



EVOS
GC
1552
.P75
S42
1991
v.17

[Shoreline evaluations, 1991].

Kodiak K0916 BR 001 to K0921 KU 004

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SHORELINE EVALUATION

SEGMENT ST/K09-16-BR-001 SUBDIVISION A (1 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)
7Z 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.

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 1500m: No Oil 950 m
Subsurface Oil Observed: Yes _____ No ☒ 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: MONITORS TO ASSESS LOGS AND TARP LIFTIES
TO DETERMINE THE NEED FOR REMOVAL

TAG APPROVAL DATE: 5/15/90.

ADEC Act Wagon Afternoon

EXXON ARMY TEAM Lead

NOAA Joseph Talbot

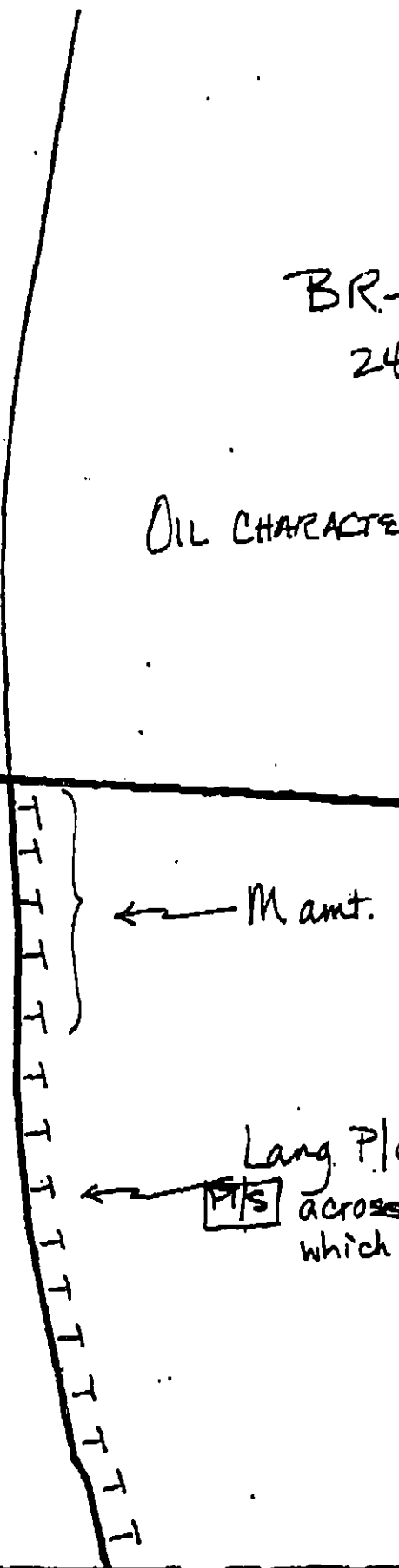
USCG *G.A. REITER SA*

FOSC: MM DATE: 5-20-90

Monitors ~~monitor~~ assess terball situation
and advise FOSC ops.

BR-001-A

2475 m

OIL CHARACTER LENGTHS (m): PT 1575 NO 900


← M amt. oiled logs on SITZ strand

Lang P/G/s

← P/G/s across SITZ berm
which is 15-20 m wide

GOA
↓ 20A

XXXX Wide

//// Medium

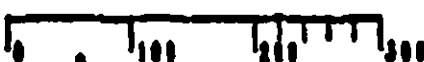
--- Narrow

TTTT Very Light

0000 No Oil

BR-1-A

Exxon Segment Length: 2475m
ADEC Segment Length: 3751m



METERS

Map Key: GOA-200

Name: C. DixonDate: 4/30/90

Data Entered:

BR-001-A
2475m

Lang P/G/S

PTS

across SITZ berm
which is 16-20 m wide

GOA 206

Lang C/P/G/S bar
SITZ PTS 30-40 cm diam.
2 meter by
2 meter area

GOA 208 →

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

BR-1-A

Exposure Segment Length: 2475m

ADEC Segment Length: 3751m

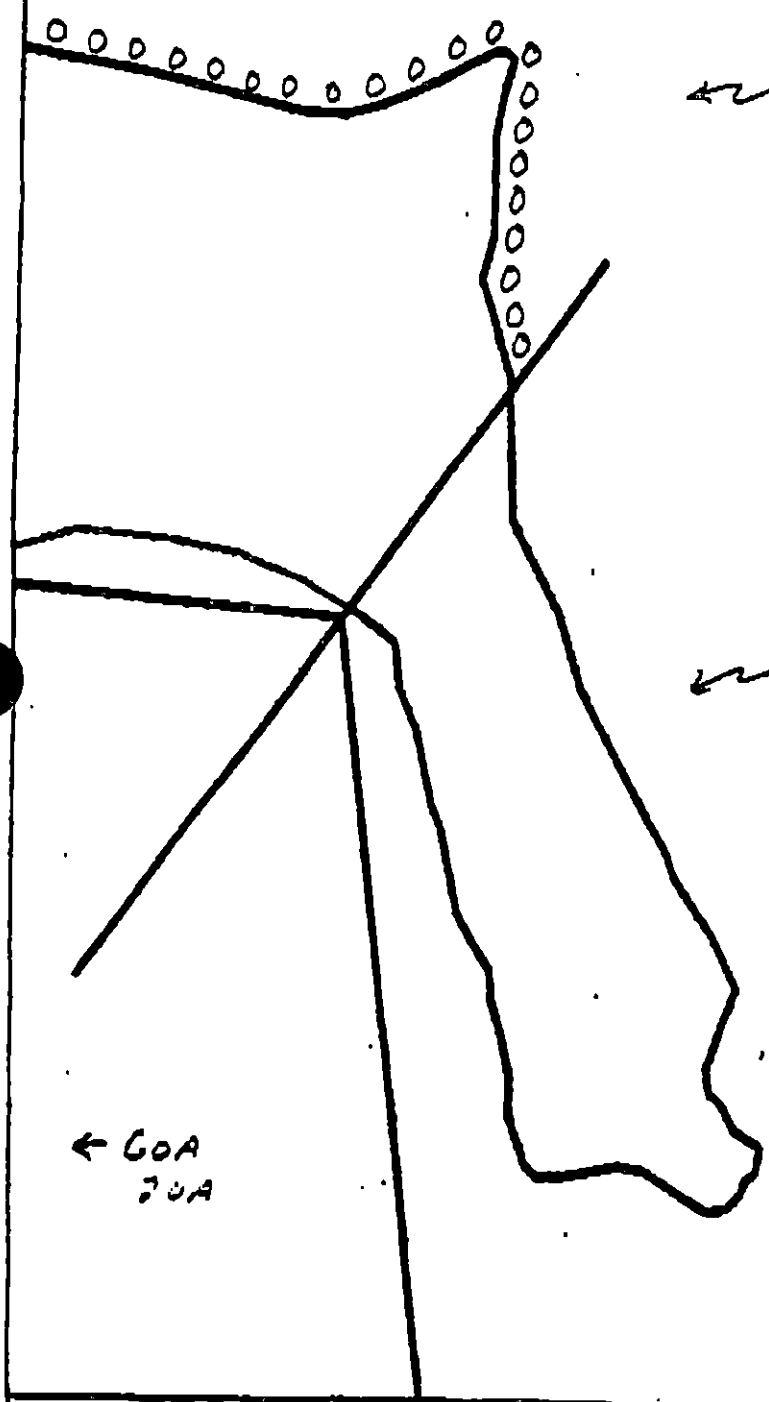
0 100 200 300
METERS

Map Key: GOA-200

Name: C. Dillon

Date: 4/30/90

Date Entered:



BR-001-A
2475m

BR-001-B
1177m

GOA
20A

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

BR-1-A
EXXON SEGMENT LENGTH: 2475m
ADEC Segment Length: 3751m



Map Key: GOA-206
Name: C. DILLON
Date: 4/30/90
Date Entered:

← BR-001-A

GOA
↓ 20A

XXXX Wide

BR-1-A

2475

ADEC Segment Length: 375m

/// Medium

---- Narrow

TTTT Very Light

0000 No Oil

0 100 200 300
METERS

Map Key: GOA-20c

Name: C. DILLON

Date: 4/30/90

Data Entered:

↑
GOA 20C

GOA
20B →

BR-1

ADEC Segment Length: 3751m

METERS

Map Key: GOA-20a

Name: C. DILLON

Date: 4/30/90

Data Entered:

XXXX Wide

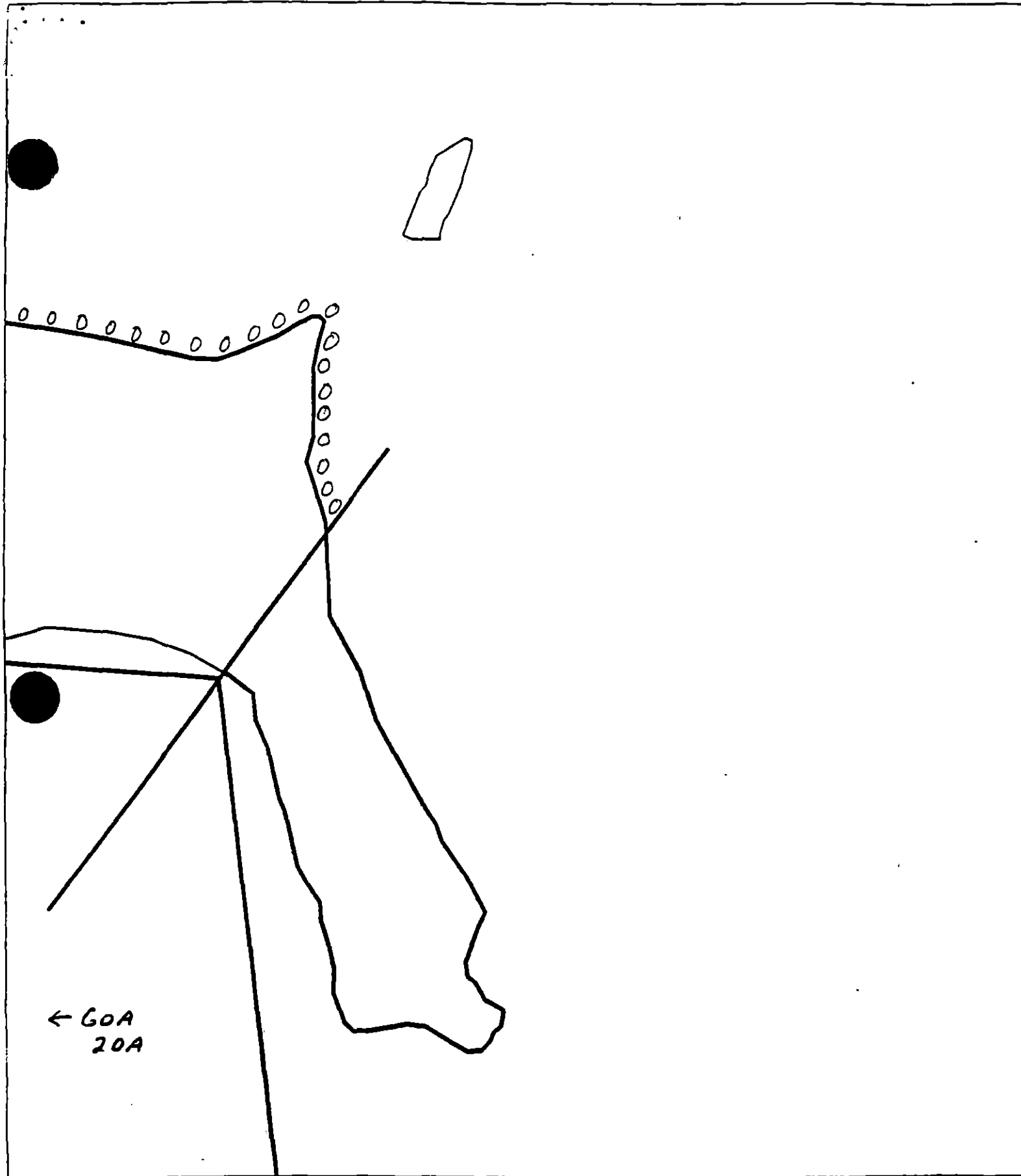
● // Medium

---- Narrow

TTTT Very Light

0000 No Oil





XXXX Wide

BR-1

Map Key: GOA-20b

Name: C. DILLON

Date: 4/30/90

Data Entered:

/// Medium

ADEC Segment Length: 3751m

--- Narrow

TTT Very Light

OOOO No Oil



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)
7Z 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 unopened substrate and biota.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Michael Antognelli 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

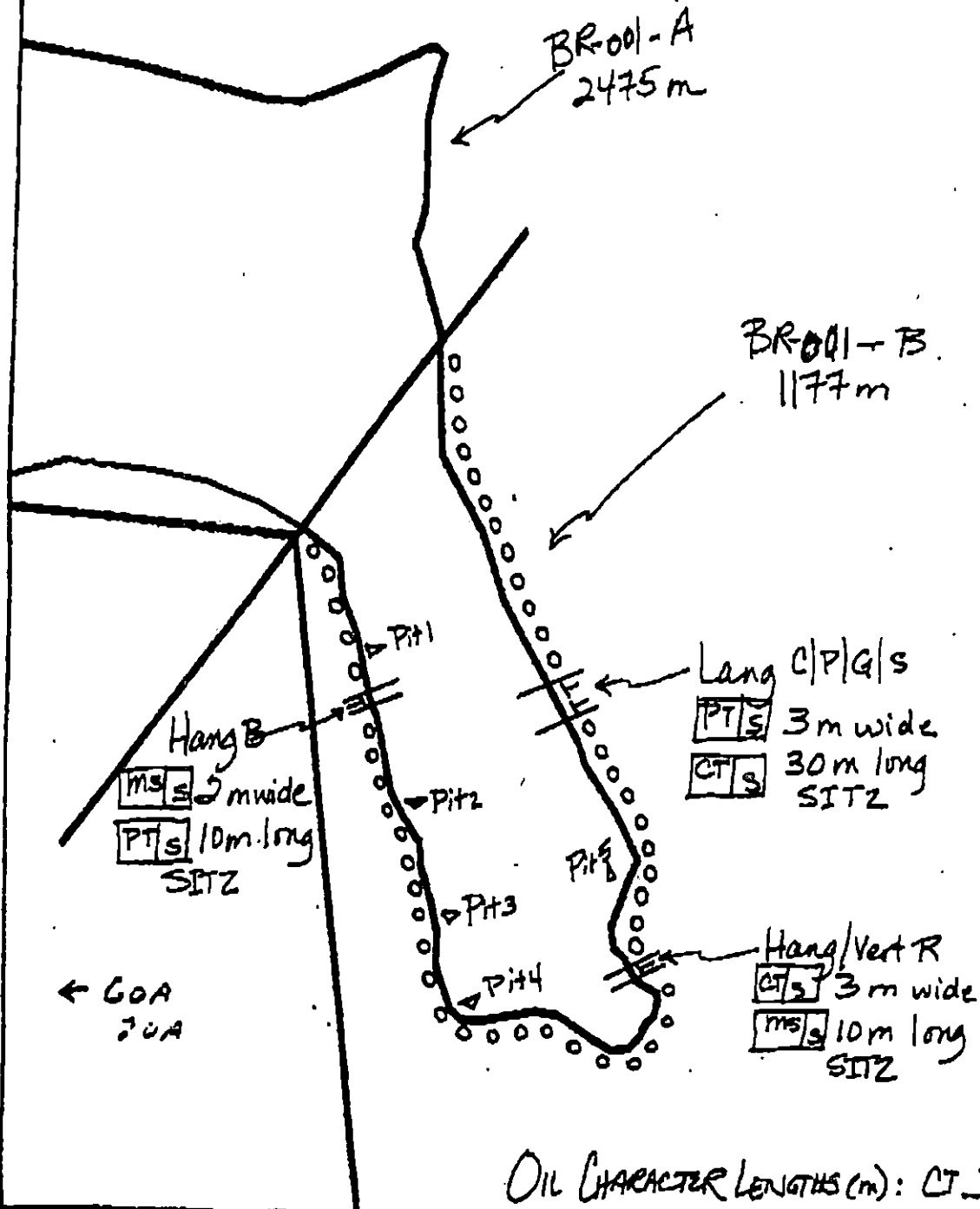
RECOMMENDATIONS:

☒ 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:

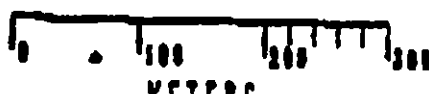
TAG COMMENTS:

TAG APPROVAL DATE: 5/15/90
ADEC Art Wenger
EXXON Andy Bl FOSC: DATE: 5-18-90
NOAA John Talbot
USCG G.A. REITER

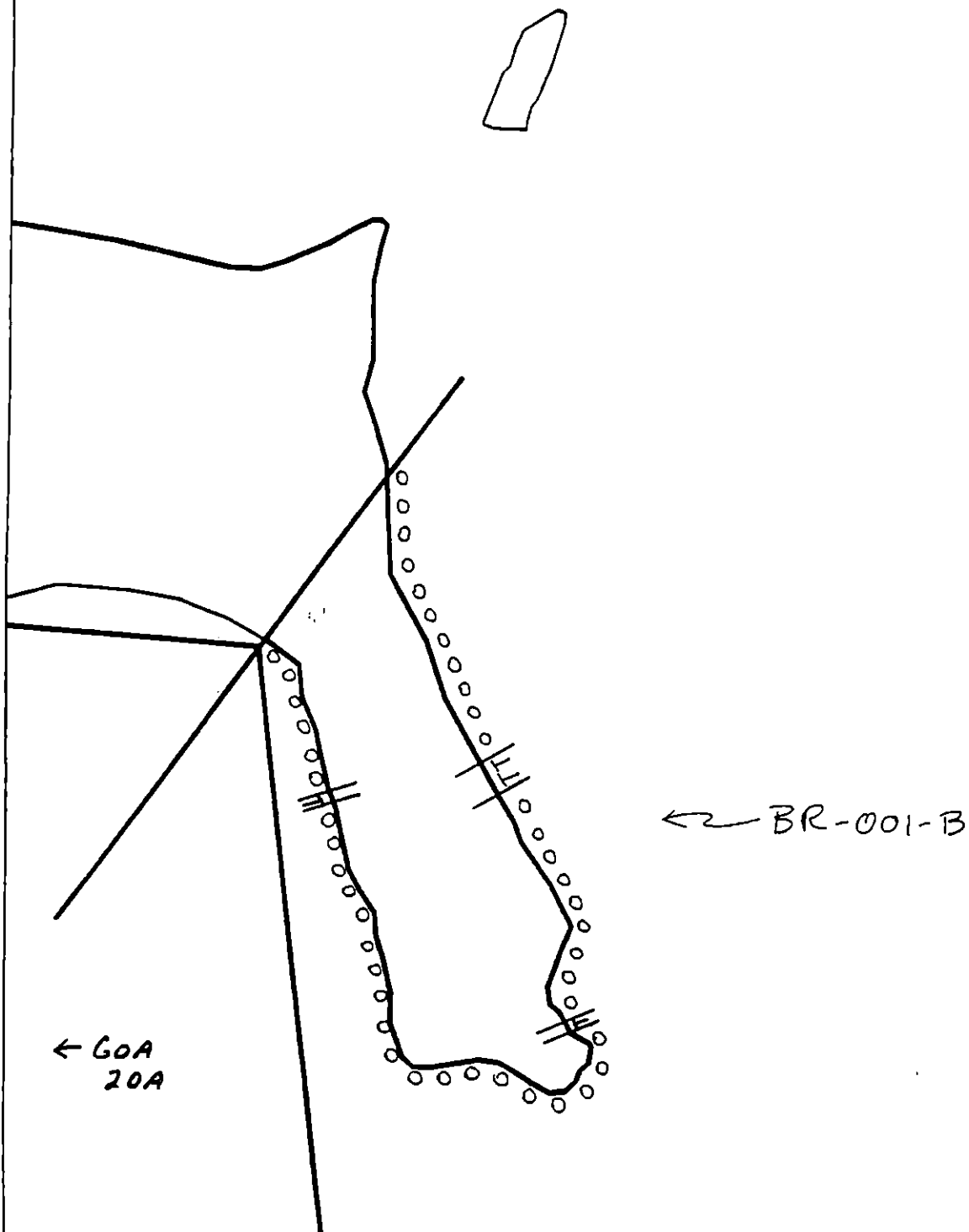


XXXX Wide
//// Medium
--- Narrow
TTTT Very Light
0000 No Oil

BR-1-B
EXON SEGMENT LENGTH: 1177m
ADCC Segment Length: 375m



Map Key: GOA-206
Name: C. DILLON
Date: 4/30/90
Date Entered:



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

BR-1-B

ADEC Segment Length: 3751m

0 100 200 300 400 500
 METERS

Map Key: GOA-20b

Name: C. DILLON

Date: 4/30/90

Data Entered:

REGION: KODIAK

SEGMENT: ST/K09-16-BR-001

SUBDIVISION: A (1 OF 2)

SHORELINE EVALUATION

SEGMENT ST/K09-16-BR-001 SUBDIVISION A (1 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)
7Z Subsistence area: Salmon harvesting (6/1 to 9/30)
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9LM Land Mammals
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid disturbance/damage to unoiled substrate and biota.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 1500m: No Oil 950 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

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)**
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 (8/1 to 9/30)**
 7HH Finfish harvesting
 7II 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 / K0912 BR-001 SUBDIVISION: A DATE 4/30/90

USCG

NAME

AEC Vandepelt SIGNATURE AEC Vandepelt

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Manually pick up tar mats.

ADEC

NAME

Michele Baer SIGNATURE M Baer

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Remove PT/s where OG has indicated on the map, and oiled logs. Logs were large and may require cutting before they can be removed. No subsurface oiling was found.

LAND MANAGER

NAME

Janis Meldrum SIGNATURE Janis Meldrum

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Mouse paths and tarballs exist throughout the segment and probably occur throughout BR-002 as well. Manual removal of the oil and contaminated sediments is warranted. Logs oiled >50% should be removed. No burning of logs or debris is permitted on NPS lands. Treatment should occur prior to the month of August when silver salmon and bears enter the drainages. Paths exist up the drainages at least 100 m.

Archeological compliance required prior to clean up.

SHORELINE OILING SUMMARY

REVISION NO. 04-13/90

OG C. DILLON USCG AEC R. Vandepels SEGMENT ST/ BR-DCI
 BIO P. Crank LAND REP Janis Meldrum (NPS) SUBDIVISION A (2 OF 2)
 EXXON T. Tomblin ADEC Michele Baer TIME 14:00 to 15:45
 TEAM NO. 5 TIDE LEVEL -0.5 → +1 DATE 4/30/90
 EST. SUBDIVISION LENGTH: 2475 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SE to NW
 SURFACE SEDIMENTS: R 2 % B 1 % C 2 % P 40 % G 15 % S 40 % M 0 % V 0 %
 SLOPE: Lang 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 1575 m NO 900 m

SURFACE OIL

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

PAVEMENT H F S _____ sq. m by _____ cm

(PATTIES) TARBALLS 2 BAGS

NEAR 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. None

Frames _____

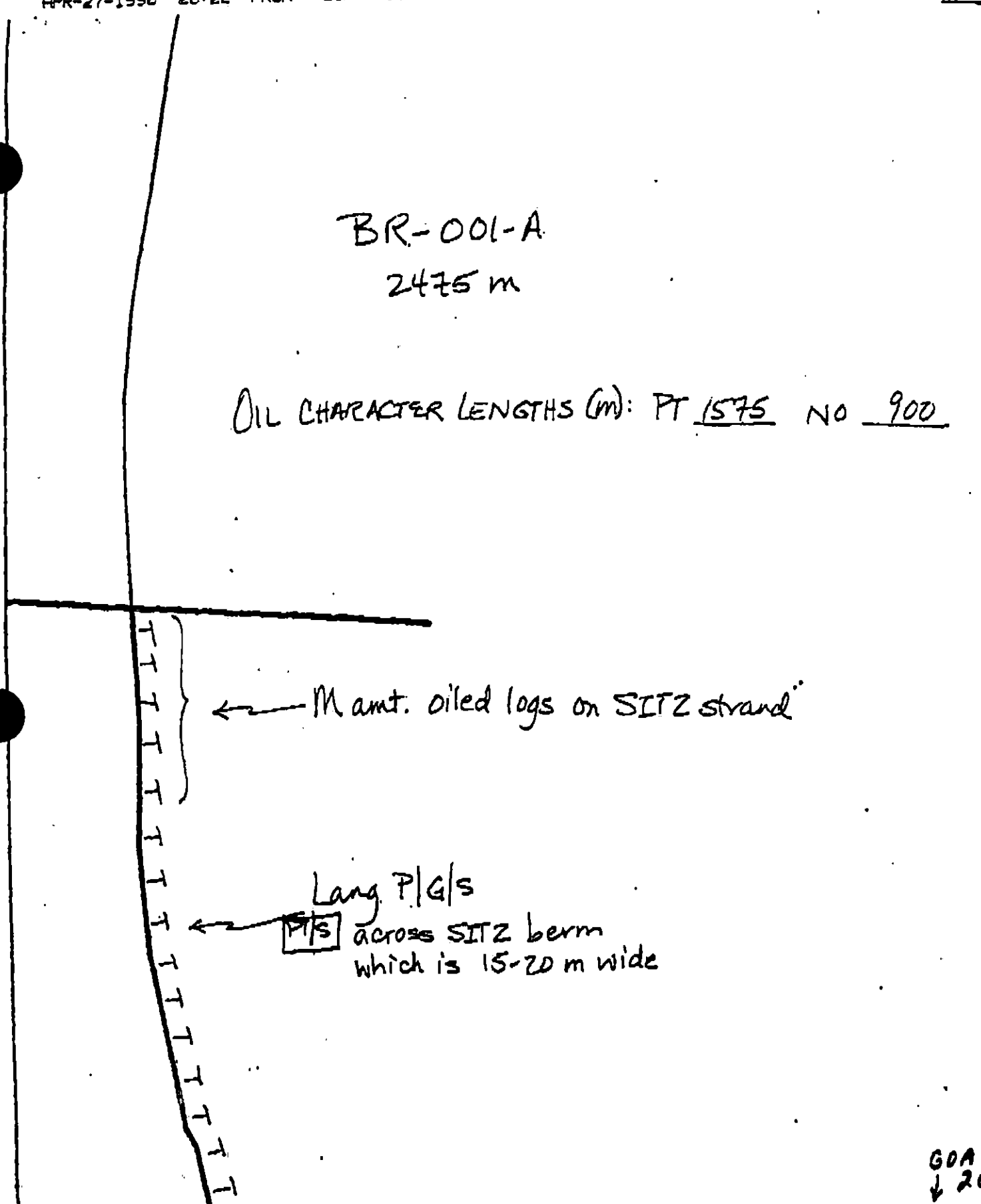
SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-FT)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	W	Y	OR	GR	BL	DR	SU	U	M	L				
1	25					X	.		X							X					N	-	P - P/G/S
							.																
							.																
							.																
							.																
							.																

COMMENTS THE SUBDIVISION IS A LARGE SANDY / PEBBLY TIDAL FLAT. THE SITZ IS A 15-20 m WIDE PEBBLE/SAND BERM WITH A LOG AND SEAWEED STRAND LEADING INTO GRASS UPLANDS. WITH AN ANADROMOUS STREAM RUNNING THROUGH THE CENTER OF THE SUBDIVISION. SPORADIC MOUSSE PATTIES ARE LIGHTLY SCATTERED THROUGHOUT THE ENTIRE SITZ ALONG THE WESTERN 2/3 OF THE SUBDIVISION. REVIEWED BAT DATE 3 May 90
 LARGER PATTIES (30-40 cm DIAMETER) BEGIN THE OILED AREA. THESE

BR-001-A

2475 m

OIL CHARACTER LENGTHS (m): PT 1575 NO 900


← M amt. oiled logs on SITZ strand

Long P/G/s

← P/S across SITZ berm
which is 15-20 m wide

GOA
↓ 20A

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

OOOO N. Oil

BR-1-A

Exxon Segment Length: 2475m

ABEC Segment Length: 375m



Map Key: GOA-200

Name: C. DixonDate: 4/30/90

Date Entered:

BR-001-A
2475m

Lang P/G/S

PT/S

across SITZ berm
which is 15-20 m wide

GOA 206

Lang C/P/G/S bar
SITZ PT/S 30-40 cm diam.
2 meter by
2 meter area

GOA 208

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

BR-1-A

EXPOSED SEGMENT LENGTH: 2475m

ADEC Segment Length: 3751m

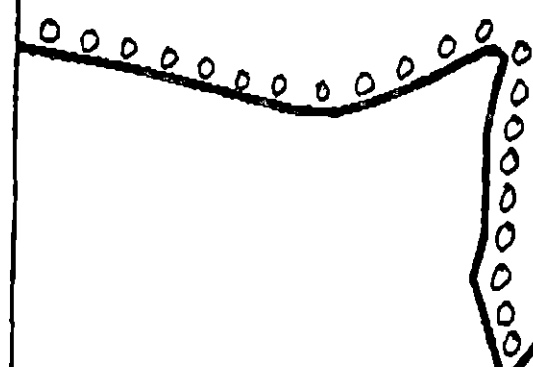


Map Key: GOA-20a

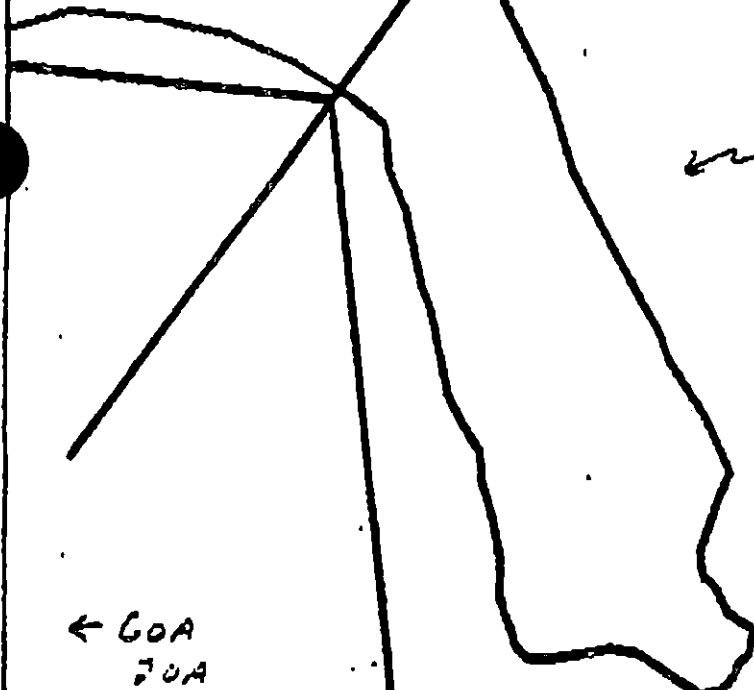
Name: C. DILLON

Date: 4/30/90

Date Entered:



BR-001-A
2475m

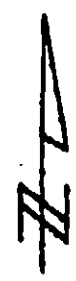


BR-001-B
1177m

← GOA
70A

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

BR-1-A
EXXON SEGMENT LENGTH: 2475m
ADEC Segment Length: 3751m



Map Key: GOA-200
Name: C. DILLON
Date: 4/30/90
Date Entered:

SHORELINE ECOLOGICAL SUMMARY

REVISION: 06/22/90

Segment ST-1 Subdivision A Date (mo/day/yr) 4/30/90

Time (24 hr) 1400-1545 Biologist Crank Length: 2475m pg 1 of 1

Tide height: -0.5 → +1 ft

(A) Substrate type and % of segments:
(1) Bedrock 2 (2) Boulder 1 (3) Cobble 2 (4) Pebble 40 (5) Sand 55 (6) Silt 1

(B) Overall % cover of biota (% of segment): Dense 100 Moderate 0 Low 0

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

Photographs: Roll No. ST-5-8

Frames 3, 4

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	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: - Segment tidal sand flat with a scattering of low rock outcrops in LIT2, cobble/boulder in upper LIT2

Bear tracks

Heard an Eagle

1- Great Blue Heron

Ecological Considerations:

EC list not available

in office.

Segment was a sand tidal

flat and appropriate

measures should be applied.

- In sand: clams; polychaete worms.

- On rocks: Scytosiphon, Filamentous Greens, Littorina, Lim

Barnacles and Mussels.

• 50% Barnacle scarring on rock w/ 10% minor

• rare recruitment

• Mussels 20% mounds w/ rare recruit

← BR-001-A

GOA
↓ 20A

XXXX Wide

● // Medium

---- Narrow

TTTT Very Light

0000 No Oil

BR-1-A

2475

ADEC Segment Length: 375m



Map Key: GOA-20c

Name: C. DILLON

Date: 4/30/90

Data Entered:

↑
GOA20C

GOA
20B →

BR-1

ADEC Segment Length: 3751m

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

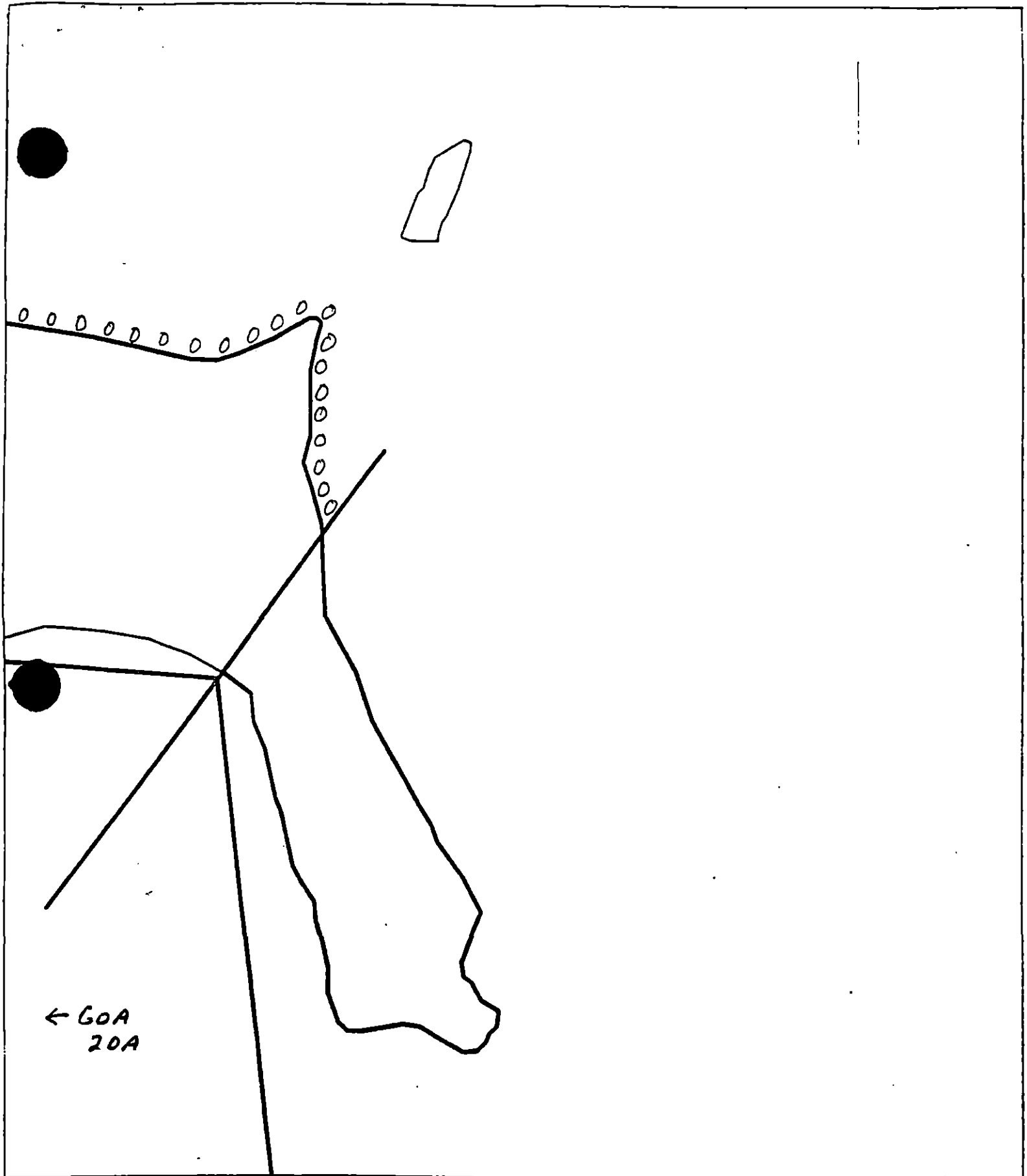


Map Key: GOA-20a

Name: C. DILLON

Date: 4/30/90

Data Entered:



← GOA
20A

BR-1

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

ADEC Segment Length: 3751m



Map Key: GOA-20b

Name: C. DILLON

Date: 4/30/90

Data Entered:

REGION: KODIAK

SEGMENT: ST/K09-16-BR-001

SUBDIVISION: B (2 OF 2)

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)

7Z 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 unoiled substrate and biota.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 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: _____

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 Adognak (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

7

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

7

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 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 (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)

7HH

Finfish harvesting

7J

Deer harvesting (8/1 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

SEGMENT ST 1 K49116 - 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

☐ TREATMENT SUGGESTED

COMMENTS

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. 04/13/90

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 04/30/90
 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: Long 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	R	P	S	1	2	3	4	5	6	7	8	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 cm(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 ☐TYPE patties and oiled seeds#BAGS 1

