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[Shoreline evaluations, 1990].

KO9-16 – K11-02

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SHORELINE EVALUATION

SEGMENT ST/K09-16-BR-001 SUBDIVISION B (2 OF 2) DATE 4/30/90

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)

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

7JJ Subsistence area: Invertebrate harvesting

9LM Land Mammals

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid disturbance/damage to uncoiled substrate and biota.

SHPO SIGNATURE: Michael A. Proctor DATE: 5/15/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 83 m: No Oil 1218 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

 X No Treatment Recommended

 Treatment Recommended

Manual Pickup

Bioremediation

Tarmat Removal

Snare/Absorbent Booms

Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

Spot Washing: _____ Wands _____

Beach Cleaner

Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE:

ADEC

EXXON

NOAA

USCG

FOSC:

DATE: 5-18-20

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 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, 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 prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299

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, 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 Kotai Bay Hatchery release

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

1H Remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.

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

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

Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791

2M Herring spawning (4/15 to 6/30)

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 Larry Nicholson 486-4791

P Harbor seal and sea lion pupping (5/10 to 7/1)

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

7HH Finfish harvesting

7L Deer harvesting (6/1 to 1/7)

7U Invertebrate harvesting

7K Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)

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

FILE -
SEGMENT ST / BR-001 SUBDIVISION: B DATE 4/30/90

USCG

NAME AEC Vandepels

SIGNATURE AEC Vandepels

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME

Michelle Baer

SIGNATURE

M Baer

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Areas of oiling were occasional, therefore we cleaned up as we covered the segment, removing & bagging the mousse patties and oiled sediments on the surface.

LAND MANAGER

NAME Janis Meldeum

SIGNATURE

Janis M. Meldeum

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

A number of mousse patties and ms/sediment was removed from the segment. Additional patties or mousse entrained in sediment probably still exist in the segment, but are buried by recent sediment deposits and rock debris. Another foot survey should be made later in the summer to locate and remove exposed mousse.

SHORELINE OILING SUMMARY

REVISION NO. 04-11

OG C. DILLON USCG AEC R. Vandepels SEGMENT ST/ BR-001
 BIO P. Crank LAND REP Janis Meldrum (NPS) SUBDIVISION B (1 OF 2)
 EXXON T. Tomblin ADEC Michele Baer TIME 12:30 to 14:00
 TEAM NO. 5 TIDE LEVEL 0 to -0.5 DATE 04/130/190
 EST. SUBDIVISION LENGTH: 1177 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock Vert Rock Cliff/grassy plateau
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 70 % B 5 % C 5 % P 10 % G 5 % S 5 % M 0 % V 0
 SLOPE: Lang 50 % Hang 1 % Vert 49 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 50 m NO 1127 m

SURFACE OIL

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

PAVEMENT H F S sq. m by cr(PATTIES) TARBALLS 1 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 ☐
patties an
TYPE oiled seeds#BAGS 1

Photographs:

Roll No. NoneFrames

SUBSURFACE OIL

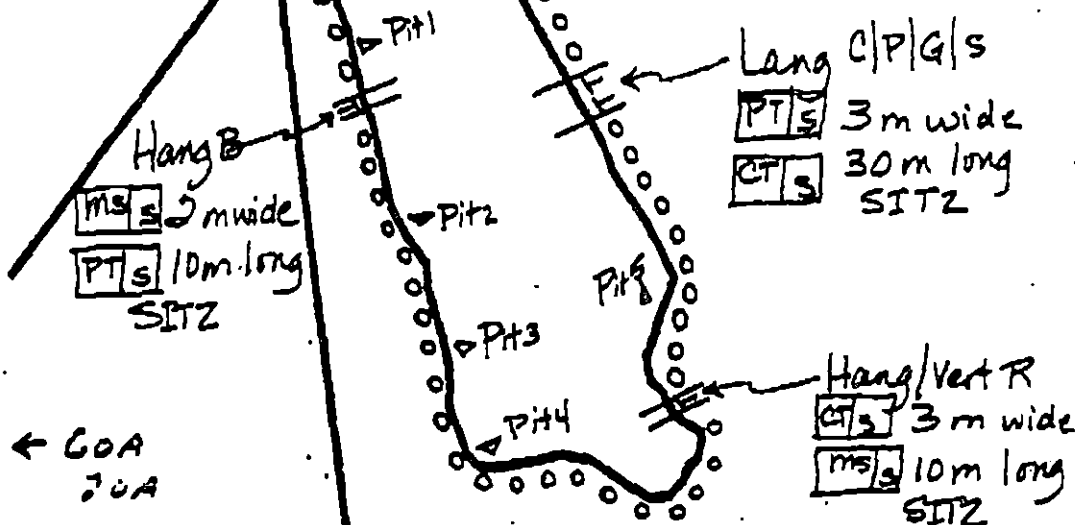
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		SO	UC	1	2	3	4	SU	U	M	L				
1	20					X	.		X					X					N	-	C-P/G/S
2	20					X	.		X					X					N	-	S-S/G/C
3	25					X	.		X					X					N	-	G/S - G/S
4	25					X	.		X					X					N	-	S - S/P
5	20					X	.		X					X					N	-	P-P/G/S/R

COMMENTS ENTIRE SUBDIVISION IS A TREE AND GRASS TOPPED PLATEAU WITH VERTICAL ROCK WALLS APPROX 100' HIGH. THE PLATEAU IS SURROUNDED BY A WIDE ROCK BENCH AND TIDAL FLAT OF BEDROCK OVERLAIN BY SAND/GRANULES, PEBBLES AND COBBLES. THE SITZ AT THE BASE OF THE CLIFF HAS 3 SMALL AREAS OF SPORADIC MOUSSE SPLATTERS, PATTIES AND COAT SPLATTERS. SEE OILING MAP. REVIEWED BAT DATE 3 May 90



BR001-A
2475 m

BR001-B
1177 m



OIL CHARACTER LENGTHS (m): CT 20 ms 10 PT 20 N

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

BR-1-B

EXON SEGMENT LENGTH: 1177m
ADCC Segment Length: 375m



Map Key: GOA-200

Name: C. DILLON

Date: 4/30/90

Date Entered:

SHORELINE ECOLOGICAL SUMMARY

Revision: 6

Segment ST/ BR001 Subdivision B Date (mo/day/yr) 4/30/90Time (24 hr) 1230-1400 Biologist Crank Length = 1177m pg 10+4(A) Substrate type and % of segments:
(1) Bedrock 76 (2) Boulder 5 (3) Cobble 5 (4) Pebble 10 (5) Sand 10 (6) Silt(B) Overall % cover of biota (% of segment): Dense Moderate 70 Low 30

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

Photographs:

Roll No. ST-S-8Frames 1, 2

BARNACLES

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

NOT PRESEN

MYTILUS

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

NOT PRESEN

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

2 Bear on beach

1 Bear w/ cub

1 Sea Lion

77 Birds - No ID - 1 Murre

11 - Ducks

4 - Auklets

1 - Raven

1 Pigeon Guillemot

2 Crows

2 Gulls

Mammal Vertebrae (maybe otter?)

in SUPRA - No o

Fresh → still articulated

Ecological Considerations:

E.C. not available from office

Area has large ^{wide} intertidal rock bench from pt → North/Extensive

inter/cobble/pebble/sand. Moderate conc Mussel bed throughout rock bench; patches of eelgrass tidepools. Would suggest limited access to rock benches to protect Mussel beds and tide pool areas.

Segment ST/BR001B

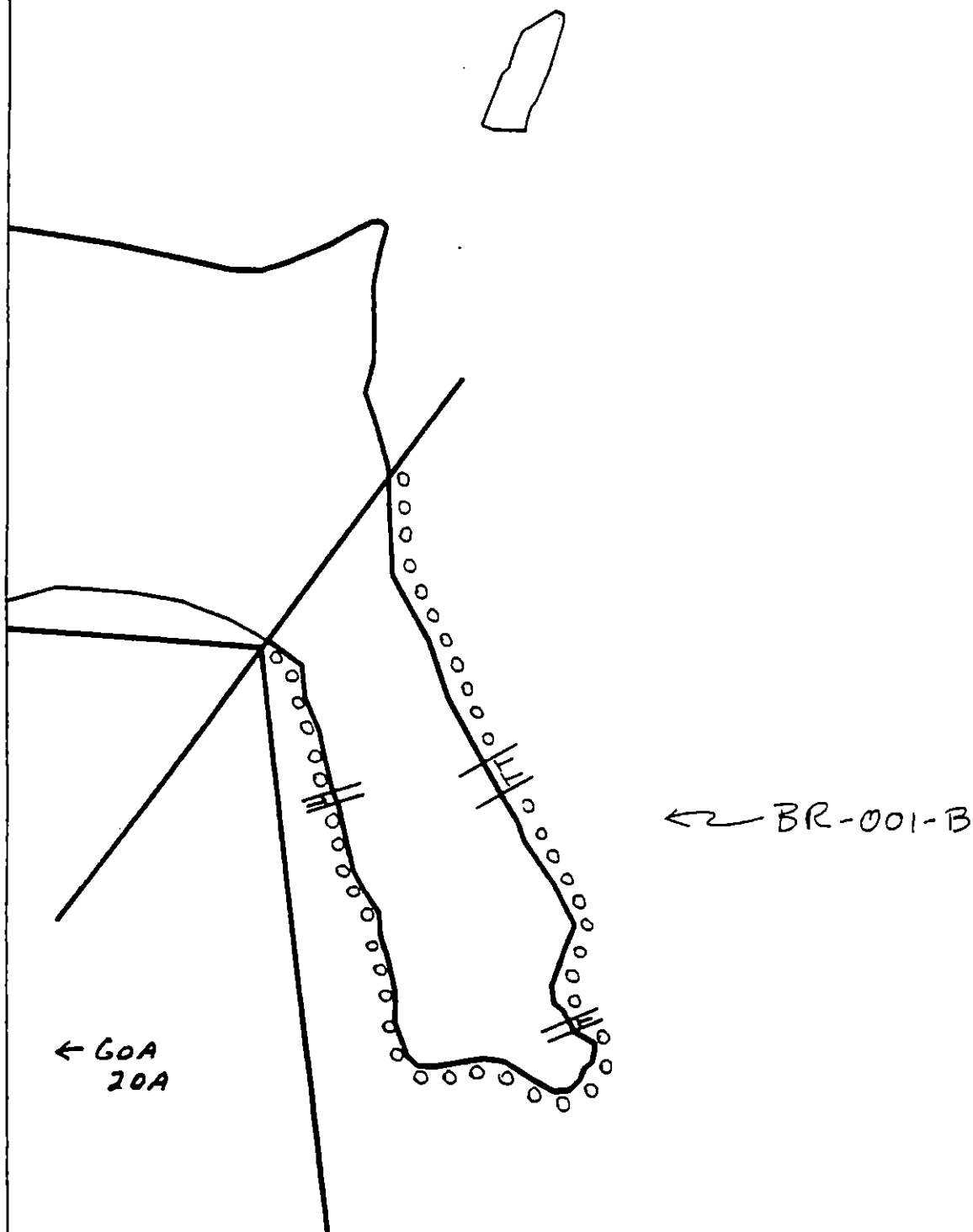
Length: 1177m Biol: Crank

Date: 4/30/90

Time: 1230-1400

Tide Height: 0 $\rightarrow$ -0.5

- From point west segment is sand flat in LITZ with Rock bench in upper LITZ through MITZ and cobble/pebble and boulder UITZ. In this area mussels are continuous but sparse along the sides of the rock bench, with a few individuals invading sand. There are 2/m² Anthropleura in sand next to rock bench. There are also sand dollars in LITZ sand. The UITZ C/P/B have a rare barnacle.
- From point east to end of segment the LITZ is a flat rockbench (2400m wide) covered with a moderate concentrated mussel bed. Throughout bench there are tidepools. In most of the tidepools there is a sand/sediment layer over the rock up to 5cm deep. In about 10% of the pools there are small Eelgrass patches.
- Area appears healthy.



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

BR-1-B

1177m

ADEC Segment Length: 3751m



Map Key: GOA-20b

Name: C. DILLON

Date: 4/30/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ K09-17-CC-001 SUBDIVISION A (1 OF 1) DATE 5/3/90

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)
Stream ID # 262-15-10030

8AA Sensitive estuary

9LM Other: Land mammals

4LL State Marine Park National Parks

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: Rachel Jean Dale DATE: 5/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 2980 m: No Oil 1783 m
Subsurface Oil Observed: Yes X No Maximum Depth 7cm

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)

TRASH 2

COMMENTS: Recommended treatment includes 1) manual removal of bags of oiled sand and tarballs 2) manual pick up of tarballs and patties on surface followed by *3) manual raking to aid in locating and removal of buried tarballs and patties as indicated on the attached sketch map. Consult ADF&G for appropriate work dates, regarding raking near anadromous stream.

TAG COMMENTS: MONITORS TO ASSESS THE LOGS

TAG APPROVAL DATE: 5/24/90
ADEC ART WEINER
EXXON ANDY EAR
NOAA Bill Alcott
USCG M.J. HALL

FOSC: [Signature] DATE: 6/4/90

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 use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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, 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 prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 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, 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 Kotol Bay Hatchery release
 Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 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
 Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 6/30)
 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 Larry Nicholson 486-4791
- 3U, 3U Harbor seal and sea lion pupping (5/10 to 7/1)
 Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31).
 Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 77 Subsistence area: Salmon harvesting (6/1 to 9/30)
 Finfish harvesting
 Deer harvesting (8/1 to 1/7)
 Invertebrate harvesting
 Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 K09-17-0001 SUBDIVISION: A DATE 5/3/90

~~0000~~
NAME STEPHEN LEHMANN SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED.

COMMENTS

Several areas of the UITZ had concentrations of TB + PT. - These should be removed from the area. Several bags of oiled sand were observed - these should be removed.

ADEC
NAME Terry Ellsworth SIGNATURE Terry Ellsworth

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

I concur with the comments of NPS and NOAA. I recommend manual removal of the mousse patches and tarballs (see sketch map) as well as the 4 bags of oiled sediment.

LAND MANAGER

NAME Carl Schach SIGNATURE Carl Schach

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Recoverable oil consists primarily of mousse patches and tarballs. Several concentrated patches of mousse patches exist at the upper edge of the upper intertidal as indicated on the sketch map. Four bags of oiled sand and mousse patches were found. The condition of the oil lends itself to rapid and easy removal. This segment could be walked end to end and patches/tarballs removed with shovels. The observed mousse patches and tarballs are apparently migrating up the beach face and being buried in

SHORELINE OILING SUMMARY

REVISION NO. 1.00

OG G. HEYMAN NOAA USCG S. LEHMAN SEGMENT ST/ K 09-17-C001
L. SHARMAN LAND REP C. SCHOSH SUBDIVISION A (1 OF 1)
 XON Not Present ADEC T. EUSWORTH TIME 17:30 to 19:45
 TEAM NO. 19 TIDE LEVEL +2 To +3.5 DATE 5 / 03 / 90
 EST. SUBDIVISION LENGTH: 4771 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 0 % B 0 % C 5 % P 10 % G 15 % S 70 % M 0 % V 0 %
 SLOPE: Long 100 % Hang — % Vert — % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 2980 m NO 1771 m
PR.

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0 cm

PATTIES / TARBALLS 20 BAGS

NEAR 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. 17

Frames —

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR								PIT ZONE	A	N	A	SHEEN (Y/N)	!?	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OP	NO		UG	UG	10	15	10	15	10	15	10	15							
1	30					X	0-0		X									X		N		-	-	GP/GS
2	25			X			4-11		X		X							X		N		-	-	G/GPS
3	30					X	0-0		X									X		N		-	-	G/GPS
4	25			X			5-7		X		X							X		N		-	-	G/GPS
							.																	
							.																	

COMMENTS

REVIEWED BAT DATE 10 May 90

DG Comments K09-17-CC001A(1 of 1) 5-3-90

This segment consists of a predominantly sand beach with a sand-granule-pebble-cobble storm berm and grassy uplands extending from Chinick Lagoon to the first creek encountered approximately 4771m to the north.

Oiling along the segment consists of TB & PT in the lower SUTZ & upper UITZ along the Kelp lines. The TB & PT typically have an appearance similar to flattened pebbles and cobbles with rounded edges. These "clasts" are DBL on the outside & DBL-DBR inside and are easily broken apart. There is a lot of sand incorporated within the TB & PT. ST, CT & CV were also observed on pebbles, cobbles and logs randomly along the segment, with the CT & CV appearing as a sand entrained layer on the clasts.

Along most of the segment the oiling concentration was $< 1\%$. At the southern and northern ends, concentrations were higher with 1-2m long areas ranging to 10% . One area at the southern end was observed with $10-15\%$ coverage ($\sim 10 \times 20$ m maximum dimension) and an area to the north was observed where the TB & PT's had been covered by 5 to 9 cm of sand.

Note that 4 garbage bags of oiled sand were also observed along this segment and are located on the sketch map.

G. Heyman

SKE MAP

EGMENT STIK 09-178001

UBDIVISION A

ATE 5/3/90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Bag/Dub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HW/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pt Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
% - No Subsurface Oil

2 Δ
% - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

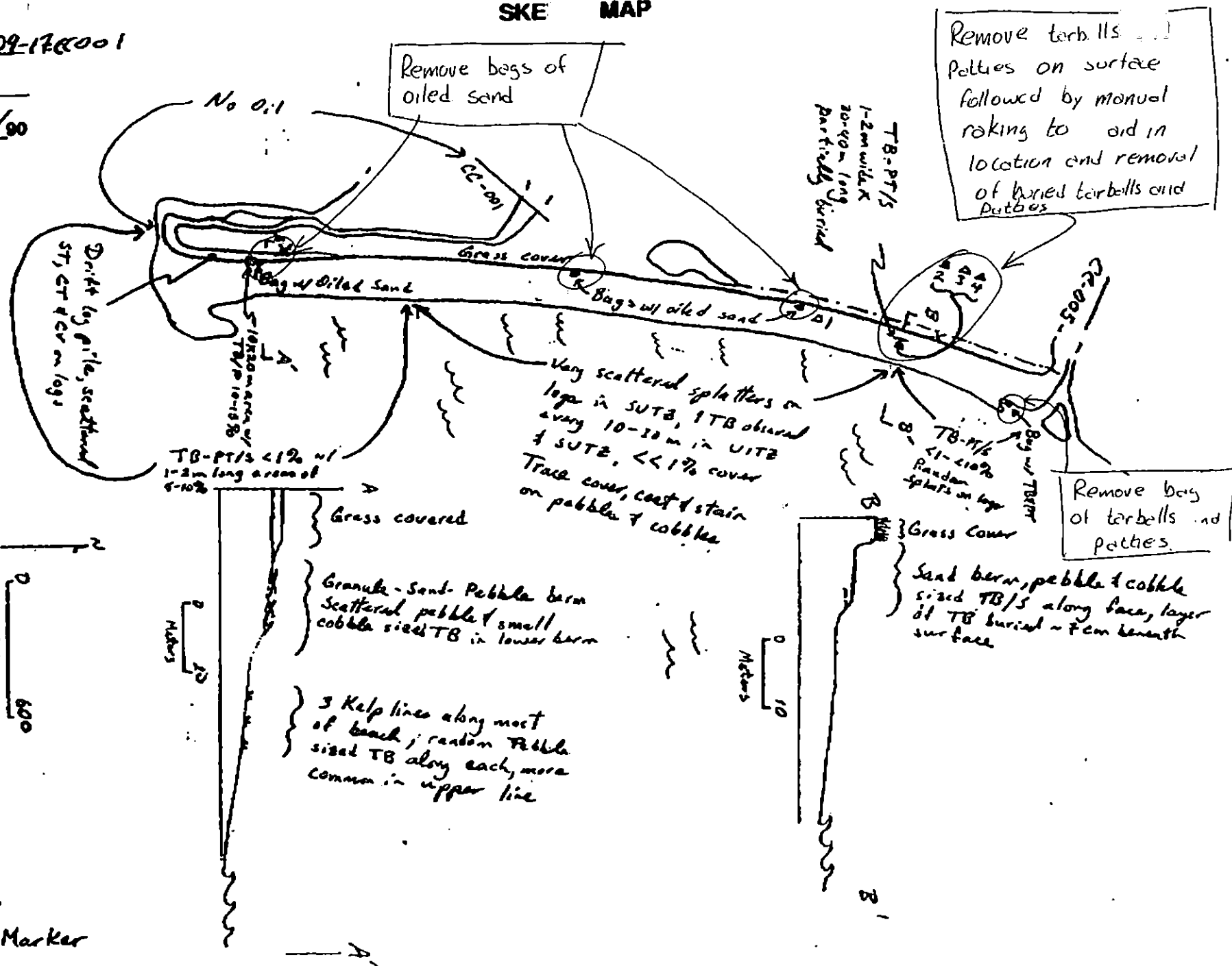
CT/P
Patchy Distribution

CT/S
Splashed Distribution

lll
Oiled Vegetation

Photo location, direction, and number

Regulatory Marker



Character Length (m): AP — PO — CV 3 CT 3 ST 4 MS — PT 6 TB 23 FL — NO 1771

REVISION 02/24/90

SHORELINE ECOLOGICAL SUMMARY (Page 1 of 6)

REVISION: 03/22/90

Segment ST/ CC-2 Subdivision A Date (mo / day / yr) 5/3/90Time (24 hr) 1730-1945 Biologist SHARMAN(A) Substrate type and % of segments: SUBDIV.
(1) Bedrock (2) Boulder (3) Cobble 5 (4) Pebble 10 (5) Sand 85 (6) Silt ^{+ granules}(B) Overall % cover of biota (% of segment): Dense Moderate Low X
SUBDIV.

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

Photographs: Roll No. 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 (NUCELLA, LITTORINA, LIMAEETS)

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: ~ 25 shorebirds, 10 sculpin, 15 glaucous-winged gulls, 1 golden plover, 1 yellowlegs, 30 pintails, 1 subadult eagle at N. end of segment (stream) sitting in willow. Brown bear, fox, and river otter tracks very common in supratidal and UTE sand - otters are transiting back & forth to backshore ponds. 2-3 fairly thin & sparse drift lines in UTE include occasional *Nereocystis* wads, along with some (cont.)

Ecological Considerations:

Please refer to attached Eco. Maps. Generally, the identified sensitivities relate to the Chinook lagoon estuary at the S. end of the segment with its anadromous stream, and the catalogued anadromous stream at the N. end of the segment. The former (lagoon) gives the codes 8AA (sensitive estuary) and 9LM (land mammals), and the latter (stream) gives the codes 1A (fry outmigration) and 1B (spawning). As related in this section of the summaries for CC-100 & CC-2, the lagoon estuary is a special concern due to ecological importance/productivity as well as sensitivity to human intrusion/physical disturbance. In addition, the backshore area of this segment appears to be of considerable importance to terrestrial mammals - particularly river otters.

Please see General Comments below.

General Comments (cont.):

Fucus, Alaria, Halosaccin. This is a wide, low-angle sandy exposed beach - much like PB-8 + CC-4, for example. In general, Comments for these segments (intertidally) are probably interchangeable. Invertebrate shells/tests/etc. include: Saxidomus giganteus, Mytilus edulis, Tresus capax, Clinocardium nuttallii, Siliqua patula, Protothaca staminea, Macoma spp., Mya spp., Spisula polyzona, Fusitriton oregonensis, Canax magister, Telmessus, Serpula tubes, large dried clam siphons (at least some - maybe all - are Mya (truncata?)), Dendroaster / Echinarachne (probably the latter), old dried Suberites ficus (hermit sponge), Podocarpus, dried clusters of egg cases of large subtidal snails (Fusitriton / Neptanea / Buccinum). Generally normal + healthy Intertidal Community, given the exposure, beach dynamics, and substrate types.

ECOLOGY MAP

(1 of 4)

CC-1

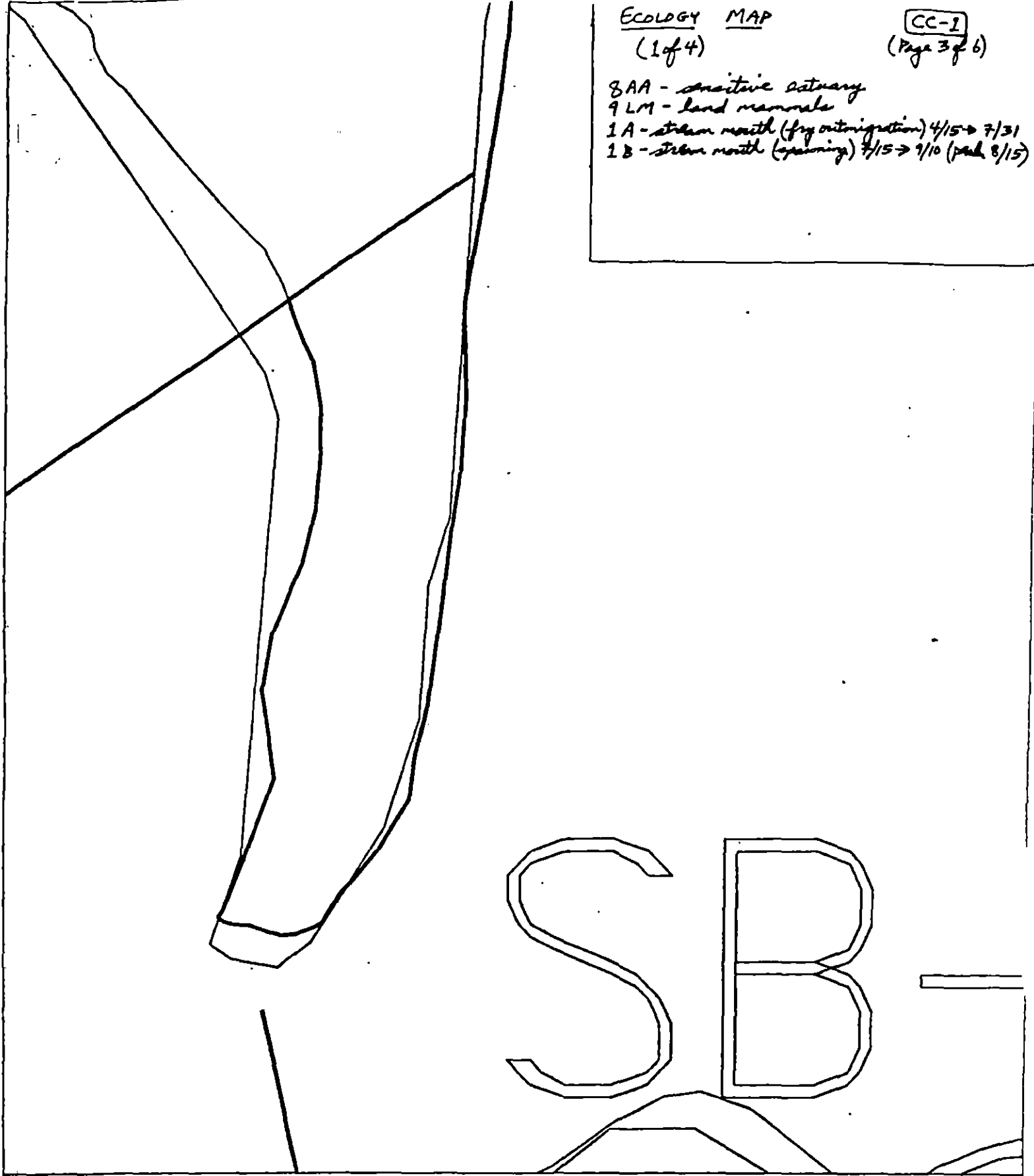
(Page 3 of 6)

8AA - sensitive estuary

9LM - land mammals

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

1B - stream mouth (spawning) 7/15 → 9/10 (peak 8/15)



XXXX Wide

/// Medium

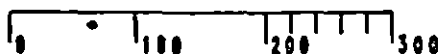
--- Narrow

TTTT Very Light

0000 No Oil

CC-1

Approx. Segment Length: 4771m



METERS



Map Key: AKP-CC-1a

Name: _____

Date: _____

Data Entered: _____

CC

+ 1

ECOLOGY MAP

(2 of 4)

See map page 1.

CC-1

(Page 4 of 6)

XXXX Wide

CC-1

/// Medium

---- Narrow

Approx. Segment Length: 4771m

TTTT Very Light

0000 No Oil

0 100 200 300

METERS



Map Key: AKP-CC-1c

Name: _____

Date: _____

Data Entered: _____

ECOLOGY MAP
(3 of 4)

CC-1
(Page 5 of 6)

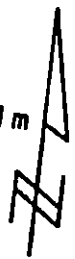
See map page 1.

side
medium

CC-1

OW
ery Light
Oil

Approx. Segment Length: 4771m



Ma
Nam
Date
Data

→ - - - - - → Anadromous stream (ADF&G # 262-15-10030)
"Village Creek"

ECOLOGY MAP
(4 of 4)

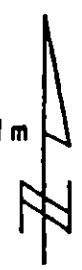
CC-1
(Page 6 of 6)

See map page 1.

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

CC-1

Approx. Segment Length: 4771m



Map Key: AKP-CC-1f
Name: _____
Date: _____
Data Entered: _____

↑
GOA 25 C

A hand-drawn map of a coastline, likely in Goa, India. The map is oriented with the coastline running vertically. The land area is on the left, and the sea area is on the right. The coastline is marked with several 'T' symbols, possibly indicating tide gauges or specific locations. The sea area is marked with several 'O' symbols, possibly indicating buoys or specific locations. A title 'GOA 25 C' is written in the top right corner, with an arrow pointing upwards. The map is drawn on a piece of paper with a vertical crease down the center.

CC - 1

ADEC Segment Length: 476⁷¹~~4~~m

A horizontal scale bar labeled "METERS" with markings at 0, 100, 200, and 300.

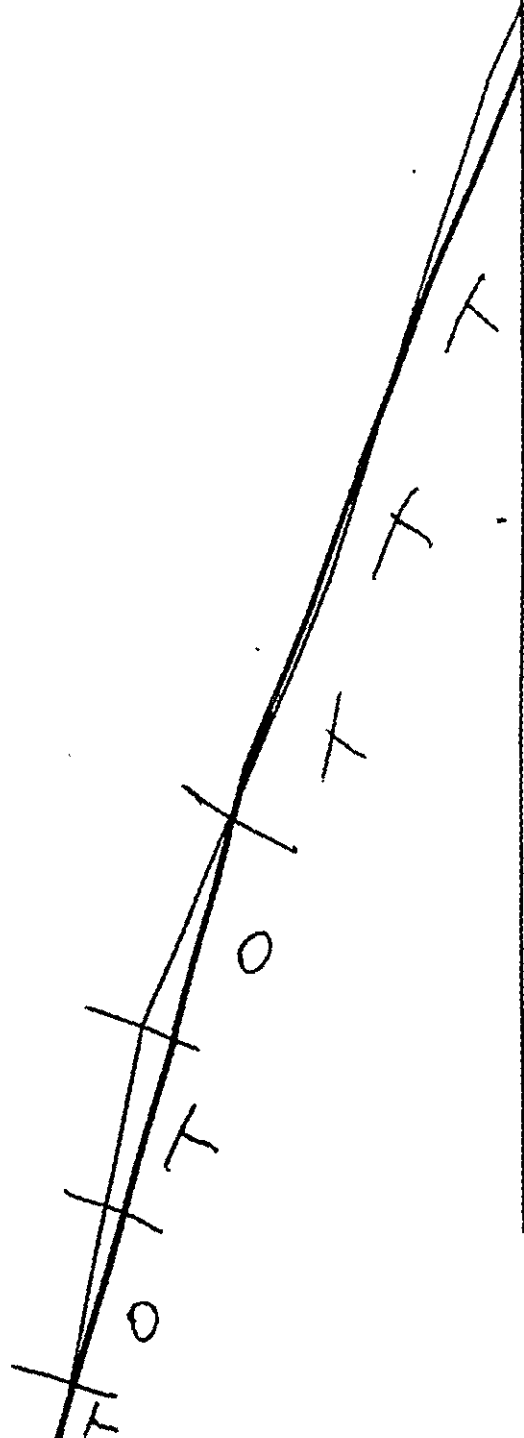
22

Map Key: GOA-25a

Name: Heyman

Date: 3 May 90

Data Entered:



Tide
 Medium
 Crow
 Very Light
 Oil

CC-1

Approx. Segment Length: 4771m

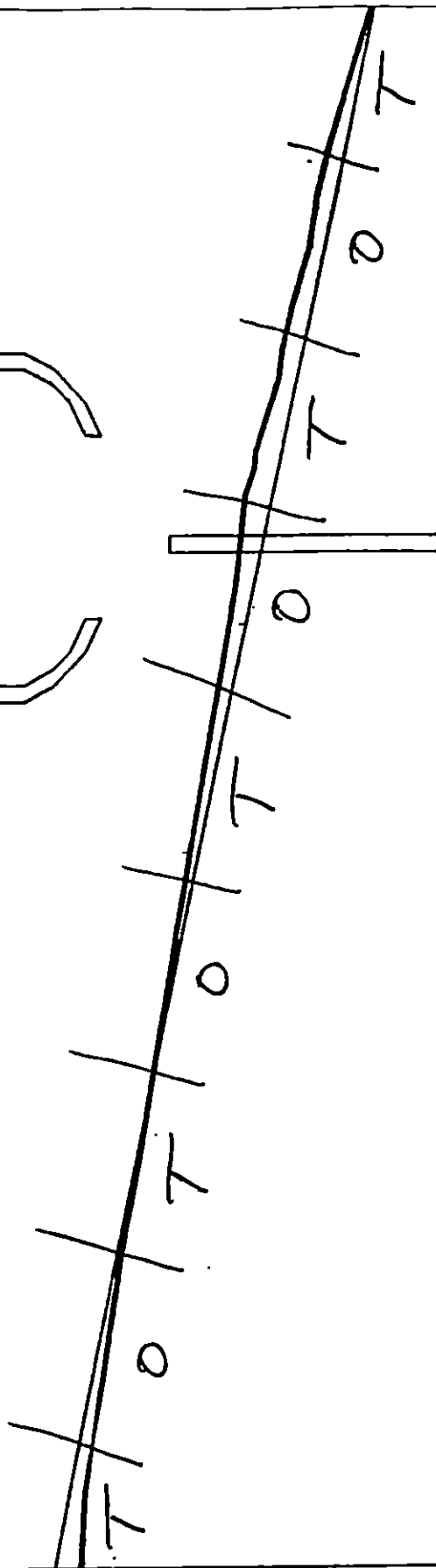


No
 Name
 Date

HEYMAN
 3 MAY 90

C

C



1

XXXX Wide

CC-1

, /// Medium

---- Narrow

TTTT Very Light

0000 No Oil

Approx. Segment Length: 4771m

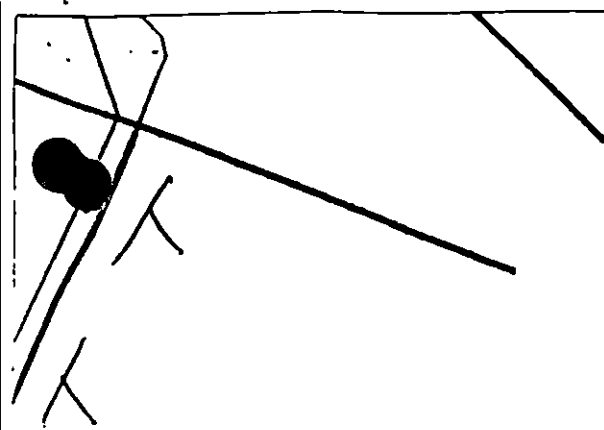


Map Key: AKP-CC-1c

Name: HEYMAN

Date: 3 MAY 90

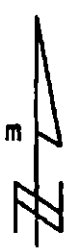
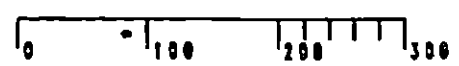
Data Entered:



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

CC-1

Approx. Segment Length: 4771m



Map Key: AKP-CC-11

Name: HEYMAN

Date: 3 MAY 90

note: ...

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K-09-17-CC-001 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN
Manual Raking	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 (262-15-10030 and 262-15-10040) are more than 100m from work site. No constraint to manual pickup and manual raking.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Avoid any unnecessary disturbance or damage to unrolled biota and substrate. Sensitive estuary.

FOSC

[Signature]

Date

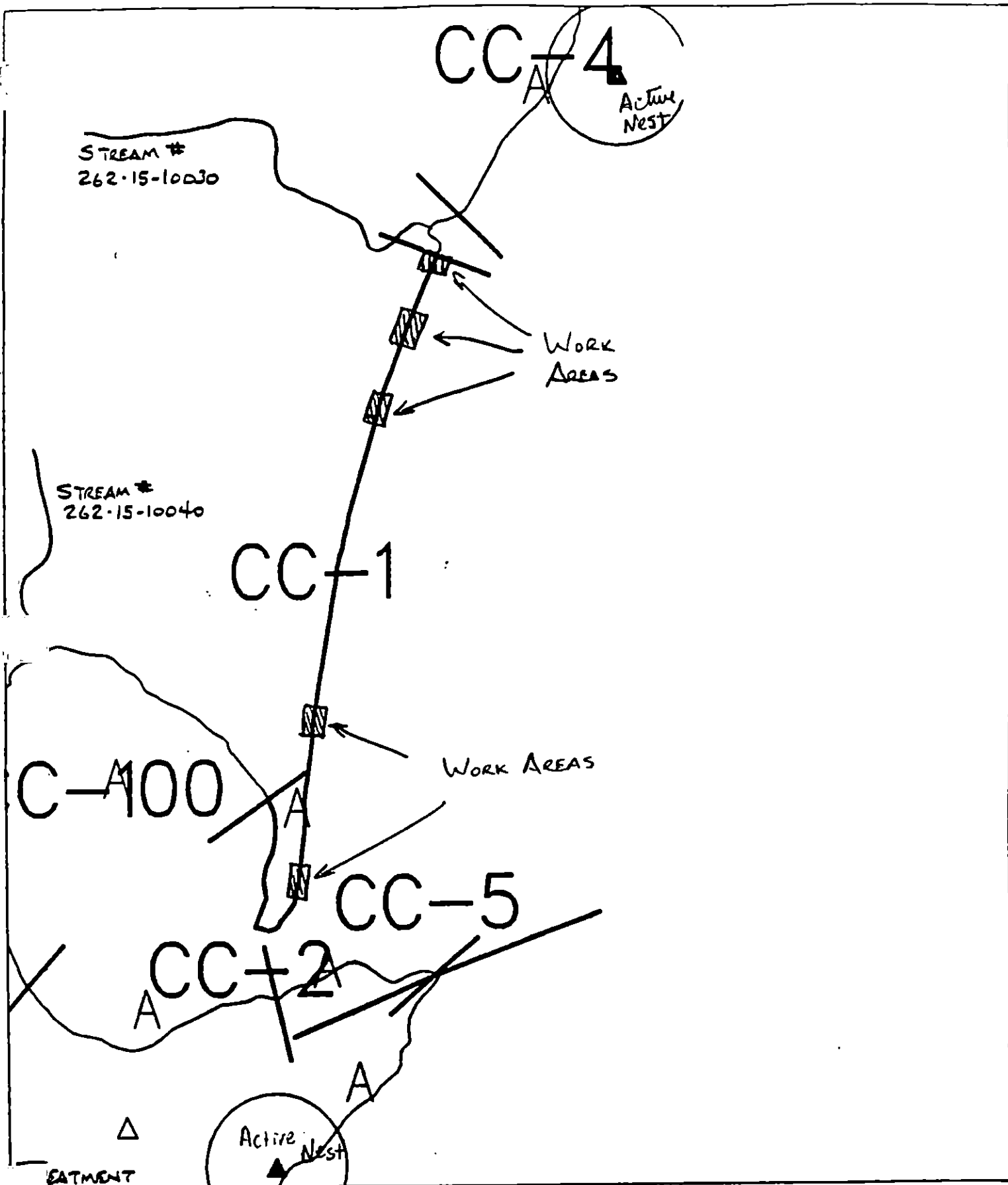
6-18-90

Prepared by

[Signature]

Date

6/15/90



Exxon Company, USA
Map Key: NP-CC-1



ECOLOGY MAP
SEGMENT K9N-17 CC-1
SUBDIVISION A (1 of 1)
METERS

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

SHORELINE EVALUATION

SEGMENT ST/ K09-17-CC-002 SUBDIVISION A (1 OF 1) DATE 5/3/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

8AA Sensitive estuary
9LM Other: Land mammals
4LL State Marine Park National Parks

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: Rachel Joan Oare DATE: 5/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 69 m: V.Light 1348 m: No Oil 207 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended manual removal of tarmat, tarballs and patties as indicated on the attached sketch map. No specific ecological time constraints identified. MANUAL pickup of TRASH + DEBRIS

TAG COMMENTS: BIOREMEDIATE (CUSTOMER) AS REQUIRED FOLLOWING TARMAT REMOVAL

TAG APPROVAL DATE: 5/24/90
ADEC ART WEINER Art Weiner
EXXON Amoy Tetz
NOAA Buckner
USCG M. J. HALL

Observe NPS record regarding bear, sensitivity & access.
FOSC: J. J. J. J. DATE: 6/8/90

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 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, 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 prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299

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, 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 Kotol Bay Hatchery release

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

1H Remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.

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

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

Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791

2M Herring spawning (4/15 to 6/30)

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 Larry Nicholson 486-4791

Harbor seal and sea lion pupping (5/10 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 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 (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 Subistence area: Salmon harvesting (6/1 to 9/30)

Finfish harvesting

Deer harvesting (8/1 to 1/7)

Invertebrate harvesting

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

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 1K09-17-CC002 SUBDIVISION: A DATE 5/03/90NAME STEPHEN LEHMANN SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED.

COMMENTS

Further human intervention into this lagoon area could do more harm than good given the slight nature of the silt and the sensitivity of the area. Small band of tar balls and occasional small mouse patches were located, but not heavy enough to warrant disturbance by crews.

ADEC

NAME Terry Ellsworth SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

This segment contains a band of tar balls and patches in concentrations of $<1\%$ with two areas of up to 15% in the upper inter tide zone from the SE segment boundary to $\approx 400\text{m}$ west of the small creek. In the upper mud flat an area $5\text{m} \times 20\text{m}$ of patty to asphalt with up to 30% coverage is located at the SW end of the segment and two patches up to $2\text{m} \times 3\text{m}$ are located in the SE part of the segment. Manual removal is recommended. Due to the high sensitivity of this area a small crew should be used and no more than 2-3 persons should be treating the mud flat areas or working beyond the mouth of the small creek.

LAND MANAGER

NAME Carl Schech SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

The oil in the south and southwest side of this segment is in a very protected lagoon/estuary system and will persist on the surface for a long time. A small crew should use shovels to remove the mouse patches and tarballs on either both sides of the creek (within 100 meters) and the mouse patch at the north west end of the segment.

SHORELINE OILING SUMMARY

REVISION NO. 04/13/80

OG G. HEYMAN NOAA USCG S. LEHMAN SEGMENT ST/ K0917 CC 002
 BIO L. SHARMAN LAND REP C. SCHOCK NPS SUBDIVISION A (1 OF 1)
 TXXON ON LEAVE ADEC T. ELSWORTH TIME 14:45 to 16:00
 EAM NO. 19 TIDE LEVEL +4 to +2.44 DATE 5/03/90
 EST. SUBDIVISION LENGTH: 1619 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 0 % B 5 % C 10 % P 20 % G 20 % S 20 % M 25 % V 0 %
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 20 m VL 1384 m NO 215 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	C	B	P	S	SP	BP	OP	SL	TL	LR	SU	U	M	L
ASPHALT PAVEMENT			X	X					X				X	X
POOLED														
COVER														
COAT														
STAIN														
MOUSSE														
PATTIES			X	X		X						X		X
TARBALLS				X		X						X		
ILM														
NO OIL											X			

PAVEMENT H F 10 sq. m by 2 cmPATTIES / TARBALLS 15 BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

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

DID YOU COLLECT DEBRIS?

YES ☐ - NO ☒TYPE 0#BAGS 0

Photographs:

Roll No. —Frames —

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	SP BP	BP TP	OT SL	BP TL	LR	SU	U	M	U							
1	30					X	0.0		X								X				N	-	-	P/P	
2	15					X	0.0		X								X				N	-	-	P/S	
3	25					X	0.0		X								X				N	-	-	P.S/S	
							.																		
							.																		
							.																		

COMMENTS

REVIEWED BAT DATE 8 May 90

This segment lies along the southern end of Chiniak Lagoon. The west boundary was difficult to determine from the maps provided, but was chosen at a large tree which had fallen across the narrow beach. The segment extends eastward to the southern entrance to the lagoon. Most of the segment consisted of a wide sand-granule-pebble beach. This narrows in the western 400-500 meters to a narrow beach with mudflats extending to near a steep alder covered scarp.

Oiling in the segment was observed along the UITZ Kelp line along the wider sand-granule-pebble beach as turballs and patties in a band up to 3 m wide. This band was continuous, but coverage was commonly $< 1\%$. Specific areas noted on the sketch maps had up to 15% coverage. The TB & PT had the appearance of pebbles and cobbles with a dull black exterior with sand incorporated in the surface. The inside was shiny black to dark brown and sticky. The "pebbles and cobbles" were typically flattened with rounded edges. Stain, coat, and occasional cover with entrained sand was sporadically observed on logs in the SUTZ.

Oiling was also observed at the top of the mudflats. Where the beach was wider, 2 small areas were observed with PT/P (2x3m, 20% cover) and AP/P (1x2m, 30% cover). Also, a narrow band of PT-AP / S with IP (1/2 x ~200m) with < 1 to 15% cover. The cover ranged to 30%, but averaged $< 10\%$. The PT & AP had similar appearances, with DBR-DBL exterior and

OG Comments K 09 17 CC002 (10 f.) 5/3/80 DGH pg 2
a shiny mouse-like interior with sand and mud
entrained. The PT & AP was very soft and
pliable. This narrow band extended from
a point about 200 to 300 m west of where
the beach narrows to the segment boundary
at the fallen tree.

OG G. Heyman

SEGMENT ST/ K0917 CC002

SUBDIVISION A

DATE 5/3/90

CHECKLIST

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

LEGEND

1 ▲

Pit - No Subsurface Oil

2 ▲

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

1

Photo location, direction, and number

Oil Character

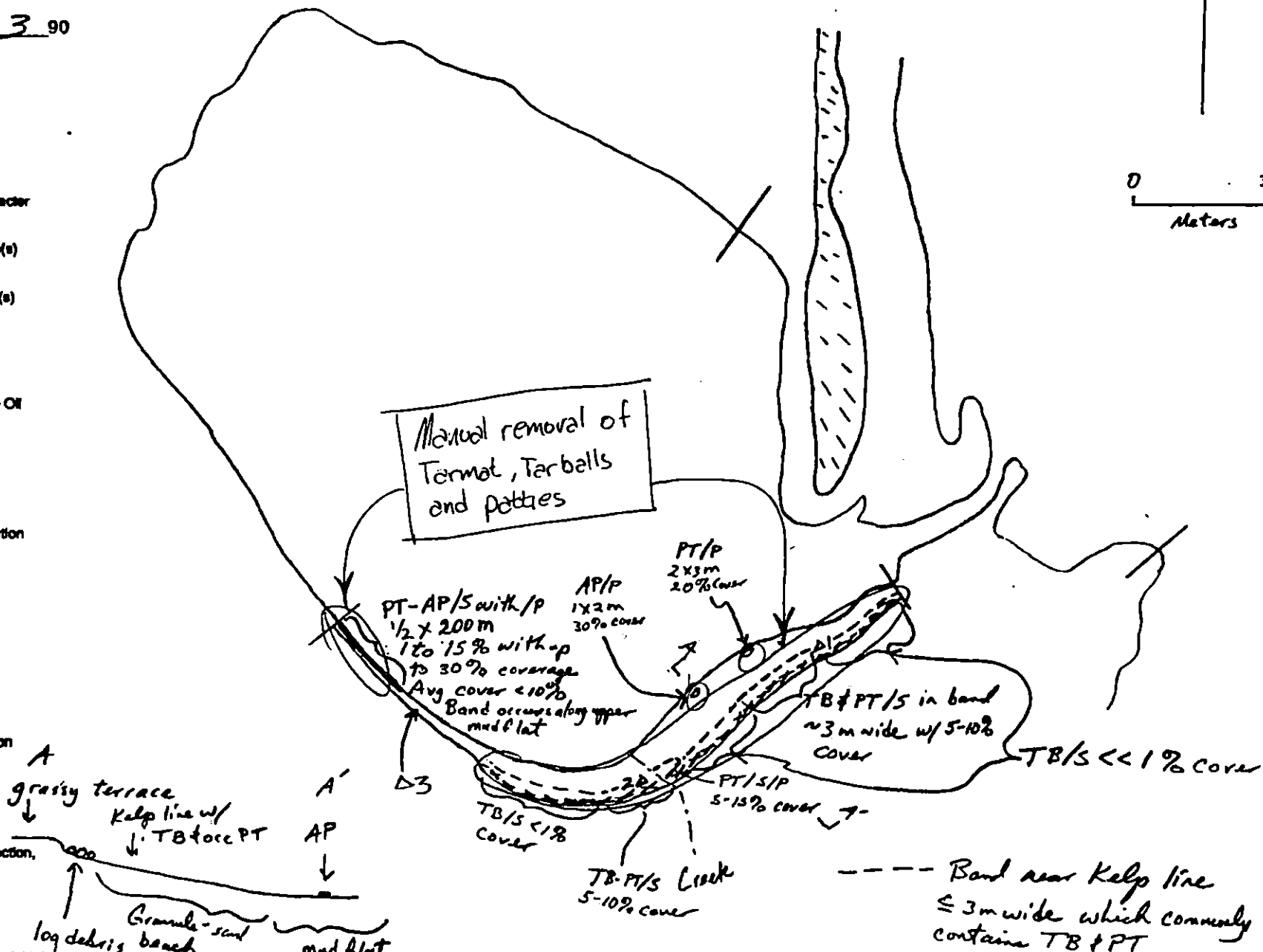
h (m): AP 10 PO - CV - CT - ST - MS -

TB - FL - NO 215

SKETCH MAP



0 300
Meters



SHORELINE ECOLOGICAL SUMMARY (Page 1 of 4)

REVISION: 03/22/90

Segment ST / CC-2 Subdivision A Date (mo / day / yr) 5/3/90Time (24 hr) 1500-1600 Biologist SHARMAN(A) Substrate type and % of segments: SUBDIV.
(1) Bedrock (2) Boulder 5 (3) Cobble 10 (4) Pebble 20 (5) Sand 40 (6) Silt 25 ^{+gravel mud}(B) Overall % cover of biota (% of segment): Dense Moderate Low X
SUBDIV.

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

Photographs: Roll No. 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 (ANCELA, LITTORINA, LIMPETS)

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments: Fox sparrows foraging in supratidal. Saw 150 ducks rafted up as in CC-2 (100 pintails, 30 green-winged teal, 10 shovellers, 10 scaup). 10 glandular-winged gulls. Brown bear, fox, wolf, and moose tracks in sandy UZ + supratidal. This is a wide, low angle sand point flat within Chirikof Lagoon. There are rare exposed boulders & cobbles exposed, some of which have barnacles - no spat. (cont.)

Ecological Considerations:

Please refer to attached Eco. Maps. Previously identified ecological sensitivities include codes 8AA (sensitive estuary) and 9LM (land mammal). Clearly the lagoon is both very biologically productive & important, as well as quite sensitive to human disturbance (both via direct intrusion and actual physical disturbance of the fine-grained substrate - this latter is probably more important in the longer term). This area is also very important as foraging & resting habitat for shorebirds & seabirds, residents as well as migrants. Also a critical nursery/feeding area for marine species, many of economic importance. Further intrusion here should be considered with caution (see also this section of CC-100 summary).

General Comments (cont.):

The remainder of any macroscopic intertidal biota is generally limited to a thin, sparse drift line and locally dense populations of Artemisia out on the sand/mud flat. There are a few elevations in these beds, presumably by bears/wolves/foxes - small holes partially filled back in by the tide (20 x 20 x 20 cm). The thin drift includes Fucus, Nereocystis, Halosaccaria, Alaria, some fine reds (Ptilota, etc.). Shells observed are the same as those on CC-5 (see that summary) - Saxidomus, Mytilus, Tresus, Macoma, Mya, etc. This is a normal, healthy sand/mud flat intertidal.

S B

CC-2



ECOLOGY MAP

(1 of 2)

CC-2

(Page 3 of 4)

8AA - sensitive estuary
9LM - land mammals

X Wide

/ Medium

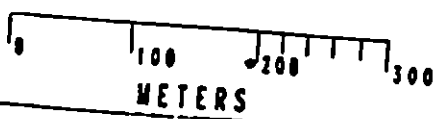
• Narrow

T Very Light

0 No Oil

CC-2

Approx. Segment Length: 1619m



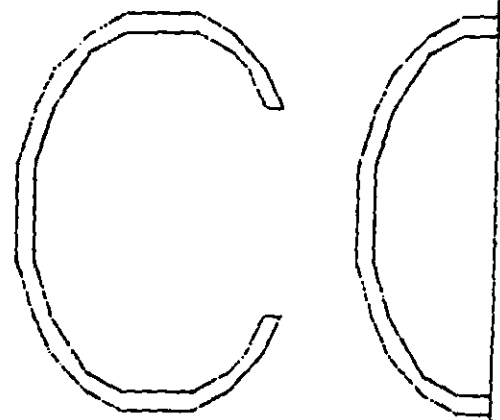
Map Key

Name: _____

Date: _____

Data Ento. _____

Chiniah Lagoon



ECOLOGY MAP

(2 of 2)

8AA - sensitive estuary
9LM - land mammals

CC-2

(Page 4 of 4)

XX Wide
// Medium
- Narrow
TT Very Light
OO No Oil

CC-2

Approx. Segment Length: 1619m

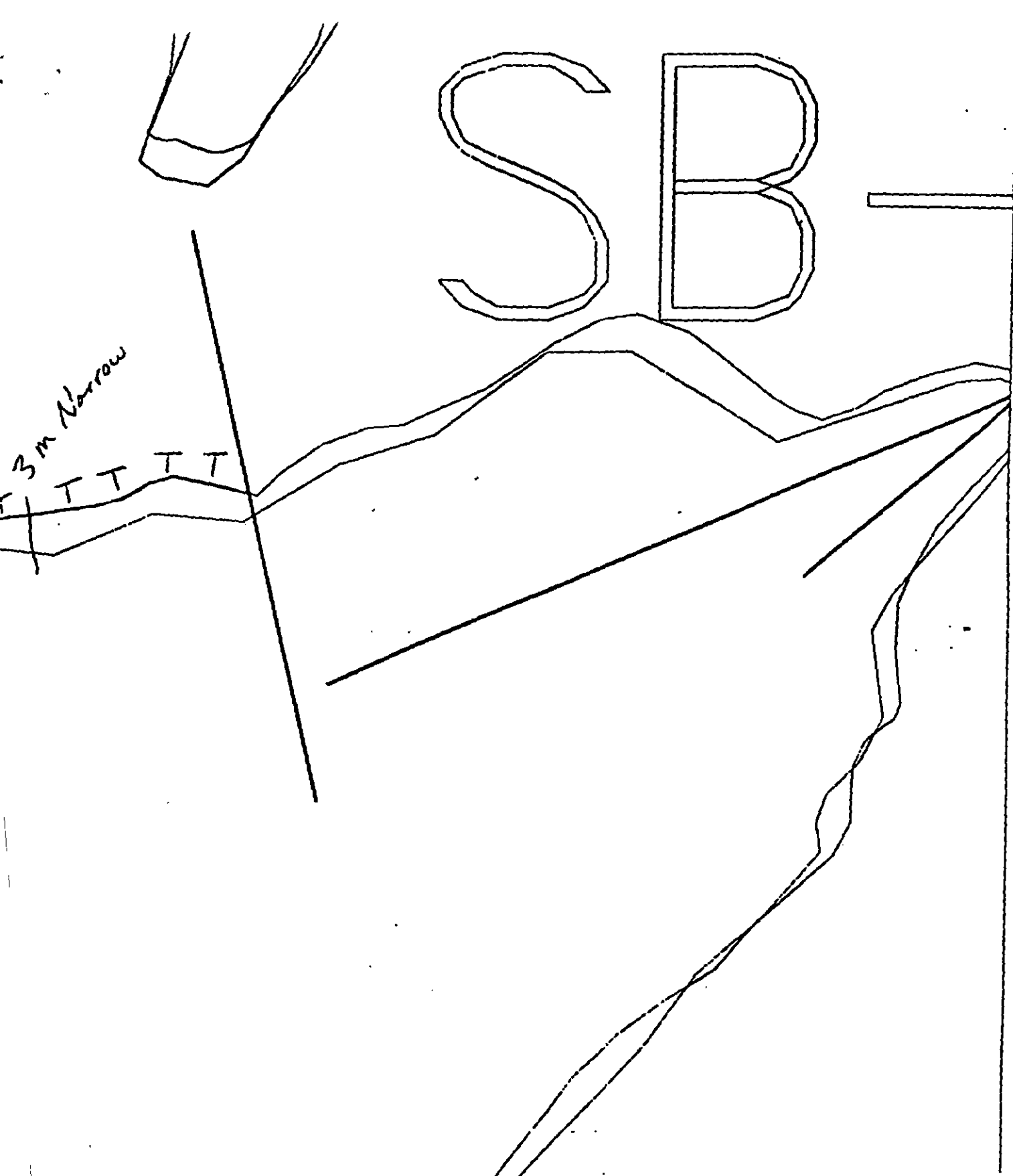


Map Key:

Name: _____

Date: _____

Data Enter



X Wide
/ Medium
- Narrow
- Very Light
O No Oil

CC-2

Approx. Segment Length: 1619m

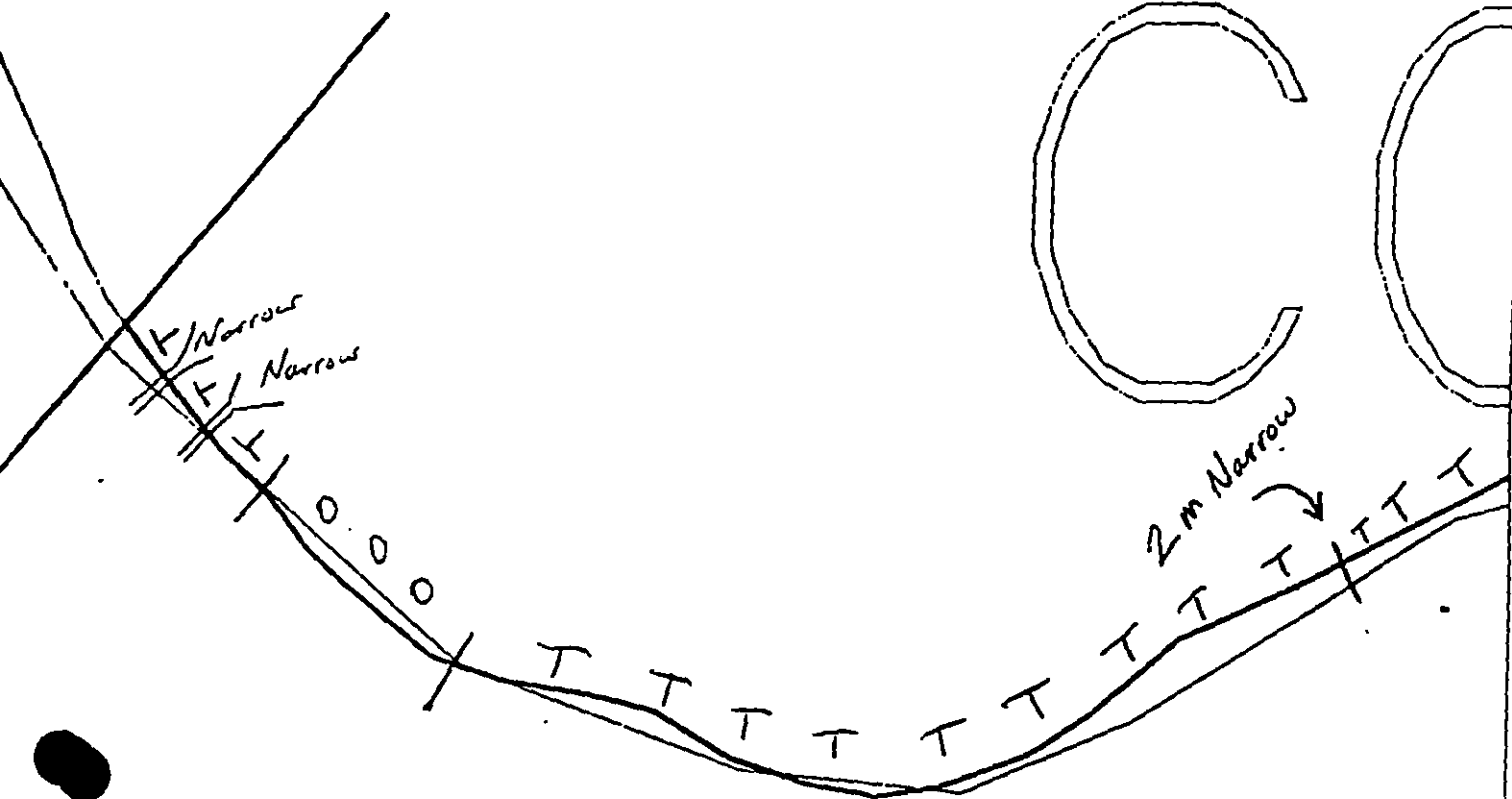
0 100 200 300
METERS

Map Key

Name: G. Heyman

Date: 5-3-90

Data Ente.



XX Wide
 // Medium
 X Narrow
 TT Very Light
 00 No Oil

CC-2

Approx. Segment Length: 1619m



Map Key:

Name: G. Hayman

Date: 5-3-90

Data Enter

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-17-CC-002 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN*
Bioremediation	OPEN*

*Observe NPS recommendations regarding bear sensitivity and access

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (262-15-10040) is more than 100m from work site. No constraint to manual pickup, tarmat removal and bioremediation.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

[Signature]

Date

6-16-90

Prepared by

[Signature]

Date

6/15/90

STREAM #
262-15-10040

CC-100

WORK AREA

CC-2

CC-5

EMP 1

TREATMENT

TREATMENT



Exxon Company, USA
Map Key: AKP-CC-2



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

- ★ Seabird Colony
- ▲ Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ K09-17-CC-004 SUBDIVISION A (1 OF 1) DATE 5/4/90

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) (Adjacent segment - #262-15-10030)
4LL State Marine Park National Parks
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: Rachel Joan Orr DATE: 5/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 1502m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/24/90

ADEC Alex W. Warrick
EXXON Amy Tate
NOAA Paul W. Warrick
USCG M. J. Hall

FOSC: J. J. J. J.

DATE: 6/8/90

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 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, 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 prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 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, 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 Kotol Bay Hatchery release
 Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1I Gill net area
- 1J Purse seine area
 Mainland, West side Kodiak, Shuyak & Moser/Oiga Bay (8/9 to 10/1)
 East side Kodiak, East side Afognak (7/4 to 10/1)
- 1K Purse seine hook-off
- 1L Set net sites
 Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 6/30)
 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 Larry Nicholson 486-4791
- Harbor seal and sea lion pupping (5/10 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 588-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (8/1 to 9/15)
 6V Anchorages (8/1 to 9/15)
 6W Forest Service cabins (8/1 to 9/15)
 6X Lodge (8/1 to 9/15)
 6Y Special use destination
- 7Z Subistence area: Salmon harvesting (8/1 to 9/30)
 1 Finfish harvesting
 1 Deer harvesting (8/1 to 1/7)
 1 Invertebrate harvesting
 1 Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
 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 109-17-CC004 SUBDIVISION: A DATE 5/4/90

NAME STEPHEN LEHMANN SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED .

COMMENTS

Very little oil observed. Scattered TBs (cc 1%).
No treatment required.

ADEC NAME Terry Ellsworth SIGNATURE Terry Ellsworth

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED Beach check + Treatment

COMMENTS
The southern half of this segment contains patties and tarballs in the supratidal and upper intertidal areas in amounts of generally $\leq 1\%$ with occasional $1m \times 2m$ areas up to 10% . When a crew is working in CC 001 the adjacent segment to the south, several team members should check this segment as concentrations of patties and tarballs may increase. Patties and tarballs should be picked up at this time.

LAND MANAGER

NAME Carl Schoch SIGNATURE Carl Schoch

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Recoverable oil was observed in the southern half of the segment and consists primarily of mouse patters and tarballs. These are apparently migrating up the beach face towards the supratidal zone where they will persist for a long time.

SHORELINE OILING SUMMARY

REVISION NO. 04/13/88

OG G HEYMAN NOAA S. LEHMAN SEGMENT ST/ K 09-17-CC-004
 BIO L SHARMAN USCG C. SCHACH SUBDIVISION A (1 OF 1)
 EXXON NOT PRESENT ADEC T. ELLSWORTH TIME 14:45 to 15:20
 AM NO. 19 TIDE LEVEL +6 to +5.5 DATE 5/04/90
 IT. SUBDIVISION LENGTH: 1500 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 0 % B 0 % C 5 % P 10 % G 15 % S 70 % M 0 % V 0 %
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 1500 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	C	N	P	S	ST	CT	CV	PT	VB	TL	SU	U	M	L
ASPHALT PAVEMENT														
POOLED														
COVER				X	X						X	X		
COAT				X	X						X	X		
STAIN				X	X						X	X		
MOUSSE														
PATTIES				X	X						X	X		
TARBALLS				X	X						X	X		
.M														
NO OIL													X	X

-PAVEMENT H F S 0 sq. m by 0 cmPATTIES / TARBALLS 10 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. ST-19(III)-1Frames 1

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	ST	CT	CV	PT	VB	TL	SU	U	M	L				
1	15					X	0-0		X							X				N	—	—	S/S
2	15					X	0-0		X								X			N	—	—	S/S
							.																
							.																
							.																
							.																

COMMENTS This segment consists of a predominantly sand beach with a sand-granule pebble-cobble storm berm containing a moderate amount of drift logs and trash. Oiling is observed along the SW part of the segment as pebble-cobble sized flattened, rounded TB & PT/S generally < 1% cover. ST, CT & CV were also observed w/ sand entrained on pebbles and cobbles. To the northeast, only ST, CT & CV were observed on drift logs, TB and PT were not observed. These splatters were observed every 5-15 m.

REVIEWED BA7 DATE 9 May 90

OG K09-17-CC004 G. Heyman

SEGMENT ST/ K09-17-CC004

SUBDIVISION A

DATE 5/04/90

SKETCH MAP

CHECKLIST

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

LEGEND

1 Δ
PI1 - No Subsurface Oil

2 Δ
PI1 - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

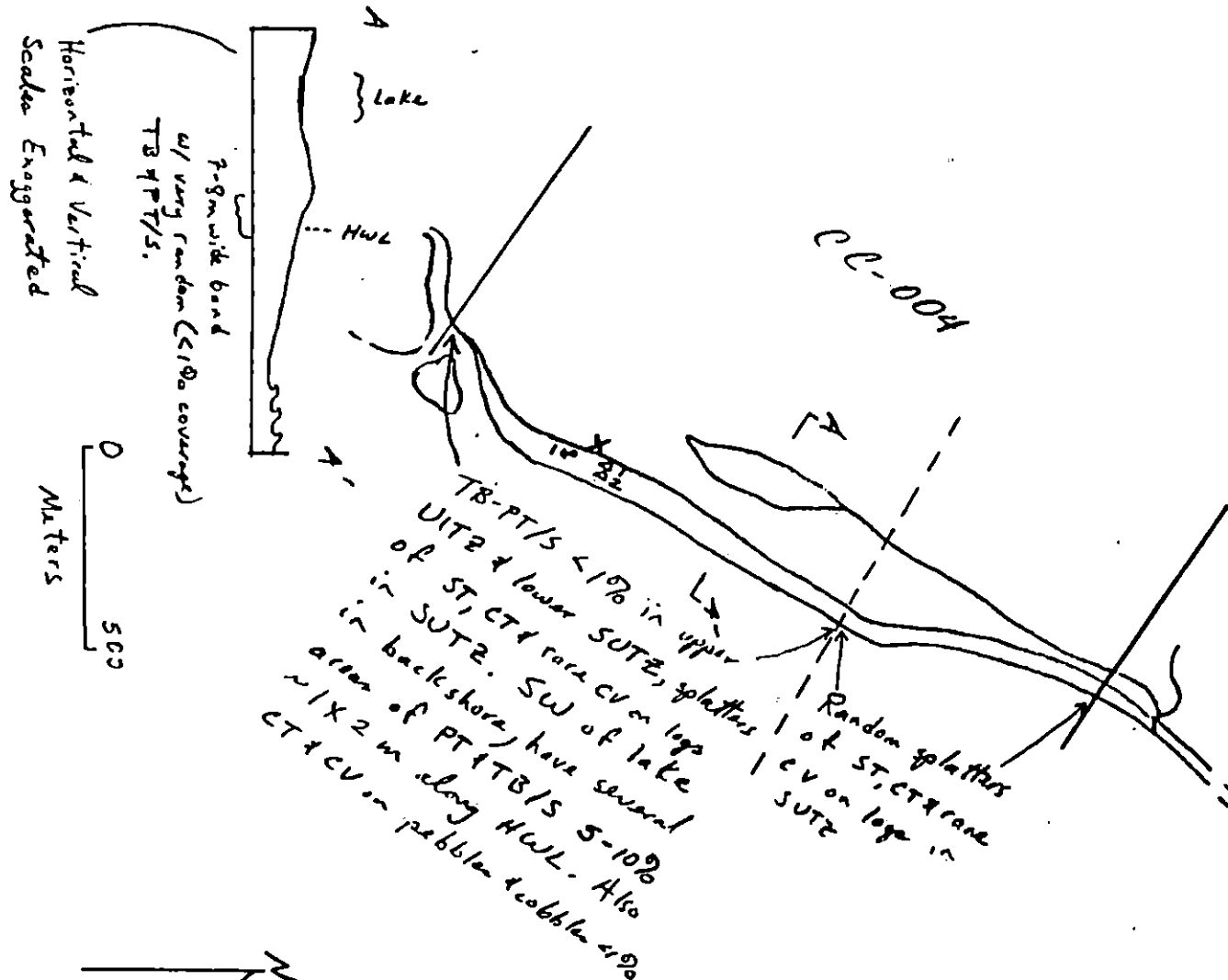
CT/P
Patchy Distribution

CT/S
Splashed Distribution

eee
Oiled Vegetation

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

X Regulatory Marker



Oil Character h (m): AP _____ PO _____ CV 150 CT 150 ST 400 MS _____ 300 TB 500 FL _____ NO _____

REVISION: 00/24/00

Segment ST/ CC-4 Subdivision A Date (mo/day/yr) 5/4/90Time (24 hr) 1445-1520 Biologist SHARMAN(A) Substrate type and % of segments: SUBDIV.
(1) Bedrock (2) Boulder (3) Cobble 5 (4) Pebble 10 (5) Sand 85 (6) Silt ^{+ granules}(B) Overall % cover of biota (% of segment): Dense Moderate Low X
SUBDIV.

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

Photographs: Roll No. ST-19 (III) - 1Frames 1

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS (ANCELA, LITTORIANA, LIMPAETS)

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: ~ 10 glaucous-winged gulls, 1 shoveler, 1 subadult eagle at stream (end segment). Pair of Western eagles on offshore large flat-topped rock (possible nest - probably within next segment to N). Brown bear, fox, & river otter tracks common in supratidal sand. This segment biologically is essentially a continuation of the adjacent segment to the S. (CC-1). A wide, low-angle sandy beach, high exposure. (cont.)

Ecological Considerations:

Please refer to attached Eco. maps. The identified sensitivities (1A + B) probably refer to the catalogued salmon stream adjacent to the S. segment boundary. There is no anadromous stream actually within the segment. An active, dynamic beach & intertidal community, apparently healthy and with only very light oiling that appears to be biologically insignificant. As with CC-1 adjacent to the S., the wetland backshore area appears to be of considerable importance to terrestrial mammals, particularly river otters.

Please see general comments below.

General Comments (cont.):

2-3 thin, sparse drift lines in UTB include Fucus, Alaria, Halosaccus, with occasional Nereocystis wads. Invertebrate shells include Solidus giganteus, Mytilus edulis, Tresus capax, Clinocardium nuttallii, Siliqua patula, Protolana staminea, Macoma spp., Mya spp., Spisula polyzona, Tridacna oregonensis, Cancer magister (small), Talorchestia, Serpula tube masoni, large dried clam shells (some - maybe all - are Mya (truncata?)). Significantly, there were several heavy shells of Neptunea lyrata on the N. 1/2 of the segment, N. of the nearshore rock reef. Given the beach type & degree of exposure, this appears to be a normal & healthy beach community.

C

C

—



(Page 3 of 4)

ECOLOGY MAP

CC-4

(1 of 2)

1A (stream mouth - fry outmigration 4/15 - 7/31)
 1B (stream mouth - spawning 7/15 - 9/10,
 peak 8/15)

Anadromous stream S. of
 segment boundary.
 ADFG # 262-15-10030
 "Village Creek"

XXXX Wide

CC-4

, / / / Medium

---- Narrow

TTTT Very Light

0000 No Oil

Approx. Segment Length: 1501m

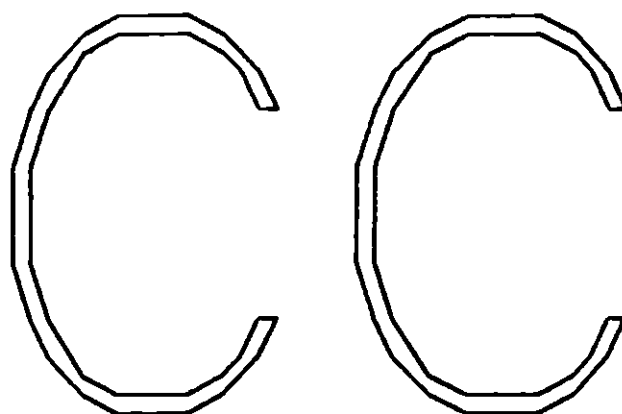
0 100 200 300
 METERS

Map Key: AKP-CC-4a

Name: _____

Date: _____

Data Entered: _____



ECOLOGY MAP

(2 of 2)

CC-4

(Page 4 of 4)

See Map 1.

XXXX Wide

CC-4

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

Approx. Segment Length: 1501m

0 100 200 300

METERS

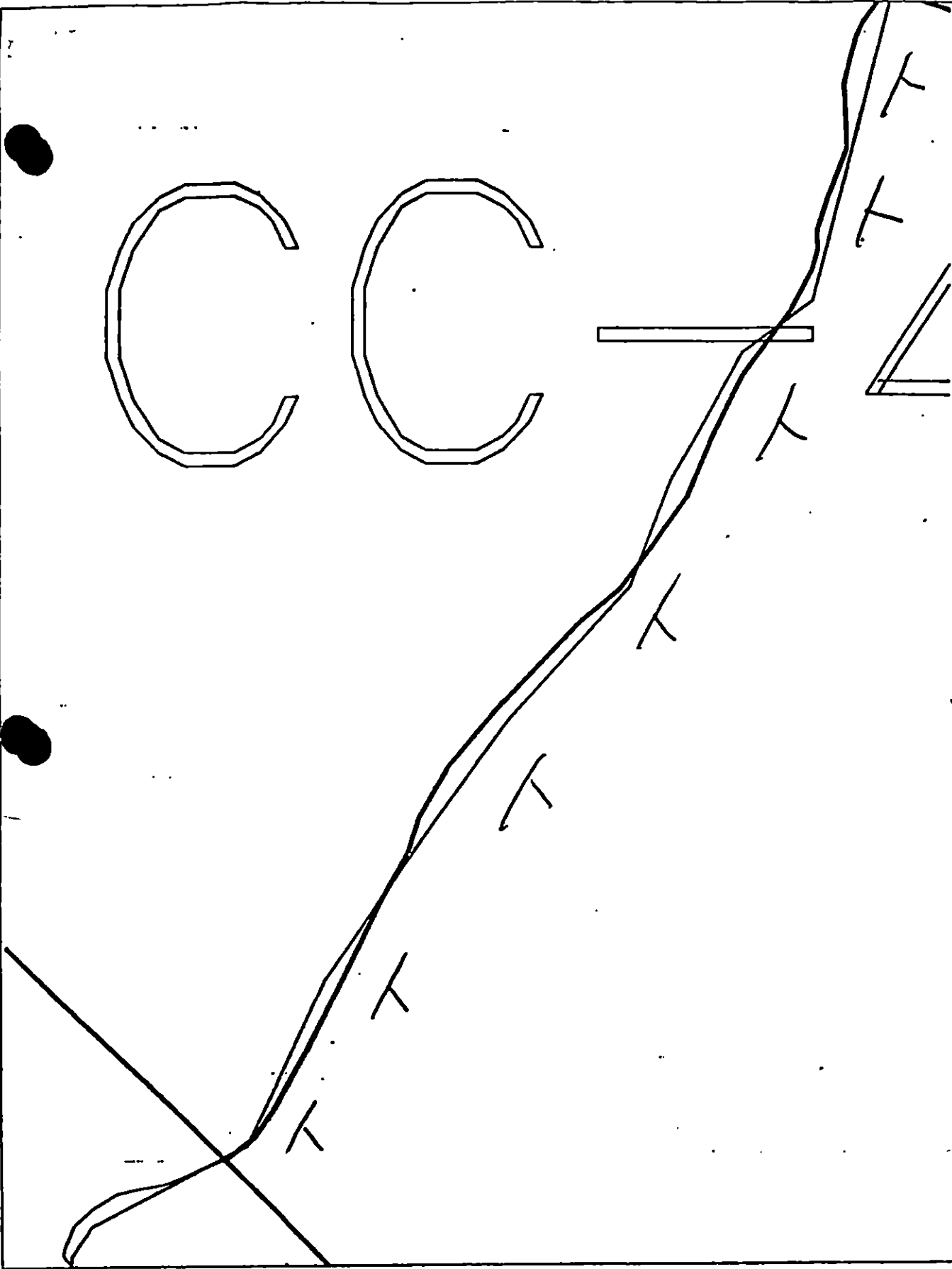
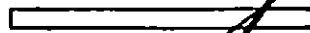
Map Key: AKP-CC-4b

Name: _____

Date: _____

Date Entered: _____

CC



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

CC-4

Approx. Segment Length: 1501m



Map Key: AKP-CC-4a

Name: G. Heyman

Date: 5-4-90

Data Entered:

CC-

XXX Wide

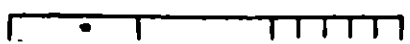
//// Medium

---- Narrow

TTTT Very Light

CC-4

Approx. Segment Length: 1501m



Map Key: AKP-CC-4b

Name: G. Heyman

Date: 5/4/90

SHORELINE EVALUATION

SEGMENT ST/ K09-17-CC-005* SUBDIVISION A (1 OF 1) DATE 5/3/90

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)
Stream ID 262-15-10040 on CC100
- 4LL State Marine Park National Parks

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 Holmes DATE: June 21, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 30 m: Narrow 15 m: V.Light 982 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pick up of mousse,
oiled vegetation and debris, 2) spot washing, and 3) bioremediation of
areas shown on attached sketch map. Work should be conducted with
approval of ADF&G regarding anadromous stream constraints.

TAG COMMENTS: Monitors to #83553 ~ LOGS

TAG APPROVAL DATE: 5/21/90

ADEC Art Weiner

EXXON ANDY TEAL

NOAA Joseph T. [unclear]

USCG G.A. FETTER

*Originally designated as SB-104

FOSC:

DATE: 7-10-90

IN, POL NOT Authorized. Work out
with NPS + ADF&G monitor requirements.

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 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, 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 prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2298

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, 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

Kodiak Bay Hatchery release

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

1H

Remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.

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

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

Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791

2M

Herring spawning (4/15 to 6/30)

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 Larry Nicholson 424-4791

3P

Harbor seal and sea lion pupping (5/10 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 6/1)

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U

Recreation:

6V

Tent sites (8/1 to 9/15)

6W

Anchorage (8/1 to 9/15)

6X

Forest Service cabins (8/1 to 9/15)

6Y

Lodge (8/1 to 9/15)

Special use destination

7Z

Subsistence area: Salmon harvesting (8/1 to 9/30)

7H

Finfish harvesting

7I

Deer harvesting (8/1 to 1/7)

7J

Invertebrate harvesting

7K

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

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

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 K0917 CC5 SUBDIVISION: A DATE 5/3/90NAME STEPHEN LENMANN SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Generally agree with ADEC. Pooled oil should be removed - as many of these areas are not readily accessible. Manual removal may be difficult. Caution should be shown regarding the beginning of the lagoon (at the end of the segment). Clean up should be concentrated at the eastern end of the segment.

NAME Terry Ellsworth SIGNATURE Terry Ellsworth☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Recoverable mousse and/or pooled oil occurs in three areas in the segment. The largest area is 20m wide x 30+ m long just west of the segment boundary at Cape Chiniak. The second area is x 200m west of the segment boundary and a third area of much smaller extent is found approximately midway in the segment. Very scattered tarballs occur in the east half of the segment on the sand-pebble beach. Manual removal is recommended although recovery of much of the pooled oil and mousse will be difficult as it is located between boulders up to 2m in size. Oiled trash & debris should be collected as well as heavily oiled small wood debris.

LAND MANAGER

NAME Carl Scheeb SIGNATURE Carl Scheeb☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Recoverable oil consists of pooled mousse deep in interstitial spaces between large angular boulders. Oiled logs, nets and rope should be removed. Tarballs and oiled wood along the western portion of the segment could be removed quickly and easily.

SHORELINE OILING SUMMARY

REVISION NO. 04-12-90

OG G. HEYMAN ^{NOAA} ~~USCG~~ S. LEHMANN SEGMENT ST/ K 0917 CCS
 BIO L. SHARMAN LAND REPC. C. SEBACH NPS SUBDIVISION A (LOFI)
 EXXON ON LEAVE ADEC T. ELLSWORTH TIME 3:30 10/4:45
 TEAM NO. 19 TIDE LEVEL +6.5 to +9 DATE 5/03/90
 EST. SUBDIVISION LENGTH: 1012 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 30 % C 15 % P 10 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Lang 40 % Hang 35 % Ven 5 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 32 m N 10 m VL 970 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	C	B	P	S	SP	OR	OL	OF	NO	LA	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	X	
MOUSSE			X	X						X		X		
PATTIES														
TARBALLS				X		X						X	X	
FILM														
NO OIL											X			X

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

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

Photographs:

Roll No. —Frames —

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SP	OR	OL	OF	NO	LA	SU	U	M	U				
1	10					X	0-0		X							X				N	—	—	PG/G

COMMENTS

REVIEWED BAT DATE 9 May 90

This Segment extends from the point of Cape Chiniak westward approximately 1012 m to a large bedrock outcrop at the south entrance of Chiniak Lagoon. Two beach types were generally encountered, a narrow bedrock-boulder-cobble beach to the east and a broader granule-pebble-cobble beach to the west.

Most oiling was observed along the eastern bedrock-boulder-cobble beach. Immediately west of the point, a pocket was observed with pooled MS & MS, CV, CT & ST about 32 m long X 20 m wide. The pooled areas were observed in boulder interstices and crevasses up to 1 X 0.2 m & 12 cm thick. MS patches have a similar occurrence. ST, CT & CV were also common with a patch distribution. The more heavily impacted area was up to approximately 10 m wide. This was surrounded by an area of ST-CT-CV/S also approximately 10 m wide. The MS & PO was observed in interstices relatively deep below the surface and most was only accessible with our shovel.

One additional concentration of PO-MS and a second accumulation of MS in 2 bands are shown on Sketch Map 1. The rest of the oiling in the rock-boulder-cobble area was a near continuous band of ST-CT-CV-MS, <1% coverage, about 1-3 m wide. As we walked this section, areas would have very random splatters or drips.

On the granule-cobble beach, TB are randomly scattered near the HWC & logs in the SUTZ have splatters of CT-CV.

Sharon
5/3/90General Comments (cont.):

and Anthopleura elegantissima, artemisia, and xanthogramma. Surprisingly, essentially no Fucus (very rare). Barnacle spots are present but very rare. Nucella eggs are occasional, and recruits are recruiting quite successfully locally where adults are established in bands (discontinuous). The UTZ is very depauperate except for sparse littorinids (recruiting well). This rocky intertidal community appears to be normal & healthy, and recruiting normally with no unusual mortality beyond what would be normally expected. The oiled zone on this portion of the segment is above any intertidal biota (essentially all extreme UTZ & supratidal) - outlying organisms do not appear to be affected. The W. 1/2 of the segment is open low-angle sandy beach, largely devoid of much macrobiota intertidally. (Back to E. rocky 1/2: natural barnacle mortality due to mechanical disturbance from waves/wash/log scouring is locally up to 25%). Empty bivalve shells in the drift on the sandy portion include: Spisidomus giganteus, Mytilus edulis, Modiolus modiolus, Tresus capax, Chioneocardium rustallii, Siliqua patula, Prothaca staminea, Macoma spp. (incl. baltica), Mya spp. (incl. truncata), Spisula polyzona. There are also some Fusitriton, carapaces of Cancer magister (small) and (probably) Telmessius, one Strongylocentrotus purpuratus test, and lots of large dried clam siphons (at least some, maybe all, are Mya truncata). The UTZ drift line is very sparse, containing Fucus, Alaria, ulvala, Scytosiphon. River otter scats in supratidal (contain mussel & other bivalve shell fragments, Telmessius fragments). There were supratidal & UTZ brown bear, fox, & wolf tracks, & one brown bear leg bone. Birds include ~ 20 glaucous-winged gulls, one fox sparrow in the intertidal zone, and a mixed flock of ~ 150 ducks (~ 100 pintails, 30 green-winged teal, 10 shovellers, 10 scaup). 1 adult eagle. Again, a normal, healthy sand beach community.

OG G. H. HemenSEGMENT ST/ 0917 CC 005SUBDIVISION ADATE 5/3/90**CHECKLIST**

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

LEGEND1 Δ
Pit - No Subsurface Oil2 Δ
Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

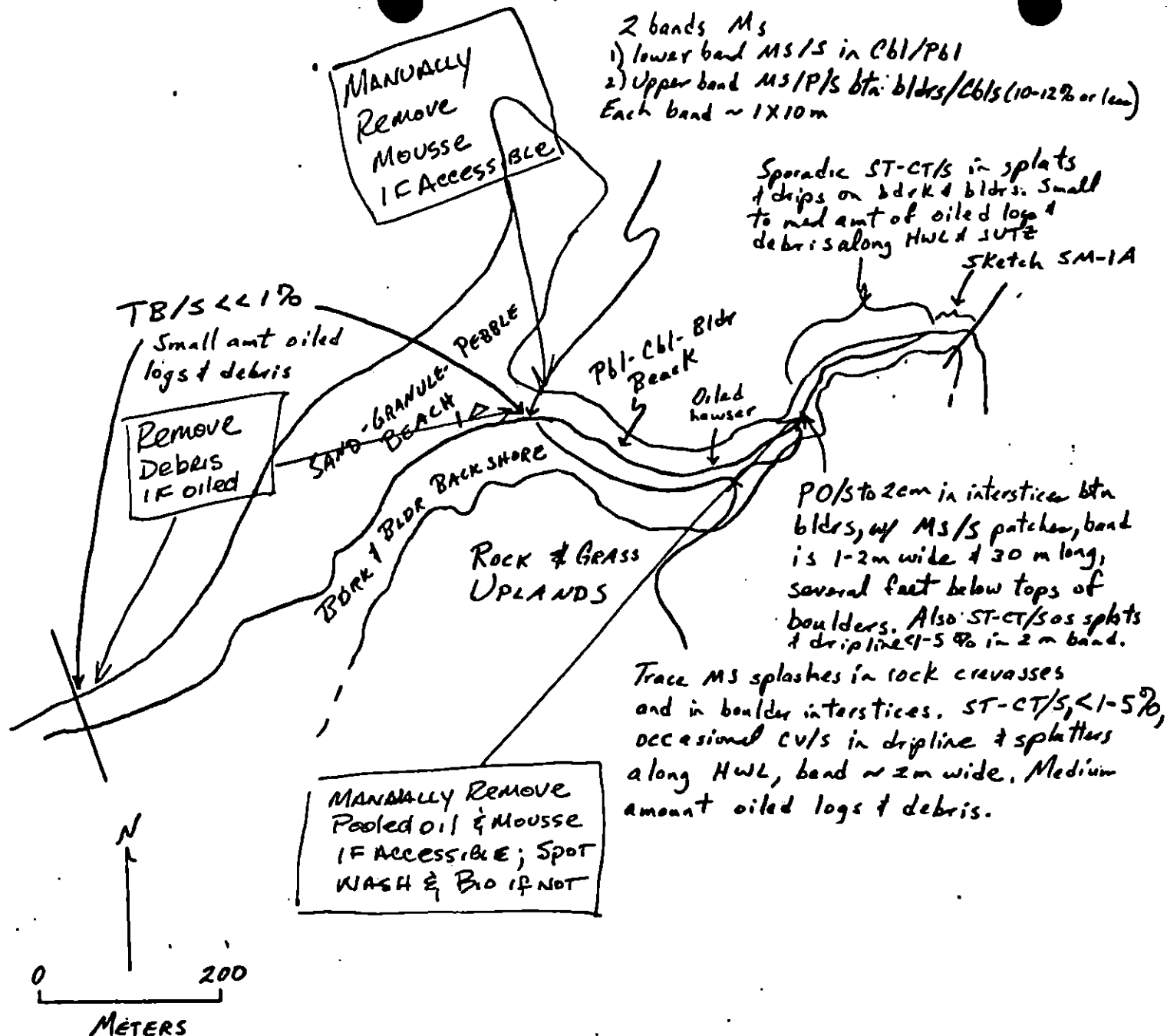
CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

Photo location, direction,
and number
SKETCH MAP - 1Oil Character Length (m): AP — PO 10 CV 62 CT 250 ST 200 MS 52 PT — TB 500 FL — NO 0

REVISION: 03/24/90

OG G. Hej

Sketch MAP 5M-1A

SEGMENT ST K 0917 CC 005

SUBDIVISION A

DATE 5/3/90

CHECKLIST

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

LEGEND

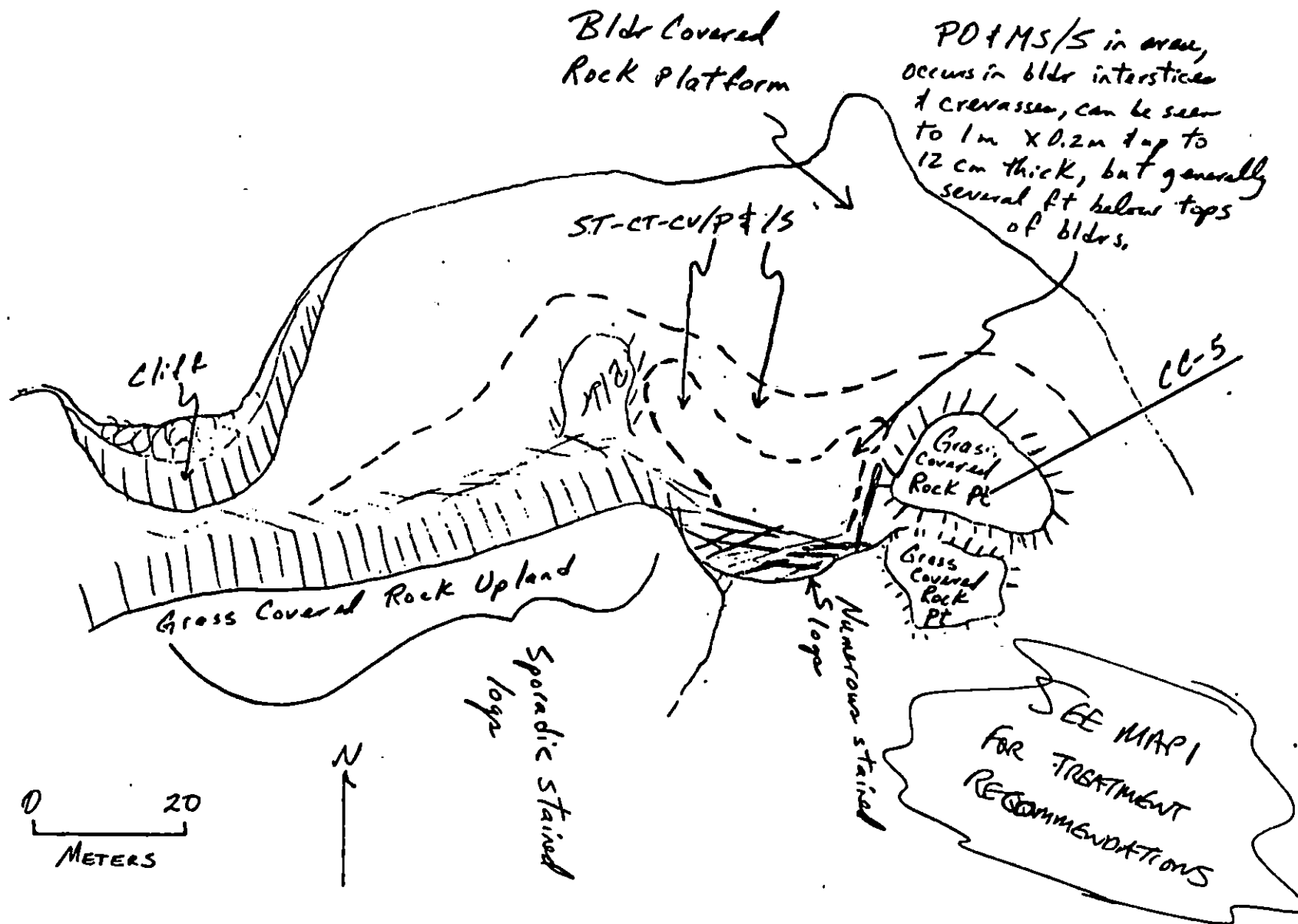
- 1 Δ
Pit - No Subsurface Oil
- 2 Δ
Pit - Subsurface Oil
- CT/C

Continuous Distribution
- CT/B

Broken Distribution
- CT/P

Patchy Distribution
- CT/S

Splashed Distribution
- 
Oil Vegetation
- 
Photo location, direction, and number



Oil Character Length (m): AP _____ PO _____ CV _____ CT _____ ST _____ MS _____ PT _____ TB _____ FL _____ NO _____ See 5M-1

REVISION 02/90

Segment ST / CC-5 Subdivision A Date (mo / day / yr) 5/3/90Time (24 hr) 1330-1500 Biologist SHARMAN(A) Substrate type and % of segments: SUBDIV.
(1) Bedrock 40 (2) Boulder 30 (3) Cobble 15 (4) Pebble 10 (5) Sand 5 (6) Silt granules(B) Overall % cover of biota (% of segment): Dense SUBDIV. Moderate Low X

(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 (NUCULA, LITTORINA, LYMAETES)

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: the above information is for the E. 1/2 (rocky) portion of the segment only. These organisms are essentially absent from the remainder of the segment (sandy) except as loose drift. The rocky portion is biotically sparse, littorally, except for some MTE tidepools which include: Alvella, Pilothidium, Halichondria, Barnacles, muscle, Littorina, Lymnaea, Nucella, Tonicella, Pagurus, Metridium, (cont.)

Ecological Considerations:

Please see attached Eco. Rep. We had no information re. previously identified resource sensitivities. No particular sensitivities observed on this survey, but note that this segment comprises half of the Chinook lagoon entrance, and the lagoon should be considered generally sensitive to disturbance (please refer to this section of the YCC 100 summary).

adjacent

ECOLOGY MAP

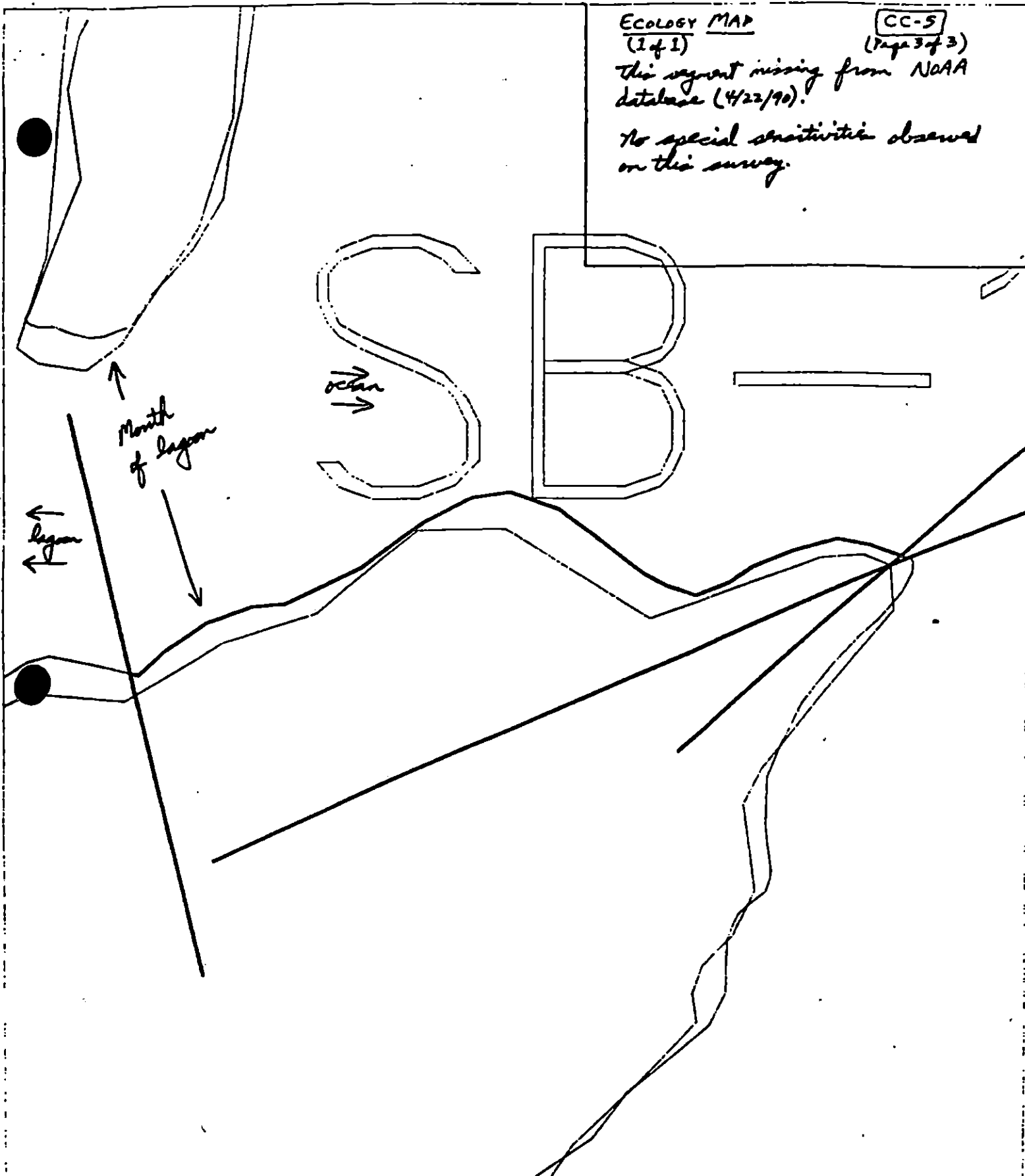
(1 of 1)

CC-5

(Page 3 of 3)

This segment missing from NOAA database (4/22/90).

No special sensitivities observed on this survey.



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

Approx. Segment Length: 1012m

K0917



CC-5

Map Key: AKP-SB-104

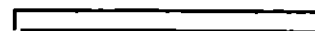
Name: _____

Date: _____

Data Entered: _____

SB

1210m Vessel



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

SB-104 cc-S

K09-17

Approx. Segment Length: 1012m

0 100 200 300

Map Key: AKP-SB-104

Name: G. Heyman

Date: 5-3-90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-17-CC-005 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN (NPS MONITOR REQ.)
Spot Washing Bioremediation*	OPEN (NPS MONITOR REQ.)

*Bioremediation with Customblen Only - Do not use Inlpol

ARCHAEOLOGICAL STANDARD CONSTRAINT

Cultural Resource Survey in progress. Shoreline treatment cannot proceed until field data have been assessed formal archaeological constraint entered on shoreline evaluation form.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (262-15-10040) is more than 100m from work site. No constraint to manual pickup, ~~and~~ spot washing, and bioremediation.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Avoid any unnecessary disturbance or damage to uncolled biota and substrate.

FOSC

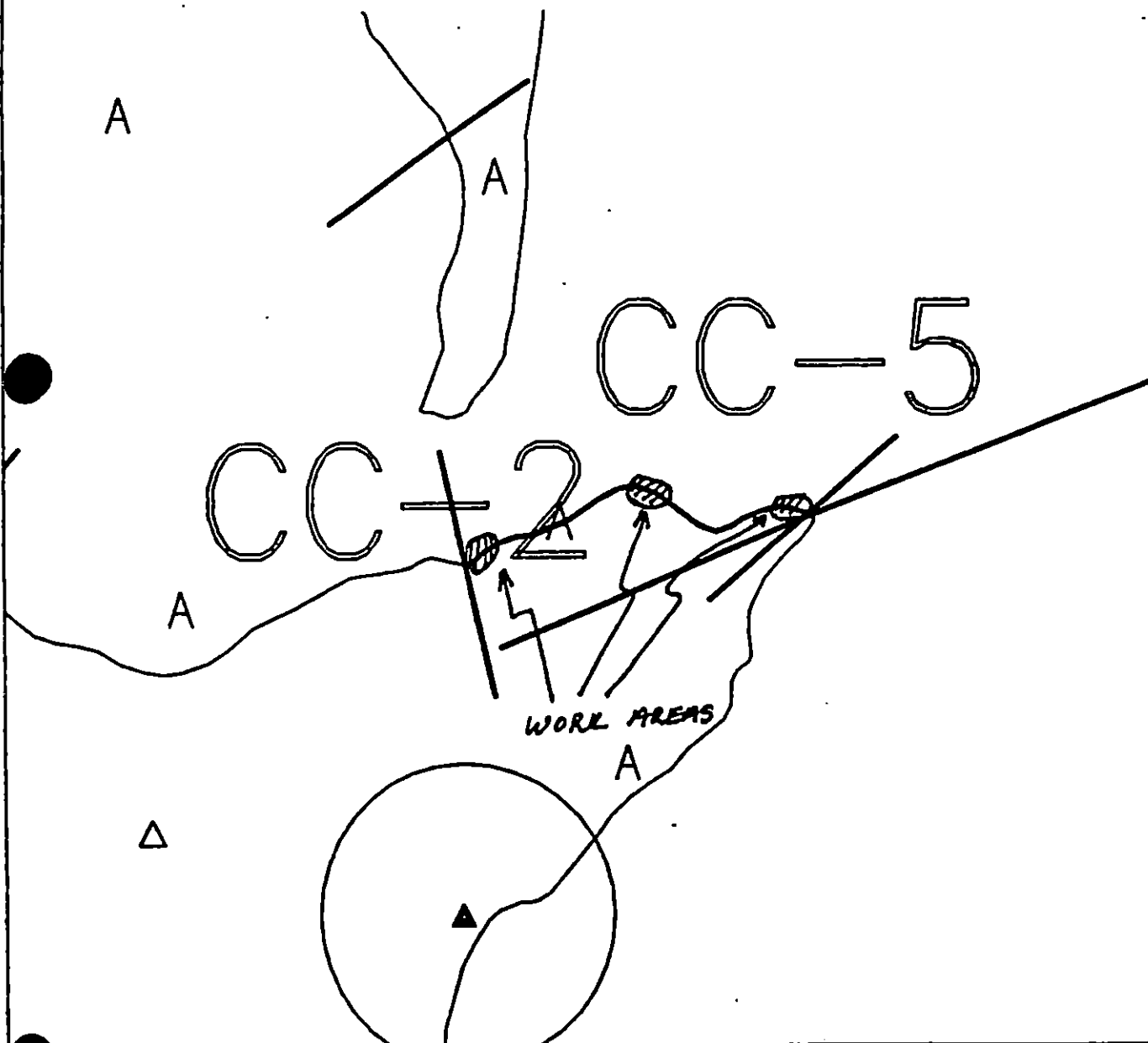
Date

7-11-90

Prepared by

Date

7/10/90



Exxon Company, USA
Map Key: AKP-CC-5
June 10, 1990



ECOLOGY MAP
SEGMENT K9N-17 CC-5
SUBDIVISION A (_ / o / _)
METERS
0 442 884

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

1 inch = 1450 feet

SHORELINE EVALUATION

SEGMENT ST/ K09-17-CC-100 SUBDIVISION A (1 OF 1) DATE 5/3/90

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)
1C Salmon by nursery area (4/31 to 7/31) Stream ID - 262-15-10040
4LL State Marine Park Natinal Parks
9LM Other Land Mammals
8AA Sensitive estuary
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature] DATE: June 27, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 63 m: V.Light 1153 m: No Oil 2670 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

+ DEBRIS

COMMENTS: Recommended treatment includes 1) manual pick up of mousse, and
2) manual removal of tarmat. Contact ADF&G for specific dates and
guidance.

TAG COMMENTS: BIOREMEDIATE (CUSTOMER) AS REQUIRED FOLLOWING TARMAT
REMOVAL

CONTACT ADF&G (EO WIES) TO DETERMINE THE NEED FOR A
PERMIT PERMIT.

TAG APPROVAL DATE: 5/17/90

ADEC ART WEINER Art Weiner

EXXON AMY TAL Real

USCG G.A. REITER G.A. Reiter

NOAA Gary Petros Ray Palmer

FOSC: ML

DATE: 7-10-90

INFORM NOT AUTHORIZED. Coordinate treatment
with F&W + ADF&G for environmental constraints.
NPS monitor + permit required.

- 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 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, 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 prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 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, 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** Kotol Bay Hatchery release
 Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H** Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 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
 Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M** Herring spawning (4/15 to 6/30)
 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 Larry Nicholson 486-4791
- 3P** Harbor seal and sea lion pupping (5/10 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 6/15)
 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 (8/1 to 9/30)
7H-H Finfish harvesting
7I Deer harvesting (8/1 to 1/7)
7J Invertebrate harvesting
7K Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
 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 1K0917CC100 SUBDIVISION: A DATE May 4, 1990NOAA
CCNAME STEPHEN LEHMANN SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

diking was key light except for one section (identified by the DG) where oil appeared at surface. Given the sensitivity of this area and the disturbance required to remove this section of oil - treatment is not suggested

ADEC

NAME Terry Ellsworth SIGNATURE Terry Ellsworth☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Diking in this segment is confined to the SW portion of the segment. The most significant occurrence is a 20m x 1m area of asphalt of patchy distribution. Patches occur sporadically along the SW portion of the segment in areas up to 1m x 2m. Manual removal of the Asphalt and mouse patches is recommended. Due to the extreme sensitivity of this area to human disturbance, only 2-3 persons should work this area. Work should not extend beyond the shore bordered by steep alder slope

LAND MANAGER

NAME Carl Sebeck SIGNATURE Carl Sebeck☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Oil remaining in this lagoon/estuary system can be expected to persist for a long time unless removed. However this critical habitat is sensitive to intrusion. The oil/mouse patches should be removed as soon as possible to avoid disturbing summer bear populations. A small crew of no more than five personnel should access the mouse patches on foot and remove by scraping the substrate with shovels. The mud flats should below the oiled area and the salt marshes to the north should not be disturbed.

5-3-90

CC 100 A comprises the NW $\frac{1}{2}$ of Chinik Lagoon.

The SW side is bordered by a steep alder covered slope, and the NW & NE sides are bordered by a grass covered salt marsh with meandering drainages. The mud flats comprising most of the lagoon w/in CC 100 boundaries were well exposed at the time of this survey.

Oiling in the segment was limited to the SW side along the shore bordered by the steep alder slope. Most oil occurs as PT/MS/AP along a narrow band $\frac{1}{2}$ to 2 m wide at the upper end of the mud flat.

The oiling is discontinuous and generally has a "1/5" distribution within discreet areas. Exceptions are a 1×20 m area of AP w/ $\sim 30\%$ coverage (see sketch maps) NW of a distinctive landslide along the shore, and areas of mousse further to the NW near where the salt marsh begins. The AP is very soft, with a DBL exterior and mouasy DBR interior. The MS layer is partially covered by a veneer of mud/silt < 5 mm thick and partially exposed at the surface so it has a patty-like surface appearance. The layer is ~~no~~ generally < 1 cm thick, contains some sand, and has a shiny DBR color. The remainder of the oiling in the segment consists of ST-CT/S $< 1\%$ on boulders, cobbles and logs in the UITE & SUTZ.

SHORELINE OILING SUMMARY

REVISION NO. 04.13.90

OGC G. HEYMAN NOAA USCG S. LEHMAN SEGMENT ST/ K0917 CC 100
 BIO L. SHARMAN LAND REP C. SCHUCH NPS SUBDIVISION A (1 OF 1)
 EXXON NOT PRESENT ADEC T. ELLSWORTH TIME 16:00 to 17:30
 TEAM NO. 19 TIDE LEVEL +2 1/4 to +1 1/4 DATE 5/3/90
 EST. SUBDIVISION LENGTH: 2640 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SW to NE (clockwise)
 SURFACE SEDIMENTS: R 0 % B 5 % C 5 % P 5 % G 5 % S 5 % M 75 % V 0 %
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 24 m VL 876 m NO 1740 m

SURFACE OIL

CHARACTER	DISTRIBUTION					OIL / FILM COLOR					IMPACTED ZONES			
	C	S	P	B	W	Y	OR	GR	BL	BR	SU	U	M	U
ASPHALT PAVEMENT			X	X		X							X	X
POOLED														
COVER														
COAT				X		X					X	X		
STAIN				X		X					X	X		
MOUSSE			X	X					X					X
PATTIES				X		X							X	X
TARBALLS														
FILM														
NO OIL														

PAVEMENT H F (S) 20 sq. m by 1 cmPATTIES / TARBALLS 4 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

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

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE #BAGS

Photographs:

Roll No. Frames

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	▽	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	BL	OR	GR	BL	BR	SU	U	M	U				
* 1	10					X	0-0		X								X	Y	-	-		M/M

COMMENTS * Anaerobic below 5cm. based on odor. Anaerobic conditions vary throughout segment. Oiling is in layers at surface or <1 cm below surface.

REVIEWED BAT DATE 8 May 90

Segment ST / CC-100 Subdivision A Date (mo / day / yr) 5/3/90Time (24 hr) 1600-1730 Biologist SHARMAN(A) Substrate type and % of segments: SUBDIV.
(1) Bedrock (2) Boulder 5 (3) Cobble 5 (4) Pebble 5 (5) Sand 10 (6) 75 ^{+ granite mud}(B) Overall % cover of biota (% of segment): Dense Moderate Low X
SUBDIV.

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

Photographs:
Roll No. 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	X	2
3	3	3	3	3	3	3	3	3	3	X	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

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 (ANCELA, LITTORINA, LYMAETA)

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

Please see general comments below.

Wildlife Observations/ General Comments: Brown bear, fox, + river otter tracks in supratidal/UTZ. One beach log chewed/clawed by bear. 1 pair yellowlegs, 2 ravens, 3 glaucous-winged gulls. See also CC-2 for additional birds in the lagoon proper. These 2 segments encompass an extensive tidal marsh. Vole runs crisscross the grassy portions. Several sets of moose tracks. 2 bear scats from last summer/fall - one with cranberries, + one (cont.)

Ecological Considerations:

Please see attached Eco. Maps. The primary ecological sensitivities are the catalogued anadromous stream at the head of the lagoon (codes 1A and 1B), as well as the lagoon itself which is a salmon fry nursery area (code 1C) and clearly a sensitive estuary (code 8AA). The area is also very important feeding and resting habitat for a variety of shorebirds and seabirds, as well as an important foraging area for terrestrial mammals (code 9LM). This area is, (cont.)

SEGMENT STICK 09 17 CC 100

SUBDIVISION A

DATE 5 / 3 90

CHECKLIST

- ___ N Arrow
- ___ Approx. Scale
- ___ Seg/Sab Brndry
- ___ Oil Dist.
- ___ Width
- ___ Length
- ___ % Cover
- ___ Substrate Character
- ___ Est. HAWLAVAL
- ___ SSL
- ___ Profile Location(s)
- ___ Profile(s)
- ___ Plt Location(s)
- ___ Photo Location(s)

LEGEND

LEGEND AP-PT/S in up to 1X2m around Δ
 Δ MS/P/S in 1/2mx
 Pt - No Subsurface Oil

2A 2 m areas discontinuous
 Pic. Subsurface Oil on upper mud flats,
 Silt/mud veneers < 5 mm
 thick commonly API
 Consistent Distribution
 Covers MS: 1. 1X20 M

CT/B

Broken Distribution

CT/P
Patchy Distribution

[CT/S] ST & CT/S
 Splashed Distribution on bluffs & cbls
 in U1T2 & SUT2
 Oiled Vegetation << 10% cover

Photo location, direction,
and number

Oil Character Length (m): AP 20 PO _____ CV _____ CT 300_{<<1%} ST 576_{<<1%} MS 20 PT 30 TB _____ FL _____ NO 1740

Bldg/	Granite/
Cbl/	SAND w/
Sand	Pebbles
logs	

14-00000

Drinking occurs in
1/2 - 2 m band at upper
end of mud flat w/
local sporadic to patchy
distribution or as ST-
CT 15 on bldg - Chl

ETCH MAP

N

General Comments (cont.):

with grassy vegetation. The intertidal zone of this segment is almost exclusively a mud/sand flat that is apparently quite macrobiotically depauperate, subsurface as well as superficially. There are rare boulders + cobbles in the MTEZ, very few of which have barnacles on them. Locally there are some areas where the lugworm Arenicola is fairly abundant in the mud. Muddy substrates are anaerobic 2-10 cm down from the surface. I observed no barnacle recruitment on boulders/cobbles.

Ecological Considerations (cont.):

as are all protected tidal lagoon estuaries of this type, extremely sensitive to human disturbance - both via direct disturbance by human intrusion and via physical disturbance of sediments by trampling. These areas are relatively rare and are important to wildlife far out of proportion to their abundance or areal extent. Such systems are extremely productive and are critical to several species of considerable economic importance during portions of their life cycles. Even relatively small scale human intrusion into this lagoon should be considered with caution.

ECOLOGY MAP

(1 of 4)

CC-100

(Page 3 of 6)

This segment missing from NOAA
database (4/22/90).

Sensitivity based:

BAA - sensitive estuary

GLM - land mammals

1A - stream mouth (fyg colonization) 4/15 → 7/31

1B - stream mouth (spawning) 7/15 → 9/10 (pub 9/15)

1C - fyg nursery area

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

CC-100

Approx. Segment Length: 3858m

0 100 200 300

METERS

K0917 was X0501

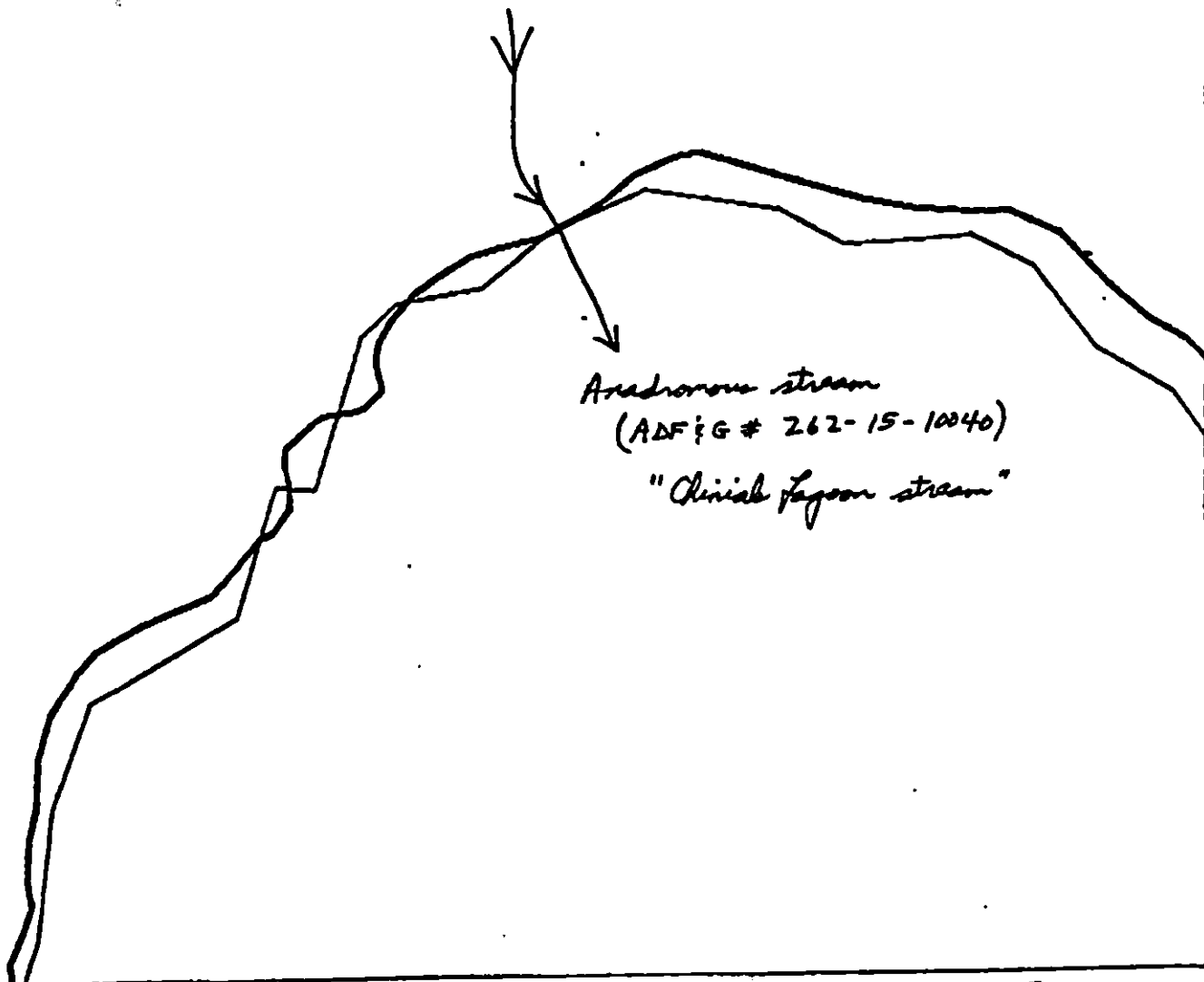
Map Key: AKP-CC-100a

Name: _____

Date: _____

Date Entered: _____

See map page 1.



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

CC-100

Approx. Segment Length: 3858m



Kp917 was XX5p1

Map Key: AXP-CC-100c

Name: _____

Date: _____

Date Entered: _____

CC

ECOLOGY MAP
(3 of 4)

CC-100
(Page 5 of 6)

See map page 1.

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

CC-100

Approx. Segment Length: 3858m



K0917 Loc X4501

Map Key: AKP-CC-100d

Name: _____

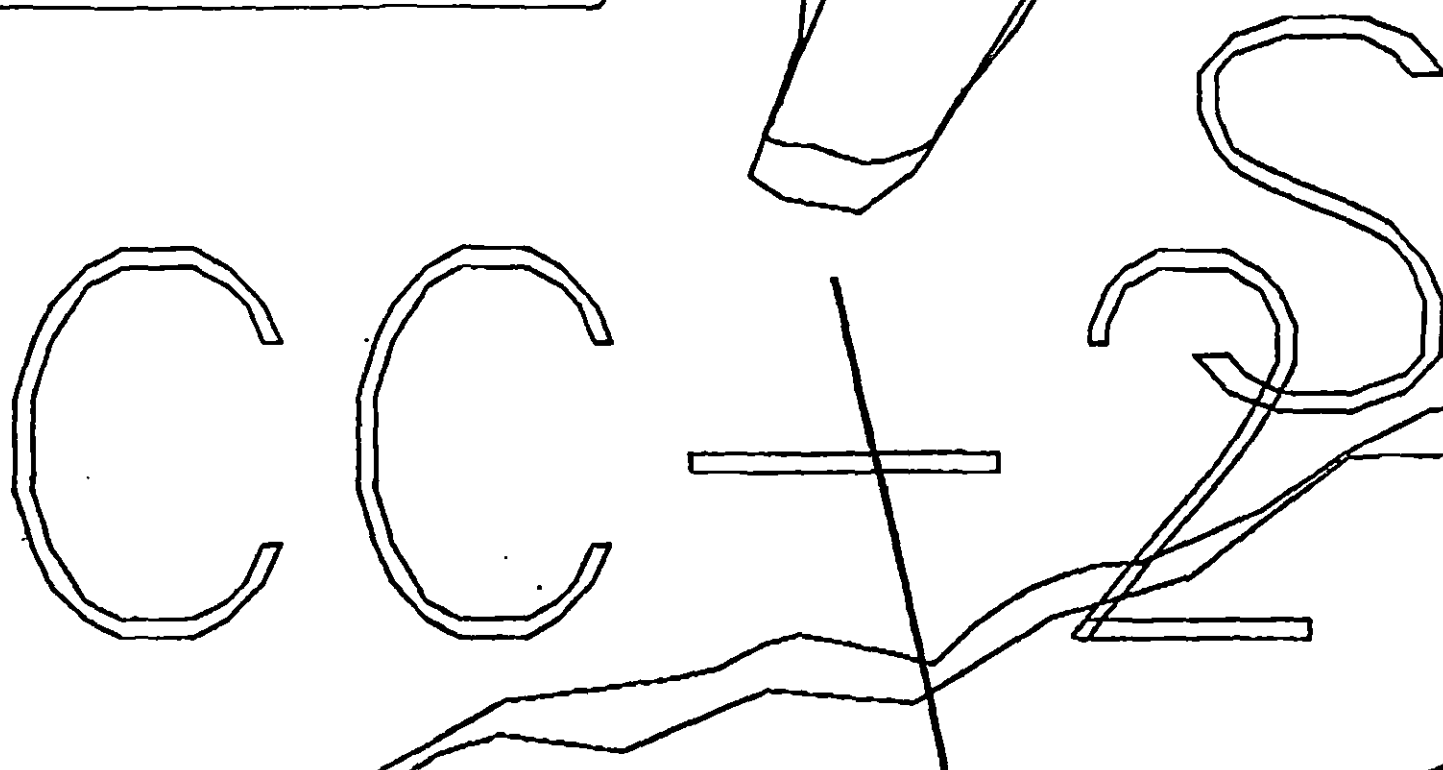
Date: _____

Date Entered: _____

ECOLOGY MAP
(4 of 4)

CC-100
(Page 6 of 6)

See map page 1.



