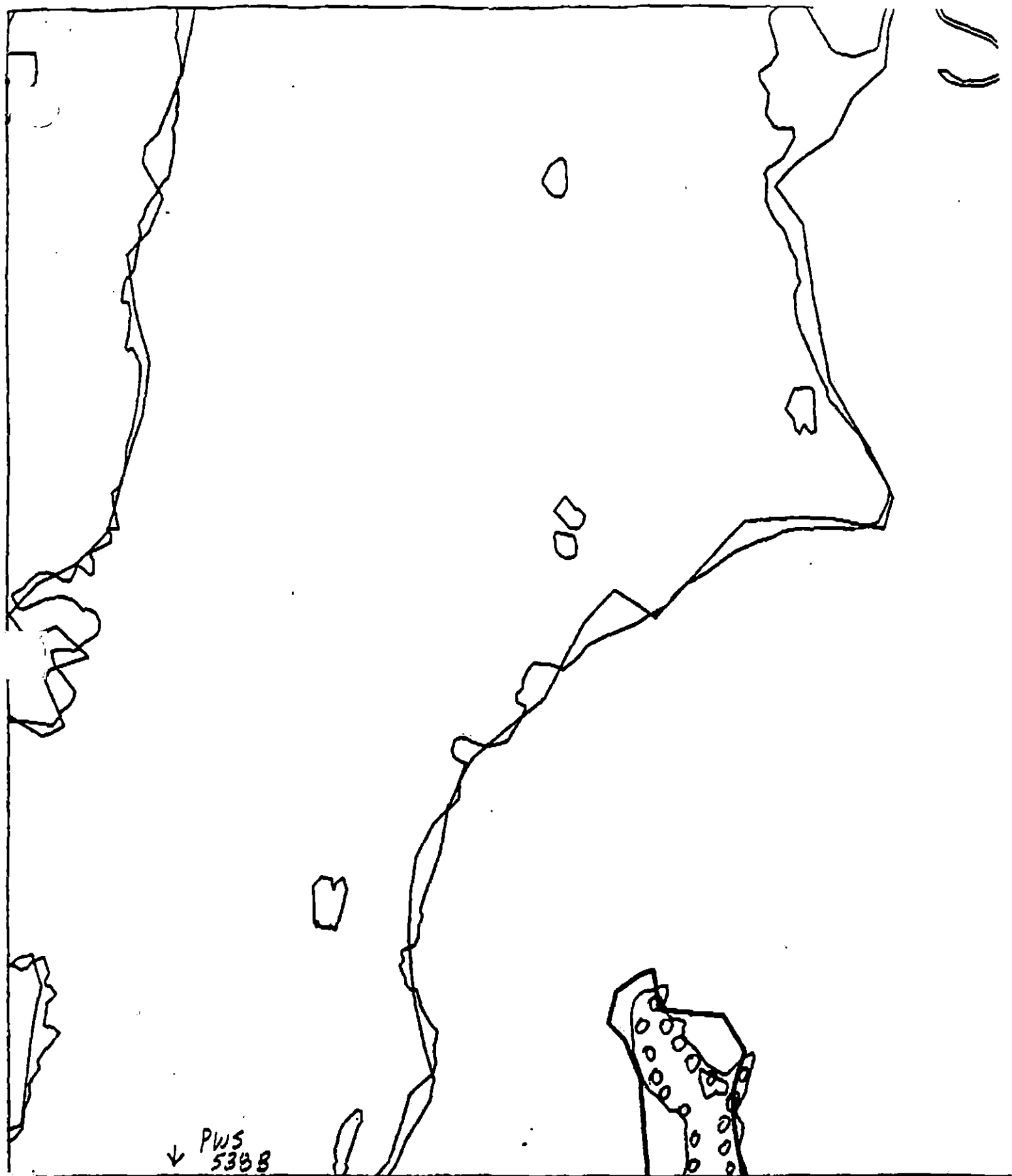
NOT PRESENT

Wildlife Observations/ General Comments:

Few BIRDS, a couple grebes

Ecological Considerations:

NONE - NO oil



↓ PWS
5348

XXXX Wide

//// Medium

----- Narrow

TTTT Very Light

ST-SQ-5-B

ADEC Segment Length: ~~444m~~ 6905

Map Key: PWS-535c

Name: K. DEBUSSCHER

Date: 4/2/90

Data Entered:

↑ PWS
534 L

END
ST-SQ-5-B

START
ST-SQ-5-B

↓ PWS 534 A

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

ST-SQ-5-B

ADEC Segment Length: 6905

0 100 200 300

Map Key: PWS-538b

Name: K. DEBUSSCHERE

Date: 4/2/90

ARLIS
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