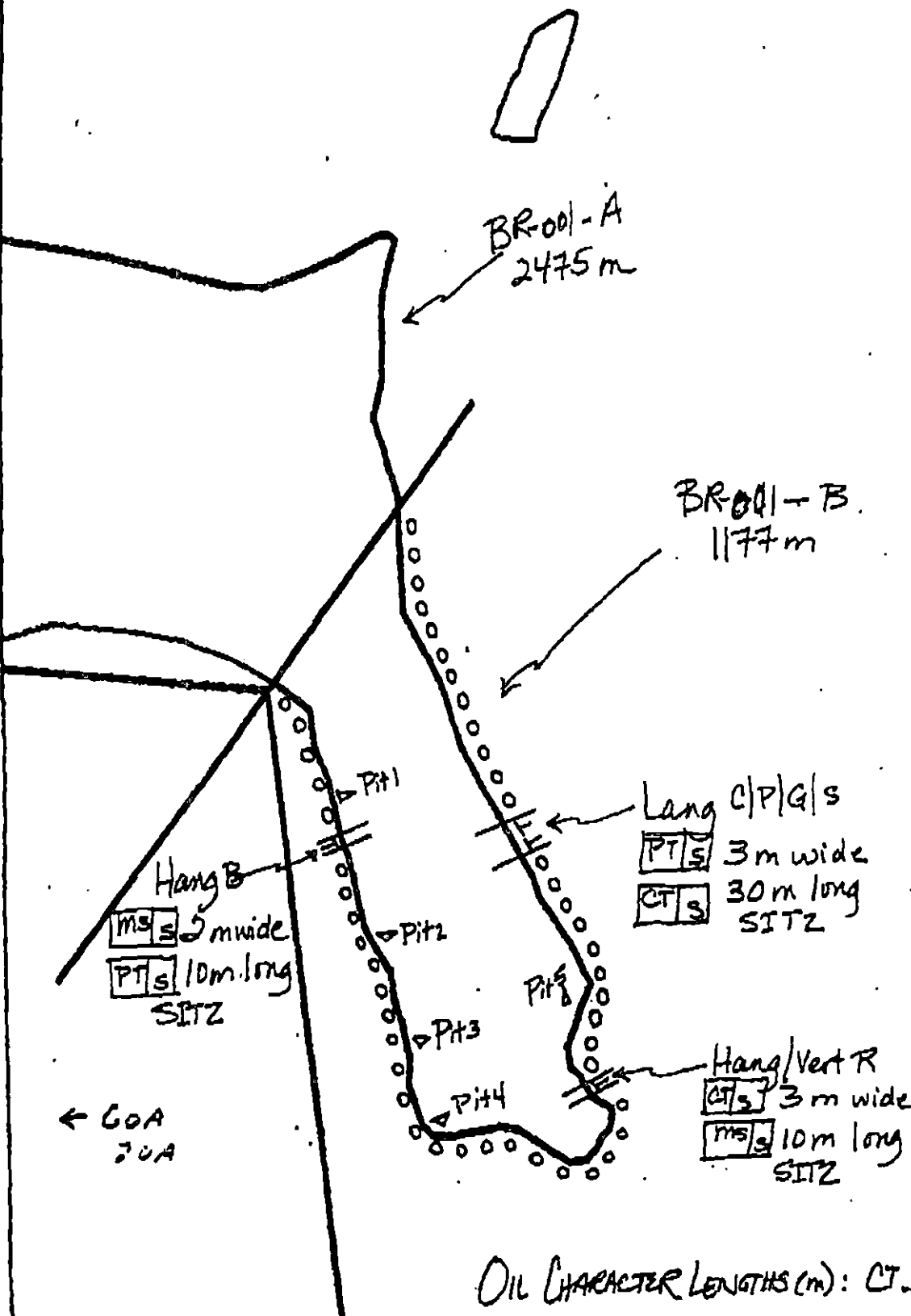
Photographs:

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		UO	UC	1	2	3	4	5	6	7	8	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 CLIFFS HAS 3 SMALL AREAS OF SPORADIC MOUSSE SPLATTERS, PATTIES AND COAT SPLATTERS. SEE OILING MAP. REVIEWED BAT DATE 3 MAY 90



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

BR-1-B

EXPLAN SEGMENT LENGTH: 1177m
 ADEC Segment Length: 3751m

0 100 200 300

Map Key: GOA-206

Name: C. DILLON

Date: 4/30/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/2/9

Segment ST/BR001 Subdivision B Date (mo/day/yr) 4/30/90Time (24 hr) 1230-1400 Biologist Crank Length = 1177m pg 1 of 4(A) Substrate type and % of segments:
(1) Bedrock 75 (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 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:

2 Bear on beach

1 Bear w/ cub

1 Seal Lion

Ecological Considerations:

E.C. not available from office

77 Birds - No ID

11 - Ducks

4 - Auklets

1 - Raven

1 Murre

1 Pigeon Guillemot

2 Crows

2 Gulls

Mammal Vertebrae
(maybe otter?)

in SUPRA - No oil

Fresh → still articulating

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 tidepool areas

Segment ST/BR001B

Length: 1177m Biol: Crank

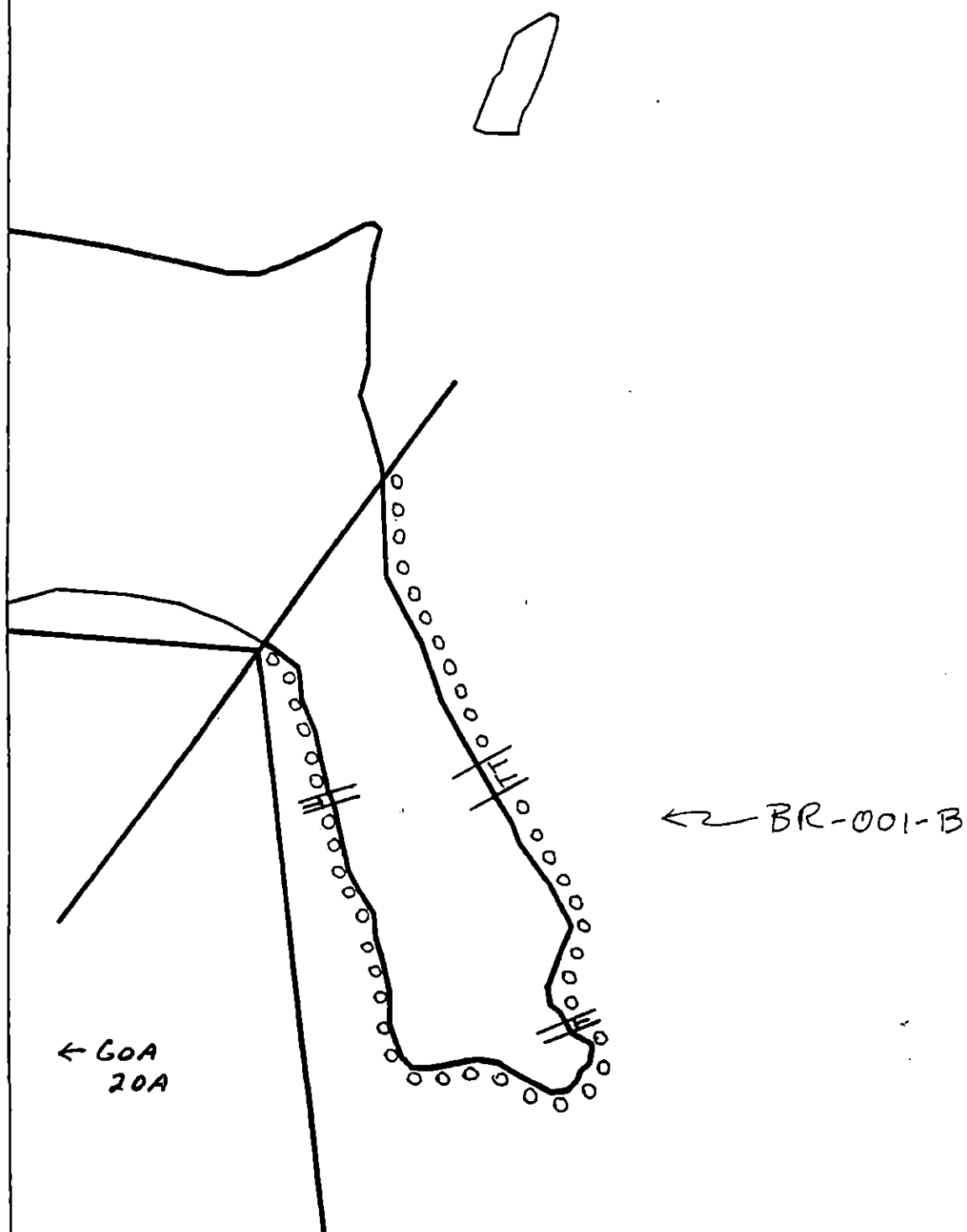
pg 3 of 4

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 (~400m 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

Data Entered:

REGION: KODIAK

SEGMENT: ST/K09-17-CC-001

SUBDIVISIONS: A (1 OF 1)

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

9IM 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.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: _____ DATE: _____

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 7 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of 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: _____

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

FOSC: _____ DATE: _____

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 257-2299

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 Adognak (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

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 Collins 257-2403

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 257-2208

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:

Tent sites (5/1 to 9/15)

6V

Anchorage (5/1 to 9/15)

6W

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

6X

Lodge (5/1 to 9/15)

6Y

Special use destination

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

Finfish harvesting

Deer harvesting (5/1 to 1/7)

Invertebrate harvesting

Beaver 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 257-2359

FIELD SHORELINE COMMENT SHEET

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

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 mouse patches and tarballs (see sketch map) as well as the 4 bags of oiled sediment.

LAND MANAGER

NAME Carl Schuch SIGNATURE Carl Schuch

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Recoverable oil consists primarily of mouse patches and tarballs. Several concentrated patches of mouse patches exist at the upper edge of the upper intertidal as indicated on the sketch map. Four bags of oiled sand and mouse 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 mouse patches and tarballs are apparently migrating up the beach face and being buried in

SHORELINE OILING SUMMARY

REVISION NO. 14-1370

OG G. HEYMAN NOAA USCG S. LEHMAN SEGMENT ST/ K 09-17-CC001
 BIO L. SHARMAN LAND REP C. SCHROCK SUBDIVISION A (1 OF 1)
 EXXON NOT PRESENT ADEG T. ELLSWORTH TIME 173019:45
 TEAM NO. 19 TIDE LEVEL +2.7 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: 3 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 20 m VL 2980 m NO 1771 m
Q12

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	R	B	P	S	1	2	3	4	SU	U	M	V
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	X		
FILM												
NO OIL											X	X

PAVEMENT H F S 0 sq. m by 0 cmPATTIES / TARBALLS 20 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				
				TYPE <u>—</u>
				BAGS <u>—</u>

Photographs:

Roll No. 5-19Frames —

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SHEEN (VND)	↓	SURFACE-SUBSURFACE SEDIMENTS
		OP	OR	OL	OP	NO		UO	UO	1	2	3	4	SU	U	M	V				
1	30					X	0-0	X						X				N	—	—	GP/GS
2	25			X			9-11	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	—	—	S/GPS

COMMENTS

REVIEWED BAT DATE 10 May 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.

SKETCH MAP

SUBDIVISION A

DATE 5, 3/90

CHECKLIST

_____ N Name
 _____ Approx. Size
 _____ Bag/Tube Body
 _____ Of Dist.
 _____ Width
 _____ Length
 _____ % Cover
 _____ Substrate Character
 _____ Est. 1994/1995
 _____ S.N.
 _____ Profile Location(s)
 _____ Profile(s)
 _____ FR Location(s)
 _____ Photo Location(s)

LEGEND

1 A
FIG - No Substrate On

2A
Fig. Subsurface Oil

CT/C
Confidential Distribution

CT/B
Exclusif Distribution

CT/P

Further Discussion

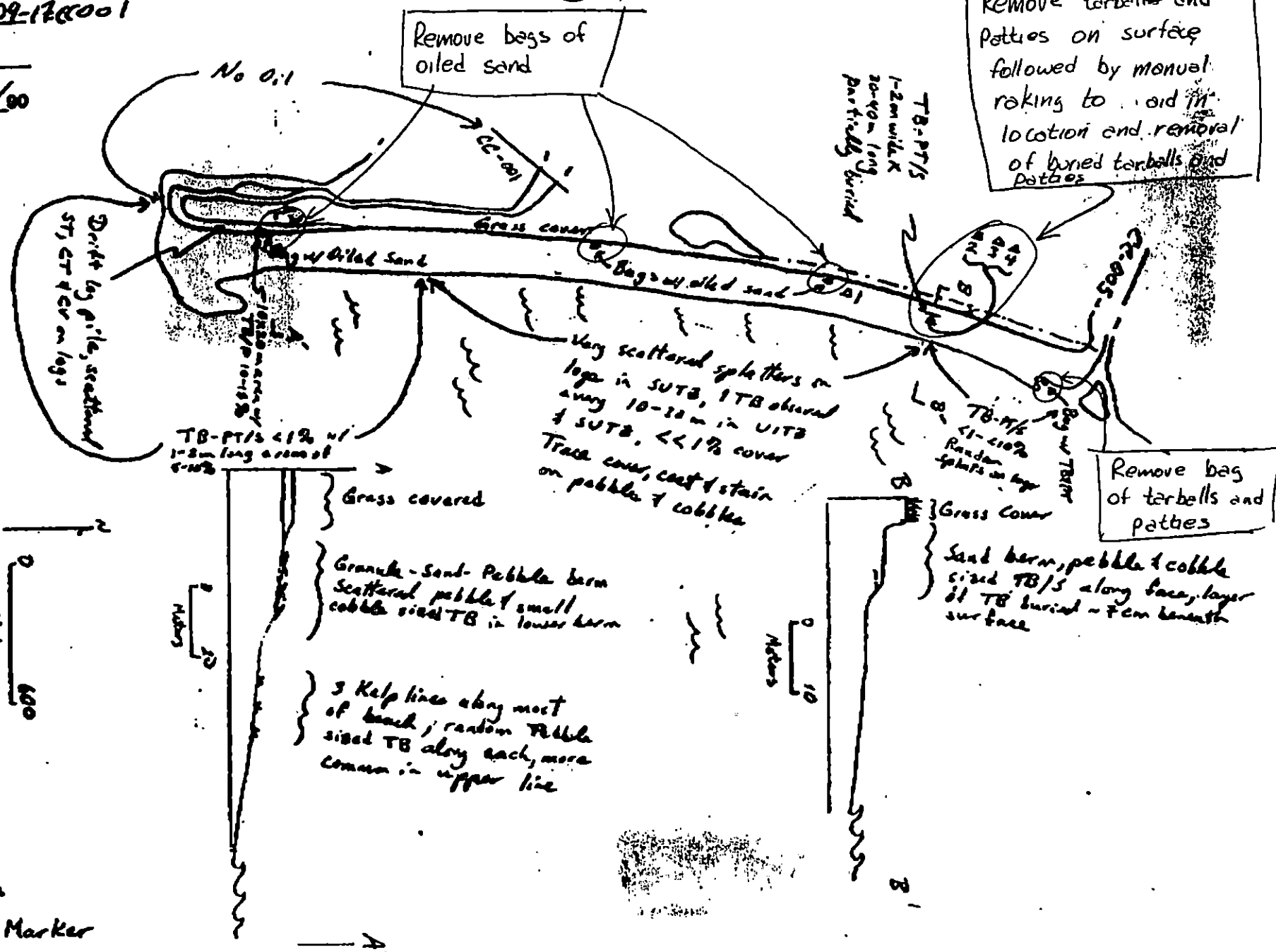
77

Selected Distribution

eee
Oiled Vegetation

1 of 2
Photo location, direction,
and number

x Regulatory Marker



Oil Character Length (in): AP — PO — CV 3 CT 3 ST 4 MS — PT 6.10 FB 2.300 FL — NO 1771

Abstract

SHORELINE ECOLOGICAL SUMMARY (Page 1 of 6)

REVISED: 08-12-78

Segment ST/ CC-1 Subdivision A Date (mo / day / yr) 5/3/90Time (24 hr) 1230-1245 Biologist SHARMAN(A) Substrate type and % of segment: SUBDIV.
(1) Bedrock _____ (2) Boulder _____ (3) Cobble 5 (4) Pebble 10 (5) Sand 85 (6) Silt _____ ^{+gravel}(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, LYMPETS)

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	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 osprey, 15 glaucous-winged gulls, 1 golden plover, 1 yellowlegs, 30 pintails, 1 subadult eagle at N. end of segment (stream) sitting in willows. 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 *Terrestrialis* 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 catadromous 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 (for 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.

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

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

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)

SB

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

CC-1

Approx. Segment Length: 4771m



Map Key: AKP-CC-1a

Name: _____

Date: _____

Data Entered: _____

CC

+

1

ECOLOGY MAP

(2 of 4)

CC-1

(Page 4 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-1c

Name: _____

Date: _____

Data Entered: _____

ECOLOGY MAP
(3 of 4)

CC-1
(Page 5 of 6)

See map page 1.



Side
medium

CC-1

Approx. Segment Length: 4771m

Light
Oil



Mc
Nam
Date
Data

→ - - - →
Anadromous
stream (ADFG # 262-15-10030)
"Village Creek"

ECOLOGY MAP

(4 of 4)

See map page 1.

CC-1

(Page 6 of 6)

XXXX Wide

●// Medium

- - - Narrow

TTTT Very Light

0000 No Oil

CC-1

Approx. Segment Length: 4771m



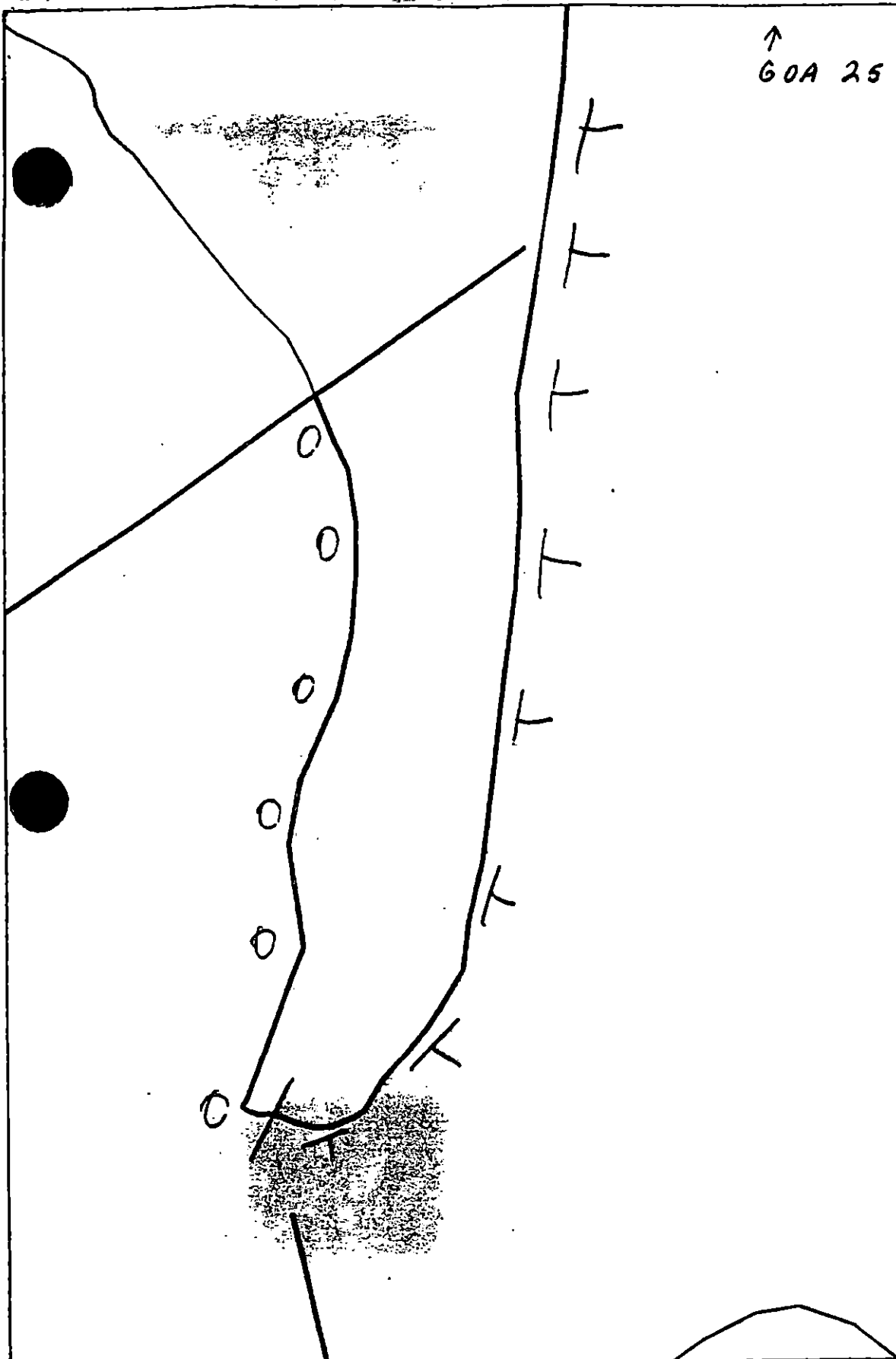
Map Key: AKP-CC-11

Name: _____

Date: _____

Data Entered: _____

↑
GOA 25C



XXXX Wide

/// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

CC-1

ADEC Segment Length: 476⁷¹m

0 100 200 300
METERS



Map Key: GOA-25a

Name: HEYMAN

Date: 3 MAY 90

Data Entered:

Side
Medium
Row
Very Light
Oil

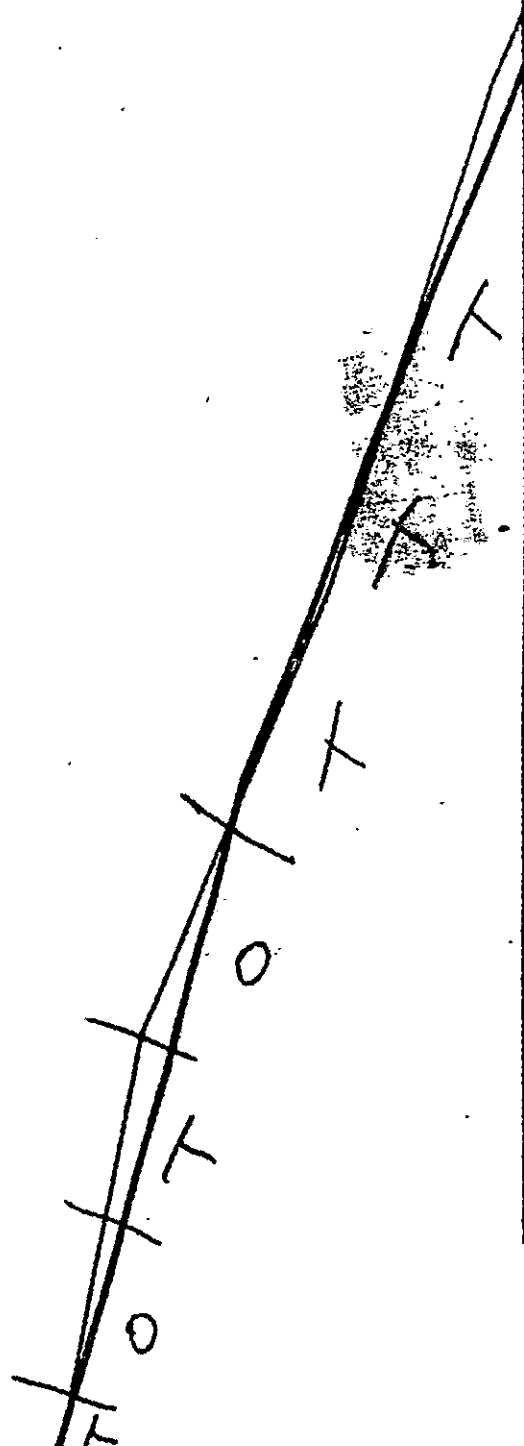
CC-1

Approx. Segment Length: 4771m

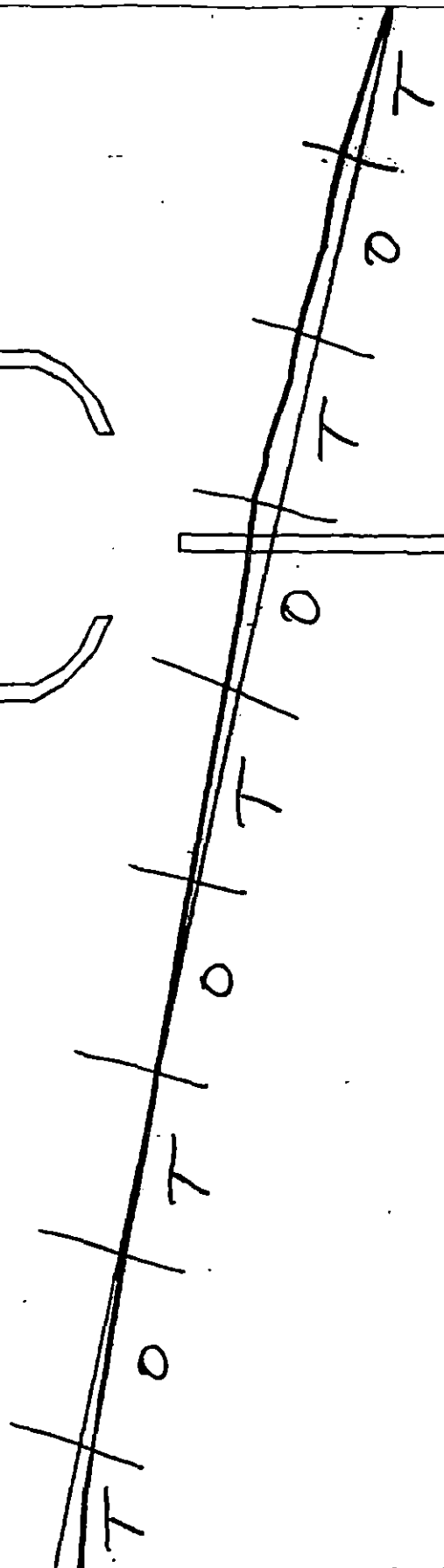


No.
Name
Date
Notes

HEYMAN
3 MAY 90



CC



1

XXXX Wide

CC-1

/// Medium

--- Narrow

Approx. Segment Length: 4771m

TTTT Very Light

0000 No Oil

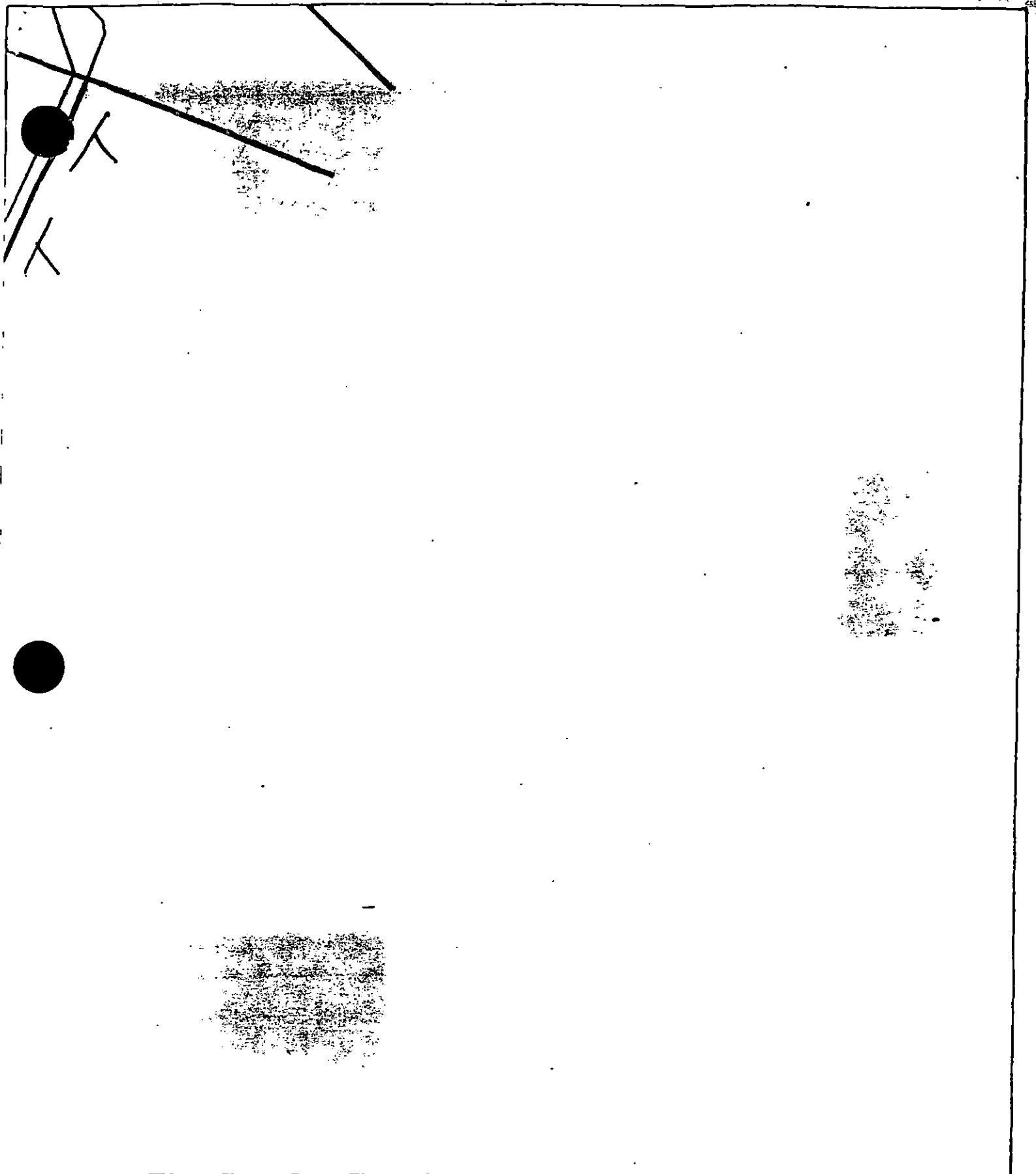


Map Key: AKP-CC-1c

Name: HEYMAN

Date: 3 MAY 90

Date Entered:



XXX Wide	CC-1	
/// Medium		
--- Narrow	Approx. Segment Length: 477m	
TTTT Very Light		
OOOO No Oil		
Map Key: AKP-CC-11		
Name: <u>HEYMAN</u>		
Date: <u>3 MAY 90</u>		
Data 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 uncoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

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>* Other (see comments)</u>

TRASH

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 GIL
NOAA Bill Abbott
USCG M.J. HALL

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

SG, Heym

SKETCH MAP

SEGMENT ST 1209-178001

SUBDIVISION A

DATE 5/3/90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Bag/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HYP/LM/L
- ☐ 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

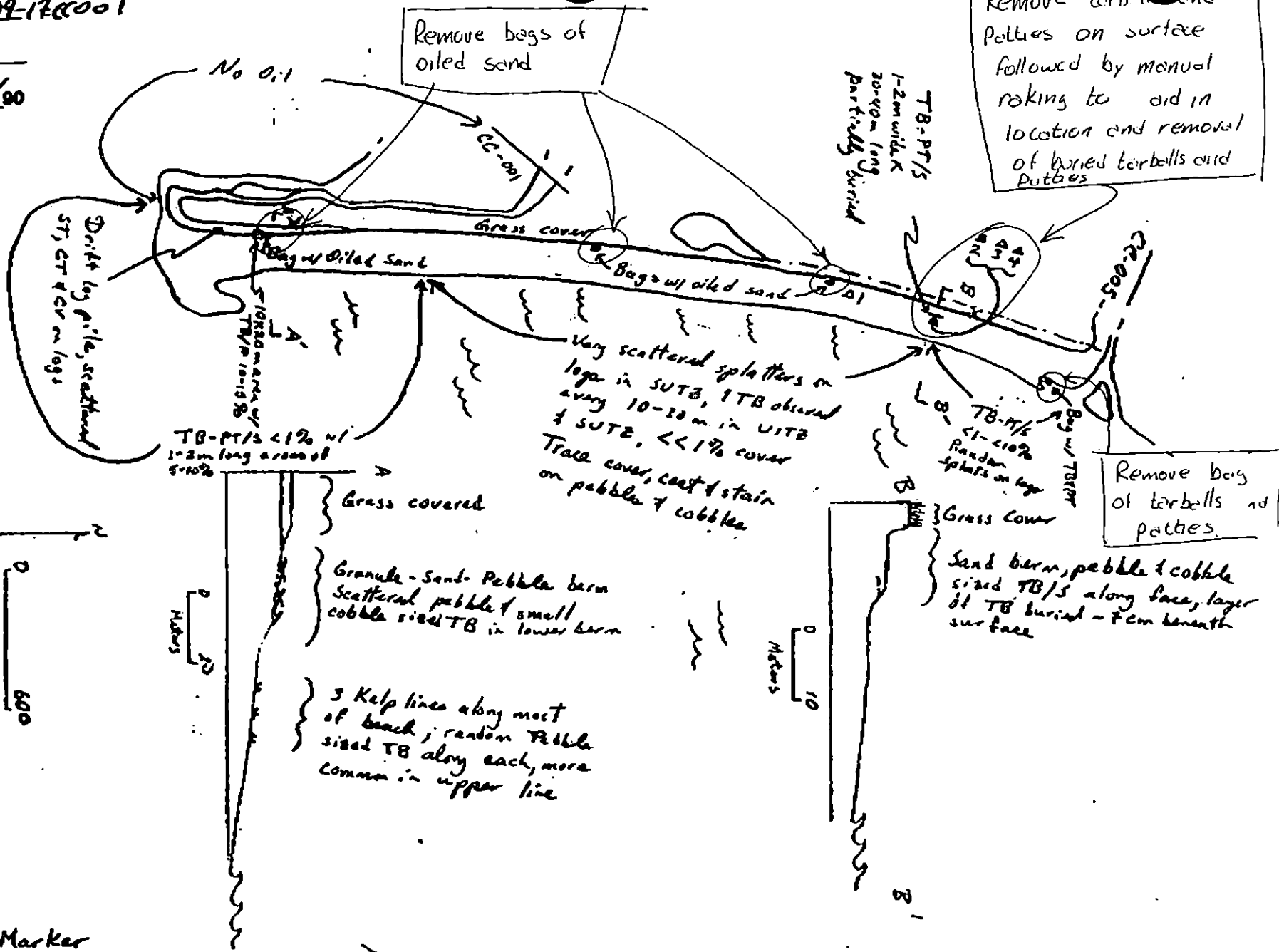
lll

Oiled Vegetation

1 →

Photo location, direction, and number

X Regulatory Marker



28 Character Length (m): AP — PO — CV 3 CT 3 ST 4 MS — PT 6 TB 2300 FL — NO 1771

REVISION 12/2/90

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) 4/15 → 9/10 (peak 8/15)

SB

XXXX Wide

//// Medium

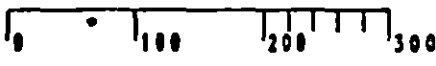
---- Narrow

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

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

CC-1

Approx. Segment Length: 4771m

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

LOW
Very Light
Oil

Approx. Segment Length: 4771m



Wc
Nom
Date
Data

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

ECOLOGY MAP
(4 of 4)

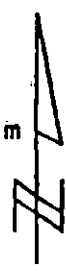
CC-1
(Page 6 of 6)

See map page 1.

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

CC-1

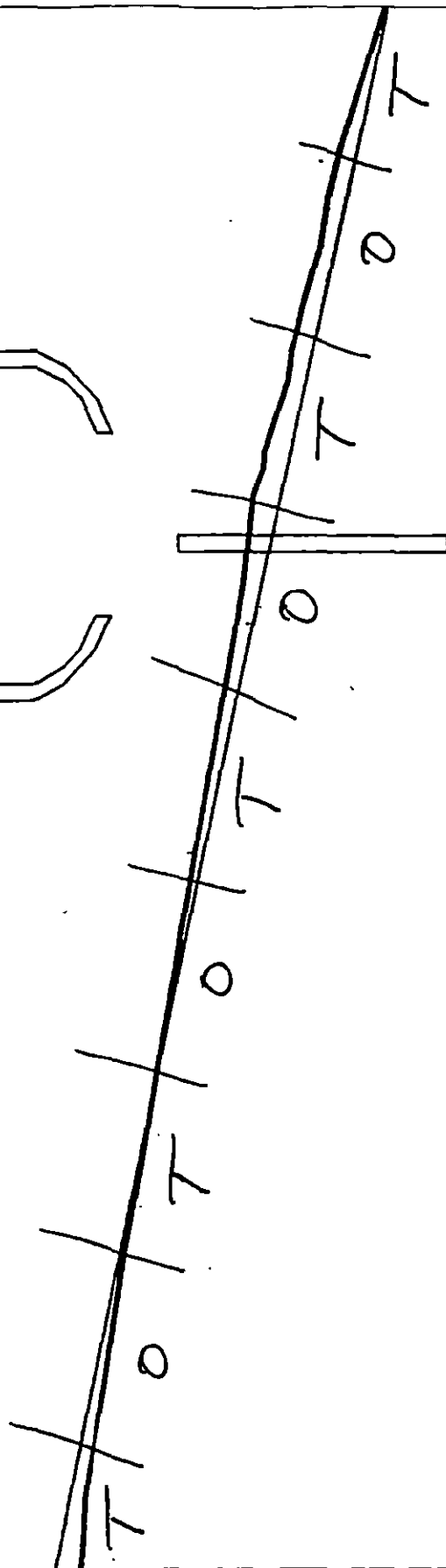
Approx. Segment Length: 4771m



Map Key: AKP-CC-11
Name: _____
Date: _____
Data Entered: _____

C

C



1

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

CC-1

Approx. Segment Length: 4771m

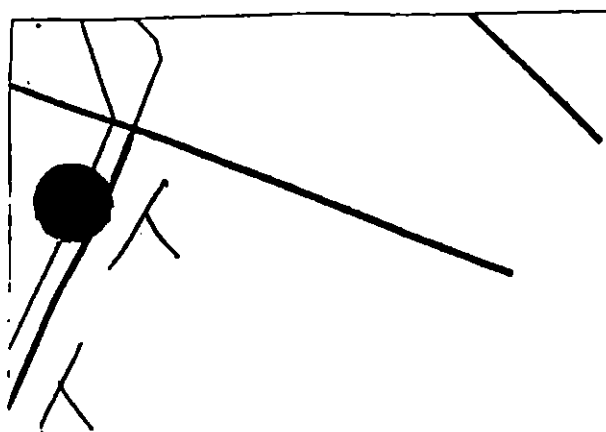


Map Key: AKP-CC-1c

Name: HEYMANN

Date: 3 MAY 90

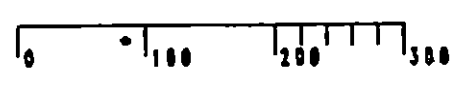
Data Entered:



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

CC-1

Approx. Segment Length: 4771m



Map Key: AKP-CC-11

Name: HEYMAN

Date: 3 MAY 90

Data Entered:

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 uncolled biota and substrate. Sensitive estuary.