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

CC-100

Approx. Segment Length: 3858m



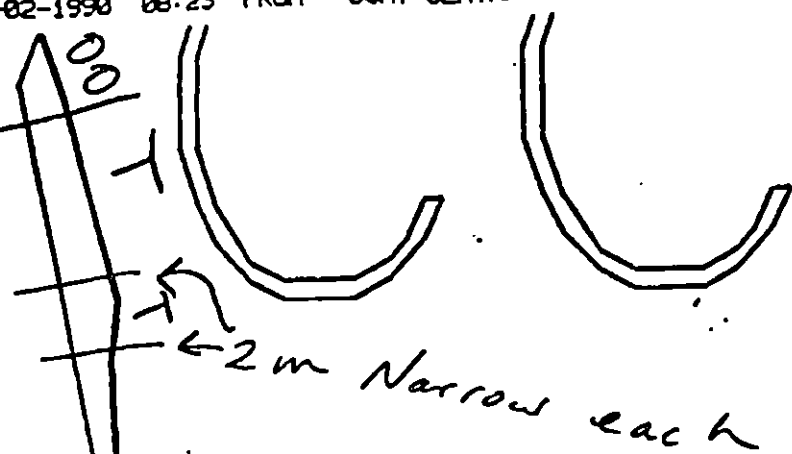
Kp917 was XX591

Map Key: AKP-CC-100b

Name: _____

Date: _____

Date Entered: _____



~20 m Narrow

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

CC-100

Approx. Segment Length: 3858m

0 100 200 300
METERS

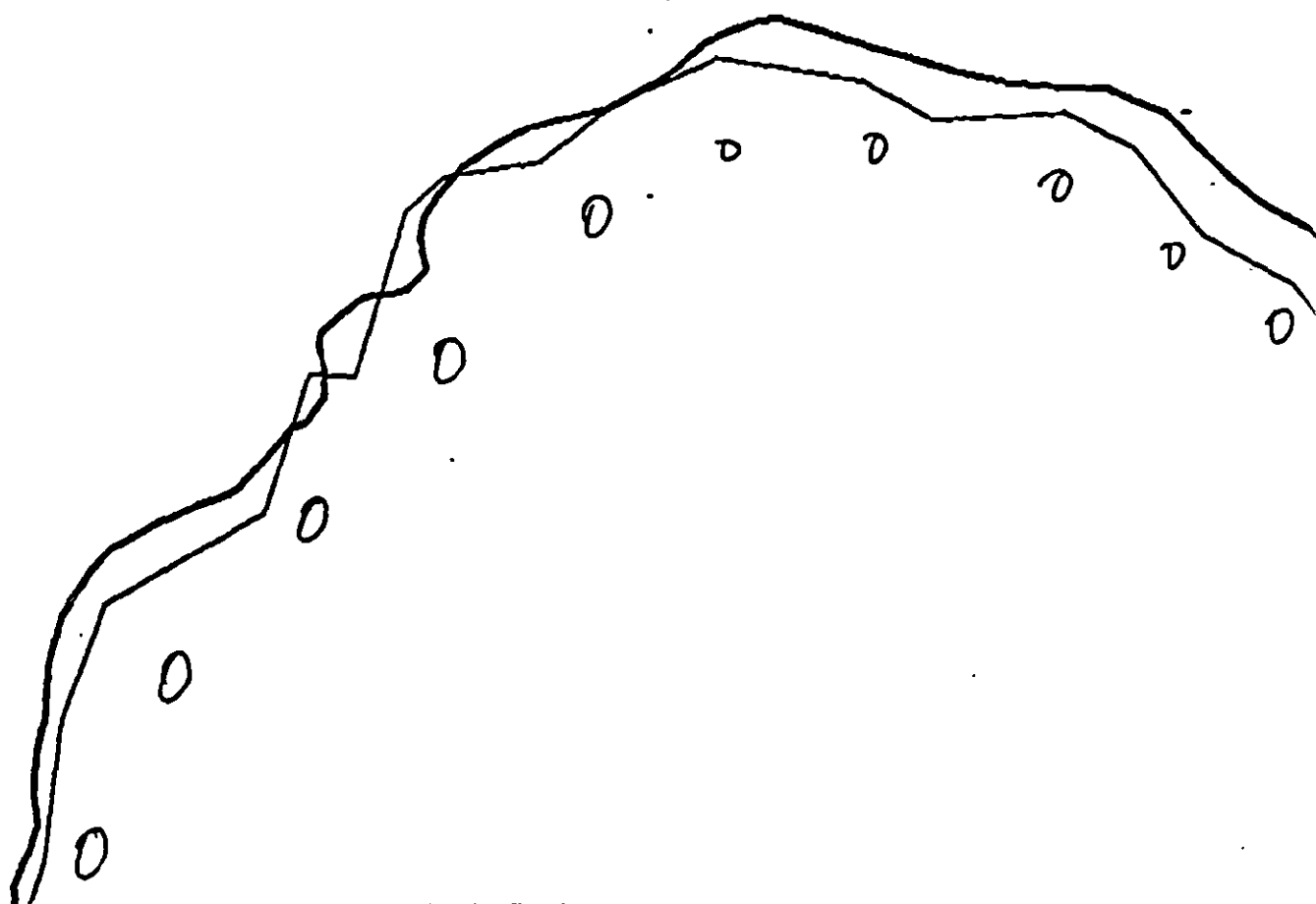
KP917 was XX591

Map Key: AKP-CC-100a

Name: G. Heyman

Date: 5-3-90

Data Entered:



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

CC-100

Approx. Segment Length: 3858m



KP717 was XX501

Map Key: AKP-CC-100c

Name: G. Hejman

Date: 5-3-90

Date Entered:

CC

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

CC-100

Approx. Segment Length: 3858m



KP917 use XX501

Map Key: AKP-CC-100d

Name: G. HeymanDate: 5-3-90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-17-CC-100 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN (NPS MONITOR REQ.)
Bioremediation*	WORK AFTER 7/31 (NPS MONITOR REQ.)

*Bioremediation with Customblen only – Do not use Inipol

ARCHAEOLOGICAL STANDARD CONSTRAINT

Cultural Resource Survey in progress. Shoreline treatment cannot proceed until field data have been assessed and formal archaeological constraints entered on shoreline evaluation form.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous stream (262-15-10040) is more than 100m from work site. No constraint to manual pickup, tarmat removal and bioremediation.
1C	Salmon Fry Nursery Area	No constraint to manual pickup and tarmat removal. Closed to bioremediation prior to 7/31.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Avoid any unnecessary disturbance or damage to unrolled biota and substrate. Sensitive estuary.

FOSC

Date

7-11-90

Prepared by

Date

7/10/90

K9N-17

STREAM # →
262-15-10040

CC-1

CC-100

WORK
AREAS

CC-5

CC-2

K9N-18



Exxon Company, USA
Map Key: AKP-CC-100



ECOLOGY MAP
SEGMENT K9N-17 CC-100
SUBDIVISION A (1 of 1)
METERS

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

SHORELINE EVALUATION

SEGMENT ST/ K09-18-CN-001 SUBDIVISION A (1 OF 1) DATE 5/4/90

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)
Stream ID # 262-20-10050
5R Seabird colony (5/1 to 9/1)
8AA Sensitive estuary
9LM Land mammals
4LL Katmai National Park

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Rachel Jan Dan DATE: 5/30/90

OILING CATEGORIZATION:

Wide 0 m: Medium 18 m: Narrow 27 m: V.Light 3216 m: No Oil 2392 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

+ TRASH

COMMENTS: Recommend manual removal of mousse and bioremediation of areas shown on attached sketch map. Work should be conducted with USFWS approval regarding seabird colony. The anadromous stream is located far enough to the south that ADF&G approval is not necessary.

TAG COMMENTS: MONITORS TO ASSESS LOGS

TAG APPROVAL DATE: 5/29/90

ADEC Art Weiner Art Weiner

EXXON Andy Tsa Andy Tsa

NOAA Bull Wescott Bull Wescott

USCG G.A. BEITER G.A. BEITER

FOSC: L DATE: 6-19-90

Bioremediation not authorized. Access to southern most (3x20 m) patch of oil by boat.

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 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, 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 prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299

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, 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 Peitz 424-3214

1D Kotol Bay Hatchery release

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

1H Remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.

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

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

Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791

2M Herring spawning (4/15 to 6/30)

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 Larry Nicholson 486-4791

Harbor seal and sea lion pupping (5/10 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 267-2208

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 (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)

Finfish harvesting

Deer harvesting (8/1 to 1/7)

Invertebrate harvesting

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

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

SHORELINE OILING SUMMARY

REVISION NO. 04-12-90

NAME HEYMAN 1044 USCGC S. LEHMANN SEGMENT ST/ K09-18-CN-001
S. LEHMANN LAND REP C. SCHOLM APS SUBDIVISION A (LOF L)
 EPOCH Not Present ADEC T. EUGENOTH TIME 15:55 to 20:15
 TEAM NO. 19 TIDE LEVEL +4 1/2 to +4 +2 DATE 5/24/90
 EST. SUBDIVISION LENGTH: 5655 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 25 % B 40 % C 10 % P 10 % G 5 % S 10 % M 0 % V 0 %
 SLOPE: Long 45 % Hang 50 % Vert 5 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 10 m N 20 m VL 3240 m NO 2385 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	R	B	P	G	1	2	3	4	5	6	7	8	SU	U	M	L
ASPHALT PAVEMENT																
POOLED																
COVER						X	X	X					X			
COAT		X	X	X	X	X	X	X					X	X		
STAIN		X	X	X	X	X	X	X					X	X		
MOUSSE										X	X	X	X	X		
TIES																
BALLS																
FILM																
NO OIL															X	X

PAVEMENT H F S 0 sq. m by 0 cmPATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT			DID YOU COLLECT DEBRIS?
	SM	MD	LG	
Logs		X		
Vegetation				
Trash		X		
Debris				

YES ☐ NO ☒TYPE #BAGS

Photographs:

Roll No. 0Frames 0

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR						PIT ZONE				A	N	SHEEN (Y/N)	V	SURFACE - SUBSURFACE SEDIMENTS	
		OP	OR	OL	OF	NO		VO	UC	1	2	3	4	5	6	7	8	SU	U						M
1	40					X	0.0		X									X				N	-	-	G-P/S
2	25					X	0.0		X									X				N	-	-	S/S
3	30					X	0.0		X									X				N	-	-	S/S
4	25					X	0.0		X								X					N	-	-	S/S
5	25					X	0.0		X									X				N	-	-	P-G/S

COMMENTS

REVIEWED BAT DATE 17 MAR 90

SEGMENT ST / K09-18-Carol SUBDIVISION: A DATE 5/7/90

NAME STEPHEN LEHMANN

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Oil appears to be recoverable in several isolated areas. Oiled debris should be removed. Agree with land manager that clean up should focus on the pocket beaches rather than the higher energy shorelines.

ADEC

NAME Terry Ellsworth

SIGNATURE Terry Ellsworth

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Mousse occurs in cracks and crevices and interstitial between boulders and cobbles sporadically throughout the segment, but tends to be more concentrated adjacent to the pocket beaches. I concur with the land manager and NOAA that treatment should concentrate on these pocket beach areas. Treatment should be limited to manual removal.

LAND MANAGER

NAME Carl Schach

SIGNATURE Carl Schach

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Recoverable oil consists primarily of interstitial mousse with some pooled mousse and oiled logs. Cleanup efforts should concentrate on pocket beaches rather than the higher energy beach shorelines. Despite the high energy on this segment, mousse was persisting in numerous but localized areas.

OG COMMENTS K09-18-CN-001 5-4-90 G HEYMAN

This segment consists of boulder covered bedrock, wave-cut bedrock, and sand-granule-pebble-cobble pocket beaches. The rock/boulder sections contained random splatters drips. Areas with higher concentrations were observed within these sections, but mostly at the ends near the pocket beaches. In these areas, concentrations of ^{interstitial} MS, ST, CT & EV were observed at concentration up to 20%. However, concentrations even in these areas

averaged - below 10%. Over the remainder of the bedrock/boulder sections, the total concentrations were less than 1%, with splatters and drips observed every to 20 m.

With one exception, no oil was observed along the pocket beaches. The exception was observed where a dry creek had exposed bedrock on either side of the creek bed. ST-CT-EV-MS is exposed on the bedrock with the stain and coating to a broken distribution. All 4 oil characters were observed on one .1 m x 7 m face at < 10% cover. This ^B distribution was observed over an area of approximately 5 x 7 m.

SHORELINE ECOLOGICAL SUMMARY (Page 1 of 4)

REPORT DATE

Segment ST / 17-18- CN-001 Subdivision A Date (mo / day / yr) 5/4/90

Time (24 hr) 1535-2000 Biologist SHARMAN

(A) Substrate type and % of segments: SUBDIV.
(1) Bedrock 25 (2) Boulder 40 (3) Cobble 10 (4) Pebble 10 (5) Sand 15 (6) Silt 0 ^{+ granules}

(B) Overall % cover of biota (% of segment): Dense 0 Moderate X Low 0
SUBDIV.

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

Photographs: Roll No. 0

Frames 0

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS (ANCELLA, LITTORINA, LIMAETS)

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: ~ 25 glaucous-winged gulls, 5 pairs harlequin ducks (2 pr. at stream mouth), 1 shoveler, 1 double-crested cormorant, 1 red-necked grebe, 1 yellowlegs, 1 pair oystercatchers, 2 ravens, 3 unidentified sparrows (probably song sparrows), singing, 1 adult eagle, 1 juvenile eagle. Bear trail along upland/beach fringe. Moped, wolf, & river otter tracks in UTE/supratidal marsh. Sparrow (!) other tabular in supratidal - scavenged by (cont.)

Ecological Considerations:

See attached Eco. Map. The primary sensitivity relates to the anadromous stream and its importance to land mammals and as a sensitive estuary in general, as well as its importance as a salmon producer. There is additional potential concern for nesting shorebirds &/or pinnipeds hauling out on rocky points - these are both relatively time-dependent sensitivities & are not a particular concern at this particular time.

General Comments (cont.):

fores (scats). Sedum about to bloom amongst upland near-supratidal rocks; Cow parsnip (Heraclum) sprouting. Intertidally, this is a reasonably rich biota inhabiting a diverse collection shoreline types. MTE bedrock platforms have rare Fucus & Odonthalia, sparse barnacles with very rare spat. Littorines are rare to locally dense, with good recruitment in most cases. Nucella also are locally abundant. In most cases Fucus sporlings surround aggregations of mature plants. Similarly, discontinuous rare mussel beds have post-spill juveniles nestled around their margins. Mid- to LTE tidal pools have Odonthalia, foliose corallines + Lithothamnium, littorines, ulvals, Anthopleura spp., Halichondria, Pagurus, Katharina, tidepool sculpins (Oligostichus). Locally where there is CV/MS above, there are some small thin shears on these tidepools - however, there is no evidence of impact. In exposed areas, normal barnacle mortality (from wave wash/debris scouring) is to 25%. Generally < 5% mortality for mussels. The LTE has, in addition to those species listed above for tidepools, locally dense aggregations of Gyrodinium, green filamentous/Enteromorpha, and brown/red filamentous spp., as well as often-dominant Porphyra covering boulder & bedrock surfaces. As always, Gammarus is abundant in the LTE. Bivalve shells (mostly Solidus) are commonly interspersed amongst boulders. The few sand/gravel pocket beaches are essentially macrobiotically "sterile" except for remains in the drift lines. This appears to be a healthy & normally rich & productive intertidal community, apparently unaffected (or at least not obviously so) by oil.

ECOLOGY MAP

CN-1

(1 of 2)

(Page 3 of 4)

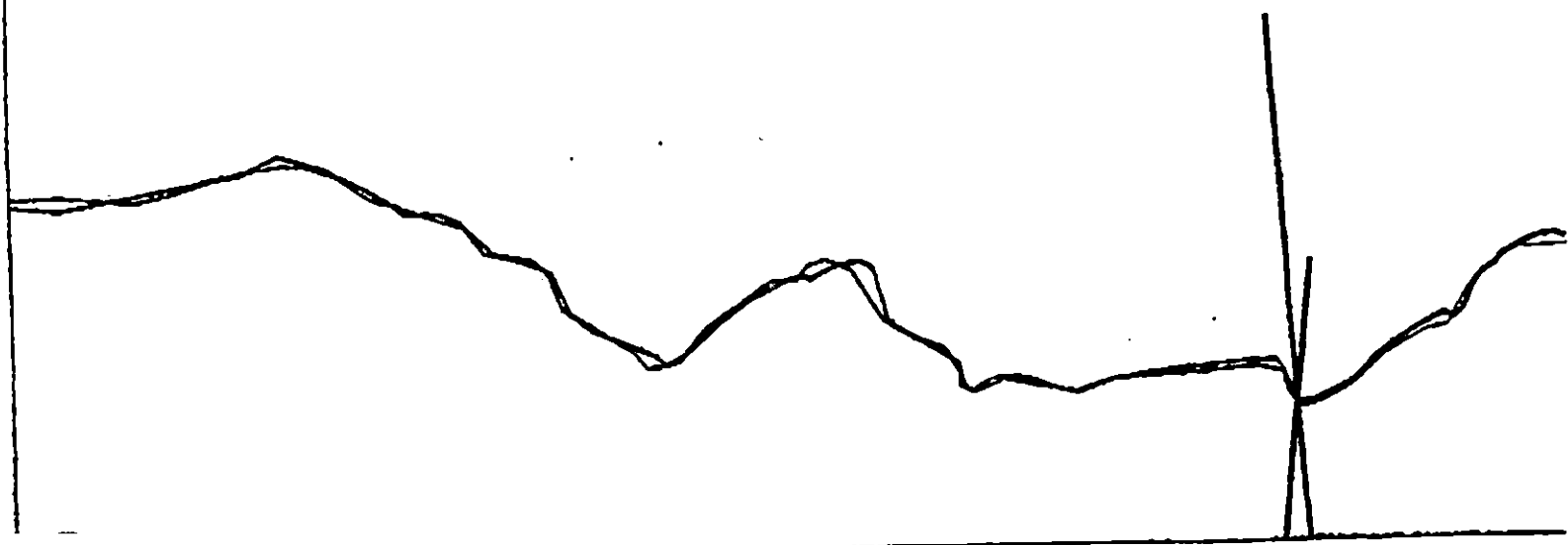
1A Stream mouth (fry outmigration)
4/15 - 7/31.

1B Stream mouth (spawning) 7/15 - 9/10
Peak 8/15.

3AA Sensitive estuary.

9LM Land mammals.

K9N



^ XXX Wide

//// Medium

--- Narrow

TTTT Very light

CN-1

ADEC Segment Length: 8962m

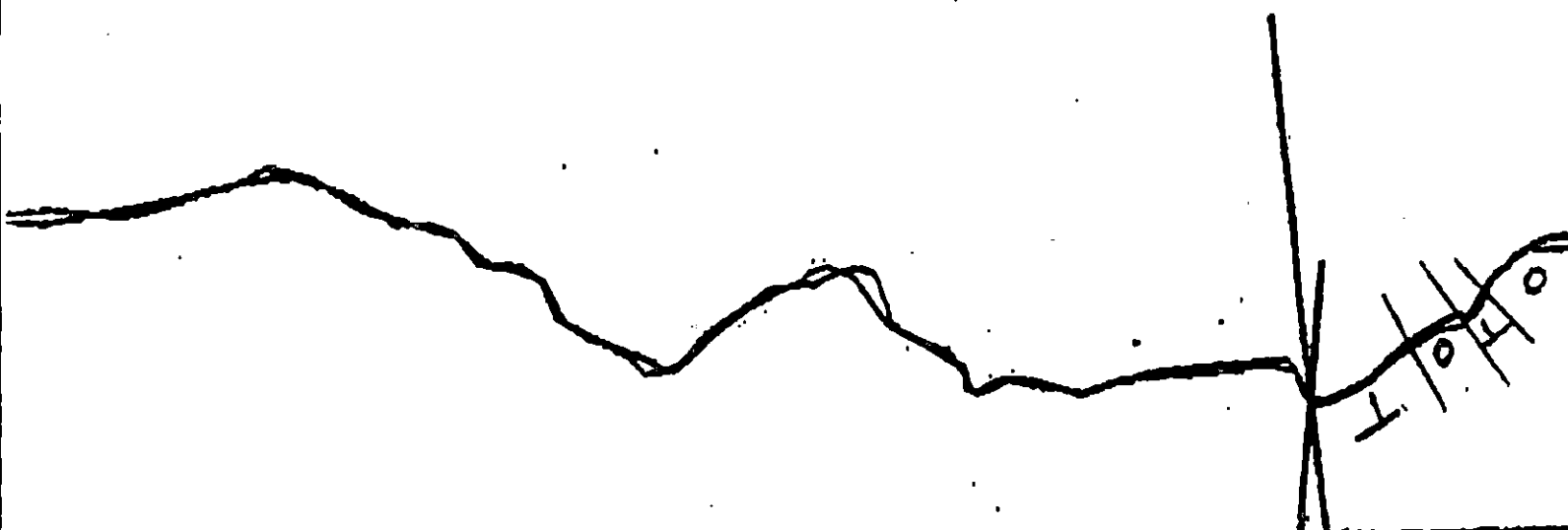


Map Key: AKP-CN-1w

Name: _____

Date: _____

K9N



XXXX Wide
//// Medium
--- Narrow
....

K091E-CN-1

ADEC Segment Length: 8902m



Map Key: AKP-CN-1w

Name: DG HEJMAN

Date: 5-04-90

CC-2 SB-104

CN-1

Medium

Narrow ~20m

XXXX Wide

//// Medium

--- Narrow

TTTT Very light

K2916-CN-1

ADIC Segment Length: 9982m

Map Key: AKP-CN-1x

Name: OG Heyman

Date: 5-04-90

CC-2 SB-104

ADF#G # 262-20-10050

Cape Clinch
Stream

CN-1

ECOLOGY MAP

(2 of 2)

See Map #1.

CN-1

(Page 4 of 4)

(XXX Wide

//// Medium

--- Narrow

TTTT Very Light

CN-1

ADEC Segment Length: 8962m

1 1000 1000 1000

Map Key: AKP-CN-1x

Name: _____

Date: _____

Scale: 1:10000

3781-603
6657-15

ADMISSION 

DATE 5/4/90

INDEX

- N Area
Approx. Scale
Seg/Sub Entry
Oil Dist.
Width
Length
% Cover
Substrate Character
Est. HbHb/LML
SSL
Profile Location(s)
Plot(s)
Photo Location(s)

અનુચિત

- 1 Δ**
2-10 Subsurface On

- 2 ▲
it - Surface Oil

3/13

CT/B

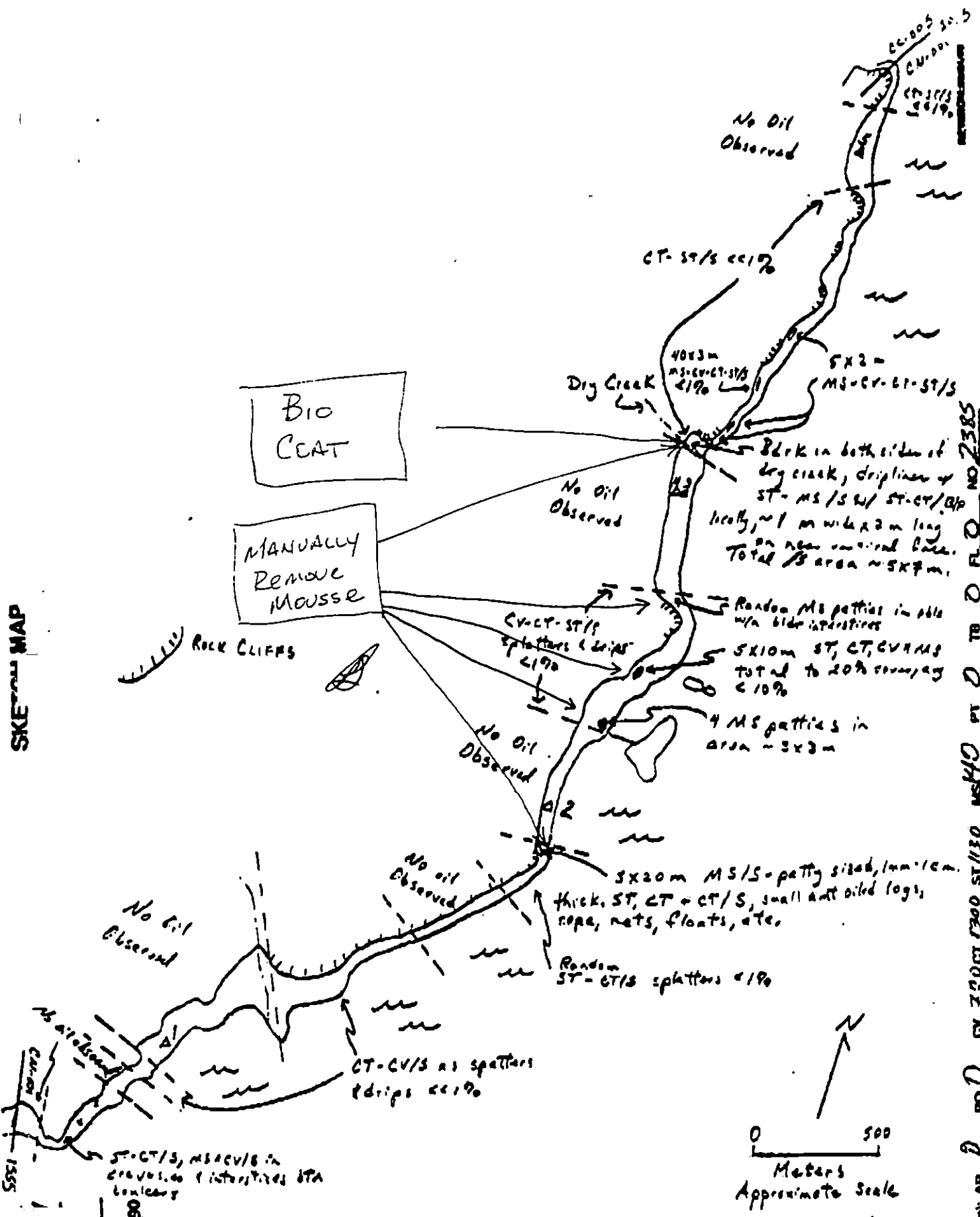
11

Study Description

CT/S -
Advanced Distribution

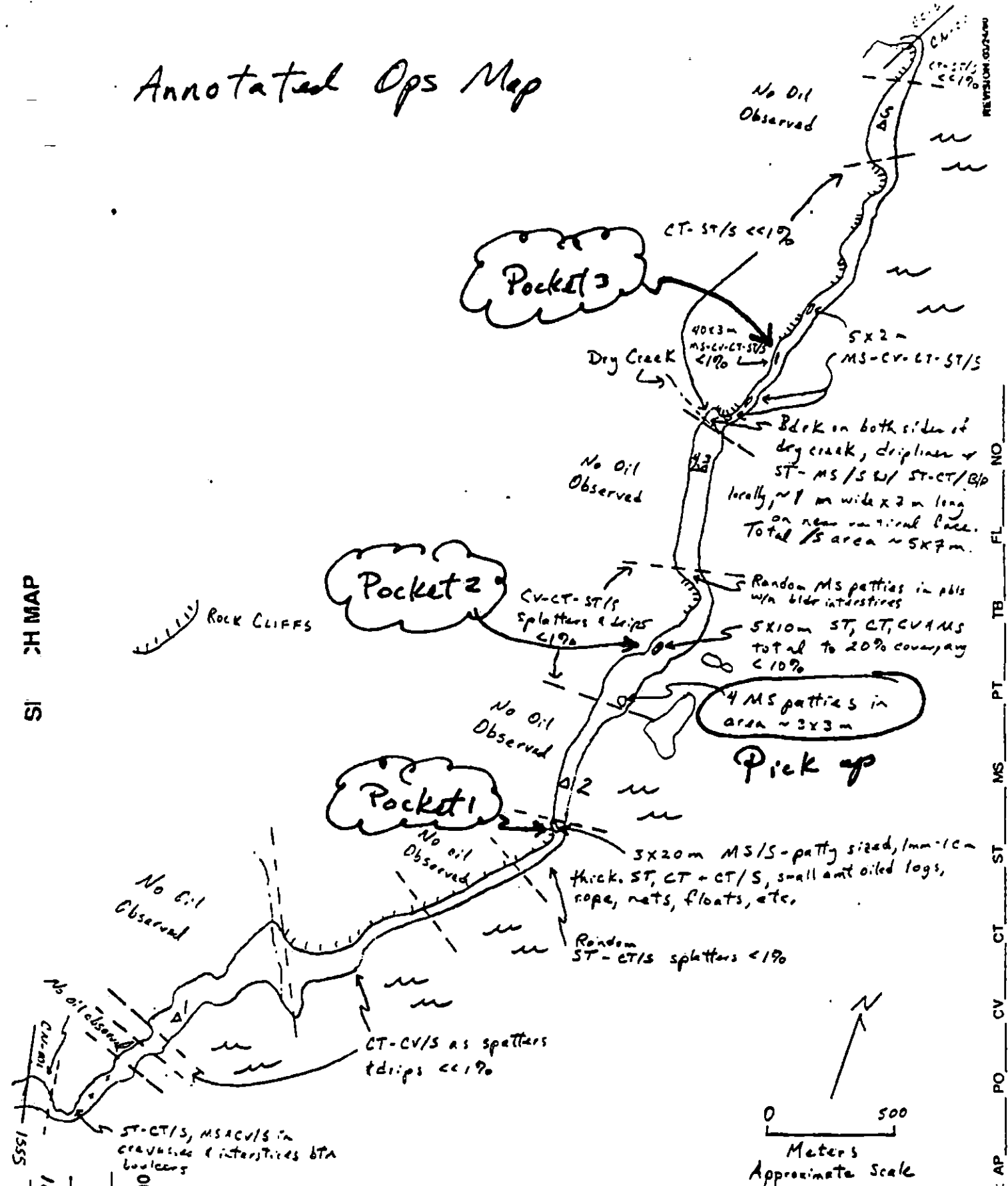
FOR THE RECORD

1



CHARACTER LENGTH (IN): AP D PO D CV 750 CT 1200 ST 1130 WS 410 PT D TB D FL D NO 2385

Annotated Ops Map



OGS/44
K09-18
SEGMENT ST/

SUBDIVISION A

DATE 5/14/90

CHECKLIST

- N Arrow
- Approx. Scale
- Seg/Sub Bdry
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HW/LWL
- SSL
- Profile Location(s)
- Profile(s)
- PK 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 Splattered Distribution
- Oiled Vegetation
- Photo location, direction, and number

Oil Character Length (m): AP MS PT TB FL NO

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-18-CN-001 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup Less Than 400m From Active Nest	CLOSED
Manual Pickup More Than 400m From Active Nest	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 (262-20-10050) is more than 100m from work site. No constraint to manual pickup.
5R	Seabird Colony	NO CONSTRAINT. Work site is more than 800m from seabird colony.
5T	Bald Eagle Nest	USFWS 4/9/90 map indicates an active nest in Subdivision A. Closed to manual pickup within 400m of active nest. No constraint to manual pickup 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. No disturbance to stream bed or banks. Avoid any unnecessary disturbance or damage to uncollected biota and substrate. Sensitive estuary.

FOSC

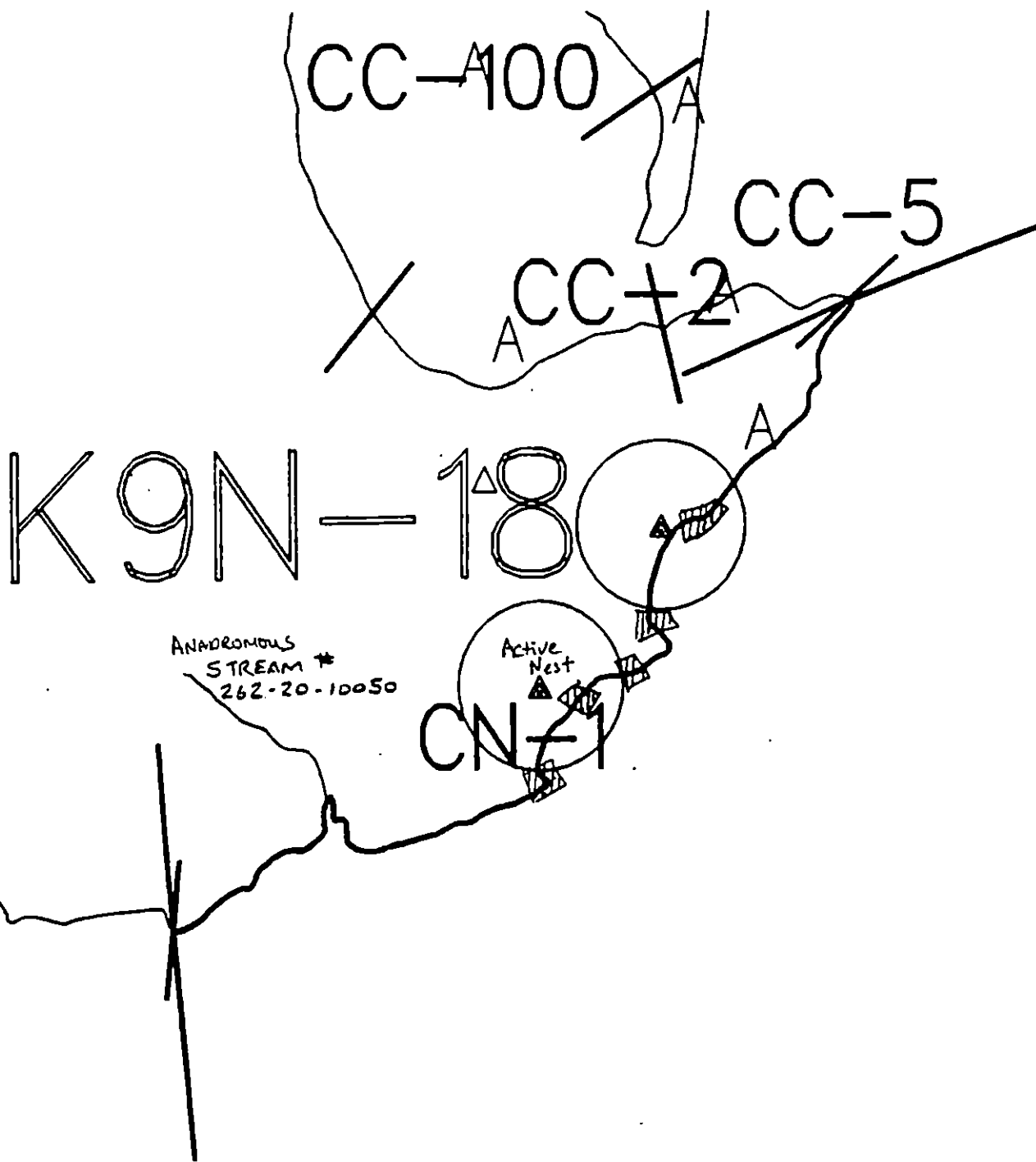
Date

6-22-90

Prepared by

Date

6/22/90



EATMENT



Exxon Company, USA
Map Key: AKP-CN-1

ECOLOGY MAP
SEGMENT K9N-18 CN-1
SUBDIVISION A (1 of 1)
METERS

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

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-19-HB-001 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 (262-20-10040) is in Subdivision A. No constraint to manual pickup.

7JJ Subsistence:
Invertebrate Harvesting

No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Restrict boat and air traffic and beach disturbance to essential minimum. Avoid any unnecessary disturbance or damage to uncollected biota and substrate.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NO. 262-20-10040)
FOR ADDITIONAL CONSTRAINT INFORMATION

FOSC

Date

6-12-90

Prepared by

J. P. Phillips

6-10-90

Date

6/11/90

ANADROMOUS
STREAM

#262-20-10035

HB-1

Work Area

STREAM # 262-20-10040

HALLO CREEK

HB-2

TREATMENT



Exxon Company, USA

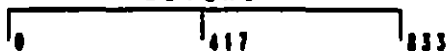
Map Key: NP-HB-1

May 21, 1990



ECOLOGY MAP
SEGMENT HB-1
SUBDIVISION A (1 of 1)

METERS



Seabird Colony



Eagle Nest

1 inch = 1367 feet

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/K09-19-HB-001 STREAM NO: 262-20-10040 DATE 4/30/90

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)
9LM Land mammals
7JJ Subsistence area: Invertebrate harvesting
ADF&G Anadromous Stream #262-20-10040 or 10035 (near border in HB-004)
See attached Ecological Constraint sheet for specific constraints and contracts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Avoid disturbance or damage to clam bed in sand beach near Hallo Creek.

SHPO SIGNATURE: Rachel Jean Darr DATE: 5/25/90

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of pooled oil, mousse, tarballs and patties. Consult ADF&G for appropriate work dates.

- POSSIBLE TIME WINDOW 7/15 - 7/31

TAG COMMENTS:

TAG APPROVAL DATE: 5/23/90

ADEC Art Weener Det Weener

EXXON Andy Gtz

NOAA Burt Wesscott

USCG G.A. Foster

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 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, 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 prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 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, 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 Kotol Bay Hatchery release
 Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 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
 Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 6/30)
 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 Larry Nicholson 486-4791
- 30, 32 Harbor seal and sea lion pupping (5/10 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 Subistence area: Salmon harvesting (6/1 to 9/30)
 Finfish harvesting
 Deer harvesting (8/1 to 1/7)
 Invertebrate harvesting
 Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
 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 / 10919-HB001 ^{STREAM} SUBDIVISION: 262-20 10090 DATE _____

USCG
NAME _____

SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

~~ADFG~~ ADFG

NAME EDWARD W. WEISS SIGNATURE Edward W. Weiss

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

MANUAL REMOVAL OF TARBALLS/PATTIES ON S & SE SIDES
OF LAGOON RECOMMENDED. AND OILED DEBRIS
ALSO IN AREAS INDICATED ON NORTH SIDE.

LAND MANAGER

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

OG GLENN HEYMAN NOAA USCGC JOHN NAUGHTON SEGMENT ST/ K 0919-HB 001
 BIO JIM BARR LAND REP CARL SCHUCH NPS SUBDIVISION A (1 OF 1)
 EXXON FRED BYARS ADEC TERRY ELLSWORTH TIME 13:20 16:30
 TEAM NO. 19 TIDE LEVEL -0.5 to +0.5 DATE 4/30/90
 EST. SUBDIVISION LENGTH: _____ m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 1 % B 3 % C 3 % P 20 % G 33 % S 20 % M 20 % V 0 %
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W _____ m M _____ m N _____ m VL _____ m NO _____ m

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0 cm

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 0

#BAGS 0

Photographs:

Roll No. ST-6/19-7

Frames 20-22

SUBSURFACE OIL

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		VO	UC	1	2	3	4	5	6	7	8	SU	U	M	V					
1	15					X	0-0		X										X				N	-	-	G/GS
2	15					X	0-0		X										X				N	-	-	G/GS
3	10					X	0-0		X									X					N	-	-	VS/SM

COMMENTS

Oiling in areas A, B, & C (shown on sketch map) is listed as MS/P & P. This is grading in areas to AP, but is included on the surface oil matrix as MS only.

REVIEWED fu DATE 5-10

ADPFC MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: AS SS DS TS AVE SCH NOPS PTA SSAT 2 REGION: PWS IP,CI K,AP
 METHOD: Aerial Ground Boat
 3 DATE: 4/30/90 16 HIGH TIDE TIMES: 0637 , 20:04 21 TEAM RECORDER: JIM BAREY
 4 START TIME: 1320 18 HIGH TIDE HTS: 12.8 , 11.3 22 OBSERVERS: SSAT TEAM #19
 5 STOP TIME: 1640 17 LOW TIDE TIMES: 0:48 , 13:38 23 AGENCY: _____
 6 SEGMENT #: K9-19-HB-1A 19 LOW TIDE HTS: 2.9 , -0.5 24 PHOTOS TAKEN: (Y) N
 7 STATION #: _____ 18 TIDE HT AT SURVEY: -0.5 → +4.5 Roll #: 37-6-7 Frame: 20-27
 8 K-UNIT: K9-19 Ebb Stack Flood Stack 25 VIDEO TAKEN: Y N TAPES: _____
 9 STAT AREA: _____ 20 USGS QUAD: _____ Starts: _____ Ends: _____
 10 LAT: 154° 35' W 11 LONG: 58° 24' N 26 SAMPLES TAKEN: Y (N) Number _____
 12 SOURCE: Map Loran Oil _____
 13 LOCATION: HALLO BAY Sediment _____
 14 DESCRIPTION: STREAM MOUTH / LAGOON for HALLO CREEK Biological _____
 Water _____

EXTENT OF OIL

	SHORELINE				STREAM			
	L	N	W	E	L	N	W	E
27 SURFACE COVERAGE					0	0	0	0
28 SURFACE THICKNESS					0	0	0	0
29 PENETRATION					0	0	0	0

30 OVERALL OIL IMPACT: N (Y) L N N
 31 OIL TYPE: Poison Mousse Tar Asphalt Sticky Slats
 32 OILED DEBRIS: (Y) N
 33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cove
Lagoon Marsh
 34 WAVE EXPOSURE: High Moderate Low
 35 SUBSTRATE TYPE: Bedrock Boulder Corals
Gravel Sand Mud/silt

36 CATALOGED AREA, FISH STREAM? (Y) N
 37 CATALOG #: 10040
 38 STREAM NAME: HALLO CREEK
 39 OIL IN STREAM BED? Y (N)
 40 OIL ON STREAM BANKS? (Y) N
 41 OIL ON BEACH ADJACENT TO MOUTH? (Y) N
 (within 50 meters)
 42 OIL WITHIN 1 MILE OF STREAM? (Y) N
 Where: _____
 43 ANADROMOUS FISH PRESENT? Y (C)
 44 ANADROMOUS FISH OBSERVATION
 Species Aerial Ground

COMMENTS: _____

THESE PHOTOS ARE CATALOGED
IN THE SIAT FILES UNDER ROLL # ST-6-7

48 PHOTOLOG

(S)	DESCRIPTION
20	MOUSSE PATCHES ON STREAM BANK MARCH
21	30 x 2m Patch of PATCHES/MOUSSE

48 OIL DISTRIBUTION DIAGRAM

ATTACHED

* Sample taken
* Photo frame # and

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/23/90

Segment ST / K9-19-HB-1 Subdivision A Date (mo / day / yr) 4/30/90
 Time (24 hr) 1320-1640 Biologist JIM BARRY

- (A) Substrate type and % of segments:
 (1) Bedrock 1 (2) Boulder 3 (3) Cobble (4) Pebble (5) Sand (6) Silt
- (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: ST-6/19-7
 Roll No.

Frames 20-22

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:

COMMON MERRANSER - 6
 BARROW'S GOLDFINCH - 1
 FOX TRACKS - ABUNDANT
 BEAR TRACKS/SCAT
 MOOSE TRACKS/SCAT
 RIVER OTTER TRACKS

Ecological Considerations:

- 1) ANADROMOUS STEAM LOCATION CHUM SALMON (SPAWNING)
 PINK SALMON (SPAWNING)
- 2) OIL CLEANUP WILL BE MINOR & WILL LIKELY NOT IMPACT SENSITIVITIES

SEGMENT K9-19-HB-1 SUBDIVISION A
BIOLOGIST - JIM BARRY

APRIL 30, 1990

Time 1320-1640

Tidal Window -0.5 => +4.5

I. GENERAL COMMENTS

A. Exposure - This segment includes a moderately exposed sandy beach and a lagoon/stream mouth with low exposure..

B. Habitats

1. Sand Beach

The mouth of Hallo Creek enters into Hallo Bay in this segment. This sandy beach has a clam bed with razor clams (*Siliqua patula*) and probably other species such as *Macoma balthica*, *M. nasuta*, and *Tresus capax*. No algae were found on the sand flat. This beach is listed as a site for invertebrate harvesting (clams).

2. Lagoon/Stream Mouth

Tidal flow apparently extends for a considerable distance (ca. 1000 m) into the mouth of Hallo Creek and includes a small lagoon. Other than a small number of amphipods swimming under and around logs and other debris, no invertebrates or macroalgae were found in this habitat. Filamentous and mat-forming algae and other microbes (diatoms, bacteria) exist as a thin coat on sediments and debris in still waters. Beach rye grass (*Leymus mollis*) and perhaps other species of grasses (*Puccinellia* spp.?) are abundant at high tidal levels and above along the stream banks.

C. Oil-Related Comments

1. Oil or Cleanup Related Mortality
None evident.

2. **Ecological Sensitivities to oil or cleanup.**
Oil cover on this segment was very light. Patches of oil coat or mousse were rare and localized, and debris spattered with oil was sparse along the drift line. This very small amount of oil constitutes a minimal biological risk for the biota of the area.

Ecological sensitivities listed are:

- a. **Anadromous streams (see map)**
Stream code 10040 Chum Salmon and Pink Salmon spawn in Hallo Creek.
- b. **Invertebrate Harvesting.** Clam beds located along the sand beach are used for clam digging.
- c. **Land Mammals.** Brown Bears, Red Fox, Moose, and River Otter were indicated by tracks, scat, or both at this site.

II. WILDLIFE OBSERVATIONS

Brown Bear - tracks

Red Fox - tracks

Moose - tracks

River Otter - tracks

Glaucous-winged gulls - 3

Common Merganser - 6

Barrow's Goldeneye - 1

III. SPECIES LIST**Legend for densities and distribution**

D	Dense	A	High Tidal Zone
M	Moderate	B	Middle Tidal Zone
S	Sparse	C	Low Tidal Zone
R	Rare	U	Subtidal Zone
1	Bedrock	J	Juveniles Present
2	Boulder	E	Eggs Present
3	Cobble	X	Probably Present
4	Pebble		
5	Sand/mud		

A. MARINE PLANTS

1. DIATOMS/BLUE GREEN ALGAE M5BC

2. GREEN ALGAE - CHLOROPHYTA

Unknown filamentous green algae S5BC

3. HIGHER PLANTS

Leymus mollis - Beach Rye Grass M5A

Puccinellia spp.? - Alkali Grass M5A

B. MARINE ANIMALS

1. CRUSTACEANS

AMPHIPODS

?Orchestia spp. RS5BC

2. MOLLUSCA

MUSSELS AND CLAMS

Clinocardium nuttallii X

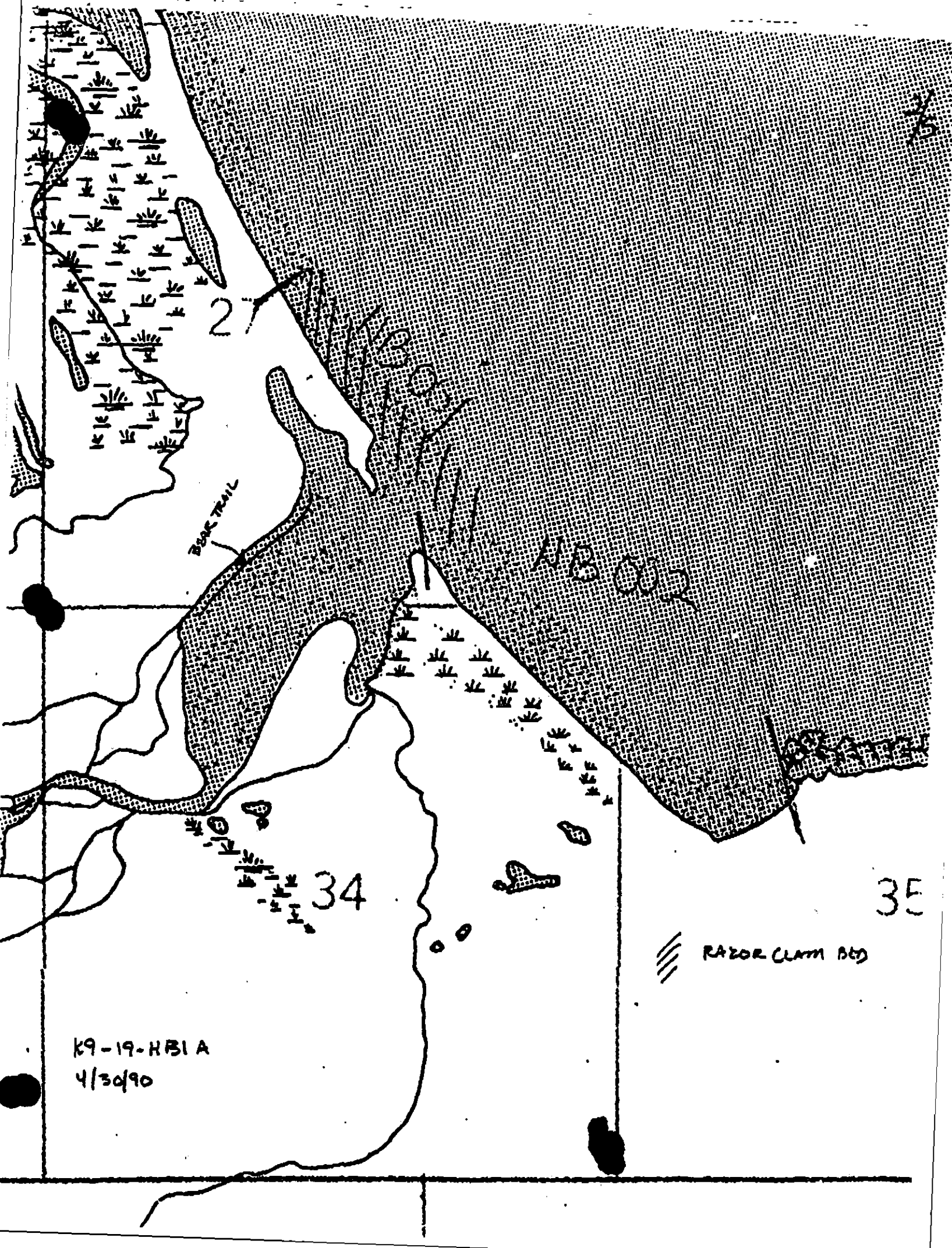
Macoma balthica X

Siliqua patula X

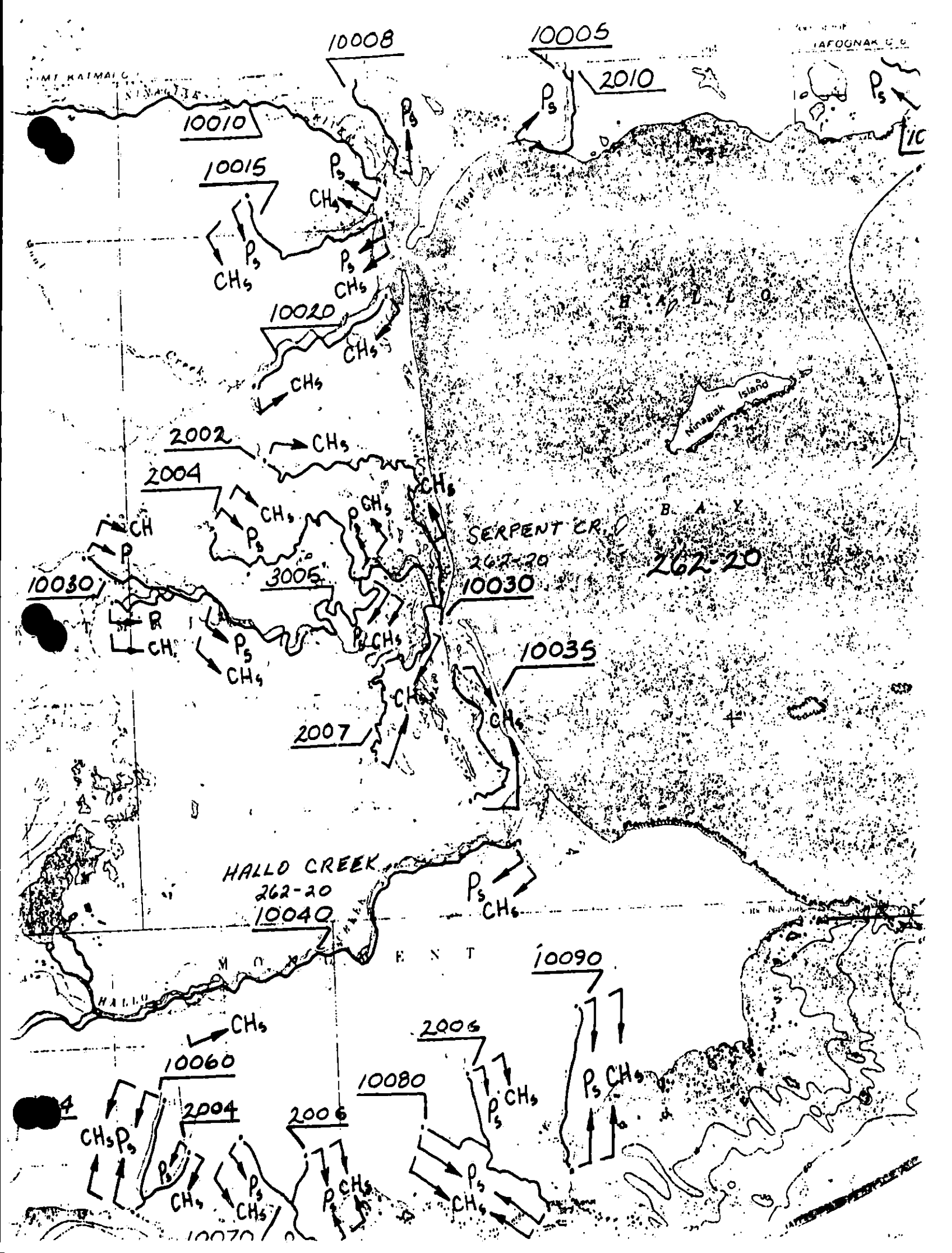
Tresus capax X

3. FISH

Salmon Smolts - Rare in stream



K9-19-HB1A
4/30/90



ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 262-20-10040

SEGMENT KO9-19-HB-001 SUBDIVISION A

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 (262-20-10040) is in Subdivision A. ADF&G catalogued anadromous stream (262-20-10035) is in an adjacent segment outside of the indicated work area. No constraint to manual pickup.

7JJ Subsistence:
Invertebrate Harvesting

No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Avoid any unnecessary disturbance or damage to unrolled biota and substrate. Avoid disturbance or damage to clam bed in sand beach near Halo Creek.

SEE SUBDIVISION CONSTRAINT ADDENDUM KO9-19-HB-001
FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC

Date

6-12-90

Prepared by

Date

6/11/90

SHORELINE EVALUATION

SEGMENT ST/ K09-19-HB-02 SUBDIVISION A (1 OF 1) DATE 4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7JJ Subsistence area: Invertebrate harvesting

9LM Land Mammals

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. Hume

DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 106 m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

X Bioremediation

 Tarmat Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pickup of mousse,
oiled debris and oiled logs, and 2) bioremediate in areas indicated on
sketch map. Apply bioremediation up to stream bank with ADF&G approval.
Avoid bioremediation in invertebrate harvesting areas.

TAG COMMENTS: MONITORS TO ASSESS NEED TO REMOVE LOGS

TAG APPROVAL DATE: 5/4/90

ADEC ART WEAVER

EXXON ANDY TER

NOAA Gary Petrus

USCG G.A. FIEBEL

FOSC: W L

DATE: 5-9-90

INIPOL: not authorized.

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 uncoiled 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 (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 (8/1 to 9/30)
 7HH Finfish harvesting
 7H 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.

CA

END PAGE

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / K0919-HB002 SUBDIVISION: A DATE 4/23/90104A
4306GNAME John Naughton SIGNATURE John J. Naughton☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Only surveyed approximately 150 meters of south end of segment since the rest was reported as having no oil, stain, coat and some mousse in upper intertidal. Suggest the mousse be treated by manual removal at the same time as treatment of adjacent Segment HB 003.

ADEC

NAME Terry Ellsworth SIGNATURE Terry Ellsworth☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

A 100m x 8m area in the southern most part of segment has mousse/sediment between boulders and cobbles as well as coat and stain with a patchy distribution and a thickness to 6cm, in the LI to MI. Manual removal recommended.

Only the southern 150m were surveyed based on reports of no oil in the remainder of the segment.

LAND MANAGER

NAME Carl Sebeck SIGNATURE Carl Sebeck☒ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Mousse with entrained sediment fills interstitial spaces between surface cobbles and boulders. Area includes cover/coat/stain. Mousse can be scrapped from interstitial spaces. The weather/hardened cover will be difficult to remove, but scraping is possible.

SHORELINE OILING SUMMARY

REVISION NO 04-13

OG LINDSAY NAKASHIMA USCG (NOAA) JOHN NAUGHTON SEGMENT ST/ K0919 - HB002
 BIO DEB Mc CORMICK LAND REP (NM) CARL SCHUCH SUBDIVISION HB002A (1 OF 1)
 EXXON FOED BYARS ADEC TERRY ELLESWORTH TIME 7:15 10:30 AM
 TEAM NO. 19 TIDE LEVEL -0.5 FT. (SLACK) DATE 4/23/90
 EST. SUBDIVISION LENGTH: 1220 m 100 ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: NW to SE
 SURFACE SEDIMENTS: R % B 25 % C 20 % P 15 % G 40 % S % M % V
 SLOPE: Long 90 % Hang 5 % Ven 5 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 100 m N 0 m VL 0 m NO 420 m

SURFACE OIL

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

PAVEMENT H F S NONE sq. m by 0 cPATTIES / TARBALLS NONE BAGSNEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	X		
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE #BAGS

Photographs:

Roll No. ST-19-15Frames 24-27

SUBSURFACE OIL NO PITS DUG - LIMITED AREA

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					BELOW	OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	T	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	30	35	40	45	50	SU	U	M	U		
0																				

COMMENTS SEGMENT WAS MOSTLY CHARACTERIZED AS NOT OILED, (ADEC M THEREFORE, THE SOUTHERN 150m WERE SURVEYED. WITHIN THE SURVEYED AREA, ABOUT 100m WAS OILED ACCORDING TO THE CATEGORIES SPECIFIED ON THE SKETCH AND THIS FORM.

REVISED 4/24/90 (L)

REVIEWED BAFDATE 24 APR 90

W. L. BY INDIAN SHIP
SEGMENT TI K0919-HB002

SUBDIVISION HB002 141

DATE 4/23/90

CHECKLIST

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

LEGEND

1 Δ
P/L - No Subsurface Oil

2 Δ
P/L - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

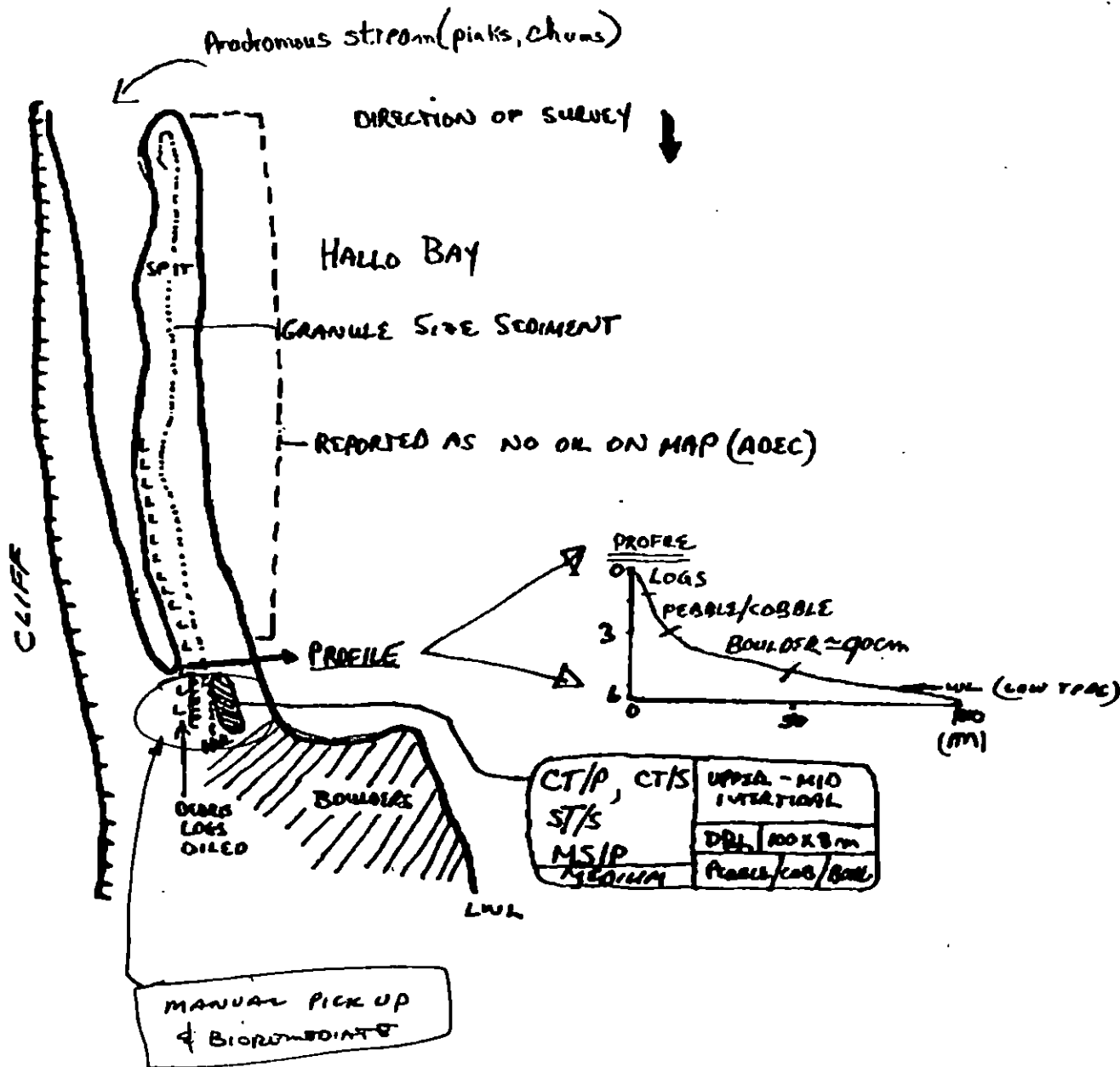
CT/P
Patched Distribution

CT/S
Splashed Distribution

eee
Oiled Vegetation

1 ●●●
Photo location, direction,
and number

SKETCH MAP



Oil Character Length (m): AP 0 PO 0 CV 0 CT 100 ST 100 MS 10 PT 0 TB 0 FL 0 NO 0

REVISION 0004/00

SHORELINE ECOLOGICAL SUMMARY

REVISION: 05/22/90

Segment ST / K0919H022 Subdivision A Date (mo / day / yr) 4-23-90Time (24 hr) 0715-0730 Biologist D. McCormick(A) Substrate type and % of segments:
(1) Bedrock _____ (2) Boulder 25 (3) Cobble 20 (4) Pebble 15 (5) Sand 40 (6) Silt _____(B) Overall % cover of biota (% of segment): Dense _____ Moderate 5% (10%) Low 95% (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 (O)

Photographs:

Roll No. ST-19-15Frames 24-27

BARNACLES present only in extreme E end of segment on boulder beach.

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 None observed

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

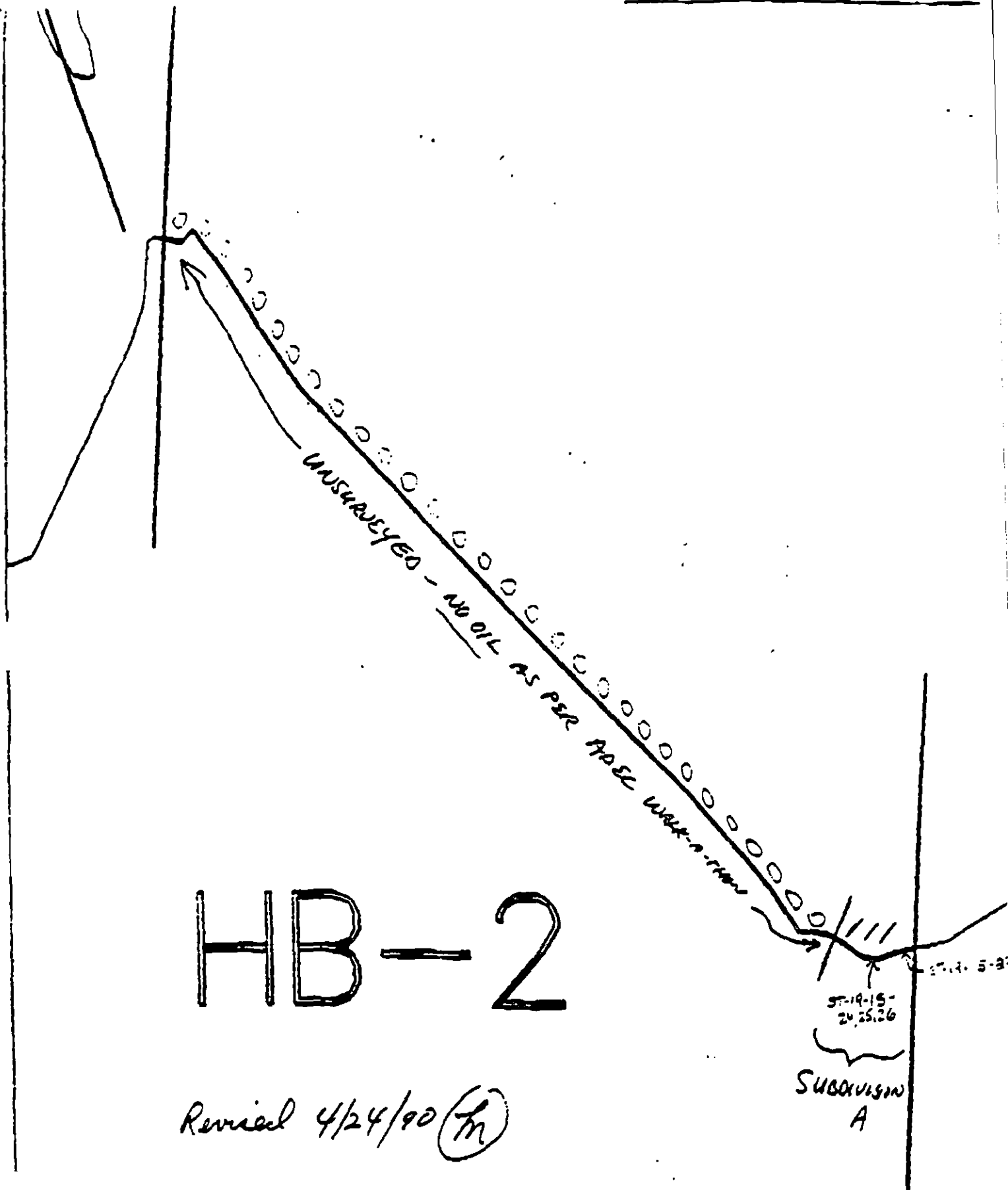
FUCUS

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: Bear tracks on beach.
Filamentous green algal layer continuous in lower IT2 on boulders, patchy in mid IT2

Ecological Considerations: Anadromous stream (Pinks, Chem) at W end of segment.



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

HB-2

ADEC Segment Length: 1238m

Map Key: GOA-106

Name: LINDSAY KIMASH

Date: 4/23/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-19-HB-02 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation*	WORK AFTER 6/15

*No Inpol - Use Customblen Only

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

7JJ Subsistence: Invertebrate Harvesting

No constraint to bioremediation after 6/15.
No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

[Signature]

Date

6-16-90

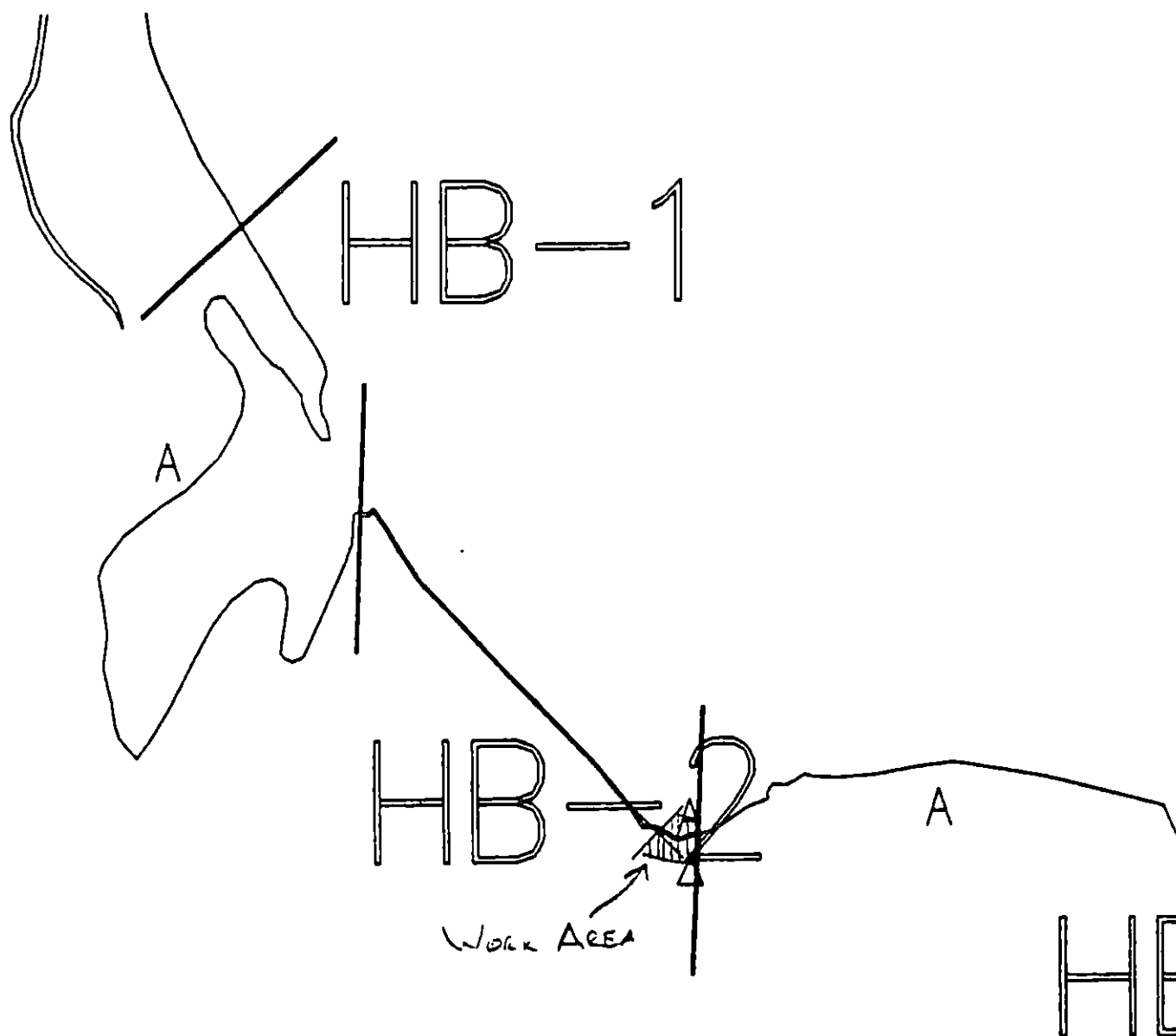
NO Inpol Ag

Prepared by

[Signature]

Date

6/16/90



TREATMENT



Exxon Company, USA
Map Key: AKP-HB-2
June 10, 1990



ECOLOGY MAP
SEGMENT K9N-19 HB-2
SUBDIVISION --- (--- of ---)
METERS
0 432 865

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

1 inch = 1419 feet

SHORELINE EVALUATION

SEGMENT ST/ K09-19-HB-03 SUBDIVISION A (1 OF 1) DATE 4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7JJ Subsistence area: Invertebrate harvesting

9LM Land Mammals

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:

DATE:

DATE: 5/3/80

OILING CATEGORIZATION:

Wide 0 m: Medium 367 m: Narrow 790 m: V.Light 2443 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 10+ cm

RECOMMENDATIONS:

No Treatment Recommended

X Treatment Recommended

 X Manual Pickup

X Bioremediation

Tarmat Removal

Snare/Absorbent Booms

Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

Spot Washing: _____ Wands

Beach Cleaner

 Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of mousse patties and oiled debris, and 2) bioremediation in areas indicated on sketch map. Bioremediate to stream banks with ADF&G approval. No specific ecological time constraints identified.

TAG COMMENTS:

TAG APPROVAL DATE:

ADEC ART WENETZ Art Wenetz

EXXON Amv TBR Deal

NOAA Gary Petros New Haven

USCG KENNETH KENNIS

FOSC:

DATE: 5-8-90

No Inshore use. All work to be performed between 1 June and 31 August. No beach burning. Access to shoreline by boat only.

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 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from
 and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to
 treatment for confirmation of dates.
- 6U Recreation: Tent sites (8/1 to 9/15)
- 6V Anchorages (8/1 to 9/15)
- 6W Forest Service cabins (8/1 to 9/15)
- 6X Lodge (8/1 to 9/15)
- 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (8/1 to 9/30)
- 7HH Finfish harvesting
- 7I 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 / K0919-H0003 SUBDIVISION: A DATE 4/23/90NAME John Naughton SIGNATURE John J. Naughton☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

This segment along the south side of Halls Bay was oiled to varying degree along the entire length, with the exception of a few 50 to 100 meter sections. Four sections in the mid and outer portion of the bay had medium oil consisting of mousse between large rocks. Stain and small amounts of cover will not be removed, however mousse should be treated by manual removal. Unusual concentration of oiled debris found near Cape Mukshak. Heavily oiled debris should be removed.

ADEC NAME Terry Ellsworth SIGNATURE Terry Ellsworth☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

This area contains stains and coat which are sporadic to patchy along its entire length. An area of broken cover occurs $\approx$ 500m from the east end of the segment. Also in this area an oil/debris/vegetation wash 30m x 3m x 2m was found in the UI. Four areas within this segment contain more concentrated interstitial mousse/sediment with smaller areas of interstitial mousse/sediment to $\approx$ 30cm in UI to MI in the remainder of the segment. Manual removal of mousse/sediment, cover, and oil/debris/veg. was recommended.

LAND MANAGER

NAME Carl Sedach SIGNATURE Carl Sedach☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Concur with ADEC comments above.
Oiled debris, algae and logs should be removed.
No log or debris burning is permitted on NPS lands.

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

OG LINDSAY NAKASHIMA USCG (NOAA) JOHN NAUGHTON SEGMENT ST/ K0919-H8003
 BIO DEB MCCORMICK LAND REP CARL SCHOCH (UP3) SUBDIVISION H8003A (1 OF 1)
 EXXON FRED BYARS ADEC TERRY ELLESWORTH TIME 7:31 to 10:30 AM
 TEAM NO. 19 TIDE LEVEL -0.5 TO +5.0 FT. DATE 4/23/90
 EST. SUBDIVISION LENGTH: 350.3 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: WEST to EAST
 SURFACE SEDIMENTS: R 15 % B 70 % C 10 % P 2 % G 2 % S 1 % M 0 % V 0 %
 SLOPE: Long 8.5 % Hang 1.5 % Vert 0 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 600 m N 750 m VL 2/53 m NO 0 m.

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	1C	1B	1P	1S	2X	2Y	3T	3W	3V	2U	1U	1M	1L
ASPHALT PAVEMENT													
POOLED													
COVER			X	X	X						X		
COAT			X	X	X						X	X	
STAIN			X	X	X						X	X	
MOUSSE			X					X			X	X	
PATTIES			X					X			X		
TARBALLS													
ELM			X		X	X					X		
NO OIL										X			X

 PAVEMENT H F S None sq. m by cm

 PATTIES / TARBALLS NONE BAGS

 NEAR SHORE SHEEN? ☒ NO BR RW SL TL

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

DID YOU COLLECT DEBRIS?

 YES ☐ NO ☒

 TYPE

 #BAGS

Photographs:

 Roll No. ST-19-15-28 to 36

 Frames ST-19-16-1 to 11

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	SU	U	M	L				
1	10		X				0-10	X					X		X				N	N	—	P/C/B
2	10				X		0-4		X				X		X				N	N	—	C/B
							.															
							.															
							.															
							.															

COMMENTS

 REVIEWED BAT DATE 24 Apr 90

OG LINE BY NAKASHIMA

SEGMENT STI K0917-HB003

SUBDIVISION HB003A

DATE 4 123 90

CHECKLIST

- ☐ N Area
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HAP/LA/WL
- ☐ SGL
- ☐ Profile Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
PI - No Subsurface Oil

2 Δ
PI - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

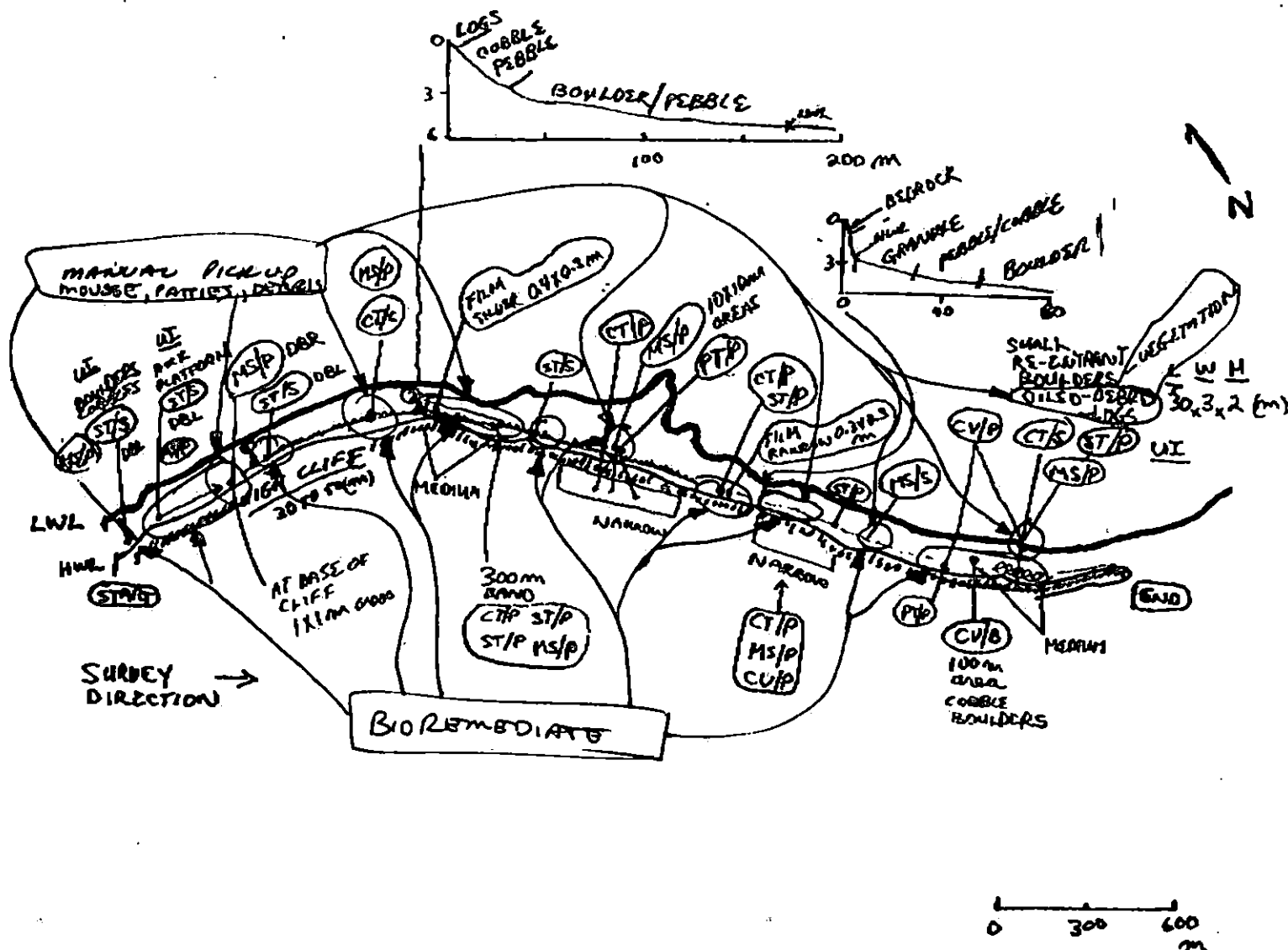
CT/P
Patchy Distribution

CT/S
Splashed Distribution

eee
Oiled Vegetation

1 ●
Photo location, direction,
and number

SKETCH MAP



Oil Character Length (m): AP 0 PO 0 CV/BSO CT 1500 ST 2000 MS 200 PT 300 TB 0 FL 2 NO 0

REVISION: 03/04/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/23/90

Segment ST / K0919K8003 Subdivision A Date (mo / day / yr) 4-23-90

Time (24 hr) 0730-1030 Biologist D. McCormick

- (A) Substrate type and % of segments:
 (1) Bedrock 15 (2) Boulder 70 (3) Cobble 10 (4) Pebble 2 (5) Sand 3 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 20% (100%) Moderate 55% (100%) Low 25% (100%)
- (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-19-15

Frames 28-36

Roll #: ST-18-16

BARNACLES

Dense			Moderate			Sparse			Rare			Frames: 1-11	NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L		
2	2	X	2	X	3	X	X	2	2	2	2		
3	3	X	3	X	3	X	3	3	3	3	3		
4	4	X	4	4	4	4	4	4	4	4	4		
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			Frames: 1-11	NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L		
2	2	X	2	X	3	X	X	X	2	2	2		
3	3	X	3	X	3	X	3	3	3	3	3		
4	4	4	4	4	4	4	4	4	4	4	4		
5	5	5	5	5	5	5	5	5	5	5	5		
6	6	6	6	6	6	6	6	6	6	6	6		

GASTROPODS

Dense			Moderate			Sparse			Rare			Frames: 1-11	NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L		
2	X	X	2	X	3	X	X	2	2	2	2		
3	3	3	3	3	3	3	3	3	3	3	3		
4	4	4	4	4	4	4	4	4	4	4	4		
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			Frames: 1-11	NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L		
2	2	X	2	X	3	X	X	2	2	2	2		
3	3	3	3	3	3	3	3	3	3	3	3		
4	4	4	4	4	4	4	4	4	4	4	4		
5	5	5	5	5	5	5	5	5	5	5	5		
6	6	6	6	6	6	6	6	6	6	6	6		

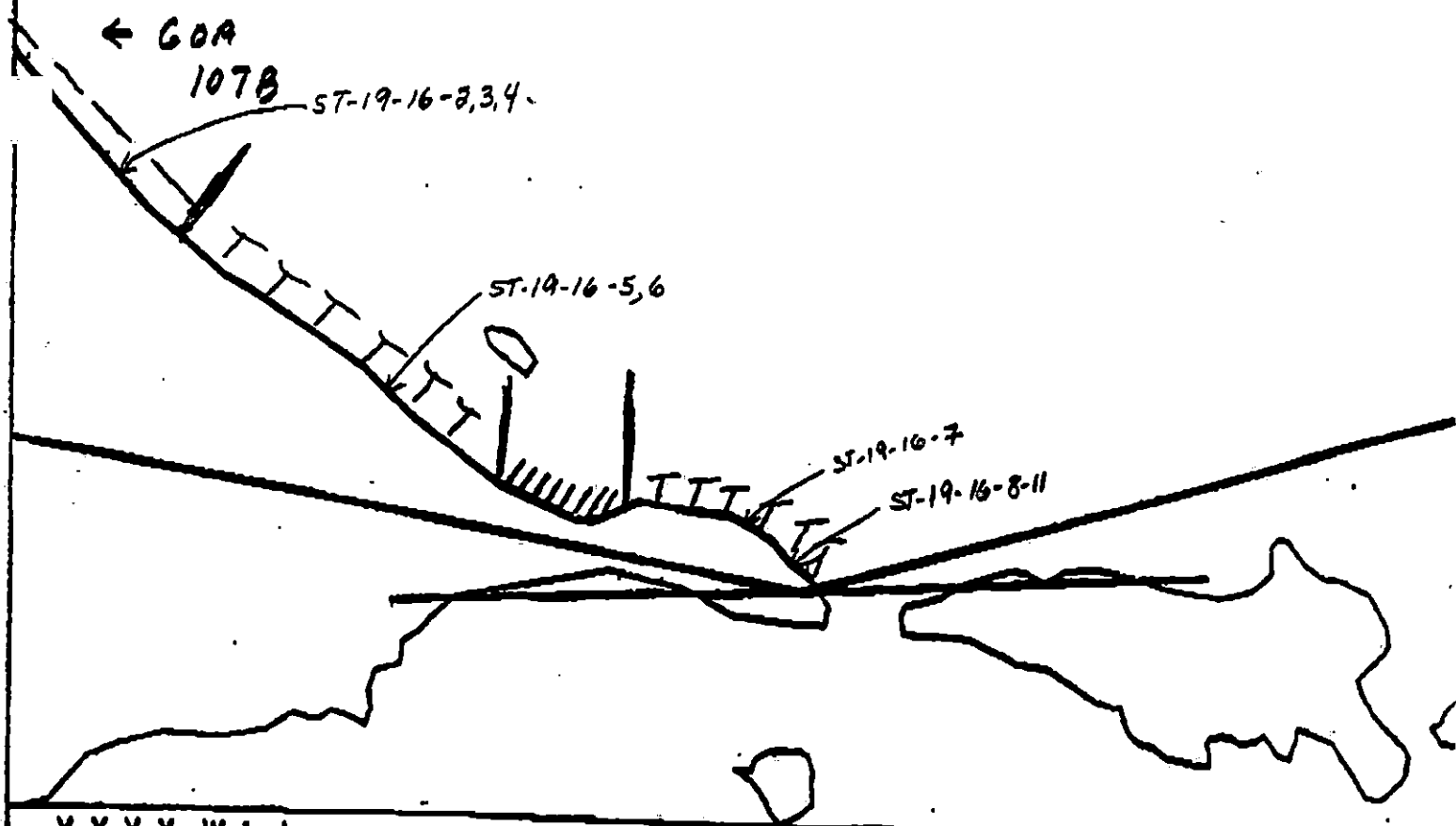
Wildlife Observations/ General Comments: See page 2 for list of fauna seen.

Ecological Considerations: 1 bald eagle on bluff above beach (see OG map for location), no nest observed. 3 harlequin ducks offshore, also 1 dog. black oysters; several oyster crackers in lower ITZ; gulls in area; 1 unidentified gull.

1A, 1B, 7JJ, 9LM

CCCC / 1111
(1 of 4)

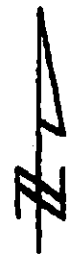
(NOTE)
- NO STREAMS
IN SEGMENT
755, 9LM



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

HB-3

ADEC Segment Length: 3878m

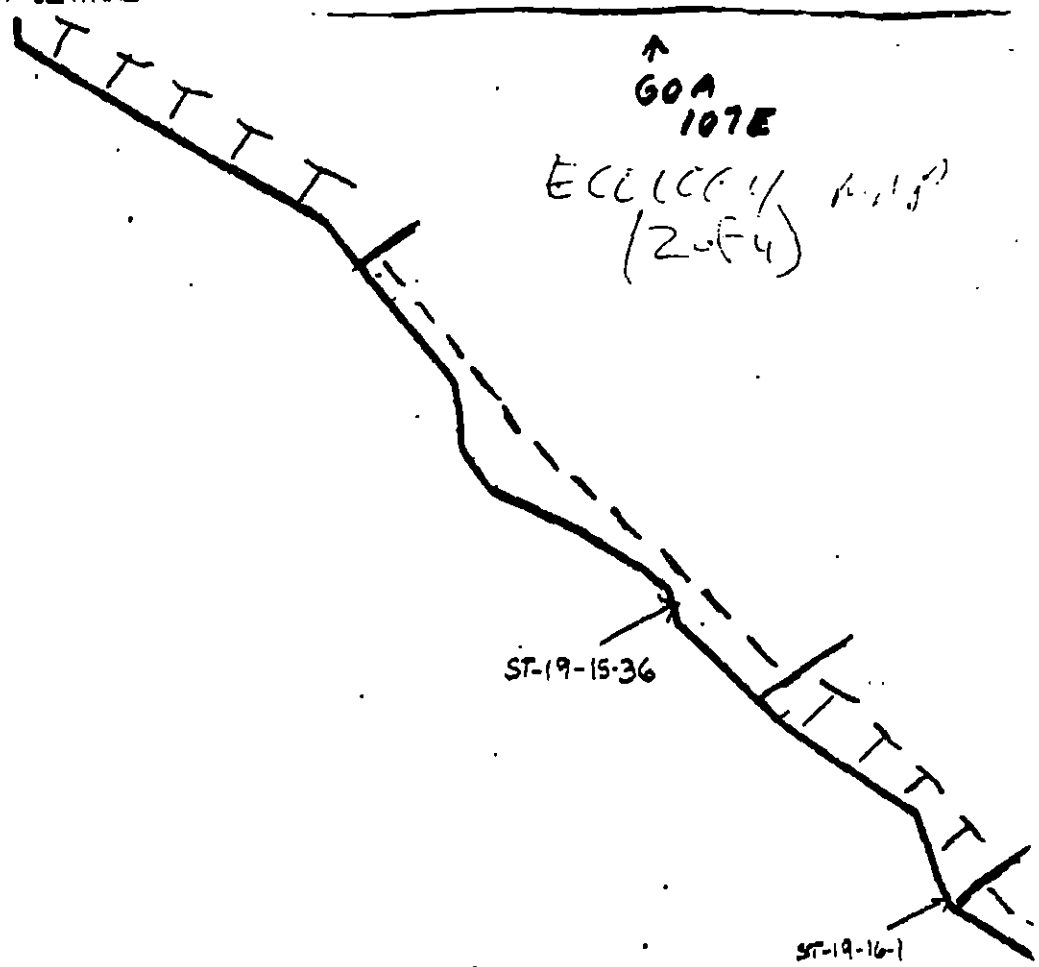


Map Key: GOA-107c

Name: NAKASHIMA

Date: 24 Apr 90

Data Entered:



GOA
 107E

XXXX Wide

/// Medium

--- Narrow ADEC Segment Length: 5579m

TTTT Very Light

0000 No Oil

HB-3



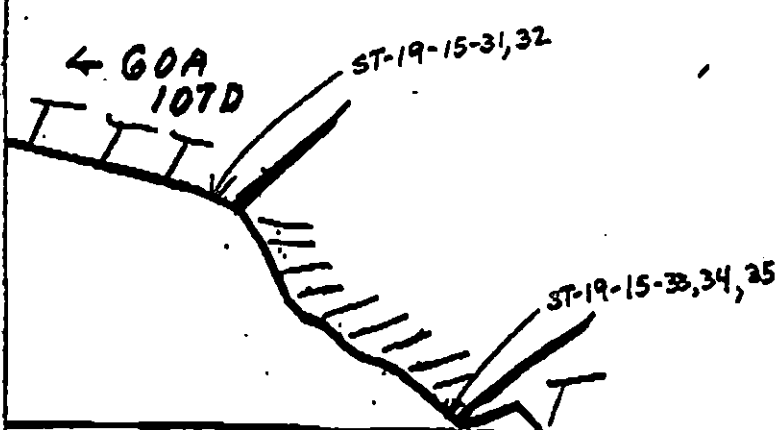
Map Key: GOA-107b

Name: NAKASHIMA

Date: 24 Apr 90

Data Entered:

337-103
L. 0206/11
(3 of 4)



↓ GOA 107B

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

HB-3

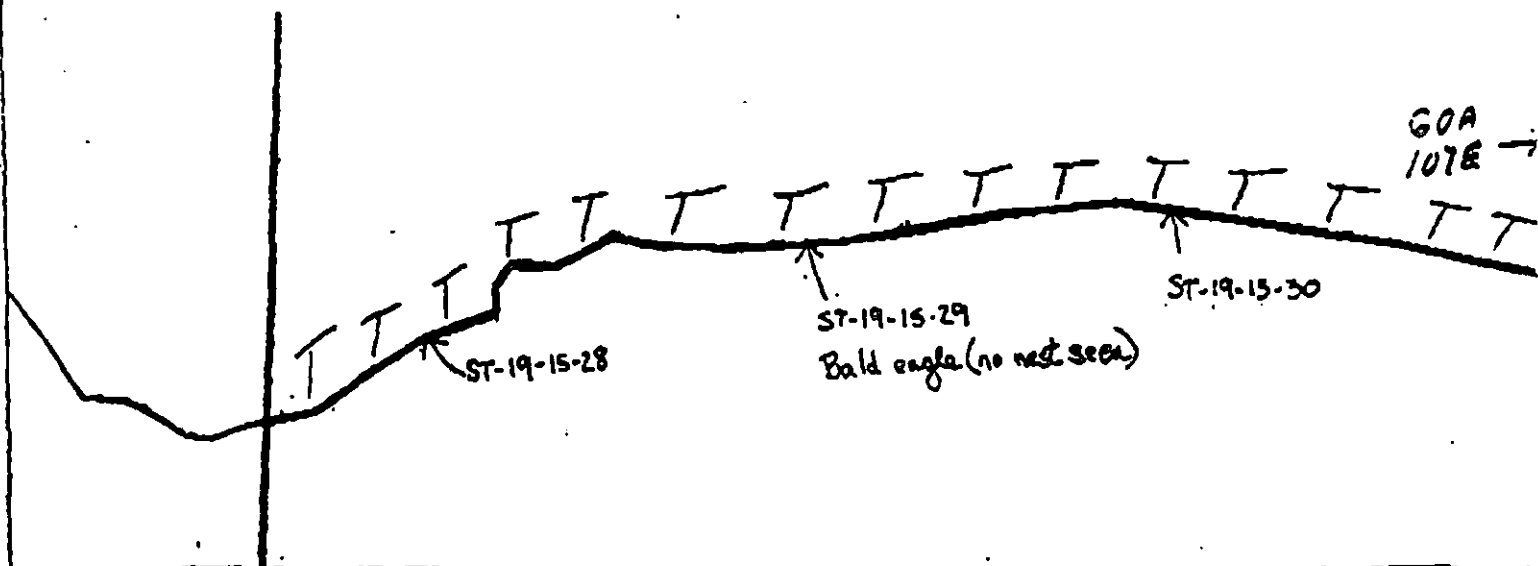
ADEC Segment Length: 3579m

0 100 200 300
METERS



Map Key: GOA-1070
Name: NAKASHIMA
Date: 24 Apr 90
Date Entered:

4:44)



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

HB-3

ADEC Segment Length: 3579m

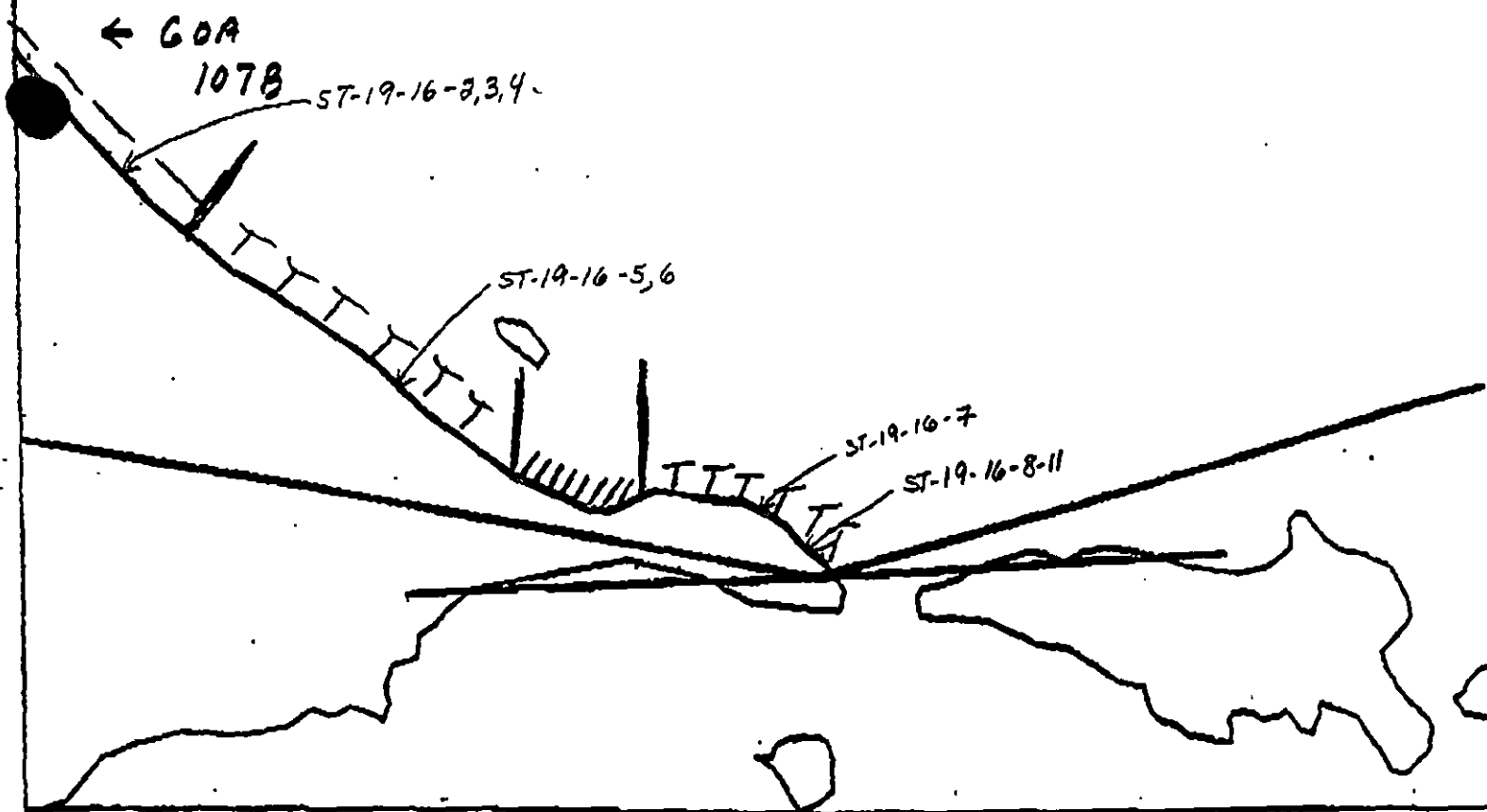


Map Key: GOA-197d

Name: NAKASHIMA

Date: 24 Apr 90

Date Entered:



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

HB-3

ADEC Segment Length: 3578m

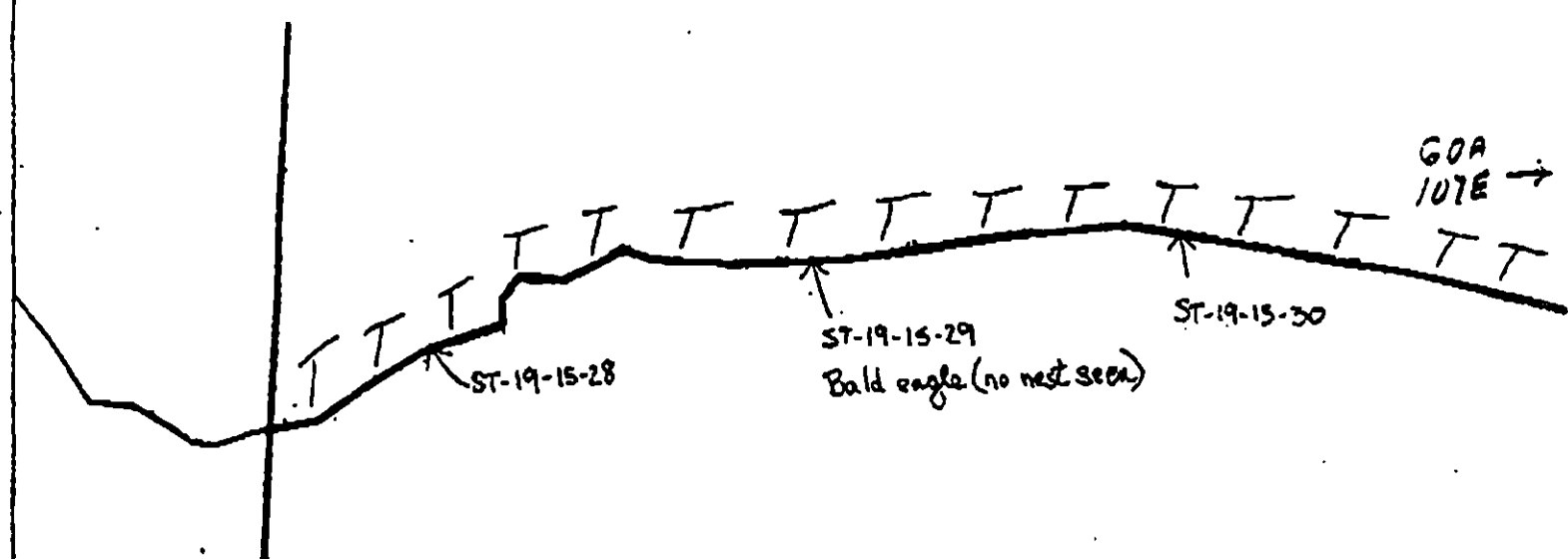


Map Key: GOA-107c

Name: NAVASHIMA

Date: 24 Apr 90

Data Entered:



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

HB-3

ADEC Segment Length: 3579m

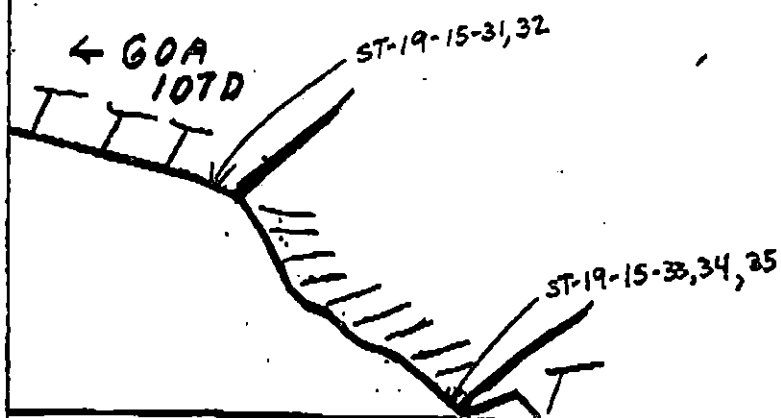


Map Key: GOA-107d

Name: NAKASHIMA

Date: 24 Apr 90

Date Entered:



↓ GOA 107B

XXXX Wide

/// Medium

HB-3

---- Narrow

ADEC Segment Length: 3579m

TTTT Very Light

0000 No Oil



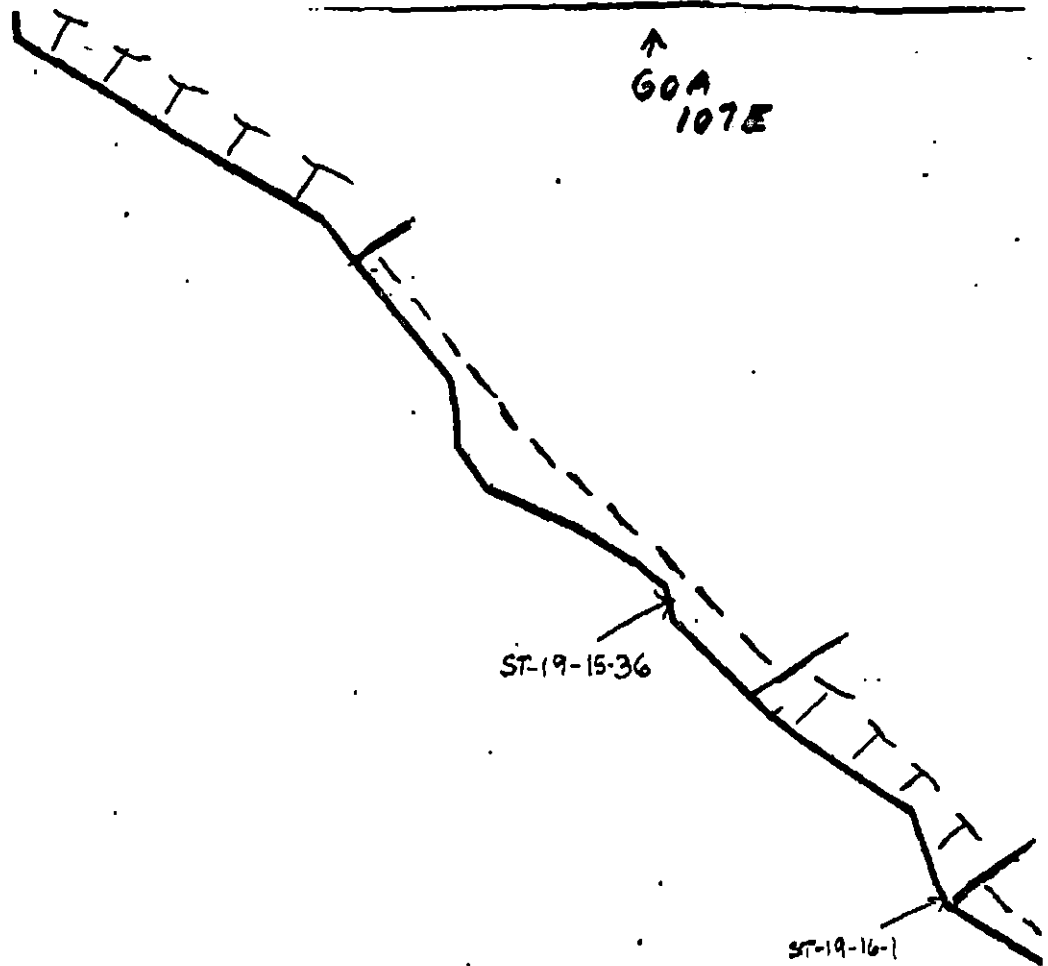
METERS



Map Key: GOA-1070

Name: NAKASHIMADate: 24 Apr 90

Data Entered:



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

HB-3

ADFC Segment Length: 3579m



Map Key: GOA-1076

Name: NAKASHIMA

Date: 24 Dec 90

Data Entered: . . .

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-19-HB-03 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	WORK 6/1 - 8/31
Bioremediation*	WORK 6/15 - 8/31

*No Inpol - Use Customblen Only

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

7JJ Subsistence: Invertebrate Harvesting

Bioremediation to be conducted after 6/15.
No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

[Signature]

Date

6/21/90

Prepared by

[Signature]

Date

6/21/90

HB-1

HB-2

HB-3

Work
Area

CN-2

TREATMENT



Exxon Company, USA

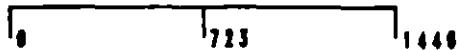
Map Key: AP-HB-3

June 10, 1990



ECOLOGY MAP
SEGMENT K9N-19 HB-3
SUBDIVISION A (1 of 1)

METERS



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

1 inch = 2371 feet

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-19-HB-03 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup Less Than 800m From Seabird Colony	CLOSED
Manual Pickup More Than 800m From Seabird Colony	OPEN
Bioremediation Less Than 800m From Seabird Colony	CLOSED
Bioremediation* More Than 800m From Seabird Colony	OPEN

No Inpol - Use Customblen Only

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5R	Seabird Colony	Closed to manual pickup and bioremediation less than 800m from seabird colony. No constraint to manual pickup and bioremediation more than 800m from seabird colony.
7JJ	Subsistence: Invertebrate Harvesting	Bioremediation to be conducted after 6/15. No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

DD Rome

Date

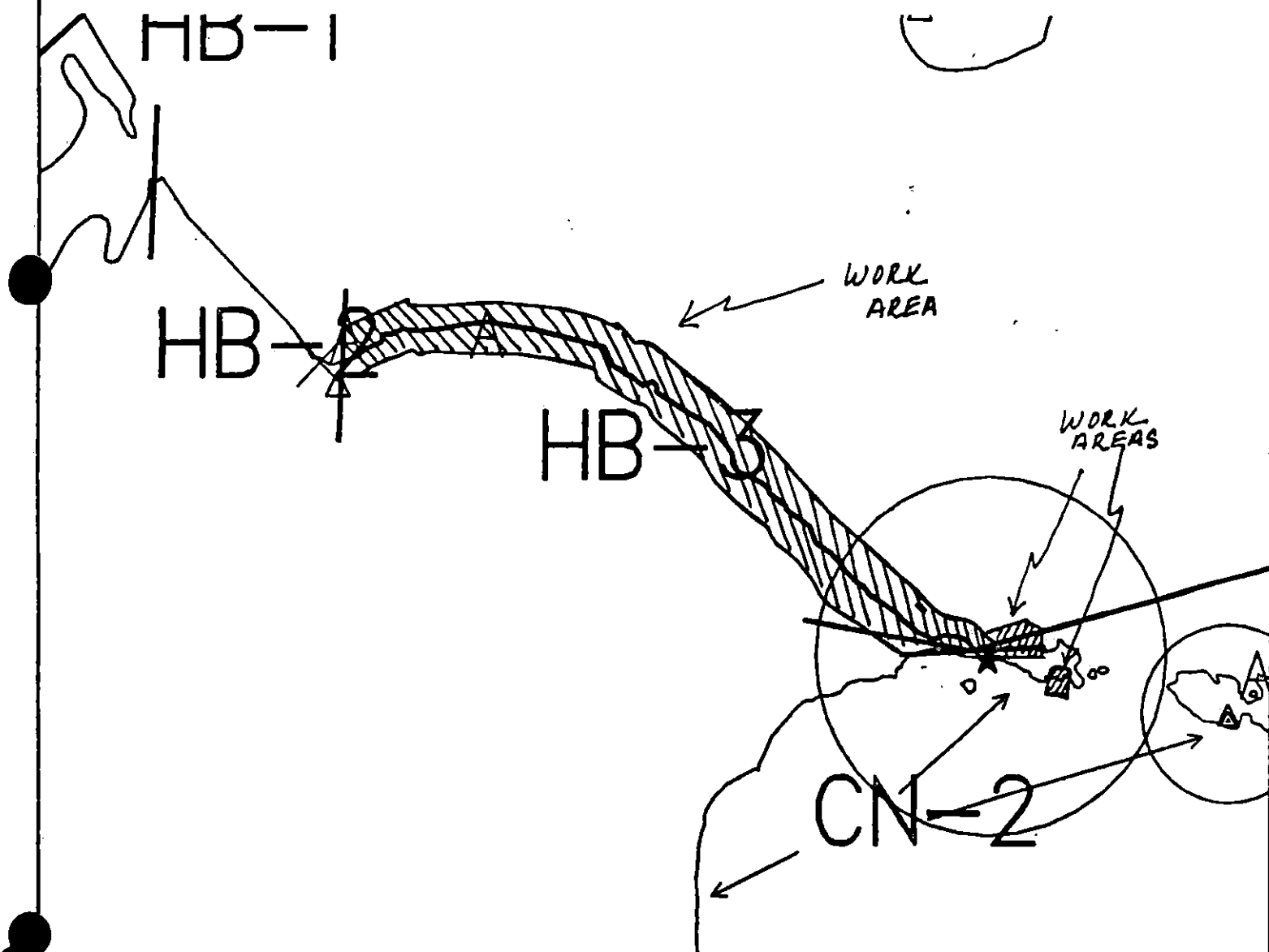
6/24/90

Prepared by

DP Phillips

Date

6/22/90



Exxon Company, USA
Map Key: AKP-HB-3



ECOLOGY MAP
SEGMENT K9N-19 HB-3
SUBDIVISION --- (--- of ---)
METERS

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

WORK PLAN ADDENDUM

Segment K9-19-HB003

Subdivision A

Dated 7/5/90

MODIFICATION

1. REASON FOR MODIFICATION

- UPLAND LAND MANAGER NOW DESIRES LOG BURNING
TO OCCUR

2. ADJUSTMENT TO WORK PLAN

- ADD LOG BURNING WITH APPROPRIATE PERMIT APPROVAL

SHPO APPROVAL NEEDED YES _____
NO X

SHPO SIGNATURE _____

TAG APPROVAL DATE 7/5/90

ADEC R. J. Monahan R. J. Monahan

EXXON ANDY TALL

FOSC [Signature] DATE 7/5/90

NOAA Joseph [Signature]

USCG G.A. REITER G.A. Reiter

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/K09-19-HB-004 STREAM NO: 262-20-10030 DATE 4/30/90

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)
9LM Land Mammals; No specific constraints)
7JJ Susistence area: Invertabrate harvesting
ADF&G Anadromous stream #'s 262-20-10039, 10035, 2002, 2004, and 2007.
Sensitivity code and general time constraints. See attached Ecological
Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiiled biota and
substrate. Avoid disturbance/damage to marsh area.

SHPO SIGNATURE: Kathleen Donnan DATE: 5/25/90

Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/23/90

ADEC Art Weidner Art Weidner

EXXON Andy Tate Andy Tate

NOAA Bull Wescott Bull Wescott

USCG G.A. Reiter G.A. Reiter

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 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, 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 prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 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, 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 Kotol Bay Hatchery release
 Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 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
 Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 6/30)
 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 Larry Nicholson 486-4791
- 30, 3Q Harbor seal and sea lion pupping (5/10 to 7/1)
 Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (8/1 to 9/15)
 6V Anchorages (8/1 to 9/15)
 6W Forest Service cabins (8/1 to 9/15)
 6X Lodge (8/1 to 9/15)
 6Y Special use destination
- 7 Subistence area: Salmon harvesting (8/1 to 9/30)
 Finfish harvesting
 Deer harvesting (8/1 to 1/7)
 Invertebrate harvesting
 Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
 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

ANADSSAT

Comments

SEGMENT ST 1 K9-19 HBY SUBDIVISION: STREAM 262-20-10030 ~~UNCATALOGED~~ DATE 5/1/90JSCG

NAME

SIGNATURE

☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

ADF&G

~~ADFG~~NAME JEFFREY BARNHART

SIGNATURE

Jeffrey Barnhart☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Salmon fry rearing area, waterfowl use area. Suggest manual pickup of mouse/tar patties & balls. Due to the quantity of Tar and thickness on the logs I would suggest these be scraped clean. JPB
RECOMMEND CONCENTRATE EFFORTS TO FRONT HALF OF LAGOON AREA. IMPACTS IN REAR HALF ARE VERY SPORADIC/PATCHY NOT PRACTICAL. EWN.

LAND MANAGER

NAME

SIGNATURE

☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

FIELD SHORELINE COMMENT SHEET

ORIG SSAT SURVEY

MENT ST / K9.19 HQ.4 SUBDIVISION: K9-1A-HQ-4A DATE 4-30-90

USCG

NAME: D. Haven Jr. (WMB) SIGNATURE: [Signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Only miniscule amounts of oil present on a large glacial flats. We only found these splashes by luck and probably couldn't find them again if our lives depended on it.

ADEC

NAME: Francine J. Benni's SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

There is only VL oil conditions in this segment in the form of stains, mousse patches, & small tarballs. Mousse patches are present along the stream banks & in the grass above stream (See SSAT map), several hundred meters up from the beach. I would not give this segment clean-up priority, however there is a greater quantity of recoverable oil in adjacent segment to the south. Recommend clean-up crew examine HQ4 if time permits.

LAND MANAGER

NAME: WILL ROOPER SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

The segment has a few scattered mouse droppings primarily in the stream inlets from the main beach. Some could be picked up but it will be about like searching for Easter eggs.

OG Acton USCG Haven SEGMENT ST/ K9-19-412-4
 BIO Davis LAND REP UPD Troyer Jones SUBDIVISION K9-19-412-4A (1 OF 1)
 EXXON Amery ADEC Bennis TIME 1:30 10 5:30
 TEAM NO. 20 TIDE LEVEL 0 to +6 DATE 4/30/90
 T. SUBDIVISION LENGTH: m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N 10 S
 SURFACE SEDIMENTS: R - % B - % C - % P 5 % G 5 % S 70 % M 20 % V - %
 SLOPE: Long 100 % Hang - % Vert - % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W - m M - m N - m VL 50 m NO - m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	A	B	P	N	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 cm

PATTIES / TARBALLS 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. St-20-9

Frames 13-17

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	V T	SURFACE - SUBSURFACE SEDIMENTS
		OF	OR	OL	OF	NO		VO	VO	1	2	3	4	5	6	7	8	SU	U	M	U				
1	60																								S
2	60																								S
3	30																								S
4	30																								S
5	30																								S
6	60																								S

COMMENTS A total of approx a dozen small (< 7cm) mousse pads were observed
 Two small areas of mousse pools were observed several hundred meters inland from the beach spits.

REVIEWED JW DATE 5-10-90

OG Ac —

SEGMENT ST/ K9-19-H12-Y

SUBDIVISION K9-19-H10-4A

DATE 4 / 21 / 90

S CH MAP

N
→

Approx Scale

1cm = 200m

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bdry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HPTL/VL
- ☐ SSI
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PFI Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

PI - No Subsurface Oil

2 Δ

PI - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

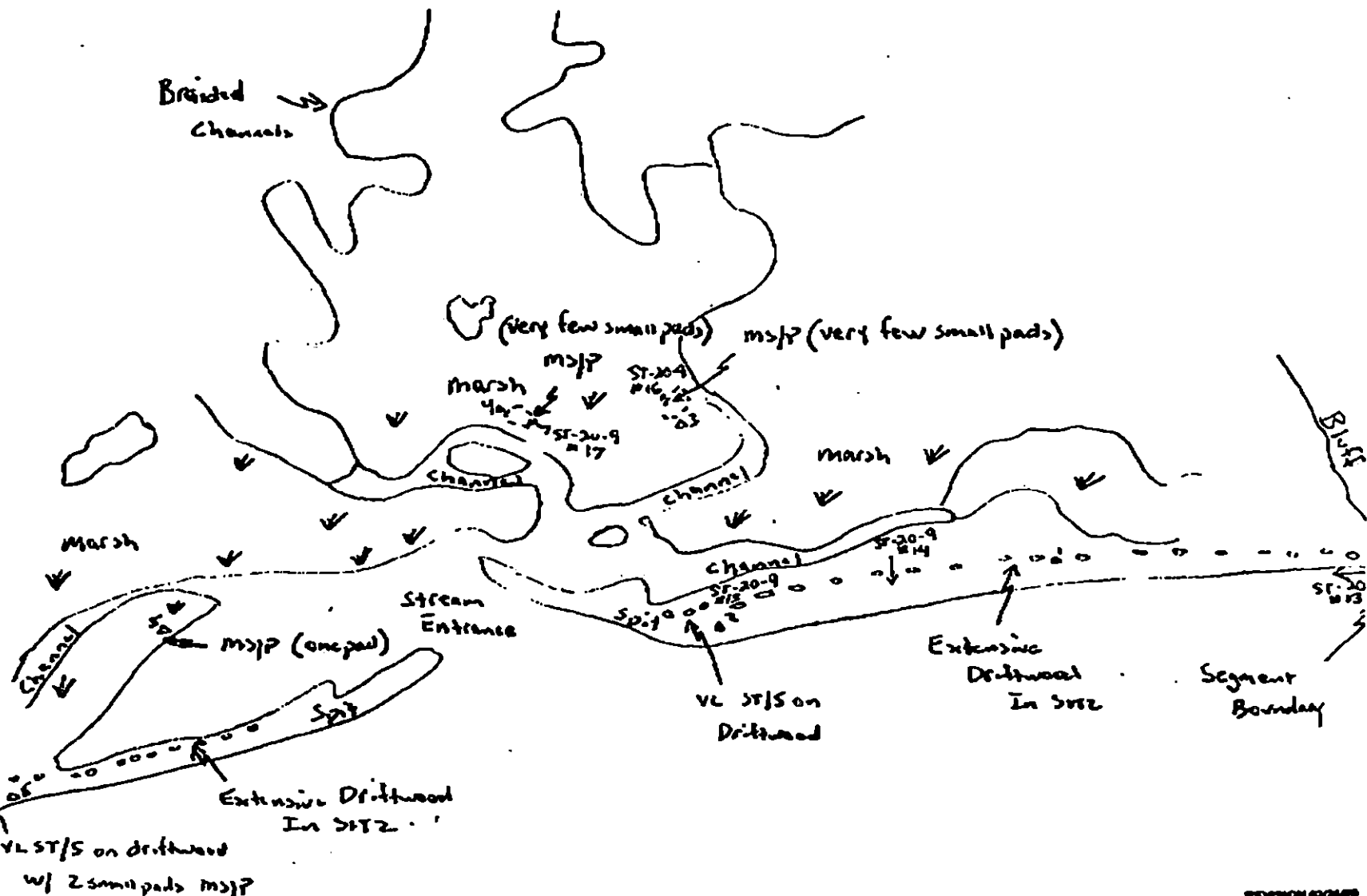
Oiled Vegetation

1 →

Photo location, direction, and number

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

Segment



REVISION 02/24/90

OG Act

SEGMENT ST 1-19-HQ-4

SUBDIVISION K9-M-HQ-4A

DATE 4 / 21 90

CHECKLIST

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

LEGEND

1 Δ

PL - No Subsurface Oil

2 Δ

PE - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

1 $\odot$

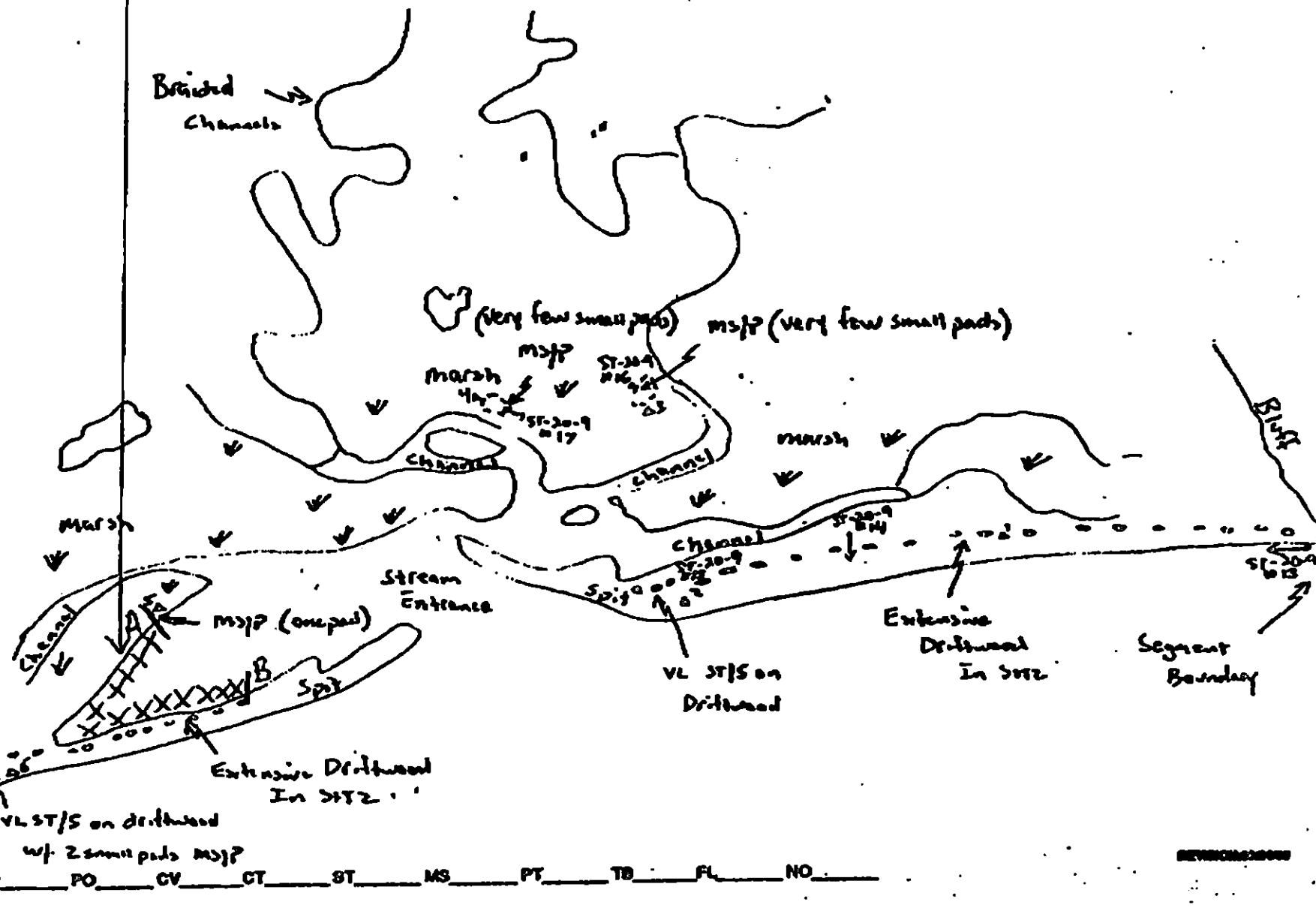
Photo location, direction, and number

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

SKETCH MAP

N
→

ADF+G pre and stat survey on 4/27/90
Between point A to B discovered mouse/tar
patties/balls mixed with sand ranging in size 1cm to 20cm
from 1" to as large as 20 inches x 8 inches. Sporadic below log drift line. The largest
area was 1 sq meter w. Th 90% coverage. Oiled logs. Some heavy oiling on logs,
80% coverage $\frac{1}{4}$ - $\frac{3}{8}$ " Thick Tar. Jeffrey Barnhart



SHORELINE ECOLOGICAL SUMMARY

Segment ST K9-19 Subdivision HB-004 Date (mo / day / yr) 4/30/90
 Time (24 hr) 13:30 Biologist H. Davis

- (A) Substrate type and % of segments:
 (1) Bedrock — (2) Boulder — (3) Cobble — (4) Pebble 10 (5) Sand 70 (6) Silt 20
- (B) Overall % cover of biota (% of segment): Dense — Moderate — Low (10%) (5%)
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)
- Photographs: Roll No. ST-20-9
 Frames 13-17

BARNACLES Barnacles present on drift only.