FOSC

[Signature]

Date

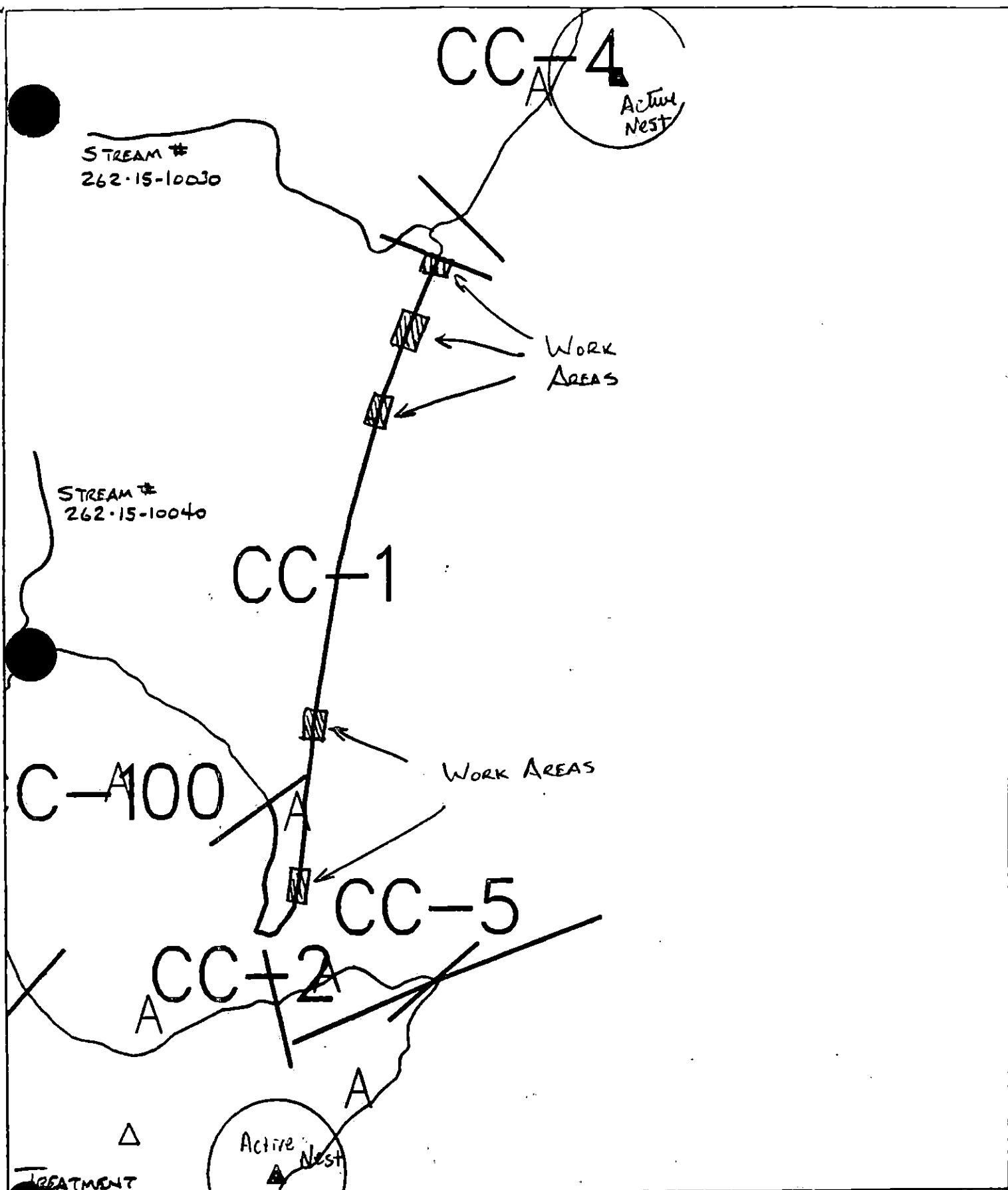
6-18-90

Prepared by

[Signature]

Date

6/15/90



Exxon Company, USA
Map Keys MP-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

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1B 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.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: Richard J. Orr 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:

☐ 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)

TRASH

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. SEE COWSPAWT ADDENDUM dated 6/15/90/PP.

TAG COMMENTS: MONITORS TO ASSESS THE LAGS

TAG APPROVAL DATE: 5/24/90
ADEC ART WENGER
EXXON ANDY EAT
NOAA BILL ALBERTSON

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

1991 MAYSAP EVALUATION

SEGMENT: KO917CC001 SUB: A REGION: KOD SURVEY DATE: 5/20/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC

FOSC

EXXON

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

ADEC

NAME J BARNHART ADFG SIGNATURE Jeff Barnhart☒ NTR ☐ Treatment suggested

Scattered TB's at mouth of village creek, stream #262-15-10030 were removed by VECO crew. Seven (7) large bags of oil, remaining from previous cleanup activities were located on 5-20-91. Two (2) bags were removed on this date. On 5/22/91 the remaining 5 bags of oil were removed from the lower ITZ.

EXXON

NAME R. HARRELSON SIGNATURE R. Harrelson☒ NTR VECO workers removed all oiled material found in it's area.

LANDMANAGER

NAME F BENNIS OF NPS SIGNATURE Frank Bennis☒ NTR

Scattered small mussel patties observed south of the stream have been removed by VECO workers. Seven bags of oiled wastes discovered half-buried in the LITZ have been recovered. These bags were left from previous clean-up operations, possibly from 1989.

USCG/NOAA

NAME CWO SPURR SHIGENAKA SIGNATURE R.P. Spurr Gary Shigenaka☒ NTR

SURVEYED PORTION OF THE SEGMENT CONSISTED OF THE MOUTH OF AN ANADROMOUS STREAM AND THAT PORTION OF THE SAND BEACH LYING TO THE SOUTH. A FEW SCATTERED SOR PATTIES WERE FOUND AND RECOVERED IN THE UITE AND SUPRA NEAR THE STREAM MOUTH, AND ONE OLD BAG OF OILED DEBRIS WAS ALSO LOCATED AND RECOVERED. THE ONLY OTHER OILED MATERIAL ENCOUNTERED WAS 7 OLD BAGS OF OILED DEBRIS FOUND IN THE MITZ. TWO OF THESE WERE RETRIEVED; HIGH WINDS OF CONCERN TO THE HELO PILOTS PRECLUDED MORE EXTENSIVE RECOVERY OPS. THE REMAINING FIVE BAGS SHOULD BE FAIRLY READILY VISIBLE BOTH FROM THE AIR AND ON THE BEACH, UNLESS SHIFTING BEACH SANDS BURY THEM. ONE BAG THAT WAS OPENED FOR WEIGHT REDISTRIBUTION PRIOR TO LOADING INTO THE HELICOPTER CONTAINED OILED SAND AND COBBLES THAT STILL GENERATED SHEEN.

APPENDIX 5/22/91- THE SURVEY TEAM RETURNED TO THE SITE AND RECOVERED THE FIVE REMAINING BAGS OF MATERIAL.

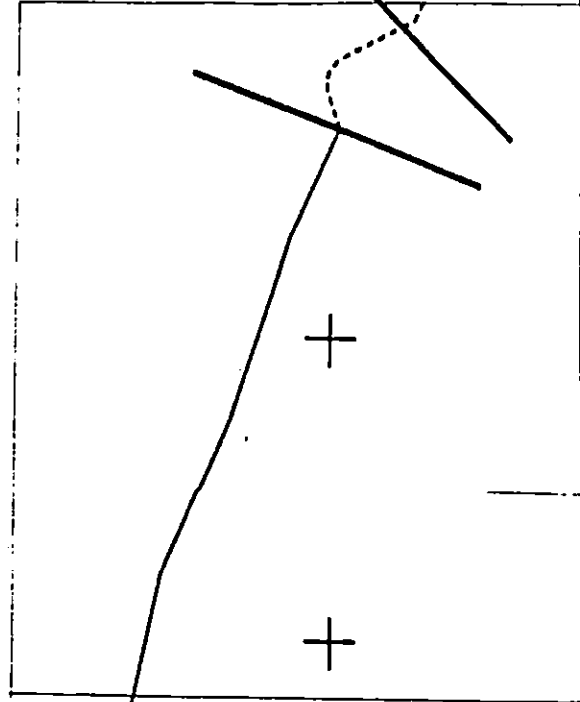
PAGE / OF /

Reviewed: MC 5/25/91
revised 5.25 94

MAP #1

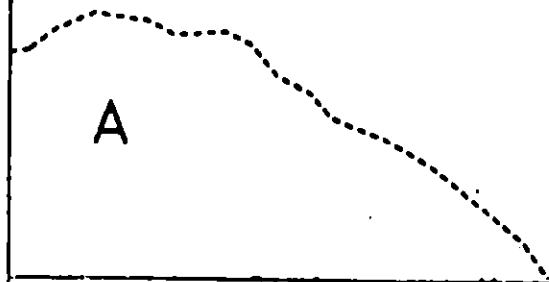
+

17



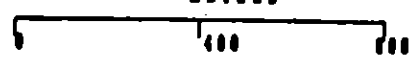
A

CC-1



K0917 CC001 A

METERS



AK State Plane Zone 14
18817-10001-00

Subdivision Field Map

Map Key: 00A0017CC001A

Name: D. F. R. GERALD

Date: 20 MAY 1991

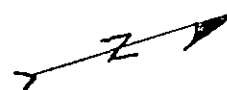
V/V Bushes
 ≡ Low
 W W GRASSY AREA
 ↗ PHOTO SITES

Sketch Map (OG)
 K9N-17-CC-1-A
 D. M. FITZGERALD
 20 MAY 1990
 1310 - 1420

MAP DERIVED FROM
 VERTICAL AERIAL PHOTOS
 WITH FIELD SURVEY
 MODIFICATIONS

ALASKA PENINSULA

P.U. X VERO WORKERS
 AND SURVEY TEAM
 PICKED UP ALL OBSERVED
 OILED SEDIMENT AMOUNTING
 TO ONE BAG



VILLAGE CREEK
 ANNO. STREAM
 #262-15-10030

P.U. plastic
 bags w/ oil
 sediment

PALEO-SHORELINE
 VEG. SCARP

C-B Beach

OLD CHANNEL
 & INLET SITE

LAGOON

MARSH
 GRASS

← UNSURVEYED →

P.U. 7 PLASTIC BAGS
 RETRIEVED FROM
 the beach face
 and sandy low-
 tide terrace

- A. TB
1. 10-20 by 120m < 1%
 2. 10-20 by 200
occasional tar patches
high sand content

0 200
 METERS

SHELIKOF STRAIT

BRUNNEN: MC 5/25/91

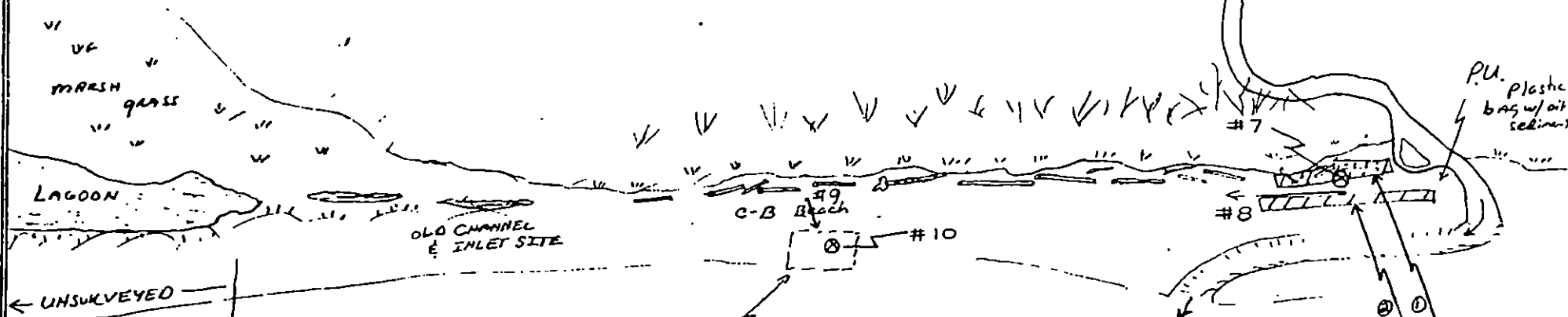
\ \ Bushes
 = Low
 W W GRASSY
 AREA
 ↗ PHOTO SITES

PHOTO SITES, CC-1A
 KOLL 6-18, FRAMES 7 THRU 10

SKETCH MAP (OG)
 K9N-17-CC-1-A
 D. M. FITZGERALD
 20 MAY 1990
 1310 - 1420

ALASKA PENINSULA

P.U. * VECO WORKERS
 AND SURVEY TEAM
 PICKED UP ALL OBSERVED
 OILED SEDIMENT ATTRIBUTING
 TO ONE IAC



P.U. 7 PLASTIC BAGS
 RETRIEVED FROM
 the beach face
 and sandy low-
 tide terrace

- A. TB
1. 10-20 by 120m < 1%
 2. 10-20 by 200
- OCCASIONAL TAR PATCHES
HIGH SAND CONTENT

0 200
 METERS

SHELIKOF STRAIT

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 Helo

DATE May 20 1991

SEGMENT # K9N-17 CC-01

TIDAL HEIGHT(Range) 0 ft - 0 ft (13:10 - 14:30)

SUBDIVISION A

BIOLOGIST N. Davis

SEA STATE 1-2 ft choppy

WIND SPEED/DIRECTION 25-30 kt Breeze NW

PHOTOGRAPHS: ROLL # 6-18

FRAME # 7-10

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

A0+2) This is a wide low angle sandy beach in front of a rubble/gravel/cobble slope. The TB found at this site were in the U12 and G12. The biota on this beach is very sparse as is normal for the beach dynamics here. There was very little drift algae *Ulva*, *Laminaria*, *Helosaccus*, and *Fucus* species were identifiable. Shell pieces included *Clenocardium nuttallii*, *Saxidomus giganteus*, *Mytilus edulis*, *Siliqua patula*, *Macoma* sp., *Nucella lamellosa*, *Pisolithaca*, *Mga* sp., *Telausius*, *Fusitriton* and *Trichotropis*. The stream next to site A0+2) is anadromous. Pinkies and Dolly Varden spawn there.

Any clean up in this area would be more disruptive than productive.

Glaucous-winged Gull(2) Kittiwake(4) Shorebirds(5) Pintails(6) Plover sp(1) Wandering Tattler(1)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	0		0
Seabirds	0		
Waterfowl	2	11	
Gulls/Kittiwakes	2	6	
Shorebirds	2	1	
Corvids	0		
Other Birds	0		

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	0	0 Moose *	2
Pinnipeds(specify)	0	0 Bear + Bear Tracks	1
Whales(specify)	0	River Otter tracks	

* In Uplands 0 on second visit to collect Old Bags.

Shoreline subdivision map showing important biological features attached.

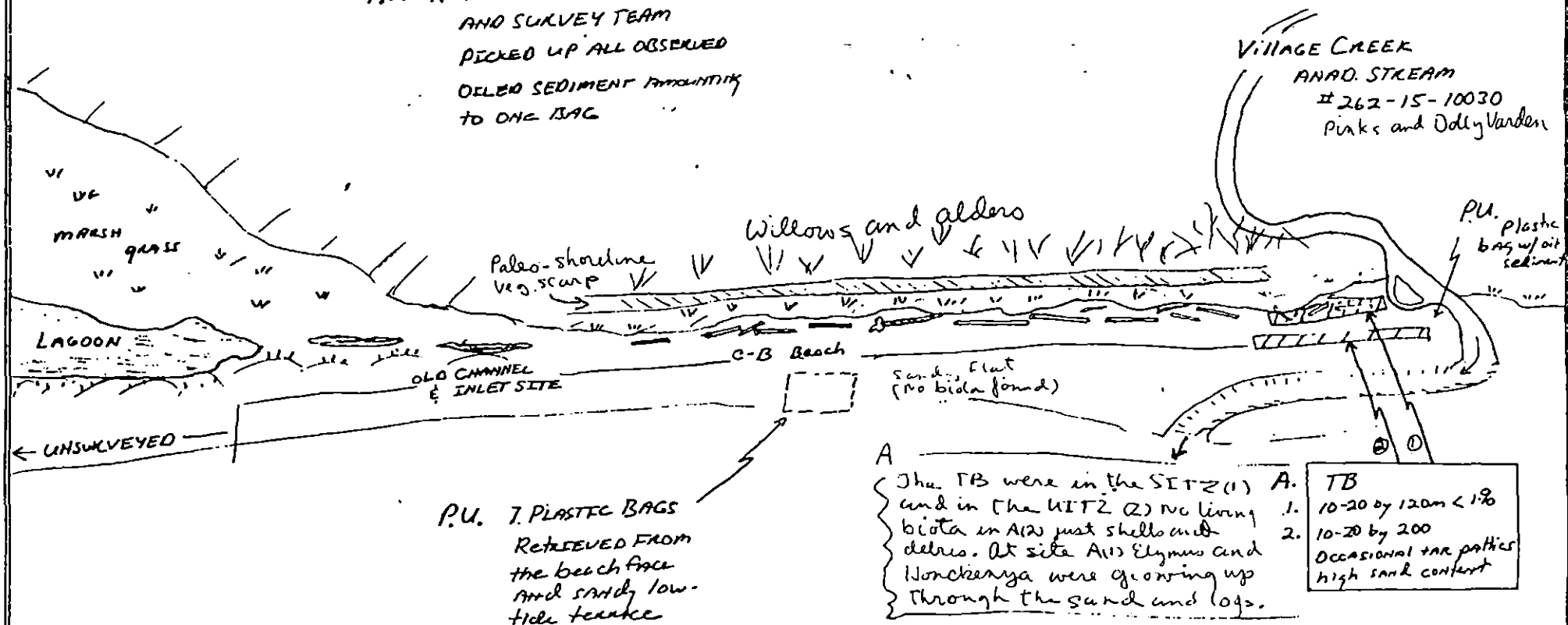
\ \ Bushes
 = Low
 w w GRASSY AREA
 ↗ PHOTO SITES

Bio Map
 H. Davis

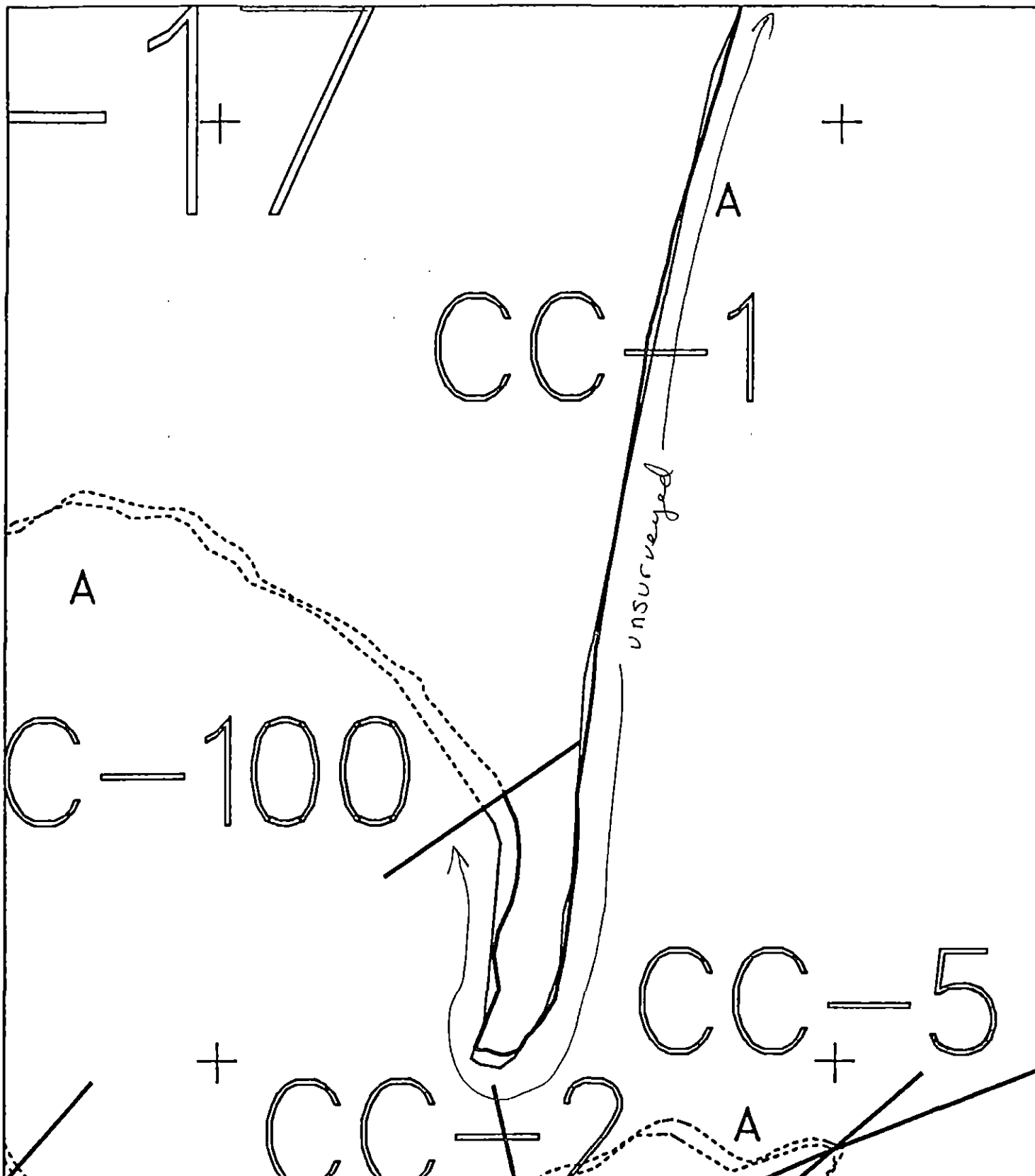
Sketch MAP (OG)
 K9N-17-CC-1-A
 D. M. FITZGERALD
 20 MAY 1990
 1310 - 1420

ALASKA PENINSULA

P.U. * VECO WORKERS
 AND SURVEY TEAM
 PICKED UP ALL OBSERVED
 OILED SEDIMENT AMOUNTING
 TO ONE BAG

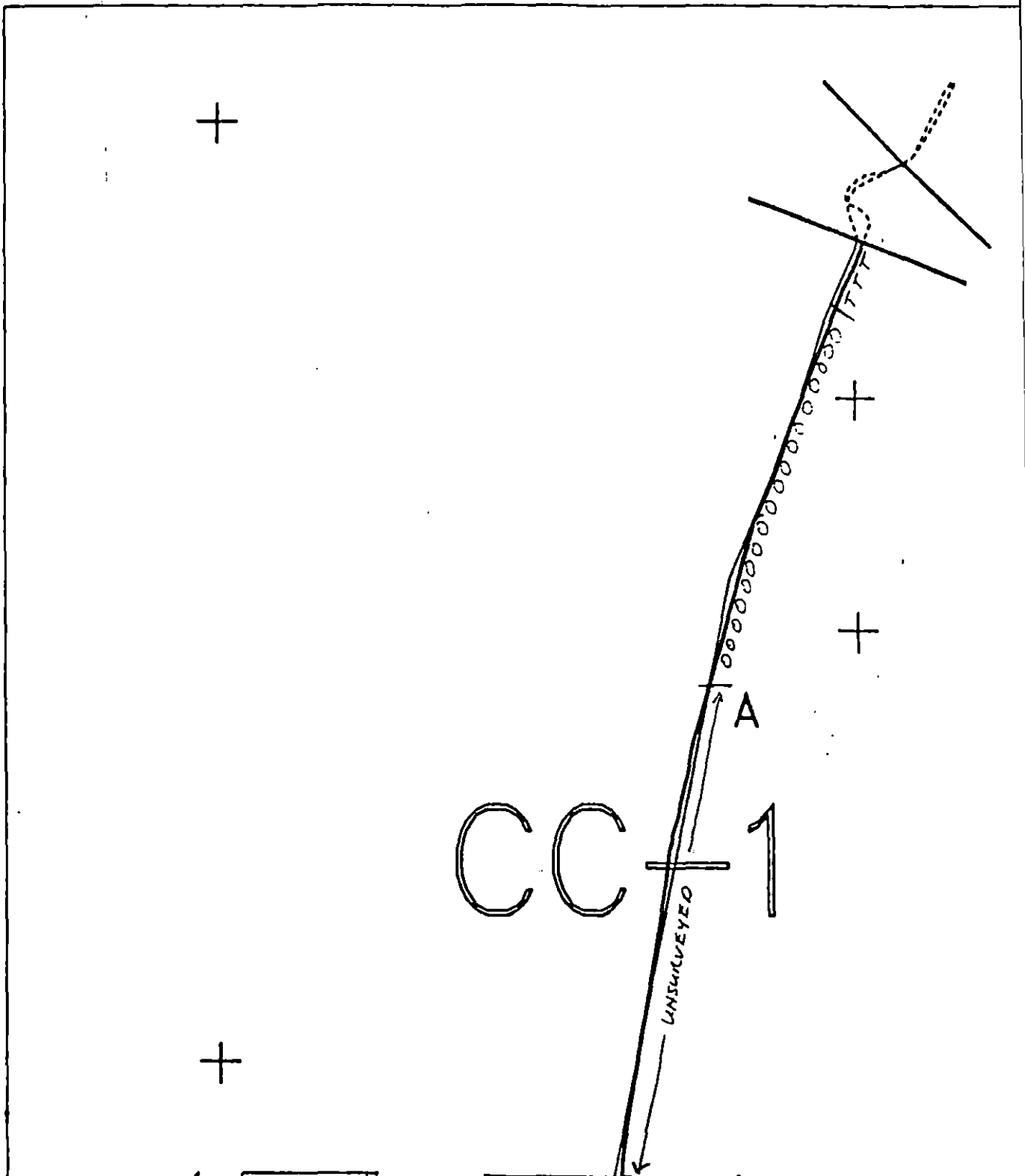


SHELIKOF STRAIT



XXXX	Wide	K0917 CC001 A	Subdivision Field Map
////	Medium	ADEC Subsegment Length: 4783m	
----	Narrow	METERS	Map Key: 60AX0017CC001Aa
TTTT	Very Light		Name: <u>Fitzgerald (J.Y.)</u>
0000	No Oil		AX State Plane Zone 4
			Data Entered:

Reviewed: MC 5/25/91
 revised 5.25.91



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

K0917 CC001 A
 ADEC Subsegment Length: 4783m
 METERS
 0 400 800
 AZ State Plane Zone 4
 90017cc001ab

Subdivision Field Map
 Map Key: 60AK0017CC001AB
 Name: D.F. Fitzgerald
 Date: 20 May 1991
 Date Entered:



Reviewed: MC 5/25/91
 reviewed 5.25.91

1991 MAYSAP EVALUATION

SEGMENT:K0917CC001 SUB: A REGION: KOD SURVEY DATE: 5/20/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: T. Matthew Adams Date: 6/04/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

2

12

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL, DATE: June 4 1991

FOSC APPROVAL DATE: 6/8/91

ADEC

FOSC

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

EXXON

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

ADEC

NAME J. BARNHART ADFG SIGNATURE Jeff Barnhart

☒ NTR ☐ Treatment suggested

Scattered TB's at mouth of Village creek, stream #262-15-10030 were removed by VECO crew. Seven (7) large bags of oil, remaining from previous cleanup activities were located on 5-20-91. Two (2) bags were removed on this date. On 5/22/91 the remaining 5 bags of oil were removed from the lower ITZ.

EXXON

NAME R. HARRELSON SIGNATURE R. Harrelson

☒ NTR VECO workers removed all oiled material found in this area.

LANDMANAGER

NAME F. BENNIS OF NPS SIGNATURE F. Bennis

☒ NTR

Scattered small mouse patties observed south of the stream have been removed by VECO workers. Seven bags of oiled wastes discovered half-buried in the LITZ have been recovered. These bags were left from previous clean-up operations, possibly from 1989.

USCG/NOAA

NAME CWO SPURR / G. SHIGENAKA SIGNATURE R.P. Spurr Gary Shigenaka

☒ NTR

SURVEYED PORTION OF THE SEGMENT CONSISTED OF THE MOUTH OF AN ANADROMOUS STREAM AND THAT PORTION OF THE SAND BEACH LYING TO THE SOUTH. A FEW SCATTERED SOR PATTIES WERE FOUND AND RECOVERED IN THE UITS AND SUPRA. NEAR THE STREAM MOUTH, AND ONE OLD BAG OF OILED DEBRIS WAS ALSO LOCATED AND RECOVERED. THE ONLY OTHER OILED MATERIAL ENCOUNTERED WAS 7 OLD BAGS OF OILED DEBRIS FOUND IN THE MITZ. TWO OF THESE WERE RETRIEVED; HIGH WINDS OF CONCERN TO THE HELO PILOTS PRECLUDED MORE EXTENSIVE RECOVERY OPS. THE REMAINING FIVE BAGS SHOULD BE FAIRLY READILY VISIBLE BOTH FROM THE AIR AND ON THE BEACH, UNLESS SHIFTING BEACH SANDS BURY THEM. ONE BAG THAT WAS OPENED FOR WEIGHT REDISTRIBUTION PRIOR TO LANDING INTO THE HELICOPTER CONTAINED OILED SAND AND COBBLES THAT STILL GENERATED SHEEN. ON MAY 22/91 - THE SURVEY TEAM RETURNED TO THE SITE AND RECOVERED THE FIVE REMAINING BAGS OF MATERIAL.

PAGE 1 OF 1

Reviewed: MC 5/25/94
revised 5.25 94

MAP #1

17

CC-1

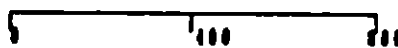
A

A



K0917 CC001 A

METERS



AK State Plane Zone 4
80017000100

Subdivision Field Map

Map Key: COAK0017CC001AB

Name: D. F. FERGALD

Date: 20 MAY 1991

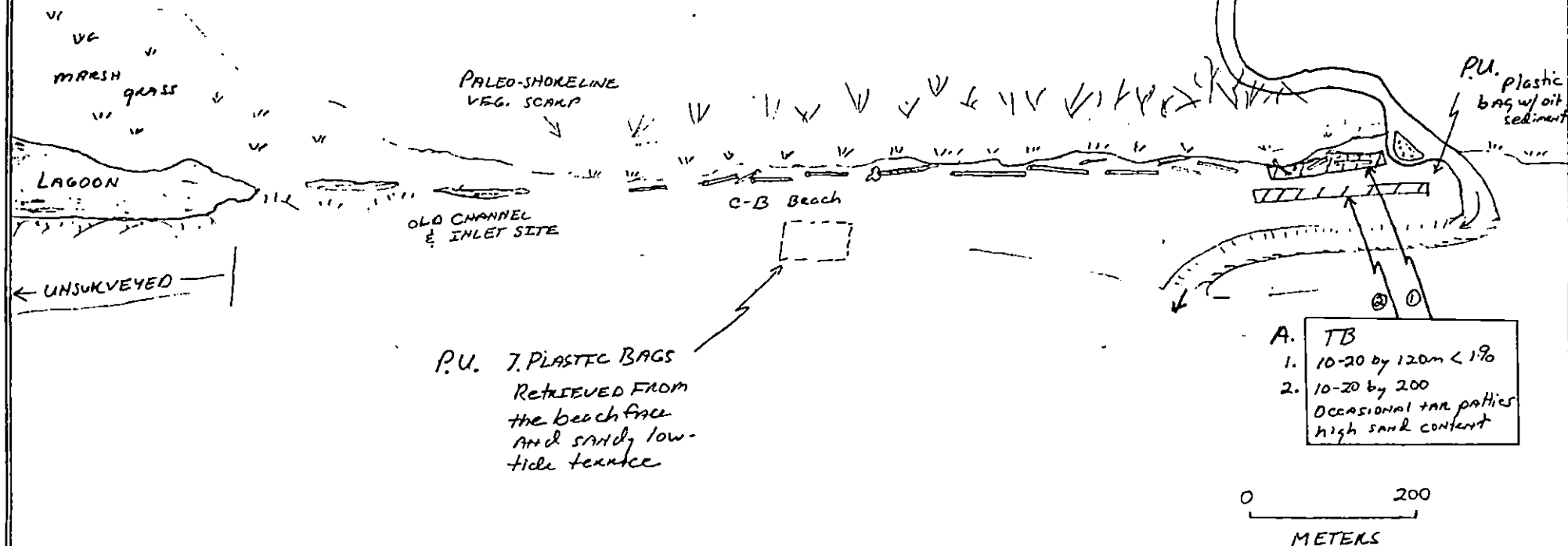
V/V  trees
 //  LOW
 W W GRASSY
 AREA
 ↗ PHOTO SITES

Sketch Map (OG)
 K9N-1-C-1-A
 D. M. FITZGERALD
 20 MAY 1990
 1310 - 1420

MAP DERIVED FROM
 VERTICAL AERIAL PHOTOS
 WITH FIELD SURVEY
 MODIFICATIONS

ALASKA PENINSULA

P.U. * VECO WORKERS
 AND SURVEY TEAM
 PICKED UP ALL OBSERVED
 OIL AND SEDIMENT AMOUNTING
 TO ONE BAG



SHELIKOF STRAIT

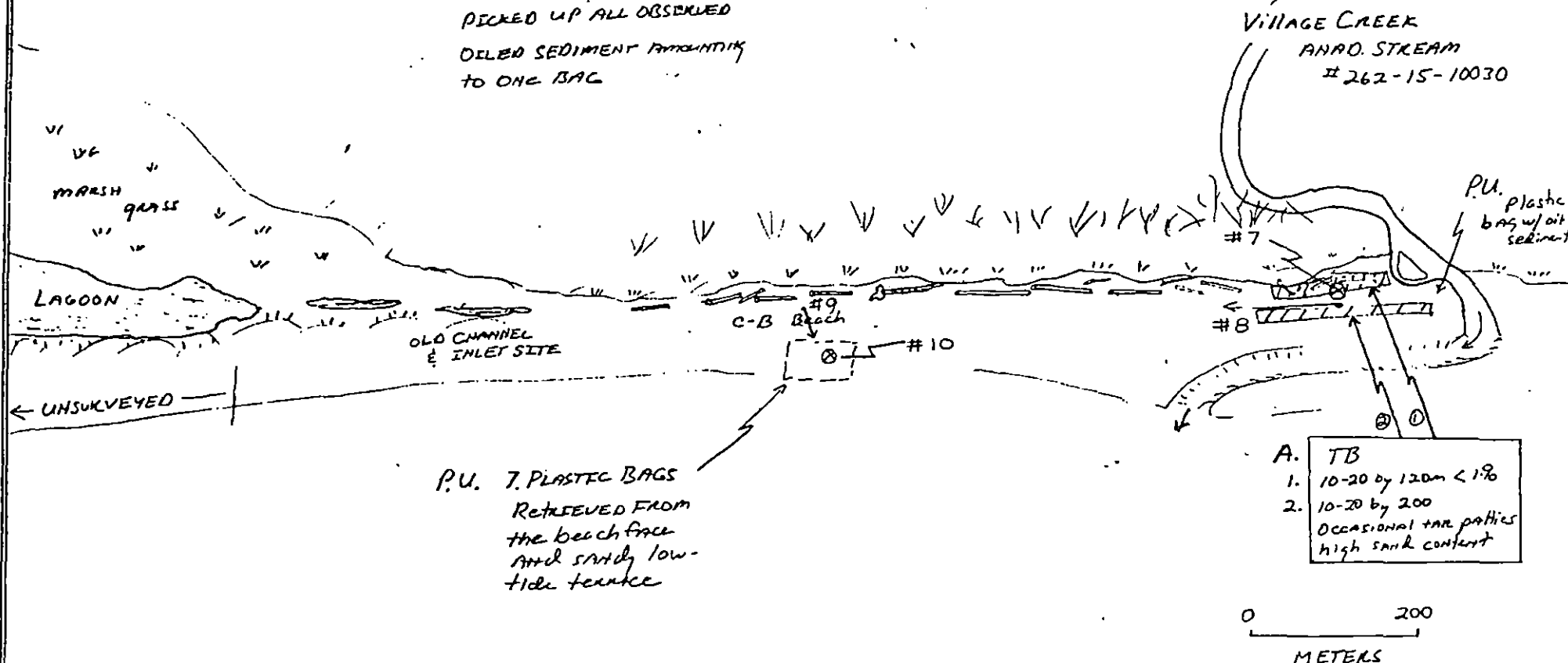
V/V  hcs
 Low
 W W GRASSY AREA
 PHOTO SITES

PHOTO SITES, CC-1A
 ROLL 6-18, FRAMES 7 THRU 10

SKETCH MAP (OG)
 K9N-CC-1-A
 D. M. FITZGERALD
 20 MAY 1990
 1310 - 1420

ALASKA PENINSULA

P.U. * VECO WORKERS
 AND SURVEY TEAM
 PICKED UP ALL OBSERVED
 OILED SEDIMENT AMOUNTING
 TO ONE BAG



- A. TB
1. 10-20 by 120m < 1%
 2. 10-20 by 200
OCCASIONAL TAR PATCHES
HIGH SAND CONTENT

SHELIKOF STRAIT

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 Helo

DATE May 20 1991

SEGMENT # K9N-17 CC-01

TIDAL HEIGHT(Range) 0ft - 0ft (13:10 - 14:20)

SUBDIVISION A

BIOLOGIST N. Davis

SEA STATE 1-2 ft choppy

WIND SPEED/DIRECTION 25-30kt Breeze NW

PHOTOGRAPHS: ROLL # 6-18

FRAME # 7-10

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

A0+2) This is a wide low angle sandy beach in front of a rubble/gravel/cobble slope. The TB found at this site were in the UTZ and GTZ. The biota on this beach is very sparse as is normal for the beach dynamics here. There was very little drift algae *Ulana*, *Laminaria*, *Halosaccus*, and *Fucus* species were identifiable. Shell pieces included *Clinocardium nuttallii*, *Saxidomus giganteus*, *Mytilus edulis*, *Siliqua patula*, *Macoma* sp., *Nucella lamellosa*, *Protothaca*, *Mga* sp., *Telmessus*, *Fusitriton* and *Trichotropis*. The stream next to site A0+2) is anadromous. Pinkies and Dolly Varden spawn there.

Any clean up in this area would be more disruptive then productive.

Glaucous-winged Gull(2) Kittiwake(4) Shorelars(5) Pintails(6) Plover sp(1) Wandering Tattler(1)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	0		0
Seabirds	0		
Waterfowl	2	11	
Gulls/Kittiwakes	2	6	
Shorebirds	2	1	
Corvids	0		
Other Birds	0		

MARINE MAMMALS

	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	0	Om 6052 *	2
Pinnipeds(specify)	0	0 Bear + Bear Tracks	1
les(specify)	0	River Otter tracks	

* In Uplands 0 On second visit to collect Old Bags.

Shoreline subdivision map showing important biological features attached.

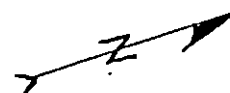
V/V PILES
 = LOW
 W W GRASSY AREA
 ↗ PHOTO SITES

Bio Map
 H. Davis

Sketch Map (OG)
 K9N-1-CC-1-A
 D. M. FITZGERALD
 20 MAY 1990
 1310 - 1420

ALASKA PENINSULA

P.U. * VECO WORKERS
 AND SURVEY TEAM
 PICKED UP ALL OBSERVED
 OILED SEDIMENT AMOUNTING
 TO ONE BAG



VILLAGE CREEK

ANAD. STREAM

#262-15-10030

Pinks and Odly Varden

P.U. plastic bag w/oil sediment

Willows and alders

Paleo-shoreline
veg. scarp

C-B Beach

Sandy flat
(No birds found)

OLD CHANNEL
& INLET SITE

LAGOON

MARSH GRASS

← UNSURVEYED

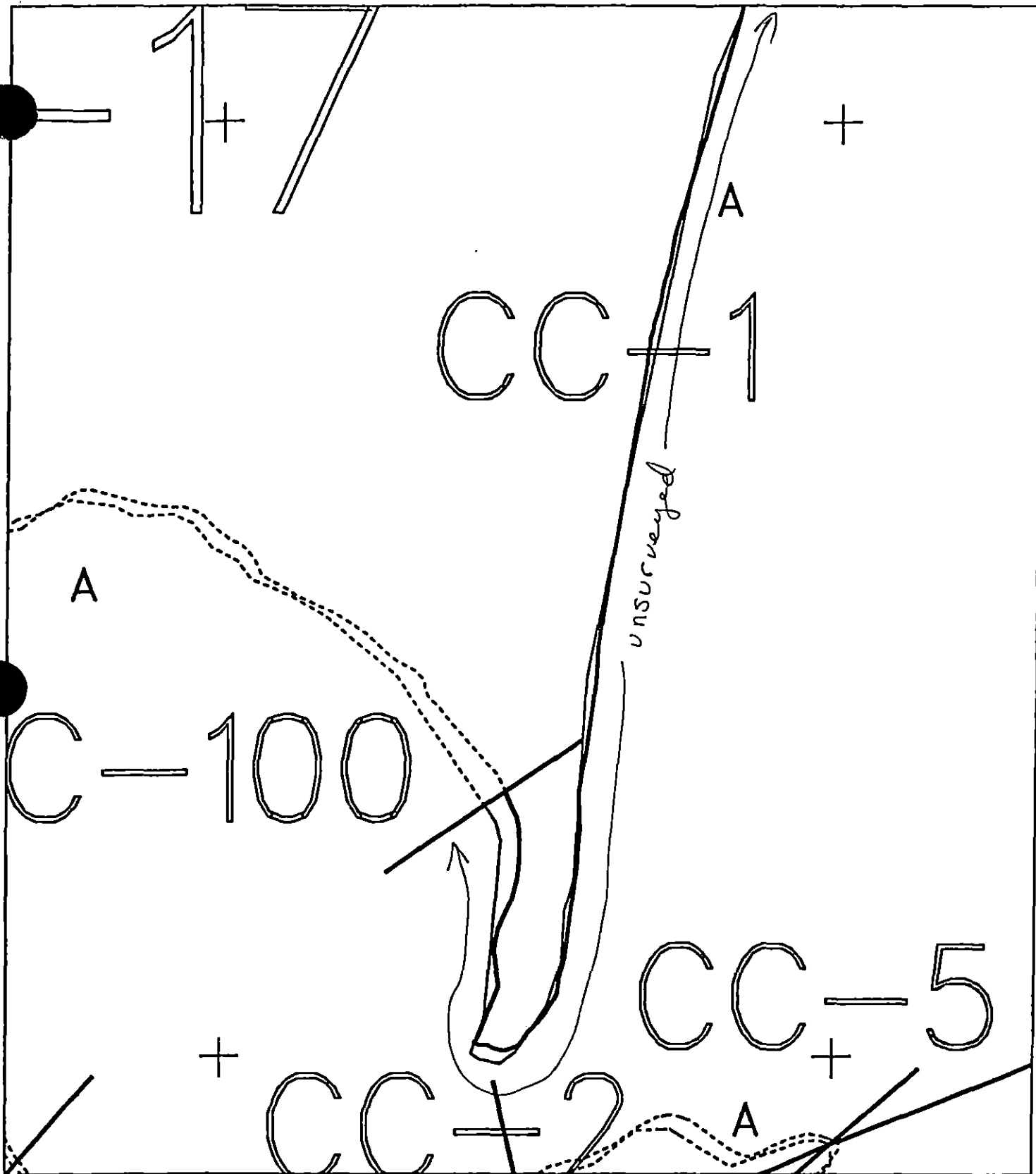
P.U. 7 PLASTIC BAGS
 RETRIEVED FROM
 the beach face
 and sandy low-
 tide terrace

A The TB were in the SITZ (1)
 and in the KITZ (2) no living
 biota in A(2) just shells and
 debris. At site A(1) Elymus and
 Noncherya were growing up
 through the sand and logs.

A. TB
 1. 10-20 by 120m < 1%
 2. 10-20 by 200
 Occasional tar patches
 high sand content

0 200
 METERS

SHELIKOF STRAIT



XXXX
 ////

 TTTT
 0000

Wide
 Medium
 Narrow
 Very Light
 No Oil

K0917 CC001 A
 ADEC Subsegment Length: 4783m

METERS

0 400 800

AK State Plane Zone 4
 90917cc001au- ...



Subdivision Field Map

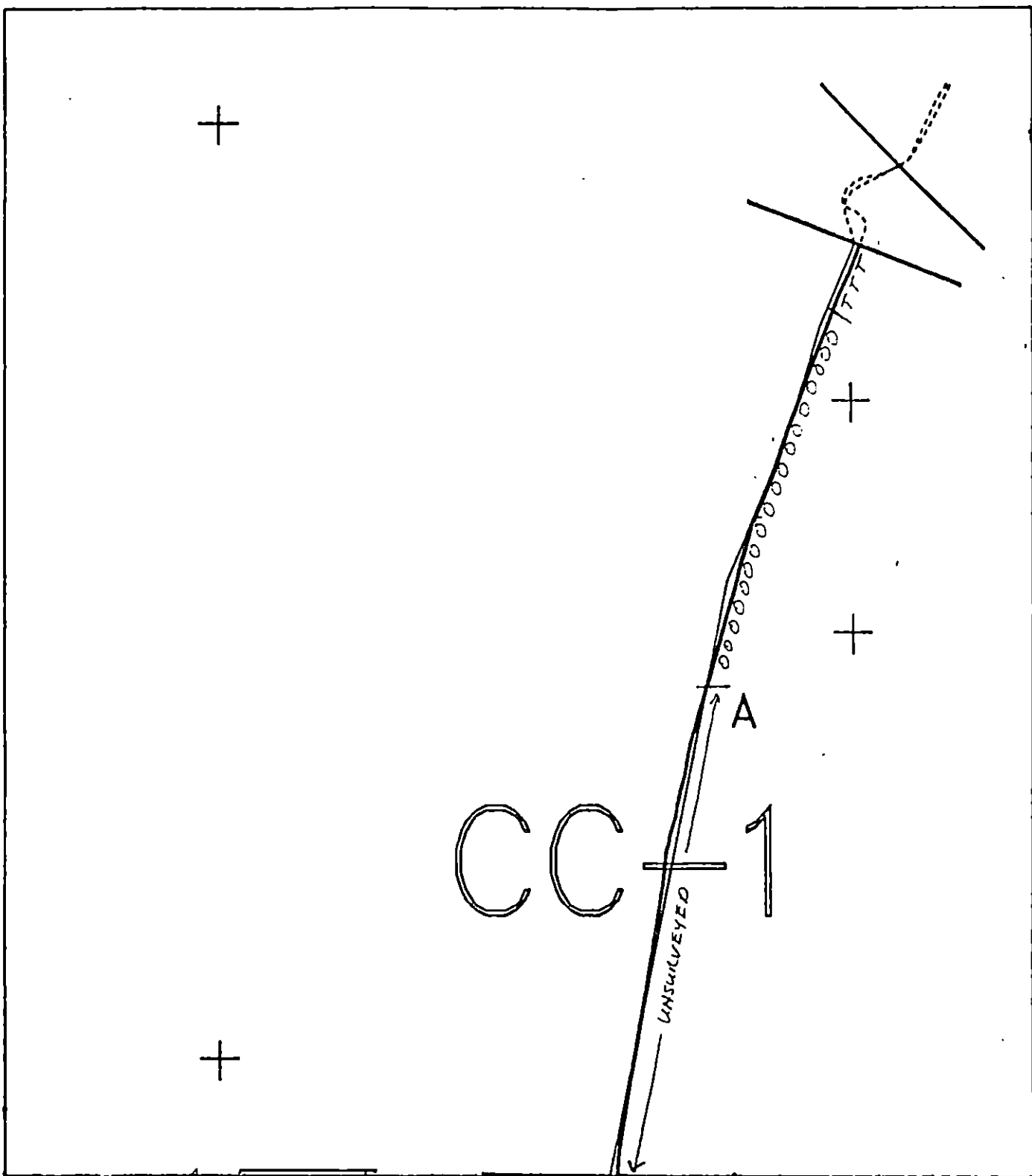
Map Key: 60AK0017CC001Aa

Name: Fitzgerald (J.Y.)

Date: 5-20-91

Data Entered:

Reviewed: MC 5/25/91
 m. j. ~~mc~~ c. 25.91



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

K0917 CC001 A
 ADEC Subsegment Length: 4783m
 METERS.

AK State Plane Zone 4
 80917cc001ab



Subdivision Field Map
 Map Key: 80AK0017CC001Ab
 Name: D.F. Fitzgerald
 Date: 20 May 1991
 Date Entered:

Reviewed: MC 5/25/91
 reviewed 5.25 91

REGION: KODIAK

SEGMENT: ST/K09-17-CC-002

SUBDIVISIONS: A (1 OF 1)

2

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.

ARCHAEOLOGICAL CONSTRAINTS:

Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time. >>>PHONE 564-3274 (Anchorage) OR 229-1508 (24 hrs.)<<<

SHPO SIGNATURE: _____ DATE: _____

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:

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

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

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

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 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 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
- 3 Harbor seal and sea lion pupping (5/10 to 7/1)
3 Harbor seal and sea lion molting (5/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (5/1 to 9/15)
6V Anchorages (5/1 to 9/15)
6W Forest Service cabins (5/1 to 9/15)
6X Lodge (5/1 to 9/15)
6Y Special use destination
- 7Z Subistence area: Salmon harvesting (6/1 to 9/30)
Finfish harvesting
Deer harvesting (5/1 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 267-2350

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1K09-17-CC002 SUBDIVISION: A

DATE 5/03/90

~~NOAA~~
~~SG~~

NAME 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 oiling and the sensitivity of the area. Small bands 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 $\approx 400m$ west of the small creek. In the upper mud flat an area $.5m \times 20m$ of patty to asphalt with up to 30% coverage is located at the SW end of the segment and two patches up to $2m \times 3m$ 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. 04-13-98

OG G. HEYMAN NOAA S. LEHMAN USCG S. LEHMAN SEGMENT STI K0917 CC 002
 BIO L. SHARMAN LAND REP C. SCHROEDER NPS SUBDIVISION A (1 OF 1)
 EXXON ON LEAVE ADEC T. ELSWORTH TIME 14:45 to 16:00
 TEAM NO. 19 TIDE LEVEL +4 to +244 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			
	IC	IS	IP	IR	1	2	3	4	5	6	7	8	SU	U	M	L
ASPHALT PAVEMENT			X	X											X	X
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES			X	X		X							X		X	
TARBALLS			X			X							X			
FILM																
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			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		UC	UC	1	2	3	4	5	6	7	8	SU	U	M	L				
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 UITE Kelp line along the wider sand-granule-pebble beach as tar balls 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 SUTE.

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 ft) 5/3/80 OGH 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.H. [redacted]

SEGMENT ST/K 0917 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 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

$\square$ CT/C
Continuous Distribution

$\square$ CT/B
Broken Distribution

$\square$ CT/P
Patchy Distribution

$\square$ CT/S
Splashed Distribution

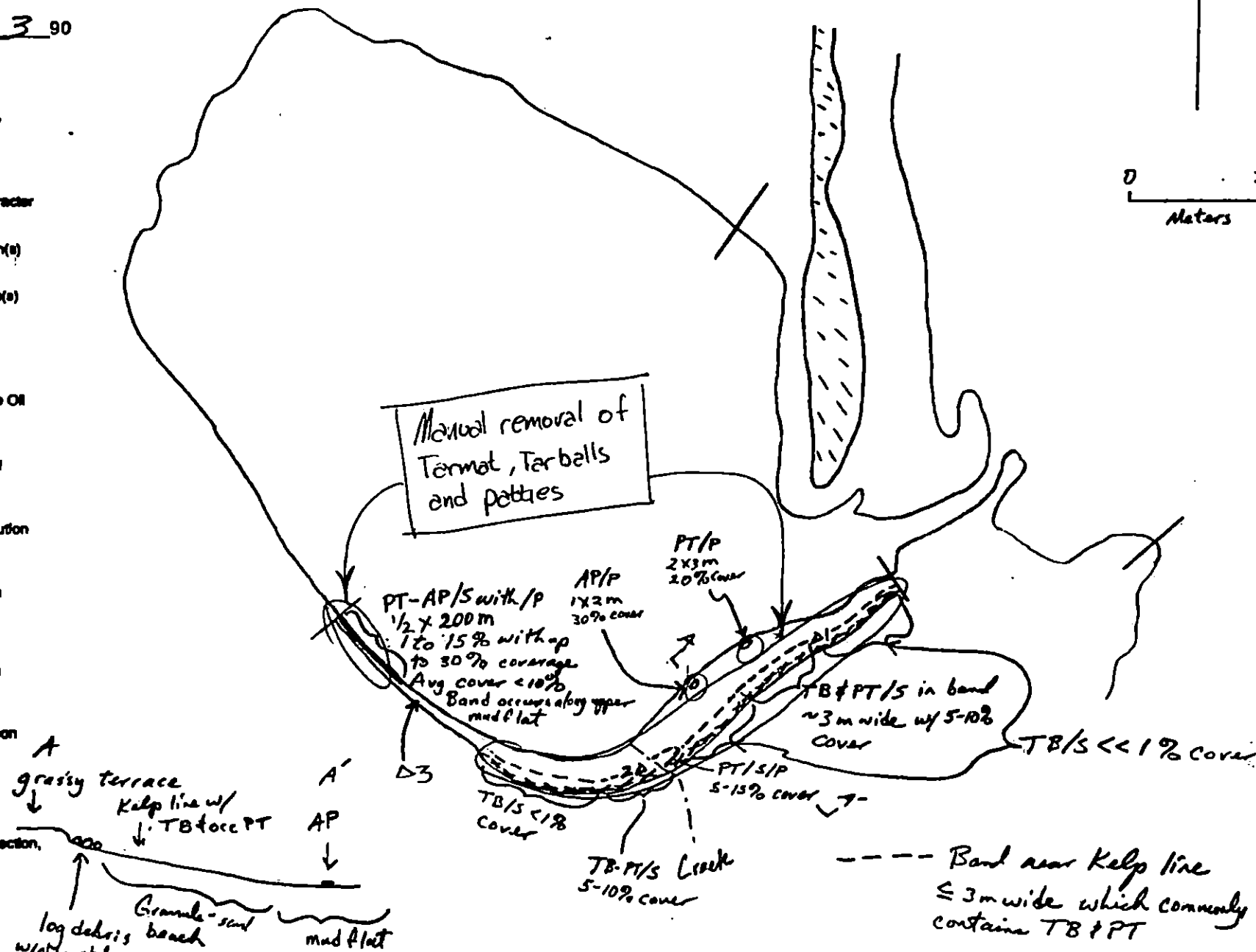
Oiled Vegetation

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

Oil Character Length (m): AP 10 PO — CV — CT — ST — MS — PT — TB — FL — NO 215

ETCH MAP

0 300
Meters



REVISION: 22/24/98

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 sand}(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, LIMPAETE)

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	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. Some 150 ducks rafted up as in CC-2 (100 pintails, 30 green-winged teal, 10 shovellers, 10 scaup). 10 glaucous-winged gulls. Brown bear, fox, wolf, and moose tracks in sandy UTE + supratidal. This is a wide, low angle strand flat within Chinik Jagoon. 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 mine). 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 - the 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 / bearing 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 excavations in these beds, presumably by beaver/wolverine/foxes - small holes partially filled back in by the tide (20x20x20 cm). The thin drift includes Fucus, Xerocypris, Halosaccus, Alaria, some fine radi (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 mammal habitat

X Wide

/ Medium

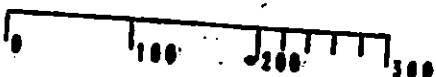
\\ Narrow

T Very Light

O No Oil

CC-2

Approx. Segment Length: 1619m



METERS

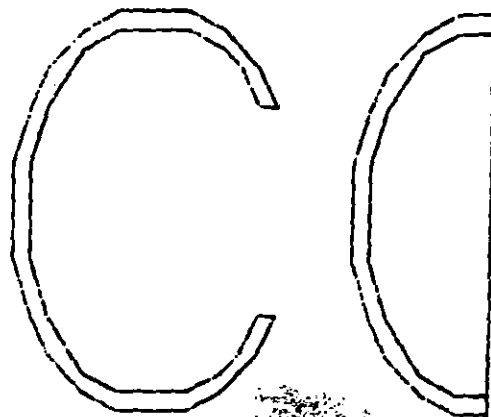
Map Key

Name: _____

Date: _____

Date Ent. _____

Chinial Lagoon



ECOLOGY MAP

(2 of 2)

8AA - sensitive estuary
9LM - land mammal

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: _____

SB

3 m Narrow

T T T T

X Wide

/ Medium

- Narrow

· Very Light

0 No Oil

CC-2

Approx. Segment Length: 1619m

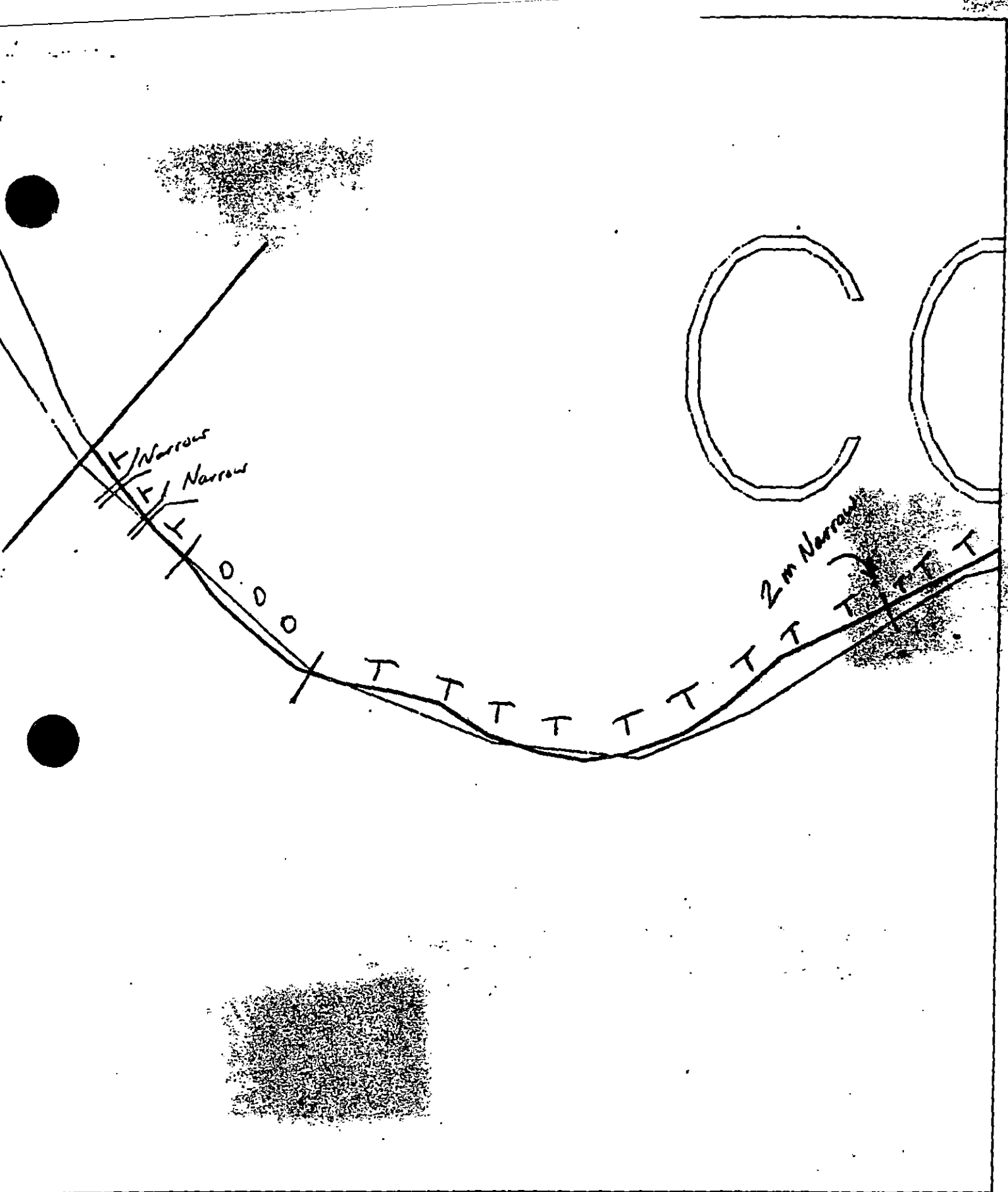


Map Key

Name: G. Heyman

Date: 5-3-90

Date Ento.



XX Wide

// Medium

● Narrow

TT Very Light

OO No Oil

CC-2

Approx. Segment Length: 1619m



Map Key:

Name: G. Haysman

Date: 5-3-90

Date Enter

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 uncoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time. >>>PHONE 564-3274 (Anchorage) OR 229-1508 (24 hrs.)<<<

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
EXXON AMY TAYLOR
NOAA Bruce W. Hall
USCG M. J. HALL

observe NPS hcmd. regarding bear, sensitivity & access.
FOSC: R. J. J. J. DATE: 6/8/90

OG A.H.

SEGMENT ST/K0917 C0002

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 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

$\boxed{CT/C}$
Continuous Distribution

$\boxed{CT/B}$
Broken Distribution

$\boxed{CT/P}$
Patchy Distribution

$\boxed{CT/S}$
Splashed Distribution

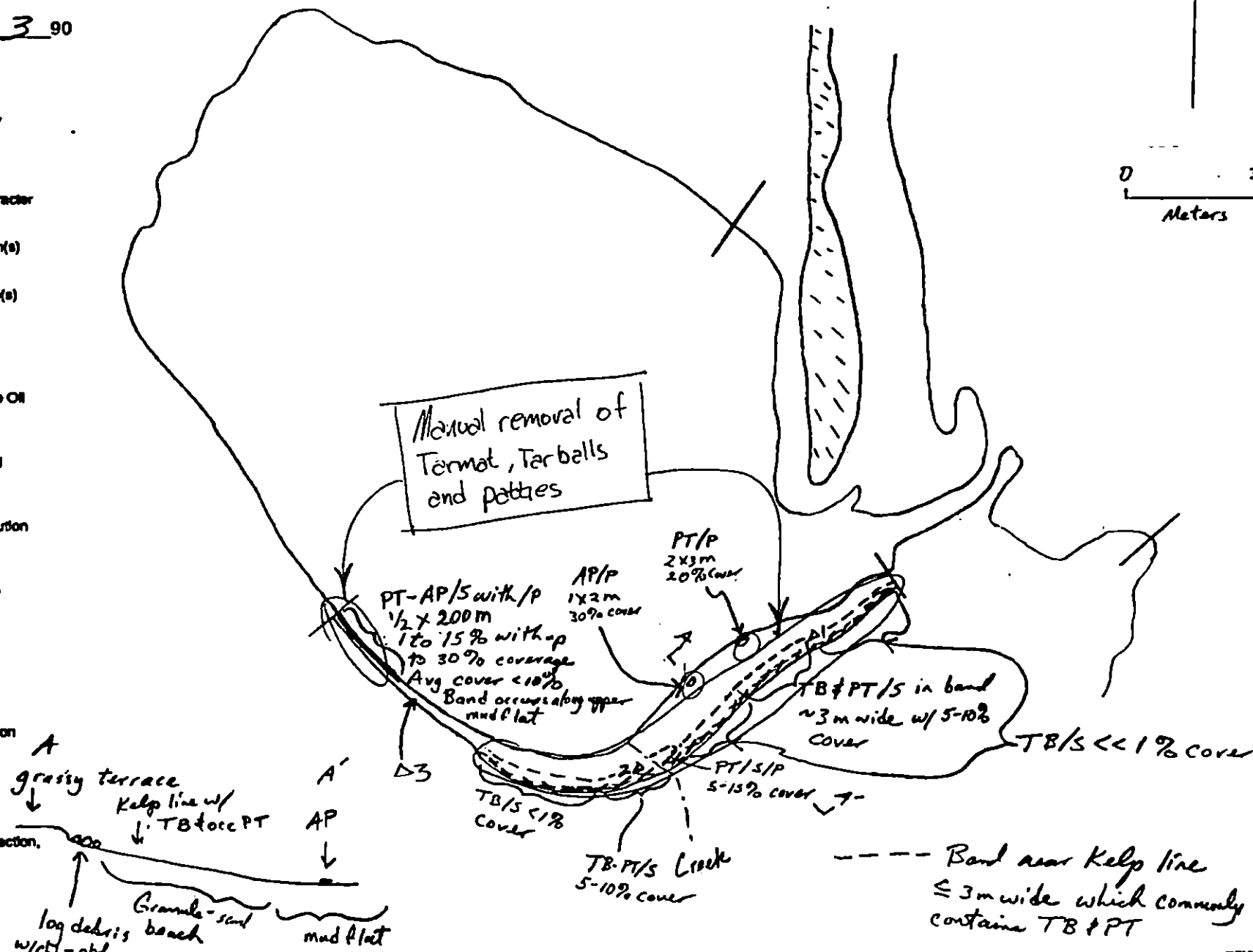
Oiled Vegetation

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

Oil Character Length (m): AP 10 PO - CV - CT - ST - MS - PT - TB - FL - NO 215

ETCH MAP

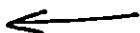
0 300
Meters



REVISION: 03/24/90

SB

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

O No Oil

CC-2

Approx. Segment Length: 1619m



Map Key

Name: _____

Date: _____

Data Entry

Chiniah Lagoon

ECOLOGY MAP

(2 of 2)

CC-2

(Page 4 of 4)

8AA - sensitive estuary

9LM - land mammals

<XX Wide

/ / Medium

• Narrow

TT Very Light

OO No Oil

CC-2

Approx. Segment Length: 1619m



Map Key:

Name: _____

Date: _____

Data Enter

SB

3 m Narrow

T T T T

X Wide

/ Medium

- Narrow

Very Light

0 No Oil

CC-2

Approx. Segment Length: 1619m



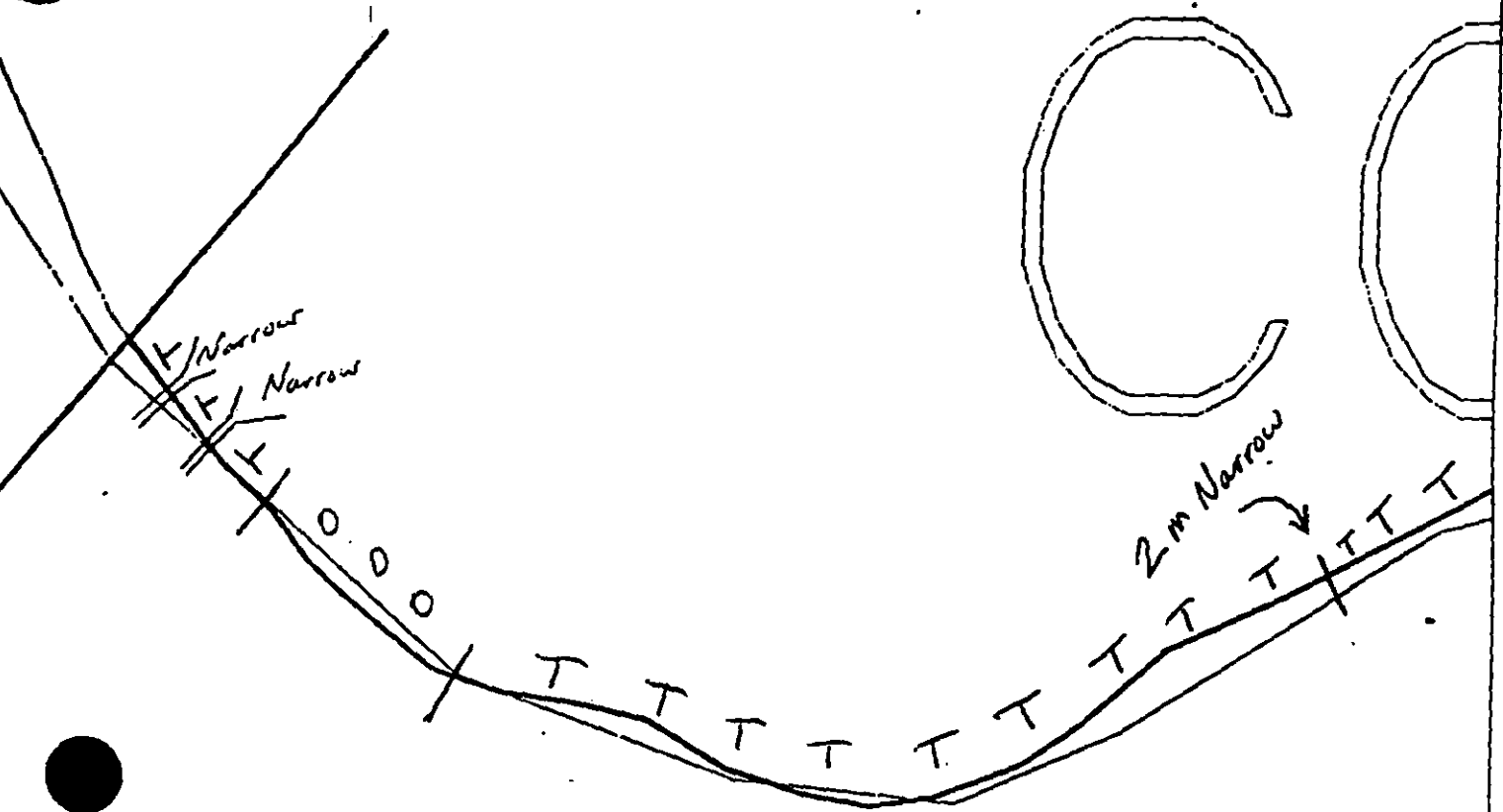
METERS

Map Key

Name: G. Heyman

Date: 5-3-90

Data Ent.



XX Wide
 // Medium
 - 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-5

CC-2

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-002 SUBDIVISION A (1 OF 1) DATE 5/3/90

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.

ARCHAEOLOGICAL CONSTRAINTS:

Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time. >>>PHONE 564-3274 (Anchorage) OR 229-1508 (24 hrs.)<<<

SHPO SIGNATURE: Rachel Joan Oase DATE: 5/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 69 m: V.Light 1348 m: No Oil 207 m
surface 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
SEE CONSTRAINT ADDENDUM DATED 6/15/90 JPP

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

TAG APPROVAL DATE: 5/24/90
DEC ART WEINER
NOM AMY TAYLOR
NOAA BILL ALBERT
USCG W. J. HALL

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

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.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Rachel Jean 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:

<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: 5/24/90
ADEC Aur Wornen Art Lohman
EXXON Amy Tate Paul
NOAA Paul Wescott Burke
USCG AL J. HALL AL J. HALL

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

00 ~~K09-17-CC004~~ G. Heyman

SEGMENT ~~K09-17-CC004~~

SUBDIVISION A

DATE 5/04/90

CHECKLIST

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

LEGEND

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

Continuous Distribution
- CT/B

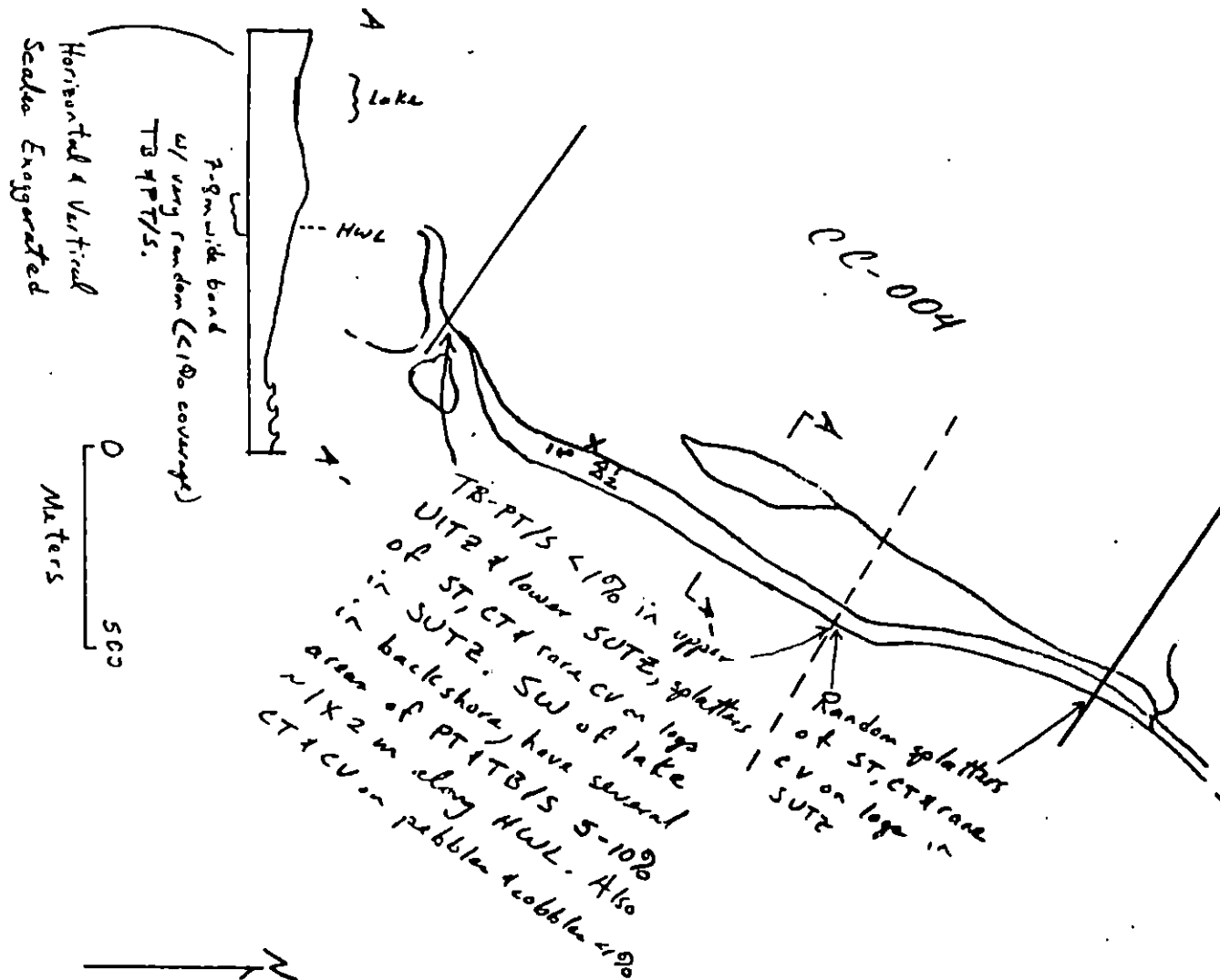
Broken Distribution
- CT/P

Patchy Distribution
- CT/S

Splashed Distribution
- eee
Oiled Vegetation
- 1 $\Rightarrow$
Photo location, direction, and number

X Regulatory Marker

SKETCH MAP



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

CC

—

∠

(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.
ADF&G # 262-15-10030
"Village Creek"

XXXX Wide

CC-4

Map Key: AKP-CC-4a

Name: _____

Date: _____

Data Entered: _____

/// Medium

---- Narrow

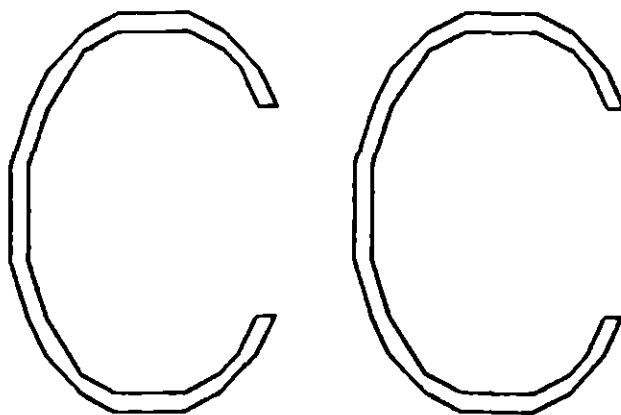
TTTT Very Light

0000 No Oil

Approx. Segment Length: 1501m

0 100 200 300
METERS





ECOLOGY MAP

(2 of 2)

CC-4

(Page 4 of 4)

See Map 1.