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
1-6

MYTILUS Mytilus present as scattered shells.

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
1-6

GASTROPODS No gastropods observed alive. Some limpet shells in wrack.

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
1-6

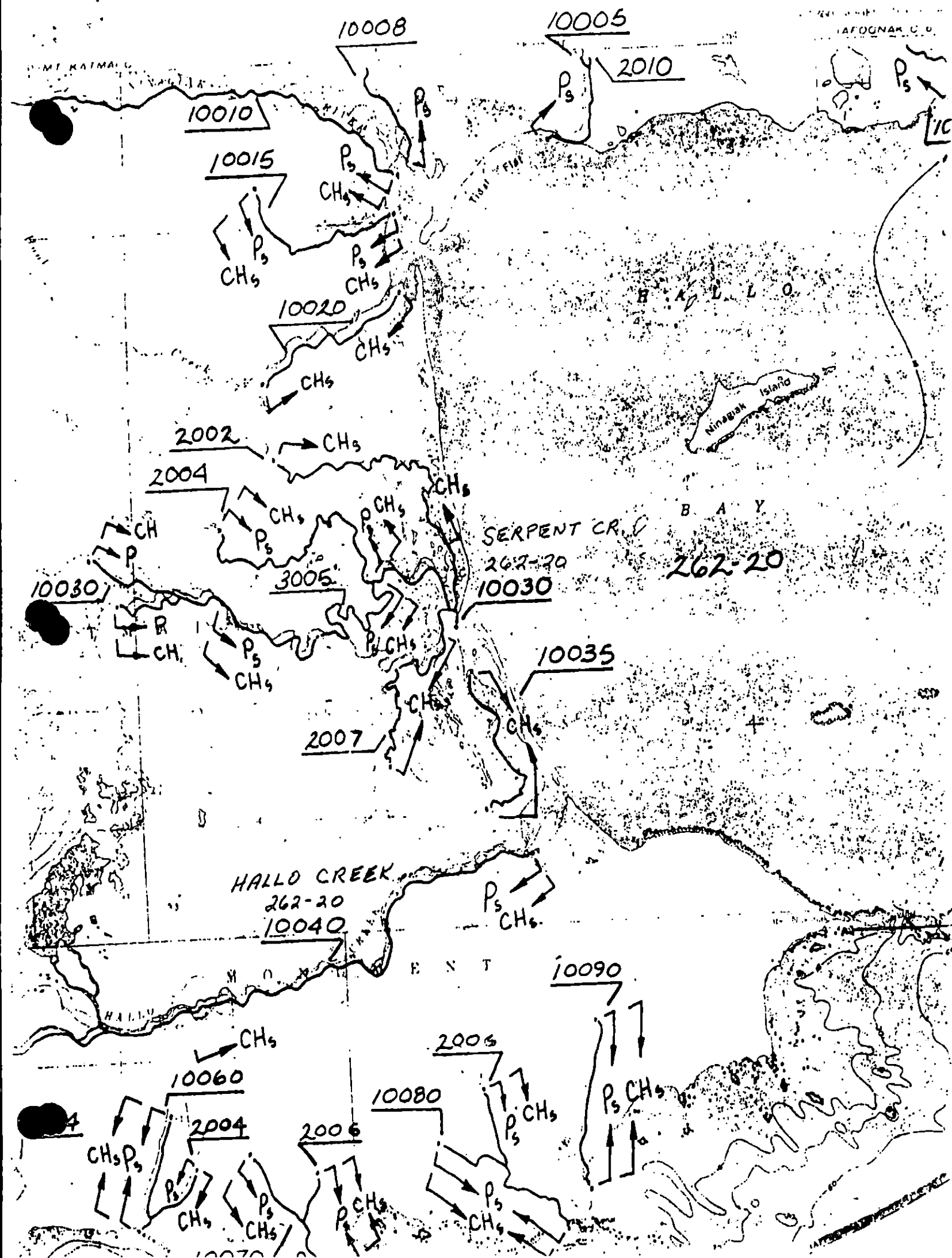
FUCUS Fucus found as drift and in the beach wrack.

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
1-6

Wildlife Observations/ General Comments: Birds seen in the area: 2 adult eagles, 1 juvenile eagle, 1 Marsh 10-15 Glaucous-winged gulls, 3 Greater White-fronted Goose, and (10) Golden plovers. Mammal tracks: River Otter, Fox, Wolf, Moose and Bear. One near clamming out on the mudflats. Thick tide inhabitants Clinocentrus nuttallii, Siliqua patula, Saxidomus giganteus, Mya sp (eliquans?) and Macoma sp.

Ecological Considerations: AIB, JST, 9LM Anadromous stream (Serpent creek) with Pinkies and Chum spawn in this area. Clams are harvested in Halls Bay. The area is used heavily by land mammals, Marsh area around stream used by waterfowl.



SHORELINE EVALUATION

SEGMENT ST/ K09-19-HB-005 SUBDIVISION A (1 OF 1) DATE 5/3/90

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)
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)
4LL National Parks

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: Michael Antognelli DATE: 5/15/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 63 m: No Oil 10172 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: 5/15/90

ADEC Art Wilson Art Wilson

EXXON Andy Tish Andy Tish

NOAA Joseph J. Galt Joseph J. Galt

USCG G.A. Feltner G.A. Feltner

FOSC: W L

DATE: 5-18-90

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 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, 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 prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 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, 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 Kotol Bay Hatchery release
 Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 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
 Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 6/30)
 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 Larry Nicholson 486-4791
- 3P Harbor seal and sea lion pupping (5/10 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 (8/1 to 9/30)
 7H-H Finfish harvesting
 7I Deer harvesting (8/1 to 1/7)
 7J Invertebrate harvesting
 7KX Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
 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 / K9-19-HA-2 SUBDIVISION: HB-5a DATE 5/3/90

USCG

NAME D.D. Haven Jr, GM3, USCG SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

No oil sighted.

ADEC

NAME Francine J. Benoit SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Only splatters and a very small amount of residue observed, & some stained drift.

LAND MANAGER NPSNAME WILL TROYER SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

This segment only had a few splatter & staining and cleanup effort would not improve it.

SHORELINE OILING SUMMARY

REVISION NO. 04-12-88

OG Action USCG Havon SEGMENT ST/ K9-19-H3-5
 BIO Davis LAND REP NPS Troyer, James SUBDIVISION K9-19-H3-5A (1 OF 1)
 EXXON Avery ADEC Bennis TIME 1:50 to 2:40
 TEAM NO. 20 TIDE LEVEL +6 to +1.5 DATE 5 / 3 / 90
 EST. SUBDIVISION LENGTH: 10234 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SW to NE
 SURFACE SEDIMENTS: R 30 % B 20 % C 4 % P 3 % G 3 % S 50 % M - % V - %
 SLOPE: Long 90 % Hang 10 % Vert - % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W - m M - m N - m VL 30 m NO 10204 m

SURFACE OIL

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

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE -#BAGS 0

Photographs:

Roll No. ST-20-9Frames 28, 29

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS
		OF	OR	OL	OP	NO		VO	UC	~~1~~	~~2~~	~~3~~	~~4~~	~~5~~	~~6~~	~~7~~	~~8~~	SU	U	M	LI				
1	30					✓	.		✓									✓							S
2	40					✓	.		✓									✓							S
3	30					✓	.		✓									✓							S
4	30					✓	.		✓									✓							S
5	40					✓	.		✓									✓							S
6	5					✓	.		✓									✓							BR S

COMMENTS Oil was observed in one area of this subdivision, very light ST/S and one 2cm x 4cm splash of CT/S, on boulder veneer on rock platform near the NE end of the subdivision. The subdivision is sandy spit beach at the SW end, sand/rock platform tidal flat in the central portion, and rock platform w/ boulder veneer at the NE end.

REVIEWED BAC DATE 4 May 90

OG Section

SKETCH MAP

SEGMENT ST/ K9-19-MD-S

SUBDIVISION K9-M-hw-SA

DATE 5 / 3 / 90

CHECKLIST

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

LEGEND

1 Δ

Pt - No Subsurface Oil

2 Δ

Pt - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

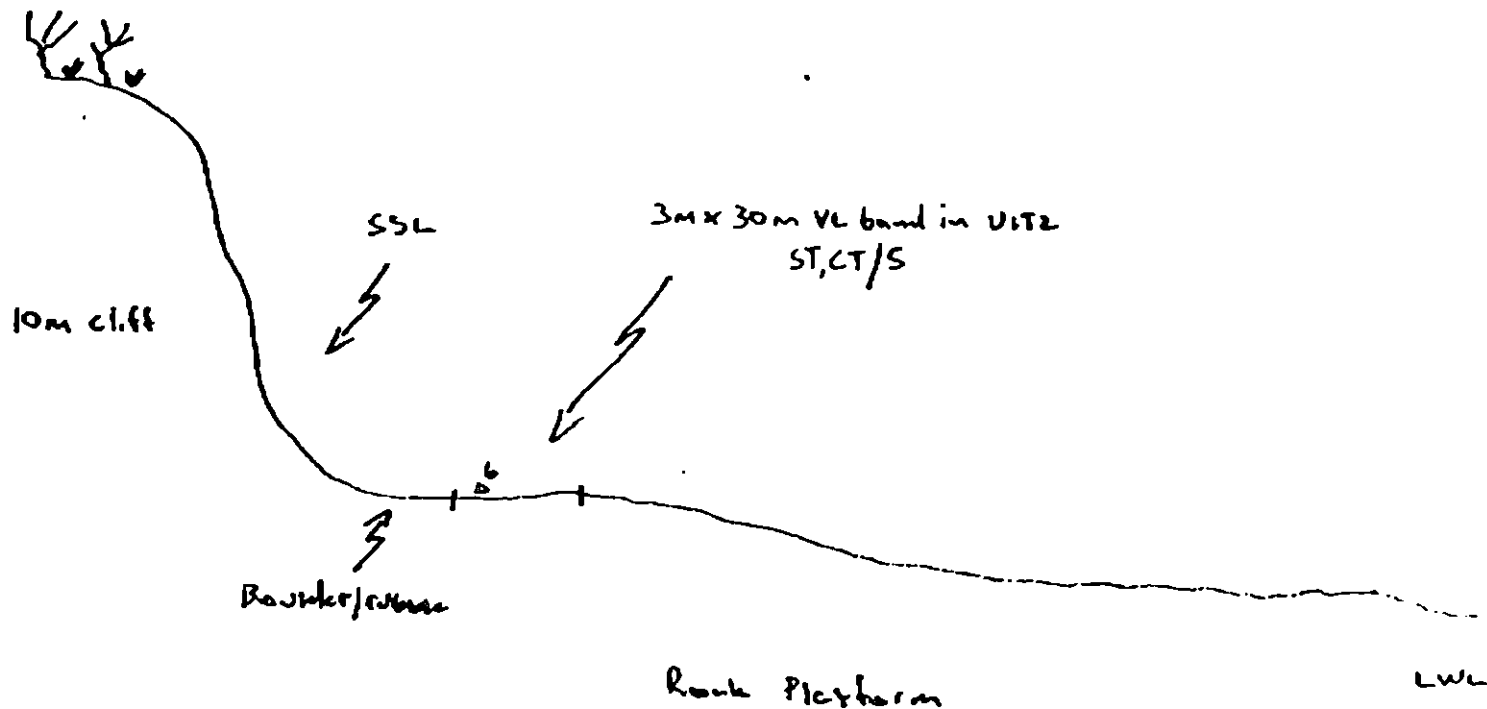
CT/S

Splashed Distribution

Oil Vegetation

1 $\Rightarrow$

Photo location, direction,
and number



Oil Character Length (in): AP ☐ PO ☐ CV ☐ CT 30 ST 30 MS ☐ PT ☐ TB ☐ FL ☐ NO 10204

REVISION: 02/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / K09-19 Subdivision HB-05A Date (mo / day / yr) 5/3/90Time (24 hr) 13:50 Biologist H. Davis(A) Substrate type and % of segments:
(1) Bedrock 20 (2) Boulder 20 (3) Cobble 5 (4) Pebble 5 (5) Sand 50 (6) Silt —(B) Overall % cover of biota (% of segment): Dense 5% Moderate 20% Low 75% (20%)

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

Photographs:
Roll No. ST-20-9Frames 28, 29

BARNACLES Present where hard substrate appeared. Patchy

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
2, 4, 5, 6

MYTILUS Very patchy on hard substrate

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
2, 3, 4, 5, 6

GASTROPODS Littorina patchy. Nuccella Rare. limpets patchy

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
2, 4, 6

FUCUS Patchy

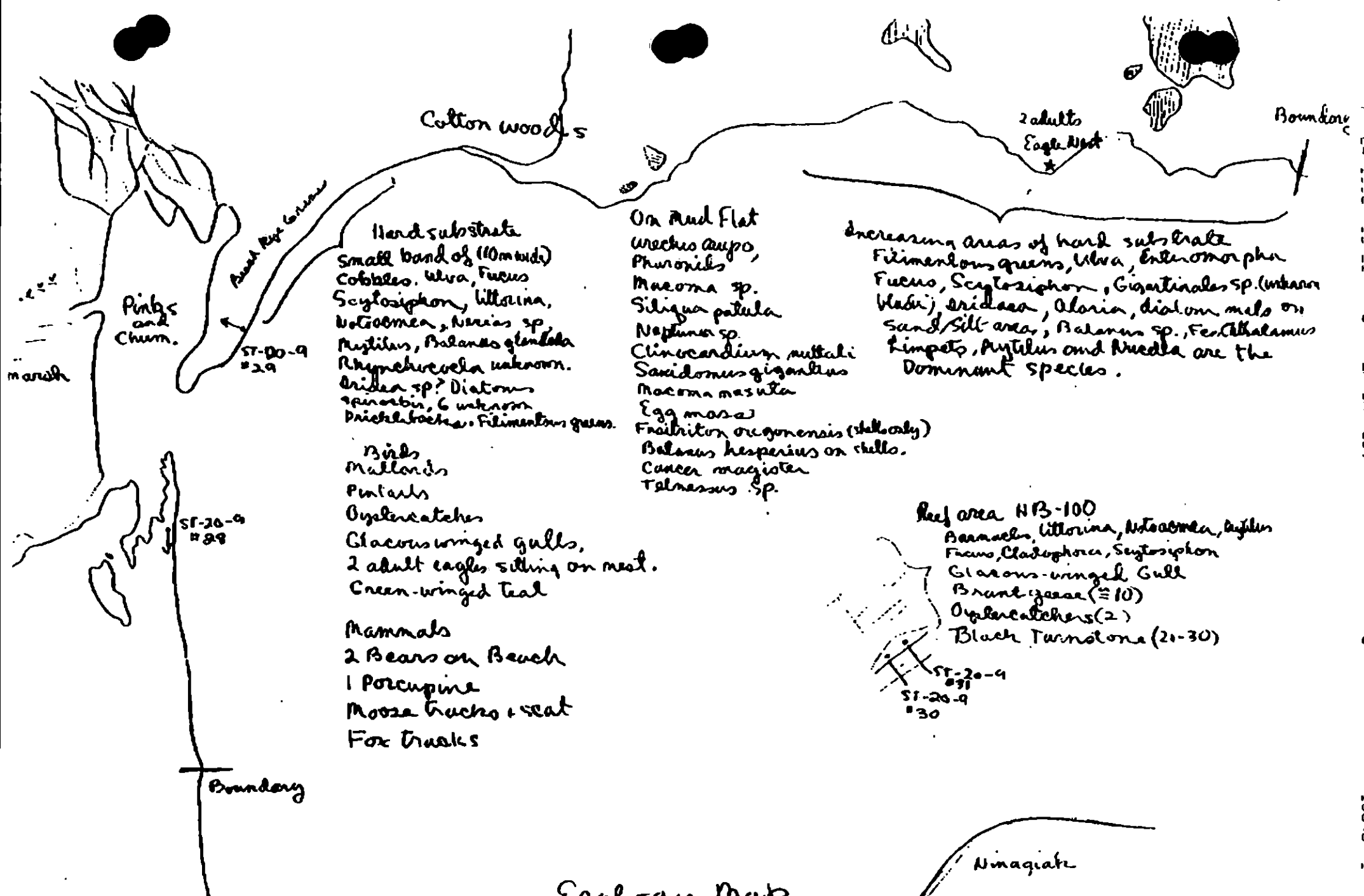
Dense			Moderate			Sparse			Rare		
~~1U~~	1M	1L	~~1U~~	1M	1L	~~1U~~	~~1M~~	~~1L~~	~~1U~~	~~1M~~	~~1L~~
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT
2, 4, 5, 6

Wildlife Observations/ General Comments: See Ecology Maps.

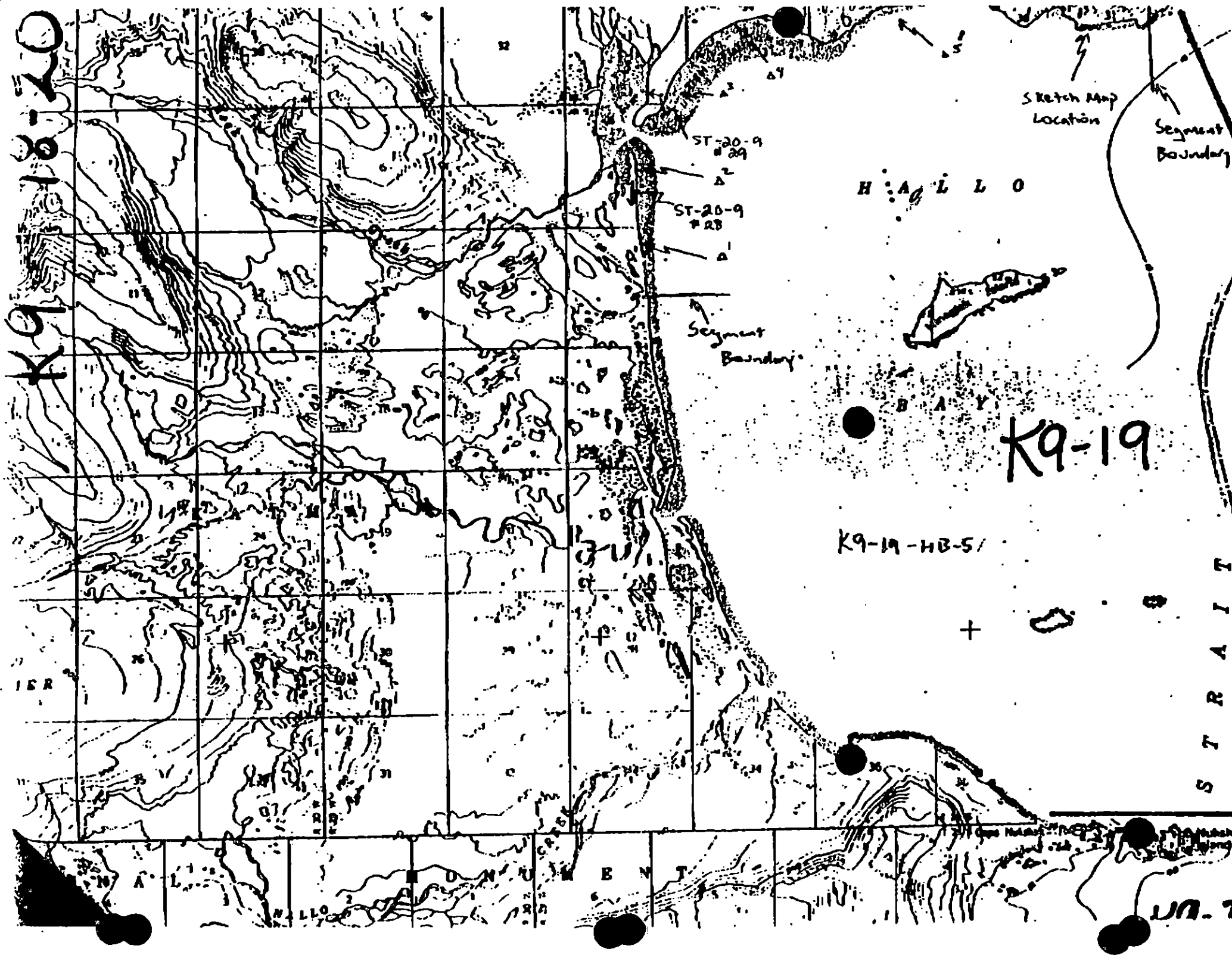
Ecological Considerations: 3 NOPQ, 1A 1B, 5T

This area is a Harbor seal and Sealion haul out area (B2H pupping and molting). Pinkies and Chum make use of the Ninagish River. The marshy area around the river is used by large numbers of water fowl. Along the eastern end of the segment there is an active eagle nest. See Ecology maps for location.



Bio H. Davis
 K09-19, NP-05
 5/3/90

K9-18-20



Sketch Map Location

Segment Boundary

HALL L O

ST-20-9 #29

ST-20-9 #28

Segment Boundary

K9-19

K9-19-HB-51

STRAIT

UN-7

K9-19-M13-5A

XXXX Wide

HB-5

K9-19-M13-5A

//// Medium

Map Key: AKP-HB-5d

---- Narrow

Approx. Segment Length: 10234m

Name: Acton

TTTT Very Light

Date: 5-3-90

0000 No Oil



Data Entered:

HB-5

K9-19-HB-5A

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

HB-5

Approx. Segment Length: 10234



METERS

K9-19-HB-5A

Map Key: AKP-HB-5a

Name: Acton

Date: 5-3-90

Data Entered:

KS

K9-19-HB-5A



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

HB-5

Approx. Segment Length: 10234m



K9-19-HB-5A

Map Key: AKP-HB-5a

Name: Acton

Date: 5-3-99

Date Entered:

K9-19-HB-5A

HB-100

HB-50



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

HB-5

Approx. Segment Length: 10234m

0 300 600 900

METERS

K9-19-HB-5A
Map Key: AKP-HB-5b

Name: Acton

Date: 5-3-90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ K09-19-HB-050 SUBDIVISION A (1 OF 2) DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Katmai National Park

7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Rachel Jan One DATE: 5/19/90

OILING CATEGORIZATION:

Wide 31 m: Medium 177 m: Narrow 50 m: V.Light 965 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 10+ cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

 ~~Bioremediation~~

 Tarmat Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommend manual pick up of mousse where shown on attached sketch map. Contact ADF&G for specific working times regarding invertebrate harvesting.

TAG COMMENTS: MONITORS TO ASSESS LOGS.
BIOREMEDIATION FOLLOWING REMOVAL OF ACCESSIBLE MOUSSE

TAG APPROVAL DATE: 5/17/90

ADEC ART WEINER Art Weiner

EXXON ANDY TEAL Andy Teal

NOAA Gary Petrone Gary Petrone

USCG G.A. REITER G.A. Reiter

FOSC: the below DATE: 5/28/90

* approved w/ following exceptions:
① Bioremediation not approved;
② work not to be conducted w/o F&WS
review & subsequent FOSC approval of
Environmental Sensitivity & Hazardous
Materials.

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 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, 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 prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 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, 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 Kotol Bay Hatchery release
Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 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
Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 6/30)
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 Larry Nicholson 486-4791
- 3P Harbor seal and sea lion pupping (5/10 to 7/1)
3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (6/1 to 9/15)
6V Anchorages (6/1 to 9/15)
6W Forest Service cabins (6/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (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)
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 / K0919-HB050 SUBDIVISION: HB050 A DATE 4/24/90NOAA
3000NAME John Naughton SIGNATURE John J. Naughton☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

This segment consisted of the southwest coast of Ninagiak Island. Oil was observed almost continuously throughout this segment, including one area of heavy (wide) and five medium areas (one of which was 80m x 20cm deep). These areas consisted primarily of mousse down in the interstices between large jagged rocks. Much of it can be treated by manual removal and recommend this should be done.

ADEC

NAME Terry Ellsworth SIGNATURE Terry Ellsworth☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

I concur w/ NOAA's recommendation of manual treatment for the interstitial/mousse/sediment, oiled debris (associated with the area rated wide) and cover which occurs in varying amounts throughout this segment. This treatment could best be accomplished using shovels and small garden tools as much of the mousse/sediment is trapped between large boulders.

LAND MANAGER

NAME Carl Schach SIGNATURE Carl Schach☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Interstitial mousse has persisted unchanged through the winter and unless removed will most likely persist for many years. In some areas the interstitial mousse contains entrained sediment. Sheen appeared in several pits, which may indicate buried oil not documented. Interstitial mousse was difficult to find in some areas where algae had grown over the surface.

REVISION NO. 04/12/00

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	1C	1B	1P	1S	2A	2B	2C	2D	2E	3U	3B	3M	3U
ASPHALT PAVEMENT													
POOLED													
COVER	X	X	X	X		X		X		X	X		
COAT	X	X	X	X		X		X		X	X	X	
STAIN	X	X	X	X		X		X		X	X	X	
MOUSSE	X	X	X	X				X			X		
PATTIES													
TARBALLS													
FILM			X			X	X			X	X		X
NO OIL													

Frames 4-12

SUBSURFACE OIL

[illegible]

COMMENTS

- FILM AFFILIATED WITH MALT WATER AND SEEPAGE FROM HILLSLOPE
- LARGE BOULDERS $\approx 4m$ - SIZE CHARACTERIZE THE SOUTHERN EMBAYMENTS

REVIEWED BAC DATE 1 MAY 90

OG LIND NAKASHIMA

SEGMENT STI K0919-HB050

SUBDIVISION HB050A

DATE 4/24/90

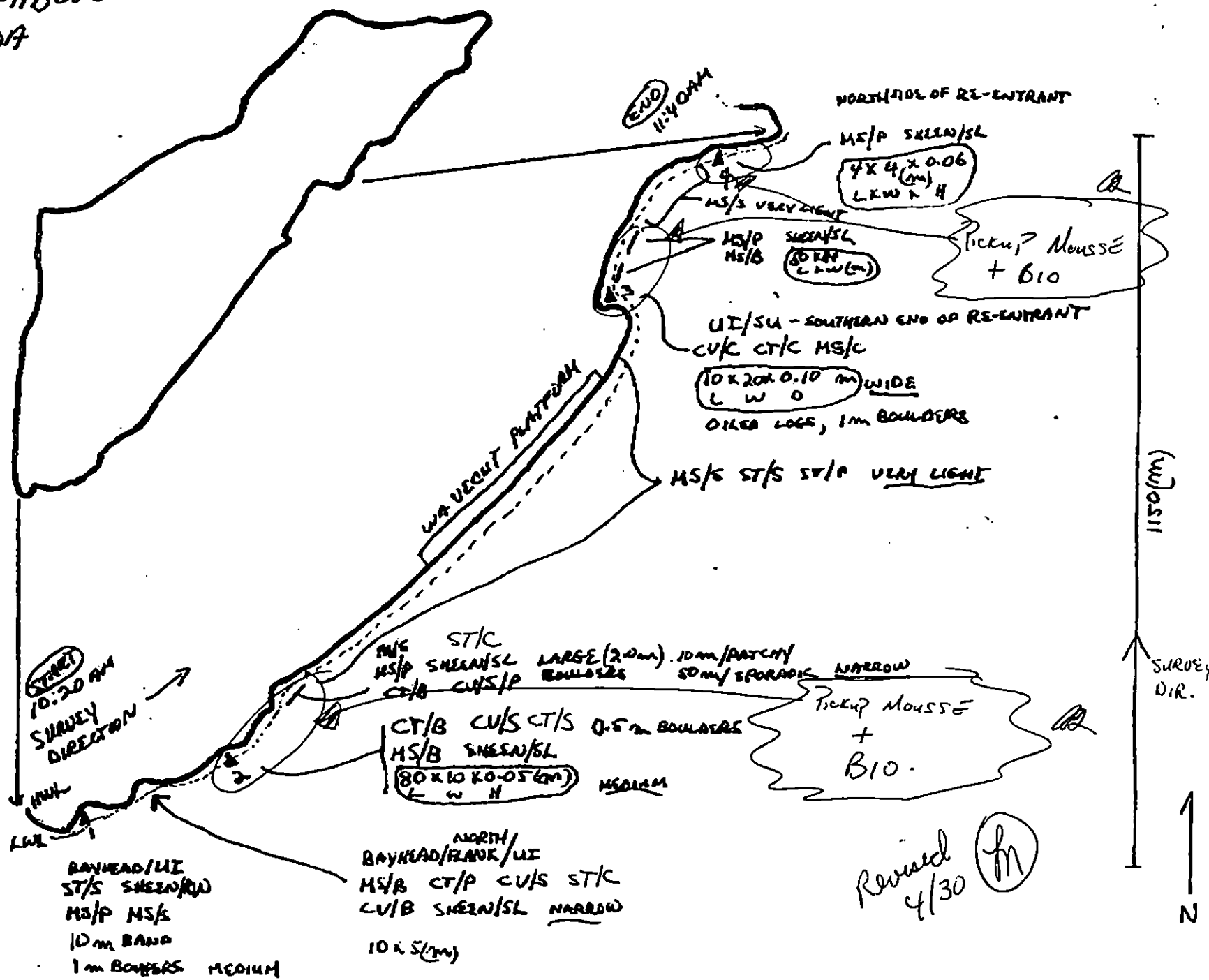
CHECKLIST

- H Area
- Approx. Scale
- Seg/Sub Entry
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HML/LWL
- SSL
- Profile Location(s)
- Profile(s)
- Pli Location(s)
- Photo Location(s)

LEGEND

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

SKETCH MAP



Oil Character Length (m): AP 0 PO 0 CV 280 CT 240 ST 350 MS 380 PT 0 TB 0 FL 250 NO 0

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03-22-79

Segment ST / K919 #B050 Subdivision A Date (mo / day / yr) 4-24-90Time (24 hr) 1030-1140 Biologist D. McCormick(A) Substrate type and % of segments:
(1) Bedrock 35 (2) Boulder 50 (3) Cobble 5 (4) Pebble 8 (5) Sand 2 (6) Silt 0(B) Overall % cover of biota (% of segment): Dense 10% Moderate 5% Low 5%

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

Photographs:
Roll No. ST-19-17Frames 4-12

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS Limpets, Littorines, Nucella

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

NOT PRESENT

FUCUS Very patchy throughout segment

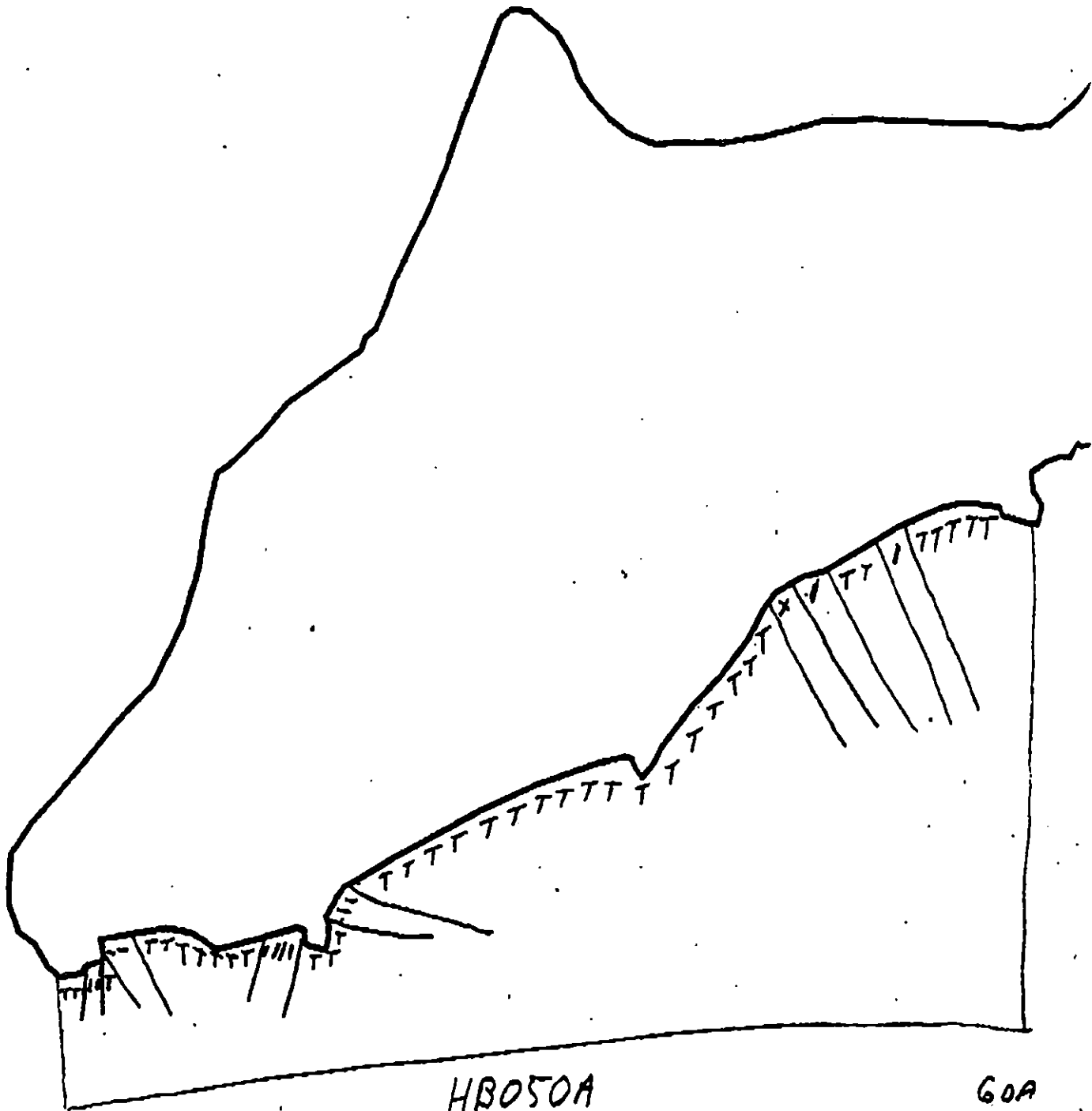
Dense			Moderate			Sparse			Rare		
1U	1M	XL	1U	XM	XL	1U	XM	XL	1U	1M	1L
2	2	X	2	X	X	2	X	X	2	2	2
3	3	X	3	X	X	3	X	X	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments: Harbor seal and sea lion offshore. Oystercatchers in the lower ITZ. Cormorants LITZ.

Ecological Considerations: No anadromous streams on the island. Seabird colony index by NOAA. No exact location given—the island clearly serves as a gull rookery.

HB-



HB050A

GOA
110B →

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

HB-50

ADEC Segment Length: 4961m



METERS



Map Key: 60A-1100

Name: LINDSAY AIAKISHIMA

Date: 4/24/90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-19-HB-050 SUBDIVISION A (1 of 2)

WORK WINDOW	
Manual Pickup	CLOSED

*Bioremediation not approved by FOSC

ARCHAEOLOGICAL STANDARD CONSTRAINT

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T	Seabird Colony	Closed to all activities; work site is less than 800m from seabird colony.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 4/9/90 map indicates no active nest within 400m of Subdivision A work site.
7JJ	Subsistence: Invertebrate Harvesting	No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC *Ed Zampelli* Date *6/16/90*

Prepared by *Dee R. Cantor* Date *06-14-90*

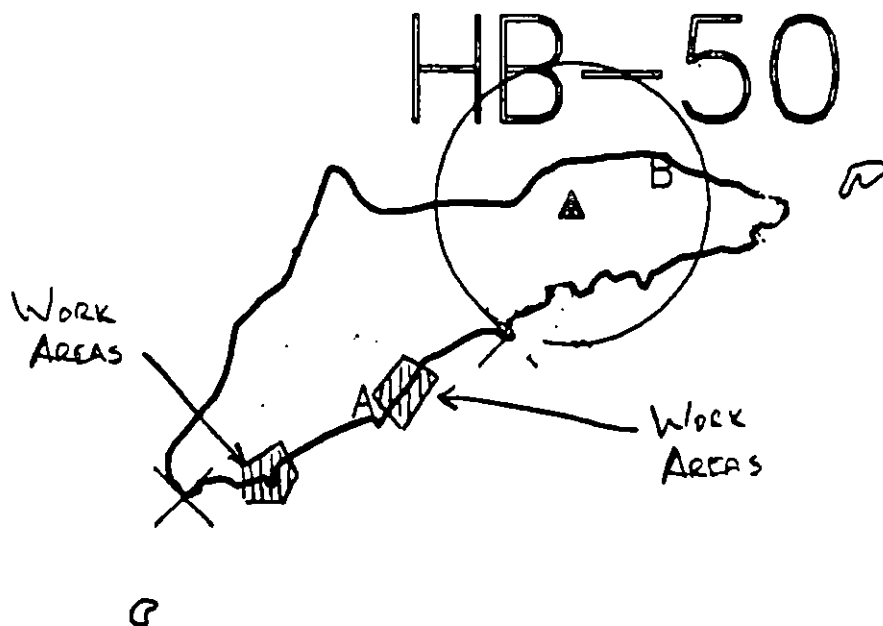
AB-50 Site

1. Access denied within buffer zone.

Possible change after end of July

mike Luke 6/13/90

HB-100



TREATMENT



Exxon Company, USA

Map Key: AKP-HB-50

June 10, 1990

ECOLOGY MAP
SEGMENT K9N-19 HB-50
SUBDIVISION A (1 of 2)
METERS

0 500 1130

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

1 inch = 1868 feet

REVISION 1 6/21/90

"REVISED" ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-19-HB-050 SUBDIVISION A (1 of 2)

WORK WINDOW

Manual Pickup Less Than 800m From Seabird Colony	CLOSED
Manual Pickup More Than 800m From Seabird Colony	OPEN

*Bioremediation not approved by FOSC

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T	Seabird Colony	USFWS Indicates an active seabird colony in Subdivision A a per memorandum from Walter Stieglitz/USFWS to Rex Coulter/Exxon on 6/15/90. Closed to manual pickup less than 800m from seabird colony. No constraint to manual pickup more than 800m from seabird colony.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 4/9/90 map indicates no active nest within 400m of Subdivision A work site.
7JJ	Subsistence: Invertebrate Harvesting	No constraint to manual pickup after 6/15/90.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

[Signature]

Date

7/2/90

Prepared by

Rex R. Coulter

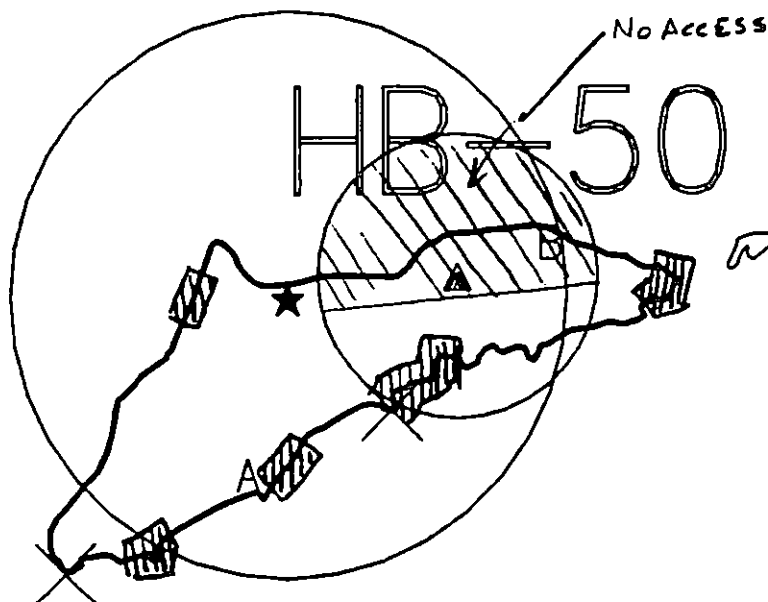
Date

7-02-90

HB-100

TRANSCRIPTION:
TREATMENT MAY PROCEED
IN PROPOSED AREAS. AVOID
INDICATED RESTRICTION
ZONE.

MIKE LUKE 6/14/90



TREATMENT

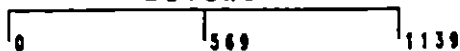


Exxon Company, USA
Map Key: AKP-HB-50
June 18, 1990



ECOLOGY MAP
SEGMENT K9N-19 HB-50
SUBDIVISION A (1 of 2)

METERS



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

1 inch = 1868 feet

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-19-HB-050 SUBDIVISION B (2 of 2)

WORK WINDOW

Manual Pickup Less Than 800m From Seabird Colony
and Less Than 400m From Active Nest

CLOSED

Manual Pickup More Than 800m From Seabird Colony
and More Than 400m From Active Nest

OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5R Seabird Colony

USFWS indicates an active seabird colony in Subdivision B as per memorandum to Rex Coulter/Exxon from Walter Stieglitz/USFWS on 6/15/90. Closed to manual pickup less than 800m from seabird colony. No constraint to manual pickup more than 800m from seabird colony.

5T Bald Eagle Nest

USFWS 4/9/90 map indicates an active nest in Subdivision B. Closed to manual pickup within 400m of active nest. No constraint to manual pickup more than 400m from active nest.

7JJ Subsistence:
Invertebrate 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. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

FOSC

[Signature]

Date

6-16-90

Prepared by

[Signature]

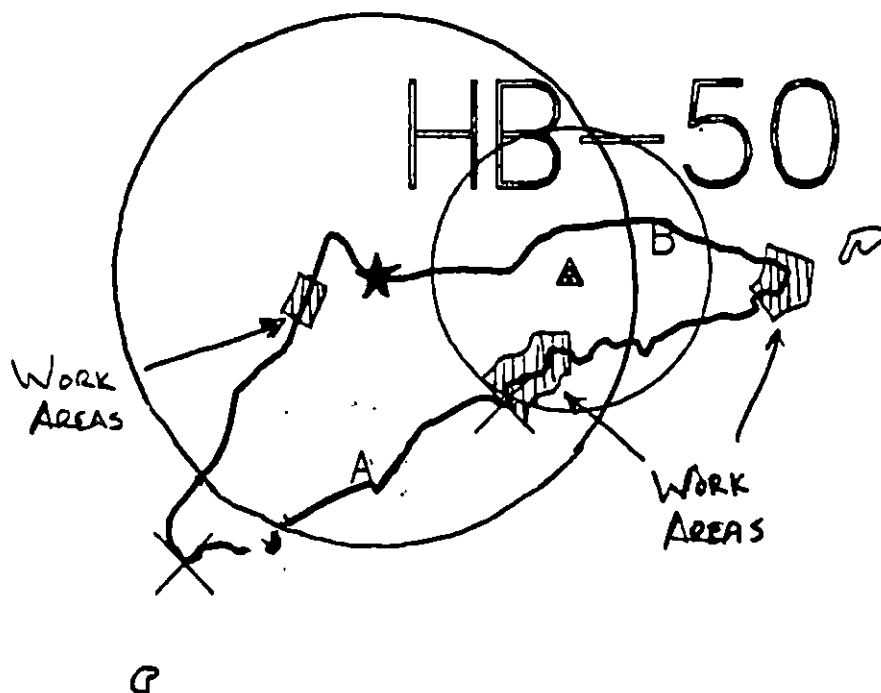
Date

6/15/90

AB-50 Site

1. Access denied within buffer zone.
Possible change after end of July
Mike Luke 6/13/90

HB-100



TREATMENT



Exxon Company, USA
Map Key: AKP-HB-50
June 10, 1990



ECOLOGY MAP
SEGMENT K9N-19 HB-50
SUBDIVISION B (2 of 2)
METERS
0 568 1139

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

1 inch = 1868 feet

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-19-HB-100 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	WORK 7/1 - 8/15 *

* WORK WINDOW AS PER FOSC NOTE ON WORK ORDER.

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

No ecological time constraints.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC [Signature] Date 6-25-90

Prepared by Ray L. Coulter Date 6/25/90

HB-100

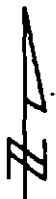
Work Area

HB-

B



Exxon Company, USA
Map Key: MP-HB-100



ECOLOGY MAP
SEGMENT K9N-19 HB-100
SUBDIVISION A (1 of 4)
METERS

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

SHORELINE EVALUATION

SEGMENT ST/ K09-20-CN-002 SUBDIVISION A (1 OF 1) DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

- A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Rachel Jean Dahn DATE: 5/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 18 m: Narrow 355 m: V.Light 855 m: No Oil 2586 m
Subsurface Oil Observed: Yes X No Maximum Depth 15+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: Treatment recommended: 1) Manual removal of mousse as indicated; 2) bioremediate broken coat in areas indicated on sketch map. 3) Manual pick up of oiled debris as shown on map. Work involving Inipol application should be conducted after 6/30 and/or approval from ADF&G. No specific time constraints for manual pick up.

TAG COMMENTS: Monitors to assess logs

TAG APPROVAL DATE: 5/23/90
ADEC Art Weiner
EXXON Andy TGA
NOAA Burt Warrell
USCG G.A. Reiter

No Inipol, only custombln, may be used for pio treatment
FOSC: D. Zavarzhi DATE: 6/4/90

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 Morrison 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
- 3N, 3P, 3Q, 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 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 areas: Salmon harvesting (5/1 to 9/30)
7H-H Finfish harvesting
 Deer harvesting (8/15 to 2/28)
 Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

MENT ST / K0920-CN002B SUBDIVISION: CN002B A DATE 4/24/90

~~NOAA~~
~~USGS~~

NAME John Naughton SIGNATURE John J. Naughton

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

This segment composed of two islands immediately offshore from Cape Nukshak. On seaward island three pocket beaches surveyed, one on north side and two on south. North side beach on either end had mounds in interstices between boulders which can be treated by manual removal. Patchy mounds on south beach (#2 on sketch map) should also be removed. The broken out patchy mound on the shoreward island (particularly north side) should also be treated by manual removal. Care should be taken during treatment - no foxes observed on islands, sealions near shore.

~~ADEC~~

NAME Terry Ellsworth SIGNATURE Terry Ellsworth

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

I concur with NOAA's recommendations that manual removal of the interstitial mounds/sediment occur on both islands surveyed. This would best be accomplished using shovels and small garden tools.

LAND MANAGER

NAME Carl Schech SIGNATURE Carl Schech

☒ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Three pocket beaches on Nukshak Island were surveyed on the ground, the remainder of the island was flown by helicopter at about 1/2 mile from the shore. The oil that could be cleaned is primarily interstitial mounds. Little surface oil persists thicker than coat on substrate surfaces. Interstitial mounds should be removed as it will probably persist for a long time.

SHORELINE OILING SUMMARY

REVISION NO 04/13/90

OG LINDSAY NAKASHIMA USCG (NDA) JOHN NAUGHTON SEGMENT STI KD920 - CND002B
 BIO DEB MCCORMICK LAND REP (NPS) CARL SCHUCH SUBDIVISION 84-028 A (1 OF 1)
 XON FRED BYARS ADEC TERRY BLISSWORTH TIME 7:30 to 8:50 AM
 AM NO. 19 TIDE LEVEL -0.8 FT FALLING DATE 4/24/90
 EST. SUBDIVISION LENGTH: 3750 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 20 % C 18 % P 6 % G 5 % S 1 % M 0 % V 0 %
 SLOPE: Long 25 % Hang 10 % Vert 65 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 40 m N 200 m VL 280 m NO 300 m
 2930 AIR

SURFACE OIL

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

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	X		
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒

TYPE _____

#BAGS _____

Photographs:

Roll No. ST-19-16 - 19 thru 36Frames ST-19-17 - 1 thru 3

SUBSURFACE OIL

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

COMMENTS

→ 3 areas (pocket beaches) walked ON NUKSHAK ISLAND, the rest viewed BY HELICOPTER (SEE ALSO SKETCH MAP) NO OIL OBSERVED COULD NOT BE SEEN
 → ENTIRE ISLAND IMMEDIATELY TO THE WEST OF THE CAPE WAS WALKED

REVIEWED MHDATE 4-26-90

OG LINDSM KASHIMA

SEGMENT ST/K0920-CN002B

SUBDIVISION CN002B

DATE 4/24/90

CHECKLIST

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

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

CT/C
Continuous Distribution

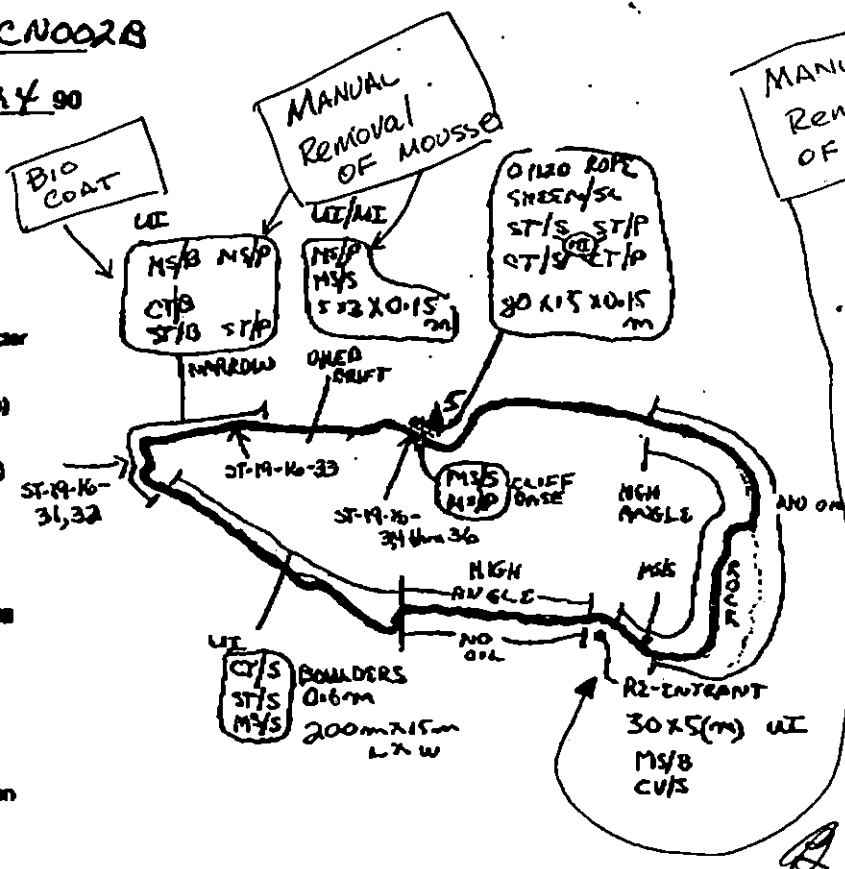
CT/D
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

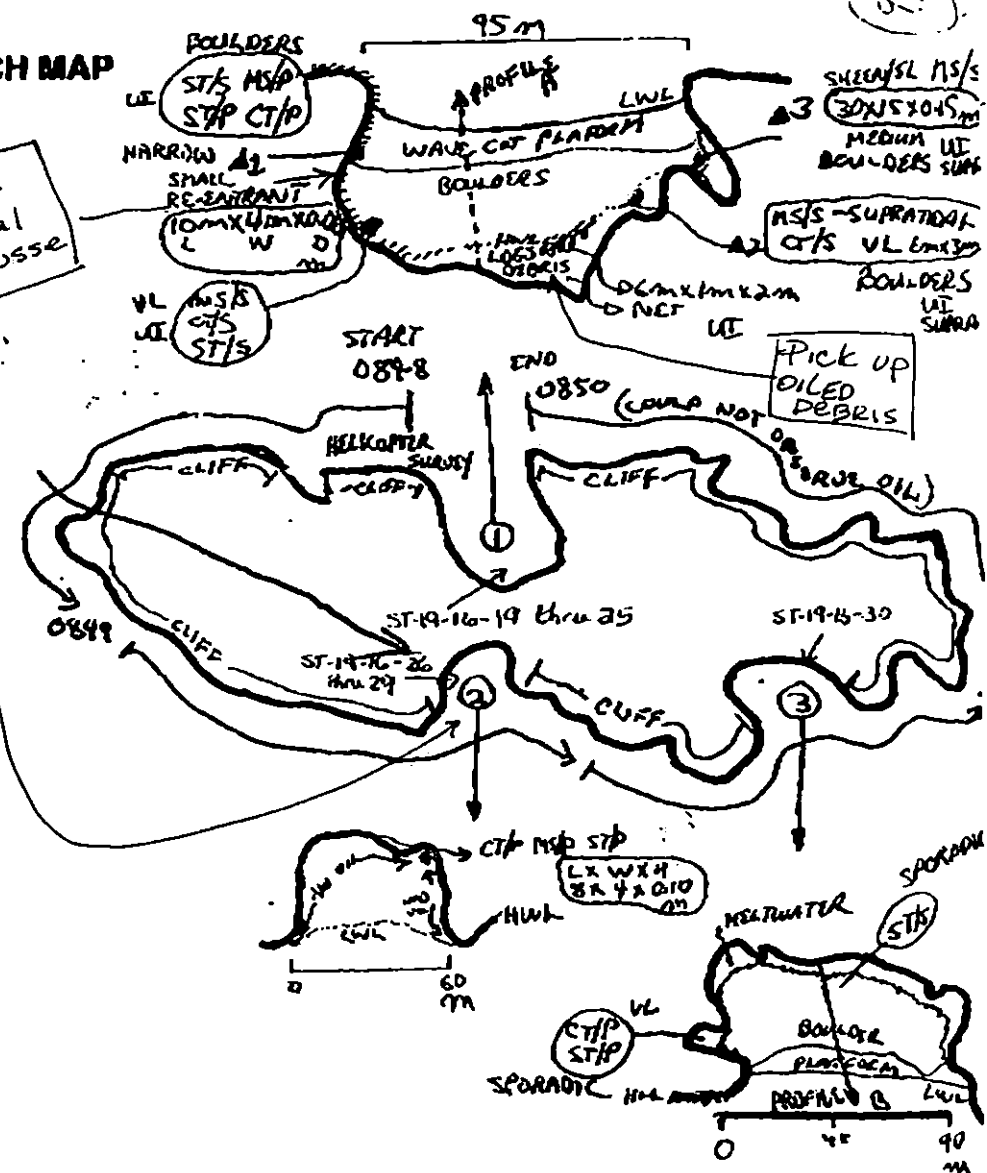
Oil Vegetation

Photo location, direction, and number



0 75 150 (m)

SKETCH MAP



① ② ③ = FOOT SURVEYS

0 100 200 (m)

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22

Segment ST / K920CH002 Subdivision A Date (mo / day / yr) 4-24-90

Time (24 hr) 0700-1000 Biologist D. Mc CORMICK

- (A) Substrate type and % of segments:
 (1) Bedrock 50 (2) Boulder 20 (3) Cobble 18 (4) Pebble 11 (5) Sand 1 (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 20 (100) Moderate 20 (75) Low 30 (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 (O)

Photographs:
 Roll No. ST-19-16

Frames 19-36

BARNACLES

ST-19-17
1-3

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: This segment composed of 2 islands. 2 red fox were seen grazing algae in the lower ITZ. One sea lion offshore S side Nukshak Island.
 Gulls on cliffs above beach.

Ecological Considerations: No anadromous streams or bird rookeries.

OG LINDS NAKASHIMA

SEGMENT ST/

SUBDIVISION CN002A

DATE 4 12 90

CHECKLIST

- ... N Arrow
- ... Approx. Scale
- ... Seg/Sub Body
- ... Oil Dist.
- ... Width
- ... Length
- ... % Cover
- ... Substrate Character
- ... Est. HAZ/LVL
- ... SSL
- ... Profile Location(s)
- ... Profile(s)
- ... Pt Location(s)
- ... Photo Location(s)

LEGEND

1 Δ
Pt - No Subsurface Oil

2 Δ
PR - Subsurface Oil

$\boxed{CT/C}$
Continuous Distribution

$\boxed{CT/D}$
Broken Distribution

$\boxed{CT/P}$
Patchy Distribution

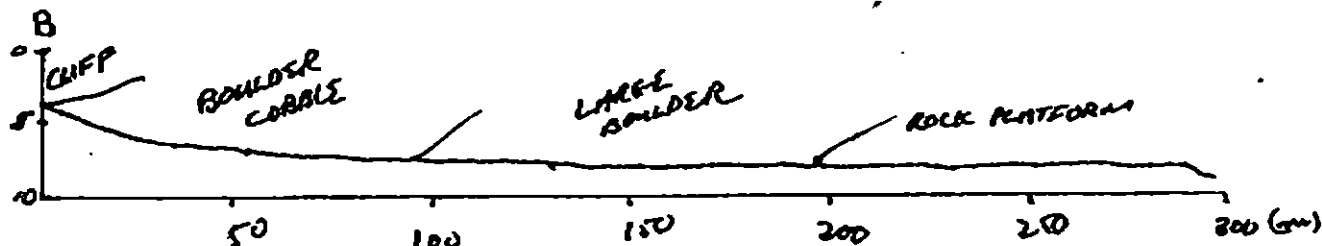
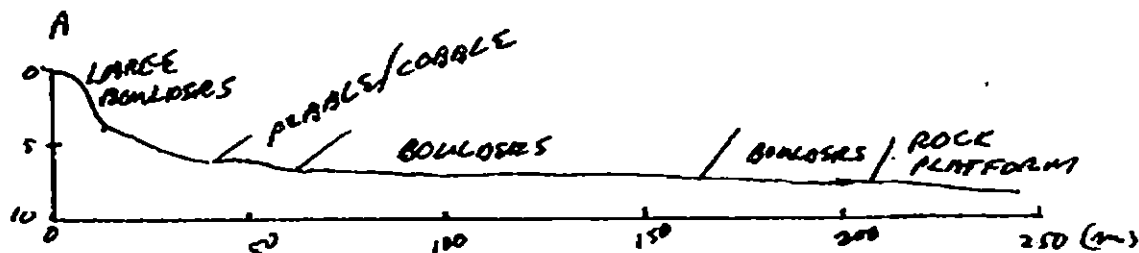
$\boxed{CT/S}$
Splashed Distribution

eee
Oiled Vegetation

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

SWITCH MAP

PROFILES



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

REVISION 28/04/90

OG LINDSAY NAKASHIMA

SEGMENT S

SUBDIVISION CND02B

DATE 4 12 80

CHECKLIST

- ☐ H Azimuth
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Off Dtm.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(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

lll

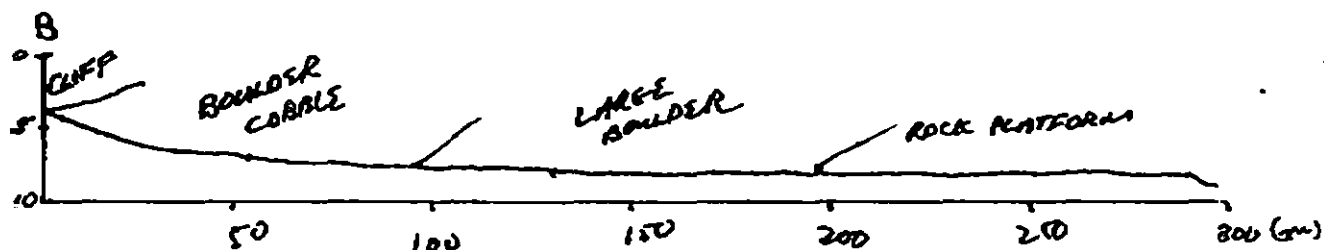
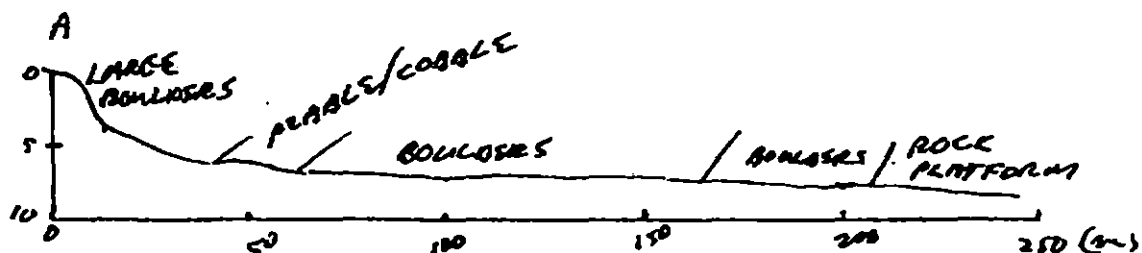
Oil Vegetation

1 $\odot$

Photo location, direction, and number

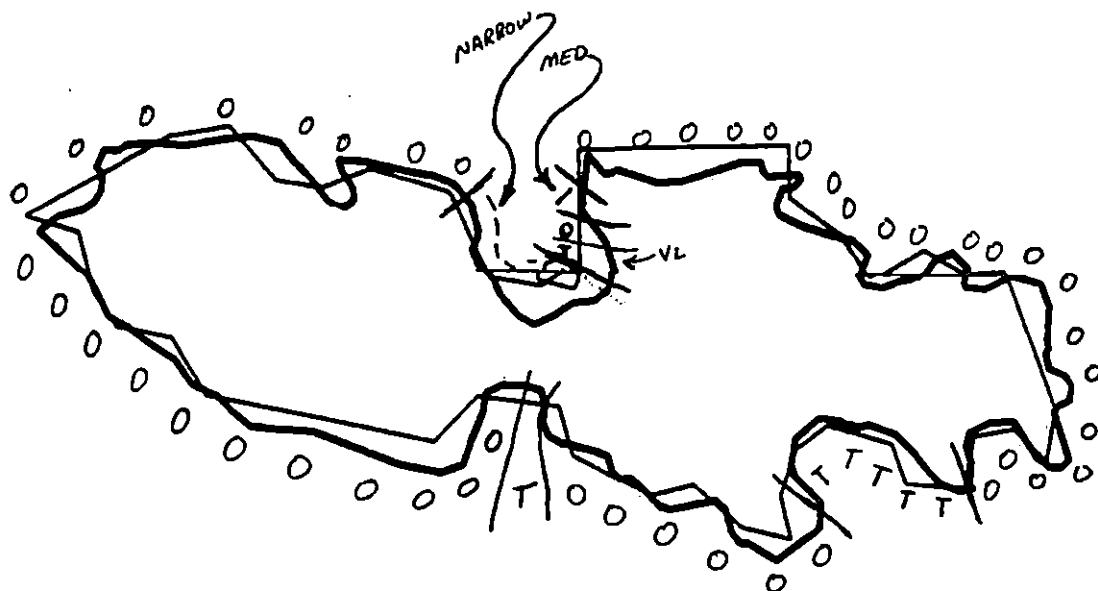
TCH MAP

PROFILES



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

REVISION 002489

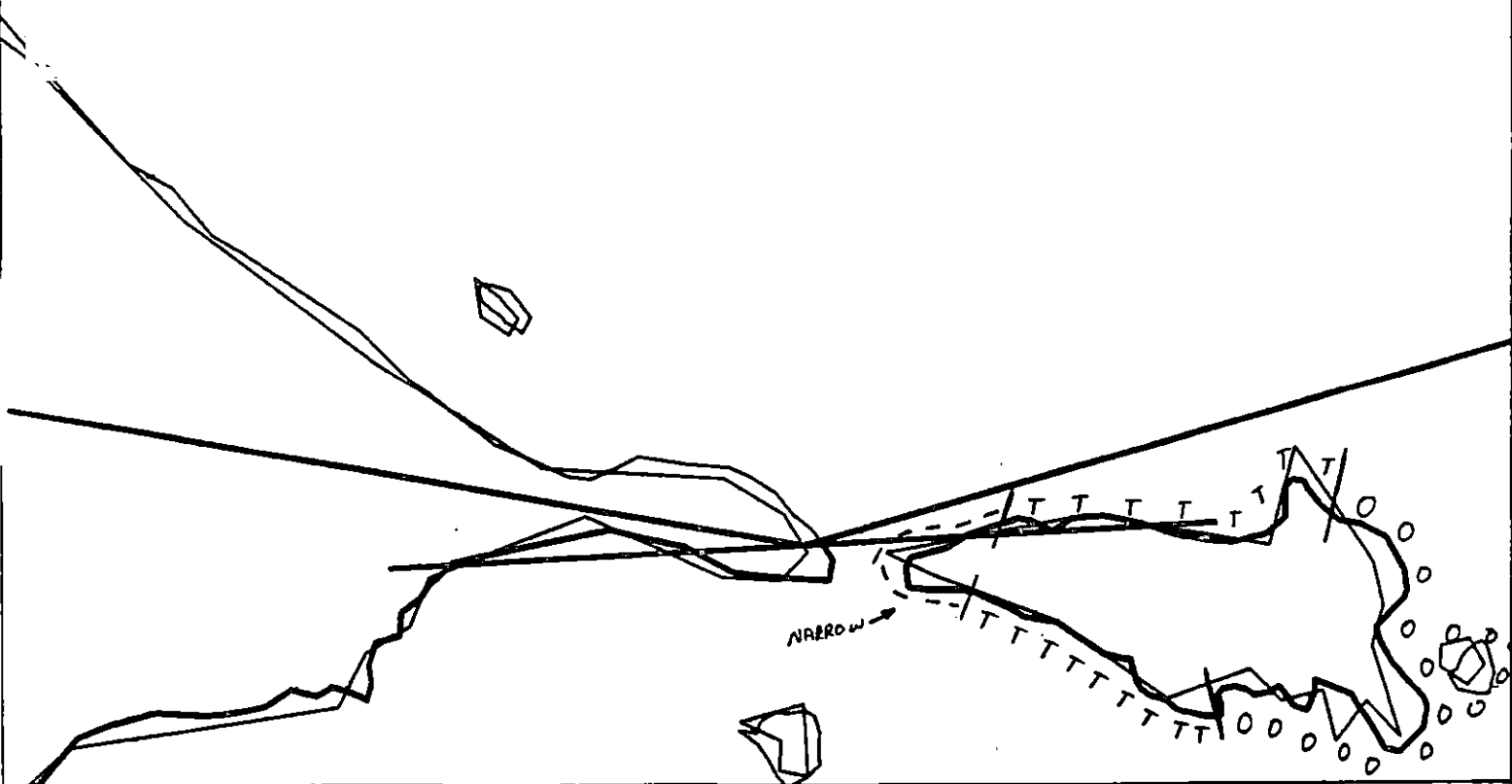


XXXX Wide
 /// Medium
 --- Narrow
 TTTT Very Light
 0000 No Oil

CN-2A
 Revised

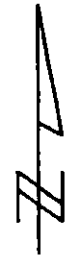


Map Key: CN-2w
 Name: Wehrenberg
 Date: 5-14-90
 Data Entered:



v v X X Wide
 / / / Medium
 - - - Narrow
 T T T T Very Light
 O O O O No Oil

CN-2A
 Revised



Map Key: CN-2dd
 Name: Wehrenbers
 Date: 5-14-90
 Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-20-CN-002 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	CLOSED
Bioremediation*	CLOSED

*No Inpol - Only Customblen as per FOSC

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous streams (262-25-10090, 262-25-2006, and 262-25-10080) are outside Subdivision A. No constraints to manual pickup and bioremediation.
5R	Seabird Colony	Closed to all activities; work site is less than 800m from seabird colony. Seabird Colony location as per conversation with Mary Portner on 6/10/90.
5T	Bald Eagle Nest	USFWS 4/9/90 map indicates an active nest in Subdivision A. Closed to manual pickup and bioremediation within 400m of active nest. No constraint to manual pickup and bioremediation more than 400m from active nest.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

[Signature]

Date

6/16/90

Prepared by

[Signature]

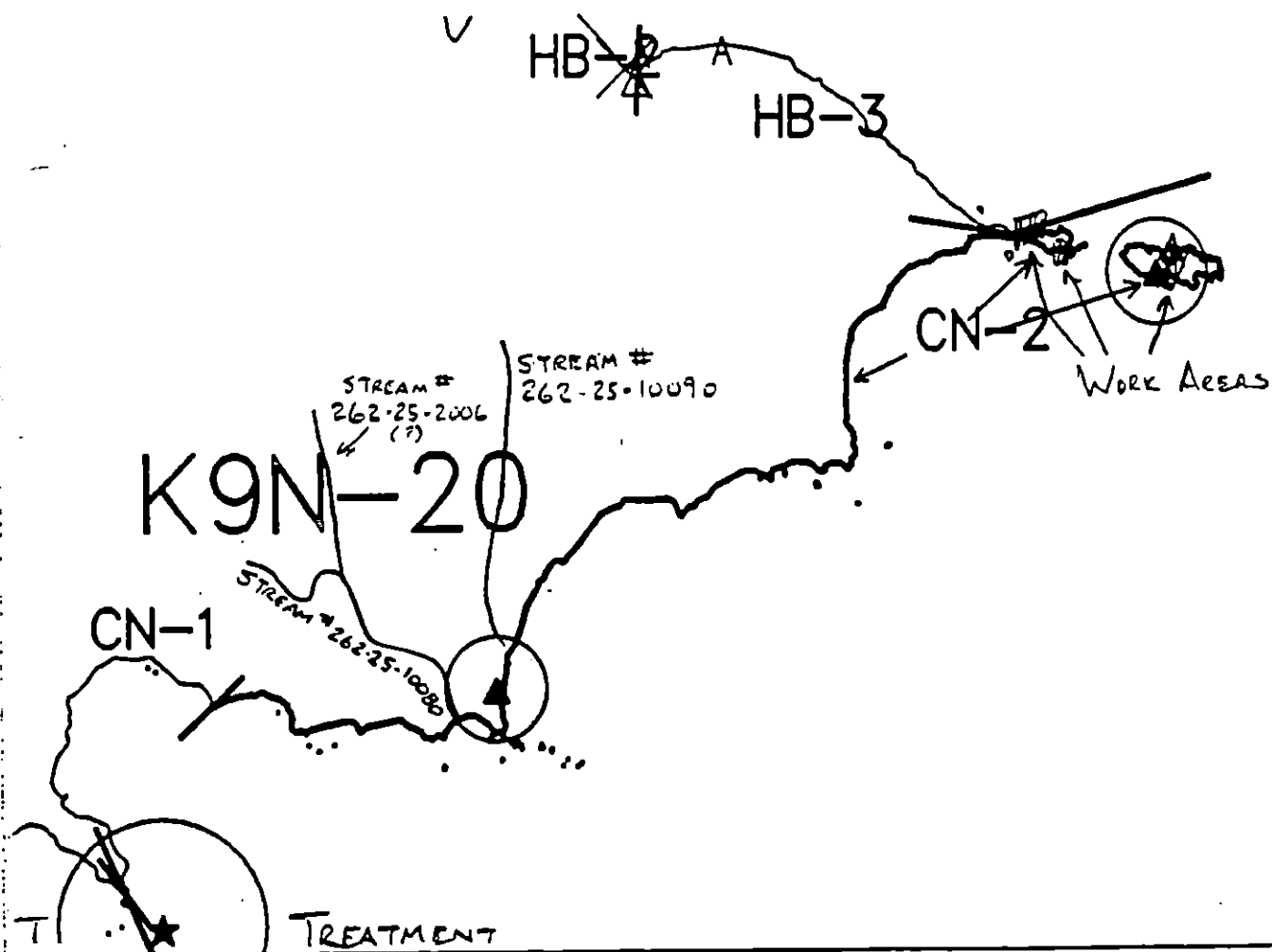
Date

6/14/90

Site CN-2

1. Access denied within buffer zone on outer island.
Recheck after July may be possible.

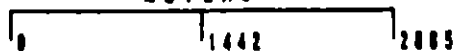
Mike Luke 6/13/90



Exxon Company, USA
Map Key: MP-CN-2
June 10, 1990



ECOLOGY MAP
SEGMENT K9N-20 CN-2
SUBDIVISION --- (--- of ---)
METERS



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

1 inch = 4732 feet

Revision 1
6/22/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-20-CN-002 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	CLOSED
Bioremediation*	CLOSED

*No Inpol - Only Customblen as per FOSC

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous streams (262-25-10090, 262-25-2006, and 262-25-10090) are outside Subdivision A. No constraints to manual pickup and bioremediation.
5R	Seabird Colony	Closed to all activities; work site is less than 800m from seabird colony. Seabird Colony location as per conversation with Mary Porter on 6/10/90. UPDATED MAP, 6/3/90 ATTACHED SHOWING SEABIRD BUTFLE ZONE. AREAS GREATER THAN 800M ARE ALSO CLOSED DUE TO EAGLE
5T	Bald Eagle Nest	USFWS 4/9/90 map indicates an active nest in Subdivision A. Closed to manual pickup and bioremediation within 400m of active nest. No constraint to manual pickup and bioremediation more than 400m from active nest.
- consider
6/22/90

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

[Signature]

Date

6/16/90

Prepared by

[Signature]

Date

6/14/90

SHORELINE EVALUATION

SEGMENT ST/ K09-21-KU-03 SUBDIVISION A (1 OF 1) DATE 4/23/90

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)

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)

Katmai National Park

See attached Ecological Constraint sheet for specific constraints and contacts.

*Uncatalogued anadromous stream

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 76 m: Narrow 385 m: V.Light 52 m: No Oil 2758 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)

+ DEBRIS

COMMENTS: Recommend manual pickup of mousse in areas indicated on sketch map. Work should be conducted between 7/1 and 8/15 based on pinned constraints.

TAG COMMENTS: FOLLOWING REMOVAL OF MOUSSE, BIOREMEDIATE

TAG APPROVAL DATE: 5/4/90

ADEC ART WEAVER Art Weaver

EXXON ANDY TGA Andy TGA

NOAA GARY PETRO Gary Petro

USCG G.A. BEITER G.A. Beiter

FOSC: WJL

DATE: 5-12-90

Bioremediation is not authorized.

KODIAK ECOLOGICAL CONSTRAINTS

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, 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 prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299

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, 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 Kotai Bay Hatchery release

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

1H Remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.

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

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

Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791

2M Herring spawning (4/15 to 6/30)

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 Larry Nicholson 424-4791

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 (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)

Finfish harvesting

7H Deer harvesting (5/1 to 1/7)

7I Invertebrate harvesting

7J Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)

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

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 H9-21-KV-3 SUBDIVISION: H9-21-KV-3A DATE 4/27/90

USCG

NAME D.D. Haven Jr, Cms, USCGR SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

main oil band (see 06 Report) is the only recoverable oil in segment. Small amounts of oil/mousse are present in almost every protected cove, but is not recoverable.

ADEC

NAME Francis J. Bennis SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

MANUAL PICK UP RECOMMENDED along 400 meter ^{Western portion of seg} band of patchy distribution of mousse patties, mousse saturated fine sediments in UIT and mousse saturated grass in supratidal area (observed a moose track in the mossy grass). CT, CV, ST also exists along here, + a few other splashes of oil are present in isolated spots along the eastern portion of this segment, relatively unrecoverable. Oil which should be removed is all surface oil, retrievable by shovel + trow. See SSAT field maps for location.

LAND MANAGER NPSNAME Will TROYER SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

This area has an extensive band of oil in the western portion, consisting of mousse. A bit of this can be removed by manual methods.

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

OG Aston USCG Haven SEGMENT ST/ K9-21-KU-3
 BIO Davis LAND REP NPS Trepier, James SUBDIVISION K9-21-KU-3A (1 OF 1)
 EXXON Avon ADEC Bennis TIME 9:45 10/11/90
 TEAM NO. 20 TIDE LEVEL 0 to +6 DATE 4 / 23 / 90
 EST. SUBDIVISION LENGTH: 3052 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 35 % B 35 % C 10 % P 10 % G 5 % S 5 % M 0 % V 0 %
 SLOPE: Long 35 % Hang 35 % Vert 30 % WAVE EXPOSURE: ☐ Low ☒ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 70 m N 330 m VL 20 m NO 2632 m

SURFACE OIL

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

 PAVEMENT H F S 0 sq. m by 0 cm

 PATTIES / TARBALLS 0 BAGS

 NEAR SHORE SHEEN? ☒ BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

 YES ☐ NO ☒

TYPE _____

#BAGS _____

Photographs:

 Roll No. ST-20-6

 Frames 25-35

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	30	35	40	45	50	SV	U	M	U			
1	10																				BCP
2	10																				CP
3	20																				CP
4	10																				BCP
5	20																				CP
6	10																				BCP

COMMENTS A band of oiling was observed extending from just inside the west segment boundary to the east for approx 900 m. The band started in the first small cove beach recess east of the west segment boundary, and extended to the east for approx. 400 m in the VITZ. Band had a maximum width of approx 9 m and was comprised mainly CT, CV / S+Pw / scattered ms / P (very light to narrow). Within this band was an approx. 1 m band of CT, CV, ms / P+D (narrow to moderate).

Other than this band of oiling, only very light, very occasional splash was observed in several areas (10 splashes total) and on driftwood/debris. The easternmost pocket beach in this segment was surveyed on foot on 4-24-90, 0715-0810. With a tide from -2 to -1.

 REVIEWED MH DATE 4-26-90

00 Act

SK H MAP

N ↑
Approx Scale
1cm = 15m

SEGMENT ST/ K9-21-KV-3

SUBDIVISION K9-21-KV-3A

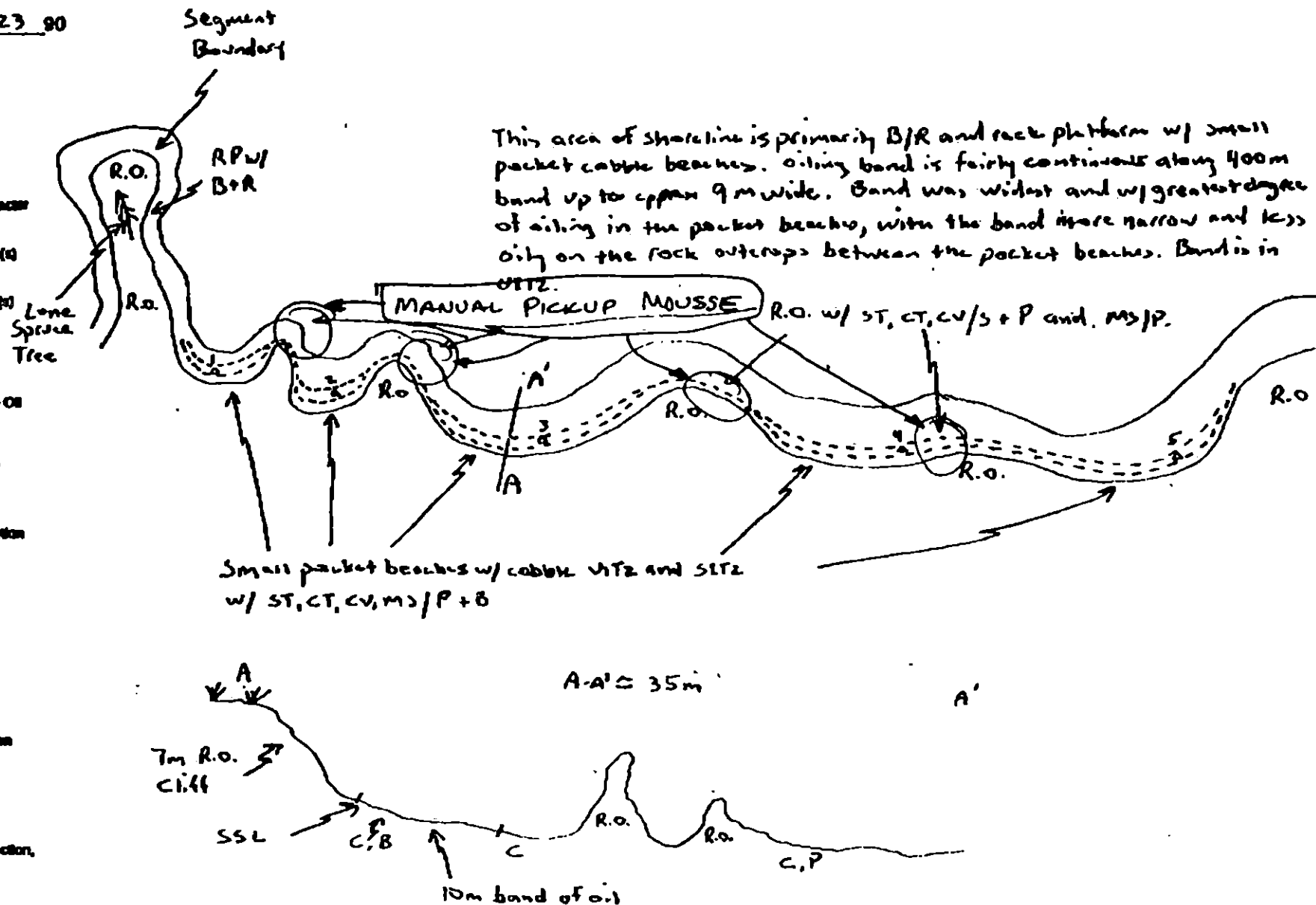
DATE 4 / 23 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Boundary
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWS/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Photo(s)
- ☐ P/L Location(s)
- ☐ Photo Location(s)

LEGEND

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



Oil Character Length (m): AP PO CV 400 CT 400 ST 400 MS 400 PT TB FL NO 2632

REVISION 02/04/90

APR-24-1990 20:21 FROM EXXON KODIAK

TU

15645771

P.05

SHORELINE ECOLOGICAL SUMMARY

REVISION. 002

Segment ST/ K9-21 Subdivision KU-03 Date (mo / day / yr) 4/23/90
4/24/90
 Time (24 hr) 9:40 (2nd) Biologist H. Davis
7:20 (2nd)

- (A) Substrate type and % of segments:
 (1) Bedrock 35 (2) Boulder 35 (3) Cobble 10 (4) Pebble 15 (5) Sand 5 (6) Silt -
- (B) Overall % cover of biota (% of segment): Dense 20% Moderate 30% Low 50% (30%)
- (C) Density, substrate preference (by number from A. above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:

Roll No. ST-20-6Frames 25-34

BARNACLES continuous along segment. Densest on rock intertidal. Sparse on cobble.

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
X	X	X	X	X	X	X	X	X	X	X	X
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
5,6

MYTILUS 2 few dense patches on rock; outcroppings and flat lower, the rest is sparse scatterings in crevices

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
X	X	X	X	X	X	X	X	X	X	X	X
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
5,6

GASTROPODS Littorina continuous moderate to sparse limpets sparse but continuous. Nucella patchy and moderate
 Littorina and limpets concentrated under rocks.

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
X	X	X	X	X	X	X	X	X	X	X	X
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
5,6

FUCUS Patchy showing alot of new growth. Small dense patches scattered in mid-low intertidal.

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
X	X	X	X	X	X	X	X	X	X	X	X
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
5,6.

Wildlife Observations/ General Comments: Moose tracks and scat in upper intertidal. Herring gulls, Oystercatchers, ? Grebe, and Cormorants. The oystercatchers were feeding in the intertidal.

Ecological Considerations: 3NOR; 1A1B Anadromous streamers (Chum-Pinks?) Sealion and Harbor Seal pup and molt in this area.

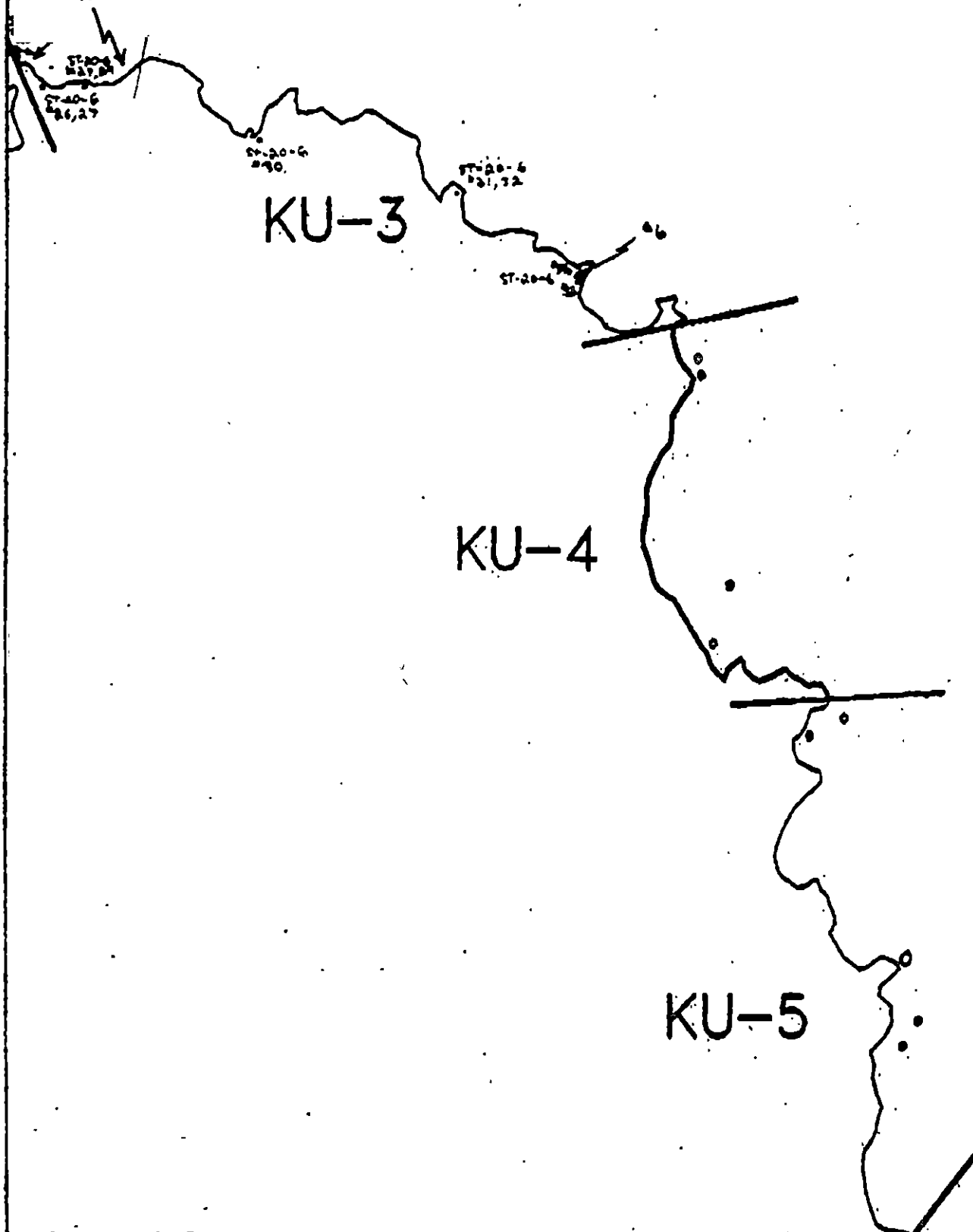
DATE 4/23/90 TIME 9:40 - 11:30
4/24/90 7:20 - 8:10TIDE HEIGHT 0 to +6
0 to -21 = BEDROCK 2 = BOULDER 3 = COBBLE 5 = SAND 6 = SILT
4 = pebbles

FLORA:

SPECIES	UTT2	MITZ	LITZ	COMMENTS
BOSSIELLA (CORALLINA)	1,2	1,2	1,2	
CALLIARTHRON/CORALLINA	1	-	-	
CLADOPHORA SPP		1,2,3		Near fresh water run off
COSTARIA SPP	-	-	-	
ENDOCLADIA MURICATA	1,2,3	1,2	-	
FILAMENTOUS GREENS	1,2,3	1,2,3,4	2,3	On tops of rocks
FILAMENTOUS REDS	-	-	2,3	
OLOIOPELTIS FURCATA	1,2,3	1,2,3	-	
HALOSACCION GLANDIFORME	1	1,2	1,2	
LAMINARIA SPP	-	-	1,2	and in drift
LITHOTHAMNION	1,2	1,2,3	1	In pools
NEREOCYSTIS SPP	-	-	-	In drift or bobbing off shore
PORPHYRA SPP	-	-	-	
RALPHSIA/HILDENBRANDIA	-	-	-	
RHODOMELA LARIX	1,2	1,2	-	
RHODOMENIA PALMATA	-	1,2	-	
SCYTOSIPHON SPP	1,2,3	1,2,3	-	on tops of surfaces
ULVA SPP	1,2	1,2,3	1,2,3	In pools in upper intertidal
ZOSTERA MARINA	-	1,2,3	1,3	
ENTEROMORPHA	1,2,3			
Venecuria (lichen)	1,2	-	-	Upper intertidal / splash zone

FAUNA:

ANTHOPLEURA SPP	1,2	1,2	1,2	intertidal and xenobryozoa
(SEMI) BALANUS CARIOSUS	1,2	1,2	1,2	
B. GLANDULA	1,2,3	1,2,3	1,2,3	
BRYOZOANS	-	-	-	In drift
CHITONS (other than K. TUNICATA)	-	-	-	
CLAMS				
CRABS	-	-	-	
DERMASTERIAS IMBRIGATA	-	-	-	
KATHARINA TUNICATA	1,2	1,2,3	1,2	in crevices
LEPTASTERIAS HEXACTIS	-	-	-	
LIMPETS	1,2,3	1,2,3	1,2	More numerous on the under side of rock
LITTORINA SPP	1,2,3,4	1,2,3,4	1,2,3,4	" "
NUCELLA SPP	1,2,3	1,2	-	
PAGURUS SPP	-	1,2	-	Running around in pools
PISASTER OCHRACEUS	-	-	-	
POLYCHAETES	-	-	-	
PYCNOPODIA HELIANTHOIDES	-	-	-	
SEARLESIA DIRA	-	1	-	shell only not alive
SERPULIDS	-	-	-	
SIPHONARIA THERSITES	-	-	-	
TEALIA crassicornis	1,2	1,2	1,2	Near or in pools, moist areas
Solaster sp.	1	-	-	
Epistolia prolifera	1	1,2	3	in pools, 2 xerobryozoa

Sketch Map
Area

XXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KU-3

ADEC Segment Length: 11173m



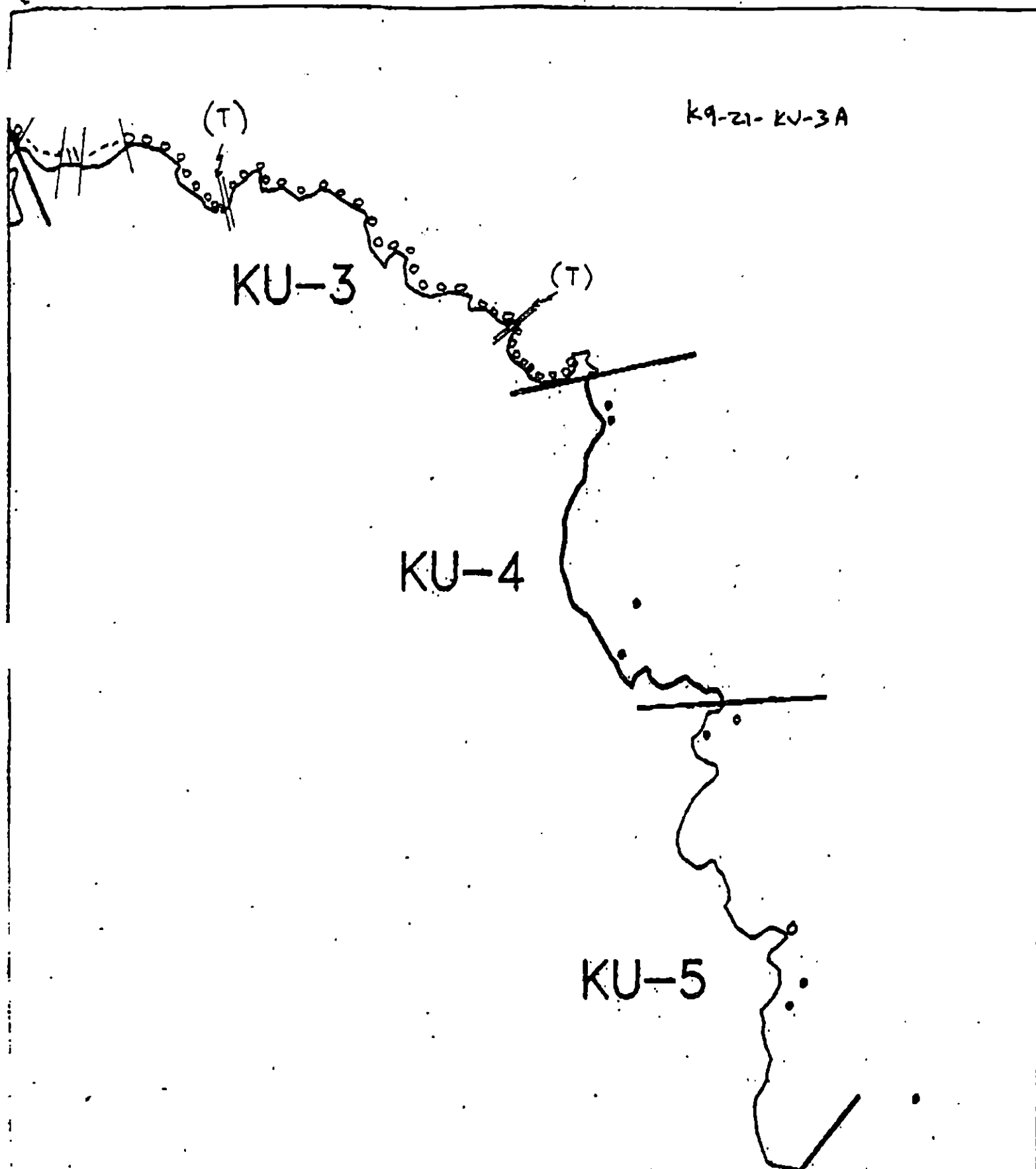
K9-21-KU-3A

Map Key: 60A-1501

Name: Acton

Date: 4-23-90

Date Entered:



XXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KU-3

ADEC Segment Length: 11173m

0 500 1000 1500

METERS



K9-21-KV-3A

Map Key: GOA-1501

Name: Acton

Date: 4-23-90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-21-KU-003 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	Work 7/1 to 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	An ADF&G uncatalogued anadromous stream is present in this subdivision. No constraint to manual pickup.
3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Molting	No constraint to manual pickup 7/1 to 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

Avoid any unnecessary disturbance or damage to uncolled biota and substrate. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. Do not apply bioremediation to specific areas where seals are observed to haulout. 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.

FOSC

[Signature]

Date

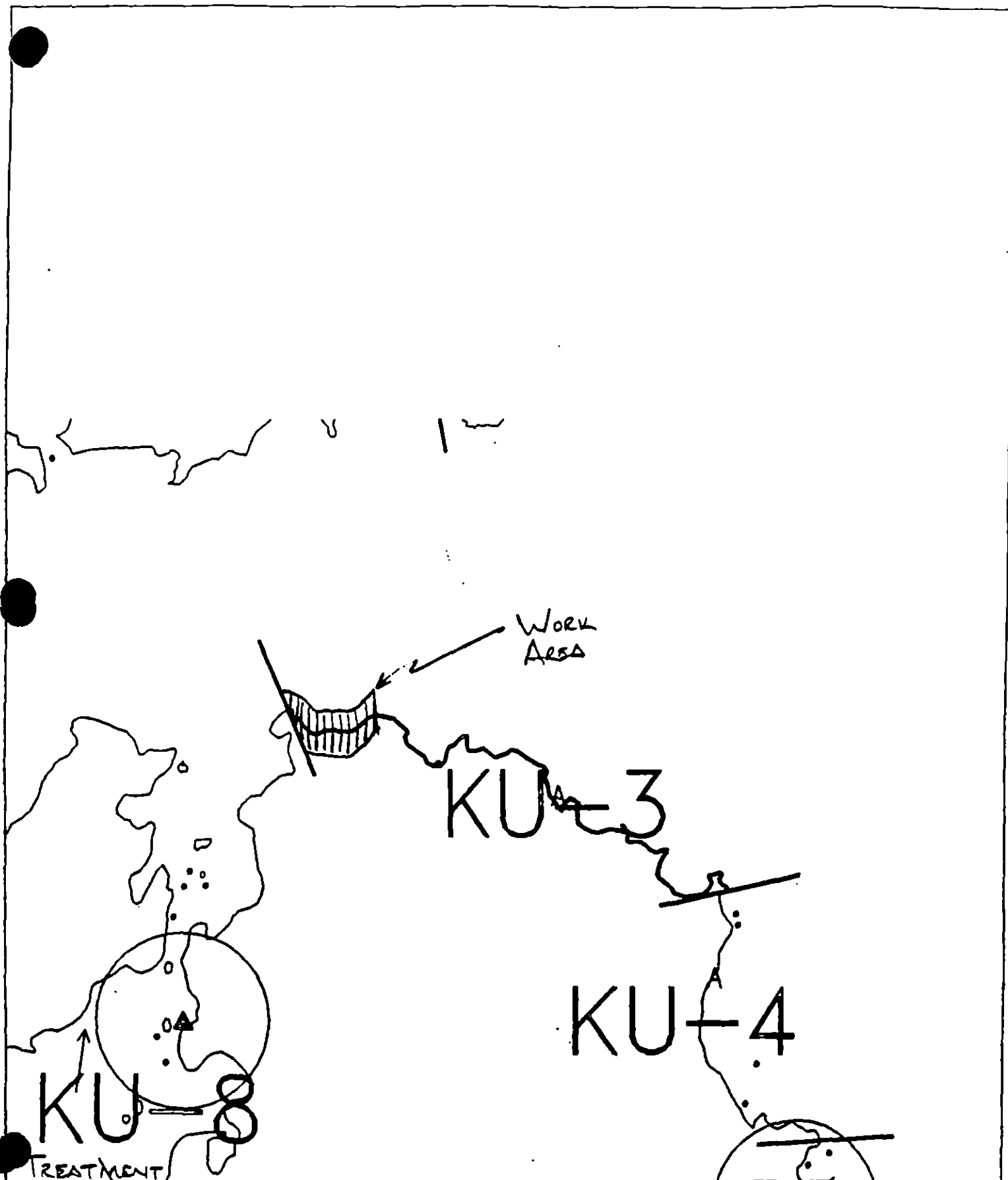
6/21/90

Prepared by

[Signature]

Date

6/20/90



Exxon Company, USA



ECOLOGY MAP
SEGMENT K9N-21 KU-3
SUBDIVISION A (1 of 1)
METERS

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

SHORELINE EVALUATION

SEGMENT ST/ K09-21-KU-004 SUBDIVISION A (1 OF 1) DATE 5/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4LL National Park - Katmai

9LM Land mammals

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. H. Hume

DATE: June 19, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 102 m: Narrow 0 m: V. Light 242 m: No Oil 1002 m
Subsurface Oil Observed: Yes X No Maximum Depth 10cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

 Manual Pickup

X Bioremediation

X Tarmat Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommend treatment is removal of tarmat in areas indicated on sketch map. No specific ecological working time constraints listed.

TAG COMMENTS: MANUAL PICKUP OF OILED DEBRIS, BIOREMEDIATION (CUSTOMER) AS REQUIRED FOLLOWING TARMAT REMOVAL

* ASSESS OILED LOGS AND THE REMAINDER OF THE SHORELINE FOR OILED DEBRIS - SSAT DONE BY HELICOPTER - SOME AREAS INACCESSIBLE

TAG APPROVAL DATE:

ADEC RAY MORRIS R. Morris

EXXON ANDY TEAL Andy Teal

NOAA Joseph Tallant Joseph Tallant

USCG C.A. BEITER C.A. Beiter

FOSC: ML

DATE: 7-10-90

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 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, 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 prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 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, 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 Kotol Bay Hatchery release
 Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 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
 Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 6/30)
 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 Larry Nicholson 486-4791
- 30, 30 Harbor seal and sea lion pupping (5/10 to 7/1)
 Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (8/1 to 9/15)
 6V Anchorages (8/1 to 9/15)
 6W Forest Service cabins (8/1 to 9/15)
 6X Lodge (8/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (8/1 to 9/30)
 7H Finfish harvesting
 7I Deer harvesting (8/1 to 1/7)
 7J Invertebrate harvesting
 7K Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
 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 / 10921 / KU004 SUBDIVISION: A DATE 5/20/90

USCG

NAME STAN L. SHIELDS SIGNATURE Stan L. Shields USCG

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

SPOT MANUAL PICKUP OF OILED DEBRIS ^{THROUGHOUT SEGMENT} AND MANUAL REMOVAL OF MOUSSE SATURATED SEDIMENTS IN THREE POCKET AREAS OF SHORELINE. IN ONE POCKET OF 20-40 CM DIA. BOULDERS, STAIN ON TOP COVER OF BOULDERS IS VERY LIGHT BUT THESE WILL NEED TO BE MOVED TO GET TO MOUSSE SATURATED SEDIMENTS AND MOUSSE STAINED COBBLE UNDER THE TOP COVER OF BOULDERS.

ADEC

NAME Francine J. Bennis SIGNATURE Francine J. Bennis

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

MANUAL PICKUP RECOMMENDED. There are three areas that justify manual removal of oil:

- 1) 3m x 15m area 'mousse mat'
- 2) 2m x 25m area of mousse, mousse saturated sediments
- 3) 5m x 30m area of mousse, mousse saturated sediments

Stain, Coar., & cover of cobbles & boulders exists in several areas throughout segment, & stained drift logs & debris is present as well. Recommend the cleanup crew police accessible areas of segment to remove any oiled debris.

LAND MANAGER

NAME Carl Scheeb SIGNATURE Carl Scheeb

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

not present during assessment

Concur with ADEC and USCG regarding removal of the 3 predominant asphalt /mousse mats. Sub-section B not surveyed. Recommend assessment during cleanup with NPS monitors. Access by staff. The remaining segment should be walked by cleanup crew to remove oiled debris.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ K0921 / KU004 SUBDIVISION: A DATE 5/20/90

USCG

NAME STAN L. SHIELDS SIGNATURE Stan L. Shields USCG

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

SPOT MANUAL PICKUP OF OILED DEBRIS [✓] ^{THROUGHOUT SEGMENT} AND MANUAL REMOVAL OF MOUSSE SATURATED SEDIMENTS IN THREE POCKET AREAS OF SHORELINE. IN ONE POCKET OF 20-40 CM DIA. BOULDERS, STAIN ON TOP COVER OF BOULDERS IS VERY LIGHT BUT THESE WILL NEED TO BE MOVED TO GET TO MOUSSE SATURATED SEDIMENTS AND MOUSSE STAINED COBBLE UNDER THE TOP COVER OF BOULDERS.

ADEC

NAME Francine J. Bennis SIGNATURE Francine J. Bennis

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

MANUAL PICKUP RECOMMENDED. There are three areas that justify manual removal of oil:

- 1) 3m x 15m area 'mousse mat'
- 2) 2m x 25m area of mousse, mousse saturated sediments
- 3) 5m x 30m area of mousse, mousse saturated sediments

Stain, Coat, & cover of cobbles & boulders exists in several areas throughout segment, & stained drift logs & debris is present as well. Recommend the clean-up crew police accessible areas of segment to remove any oiled debris.

LAND MANAGER

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Not Available

SHORELINE OILING SUMMARY

OG Mike Foget USCG San Shields SEGMENT ST/ K0921-K0004
 BIO Heather Davis LAND REP Dan Pontand SUBDIVISION A (1 OF 1)
 EXXON - ADEC Fran Dennis TIME 17:00 18:20:00
 TEAM NO. 20 TIDE LEVEL 1.5-2.0 DATE 5/20/90
 EST. SUBDIVISION LENGTH: 1767 m 1260 ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock mostly rocky cliffs w/ some grassy meadows
 SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 10 % B 45 % C 30 % P 10 % G 5 % S - % M - % V - %
 SLOPE: Long 60 % Hang 30 % Vert 10 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 70 m N 0 m VL 240 m NO 900 m

SURFACE OIL

1760

unsurveyed 507 m

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

PAVEMENT H F @ 30 sq. m by 5 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? ☒ BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	X		
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE 1 Com PamBAGS 1

Photographs:

Roll No. ST-20-12Frames 1-21

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UO	1	2	3	4	5	SW	U	M	V				
1	50					X	-		X						X				N	-		P, G, S, C
2	30					X	-		X						X				N	-		C, P
3	30					X	-		X						X				N	-		P, G
4	20		X				0.5		X				X	X					N	-		B, C, P, C
5	25					X	-		X						X				N	-		C
6	30					X	-		X						X				N	-		C, P, S

COMMENTS Shore zone consists of rocky headlands with pocket beaches. The low and mid ITZ are mostly boulder and large cobble w/ the supra ITZ consists of pebble storm berm. The supra ITZ beach zone contains a large amount of driftwood along the pocket beaches. The northern part of the segment has some staining and coat in the supra ITZ, some of the logs and driftwood also stained. Toward the southern end of the segment.

REVIEWED BAT DATE 25 May 90

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR						PIT ZONE				A	N	S	V	SURFACE - SUBSURFACE SEDIMENTS		
		OP	OR	OL	OF	NO		UO	UO	1	2	3	4	5	6	7	8	9	10						11	
7	30					X	-		X							X								N	-	P
* 8	30				X		0-10		X		X					X								N	-	B
* 9	20				X		0-10		X		X					X								N	-	B, C
10	30					X	-		X							X								N	-	P
11	20					X	-		X							X								N	-	P
12	40					X	-		X							X								N	-	P
13	30					X	-		X							X								N	-	P
14	10	X					0-5		X					X	X									N	-	P, G, C
15	10		X				0-9		X					X	X									N	-	C, P, S, C
16	15	X					0-7		X					X	X									N	-	C, P, S
17	30					X	-		X							X								N	-	C, P, S
							-																			
							-																			
							-																			

COMMENTS

* 8, 9 - an oil cover on the B/C

There are three locations with asphalt (mousse tar mats) located in the Super ITZ (see map). The first two locations are right by each other and are separated by a point. The third location is south of the first two and is located in the Super ITZ, subsection 13 has not yet been surveyed due to difficulty of accessing this area.

* The unsurveyed area was attempted on 5/20/90, and 5/21/90. The best way to access the beach is via a boat or skiff. Clean up have already been approved for KU-005 and KU-003, therefore it is suggested that an ops person and a NPS rep with the clean up crew survey and remove any mousse or other oiling that can manually be removed.

REVIEWED BAT DATE 25 May 90

3. Mike Foy

CGMENT ST/ K0921 - K0004

JEDIVISION A

ATE 5 / 21 90

CHECKLIST

- 1. Area
- 2. Approx. Scale
- 3. Sup/Sub Body
- 4. C/D
- 5. Width
- 6. Length
- 7. % Cover
- 8. Substrate Character
- 9. Est. HML/LWL
- 10. S/L
- 11. Profile Location(s)
- 12. Profile(s)
- 13. P/L Location(s)
- 14. Photo Location(s)

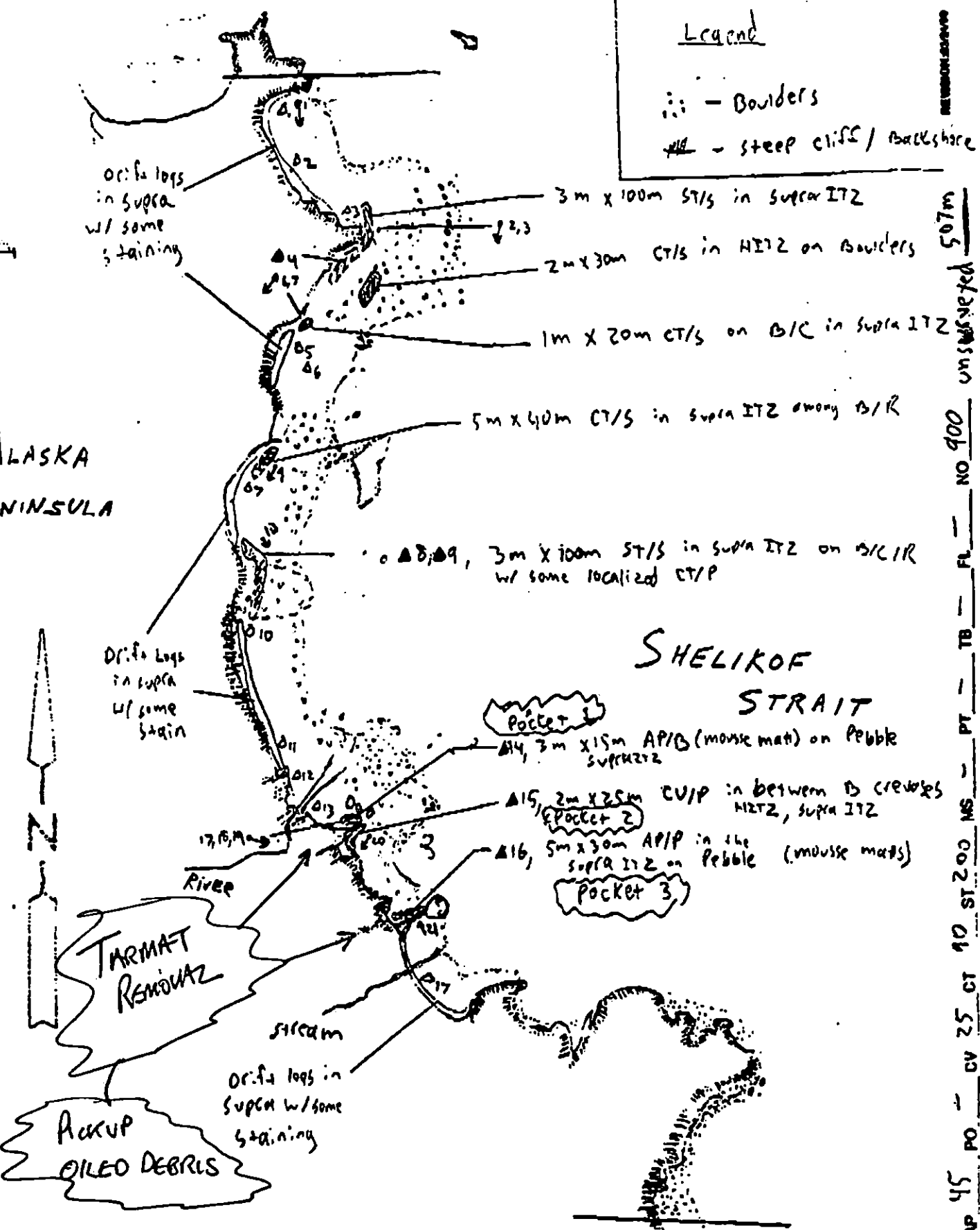
LEGEND

- 1. Δ - No Subsurface C/D
- 2. Δ - Subsurface C/D
- CT/C - Continuous Distribution
- CT/B - Bottom Distribution
- CT/P - Patchy Distribution
- CT/S - Specified Distribution
- CLL - Clad Vegetation
- Photo location, direction, and number

Scale
125 m

SKETCH MAP

ALASKA
PENINSULA



Character Length (m): AP 45 PO - CV 25 CT 10 ST 200 MS - PT - TB - FL - NO 400

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03-22-88

Segment ST/K9-21 Subdivision KU-04A (Formerly KK04) Date (mo/day/yr) 5/20/90Time (24 hr) 17:00 Biologist H. Davis

(A) Substrate type and % of segments:

(1) Bedrock 10 (2) Boulder 45 (3) Cobble 30 (4) Pebble 10 (5) Sand 5 (6) Silt —(B) Overall % cover of biota (% of segment): Dense 20% Moderate 30% Low 50% (30%)

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

Photographs:

Roll No. ST-20-12Frames 1-21

BARNACLES continuous along segment. Variable density

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

MYTILUS moderate beds on rocky platform. Sparse elsewhere

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
3, 4, 5, 6

GASTROPODS Littorines moderate, Nucella small groups, limpets moderate

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
4, 5, 6

FUCUS Patchy along the segment. Dense to sparse within each patch

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
4, 5, 6

Wildlife Observations/ General Comments: The tide was +2.0 at its lowest so the LTZ wasn't completely available.

Ecological Considerations: ST, 5R, 1C, 2M, 75J 72, 94M

No eagle nests were seen but 3 adult eagles were flying over the area. No seabird colonies were seen on the segment but several birds were nesting (1 known 3G Glaucous-winged gull). No salmon streams on the segment. Small smolt seen in large pools.

(2M) Herring spawning April 15-June 30. 75J invertebrate harvesting, 72 Salmon harvesting, 94M Land Mammals-Bear tracks along segment 1 mother 2(2M, 4M) Cubs encountered.

K9-21

KU-04A

5/20/90 17:00

H. Davis

The segment subdivision covered had rocky headlands alternating with pocket beaches. UTZ is mostly Bedrock and boulders on the headlands, Cobble and pebble berms on the pocket beaches. The mid-Low intertidal zones are small boulder/cobble over rocky shelves and sand.

In general the upper intertidal area has Littorina (mostly siphons) limpets (*Notosomena personata*, *Collisella digitata*) Balanus, a few *Pagurus*, *Porphyra*, Green filamentous algae and *Chlorella* (its presence is inversely related to the number of Littorina in the area) *Fucus* and Sculpins (in pools)

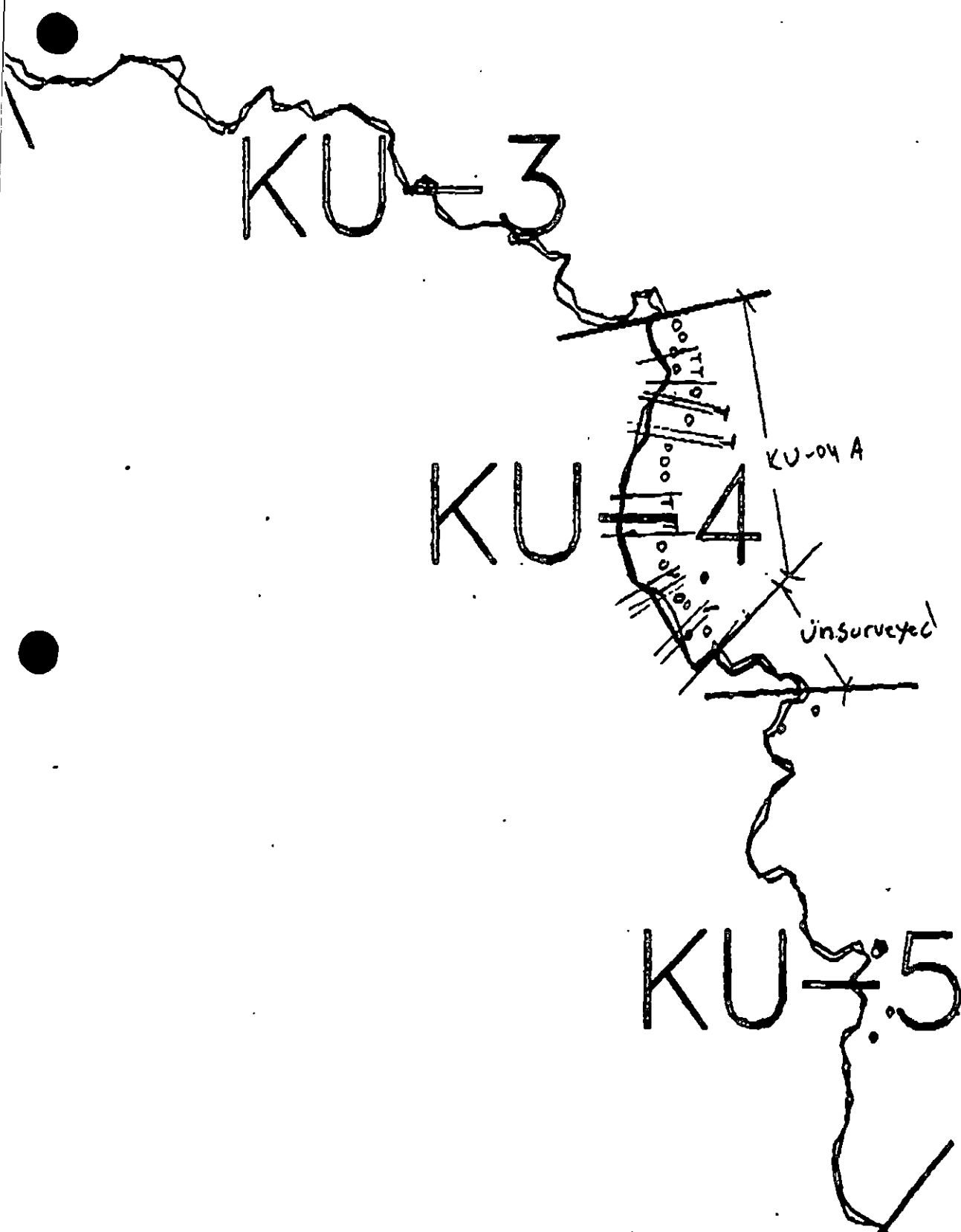
The mid-intertidal zone had *Fucus*, *Odonthalia/Rhodomena*, *Scytosiphon*, *Endocladia* (a few tufts), *Gloiopeltis*, *Halosaccion*, *Coralina* sp., *Valoniobrya*, *Nucella* sp., *Littorina*, limpets, Barnacles, *Katharina*, *Anthopleura* (*artemisia* and *xanthogramma*) and a few patches of *Megilus*.

The low-intertidal area was difficult to evaluate because the lowest point of the tide was +20 ft. *Pleurophycus*, *Ularia*, *Rhodomenia*, *Ulva*, *Scytosiphon*, *Pagurus*, *Leptasterias*, *Copestomata*?, *Idotea*, amphipods, Sculpins, and pricklyfishes

On most available space cyprinid larvae have settled. None settled up in oiled areas.

Birds seen: Harlequin Ducks, Black Scoters, Oystercatchers, Glaucous-winged gulls, Sparrows (song or Fox?), Thrush(?), 3 Eagles, and a loon (common?)

Moose pellets were found in the supra tidal areas. Bear tracks were found. 1 ♀ and 2 (2 yr) cubs seen digging in kelp rock.



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

KU-4
K9-Z1

ADEC Segment Length: 11172m



Map Key: AKP-KU-41
Name: Mike Foget
Date: 5/21/90
Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-21-KU-004 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation*	CLOSED AFTER 7/1

*No Inpol - Use Customblen Only

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

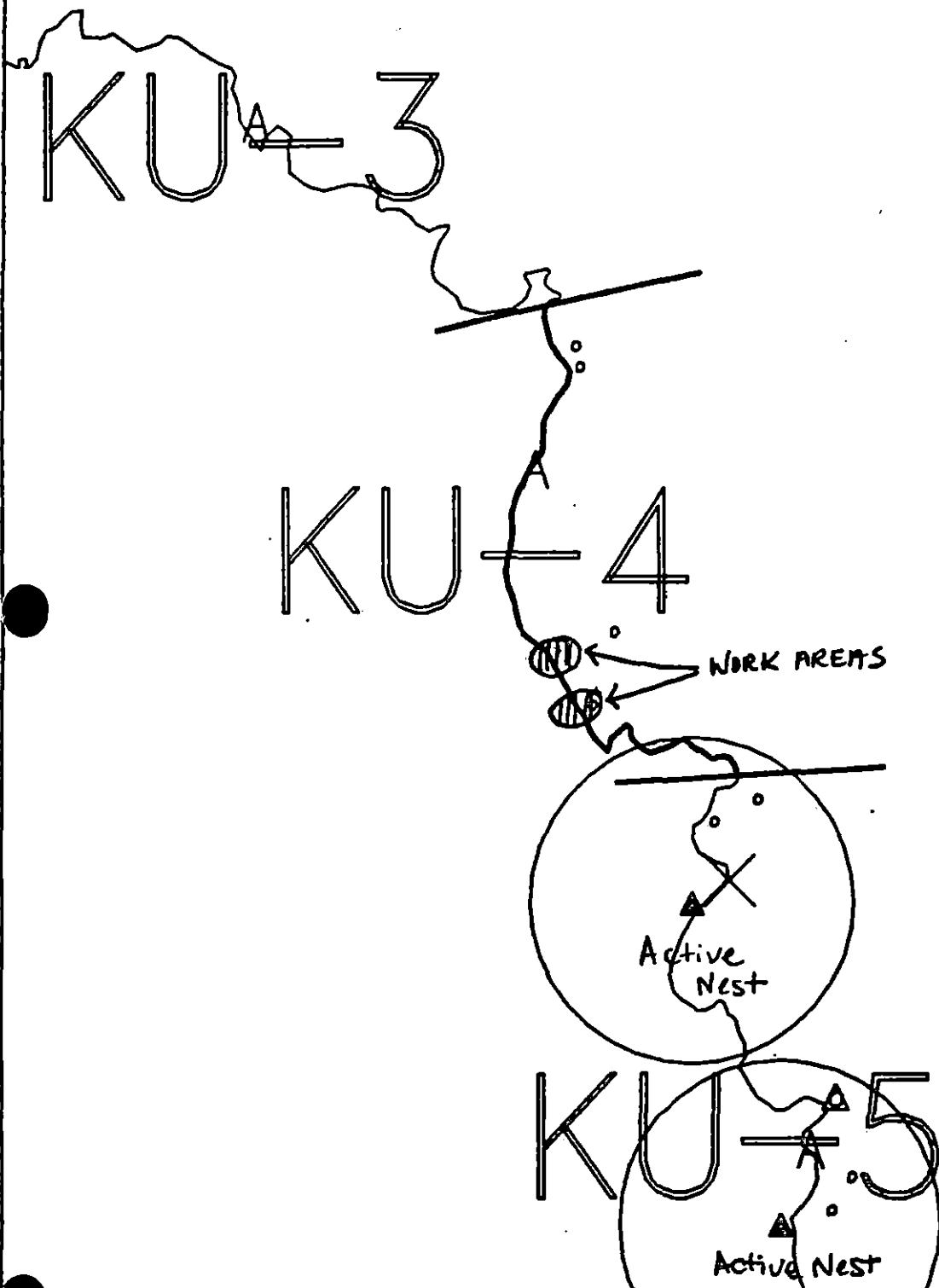
1C	Salmon Fry Nursery Area	Closed to bioremediation prior to 7/31. No constraint to manual pickup and tarmat removal.
2M	Herring Spawning	No constraint to manual pickup, tarmat removal, and bioremediation.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 4/9/90 map indicates no active nest within 400m of Subdivision A work site.
7JJ	Subsistence: Invertebrate Harvesting	No constraint to manual pickup, tarmat removal, and bioremediation.
7Z	Subsistence: Salmon Harvesting	No constraint to manual pickup and tarmat removal. Closed to bioremediation after 7/1.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Restrict boat traffic to essential minimum. Avoid any unnecessary disturbance or damage to uncolled substrate and biota especially intertidal and subtidal algae and seagrass. Restrict air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to uncolled biota and substrate.