XXXX Wide

/// Medium

---- Narrow

TTTT Very Light

0000 No Oil

CC-4

Approx. Segment Length: 1501m

0 100 200 300

METERS

Map Key: AKP-CC-4b

Name: _____

Date: _____

Data Entered: _____

C

C

—

∠

T

T

T

T

T

T

T

XXXX Wide

CC-4

Map Key: AKP-CC-4a

Name: G. Heyman

Date: 5-4-90

Date Entered:

/// Medium

---- Narrow

TTTT Very Light

0000 No Oil

Approx. Segment Length: 1501m

0 100 200 300

METERS



11/11/2019

Date: 5/4/90

REGION: KODIAK

SEGMENT: ST/K09-17-CC-004

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

A 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 unoilied biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

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

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

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 Inpol 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 Inpol 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 Inpol 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/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 Inpol 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 Inpol 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 Inpol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31).
 Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2208
- 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 (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)
 Fish harvesting
 Deer harvesting (5/1 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 Inpol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 109-17-0004 SUBDIVISION: A DATE 5/4/90

NOAA
SC

NAME STEPHEN LEHMANN

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

*Very little oil observed. Scattered TBs (44/12).
No treatment required.*

ADEC

NAME Terry Ellsworth

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED *Beach cleanup + Treatment*

COMMENTS

The southern half of this segment contains patties and tarballs in the supratidal and upper intertidal areas in amounts of generally <1% with occasional 1m x 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 [Signature]

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Recoverable oil was observed in the southern half of the segment and consists primarily of mouse patties 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 USCG S. LEHMAN SEGMENT ST/ K 09-17-CC-004
 BIO L SHARMAN LAND REP C. SCHUCH SUBDIVISION A (LOF1)
 EXXON Not Present ADEC T. Ellsworth TIME 4:45 10/15/20
 TEAM NO. 19 TIDE LEVEL +6 to +5.5 DATE 5/04/90
 ST. SUBDIVISION LENGTH: 1500 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 PLANDS 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: Lang 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	R	P	B	ST	CT	CV	PT	VB	TL	LB	UB	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		
FILM																
NO OIL															X	X

PAVEMENT H F S 0 sq. m by 0 cmPATTIES / TARBALLS 10 BAGSNEAR SHORE SHEEN? ☒ 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		VO	UC	ST	CT	CV	PT	VB	TL	LB	UB	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 TBA 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 BAF DATE 9 May 90

OG ~~K09-17-CC004~~ G. Heyman

SEGMENT ~~K09-17-CC004~~

SUBDIVISION A

DATE 5/04/90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bdry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWL/VL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pt 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

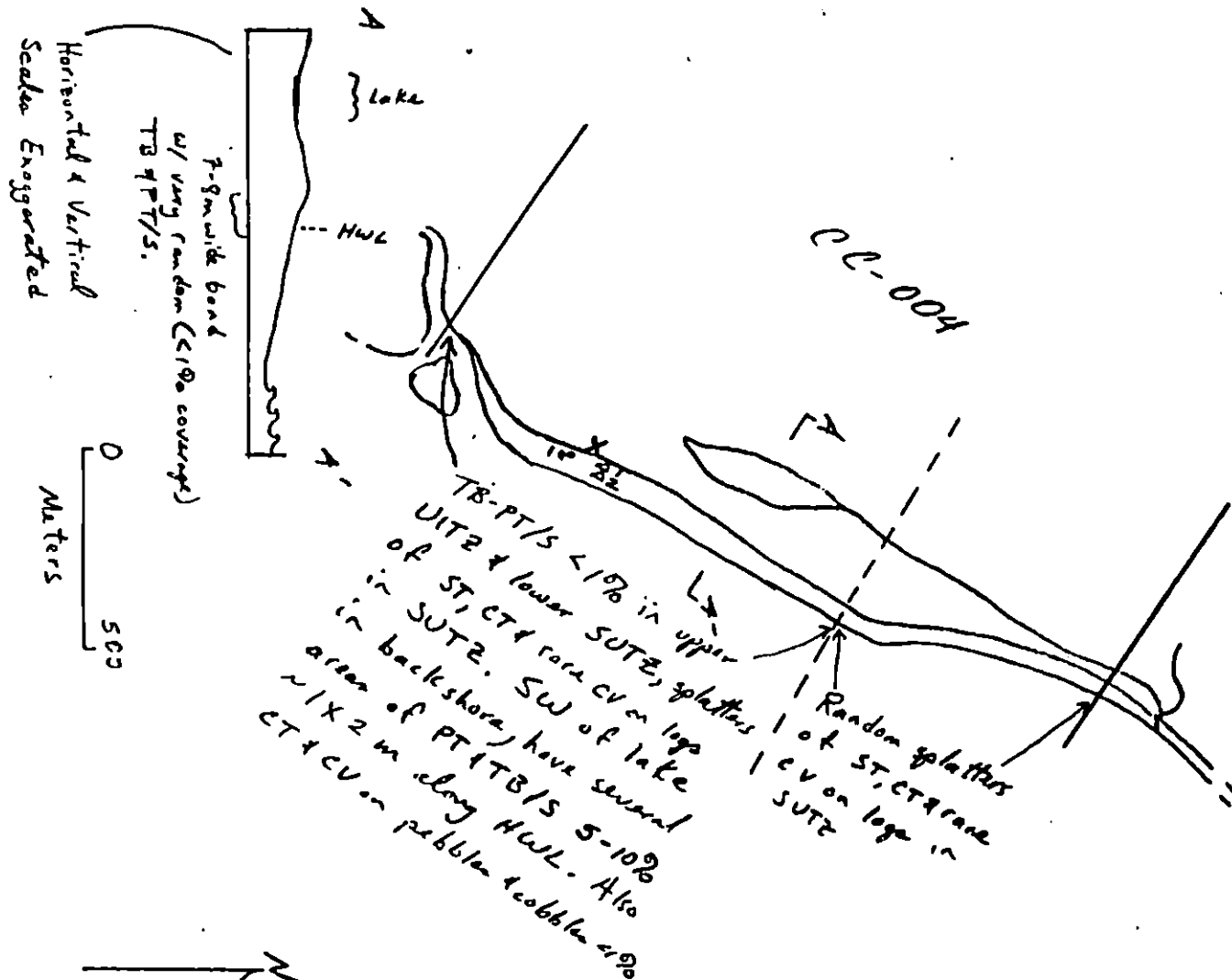
$\boxed{CT/S}$
Splashed Distribution

$\lll$
Oiled Vegetation

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

X Regulatory Marker

SKETCH MAP



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

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, LITTORINA, LYMAEUS)

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	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 Hairy 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 also appears to be of considerable importance to terrestrial mammals, particularly river otters.

General Comments (cont.):

2-3 thin, sparse drift lines in UTB include Fucus, Alaria, Halosaccaria, with occasional Nereocystis wads. Invertebrate shells include Saxidomus giganteus, Mytilus edulis, Tresus capax, Clinocardium nuttallii, Siliqua patula, Prothaca staminea, Macoma spp., Mya spp., Spisula polyzona, Fusitriton oregonensis, Cancer magister (small), Talassoma, Serpula tube masses, large dried clam siphons (some-maybe all - are Mya (truncata?).). Significantly, there were several heavy shells of Neptunea lysata on the N. $\frac{1}{2}$ 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.

CC

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∠

(Page 3 of 4)

Ecosys 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)

Random stream S. of
agent boundary.
RDFIG # 262-15-10030
"Village Creek"

XXXX Wide

CC-4

Map Key: AKP-CC-4a

/// Medium

Approx. Segment Length: 150m

Name: _____

---- Narrow

Date: _____

TTTT Very Light

0 100 200 300
METERS

Date Entered: _____

0000 No Oil

CC

ECOLOGY MAP

(2 of 2)

See Map 1.

CC-4

(Page 4 of 4)

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

CC-4

Approx. Segment Length: 1501m



Map Key: AKP-CC-4b

Name: _____

Date: _____

Date Entered: _____

CC

—

∠

XXXX

XXXX

XXXX Wide

CC-4

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

Approx. Segment Length: 1501m



Map Key: AKP-CC-4a

Name: G. Heyman

Date: 5-4-90

Date Entered:

CC

—

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

CC-4

Approx. Segment Length: 1501m

0 100 200 300

Map Key: AKP-CC-4b

Name: G. Heyma

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.

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 SIGNATURE: Charles E. Holmes DATE: June 27, 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>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 assess logs

TAG APPROVAL DATE: 5/21/90

ADEC Art Weiner

EXXON ANDY TEAL

NOAA Joseph Talbot

USCG G.A. Dwyer

*Originally designated as SB-104

FOSC:

DATE: 7-10-90

INPOL NOT Authorized. Work out
with NPS + ADF&G monitor requirements!

OG G. Heuman

SEGMENT 01/7 CC 005

SUBDIVISION A

DATE 5/3/90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Sep/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

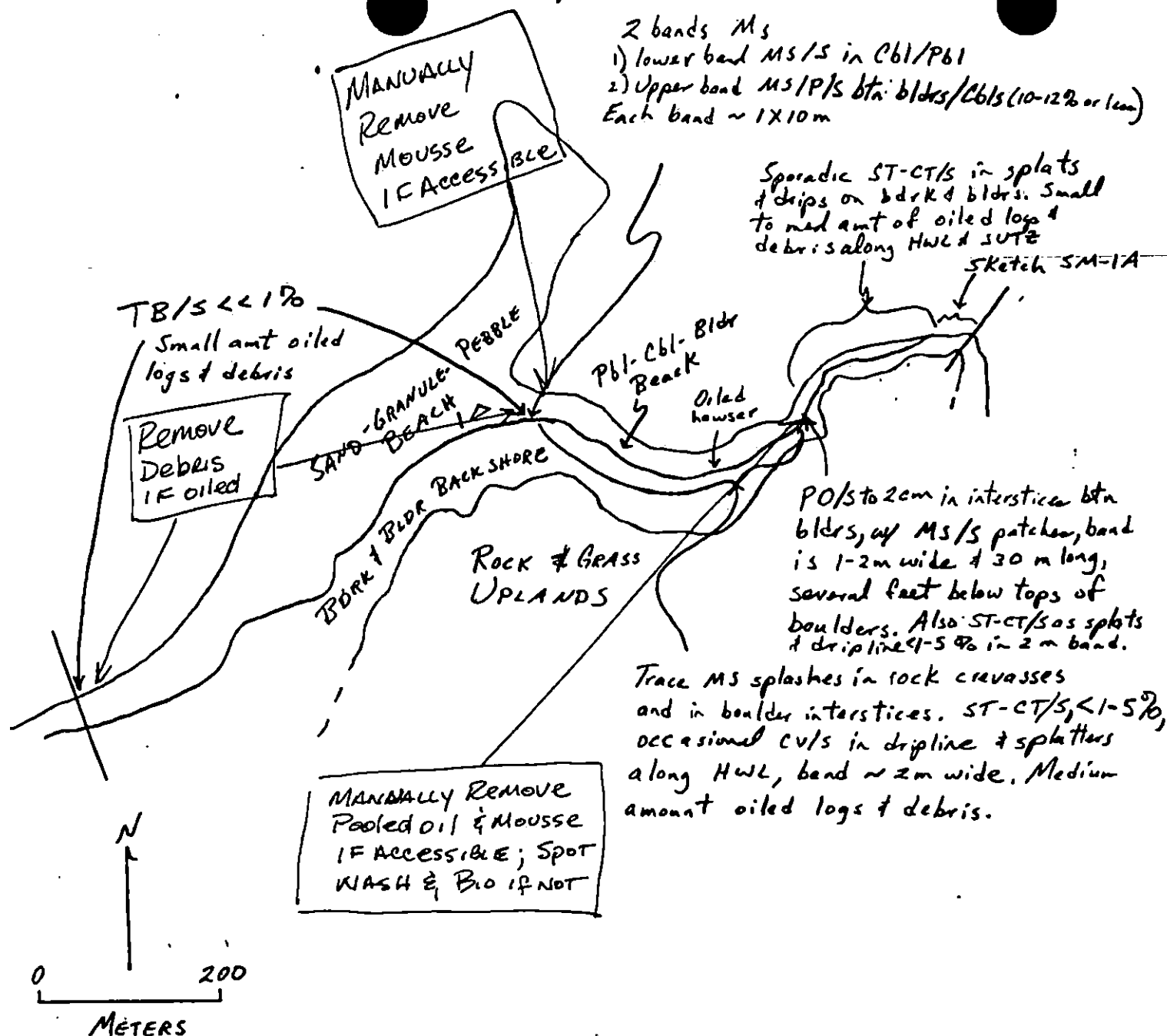
Splashed Distribution

Oiled Vegetation

1 $\bullet$

Photo location, direction, and number

SKETCH MAP-1



Oil Character Length (m): AP — PO 10 CV 62 CT 250 ST 200 MS 52 PT — TB 500 FL — NO 0

REVISION: 03/24/98

OG G. Hey

SEGMENT ST/ 0917 CC 005

SUBDIVISION A

DATE 5/3/90

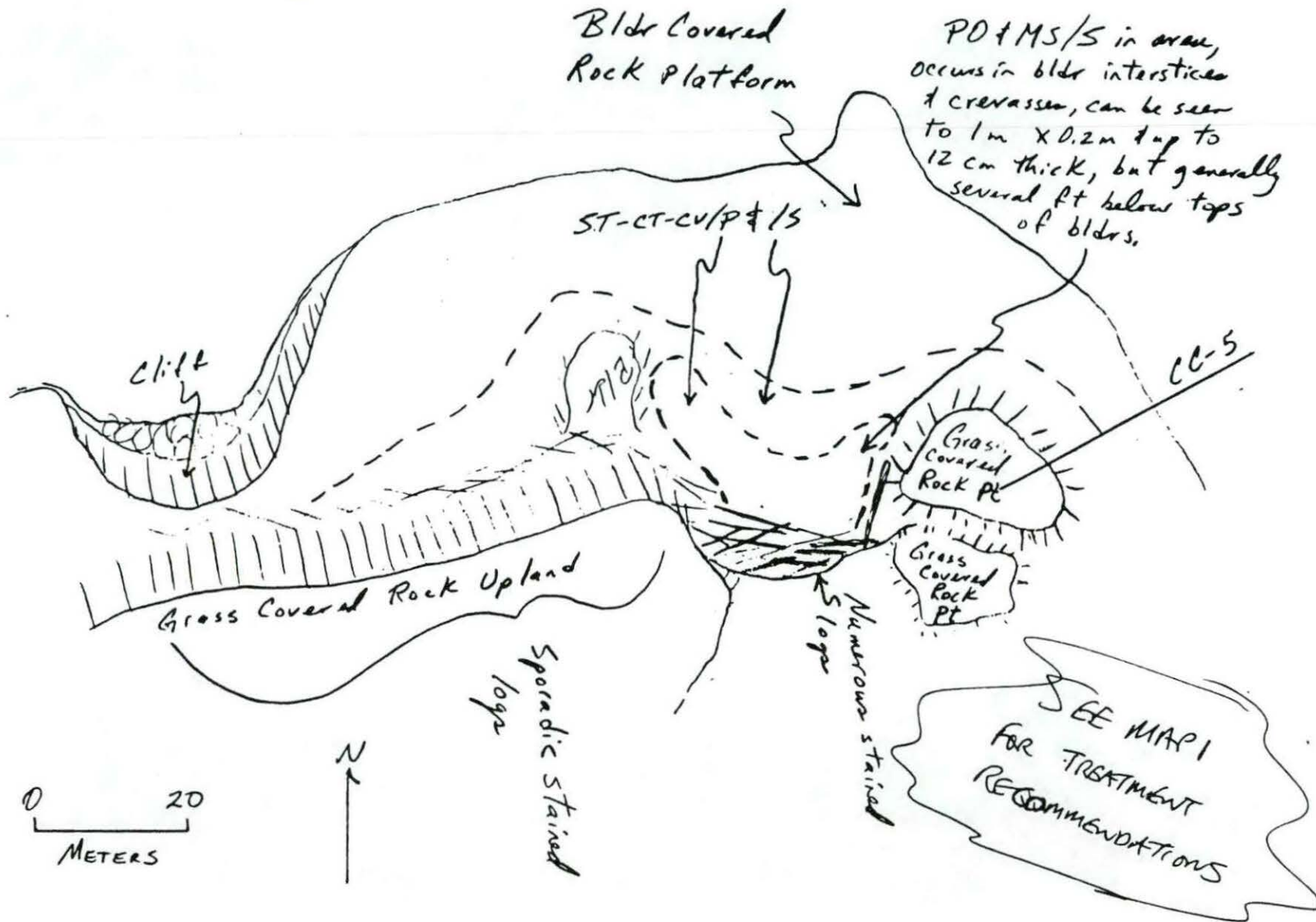
S CH MAP 5M-1A

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 $\blacktriangle$
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



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

REVISION: 02/24/90

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.

SB

ocean

Mouth of Lagoon

Lagoon

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

Approx. Segment Length: 1012m

K0917

0 100 200 300
METERS

CC-5

Map Key: AKP-SB-104

Name: _____

Date: _____

Data Entered: _____

SB

12/10m Narrow

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

~~SB-104~~ cc-5

K09-17

Approx. Segment Length: 1012m

0 100 200 300

Map Key: AKP-SB-104

Name: G. Heyman

Date: 5-3-90

Data Entered:

REGION: KODIAK

SEGMENT: ST/K09-17-CC-005

SUBDIVISION: A (1 OF 1)

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.

ARCHAEOLOGICAL CONSTRAINTS:

Cultural resource survey in progress. Shoreline treatment cannot proceed until field data have been assessed and a formal archaeological constraint entered on the shoreline evaluation form.

SHPO SIGNATURE: _____ DATE: _____

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:

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

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

*Originally designated as SB-104

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)
 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 (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
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 ST1K0917 CC5 SUBDIVISION: A DATE 5/3/90

~~44~~
~~0300~~
NAME 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.

ADEC
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 Scheeh SIGNATURE Carl Scheeh

☐ 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. 04.13.90

OGC G. HEYMAN ~~NOAA~~ USCG S. LEHMANN SEGMENT ST/ K0917 CCS
 BIO L. SHARMAN LAND REP C. SCHOCK NPS SUBDIVISION A (1 OF 1)
 EXXON ON LEAVE ADEC T. ELSWORTH TIME/3 3010/4:45
 TEAM NO. 19 TIDE LEVEL +6.5 to +4 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 % Vert 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	SEL BR	DEL RW	GY CL	DEB TL	LBR	SU	U	M	L
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		
	SM	MD	LG
Logs			X
Vegetation			
Trash	X		
Debris		X	

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE 0#BAGS 0

Photographs:

Roll No. 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		VO	UC	SEL BR	DEL RW	GY SL	DEB TL	LBR	SU	U	M	L					
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/MS 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 Maps 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, artemia, and xanthoecia. Surprisingly, essentially no Fucus (very rare). Barnacle spat are present but very rare. Nucella eggs are occasional, and mussels are recruiting quite successfully locally where adults are established in bands (discontinuous). The UTZ is very depauperate except for sparse Littorina (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) - outstanding 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: natural barnacle mortality due to mechanical disturbance from wave wash / log scouring is locally up to 25%). Empty bivalve shells in the drift on the sandy portion include: Spidomus giganteus, Mytilus edulis, Modiolus modiolus, Tresus capax, Chiocardium nuttallii, Siliqua patula, Protothaca staminea, Macoma spp. (incl. baltica), Mya spp. (incl. truncata), Spisula polyzona. There are also some Frustraria, carapaces of Cancer magister (small) and (probably) Telmessus, 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, ulva, Scytosiphon. River otter scats in supratidal (contain mussel & other bivalve shell fragments, Telmessus 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 shorelarks, 10 scaup). 1 adult eagle. Again, a normal, healthy sand beach community.

OG G. HeymanSEGMENT S 0917 CC 005SUBDIVISION ADATE 5/3/90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bdry
- ☐ 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

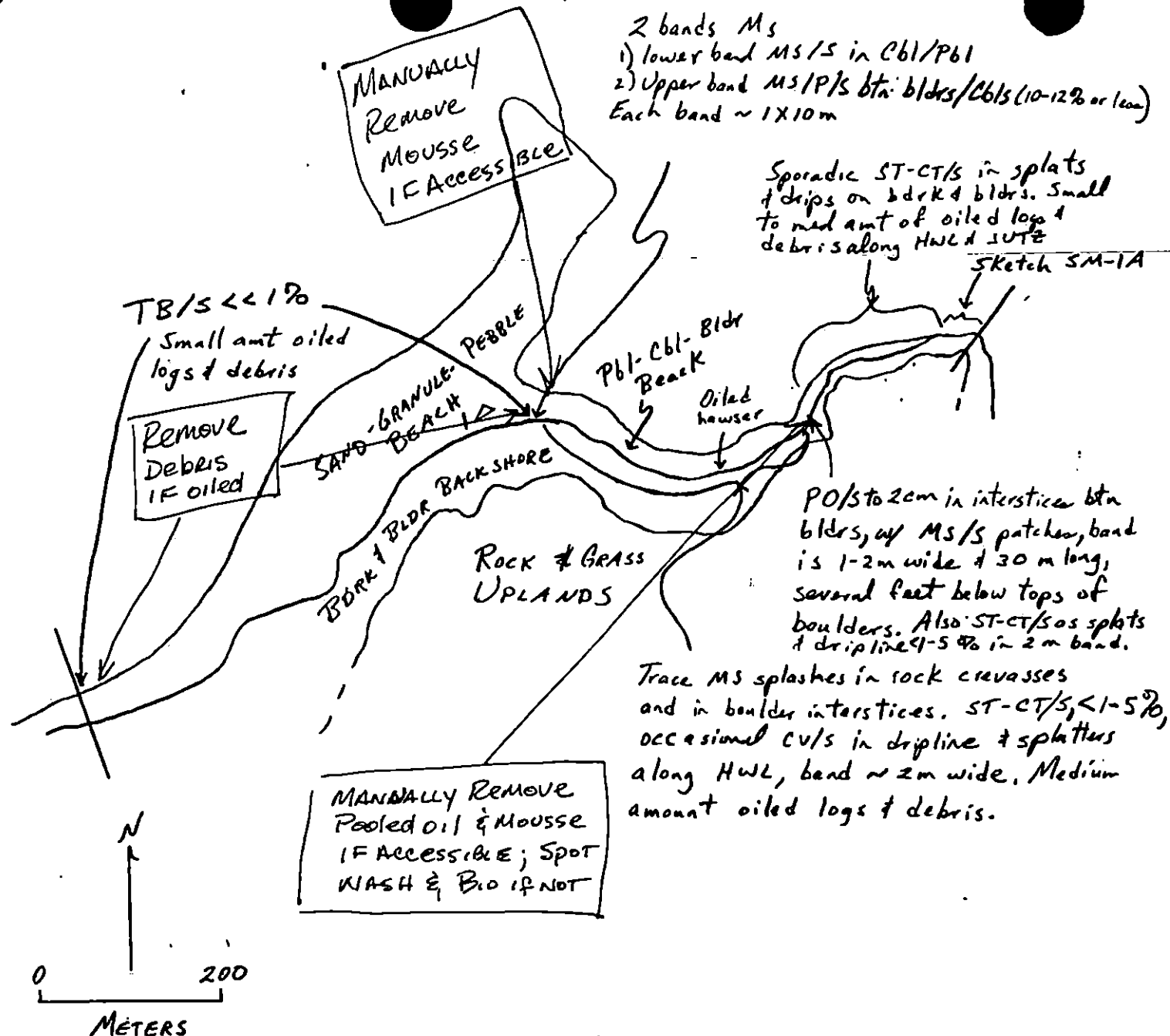
Splashed Distribution

Oiled Vegetation

1 $\rightarrow$

Photo location, direction, and number

SKETCH MAP-1

Oil 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. Hey

SKETCH MAP SM-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
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

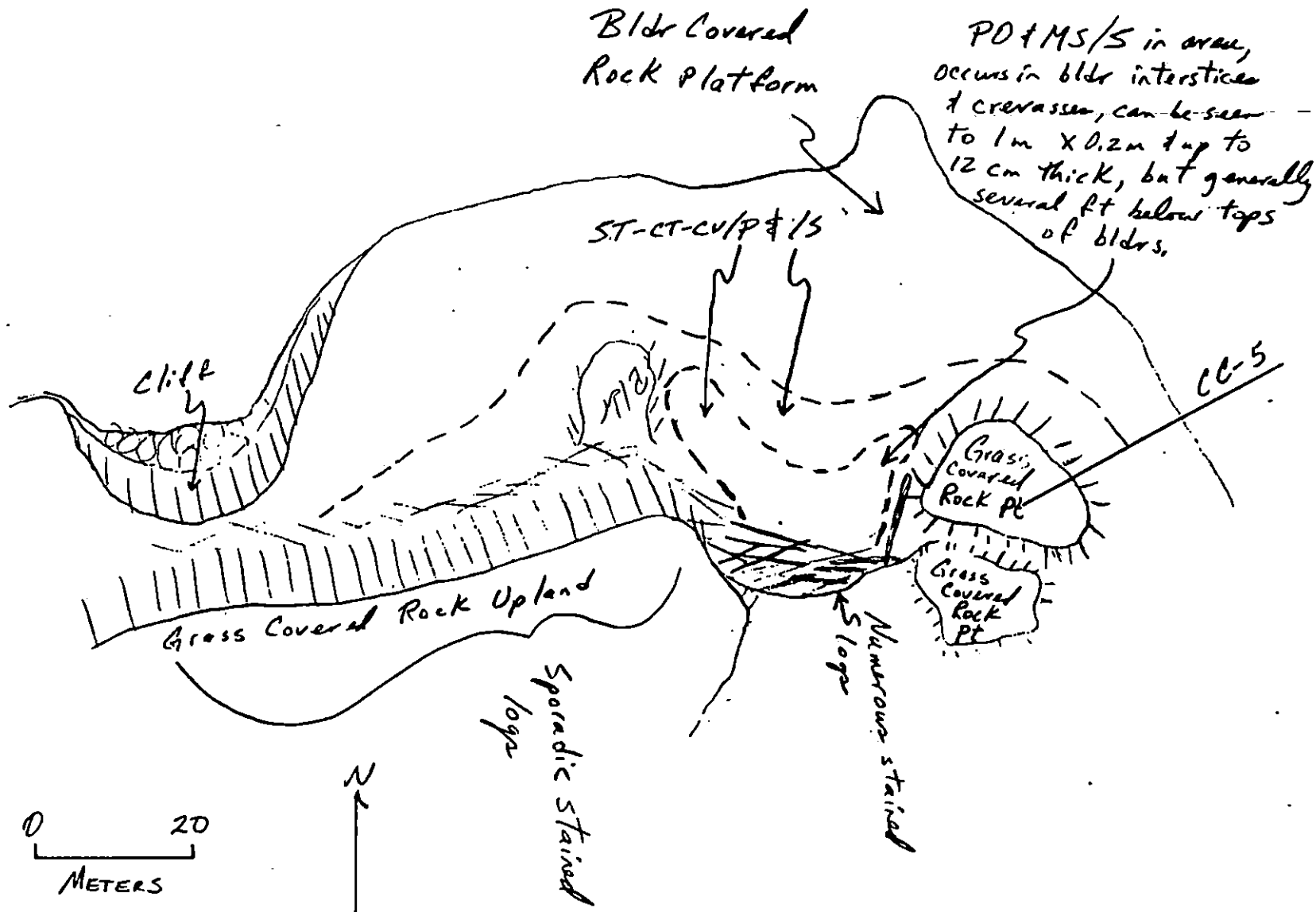
- 1 Δ
Pit - No Subsurface Oil
- 2 Δ
Pit - Subsurface Oil
- CT/C

Continuous Distribution
- CT/B

Broken Distribution
- CT/P

Patchy Distribution
- CT/S

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



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

REVISION: 02/24/98

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 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 (ANCELLA, LITTORINA, LYMAETUS)

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	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 please drift. The rocky portion is biotically sparse, biotically, except for some MTE tidepools which include: Monothallis, Filothamnium, Halichondria, barnacles, mussels, littorines, limpets, Ancella, Tonicella, Pagurus, Metridium, (cont.)

Ecological Considerations:

Please see attached Eco. Map. 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 Chinese Jagan entrance, and the lagoon should be considered generally sensitive to disturbance (please refer to this section of the VCC/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.

SB

ocean
→

↑
Mouth
of lagoon

←
lagoon
←

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

Approx. Segment Length: 1012m

K0917

0 100 200 300

METERS

CC-5

Map Key: AKP-SB-104

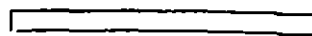
Name: _____

Date: _____

Data Entered: _____

SB

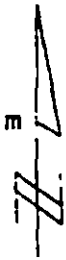
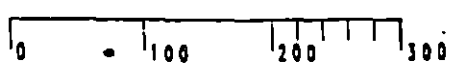
1~10m Narrow



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

SB-104 cc-5
K09-17

Approx. Segment Length: 1012m



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 Inipol

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 unrolled biota and substrate.

FOSC

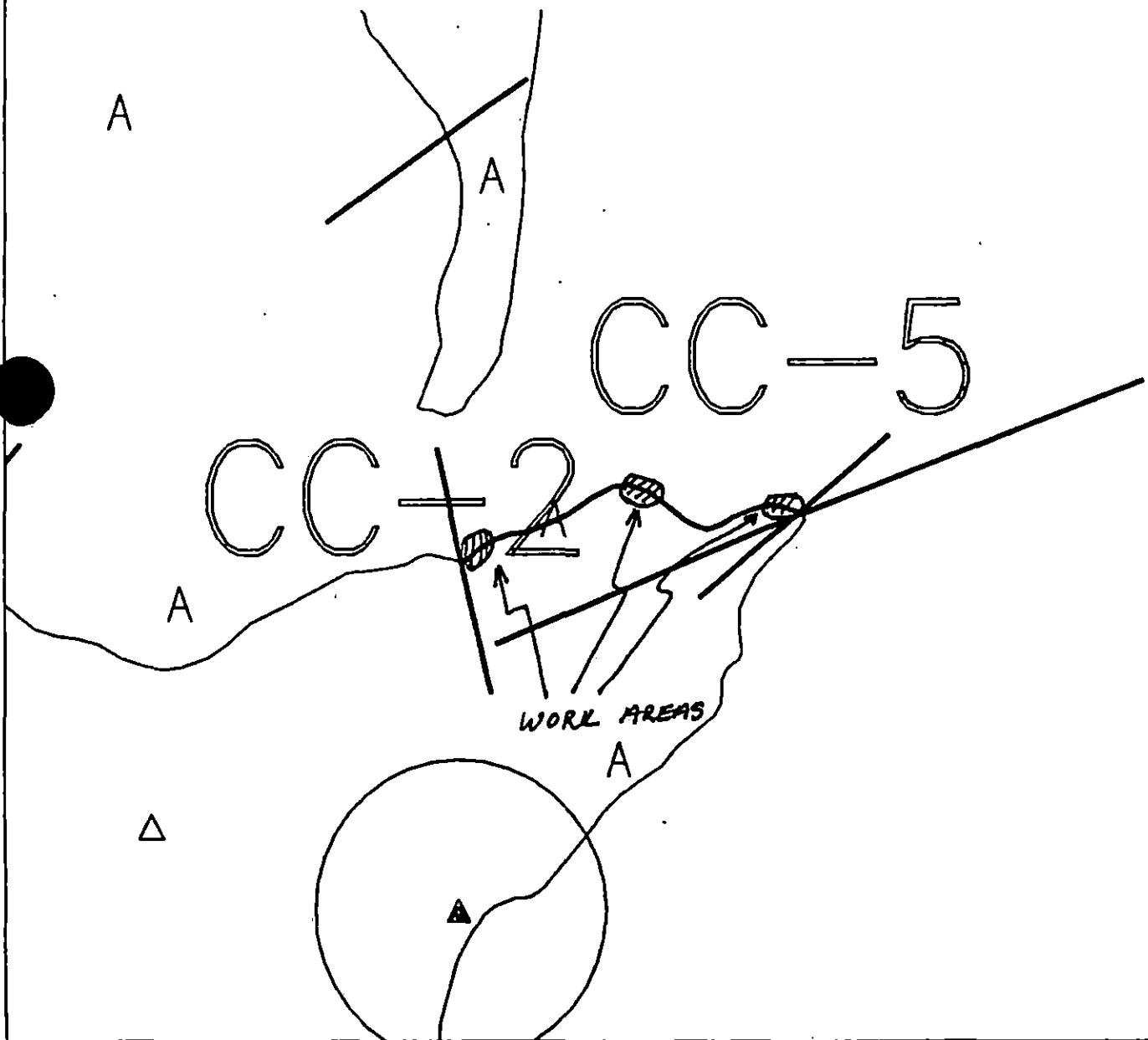
Date

7-11-90

Prepared by

Date

7/16/90



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



ECOLOGY MAP
SEGMENT K9N-17 CC-5
SUBDIVISION A (1 of 1)
METERS
0 442 884

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

1 inch = 1450 feet

SHORELINE EVALUATION

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

ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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 SIGNATURE: Charles F. Holmes DATE: June 27, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 30 m: Narrow 15 m: V.Light 982 m: No Oil 0 m
Surface 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.

SEE CONSTRAINTS ADDENDUM DATED 7/10/90

TAG COMMENTS: MONITORS TO #33553 - LOGS

TAG APPROVAL DATE: 5/21/90

DEC Art Weiner Art Weiner

EXXON ANN TAYLOR Ann Taylor

NOAA Joseph J. ... Joseph J. ...

USCG G.A. ... G.A. ...

FOSC: DATE: 7-10-90

*Originally designated as SB-104

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

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.

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 SIGNATURE: Charles J. Holmes 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 AMNIGAL Real

USCG G.A. REITER G.A. Reiter

NOAA Gary Petros Gary Petros

FOSC:

DATE: 7-10-90

IN, not AUTHORIZED. Coordinate treatment
with F&W + ADF&G for environmental
constraints. NPS mount + permit required.

OG G. H. Man

SKETCH MAP

SEGMENT STICK 09 17 CC 100

SUBDIVISION A

DATE 5, 3 90

CHECKLIST

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

LEGEND

- AP-PT/S in up to 1X2 m area
- 1 Δ 1X2 m area
- Pt - No Subsurface Oil MS/P/S in 1/2 m x 2 m area discontinuous on upper mud flats, silt/mud veneer 5 mm thick commonly covers MS.
- 2 Δ 2 m area discontinuous on upper mud flats, silt/mud veneer 5 mm thick commonly covers MS.
- Pt - Subsurface Oil
- CT/C Continuous Distribution
- CT/B Broken Distribution
- CT/P Patchy Distribution
- CT/S Splotched Distribution on bldrs & cbls in U/T2 & SUTZ
- Oiled Vegetation
- 1 $\Rightarrow$ Photo location, direction, and number

AP-PT/S in up to 1X2 m area

1 Δ 1X2 m area

Pt - No Subsurface Oil MS/P/S in 1/2 m x 2 m area discontinuous on upper mud flats, silt/mud veneer 5 mm thick commonly covers MS.

2 Δ 2 m area discontinuous on upper mud flats, silt/mud veneer 5 mm thick commonly covers MS.

Pt - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splotched Distribution on bldrs & cbls in U/T2 & SUTZ

Oiled Vegetation

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

ST & CT/S

Splotched Distribution on bldrs & cbls in U/T2 & SUTZ

Oiled Vegetation

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

PT/S

CC-100

STEEP SLOPE COVERED W/ ALDER

CC-002

STEEP SLOPE

Bldr/ Cbl/ Sand/ logs

Granule/ SAND w/ Pebbles

Moft

REVISION: 00/00/00

Oil Character Length (m): AP 20 PO CV CT 300 ST 576 MS 20 PT 30 TB FL NO 1740

CC 1% CC 1%

SALT MARSH

SALT MARSH

MUDFLAT

Channel Boundary & Time of survey

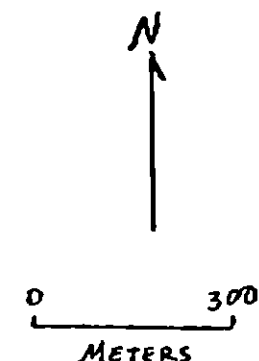
MANUALLY REMOVE PAVEMENT AND MOUSSE

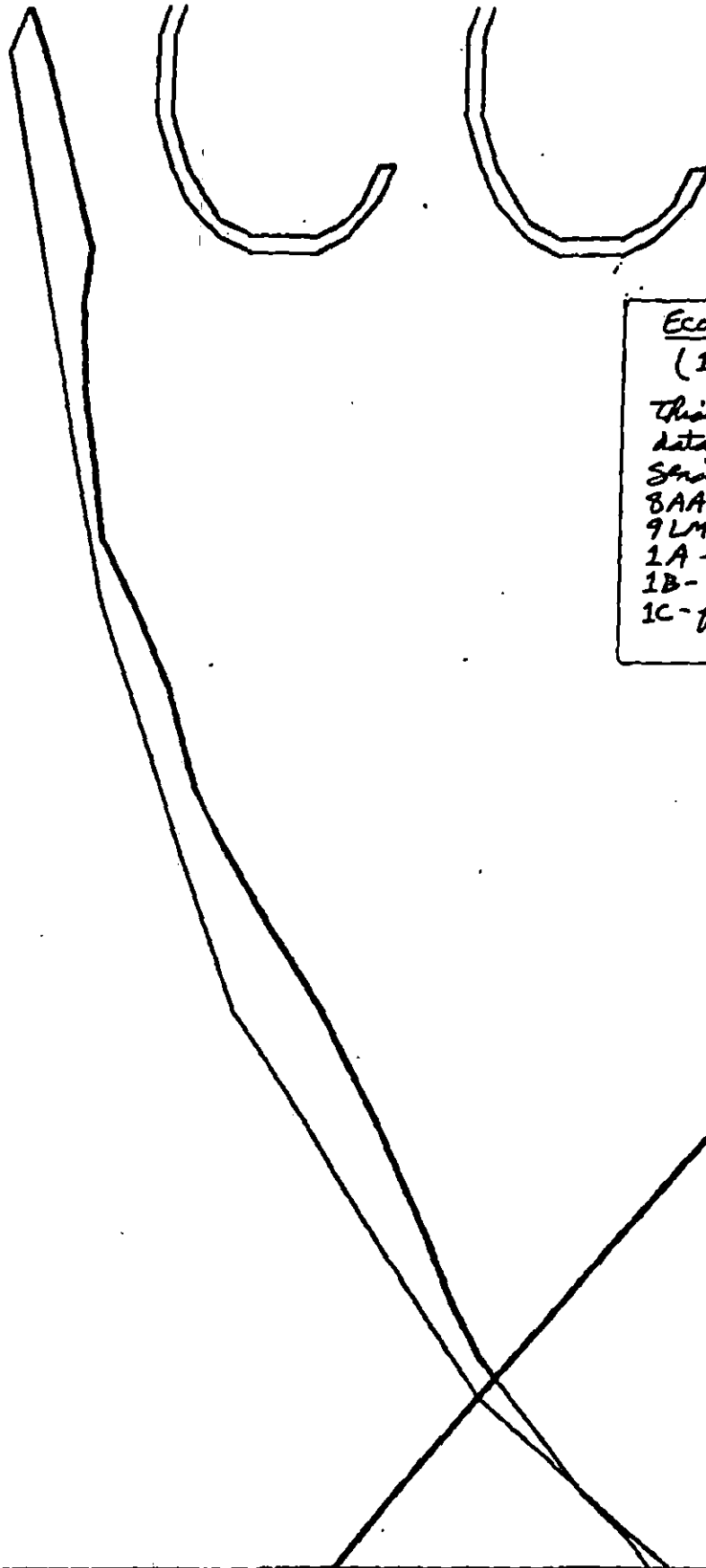
MUDFLAT

LANDSLIDE SCAR

CAPE CHWIAK

CC-005





ECOLOGY MAP

(1 of 4)

CC-100

(Page 3 of 6)

This segment missing from NOAA database (4/23/90).

Sensitivity based:

BAA - sensitive estuary

9LM - land mammals

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

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

1C - fry nursery area

XXXX Wide

/// Medium

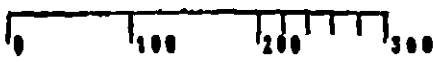
--- Narrow

TTTT Very Light

0000 No Oil

CC-100

Approx. Segment Length: 3858m



METERS

K0917 was XX501

Map Key: AKP-CC-100a

Name: _____

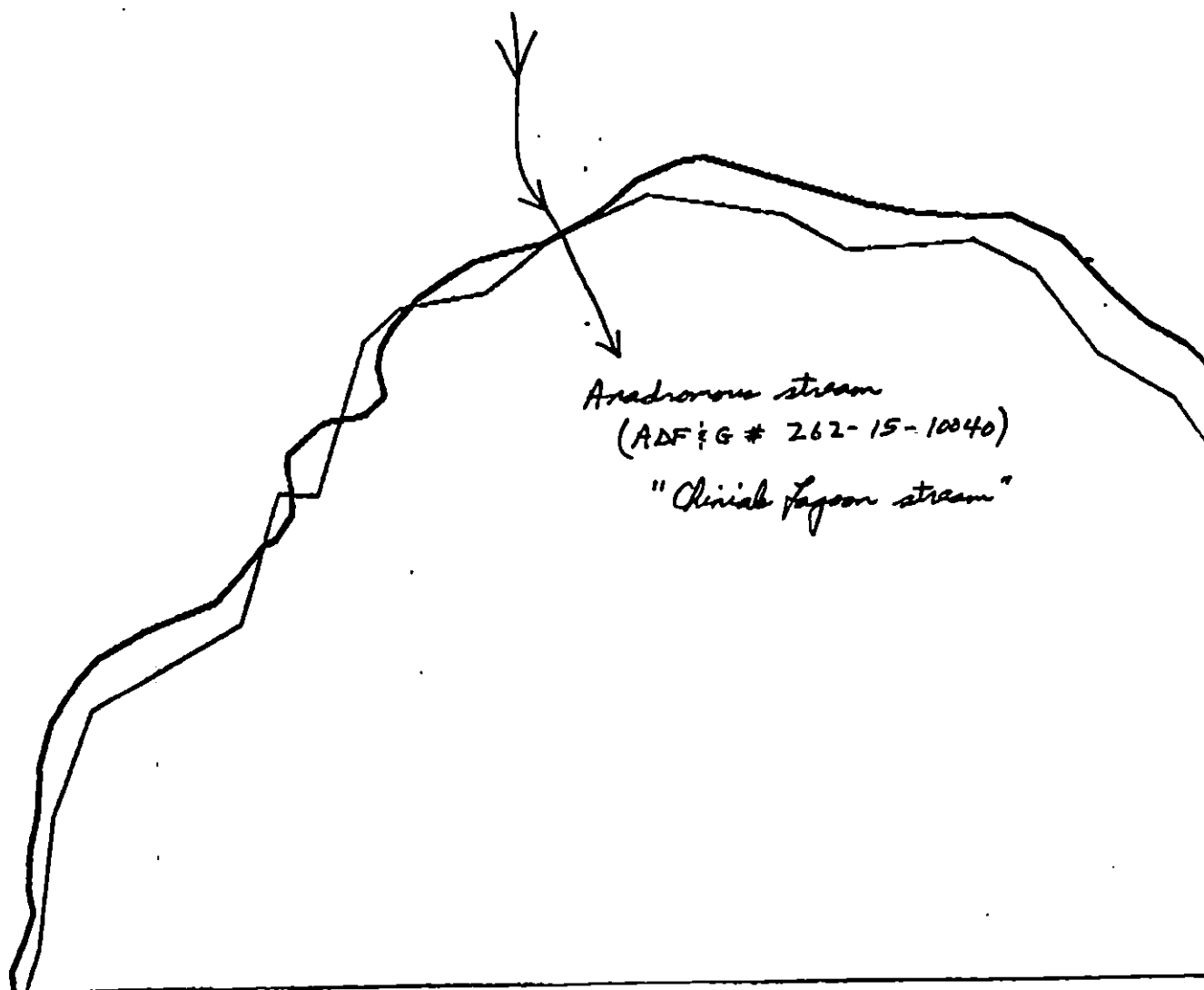
Date: _____

Date Entered: _____

ECOLOGY MAP
(2 of 4)

CC-100
(Page 4 of 6)

See map page 1.



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

CC-100

Approx. Segment Length: 3858m

0 100 200 300
METERS

KP917 was XX501

Map Key: AKP-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

0 100 200 300
METERS

K0917 N45 XXSP1

Map Key: AKP-CC-100d

Name: _____

Date: _____

Date Entered: _____

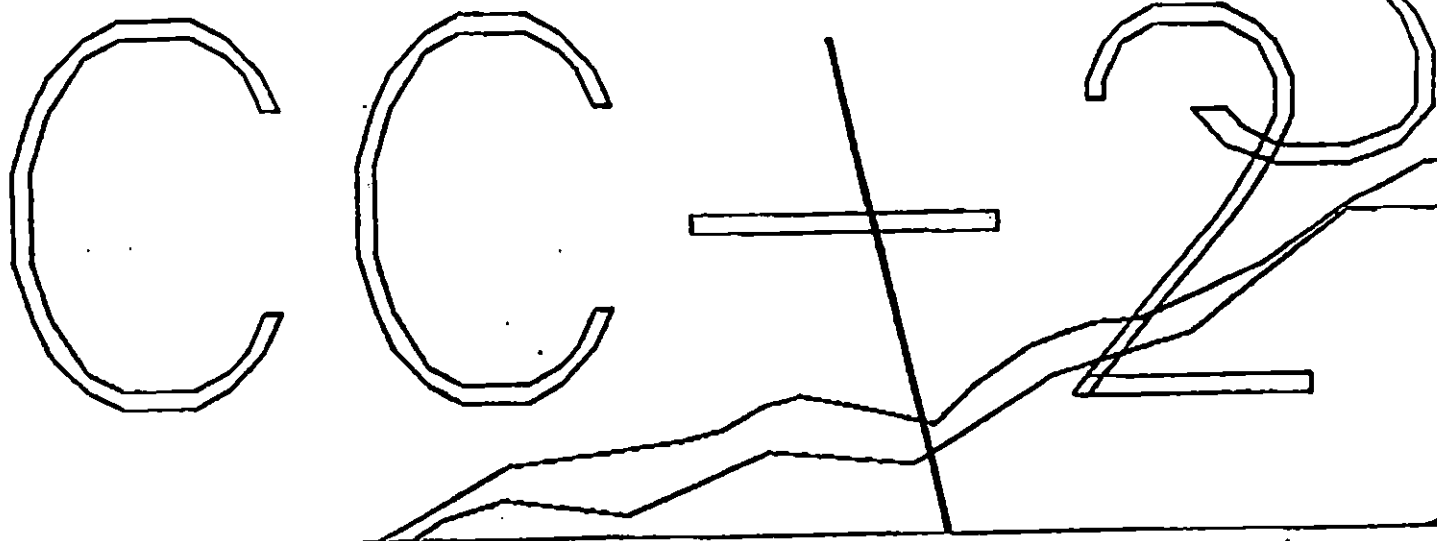
ECOLOGY MAP

(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



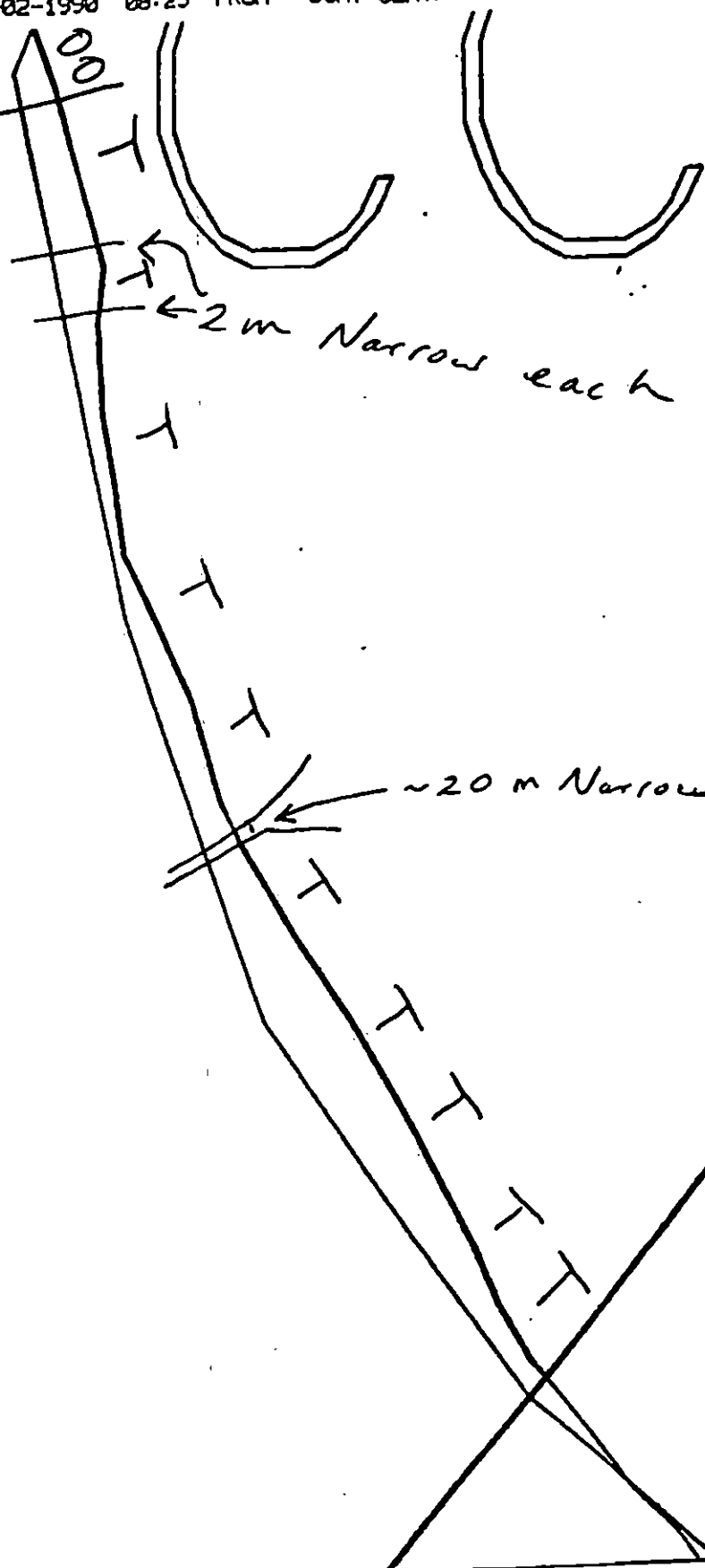
Kp917 was XX5pl

Map Key: AKP-CC-100b

Name: _____

Date: _____

Date Entered: _____



XXXX Wide

CC-100

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

Approx. Segment Length: 3858m

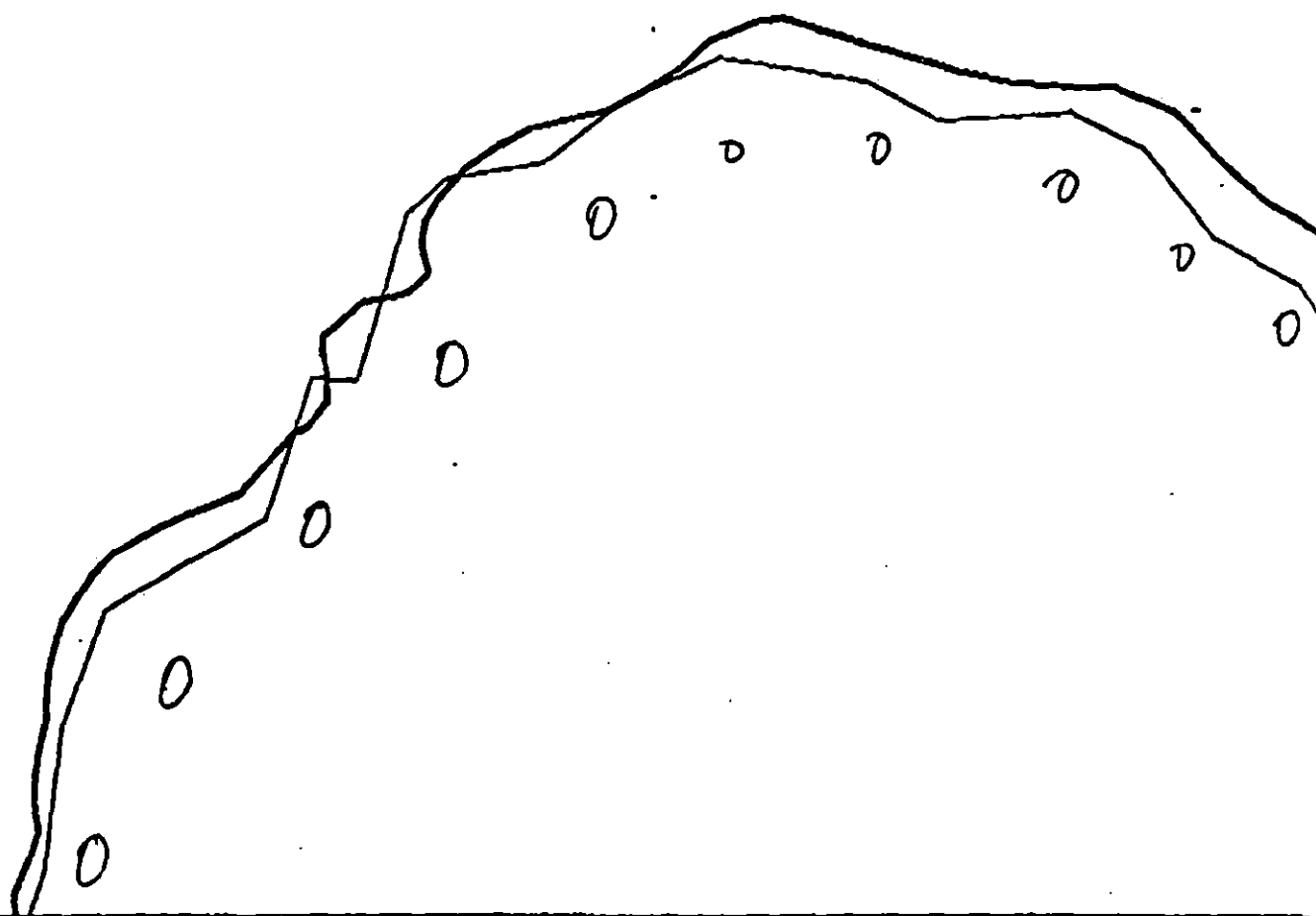


K0917 was XX501

Map Key: AKP-CC-100a

Name: G. HeymanDate: 5-3-90

Data Entered:



XXXX Wide

//// Medium

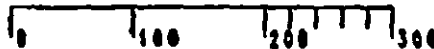
---- Narrow

TTTT Very Light

0000 No Oil

CC-100

Approx. Segment Length: 3858m


METERS

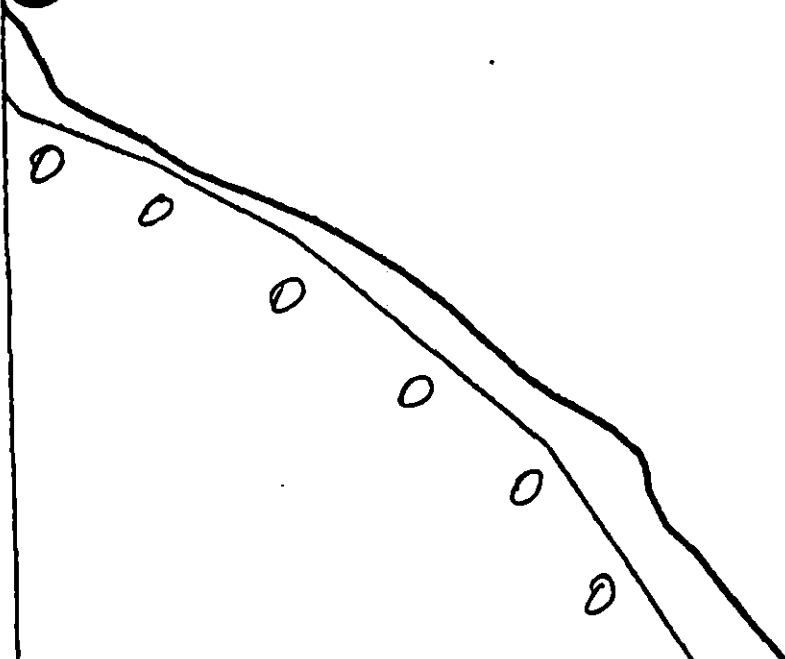
KP917 was XX501

Map Key: AKP-CC-100c

Name: G. HejmanDate: 5-3-90

Data Entered:

CC



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

CC-100

Approx. Segment Length: 3858m



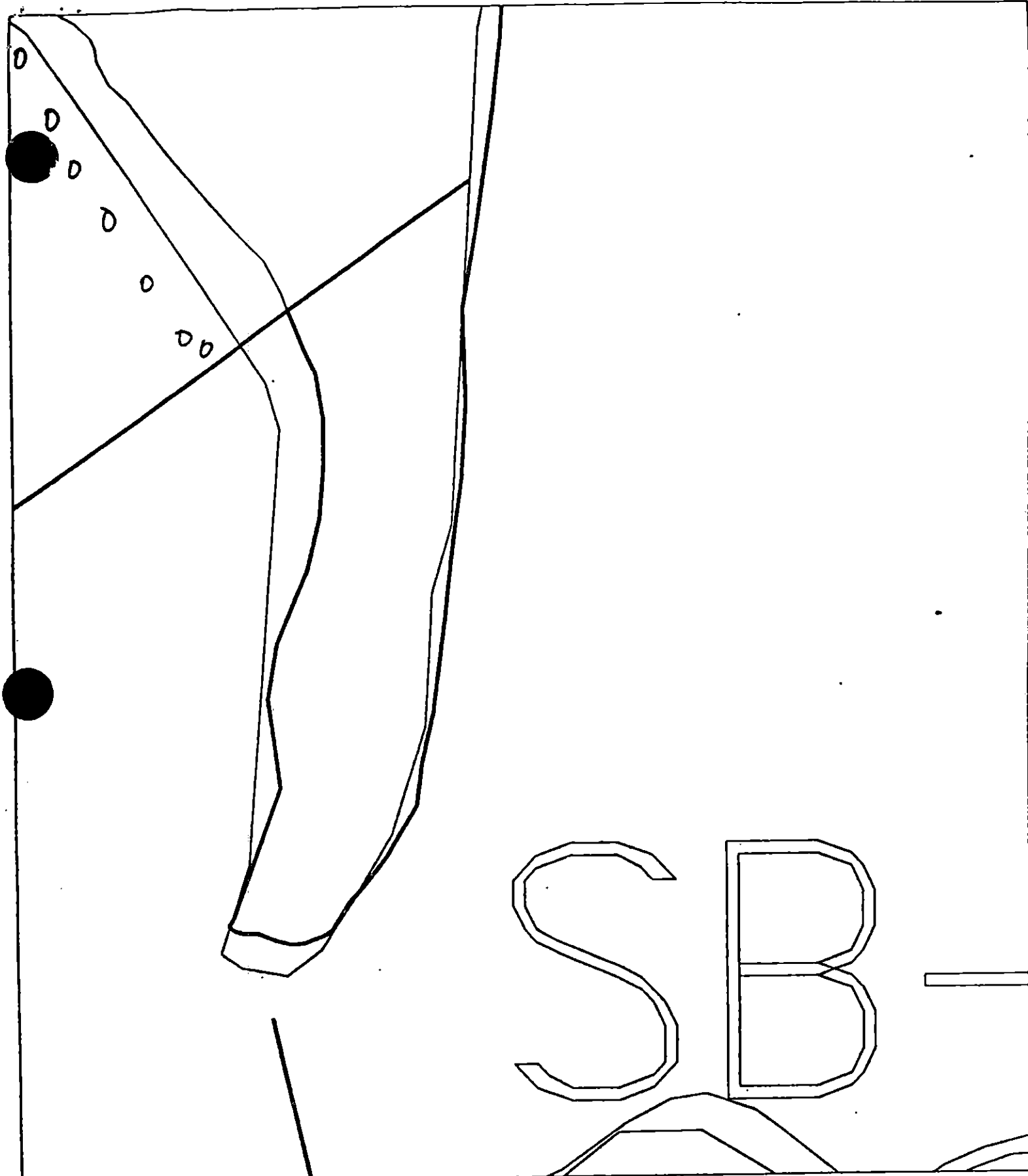
K0917 was Xx501

Map Key: AKP-CC-100d

Name: G. Heyman

Date: 5-3-90

Date Entered:



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

CC-100

Approx. Segment Length: ~~475m~~



Map Key: AKP-CC-1a

Name: G. Heyman

Date: 5-3-90

Data Entered:

REGION: KODIAK

SEGMENT: ST/K09-17-CC-100

SUBDIVISIONS: A (1 OF 1)

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.

ARCHAEOLOGICAL CONSTRAINTS:

Cultural resource survey in progress. Shoreline treatment cannot proceed until field data have been assessed and a formal archaeological constraint entered on the shoreline evaluation form.

SHPO SIGNATURE: _____ DATE: _____

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:

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

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

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

FOSC: _____ DATE: _____

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 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 788-3377
- 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 788-3377
 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 788-3377
- 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
7H Deer harvesting (6/1 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

SEGMENT ST/ K09/7CC100 SUBDIVISION: A DATE May 4, 1990NOAA
USCGNAME STEPHEN LEHMANN SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Oil was very 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

Oil 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 Schoch SIGNATURE Carl Schoch☐ 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 be 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 Chiniak 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 map) 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 moussy 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. 04.12.90

OGC G. HEYMAN NOAA S. LEHMANN 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 3/4 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: Lang 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			
	IC	IB	IP	IS	SL	BL	BR	GL	GR	TL	LR	LL	SU	U	M	L
ASPHALT PAVEMENT			X	X											X	X
POOLED																
COVER																
COAT				X									X	X		
STAIN				X									X	X		
MOUSSE			X	X												X
PATTIES			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	SL	BL	BR	GL	GR	TL	LR	LL				
* 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

OG G. Heyman

SEGMENT STICK 09 17 CC 100

SUBDIVISION A

DATE 5 13 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

AP-PT/S in up to
1X2 m area
Pit - No Subsurface Oil MS/P/S in 1/2 m x

2 m area discontinuous
Pit - Subsurface Oil on upper mud flats,
Silt/mud veneer < 5 mm
thick commonly
AP/P-2
1X20 m
30% Cover
1 cm

CT/C
Continuous Distribution

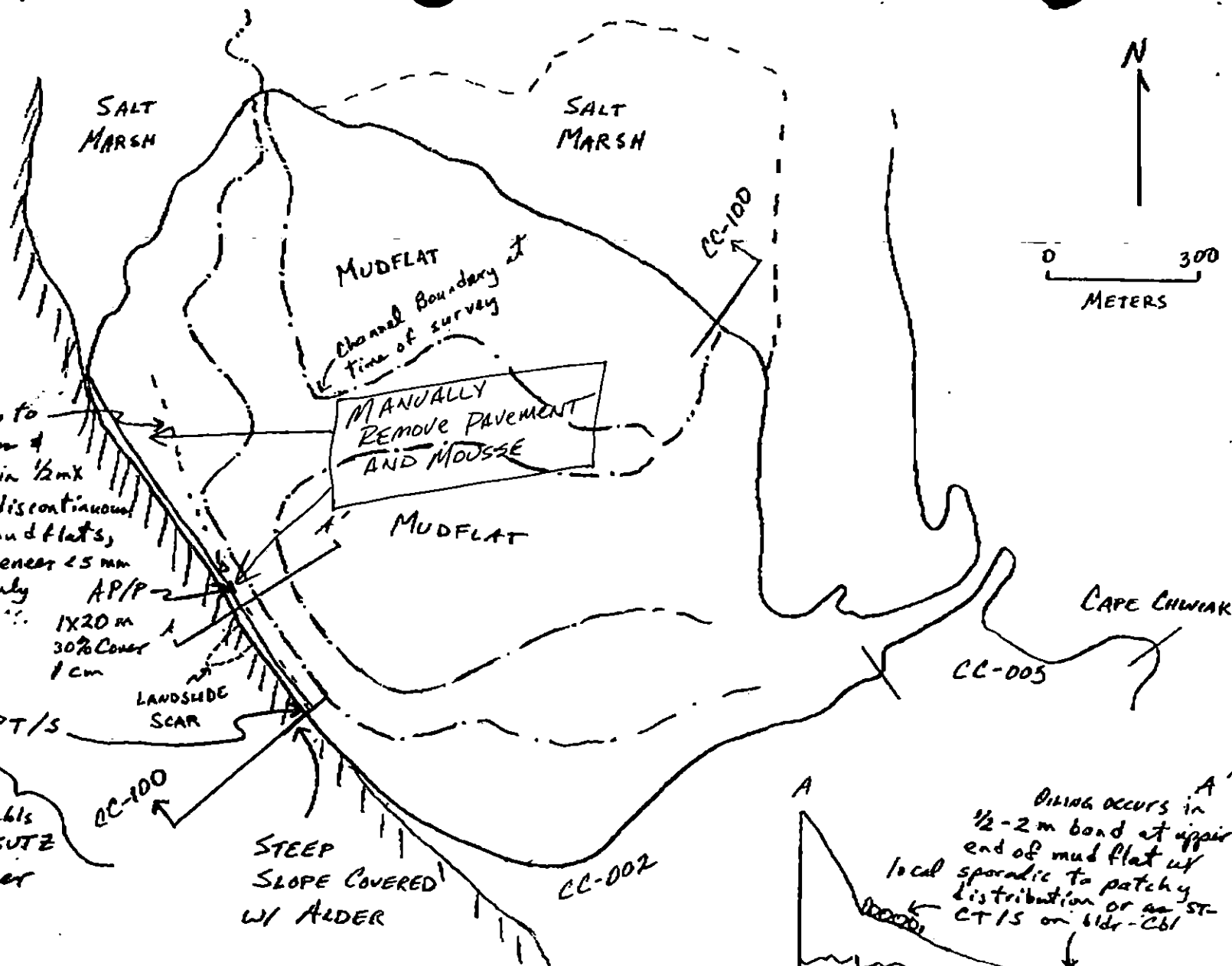
CT/B
Broken Distribution

CT/P
Patched Distribution

CT/S
Splashed Distribution on bldrs & chls
in U1T2 & SUT2
Oil Vegetation
< 10% cover

1 ●
Photo location, direction,
and number

SKETCH MAP



Oil Character Length (m): AP 20 PO CV CT 300 ST 576 MS 20 PT 30 TB FL NO 1740
CC18 CC19

Bldr/Cbl/Sand logs
Granule/SAND w/ Pebbles
Mdf
REVISION 08/24/90

SHORELINE ECOLOGICAL SUMMARY (Page 1 of 6)

REVISION: 03.22.90

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) Silt 75 ^{+ granite mud}(B) Overall % cover of biota (% of segment): Dense SUBDIV. Moderate SUBDIV. 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	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

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, LIMAEYS)

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	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: Brown bear, fox, + river otter tracks in supratidal/UTB. 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.)

Please see general comments below.

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, sub-surficially as well as superficially. There are rare boulders + cobbles in the MTZ, 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).

Sensitivities observed:

BAA - sensitive estuary

9LM - land mammals

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

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

1C - fry 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 XX501

Map Key: AKP-CC-100a

Name: _____

Date: _____

Data Entered: _____

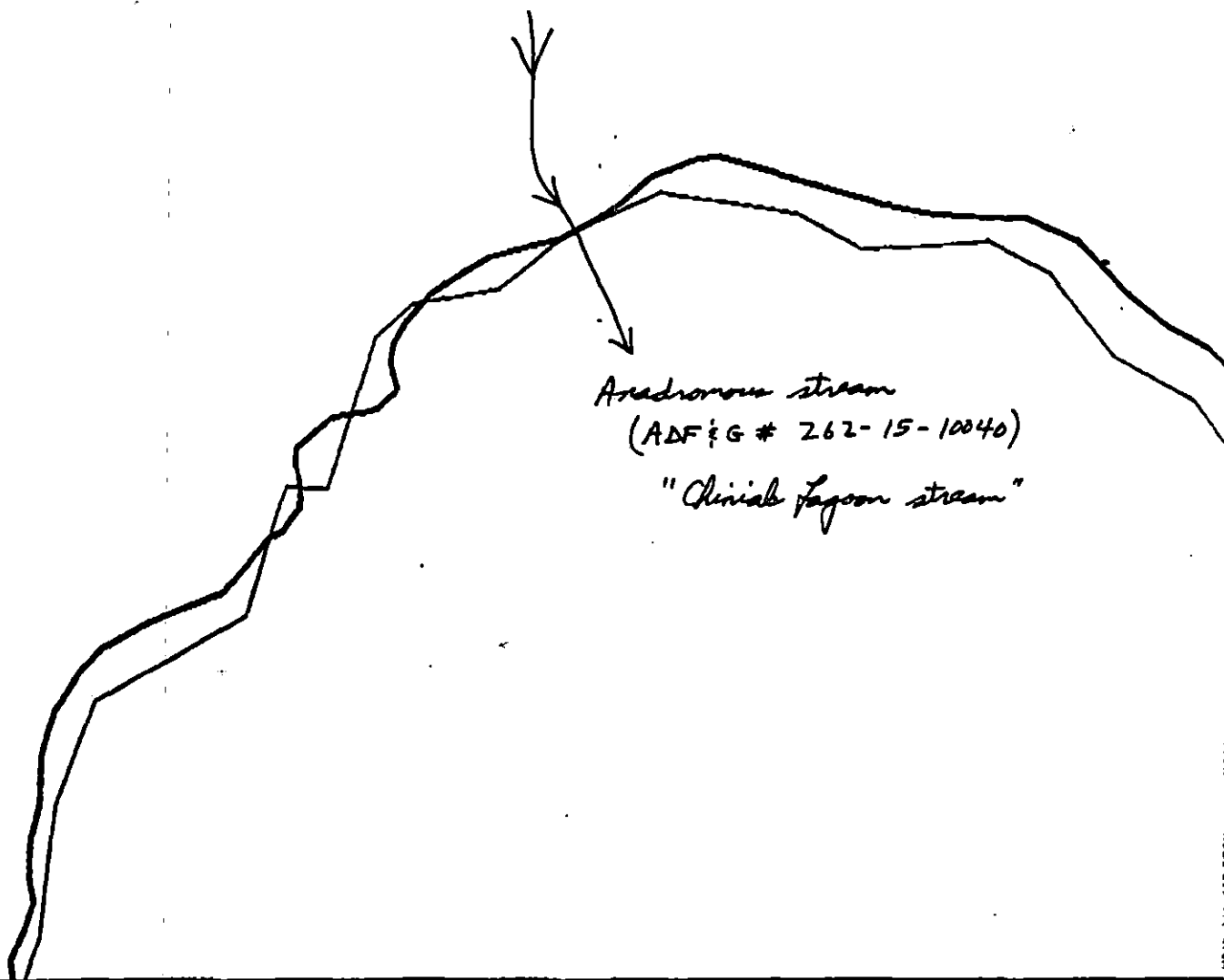
ECOLOGY MAP

(2 of 4)

CC-100

(Page 4 of 6)

See map page 1.



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

CC-100

Approx. Segment Length: 3858m



METERS

KP217 was XX501

Map Key: AKP-CC-100c

Name: _____

Date: _____

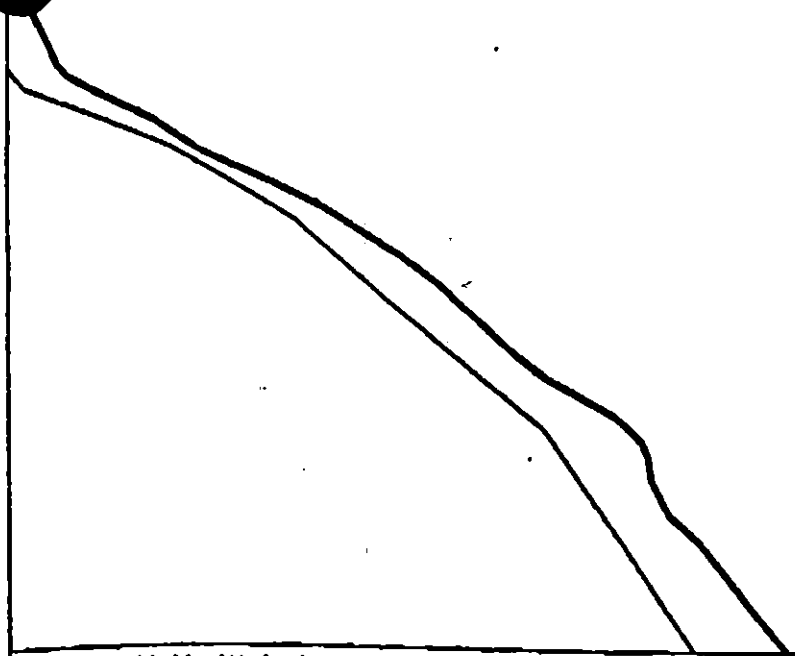
Data Entered: _____

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

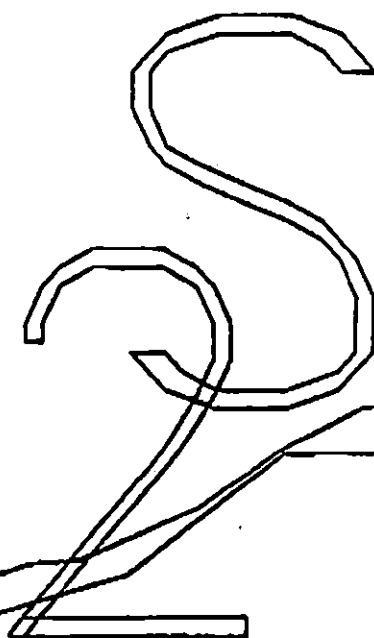
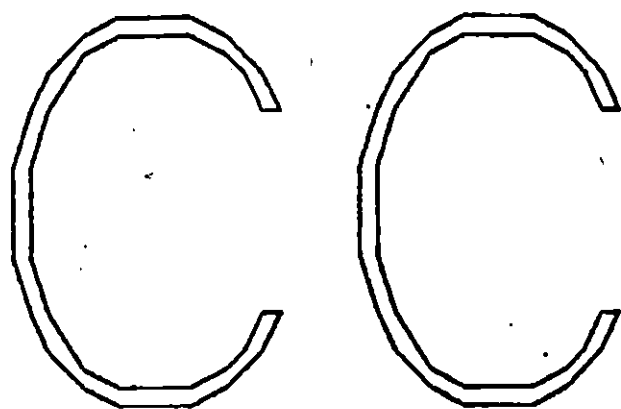


K0917 use XXSP1
Map Key: AKP-CC-100d
Name: _____
Date: _____
Data Entered: _____

ECOLOGY MAP
(4 of 4)

CC-100
(Page 6 of 6)

See map page 1.