FOSC Date 7-11-90

Prepared by Date 7/10/90



Exxon Company, USA
Map Key: AKP-KU-4
June 10, 1990

ECOLOGY MAP
SEGMENT K9N-21-KU-4
SUBDIVISION A () of ()

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / K09-21-K4005 SUBDIVISION: A DATE 5/5/90

NAME STEPHEN LEHMANN SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Very little evidence of oil. In light of the very light and the presence of ^a pair of nesting eagles - treatment is not recommended.

ADEC NAME Terry Ellsworth SIGNATURE Terry Ellsworth

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Only sporadic stain, coat and cover was observed in this segment. Treatment is not recommended.

LAND MANAGER

NAME Carl Schech SIGNATURE Carl Schech

☒ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

The ecological summary indicates 1 pair of nesting eagles, which is correct (see notes above). Only a negligible amount of recoverable oil was observed on this segment

SHORELINE OILING SUMMARY

REASON NO. 1412 10

OG G. HEYMAN ^{NOAA} USCG S. LEHMAN SEGMENT ST/ K 09 21-KU-005
 BIO L. SHARMAN LAND REPC. SCHOCH SUBDIVISION A (1 OF 1)
 TXON NOT PRESENT ADEC T. ELLSWORTH TIME 19:00 to 20:45
 EAM NO. 19 TIDE LEVEL +2 to +3 3/4 DATE 5/5/90
 EST. SUBDIVISION LENGTH: 2314 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 35 % B 45 % C 10 % P 10 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 40 % Hang 50 % Vert 10 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 30 m NO 1924 m
U 360

SURFACE OIL

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

PAYEMENT H 1 S 0 sq. m by 0 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT			DID YOU COLLECT DEBRIS?
	SM	MD	LG	
Logs				YES ☐ NO ☒
Vegetation				
Trash				
Debris				
				TYPE <u>---</u>
				#BAGS <u>---</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 - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UO	1	2	3	4	5	SU	U	M	U				
1	20					X	0-0	X							X				N	-	-	CP/PGC
							.															
							.															
							.															
							.															
							.															

COMMENTS This segment consists of 6 pocket beaches separated by rock points. The beaches were coarse grained, predominantly cobble-boulder-pebbles w/ some granules. The northernmost beach was unsurveyed as we could not walk around the point immediately to the south. Oiling consisted generally of random splatters. Most oiling on the segment was on Beach 3 in the SE corner. At this location, a 2x20 m band of AS+ST+CT was REVIEWED BAT DATE 10 MAY 90 observed, total cover < 1%, MS occurred as splatters 1-2 mm thick, 2x3 cm area.

OG G. HE 4A

SH H MAP

SEGMENT S: 29-21-KU-005

SUBDIVISION A

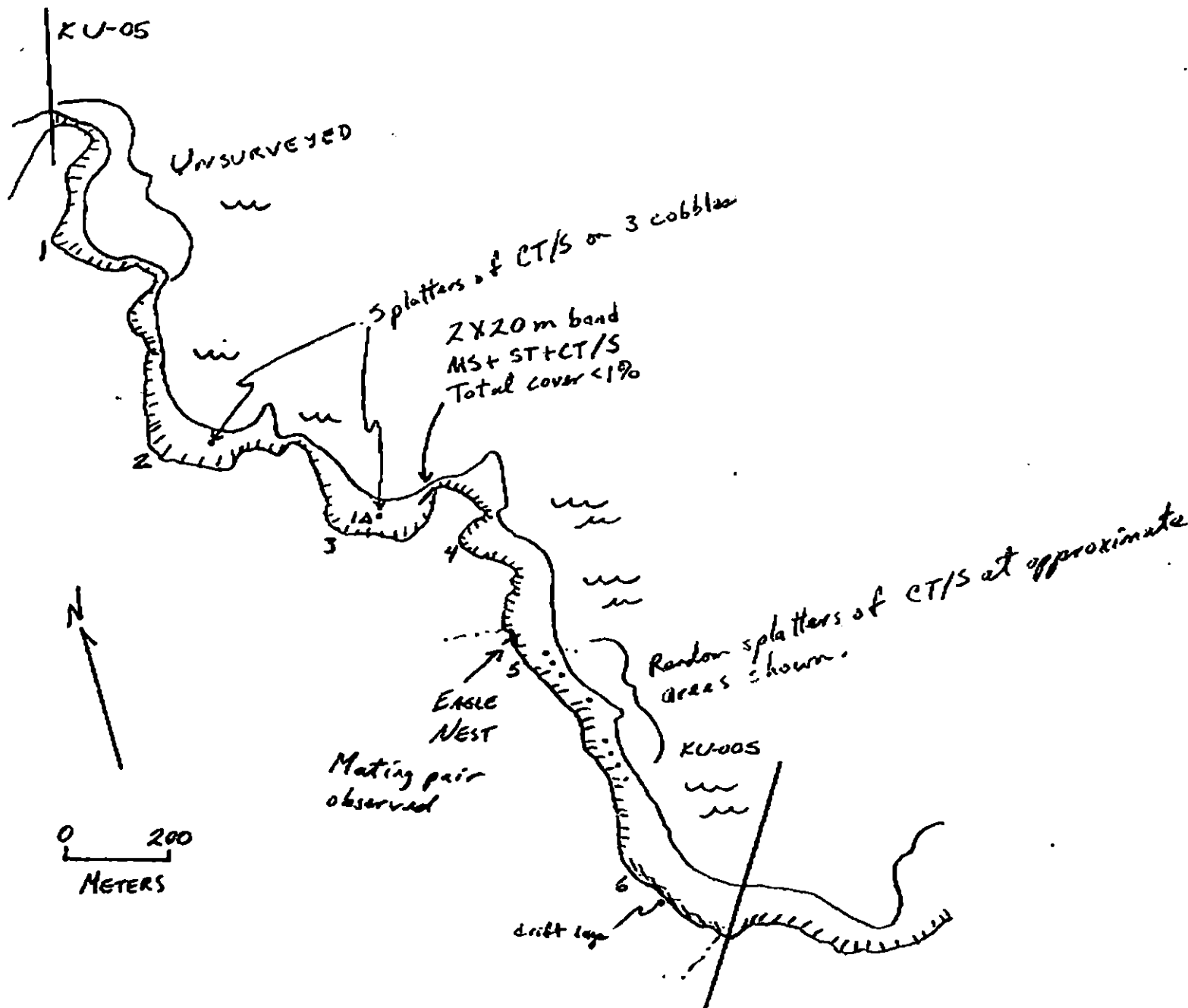
DATE 5/5/90

CHECKLIST

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

LEGEND

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



Oil Character Length (m): AP PO CV CT 20 ST 5 MS 5 PT TB FL NO 1924

REVISION: 93/26/90

SHORELINE ECOLOGICAL SUMMARY (Page 1 of 4)

REVISION: 02/22/1

Segment ST / KU-5 Subdivision A Date (mo / day / yr) 5/5/91

Time (24 hr) 1900-2030 Biologist SHARMAN

(A) Substrate type and % of segments: SUBDIV.
(1) Bedrock 35 (2) Boulder 45 (3) Cobble 10 (4) Pebble 10 (5) Sand (6) Silt

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

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

Photographs: Roll No.

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 (ANCELA, LITTORINA, LIMPAETS)

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: 15 white-winged noddies, 4 red-footed cormorants, 2 pairs hairywood ducks, 3 unidentified cormorants. 2 adult eagles with active nest (see 'Ecol. Considerations'). Uplands above cliffs have lots of mouse scat (some bear scat (last year)). Mouse have been browsing willows + some shrubs (moderate). 1 mourning quail callow in supratidal. This segment is a cliffy bank subtended generally by boulder beaches. (cont.)

Ecological Considerations:

Please see attached Eco. Maps. Note the 2 eagle nest locations (one definitely active - 2 incubating adults). We did not observe any seabird colony (identified on NOAA database but not on USFWS map). The segment is also identified as important and sensitive from the standpoint of having spawning, salmon fry rearing, subsistence harvesting, + land mammals. Extreme sensitivity should be placed on the active eagle nest. The area appears to be used by a variety of seabirds, and clearly the uplands are important to moose, brown bears, and probably wolves.

KU-5

Shoreline Ecological Summary (cont.)
(Page 2 of 4)

Shorman
5/3/90

General Comments (cont.):

+ gastropods

Barnacles, littorines, muscle, remora, and Fucus are all locally dense, particularly in the MTZ, but rare to sparse over the entire segment. MTZ tidal pools contain coralline algae (mainly Lithothamnium), Odonthellia (dominant), littorines, Katharine, Anthalgura spp., laminarians, tidepool sculpins, etc. The lower MTZ is experiencing very dense settlement of barnacle cyprids presently - this is the only beach where I have seen this spring's bigtime barnacle recruitment on the mainland coast since I arrived a week ago. These cyprids are presently successfully metamorphosing into spat. Few new spat have been observed on other mainland beaches thus far (by me), indicating to me that this is the seasonal spring settlement event (lagging ~3 weeks behind PWS).

Muscle + Fucus are also recruiting well where adults are established. The LTZ includes discontinuous removal bands along with locally abundant + large Balanus cariculus, 2 Picaster (first I've seen on this coast so far), and very abundant Enteromorpha. Beneath boulders are barnacles, littorines, pricklebacks, and amphipods - not a particularly rich sub-boulder biota. The amphipods, however, are brooding (recruitment). Amongst the boulders on the pocket beach, shells of Saxidomus (butter clam) are common. Subaerial intertidal rock surfaces are covered with barnacle molts.

KK

UU

—————

Possible
old nest in disrepair
(top of islet rock cliff)

active
nest
(upper cliff)
2 adults incubating

ECOLOGY MAP

(1 of 2)

KU-5

(Page 3 of 4)

ST + SR identified in NOAA database dated 4/24/90, but not documented on 1989 USFWS eagle nest/landbird Colony map. Eagle nests marked here not documented on 8/4/89 NPS eagle nest map.

1C (fry nursery area).

2M (herring spawning 4/15 - 6/30).

7JJ (salmon spawning 6/15 - 9/30).

7B (subsistence salmon harvesting 6/15 - 9/30).

9LM (land mammals).

XXX Wide

//// Medium

---- Narrow

TTTT Very Light

KU-5

Approx. Segment Length: 2314m

Map Key: AKP-KU-5a

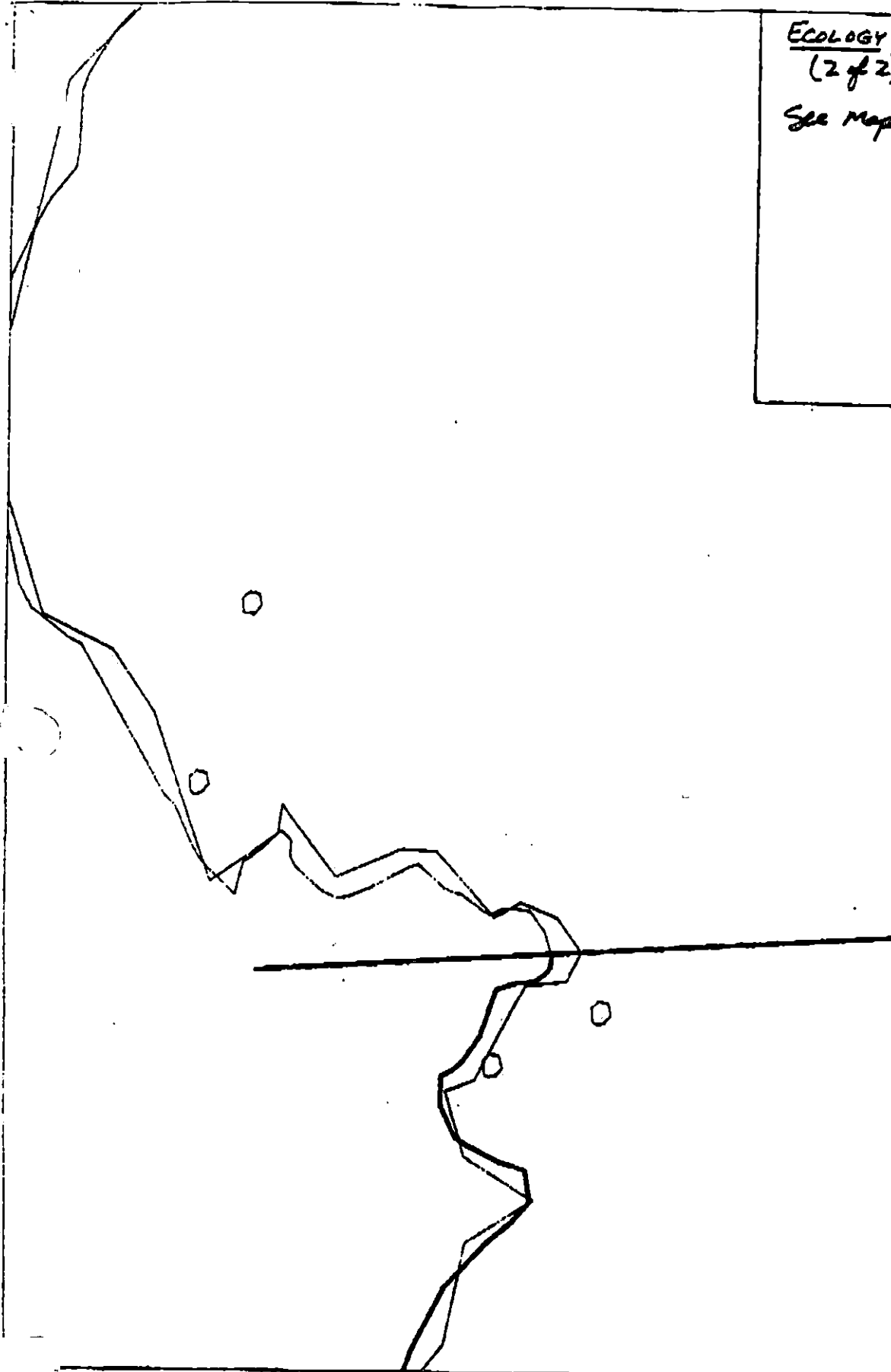
Name: _____

Date: _____

ECOLOGY MAP
(2 of 2)

KU-5
(Page 4 of 4)

See map page 1.



XXXX Wide

//// Medium

--- Narrow

TTTT Very narrow

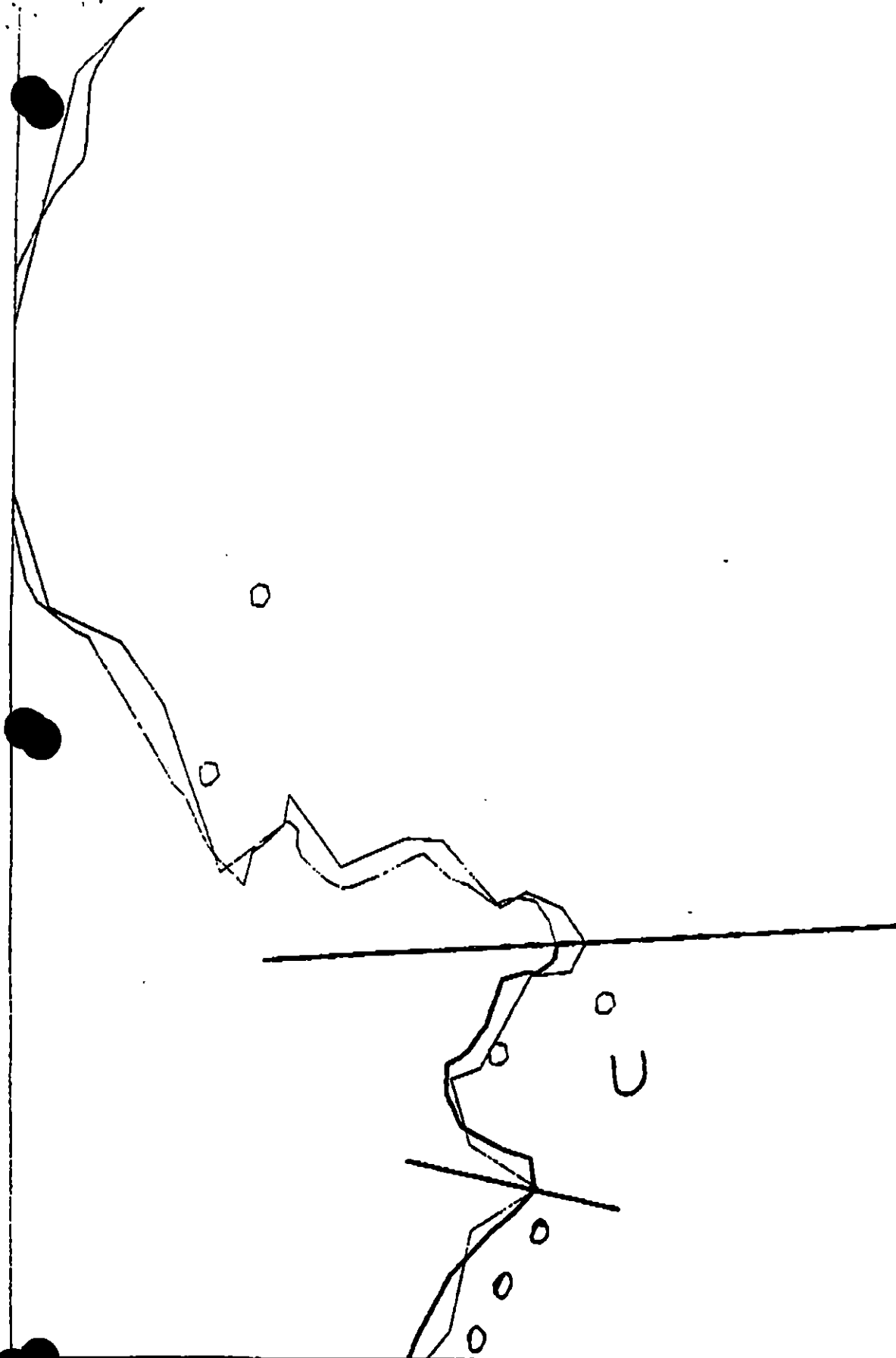
KU-5

Approx. Segment Length: 2314m

Map Key: AKP-KU-5b

Name: _____

Scale:



XXXX Wide

//// Medium

--- Narrow

TTTT Very light

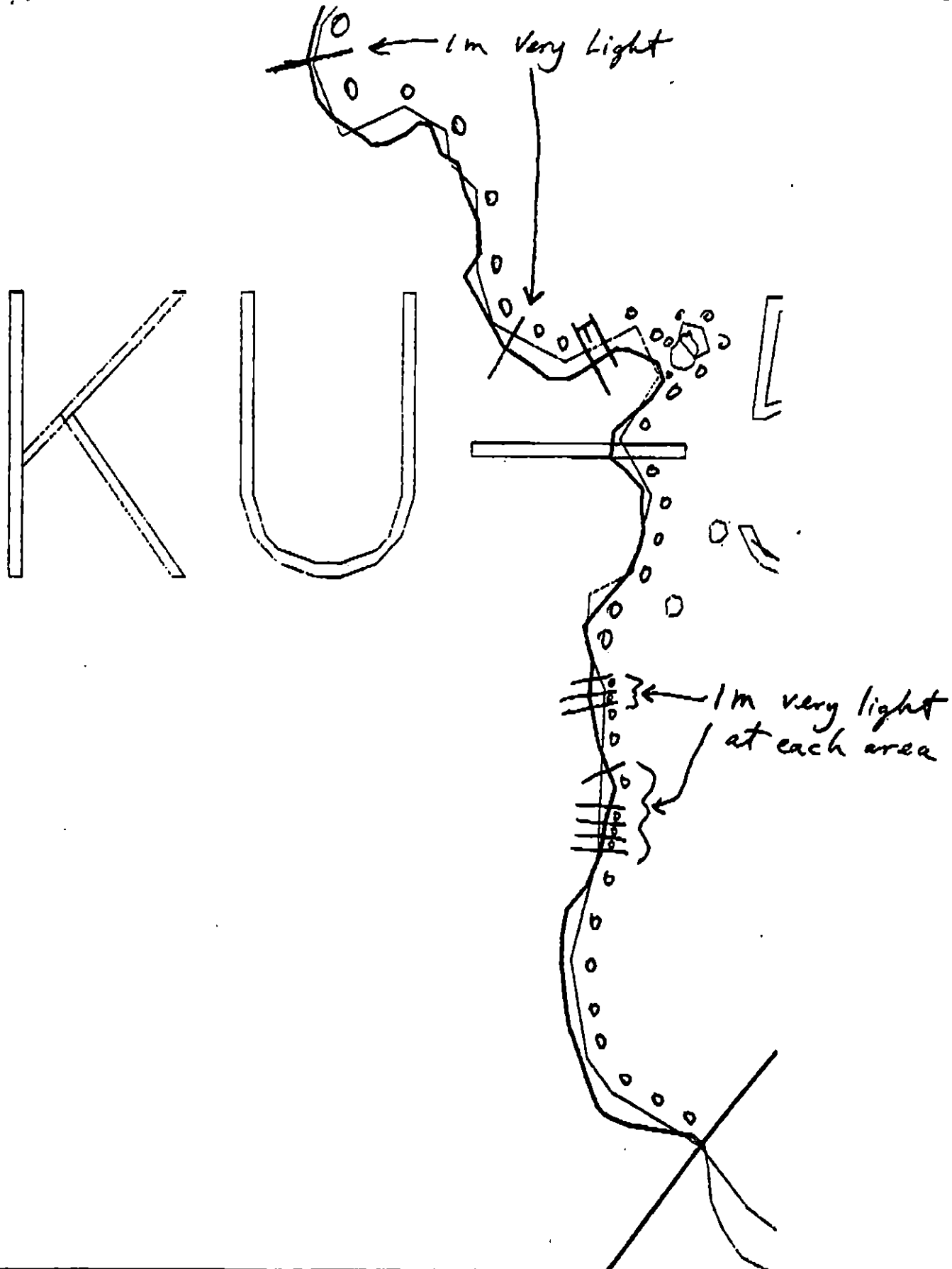
KU-5

Approx. Segment Length: 2314m

Map Key: AKP-KU-5b

Name: G. Heyman

Date: 5-5-90



XXXX Wide

//// Medium

--- Narrow

TTTT Very light

KU-5

Approx. Segment Length: 2314m

Map Key: AKP-KU-5a

Name: G. Heyman

Date: 5-5-90



SHORELINE EVALUATION

SEGMENT ST/ K09-21-KU-06 SUBDIVISION A (1 OF 1) DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Katmai National Park

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 214 m: Narrow 93 m: V. Light 3672 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of mousse and oiled debris (debris, trash, vegetation and logs) followed by bioremediation in the areas indicated on the sketch map. No specific working time constraints identified.

TAG COMMENTS: Monitors to assess logs

TAG APPROVAL DATE: May 5 1990

ADEC Art Weiner Art Weiner

EXXON Mark N. Whit Mark N. Whit

NOAA Gary Petrac Gary Petrac

USCG GA FELTER GA FELTER

FOSC: My L DATE: 5-12-90

Treat after 30 May. Twpol NOT approved. However, CUSTOMERID is approved. no beach burning of logs. Access to shoreline by boat only.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 K9-21 (KU-006) KK-000 SUBDIVISION: A DATE 4-24-90

USCG

NAMED D. Haven Jr, GMS, USCG

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Main areas that needs attention ^{are} ~~to~~ the 2 eastern most coves and even the 3rd cove to a less extent.

ADEC

NAME Francine T. Bennis

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

MANUAL CLEAN-UP IS RECOMMENDED FOR THE SIGNIFICANTLY OILED AREAS WITHIN THIS SEGMENT (PLEASE SEE SSAT MAP). FOUR SUCH AREAS EXIST (medium oil)

1. A 3m x 15m band of MS saturated fine sediments among cobbles, & 5x10m area of mouse deposited in supratidal zone grasses.

2. A 6m x 15m band of oil CF, & MS (Sketch map 2)

3. A 10m x 30m band + 15m x 35m band of MS, MS patches, & MS saturated fine sediments (Sketch map 3)

4. A 6m x 35m band of oil CF, CV, & MS

Manual treatment should include the use of shovels & trowels, & SSAT field maps should accompany crew. Other oil present is not recoverable by manual methods.

LAND MANAGER

NAME WILL TROYER

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

on sketch map #1 The first 4 areas go from east to west have considerable mouse that could be recovered by manual methods. The last two areas are sunk down in huge boulders and are probably not recoverable.

SHORELINE OILING SUMMARY

REVISION NO. 04/13/88

OG Acton USCG Haven SEGMENT ST/ K9-21-KU-6
 BIO Davis LAND REP NPS Trower, James SUBDIVISION K9-21-KU-6A (1 OF 2)
 EXXON Avery ADEC Bennis TIME 8:30 10/11/95
 EAM NO. 20 TIDE LEVEL -2.5 to +6 DATE 4/24/90
 ST. SUBDIVISION LENGTH: 3920 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 10 % G 10 % S 10 % M 0 % V 0 %
 SLOPE: Long 40 % Hang 40 % Vert 30 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 130 m N 100 m VL 3600 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	10	20	30	40	50	60	70	80	90	SU	U	M	U
ASPHALT PAVEMENT													
POOLED													
COVER		✓	✓	✓	✓						✓		
COAT		✓	✓	✓	✓					✓	✓		
STAIN		✓	✓	✓	✓					✓	✓		
MOUSSE		✓	✓				✓	✓			✓		
PATTIES													
TARBALLS													
FILM													
NO OIL											✓	✓	

PAVEMENT H F S C sq. m by 0 cmPATTIES / TARBALLS C 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 0

Photographs:

Roll No. ST-20-6 ST-20-7Frames 35,36 2-7

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				AN A	N A	S	W	V	SURFACE-SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UO	50	60	70	80	90	SU	U	M	U						
1	15					✓	.		✓							✓								C, P
2	20					✓	.		✓						✓									C, P
3	20					✓	.		✓						✓									C, P
4	10					✓	.		✓							✓								C, B
5	10					✓	.		✓							✓								C, B
6	10					✓	.		✓							✓								C, B

COMMENTS Oil was observed in narrow and medium category in the areas noted in sketch map #1 (230 m total). The remainder of the segment was categorized as very light oil, which consisted of very light, very occasional, very sporadic, splash on cobbles, rocks, or drift material in VSTZ or SITZ.

REVIEWED BAT DATE 25 Apr 90

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 04/13/88

SEGMENT ST/ K 9-21-KV-6 SUBDIVISION K 9-21-KV-6A (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	SHEEN (Y/N)	!	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1/2	3/4	5/8	1/4	1/2	1/4	BU	U	M	U				
7	10					✓	.		✓							✓							C, B
8	10					✓	.		✓							✓							C, B
9	20					✓	.		✓							✓							C, P
10	20					✓	.		✓							✓							C, P
							.																
							.																
							.																
							.																
							.																
							.																
							.																
							.																
							.																
							.																
							.																
							.																

COMMENTS

REVIEWED BAC DATE 25 Apr 90

00 Ad _____

SEGMENT ST/ K9-21-KJ-6

SUBDIVISION K9-21-KJ-6A

DATE 9/24/90

SKETCH MAP

CHECKLIST

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

LEGEND

- 1 Δ
PR - No Subsurface Oil
- 2 Δ
PR - Subsurface Oil
- CT/C

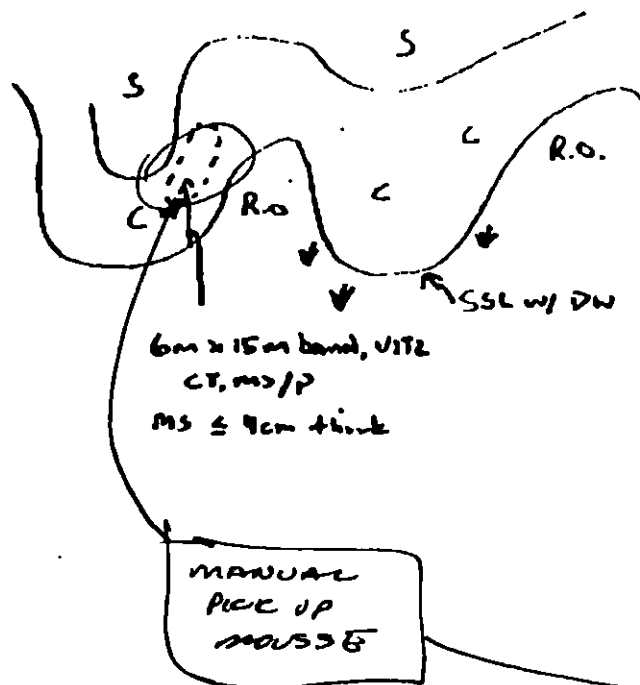
Continuous Distribution
- CT/B

Broken Distribution
- CT/P

Patchy Distribution
- CT/S

Splashed Distribution
- $\odot \Rightarrow$
Oil Vegetation
- 1 $\Rightarrow$
Photo location, direction, and number

Sketch Map #2
N $\uparrow$ 1cm = 10m



Sketch Map #3
N $\uparrow$ 1cm = 10m

BOREMEDITE

10m x 30m band
ST, CT, CV, P & B
ms/p
ms $\leq$ 4cm thick
VITZ

15m x 35m
ST, CT, CV, ms/p
ms $\leq$ 4cm thick
VITZ

4m band
ms/p

SHORELINE ECOLOGICAL SUMMARY

REVISION: 002

Segment ST / K9-21 Subdivision KU-06 Date (mo / day / yr) 4/24/90Time (24 hr) 8:20 Biologist H. Davis

(A) Substrate type and % of segments:

(1) Bedrock 30 (2) Boulder 30 (3) Cobble 15 (4) Pebble 15 (5) Sand 10 (6) Silt —(B) Overall % cover of biota (% of segment): Dense 10% Moderate 50% Low 40% (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-20-6/ST-20-7Frames 35, 36/2-7

BARNACLES continuous along segment. Dense on rock outcroppings and lg. boulders.

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
4, 5, 6

MYTILUS small 2-3mm in upper intertidal over rocks. Patchy mats between cobbles.

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
4, 5, 6

GASTROPODS continuous limpet, Littorines. Small groups 20-30 Nudella.

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
4, 5, 6

FUCUS moderate, continuous patches

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
4, 5, 6

Wildlife Observations/ General Comments: Cormorant, Osprey, Osprey, Seals(?), Eagle pair and Harlequin ducks all feeding in the area. Red Fox seen in the low intertidal. Moose scat and tracks in the intertidal. Bear tracks in upper intertidal. In one area coastal barnacles were still alive and feeding.

Ecological Considerations: NONE. There are anabranching streams above and below this area.

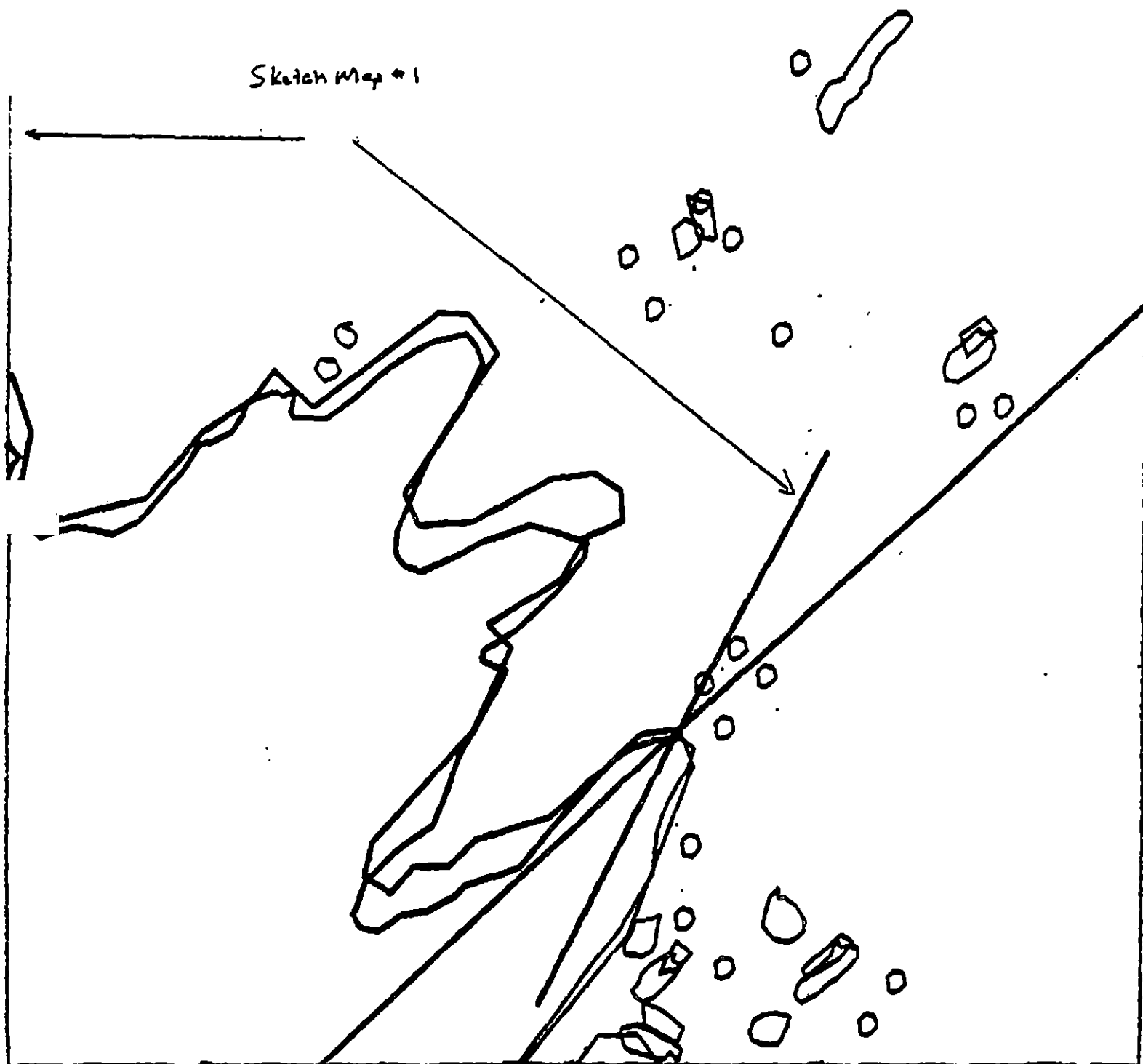
PHOTOGRAPHY LOG

ROLL NO. ST-20-7 FROM 4/24 TO _____
TEAM NO. 20 PWS / KENAI / KODIAK / AK. PENINSULA

FRAME NUMBER	TITLE
001	INTRODUCTION
002	PURPOSE AND SCOPE
003	LITERATURE REVIEW
004	MATERIALS AND METHODS
005	RESULTS
006	DISCUSSION
007	CONCLUSIONS
008	BIBLIOGRAPHY
009	APPENDICES
010	REFERENCES

[illegible]

Sketch Map #1



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

KU-6

Approx. Segment Length: 3950m



K9-21-KU-6A

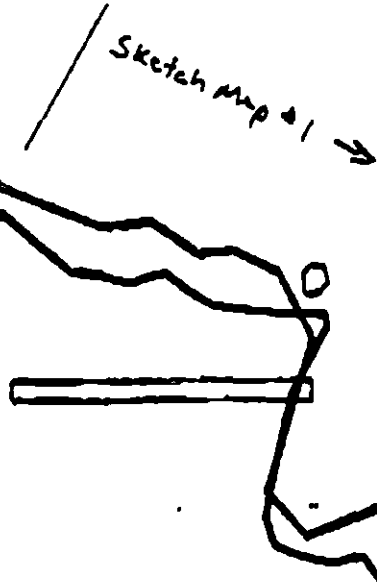
Map Key: AKP-KU-6b

Name: Acton

Date: 4-24-90

Date Entered:

KU



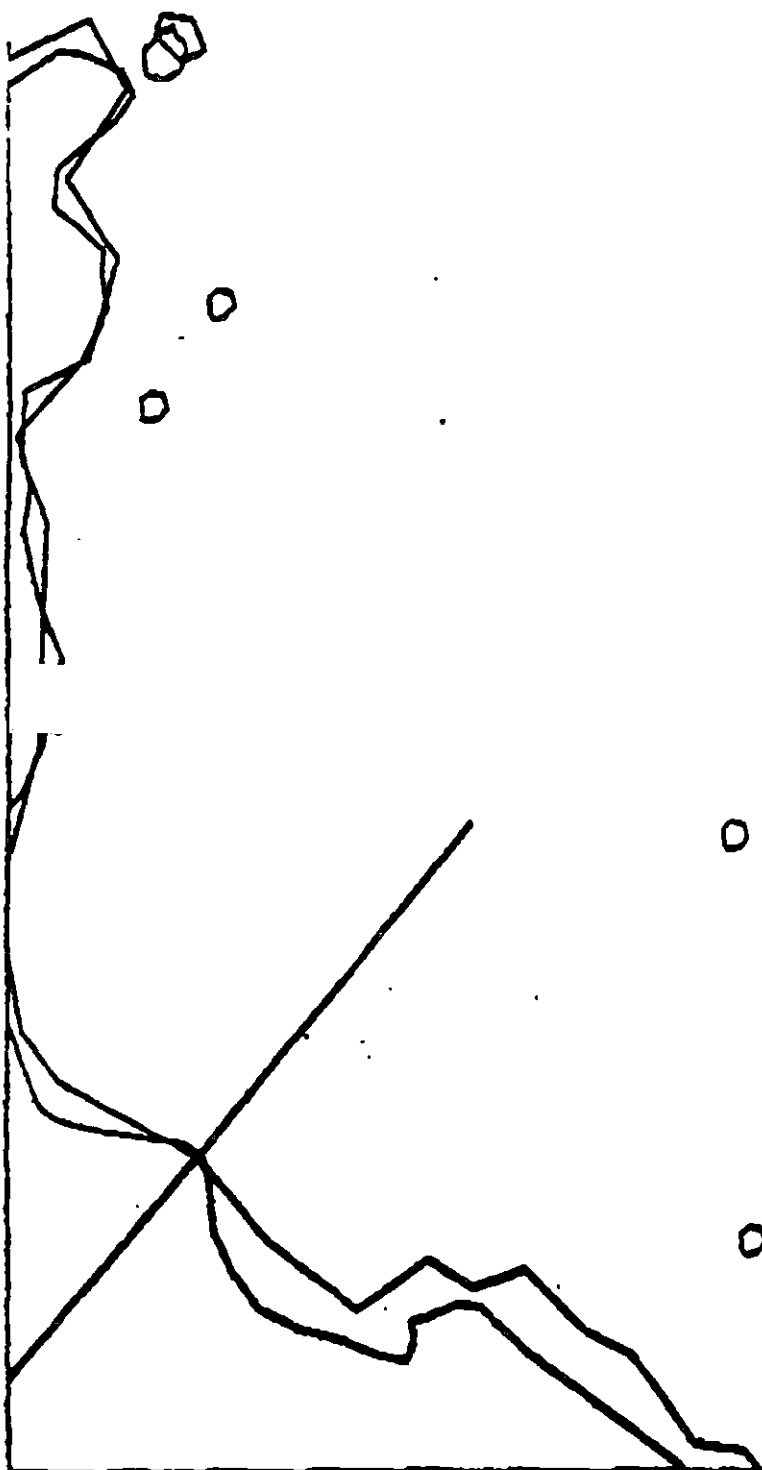
XXXX Wide
//// Medium
--- Narrow
TTTT Very Light
OOOO No Oil

KU-6

Approx. Segment Length: 3950m



K9-21-KU-6A
Map Key: ARP-KU-6a
Name: Acton
Date: 4-24-90
Data Entered:



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

KU-6

Approx. Segment Length: 3950m



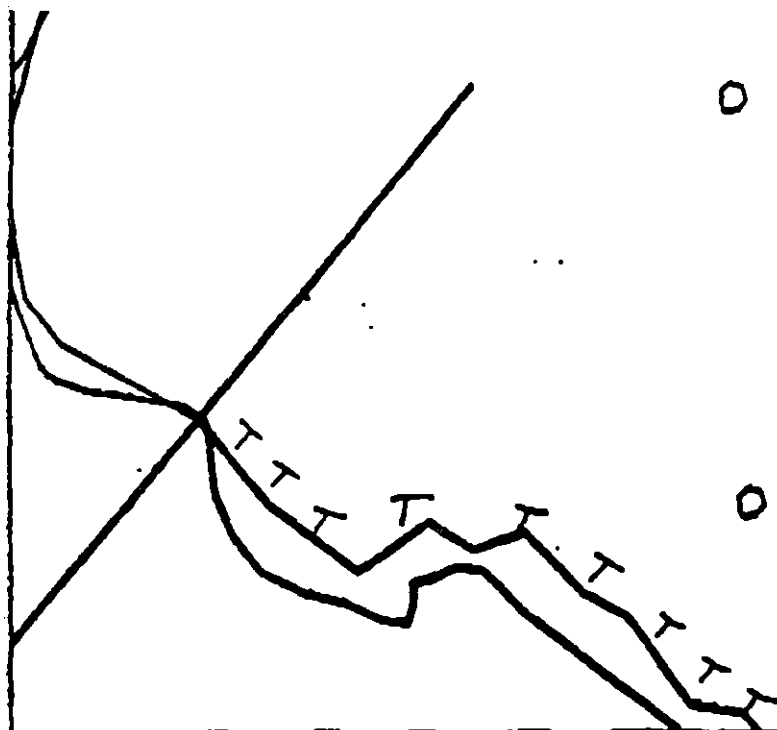
K9-21-KU-6A

Map Key: AKP-KU-6c

Name: Acian

Date: 4-24-90

Date Entered:



K9-21-KU-6A

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

KU-6

Approx. Segment Length: 3950m



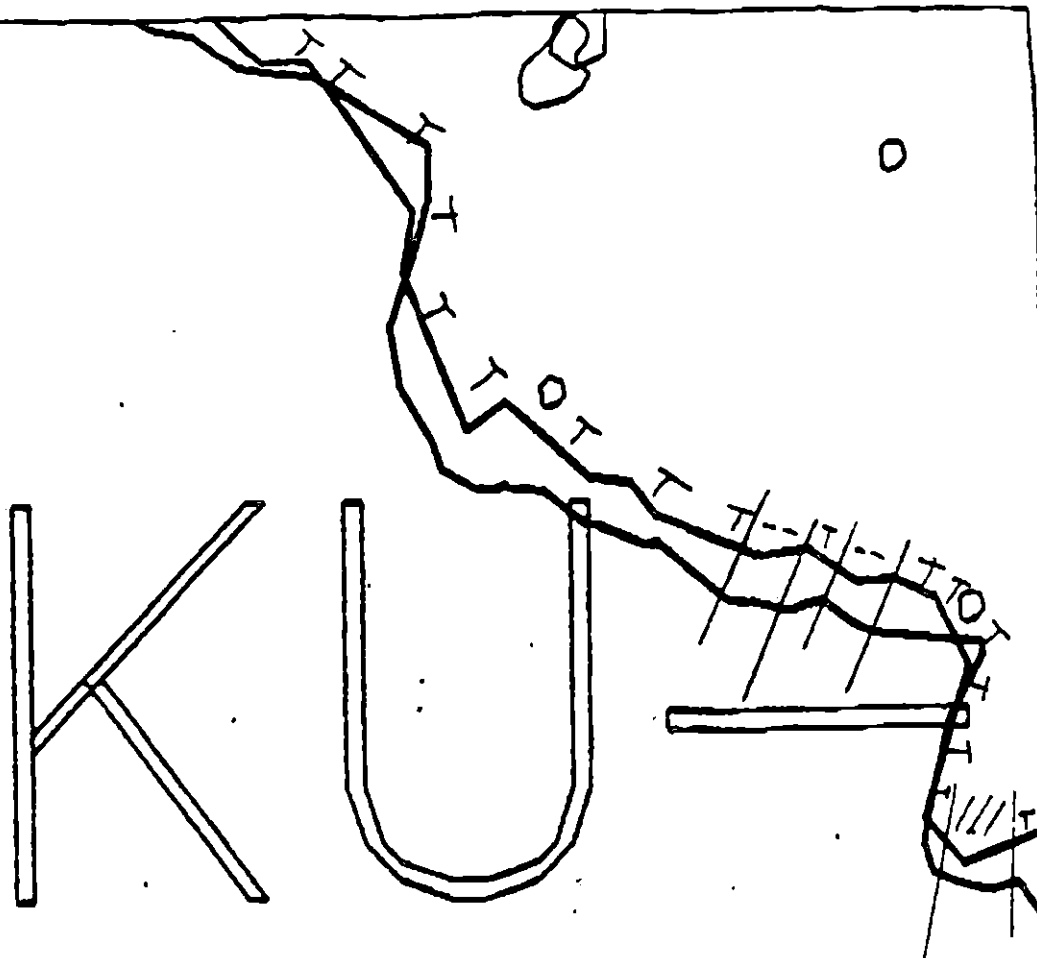
K9-21-KU-6A

Map Key: AKP-KU-6c

Name: Acton

Date: 4-24-90

Date Entered:



K9-21-KU-6A

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

KU-6

Approx. Segment Length: 3930m



K9-21-KU-6A

Map Key: AKP-KU-6a

Name: Acton

Date: 4-24-90

Date Entered:



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

KU-6

Approx. Segment Length: 3950m



METERS

KA-21-KU-6A

Map Key: ARP-KU-6b

Name: ActonDate: 4-24-90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-21-KU-06 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation	WORK PRIOR TO 7/1

*No Inpol - Use Customblen Only

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

7Z Subsistence: Salmon Harvesting

Closed to bioremediation after 7/1. No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

Access by boat only. Restrict boat and air traffic and beach disturbance to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

FOSC

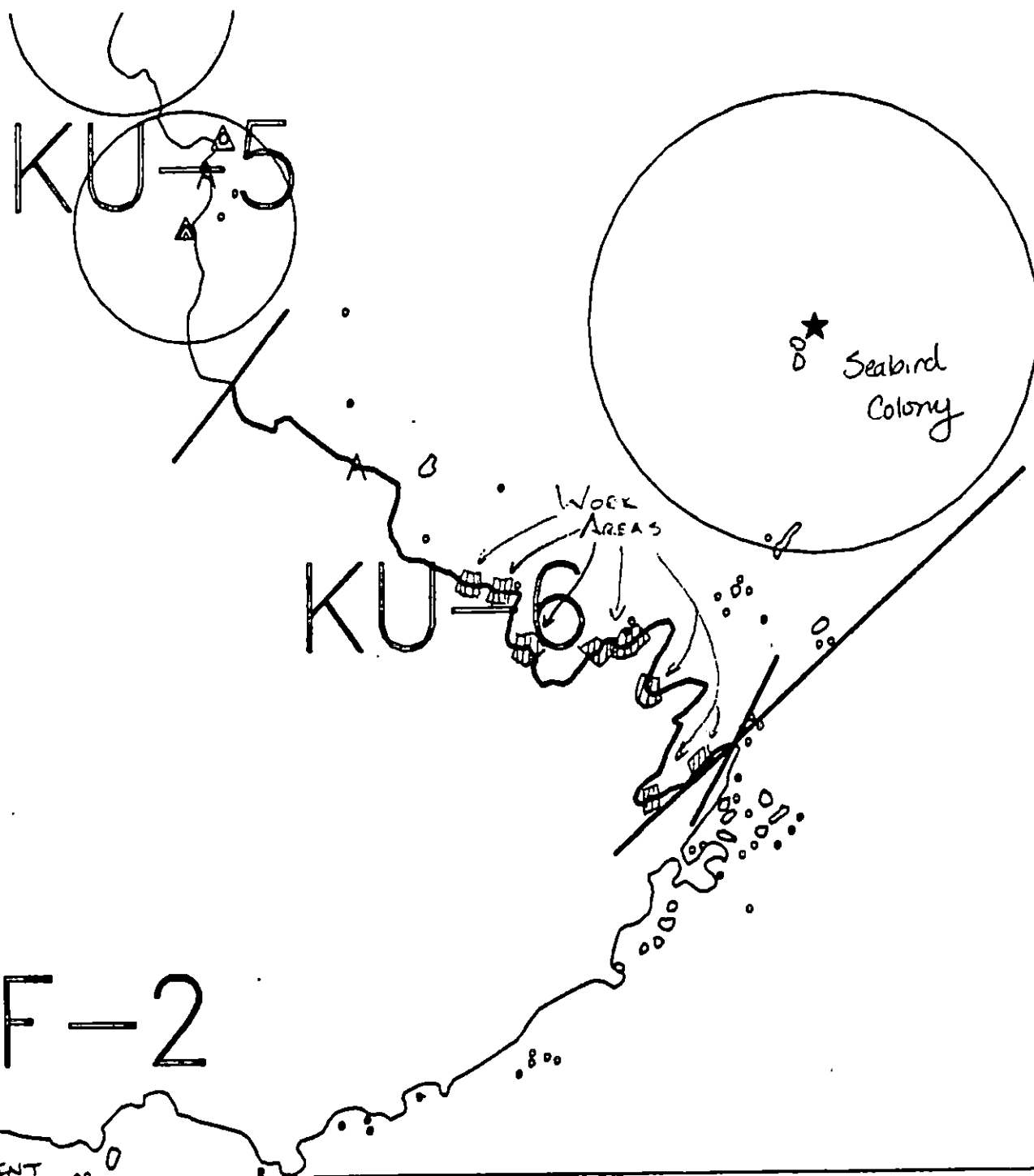
Date

6-15-90

Prepared by

Date

6/15/90



EATMENT



Exxon Company, USA
Map Key: AP-KU-6



ECOLOGY MAP
SEGMENT K9N-21 KU-6
SUBDIVISION A (L.O.I.)
METERS

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

SHORELINE EVALUATION

SEGMENT ST/ K09-22-CG-01 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
No specific ecological constraints identified.
Katmai National Park.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. H. H. H.

DATE: 5/5/90

OILING CATEGORIZATION:

Wide 90 m: Medium 227 m: Narrow 276 m: V.Light 91 m: No Oil 1211 m
Subsurface Oil Observed: Yes X No Maximum Depth 15 cm

RECOMMENDATIONS:

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

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

COMMENTS: Recommended treatment includes 1) manual pickup of mousse,
oiled debris and oiled logs in conjunction with pom poms followed by
2) bioremediation (access permitting) in areas indicated on attached
sketch map.

TAG COMMENTS: Monitors to assess logs.

TAG APPROVAL DATE: May 5 1990

ADEC Art Weiner

EXXON Mark N. Gilbert

NOAA Gary Petrac

USCG G.A. BEITER

Art Weiner

Mark N. Gilbert

Gary Petrac

G.A. BEITER

FOSC: Wing L

DATE: 5-12-90

Treat prior to 1 June or after 15 Aug.
Bioremediation is not approved. Access
shoal by boat only.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / K9-22 CG-001 SUBDIVISION: 1A DATE 4-21-90

USCG

NAMED D. D. Haven Jr. GM3 USCGR SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Concur fully with ADEC Rep.

ADEC

NAME Francine T. Bennis SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

MANUAL PICK-UP OF REMAINING OIL IS HIGHLY RECOMMENDED.

MAIN OIL BAN
IS IN LOW END
AREA

Main band of mousse/mousse saturated sediments is approximately 300 meter long, varying in width from 4 to 12 meters, patchy distribution but certainly collectable. Mousse is present in crevices & cracks of rock outcrop that extends into this baylet, it can be removed with trowels. Some oiled debris is present in supratidal zone to the east of main band of oil. There are isolated pockets of mousse saturated sediments visible along rock outcrops that border green filled bights. (Please see field map). Much of this is collectable, it should be removed.

LAND MANAGER NPS

NAME WILL TROYER

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

In general I concur with ADEC and U.S.C.G. the mousse in there and with some effort it would be possible to remove a significant amount of this material with pick and shovel.

SHORELINE OILING SUMMARY

REVISION NO 06-12-90

OG Acton USCG Haven SEGMENT ST/ K9-22-66-1
 BIO Davis LAND REP NPS Taylor, James SUBDIVISION K9-22-66-1A (1 OF 1)
 EXXON Avery ADEC Berlin TIME 3:15 to 6:30
 TEAM NO. 20 TIDE LEVEL +6 to +1 DATE 4 / 21 / 90
 EST. SUBDIVISION LENGTH: 1555 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: NW to SE
 SURFACE SEDIMENTS: R 20 % B 30 % C 20 % P 10 % G 10 % S 10 % M 0 % V 0 %
 SLOPE: Long 70 % Hang 20 % Vert 10 % WAVE EXPOSURE: ☐ Low ☒ Med ☒ High
 OIL CATEGORY LENGTH: W 100 m M 200 m N 100 m VL 60 m NO 1105 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										✓		✓	✓

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

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

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE 1#BAGS 0

Photographs:

Roll No. ST-20-6Frames 2-18

see * below

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A	N	A	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	SU	U	M	L						
1	10					✓	-		✓							✓						U		B.R
2	10					✓	-		✓							✓						N		B.R
3	10					✓	-		✓							✓						N		B.R
4	10					✓	-		✓							✓						N		B.R
5	20					✓	-		✓							✓						N		C.P
6	20					✓	-		✓							✓						N		P.G

COMMENTS Main oil accumulation is in the baylet depicted in sketch map. Oiled band is present in VITZ varying in width from approx 12m in SE to 6m in NW end of baylet. At either end of segment, oil was observed up in recesses in the upper VITZ. Baylet is empty of water at minus tide.

pits,

* Sheen was observed in some of the pits but was most likely due to oil residue falling into pit from coarse surface sediments. Sheen in Pit 13 was from subsurface sediments.

Pits were dry in areas where surface oiling was observed.

REVIEWED EAT DATE 23 Nov 90

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 06/13/90

SEGMENT ST/ K9-22-66-7 SUBDIVISION K9-22-66-1A (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	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SP	BP	WP	ST	EL	SB	LT	ST	SU	U	M	LI				
7	25					✓	.		✓									✓					N		P, G, S
8	25					✓	.		✓									✓					N		P, G, S
9	30					✓	.		✓									✓					N		P, G, S
10	10					✓	.		✓									✓					N		R, B
11	5					✓	.		✓									✓					N		R, B
12	10					✓	.		✓									✓					N		R, B
13	20		✓				0-15	✓							✓			✓					Y		P, G, S
14	10					✓	.		✓									✓					N		R, B
15	10					✓	.		✓									✓					N		R, B
							.																		
							.																		
							.																		
							.																		
							.																		

COMMENTS

REVIEWED BAT DATE 23 Apr 90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 00

Segment ST / K09-22 Subdivision CG - 01 Date (mo / day / yr) 4 / 21 / 90

Time (24 hr) 14:30 Biologist H. Davis

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

(B) Overall % cover of biota (% of segment): Dense 30% Moderate 30% Low 40% (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)
Gastropods < 2 mm
Mytilus < 5 mm

Photographs:
Roll No. ST-20-6

Frames 2-18

BARNACLES *Continuously sparse with patches of Dense, Moderate, Rare*

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

NOT PRESENT
4, 5, 6

MYTILUS *Very Patchy*

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

GASTROPODS *continuous moderate-sparse. Patches of dense littorina in upper, dense mid mucella in mid-upper.*

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

FUCUS *Very Patchy*

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

NOT PRESENT
4, 5, 6

Wildlife Observations/ General Comments: 2 osprey nesters, Glaucous-winged gull, Harlequin ducks and two adult eagles. The osprey nesters were feeding in the L.T.Z. Relatively high energy area. Small boulders, cobbles. Plants - animals in more protected areas and in bedrock pools. Bluffs with grass, willow and alder. Nest in alder (Thrush?) Rock outcropping with more species diversity than cobbles area. Oil reached to the upper MTZ, in some areas, but was mostly located above biota.

Ecological Considerations: Gull rookeries in the area. Two adult eagles out on pinnacles, possibly nesting. No nest seen. No anadromous streams in the section. Pinfish, Chum and Sockeye spawn in streams above and below the segments.

DATE 4/21/90 TIME 15:00 - 18:00 TIDE HEIGHT +6 - +11 = BEDROCK 2 = BOULDER 3 = COBBLE 5 = SAND 6 = SILT
4 = PEBBLES

FLORA:

SPECIES	UITZ	MITZ	LITZ	COMMENTS
BOSSIELLA/CORALLINA				
CALLIARTHRON/CORALLINA	1	1	1,2	In Pools
CLADOPHORA SPP	-	-	-	
COSTARIA SPP	-	-	-	Found in drift
ENDOCLADIA MURICATA	1,2	1,2		
FILAMENTOUS GREENS	2,3	2		
FILAMENTOUS REDS		1		On Rock
OLOIOPELTIS FURCATA	-	-	-	
HALOSACCION GLANDIFORME	1,2	1,2		
LAMINARIA SPP	-	-	-	In drift
LITHOTHAMNION	1	1,2		
NEREOCYSTIS SPP				as drift on easterly side of shore
PORPHYRA SPP	-	-	-	
RALPHISIA/HILDENBRANDIA/P. ~~tridactyla~~				
RHODOMELA LARX	-	-	-	
RHOBOMENIA PALMATA	-	-	-	
SCYTOSIPHON SPP	1,2	1,2	-	Vertical faces.
ULVA SPP	1	1,2,3	(5 ft)	Found in pools and floating in cove
ZOSTERA MARINA	-	-	-	
ENTEROMORPHA			5,3	Found as drifting tufts in cove
<i>Oderthelia elongata</i>	1,2	1,2		on open points in pools

FAUNA:

ANTHOPELURA SPP <i>communis</i>	1	1	1,2	in crevices and pools
(SEM) BALUNUS CARIOSUS			1,2	
B. GLANDULA	1,2,3	1,2,3	1,2,3	
BRYOZOANS				
CHITONS (other than K. TUNICATA)				
CLAMS				Shells tossed up in storm
CRABS				See Pagurus
DERMASTERIAS IMBRICATA				
KATHARINA TUNICATA	1	1	1	crevices, pools
LEPTASTERIAS HEXACTES				
LIMPETS	1,2,3	1,2,3	1,2,3	large nitidulids
LITTORINA SPP	1,2,3,4	1,2,3,4	1,2,3	continuous across the intertidal
NUCELLA SPP				
PAGURUS SPP	1,2	1,2		In pools under boulders + cobbles
PISASTER OCHRACEUS	-	-	-	
POLYCHAETES	-	-	-	
PYCNOPODIA HELIANTHOIDES	-	-	-	
SEARLESIA DIRA		1		only one seen
SERPULIDS	-	-	-	
SIPHONARIA THERSITES	-	-	-	
TEALIA	1	1,2		Pools, crevices and moist areas
<i>Epiactis</i>	1	1		In wet crevices - tide pools

OG A

SEGMENT ST/ K9-22-CG-1

SUBDIVISION K9-22-CG-1A

DATE 4/21/90

CHECKLIST

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

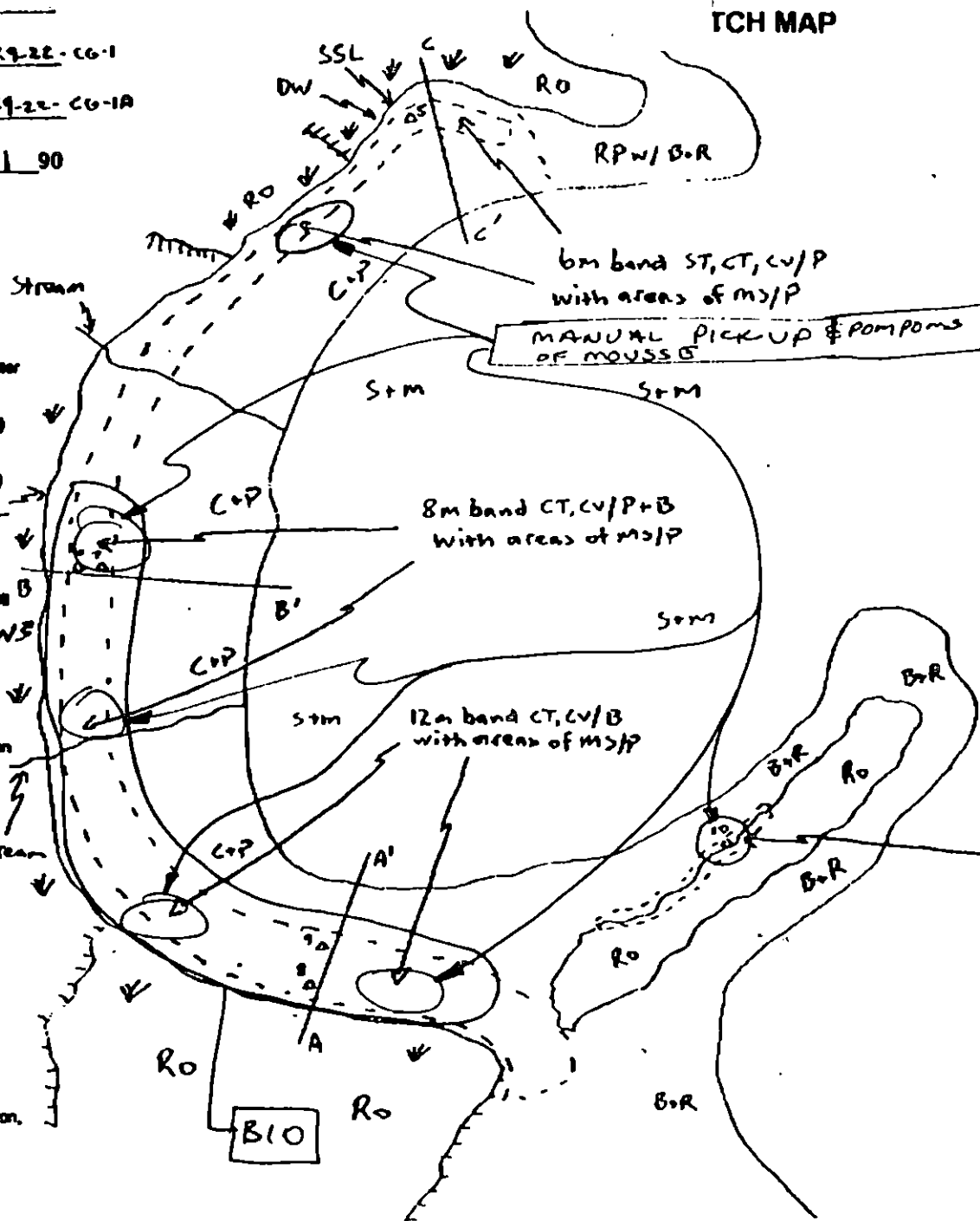
LEGEND

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

TCH MAP

Approx Scale

1cm $\approx$ 15m



M3/P observed was in between and under cobbles and boulders w/ thickness up to 4-5cm
- no oil was observed in the subsurface in any pits in this sketch map area

1m x 25m band ST, CT/S and M3/P on wall of RO

During a minus tide this baylet has no standing water and is comprised of S+M sediments.

Oil Character Length (m): AP 0 PO 0 CV 300 CT 300 ST 300 MS 300 PT 0 TB 0 FL 0 NO 1105

REVISION: 02/2000

OG Ag

SEGMENT ST/ K9-22-CG-1

SUBDIVISION K9-22-CG-1A

DATE 4 / 21 / 90

SKETCH MAP

A-A' $\approx$ 25 m

A'

CHECKLIST

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

LEGEND

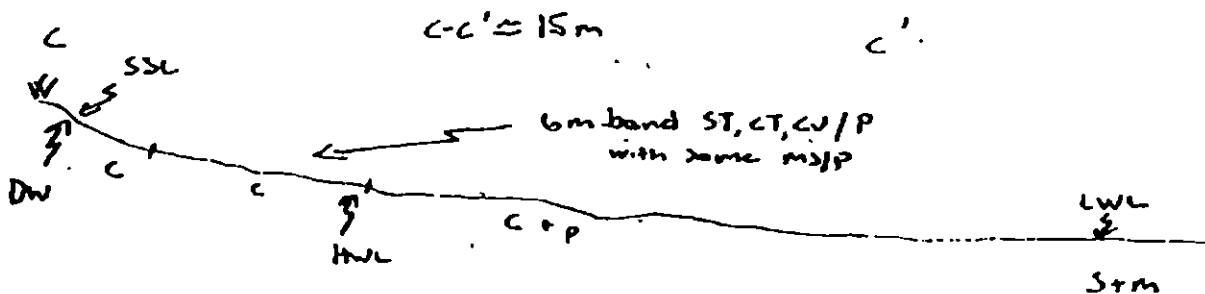
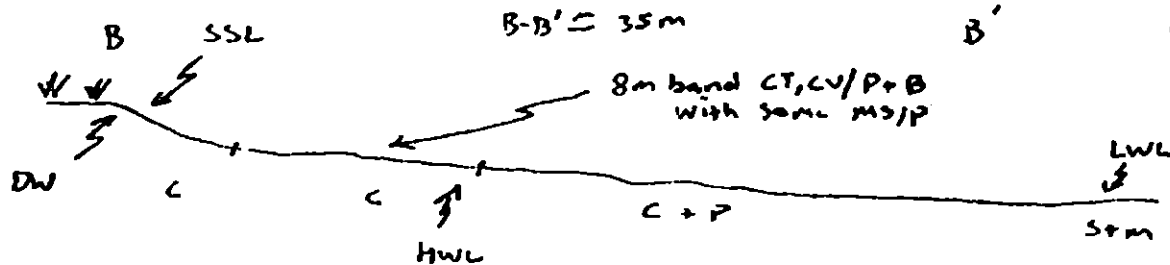
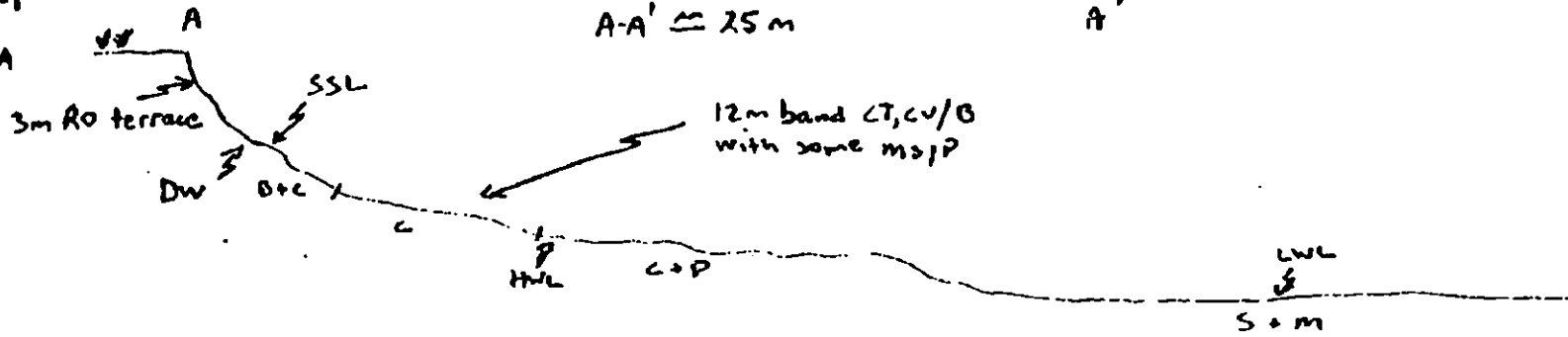
- 1 Δ
PI - No Subsurface Oil
- 2 Δ
PI - Subsurface Oil
- CT/C

Continuous Distribution
- CT/B

Broken Distribution
- CT/P

Pecchy Distribution
- CT/S

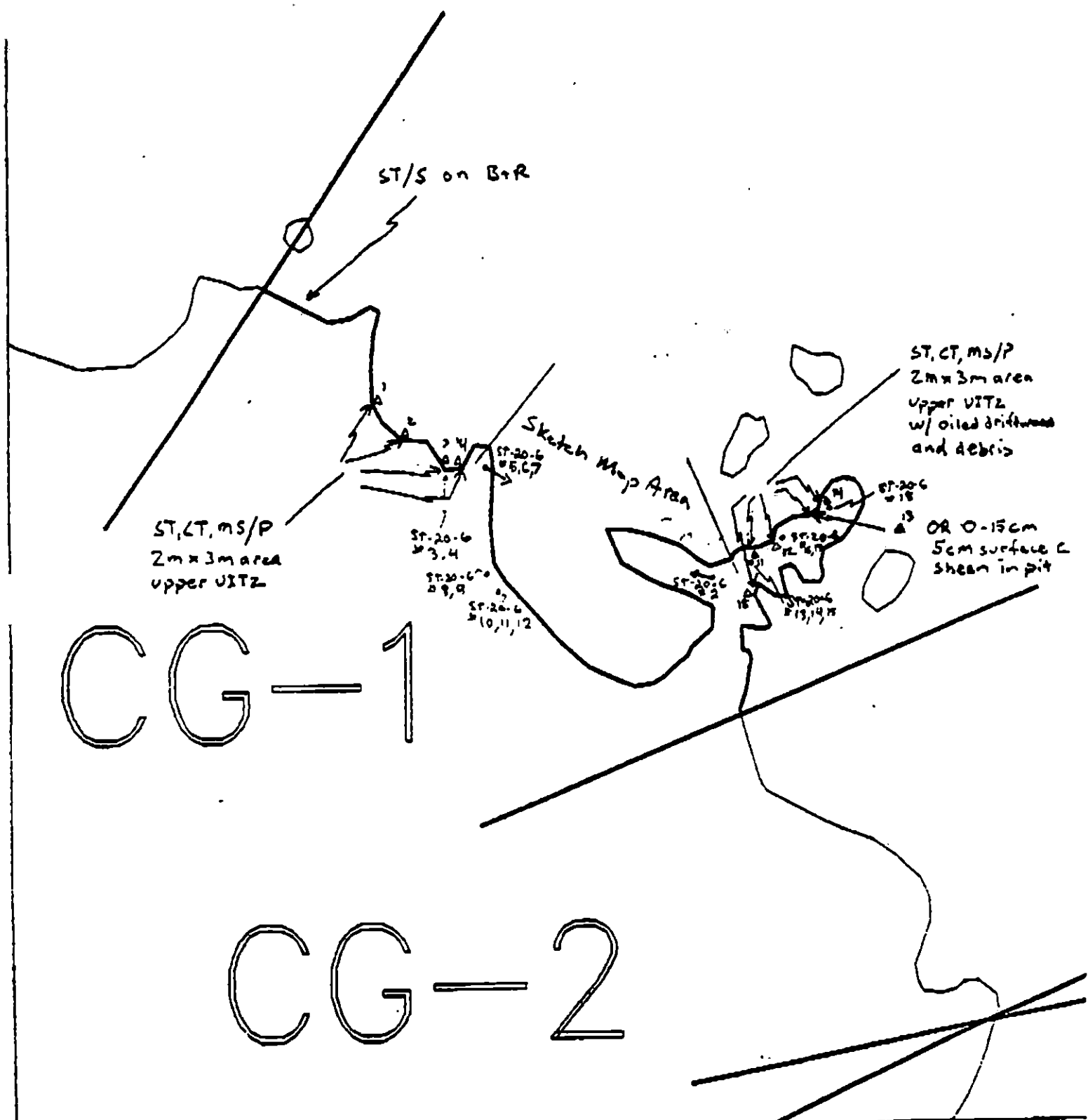
Splashed Distribution
- $\odot$
Oiled Vegetation
- $\odot$
Photo location, direction, and number



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

REVISION 02/2000

15:10 FROM EXAM NUBIAH TB 15045771 P.07



XXXX Wide

/// Medium

----- Narrow

TTTT Very Light

0000 No Oil

CG-1

ADEC Segment Length: 1825m



K9-22-CG-1A

Map Key: GOA-50

Name: Acton

Date: 4-21-90

Data Entered:

K9-22-CG-1A

CG-1

CG-2

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

CG-1

ADEC Segment Length: 1825m

0 100 200 300
 METERS

K9-22-CG-1A

Map Key: GOA-50

Name: ActonDate: 4-21-90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-22-CG-01 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	WORK AFTER 8/15
Other Approved Treatment (Oil Snares)	WORK AFTER 8/15

No bioremediation as per FOSC

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

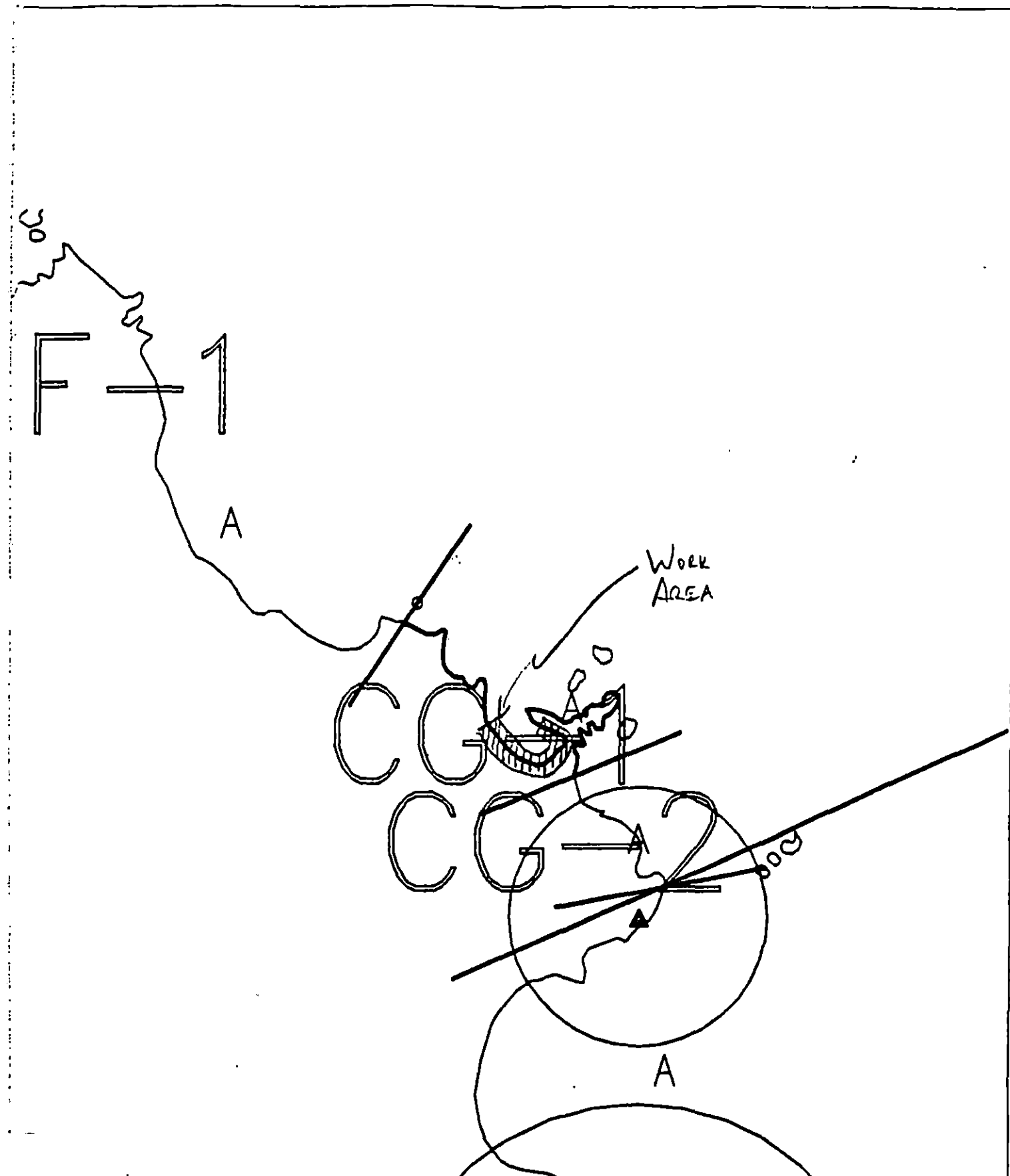
No specific ecological constraints identified for manual pickup or other approved treatment (oil snares).

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC [Signature] Date 6-19-90

Prepared by [Signature] Date 6/16/90



Exxon Company, USA
Map Key: AKP-00-1



ECOLOGY MAP
SEGMENT K9N-22 CG-1
SUBDIVISION A (Lot 1)
METERS

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

Revision 1
06/27/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-22-CG-01 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup

~~WORK AFTER 8/15~~ OPEN

Other Approved Treatment
(Oil Snares)

~~WORK AFTER 8/15~~ OPEN

No bioremediation as per FOSC

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

No specific ecological constraints identified for manual pickup or other approved treatment (oil snares).

ADDENDUM REVISED
PER CONVERSATION WITH
DAN HAMSON (NPS) AND
BUZZ ROME (USCG).

Rex Coulter 06/27/90

Concur - DD Rome 6/29/90

Appvd - [Signature] 6/29/90

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

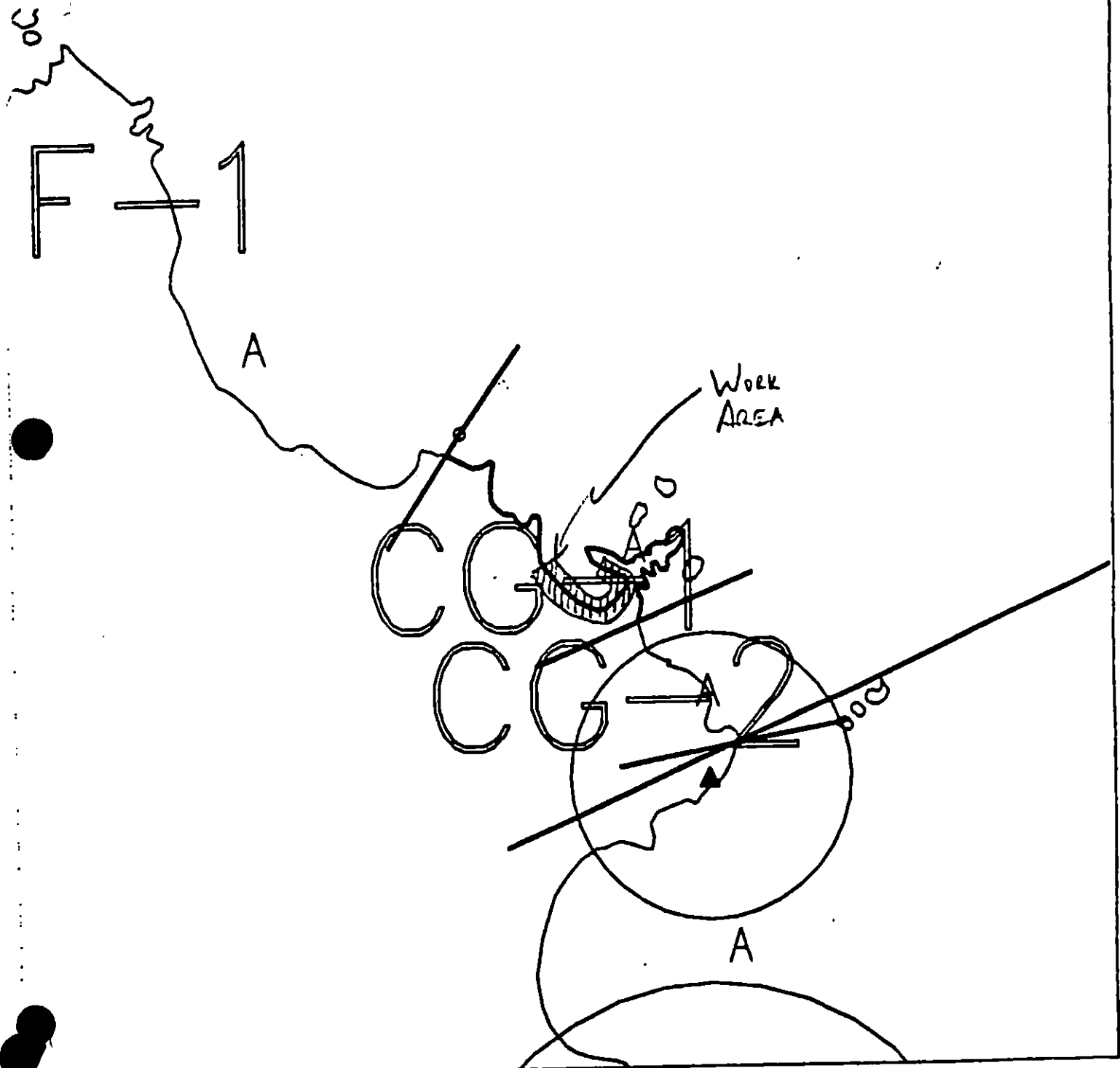
Date

6-19-90

Prepared by

Date

6/16/90



Exxon Company, USA



ECOLOGY MAP
 SEGMENT K9N-22 CG-1
 SUBDIVISION A (.../.../...)
 UTTEBC

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

SHORELINE EVALUATION

SEGMENT ST/ K09-22-CG-02 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N, 3P Harbor seal and sea lion pupping (5/10 to 6/30)

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

4LL National Parks

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: A. Kevin M. McKean

DATE: 5/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 13 m: No Oil 557 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

☒ No Treatment Recommended
☐ Treatment Recommended
☐ Manual Pickup
☐ Bioremediation
☐ Tarmat Removal

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

COMMENTS:

AG COMMENTS:

TAG APPROVAL DATE: 5/1/90
ADEC Art Weiner Art Weiner
EXXON Art Teln Art Teln
NOAA Gary Petros Gary Petros
USCG KENNETH KEENE Kenneth Keene

FOSC:

DATE: 5-9-60

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 unholed 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 (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 (8/1 to 9/30)
- 7HH** Finfish harvesting
- 7H** 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 / K9.22 CG002 SUBDIVISION: A DATE 4.21.90USCGNAME DD. Haven Jr., GM3, USCGR SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Not enough oil to justify cleanup. Only one small patch of mousse

ADECNAME Francine J. Bennis SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Only a very small amount of mousse is present in UITE, in the accessible area of this segment.

LAND MANAGER NPSNAME WILL TROYER SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

only one or two small spots of mousse found in this segment of high energy beach. Probably not possible to remove small amount to improve beach.

SHORELINE OILING SUMMARY

REVISION NO. 04 12 00

OG Aston USCG Haven SEGMENT ST/ K9-22-C6-2
 BIO Davis LAND REP NPS Troyer, James SUBDIVISION K9-22-C6-2A(1 OF 1)
 EXXON Axon ADEC Beavis TIME 6:30 to 7:35
 TEAM NO. 20 TIDE LEVEL +1 to +3 DATE 4/21/90
 EST. SUBDIVISION LENGTH: 541 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 20 % C 20 % P 20 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 40 % Hang 20 % Vert 40 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 1 m NO 540 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	R	B	C	P	SW	W	M	N	VL	SU	U	M	U
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT													
STAIN													
MOUSSE				✓			✓			✓			
PATTIES													
TARBALLS													
FILM													
NO OIL										✓	✓	✓	

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE —#BAGS 0

Photographs:

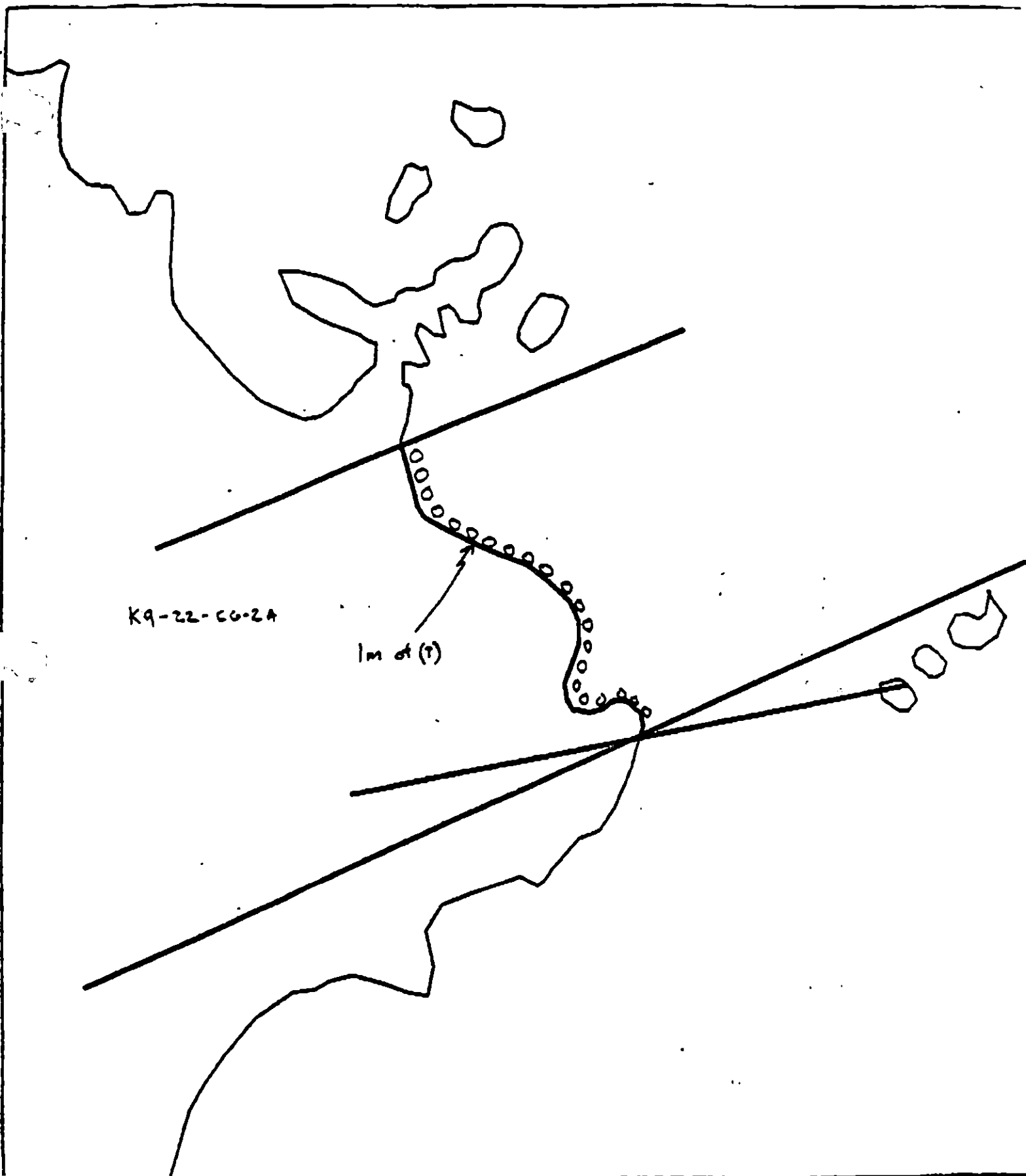
Roll No. —Frames —

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				AN A	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SW	W	M	N	VL	SU	U	M	U				
1	20					✓	.		✓							✓				N		PGS
2	25					✓	.		✓							✓				N		PGS
3	20					✓	.		✓							✓				N		PGS
							.															
							.															
							.															

COMMENTS NW portion (200 m) was surveyed on foot. One cobb w/ mousse was observed in the SSL. The SE portion (341 m) was surveyed by helo due to cliffs and wave exposure.

REVIEWED BAT DATE 23 Apr 90



XXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

CG-2

ADEC Segment Length: 541m

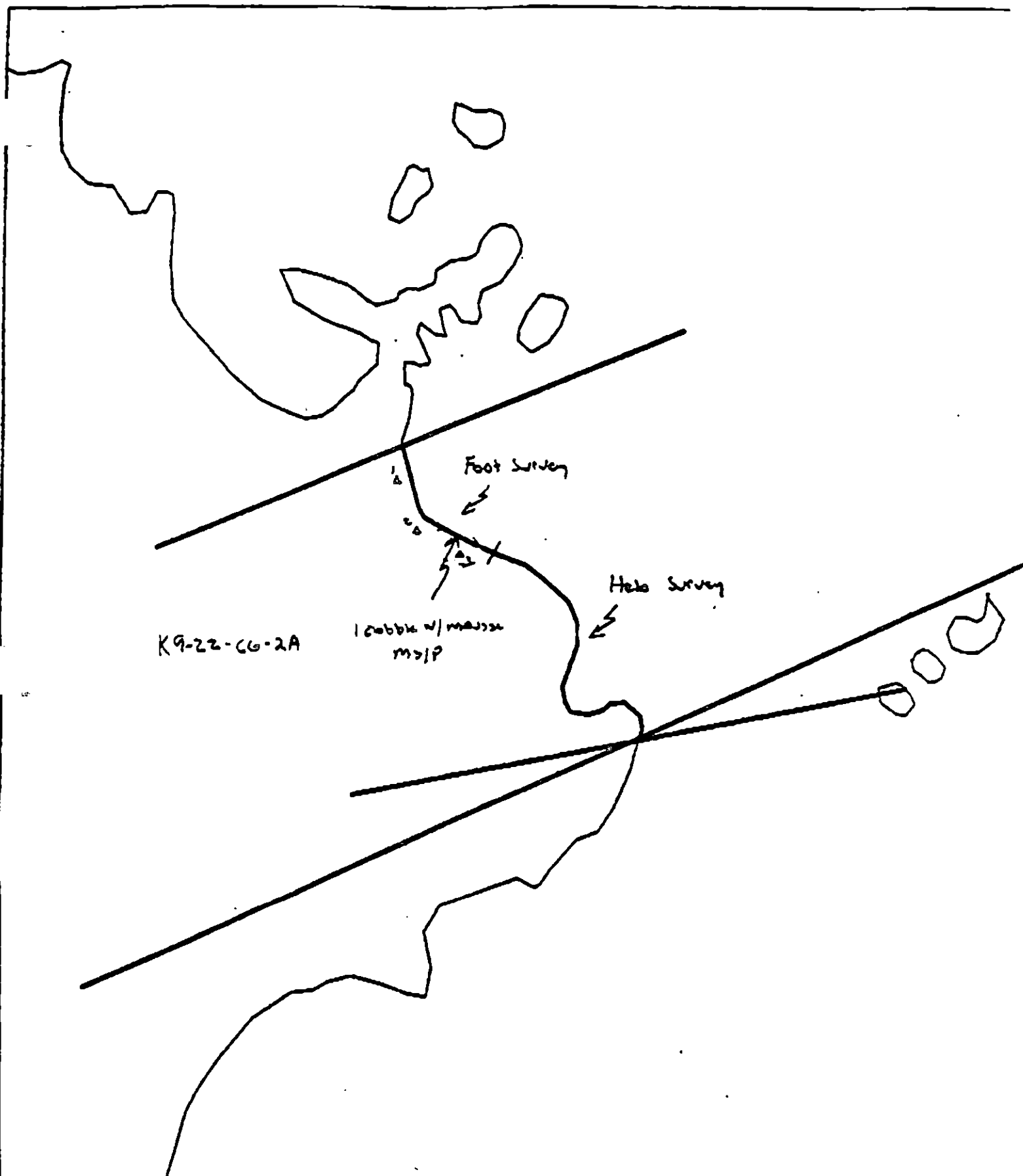


K9-22-CG-2A

Map Key: GOA-51

Name: ActonDate: 4-22-90

Data Entered:



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

CG-2

ADEC Segment Length: 541m



K9-22-CG-2A

Map Key: 60A-51

Name: Acton

Date: 4-2-90

Data Entered:

DATE 4/21/90 TIME 18:00 - 19:00 TIDE HEIGHT +1 - +31 = BEDROCK 2 = BOULDER 3 = COBBLE 5 = SAND 6 = SILT
4 = Pebbles

	SPECIES	UITZ	MITZ	LITZ	COMMENTS
FLORA:	BOSSIELLA/CORALLINA	-	1	-	species I.D. not certain
	CALLIARTHRON/CORALLINA	-	-	-	
	CLADOPHORA SPP	-	-	-	
	COSTARIA SPP	-	-	-	
	ENDOCLADIA MURICATA	1, 2, 3	1, 2	1, 2	
	FILAMENTOUS GREENS	1, 2, 3	1, 2, 3	-	Covers tops of boulders, cobbles etc
	FILAMENTOUS REDS	-	-	-	
	GLOIOPELTIS FURCATA	1, 2, 3	1, 2, 3	2	on tops of boulders, cobbles
	HALOSACCION GLANDIFORME	-	1, 2	1, 2	
	LAMINARIA SPP	-	-	-	In drift
	LITHOTHAMNION	-	1, 2, 3	1, 2, 3	In pools
	NEREOCYSTIS SPP	-	-	-	Off shore in drift
	PORPHYRA SPP	-	-	-	
	RALFISIA/HILDENBRANDIA	-	-	-	
	RHODOMELA LARIX	-	-	-	
	RHOBOMENTA PALMATA	-	-	-	
	SCYTOSIPHON SPP	1, 2	1, 2	-	
	ULVA SPP	-	-	-	
	ZOSTERA MARINA	-	-	-	
	ENTEROMORPHA	-	-	-	
FAUNA:	ANTHOPLEURA SPP	-	-	-	
	(SEMI) BALANUS CARIOSUS	-	1, 2	1, 2	
	B. GLANDULA	1, 2, 3	1, 2, 3	1, 2	
	BRYOZOANS	-	-	-	
	CHITONS (other than K. TUNICATA)	-	-	-	
	CLAMS	-	-	-	Shells Tossed up
	CRABS	-	-	-	See Pagurus spp
	DERMASTERIAS IMBRICATA	-	-	-	
	KATHARINA TUNICATA	-	1, 2	1	In pools and areas without cobbles
	LEPTASTERIAS HEXACTIS	-	-	-	
	LIMPETS	1, 2, 3	1, 2, 3	1, 2, 3	large Notacmaea
	LITTORINA SPP	1, 2, 3	1, 2, 3	-	
	NUCELLA SPP	-	1, 2	-	
	PAGURUS SPP	-	1, 2, 3	-	Marine around pools
	PISASTER OCHRACEUS	-	-	-	
	POLYCHAETES	-	-	-	
	PYCNOPODIA HELIANTHOIDES	-	-	-	
	SEARLESIA DIRA	-	-	-	
	SERPULIDS	-	-	-	
	SIPHONARIA THERSITES	-	-	-	
	TEALIA	-	1, 2	1, 2	In area protected from cobbles movement

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22

Segment ST / K09-22 Subdivision CG-02 Date (mo / day / yr) 4/21/90Time (24 hr) 18:00 Biologist H. Davis

(A) Substrate type and % of segments:

(1) Bedrock 40 (2) Boulder 20 (3) Cobble 20 (4) Pebble 20 (5) Sand — (6) Silt —(B) Overall % cover of biota (% of segment): Dense 20 Moderate 30 Low 50 (30%)

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

Photographs: —
Roll No. —Frames —

BARNACLES Continuous along segment (3 areas) patches of Dense-Moderate

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
X	X	2	X	2	2	X	X	2	2	2	2
X	X	3	X	3	3	X	X	3	3	3	3
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
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 Very patchy, not many mytilus.

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

NOT PRESENT

GASTROPODS continuous sparse-moderate depending on species

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
X	2	2	X	2	2	X	X	X	2	2	2
X	3	3	X	3	3	X	X	X	3	3	3
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
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 Very Patchy

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	X	X	X	X	X	X
3	3	3	3	3	3	X	X	X	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: Glaucous-winged gull, Harlequin ducks and two adult eagles on pinnacles off shore. This segment is small boulder large cobbles in front of cliffs. The lower intertidal areas have fewer cobbles. Filamentous green algae cover the tops of rocks.

Ecological Considerations: Gull rookeries in the area. 2 eagles possibly nesting on pinnacles off shore. No anadromous streams in the section. Pinks, Chum, and Rock eye spawn in streams above and below the segments.

SHORELINE EVALUATION

SEGMENT ST/ K09-22-KF-001 SUBDIVISION A (1 OF 1) DATE 5/11/90

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) - (Adjacent segment)
4LL State Marine Park National Parks
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: Rachel de Oar DATE: 5/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 12 m: V.Light 951 m: No Oil 3713 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: FRED BEYERS RETURNED + PICKUP THE SURVIVAL SUT
AND ASSOCIATED TRASH.

TAG APPROVAL DATE: 5/29/90.

ADEC ART WEINER Art Weiner

EXXON ANDY TGAZ Andy TGAZ

NOAA BILL WESMOTT Bill Wesmott

USCG G.A. REIFER G.A. Reifer

FOSC: DATE: 6-19-90

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 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, 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 prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 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, 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 Kotol Bay Hatchery release
 Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 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
 Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 6/30)
 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 Larry Nicholson 486-4791
- Harbor seal and sea lion pupping (5/10 to 7/1)
 Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subistence area: Salmon harvesting (6/1 to 9/30)
 Finfish harvesting
 Deer harvesting (8/1 to 1/7)
 Invertebrate harvesting
 Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
 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

ENT ST / K9-22-KF-01 SUBDIVISION: A DATE 5-11-72

USCG

NAME Kenneth M. TRABUE SIGNATURE K. Trabue

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

a very little splash of Coal and stain on boulders.

occasional mouse.

ADEC

NAME Francie J. Bennis SIGNATURE Francie J. Bennis

SPOT CHECK

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Crew will be conducting clean up in adjacent segment (CG-1, K9-22). To wrap up treatment in this area, 1 or 2 people could skiff over to specific locations in KF-1 as indicated on SSAT field map to retrieve oiled debris + small amounts of mouse.

LAND MANAGER NPS

NAME Will TROYER SIGNATURE Will Troyer

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

a few platters of mouse & stain seen, most difficult to retrieve, a little debris with oil, could search on nets and what sent could be removed.

COMMENTS
SEGMENT STK09-22-KF001

Greg Chaney

May 11 1990

Segment STK09-22-KF001 consists of rocky headlands and pocket beaches. Little oil was observed however the oil which was found was spread thinly along the segment. It occurred primarily in the form of splattered tar coats and stain. A few small mousse patches were located. The mousse had melted into the sediments and was not easy to find. One very oiled pompos was recovered from the segment as well as a lightly oiled hard hat. Roughly one bag of oiled trash remains. In addition, a lightly oiled survival suit was found on the beach but was too big to be carried out by our helicopter team. A small amount of the tar drips noted were very hard, black and friable. These broke like obsidian. A few lightly oiled logs were also noted.

SHORELINE OILING SUMMARY

REVISION NO. 04/13/93

OG Greg Chaney USCG Ken Engle SEGMENT ST/ K0922K001
 BIO Heather Davis LAND REP Will Wagner (NP) SUBDIVISION A (LOFL)
 EXXON - ADEC Frank Bennett TIME 07:30 13:00
 M NO. 20 TIDE LEVEL 6.0 ft to -1.5 ft DATE May 11 /90
 SUBDIVISION LENGTH: 4412 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock Alders
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: North to South
 SURFACE SEDIMENTS: R 35 % B 35 % C 10 % P 10 % G 5 % S 5 % 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 5 m VL 200 m NO 3607 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	10	12	14	16	18	20	22	24	26	SU	U	M	L
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT	X				X	X	X			X	X		
STAIN					X	X				X	X		
MOUSSE					X				X		X		
PATTIES													
TARBALLS													
A													
WATER OIL											X	X	

PAVEMENT H F S 0 sq. m by 0 cm

PATTIES / TARBALLS _____ BAGS

NEAR 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 perforated
#BAGS less than 1

Photographs:

Roll No. ST-20-10Frames 30, 31, 32, 33

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	F	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	18	20	22	24	26	SU	U	M	L				
1	35					X	.								X					N	0	Sand
							.															
							.															
							.															
							.															
							.															

COMMENTS

See attached.

REVIEWED

AW

DATE

5/15/90

OG Greg Ch...

SEGMENT ST/ K0922KF001

SUBDIVISION A

DATE May 11 90

CHECKLIST

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

LEGEND

1 ▲
Pht - No Subsurface Oil

2 ▲
Pht - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

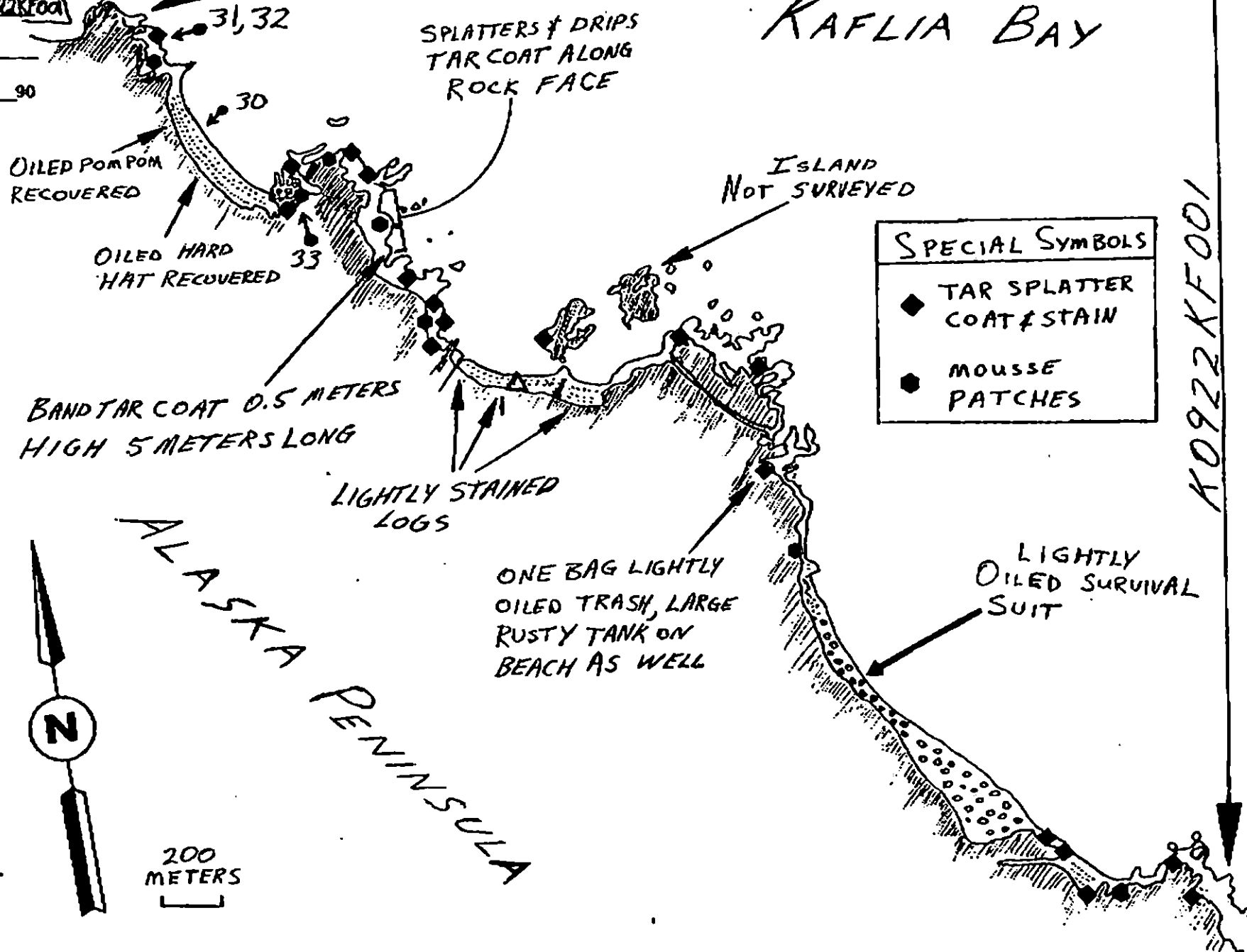
CT/S
Splashed Distribution

Oiled Vegetation

1 →
Photo location, direction,
and number

SKETCH MAP

KAFLIA BAY



K0922KF001

Oil Character Length (m): AP 0 PO 0 CV 0 CT 400 ST 400 MS 20 PT 0 TB 0 FL 0 NO 3607

REVISION: 03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / K9-22 Subdivision KF-01 Date (mo / day / yr) 5/11/90

(24 hr) 07:30 Biologist H. Davis

(A) Substrate type and % of segments:
(1) Bedrock 35 (2) Boulder 35 (3) Cobble 10 (4) Pebble 15 (5) Sand 15 (6) Silt -

(B) Overall % cover of biota (% of segment): Dense 10% Moderate 40% Low 50% (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-20-10

Frames 30-33

BARNACLES Patchy. Variable density on Rock, and Boulder. Rare on gravel/cobble beach.

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

MYTILUS Patchy. A few Sparse bks. Some small (1M) dense beds. Scattered individuals.

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

NOT PRESENT
4,5,6

ANATROPODS Patchy. Littorina - moderate, limpets moderate, Nucella sparse w/ small dense patches

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

FUCUS Patchy. In places dense. Overall Sparse.

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

Wildlife Observations/ General Comments: See attached page.

Ecological Considerations: No Ecological constraints. Sockeye, Pink and Chum migrate past this segment to the stream at the head of the bay. There is an Eagle nesting on a pinnacle (KF-3) to the north of the west end of the segment. On a promontory to the east of the segment there was a second Eagle nest. (CG-1)

S-nology Sketch Map

K9-22 KF-01
5/11/91
H. Davis

200
meters



Six huge Eagle Nests
- Pinks
Churn

Segment Boundary

Gravel beach
Chlorophyta
amphipods
and drift.

This segment was made up of bedrock platforms, boulder fields, and cobble beaches. The cobble beaches had very little biota on them.

Underneath was under cobble and in kelp beds from the UTZ to the LTZ. Cobbles in the MTZ to the LTZ had filamentous green algae and Chlorophyta.

In the boulder fields UTZ was dominated by *Balanus* sp., a few lifts of *Glaucopelta*, limpets (*Adorocera*, *Adorata*), *Urticina*, and *Polydora*. Below this *Fucus*, *Mytilus*, and *Rhodomena* start becoming more prominent. Under the boulders: *Heptasterias* (brooding eggs), *Odontaster*, *Amphipods*, *Pagurus* sp., *Pycnogonida* sp., *Eupentacta*, *Sculpin* and *Pricklebacks* were all common. In the LTZ *Alaria*, *Ulva*, *Sargassum*, *Rhodomena*, *Scytosiphon*, *Codium*, *Tetia*, *Holochondria*, *Anthopleura*, and *Mytilus* were the most visible biota. On one beach (see map) the LTZ was a sand flat with *Ulva*, *Sargassum*, and *Pleurophyllus gaudineii* on cobbles. *Clinocardium nuttallii*, *Saxidomus giganteus*, *Protolittorina staminea* and *Macoma nasuta* were found in the sand (*Clinocardium* has a shell only).

Sand flat covered with:
Crepidula forbesi
Strongylocentrotus droebachiensis
Vendaxia excentricus
Ulva and *Polinices* egg cases.

Sand Flat

Stream

Segment Boundary

Eagle Nest

- Birds

Oystercatchers (2)
Eagles (4)
Black Seals (4)
Harlequin Duck (20-30)
Golden Crowned Sparrows

- Mammals

Fox (tracks)
Otter (tracks)
Bear (tracks)

OG Greg Chaney

SEGMENT ST/K0922KF001

SUBDIVISION A

DATE May 11 90

CHECKLIST

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

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

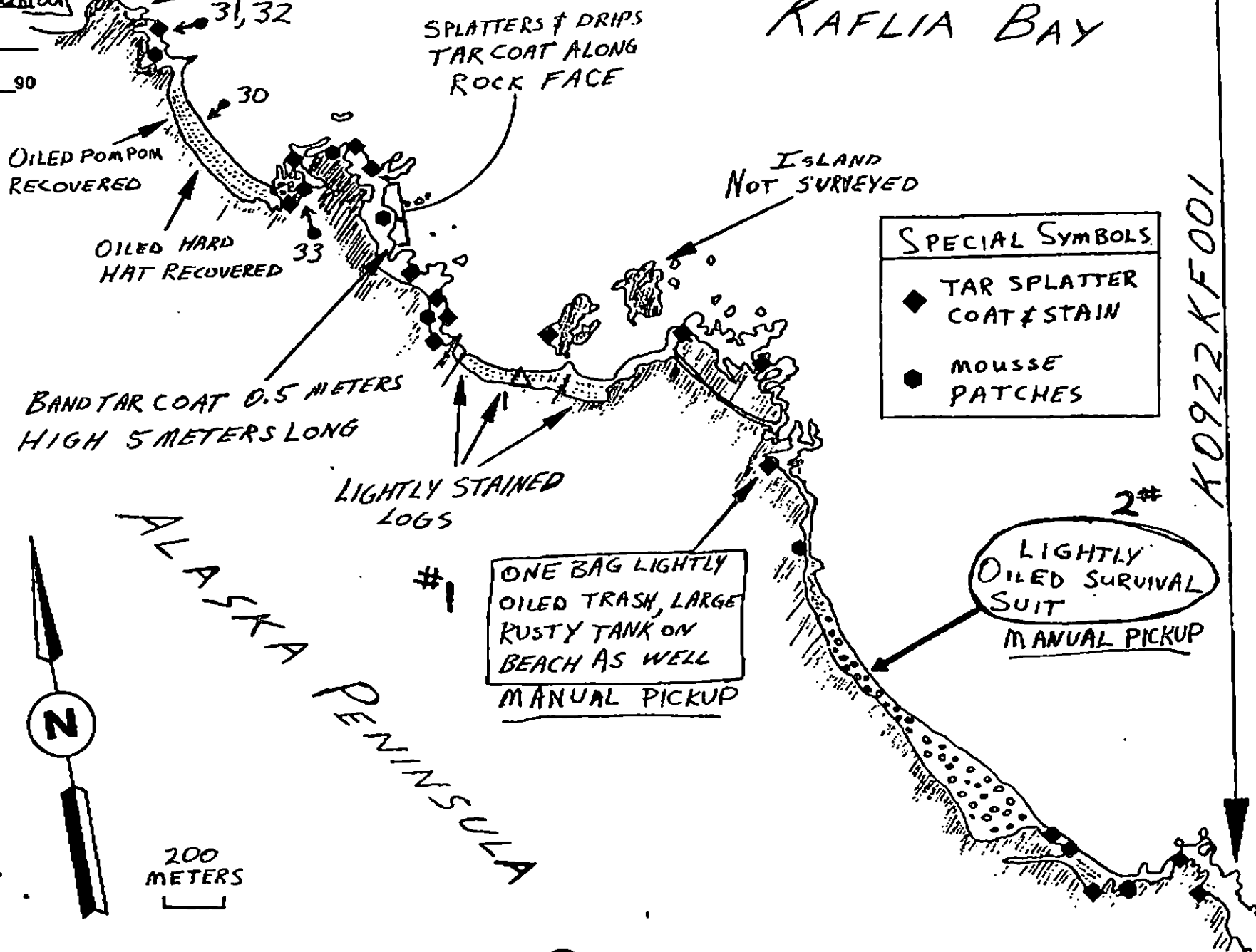
CT/S
Splashed Distribution

Oiled Vegetation

1 →
Photo location, direction,
and number

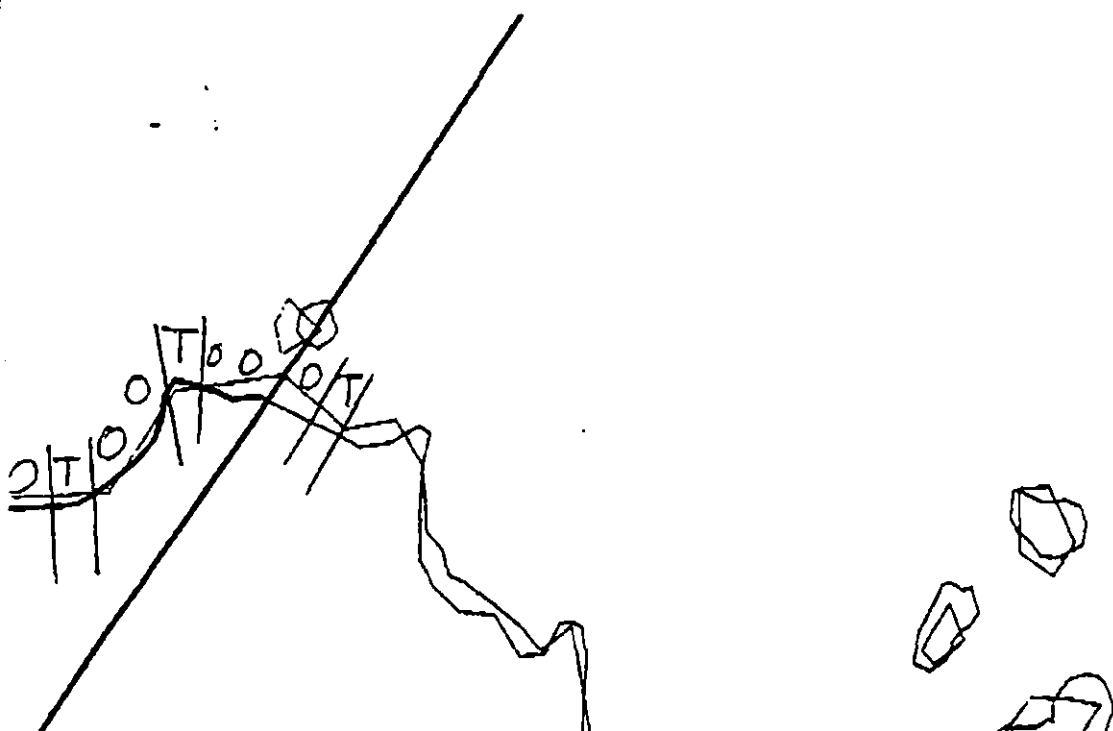
SKETCH MAP

KAFLIA BAY



Oil Character Length (m): AP 0 PO 0 CV 0 CT 400 ST 400 MS 20 TB 0 FL 0 NO 3607

1304:30/24/90



XXXX Wide

// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KF-1

Approx. Segment Length: 4544m

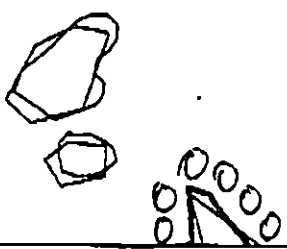


Map Key: AKP-KF-1c

Name: Greg Chaney

Date: May 11 1990

Data Entered:



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KF-1

Approx. Segment Length: 4544m

0 100 200 300
METERS

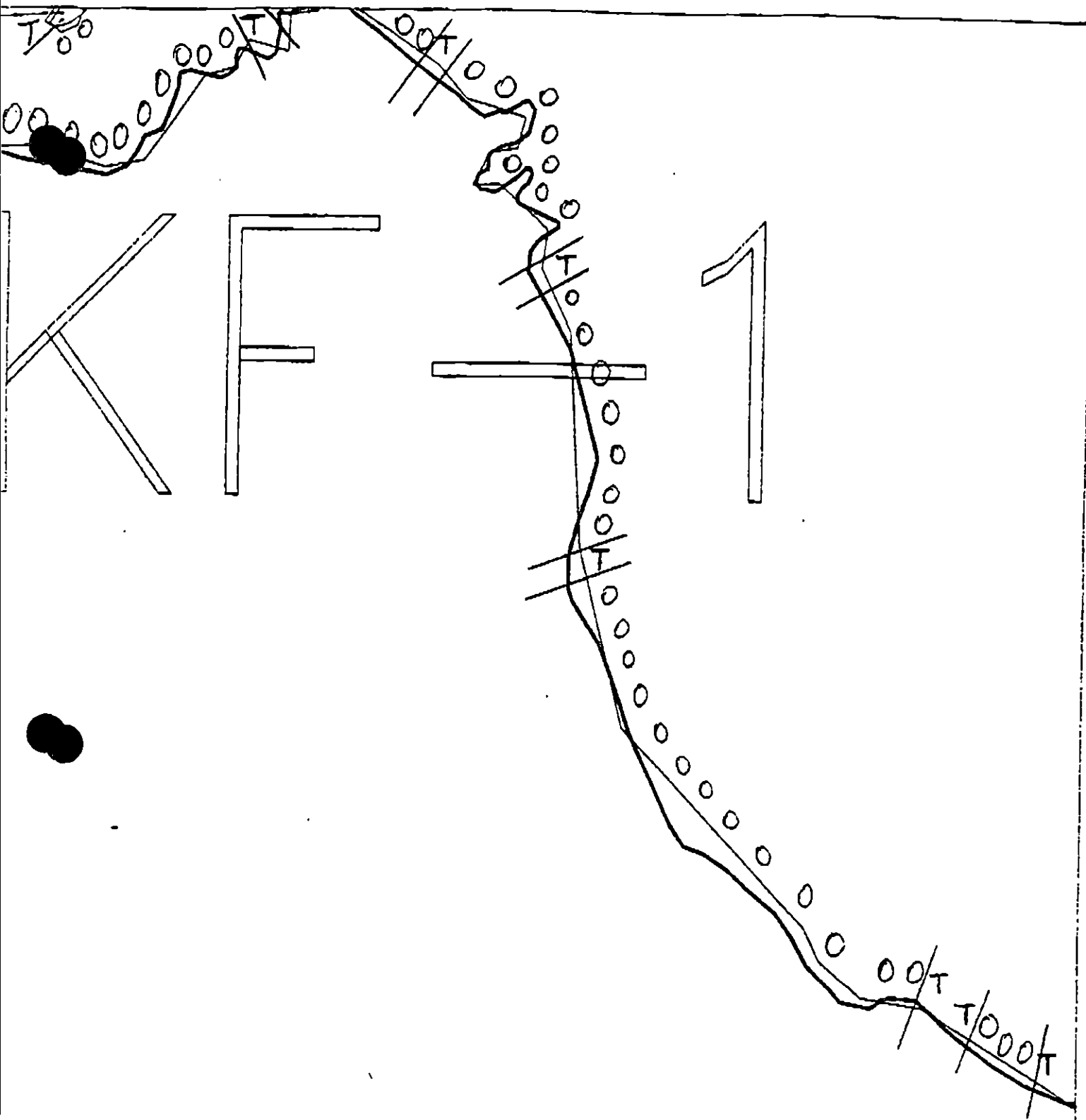


Map Key: AKP-KF-1e

Name: Greg Chaney

Date: May 11 1990

Data Entered:



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

KF-1

Approx. Segment Length: 4544m



Map Key: AKP-KF-1b
 Name: May 11 1990
 Date: Greg Chaney
 Data Entered:

~~T/0000000~~

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

KF-1

Approx. Segment Length: 4544m



Map Key: AKP-KF-1a

Name: Greg Chaney

Date: May 11/1996

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ K09-23-CG-03 SUBDIVISION A (1 OF 1) DATE 4/23/90

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)
5R Seabird colony (5/1 to 8/31)
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.

SHPO SIGNATURE: J. Daniel McManus

DATE: 5/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 10 m: V.Light 0 m: No Oil 3548 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: 5/1/90.

ADEC Art Weiner
EXXON Andy Teal
NOAA Gary Petrac
USCG Kenneth Keane

FOSC:

DATE: 5-12-90

KODIAK ECOLOGICAL CONSTRAINTS

SUPERCEDED

- 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 Kotai 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 uncoiled 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 (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.
- 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 (5/1 to 6/1)
 Active Bald Eagle nests (5/1 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 Subistence area: Salmon harvesting (5/1 to 9/30)
- 7HH Fish harvesting
- 7I Deer harvesting (5/1 to 1/7)
- 7JJ Invertebrate harvesting
- 7KX 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.

SEGMENT ST / K 9-23-C6-003 SUBDIVISION: K9-23-C6-3A DATE 4-23-90

USCG

NAME D.D. Haven Jr., CMS, USCGR SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Oil not recoverable.

ADEC

NAME Francine J. Dennis SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

One small area of LIGHT oil remains here in the form of OT, CV, ST, and MS. The mousse is trapped in rock crevices & under boulders & is relatively unretrievable by manual methods.

LAND MANAGER NPSNAME WILL TROYER SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

oil very scattered and not much there. Do not feel it is possible to clean by manual means or would be worth the effort

SHORELINE OILING SUMMARY

REVISION NO. 04-13-89

OG Acton USCG Haven SEGMENT ST/ K9-23-CG-3
 BIO Davis LAND REP NPS Troyer, James SUBDIVISION K9-23-CG-3A (1 OF 1)
 EXXON Avery ADEC Bennis TIME 7:15 to 9:30
 TEAM NO. 20 TIDE LEVEL -1 to +1 DATE 4 / 23 / 90
 EST. SUBDIVISION LENGTH: 3518 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 25 % C 20 % P 10 % G 10 % S 10 % M 0 % V 0 %
 SLOPE: Long 60 % Hang 20 % Vert 20 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 10 m VL 0 m NO 3508 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	R	B	C	P	SP	UC	SC	ST	CT	ST/P	MS/P	MS	SU	U	M	L
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL																

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE —#BAGS 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)	▼	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OS	NO		US	UC	SC SP	ST SP	CT SP	ST TL	MS TL	SU	U	M	L							
1	20					✓	.		✓								✓								P _G
2	20					✓	.		✓								✓								P _G
3	10					✓	.		✓								✓								B, R
							.																		
							.																		
							.																		

COMMENTS Oil was observed at one location in band approx 5m wide x 10 m long, ST, CT/S+P and MS/P. MS was in between some B/R/C up to 3-4cm thick. This area is classified as narrow. Other than this area, only very light, very occasional spots on driftwood was observed.

The 5m x 10m band is located in and around a rock cave.