XXXX Wide

/// Medium

--- Narrow

TTT Very Light

0000 No Oil

CC-100

Approx. Segment Length: 3858m

0 100 200 300
METERS

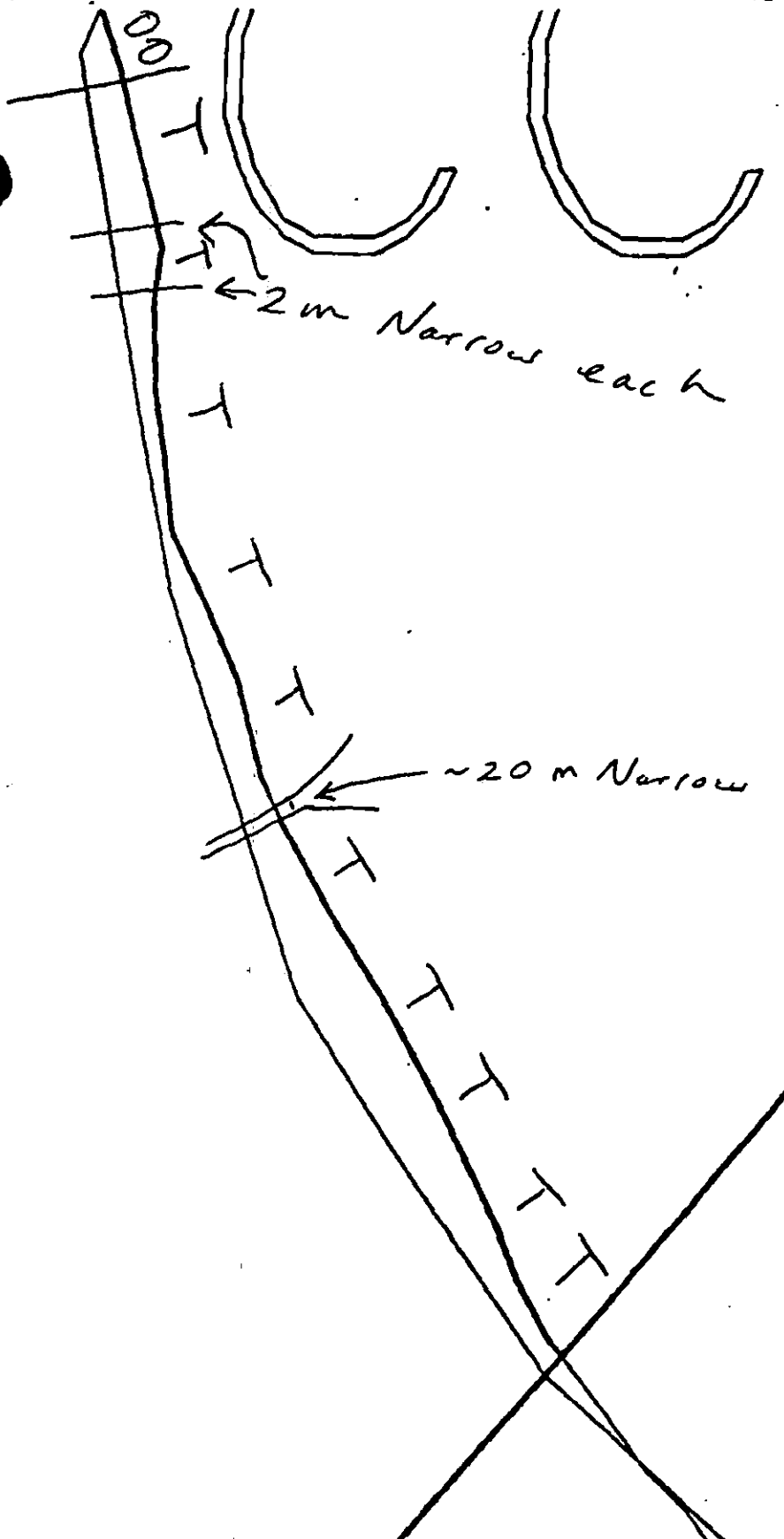
Kp917 was Xx5pl

Map Key: AKP-CC-100b

Name: _____

Date: _____

Data Entered: _____



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

000.0 No Oil

CC-100

Approx. Segment Length: 3858m

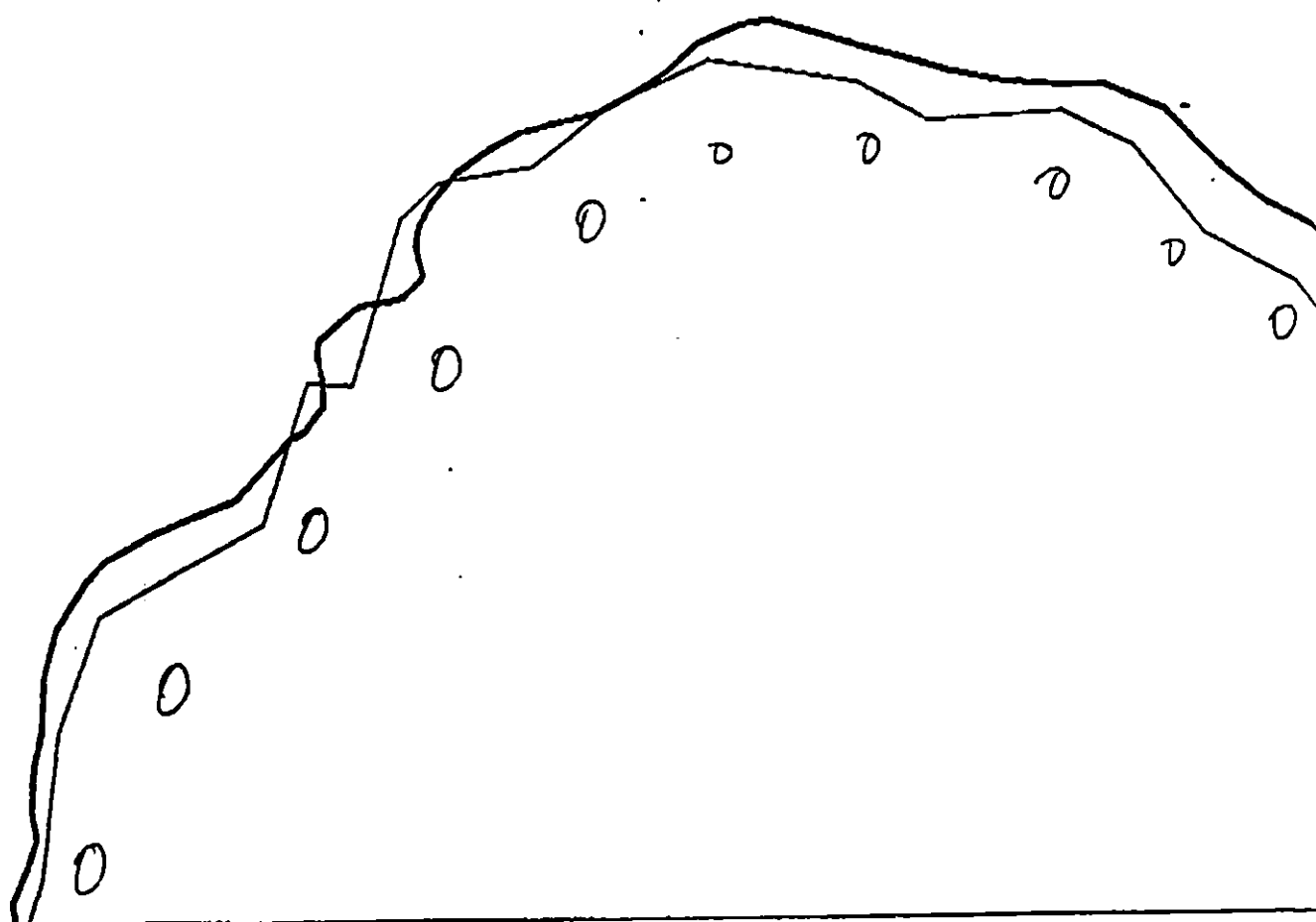


K0917 was XX501

Map Key: AKP-CC-100a

Name: G. HeymanDate: 5-3-90

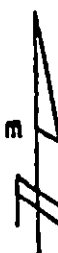
Data Entered:



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

CC-100

Approx. Segment Length: 3858m



Kp717 was XXSp1

Map Key: AKP-CC-100c

Name: G. Hejman

Date: 5-3-90

Date Entered:

CC

XXXX Wide

//// Medium

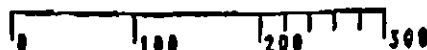
--- Narrow

TTTT Very Light

0000 No Oil

CC-100

Approx. Segment Length: 3858m

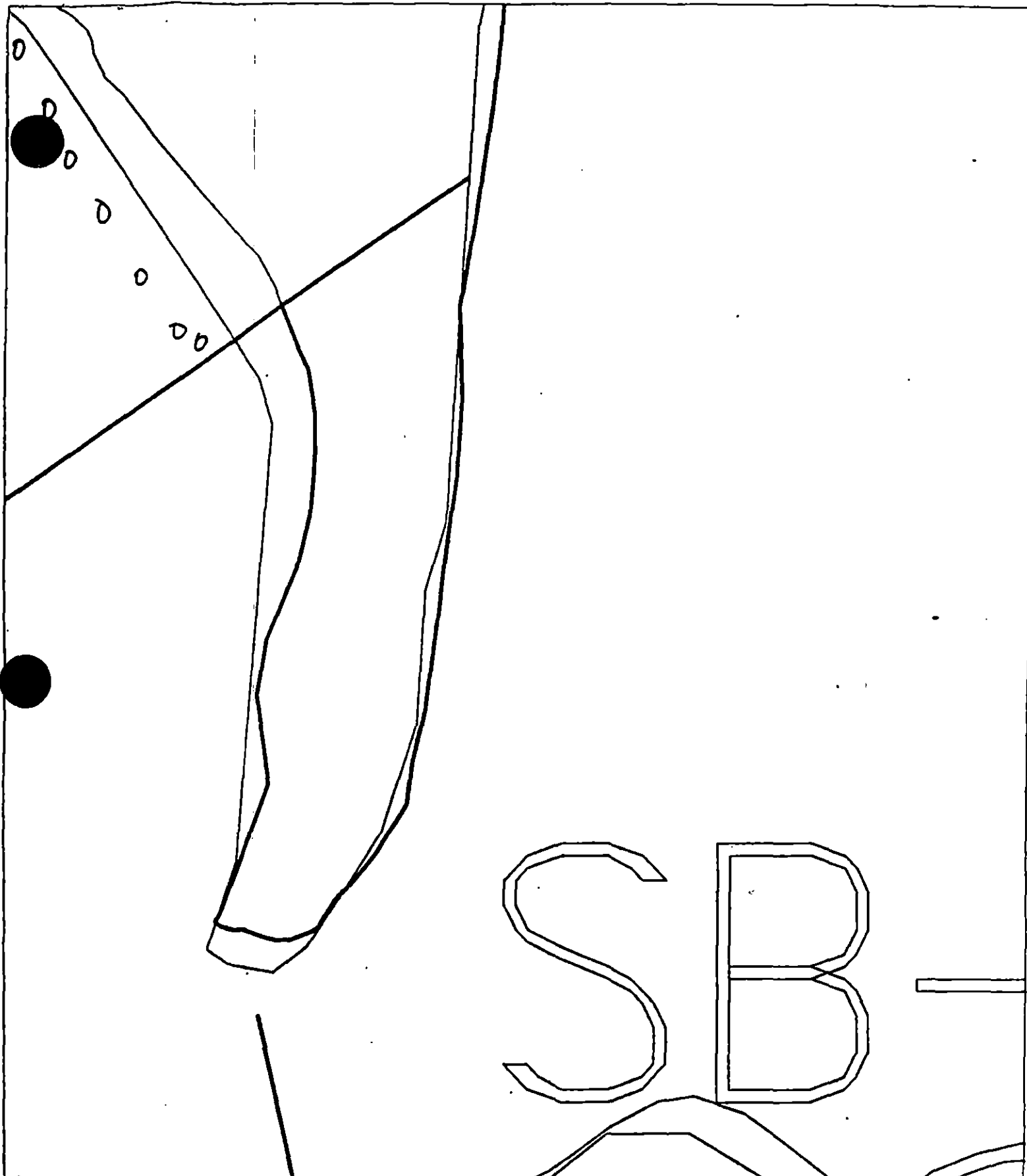

METERS

K0917 Acc XXSD1

Map Key: AKP-CC-100d

Name: G. HeymanDate: 5-3-90

Data Entered:



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

CC-100

Approx. Segment Length: ~~475~~



Map Key: AKP-CC-1a

Name: G. Heyman

Date: 5-3-90

Data Entered:

ANADROMOUS FISH STREAM ASSESSMENT

REGION: KODIAK

SEGMENT: ~~KN~~^{K9N}9-17-CC-100 K09-17-CC-100

SUBDIVISION: A

STREAM NO: 262-15-10040

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/~~KN9~~-17-CC-100 STREAM NO: 262-15-10040 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)
8AA Sensitive estuary
9LM Land mammals

ADF&G Anadromous stream # 262-15-10040.

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.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

<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: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

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 (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

30, 31

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:

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)

Finfish harvesting

Deer harvesting (8/1 to 1/7)

Invertebrate harvesting

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

7KQ

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

ANAD SCAT

ADF#G# 262-15-10040

SEGMENT ST/ K09/7CC100

SUBDIVISION: A

DATE May 4, 1990

NAME

STEPHEN LEHMANN

SIGNATURE

☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Oil was very 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

Oil 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 Sebach

SIGNATURE

Carl Sebach

☐ 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 adjacent below the oiled area and the salt marshes to the north should not be disturbed.

FIELD SHOULDERLINE COMMENT SHEET

CC001/CC002
 SEGMENT ST/CC100/CC005 SUBDIVISION: ANADSSAT DATE 5-11-90

NAME EDWARD W. WEISS SIGNATURE Edward W. Weiss

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

THIS EXXON/SSAT ANADSSAT REPORT ONLY REFLECTS THE OILING CONDITIONS WITH IN 100 M EITHER SIDE OF WHERE THE STREAM BED ENTERS THE UPPER LAGOON (CC100). IN THIS SHORT SECTION OF SEGMENT CC100 THERE INDEED WAS NO OIL FOUND, BUT IT DOES NOT REFLECT THE CONDITIONS WITH IN SEGMENTS CC002, 005, 001 NOR THE SOUTH AND WEST PORTIONS OF CC100. THESE SEGMENTS ARE WITHIN THE LAGOON WHICH IS PART OF THE ANADROMOUS STREAM. CONSEQUENTLY ADFG HABITAT PERSONNEL SHOULD BE INVOLVED IN THE TAG GROUP FOR ALL FOUR SEGMENTS (CC001, CC002, CC005, CC100) & ADFG PERMITS NEED TO BE OBTAINED TO DO ANY WORK IN THESE FOUR SEGMENTS. THE FIELD SKETCHES SHOWING THE IMPACTS IN THESE OTHER SEGMENTS ARE INCLUDED IN THIS ANADSSAT REPORT. THESE AND THE SSAT REPORTS FOR THESE SECTIONS SHOULD BE CONSULTED WHEN CLEANING UP THIS ANADROMOUS STREAM.

MANUAL TYPE A CLEANUP SHOULD BE CONDUCTED IN FOLLOWING SEGMENT AREAS;

THE SOUTH & WEST PORTION OF CC100 ALONG THE STEEP ALDER COVERED BANK TO THE POINT WHERE IT FALLS AWAY FROM THE LAGOON AND THE MARSH GRASS STARTS. CLEANUP SHOULD NOT TAKE PLACE IN THE MARSH GRASS SECTION OF CC100 (NO OIL FOUND DURING SSAT AND SENSITIVE MARSH AREA). AP, PT, MS/P WITH PARTS LOCALLY /B, IN THE SOUTH & WEST PART OF CC100

OG G. H. H.

SEGMENT STICK 09 17 CC 100

SUBDIVISION A

DATE 5, 3, 90

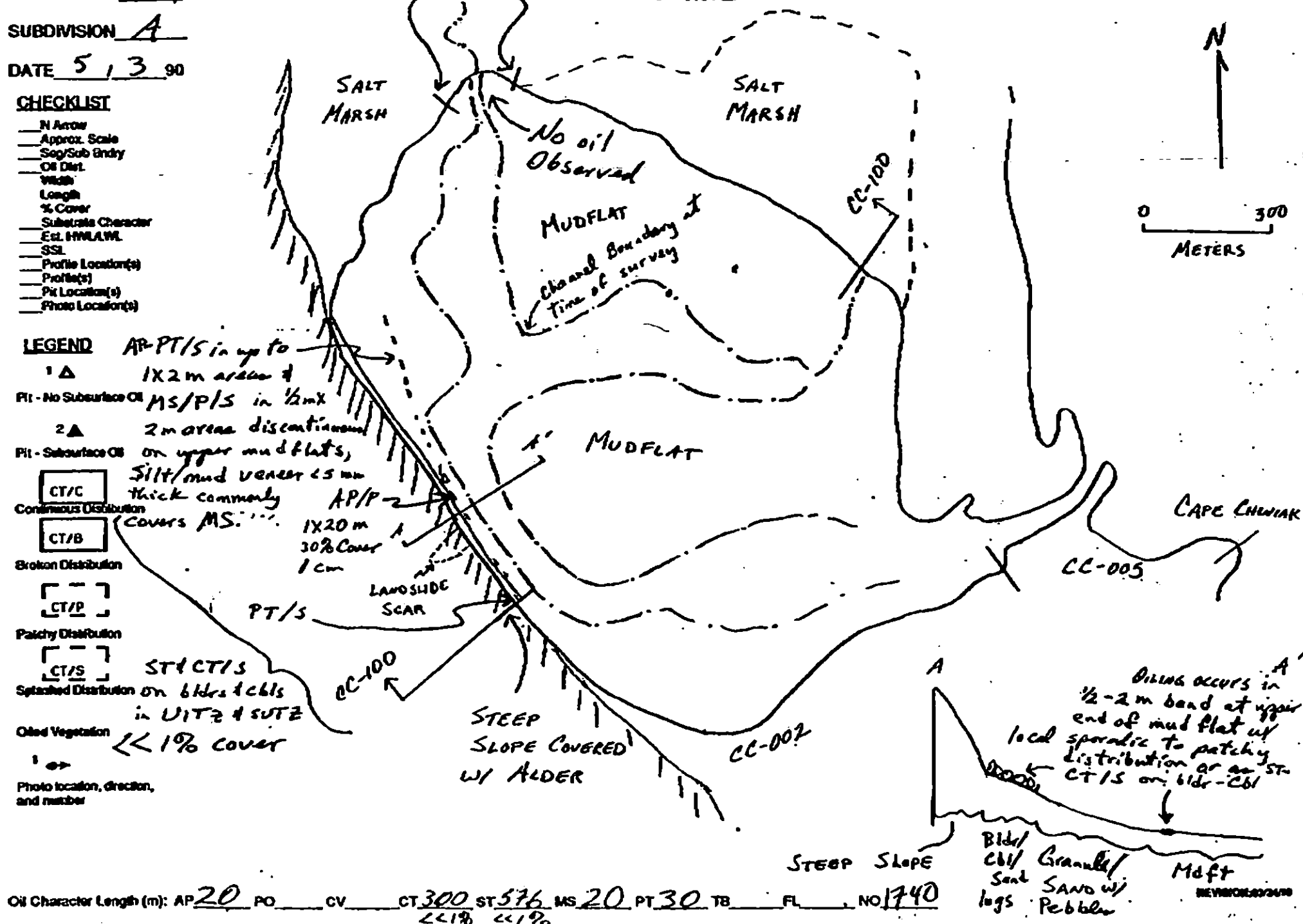
CHECKLIST

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

LEGEND

- 1 Δ AP-PT/S in up to 1X2 m area of MS/P/S in 1/2 m
- 2 Δ 2 m areas discontinuous on upper mud flats, silt/mud veneer 15 m thick commonly covers MS.
- CT/C Continuous Distribution
- CT/B Broken Distribution
- CT/P Patchy Distribution
- CT/S Stalked Distribution on bldrs & cbls in UITE & SUTE
- Oiled Vegetation $\ll 1\%$ cover
- Photo location, direction, and number

ANADSCAT SURVEY MAP BOUNDARIES



OG Gulf

SEGMENT ST/K 0117 CC 005

SUBDIVISION A

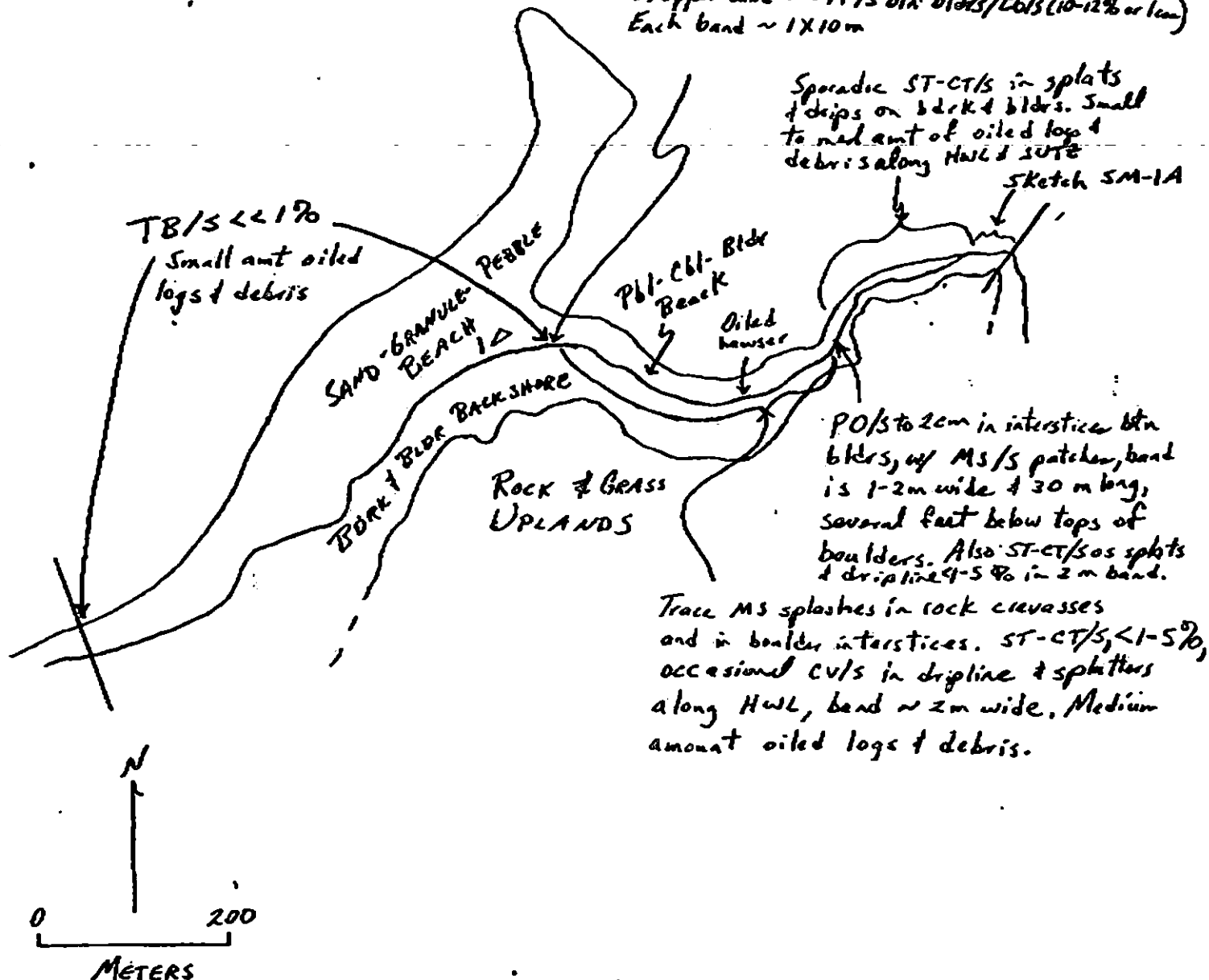
DATE 5/3/90

CHECKLIST

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

LEGEND

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



Oil 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. Hey

SKETCH MAP 5M-1A

SEGMENT ST/ K017 CC005

SUBDIVISION A

DATE 5/3/90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. NW/SE/NE/SW
- ☐ SSI
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

CT/C
Continuous Distribution

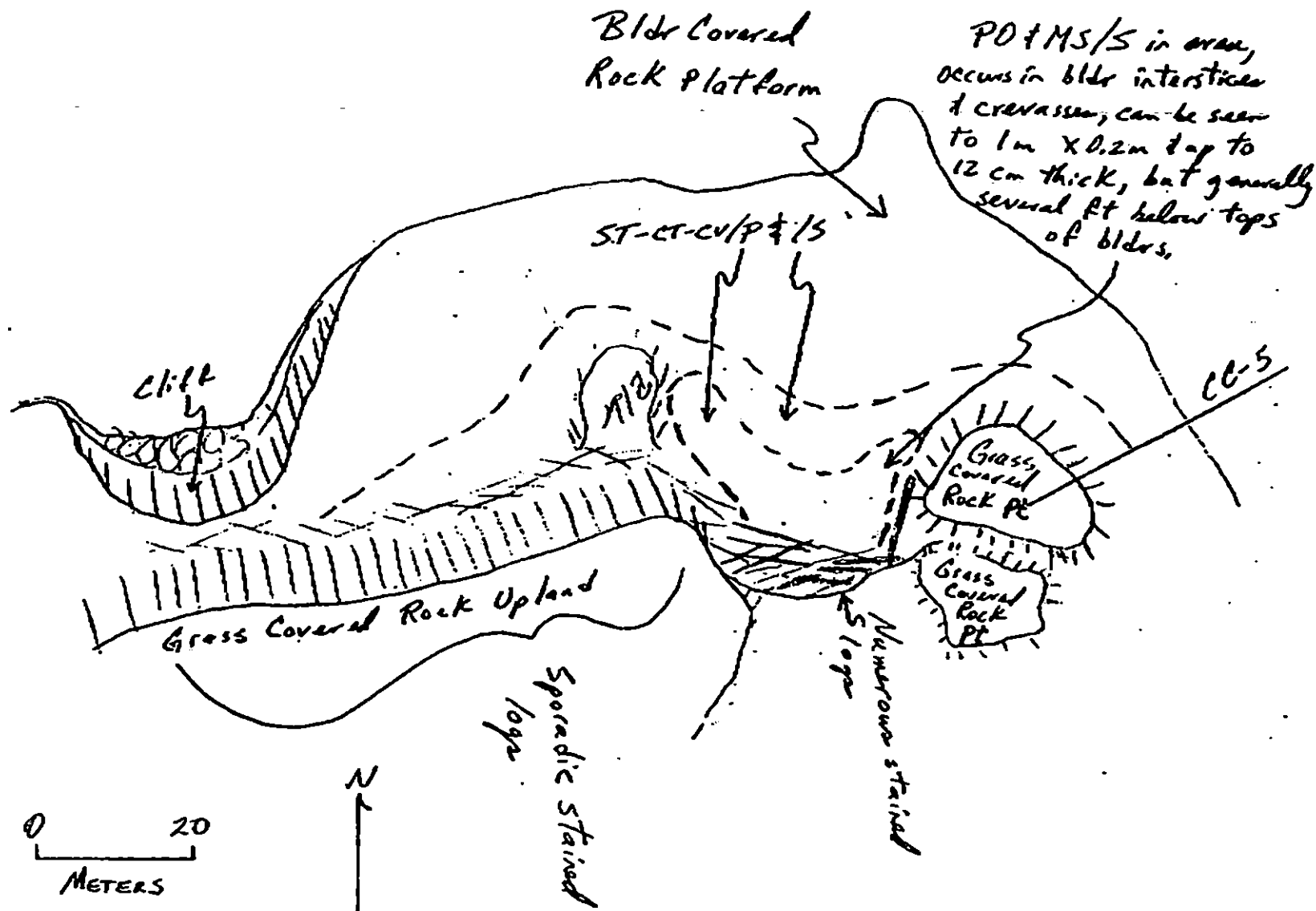
CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Spotted Distribution

Oil Vegetation

1 →
Photo location, direction, and number



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

REVISION: 02/2/90

SEGMENT K 09-170001

SUBDIVISION A

DATE 5/3/90

CHECKLIST

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

LEGEND

1 Δ
PK - No Scheutings OM

2 ▲
Pt - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Policy Distribution

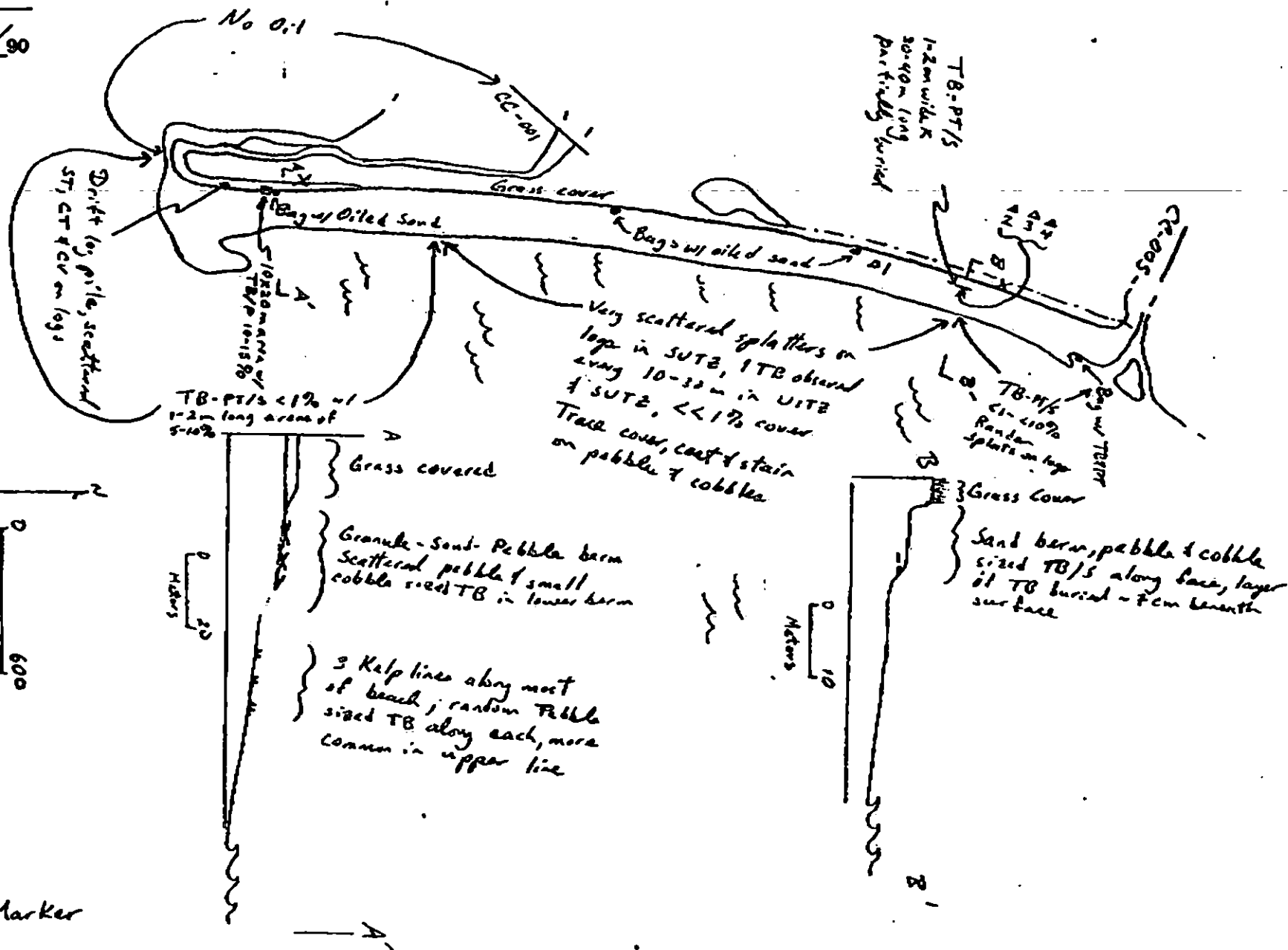
CT/S
Selected Distribution

lll
Oiled Vegetation

1 
Photo location, direction,
and number

x Regulatory Marker

KITCHEN MAP



Oil Character Length (m): AP — PO — CV 3 CT 3 ST 4 MS — PT 6.90 TS 2.30 FL — NO 771

PREVIOUSLY: \$23,400

OGG/Heg

SKETCH MAP

SEGMENT ST/ K0917 CC002

SUBDIVISION A

DATE 5/3 90

CHECKLIST

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

Spashed Distribution

Oiled Vegetation

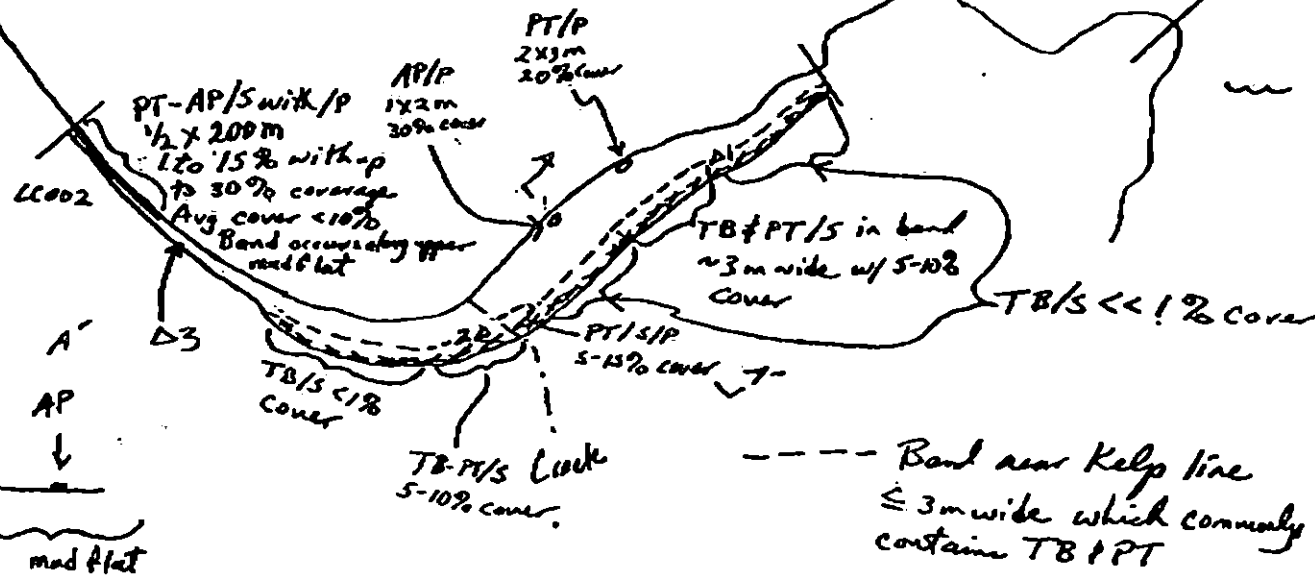
Photo location, direction, and number

SALT MARSH

SALT MARSH

LAGOON

0 300
Meters



Oil Character Length (m): AP 10 PO - CV - CT - ST - MS - PT 450 TB 450 FL - NO 215

REVISION: 03/24/90

ADFG MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: ES CS DS TS AVS SCH HHIS PTA2 REGION: PWS JP,CI KAPMETHOD: Aerial Ground BoatDATE: 5/3/9015 HIGH TIDE TIMES: 121 TEAM RECORDER: E. WEISS4 START TIME: 133516 HIGH TIDE HTS: 122 OBSERVERS: K. SCHOCK,5 STOP TIME: 180017 LOW TIDE TIMES: 170923 AGENCY: ADFG/NAS/LWWC/ANEC6 CC/00 CC00118 LOW TIDE HTS: 1.6924 PHOTOS TAKEN: Y X9 SEGMENT #: CC002

19 TIDE HT AT SURVEY: _____

Roll #: _____ Frame: _____

7 STATION #: _____

8 K-UNIT: K0917

Ebb Slack Flood Slack

25 VIDEO TAKEN: Y X TAPES: _____

9 STAT AREA: _____

20 USCG QUAD: AFOGNAK C-6

Starts: _____ Ends: _____

10 LAT: _____

11 LONG: _____

26 SAMPLES TAKEN: Y X Number _____12 SOURCE: Map Loran

Oil _____

13 LOCATION: CHINIAR LAGOON, CAPE CHINIAR, AK PENINS.

Sediment _____

14 DESCRIPTION: _____

Biological _____

Water _____

EXTENT OF OIL

	SHORELINE				STREAM			
	L	V	H	S	L	V	H	S
1 SURFACE COVERAGE	1000+	10m		5%			2600	10%
28 SURFACE THICKNESS	2cm				1cm			
29 PENETRATION	—			SURFACE	—			

30 OVERALL OIL IMPACT: N VL 1 N N31 OIL TYPE: Pooled House Tar Asphalt Sticky Stain32 OILED DEBRIS: Y N33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cove36 CATALOGED ANAD. FISH STREAM? Y N37 CATALOG #: 262-15-1004038 STREAM NAME: CHINIAR LAGOON39 OIL IN STREAM BED? Y X40 OIL ON STREAM BANKS? Y N41 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 X34 WAVE EXPOSURE: High Moderate Low44 ANADROMOUS FISH OBSERVATION
Species Aerial Ground35 SUBSTRATE TYPE: Bedrock 10 Boulder Cobble 10Gravel 20 Sand Rock/Shell 60

Species	Aerial	Ground

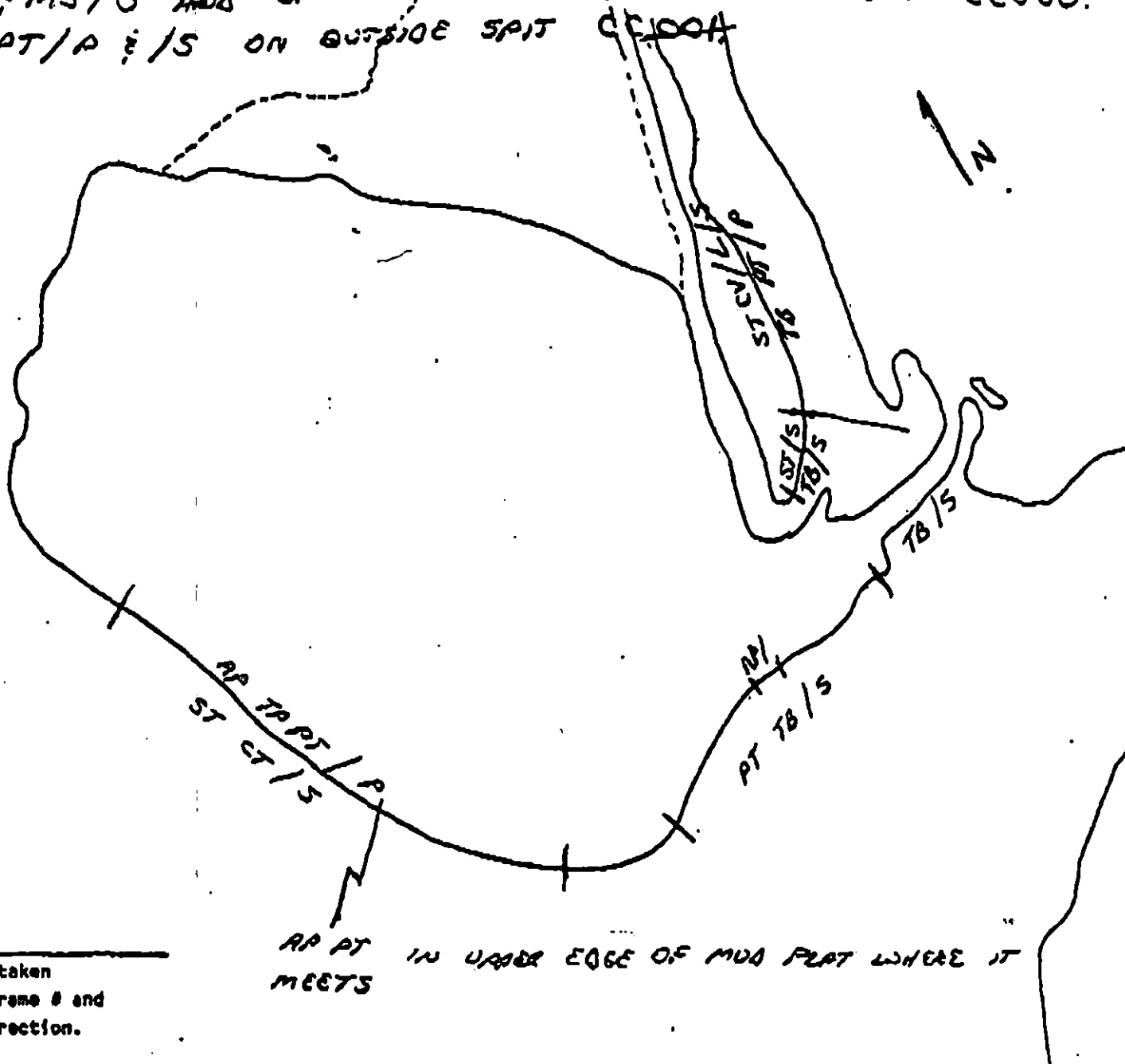
COMMENTS: SCATTERED TARBALLS PATCHES SOME ASPHALT/SOFT ON
SOUTH BANK. SOUTHWEST AND WEST BANK HAS TARBALLS
PATCHES ASPHALT THAT IS PATCHY AND LOCALLY BROKEN.
BT CV/S IN SUPRA COBBLE TIDE ZONE.

RECOMMEND: MANUAL TYPE A CLEANUP WITH MONITOR (NAS &
ADFG) MONITOR SHOULD BE FAMILIAR WITH SITE AND OIL
LOCATION AS IT IS SOMETIMES HARD TO SAOT. (OVER)

FRAME(S)

DESCRIPTION

CLEANUP SHOULD TAKE PLACE IN ⁴⁸ OIL DISTRIBUTION DIAGRAM CC002, CC005, CC001, BUT ONLY ON THE WEST/SOUTHWEST SIDE OF CC100, (WEST/SOUTHWEST SIDE OF LAGOON) UP TO BUT NOT INCLUDING GRASS/MARSH AREA AT NW CORNER OF LAGOON. ~~DO NOT~~ DO NOT INCLUDE BEACH OUTSIDE LAGOON CC005. TB:AT/A & /S ON OUTSIDE SPIT CC100A



Sample taken
= Photo frame # and
shot direction.

ADF#G #

262-15-10040

SHORELINE ECOLOGICAL SUMMARY

Segment ST / K0917CC100

Subdivision

A

Date (mo / day / yr) 5/3/90

Time (24 hr) 1600-1730

Biologist

SHARMAN

(A) Substrate type and % of segment: SUBDIV.

(1) Bedrock (2) Boulder (3) Cobble (4) Pebble (5) Sand (6) Silt 100

(B) Overall % cover of biota (% of segment): Dense 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 (ANCELLA, LITTORINA, LIMAETE)

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	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 above. The stream mouth quickly opens out into a sand/mud grassy tidal flat. No particularly unusual biological observations. The surrounding Chinich Lagoon proper was surveyed in more detail (See Shoreline Ecological Summaries for CC-3, CC-2, CC-100, and CC-1).

Ecological Considerations:

ADF#G Catalog # 262-15-10040 anadromous stream ("Chinich Lagoon stream"). No additional local (within 100m) ecological sensitivities other than the usual concern for sensitive + productive estuarine tidal areas. It may be useful to refer to this section of the regular SSAT survey of CC-100.

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 blots and substrate. Sensitive estuary.