REVIEWED BAT DATE 24 Apr 90

OX 1 7

SEGMENT ST/ K9-23-CG-3

SUBDIVISION K9-23-CG-3A

DATE 4 / 23 / 90

TCH MAP

CHECKLIST

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

LEGEND

1 Δ

Pt - No Subsurface Oil

2 Δ

Pt - Subsurface Oil

CT/C

Concentrated Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

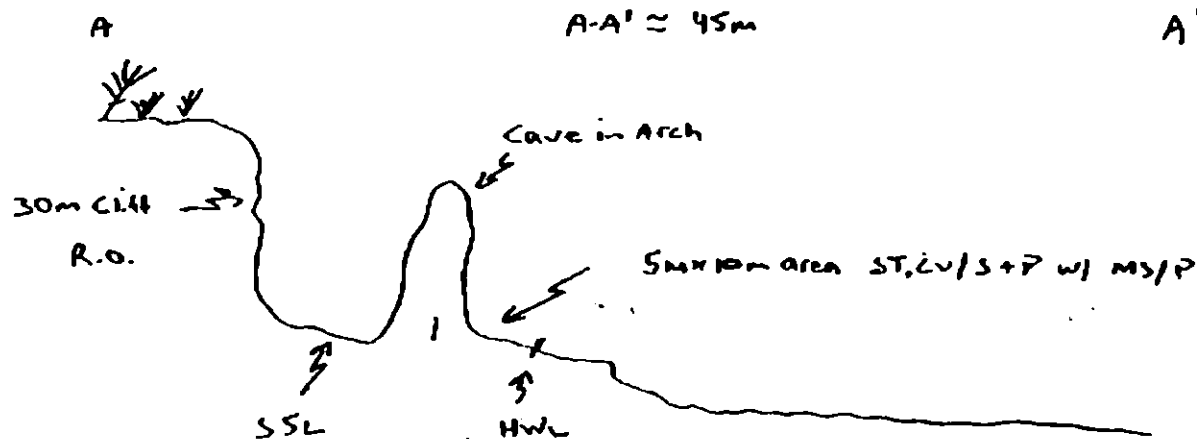
CT/S

Splashed Distribution

Oil'd Vegetation

1 ⇨

Photo location, direction,
and number



Oil Character Length (m): AP 0 PO 0 CV 0 CT 10 ST 10 MS 10 PT 0 TB 0 FL 0 NO 3508

REVISION: 00/00/00

SHORELINE ECOLOGICAL SUMMARY

REVISION: 222

Segment ST / K09-23 Subdivision CG-03 Date (mo / day / yr) 4/23/90Time (24 hr) 07:15 Biologist H. Davis

(A) Substrate type and % of segments:

(1) Bedrock 25 (2) Boulder 25 (3) Cobble 20 (4) Pebble 20 (5) Sand 20 (6) Silt _____(B) Overall % cover of biota (% of segment): Dense 15% Moderate 40% Low 45% (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-20-6Frames 19-24

BARNACLES continuous except in sand covered areas

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

NOT PRESENT
4, 5, 6

MYTILUS Very patchy, in LTZ No Belts.

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

NOT PRESENT
4, 5, 6

GASTROPODS continuous except in sand covered areas. Limpets - Littorina on underside of Rocks.

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

NOT PRESENT
4, 5, 6

FUCUS Patchy Tops of Rocks - bedrock.

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

NOT PRESENT
4, 5, 6

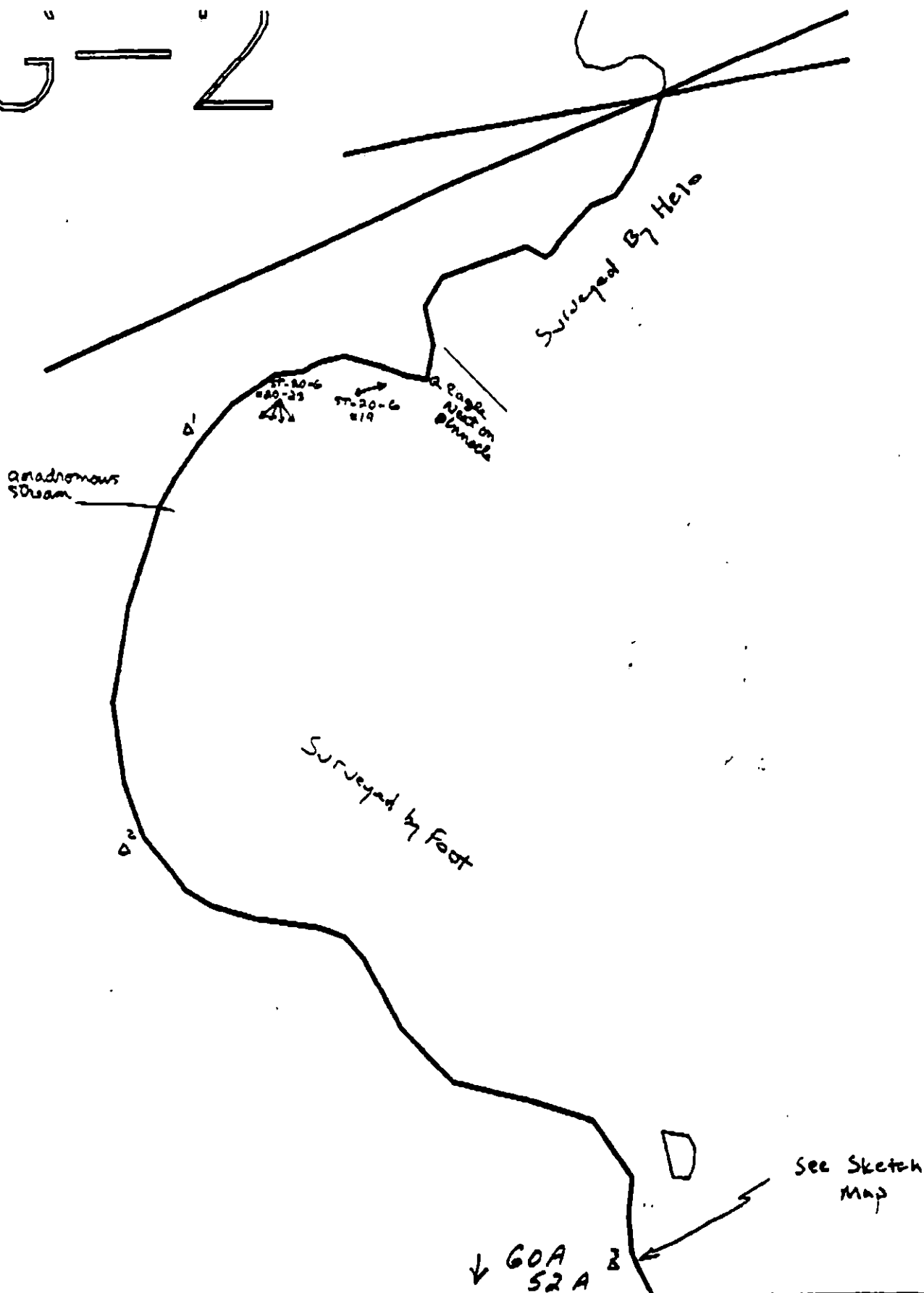
Wildlife Observations/ General Comments: Eagles nesting at northern tip. Bluffs above sand, cobble, boulder and bedrock beaches. Sandy areas have fewer animals. No Barnacles. No Mytilus. No Littorina. Bedrock and large boulders in the mid-low intertidal had dense flora and fauna. Mid to upper boulders and ledges had continuous moderate barnacle limpet + littorina cover. "limpet + green" - fauna covered the tops of rocks.

Ecological Considerations: IA, IB, ST-1, Anadromous stream on the northern end of the segment. On one of the pinnacles at the northern end of CG-03 there is a pair of eagles and a nest. 5R

DATE 4/23/90 TIME 0715-09:20 TIDE HEIGHT -1 to +11 = BEDROCK 2=BOULDER 3=COBBLE 5=SAND 6=SILT
4=Pebble

	SPECIES	UITZ	MITZ	LITZ	COMMENTS
FLORA:	BOSSIELLA/CORALLINA	—	1,2	1,2	In pools only
	CALLIARTHRON/CORALLINA	—	1,2	1,2	In pools only
	CLADOPHORA SPP	—	2,3	—	
	COSTARIA SPP	—	—	—	In drift
	ENDOCLADIA MURICATA	1,2,3	1,2,3	—	Patches (typ. 5 cm)
	FILAMENTOUS GREENS	2,3	2,3	1,2,3	On the tops of cobbles/boulders
	FILAMENTOUS REDS	—	2,3	1,2,3	On the tops of cobbles/boulders
	GLOIOPELTIS PURCATA	—	—	—	
	HALOSACCION GLANDIFORME	1,2	1,2	1	
	LAMINARIA SPP	—	—	1	
	LITHOTHAMNION	—	—	—	
	NEREOCYSTIS SPP	—	—	—	Off shore or in drift on beach
	PORPHYRA SPP	—	—	—	
	RALPHSIA/HILDENBRANDIA/Petridia	—	—	—	
	RHODOMELA LARIX	—	1,2,3	1,2	
	RHODOMENIA PALMATA	1,2	1,2,3	1,2	In pools in the MITZ
	SCYTOSIPHON SPP	1,2	1,2,3	—	
	ULVA SPP	—	1,2	1,2	
	ZOSTERA MARINA	—	—	—	
	ENTOROMORPHA	1,2	1,2	—	Near fresh water flow
FAUNA:	ANTHOPELURA SPP	1	1	1	Seen in pools
	(SEMI) BALANUS CARIOSUS	—	1,2,3	1,2,3	
	B. GLANDULA	1,2,3	1,2,3	1,2	
	BRYOZOANS	—	—	—	
	CHITONS (other than K. TUNICATA)	—	—	—	
	CLAMS	—	—	—	No shell debris some had been drilled
	CRABS	—	—	—	
	DERMASTRIAS IMBRICATA	—	—	—	
	KATHARINA TUNICATA	1,2	1,2	1	
	LEPTASTERIAS HEXACTIS	2	—	—	one large (7cm) specimen alone on a boulder
	LIMPETS	1,2,3	1,2,3	1,2,3	Gravid on the underside of rocks
	LITTORINA SPP	1,2,3	1,2,3	1,2	very dense in spots, under rocks (no eggs)
	NUCELLA SPP	2	1,2	—	Found eating barnacles
	PAGURUS SPP	—	—	—	
	PISASTER OCHRACEUS	—	—	—	
	POLYCHAETES	—	—	—	
	PYCNOPODIA HELIANTHOIDES	—	—	—	
	SEARLESIA DIRA	—	—	—	
	SERPULIDS	—	—	—	
	SIPHONARIA THERSITES	—	—	—	
	TEALIA	—	1,2	1	

CG-2



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

CG-3

ADEC Segment Length: 3557m



K9-23-CG-3A

Map Key: GOA-52b

Name: Acton

Date: 4-23-90

Data Entered:

60A
52B

CG-3

Surveyed By Foot

Surveyed by Helo

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

CG-3

ADEC Segment Length: 3357m



K9-23 - CG-3A

Map Key: 60A-52a

Name: Acton

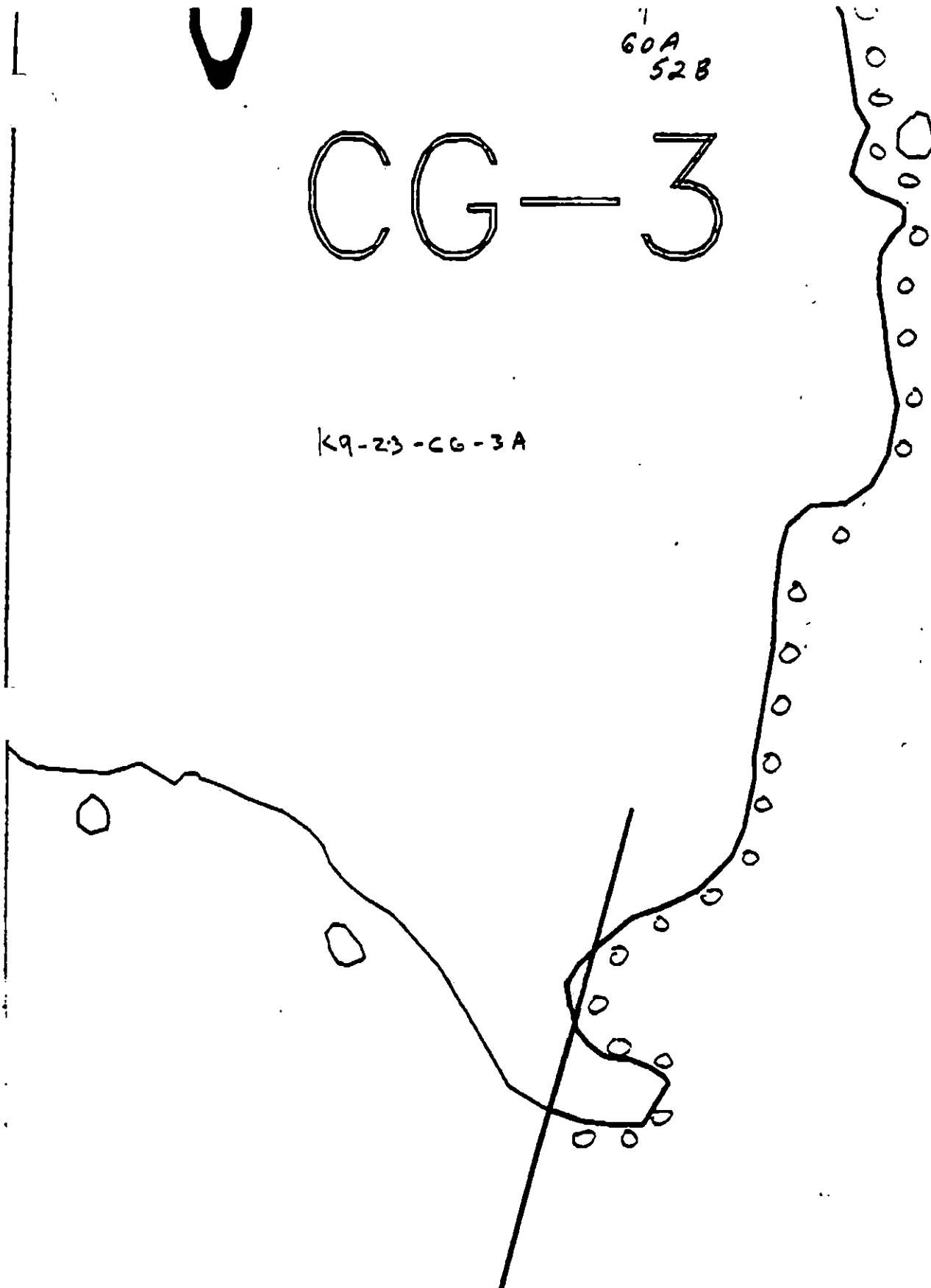
Date: 4-23-90

Data Entered:

GOA
52B

CG-3

K9-23-CG-3A



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

CG-3

ADEC Segment Length: 3557m



K9-23-CG-3A

Map Key: GOA-52a

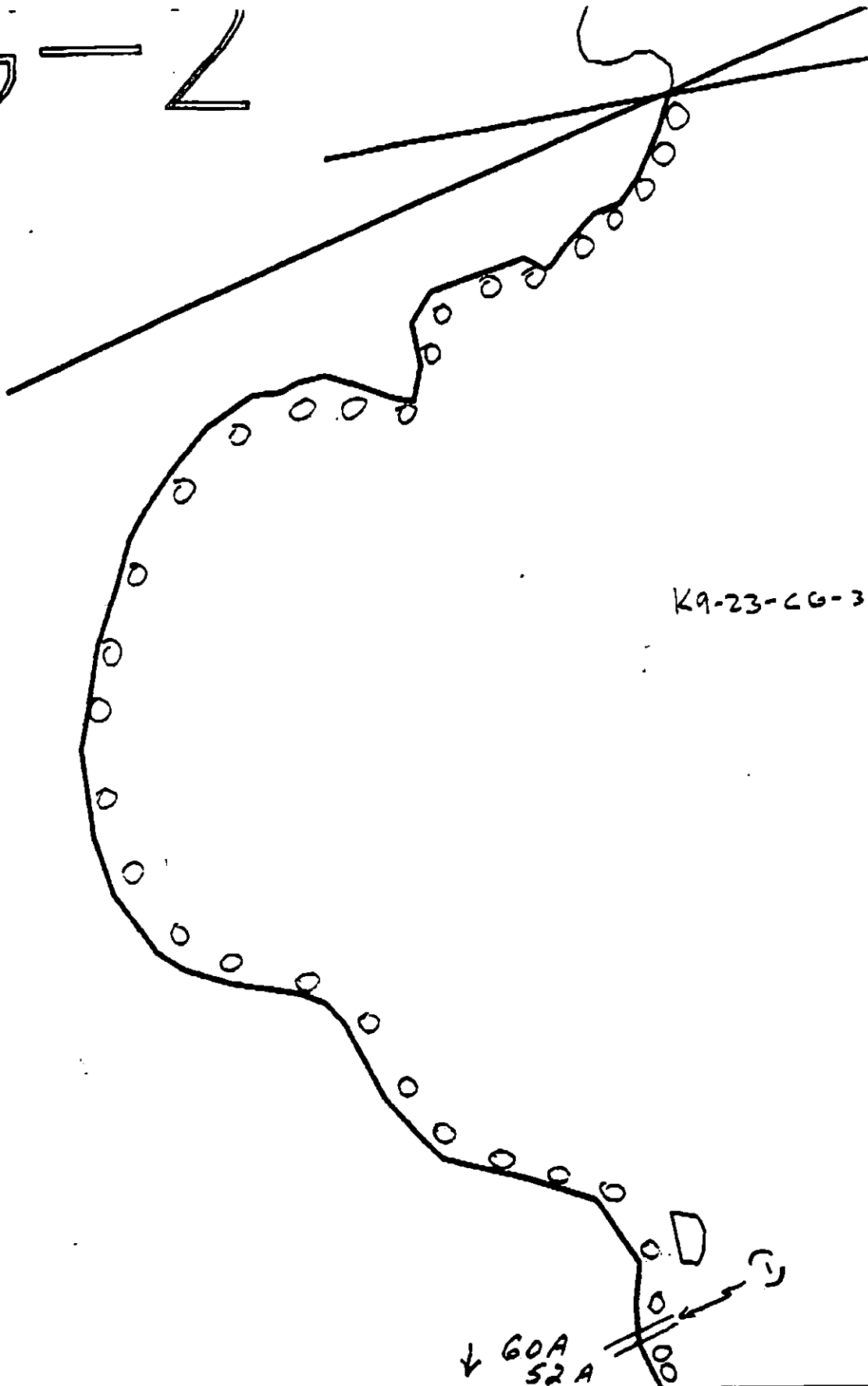
Name: Aceton

Date: 4-23-90

Data Entered:

///

CG-2



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

CG-3

ADEC Segment Length: 3557m



K9-23-CG-3A

Map Key: GOA-52b

Name: Acton

Date: 4-23-90

SHORELINE EVALUATION

SEGMENT ST/ K09-24-KU-01 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/10 to 6/30)

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

Katmai National Park

Seabird colony in NOAA data base (unmapped)

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 1510 m: No Oil 1542 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: Recommend manual removal of mousse and tarmats in areas
shown on sketch map. Work should be conducted between 7/1 and 8/15
based on pinniped constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 5/1/90
ADEC ART WENNER
EXXON ANDY TEAL
NOAA GARY PETRO
USCG KENNETH KIRBY

FOSC: WFL 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 Kotai 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 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (8/1 to 9/15)
- 6V Anchorages (8/1 to 9/15)
- 6W Forest Service cabins (8/1 to 9/15)
- 6X Lodge (8/1 to 9/15)
- 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (8/1 to 9/30)
- 7HH Finfish harvesting
- 7I 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 / K0924-KU001 SUBDIVISION: K0924-A DATE 4/21/70IOAA
USCG

NAME

John Naughton

SIGNATURE

John J. Naughton☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Concentrations of medium oil in two locations in this segment. Appears like pavement but actually a mousse cover, approximately 2 meters wide in upper intertidal. Several areas continuous for 10 meters and varying in depth from 2 to 5 cms. Should be fairly easy to manually pick up and bag.

ADEC

NAME

Terry Ellsworth

SIGNATURE

Terry Ellsworth☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

This segment contains approximately 1400m of sporadic stain and mousse/sediment patties and 3 areas of broken mousse/sediment mat (soft asphalt) in the mid-intertidal zone. These areas have a thickness of up to 5cm and widths up to 3M. This area should be fairly easy to clean by manual methods.

LAND MANAGER

NAME

Carl Saboch

SIGNATURE

Carl Saboch☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

The indicated mats of asphalt/mousse can be manually removed. The remaining impacted sections should be walked by the work crew to manually remove scattered mousse patties.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22

Segment ST/K924KU001 Subdivision A Date (mo / day / yr) 4/21/90

Time (24 hr) 1440-1625 Biologist D. McCormick

(A) Substrate type and % of segments:
(1) Bedrock (2) Boulder 20 (3) Cobble 60 (4) Pebble 18 (5) Sand 2 (6) Silt

(B) Overall % cover of biota (% of segment): Dense 5 Moderate 50 Low 45

(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-19-15

Frames 1-13

BARNACLES *Generally continuous throughout segment.*

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

NOT PRESENT

MYTILUS *Very patchy over the course of segment.*

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	3	2	2	3	2	3	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 *Littorines, limpets, Locomo*

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	3	2	3	3	3	3	3	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 *Very patchy throughout, often dense when it occurs*

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	3	2	3	3	2	3	3	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: Birds seen: surf scoters, ravens, glauc-wing gulls; 1 *strandus Placochelone cantabrigiae*. Heavy recruitment in the lower ITZ of *Littorines* and *Relaxus*. Filamentous green algae common in low- to mid ITZ. Ulva patchy in lower ITZ. Juvenile *Eudoradia* patchy near east end of segment. No fauna seen in direct contact with oil (p. primarily in UITZ)

Ecological Considerations:

Salmon spawning stream (pinks, chums) at head of bay (segment). No known eagle nests. No marine mammals observed.

OG LINDS

YAKUSHIMA

0924-

SEGMENT STI KU001

SUBDIVISION A

DATE 4/21/80

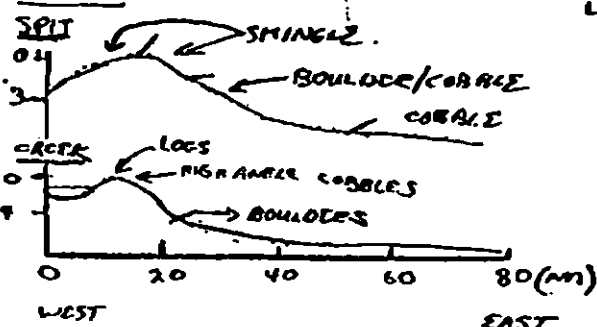
CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Col Backy
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. ISBLAVE
- ☐ SOL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pin Location(s)
- ☐ Photo Location(s)

LEGEND

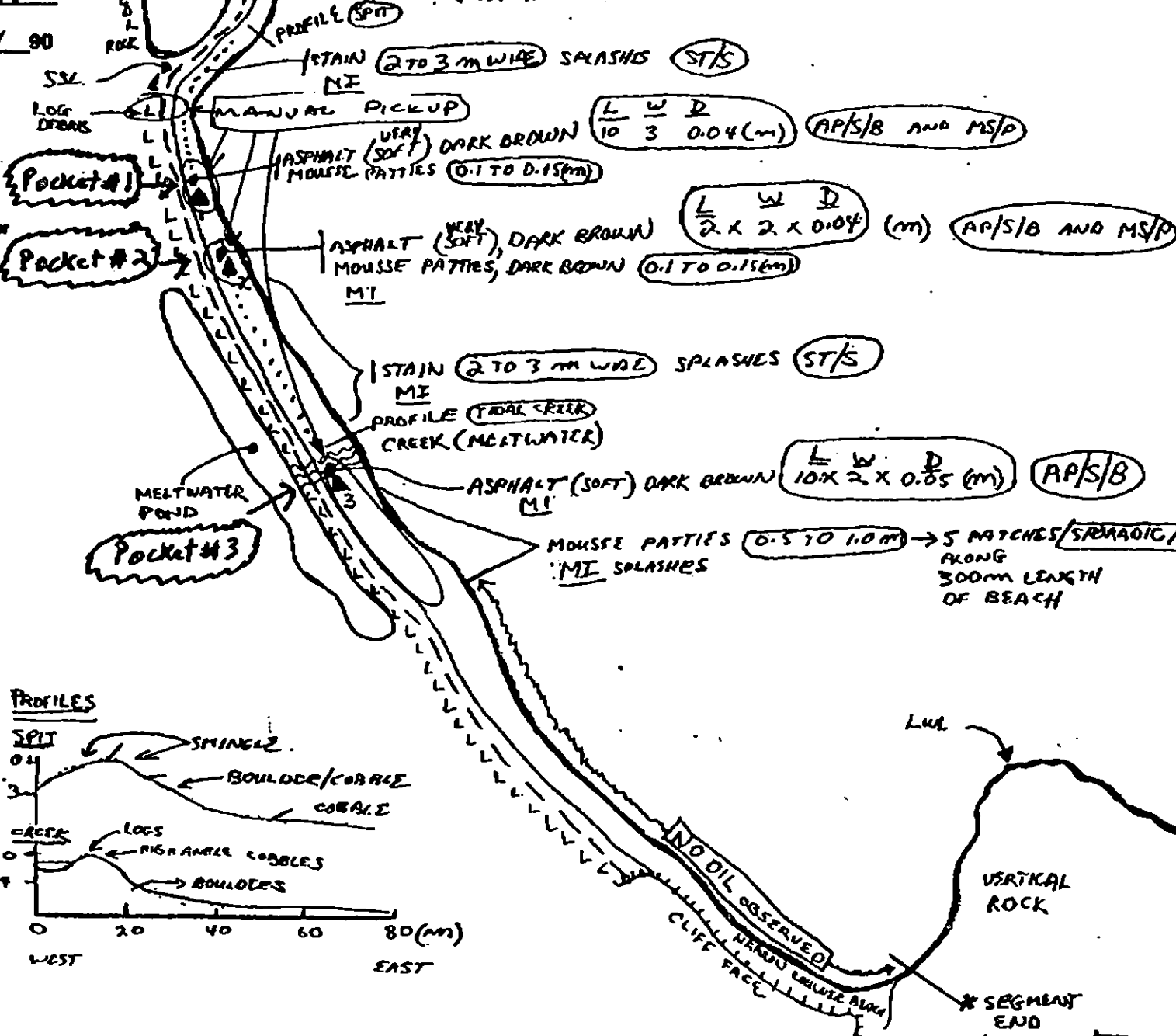
- 1 Δ
- PR - No Subsurface Oil
- 2 Δ
- PR - Subsurface Oil
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Spashed Distribution
- lll
- Oil Vegetation
- 1 $\Rightarrow$
- Photo location, direction, and number

PROFILES



TCH MAP

SEGMENT START (14:40HR)
WALKING DIRECTION



Oil Character Length (m): AP 22 PO 0 CV 0 CT 0 ST 1050 MS 0 PT 344 TB 0 FL 0 NO 1575

350 (m)

N

OG LINDSAY WAKESHIMA USOC BYER BILLY DE (NPS) SEGMENT ST/ K0924-KH001
 BIO OGB McCORMICK LAND REP CARL SCHUCH (NPS) SUBDIVISION K0924-KH001A (OF 1)
 EXXON FRED BYARS ADEC TERRY ELLSWORTH TIME 14:40 16:30
 TEAM NO. 19 TIDE LEVEL +3.00 to +1.35 (FT) DATE 4/21/90
 EST. SUBDIVISION LENGTH: 2991 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock W SOME VEGETATION ON SLOPES/GRASSES
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: NW to SE
 SURFACE SEDIMENTS: R 20 % B 20 % C 60 % P 20 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 20 % Hang 15 % Vert 15 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 1416 m NO 1575 m

SURFACE OIL

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

PAVEMENT H F (S) 20 sq. m by 5 cm

PATTIES / TARBALLS NONE 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. ST-19-15

Frames 1-13

SUBSURFACE OIL

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
		OF	OR	OL	OF	NO		VO	UC	1	2	3	4	5	6	7	8	SU	U	M	U					
1	10	X					0-4"		X				X						X			N	N		—	P
2	15	X					0-4"		X				X						X			N	N		—	P
3	10	X					0-5"		X				X						X			N	N		—	P
							.																			
							.																			
							.																			

COMMENTS — STARTED DURING A FALLING TIDE

— NO WAVES/WAVELETS ON ENTIRE SEGMENT

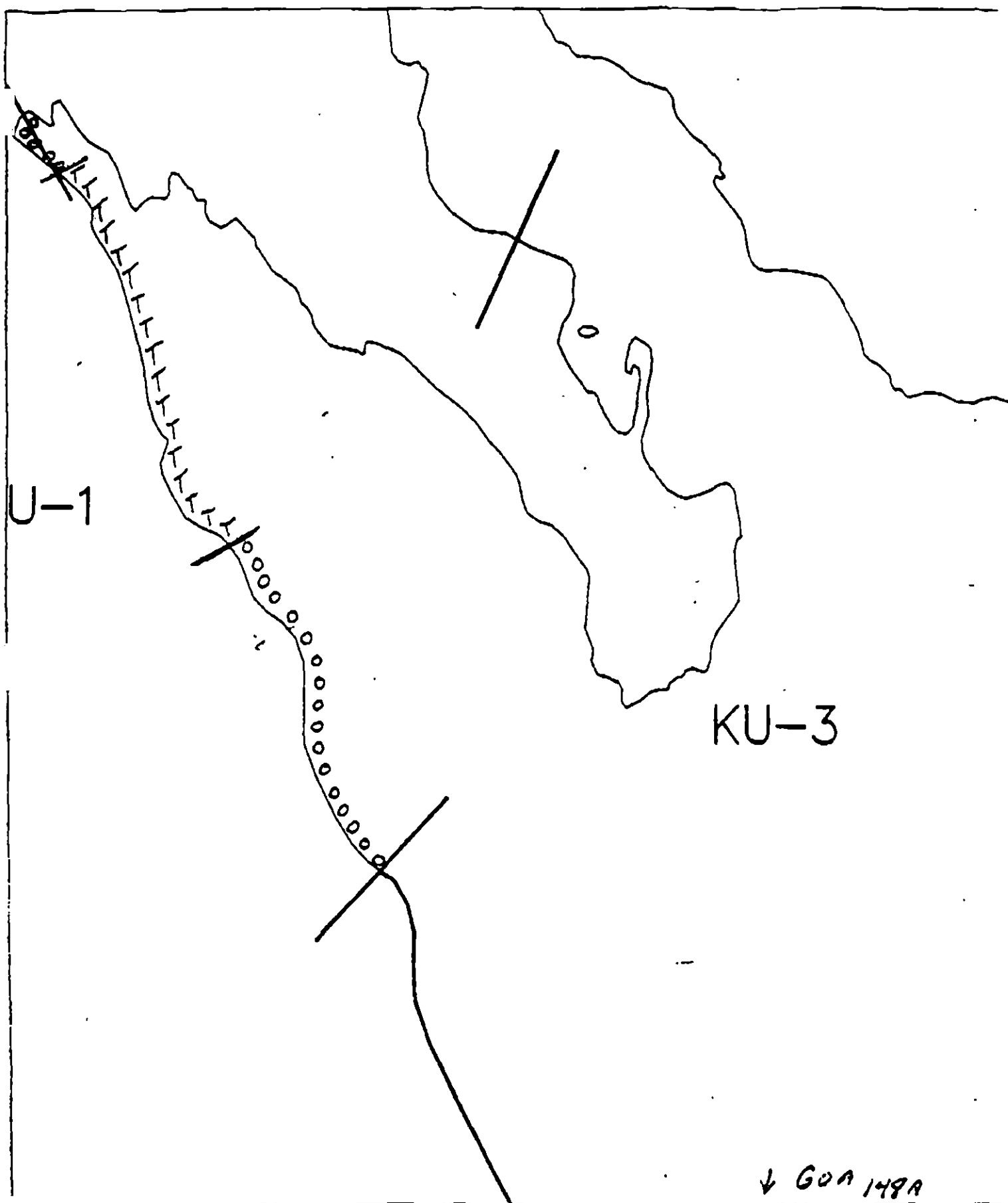
— 3 PATCHES/AREAS AT & TO NORTH OF MILLWATER POND

* Oil penetration < 5cm does not constitute subsurface oil.

REVISED LN
4/23

REVIEWED BAT DATE 24 APR 90

11 PP.



U-1

KU-3

KU-2

↓ GOA 148A

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

ADEC Segment Length: 8995m



Map Key: GOA-148c

Name: LINDSAY NAKASHIMA

Date: 4/21/90



ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-24-KU-01 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 (262-35-10010) is more than 100m from work site. No constraint to manual pickup.
3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Molting	No constraint to manual pickup (Donald Calkins/ADF&G) per 6/11/90 memorandum from Sam Stoker.
5R	Seabird Colony	No documented seabird colonies. No constraint to manual pickup as per letter dated 6/15/90 to Rex Coulter/Exxon from WALTER STIEGLITZ, USFWS.

OTHER ECOLOGICAL CONSIDERATIONS

Beach is to be approached with caution, by boat, and carefully scrutinized. If seals are present on the beach or in the water nearby, operations are to be suspended until after expiration of the previously defined constraint period. If seals are not present, treatment is to be completed as quickly as possible, with as few personnel and equipment as possible, and with an absolute minimum level of noise and general disturbance. Any application of bioremediation should be confined to above the mid-tide zone.

FOSC

[Signature]

Date

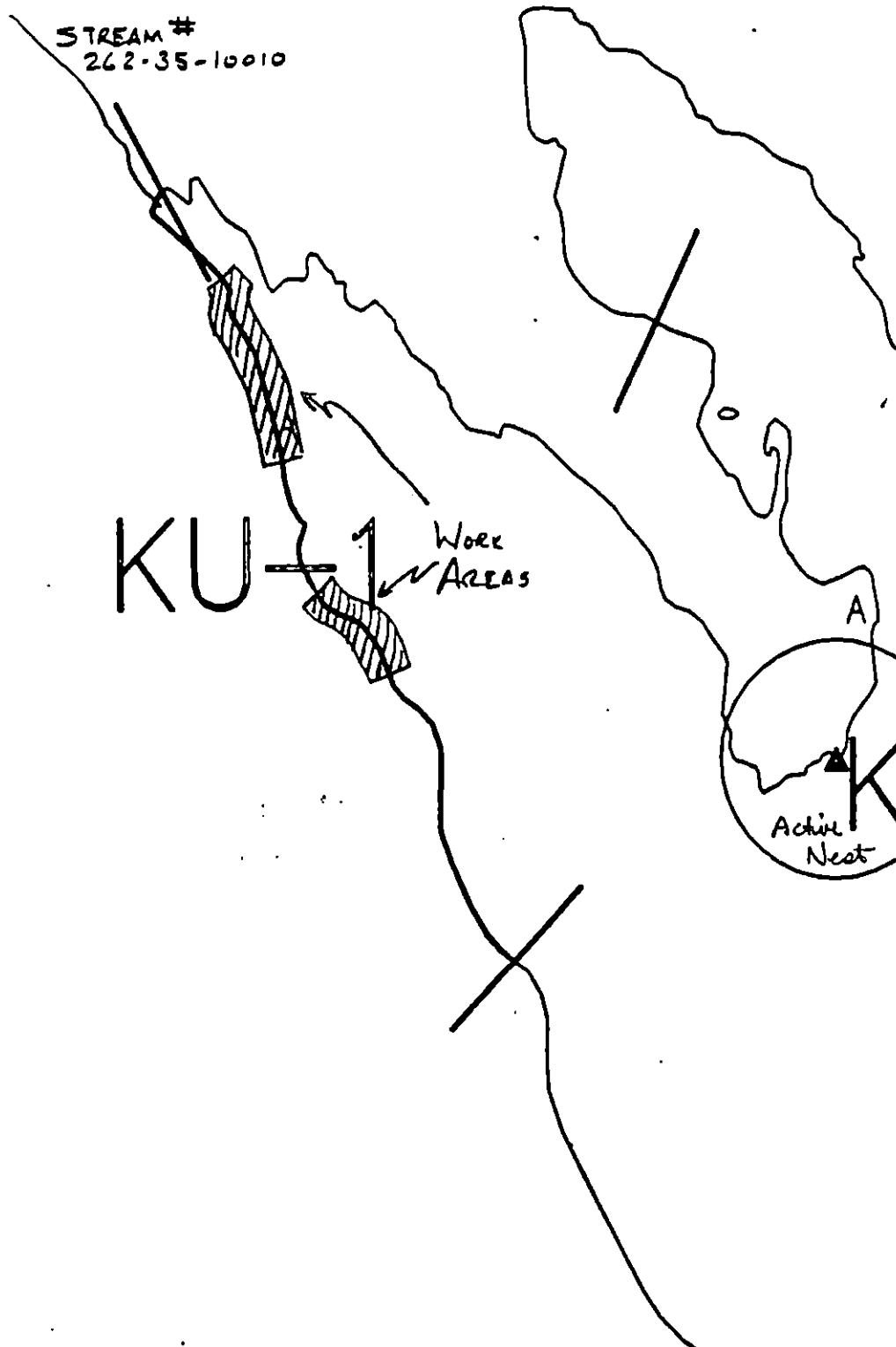
6-16-90

Prepared by

[Signature]

Date

6/15/90



TREATMENT



Exxon Company, USA
Map Key: AK-KU-1
June 10, 1990



ECOLOGY MAP
SEGMENT K9N-24 KU-1
SUBDIVISION A (1 of 1)
METERS



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

1 inch = 1947 feet

SHORELINE EVALUATION

SEGMENT ST/ K09-24-KU-02 SUBDIVISION A (1 OF 1) DATE 4/21/90

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)

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: 5/2/90

OILING CATEGORIZATION:

Wide 0 m: Medium 90 m: Narrow 215 m: V.Light 4535 m: No Oil 1286 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of mousse,
patties, and oiled debris, 2) bioremediation in areas indicated on
sketch map. Work should be conducted between 6/30 and 8/1 due to
above pinniped constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 5/2/90
ADEC [Signature]
EXXON [Signature]
NOAA [Signature]
USCG [Signature]

FOSC: [Signature] DATE: 5-8-90
NO IN.PdL - Customblend only in upper,
Supra intertidal at discretion of NIS monitor.

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 releases
 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 uncoiled 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 (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 (8/1 to 9/30)
- 7HH Finfish harvesting
- 7H 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.

SEGMENT ST / K0924-KU002 SUBDIVISION: K0924-A DATE 4/21/90NOAA
CGNAME John Naughton SIGNATURE John P. Naughton☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

This extensive segment had very little oil on the inner (north) two-thirds portion, with occasional splatters and stain observed high in the upper intertidal. As approach Kuliak Bay mouth more high energy environment with four areas of continuous stain and coat on large boulders. Mousse pooled at base of large boulders. However very difficult for manual removal without moving large rocks. Because of high energy will weather and dissipate naturally - recommend no treatment.

ADEC
NAME Terry Ellsworth SIGNATURE Terry Ellsworth☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Two areas in the segment, a narrow area in the middle of segment and a medium area near the SE end of segment, contain coats, stains and mousse/sediment trapped at the base of large (5'-6') boulders. Although in high energy areas the mousse trapped between the boulders will not quickly or easily be removed naturally. I recommend manual treatment of these areas, best accomplished by use of small hand tools.

LAND MANAGER

NAME Carl Scheek SIGNATURE Carl Scheek☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

The indicated 4 areas of pooled mousse, cover, coat and stain have not changed significantly over the winter. These areas are generally protected by large boulders and may persist for a long time. Areas with pooled mousse and cover should be manually removed. Cited fishing nets should be cut away from angular boulders and logs and removed. With a work crew in this area, the remaining impacted section should be walked, and patches of scattered pooled mousse should be manually removed.

REVISION NO. 022190

OG LINDSAY NAKASHIMA USCG BILL MILLER (NPS) SEGMENT STI K0924-KH002
BIO DER MCCORMICK LAND REP CARL SCHOCH (NPS) SUBDIVISION K0924-A (1 OF 1)
EXXON FRED BYARS ADEC TERRY ELLSWORTH TIME 4:45 to 8:10 PM
TEAM NO. 19 TIDE LEVEL +1.1 to +2.33 AT DATE 4/21/90
ST. SUBDIVISION LENGTH: 6170 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock SPARSELY VEGETATED
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: NW to SE
SURFACE SEDIMENTS: R % B 70 % C 20 % P 5 % G 4.5 % S 0.5 % M % V %
SLOPE: Long 30 % Hang 40 % Vert 30 % WAVE EXPOSURE: ☒ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 52 m N 80 m VL 4798 m NO 1240 m

SURFACE OIL

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

PAVEMENT H F S NONE sq. m by C cm

PATTIES / TARBALLS NONE 250 BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

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

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒

TYPE

#BAGS 0

Photographs:

Roll No. ST-19-15

Frames 14-23

SUBSURFACE OIL — NO PITS DUE TO SUBSTRATE CHARACTER

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	T	SURFACE SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UD	1	2	3	4	5	SU	U	M	N				

COMMENTS - TIDE FALLING AT START OF SURVEY, RISING AT END OF SURVEY
- LAST 100M NOT SURVEYED

13 PP

REVISED LN
4/23

REVIEWED BAT DATE 24 Apr 90

VERTICAL ROCK

START 445 PM

POCKET BEACH (NO OIL)

COBBLE BOULDER

DRIFT LOGS

DBL

ST/P, TB/P (4cm) DBA

UI

NO OIL

DBR DBL

TB/P, ST/S - IN BOULDERS ANGULAR (60-90cm)

UI

MS/B 10x4x0.01 m LOG SPIRAL BENCH

CT/P DBL 1 TO 2m BOULDERS

LOW ANGLE UPLAND

MANUAL PICK UP

BIO

POCKET BEACH OILED LOGS/SPLASHES DBL

CT/B AT BASE 1 TO 1.6m DBL MS/P BOULDERS DBA L W D UI/MI 20x2x0.02 (m) NARROW AT EACH OF 4 SITES

P/S DARK BROWN 2 PATTIES, EACH ~12cm UI

CLIFF

NO OIL

DBL CT/B DBL MS/P DBL ST/B BOULDER DBL 4 AREAS UI EACH 5x13m MEDIUM

NO OIL

UPLAND

END 810 PM

HWH

LWL

DEVELOP BEACH

6170 (m)

CV 0 CT 132 ST 2575 MS 142 PT 1 TB 2125 FL 0 NO 1240

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / K924 KU002 Subdivision A Date (mo / day / yr) 4-21-90

Time (24 hr) 1640-2000 Biologist D. McCORMICK

(A) Substrate type and % of segments:
(1) Bedrock _____ (2) Boulder 70 (3) Cobble 20 (4) Pebble 9 (5) Sand 1 (6) Silt _____

(B) Overall % cover of biota (% of segment): Dense 10 Moderate 60 Low 30

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

Photographs:
Roll No. ST-19-15

Frames 14-23

BARNACLES Generally continuous, moderately dense esp. in LITZ, not on pebble/cobb beaches

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
on peb, sand

MYTILUS Present mostly in patchy dense clump on boulders - new recruits in crevices.

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
on peb, sand

GASTROPODS Littorines continuous throughout segment; recruits abundant; not present on sand/peb pocket beach

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
on peb, sand

FUCUS Usually patchy - juveniles prevalent

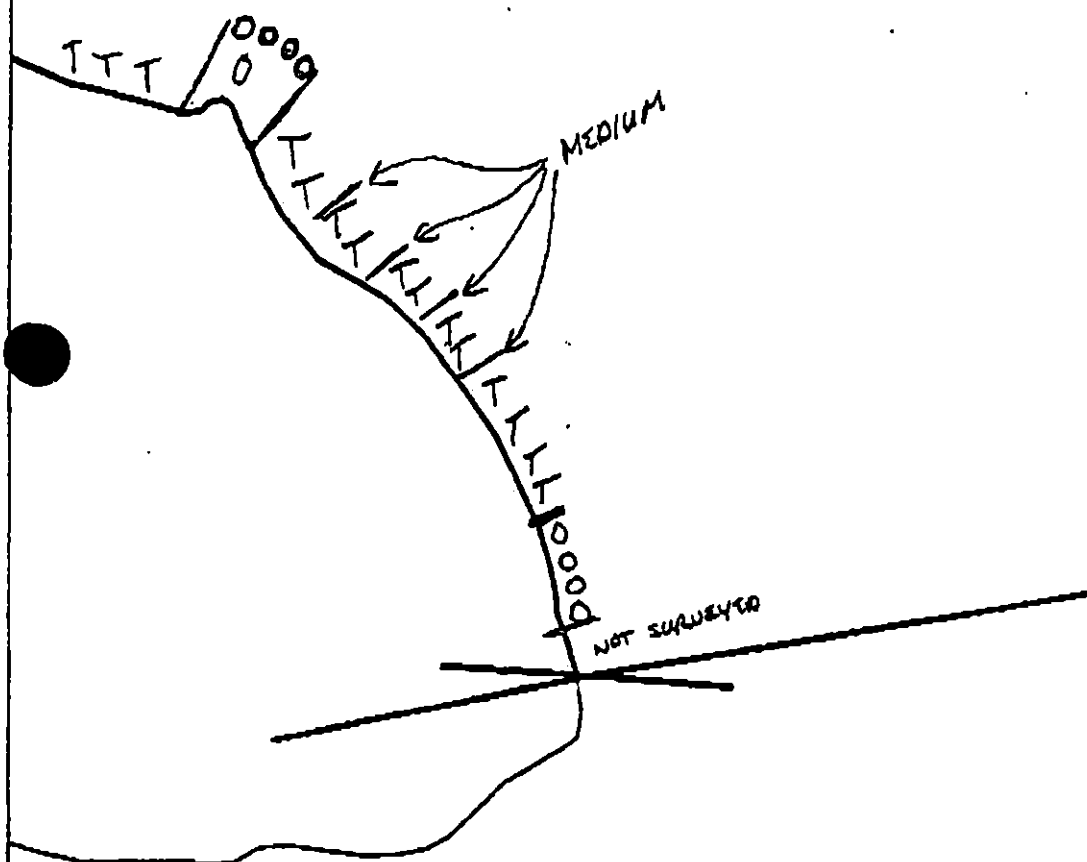
Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT
on peb, sand

Wildlife Observations/ General Comments: Algae noted: *Petrelia* or *Ralfsia* occasionally seen in mid to upper ITZ, *Littorinium* in tidal pools; *Helicodonta* and *Urosalpinx* in tidal pools, *Enteromorpha* commonly dense in lower ITZ at eastern end of segment, completely covering boulders. Other fauna - Filamentous red + green algae in mid-lower ITZ; *Anthopleura* + *Tetras* in tidal pools; patchily dense *Urosalpinx* eating barnacles. No fauna in direct contact with oil.

Ecological Considerations

2 bald eagles seen @ 1 mi W of Cape Kuliak - no nest observed. Glaucous-winged gulls. No marine mammals observed.



← GOA
148A

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO

KU-2

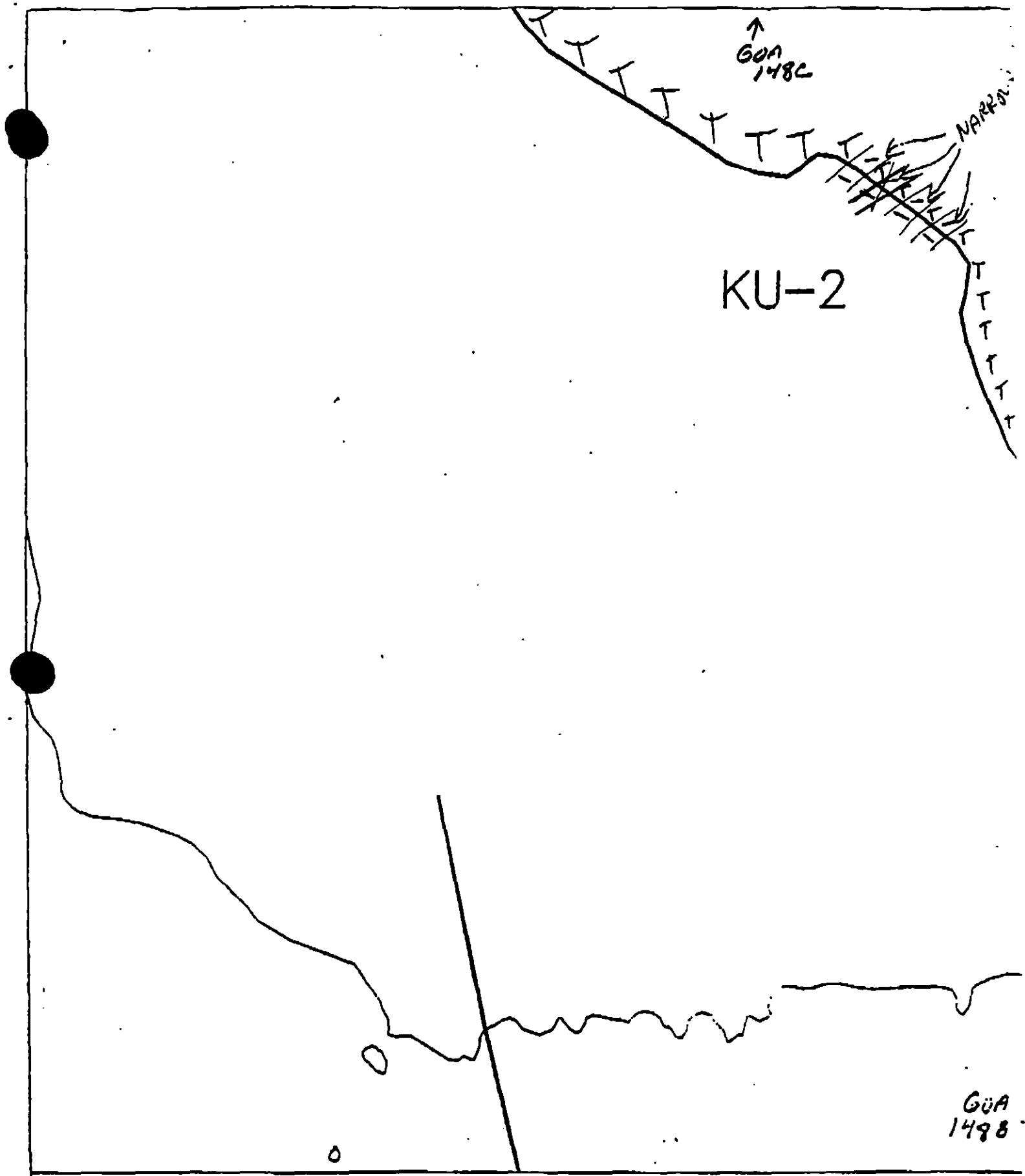
ADEC Segment Length: 8995m



Map Key: GOA-148b

Name: L. NAKASHIMA

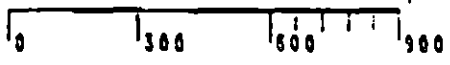
Date: 4/2/90



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

KU-2

ADEC Segment Length: 8995m



Map Key: GOA-148a

Name: L. NARSAHIMA

Date: 4/21/80

U-1

KU-3

KU-2

↓ GOA 148A

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Data

ADEC Segment Length: 8995m

0 300 600 900

Map Key: GOA-148c

Name: L. NAKASHIMA

Date: 4/21/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-24-KU-02 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation	OPEN

*No Inlpol - Use Customblen only in upper supra intertidal at discretion of NPS monitor.

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

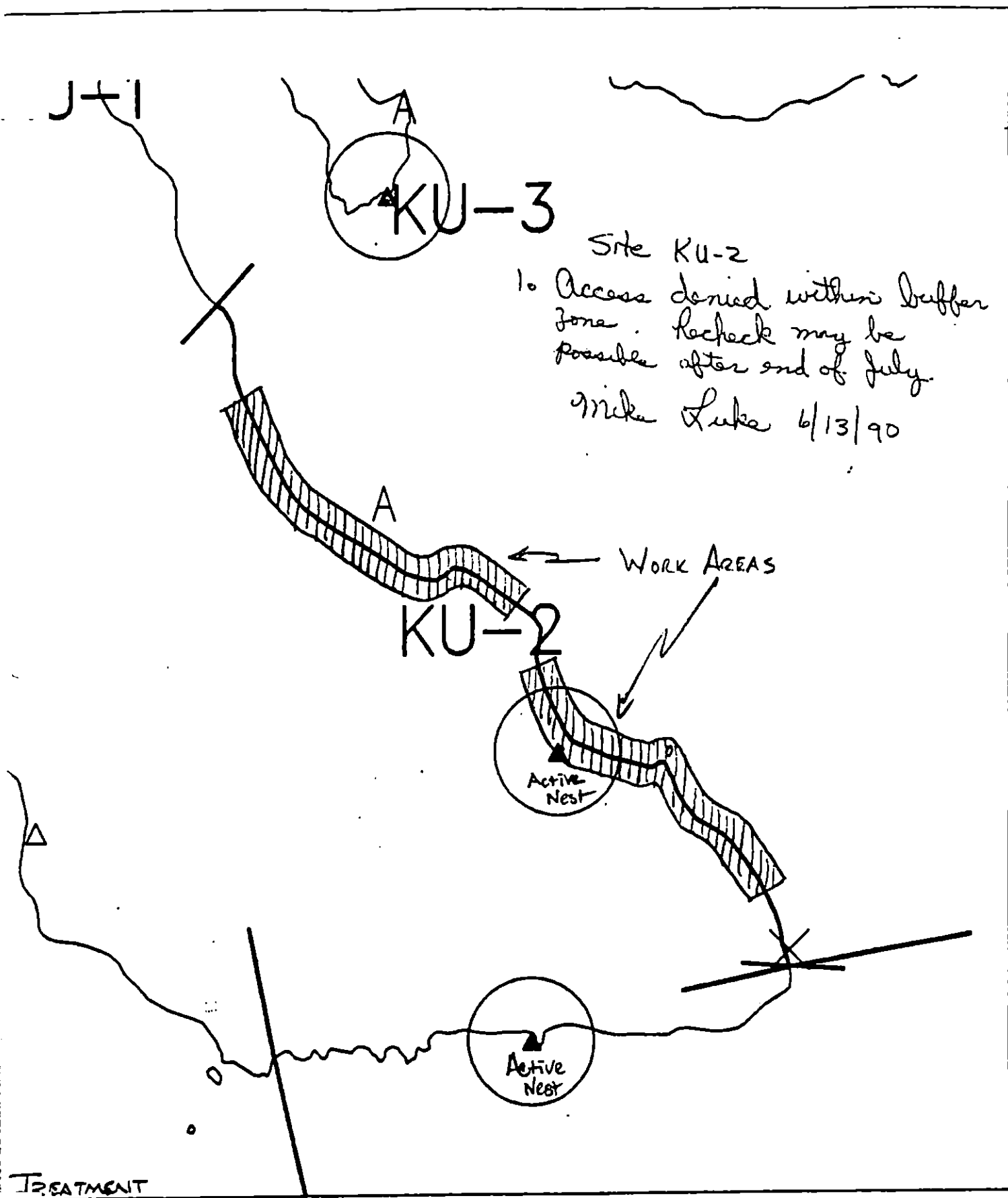
APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Molting	No constraint to manual pickup and bioremediation (Donald Calkins/ADF&G) per 6/11/90 memorandum from Sam Stoker.
5R	Seabird Colony	No documented seabird colonies. No constraint to manual pickup as per LETTER DATED 6/15/90 Rex Coulter/Exxon from WALTER STEGLITZ, USFWS.

OTHER ECOLOGICAL CONSIDERATIONS

Beach is to be approached with caution, by boat, and carefully scrutinized. If seals are present on the beach or in the water nearby, operations are to be suspended until after expiration of the previously defined constraint period. If seals are not present, treatment is to be completed as quickly as possible, with as few personnel and equipment as possible, and with an absolute minimum level of noise and general disturbance. Any application of bioremediation should be confined to above the mid-tide zone. Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

10 Inlpol
FOSC J. P. Phillips Date 6-15-90
Prepared by J. P. Phillips Date 6/15/90



Site KU-2
 1. Access denied within buffer zone. Recheck may be possible after end of July.
 Mike Luke 6/13/90

TREATMENT



Exxon Company, USA
 Map Key: AKP-KU-2
 June 10, 1990



ECOLOGY MAP
 SEGMENT K9N-24 KU-2
 SUBDIVISION A (1-1-1-1)



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

1 inch = 2766 feet

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-24-KU-02 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup
 Greater Than 400m From Eagle Nest OPEN
 Less Than 400m From Eagle Nest WORK AFTER 7/1 **

Bioremediation
 Greater Than 400m From Eagle Nest OPEN
 Less Than 400m From Eagle Nest WORK AFTER 7/1**

*No Inpol - Use Customblen only in upper supra intertidal at discretion of NPS monitor.
 **USFWS monitor on site during treatment.

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

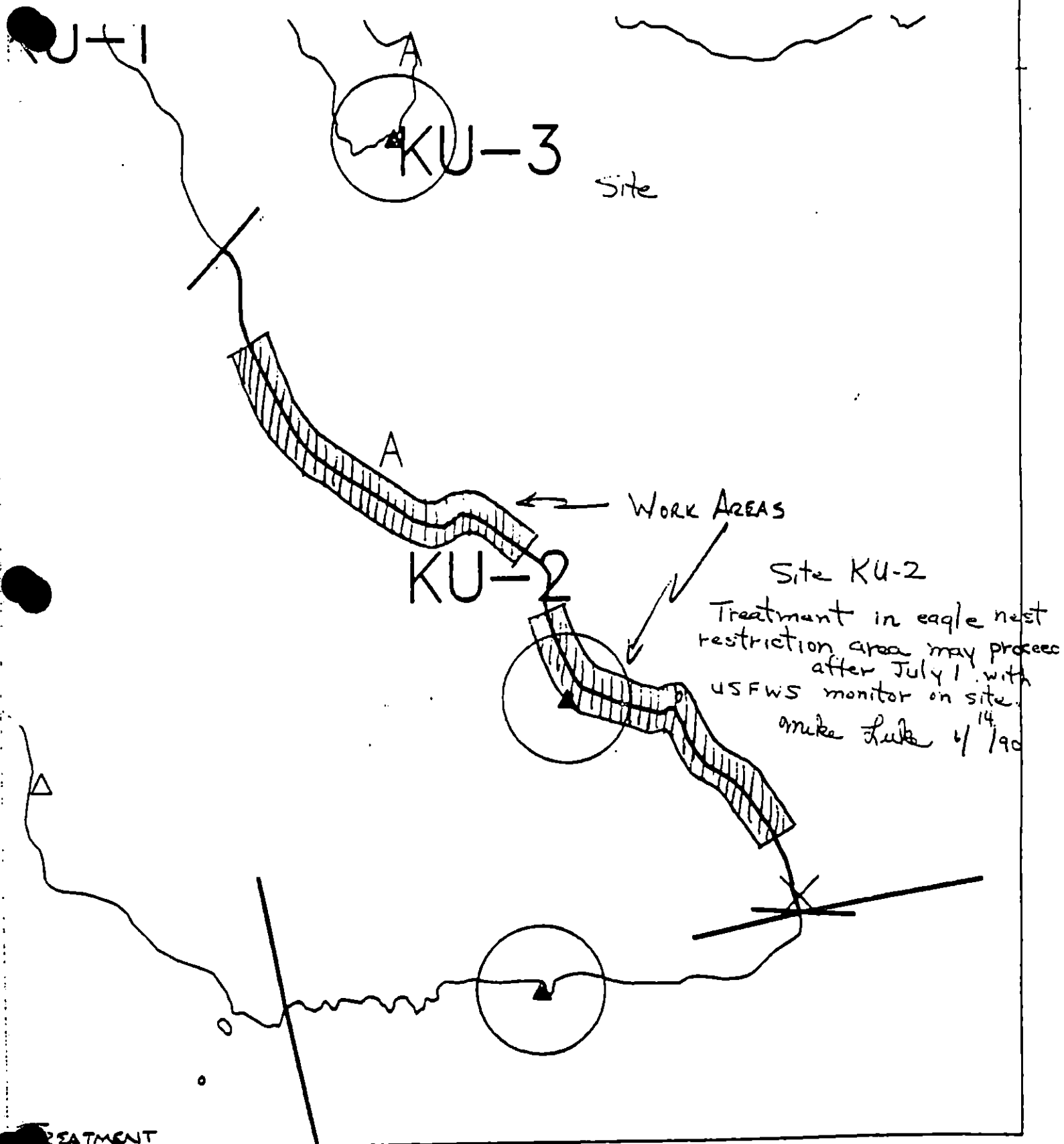
3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Molting	No constraint to manual pickup and bioremediation (Donald Calkins/ADF&G) per 6/11/90 memorandum from Sam Stoker.
5R	Seabird Colony	No documented seabird colonies. No constraint to manual pickup as per memorandum to Rex Coulter/Exxon from Mary Portner/USFWS.
5T	Eagle Nest	No constraint to manual pickup and bioremediation less than 400m from eagle nest, USFWS needs to be present.

OTHER ECOLOGICAL CONSIDERATIONS

Beach is to be approached with caution, by boat, and carefully scrutinized. If seals are present on the beach or in the water nearby, operations are to be suspended until after expiration of the previously defined constraint period. If seals are not present, treatment is to be completed as quickly as possible, with as few personnel and equipment as possible, and with an absolute minimum level of noise and general disturbance. Any application of bioremediation should be confined to above the mid-tide zone. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

FOSC W L Date 6-22-90

Prepared by P. Philley Date 6/20/90



Exxon Company, USA
Map Key: AKP-KU-2



ECOLOGY MAP
SEGMENT K9N-24 KU-2
SUBDIVISION A (1 of 1)
METERS

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

SHORELINE EVALUATION

SEGMENT ST/ K09-24-KU-003 SUBDIVISION A (1 OF 1) DATE 5/4/90

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)

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

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

9LM Other: Land Mammals

4LL State Marine Park National Parks

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Rachel Lee Dine DATE: 5/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 1099 m: No Oil 5705 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: 5/23/90.

ADEC Art Weingart Art Weingart

EXXON *Amoy Gas*

NOAA *Burl Wescott Burl Wescott*

USCG G.A. BEITER G.A.T.

FOSC: 12/2/90 DATE: 1/90

DATE: 7/96

- 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 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, 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 prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2290
- 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, 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 Kotol Bay Hatchery release
Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 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
Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 6/30)
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 Larry Nicholson 486-4791
- 3P Harbor seal and sea lion pupping (5/10 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 267-2208
- 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 (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 Subistence area: Salmon harvesting (5/1 to 9/30)
7H Finfish harvesting
7I Deer harvesting (9/1 to 1/7)
7J Invertebrate harvesting
7K Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 K9.24 KU.3 SUBDIVISION: K9.24-KU-3A DATE 5-4-90

USCG

NAMED D.D. Haven Jr, CDR, USCGR

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME Francine J. Bennis

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Only VL oil observed : stain + splatters.

LAND MANAGER NPS

NAME WILL TROYER

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

only light splatter & stain observed

OG Acton USCG Haven SEGMENT ST/ K9-24-KJ-3
 BIO Davis LAND REP NPS Troyer, Pantherland SUBDIVISION K9-24-KJ-3 (1 OF 1)
 EXXON Avery ADEC Bennis TIME 5:40 to 7:50
 TEAM NO. 20 TIDE LEVEL +2 to +3.5 DATE 5 / 9 / 90
 ST. SUBDIVISION LENGTH: 6.29 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 PLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☒ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 30 % B 30 % C 15 % P - % G 5 % S 10 % M 10 % V - %
 SLOPE: Lang 70 % Hang 15 % Vert 15 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 1000 m NO 5629 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR							IMPACTED ZONES			
	C	B	P	S	SL BR	DL FW	OL	FL	DR TL	LR	SU	U	M	U	
ASPHALT PAVEMENT															
POOLED															
COVER															
COAT															
STAIN				✓		✓						✓			
MOUSSE															
PATTIES															
TARBALLS															
LM															
DOIL											✓		✓	✓	

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE #BAGS 0

Photographs:

Roll No. ST-20-9Frames 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)	T	SURFACE - SUBSURFACE SEDIMENTS		
		OF	OR	OL	OF	NO		UO	UC	SL BR	DL FW	OL TL	DR TR	LR	SU	U	M	U							
1	5					✓	.		✓							✓									BC
2	5					✓	.		✓							✓									BC
3	20					✓	.		✓							✓									BC
4	30					✓	.		✓							✓									SM
							.																		
							.																		

COMMENTS Shoreline in this segment is primarily narrow width (< 20m) boulder, flat cobble beach. Area of oiling was approx 1000m long and was comprised of VL stain on boulders (very occasional). The tip of the peninsula was unreachable by helo due to vertical cliffs. The stream area at the extreme NW segment end was not surveyed ^{on foot} due to the presence of bears.

REVIEWED BAT DATE 8 MAY 90

OG Ac

SEGMENT S' -Z4-KU-3

SUBDIVISION K9-Z4-KU-3A

DATE 5 / 4 90

CHECKLIST

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

LEGEND

1 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

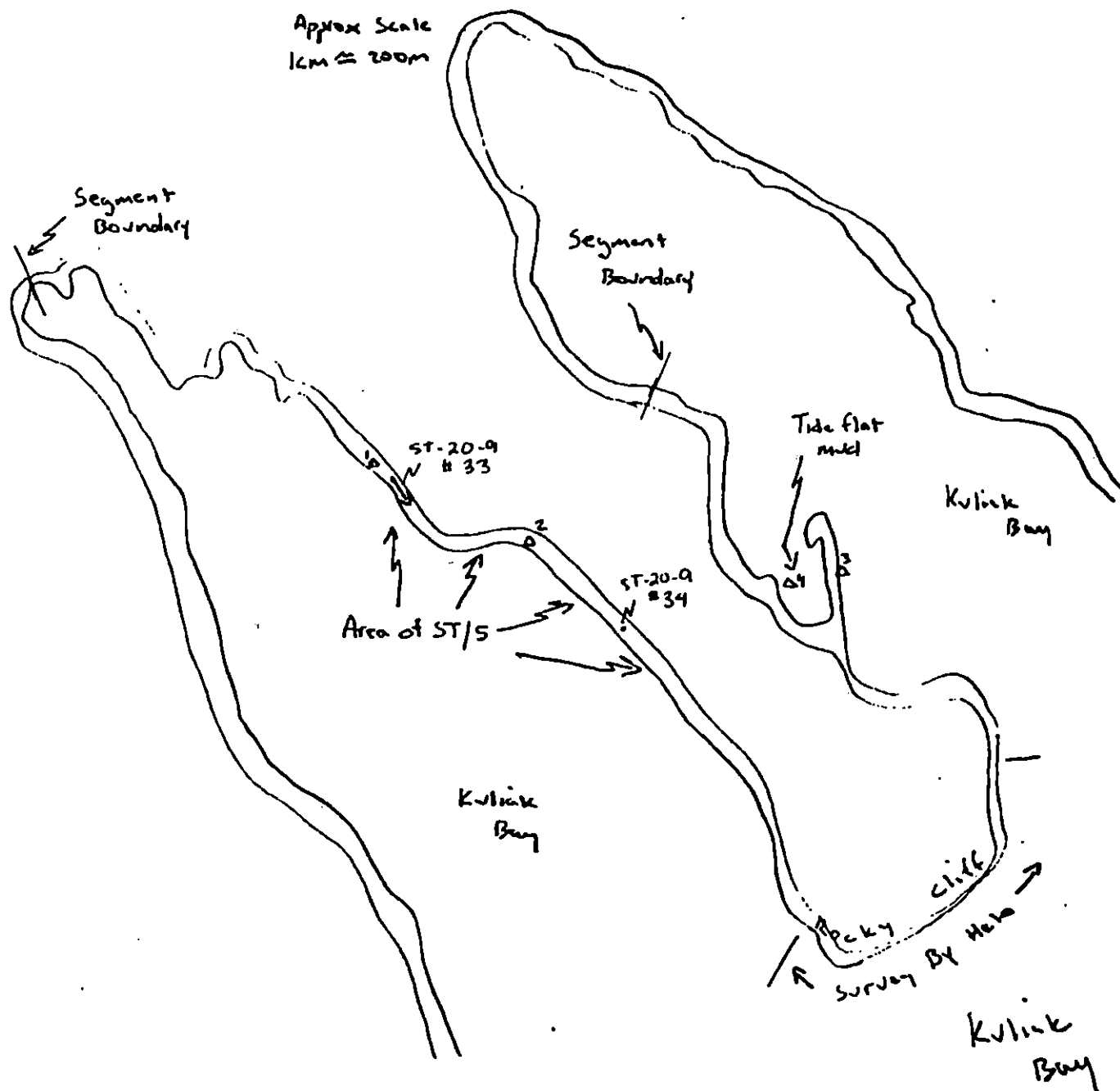
Oil Vegetation

1 $\Rightarrow$

Photo location, direction,
and number

S CH MAP

Approx Scale
1cm $\approx$ 200m



Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 1000 MS 0 PT 0 TB 0 FL 0 NO 5629

REVISION: 230400

SHORELINE ECOLOGICAL SUMMARY

REVISION: 332

Segment ST / K9-24 Subdivision KU-3 Date (mo / day / yr) 5/4/90Time (24 hr) 18:00 Biologist H. Davis

(A) Substrate type and % of segments:

(1) Bedrock 30 (2) Boulder 30 (3) Cobble 15 (4) Pebble 5 (5) Sand 10 (6) Silt 10(B) Overall % cover of biota (% of segment): Dense 20% Moderate 30% Low 50% (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-20-9Frames 33 34

BARNACLES Dense-Moderate Throughout the segment.

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

MYTILUS Small (3x1 meter) dense patches of large mytilus

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

GASTROPODS continuous along segment. Littorina Dense-Moderate, limpets Mod, Nucella Sp.

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

FUCUS Dense patches scattered along whole segment.

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

Wildlife Observations/ General Comments: The southern side had a sharper boundary between the rocky slope and the tide flat than the northern side. All the oil was found on the southern side above the inhabited area.

Ecological Considerations: 3NOPE, 1A1B

Harbor seal and Sea lion haulout, for molting and having pups. Streams coming into the south side of the segment have Pink and Chum Salmon spawning in it. Schools of fry were observed in the water along the segment.

K9-24 KH-03
5/4/90
Bio H. Davis

Birds:

Mallards
Buffleheads
Glaucous winged Gulls
1 adult Eagle
1 juvenile Eagle
Greater Scaup
Harlequin
Surf Scoter
Oystercatchers
Cormorant

North

← Pink and Chum
Spawn in these
streams.
1 Bear seen here

boundary

The south side of the
segment is a sand and silt
leading up to a slope
of bedrock, boulders and shingles.

On the slope: *Balanus glandula*, *Fucus*,
Porphyra, *Odenthalia*, *Scytosiphon*, green
filamentous, *Chladophora*, patchy bands of
dense large *Mytilus*, *Littorina*, limpets
Nucella, and *Katharina tunicata*. On the
sand-silt flat phoronids, *Ulva*, some *Zostera*,
Gigartinales sp., *Halosaccion*, *Clinocardium nuttalli*,
Protothaca, *Saxidomus*, *Cancer magister*, and *Telmessus*.
Salmon fry were in small schools around slope
sand interface.

The northern side of the segment was a more
gentle sloping area. Shingle and sand in the
UTZ with mud and sand below. *Balanus* sp.
were very dense on all hard substrates.
Mytilus beds were patchy with large *Mytilus* and
some *Modiolus*. Dominant algae are *Ulva*,
Halosaccion, small patches of *Odenthalia*, and *Fucus*.
Zostera marina beds are in the LTZ. Animals
found among the shingles are *Littorina*, limpets,
Katharina tunicata, *Serpula*, *Spirorbis*, *Anthopleura*,
Holothurids, *Leptasterias* and *Platyhelminthes*.

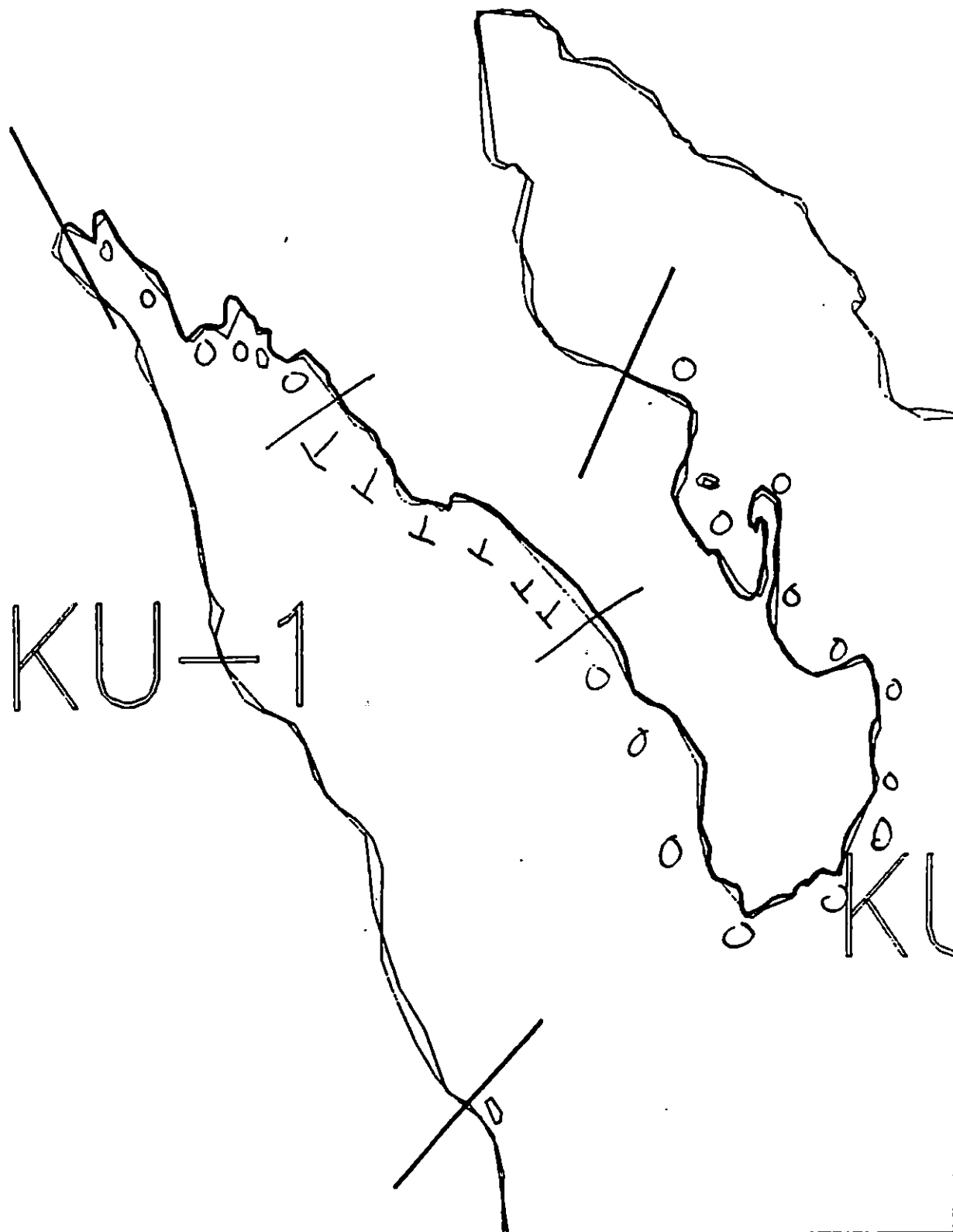
On the mud flats phoronids
Clinocardium, *Protothaca*, *Serpula*,
Neomyxis sp., *Anthopleura artemesia*,
Neptunella, *Saxidomus*, and
Natica. Diatom mats present

fly-by area *Fucus*, *Barnacles*,
Mussels, *Porphyra*, seemed
similar to south side.

800 m.

Ecology Sketch Map

K9-24-KU-3A



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

KU-3

Approx. Segment Length: 9878m



K9-24-KU-3A

Map Key: AKP-KU-3a

Name: Acton

Date: 5-4-90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ K09-30A-TL-001 SUBDIVISION A (1 OF 1) DATE 5/13/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5R Seabird colony (5/1 to 9/1)
5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
4LL State Marine Park National Parks

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: Michael C. ...

DATE: July 12, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 334 m: Narrow 245 m: V. Light 1165 m: No Oil 5800 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

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

COMMENTS: Recommend manual pick up of mousse as indicated on attached sketch map. Consult USFWS for appropriate work dates, regarding eagle nests and seabird colonies.

TAG COMMENTS: MONITORS TO ASSESS OILED LOGS

TAG APPROVAL DATE: 6/04/90

ADEC Ray Morris R. Morris
EXXON Andy ...
NOAA Joseph ...
USCG G.A. ...

FOSC:

DATE: 7-20-90

no treatment!

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 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, 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 prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 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, 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 Kotol Bay Hatchery release
 Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 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
 Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 6/30)
 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 Larry Nicholson 486-4791
- 30, 3Q Harbor seal and sea lion pupping (5/10 to 7/1)
 Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (8/1 to 9/15)
 6V Anchorages (8/1 to 9/15)
 6W Forest Service cabins (8/1 to 9/15)
 6X Lodges (8/1 to 9/15)
 6Y Special use destination
- Z Subistence area: Salmon harvesting (8/1 to 9/30)
 H Finfish harvesting
 I Deer harvesting (8/1 to 1/7)
 7J Invertebrate harvesting
 7K Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 K09-30A-TL-2 SUBDIVISION: A DATE 5/13/90

USCG

NAME Kenneth M. TRABUE SIGNATURE K. Trabue

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Three different wide (>6m) sections of Broken coast and stain with sporadic manasse. Occasional stain throughout rest of segment. The oil and substrate characteristics make clean-up unfeasible. The sand oily section near far NW part of segment (Pit #1) does have recoverable oil.

ADEC

NAME Francine J. Bennis SIGNATURE Francine J. Bennis

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Manual clean-up recommended in area designated as 'Rough Band' 6 x 7.5m. SSAT map on western side of islets located in 4th major bay from our survey starting in lagoon (SW corner of Takli). [Other areas of light oil exist but are not worth recovering]. This band could be cleaned w/frames to remove persistent manasse among cobbles & boulders

LAND MANAGER NPS

NAME Will TROYER SIGNATURE Will Troyer

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Band #2 in the lagoon adjacent to archeological site, large nests and rookery, little recoverable oil. Band probably should not receive cleanup effort.
Band #6 has an extensive amount of manasse that is recoverable. It doesn't lie close to the rookery that would be a problem so it can be recovered with manual cleanup methods.

SHORELINE OILING SUMMARY

REVISION NO. 06/13/90

OG Greg Chaney USCG Ken Tralove SEGMENT ST/ K09-30A-TL1
 BIO Nathan Duffie LAND REP. Will Trayer (NPS) SUBDIVISION A (1 OF 1)
 EXXON — ADEC Tran Benthis TIME 08:00 to 5:10
 TEAM NO. 20 TIDE LEVEL -0.5 to 6.0 DATE May 13 1990
 EST. SUBDIVISION LENGTH: 9570 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock Alders
 SURVEYED FROM: ☒ Foot ☐ Boat ☒ Helo WORKING DIRECTION: West to East
 SURFACE SEDIMENTS: R 50 % B 25 % C 5 % P 5 % G 5 % S 10 % M 0 % V 0 %
 SLOPE: Long 10 % Hang 60 % Vert 30 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 224 m N 190 m VL 1200 m NO 7956 m

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0 cmPATTIES / TARBALLS 4 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 marine patty
#BAGS less than 1

Photographs:

Roll No. ST-20-11Frames 2 to 7

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	S E E K (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OW	OL	OF	NO		UO	VO	1	2	3	4	SS	U	M	U				
1	40					X	.								X				N	0	GS
2	30					X	.								X				N	0	S
3	40					X	.								X				N	0	S
4	55					X	.								X				N	0	S
							.														
							.														

COMMENTS

See attached.

REVIEWED BAT DATE 17 MAY 90

SKETCH MAP

KG Greg Chaney

SEGMENT ST/ K09-30A-TL1A

SUBDIVISION A

DATE May 13 80

CHECKLIST

- ☐ M Arrow
- ☐ Approx. Scale
- ☐ Ship/Sub Entry
- ☐ Oil Dist
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HMA/LWL
- ☐ SBL
- ☐ Profile Location(s)
- ☐ Photo(s)
- ☐ Photo Location(s)

LEGEND

- 1 A
- FI - No Subsurface Oil
- 2 A
- FI - Subsurface Oil
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/R
- Patchy Distribution
- CT/S
- Spotted Distribution
- Oil Vegetation

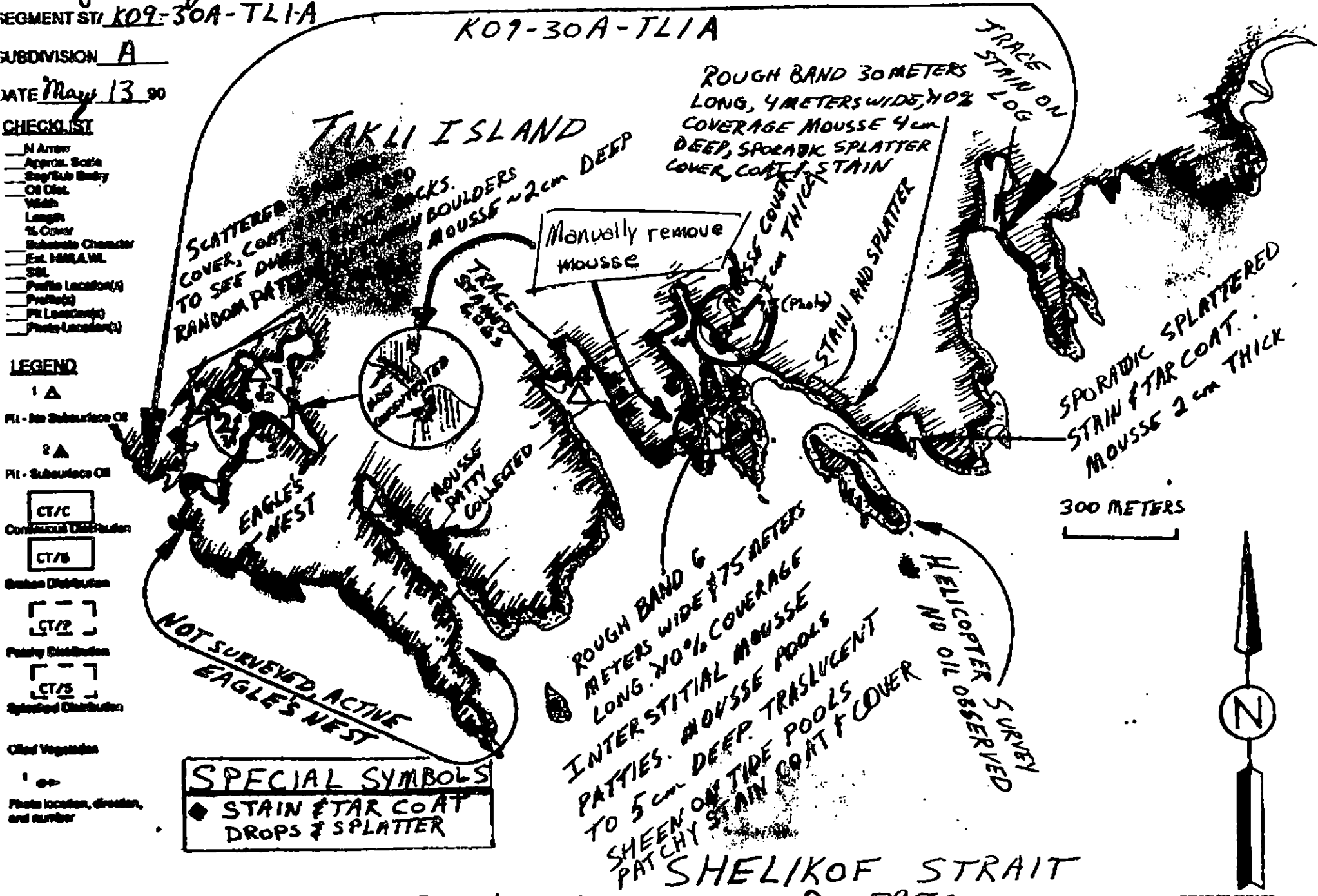
Oil Vegetation

1 ●●

Photo location, direction, and number

SPECIAL SYMBOLS

◆ STAIN & TAR COAT
DROPS & SPLATTER



Oil Character Length (m): AP 0 PO 20 CV 100 CT 300 ST 1200 NS 200 PT 200 TB 0 FL 0 NO 7956

REVISED 10/80

Notes: Further SSAT of this segment was not
conducted due to NPS request. May 14 1990
COMMENTS
BT-K09-30A-TL1-A

Greg Cheney

May 13 1990

Subdivision "A" of segment BT-K09-30A-TL1 consists of the small fjord like embayments along Takli Island's southern coast. Although the linear distance from the beginning to the end of the subdivision is just over a mile, the length along it's meandering coastline is roughly six miles. The shore is composed of rocky headlands, steep sided bays and pocket sand beaches. At the western edge of the subdivision is a protected lagoonal system. Within this lagoon, between pits 1 and 2, are two low boulder strewn rocky points. These features retain splatters of cover, coat and stain. Also scattered randomly in this area are mousse patties which have weathered to dark black on the surface. Since the local rock is also black, these patties are very difficult to see. When the surface of the mousse is disturbed it is a rich chocolate brown. In a few locations mousse was pooled at least 2 centimeters deep in bedrock cracks and between boulders. Along the protected shores of the rest of the segment small splatters of stain and tar coats were occasionally observed as noted on the sketch map. The agency personnel on our team did not feel that these rare splatters and drops were of serious consequence. The exceptions to this were noted near the center of the subdivision. In the location where three low islands are clustered in a small bay the wave energy was low enough that oil remained from last year. Scattered pooled mousse and patches of tar cover, coat and stain were observed near the intersection of the two western islands in a rough band 6 meters wide, 75 meters long with 10% coverage. Random pooled mousse was lodged between the boulders at least 5 centimeters deep. Although the total area effected by oil was less than in the western lagoon, mousse between the two islands seemed more concentrated and recoverable. Estimates of mousse concentration were very difficult to develop in both locations due to the very dark nature of both mousse and bedrock. Translucent sheen was observed on tide pools associated with local mousse deposits. The final notable concentration of mousse was located near the eastern edge of the subdivision. Here a rough band of sporadic splattered cover, coat, stain and pooled mousse was deposited along a 30 meter section of boulder beach, 4 meters wide. Again coverage within this band was near 10%, with rare pooled mousse to 4 centimeters deep. Recovery of mousse mentioned in this report, although tedious, is possible with hand trowels etc.

K09-30A TL-01A
 5/13/90
 H. Davis

This segment is made up of several deep inlets alternating with sloping rocky points. The inlets have sand bottoms with bedrock boulder and cobble walls that get smaller toward the head of the inlet. The heads of these inlets are usually sloping grass hills with sand dunes and debris. At the south-west end of the segment was a lagoon with sand bottom and boulder/bedrock edges. In the lagoon the rocks were commonly occupied by: *Uca*, *Scydaphon*, *Enodoladia*, *Gloiopecta*, *Fucus*, *Odenthalia*, *Mytilus*, *Nucula*, limpets, littorina, *Balanus* and *Pogonias*. On the sand shells of *Clinocardium*, *Saxidomus*, *Prothaca* and *Chlamys* were found. Some had drill holes from a predatory snail possibly *Polinices* or *Natica*. A few *Phoronis* were found. Near the mouth of the lagoon the boulders had been settled by corals. (Barnacle larvae) The flora and fauna in the inlets was very similar to that of the lagoon with the addition of *Cancer magister*, *Puaster ochraceus*, *Higia*, *Antennalis*, *Actinia*, and sculpins. On the rocky headlands there was a more diverse community visible. The Algae: *Porphyra*, *Ulva*, *Fucus*, *Odenthalia*, *Rhodomenia*, *Bryopsis*, *Corallina*, *Alaria*, *Bombardier* and *Laminaria*. Barnacles (*Balanus glauca* and *caninus*), *Cellinella digitata*, *Alcyon*, *scutum*, *Adosia*, *persona*, *Nucula canaliculata*, *Sabellid* sp, *Katharina*, *Turris*, *Cryptochiton stellus* (dead), *Buccinum* sp., *Epiaetus prolifica*, *Anthopleura*, *Anthopleura artemisia*, *Tritia crassicornis*, *Mytilus*, *Spizella*, *Tonnoia*, *Chondria*, *Chondria pumila*, *Allopora porphyra*?, *Melanothamnus*, *Taphia* and *Strongylocentrotus droebachiensis*.

Stone
 observed
 that it's anachronous.



SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/28/90

Segment ST/ K09-30A Subdivision TL-01 ADate (mo / day / yr) 5/13/90Time (24 hr) 08:00 Investigator H. Davis

- (A) Substrate type (% of segment):
 (1) Bedrock 5 (2) Boulder 25 (3) Cobble 5 (4) Pebble 5 (5) Sand 15 (6) Silt 40
- (B) Overall % cover of biota (% of segment): Dense 20% Moderate 40% Low 40% (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-20-11Frames 2-8BARNACLES *Continuous except across the sand and grass at the heads of inlets. New settlement had occurred recently.*

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

NOT PRESENT

4, 5, 6

MYTILUS *Patchy all along the segment*

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

5, 6

GASTROPODS *Littorina* Dense-Sparse, *Urosalpinx* moderate-Sparse, *Urosalpinx* Moderate-Sparse, *Urosalpinx* were patchy

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

5, 6

FUCUS *Patchy, along some places there was a dense band of Fucus in others only patches on the tops of boulder*

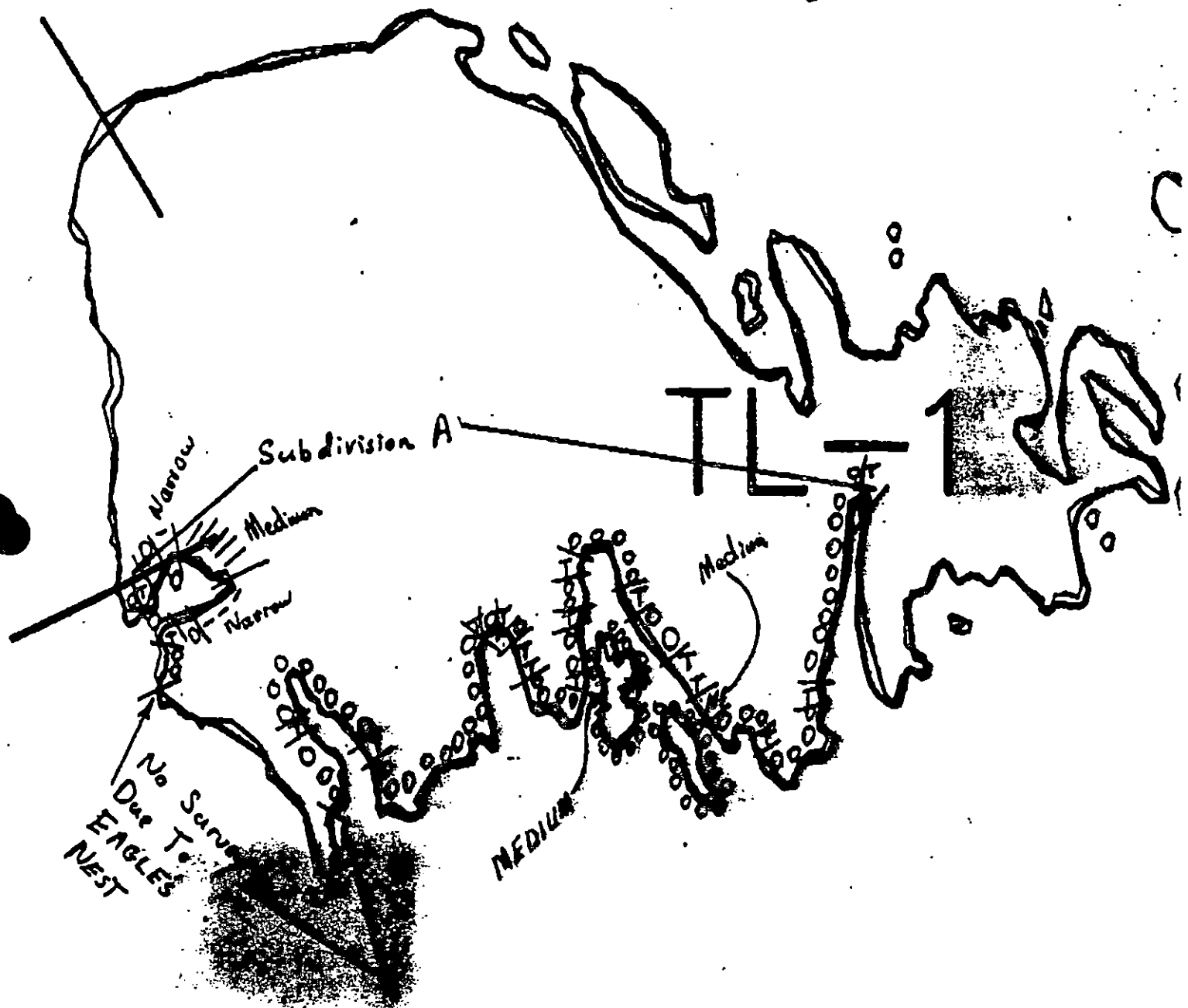
Dense			Moderate			Sparse			Rare		
1M	1L		1M	1L		1M	1L		1U	1M	1L
X	X		X	X		X	X				
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

4, 5, 6

Wildlife Observations: See Ecology maps.

Ecological Considerations: SR. On the western edge of the island, north of the lagoon there is a cormorant rookery (Pied-billed and Red-faced?). There is also an Eagle Nest on the south west corner of the island (see Map) and possibly another



KAS

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

TL-1

KAS-30A

ADEC Segment Length: 24993m

1. ... 1.2. 1.3. 1.4. 1.5. 1.6. 1.7. 1.8. 1.9. 2.0.

Map Key: AKP-TL-1a

Name: Greg Chasen

Date: May 13, 1970

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-34-KB-001 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	WORK 7/1 - 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous stream (262-60-1006, 262-60-1008, and 262-60-10010) are more than 100m from work site. No constraint to manual pickup.
3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Molting	Closed to manual pickup prior to 7/1 and after 8/15.
5R	Seabird Colony	NO CONSTRAINT. Work site is more than 800m from seabird colony.

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.

FOSC

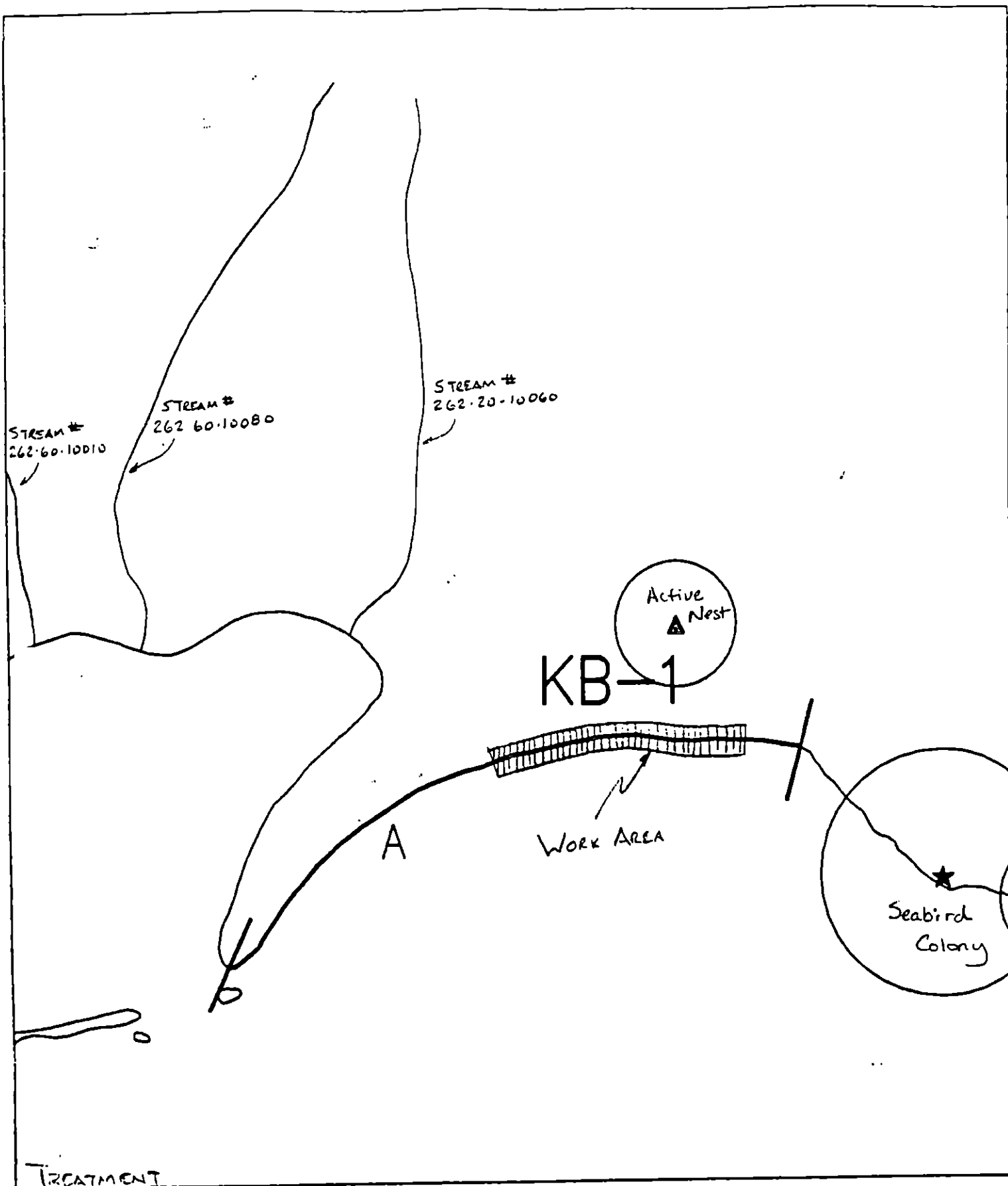
[Signature]

Date

6-16-90

Prepared by

Date



Exxon Company, USA
Map Key: AKP-KB-1
June 10, 1990

ECOLOGY MAP
SEGMENT K9S-34 KB-1
SUBDIVISION A (Lot 1)
METERS

0 851 1703

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

1 inch = 2794 feet

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-35-KA-002 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN
Spot Washing	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 4/9/90 map indicates no active nest within 400m of Subdivision A work site.
7JJ	Subsistence: Invertebrate Harvesting	No constraint to manual pickup and spot washing.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

[Signature]

Date

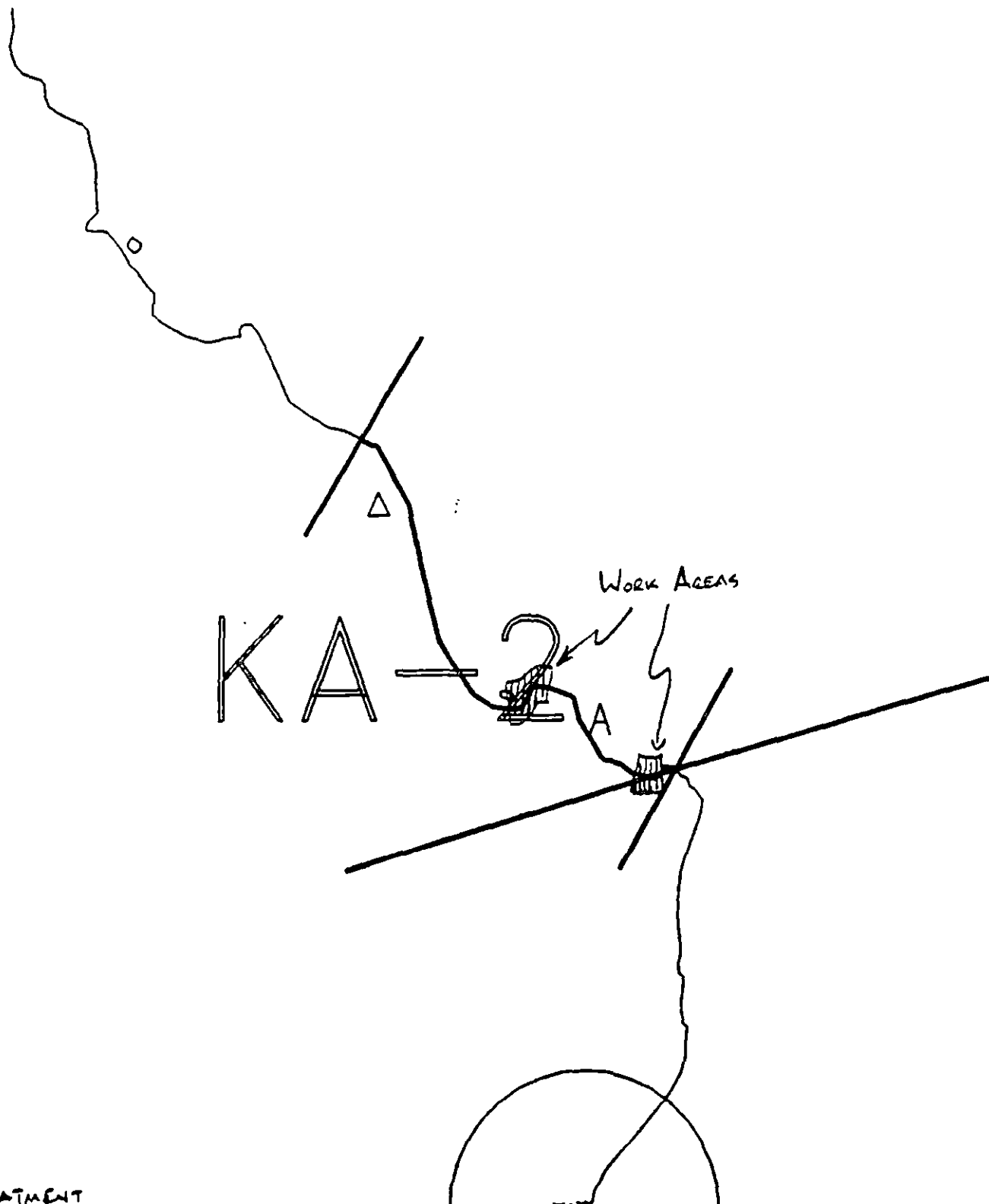
6-16-90

Prepared by

[Signature]

Date

6/15/90



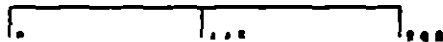
ATTENTION



Exxon Company, USA

Map Key: AKP-KA-2

ECOLOGY MAP
 SEGMENT K9S-35 KA-2
 SUBDIVISION A (1 of 1)
 METERS



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

1 inch = 1459 feet

WORK PLAN ADDENDUM

Segment K09-35-KA-002

Subdivision A.

Dated 06/20/90.

MODIFICATION

1. REASON FOR MODIFICATION

- LAND MANAGER REQUEST - NO SPOT WASH.

2. ADJUSTMENT TO WORK PLAN

- NO SPOT WASH.

SHPO APPROVAL NEEDED YES ✓

NO X

SHPO SIGNATURE

Chuck Adams 6/22/90

TAG APPROVAL DATE

06/20/90.

ADEC

Ray Morris R. Morris

EXXON

Amoy TGA Deal

NOAA

Joseph Talbott J. Talbott

USCG

G.A. REITER G.A. Reiter

FOSC

J. Garofalo

DATE

2/5/90

SHORELINE EVALUATION

SEGMENT ST/ K09-35-KA-03 SUBDIVISION A (1 OF 1) DATE 4/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no: 262-65-10030 and 262-65-10040

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

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

4LL National Parks

5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)

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

9LM Land Mammals

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: Michael Petrogovsky DATE: 5/15/00

OILING CATEGORIZATION:

Wide_0_m: Medium_0_m: Narrow_0_m: V.Light_1560_m: No Oil_9155_m
Subsurface Oil Observed: Yes_____No X_____Maximum Depth_____

RECOMMENDATIONS:

 No Treatment Recommended

X	Treatment Recommended
1	1
2	1
3	1
4	1
5	1
6	1
7	1
8	1
9	1
10	1
11	1
12	1
13	1
14	1
15	1
16	1
17	1
18	1
19	1
20	1
21	1
22	1
23	1
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85	1
86	1
87	1
88	1
89	1
90	1
91	1
92	1
93	1
94	1
95	1
96	1
97	1
98	1
99	1
100	1

X Manual Pickup

Bioremediation

Tarmat Removal

Snare/Absorbent Booms

Oil Snares (pom poms)

____ Absorbents (pads, rolls, etc)

Spot Washing: _____ Wands _____

Beach Cleaner

 Other (see comments)

COMMENTS: Recommended treatment is manual pickup of mousse from areas indicated on attached sketch map. Work should be conducted between 6/1 and 7/10 based on eagle nest and salmon constraints with approval of USFWS regarding eagle nest. Consult ADF&G for specific working times regarding invertebrate harvesting.

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/15/90

ADEC ART WINGER Art Winger

EXXON Amoy TGA Real

NOAA Joseph T. Galt
USCG G.A. BEITER G.A. Beiter

FOSC: ML DATE: 5-18-90

DATE: 5-18-90

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 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, 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 prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 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, 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 Kotol Bay Hatchery release
Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 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
Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 6/30)
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 Larry Nicholson 486-4791
- P Harbor seal and sea lion pupping (5/10 to 7/1)
2 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 6/1)
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 (8/1 to 9/30)
7H Finfish harvesting
7I Deer harvesting (8/1 to 1/7)
7J Invertebrate harvesting
7K Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
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/ K0936-KA003 SUBDIVISION: KA003A DATE 4/29/80

VOAA
USCG
NAME

John Naughton SIGNATURE John J. Naughton

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

This segment at the head of Kashvik Bay had only very light oil. Patches of mousse were found in a few locations, primarily along rock outcrop adjacent to an anadromous stream. This area is a rich resource area consisting primarily of extensive intertidal mud/sand flats, anadromous streams, eagle nesting, bear and other large land mammal habitats. Because of potential disturbance from clean up activities and small amounts of oil observed, recommended by the

ADEC

NAME Terry Ellsworth SIGNATURE Terry Ellsworth

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Four areas containing recoverable mousse were found in this segment. Mousse occurs interstitially between boulders and cobbles and in crevices. One area is located along the North side of Kashvik Bay easterly from the head of the bay. The remaining areas occur along the south side of the bay. Manual removal is recommended and would be best accomplished using shovels and small garden tools. The possible presence of nesting eagles should be considered when scheduling clean up.

LAND MANAGER

NAME Carl Sabers SIGNATURE Carl Sabers

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Recoverable oil consists primarily of scattered mousse patches with entrained sediments. The larger patches could be removed with shovels or trowels. The cleanup crew should access oiled sections only and not disturb sensitive eagle and bear habitats adjacent to these sections. Helicopters should avoid flying along bluffs where eagles commonly roost. Oil along the north shore is limited to the banks of an anadromous stream.

SHORELINE OILING SUMMARY

REVISION NO 34-12-90

OG LINDSAY NARASHIMA (NAAA) JOHN NAUGHTON SEGMENT ST/ K0936-KA003
 BIO JIM BARRY LAND REP CARL SCHOCH SUBDIVISION KA003A (1 OF 1)
 EXXON FRED BYARS ADEC TERRY ELLSWORTH TIME 10:15 to 12:40 PM
 TEAM NO. 19 TIDE LEVEL +1.80 TO -1.80 FT. DATE 4/29/90
 EST. SUBDIVISION LENGTH: 10388 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: NORTH to SOUTH
 SURFACE SEDIMENTS: R 50 % B 30 % C 10 % P 5 % G 2 % S 2 % M 0 % V 0 %
 SLOPE: Long 50 % Hang 30 % Vert 20 % WAVE EXPOSURE: ☐ Low ☒ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 375 m NO 10013 m

SURFACE OIL

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

PAVEMENT H F S NONE sq. m by 0 cmPATTIES / TARBALLS NONE 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 0

Photographs:

Roll No. _____

Frames _____

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	6	7	8	SU	U	M	U				
1	5			X			0.3		X				X					X				N	N	—	PK
2	5			X			0.1		X				X					X				N	N	—	PK/G
							.																		
							.																		
							.																		
							.																		

COMMENTS

THE NORTH SHORE IS PRIMARILY INTERTIDAL TO A HIGH CLIFF BASE, OTHER AREAS TO THE WEST ARE COMPOSED OF LOWER ROCK CLIPS OR FILL, WHICH IS CROWDING AN CONTRIBUTING SEGMENT TO THE NEARSHORE BOWE. OIL CONSISTS OF ISOLATED SPILLS ON A FEW (5 TO 6) BUILDERS IN THE CENTRAL AND EASTERN PORTION OF THE NORTH SIDE OF KASHAK BAY. THE WESTERN END HAS MOUSSE, COAT, & STAIN ON A BEDROCK OUTCROP/APRON THAT PROTECTS INTO THE BAY. MOUSSE AND STAIN SPILLS OCCUR ON THE BOWERS TO THE WEST OF THE ROCK OUTCROP. THE SOUTHSIDE OF KASHAK BAY HAS MOUSSE/COAT/STAIN

REVIEWED BAT DATE 3 MAY 90

FILE NUMBER: 99-2458

K735-KA603

SHORELINE ECOLOGICAL SUMMARY

REVISION 33229

Segment ST / Subdivision A Date (mo / day / yr) 4/29/90

Time (24 hr) 1025-1345 Biologist Jim Barry

(A) Substrate type and % of segments:
(1) Bedrock 50 (2) Boulder 30 (3) Cobble 10 (4) Pebble 5 (5) Sand 3 (6) Silt 2(B) Overall % cover of biota (% of segment): Dense 10 Moderate 10 Low 80

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

Photographs:
Roll No. ST-6-7

Frames 15-16

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

See ATTACHED

Ecological Considerations:

ANADROMOUS FISH STREAMS - 2 on segment

10040 DAILY UADEN
CHUM SALMON (SPAWNING)
PINK SALMON (SPAWNING)

10030 DAILY UADEN
CHUM SALMON (SPAWNING)
PINK SALMON (SPAWNING)

SEGMENT K9-35-KA003 SUBDIVISION A APRIL 29, 1990
BIOLOGIST - JIM BARRY

Time 1025-1345

Tidal Window +1.8 => -1.8 ft.

I. GENERAL COMMENTS

- A. Exposure - This segment includes moderate to highly exposed headlands and low to moderately exposed sand flats and cobble shores.

B. Habitats

1. Sand Flats

Extensive intertidal sand flats are by far the dominant habitat type on this segment. Sand flats extend to as much as 1000 m or more from the upper shore. The biota occupying this habitat are patchy. Clams are moderately abundant (razor clams - *Siliqua patula*; *Macoma balthica*, *M. nasuta*, and *Tresus capax*). Polychaete worms also are dense in patches (Neridae?). Well defined patches of an unidentified infaunal worm are evident from their castings on the surface. These worms (Sipunculids?) are dense (>30/m²) in some locations and sparse in others. Few algae are present on the sand flat. Occasional boulders are covered by barnacles, a few mussels, and *Ulva lactuca* and filamentous green algae.

2. Flat Bedrock Shores

This habitat is located in a large patch (ca. 200 x 600 m) in the northern section of the segment, as well as much smaller patches along the southern end. Most of this habitat is located in the middle to low zone and is occupied by a high cover of macroalgae. Dominant species include *Ulva lactuca*, *Laminaria dentigera*, *Alaria marginata*, *Fucus distichus*, *Palmaria palmata*, *Rhodomela larix*, *Zostera marina* (a higher plant), and crustose corallinaceae. Other species include *Grateloupia* sp.,

Iridaea sp., *Membranoptera?* sp.). Occasional boulders and cobble that extend into the middle zone are covered by filamentous and bladelike green algae, and a sparse cover of mussels.

3. High Angle Bedrock and Boulder Headlands

Most of these shores have a dense cover of barnacles (*Balanus glandula*) and periwinkles (*Littorina* sp.) in the upper zone, with a moderate to sparse cover of mussels (*Mytilus edulis*) in slightly lower levels. The middle zone often has a dense to moderate cover of *Fucus distichus*, *Rhodomela larix*, and eel grass (*Zostera marina*). Lower zones are covered by *Fucus distichus*, *Laminaria dentigera*, *Odonthalia floccosa*, *Palmaria palmata*, and others. Common invertebrates include anemones (*Anthopleura artimesia*), sponges (*Halichondria* sp.), chitons, limpets, worms (polychaeta and echiura), hermit crabs, whelks, sea stars, sea cucumbers, isopods and amphipods.

4. Cobble Beaches

Cobble beaches vary considerably in terms of biotic characteristics. In upper zones, cobble beaches usually are nearly devoid of biota, especially on moderate to highly exposed beaches where scour by wave action is severe. On protected beaches, upper zones cobbles have barnacles and mussels, while lower zones are covered by the algae and invertebrates similar to those discussed above. Several intertidal fishes (pricklebacks, gunnels, sculpins) inhabit this area.

5. Cobble and Boulder Fields

This habitats also varies. Flat cobble beaches are present in some parts of the extensive sand flats. Barnacles are moderately abundant on cobble in this habitat. Filamentous green algae are sparse, as are macroalgae. Amphipods, isopods, and a few other invertebrates are present and variable in abundance.

C. Oil-Related Comments

1. Oil or Cleanup Related Mortality

None evident.

2. Ecological Sensitivities to oil or cleanup.

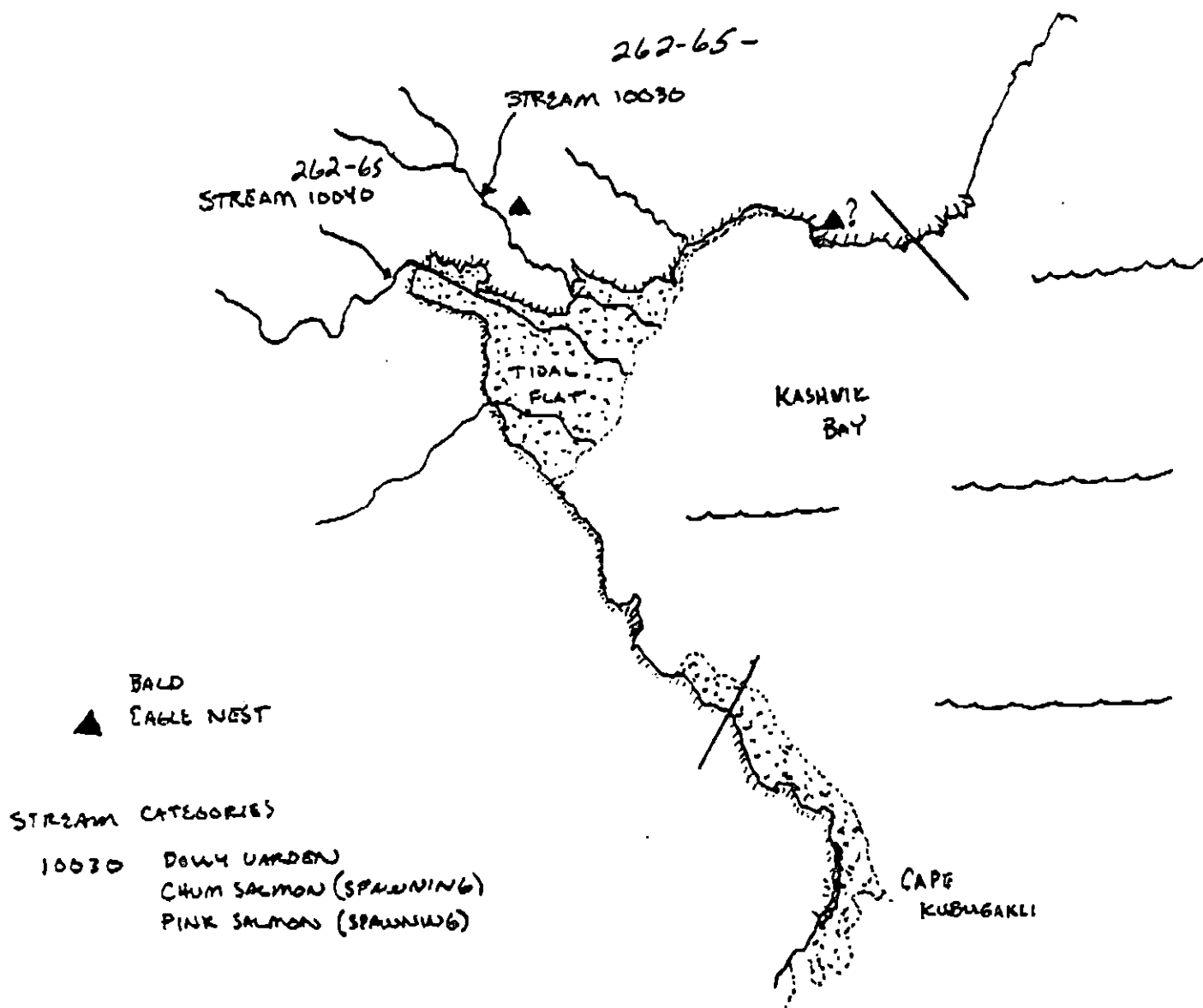
Oil cover on this segment was very light or zero and treatment will likely not be recommended for any of the segment. As such there are no ecological sensitivities that will be affected. Ecological sensitivities are:

a. Anadromous streams (see map)

Streams number 10030 and 10040. Both are utilized by Dolly Varden, Chum Salmon (spawning), and Pink salmon (spawning).

b. Eagle Nesting sites (see map)

One (or possibly two) bald eagle nests are located in the segment.



KA-3

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

KA-3

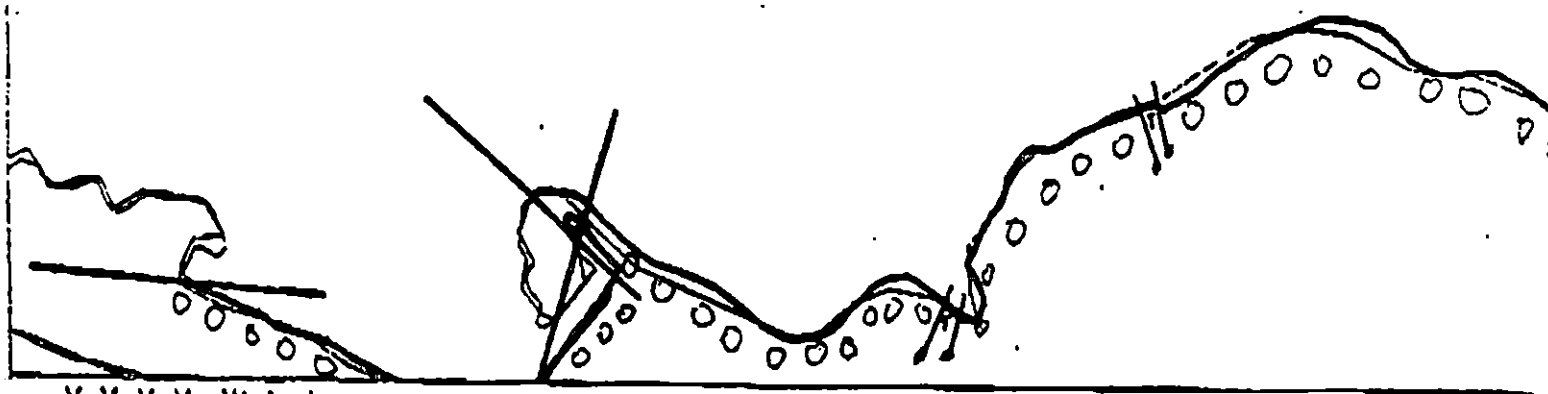
Approx. Segment Length: 10551m

0 500 1000 1500

Map Key: AKP-KA-30

Name: LINDSAY NAKASHIMA

Date: 4/29/90



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No O

KA-3

Approx. Segment Length: 10551m

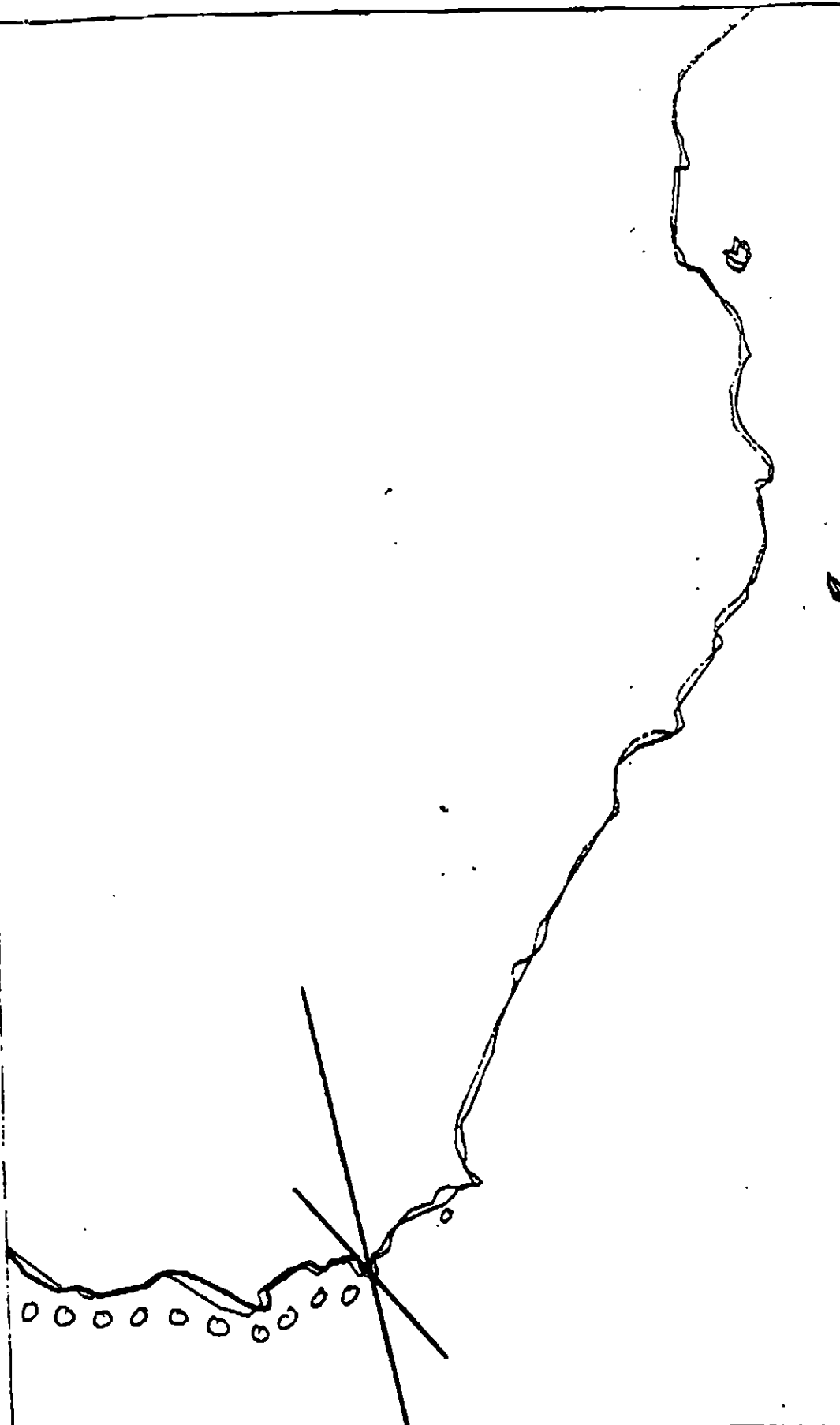


Map Key: AKP-KA-3c

Name: LINDSAY NAKASHIMA

Date: 4/29/90

Date Entered:



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

KA-3

Approx. Segment Length: 1055m



Map Key: AKP-KA-3d
 Name: LINDSAY NAKASHIMA
 Date: 4/28/90
 Data Entered: _____

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-35-KA-03 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 streams (262-65-10030 and 262-65-10040) are more than 100m from work site. No constraint to manual pickup.
5R	Seabird Colony	NO CONSTRAINT. Work site is more than 800m from seabird colony.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 4/9/90 map indicates no active nest within 400m of Subdivision A work site.
7JJ	Subsistence: Invertebrate Harvesting	No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

[Signature]

Date

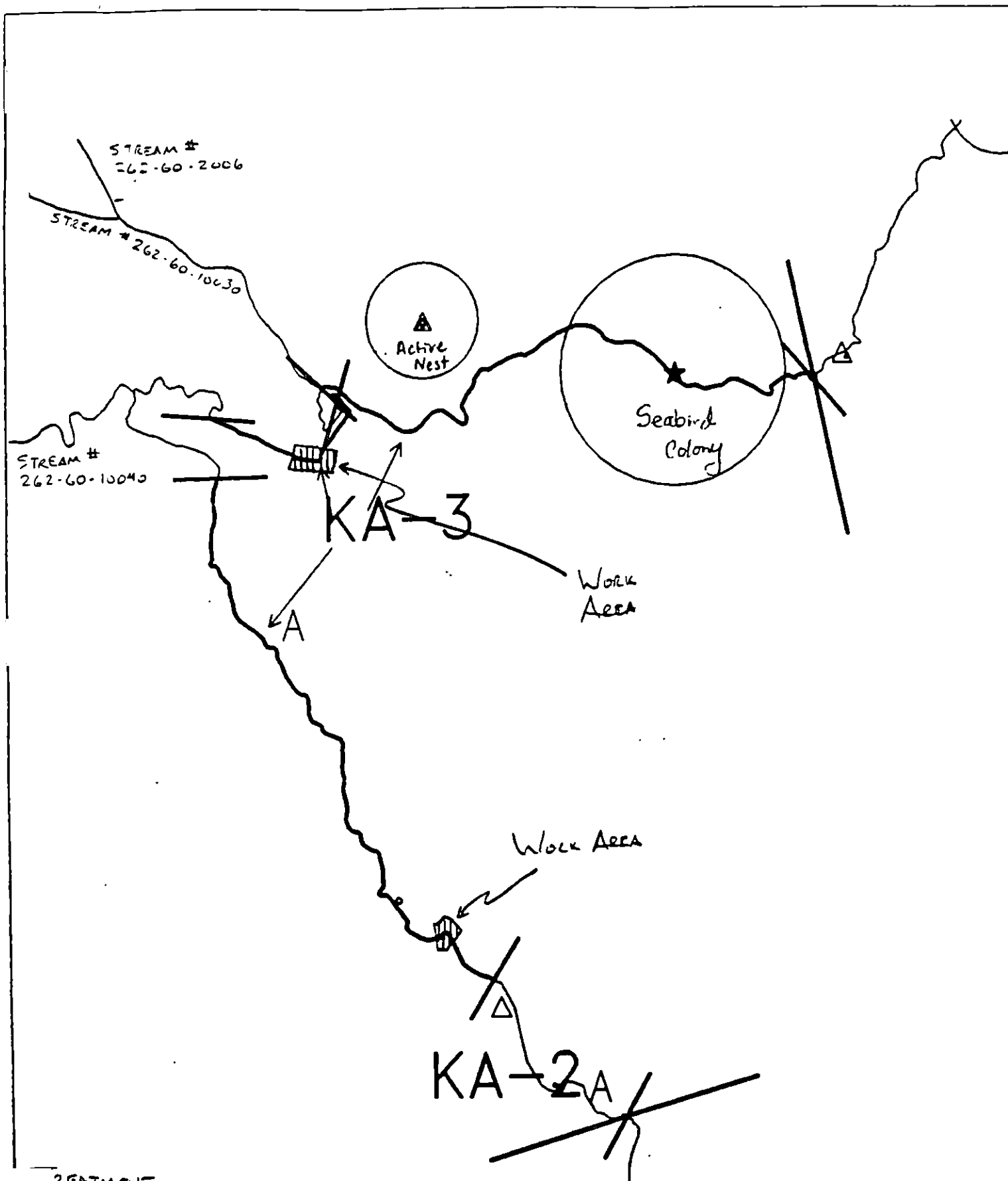
6-15-90

Prepared by

[Signature]

Date

6/15/90

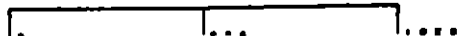


TREATMENT



Exxon Company, USA
Map Key: AKP-KA-3

ECOLOGY MAP
SEGMENT K9S-35 KA-3
SUBDIVISION A (1 of 2)
METERS



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

1 inch = 2000 feet

WORK PLAN ADDENDUM

segment K09-35-KA003

subdivision A

Dated 7/24/20

MODIFICATION

1. REASON FOR MODIFICATION

- . . REQUEST BY FIELD.
- . TAG FIELD ASSESSMENT.

2. ADJUSTMENT TO WORK PLAN

REMOVE TARMATS ^{MOVSE} AS INDICATED IN ATTACHED DOCUMENT.
RAKE REMAINING OILED SEDIMENTS AND CUSTOMBLEN.

SHPO APPROVAL NEEDED YES X
NO

SHPO SIGNATURE Richard Dore 7/25/20
STANDARD CONSTRAINT APPLIES

TAG APPROVAL DATE 07/24/20

ADEC JOHN BAUER
EXXON ANDY TEAL
NOAA Carl Wescott
USCG G.A. REITER

FOSC KL DATE 7-26-20

SHORELINE EVALUATION

SEGMENT ST/ K09-36-KA-01 SUBDIVISION A (1 OF 1) DATE 4/28/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4LL National Parks

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: Michael Outzorgowh DATE: 5/15/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 82 m: No Oil 4069 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: 5/15/90
 ADEC ART WEINER
 EXXON ANDY TEN FOSC: W L DATE: 5-15-90
 NOAA Joseph Tallott
 USCG J. A. REITER

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 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, 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 prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 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, 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 Kotol Bay Hatchery release
 Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 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
 Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 8/30)
 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 Larry Nicholson 486-4791
- > Harbor seal and sea lion pupping (5/10 to 7/1)
 > Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31).
 Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (8/1 to 9/15)
 6V Anchorages (8/1 to 9/15)
 6W Forest Service cabins (8/1 to 9/15)
 6X Lodge (8/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (8/1 to 9/30)
 7HH Finfish harvesting
 7H Deer harvesting (8/1 to 1/7)
 7I Invertebrate harvesting
 7JK Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
 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 / K0936-KA001 SUBDIVISION: KA001A DATE 4/28/90NOAA
USCG

NAME

John Naughton

SIGNATURE

John J. Naughton☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

This long segment (4151 m) at Cape Kubugakli had very light oil and only in the northern sector. This consisted of mostly stain and a few splatters of mousse. Considerable numbers in area — bears, eagle nesting, grey whales nearshore, otters, caribou land and water birds. This area should not be treated.

ADEC

NAME

Terry Ellsworth

SIGNATURE

Terry Ellsworth☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

No oil was observed in the southern portion of this segment. At mid segment in a high energy environment mousse occurs very sporadically in a 30x8m area and several small areas contain stain and coat in splashes in the northern portion. Numerous animals were observed in the area, note NOAA's comments. Because of the high energy environment, the small volume of recoverable mousse, and the disturbance of clean up to the animals and birds, no treatment is recommended.

LAND MANAGER

NAME

Carl Schuch

SIGNATURE

Carl Schuch☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

The small amount of recoverable oil may not warrant the disturbance to wildlife by cleanup crews. Eagle nests, in particular, are vulnerable to beach traffic and low flying aircraft. Brown bear activity is high in this area. Oiled debris located in the supratidal may persist for a very long time. A lot of this debris has been cleaned on by bears.

REVISION NO. 02/1/90

SHORELINE OILING SUMMARY

REVISION NO. 04/12/90

OG LINDSAY NALLASHIMA ^{NOAA} ~~WOOD~~ JOHN NANCYTON SEGMENT ST/ K0936-KA001
 BIO JIM BARRY LAND REP CARL SCHOEN SUBDIVISION KA001A (1 OF 1)
 EXXON FRED BYRNE ADEC TERRY ELLSWORTH TIME 9:10 to 12:30
 TEAM NO. 19 TIDE LEVEL +2.7 TO -2.2 FT DATE 4/28/90
 EST. SUBDIVISION LENGTH: 4151 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SOUTH to NORTH
 SURFACE SEDIMENTS: R 50 % B 25 % C 10 % P 10 % G 3 % S 2 % M 0 % V 0 %
 SLOPE: Long 30 % Hang 65 % Vert 5 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 35 m NO 416 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	C	S	P	S	1	2	3	4	SW	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 None sq. m by 0 cmPATTIES / TARBALLS None BAGSNEAR SHORE SHEEN? ☒ NO BR RW SL TL

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

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒

TYPE _____

#BAGS _____

Photographs: 1 / FLOAT

Roll No. _____

Frames _____

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	N N	IN	OUT	SURFACE-SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	SW	U	M	L					
1	15					X	0-0	X						X				N	N			P/C/G/S
							.															
							.															
							.															
							.															
							.															

COMMENTS

THE LENGTH OF THIS SEGMENT IS 4151 m AND IS PRINCIPALLY NOT OILED. THE OIL OCCURS IN 2 EMBAYMENTS/POCKET BEACHES. THE LARGEST AREA OCCURS IN THE SOUTHERN EMBAYMENT WITHIN A 30x8m AREA AS LIGHT SPATTERS/SPLASHES OF MOUSSE, STAIN, AND COAT. THE EMBAYMENT TO THE NORTH HAS 5 INDIVIDUAL SPLASHES OF COAT/STAIN IN THE TOP OF THE UPPER INTERIOR ZONE. THE INTERVENING AREAS WERE NOT OILED. REVIEWED BAT DATE 4 May 90

SEGMENT ST 0936-KA001

SUBDIVISION KACCA

DATE 4/28 90

CHECKLIST

- ☐ N Area
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. H/LAWL
- ☐ SBL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Photo Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
PH - No Subsurface Oil

2 Δ
PH - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

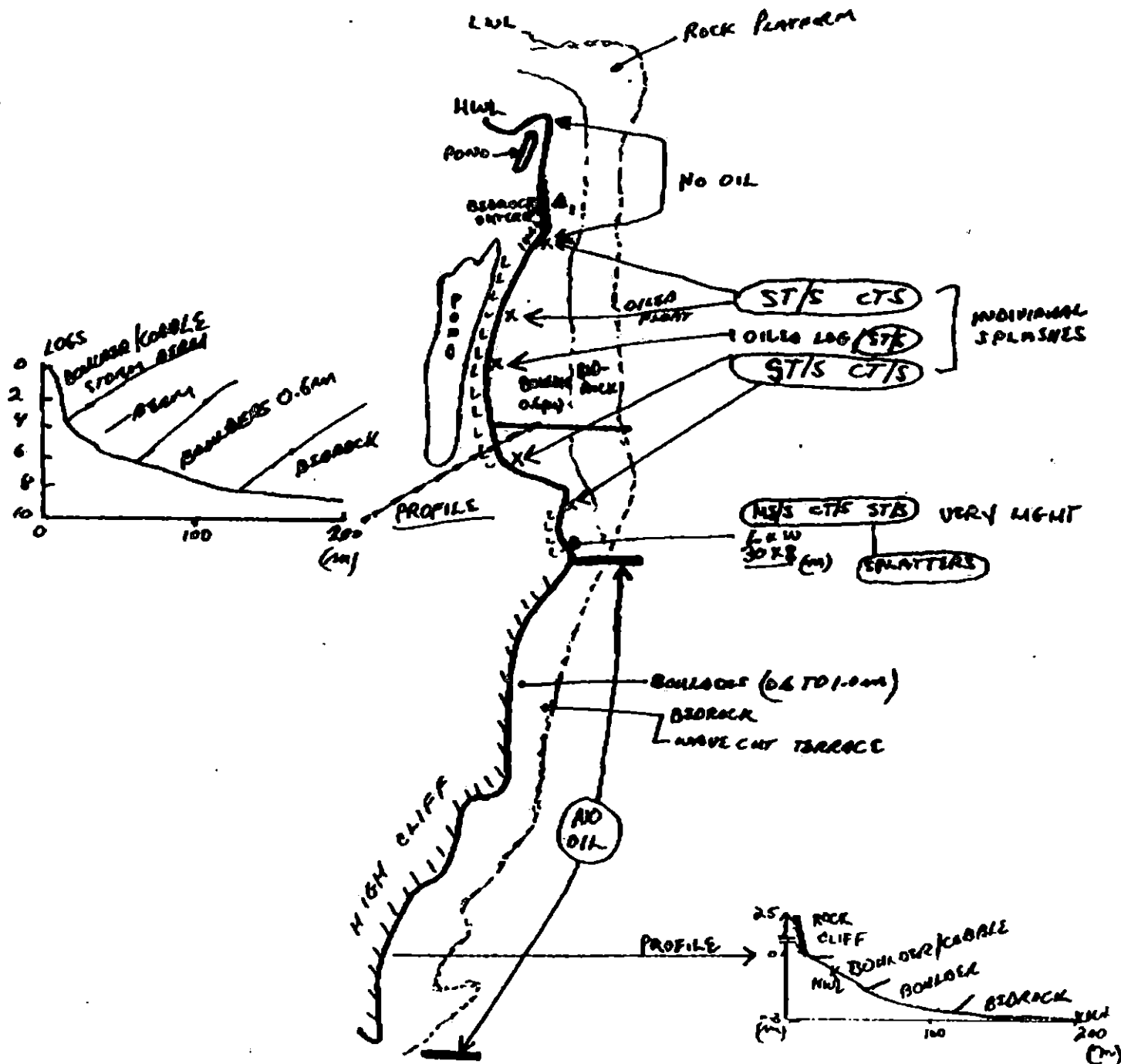
CT/P
Patched Distribution

CT/S
Splashed Distribution

eee
Oiled Vegetation

1 ●
Photo location, direction,
and number

SKETCH MAP



Oil Character Length (m): AP 0 PO 0 CV 0 CT 30 ST 30 MS 70 PT 0 TB 0 FL 0 NO 4/16

REVISIONS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22

Segment ST / KA1 Subdivision A Date (mo / day / yr) 4/28/90Time (24 hr) 0900 - 1230 Biologist Jim Barry(A) Substrate type and % of segments:
(1) Bedrock 50 (2) Boulder 25 (3) Cobble 10 (4) Pebble 10 (5) Sand 5 (6) Silt 0(B) Overall % cover of biota (% of segment): Dense 15 Moderate 75 Low 10

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

Photographs: Roll No. ST-6-7Frames 10-13

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

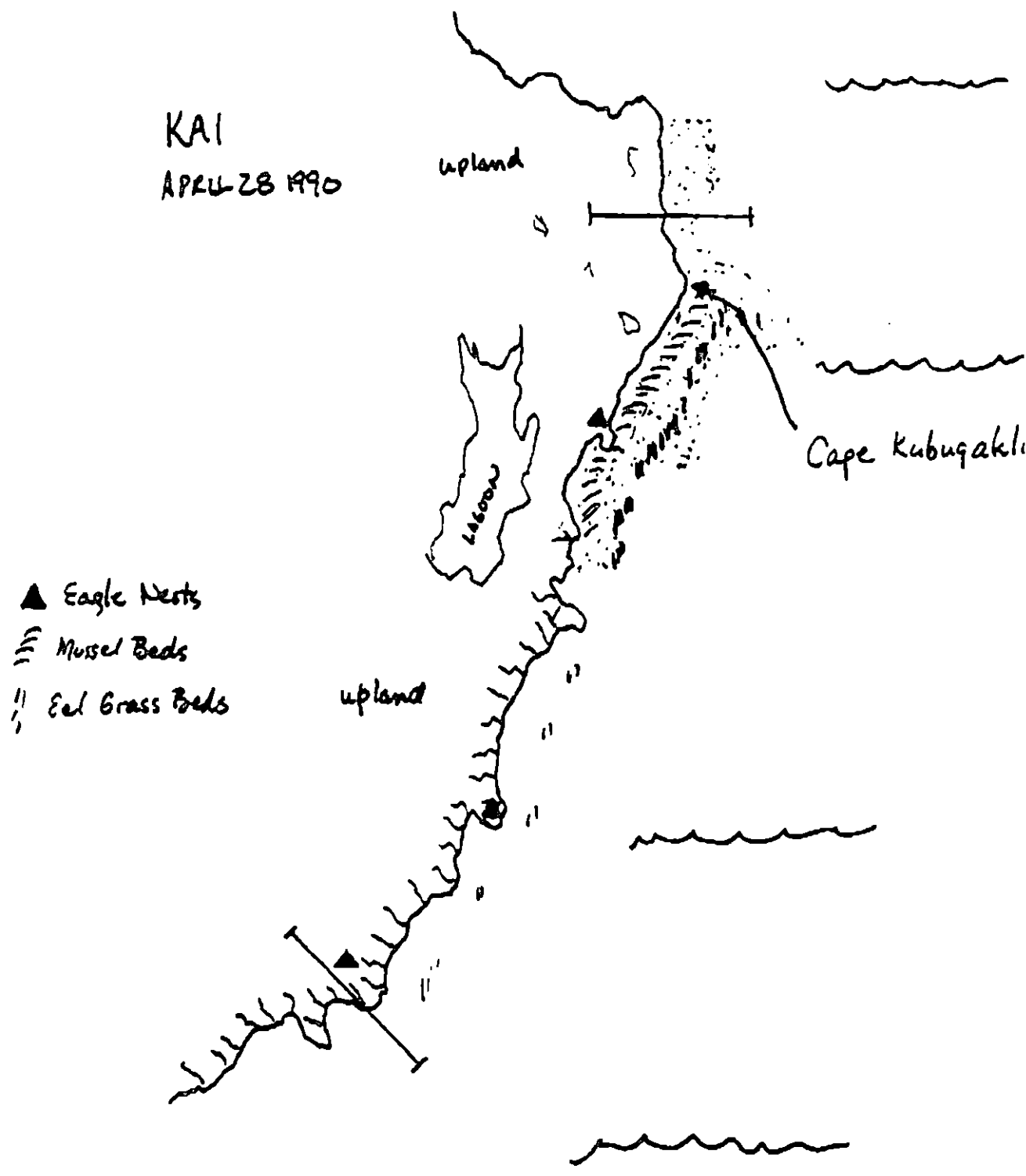
Wildlife Observations/ General Comments:

SEE ATTACHED

Ecological Considerations:

- 1) EAGLE NESTS - 3 - LOCATED ON SEGMENT - NO CLEANUP IS RECOMMENDED, thus Eagle nesting will not be impacted.
- 2) NO OTHER SENSITIVITIES ARE LISTED.

KAI
APRIL 28 1990



Segment KA-1 Subdivision A
April 28, 1990
Time: 0900-1245
Tidal Window: +2.7 => -2.2 ft.

JIM BARRY - BIOLOGIST

3/9

I. GENERAL COMMENTS

A. **Exposure** KA-1A is located at Cape Kubugakli, a highly exposed shoreline adjacent to the Shelikof Strait.

B. Habitat types

1. Bedrock Platforms

Much of the segment (>75%) is comprized by gently sloping bedrock leading from the extreme low zone to the high zone shoreline where cobble or high angle boulders and bedrock are dominant. Biota generally are moderate to dense in this habitat. Low zones are dominated by stipitate brown algae, mainly *Alaria marginata* and *Laminaria dentigera*. Eel grass (*Zostera marina*), *Ulva lactuca*, *Fucus distichus*, and *Rhodomela larix* dominate the lower middle zone. The upper middle zone is dominated by bare space, barnacles (*Balanus glandula*, *Chthamalus dalli*), and littorine snails (*Littorina sitkana*, *L. scutulata*). Several other invertebrates and algae are common in this zone. The giant feather duster worm (*Eudistylia polymorpha*) is most notable and is present in sparse to moderate densities.

2. Cobble Beaches

Towards the upper zone, large cobble covers most of the segment, except along exposed headlands. Biota are very low in abundance along such shores, especially in the upper zone, due to the high rate of disturbance caused by high waves and rolling cobble. In the middle zone, a sparse to moderate cover of algae are present, including *Ulva lactuca*, *Rhodomela larix*, *Fucus distichus*, and eel grass. Invertebrates are moderate to dense. Littorine snails and isopods (*Idotea*) are very dense, with sparse

abundances of barnacles, mussels, and other invertebrates (colonial polychaete worms, anemones, whelks, limpets, and sponges (*Hallchondria* sp.?).

3. Pebble/Sand Beaches

Unlike cobble beaches, occur where wave energy is slightly lower, often where the width of the tidal flat is 50 m or more. Sand flats occur only in the lower zone of parts of the segment, where brown algae are usually abundant. Live clams were not observed on sand flats, but probably were present. In the middle to upper zone of some portions of the segment mussels (*Mytilus edulis*) forms extensive beds covering nearly 100% of the substratum and acting to consolidate the pebble substratum.

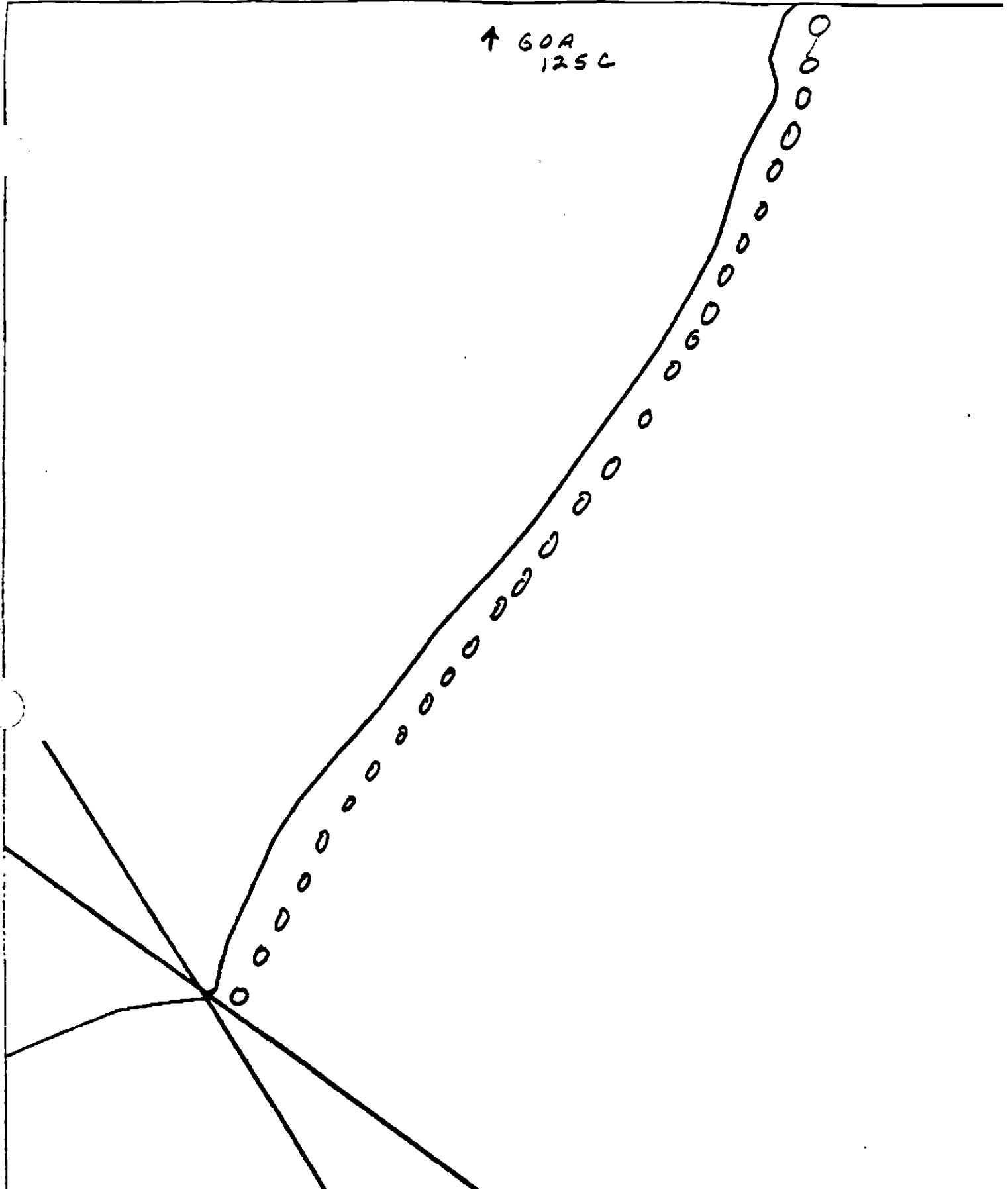
4. High angle boulders and bedrock outcrops

Headlands and exposed outcrops are occupied by a moderate and occasionally dense cover of barnacles (*Balanus glandula*) and a moderate to sparse cover of mussels. *Fucus distichus* is mostly absent from the upper zones, and is usually sparse to moderate in the middle zone of this habitat. Gastropods (mainly littorine snails) are moderate and occasionally dense.

B. OIL-RELATED COMMENTS

Oil contamination is very low on this segment and undetectable in all but the extreme upper intertidal zone. No treatment is recommended for the segment. As such no ecological sensitivities will be impacted. Three eagle nest occur on the segment.

↑ GOA
125C



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

KA-1

ADEC Segment Length: 415m



Map Key: GOA-125a

Name: LINDSEY NAKASHIMA

Date: 4/28/90

Date Entered:

SSAT P.08

TD

EXODIN KODIRK

APR-29-1990 16:41 FROM

KA-1

↓ GOA
125A

GOA
125D →

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

KA-1

ADEC Segment Length: 415m

0 100 200 300
METERS



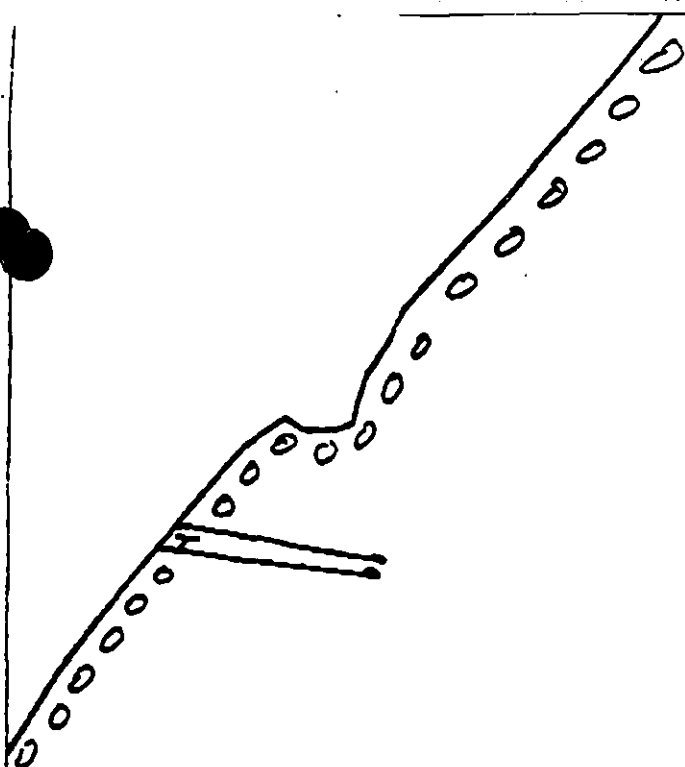
Map Key: GOA-125c

Name: LINDSAY NAKASHIMA

Date: 4/28/90

Date Entered:

↑
GOA
126P



← GOA
125C

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

KA-1

ADEC Segment Length: 4151m

0 100 200 300
METERS

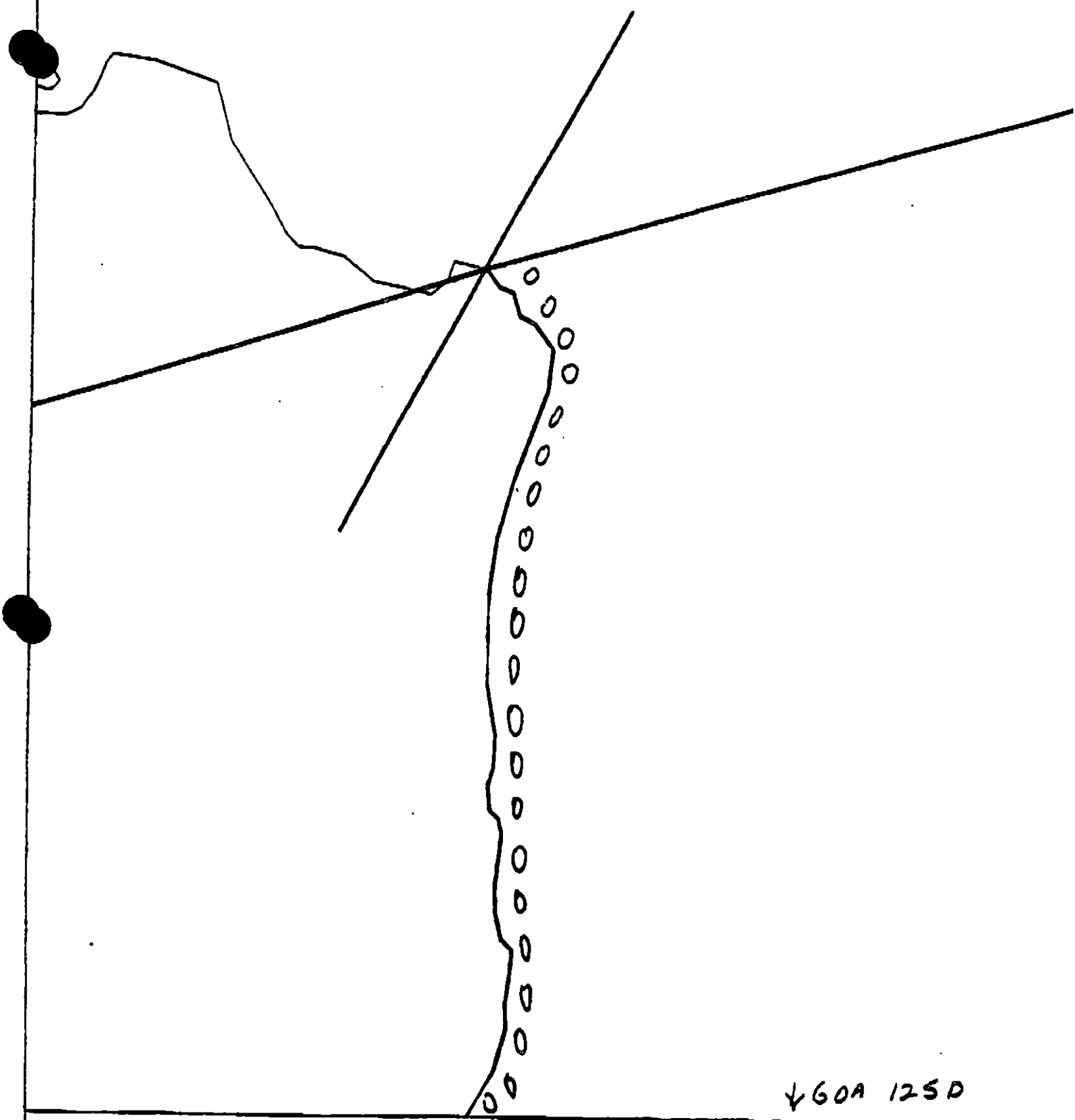


Map Key: GOA-125d

Name: Linosa Nakamura

Date: 4/28/90

Data Entered:



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

KA-1

ADEC Segment Length: 4151m



↓ GOA 125D

Map Key: GOA-125f

Name: LINDSAY MACASAND

Date: 4/28/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ K10-02-AB-002 SUBDIVISION A (1 OF 1) DATE 5/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

400 National Wildlife Refuge

8AA Sensitive estuary

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

1B Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)

(None found on ADF&G map)

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: Michael E. Hines

DATE: June 14, 1980

OILING CATEGORIZATION:

Wide 0 m: Medium 395 m: Narrow 175 m: V.Light 4022 m: No Oil 940 m
Subsurface Oil Observed: Yes X No Maximum Depth 15cm

RECOMMENDATIONS:

No Treatment Recommended

☒ 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

X Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pick up of mousse, 2) manual raking and 3) bioremediation using Customblen areas indicated on attached sketch map.

TAG COMMENTS:

TAG APPROVAL DATE: 6/16/90

ADEC Ray Merritt R. Merritt

EXXON *Two Year Term*

NOAA Joseph C. Trullinger

USCG G.A. REITER G.A.D.

FOSC: *6/24/90* DATE: *6/24/90*

*note: Monitor check for oil
leak in vicinity of Port #1
DJ

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 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, 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 prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 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, 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 Kotol Bay Hatchery release
 Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 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
 Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 6/30)
 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 Larry Nicholson 486-4791
- 30, 3Q Harbor seal and sea lion pupping (5/10 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 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 Subistence area: Salmon harvesting (5/1 to 9/30)
 7I Finfish harvesting
 7J Deer harvesting (5/1 to 1/7)
 7K Invertebrate harvesting
 Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
 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 / K 10-2 (AB-2) SUBDIVISION: A DATE 31 May 1990

USCG

NAME Michael B. Millner SIGNATURE Michael B. Millner D.C.

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

MANUAL PICK-UP RECOMMENDED FOR MOUSSE PATTERNS LOCATED ON WEST BANK OF THE SMALL UNNAMED RIVER THAT DIVIDES THIS SEGMENT. SMALL AMOUNT FOUND ON EAST BANK. NO OTHER AREAS OF SEGMENT RECOMMENDED FOR TREATMENT.

ADEC

NAME Francine J. Bennis SIGNATURE Francine J. Bennis

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

MANUAL PICK-UP RECOMMENDED FOR MOUSSE PATTERNS.
LARGE mouse patterns are present throughout sand flat just west of river. Smaller patterns are present along river banks, as well as along high tide mark on east side of river. Clean-up crew should 'police' these areas to pick-up mouse.
Mouse is buried under sand in one location at western end of segment. Can be easily located by the presence of oil splot on boulders scattered from the sand. Should be collected.

LAND MANAGER

NAME OTTO FLORSCHUTZ SIGNATURE Otto Florschutz FWS

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

River edge tidal flat had large amount of mouse - sand patterns. Agree with above recommendations to recover. Manual pickup should take place ASAP as flats appear to have exposure to severe sand erosion and stripping - see Otto chart #2

Attachment 2
U.S. Fish and Wildlife Service Shoreline Cleanup Disclaimer

This comment sheet is based on current observations and is solely for the purpose of planning and scheduling of 1990 response treatment actions. It in no way implies that the State or Federal government will not in the future determine that further restoration or other treatment, or compensation is warranted regarding this area, or that the area is considered by the Federal or State government to be adequately "clean" or "restored" for the purpose of any claim which the State or Federal government has brought or may bring against Exxon, Incorporated or any other potentially responsible party.

R. Marty

SKETCH MAP

MENT ST/ K/D-2(A8-2)

DIVISION 4

TE 31 / May 90

CHECKLIST

N Arrow
Approx. Scale
Seg/Sub Entry
Oil Dist.
Width
Length
% Cover
Substrate Character
Est. HWS/LWS
SSL
Profile Location(s)
Profile(s)
Pit Location(s)
Plate Location(s)

LEGEND

1 Δ
No Subsurface Oil

2 Δ
Subsurface Oil

CT/C
Coastal Distribution

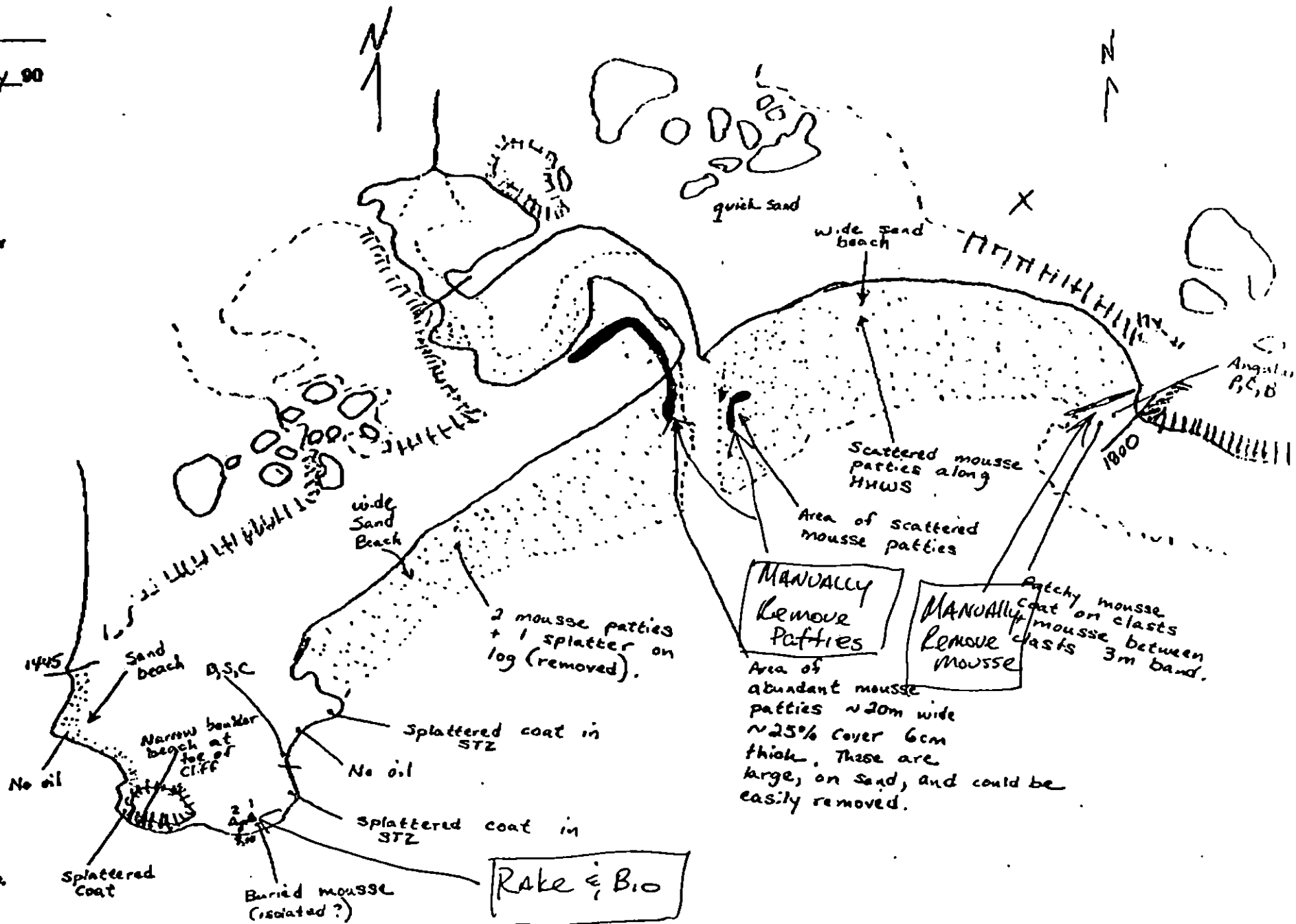
CT/D
Inland Distribution

CT/E
Tidal Distribution

CT/F
Freshwater Distribution

CT/G
Grass Distribution

CT/H
to location, direction, number



OIL CHARACTER LENGTHS(M) - CT-2500 MS-200 PT-4000 NO-1294

SHORELINE OILING SUMMARY

REVISION NO. 33-2288

OG R. Marty USCG Barry Millner SEGMENT ST/ 20-2 (AB-2)
 BIO H. Davis LAND REP Olto Florschutz SUBDIVISION A
 XON Francine Benn's TIME 14:45 to 18:00
 TEAM NO.: 20 TIDE LEVEL: +0.15m to +1.69m DATE 31 May 190
 EST. SUBDIVISION LENGTH: 5590 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 5 % B 5 % C 5 % P 5 % G 0 % S 80 % M 0 % V 0 %
 SLOPE: Lang 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W — m M 962 m N 138 m VL 396 m NO 1294 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	R	P	B	SP	OR	OL	OF	NO	VO	UC	SV	U	M	V	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT				X		X				X	X					
STAIN																
MOUSSE			X	X						X	X					
PATTIES			X							X	X	X				
TARBALLS																
FILM																
NO OIL																X

PAVEMENT: H F S — sq.m by — cmPATTIES / TARBALLS 100 BAGS*NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	NO	AMOUNT		
		SM	MD	LG
Logs	X			
Vegetation	X			
Trash	X			
Debris	X			

DEBRIS COLLECTED
☒ YES ☐ NOTYPE Mousse Patties#BAGS 1

Photographs:

Roll No. ST-20-13Frames 9-12

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL cm-cm (10-15)	BELOW		OIL / FILM COLOR								PIT ZONE	A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	SV	U	M	V	U	SV	U	M	V		
1	20			X			10 - 15		X					X	X				N	S, C
2	25					X	.		X						X				N	S, C
							.													
							.													
							.													
							.													

COMMENTS *A highly concentrated area of mousse patties is located on the west bank of the river which divides the Segment in two. These patties are large, fresh but they are on sand and should be easily removed by a small crew. Oil is also present through much of the remainder of the segment. This oil is primarily the widely scattered mousse patties. Locally these patties are buried under the well sorted sand.

Primary sediment is sand.

SHORELINE ECOLOGICAL SUMMARY

REVISION 3/22/76

Segment ST/KIO-02 Subdivision AB-002 Date (mo/day/yr) 5/31/70

Time (24 hr) 14:30 Biologist H. Davis

(A) Substrate type and % of segments:
(1) Bedrock 5 (2) Boulder 5 (3) Cobble 5 (4) Pebble 5 (5) Sand 80 (6) Silt —

(B) Overall % cover of biota (% of segment): Dense 5% Moderate 20% Low 75% (20%)

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

Photographs:
Roll No. ST-20-13

Frames 9-12

BARNACLES On areas with rock. Dense - Sparse.

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

NOT PRESENT
4,5,6

MYTILUS Small sparse patches.

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	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	X	X	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT
3,4,6

GASTROPODS Littorina - moderate, Nucella - Rare, limpets - sparse

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

NOT PRESENT
4,6

FUCUS Small sparse patches

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	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
4,5,6

Wildlife Observations/General Comments: Birds: Glaucous-winged gulls, cormorants, Puffins, Surf Scoters, semi-palmated & plovers, and sandpipers. Mammals: Fox, Caribou (8-10), and Beartooth (Adult 1, Sub 2). This segment was a low lying area with rock outcroppings at either end. Sand dunes with Beach Rye (*Phyma mollis*) covered the rest of the area. Shells found in the sandy area were *Saxidomus gigas*, *Clavoscardium nuttallii*, *Piotrochaea staminea*, *Mya* sp. and *Siliqua patula*.

Ecological Considerations: IAB, BAA, AB-IN adjacent. The Rocky areas contained most of the fauna and flora. MTZ Barnacles, limpets, littorines, Porphyra, Fucus and Chlorella. MTZ Barnacles, limpets, Littorina, Nucella, some Mytilus, Fucus, Scytosiphon, Ulva and Halosaccion. LTZ Alaria, laminaria?, Ulva, Rhodomenia, Rhodomela, Nucella, Mytilus, Chrysirostris.

Seabird colony. There is a stream on AB 002 but no fish and game for it. Pinks, Chum and Polly Varden spawn in an adjacent stream in segment AS-005 (262-65-10040). There are Gull colonies in adjacent segments (AS 005/AB 004). There is an small salinity-like area.

AS-8

AB-2N

Normalized

NO	2.0"	1260	1294
VL	9.5"	3600	3696
L	5.3"	135	138
M	1.0"	450	462

5445 5590

XXXX Wide
 /// Medium
 --- Narrow

AB-2N

Approx. Segment Length: 5380m

Map Key: AKP-AB-2N

Name: R. Marty

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/K10-2-AB-002 STREAM NO: 262-65-655 DATE 5/2/90

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

ADF&G Anadromous stream # 262-65-655.

Sensitivity code and general time constraints. 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 disturb marsh area.

SHPO SIGNATURE: Reckle Dean Dahn DATE: 6/20/90

Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

X No Treatment Recommended

_____ Treatment Recommended

X Manual Pickup

_____ Bioremediation

_____ Tarmat Removal

_____ Snare/Absorbent Booms

_____ Oil Snares (pom poms)

_____ Absorbents (pads, rolls, etc)

_____ Spot Washing: _____ Wands

_____ Beach Cleaner

_____ Other (see comments)

COMMENTS: _____

TAG COMMENTS: MANUAL PICKUP OF MOUSSE PATTIES AND TARBALLS

TAG APPROVAL DATE: 5/23/90 6/16/90

ADEC Ray Mearns R. Thomas

EXXON Amy Teth Paul

NOAA Joseph C. ...

USCG G.A. DETER G.A. Reiter

FOSC: M L

DATE: 6-27-90

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 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, 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 prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 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, 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** Kotol Bay Hatchery release
 Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H** Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1I** Gill net area
1J Purse seine area
 Mainland, West side Kodiak, Shuyak & Moser/Olga Bay (8/9 to 10/1)
 East side Kodiak, East side Afognak (7/4 to 10/1)
- 1K** Purse seine hook-off
1L Set net sites
 Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M** Herring spawning (4/15 to 6/30)
 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 Larry Nicholson 486-4791
- 3N, 3P** Harbor seal and sea lion pupping (5/10 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R** Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S** Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T** All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U** Recreation: Tent sites (8/1 to 9/15)
6V Anchorages (8/1 to 9/15)
6W Forest Service cabins (8/1 to 9/15)
6X Lodge (8/1 to 9/15)
6Y Special use destination
- 7Z** Subsistence area: Salmon harvesting (8/1 to 9/30)
7H-H Finfish harvesting
7I Deer harvesting (8/1 to 1/7)
7J Invertebrate harvesting
7K Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
 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.

FIELD SHORELINE COMMENT SHEET

20/38-1

SEGMENT ST 1 AB-002 ~~AB-001~~ STREAM: 262-65-655 DATE 5-2-90

USCG NAME CWO MC NATHAN SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADFG

~~ADFG~~

NAME JEFFREY BARNHART SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Anadromous Fish Stream, STAT area 262-65. This Lagoon is used by brown bears, caribou, moose, waterfowl and Land Otters as evidenced by the tracks we observed. I suggest manual cleanup of the T/P, T/B.

LAND MANAGER

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

SUMMARY (ANAD.) 23/58
 OG WILLIAM LEID USCG McMAHON SEGMENT ST/ A8002
 BIO MICHAEL FOWCETT LAND REP
 EXXON GUS GARCIA ADFG MARK WOODRUFF JEFF BELMONT TIME 11:20 to 12:00
 TEAM NO. 15 TIDE LEVEL 6.5 FT DATE 2/11/90
 EST. SUBDIVISION LENGTH: 100 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 100 % B 0 % C 2 % P 8 % G 25 % S 65 % M 0 % V 0
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ Hi
 OIL CATEGORY LENGTH: W 0 m M 0 m N 600 m VL 0 m NO 100

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0

PATTIES/TARBALLS 1 E

NEAR SHORE SHEEN? ☒ NO BR RW SL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

Did You Col
 DEBRIS ☒ YES ☐ NO
 TYPE 0
 #BAGS 0

Photographs:

Roll No. AS-15-8

Frames 1-3

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		UD	UC	1	2	3	4	5	6	7	8				
1	40					X	•											X		N	SIP/K
2	35					X	•											X		N	SIP
3	35					X	•											X		N	S/G/H
							•														
							•														
							•														
							•														

COMMENTS

REVIEWED fw DATE 5-10-90

OG WILLIAM

SEGMENT ST/ AB002

STREAM 262-65-(655)

DATE / / 90

SKETCH MAP

Film AS-15

CHECKLIST

- ☐ N Area
- ☐ Approx. Scale
- ☐ Seg/Sch Entry
- ☐ Off Dist
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWA/LWA
- ☐ SSI
- ☐ 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
Scattered Distribution

eee
Bed Vegetation

1 ●→
One location, direction,
and number

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



REVISIONS

NAME(S)

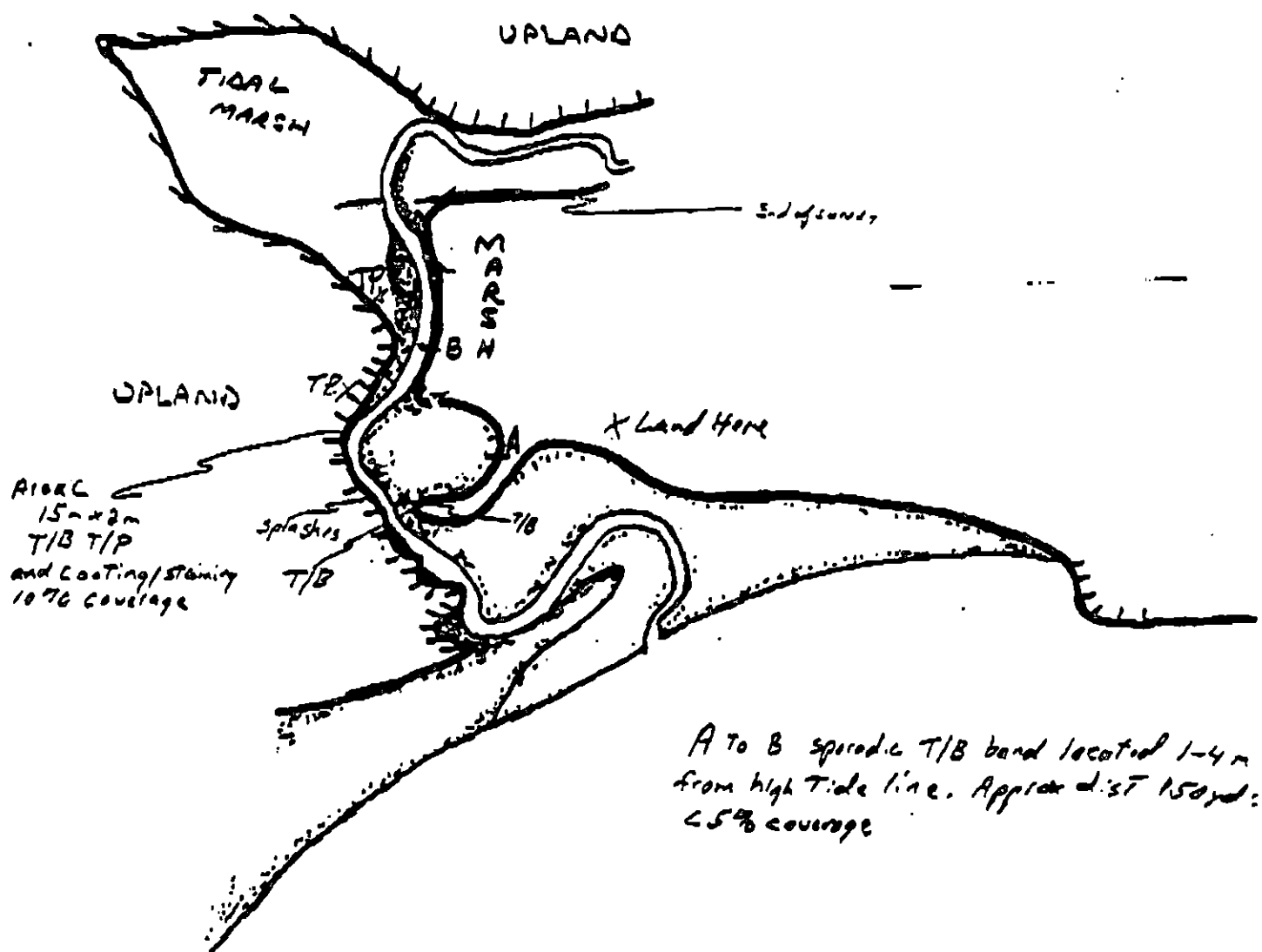
DESCRIPTION

21/38

48 OIL DISTRIBUTION DIAGRAM

C. KUBRIGAKLI

655

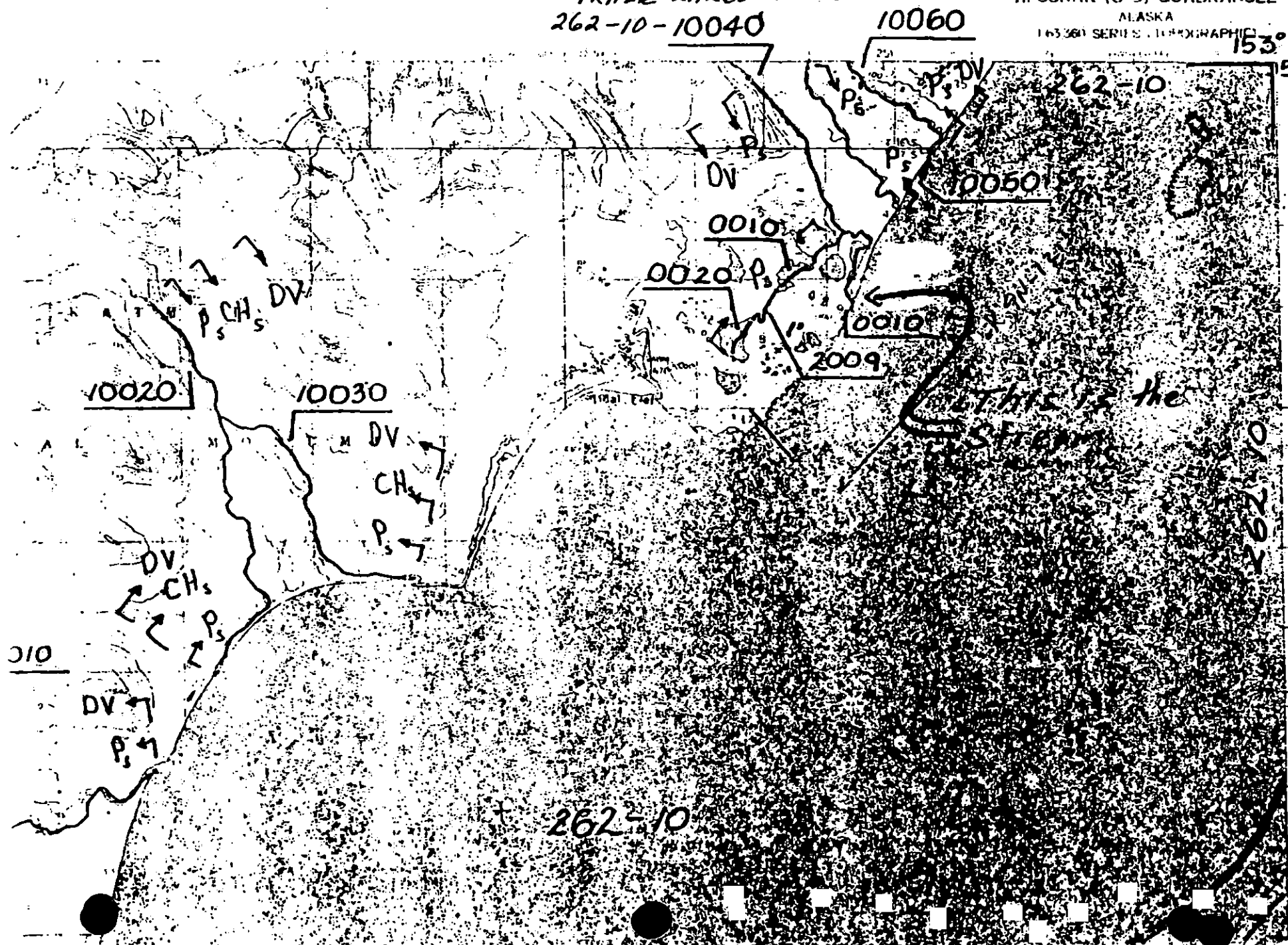


Sample taken
Photo frame # and
shot direction.

TRIPLE LAKES CREEK
262-10-10040

AFOGNAK (C-5) QUADRANGLE
ALASKA
1:63,360 SERIES, TOPOGRAPHIC

153° 20'
158° 45'



Segment AB002
Bear Lake Creek
Stream 262-65-655
Ecological Summary

5/2/90
Michael Fawcett

This large stream has a large flood plain/delta consisting mainly of sand, with some patches of cobble. Some bedrock bluffs on the west side of the stream have sparse barnacles, Fucus and Littorina in the MTZ, but otherwise there is no macro-biota in the intertidal area. The only oil found was a few widely scattered tar balls and patties, very weathered, and spread over a large area. Cleanup is not recommended, as these few bits of weathered oil are unlikely to cause any environmental damage if left to decompose.

One mature eagle was roosting on the bluff overlooking the stream mouth. Tracks of caribou, bears, and river otters were seen along the stream banks.

Michael H Fawcett

ADF&G MULTI-ASSESSMENT DATA FORM

22/38

1 SURVEY TYPE: DS SS DS TS AVS SCHM NMS PTA

2 REGION: PWS KP, CI

KAP

METHOD: Aerial Ground Boat

3 DATE: 5/2/90

16 HIGH TIDE TIMES: 9:00 AM / 10:24 PM

21 TEAM RECORDER: JEFFREY BARNHART

4 START TIME: 1130

18 HIGH TIDE HTS: 14.1 / 14.8

22 OBSERVERS: Gus G. G. W. William R. W.

5 STOP TIME: 1243

17 LOW TIDE TIMES: 3:14 AM / 3:54 PM

23 AGENCY: ADFG/EXTN/WS/USCG/W

6 SEGMENT #: ABCO2

19 LOW TIDE HTS: 5.4 / 1.9

24 PHOTOS TAKEN: Y (N)

7 STATION #: 262-65-(655)

10 TIDE HT AT SURVEY: _____

Roll #: _____ Frame: _____

8 K-UNIT: K10-01

Sub Slack Flood Slack

25 VIDEO TAKEN: Y (N) TAPES: _____

9 STAT AREA: 262-65

20 USCG QUAD: _____

Start: _____ End: _____

10 LAT: 57° 51' 5" N

11 LONG: 155° 11' 5" W

26 SAMPLES TAKEN: Y (N) Number

12 SOURCE: Map Loren Andcat

Oil _____

13 LOCATION: Approx. 5 air miles South of Cape Kuyukaki, AK Penn. Sediment

14 DESCRIPTION: Bear Lake Creek

Biological _____

EXTENT OF OIL

Water _____

27 SURFACE COVERAGE

SHORELINE				STREAM			
L	V	N	S	L	V	N	S
			25				

36 CATALOGED AHAD. FISH STREAM? (Y) N

37 CATALOG #: 262-65-(655)

38 STREAM NAME: Bear Lake Creek

28 SURFACE THICKNESS

39 OIL IN STREAM BED? Y (N)

29 PENETRATION

40 OIL ON STREAM BANKS? (Y) N

30 OVERALL OIL IMPACT: N VL L M H

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

31 OIL TYPE: Pooled Mousse tar Asphalt Sticky Stain

42 OIL WITHIN 1 MILE OF STREAM? Y N

32 OILED CHEST? Y (N)

Where: _____

33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cove

43 ANADROMOUS FISH PRESENT? Y (N)

Lagoon Marsh

34 WAVE EXPOSURE: High Moderate Low

44 ANADROMOUS FISH OBSERVATION

35 SUBSTRATE TYPE: Bedrock _____ Boulder _____ Cobble 10

Species Aerial Ground

Gravel 10 Sand 80 Mud/silt _____

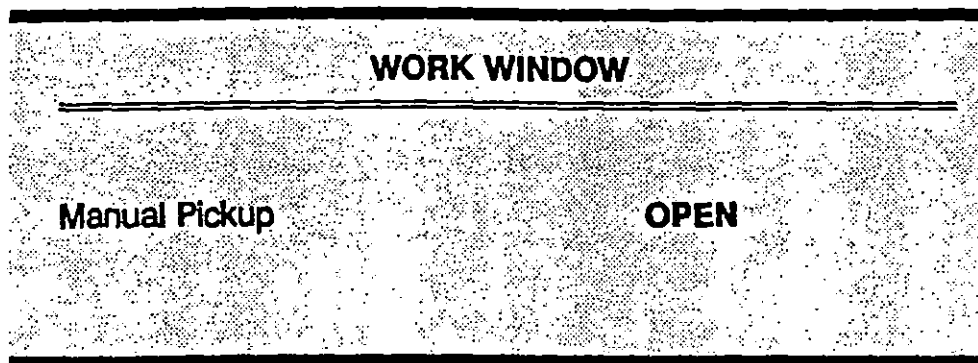
COMMENTS: This Cape area is used by brown bears, caribou, moose, waterfowl and land otters, as evidenced by the tracks we observed. In addition, it is an anadromous fish stream. I suggest manual clean-up of the area between A to B and area C. Jeff Barnhart

I recommend no treatment, as remaining oil is very light

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 262-65-655

SEGMENT K10-2-AB-002 SUBDIVISION A



ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G uncatalogued anadromous stream (262-65-655) is in Subdivision A. No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Avoid any unnecessary disturbance or damage to unrolled biota and substrate. Sensitive Estuary.

SEE SUBDIVISION CONSTRAINT ADDENDUM K10-2-AB-002A
FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC

Date

6/8/90

Prepared by

Date

6-28-90

AS-8

K

WORK
AREAS

STREAM NOT SHOWN WITH #
ON ADF+G Catalogued
ANAD. STREAM MAP

AB-2N

★ D
Seabird
Colony

ANADROMOUS STREAM EVALUATION



Exxon Company, USA
Map Key: AKP-AB-2N

ECOLOGY MAP
SEGMENT K10-2 AB-2N
SUBDIVISION A (1 of 1)
METERS

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

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT K10-2-AB-002

SUBDIVISION A

DATE July 23, 1990

MODIFICATION

1. REASON FOR MODIFICATION:

Noncompliance with original work order for beach portion of the segment (Areas 1, 3, and 4 on attached map). TAG Group visited the site on July 17, 1990 when some members agreed that the work crew should return to complete manual removal of mousse patties on the surface of the sand spit (Area 2) along Bear Lake Creek (Anadromous Stream No. 262-65-655) and in the stream.

TAG visited this site. We decided to do surface pickup near the stream and in the stream bed.

No Raking or tilling. I strongly disagree with the removal of "mousse-impregnated" sand in area #1.

2. SUGGESTED ADJUSTMENT TO WORK PLAN:

Wm Stalings - Exxon

Remove remaining surface mousse patties on sand spit adjacent to the stream and in the stream. ^{Area #2} Complete manual removal of mousse patties on the surface of the beach portion of the segment (Areas 1, 3, and 4). Rake and bioremediation on Area 1 was modified on July 18, 1990 to delete bioremediation component of the work order. We recommend that the bioremediation component of the work order be entirely deleted from this segment. Also, we recommend manual removal of mousse-impregnated sand from Area 1.

3. TIMING ISSUES:

As soon as possible because of returning salmon to Bear Lake Creek and resulting congregation of bears on the sand spit and beach.

USCG

ADEC

LAND MANAGER

EXXON:

ADF&G:

D. T. Smith

James B.

John Hardister

Disagree with recommendations as voted. Wm Stalings / Exxon 7/24/90

Jeffrey P. Barnhart

(If field representative is on site)

WORK PLAN ADDENDUM

Segment K10-2-AB-002

Subdivision A

Dated 07/24/90.

MODIFICATION

1. REASON FOR MODIFICATION

REQUEST FROM FIELD FOR ADDITIONAL WORK EFFORT.

2. ADJUSTMENT TO WORK PLAN

AREAS 1-4 ON ATTACHED SKETCH.
- MANUAL PICKUP OF SURFACE MOUSSE PATTIES

SHPO APPROVAL NEEDED YES
NO X

SHPO SIGNATURE _____

TAG APPROVAL DATE 07/24/90.

ADEC JOHN BAKER John Baker

EXXON Amf Tetr - 100

NOAA Burl Wescott Burl Wescott

USCG G.A. REITER G.A. Reiter

FOSC DATE 7-26-90

SHORELINE EVALUATION

SEGMENT ST/ K10-02-AS-008 SUBDIVISION A (1 OF 2) DATE 6/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4QQ National Wildlife Refuge

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: Mark E. Holmes DATE: June 19, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 629 m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u>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: Recommend manual removal of mousse patties in the UITZ and MITZ
as shown on attached sketch map.

TAG COMMENTS:

TAG APPROVAL DATE: 6/16/90

ADEC Ran Mung's E. J. Ford

EXXON Amy T. Rial

NOAA Joan Talbot

USCG G.A. Reiter G.A. Reiter

FOSC: [Signature]

DATE: 2/5/90

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 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, 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 prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 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, 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 Kotol Bay Hatchery release
 Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 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
 Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 6/30)
 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 Larry Nicholson 486-4791
- 3N, 3P Harbor seal and sea lion pupping (5/10 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Rothly 267-2208
- 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 Subistence area: Salmon harvesting (8/1 to 9/30)
 7H Finfish harvesting
 7I Deer harvesting (8/1 to 1/7)
 7J Invertebrate harvesting
 7K Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
 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 / ^{K1002} AS-8 SUBDIVISION: A DATE June 01 199

USCG

NAME Michael B. Millman SIGNATURE Michael B. Millman DCI

☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

MANUAL TREATMENT IS REQUIRED IN THIS SUBDIVISION. THE TREATMENT EXTENDS FROM AS-7 AND NEEDS TO BE ADDRESSED SIMULTANEOUSLY. MATTE EXTENDS NE INTO THIS SEGMENT, BECOMING BROKEN & SCATTERED.

ADEC

NAME Francine J. Bennis SIGNATURE Francine J. Bennis

☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

MANUAL PICK-UP OF MOUSE / MOUSE SATURATED FINE SEDIMENTS STRONGLY
RECOMMENDED:

BAND OF mouse mat, 2-4m wide, extends over at least 550 meters in sometimes broken, sometimes patchy, distribution. This band lies in the VITE, & overlaps the boundary between AS-7 and AS-8. The recoverable oil can be collected by a crew using shovels & Tronels.

LAND MANAGER

NAME OTO FLOESCHUTZ SIGNATURE OTO FLOESCHUTZ FWS

☒ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Agree with above ADEC recommendation to manually recover large section of mouse in thin shore line rocks on AS-7 adjacent section examined see att sheet #2

Attachment 2
U.S. Fish and Wildlife Service Shoreline Cleanup Disclaimer

This comment sheet is based on current observations and is solely for the purpose of planning and scheduling of 1990 response treatment actions. It in no way implies that the State or Federal government will not in the future determine that further restoration or other treatment, or compensation is warranted regarding this area, or that the area is considered by the Federal or State government to be adequately "clean" or "restored" for the purpose of any claim which the State or Federal government has brought or may bring against Exxon, Incorporated or any other potentially responsible party.

SHORELINE OILING SUMMARY

REVISION NO. 02/22/90

OG R. Marty USCG B. Milliner SEGMENT ST/ K1002 AS8
 BIO H. Davis LAND REP O. Florschutz SUBDIVISION A
 EXXON — ADEC F. Bennis TIME 18:00 to 19:00
 TEAM NO.: 20 TIDE LEVEL: +1.26m to +1.9m DATE 1 / June / 90
 EST. SUBDIVISION LENGTH: 563 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 30 % B 30 % C 30 % P 5 % G 5 % S — % M — % V — %
 SLOPE: Long 50 % Hang 50 % Vert — % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W — m M 563 m N — m VL — m NO — m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	B	P	S	SP	BP	ST	TH	LR	SU	U	M	L
ASPHALT PAVEMENT POOLED													
COVER				X	X					X	X		
COAT													
STAIN													
MOUSSE													
PATTIES			X	X						X	X	X	
TARBALLS			X							X			X
FILM													
NO OIL													

PAVEMENT: H F S — sq. m by — cmPATTIES / TARBALLS 300 BAGSNEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	NO	AMOUNT		
		SM	MD	LG
Logs	X			
Vegetation	X			
Trash	X			
Debris	X			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE —#BAGS —

Photographs:

Roll No. —Frames —

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OM	OL	OF	NO		UD	UC	SP	BP	ST	TH	LR	SU	U	M	L		

COMMENTS *Abundant mousse patties form an incipient pavement in the MITZ-UITZ. The mousse patties are widespread down in among boulders and cobbles at the toe of the cliffs. There are also some scattered tar balls down on the mud flat.*

* Note: *mousse patties in UITZ-STZ form an incipient pavement which has not, as yet, set up.*

SEGMENT ST/ K 1002
AS-8

SUBDIVISION A

DATE 1 June 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Sep/Sub Body
- ☐ Of Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWA/LWA
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PI Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
PI - No Subsurface Of

2 Δ
PI - Subsurface Of

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

eee
Oiled Vegetation

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

Mousse balls

Rock cliffs
with boulders
& cobbles at
be

Mousse
patches
in b, c.

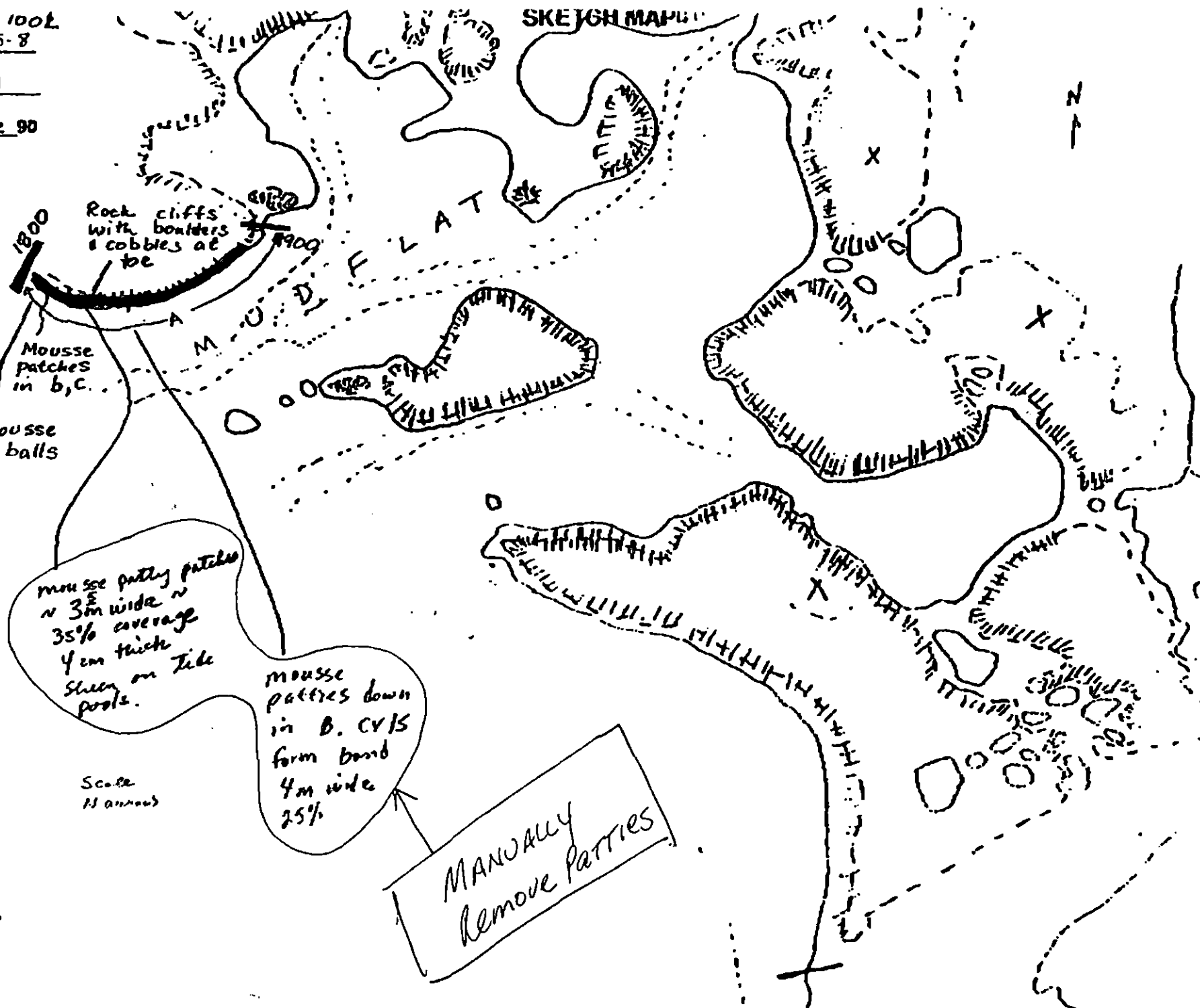
mousse patty patches
~ 3m wide ~
35% coverage
4m thick
Shore on tide
pools.

mousse
patties down
in B. CV/S
form band
4m wide
25%

Scale
N arrow

MANUALLY
Remove Patties

SKETCH MAP



Character CV/S PI/P
AP PO CV 563 CT ST MS PT 563 TB FL NO

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03-22-90

Segment ST/K10-02 Subdivision AS-008 Date (mo/day/yr) 6/1/90Time (24 hr) 18:15 Biologist H. Davis(A) Substrate type and % of segments:
(1) Bedrock 25 (2) Boulder 25 (3) Cobble 25 (4) Pebble 5 (5) Sand 10 (6) Silt 10(B) Overall % cover of biota (% of segment): Dense — Moderate 10% Low 90% (20%)

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

Photographs:
Roll No. ST-20-14Frames 5

BARNACLES Moderate to sparse in UTZ + MTZ. Sparse - Rare in LTZ

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

NOT PRESENT
5, 6

MYTILUS Scattered, Sparse

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

NOT PRESENT on
1, 5, 6

GASTROPODS Continuous but variable in density.

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

NOT PRESENT
4, 5, 6

FUCUS Patchy

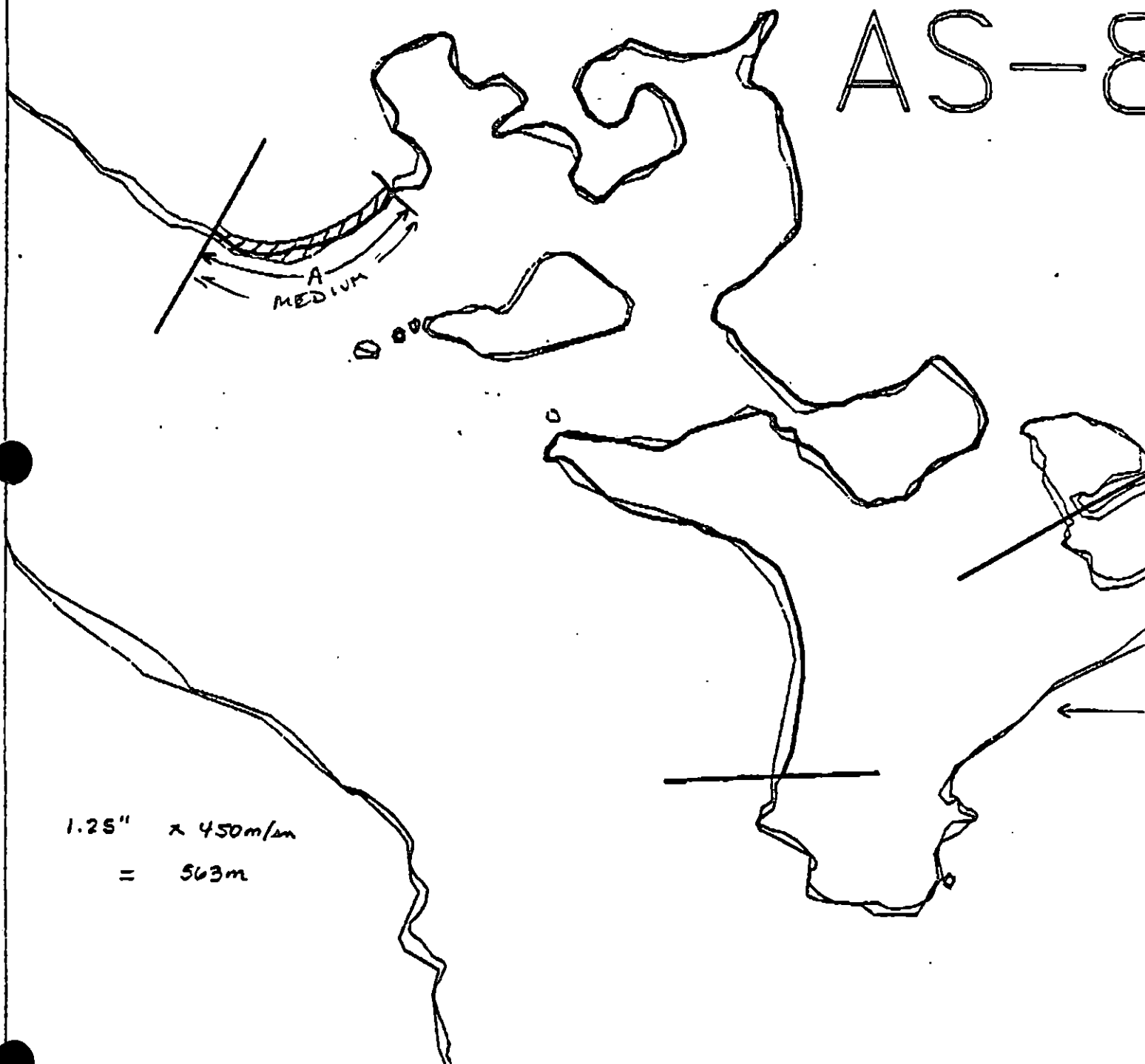
Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	X	X	X	X	X	2
3	3	3	3	3	3	X	3	X	X	X	3
4	4	4	4	4	4	4	4	4	4	4	X
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT
5, 6

Wildlife Observations/ General Comments: This part of the segment had rock cliffs with boulder-pebble rubble at the base. Below this was a sand/mud flat. On the rocky area *Balanus* sp. & spalt, *Littorina siliqua*, *Notozoea* sp., *Collesella digitalis*, *Mytilus*, *Sextosiphon*, *Ulva*, *Porphyra* and *Fucus* were dominant. On the mud flats: *Phoronids*, *Macoma* (rellina), *Saxidomus*, *Protatrea* and *Siliqua* (shells) were found. Bears were in the area. Glaucous-winged Gulls, Yellowlegs and Scripps plover.

Ecological Considerations: No Ecological constraints on the list but there is a gull colony nesting on the three islands off shore of AS-008A. Streams on adjacent subdivisions have Pinkies, Chums, and Oolichan spawning.

AS-8


$$1.25'' \times 450 \text{ m/m} = 563 \text{ m}$$

XXXX Wide

/// Medium

----- Narrow

TTTT Verv licht

K1402-AS-8

Approx. Segment Length: 10417m

Map Key: AKP-AS-8

Name: R. Marty

Date: 1 June 1990

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K10-02-AS-008 SUBDIVISION A (1 of 2)

WORK WINDOW	
Manual Pickup	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

No applicable ecological time constraints.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

R. J. J. J.

Date

7/6/90

Prepared by

Rev. R. Coulter

Date

7/6/90

K10-2

AS-8

AS-7

WORK
AREA

AB-

ECOLOGY MAP

SEGMENT K10-2 AS-8

SUBDIVISION A (1 of 2)

METERS

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

SHORELINE EVALUATION

SEGMENT ST/ K10-02-AS-008 SUBDIVISION B (2 OF 2) DATE 6/3/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4QQ National Wildlife Refuge

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. Holmes DATE: June 19, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 406 m: Narrow 375 m: V.Light 1621 m: No Oil 6496 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommend treatment includes 1) manual removal of tarmats and
2) manual pick up of mousse and bags of mousse remaining from prior
cleanup as shown on attached sketch map.

TAG COMMENTS: BIOREMEDIATION (CUSTOMER) AS REQUIRED FOLLOWING
TARMAT REMOVAL.

TAG APPROVAL DATE: 6/16/90

ADEC Ray Mennery R. Thompson

EXXON Amy Teal

NOAA Joseph C. Talbot

USCG GA. REITER

FOSC

DATE:

7/5/90

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)
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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
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- 2M Herring spawning (4/15 to 6/30)
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- 3N, 3P Harbor seal and sea lion pupping (5/10 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31).
Contact ADF&G and USFWS prior to treatment for confirmation.
AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 766-3377
- 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 766-3377
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 766-3377
- 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 Subistence area: Salmon harvesting (8/1 to 9/30)
7H Finfish harvesting
7I Deer harvesting (8/1 to 1/7)
7J Invertebrate harvesting
7K Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
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 / ST K10-02 SUBDIVISION: AS-008 B DATE 6-3-90

USCG

NAME Michael B. Milliner SIGNATURE Michael B. Milliner DCI

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

MANUAL TREATMENT IS NEEDED IN THIS SEGMENT. 3 LARGE MATS WERE OBSERVED SCATTERED THROUGH, WITH NUMEROUS SMALL PATCHES & SPASHERS SPREAD SPORADICALLY WITHIN. I WOULD RECOMMEND CONCENTRATING ON THE LARGE MATS ONLY, AS THEY ARE THE ONLY AREAS OF SUBSTANCE.

ADEC

NAME Francis J. Benoit SIGNATURE Francis J. Benoit

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

MANUAL PICK-UP OF MOUSSE, MOUSSE PATCHES, & MOUSSE SATURATED FINE SEDIMENTS STRONGLY RECOMMENDED: USE SHOVELS & TROWELS -

area adjacent to AS-8A - clean recoverable mousse in patchy distribution ~70m. 'mousse mat' to the north, at top of westernmost bag of this segment - 4x20m next area to the east of this 3m x 100m area of MS among sediments - marked (6) on SSAT map. SE of this: check small, sandy pocket beaches for mousse patches. Pick-up oiled gravel bag located near MS mat, 4m x 35m long, marked (11) on SSAT map. MS mat 5m x 1m marked (N) on SSAT map. Pick-up oiled gravel bag. location marked on SSAT map. MS mat 2m x 10m marked (4) on SSAT map.

CREW SHOULD ALSO WORK SE sandy beach to remove MS patches in UITE

LAND MANAGER

NAME OTTO FLORSCHUITZ SIGNATURE Otto Florschütz FWS

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Agree with above ADEC comments as mousse occurs in several concentrated areas throughout much of segment - See attachment #2

Attachment 2
U.S. Fish and Wildlife Service Shoreline Cleanup Disclaimer

This comment sheet is based on current observations and is solely for the purpose of planning and scheduling of 1990 response treatment actions. It in no way implies that the State or Federal government will not in the future determine that further restoration or other treatment, or compensation is warranted regarding this area, or that the area is considered by the Federal or State government to be adequately 'clean' or 'restored' for the purpose of any claim which the State or Federal government has brought or may bring against Exxon, Incorporated or any other potentially responsible party.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG J. Springer USCG B. Milliner SEGMENT ST/ K 11-02/ AS-8
 BIO H. Davis LAND REP O. Florschutz SUBDIVISION B (2 of 2)
 EXXON — ADEC F. Bennis TIME 15:25 to 20:10
 TEAM NO.: 20 TIDE LEVEL: +6 to +6 DATE 06/03/90
 EST. SUBDIVISION LENGTH: 10743 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☒ Helo WORKING DIRECTION: NW to SE
 SURFACE SEDIMENTS: R 15 % B 15 % C 15 % P 10 % G 5 % S 30 % M 10 % V — %
 SLOPE: Lang 100 % Hang — % Vert — % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 140 m N 103 m VL 1795 m NO 8705 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	IC	IB	IP	IS	SP	SN	SW	SL	SR	TL	LR	—	SU	U	M	U
ASPHALT PAVEMENT	X					X							X	X		
POOLED																
COVER																
COAT		+	X	✓		X	✓						X	✓		
STAIN																
MOUSSE	X	✓	+	X	+	X	✓		+				*	X	+	+
PATTIES																
TARBALLS																
FILM																
NO OIL																X

PAVEMENT: H F (S) 25 sq. m by 4 cmPATTIES / TARBALLS 500 BAGSNEAR SHORE SHEEN? NO BR RW (SL) TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris	X		

DEBRIS COLLECTED
☐ YES ☒ NOTYPE —#BAGS —

Photographs:

Roll No. ST-20-14Frames 6-13

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	SN	SW	SL	SR	TL	LR	—	SU	U	M	U		
1	35					X	.		X									X					GS/GS
2	7					X	.		X									X					C/PM
3	30					X	.		X									X					S/SM
4	30					X	.		X									X					S/S
							.																
							.																

COMMENTS

18 J. Sp...er

SEGMENT ST/ K10-2/AS-8

SUBDIVISION B

DATE 06/03/90

CHECKLIST

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

LEGEND

1 ▲

PI - No Subsurface Oil

2 ▲

PI - Subsurface Oil

CT/C

Continuous Distribution

CT/D

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

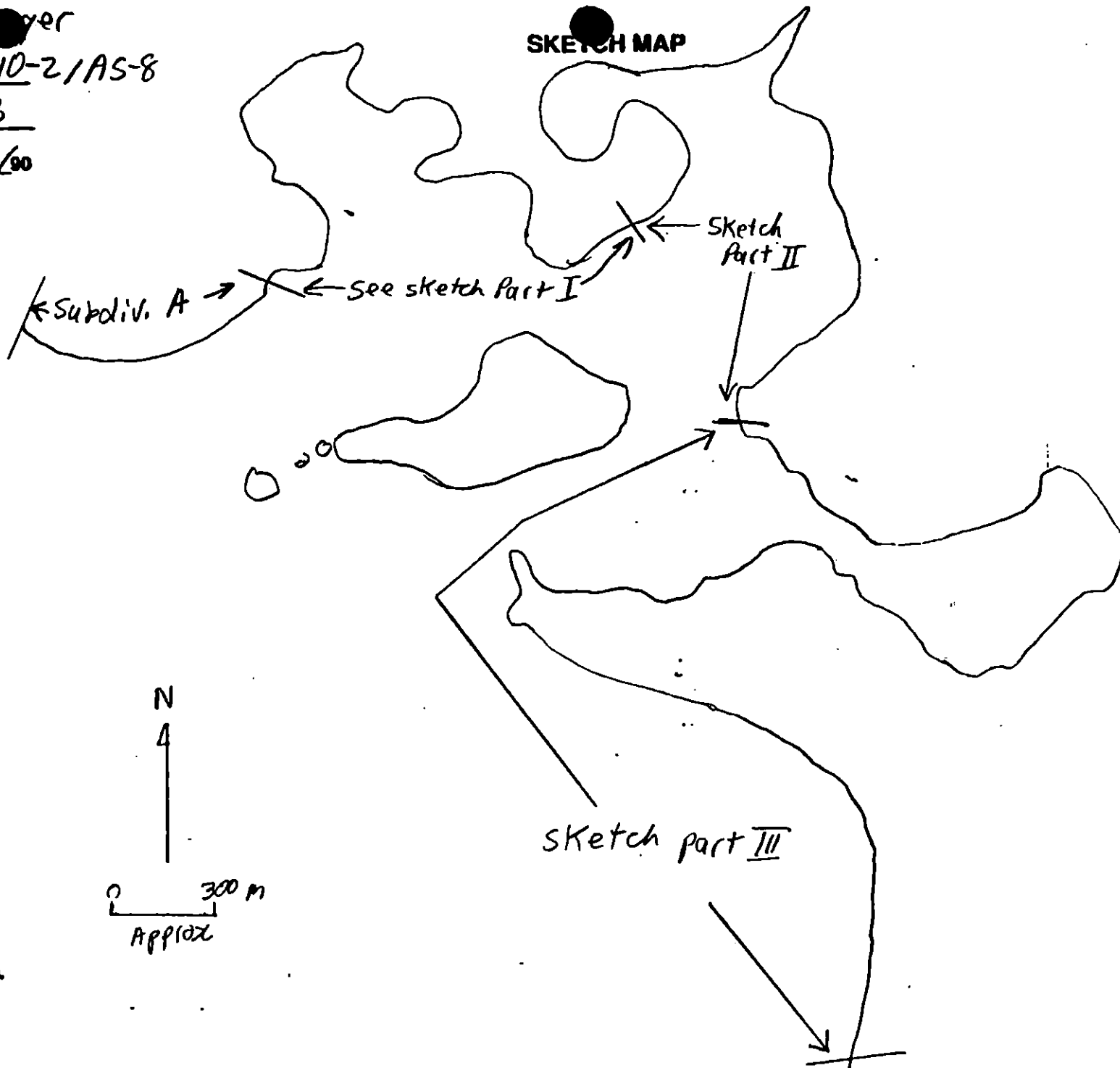
Urea

Oiled Vegetation

1 ➡

Photo location, direction,
and number

SKETCH MAP



Character Length (m): AP 15 PO CV CT 279 ST 21 MS 1723 PT TB FL NO 8705

REVISION 03/24/90

06 J. S. [redacted]

SEGMENT STI K10-2/AS-8

SUBDIVISION B

DATE 06/03/90

CHECKLIST

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

LEGEND

1 ▲

PI - No Subsurface Oil

2 ▲

PI - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

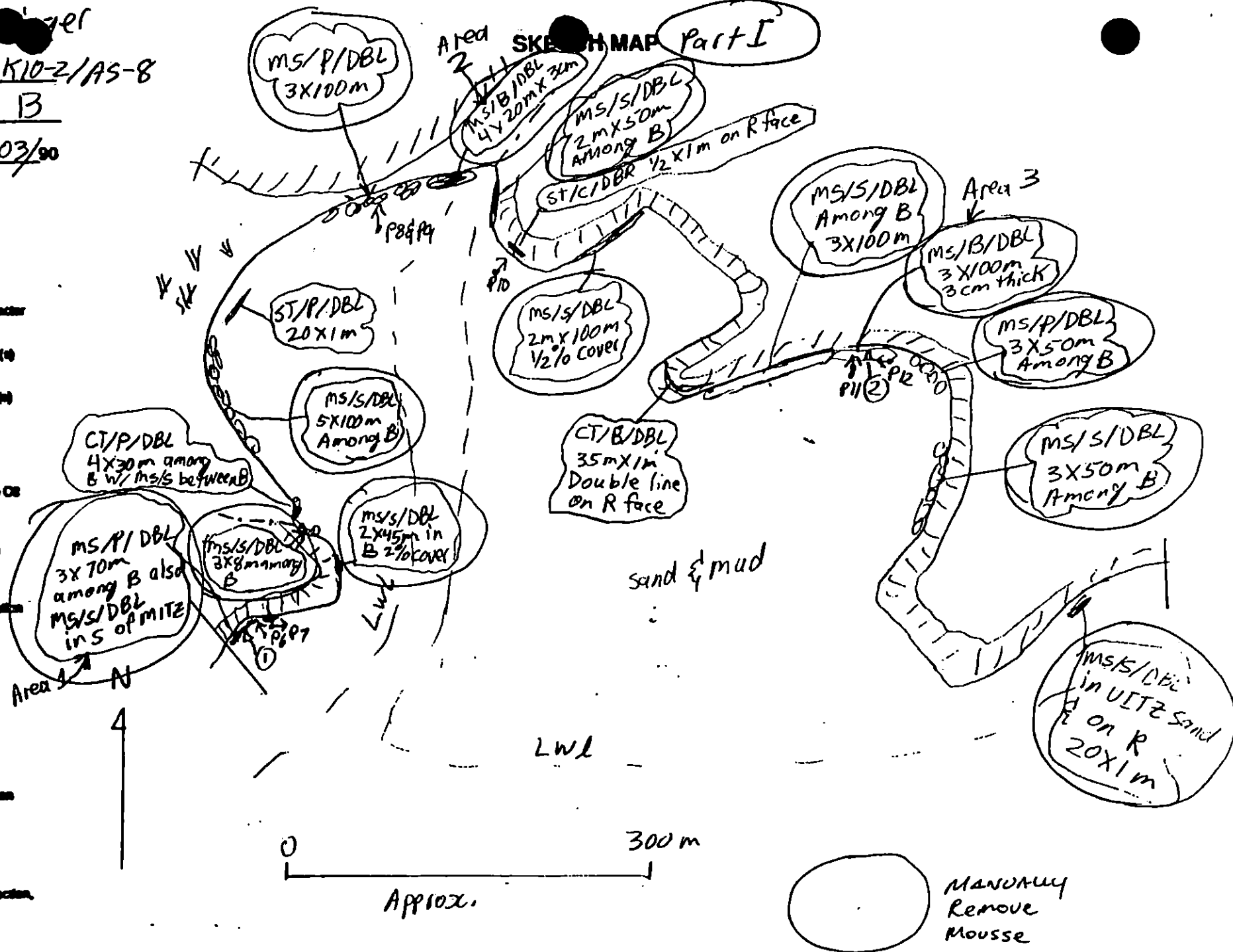
|||||

Old Vegetation

1 ●→

Photo location, direction, and number

SKETCH MAP Part I



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

REVISION: 23/24/90

OG J. Springer

SEGMENT STI K10-2/AS-8

SUBDIVISION B

DATE 06 1 03/90

SKETCH MAP

Part II

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Ch Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Ext. HAZ/LAVL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pt Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

Pt - No Subsurface Oil

2 Δ

Pt - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

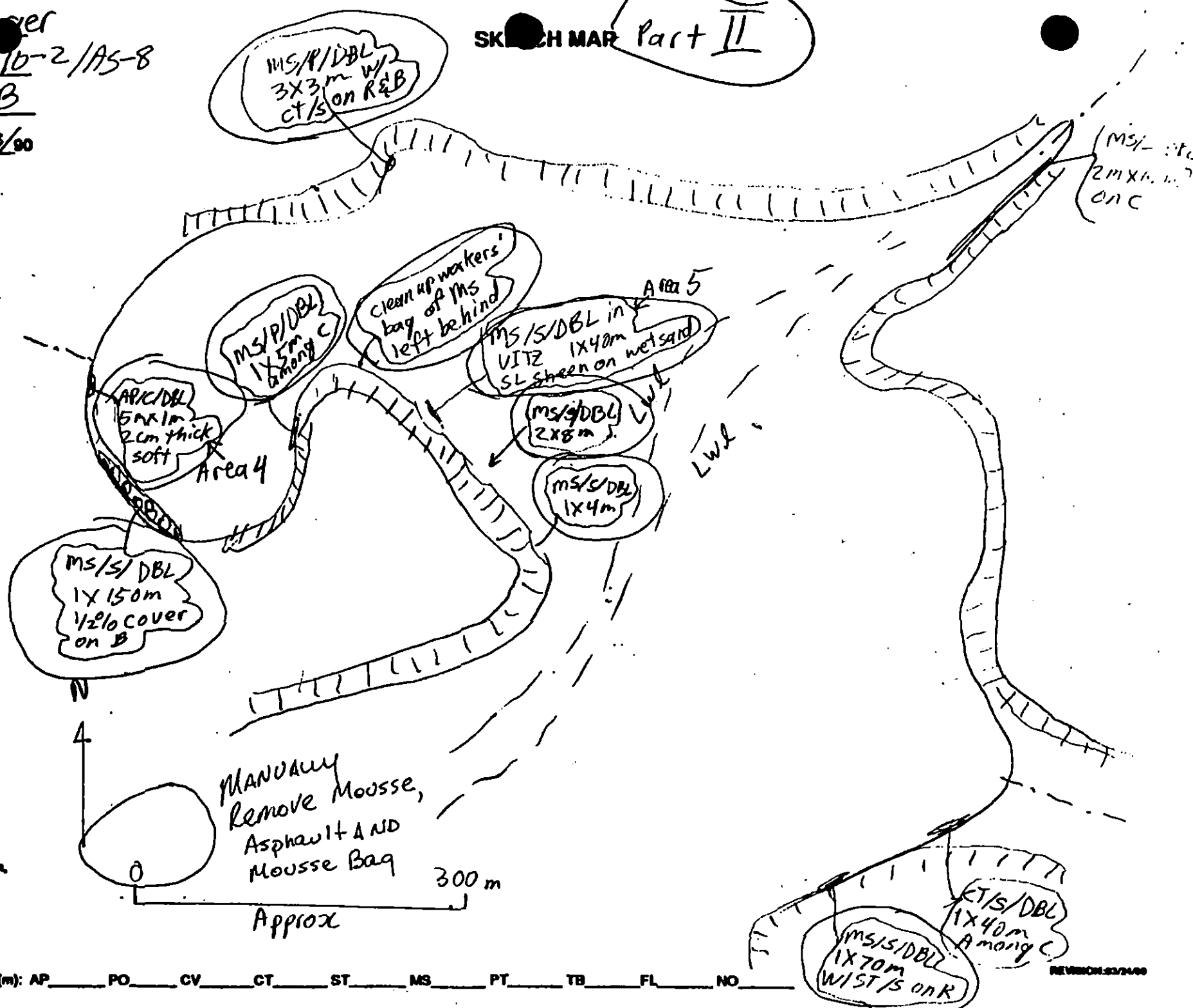
Splashed Distribution

leee

Oil Vegetation

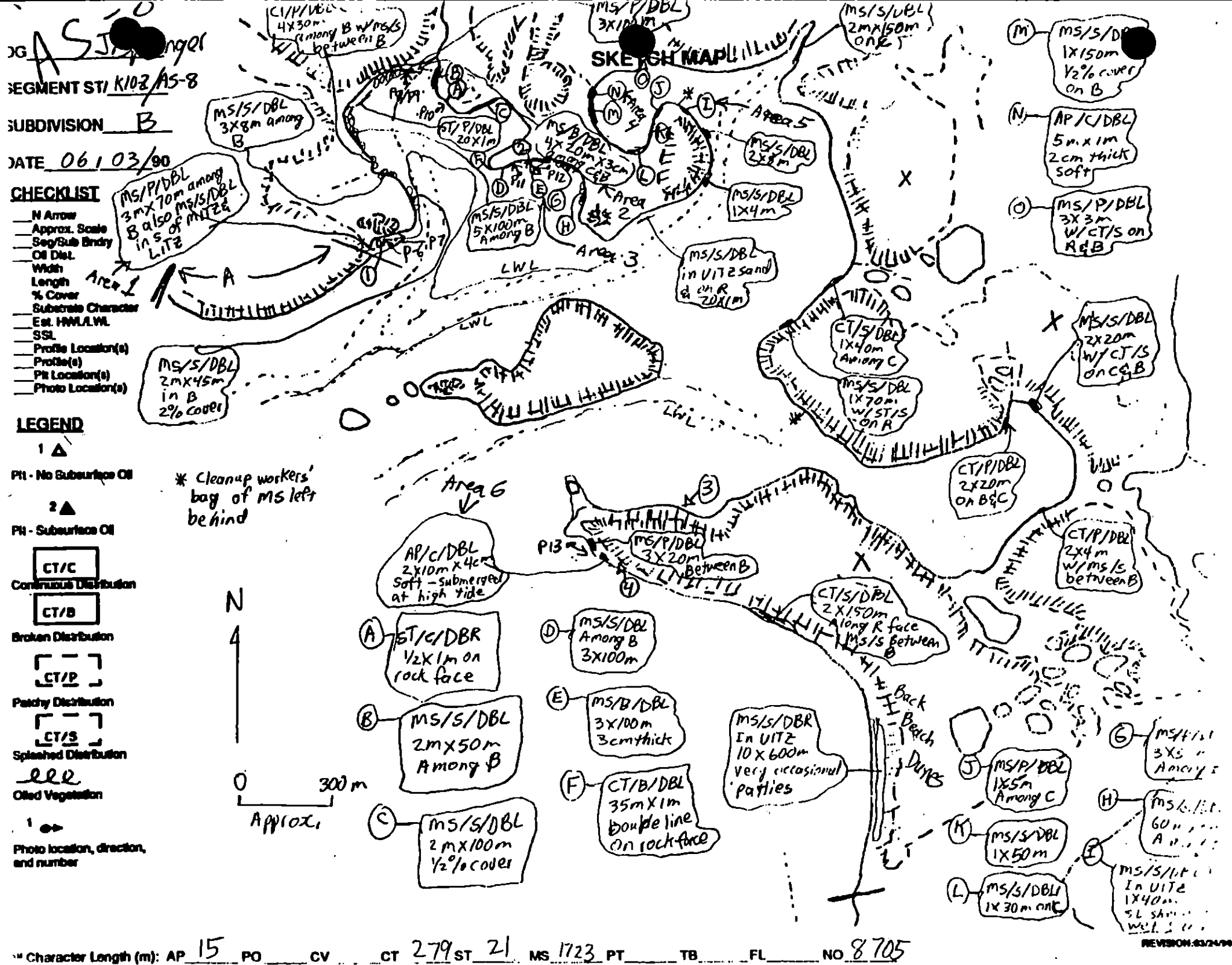
1 ●

Photo location, direction, and number



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

REVISION 20/24/90



SHORELINE ECOLOGICAL SUMMARY

REVISION 03-22-90

Segment ST/K10-02 Subdivision AS-008 B Date (mo / day / yr) 6-3-10Time (24 hr) 15:30 Biologist N. Davis(A) Substrate type and % of segments:
(1) Bedrock 15 (2) Boulder 15 (3) Cobble 15 (4) Pebble 10 (5) Sand 30 (6) Silt 15(B) Overall % cover of biota (% of segment): Dense 5% Moderate 10% Low 85% (

(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-20-14Frames 6-13

BARNACLES Dense - Rare. Cyprids + spat. Dense.

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

5, 6

MYTILUS Rare, Patchy in LZT + ATZ.

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

1, 5, 6

GASTROPODS Littorina - Dense-Sparse, limpets sparse, Nucella - Rare

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 Rare.

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

4, 5, 6

Wildlife Observations/ General Comments: This segment is a convoluted shoreline surrounding mud and sand flats. The upper intertidal has grassy bluffs, rock cliffs or dunes below which are gravel/pebble beaches or narrow boulder fields or sand beaches. The density of animals varies considerably even with in a single substrate type. The most common inhabitants are 8 Shore - Balanus, Chthamalus, Mioscaenella, Littorina (saxatilis), Ampelopsis, Mytilus, Fucus, Scytosiphon, Didemna, and Ulva. Mud/Sand Flat - Ulva, Antennomorpha, Zostera, Porphyra, Siphonaria, Scytosiphon, Didemna, Mytilus.

Ecological Considerations: None listed, but the islands in the center of the bay have Gull colonies nesting. Nearby areas have Balanus runs. The mud/sand/estuary areas are also sensitive to disturbance.

Clinocardium, Saxidomus, Pinctada, Natica, Mya, Macoma, Tellina, Pharosia and Urosalpinx. Bird: Thrush, Sparrow, Bank Swallow, Surf-bird, Least sandpiper, semi-palmated plover, Least? Yellow legs, Glaucous Gull, Glaucous-winged Gull, Raven and one adult eagle. Mammals: 2 Bears seen, Bear tracks, Fox tracks. Caribou tracks in intertidal, 10-12 Caribou in uplands.

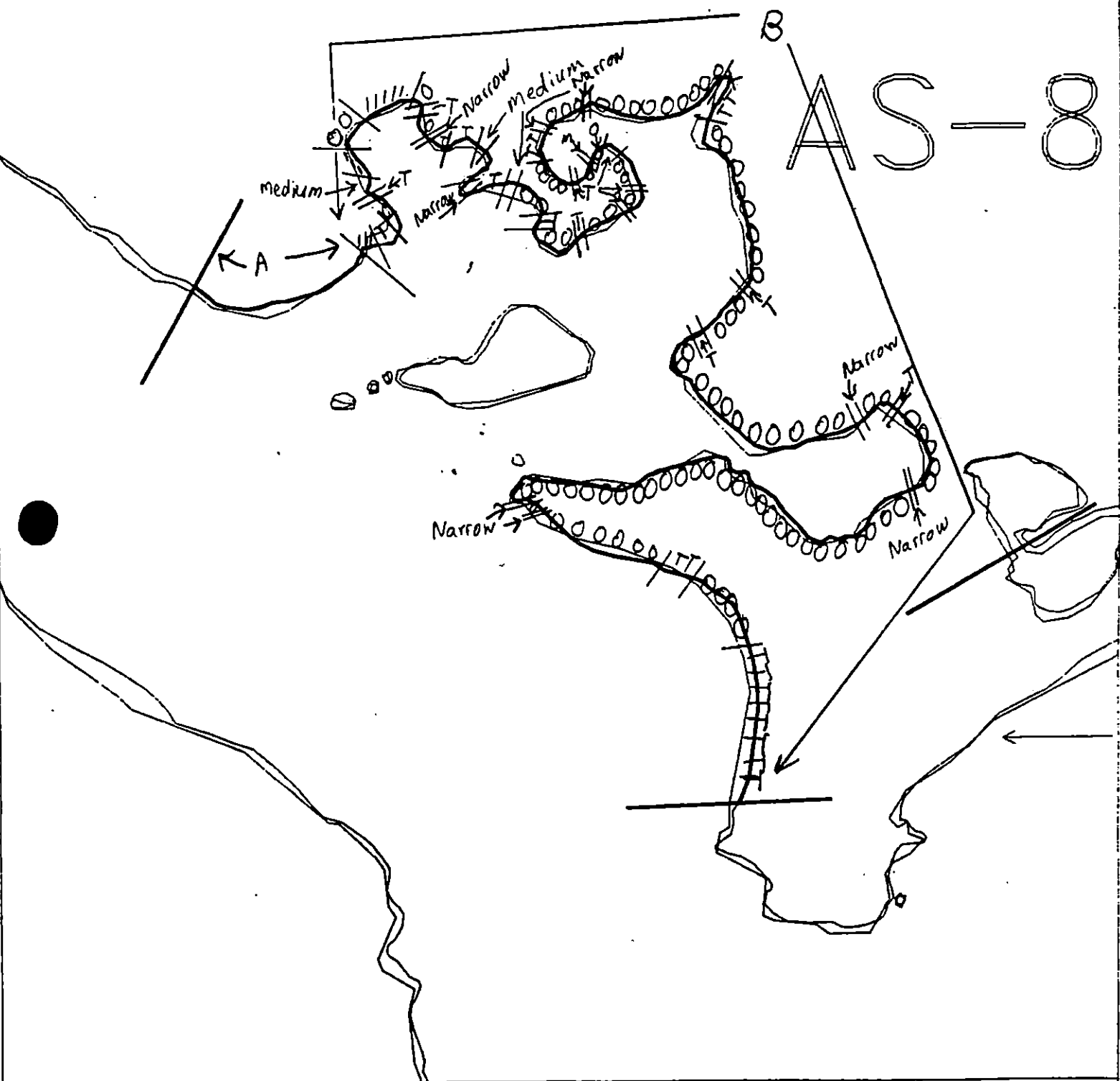
PHOTOGRAPHY LOG

ROLL NO. ST-20-14 FROM 6/1/90 TO _____
TEAM NO. 20 PWS / KENAI / KODIAK / AK. PENINSULA

FRAME NUMBER	PHOTO- GRAPHER	DATE	SITE ID	LOCATION/COMMENTS

1	H. Davis	6/1/90	K10-01 IL-001	B. Sandy/oil mixture	UTZ	10
2			K10-02 AS-007	Mousse and coat	UTZ	6
3				" "	UTZ	6
4				mousse "balls" 1-2 inch diam. 2-3 cm thick		6
5			K10-01 AS-008	A mousse patties, coat and cover	UTZ	6
6		6/3/90	K10-02 AS-008	B Mousse in	UTZ	3
7				view along oiled area	UTZ	3
8				Mousse Mat 2-5 cm thick	UTZ	4
9				" " "	UTZ	4
10				Ring along cliff + Boulders	UTZ	4
11				Oil Ring in	UTZ	4
12				View along an oiled area, mousse	UTZ	5
13				Oil + Sand in	UTZ	7

AS-8



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

K1002-AS-8

Approx. Segment Length: 10417m

0

300

600

900

11306

11306

Map Key: AKP-AS-8
 Name: J. Springer
 Date: 6/3/90
 Note Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K10-02-AS-008 SUBDIVISION B (2 of 2)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation	OPEN*

*No Inpol - Use Customblen Only

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

ST Bald Eagle Nest NO CONSTRAINT. USFWS 4/9/90 map indicates no active nest within 400m of Subdivision B work sites.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to uncolled biota and substrate.

FOSC

[Signature]

Date

2/4/90

Prepared by

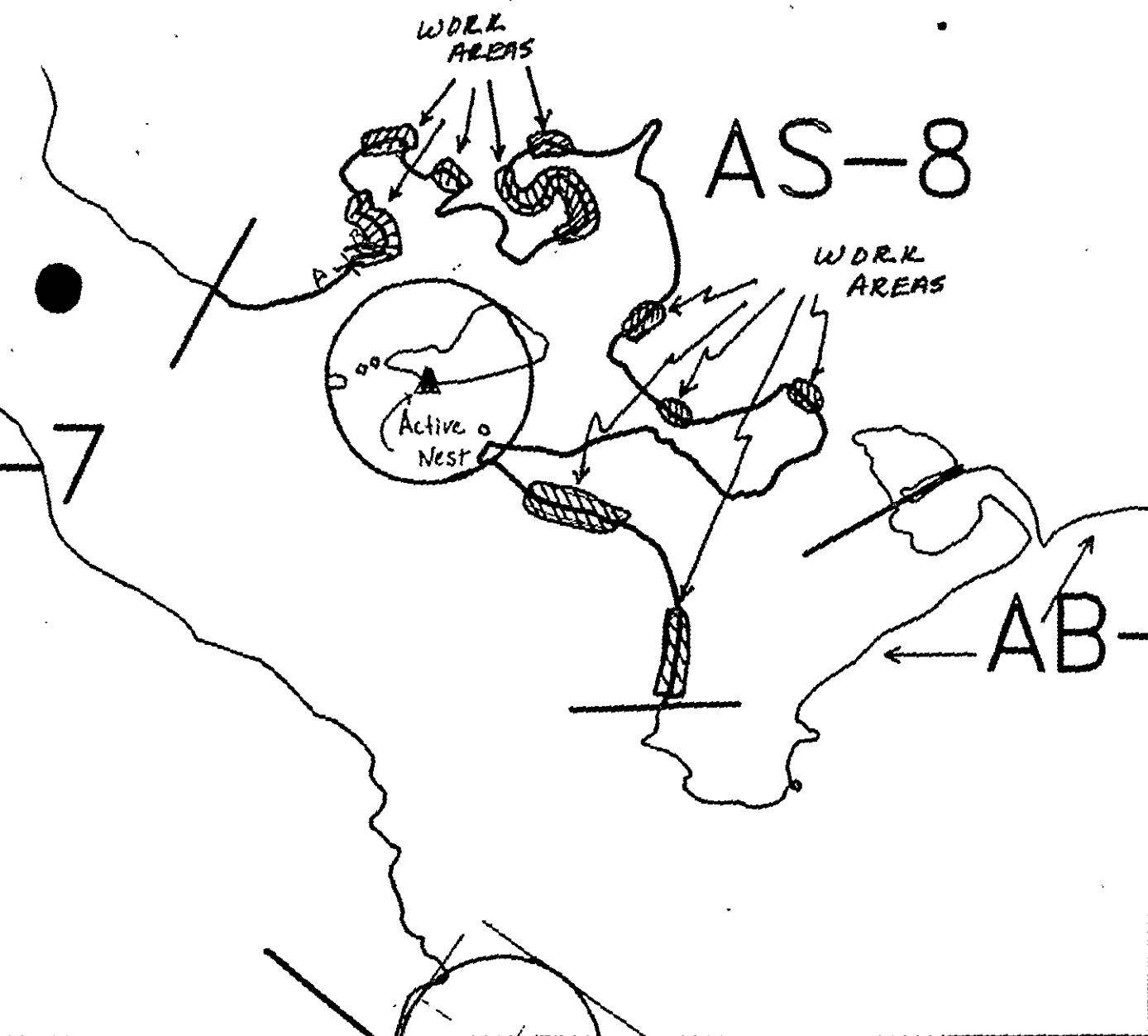
R. R. Cantor

Date

7/6/90

K10-2

AS-8



many. USA

ECOLOGY MAP
SEGMENT K10-2 AS-8
SUBDIVISION B (2 of 2)
METERS

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

SHORELINE EVALUATION

SEGMENT ST/ K10-05-AS-002 SUBDIVISION A (1 OF 2) DATE 5/11/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

T-1 All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
4QQ National Wildlife Refuge
Active Raven cliff nest in Subdivision B
9LM Land mammals
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: Lachlan Dorn DATE: 5/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 22 m: Narrow 0 m: V.Light 1 m: No Oil 1669 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

+ TRASH.

COMMENTS: Recommend manual removal of tarmats as shown on attached sketch map. Work after 6/1 and/or with approval from USFWS regarding eagle nest.

TAG COMMENTS: BIOREMEDIATE (CUSTOMBLEW) AS REQUIRED FOLLOWING TARMAT REMOVAL.

TAG APPROVAL DATE: 5/29/90.

ADEC ART WEINER Art Weiner

EXXON AMY GIL Amy Gil

NOAA BILL WISSE Bill Wisse

USCG G.A. REITER G.A. Reiter

FOSC: My L DATE: 6-19-90

note: Use Customblew only!

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 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, 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 prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 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, 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 Kotai Bay Hatchery releases
Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 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
Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 6/30)
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 Larry Nicholson 486-4791
- 3 Harbor seal and sea lion pupping (5/10 to 7/1)
3 Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31).
Contact ADF&G and USFWS prior to treatment for confirmation.
AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Rothly 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (6/1 to 9/15)
6V Anchorages (6/1 to 9/15)
6W Forest Service cabins (6/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (6/1 to 9/30)
7H Finfish harvesting
Deer harvesting (6/1 to 1/7)
Invertebrate harvesting
Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
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

SHORELINE OILING SUMMARY

OG OG HEYMAN NOA 5 LEHMANN SEGMENT ST/ K 10 05 A5002
 IO L SHARMAN LAND REP/ HARDISTER SUBDIVISION 1 (1 OF 2)
 XXON NO REPORT ADEC FLORIDA TIME 02:30 12:30
 TEAM NO. 19 TIDE LEVEL -1.5 to +3 DATE 5/11/90
 EST. SUBDIVISION LENGTH: 1695 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 2 % C 5 % P 3 % Q 0 % S 85 % M 0 % V 0 %
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 15 m N 0 m VL 1 m NO 1679 m

SURFACE OIL

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

PAVEMENT H F 018 sq. m by 5 cmPATTIES / TARBALLS 30 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. ST-19(III) - 1Frames 6

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR				PIT ZONE				AN A	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		US	US	1	2	3	4	N	U	M	U				
1	15					X	0.0	X						X				N	N	12	CP8/PG8

COMMENTS * Particles of AP fell into water & produced sheen.

One 6X15 m² accumulation of soft, mousey AP was observed at N end of this subdivision. Within the 6X15 m² area, patches of DBR up to 15X1.5 m cover 20-25% of the total area. Each patch consists of mouse which has settled between the cobbles, pebbles & boulders & has hardened to a soft AP up to 5-7 cm thick. Each patch

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ K10-05-AS-2 SUBDIVISION: A DATE 5/11/90

~~NOAA~~
~~USFWS~~
NAME STEPHEN LEHMANN SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

At the northern end of subdivision A (south of the stream) are removable mouse/asphalt patches. The oil is up to 2-3 cm thick and with cobbles entrained. This should be manually removed. Pilots + crews should be aware of the eagle + raven nests and avoid those areas.

ADEC
NAME Terry Ellsworth SIGNATURE Terry Ellsworth

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

I concur with NOAA comments. the asphaltic mouse patches at the northern end of the segment should be manually removed. Also, the trash bag of oiled sediment should be picked up.

LAND MANAGER
NAME JOHN HARDISTER SIGNATURE [Signature] USFWS

☒ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Manual removal of mouse patches/asphalt is recommended. It is recommended for subdivision B of this beach segment; precautions must be taken to prevent stress to nesting bald eagle and raven. Precautions include both air/boat approaches to/from beach and by crews on beach.

Attachment 2**U.S. Fish and Wildlife Service Shoreline Cleanup Disclaimer**

This comment sheet is based on current observations and is solely for the purpose of planning and scheduling of 1990 response treatment actions. It in no way implies that the State or Federal government will not in the future determine that further restoration or other treatment, or compensation is warranted regarding this area, or that the area is considered by the Federal or State government to be adequately "clean" or "restored" for the purpose of any claim which the State or Federal government has brought or may bring against Exxon, Incorporated or any other potentially responsible party.

THEYMAN

ITSTIKIO 15002

SION A

5/11/90

LIST

• Scale
• Study

• In Character
• RARE

• (unlabeled)
• (unlabeled)
• (unlabeled)

2

where CH

see CH

[unlabeled]

[unlabeled]

[unlabeled]

[unlabeled]

[unlabeled]

[unlabeled]

[unlabeled]

[unlabeled]

Length (m): AP 15 PO CV CT ST / MS PT TB FL NO

SKETCH AP 1A
(See L. in Map)
STREAM

MANUALLY
Remove
PAVEMENT

DRIFT LOGS

SAND
BEACH

2 Large
Boulders

Bedrock
Bluffs

Pills & Chis

Flatlying Bedrock
Predominantly Cobble
w/ Pebbles & few boulders

~6x15 m, 20-25% cover
AP, soft, Patches to 1.5x1.5 m,
up to 5-7 cm thick, each patch has
1B-1C distribution, 6x15 m² area
has total 1P distribution

EXPOSED AT MID TO LOW TIDE

BEDROCK
ISLAND

(Approximate Scale)

0
10
20
30
METERS

MAY-17-1990 16:19 FROM EXXON KODIAK

TO

15643771

P.08
P.04

SKETCH MAP

LOCAT. MAP

AGENT ST/ K 5 AS 002

DIVISION A

5/11/90

CKLIST

- Arrow
- Scale
- Sub Body
- Dist.
- Dist.
- Cover
- Station Character
- 1. HULL/WL
- 2.
- Site Location(s)
- Site(s)
- Location(s)
- Site Location(s)

END

Subsurface Oil

Surface Oil

T/C Sub Distribution

T/B

Distribution

T/P

Distribution

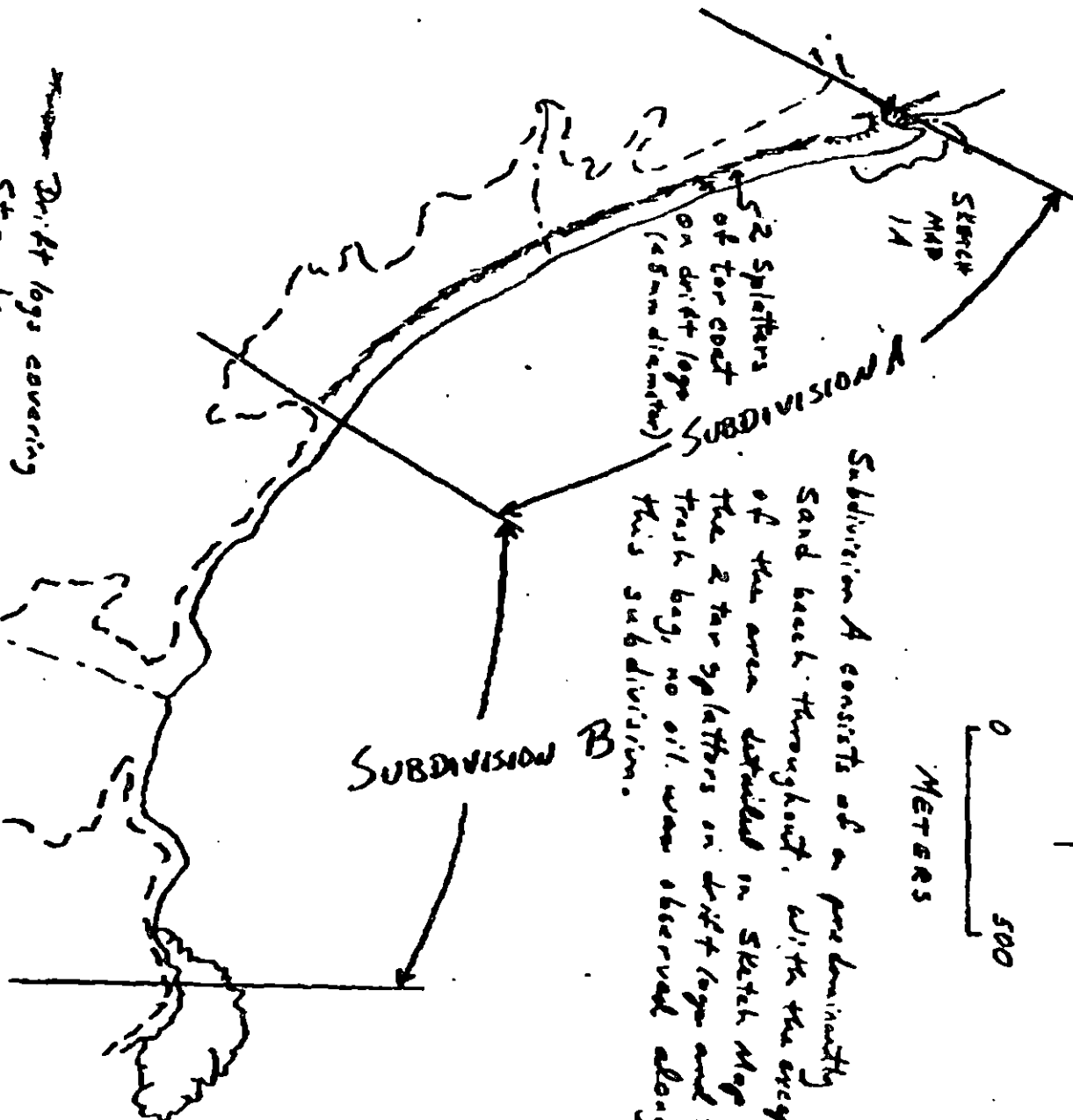
T/S

Distribution

position

site, direction, etc

Drift logs covering
Storm berm
Approximate location of 1 Plastic
Cleaning bag from 1989.



Line Length (m): AP/5 PO CV CT ST MS PT TB FL NO

SHORELINE ECOLOGICAL SUMMARY (Page 1 of 4)

REVISION: 03/22/90

Segment ST / K10-5 Subdivision AS-2 A Date (mo / day / yr) 5/11/90

Time (24 hr) 0930-1230 Biologist SHARMAN

(A) Substrate type and % of segments: SUBDIV.
(1) Bedrock 5 (2) Boulder 2 (3) Cobble 5 (4) Pebble 3 (5) Sand 85 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 0 Moderate 10 Low 90
SUBDIV.

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

Photographs:
Roll No. ST-19 (III) - 1

Frames 6

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS (ALCELA, LITTORINA, LYMNAE)

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 group of 7, + 1 group of 2 caudon in uplands in stream valley. ~ 40 glaucous-winged gulls, 16 new gulls all along subdivision - however, ~ 80 gulls (mostly glaucous-winged) concentrated at stream mouth, along with 13 harlequin ducks, 1 pair oystercatchers, 4 green-winged teal, + 2 red-breasted mergansers. 1 willow ptarmigan in boulder area, and saward + golden-crowned sparrow singing (cont).

Ecological Considerations:

The primary sensitivity within the subdivision is the anadromous stream at the N. boundary - please refer to the Eco. Maps. This stream was not previously identified on the NOAA database. Sensitivity codes are: 1A Stream mouth (fry outmigration) 7/15-7/31, and 1B Stream mouth (spawning) 7/15-9/10, peak 8/15. This is an ADF & G catalogued pink salmon stream (# 262-65-10030). Additionally, the offshore grassy islets are potential seabird colony nesting habitat (code 5R 5/1-8/31) - as in not in NOAA database &

(AS-2-A)

Shoreline Ecological Summary (cont.)

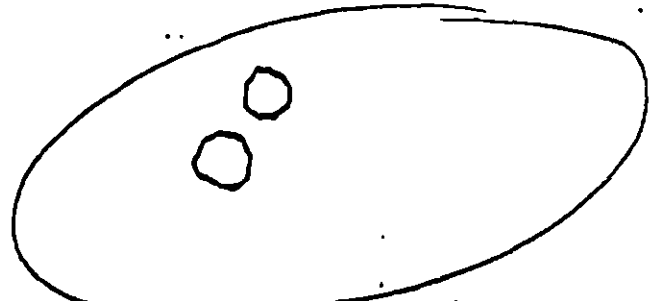
(Page 2 of 4)

Sherman
5/11/90General Comments (cont.):

from backshore. 1 semipalmated plover. Brown bear and fox tracks in supratidal sand. 1 marmot atop backshore bluff. This subdivision is composed primarily of a wide, low-angle sandy beach that is largely quite depauperate with respect to macrobiota. At the stream mouth there are some large boulders and a bit of bedrock. On these substrates there are sparse barnacles (with rare spat) and sparse stands of Fucus (unsuccessfully producing sporlings). Other algae include Sargassum and green filamentous forms. The dominant sand beach portion of the subdivision has the shells of Sepidomus, Protothaca, Chiocardium, and masses of the calcareous tubes of serpulid worms. In LTZ and MTZ sand there are locally very dense populations of the lugworm Aricicola. Amongst the boulders in the vicinity of the stream mouth there are several Glycymeris exposed on the surface, as well as a few Terebra polychaetes. Given the substrate types, instability, and exposure of this shoreline, the intertidal community just described is likely normal and healthy. Species appear to be recruiting satisfactorily, as there appears to be no untoward mortality. However, exposure of the polychaetes amongst the boulders is unusual.

Ecological Considerations (cont.):

pinniped haulouts on the shore of these islets as well as tidal rocks and reefs. Sensitivity codes would be 3N, 0, P, & (Harbor seal/sealion pupping 5/10 - 6/30, and Harbor seal/sealion molting 8/15 - 9/15). Again, not on the NOAA database and possibly because they are indeed not important haulout habitat. A very real sensitivity, however, is the active eagle nest atop the sea stack off the point within the adjacent segment beyond subdivision "B" to the S. (Segment AS-2). Perhaps even more importantly, there is presently an active raven cliff nest within subdivision "B" which should probably be considered operationally to occur within this subdivision. Documented active raven nests are exceedingly rare and presumably highly sensitive to human disturbance. Helicopters should avoid that immediate area (see Eco. Map for AS-2-B). Also note the active fox denning area along the bluffs within AS-2-B.



*Isla with associated tidal reefs/reefs
- potential seabird nesting + pinniped haulouts.*

ECOLOGY MAP

AS-2-A

(1 of 2)

(Page 3 of 4)

5T - Eagle nest adjacent,
within Segment AS-2 to S.
(3/1 → 6/1; active
nests until 9/1).

→
Anadromous stream
ADF&G #
262-65-1030
(Pink
m)

AS-2A
↓

*tidal reef area,
potential pinniped haulouts*

*If to scale,
actually located
just off page
to E.*

↓ GOA 11A

KXX Wide
//// Medium
--- Narrow
TTTT Very Thin

AS-2-A

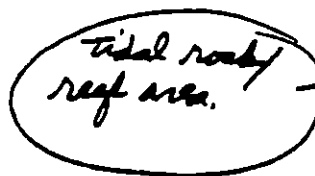
ADEC Segment Length: 3574m

Map Key: GOA-11c

Name: G. Heyman

Date: 5-11-90

GOA
11C



Potential pinniped haulouts.

AS-2-A

AS-2-B

AS-2

ECOLOGY MAP
(2 of 2)

AS-2-A
(Page 4 of 4)

Please see Map #1.

GOA →
11B

XXX Wide
/// Medium

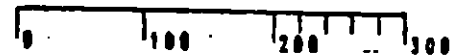
--- Narrow

TTTT Very Light

0000 " " " "

AS-2-A

ADEC Segment Length: 3574m



Map Key: GOA-11a

Name: _____

Date: _____

↑
GOA
11C

AS-2

AS-2A
AS-2B

GOA →
11B

XXXX Wide
//// Medium
---- Narrow

K10-5-AS-2.A

ADEC Segment Length: 3574m

Map Key: GOA-11a
u... 6 11a...

AS-2A

/// - Medium

← 1m Very light

↓ GOA 11A

XXXX Wide
 /// Medium
 --- Narrow

AS-2A

ADEC Segment Length: 3574m

Map Key: GOA-11c

W... 6 H...

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K10-05-AS-002 SUBDIVISION A (1 of 2)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation	OPEN*

*No Inipol - Use Customblen Only

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T **Bald Eagle Nest** NO CONSTRAINT. USFWS 4/9/90 map indicates no active nest within 400m of Subdivision A work site.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

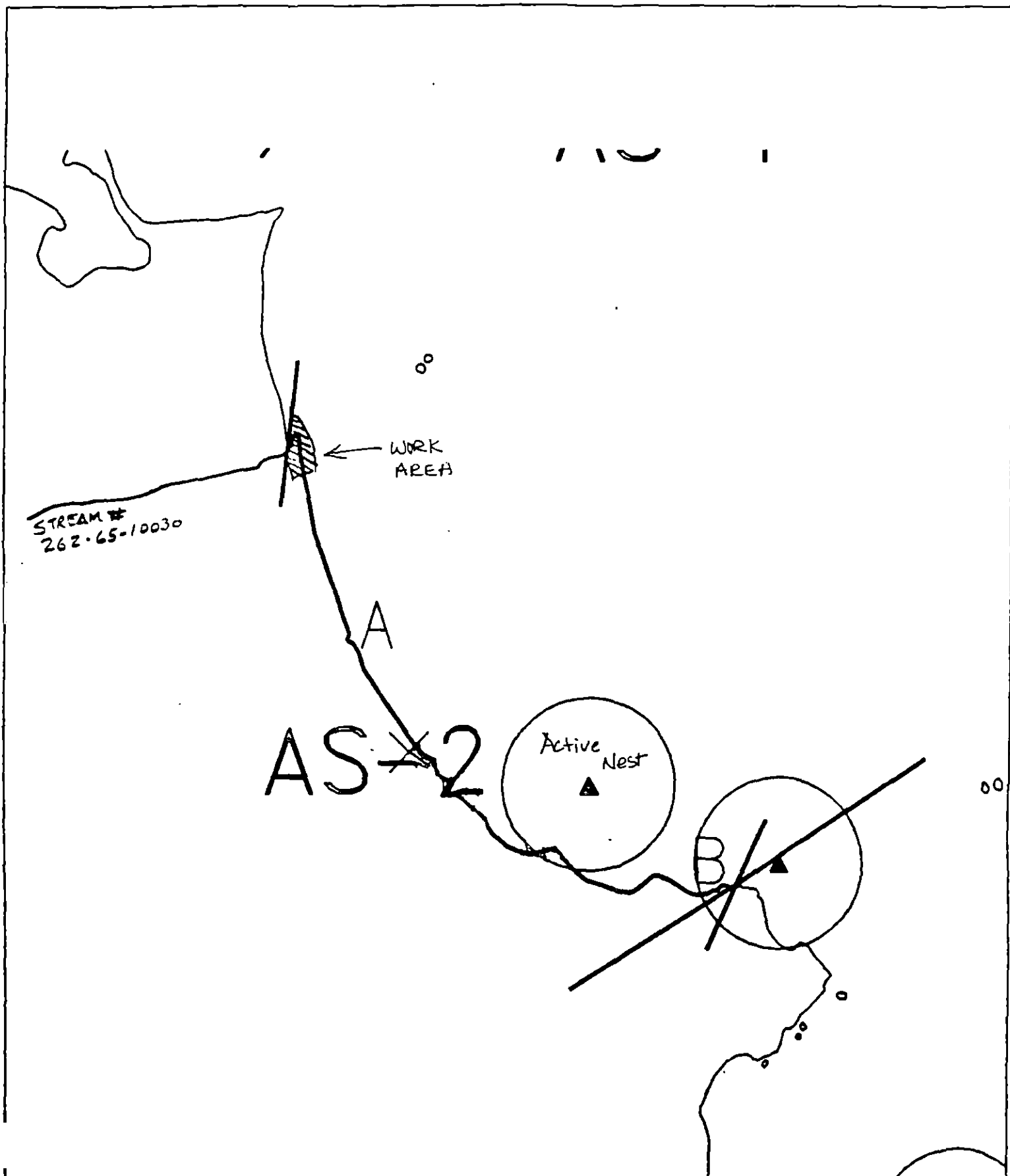
Date

6-22-90

Prepared by

Date

6/22/90



Exxon Company, USA

ECOLOGY MAP SEGMENT K10-5 AS-2 SUBDIVISION A (1 of 2)

UPTRE

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

SEGMENT ST/ K10-05-AS-002 SUBDIVISION B (2 OF 2) DATE 5/11/90

--1 All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)

Active Raven cliff nest

9LM Land mammals (Fox dens)

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. Helicopters should avoid the southern portion of the segment and the northern portion of AS001. Due to eagle nest.

SHPO SIGNATURE: Rachel Don Oate

DATE: 5/30/90

OILING CATEGORIZATION:

ide_0_m: Medium_42_m: Narrow_76_m: V.Light_397_m: No Oil_1367_m
 subsurface Oil Observed: Yes_____No X_____Maximum Depth_____

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

Bioremediation

Tarmat Removal

_____ Snare/Absorbent Booms

Oil Snares (pom poms)

____ Absorbents (pads, rolls, etc)

 X Spot Washing: X Wands

Beach Cleaner

Other (see comments)

COMMENTS: Recommend manual removal of mousse accumulations and spot wash where manual removal is not possible. Work after 6/1 with approval from USFWS regarding eagle nests.

TAG COMMENTS:

TAG APPROVAL DATE:

ADEC Art Weiner Art Weiner

EXXON *Amoy TGAZ* *Reed*

NOAA Buil Westcott Buil Westcott

USCG G.A. REITER G.A. Reiter

FOSC:

DATE: 6-19-90

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 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, 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 prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 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, 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 Kotol Bay Hatchery release
Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 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
Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 6/30)
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 Larry Nicholson 486-4791
- Harbor seal and sea lion pupping (5/10 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 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 Subistence area: Salmon harvesting (6/1 to 9/30)
Finfish harvesting
Deer harvesting (8/1 to 1/7)
Invertebrate harvesting
Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
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

REVISION NO. 04, 1.90

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	B	P	A	~~1~~	~~2~~	~~3~~	~~4~~	~~5~~	SU	U	M	U
ASPHALT PAVEMENT					~~1~~	~~2~~	~~3~~	~~4~~	~~5~~				
POOLED				X		X					X		
COVER				X		X					X		
COAT				X		X					X		
STAIN													
MOUSSE		X	X	X				X			X		
IES		X	X	X				X			X		
ALLS													
FILM													
NO OIL										X		X	X

Frame

[illegible]

DATE 18/11/90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 K10-05-AS-2 SUBDIVISION: B DATE 5/11/90

~~NORA~~
~~USCG~~
NAME STEPHEN LEHMAN SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

M/S/CR was seen within the crevices of the bedrock and in the cobble. much of the mousse within the cobble is treatable and should be removed manually and/or treated for bio remediation (see OG map). Consideration should be given to the active nests in the area (Bio. Map). They are located somewhat east of the impacted area -

~~ADFC~~
~~E~~ Terry Ellsworth SIGNATURE Terry Ellsworth

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Mousse/sediment interstitial between boulders and cobbles and mousse in bedrock crevices occurs in two areas in the western portion of the segment (see OG sketch). The interstitial mousse/sediment is generally recoverable but the mousse in bedrock crevices will be difficult to remove in many instances. Manual removal is recommended for the mousse/sed and where reasonable for mousse trapped in crevices. Activity should be confined to the west half of the segment and pilots made aware of the active raven and eagle nests in or near the east boundary of the segment.

LAND MANAGER
NAME JOHN HARDISTER SIGNATURE [Signature]

USFWS

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Recommend manual removal of interstitial mousse/sediment and from bedrock crevices where possible. Precautions must be taken to prevent undue stress to nesting bald eagle and raven during air/boat approach to/from beach area during beach cleanup operation.

Attachment 2

U.S. Fish and Wildlife Service Shoreline Cleanup Disclaimer

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HEJMA

SKETCH

A BOUNDER/CORREL

A'

1ST K100 S 002

ION B 20P2

11/90

SI

Scale
to Map

to Character
RAVE

Location
of
shore of
accompany
Barren

2

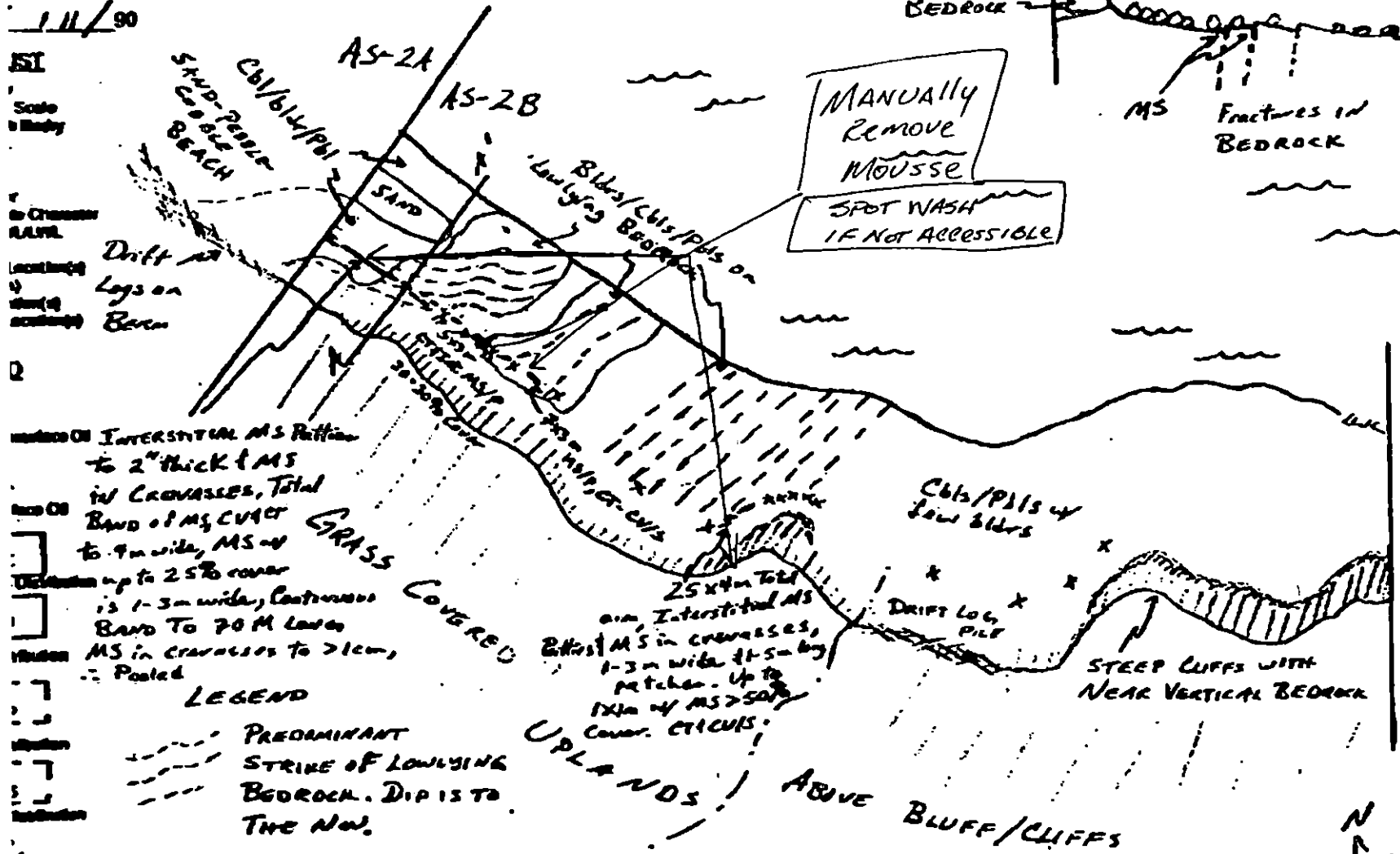
Intermittent MS patches
to 2" thick MS
in crevasses, total
band of MS cover
to 4m wide, MS up
to 25% cover
is 1-3m wide, continuous
band to 70M lower
MS in crevasses to 7cm,
Pooled

LEGEND

- PREDOMINANT STRIKE OF LONELY BEDROCK. DIP IS TO THE NW.
- MS BAND
- XXX RANDOM SPLATTERS OF CV, CT & MS

GRASS COVER
MED BAND
SAND
BEDROCK
SUBDIVISION
APRON IN FRONT OF CLIFFS ALONG ENTIRE
SAND TONGUE
MS
Fractures in BEDROCK

MANUALLY REMOVE MOUSSE
SPOT WASH IF NOT ACCESSIBLE



for Length (m): AP 10 CV 10 CT 205 ST MS 90 FT 100 TB FL NO 1374

OG COMMENTS K 10 05 AS 002 B (2 of 2) OG HEYMAN 5-11-90

This subdivision consists of broad benches with low lying bedrock covered by boulders, cobbles & pebbles. The metasedimentary bedrock is folded and highly fractured, creating a good substrate to trap and protect oil in place.

Oil along the subdivision was only observed at and just above the upper barnacle line. Oil was observed in the form of MS in crevasses to over 1cm deep, interstitial MS binding pebbles between cobbles & boulders (patties & patches to 2 inches thick), and CV/CT/S. Most MS was observed at the NW end of the subdivision, with a continuous to discontinuous band up to 4m wide and 130m long. Large patches (5-7m) & areas (25m) up to 4m wide of MS, CV & CT were also observed in the NW half of the subdivision. In the SE half, only random CT, CV and rare MS patches were observed.

GUGH-4MAN

EGMENT ST/ 05 AS 002

UBDIVISION B

ATE 5.11.90

CHECKLIST

- ☐ M Area
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Ext. HMM/L/MR
- ☐ SSI
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

1 ▲

Pt - No Subsurface Oil

2 ▲

Pt - Subsurface Oil

CT/C

Continuous Distribution

CT/D

Broken Distribution

CT/P

Patchy Distribution

CT/S

Spotted Distribution

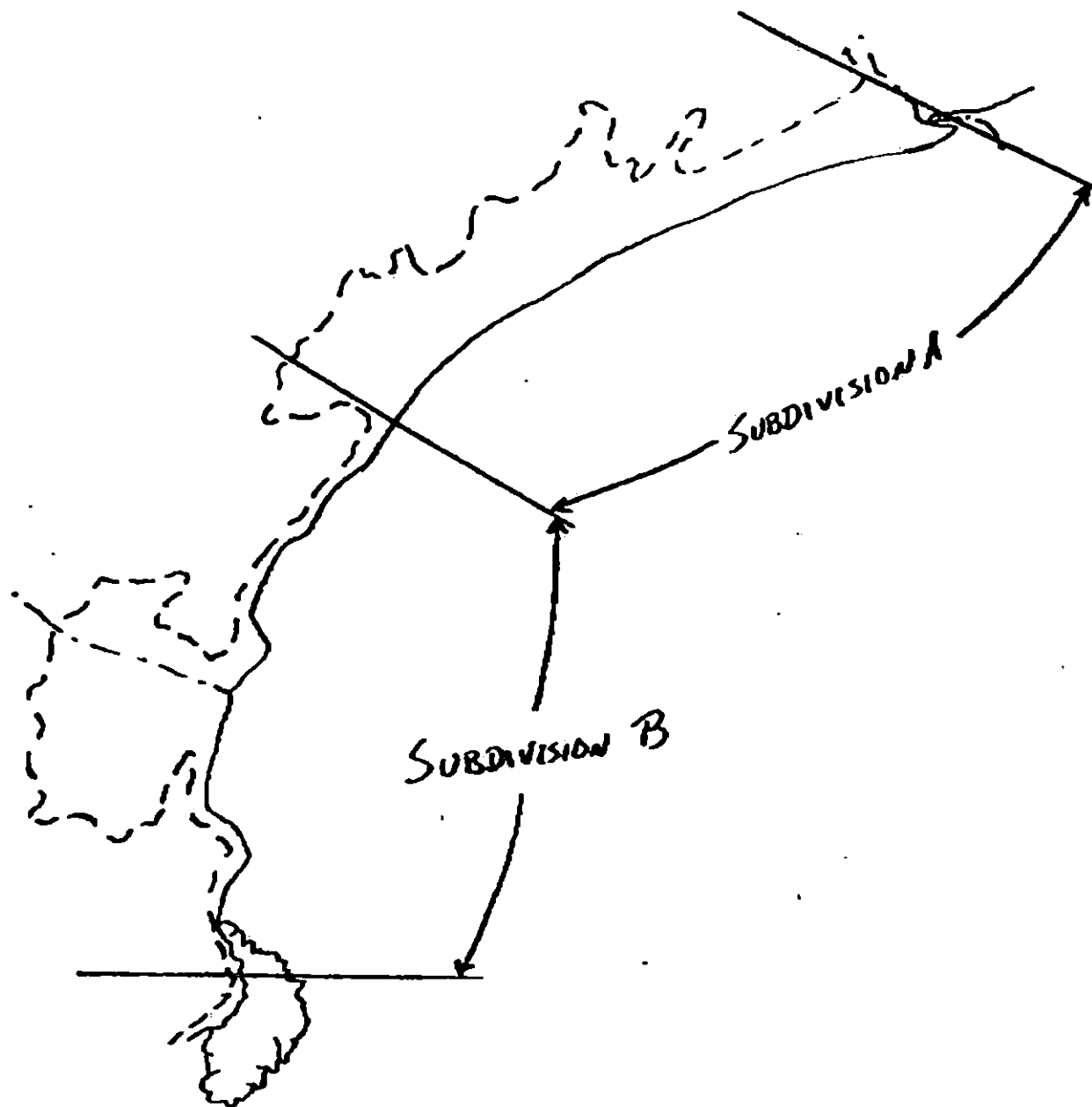
Oil on Vegetation

1 >>

Photo location, direction,
and number

SKETCH MAP

SUBDIVISION LOCATION MAP



Character Length (m): AP

PO

CV

CT

ST

MS

PT

TB

FL

NO

REVISIONS

SHORELINE ECOLOGICAL SUMMARY (Page 1 of 7)

REVISION: 03-22-90

Segment ST / K10-05 AS-2 Subdivision B Date (mo / day / yr) 5/11/90

Time (24 hr) 1100-1230 Biologist SHARMAN

- (A) Substrate type and % of segments: SUBDIV.
 (1) Bedrock 33 (2) Boulder 30 (3) Cobble 25 (4) Pebble 10 (5) Sand 2 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 20 Moderate 70 Low 10
SUBDIV.
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs: -
 Roll No. -

Frames -

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 (ANCELA, LITTORINA, LYMAETS)

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: ~ 30 glaucous-winged gulls, 1 adult eagle (see Ecol. Considerations re. adjacent nest), 1 juvenile eagle, 2 ravens (see Ecol. Considerations re. active nest), 12 pintails, 6 green-winged teal, 1 pair yellowlegs, 1 least sandpiper, 2 foxes (see Ecol. Considerations re. active denning area). This subdivision is a predominantly rocky, low-moderate-angle beach with frequent fractured (cont.)

Ecological Considerations:

Please see attached Eco. Maps. The only sensitivity documented in the NOAA database is the adjacent eagle nest within segment AS-1 to the S. Additional sensitivity may include potentially important pinkish haulouts on nearshore tidal rock/raft areas (Codes would be 3N, 0, P, Q - harbor seal/sea lion pupping/mating 5/6-6/30 and 8/15-9/15), as well as the importance of the active fox denning area.

AS-2-B

Shoreline Ecological Summary (cont.)
(Page 2 of 4)Sharman
5/11/90General Comments (cont.):

bedrock platforms. These areas are dominated by good populations of Fucus and Odonthallia, both actively recruiting. There is also Gelidium, Ulva, Sargassum, and fine red algae (Polysiphonia/Porosiphonia?). Barnacles (with spat), Littorina, and Nucella are present in moderate abundance locally. Anthopleura spp. are present in sandy pockets, attached to suburface bedrock and cobbles. Small bedrock pools contain the typical assemblage of Lithothamnium, Odonthallia, Littorina, Agarum, Anthopleura spp., Epigastria, some Katharina, etc. Round masses (2-5 cm dia.) of fish/ovoid (?) eggs are extremely common (1,000's) in the UTE drift line. Snipe are foraging over the uplands. Generally normal and healthy marine intertidal community.

Ecological Considerations (cont.):

Eagle nest should be considered to be within this segment, since it is so close to the boundary. Atop the nearshore sea stack, it is extremely vulnerable to disturbance from shoreline-following helicopters. Perhaps more importantly, nearby and well within this segment is an active raven cliff nest with 2 chicks. Raven nests are exceedingly rare (at least documented ones) and are presumably very sensitive to human disturbance, particularly of the airborne variety. Helicopters should avoid this S. portion of the segment and the N. portion of AS-3.

AS-2

↑
GOA
11C

↑
AS-2A
AS-2B
↓

nearshore tidal
rocky reef area.
Potential
pinniped
haunts.

ECOLOGY MAP

AS-2-B

(1 of 2)

(Page 3 of 4)

ST - Eagle nest adjacent,
within Segment AS-1 to S.
(3/1 → 6/1; active nests
until 9/1).

GOA →
11B

XXX Wide
/// Medium
--- Narrow
... ..

AS-2-B

ADEC Segment Length: 3574m

Map Key: GOA-11a

Name: G. Heymen

Date: 5-11-90

ECOLOGY MAP

(2 of 2)

AS-2-B

(Page 4 of 4)

Please see Map #1.

Nearshore tidal
rocks/reefs.
Potential pinniped haulouts.

Active eagle nest atop sea stack

Fox denning area

← GOA
11A

Active raven
cliff nest
(2 chicks)

← AS-2-B

AS-1

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

AS-2-B

ADEC Segment Length: 3574m

0 100 200 300

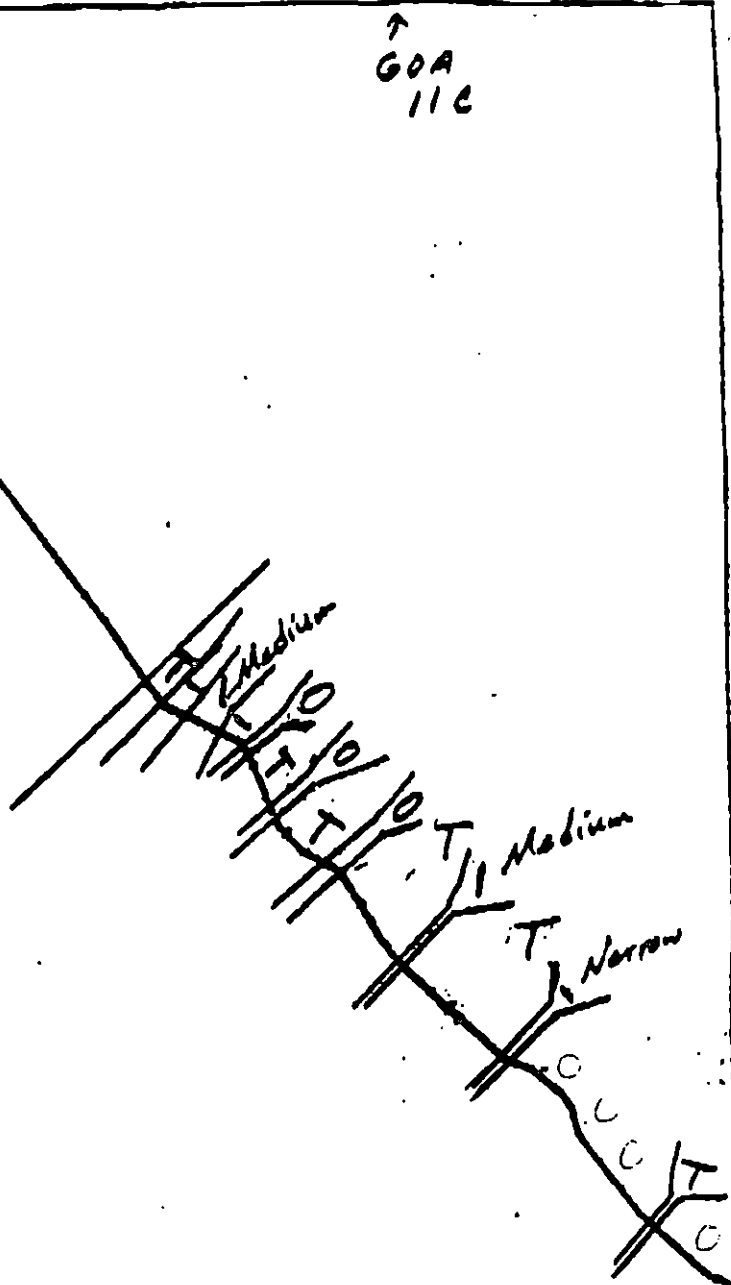
Map Key: GOA-11b

Name: _____

Date: _____

Date Entered: _____

AS-2



GOA 11B →

XXXX Wide
 /// Medium
 --- Narrow
 TTTT

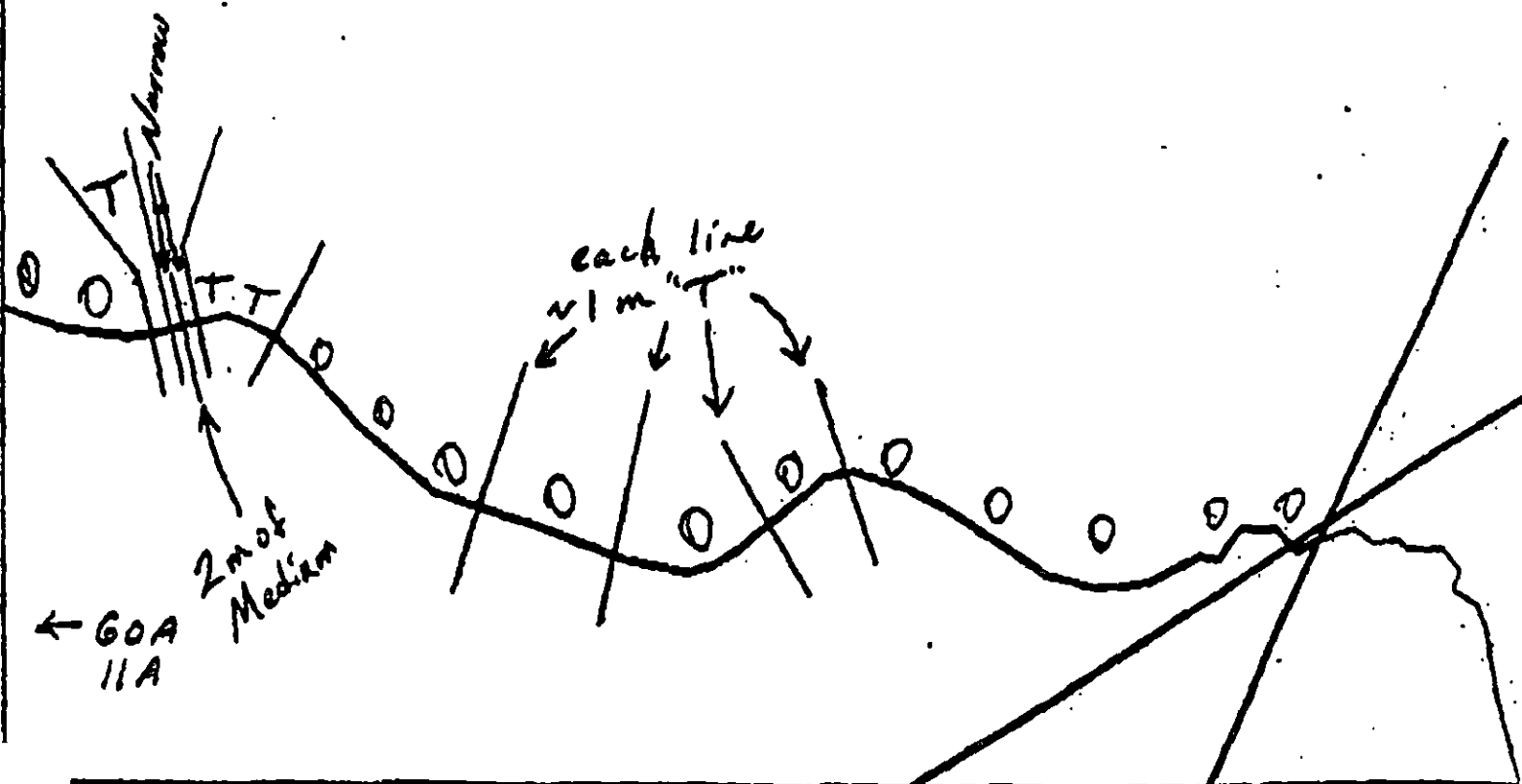
K10-5-AS-2-B

ADEC Segment Length: 3574m

Map Key: GOA-11C

Name: G. Heyman

Date: 5/11/90



XXX Wide

/// Medium

--- Narrow

TTTT Very light

AS-2-B

ADEC Segment Length: 3574m



Map Key: 00A-11b

Name: G. HEYMAN

Date: 5/11/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K10-05-AS-002 SUBDIVISION B (2 of 2)

WORK WINDOW

Manual Pickup Less Than 400m From Active Nest	CLOSED
Manual Pickup More Than 400m From Active Nest	OPEN
Spot Washing Less Than 400m From Active Nest	CLOSED
Spot Washing More Than 400m From Active Nest	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

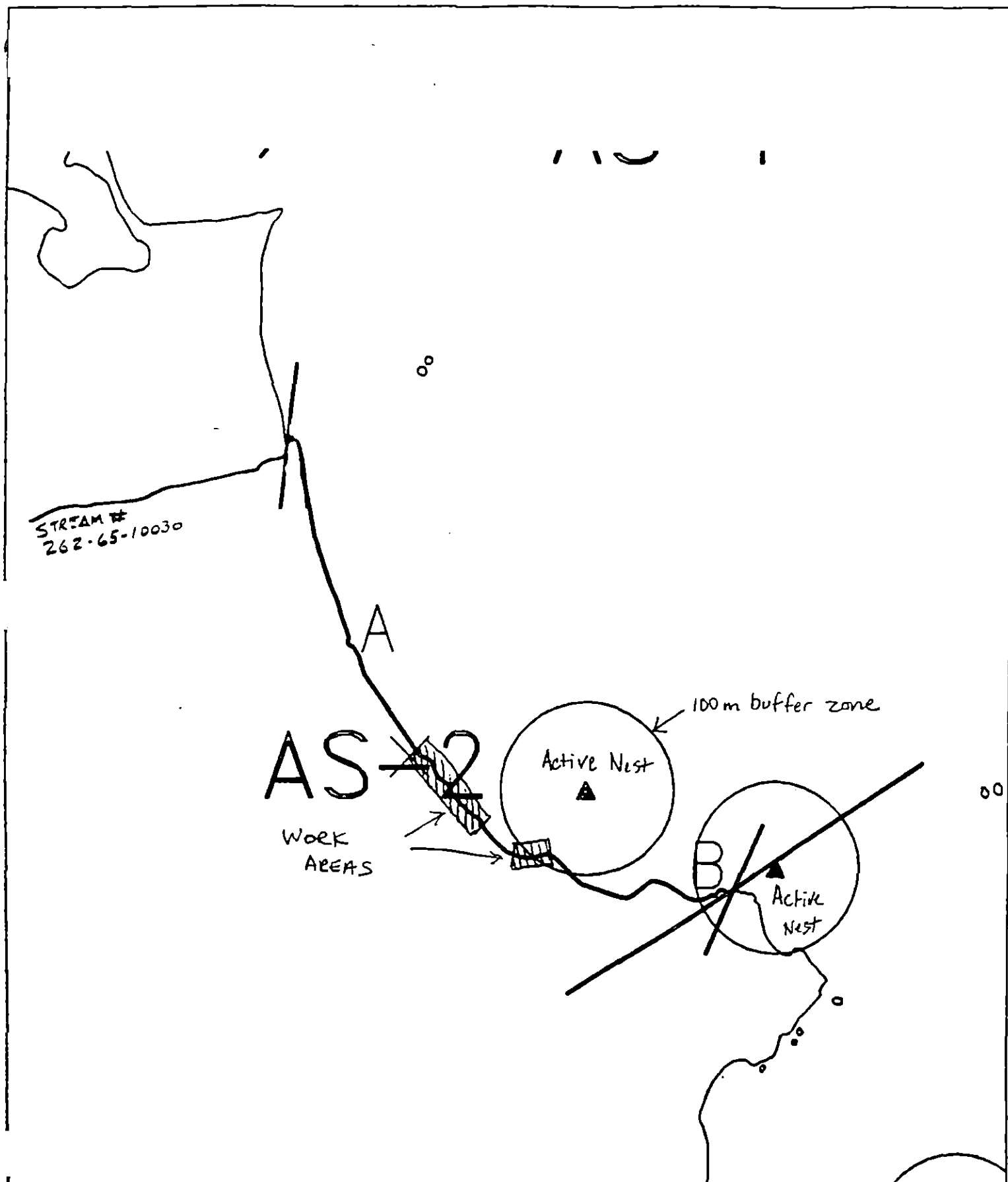
5T **Bald Eagle Nest** USFWS 4/9/90 map indicates an active nest in Subdivision B. Closed to manual pickup and spot washing within 400m of active nest. No constraint to manual pickup and spot washing more than 400m from active nest.

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. Avoid any unnecessary disturbance or damage to unopened biota and substrate. Helicopters should avoid southern portion of the segment and the northern portion of AS001 due to eagle nests.

FOSC W L Date 6-22-90

Prepared by VP Phillips Date 6/22/90



Exxon Company, USA



ECOLOGY MAP
SEGMENT K10-5 AS-2
SUBDIVISION B (2 of 2)

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

SHORELINE EVALUATION

SEGMENT ST/ K10-05-AS-004 SUBDIVISION A (1 OF 2) DATE 5/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4QQ National Wildlife Refuge

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. Holman DATE: June 19, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 137 m: No Oil 1962 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>X</u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommend treatment is manual removal of mousse accumulations
as shown on attached sketch map and spot wash where manual removal is not
possible.

TAG COMMENTS:

TAG APPROVAL DATE: 6/16/90.
ADEC Ray Marks
EXXON Andy Tetz FOSC: G. A. Reiter DATE: 7/5/90
NOAA John C. Tullhott
USCG G. A. REITER

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 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, 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 prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 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, 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 Kotol Bay Hatchery release
Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1I Gill net area
- 1J Purse seine area
Mainland, West side Kodiak, Shuyak & Moser/Oiga Bay (8/9 to 10/1)
East side Kodiak, East side Afognak (7/4 to 10/1)
- 1K Purse seine hook-off
- 1L Set net sites
Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 8/30)
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 Larry Nicholson 486-4791
- 30, 3Q Harbor seal and sea lion pupping (5/10 to 7/1)
Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31).
Contact ADF&G and USFWS prior to treatment for confirmation.
AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (8/1 to 9/15)
- 6V Anchorages (8/1 to 9/15)
- 6W Forest Service cabins (8/1 to 9/15)
- 6X Lodge (8/1 to 9/15)
- 6Y Special use destination
- 7Z Subistence area: Salmon harvesting (5/1 to 9/30)
- 7H Finfish harvesting
- 7I Deer harvesting (8/1 to 1/7)
- 7J Invertebrate harvesting
- 7K Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
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/K10-5 AS-4 SUBDIVISION: A DATE 5-22-90

USCG

NAME STAN SHIELDS SIGNATURE Stan Shields

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

SEGMENT HAS VERY LIGHT COAT WHICH WOULD BE BETTER LEFT UNTOUCHED BUT A SMALL PATCHY AREA OF COAT AND MOUSSE EXISTS NEAR THE EAST BOUNDARY FOR THIS SUBDIVISION WHICH COULD BENEFIT FROM SOME MANUAL REMOVAL.

ADEC

NAME Francine J. Bennis SIGNATURE Francine J. Bennis

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Manual Treatment Recommended for area of mousse & mousse saturated sediments among boulders/cobbles:

Area 3m x 80m in eastern portion of segment subdivision has this patchy mousse.

More oil is present in adjacent subdivision to the east & should be removed.

LAND MANAGER

NAME OTTO FLORSCHUTZ SIGNATURE Otto Florschutz

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Agree with above ADEC recommendation for manual removal of mousse in concentrated area. See attachment no. 2. Half line only.

Attachment 2
U.S. Fish and Wildlife Service Shoreline Cleanup Disclaimer.

This comment sheet is based on current observations and is solely for the purpose of planning and scheduling of 1990 response treatment actions. It in no way implies that the State or Federal government will not in the future determine that further restoration or other treatment, or compensation is warranted regarding this area, or that the area is considered by the Federal or State government to be adequately "clean" or "restored" for the purpose of any claim which the State or Federal government has brought or may bring against Exxon, Incorporated or any other potentially responsible party.

SHORELINE OILING SUMMARY

REVISION NO 34-12-20

OF Mike Foget USCG Stan shields SEGMENT ST/ K1005-AS4
 BR Heather Davis LAND REP 040 Florshutz F-G SUBDIVISION A (1 OF 2)
 EXXON — ADEC Fran Dennis TIME 17:30 to 18:30
 TEAM NO. 20 TIDE LEVEL +4.0 - +2.0 DATE 5 / 22 / 90
 EST. SUBDIVISION LENGTH: 2160 m ☐ Sun ☒ Clouds ☒ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock 3m steep soil / Rocky back shore
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 20 % B 25 % C 40 % P 5 % G 5 % S 5 % M 0 % V 0 %
 SLOPE: Lang 90 % Hang 10 % Vert 0 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 120 m NO 2040 m

SURFACE OIL

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

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

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

Photographs:

Roll No. ST-20-12Frames 28-30

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR					PIT ZONE				AN A	SHEEN (Y/N)	D	SURFACE-SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SW	W	NW	W	SW	SU	U	M	U				
1	25					X	-								X				-	N	20	S, G, P, C
2	20					X	-								X				-	N	15	G, S
3	25					X	-								X				-	-	-	S, G, S
4	30					X	-								X				-	-	-	S, G
5	25					X	-								X				-	N	20	S
6	20					X	-								X				-	N	15	S, G

COMMENTS

Shore Zone consists of low angle cobble/boulder beach w/ some rocky headlands there is a 3m x 80m CT/s in the HITZ located on the east end of the subdivision

Mike Fo

MENT ST/ K1005-AS4

DIVISION A

5, 22 80

CKLIST

1 Arrow
approx. Scale
eg/ Sub Endy
a Dist
aith
aigh
Cover
where Church
at HWA/LWL
St
ville Locater(s)
ville(s)
t Locater(s)
into Locater(s)

END

Δ
to Subsurface Oil

2 Δ
to Surface Oil

CT/C
to Sub Distribution

CT/B
to Distribution

CT/P
to Distribution

CT/S
to Distribution

re
Vegetation

→
location, direction,
order

North

SKETCH MAP

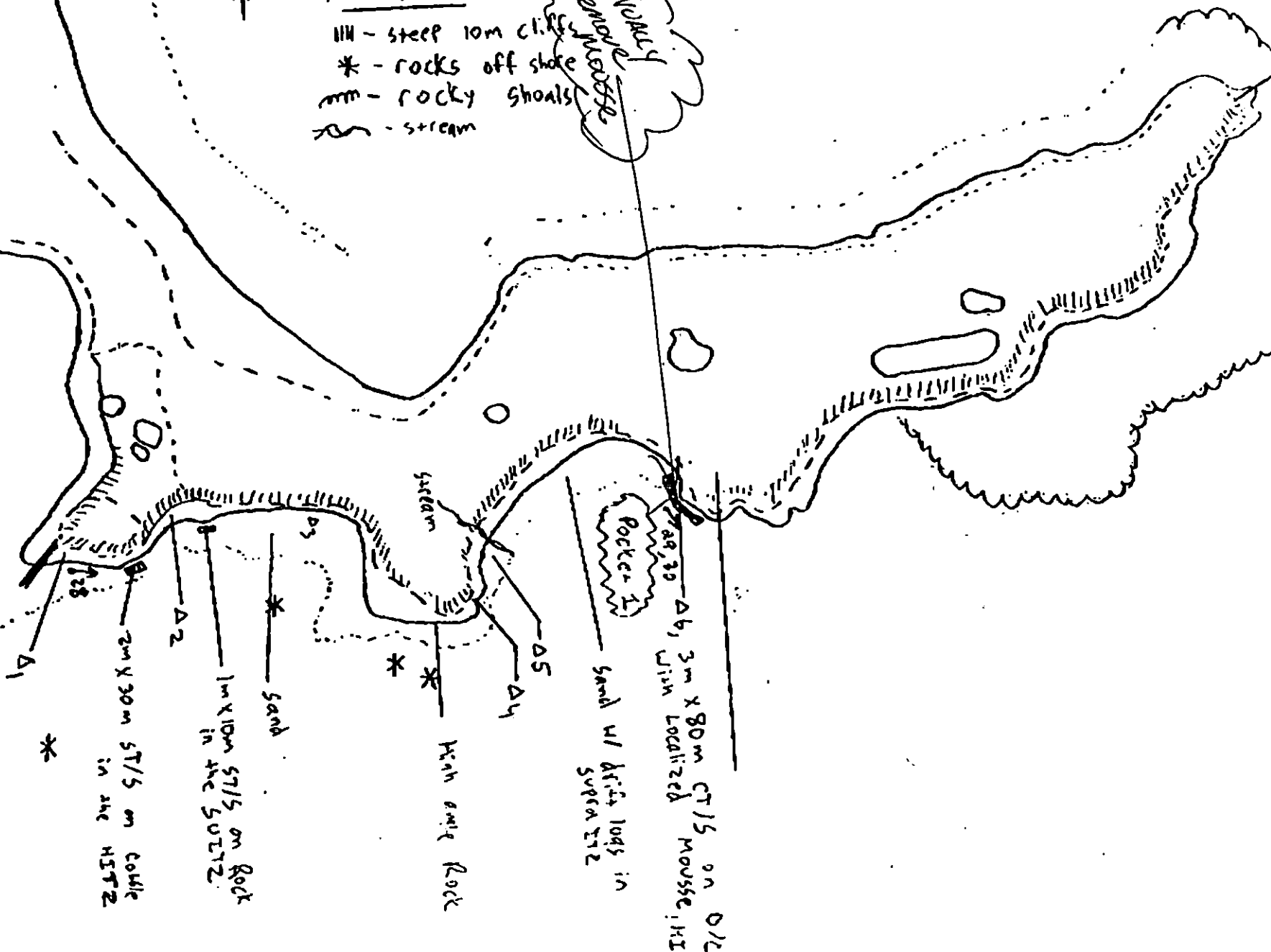
Scale

100m 500m 1000m

Legend

|||| - steep 10m cliffs
* - rocks off shore
mm - rocky shoals
~ - stream

NATURAL
PENINSULA



vector Length (m): AP 0 PO 0 CV 0 CT 80 ST 40 MS 2 PT 0 TB 0 FL 0 NO 2040

REVISION 23/24/08

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST, K10-08 Subdivision AS-004 A Date (mo / day / yr) 5/22/90
 Time (24 hr) 17:30 Biologist H. Davis

- (A) Substrate type and % of segments:
 (1) Bedrock 20 (2) Boulder 25 (3) Cobble 40 (4) Pebble 9 (5) Sand 6 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 20% Moderate 50% Low 30% (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-20-12

Frames 28, 29, 30

BARNACLES continuous along the segment

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
 5, 6

MYTILUS small patches on boulders or sparse beds in MT2.

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
 5, 6

GASTROPODS Nucella - sparse, limpets moderate, Littorina moderate w/ Dendrospira.

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
 5, 6

FUCUS Patches on cobble + boulder. Dense - moderate.

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
 5, 6

Wildlife Observations/ General Comments: Shore line is low angle cobble / Boulder beach with rocky headlands. MTZ Barnacles, limpets, Littorina, Gastropods, Porphyrans and some Fucus. MTZ Barnacles, limpets, limpets, Pagurus, Pinnate limpets, Gloripelta, Fucus, Odontaspis, Rhodospira, Ulva, and Scytosiphon. LTZ some barnacles, limpets, Littorina, Scytosiphon, Rhodospira, Fucus, Scytosiphon, Ulva, and some Diatoms. Bird: Glaucous-winged gull, Semipalmated plover, Wandering Tattler, Herring Gull, Golden Plover (Black-winged?). Mammals: Beach trash, and Fox tracks.

Biological Considerations: No Ecological constraints listed

* The camera is now taking pictures at random as well as the desired photos.

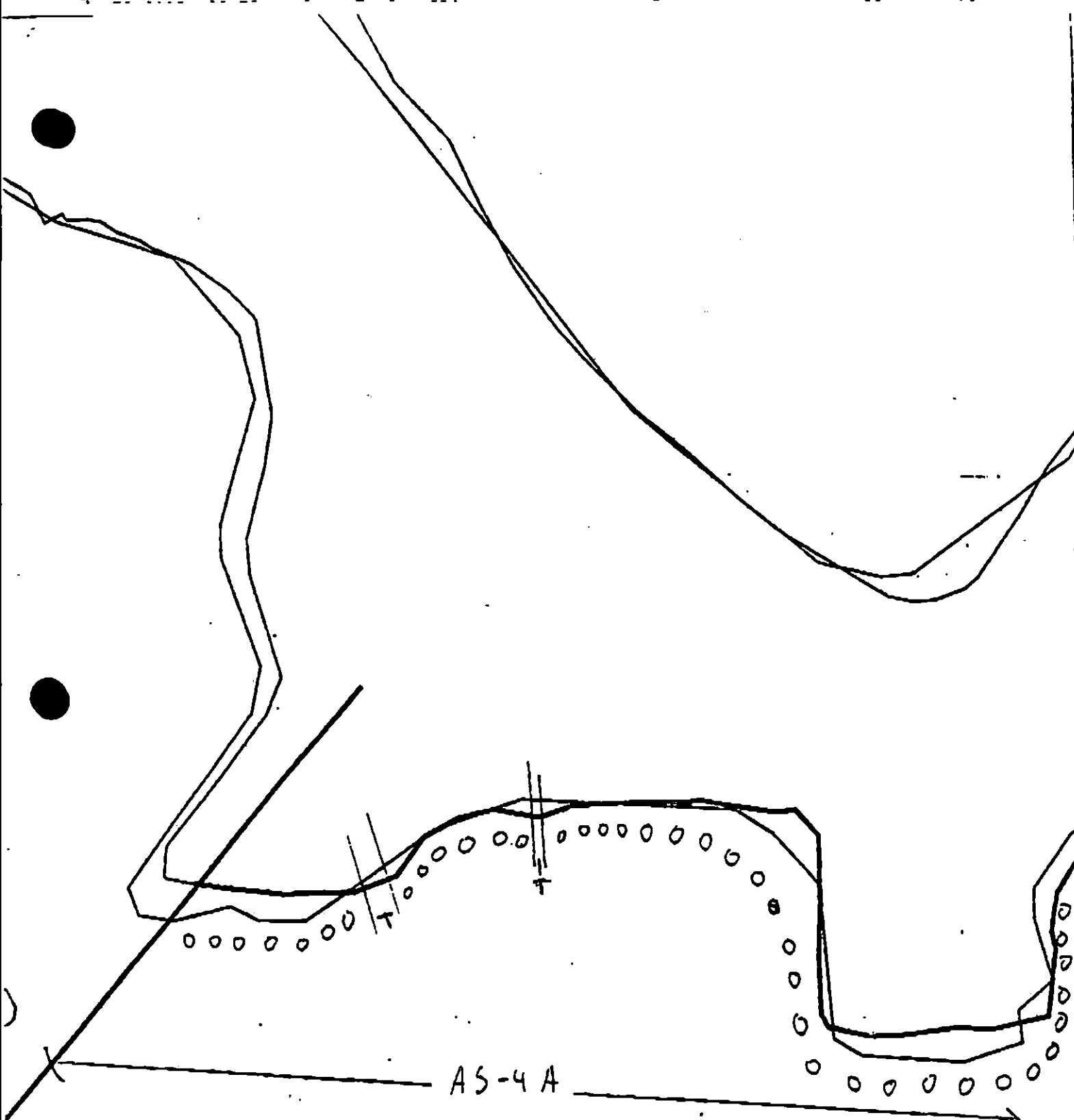
Control No.
(Office Use Only)

PHOTOGRAPHY LOG

ROLL NO. ST-20-12 FROM 5/20 TO 5/26/90
TEAM NO. 20 PWS / KENAI / KODIAK / AK. PENINSULA

FRAME NUMBER	PHOTO- GRAPHER	DATE	SITE	LOCATION/CONTENTS

1	H. Davis	5/20/90	K9-21 KU 04	North end of the segment facing south View along seg.	5:10
2				Stain and mousse	5:30
3				View across oil band facing south	5:40
4				—	
5				—	
6				Tar and stain	6:00
7				Stain, mousse and black sticky tar	6:00
8				—	
9				Coat + stain	6:15
10				—	
11				—	
12				—	
13				Coat and shiny black tar?	6:20
14				—	
15				—	
16				—	
17				Mousse, coat and splatter over large area UTZ	6:30
18				" " " " " "	6:40
19				" " " " " " " " " " " "	6:45
20				Pit #15 oil and mousse to 9 cm. UTZ	7:00
21				Mousse and coat splash zone w/ grass	7:30
22		5/21/90	K0909 C007	Dead Eagle	16:45
23				" "	16:45
24				Oil and mousse in UTZ	17:00
25				View across oiled area	17:10
26				Pit #5	17:30
27				—	
28		5/22/90	K1008 AS004	View along the segment	5:40
29				Mousse, stain, coat in crevice UTZ	6:30
30				" " " " " " " " " " " "	6:30
31		5/24/90	K01-01 ST-14	Coat in UTZ with spruce needles, shen.	8:00
32				" " " " " " " " " " " "	8:10
33				View across oiled area of segment	8:15
34				View across stained, coated, and mousse area	8:25
35				Boon and Fishing Net, Segment to Big Fort	12:30
36				" " " " " " " " " " " "	12:30
37		5/26/90		Oiled rocks in Bay, Pom Pom and coated Rock UTZ	11:40
38				Mousse in crevice w/ shen. UTZ	12:15



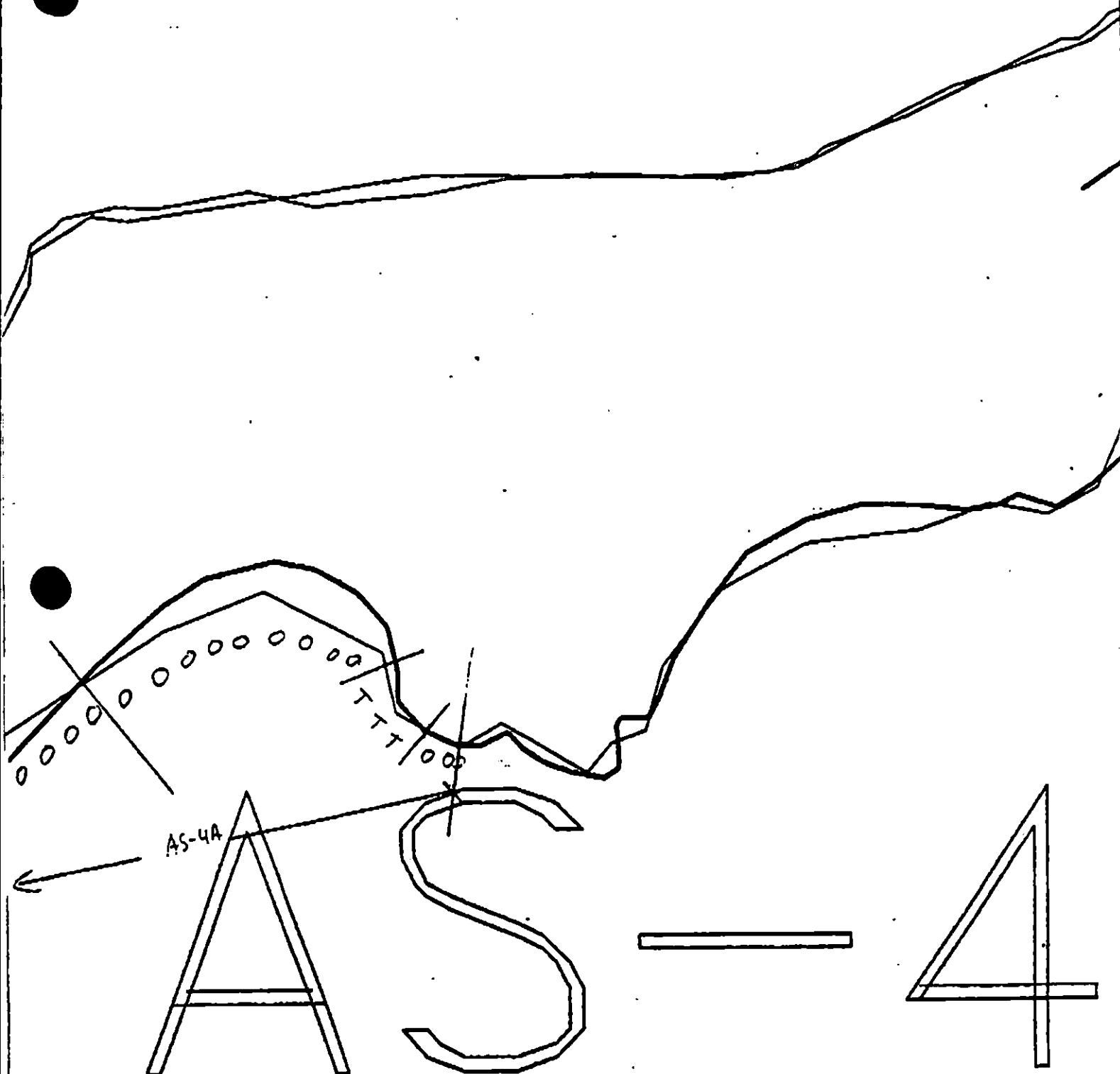
XXX Wide
 /// Medium
 --- Narrow
 TTTT Very Light

K1005-AS-4
 Approx. Segment Length: 3943m

0 100 200 300

N

Map Key: AKP-AS-4a
 Name: Mike Foget
 Date: 5/
 Not Colored



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

K1005-AS-4A

Approx. Segment Length: 3943m

0 100 200 300

Map Key: AKP-AS-4b

Name: Mike Fogel

Date: 5/

not entered.

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K10-05-AS-004 SUBDIVISION A (1 of 2)

WORK WINDOW	
Manual Pickup	OPEN
Spot Washing	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

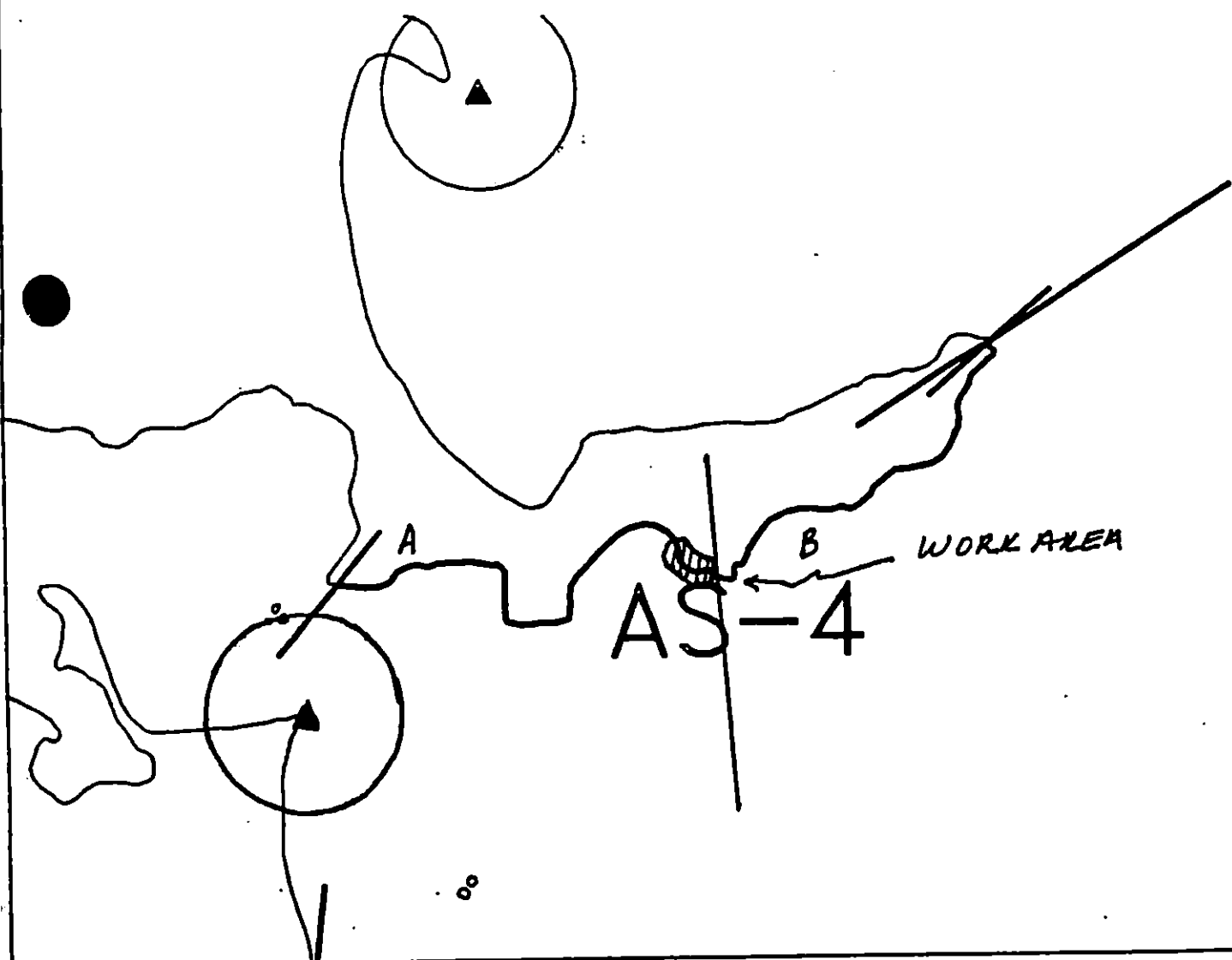
No applicable ecological time constraints.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC *[Signature]* Date 7/6/90

Prepared by *Rev. R. Cantor* Date 7/6/90



Exxon Company, USA
Map Key: AP-AS-4



ECOLOGY MAP
SEGMENT K10-5 AS-4
SUBDIVISION A (1 of 2)
METERS

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

SHORELINE EVALUATION

SEGMENT ST/ K10-05-AS-004 SUBDIVISION B (2 OF 2) DATE 5/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4QQ National Wildlife Refuge

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: Rachel Jean Dyer DATE: 6/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 19 m: Narrow 48 m: V.Light 1558m: No Oil 217 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 is manual removal of mousse and oiled debris in areas shown on attached sketch map.

TAG COMMENTS: _____

TAG APPROVAL DATE: 6/16/90

ADEC Ray Nicolas R. Blyden FOSC: [Signature] DATE: 7/5/90

EXXON ANDY TEAL

NOAA Joseph C. Tolbert

USCG G.A. BREITER G.A. Breiter

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 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, 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 prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 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, 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 Kotol Bay Hatchery release
 Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 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
 Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 6/30)
 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 Larry Nicholson 486-4791
- 3N Harbor seal and sea lion pupping (5/10 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Rothy 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: 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
- 7 Subistence area: Salmon harvesting (5/1 to 9/30)
 7H Finfish harvesting
 7I Deer harvesting (5/1 to 1/7)
 7J Invertebrate harvesting
 7K Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
 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 / K10-05 SUBDIVISION: AS-004 B DATE 5/31/90

USCG

NAME Michael B. Miller SIGNATURE Michael B. Miller DCI

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Recommend Treatment only if another Segment in AS-004 B proximity. Found only three areas on Segment with sufficient oil/mousse coverage to warrant recording.

1). APPROX. 6m. x 2m. Mousse coverage very sporadic, small amounts of pocketed mousse of 210 in thickness, lying in between cobble & Boulder. TOTAL concentration - < 25%

2). APPROX. 2m. by 3m. Type of oil and concentration are approximate to list (1).

3). APPROX. 6m. x 3m. This is considered to be area of attention if in this Bay. Mousse is 5cm. thick with some portions of this mat. Having the consistency of tar on the surface.

A small amount of staining was found on logs in SUPRA, & small mousse cover was found 40.

It is my opinion that this Segment does not warrant any individual attention, but # 3 should be noted if in any adjacent areas.

ADEC

NAME Francine J. Bennis SIGNATURE Francine J. Bennis

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

RECOMMEND MANUAL PICK-UP in 3 areas of oil concentrations:

1) 6m x 3m area of mousse & mousse saturated sediments

2) 2m x 2m area

3) 7m x 2m area of patchy mousse saturated fine sediments among C/B

Clean-up crew should walk through the eastern portion of this segment to make sure all oiled areas are treated (manually). There is also an indication that more oil is present on north side of this peninsula. Further ADEC assessment will confirm & possibly recommend to: (AS-5 - NOT ISSUED)

LAND MANAGER

NAME OTTO FLORSCHUTZ SIGNATURE Otto Florchutz

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

I agree with ADEC recommendation that manual retrieval of mousse be done. See attachment No. 2

Attachment 2
U.S. Fish and Wildlife Service Shoreline Cleanup Disclaimer

This comment sheet is based on current observations and is solely for the purpose of planning and scheduling of 1990 response treatment actions. It in no way implies that the State or Federal government will not in the future determine that further restoration or other treatment, or compensation is warranted regarding this area, or that the area is considered by the Federal or State government to be adequately "clean" or "restored" for the purpose of any claim which the State or Federal government has brought or may bring against Exxon, Incorporated or any other potentially responsible party.

REYSCHKA MC. 32-246

SURFACE OIL

CHARACTER. INCLUDES
1. Composition
2. "Habit" - Nature of occurr.

*** open to
Shelikoff Strait

PAVEMENT: H F S — sq. m by — cm

PATTIES / TARBALLS 30 BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE

#BAGS 0

Photographs:

Roll No. ST-20-13

Frames 6-8

[illegible]

COMMENTS Oiling consist of splattered cover & scattered mousse over most of the subsegment. Locally mousse becomes more concentrated and forms patches of "mousse pavement". The mousse appears fresh & in a few places new mousse seems to have come in quite recently (these are penny sized splatters & are extremely rare). Splattered oil here is much thicker than in pws & cleans from the rocks with much less staining. Probably this results from high viscosity during emplacement.

The primary sediments are cobbles & boulders over shallow bedrock

THE MICHIGAN COLLEGE

(5) MS 100 PT 900 TB FL NO 195

R. Marty
AGENT ST/ K1005-AS4

VISION B 5 131 90

ISTIS

Answer
1992L Bonds
1992L Bonds
1992L Bonds

5

Uptake

Cover

LIBRARY OF CONGRESS
READING ROOM

[illegible]

Chlorophyll

10/10/2017

It's Location, Location, Location!

type (contingent)

3END

Δ

Use Performance Oil

2 ▲
Engine Exhaust Oil

7

CT/C

7

0/13

on Distribution

11

1000

7월

2019年12月

11

— 278 —

의견

Invited Discussion

282.

DISCOUNT

[illegible]

3

1

no location, car

NOTES

5

Character List

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / K10-05 Subdivision AS004 B Date (mo / day / yr) 5/31/90
 Time (24 hr) 11:40 Biologist H. Davis

- (A) Substrate type and % of segments:
 (1) Bedrock 25 (2) Boulder 30 (3) Cobble 25 (4) Pebble 10 (5) Sand 10 (6) Silt —
- (B) Overall % cover of biota (% of segment): Dense 20% Moderate 20% Low 60% (30%)
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
 Roll No. ST-20-13
 Frames 6-8

BARNACLES Continuous but variable densities

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 5, 6
~~3~~	~~3~~	3	~~3~~	~~3~~	~~3~~	~~3~~	~~3~~	3	~~3~~	~~3~~	3	
~~4~~	~~4~~	4	~~4~~	~~4~~	~~4~~	~~4~~	~~4~~	4	~~4~~	~~4~~	4	
~~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 Small patches on boulders and sparse beds on rock MTZ

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 5, 6
3	3	3	~~3~~	~~3~~	~~3~~	~~3~~	~~3~~	3	~~3~~	~~3~~	3	
4	4	4	~~4~~	~~4~~	~~4~~	~~4~~	~~4~~	4	~~4~~	~~4~~	4	
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 Nucella in sparse groups, limpets moderate, Littorina mod-Dense

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 5, 6
~~3~~	3	3	~~3~~	~~3~~	~~3~~	~~3~~	~~3~~	3	~~3~~	~~3~~	3	
~~4~~	4	4	~~4~~	~~4~~	~~4~~	~~4~~	~~4~~	4	~~4~~	~~4~~	4	
~~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 Patches along segment. Dense - moderate

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 4, 5, 6
~~3~~	~~3~~	3	~~3~~	~~3~~	3	~~3~~	~~3~~	~~3~~	~~3~~	~~3~~	3	
~~4~~	~~4~~	4	~~4~~	~~4~~	4	~~4~~	~~4~~	~~4~~	~~4~~	~~4~~	4	
~~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: The lower intertidal area was not exposed due to strong (25 knot) on shore winds. MTZ Balanus, Notosomata, Callinella, Littorina, Annelida, Porophora, Cladophora, and some Fucus. MTZ Balanus, Littorina, Notosomata, Mytilus, Perna, Pristigaster, Sculpino, Goniopeltis, Fucus, Rhodomela (Odonthalia?) Ulva and Scytosiphon. Mammals: Fox tracks Birds: Glaucous-winged Gulls, Cormorants, semi-palmated plovers, Surf-bird, White-winged Scoters and sandpiper.

Ecological Considerations:
 No ecological constraints listed.

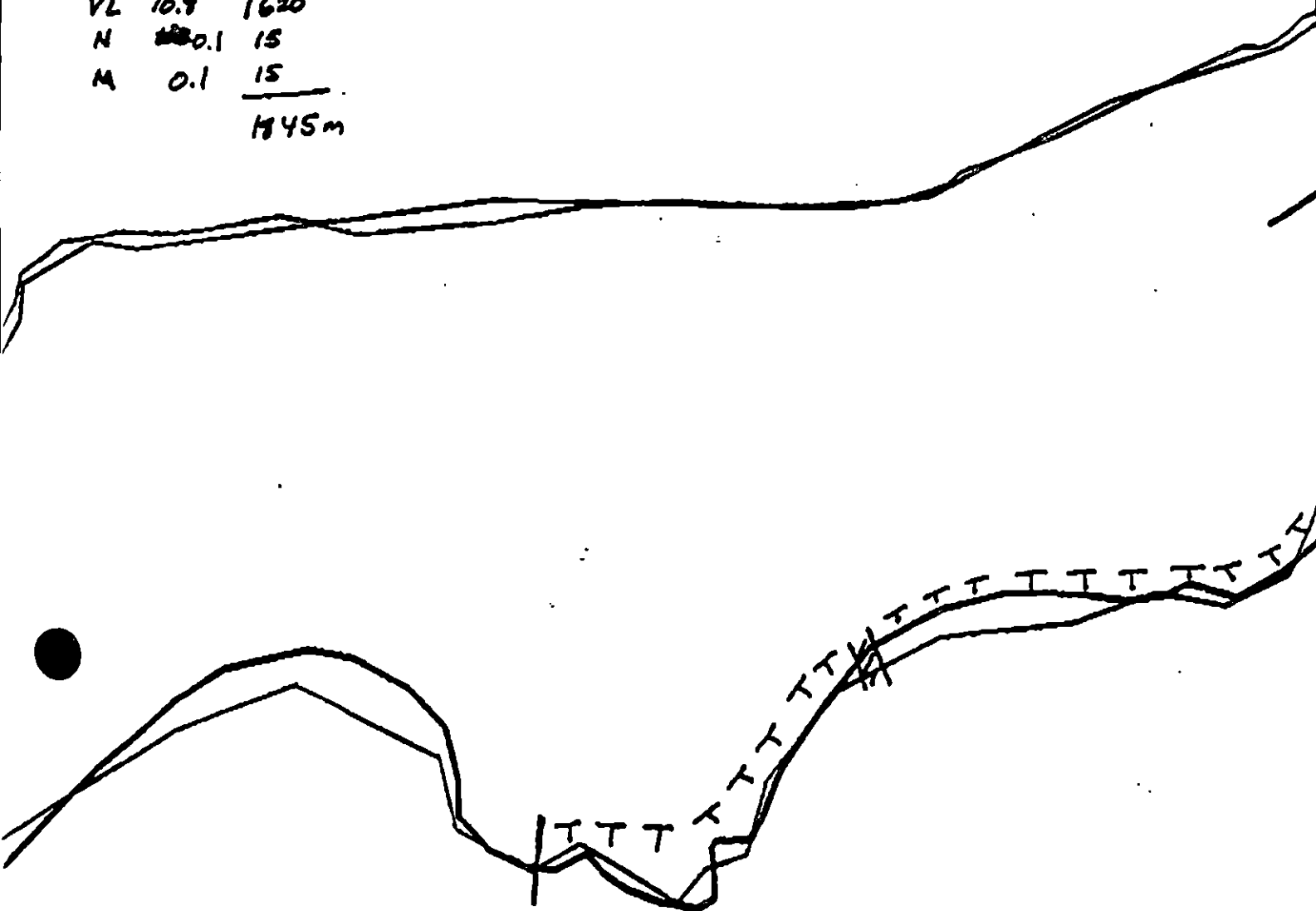
PHOTOGRAPHY LOG

ROLL NO. ST-20-13 FROM 5/26 TO _____
TEAM NO. 20 PWS / KENAI / KODIAK / AK. PENINSULA

FRAME NUMBER	BAND GRAPHIC	DATE	SHEET

1	H. Davis	5/26/90	K01-01 SI 14	Mousse in UT2.
2			K01-01 SI-12	Mousse pattern in mud + in gravel
3				View along mousse pattern (down stream)
4			↓	Mousse (Thin Film?) in UT2
5		—	—	?
6		5/31/90	K1003 AB004	B. Mousse coat + stain UT2
7			↓	Mousse and coat in UT2
8			↓	Splatter of Mousse + some mud in UT2
9			K1002 AB002	Pit #1 layer UT2
10			↓	View across oiled area UT2
11			↓	Mousse pattern on sand
12	↓	↓	↓	View along area w/ Mousse pattern

No	11	m
VL	10.9	1620
N	0.1	15
M	0.1	15
		<u>1845m</u>



AS-4

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

K1605-AS-4

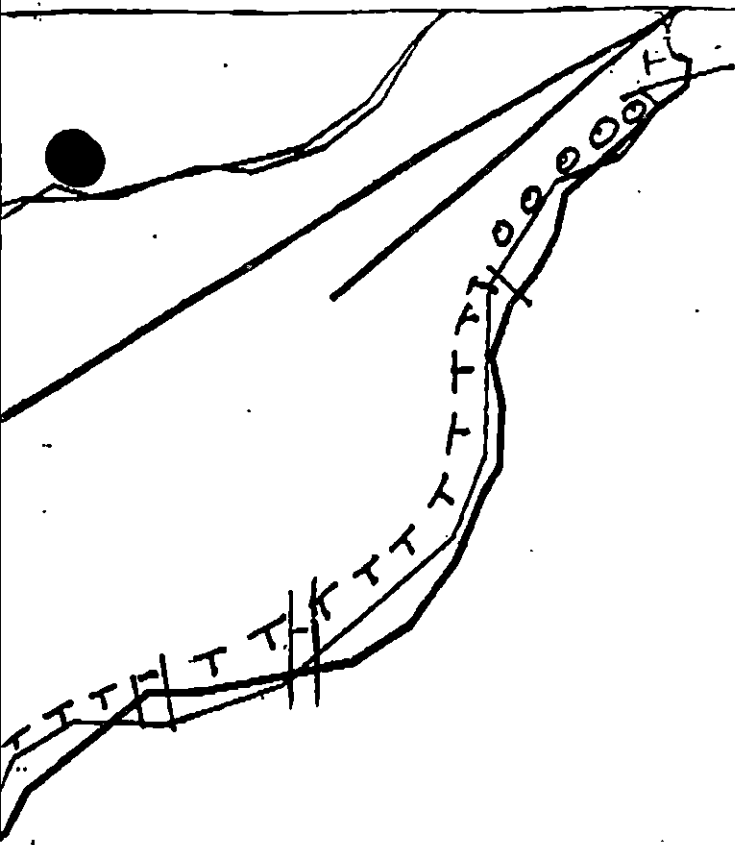
Approx. Segment Length: 3943m



Map Key: AKP-AS-4b

Name: R. Marty

Date: 31 May 1990



CORRECTIONS AS PER PHONE
CONVERSATION W/ R. MARTY 11 JUN 90

XXX Wide

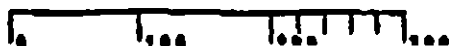
//// Medium

--- Narrow

TTTT Very Light

K1605-AS-4

Approx. Segment Length: 3943m



Map Key: AKP-AS-40

Name: R. Marty

Date: 31 May 1990

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K10-05-AS-004 SUBDIVISION B (2 of 2)

WORK WINDOW	
Manual Pickup	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

No applicable ecological time constraints.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

[Signature]

Date

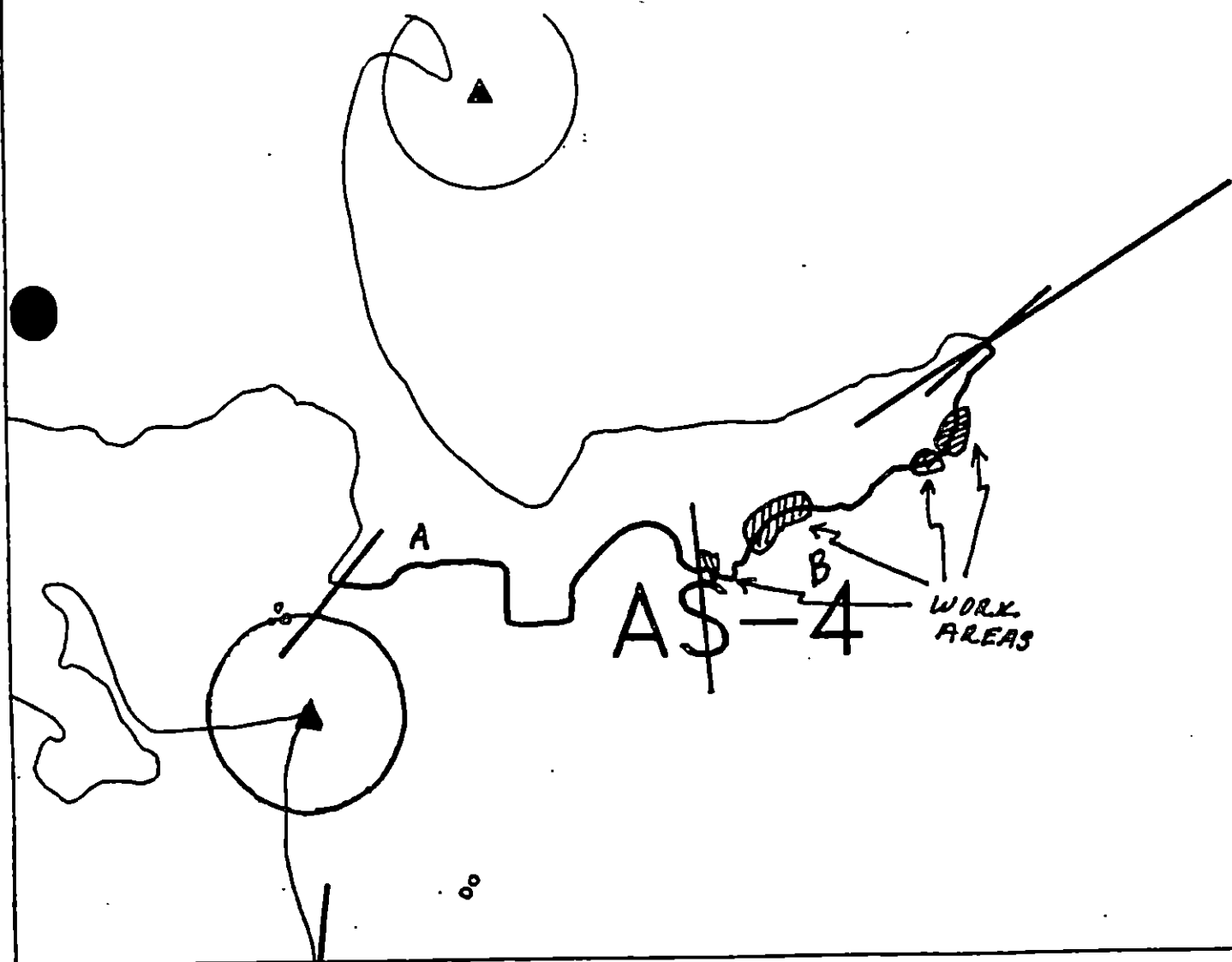
7/6/90

Prepared by

R. R. Coulter

Date

7/6/90



Exxon Company, USA



ECOLOGY MAP
SEGMENT K10-5 AS-4
SUBDIVISION B (2 of 2)
METERS

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

SHORELINE EVALUATION

SEGMENT ST/K10-07-PB-001 SUBDIVISION A (1 OF 1) DATE 5/11/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (4/1 to 7/31)
1B Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)
8AA Sensitive estuary
4QQ State Marine Park National Wildlife Refuge
5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1) - Nearby adjacent segment
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: Rachel Jean Dae DATE: 6/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 17 m: V.Light 1681m: No Oil 649 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: MANUAL PICKUP OF MOYSE PATIES + TARBALLS - WORK
WINDOW RESTRICTED DUE TO ACTIVE BALD EAGLE NEST
(3/1 -> 9/1) - CONTACT USFWS

TAG APPROVAL DATE: 5/29/90
ADEC Art Weimer Art Weimer
EXXON Andy Tetz Andy Tetz
NOAA Bill Wescott Bill Wescott
USCG G.A. RIEGER G.A. RIEGER
FOSC: DATE: 6-8-90

KODIAK ECOLOGICAL CONSTRAINTS

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 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, 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 prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299

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, 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 Kotol Bay Hatchery release

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

1H Remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.

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

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

Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791

Herring spawning (4/15 to 6/30)

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 Larry Nicholson 486-4791

3N, 3P Harbor seal and sea lion pupping (5/10 to 7/1)

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

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

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

ADF&G Don Calkins 267-2403

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Roth 267-2208

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

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation:

Tent sites (8/1 to 9/15)

6V Anchorages (8/1 to 9/15)

6W Forest Service cabins (8/1 to 9/15)

6X Lodge (8/1 to 9/15)

Y Special use destination

7Z Subsistence area: Salmon harvesting (8/1 to 9/30)

7H-H Finfish harvesting

7I Deer harvesting (8/1 to 1/7)

7J Invertebrate harvesting

7K-K Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)

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

SHORELINE OILING SUMMARY

REVISION NO 24 12-90

NOAA USCG S LEHMAN SEGMENT ST/ K10 07 PB 001
 BIO L. SHARMAN LAND REP J. HARDISTER USFWS SUBDIVISION A (LOFL)
 EXXON F. BYARI / NOT PRESENT ADEC T. ELLSWORTH TIME 11:20 10/12:20 0835h
 TEAM NO. 19 VISIT TIDE LEVEL +6 to +5 0 to -0.5 DATE 5/12/90 05/11/90 0920
 EST. SUBDIVISION LENGTH: 2339 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E. to W & W to E
 SURFACE SEDIMENTS: R 0 % B 0 % C 5 % P 10 % G 0 % S 85 % M 0 % V 0 %
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 20 m VL 1694 m NO 625 m

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0 cm

PATTIES / TARBALLS 30 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

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	▽	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	1	2	3	4	5	SU	U	M	U				
1	20					X	0-0		X						X				N	-	-	S/S
2	20					X	0-0		X						X				N	N	18	S/S

COMMENTS This segment extends from the sand spit at the N side of Puale Lagoon eastward approximately 2339 m. It was surveyed on 5/2/90 & 5/11/90 due to miscommunication on segment boundaries. On 5/2/90, the sand spit was surveyed, and 3 Kelp trees were observed with pebble-cobble sized, rounded, flattened TB w/ few > 10 cm (PT) The uppermost Kilo line contained most of the TB.

PB-1

Shoreline Ecological Summary (cont.) (Page 2 of 4)

Sharmen
5/2/90
5/11/90

General Comments (cont.):

include fox, river otter, caribou, and eagle. One unidentified bird carcass in the supratidal zone (no oil - old, dried, scavenged - probably a gull). This is a wide, straight, low-angle almost pure sand beach, unstable and reasonably highly exposed, which supports a very depauperate macrobiota. The thin & discontinuous ^{WTB} wrack line contains Fucus, Alaria, Enteromorpha, ulva, Sargassum, Halosaccus, Macrocystis, some foliose coralline algal fragments, several foliose red algae (including Pilota), subtidal worm tubes, sponges, and occasional large wads of Xerocystis. The Halosaccus are usually attached to broken-off barnacle plates. Scattered across the beach are shells of Tresus sp., Siligus patina, Saxidomus, Protolaea, Mytilus, Chione, Pododemus, Fusitriton, and Notosaurus santum, as well as Macoma spp. and Mya spp. (including M. truncata). There are also juvenile Cancer carapaces and rare sand dollars (Echinarachne probably - maybe Dendroaster). Given the sediment type, beach character, & exposure, this is a biologically normal and healthy beach.

OG OG HEYMAN

SEGMENT ST/ K1007 PB001

SUBDIVISION A

DATE 5/11/90

CHECKLIST

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

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

eee
Oiled Vegetation

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

SKETCH MAP

LAGOON TIDAL FLAT

SAND BEACH
w/ OCCASSIONAL
PEBBLES & COBBLES

3 Kelp lines below
berm, decreasing number
of TB & PT towards
Bay.

GRASS COVERED
HUMMOCKY TOPOGRAPHY

Slope

DILAPIDATED
CABIN

DRIFT LOGS
ON BERM

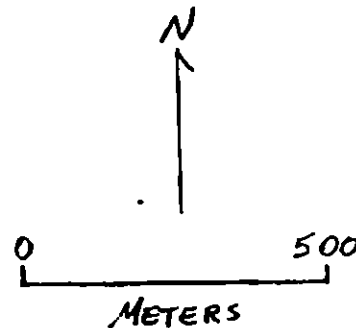
21-5% TB

5-locally 15%
TB, Trace PT
Band to 5m wide
5/11/90 - One wide Kelp line just below storm berm
observed on 5/11/90 along entire shoreline

5/2/90

21% TB

5-10% TB, trace PT



Oil Char length (m): AP 0 PO 0 CV 0 CT 0 ST 0 MS 0 PT 24 TB 1610 FL 0 NO 625

REVISION: 00/24/90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / K10-7 SUBDIVISION: A DATE 5/2/90
5/11/90
 NAME STEPHEN LEMMAN SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
 COMMENTS

☒ TREATMENT SUGGESTED

Concentrations of mouse patties vary widely along beach, however many areas the concentrations are heavy - (relative to other beaches in the zone).
 Manual removal of the in these areas is recommended.

NAME Terry Ellsworth SIGNATURE Terry Ellsworth

☐ NO TREATMENT RECOMMENDED
 COMMENTS

☒ TREATMENT SUGGESTED

Tarballs and patties occur along the length of this segment in variable quantities from $<1\%$ to 15% . The higher concentrations occur in localized patches up to 10 m long. Manual pick up of these patties and tarballs is recommended.

LAND MANAGER

NAME JOHN HARDISTER SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
 COMMENTS

☒ TREATMENT SUGGESTED

USFWS

Manual removal of Tarballs/mouse patties recommended.

Attachment 2**U.S. Fish and Wildlife Service Shoreline Cleanup Disclaimer**

This comment sheet is based on current observations and is solely for the purpose of planning and scheduling of 1990 response treatment actions. It in no way implies that the State or Federal government will not in the future determine that further restoration or other treatment, or compensation is warranted regarding this area, or that the area is considered by the Federal or State government to be adequately "clean" or "restored" for the purpose of any claim which the State or Federal government has brought or may bring against Exxon, Incorporated or any other potentially responsible party.

SHORELINE ECOLOGICAL SUMMARY (Page 1 of 4)

REVISION: 03/22/90

Segment ST / K10-7 Subdivision A Date (mo / day / yr) 5/2/90
1120-1220 Time (24 hr) 0830-0920 Biologist SHARMAN

- (A) Substrate type and % of segments: SUBDIV.
 (1) Bedrock 0 (2) Boulder 0 (3) Cobble 5 (4) Pebble 10 (5) Sand 85 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 0 Moderate 0 Low 100
SUBDIV.
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)
- Photographs: Roll No. —
 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 (ANCELA, LITTORINA, LIMAETS)

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

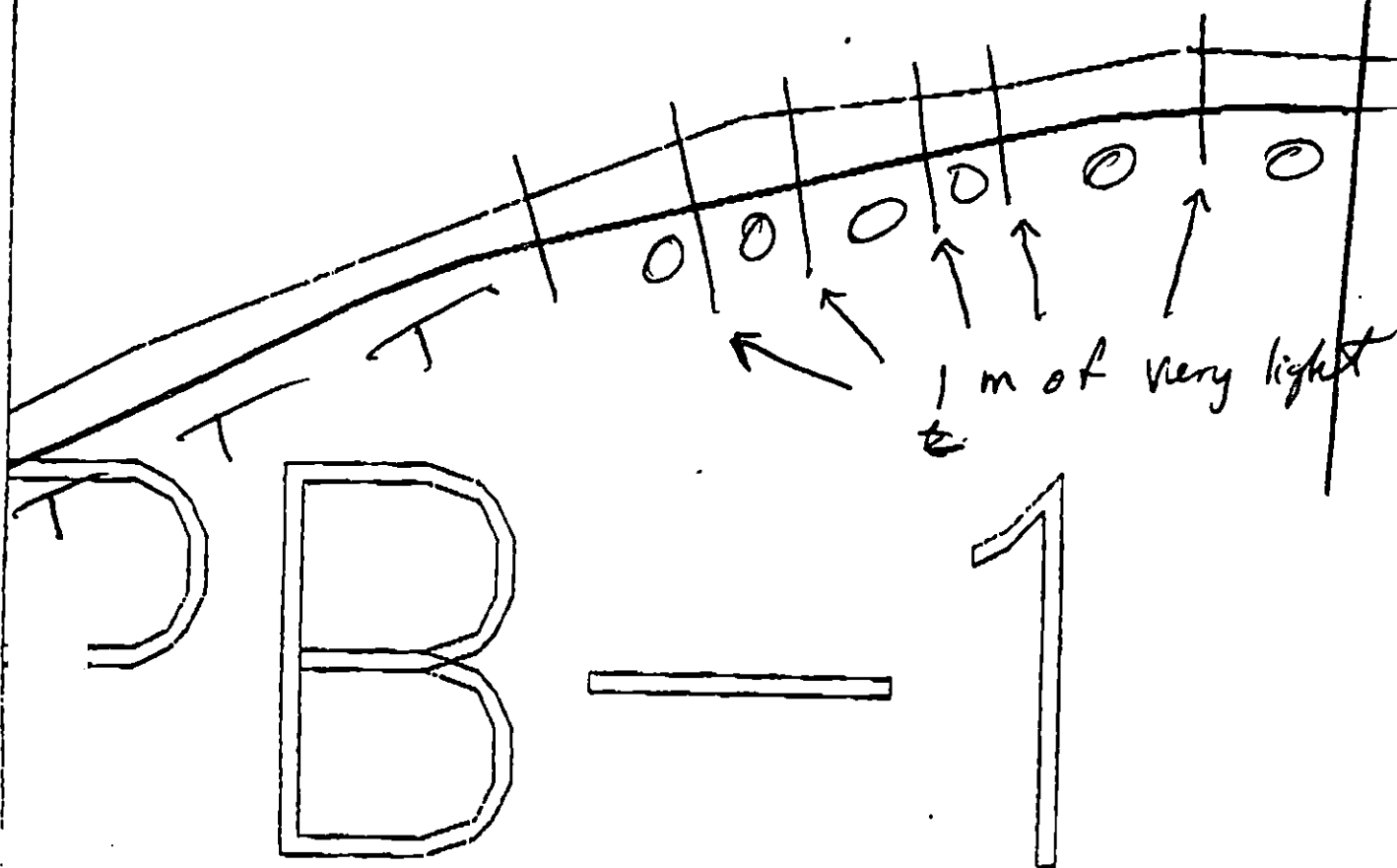
NOT PRESENT

Wildlife Observations/ General Comments: 1 immature eagle, 3 horned grebe, 1 red-faced cormorant, golden-crowned sparrow singing from backshore. When the lagoon connects to the ocean through the spit (10. end of segment), there were ~100 glaucous-winged & mew gulls, ~12 black-leg Kittiwake, ~25 boaters, and 10 gulls (probably mottled). 3 pelagic cormorants offshore. Tracks in the upper to mid-tidal zone sand.

Ecological Considerations:

Please see Eco. Maps. Sensitivities relate primarily to active bald eagle cliff nest immediately to W., at base of W. sand spit guarding lagoon entrance — also the lagoon & anadromous stream mouths back behind the spit itself. All these sensitivities are technically on adjacent segments, but the eagle nest in particular should for practical purposes be considered to be within this segment.

Please refer to comments below.



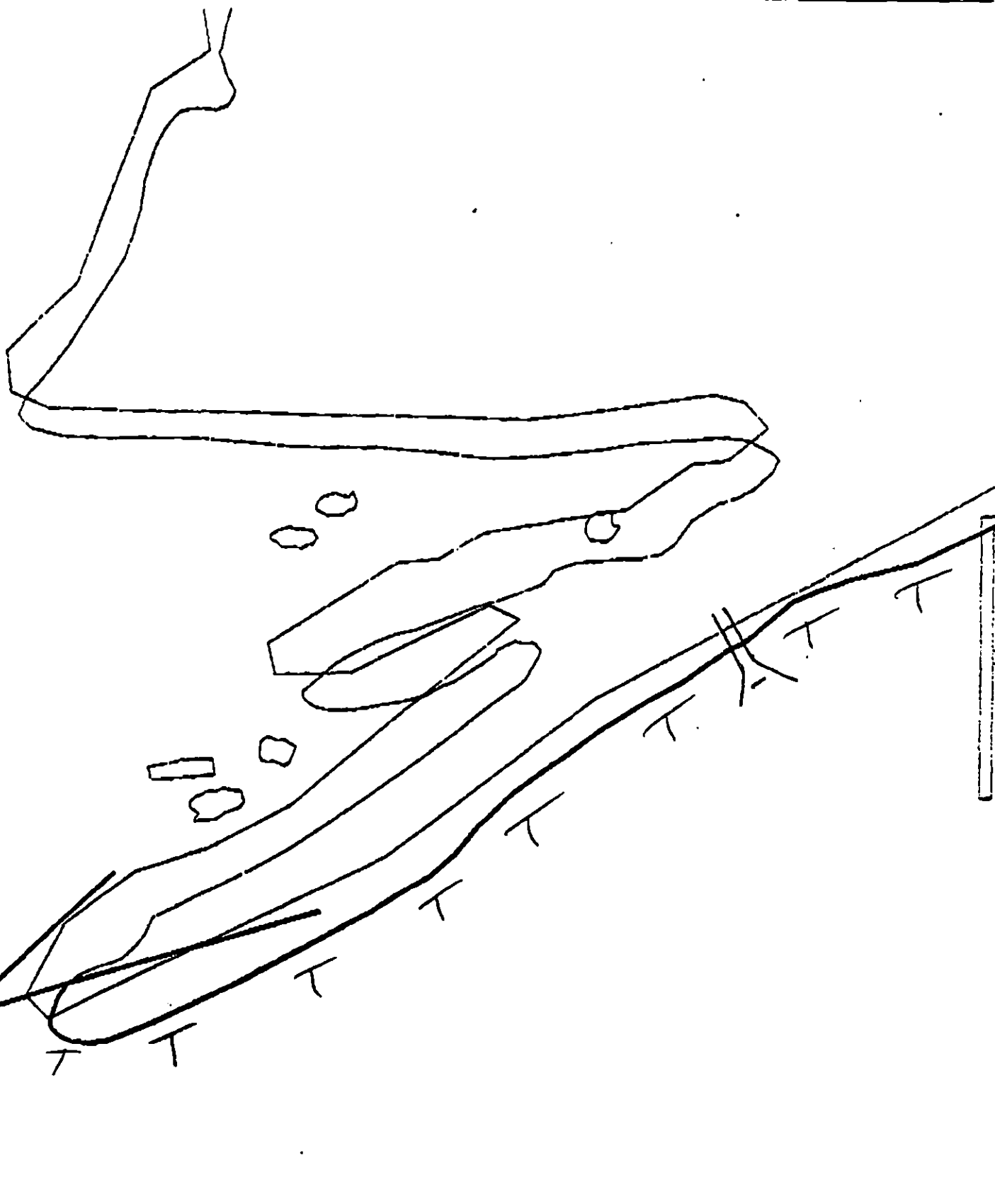
XXXX Wide
 /// Medium
 --- Narrow

K1007 - PB-1-A

Approx. Segment Length: 2339m

Map Key: AKP-PB-1b

Name: G. HEYMAN



XXXX Wide
//// Medium
---- Narrow

K1007 - PB-1-A

Approx. Segment Length: 2339m

Map Key: AKP-PB-1a

Name: G. HEYMAN

ECOLOGY MAP

(Map 1 of 2)

PB-1

(Page 3 of 4)

1A Stream mouth (fry outmigration)
4/15 - 7/31.

1B Stream mouth (spawning) 7/15 - 9/10
peak 8/15.

3AA Sensitive estuary.

All these sensitivities refer to
the adjacent segment to the N.
within the lagoon.

Anadromous stream(s)

Enter head of lagoon,
adjacent segment.

Active bald eagle nest
200' up on cliff, on
adjacent segment.
Not on USFWS Eagle Nest & Seabird Colony maps.

XXXX Wide

//// Medium

--- Narrow

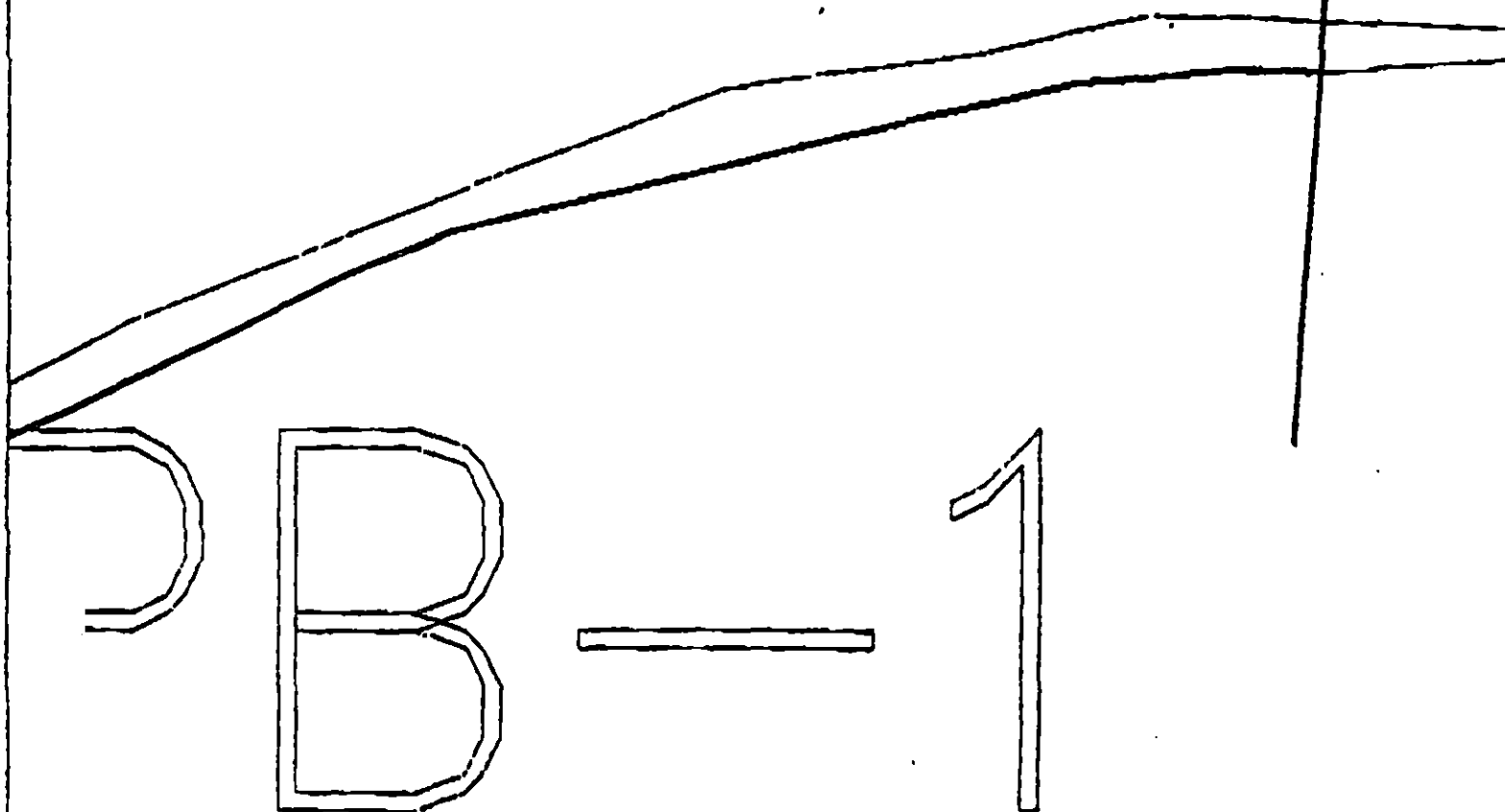
PB-1-A

Approx. Segment Length: 2339m

Map Key: AKP-PB-1a

Name: _____

DATE: _____



ECOLOGY MAP

(Map 2 of 2)

See Map 1.

PB-1

(Page 4 of 4)

XXXX Wide

//// Medium

---- Narrow

PB-1-A

Approx. Segment Length: 2339m

Map Key: AKP-PB-1b

Name: _____

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K10-07-PB-001 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 (262-70-10025) is in Subdivision A. No constraint to manual pickup.
5T	Bald Eagle Nest	NO CONSTRAINT. Authorized per memo dated 6/10/90 from Mary Portner/USFWS to Rex Coulter/Exxon.

OTHER ECOLOGICAL CONSIDERATIONS

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

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NO. 262-70-10025)
FOR ADDITIONAL CONSTRAINT INFORMATION

FOSC

[Signature]

Date

6-16-90

Prepared by

[Signature]

Date

6/14/90

KIU-1

STREAM*
262-70-10025

PB-14

PB-1

PB-13

PB-12

Work Areas

LEATMENT



Exxon Company, USA
Map Key: KP-PB-1

ECOLOGY MAP
SEGMENT K10-7 PB-1
SUBDIVISION A (1-01-1-1)
METERS

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

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 262-70-10025

SEGMENTS K10-07-PB-001 SUBDIVISION A

WORK WINDOW	
Manual Pickup	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

Avoid any unnecessary disturbance or damage to uncolled biota and substrate. No flushing of pollutants or sediments into stream drainage.

SEE SUBDIVISION CONSTRAINT ADDENDA K10-07-PB-001A
FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC

D. Zavarzhi

Date

6-16-90

Prepared by

J.P. Phillips

Date

6/15/90

K10-7

STREAM #
262-70-10025

PB-14

PB-1

PB-13

PB-12

Work Areas

TREATMENT



Exxon Company, USA
Map Key: AP-PB-1

ECOLOGY MAP
SEGMENT K10-7 PB-1
SUBDIVISION A (L-01-L)
METERS

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

1 inch = 2000 feet

SHORELINE EVALUATION

SEGMENT ST/ K10-07-PB-008 SUBDIVISION A (1 OF 1) DATE 5/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4QQ State Marine Park National Wildlife Refuge

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: Rachel Jean Owen

DATE: 5/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 424 m: No Oil 2046 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: 5/24/90

ADEC Art Weiner Det Weiner

EXXON Amey Ten

NOAA Burt Wescott

USCG Mr. J. Hall

FOSC:

[Signature]

DATE:

6/4/90

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 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, 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 prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2290
- 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, 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 Kotol Bay Hatchery release
Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1I Gill net area
1J Purse seine area
Mainland, West side Kodiak, Shuyak & Moser/Olga Bay (8/9 to 10/1)
East side Kodiak, East side Afognak (7/4 to 10/1)
1K Purse seine hook-off
1L Set net sites
Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 6/30)
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 Larry Nicholson 486-4791
- Harbor seal and sea lion pupping (5/10 to 7/1)
Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (8/1 to 9/15)
6V Anchorages (8/1 to 9/15)
6W Forest Service cabins (8/1 to 9/15)
6X Lodge (8/1 to 9/15)
6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (8/1 to 9/30)
H Finfish harvesting
7I Deer harvesting (8/1 to 1/7)
J Invertebrate harvesting
7KK Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
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/ K 10 07 - PB008 SUBDIVISION: A DATE 5/2/90

~~NOAA~~
~~USCG~~

NAME STEPHEN LEHMANN SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Mousse patties and tarballs were observed along the North part of the subdivision at the upper high tide for 500-600 ft. The area subdivision as a whole is less than 1% covered. No oil was observed in pits. Beach should be rechecked and large patties removed.

ADEC

NAME Terry Ellsworth SIGNATURE Terry Ellsworth

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED Spot Check Suggested

COMMENTS

Mousse patties and tarballs occur from the North segment boundary South in a 2m x 600m long band with coverage being <1%. This is a sand beach environment and although no buried oil was observed in the pits dug, it is possible that as sand is removed from the beach more "tarballs" and patties will be uncovered. A crew should spot check this beach and pick up any patties and tarballs found. No oiled drift was observed.

LAND MANAGER

NAME JOHN P. HANLSTER SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Mousse patties and Tarballs present along sandy beach as depicted by ADEC representative. These could easily be removed by a pick-up crew with shovels. Concur that this segment should be checked again for any further contamination.

SHORELINE OILING SUMMARY

REVISION NO. 000000

OG GLENN HEYMAN USCG STEVE LEHMANN SEGMENT ST/ K 1007 PB 008
 BIO LOUIS SHARMAN LAND REP JOHN HARDISTER SUBDIVISION A (1 OF 1)
 EXXON FRANK BYARS ADEC TERRY ELLSWORTH TIME 13:10:15:30
 TEAM NO. 19 TIDE LEVEL +4 to +1.5 DATE 5/02/90
 EST. SUBDIVISION LENGTH: 2470 m ☐ Sun ☒ Clouds ☒ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 0 % B 0 % C 5 % P 10 % G 0 % S 85 % M 0 % V 0 %
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 600 m NO 1870 m

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0 CTPATTIES / TARBALLS 3 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 0#BAGS 0

Photographs:

Roll No. —Frames —

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UG	30	35	40	45	SU	U	M	L				
1	30					X	0-0		X					X				—	—	—	SP/S
2	35					X	0-0		X					X				—	—	—	SP/S

COMMENTS

Oil in this segment occurred as mousse patties and mousse "tarballs" (< 10 cm diameter) in a band up to 2 m wide and 600 m long along the seasonal high water line. This band was observed at the northern end of the segment, to the south of the band no oil was observed. PT & TB w/in the band had < 1% coverage.

REVIEWED PTDATE 10 May 90

OG G. H. H. H.

SKETCH MAP

SEGMENT STI R.1007-PB008

SUBDIVISION A

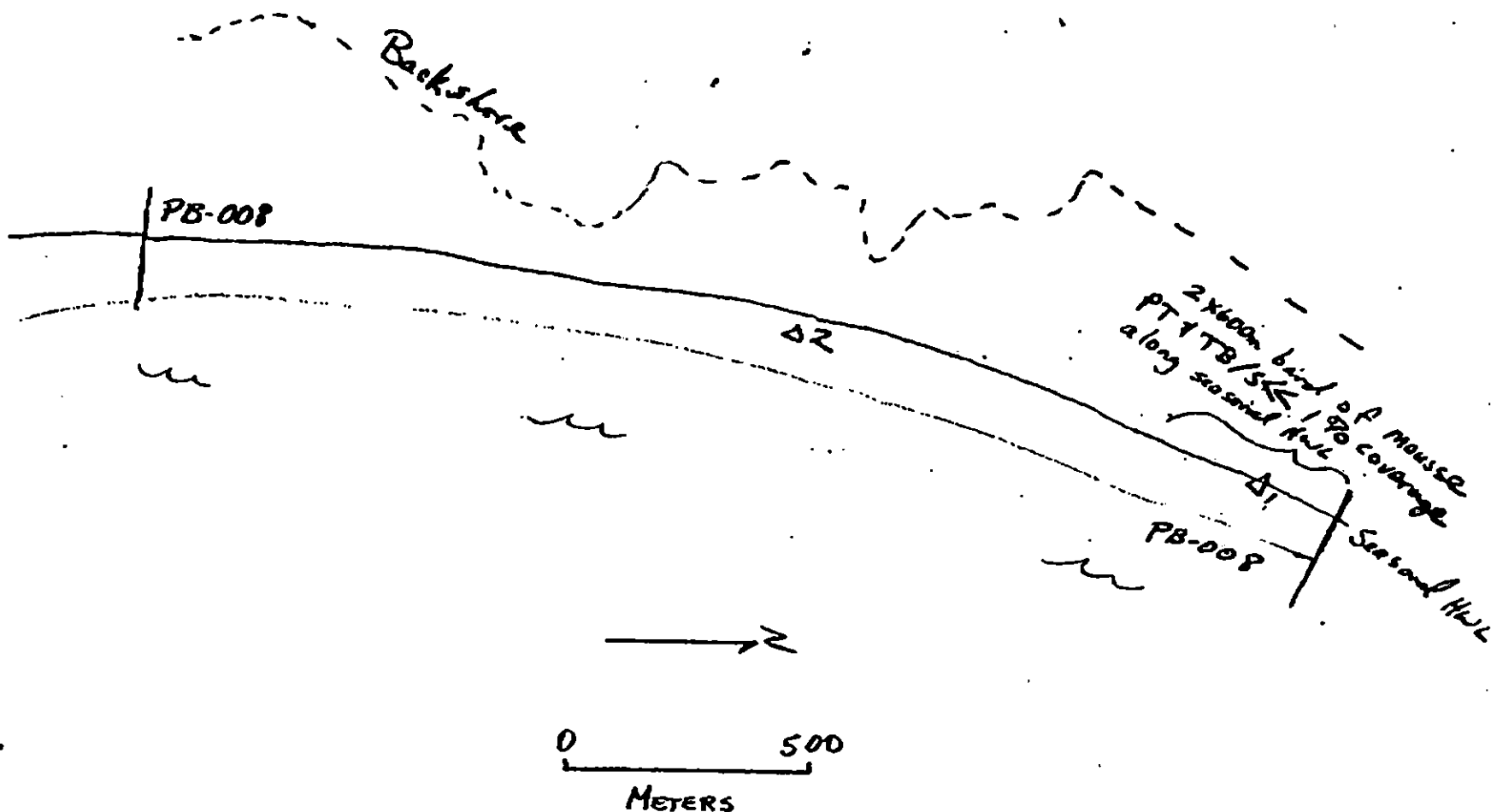
DATE 5, 2 90

CHECKLIST

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

LEGEND

- 1 Δ
1/2 - No Subsurface Oil
- 2 Δ
1/2 - Subsurface Oil
- CT/C
Continuous Distribution
- CT/B
Broken Distribution
- CT/P
Patchy Distribution
- CT/S
Plashed Distribution
- eee
Red Vegetation
- 1 $\bullet \rightarrow$
Photo location, direction, and number



Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 0 MS 0 PT 300 TB 300 FL 0 NO 1670

Segment ST / PA-8 Subdivision A Date (mo / day / yr) 5/2/90

Time (24 hr) 1340-1500 Biologist SHARMA

(A) Substrate type and % of segment: SUBDIV.

(1) Bedrock (2) Boulder (3) Cobble 5 (4) Pebble 10 (5) Sand 85 (6) Silt

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

SUBDIV.

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

Photographs:

Roll No.

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 PRESEN

MYTILUS

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

NOT PRESEN

GASTROPODS (ALCELA, LITTORINA, LIMPETS)

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

NOT PRESEN

FUCUS

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

NOT PRESEN

Please see general comments below.

Wildlife Observations/ General Comments: 3 crows just inland behind dunes; fox + wolf tracks in intertidal zone; 8 snow buntings, 2 cormorants, 4 surf scoters offshore, occasional glaucous-winged + new gulls flying. 1 pelagic cormorant carcass in upper intertidal, scavenged by fox + eagle (no oil - cause of death unknown) - surrounded by fox + eagle tracks, lone fox scat. The segment comprises an (cont.)

Ecological Considerations: No resource sensitivities identified in NOAA database (4/22/90) - see attached Eco. Maps. A severely wave-battered, unstable sandy beach - no particular ecological constraints observed during this survey.

Sharma
5/2/90

General Comments (cont.) :

exposed, wavebeaten sandy beach. High energy + instability lead to an exceedingly depauperate intertidal biota. Essentially all living (or recently living) macrobiota are in the form of deposited drift material. 90%+ is Fucus, with some Desmarestia, Alaria, Laminaria, Halosaccus (mostly attached to dislodged barnacle tests), Ulva, Enteromorpha, Sargassum, Pilota. Bivalve shells found on the beach surface include numerous large Chionea nuttallii, Tresus capax, Siliqua patula, Saxidomus gigantea, Macoma spp., Mya spp. (incl. truncata); Protellina staminea, Mytilus edulis, Pododermus macrochlamys. Also there are occasional Ematriton oregonense, one Medella lanthorn, rare sand dollars (Dendraster or possibly Echinaster), subadult Dungeness Crab Carapace (Cancer regalis), large membranous sabellid worm tubes, some coralline algal fragments, orange sponges (possibly Sabaria sp.), some fishing floats + logs with attached pelagic goose barnacles (Lepas); some masses of egg cases from large subtidal snails (Fusitriton, Hydrobia, Buccinum). A very typical assemblage for this type of beach - appears healthy + normal.

ECOLOGY MAP

(1 of 2)

PB-8

(Page 3 of 4)

No resource sensitivities
according to NOAA database (4/23/90).
No special sensitivities
observed on this survey.

PB-8

GOA
↓ 223A

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

PB-8

ADEC Segment Length: 2470m

0 100 200 300

Map Key: GOA-223b

Name: _____

Date: _____

Not Entered

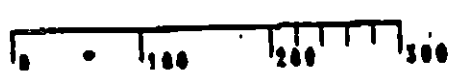
↑
GOA
2238

PB-8 Ecology Map
(2 of 2)
(Page 4 of 4)

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

PB-8

ADEC Segment Length: 2470m



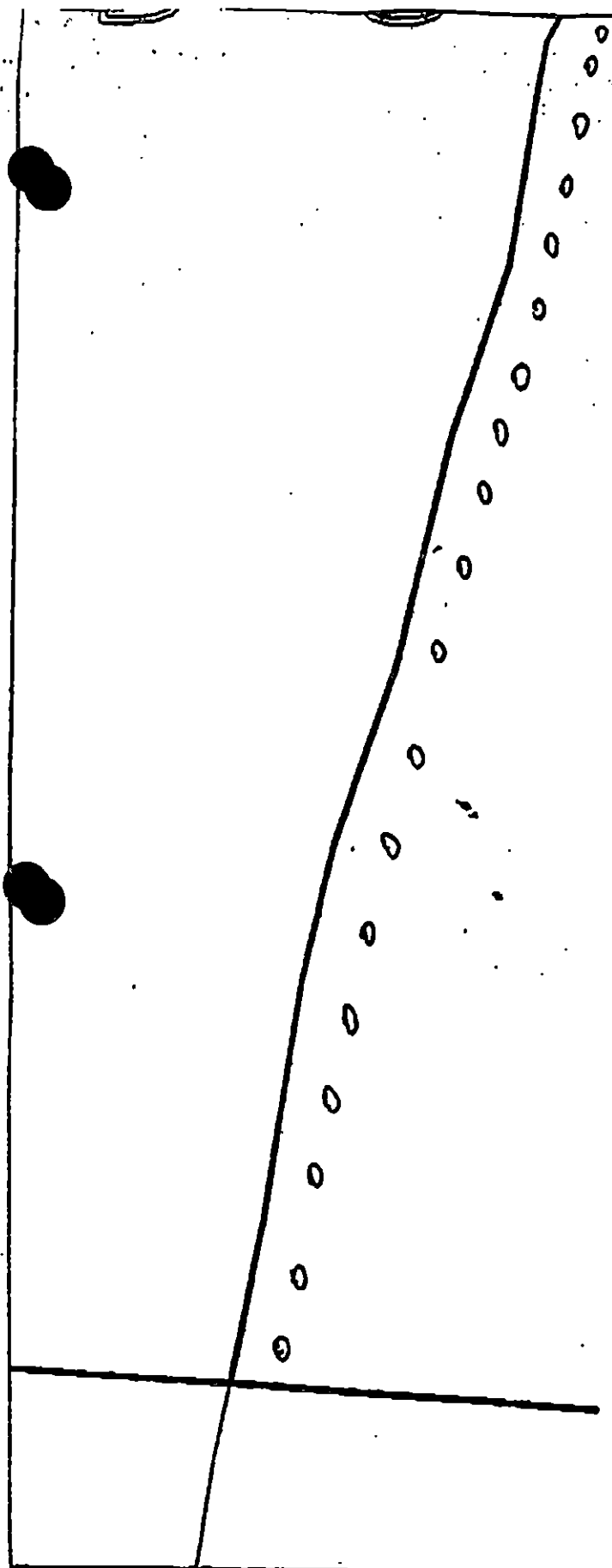
Map Key: GOA-223a

Name: _____

Date: _____

Notes Entered:

↑
GOA
2238



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

PB-8A
(10ft)

ABEC Segment Length: 2470m



Map Key: GOA-223a

Name: G. HEYMAN

Date: 5-2-70

ANADROMOUS FISH STREAM EVALUATION

-001

-013

SEGMENT ST/K10-07-PB-014 STREAM NO: 262-70-10025 DATE 5/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

1B Salmon stream mouth - spawning (~~2/15~~ to ~~8/31~~)

8AA Sensitive estuary (5/15 to 9/10) ^{with}

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: Rachel Jean Dan DATE: 5/25/90

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of tarballs, patties and plastic bags
as indicated on attached sketch map. Consult ADF&G for appropriate work
dates.

TAG COMMENTS:

TAG APPROVAL DATE: 5/24/90

ADEC Art Wescott Art Wescott

EXXON Andy Tora Andy Tora

NOAA Bruce Wescott Bruce Wescott

USCG Mr. J. Hall Mr. J. Hall

FOSC:

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 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, 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 prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 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, 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 Kotol Bay Hatchery release
 Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1I Gill net area
 1J Purae 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 Purae seine hook-off
 1L Set net sites
 Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 6/30)
 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 Larry Nicholson 486-4791
- 5A Harbor seal and sea lion pupping (5/10 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 8/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subistence area: Salmon harvesting (6/1 to 9/30)
 Finfish harvesting
 Deer harvesting (8/1 to 1/7)
 Invertebrate harvesting
 Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
 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

29/35 #3

SEGMENT ST 1 B 001A A SUBDIVISION: 0013+14 DATE 5/2/90

USCG NAME CWO MCNATTEN SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

1. Manual clean-up; remove two patches
2. Remove 4-5 contaminated plastic bag (see map).

ADF+6

~~ABEC~~

NAME JEFFREY BARNHART SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Manual clean-up of all oil (T/P, T/B, mousse) and bags of mousse along the mouth of the lagoon.

LAND MANAGER

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

OG WILLIAM LEID USCG McMAHON SEGMENT ST/ PODOLAB/PBI
 BIO MICHAEL FAWCETT LAND REP ... STREAM 262-70-0029 OF ...
 EXXON GUS GARCIA ADFG MIKE WILSON JEP BERNHART TIME 13:50
 TEAM NO. 15 TIDE LEVEL 2 FT DATE 2 / MAR / 90
 EST. SUBDIVISION LENGTH: 1800 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R ... % B ... % C 10 % P 20 % G ... % S 70 % M ... % V ...
 SLOPE: Lang 95 % Hang 5 % Vert ... % WAVE EXPOSURE: ☒ Low ☐ Med ☐ Hig
 OIL CATEGORY LENGTH: W ... m M ... m N 450 m VL ... m NO 1350

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES				
	TC	FB	FP	FS	SL	OR	FM	GA	BL	TL	UR	SU	U	M	L
ASPHALT PAVEMENT															
POOLED															
COVER															
COAT															
STAIN															
MOUSSE															
PATTIES		X	X						X				X		
TARBALLS			X				X		X				X		
FILM															
NO OIL												X		X	X

PAVEMENT H F S 0 sq. m by 0PATTIES / TARBALLS 20 BNEAR SHORE SHEEN? ☒ NO BR RW SL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris			

Did You Col
 DEBRIS
☐ YES ☒ NO

TYPE ...#BAGS ...

Photographs:

Roll No. A5-15-8Frames 8-11

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)	V	SURFA SUBSURF SEDIME
		OP	OR	OL	OF	NO		VO	UC	SL OR	OR FM	OL SL	OR TL	UR LR	BU	U	M	U							
1	35					X	.									X						N			S/G
2	35					X	.									X						N			S/G
3	50					X	.									X						N			S/G
4	50					X	.									X						N			S/G
5	50					X	.									X						N			S/G
6	35					X	.									X						N			S/G

COMMENTS

REVIEWED AWDATE 58-90

SEGMENT ST/13 1/4 STREAM 262-70-10025(OF)

[illegible]

COMMENTS

REVIEWED SW DATE 5-8-90

OG WILLIAM REID

SEGMENT ST/ PB001A+B/PB13+14

STREAM 262-70-10025

DATE 2, MAY 90

CHECKLIST

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

LEGEND

1 Δ
PII - No Subsurface Oil

2 Δ
PII - Subsurface Oil

$\boxed{CT/C}$
Continuous Distribution

$\boxed{CT/B}$
Broken Distribution

$\boxed{CT/P}$
Patchy Distribution

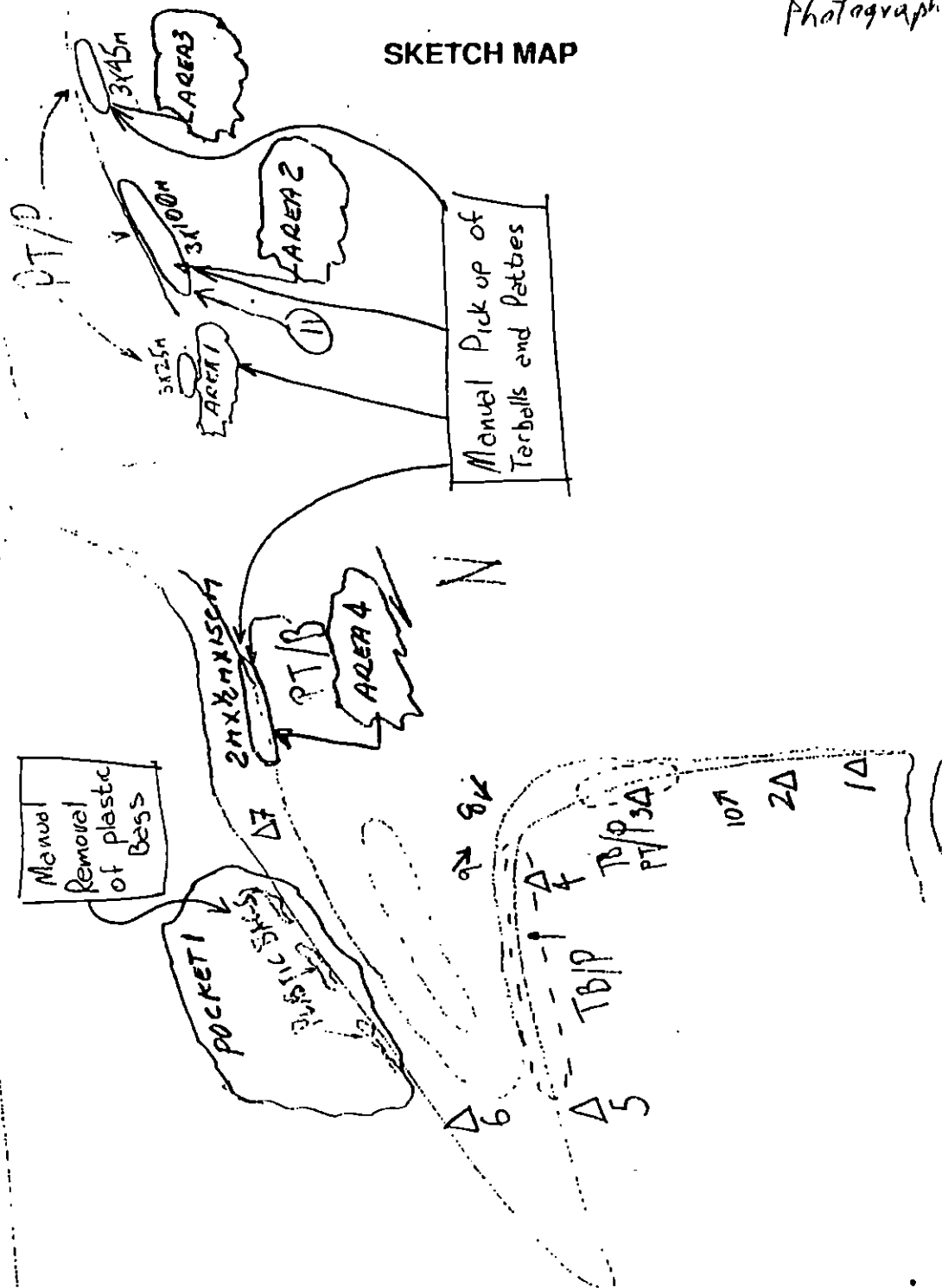
$\boxed{CT/S}$
Splashed Distribution

eee
Oiled Vegetation

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

SKETCH MAP

Photographs 15-15-0



30/55

ADF&G MULTI-ASSESSMENT DATA FORM

SURVEY TYPE: BS SS OS TS AVS SCHA MMS PTA

2 REGION: PWS KP, CI K-AP

METHOD: Aerial Ground Boat

3 DATE: 5/2/90 15 HIGH TIDE TIMES: 8:52 Am 1 0:16 pm 21 TEAM RECORDER: JEFFREY BARNHART
4 START TIME: 1405 16 HIGH TIDE HTS: 14.1 1 14.8 22 OBSERVERS: Gus Garcia, William Reid
5 STOP TIME: 1600 17 LOW TIDE TIMES: 3:11 Am 1 3:50 pm 23 AGENCY: ADF&G/1000/1000/1000/1000
6 SEGMENT #: PB001A+B 18 LOW TIDE HTS: 5.4 1 1.9 24 PHOTOS TAKEN: Y (N)
7 STATION #: _____ 19 TIDE HT AT SURVEY: _____ Roll #: _____ Frame: _____
8 K-UNIT: K10-07 (Ebb) Slack Flood Slack 25 VIDEO TAKEN: Y (N) TAPE#: _____
9 STAT AREA: 262-70 20 USCG QUAD: Karluk D-5 Start: _____ End: _____
10 LAT: 57° 46' 53" 11 LONG: 155° 36' 36" 26 SAMPLES TAKEN Y (N) Number
12 SOURCE: Map Loran Anadromous 011 _____
13 LOCATION: Paula Creek, Paula Bay, Alaska Peninsula Sediment _____
14 DESCRIPTION: S 385 39 W 12 Biological _____
Water _____

EXTENT OF OIL

	SHORELINE				STREAM			
	L	M	H	S	L	M	H	S
27 SURFACE COVERAGE				<u>25</u>				
28 SURFACE THICKNESS								
29 PENETRATION								
30 OVERALL OIL IMPACT:	N	VL	<u>(L)</u>	M	H			
31 OIL TYPE:	Pooled	<u>Mousse</u>	<u>Tar</u>	Asphalt	<u>Sticky</u>	Stain		
32 OILED DEBRIS?	<u>(Y)</u>	N						
33 SHORELINE TYPE:	Headland	<u>Low-lying Rocks</u>	Beach	Cove				
		<u>Lagoon</u>	Marsh					
34 WAVE EXPOSURE:	High	Moderate	<u>Low</u>					
35 SUBSTRATE TYPE:	Bedrock	Boulder	Cobble					
	Gravel	<u>.5</u>	Sand	<u>4.5</u>	Mud/silt			

36 CATALOGED ANAD. FISH STREAM? (Y) N
37 CATALOG #: 262-70-10025
38 STREAM NAME: Paula Creek
39 OIL IN STREAM BED? (Y) N
40 OIL ON STREAM BANKS? (Y) N
41 OIL ON BEACH ADJACENT TO MOUTH? (Y) N
(within 50 meters)
42 OIL WITHIN 1 MILE OF STREAM? Y N
Where: _____
43 ANADROMOUS FISH PRESENT? Y (N)
44 ANADROMOUS FISH OBSERVATION
Species Aerial Ground

COMMENTS: Manual cleanup of all oil & bags of oil along mouth of lagoon.
as indicated on sketch map. I observed about 6 range stakes, some with
physical signs indicating a study site. The signs were faded to the point
where they were unreadable. They were located along the mouth of the
lagoon basin in the areas that were oiled off previously.

31/38

VE(3)

DESCRIPTION
DESCRIPTION

OIL DISTRIBUTION DIAGRAM

262-10-10025

PUALLI BAY, AK 10

706

Rock Bluffs.

Tidal
Flat

X Tar spots on grass

X T/B 5m x 5m 5% coverage

T/B 5m x 5m 5% coverage

X 5m x 20m

grass

3 plastic bags of oil partially
with sand2 plastic bags of oil partially
covered with sandMousepatt. approx 12 inches wide,
3 feet long, 6 inches thick (5 in.
in color, brown) Sheeps wool
disturbed

4 m x 50 m T/B T/P 5% coverage

3 m x 25 m patchy T/B T/P

3 m x 100 m patchy T/B T/P 30% coverage

3 m x 45 m water, T/B T/P partially
covered with sand. Parts of this band
have 80% oil coverage

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/K10-07-PB-016 STREAM NO: 262-70-10010 DATE 5/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

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: Rachel Jean Orr DATE: 5/22/90

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: 5/18/90
ADEC ART WOLVER
EXXON ANDY TATE
NOAA GARY PETRAE
USCG G.A. REITER

FOSC:  DATE: MAY 27 1990

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 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, 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 prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 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, 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 Kotol Bay Hatchery release
 Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 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
 Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 6/30)
 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 Larry Nicholson 486-4791
- Harbor seal and sea lion pupping (5/10 to 7/1)
 Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (6/1 to 9/30)
 7HH Finfish harvesting
 Deer harvesting (8/1 to 1/7)
 Invertebrate harvesting
 Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
 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

RB 16 PB-16
~~11/58~~ **FIELD SHORELINE COMMENT SHEET**

SEGMENT ST / ~~11/58~~ ~~11/58~~ SUBDIVISION: _____ DATE _____

USCG
NAME Cub McMAHON SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

ADFG
ADEC
NAME JEFFREY BARNHART SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS Very little oil located in this anadromous fish stream.
The four T/B's located do not justify a cleanup.

LAND MANAGER
NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

OG WILLIAM LEID USCG McMAHON SEGMENT ST/ PB016
 BIO MICHAEL FAWCETT LAND REP 5 STREAM 262-70-10001 OF
 EXXON GUS GARCIA ADFG ADRE WILDER / EFF BEIMPACT TIME 13:0510
 TEAM NO. 15 TIDE LEVEL 4 FT DATE 2 / MAY / 90
 EST. SUBDIVISION LENGTH: 80 m ☐ Sun ☐ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 0 % B 0 % C 10 % P 0 % G 20 % S 70 % M 0 % V
 SLOPE: Lang 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☒ H:
 OIL CATEGORY LENGTH: W 0 m M 0 m N 20 m VL 20 m NO 40

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	B	P	B	BR	OR	GY	BL	TR	LR	SU	U	M	U		
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN				X			X					X				
MOUSSE																
PATTIES																
TARBALLS			X					X				X				
FILM																
NO OIL											X		X	X		

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

Did you Co
DEBRIS
☐ YES ☒ NO

TYPE G#BAGS 0

Photographs:

Roll No. AS-15-8Frames 4-7

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)	!	SURF. SUBSURF SEDIM.		
		OP	OR	OL	OF	NO		UO	UC	SP	OR	OL	OF	NO	IC	IS	IP	IR	SU					U	M
1	40					X	.											X					X	35	S/C
2	35					X	.											X					X	30	S/G
							.																		
							.																		
							.																		
							.																		
							.																		

COMMENTS

REVIEWED JW DATE 5/8/90

OG WILLIAM REID

FIRM 11

SKETCH MAP

15/38 SEGMENT ST/ PB216

STREAM 262-70-1000

DATE 7/1/90 90

CHECKLIST

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

LEGEND

1 

Pit - No Subsurface Oil

2 

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution



Oil Vegetation



Photo location, direction,
and number

Oil Character

h (m): AP

PO

CV

CT

ST

MS

TB

FL

NO

REVISION: 03/24/90

12/38

ADF&G MULTI-ASSESSMENT DATA FORM

SURVEY TYPE: BS SS DS TS AVS SCHA MMS PTA 2 REGION: PWS KP, CI K, AP

METHOD: Aerial Ground Boat

3 DATE: 5/2/96 15 HIGH TIDE TIMES: 8:53pm / 10:16pm 21 TEAM RECORDER: JEFFREY BARNHART
Cus Garcia, William Reist

4 START TIME: 1:15pm 16 HIGH TIDE HTS: 14.1 / 14.8 22 OBSERVERS: John M. Mahoney, Mike Fane

5 STOP TIME: 1:35pm 17 LOW TIDE TIMES: 3:11pm / 3:50pm 23 AGENCY: ADF&G/Essex/USCG/WNC/W

6 SEGMENT #: 08016 18 LOW TIDE HTS: 5.4 / 1.9 24 PHOTOS TAKEN: Y (N)

7 STATION #: 262-70-10010 19 TIDE HT AT SURVEY: _____ Roll #: _____ Frames: _____

8 K-UNIT: K10-07 Ebb: Slack Flood Slack 25 VIDEO TAKEN: Y (N) TAPE#: _____

9 STAT AREA: 262-70 20 USCG QUAD: Karl-K D-5 Start: _____ End: _____

10 LAT: 57°45'20"N 11 LONG: 155°29'9"W 26 SAMPLES TAKEN? Y (N) Number _____

12 SOURCE: Map Loran Anadcat 011 _____

13 LOCATION: Helen Creek, Puget Bay Sediment _____

14 DESCRIPTION: S 285 38W 22 Biological _____

Water _____

EXTENT OF OIL

	SHORELINE				STREAM			
	L	M	H	S	L	M	H	S
27 SURFACE COVERAGE								
28 SURFACE THICKNESS								
29 PENETRATION								

30 OVERALL OIL IMPACT: N (L) L M H

31 OIL TYPE: Pooled Mousse Tar Asphalt Sticky Stain

32 OILED DEBRIS? Y (N)

33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cove
Lagoon Marsh

34 WAVE EXPOSURE: High Beach Moderate Low Stream

35 SUBSTRATE TYPE: Bedrock _____ Boulder _____ Cobble _____
Gravel 30 Sand 50 Mud/silt _____

36 CATALOGED ANAD. FISH STREAM? (Y) N

37 CATALOG #: 262-70-10010

38 STREAM NAME: Helen Creek

39 OIL IN STREAM BED? Y (N)

40 OIL ON STREAM BANKS? (Y) N

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

42 OIL WITHIN 1 MILE OF STREAM? Y N

Where: _____

43 ANADROMOUS FISH PRESENT? Y (N)

44 ANADROMOUS FISH OBSERVATION

Species	Aerial	Ground

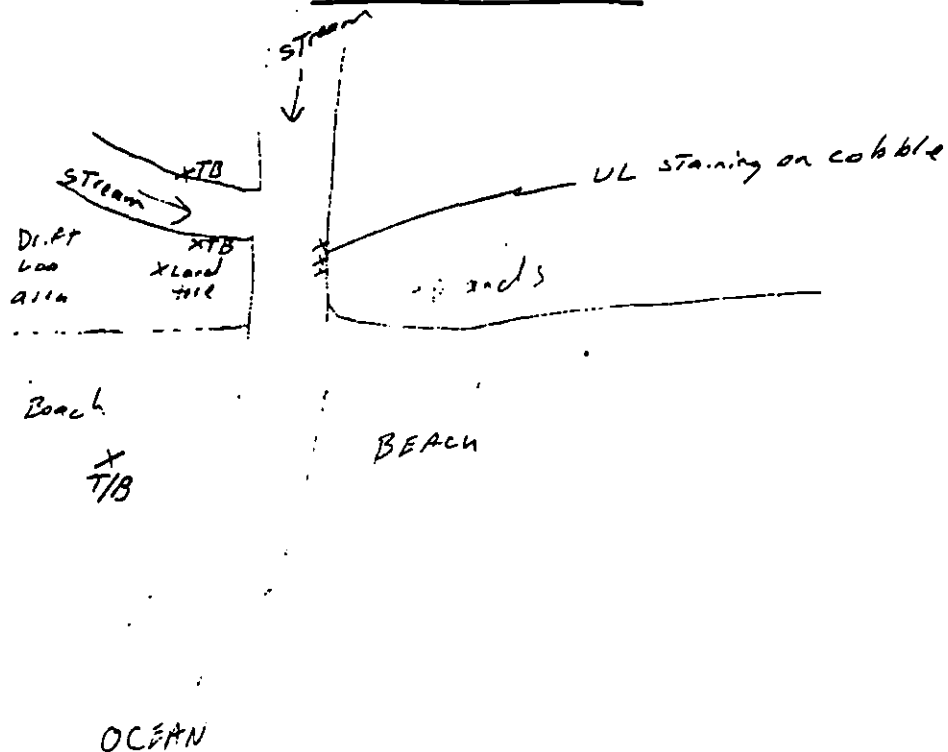
COMMENTS: Found only 4 T/B's. NO cleaning recommended.

I agree with recommendation. M. J. Farnsworth

FRAME(S)

DESCRIPTION

48 OIL DISTRIBUTION DIAGRAM



ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 262-70-10010

SEGMENT K10-07-PB-16 SUBDIVISION A

WORK WINDOW	
Manual Pickup	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream	ADF&G catalogued anadromous stream (262-70-10010 is in Subdivision A. No constraint to manual pickup.
5T Bald Eagle Nest	USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to manual pickup within 400m of active nest. No constraint to manual pickup more than 400m from active nest.

OTHER ECOLOGICAL CONSIDERATIONS

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

SEE SUBDIVISION CONSTRAINT ADDENDUM K10-07-PB-16A
FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC

Date

7-10-90

Prepared by

Date

7-10-90

WORK PLAN ADDENDUM

K10-7

Segment PB-16

Subdivision _____

Dated 7/9/90

ANAD. STREAM # 262-70-10010 (HELEN CREEK)

MODIFICATION

1. REASON FOR MODIFICATION

ANAD SCAT RECOMMENDED NO TREATMENT. REASSESSMENT ON 29 JUNE 90 LOCATED A LAYER OF MOUSSE.

2. ADJUSTMENT TO WORK PLAN

WORK PLAN SHOULD BE CHANGED FROM "NO TREATMENT RECOMMENDED" TO "MANUAL PICKUP" AS INDICATED ON THE ATTACHED SKETCH MAP.

ARCHAEOLOGICAL CONSTRAINT: If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO APPROVAL NEEDED YES X

NO _____

SHPO SIGNATURE

Rachelle Dora 7/11/90

TAG APPROVAL DATE

7/9/90

ADEC

Ron Marcus

EXXON

ANDY TATE

NOAA

Burt Wescott

USCG

G.A. TEITEL

FOSC

[Signature]

DATE

7-10-90

100

434

KID-7
PB-15

K10-1
p8-26

MS 18
p 10

FILE

MEMORANDUM

ctls
ctls
ctls

**Tackball
Index**

MANUALLY REMOVE
MOUSSE, PATTIES, POURED
OIL, AND TARDALLS

Puget Bay

DATE AP NO 20 CR 20 CT 40 ST MS 20 PT 100 TM 100 JL NO

TOTAL P.06

SHORELINE EVALUATION

SEGMENT ST/ K10-07-PB-019 SUBDIVISION A (1 OF 2) DATE 5/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4QQ State Marine Park Natinal Wildlife Refuge

Sensitivity code and general time constraints. See attached Ecological sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. (See above)

SHPO SIGNATURE: Rachel Ann Oser DATE: 5/22/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 29 m: No Oil 223 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: 5/21/90.
ADEC Alet Weimer D. Weimer
EXXON Amv Tera Real FOSC: [Signature] DATE: MAY 27 1990
NOAA Joseph Talbot
USCG G.A. FETTER G.A. Becker

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 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, 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 prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 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, 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 Kotol Bay Hatchery release
 Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 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
 Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 6/30)
 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 Larry Nicholson 486-4791
- 3O, 3Q Harbor seal and sea lion pupping (5/10 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 267-2208
- 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 (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)
 Finfish harvesting
 Deer harvesting (8/1 to 1/7)
 Invertebrate harvesting
 Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
 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

554
⊕

SEGMENT ST / K10-6 PG 19A SUBDIVISION: KN-7-PB-19A DATE 5.2.91

7

USCG

NAME D. Hansen Jr., CMS, USCG SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME Francine J. Bennis SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Only splatters observed.

LAND MANAGER

NAME JOHN HARDISTER SIGNATURE [Signature]

USFWS

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Did not observe this segment directly. Concur with ADEC representative.

SHORELINE OILING SUMMARY

REVISION NO. 04/12/90

OG Acton USCG Haven SEGMENT ST/ K10-7-19A
 BIO Davis LAND REP NH Tregor (for USFWS) SUBDIVISION K10-6-19A (1 OF 3)
 EXXON Avery ADEC Bennis TIME 15:10:15
 EAM NO. 20 TIDE LEVEL +6 1m +5 DATE 5/2/90
 ST. SUBDIVISION LENGTH: 230 m ☐ Sun ☐ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 60 % B 35 % C 2 % P 1 % G 1 % S 1 % M - % V - %
 SLOPE: Long 20 % Hang 4 % Vert 40 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W - m M - m N - m VL 10 m NO 220 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	N	P	S	SP	ST	SL	SB	SS	SU	U	M	U
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT													
STAIN				✓		✓					✓		
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										✓		✓	✓

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE -#BAGS 0

Photographs:

Roll No. ST-20-9Frames 11, 12

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	SP	ST	SL	SB	SS	SU	U	M	U				
1	10					✓	.		✓							✓						R, B, G
2	5					✓	.		✓						✓							R, B, G
							.															
							.															
							.															
							.															
							.															

COMMENTS Several very light stain (ST/SL) were observed in one area of the upper PITZ.
 This subdivision is very high wave exposure and comprised primarily of rock platform with boulder/rubble veneer.

REVIEWED BAT DATE 8 MAY 90

OG

SEGMENT ST/ K10-7-PB-19A

SUBDIVISION K10-7-PB-19A

DATE 5 / 2 / 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bdry
- ☐ Oil Det.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/VL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(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

Cilled Vegetation

1 →

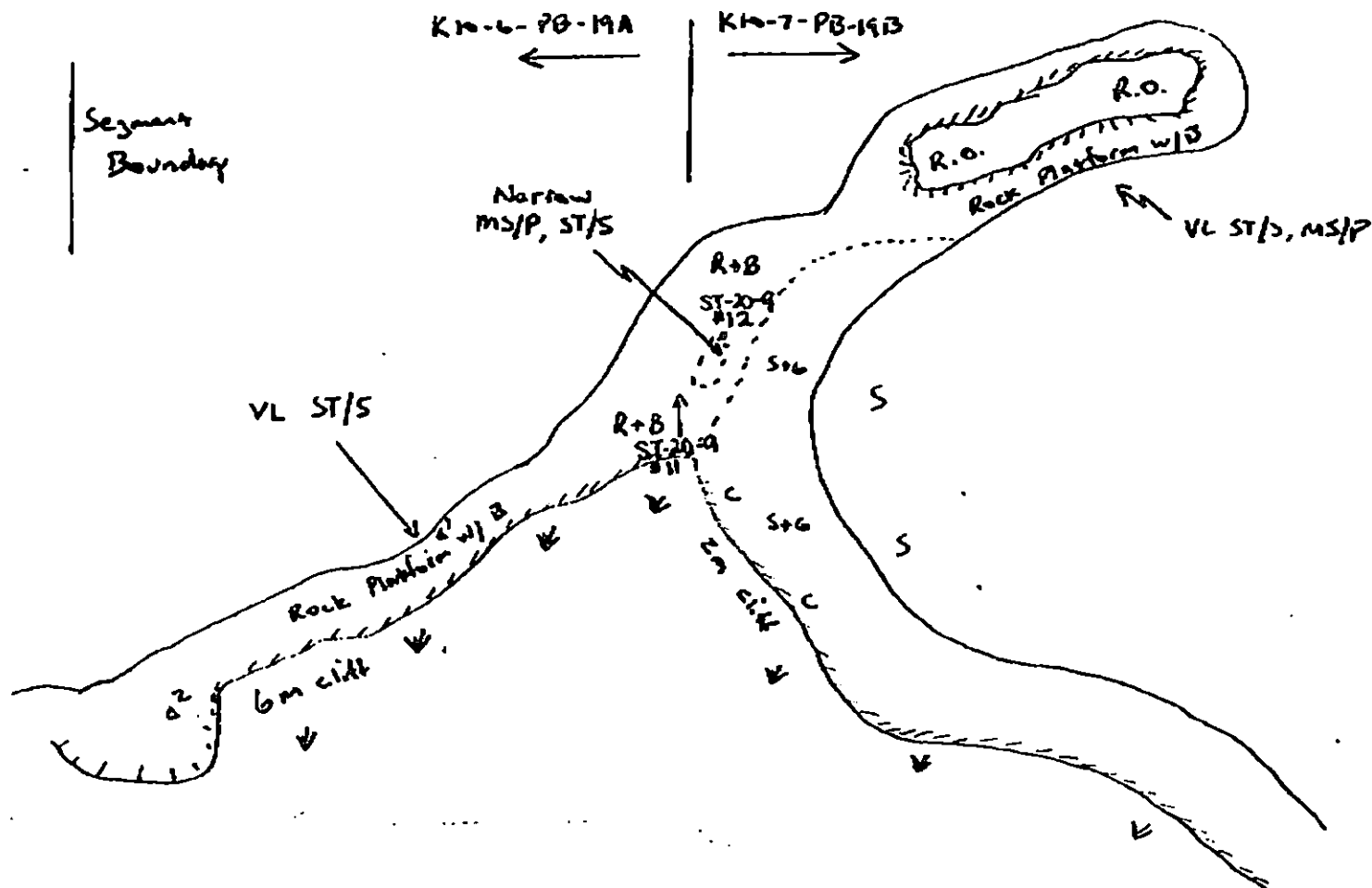
Photo location, direction,
and number

SKETCH MAP

N ↑

Approx. Scale

1cm = 30m



Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 10 MS 0 PT 0 TB 0 FL 0 NO 220

REVISIONS/2499

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/7

Segment ST/K10-7 Subdivision PB-19A Date (mo/day/yr) 5/2/90

Time (24 hr) 12:30 Biologist H. Davis

(A) Substrate type and % of segments:
(1) Bedrock 60 (2) Boulder 35 (3) Cobble 2 (4) Pebble 2 (5) Sand 1 (6) Silt —(B) Overall % cover of biota (% of segment): Dense 20% Moderate 30% Low 50% (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-20-9Frames 11, 12,

BARNACLES Continuous along segment. Some sparse - some dense. Mostly Moderate.

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
3, 4, 5, 6

MYTILUS Small patches of small mytilus, most were < 5cm in length.

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
3, 4, 5, 6

GASTROPODS Continuous but variable in density. Littorina moderate; Limpets sparse, Nucella Sparse-Rare.

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
4, 5, 6

FUCUS Continuous with variable density. A lot of new growth

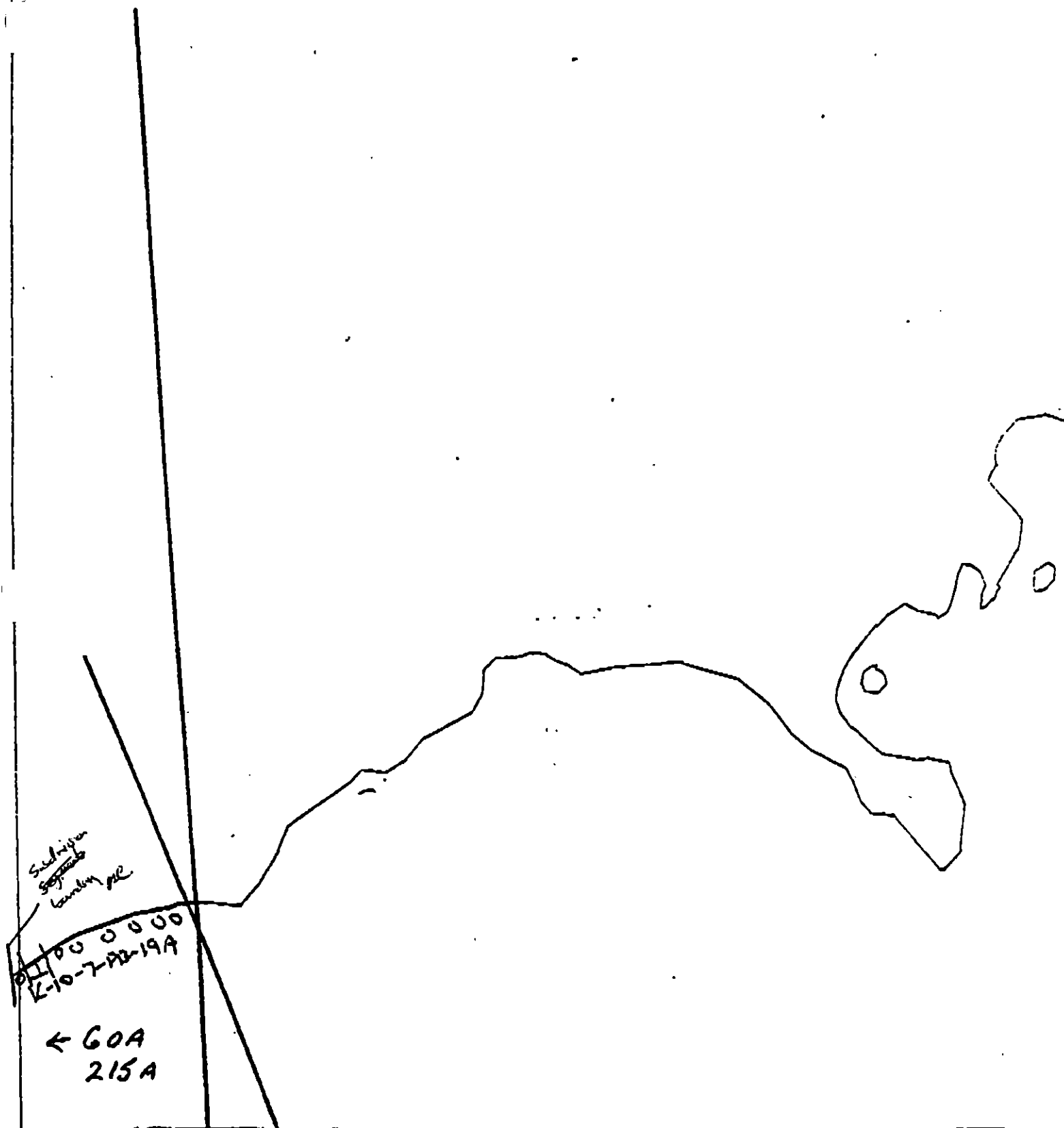
Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESEN
4, 5, 6Wildlife Observations/ General Comments: The lower intertidal was dominated by *Lammaria dentigera*, *Alaria*, *Dredia* - unknown *Gigartinales* blade, *Rhodomenia*, and coralline. *Anthropus artemisia* *mopali* sp. *Katharina tunicata*, unknown holothuroids, and *Pagurus* sp. The MTZ was dominated by *Littorina*, *Corallina*, *Rhodomenia*, *Odonthalia*, *Ulva*, *Fucus*, *Notoacmea*, *Anthropus artemisia*, *Littorina cressicornis*, *Pagurus*, *Spinolus*, unknown *Rhynchonell*.Ecological Considerations: *Balanus cariosus* and *Glandula*, *Littorina sitkana* and *Scutellata*, *Nucella*. The MTZ was dominated by *Fucus*, *Rhodomenia*, *Odonthalia floccosa*, *Ulva*, *Boswellia* and *Corallina*, *Balanus*, *Glandula*, *Littorina*, *Nucella*, *Notoacmea* and *Pagurus*. Birds seen in the area Harlequin, Mergansers, Cormorants, Glaucous-winged Gulls, Tundra Swans, 2 adult Eagles and mergansers. Mammals using the area Caribou, Foxes (they have an active den on bluff) Sea Otters, Wolves and 2 Bears.

ROLL NO. ST-20-9 FROM 4/29 TO
TEAM NO. 20 PWS / KENAI / KODIAK / AK. PENINSULA

FRAME	PHOTO	SIDE	DATE
NUMBER	GRAPHIC	TYPE	DESCRIPTION

[illegible]



XXXX Wide

//// Medium

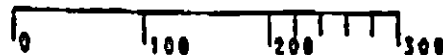
---- Narrow

TTTT Very Light

OOOO No Oil

PB-19A

ADEC Segment Length: 3295m



K10-7-PB-19A
Map Key: GOA-215b

Name: Acton

Date: 5-2-90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ K10-7-PB-019 SUBDIVISION B (2 OF 2) DATE 5/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
4QQ State Marine Park National Wildlife Refuge

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

SHPO SIGNATURE: Rachel Joan Over DATE: 5/22/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 201 m: No Oil 2843 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: Recommend manual pick up of mousse accumulations in the UITZ
as indicated on the attached sketch map. No specific environmental time
constraints identified.

TAG COMMENTS:

TAG APPROVAL DATE: 5/21/90.

ADEC Art Weiner Art Weiner

EXXON Andy Tsch Andy Tsch

NOAA Joseph Talbot Joseph Talbot

USCG G.A. Reiter G.A. Reiter

FOSC

DATE: MAY 27 1990

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 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, 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 prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 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, 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 Kotol Bay Hatchery release
Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 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
Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 6/30)
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 Larry Nicholson 486-4791
- 30, 3Q Harbor seal and sea lion pupping (5/10 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)
7H Finfish harvesting
7I Deer harvesting (8/1 to 1/7)
7J Invertebrate harvesting
7KK Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
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 / K10-7 ^{AB} P.B.194 SUBDIVISION: K10-7-73-14 ^{AB} DATE 5-2-90

USCG

NAME D.D. Haven Jr. / M3, USCG SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Mousse is not weathering rapidly, But it should be low priority due to very small quantity.

ADEC

NAME Francine J. Bennie SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Observed 2 areas of Mousse saturated fine sediments among cobble/boulders, easily accessible, collectable by shovel from

1. 3m x 20m band

2. 3m x 4m band just to the south of band described

Mousse is also present in cracks/crevices of boulder/bedrock in this area, but generally too difficult to extract.

LAND MANAGER

NAME JOHN HARDISIER SIGNATURE [Signature]

USFWS

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Was not present on this segment due to assignments on other segments. Agree with ADEC observations and recommendations.

SHORELINE OILING SUMMARY

REVISION NO. 04/12/90

OG Acton USCG Haven SEGMENT ST/ K10-7-PD-193
 BIO Davis LAND REP NPS Troyer (for USFWS) SUBDIVISION K10-7-PD-193 (1 OF 2)
 FXXON Avery ADEC Bennis TIME 12:45 to 2:30
 EAM NO. 20 TIDE LEVEL +4.5 to +2.0 DATE 5/2/90
 ST. SUBDIVISION LENGTH: 4392 m ☐ Sun ☐ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SE to NW
 SURFACE SEDIMENTS: R 40 % B 30 % C 20 % P 10 % G - % S - % M - % V - %
 SLOPE: Long 80 % Hang 20 % Vert - % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W - m M - m N 20 m VL 200 m NO 4172 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	S	P	B	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 0 sq. m by 0 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? ☒ NO BR RW SL TL

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

Photographs:

Roll No. ST-20-9Frames 18-23

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	6	7	8	SU	U	M	U				
1	10																								<P>
2	5																								RB
3	5																								RB
4	5																								RB
5	5																								RB
6	10																								<R

COMMENTS A smud (2m x 2cm) of narrow oiling was observed in between boulders at the extreme SE end of the segment, on the SE side of the isthmus which connects the mainland w/ an offshore rock outcrop. Oiling here was stain and mousse in between boulders. Other oil observed was very light stain or mousse at very widely spaced / sporadic intervals. This segment is primarily rock platform composed of exposed shale/slate beds folded at an approximate 45 degree angle.

REVIEWED TBAT DATE 8 MAY 90

OG f-n

SEGMENT K10-PB-19B

SUBDIVISION K10-PB-19B

DATE 5/2/90

CHECKLIST

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

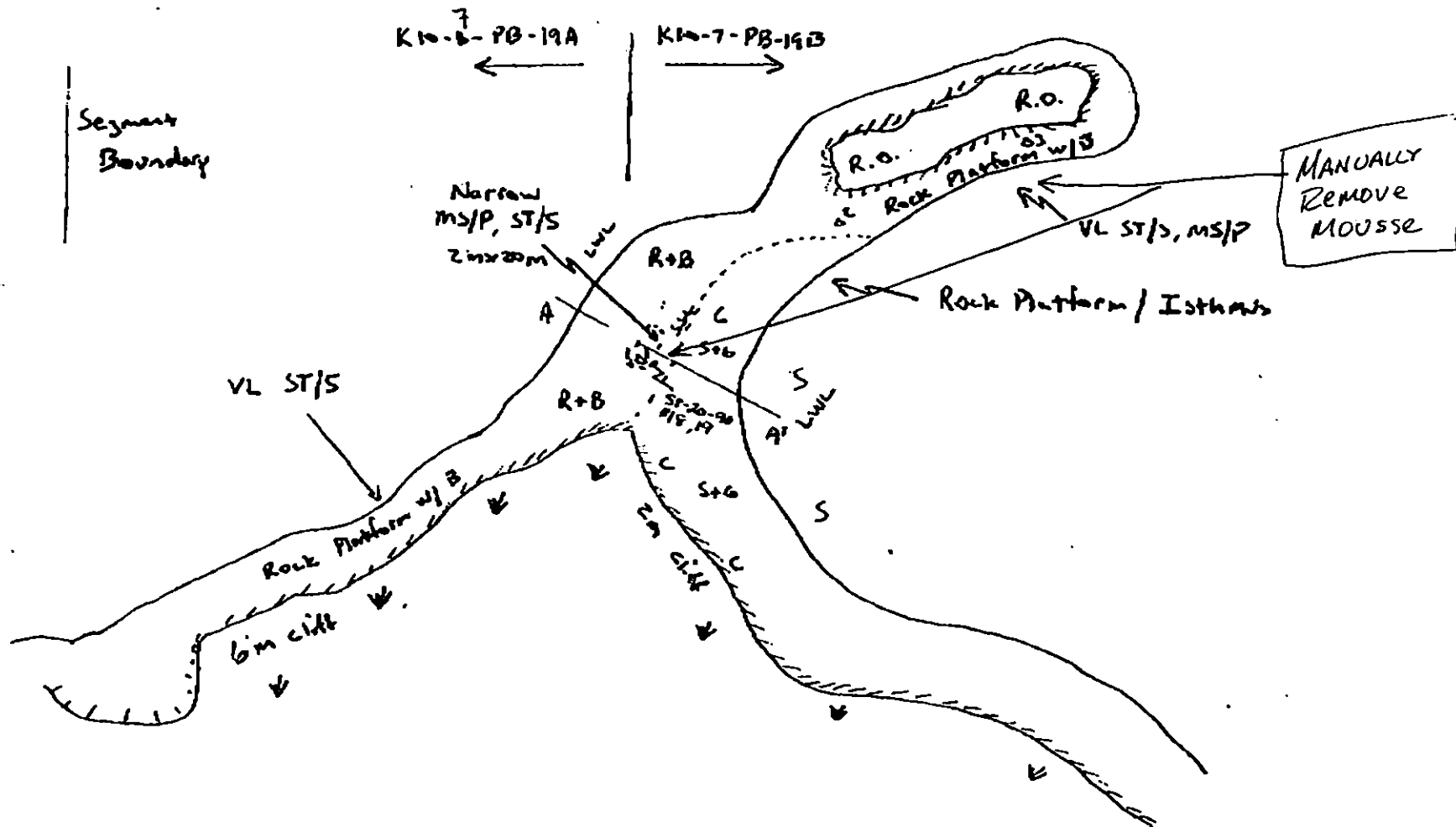
Oiled Vegetation

1 $\Rightarrow$

Photo location, direction, and number

TCH MAP

N
↓
Approx Scale
1cm = 30m



Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 220 MS 220 PT 0 TB 0 FL 0 NO 4172

REVISION 9/2/90

06 Ac

SEARCH MAP

SEGMENT ST/ K10-7-P13-19 ^B ~~A~~

SUBDIVISION K10-7-P13-19 ^B ~~A~~

DATE 5/2/90

CHECKLIST

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

LEGEND

1 Δ

PR - No Subsurface Oil

2 Δ

PR - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

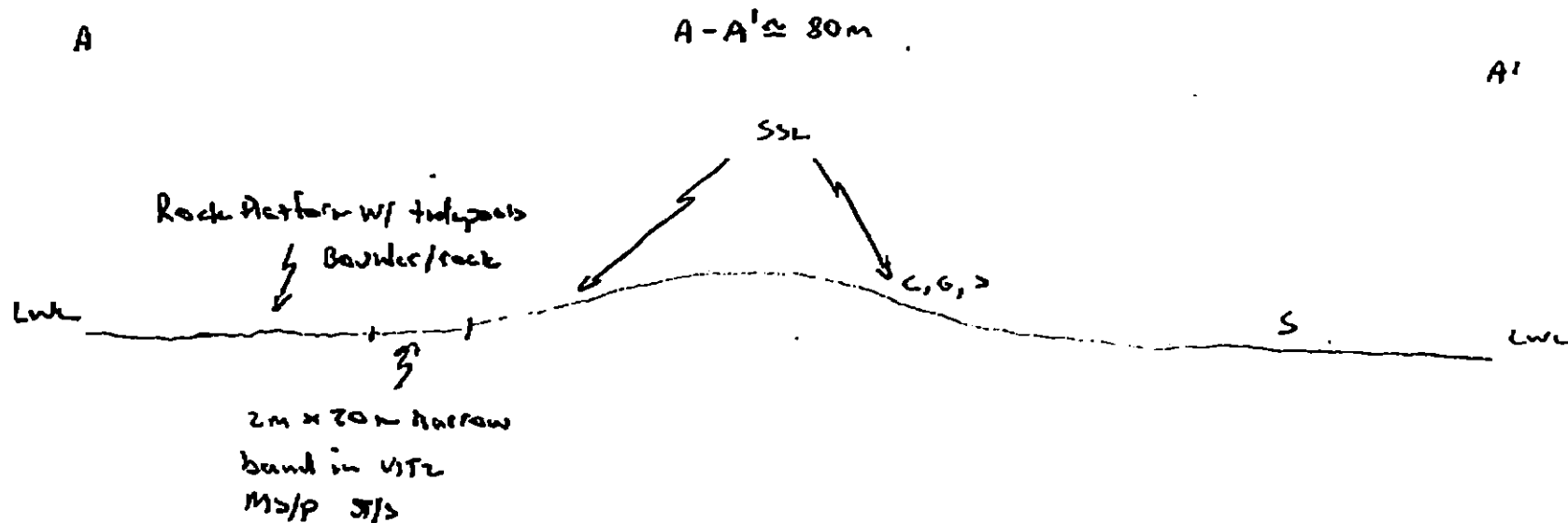
CT/S

Splashed Distribution

Oiled Vegetation

1 $\Rightarrow$

Photo location, direction,
and number



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

REVISION: 02/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22

Segment ST/K10-7 Subdivision PB-19A B Date (mo/day/yr) 5/2/90
 Time (24 hr) 13:00 Biologist H. Davis

- (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 10% Moderate 40% Low 50% (30%)
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

Photographs:
 Roll No. ST-20-9
 Frames 18-23

BARNACLES Continuous along the segment except where interrupted by small sand beaches

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

NOT PRESENT

MYTILUS No dense patches, small numbers in crevices. Very patchy most smaller than 4cm.

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

3,4,5,6

GASTROPODS Variable but continuous. Dense to rare areas along segment

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

NOT PRESENT

4,5,6

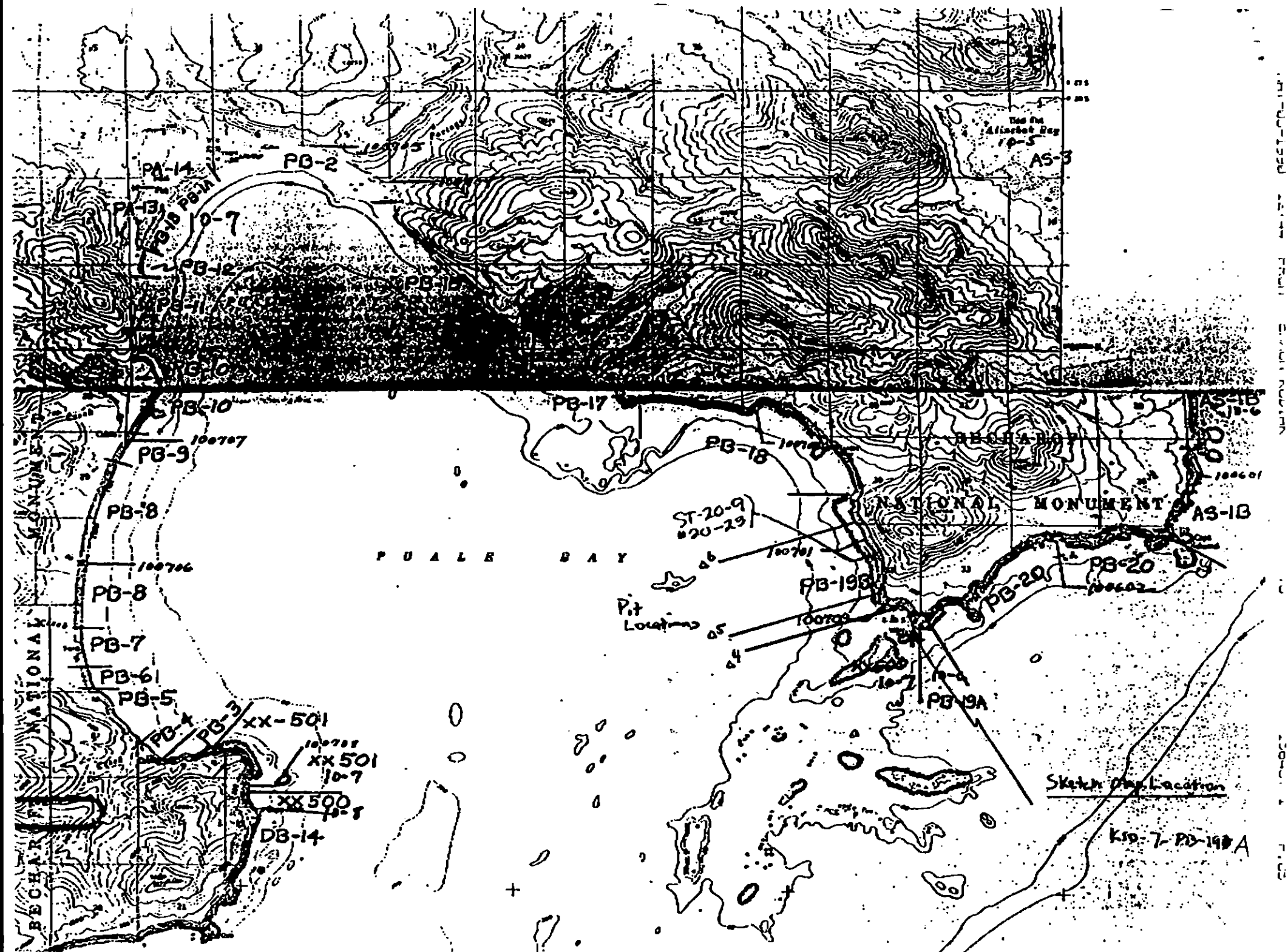
FUCUS Continuous with a variable density. A lot of new growth.

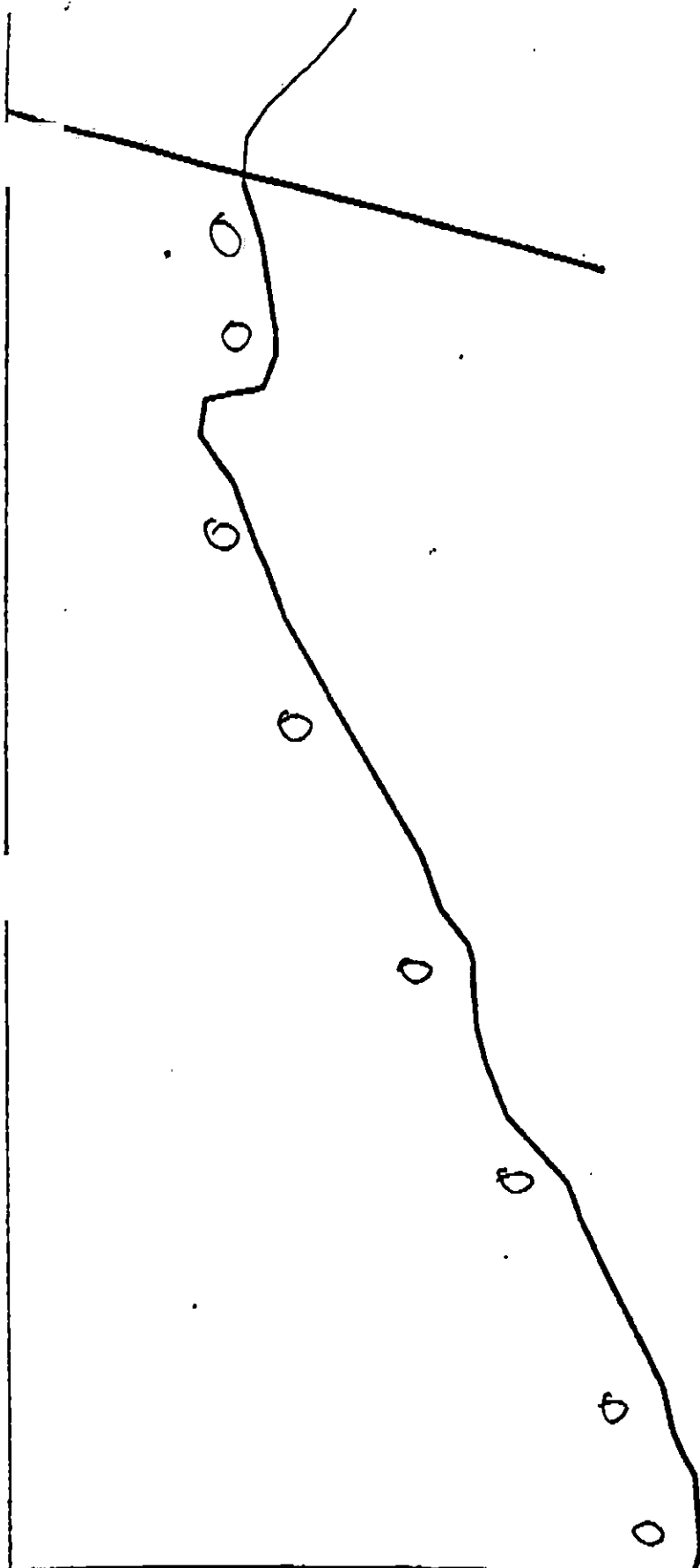
Dense			Moderate			Sparse			Rare		
1M	1L		1M	1L		1M	1L		1M	1L	
2	2		2	2		2	2		2	2	
3	3		3	3		3	3		3	3	
4	4		4	4		4	4		4	4	
5	5		5	5		5	5		5	5	
6	6		6	6		6	6		6	6	

NOT PRESENT

3,4,5,6

Wildlife Observations/ General Comments: This segment is mostly shale/mudstone shelves tilted at an angle. LTZ Dense littorine Fucus, Rhodomela, Odonthalia, Porphyra, Soma Nucella, limpets, Platyhelminthes sp, littorina egg S. Amphipods, M.T.Z was mostly Rhodomela, Odonthalia, Corallina, Zostera marina in pools, Anthopleura artemisia, Katharina tunicata, Tonicella, and Pagurus sp. The LTZ was covered with sand in Ecological Considerations: many areas but had Laminaria, Zostera, Alaria, Rhodomela None listed but Eagles, Dredge, Birds seen merganser, Harlequin, Surf scoter, maybe nesting on the point. Nearby segment have anadromous stream Cormorants, Glaucous-winged gulls, Snow Bunting, Wandering Tattler. 2 adult Eagles and Tundra swans. Sea Otters, Bear, Foxes, Wolves and Caribou tracks were found along this segment.





K10-7-PB-19B

GOA
↓ 215A

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

PB-19

ADEC Segment Length: 3295m



K10-7-PB-19B

Map Key: GOA-215c

Name: ActonDate: 5-2-90

Data Entered:

↑
GOA
215C

K10-7-PB-19B

PB-19

Subdivision

Boundary

GOA
215B-

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

P.B-19

ADEC Segment Length: 3295m

0 100 200 300
METERS

K10-7-PB-19B

Map Key: GOA-215a

Name: ActonDate: 5-2-90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K10-7-PB-019 SUBDIVISION B (2 of 2)

WORK WINDOW

Manual Pickup

OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

[Signature]

Date

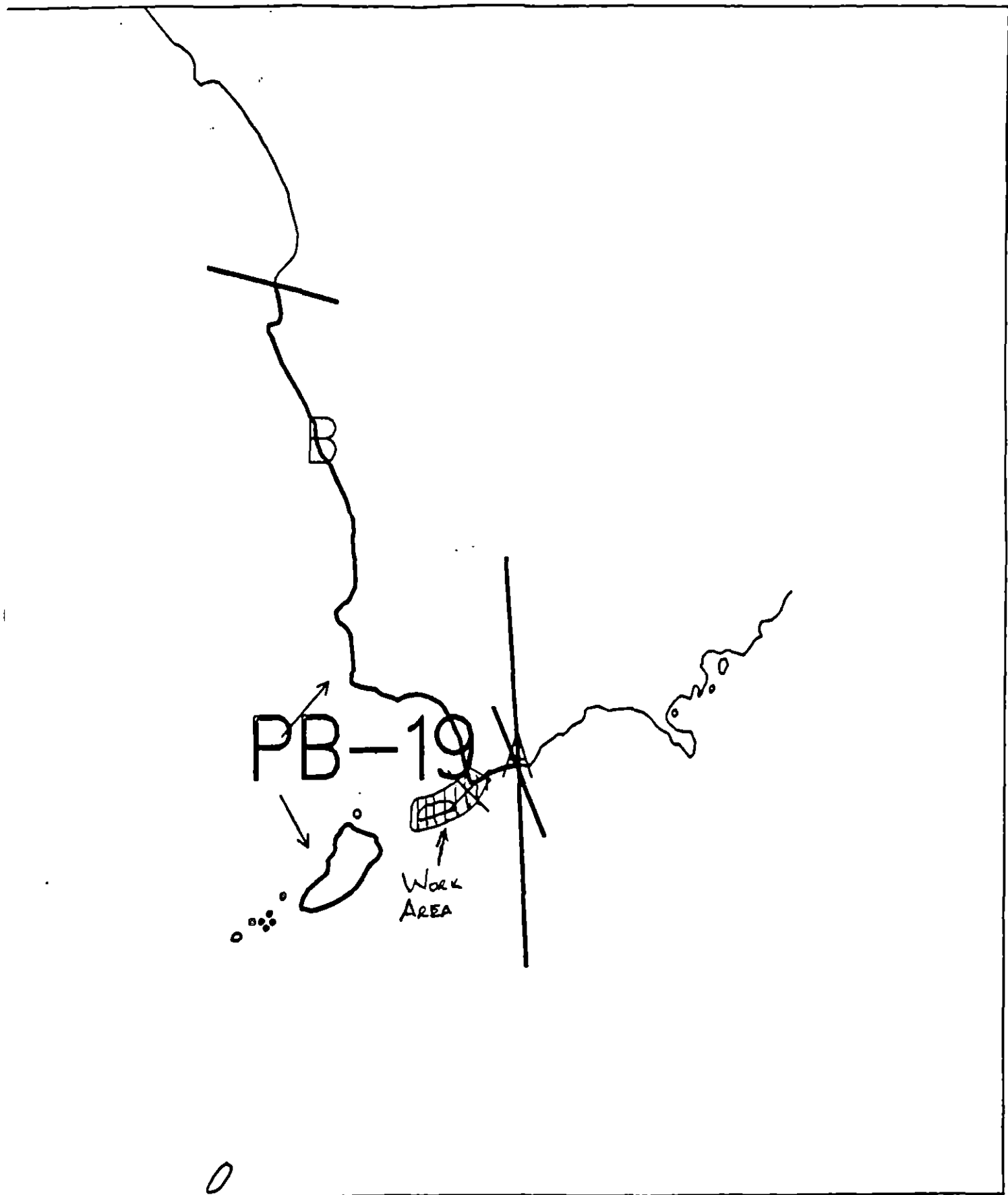
6/15/90

Prepared by

REG-1-Carlton

Date

06-14-90



Exxon Company, USA
Map No. AKP-PB-19



ECOLOGY MAP
SEGMENT K10-7 PB-19
SUBDIVISION B (2 of 2)
METERS

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

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/K10-09-DB-08 STREAM NO: 262-75-10020 DATE 5/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Reckel Joan Durr DATE: 5/22/90

Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/18/90.

ADEC Art Weimer Art Weimer

EXXON Andy G. Reed

NOAA Gary Petree Gary Petree

USCG G.A. REITER G.A. Reiter

FOSC: [Signature] DATE: MAY 27 1990

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 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, 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 prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 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, 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 Kotai Bay Hatchery release**
 Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site**
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 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
 Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 8/30)**
 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 Larry Nicholson 486-4791
- 3 Harbor seal and sea lion pupping (5/10 to 7/1)**
3B 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 8/1)**
Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation:**
6V Tent sites (6/1 to 9/15)
6W Anchorages (6/1 to 9/15)
6X Forest Service cabins (6/1 to 9/15)
6Y Lodge (6/1 to 9/15)
Special use destination
- 7Z Subistence area: Salmon harvesting (6/1 to 9/30)**
Finfish harvesting
Deer harvesting (8/1 to 1/7)
Invertebrate harvesting
Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
- 7KK**
 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

4/38 H 4

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1D3008 SUBDIVISION: _____ DATE 5/2/90

USCG NAME CWO McMillan SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADF&G

~~REC~~ NAME JEFFREY BARNHART SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

VL T/P T/B. If a cleanup crew was working in a nearby area I would suggest that the T/P T/B be manually picked up and removed.

LAND MANAGER

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

OG WILLIAM REID USCG McMAHON SEGMENT ST/ DB 008
 BIO MICHAEL FAWCETT LAND REP STREAM 262-75-1000 OF
 EXXON GUS GARCIA ADFG MIKE WIEDER VEEC 304417 TIME 15:20
 TEAM NO. 15 TIDE LEVEL 1.5 ft DATE 5/1/90
 EST. SUBDIVISION LENGTH: 400 m ☐ Sun ☐ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 10 % B 30 % C 10 % P 10 % G 30 % S 10 % M 10 % V 10
 SLOPE: Lang 100 % Hang 100 % Vert 100 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 30 m VL 0 m NO 370

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	IC	IS	IF	IR	SP	OR	OL	OF	OT	OB	SU	U	M	L
ASPHALT														
PAVEMENT														
POOLED														
COVER														
COAT														
STAIN														
MOUSSE														
PATTIES														
TARBALLS														
FILM														
NO OIL														

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

Did you Col
DEBRIS
☐ YES ☒ NO

TYPE 0#BAGS 0

Photographs:

Roll No. A5-15-8Frames 12-13

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		UC	UC	SP	OR	OL	OF	OT	OB	SU	U	M	L				
1	50					X	.									X					N		S/E
2	40					X	.									X					N		G/L
							.																
							.																
							.																
							.																
							.																

COMMENTS

REVIEWED

DATE

5/8/90

SKETCH MAP

ST/ DB GUP

STREAM 26275-10020

DATE 2, MAR 90

CHECKLIST

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

LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

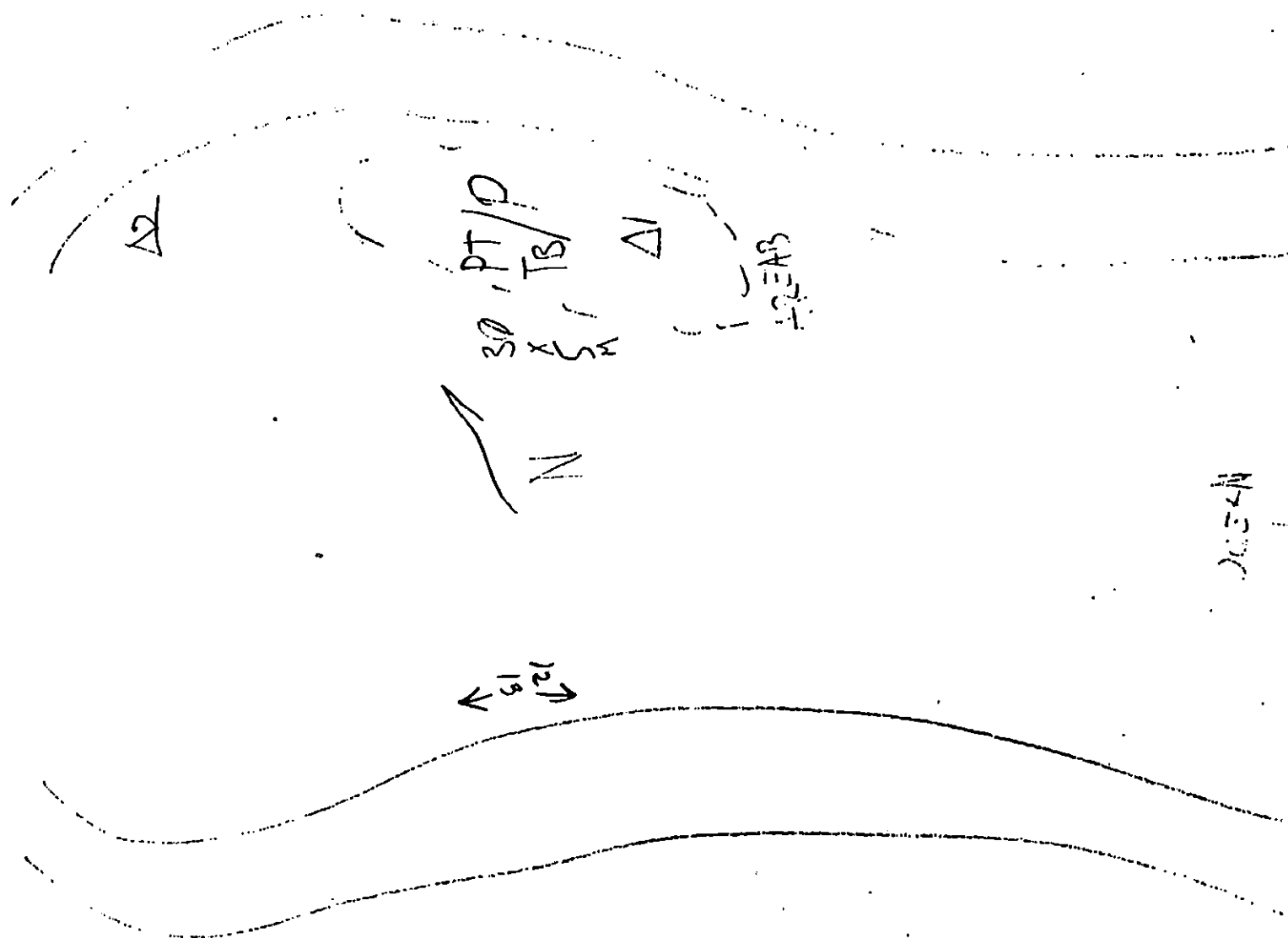
Splashed Distribution

eee

Oiled Vegetation

1 $\rightarrow$

Photo location, direction, and number



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

REVISION: 02/24/90

ADF&G MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS (SS) DS TS AVS SCHA MOHS PTA 2 REGION: PWS KP,CI X (AP)

METHOD: Aerial (Ground) Boat

3 DATE: 6/2/90 15 HIGH TIDE TIMES: 8:52 AM 1 10:16 PM 21 TEAM RECORDER: JEFFREY BARRINHART
Chris Corbin William Reid

4 START TIME: 1620 16 HIGH TIDE HTS: 14.1 1 14.8 22 OBSERVERS: John McMath Mike Fox

5 STOP TIME: 1655 17 LOW TIDE TIMES: 3:11 PM 1 3:50 PM 23 AGENCY: ADF&G EIS / WCC / USCG

6 SEGMENT #: DBCCB 18 LOW TIDE HTS: 5.4 1 1.9 24 PHOTOS TAKEN: Y (N)

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

8 K-UNIT: K1009 Ebb Slack Flood (Slack) 25 VIDEO TAKEN: Y (N) TAPES: _____

9 STAT AREA: _____ 20 USCG QUAD: Ka, Luk C-6 Start: _____ End: _____

10 LAT: 57° 38' 31" 11 LONG: 155° 46' 18" 26 SAMPLES TAKEN? Y (N) Number _____

12 SOURCE: Map Loran (Analog) Oil _____

13 LOCATION: Dry Bay, Alaska Peninsula Sediment _____

14 DESCRIPTION: S 39S 40W 29 Biological _____

Water _____

EXTENT OF OIL

	SHORELINE				STREAM			
	L	W	M ²	%	L	W	M ²	%
17 SURFACE COVERAGE	30	3	90	25				
28 SURFACE THICKNESS								
29 PENETRATION								
30 OVERALL OIL IMPACT: N <u>(VL)</u> L M H								
31 OIL TYPE: Pooled Mousse <u>(Tar)</u> Asphalt Sticky Stain								
32 OILED DEBRIS? Y <u>(N)</u>								
33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cove <u>(Lagoon)</u> Marsh								
34 WAVE EXPOSURE: High Moderate <u>(Low)</u>								
35 SUBSTRATE TYPE: Bedrock Boulder Cobble Gravel <u>5</u> Sand <u>9.5</u> Mud/silt								

36 CATALOGED ANAD. FISH STREAM? (Y) N

37 CATALOG #: 262-75-10020

38 STREAM NAME: Dry Bay Creek

39 OIL IN STREAM BED? Y (N)

40 OIL ON STREAM BANKS? (Y) N

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

42 OIL WITHIN 1 MILE OF STREAM? Y N

Where: _____

43 ANADROMOUS FISH PRESENT? Y (N)

44 ANADROMOUS FISH OBSERVATION

Species	Aerial	Ground

COMMENTS: Area A (see sketch map) was found to have oil. It was VL Tar patches and Tar balls. The oil was found in a nearby area I would suspect that the oil be manually picking up. Jeff Barrinhart

I agree with recommendations. M. J. Farris

SHORELINE EVALUATION

SEGMENT ST/ K11-01-IL-001 SUBDIVISION A (1 OF 2) DATE 5/15/90

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)
(262-80-10010, 262-80-10012)

4QQ State Marine Park National Wildlife Refuge

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. Holmes DATE: June 19, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 713 m: No Oil 1630 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: 6/16/90

ADEC Ryan M. Morris

EXXON Amy Tetz

NOAA John C. Galt

USCG C.A. Fritzel

ADVA Flag ~~is~~ not priority for
full survey if reassessment desired.
FOSC: D. J. ... DATE: 7/5/90

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 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, 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 prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 1C Salmon fry nursery area (4/31 to 7/31)
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 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Kotol Bay Hatchery release
 Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 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
 Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 6/30)
 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 Larry Nicholson 486-4791
- 3N, 3P Harbor seal and sea lion pupping (5/10 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 588-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (8/1 to 9/15)
 6V Anchorages (8/1 to 9/15)
 6W Forest Service cabins (8/1 to 9/15)
 6X Lodge (8/1 to 9/15)
 6Y Special use designation
- 7Z Subsistence area: Salmon harvesting (8/1 to 9/30)
 7H Finfish harvesting
 7I Deer harvesting (8/1 to 1/7)
 7J Invertebrate harvesting
 7K Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
 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 1K16-01-FL-1 SUBDIVISION: A DATE 5/15/90USCG
NAME Kenneth M. Treabue SIGNATURE K. Treabue☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Concur with OG Comments. Not enough recoverable oil to recommend work order.

ADEC
NAME Francine T. Bernis SIGNATURE Francine T. Bernis☐ NO TREATMENT RECOMMENDED
COMMENTS☒ ^{SPOT CHECK} ~~TREATMENT~~ SUGGESTED

Oil occurs in areas of this segment in the form of ST, CT, mouse caught in rock cracks/crevices, & mouse patches. Interestingly, the patches observed were located in a recent high tide line. We collected them.
Due to weather conditions, exact extent of oil present was difficult to observe. We did not complete assessment of the entire segment. Given the circumstances & patches present in a recent high tide line, I recommend a spot check of area later in the summer to see if any more oil is revealed.

LAND MANAGER

NAME Old Florio Schlotz-Fuss SIGNATURE Old Florio Schlotz-Fuss☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Agree on recheck of area as ADEC recommends - see attachment #2

Attachment 2**U.S. Fish and Wildlife Service Shoreline Cleanup Disclaimer**

This comment sheet is based on current observations and is solely for the purpose of planning and scheduling of 1990 response treatment actions. It in no way implies that the State or Federal government will not in the future determine that further restoration or other treatment, or compensation is warranted regarding this area, or that the area is considered by the Federal or State government to be adequately 'clean' or 'restored' for the purpose of any claim which the State or Federal government has brought or may bring against Exxon, Incorporated or any other potentially responsible party.

SHORELINE OILING SUMMARY

REVISION NO 04-13-90

OG Greg Chaney USCG Ken Trabue SEGMENT ST/ K11-1-IL-1
 BIO Heather Davis LAND REP Otha Harris USFWS SUBDIVISION A (1 OF 1)
 EXXON — ADEC Fran Bennis TIME 10:40/13:00
 TEAM NO. 20 TIDE LEVEL 3.0 to 0.5 ft DATE May 15/90
 EST. SUBDIVISION LENGTH: 2240 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock alders
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: South to North
 SURFACE SEDIMENTS: R 40 % B 30 % C 5 % P 0 % G 0 % S 25 % M 0 % V 0 %
 SLOPE: Long 45 % Hang 5 % Vert 50 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 785 m NO 1455 m

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0 cmPATTIES / TARBALLS collected 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 mousse balls#BAGS 1

Photographs:

Roll No. ST 20 11Frames 9

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		UC	UC	1	2	3	4	SU	U	M	L				
1	35					X	.								X				N	30	Sand
							.														
							.														
							.														
							.														
							.														

COMMENTS

See attached.

REVIEWED BA7 DATE 18 May 90

COMMENTS
SEGMENT 8TK11-01-IL1-A

May 15 1990

Greg Chaney

The survey of segment 8TK11-01-IL1-A was conducted in wind blown rain under low overcast skies. These conditions made locating oil more difficult than usual. This subdivision encompasses the south western edge of the Island Bay on the Alaska Peninsula. The coast is composed primarily of steep bedrock cliffs and sand beaches. Boulders were often observed near the base of cliffs. Along this subdivision, splattered stain on bedrock and boulders was commonly observed. It appeared have been a remnant of splattered coats and covers which were abraded by abundant sand and high energy waves from the Gulf of Alaska. In addition to the dispersed stain, more concentrated oiling was discovered around the location of pit #1. Along a section of beach roughly 30 meters long, mousse was retained in cracks of large boulders. The surface of these boulders were also splattered with cover, coat and stain. This section of beach was particularly unusual because the oiled boulders were randomly coated with loose sand up to 5 cm. deep. It was not possible to see mousse retained by boulders until sand was scrapped away from the rock surfaces. Additionally, the area appeared to have been at the bottom of an active snow avalanche chute and snow still remained in the shape of an inverted cone above the oiled beach. Our DEC representative stated that the area had been snow covered through much of the winter and spring. This may help to explain why so little weathering had taken place in this location relative to other portions of adjacent beach. Although mousse was found over 2 centimeters deep, and splattered mousse/tar cover was present on boulders, surficial coverage was less than 10%. This seemed due to the sand coating which undoubtedly covered much of the oil present. Much of the tar and mousse had incorporated a significant amount of sand into the oil matrix. This made detection of exposed oil even more difficult than usual. Just northeast of this oiled area, 6 very sandy mousse balls were collected. These were recovered from the last high tide line. These mousse balls may have been recently eroded from the adjacent oiled section just described. More sandy splattered coats and covers were located near the stream at the end of the subdivision but these did not cover more than 10% of the beach in any area. Sheen was not observed in the water along the segment, however sheen was "bleeding" off of mousse in the heavy rain. Another unusual observation was that brown bears had been digging in the sand around areas of oil concentration.

OG Greg Chaney
 SEGMENT ST/ K11-1-IL-1

SUBDIVISION A

DATE May 15 90

CHECKLIST

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

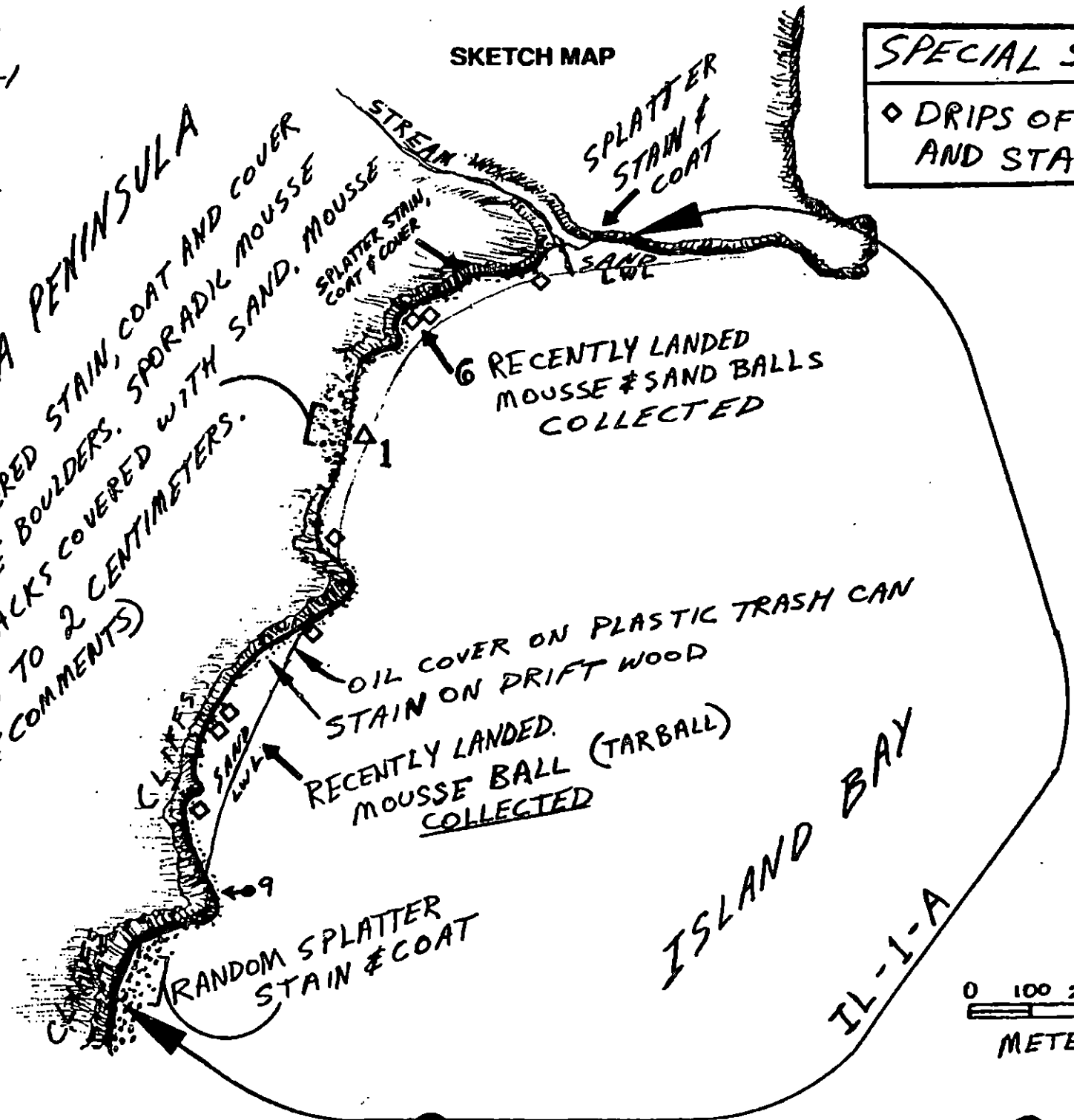
LEGEND

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

SKETCH MAP

SPECIAL SYMBOL
 $\diamond$ DRIPS OF TAR AND STAIN

ALASKA PENINSULA
 SPLATTERED STAIN, COAT AND COVER
 ON LARGE BOULDERS. SPORADIC MOUSSE
 POOLED TO 2 CENTIMETERS.
 (SEE COMMENTS)



ISLAND BAY
 IL-1-A

0 100 200 300
 METERS

Oil Char Length (m): AP 0 PO 10 CV 50 CT 100 ST 750 MS PT 0 TB 0 FL 0 No 1455

15643771 P.35 TO EXXON KODIAK MAR-17-1990 12:38 FROM

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/K11-01 Subdivision IL-01A Date (mo / day / yr) 5/15/90
 Time (24 hr) 10:30 Biologist H. Davis

- (A) Substrate type and % of segments:
 (1) Bedrock 40 (2) Boulder 30 (3) Cobble 5 (4) Pebble — (5) Sand 25 (6) Silt —
- (B) Overall % cover of biota (% of segment): Dense — Moderate 20 Low 80% (20%)
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)
- Photographs: Roll No. ST-20-11
 Frames 9

BARNACLES Intermittent, Dense - Sparse in areas with substrates Barnacles can attach to.

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

MYTILUS Rare, a few in crevices on boulders.

Dense			Moderate			Sparse			Rare			NOT PRESENT 3,4,5,6
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	~~X~~	~~X~~	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	
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 Littorina Dense-Sparse, Nucella Rare, limpets sparse.

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

FUCUS Intermittent on boulder tops. Dense in small patches.

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

Wildlife Observations/ General Comments: See attached page.

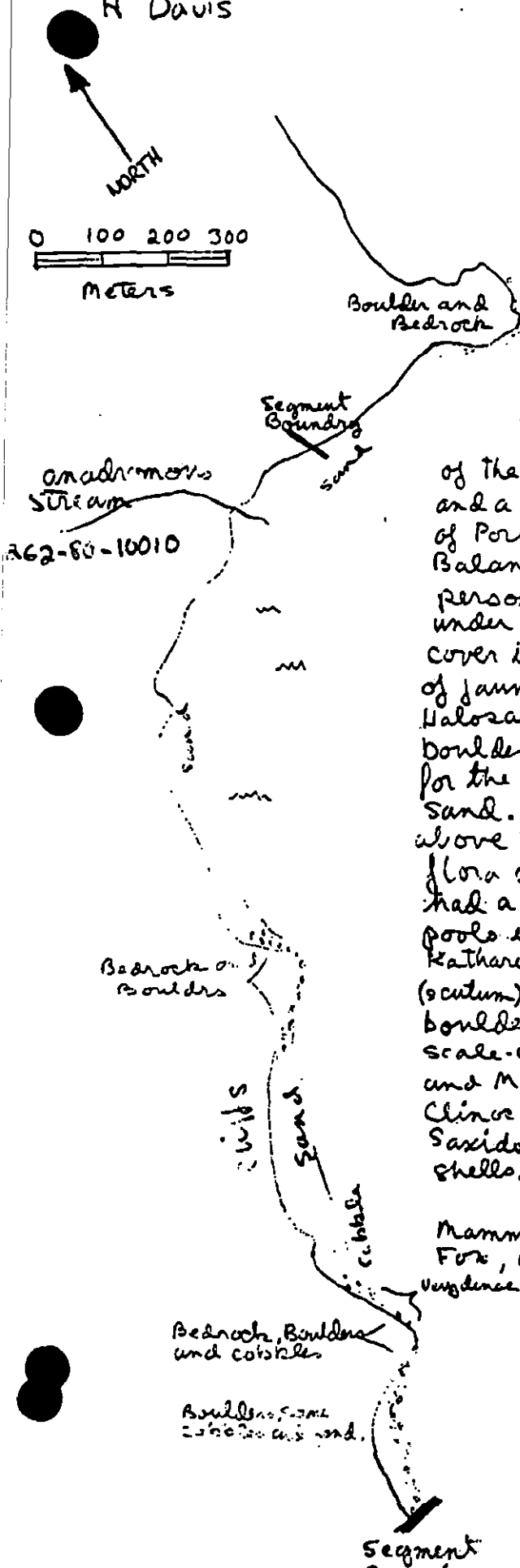
Ecological Considerations: No Ecological constraints on list. There are two streams that are anadromous. Stream # 262-80-100/2 has Pink Salmon and Dolly Varden spawning in it. Stream # 262-80-100/0 in IL-01B has Pinkies and Chum salmon spawning in it. No Eagle nests or Seabird colonies were observed although there is one of each on Jule Island (IL-2)

K11-01 IL-01A

5/15/90

H Davis

Ecology Sketch Map



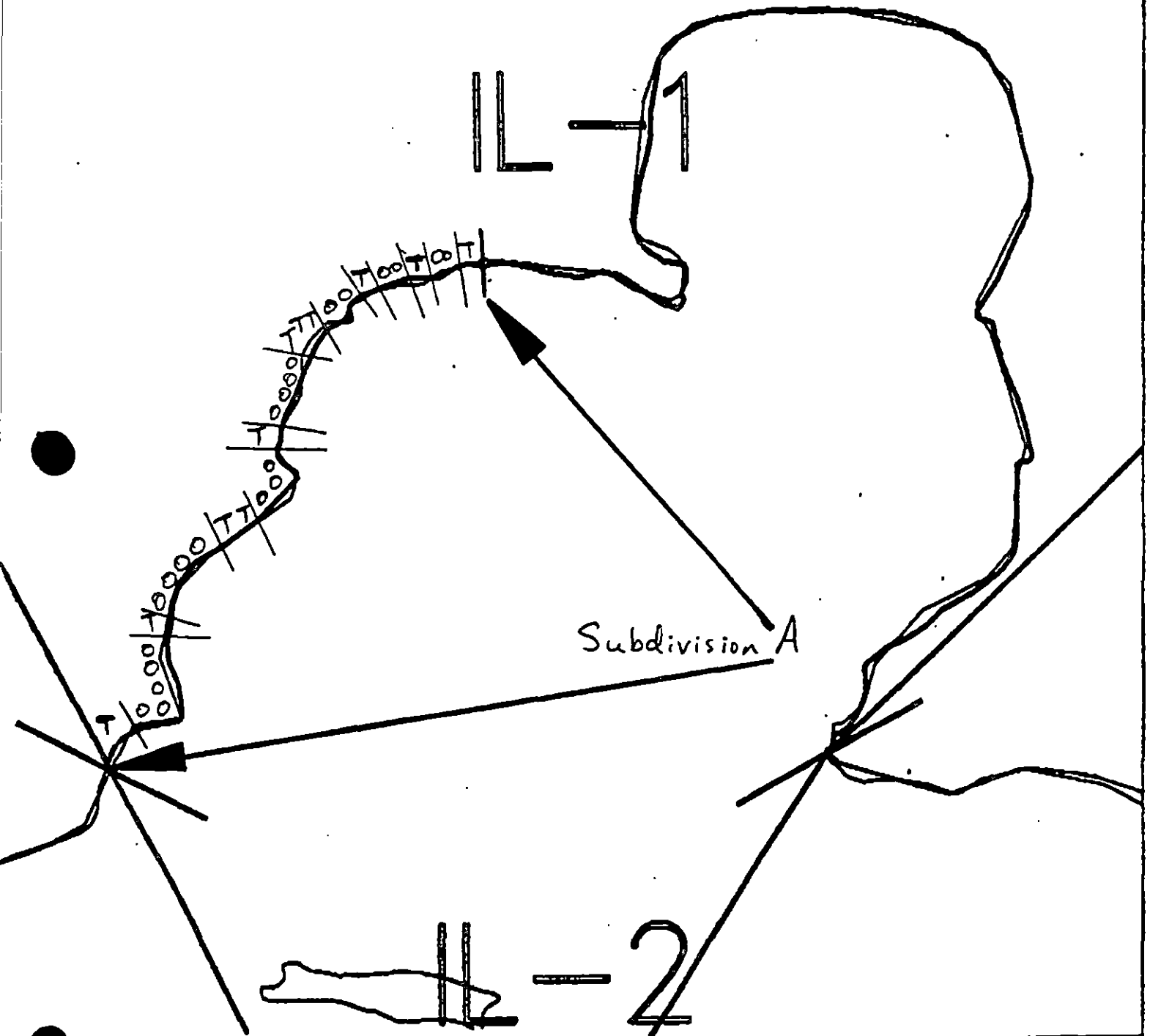
This subdivision had a mixture of sand beaches, cobble beaches, and bedrock/boulder points. The rock/boulder and cobble areas had a narrow band of organisms. The lower intertidal area changed rapidly to sand and the upper intertidal area was against the cliffs. The sandy beaches had no visible organisms, although shells indicated that in the shallows subtidal areas there were bivalves.

On the boulder field at the south-west end of the subdivision there was a moderate algae cover and a sparse fauna. The UTZ had a distinct zone of *Porphyra*, green filamentous algae (*Chaetomorpha*), and *Balanus glandula*. *Littorina cithara* and *Notoacmea personata* were scattered sparsely among the barnacles and under the algae. Below this area the amount of algal cover increases although there is no increase in the amount of fauna. *Rhodomenia*, *Ulva*, *Fucus*, *Scytosiphon*, and *Halosaccion* were the most common algae on the boulders. Under the boulders were some amphipods but for the most part the boulder bases were covered with sand. At each of the three Bedrock/Boulder points above the boulder/cobble field the amount of flora and fauna increased. The upper tide zone had a few *Mytilus* in crevices and more *Fucus*. Tide pools in the UTZ had *Corallina*, *Odonthalia*, *Rhodomenia*, *Katharina*, *Anthopleura* (*artemisia* and *kantagammica*), *Notoacmea* (*scutum*), *Nucella*, and *Halochondria*. Under cobbles and boulders were *Heptasterias* (with eggs), *Idotea*, amphipods, and scale-worms. *Fucus*, *Alaria*, *Pleurophygens*, *Nereocystis*, and *Macrocystis* were found a drift on the sand beaches. *Clinocardium*, *Siliqua*, *Macoma* (with drill holes), and *Saxidomus* were all present on the sand beaches as shells.

The anadromous stream had no fish visible. Mammals in the area: Bear (Mother and at least one cub) Fox, and River Otter (tracks).

The birds in the area were: Glaucous-winged gulls, Harlan's Hawk (Red-tailed), Surf Scoters, Horned Puffins, and Thrush.

K11-1



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

IL-1

ADEC Segment Length: 7700m

0 100 200 300

Map Key: AKP-IL-1

Name: Greg Chaney

Date: May 15 1990

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ K11-01-IL-001 SUBDIVISION B (2 OF 2) DATE 6/1/90

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)
(262-80-10010, 262-80-10012)

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: June 19, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 2006m: No Oil 1504 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: 6/18/90
ADEC [Signature] EXXON [Signature] FOSCO [Signature] DATE: 7/5/90
NOAA [Signature] USCG [Signature]

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 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, 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 prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 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, 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 Kotol Bay Hatchery releases
Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 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
Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 6/30)
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 Larry Nicholson 486-4791
- 3P Harbor seal and sea lion pupping (5/10 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 (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 Subistence area: Salmon harvesting (5/1 to 9/30)
H Finfish harvesting
I Deer harvesting (5/1 to 1/7)
J Invertebrate harvesting
7K Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
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 / L1101 (IL-1) SUBDIVISION: B DATE 6/1/90

USCG

NAME Michael B. Millner SIGNATURE Michael B. Millner DCI

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

NTR. There is virtually nothing to recover

ADEC

NAME Francine J. Beavis SIGNATURE Francine J. Beavis

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Observed Mousse patties + balls.

Collected them.

Occasional splatter is present otherwise

LAND MANAGER

NAME OTTO FLORSCHWITZ SIGNATURE Otto Florschwitz FWS

☒ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Agree with above - nothing recoverable - see Attachment #2

Attachment 2
U.S. Fish and Wildlife Service Shoreline Cleanup Disclaimer

This comment sheet is based on current observations and is solely for the purpose of planning and scheduling of 1990 response treatment actions. It in no way implies that the State or Federal government will not in the future determine that further restoration or other treatment, or compensation is warranted regarding this area, or that the area is considered by the Federal or State government to be adequately "clean" or "restored" for the purpose of any claim which the State or Federal government has brought or may bring against Exxon, Incorporated or any other potentially responsible party.

REF ID: A66040

SURFACE OIL

Frames_____

REVIEWED BA7 DATE 6/6/90

SHORELINE ECOLOGICAL SUMMARY

REVISION 03/22/90

Segment ST/ K11-01 Subdivision TL-001 B Date (mo / day / yr) 6/1/90

Time (24 hr) 12:40 Biologist H. Davis

- (A) Substrate type and % of segments:
 (1) Bedrock 10 (2) Boulder 20 (3) Cobble 10 (4) Pebble 10 (5) Sand 50 (6) Silt —
- (B) Overall % cover of biota (% of segment): Dense 10% Moderate 10% Low 80% (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. ST-20-14

Frames #1

BARNACLES Sparse - Moderate on available rock surfaces.

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

MYTILUS very few patches on Boulders.

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

GASTROPODS Littorina Dense-Sparse, Limpets Mod-Sparse, Nucella Rare

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

NOT PRESENT
 4, 6

FUCUS Moderate-Sparse patches.

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

NOT PRESENT
 4, 5, 6

Wildlife Observations/ General Comments: Birds seen in the area: Glaucous-winged gulls, Surf Scoters, Horned Puffins, Swallows, Surf scubs, and a Semi-palmated plover.
 Mammals: For tracks, Bear tracks, and 1 female 2 cubs were seen foraging in IL001A.
 See Ecology map.

Ecological Considerations: No Ecological constraints listed. One anadromous stream in IL-001B #262-80-1010 has Pink and Chin Salmon spawning in it. No Eagles were seen in the area.

MENT ST/KNOL IL-1

E 1 / June 90

History

Top

Did you know?

**Corporate
Public Relations**

1997

1

1

Development

2017

0113

10

100

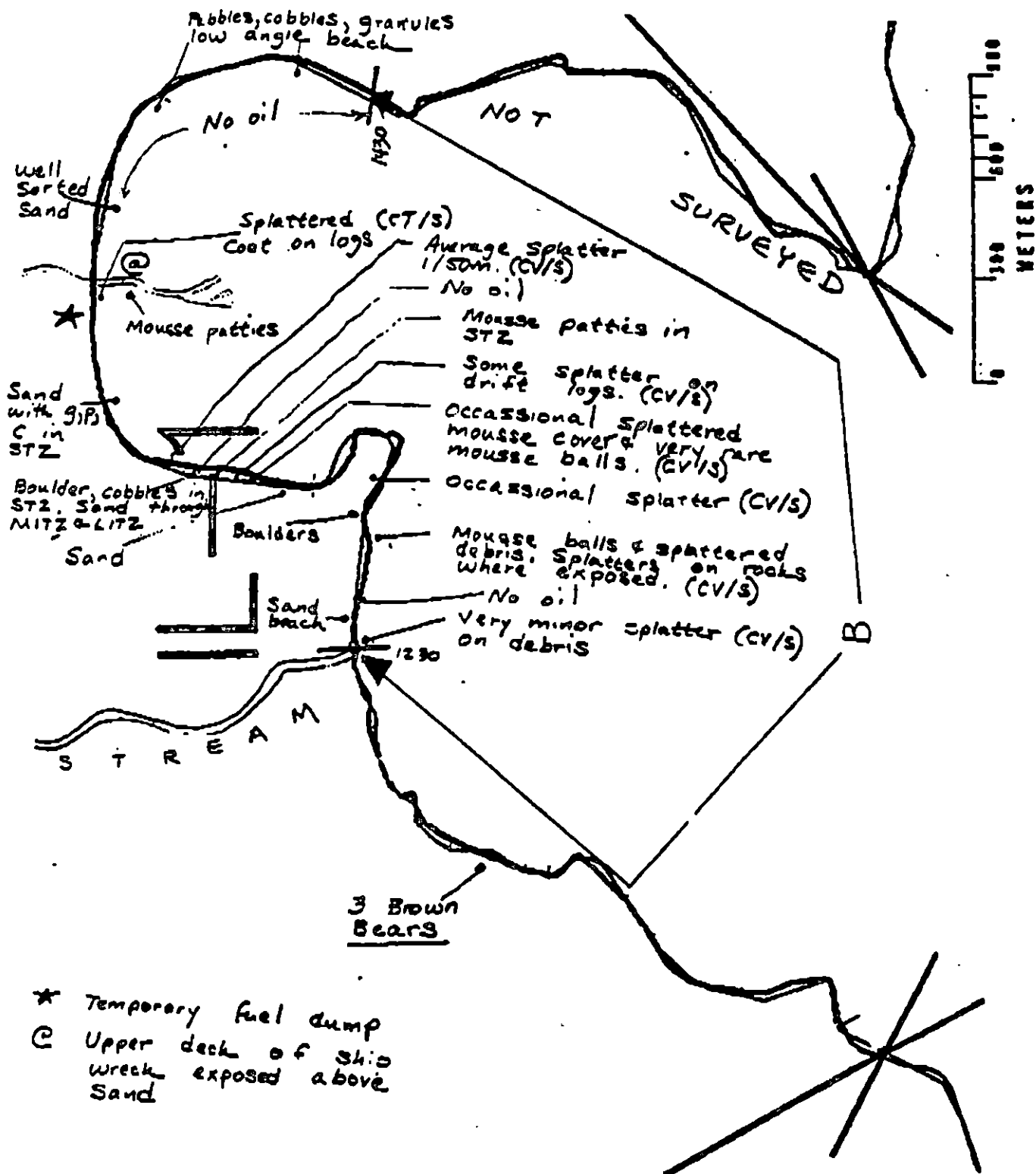
Head Office

10

Location

1

SKETCH MAP



1/2 mile

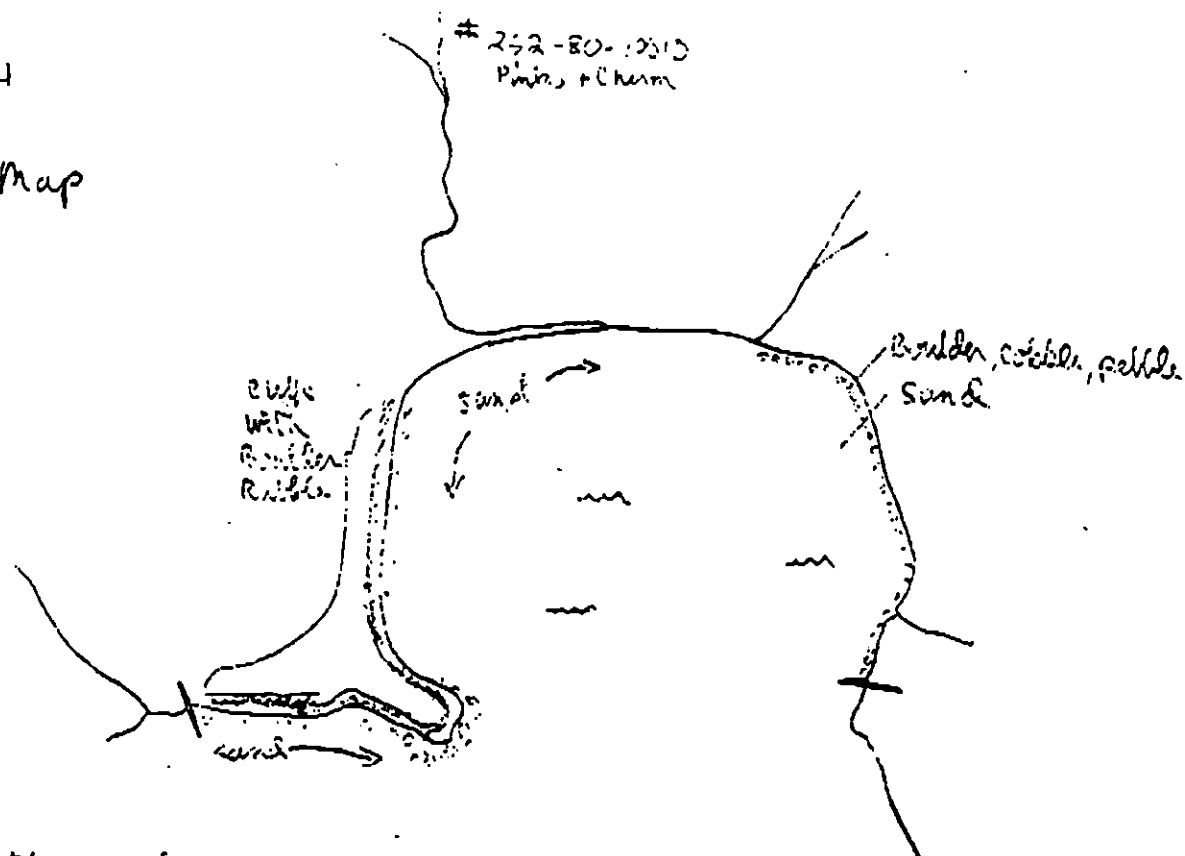
Ecology Map

K11-01

IL-001 B

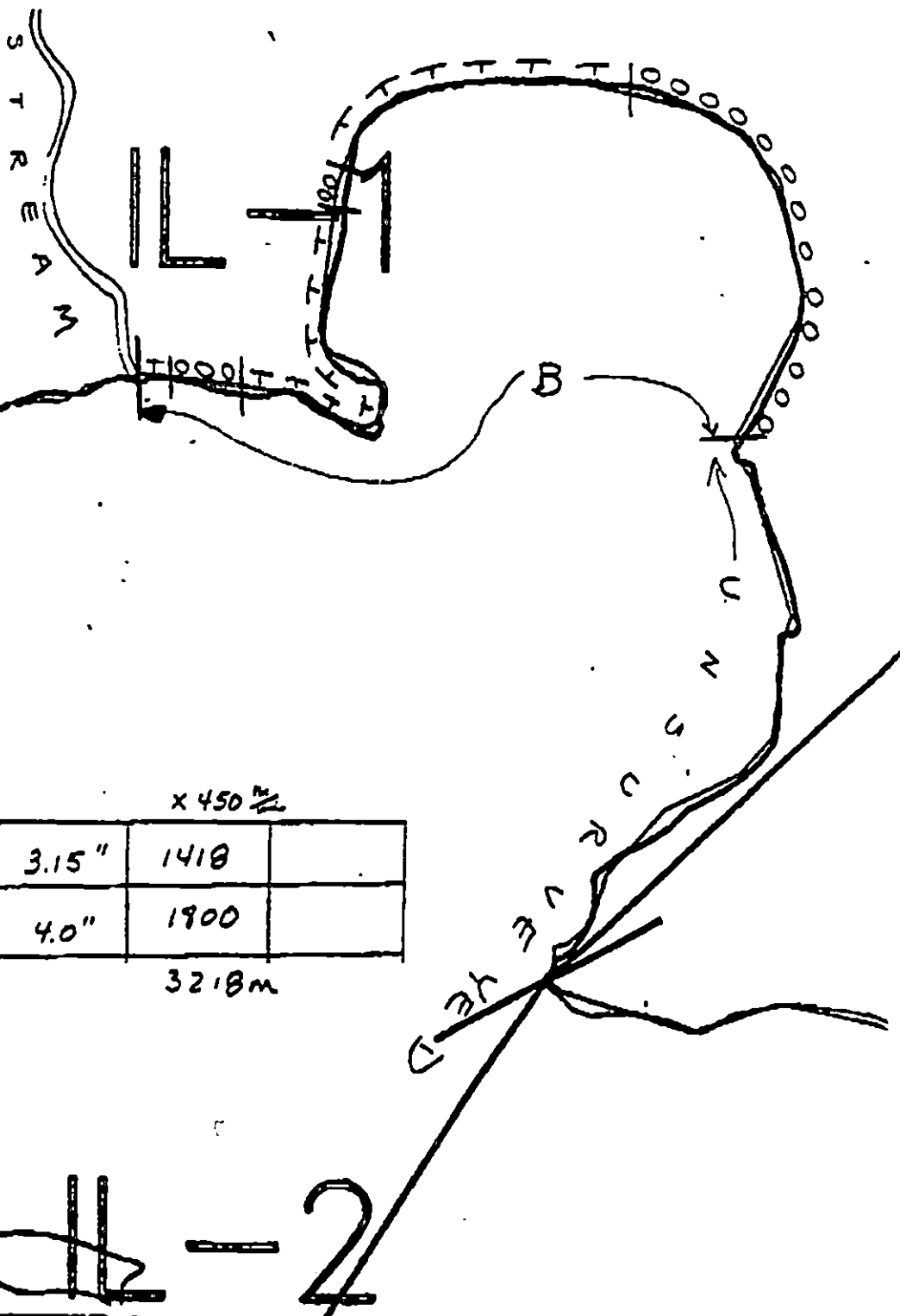
6/1/90

H. Davis



In the rocky areas *Porphyra*, *Chladophora*, and *Balanus* are in the highest areas below this littorina, *Notoosmaea*, *Collusella*, became more common, *Fucus*, *Scytosiphon*, *Ulva* and *Halosaccis* were the most common algae on the boulders. Under the boulders *Leptasterias*, amphipods, littorina eggs, and *Idotea*. In the LTZ *Alaria*, *Rhodomenia*, *Ulva*, and *Tridaca* were common. On the sandy flats shells of *Clinocardium*, *Siliqua*, *Saridonia*, *Mya*, and *Macoma*. Some of these shells had drilled holes in them. *Eutima* had been washed in and stranded in the sand flats.

K I I I



x 450 ^m

No	3.15"	1418	
VL	4.0"	1900	

3218m

11-2

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

K1101-IL-1

ADEC Segment Length: 7700m

0 1000 2000 3000
 METERS

Map Key: K1101
 AKP-IL-1

Name: R. Marty

Date: 1 June 1990

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ K11-02-IL-003 SUBDIVISION A (1 OF 1) DATE 5/22/90

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)
Bio States no anadromous streams
9LM Land Mannals - Tracks observed during survey
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: Rachel Ann Oane DATE: 6/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 69 m: No Oil 7539 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: 5/31/90
ADEC Art Weingart
EXXON Amy Katz FOSC: W L DATE: 6-8-90
NOAA Joseph Talbot
USCG G.A. Heister

KODIAK ECOLOGICAL CONSTRAINTS

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 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, 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 prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299

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, 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 Kotol Bay Hatchery release

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

1H Remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, 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 for confirmation and authorization.

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

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

Contact ADF&G for confirmation - dates and locations may vary. 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 Larry Nicholson 424-4791

Herring spawning (4/15 to 6/30)

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 Larry Nicholson 486-4791

3N, 3P Harbor seal and sea lion pupping (5/10 to 7/1)

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

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

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Calkins 267-2403

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Rothy 267-2206

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

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation:

Tent sites (8/1 to 9/15)

6V Anchorages (8/1 to 9/15)

6W Forest Service cabins (8/1 to 9/15)

Lodge (8/1 to 9/15)

Special use destination

7Z Subsistence area: Salmon harvesting (8/1 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)

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / K 11-00-12-3 SUBDIVISION: _____ DATE 5-22-92USCGNAME STAN L. SHIELDS SIGNATURE Stan L. Shields☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

ONLY LIGHT STAINING IN A FEW AREAS OF THE SEGMENT
WERE OBSERVED.

ADECNAME Francine J. Bennis SIGNATURE Francine J. Bennis☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Only sporadic stains and splatters observed.

LAND MANAGERNAME OTTO FLORESCHUTZ SIGNATURE Otto Floreschutz☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

In agreement with above ADEC recommendations - see Attachment No. 2

Attachment 2
U.S. Fish and Wildlife Service Shoreline Cleanup Disclaimer

This comment sheet is based on current observations and is solely for the purpose of planning and scheduling of 1990 response treatment actions. It in no way implies that the State or Federal government will not in the future determine that further restoration or other treatment, or compensation is warranted regarding this area, or that the area is considered by the Federal or State government to be adequately 'clean' or 'restored' for the purpose of any claim which the State or Federal government has brought or may bring against Exxon, Incorporated or any other potentially responsible party.

SHORELINE OILING SUMMARY

REVISION NO. 04-12-90

G Mike Foyet USCG Stan Shields SEGMENT ST/K11b2-IL003
 IO Heather Davis LAND REP 040 FLORSCHUTZ SUBDIVISION A (LOFT)
 XXON — ADEC Fran Bennis TIME 6:30 to 10:30
 EAM NO. 20 TIDE LEVEL +1.0 - +3.5 DATE 5/22/90
 ST. SUBDIVISION LENGTH: 7500 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 ISLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock Backshore consists mostly of steep vert. rock w/ some grass backshore
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 20 % B 50 % C 20 % P 5 % G 0 % S 5 % M 0 % V 0 %
 SLOPE: Long 70 % Hang 30 % Vert 0 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 60 m NO 7440 m

SURFACE OIL

CHARACTER	DISTRIBUTION					OIL / FILM COLOR					IMPACTED ZONES			
	IC	IB	IF	IL	IS	OC	OB	OF	OL	OS	SU	U	M	L
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT														
S					X						X	X		
M														
PATTIES														
TARBALLS														
FILM														
NO OIL												X	X	

PAVEMENT H F S 0 sq. m by 0 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒

TYPE 0

#BAGS 0

Photographs:

Roll No. —

Frames —

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR							PIT ZONE				A N A	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	20% WATER	10% WATER	5% WATER	1% WATER	1% WATER	1% WATER	SU	U	M	L					
1	30					X	•									X				-	-	-	P, G, S, P	
2	30					X	•									X				-	-	-	C, G, S, C	
3	40					X	•										X			-	-	-	S, C	
4	50					X	•										X			-	-	-	S, C	
5	30					X	•									X				-	h	20	S, C	
6	30					X	•										X			-	-	-	C, P	

MENTS shore zone consists of Rocky headlands w/ Low angle Boulder Beaches and Rock benches, there are also a few sand Beaches. With the exception of some staining (see map) no oil

Mike Fort

MENT ST/ K1102-IL003

DIVISION A

E 5, 22 80

ECKLIST

✓ Arrow
✓ Approx. Scale
✓ leg/Sub Endry
✓ Dist.
✓ Width
✓ Length
✓ Cover
✓ Substrate Character
✓ Est. 1991/1991
✓ SSI
✓ Profile Location(s)
✓ Profile(s)
✓ 1/2 Location(s)
✓ Photo Location(s)

3END

1 Δ
Subsurface Oil

2 Δ
Subsurface Oil

CT/C
Tidal Distribution

CT/B
in Distribution

CT/P
y Distribution

CT/S
Red Distribution
RR
Vegetation

location, direction,
number

Legend

||||| - steep back shore
~~~~~ - Low angle bedrock  
~~~~~ - stream  
--- - drift logs, debris

SKETCH MAP

Scale

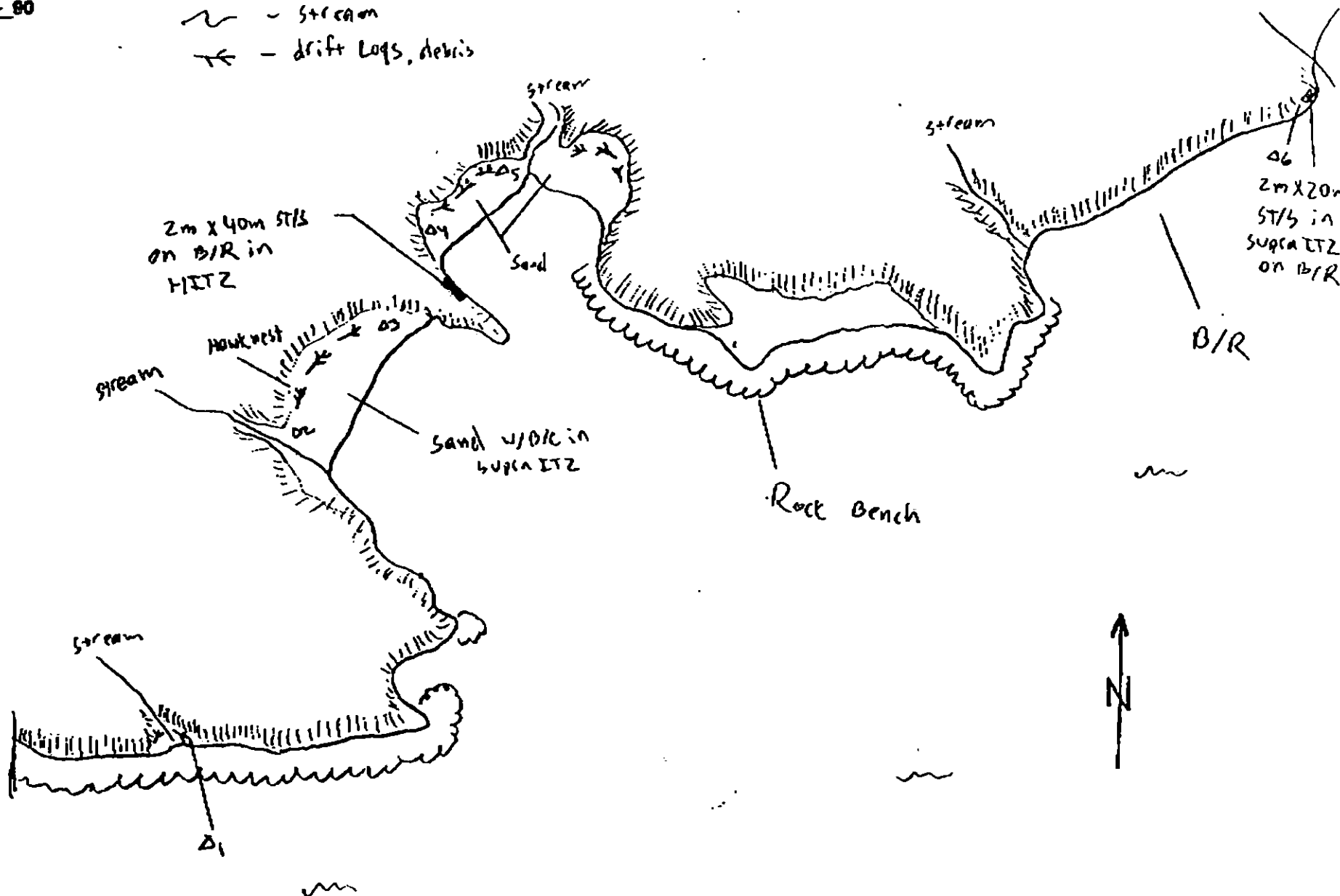
500m

11-23-1990 14:50 FROM EMAN NODIN

10

1504571

1.02



Tracer Length (m): AP 0 PO 0 CV 0 CT 0 ST 60 MS 0 PT 0 TB 0 FL 0 NO 7440

REVISION: 03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 00/22/90

Segment ST / KII 02 Subdivision IL-003 Date (mo / day / yr) 5/22/90Time (24 hr) 18:15 Biologist H. Davis(A) Substrate type and % of segments:
(1) Bedrock 20 (2) Boulder 50 (3) Cobble 20 (4) Pebble 5 (5) Sand 5 (6) Silt —(B) Overall % cover of biota (% of segment): Dense 30% Moderate 40% Low 30% (30%)

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

Photographs: —
Roll No. —Frames —

BARNACLES Continuous along most of the segment (none on sandy flats)

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 4, 5, 6
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS Small sporadic patches

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, 4, 5, 6
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS Continuous along segment Littorina Dense/mod. Limpets mod/sparse Nucella sparse

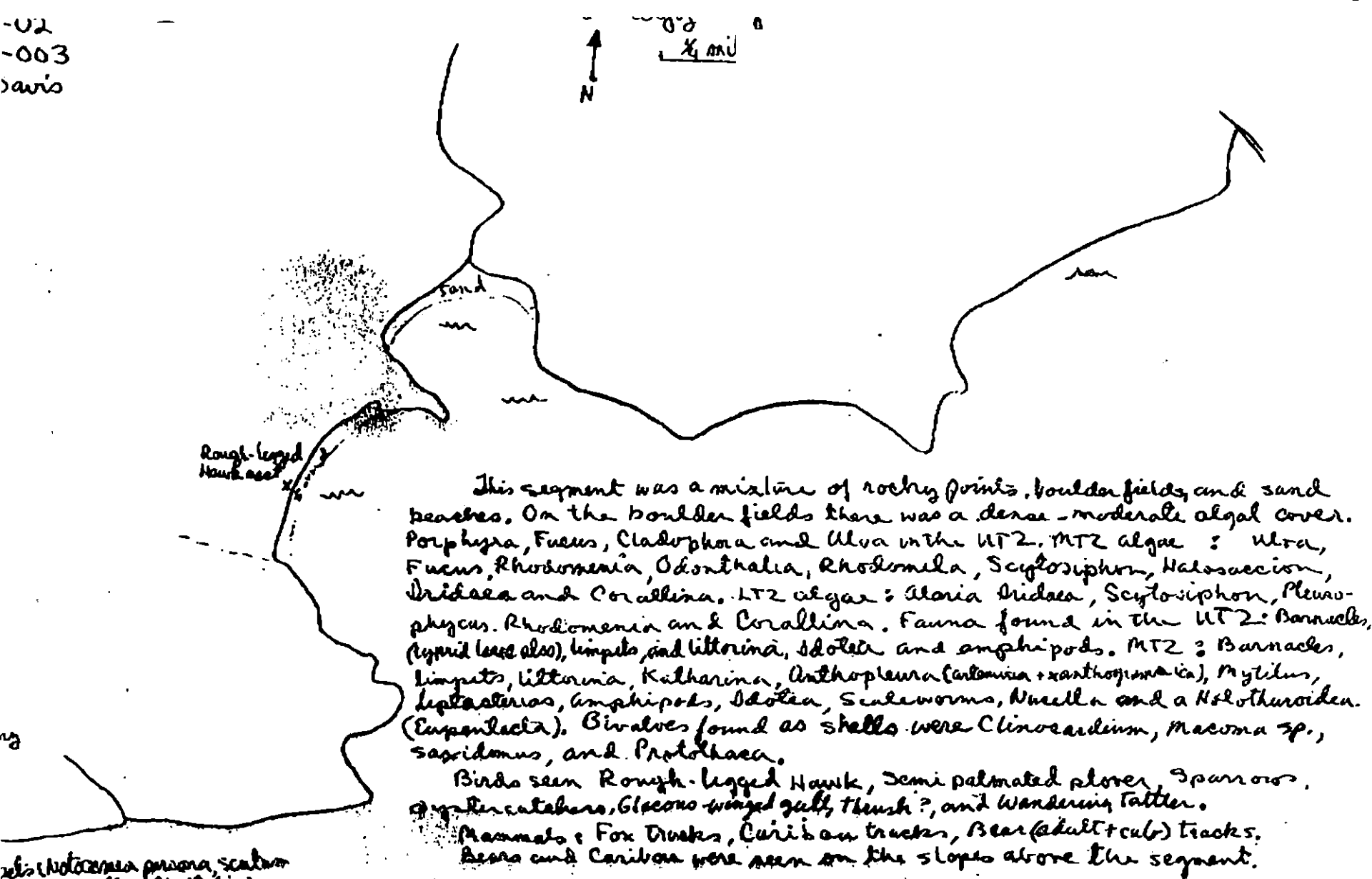
Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	NOT PRESENT 4, 6
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	
6	6	6	6	6	6	6	6	6	6	6	6	

FUCUS Moderate patches along segment

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

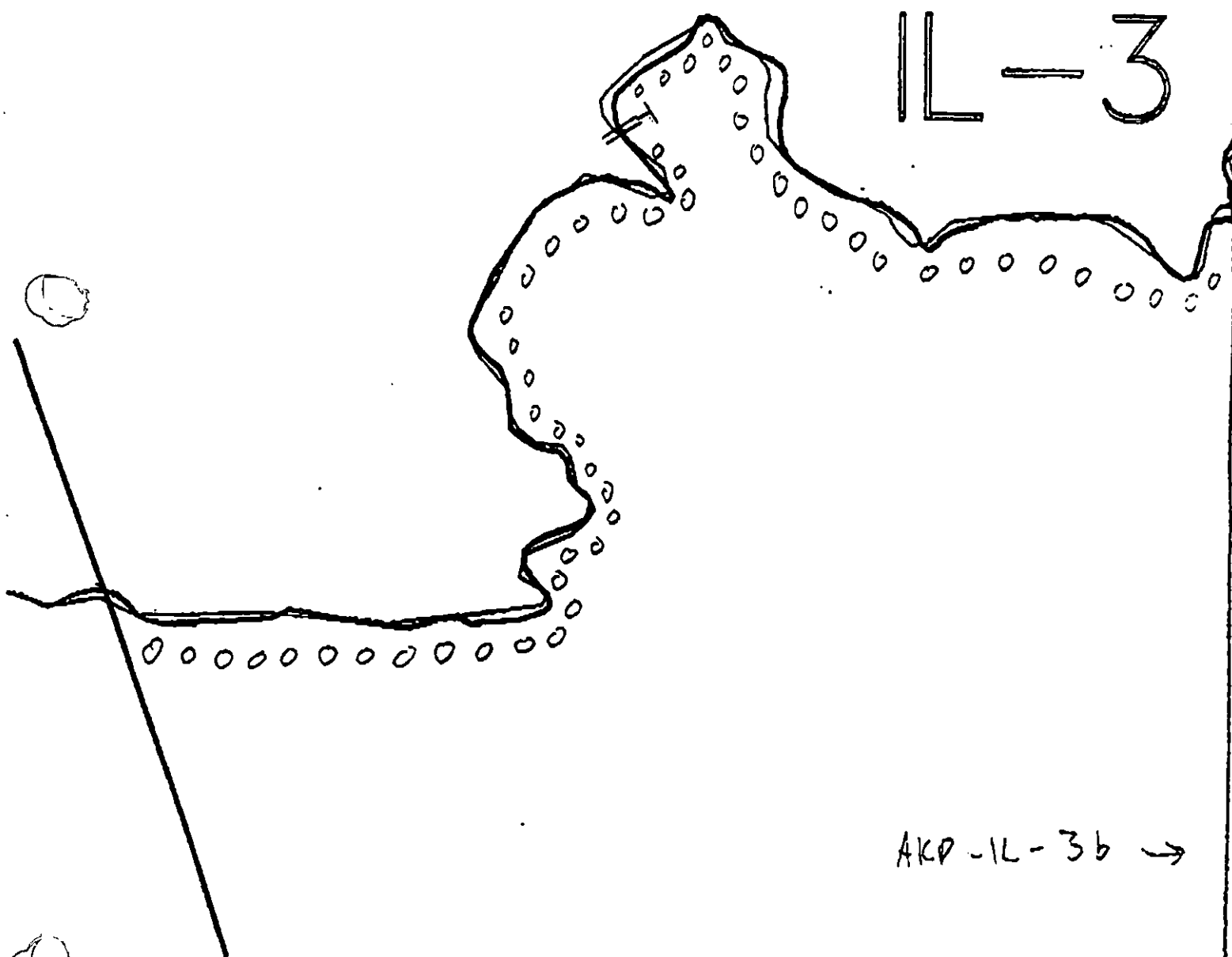
Wildlife Observations/ General Comments: See Eco Map.

Ecological Considerations: NOT on Ecological Constraints list. No Anadromous streams listed on Fish and Game maps. None of the streams showed evidence of being anadromous. The next segment up IL-1 did have Anadromous streams. There were no Bird colonies observed on the segment. Caribou tracks were found in the UTZ. A Rough-legged hawk had a nest 1/2 way up one of the cliffs. She appeared to be brooding.



K11-2

IL-3



AKP-IL-3b →

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

K1102-IL-3A

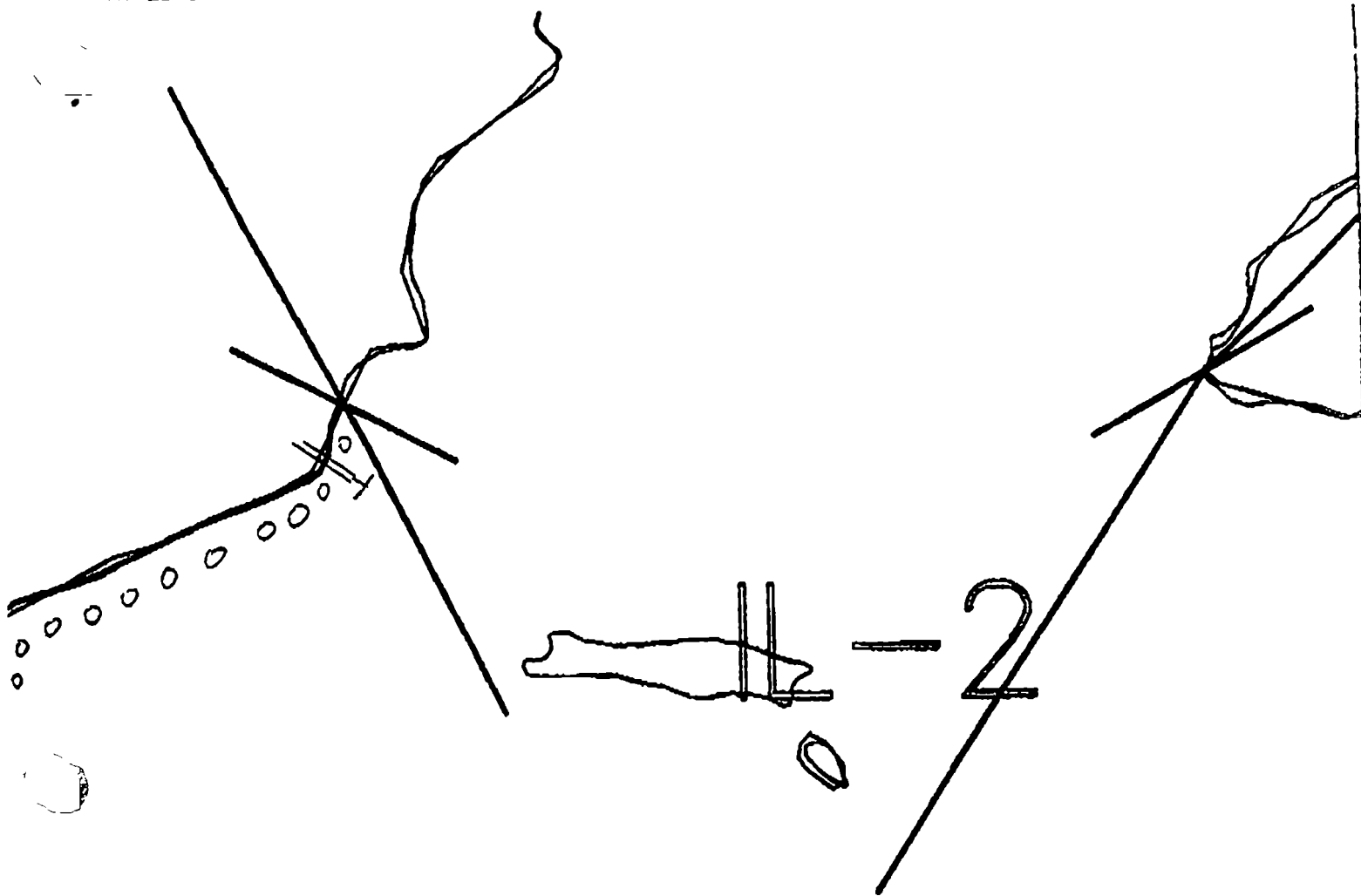
ADEC Segment Length: 7608m

Map Key: AKP-IL-3a

Name: Mike Foyt

Date: 5/21/90





← AKP-IL-3a

XXXX Wide

//// Medium

---- Narrow

TTTT Very light

K1102-IL-3-A

ADEC Segment Length: 7608m



Map Key: AKP-IL-3b

Name: Mike Foyet

Date: 5/21/90

ARLIS
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