FOSC

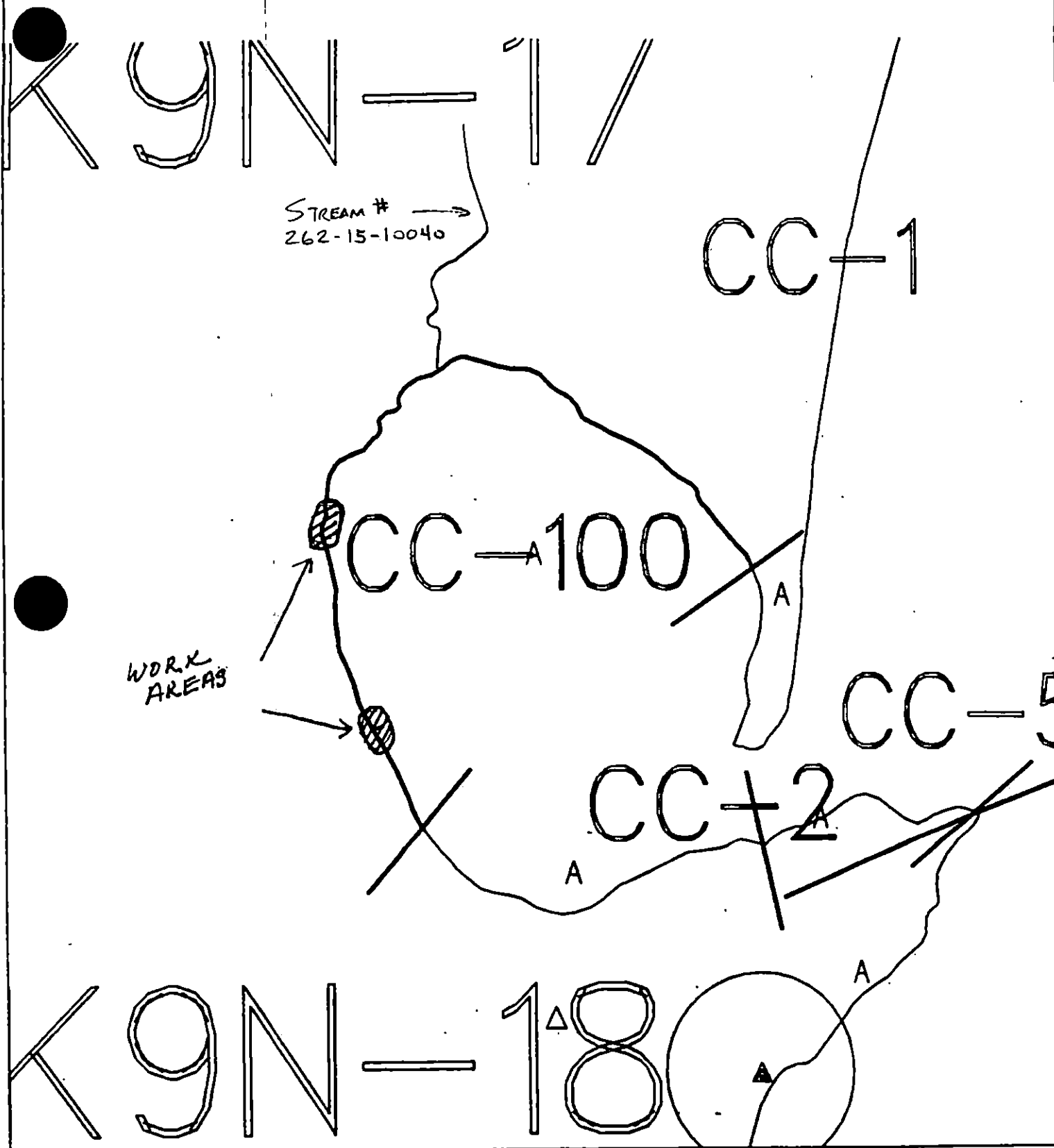
Date

7-11-90

Prepared by

Date

7/10/90



Exxon Company, USA
Map Keys: ACP-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/ K09-17-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.

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 SIGNATURE: Charles J. H. H. H. 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.

SEE CONSTRAINTS ADDENDUM DATED 7/10/90 PP

TAG COMMENTS: BIOREMEDIATE (CUSTOMER) IS 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 AMN TGA Real

USCG G.A. RATER G.A. Rater

NOAA Gary Petros Gary Petros

FOSC:

DATE: 7-10-90

Temporarily NOT AUTHORIZED. Coordinate treatment with F&W & ADF&G for environmental constraints. NPS monitor & permit reviewed.

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/K19-17-CC-100 STREAM NO: 262-15-10040 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)
8AA Sensitive estuary
9LM Land mammals

ADF&G Anadromous stream # 262-15-10040.

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.

ARCHAEOLOGICAL CONSTRAINTS:

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

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

Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: NO OIL OBSERVED IN AREA OF STREAM. HOWEVER
WORK TO BE COMPLETED IN ADJACENT AREAS TO THE STREAM + LAGOON
SEE SEAT PACKAGES 19-17-CC-180A + 02A FOR RECOMMENDED
WORK - MINIMIZE DISTURBANCE + WORK CREW SIZE.

TAG APPROVAL DATE: 5/23/90.
ADEC Art Werner Art Werner
EXXON Andy Earl Andy Earl
NOAA Barl Wescott Barl Wescott
USCG G.A. Reiter G.A. Reiter

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

OG Gillman

SEGMENT ST/K 09 17 CC 100

SUBDIVISION A

DATE 5/3/90

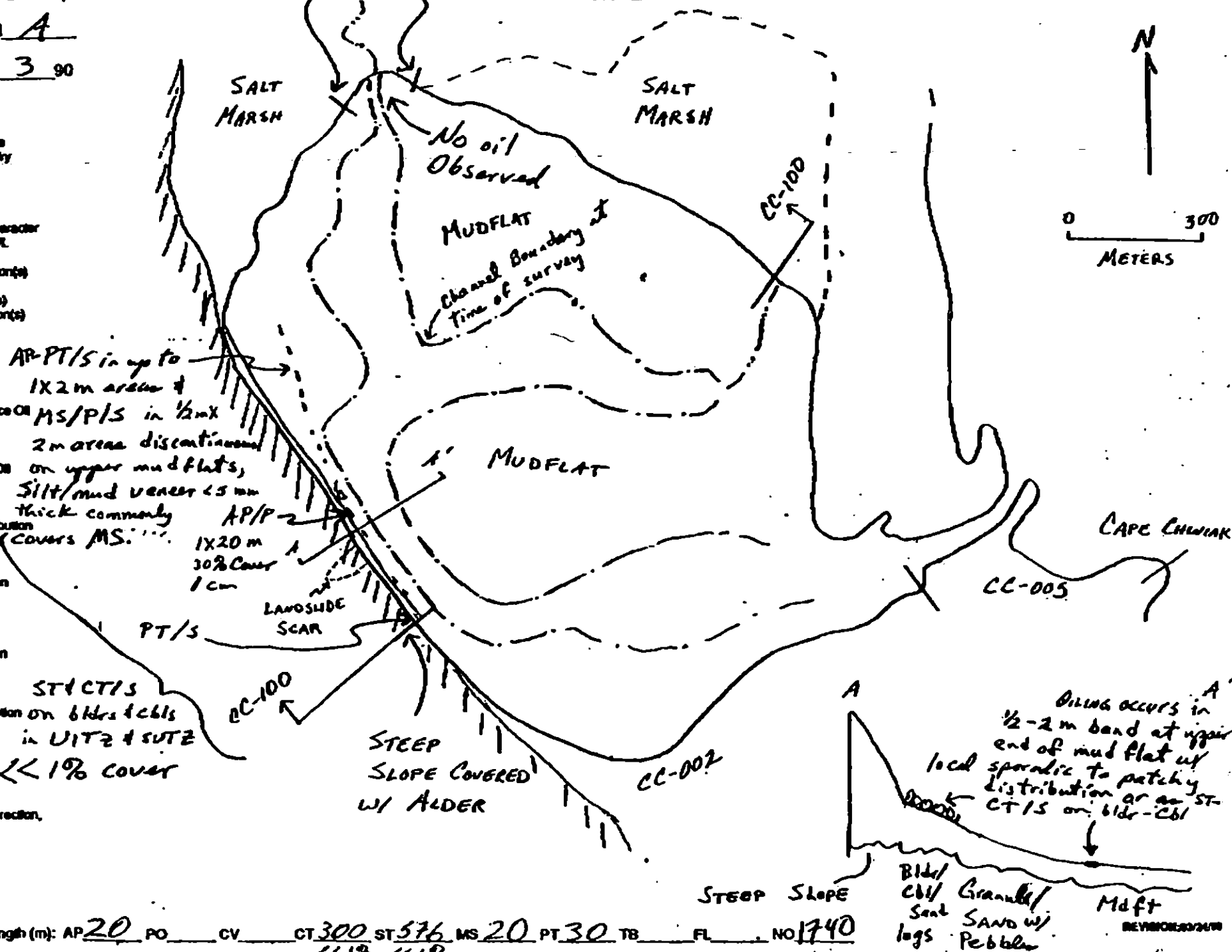
CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bdry
- ☐ Oil Dst.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. H/W/L/A/W/L
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 Δ AP-PT/S in up to 1x2 m area & MS/P/S in 1/2 m x 2 m area discontinuous on upper mud flats, silt/mud veneer < 5 mm thick commonly covers MS.
- 2 Δ Pit - Subsurface Oil
- CT/C Continuous Distribution
- CT/B Broken Distribution
- CT/P Patchy Distribution
- CT/S Splashed Distribution
- Oil Vegetation < 1% cover
- Photo location, direction, and number

ANADSCAT SKETCH MAP BOUNDARIES



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

OG G. Y. M. E. A.

SEGMENT ST/ K 0917 CC 005

SUBDIVISION A

DATE 5/3/90

CHECKLIST

- ☐ M Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Body
- ☐ Oil Ditch
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pt 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

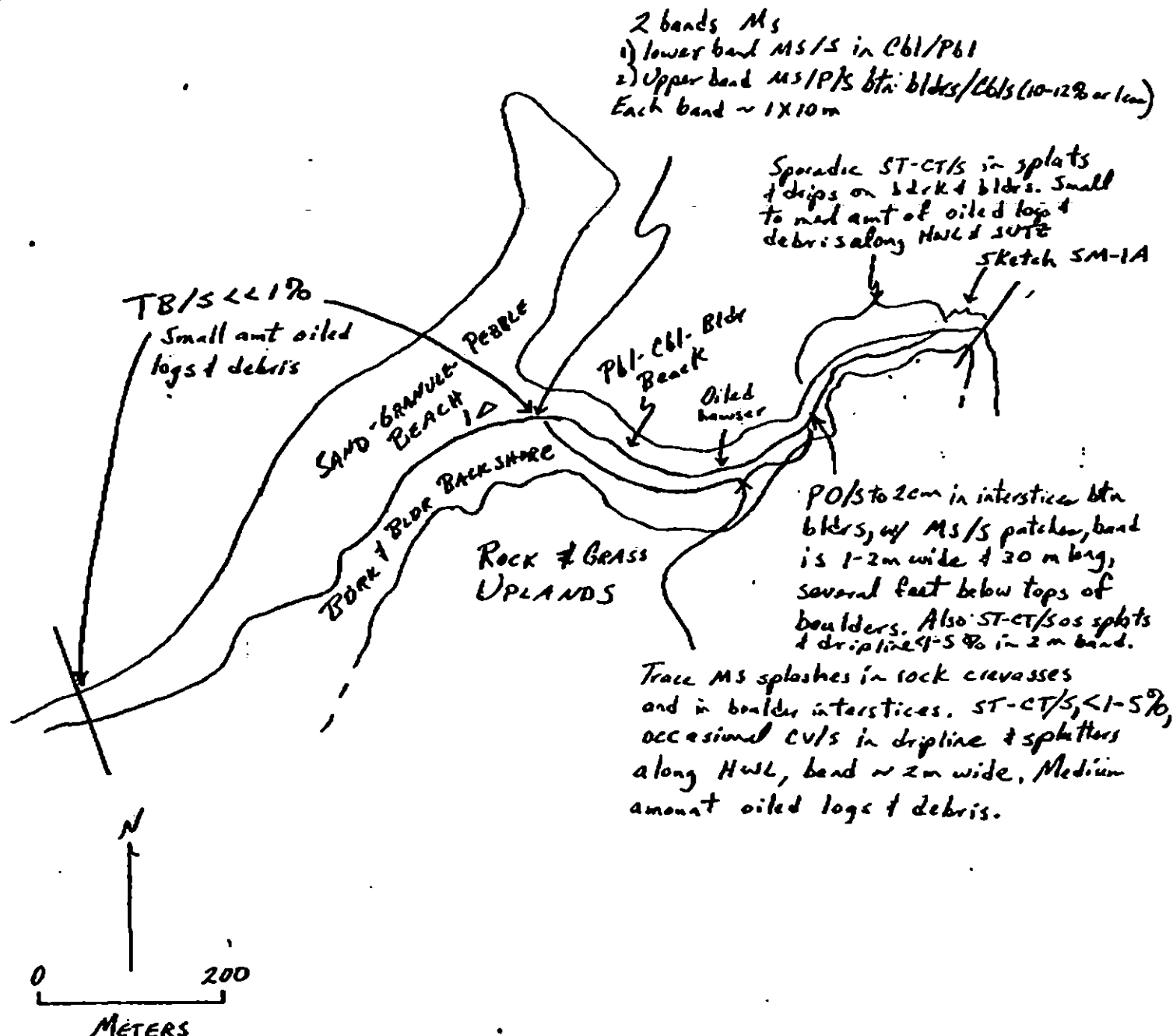
Splashed Distribution

Oiled Vegetation

1 ●

Photo location, direction, and number

SKETCH MAP-1



Oil 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. Heyman

SEGMENT ST/ K 0917 CC 005

SUBDIVISION A

DATE 5/3/90

CHECKLIST

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

LEGEND

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

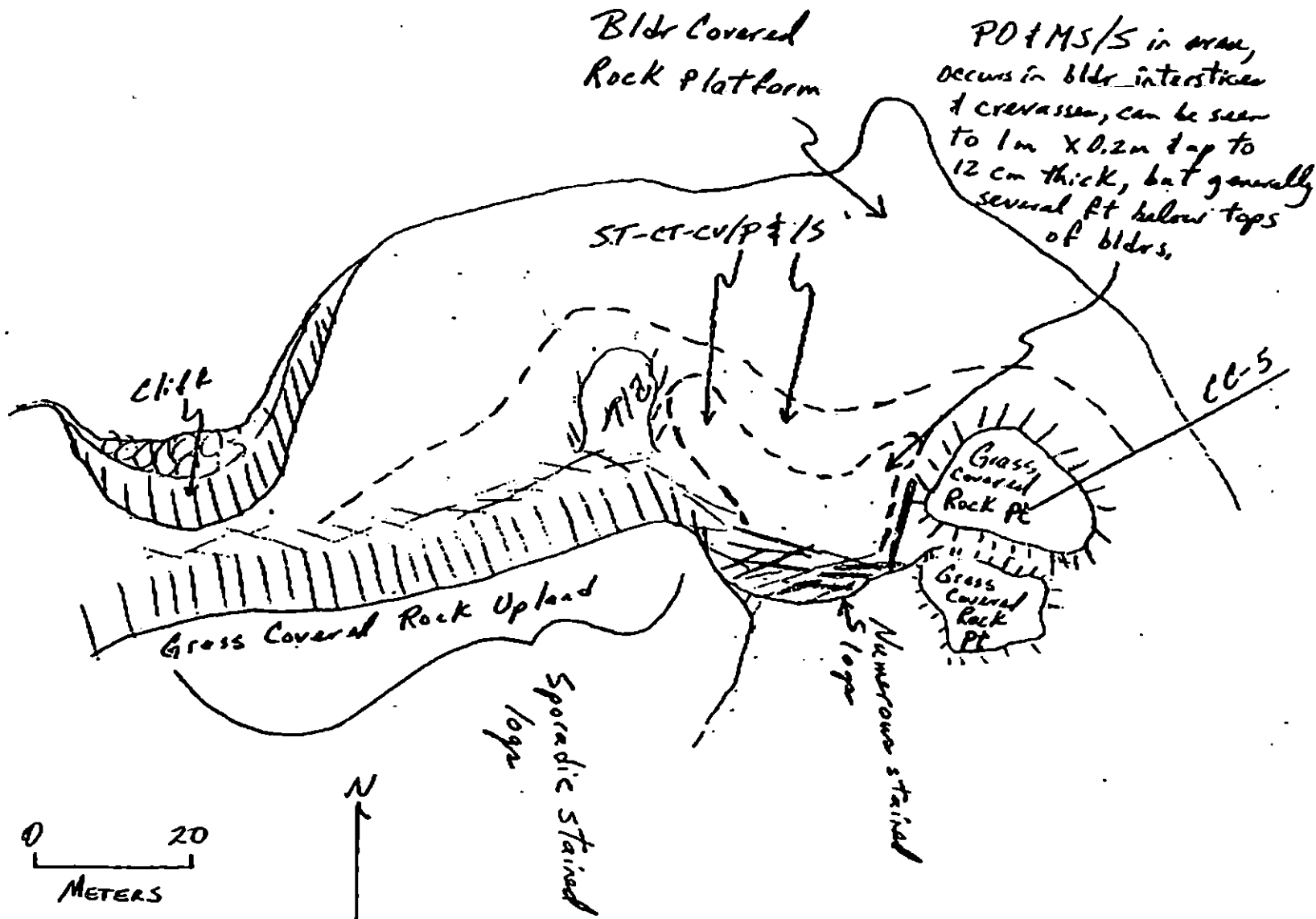
Continuous Distribution
- CT/B

Broken Distribution
- CT/P

Patchy Distribution
- CT/S

Splashed Distribution
- ☐ Oiled Vegetation
- 1 $\Rightarrow$
Photo location, direction, and number

SKETCH MAP SM-1A



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

SEGMENT STICK 09-17X001

SUBDIVISION A

DATE 5/3/90

CHECKLIST

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

LEGEND

1 Δ
PK - No Substitution On

2▲
Pt - Subsurface Oil

CT/C
Continuous Distribution

CT/8

Broken Distribution

CT/P

Patchy Distribution

CT/3

Selected Distribution

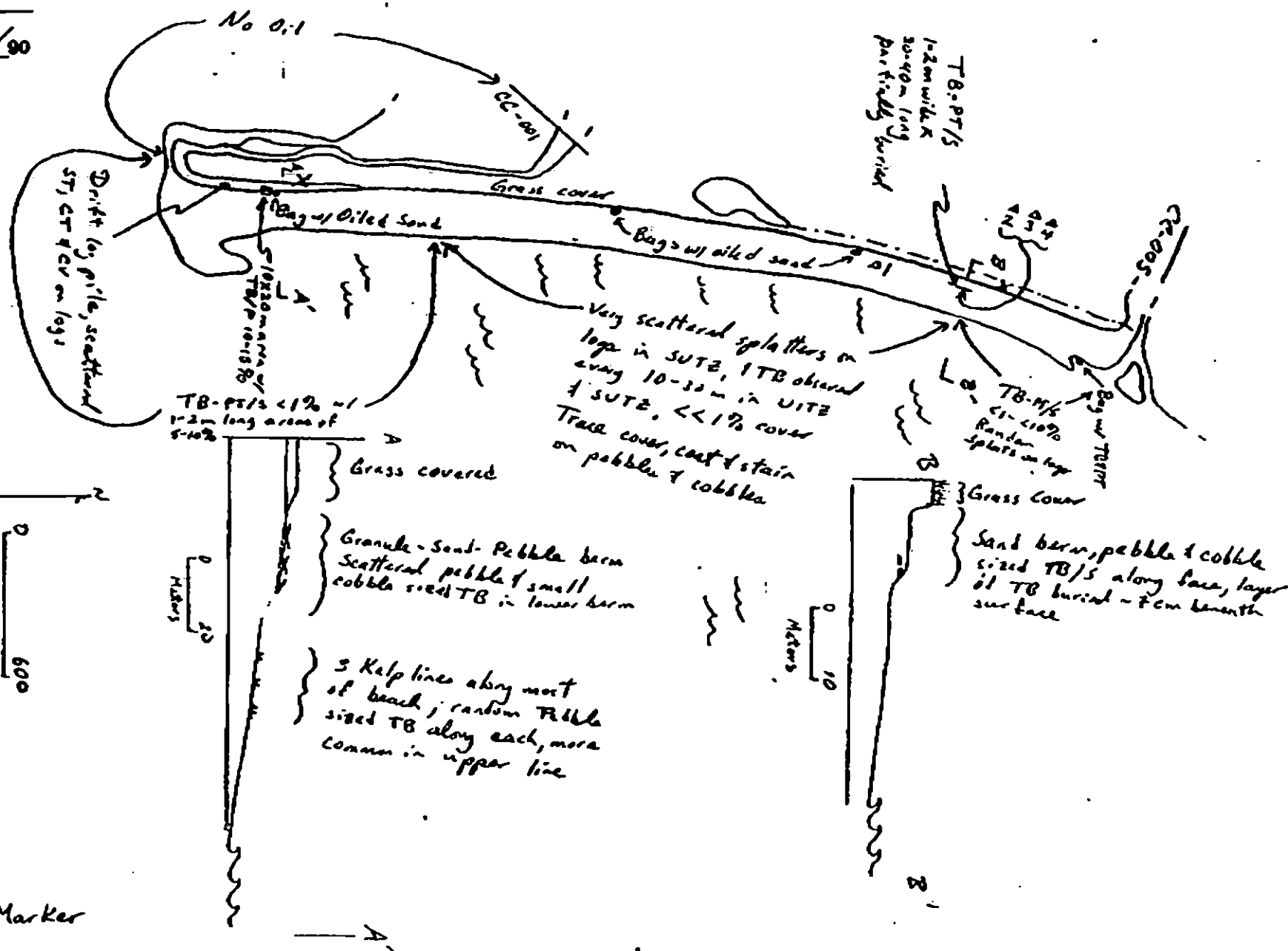
lll
Oiled Vegetation

1 0-7

Photo location, direction,
and number

x Regulatory Marker

KETCH MAP



Oil Character Length (m): AP — PO — CV 3 CT 3 ST 4 MS — PT 6.20 RS 2.30 FL — NO 771

REVISION: 25/2/00

OGA Handwritten

SKETCH MAP

SEGMENT ST/ K0917 C0002

SUBDIVISION A

DATE 5/3/90

CHECKLIST

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

LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Spotted Distribution

Oiled Vegetation

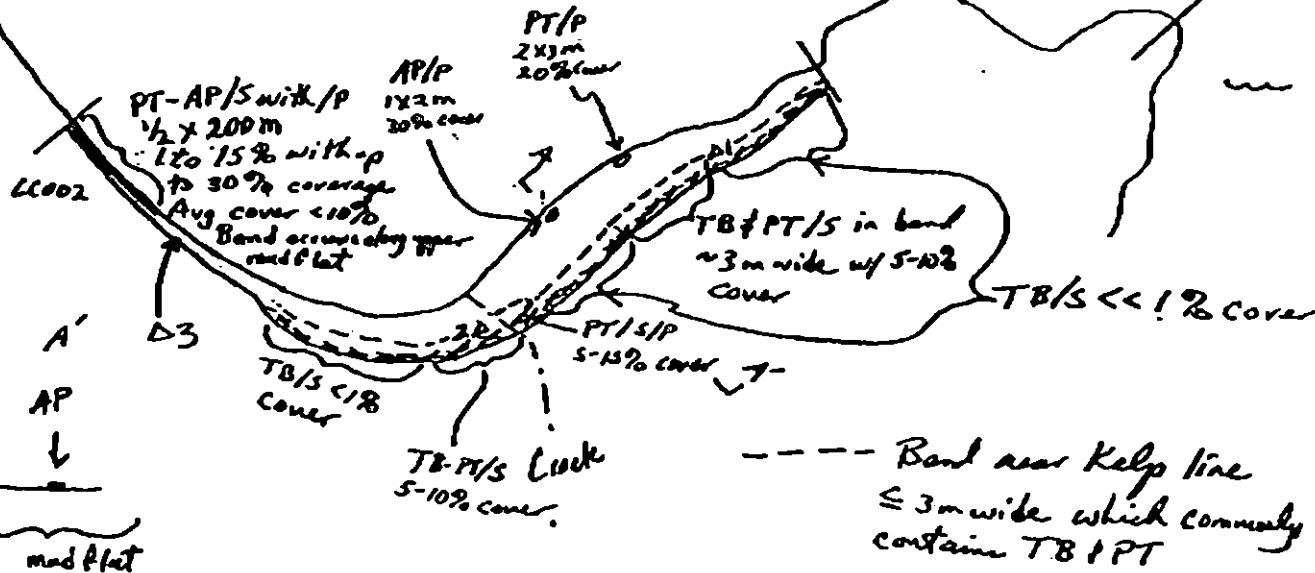
1 →
Photo location, direction,
and number

SALT MARSH

SALT MARSH

LAGOON

0 300
Meters



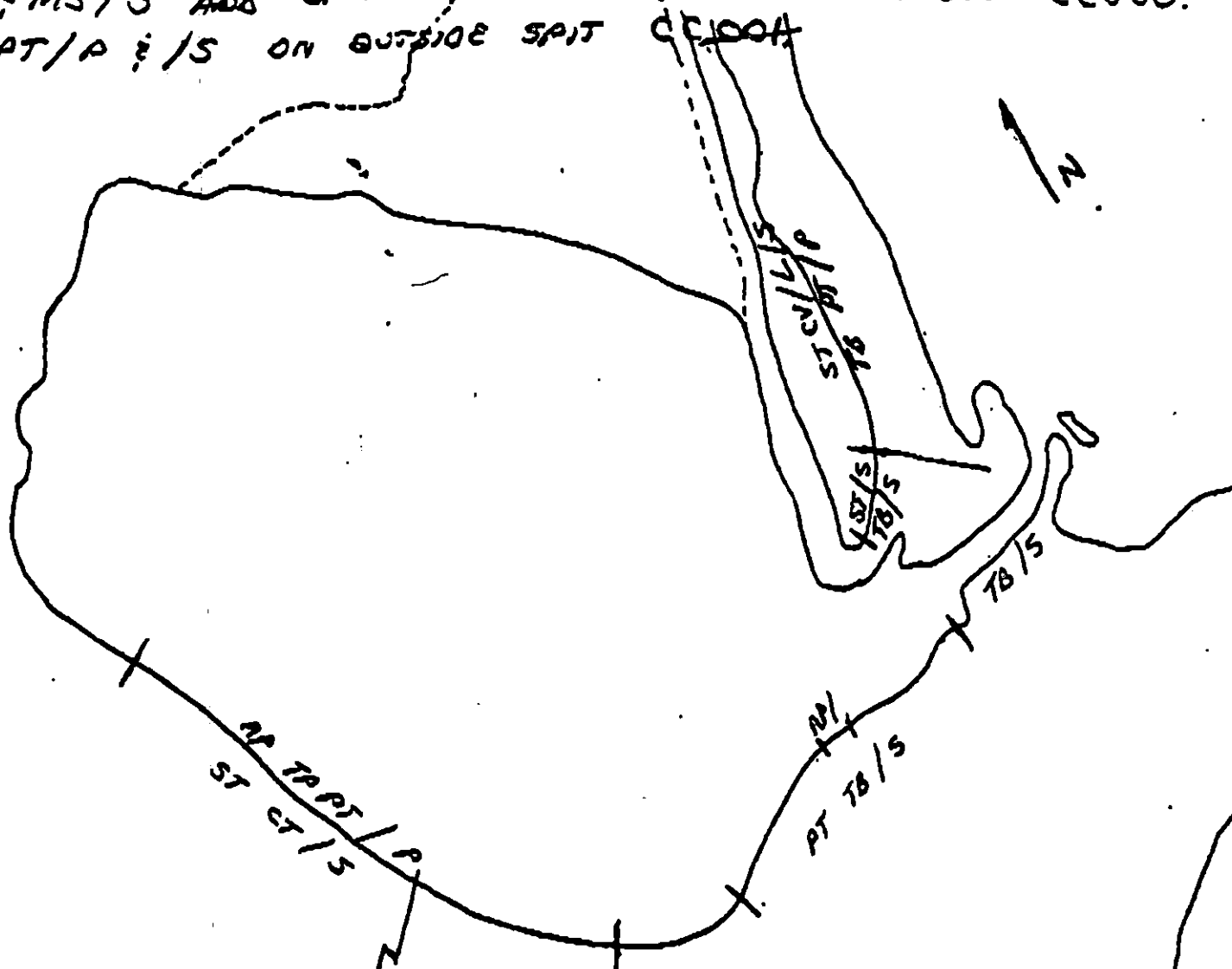
Oil Character Length (m): AP 10 PO — CV — CT — ST — MS — PT 450 TB 450 FL — NO 215

REVISION 03/24/90

FRAME(S)

DESCRIPTION

48 OIL DISTRIBUTION DIAGRAM
 CLEANUP SHOULD TAKE PLACE IN CC002, CC005, CC001, BUT ONLY ON THE WEST/SOUTHWEST SIDE OF CC100, (WEST/SOUTHWEST SIDE OF LAGOON) UP TO BUT NOT INCLUDING GRASS/MARSH AREA AT NW CORNER OF LAGOON. ED W/211 RD & MS/S AND ST CT CV/A ON BEACH OUTSIDE LAGOON CC005. TB/AT/A & /S ON OUTSIDE SPIT CC100A



AP PT IN UPPER EDGE OF MUD FLAT WHERE IT MEETS

Sample taken

Photo frame # and shot direction.

REGION: KODIAK

SEGMENT: ST/K09-18-CN-001

SUBDIVISIONS: A (1 OF 1)

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.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: _____ DATE: _____

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:

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

COMMENTS: Recommend manual 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: _____

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

FOSC: _____ DATE: _____

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
- 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 Anchorage (6/1 to 9/15)
6W Forest Service cabins (6/1 to 9/15)
6X Lodge (5/1 to 9/15)
6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (6/1 to 9/30)
7H Finfish harvesting
7I Deer harvesting (8/1 to 1/7)
7J Invertebrate harvesting
7K Boar 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 80

OG G. HEYMAN ADAP S. LEHMANN SEGMENT ST/ K09-18-CN-001
 BIO S. SHARMAN LAND REP C. SCHOLM APS SUBDIVISION 4 (LOF 1)
 XON Not Present ADEC T. Eusemworth TIME/IS 551030:15
 TEAM NO. 19 TIDE LEVEL +4 1/2 To +4 +2 DATE 5/04/90
 EST. SUBDIVISION LENGTH: 545.5 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 2375 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	R	L	P	S	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			DID YOU COLLECT DEBRIS?
	SM	MD	LG	
Logs				YES ☐ NO ☒
Vegetation				
Trash				
Debris				
				TYPE <u> </u>
				#BAGS <u> </u>

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 A	SHEEN (Y/N)	V	SURFACE - SUBSURFACE SEDIMENTS
		OF	OR	OL	OF	NO		UO	UC	1	2	3	4	5	6	7	8					
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 May 90

SEGMENT ST / K09-18-C1001 SUBDIVISION: A DATE 5/7/90

~~NOAA~~

~~NOG~~

NAME STEPHEN LEHMANN SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

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 ~~low~~ pocket beaches rather than the higher energy shorelines.

ADEC

NAME Terry Ellsworth SIGNATURE Terry Ellsworth

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

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 Schoch SIGNATURE Carl Schoch

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

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 bedrock shorelines. Despite the high energy on this segment, mousse was persisting in numerous but localized areas.

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 5 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 sides 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 ^{is} distribution was observed over an area of approximately 5 x 7 m.

SHORELINE ECOLOGICAL SUMMARY (Page 1 of 4)

Segment ST / 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

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

(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, LIMAETA)

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	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 shorebird, 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. Deer trail along upland/beach fringe. Moped, wolf, & river otter tracks in UTR/supratidal zone. Go/river (?) other habitat in supratidal - scavenged by (cont.)

Ecological Considerations:

Area as attached Ec. Map. The primary sensitivities relate 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 (Hemlock) 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. Mucella also are locally abundant. In most cases Fucus sporadically surround aggregations of native plants. Similarly, discontinuous rare mussel beds have post-spill juveniles nestled around their margins. Mid- to LTE tidal pools have Adonthalia, foliose corallines + Lithothamnium, littorines, ulvalae, Anthopleura spp., Halichondria, Pagurus, Katharina, tidepool sculpins (Oligocottus). Locally where there is CV/MS above, there are some small thin sheens on these tidepools - however, there is no evidence of impact. In exposed areas, normal barnacle mortality (from wavewash/deloria 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 Scytosiphon, green filamentous/Enteromorpha, and brown/red filamentous spp., as well as often-dominant Porphyra covering boulder + bedrock surface. As always, Smilacina canonae is abundant in the LTE. Bivalve shells (mostly Saxidomus) 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)

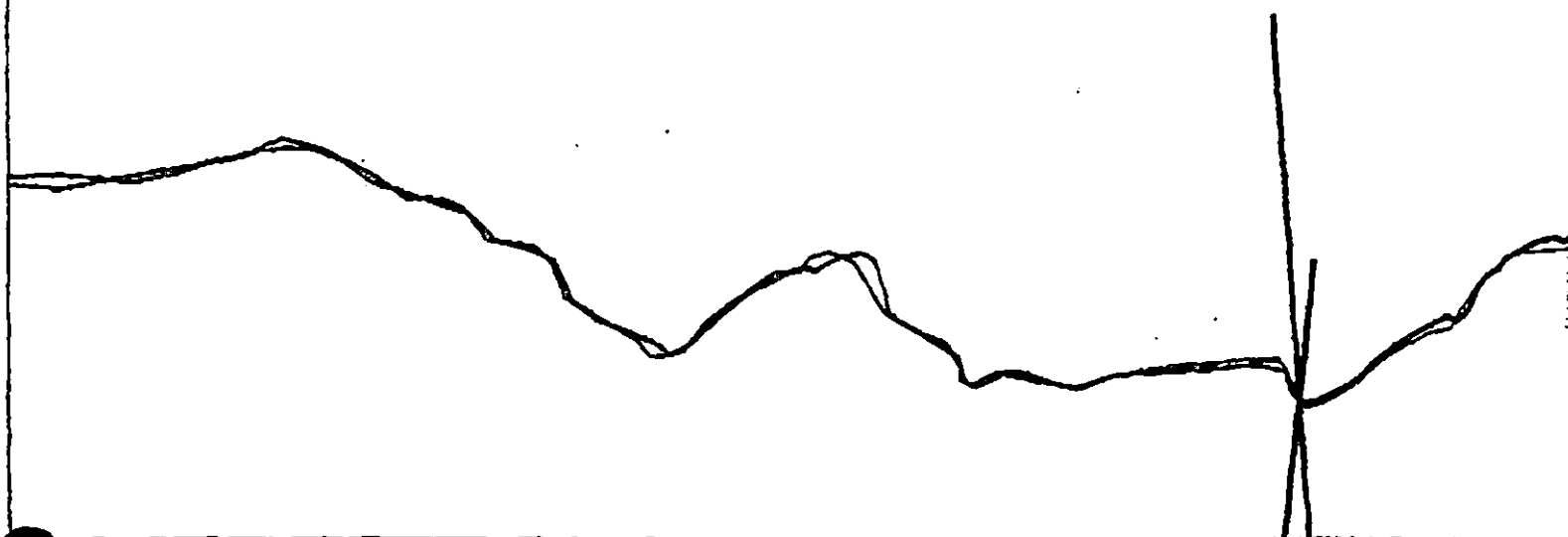
1A Stream mouth (frog outmigration)
4/15 - 7/31.

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

3AA Sensitive estuary.

9LM Land mammals.

K9N



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

CN-1

ADEC Segment Length: 8962m

0 300 400 500

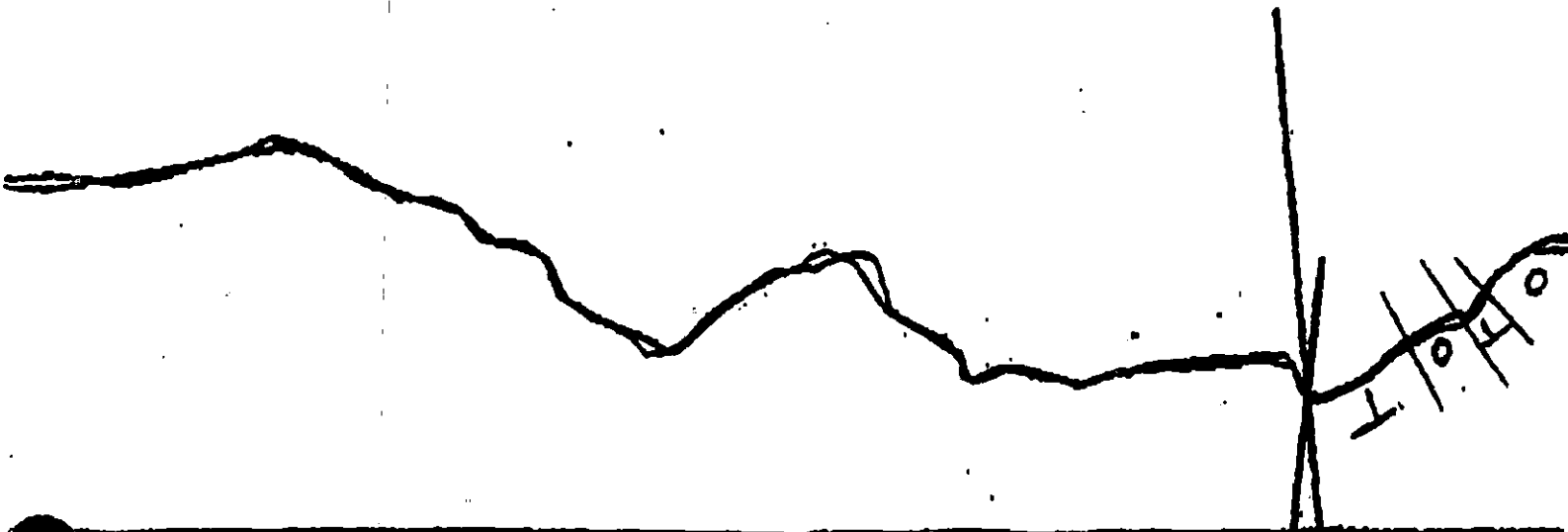
Map Key: AKP-CN-1w

Name: _____

Date: _____

Data Entered:

K9N



XXX Wide

/// Medium

--- Narrow

TTTT Very Light

K918-CN-1

ADEC Segment Length: 8802m



Map Key: ARP-CN-1w

Name: DG HEJMAN

Date: 5-04-90

Date Released:

CC-SB-104

CN-1

Medium

Narrow ~20m

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

K0918-CN-1

ADEC Segment Length: 8982m



Map Key: AKP-CN-1x

Name: OG Heyman

Date: 5-04-90

Data Entered:

CC-2SB-104

ADF&G # 262-20-10050

Cape Chinik
Stream

CN-1

ECOLOGY MAP

(2 of 2)

See Map #1.

CN-1

(Page 4 of 4)

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

CN-1

ADEC Segment Length: 8962m

0 500 600 900
METERS

Map Key: AKP-CN-1x

Name: _____

Date: _____

Data Entered: _____

OGS
K09-1822
SEGMENT STI

SUBDIVISION A

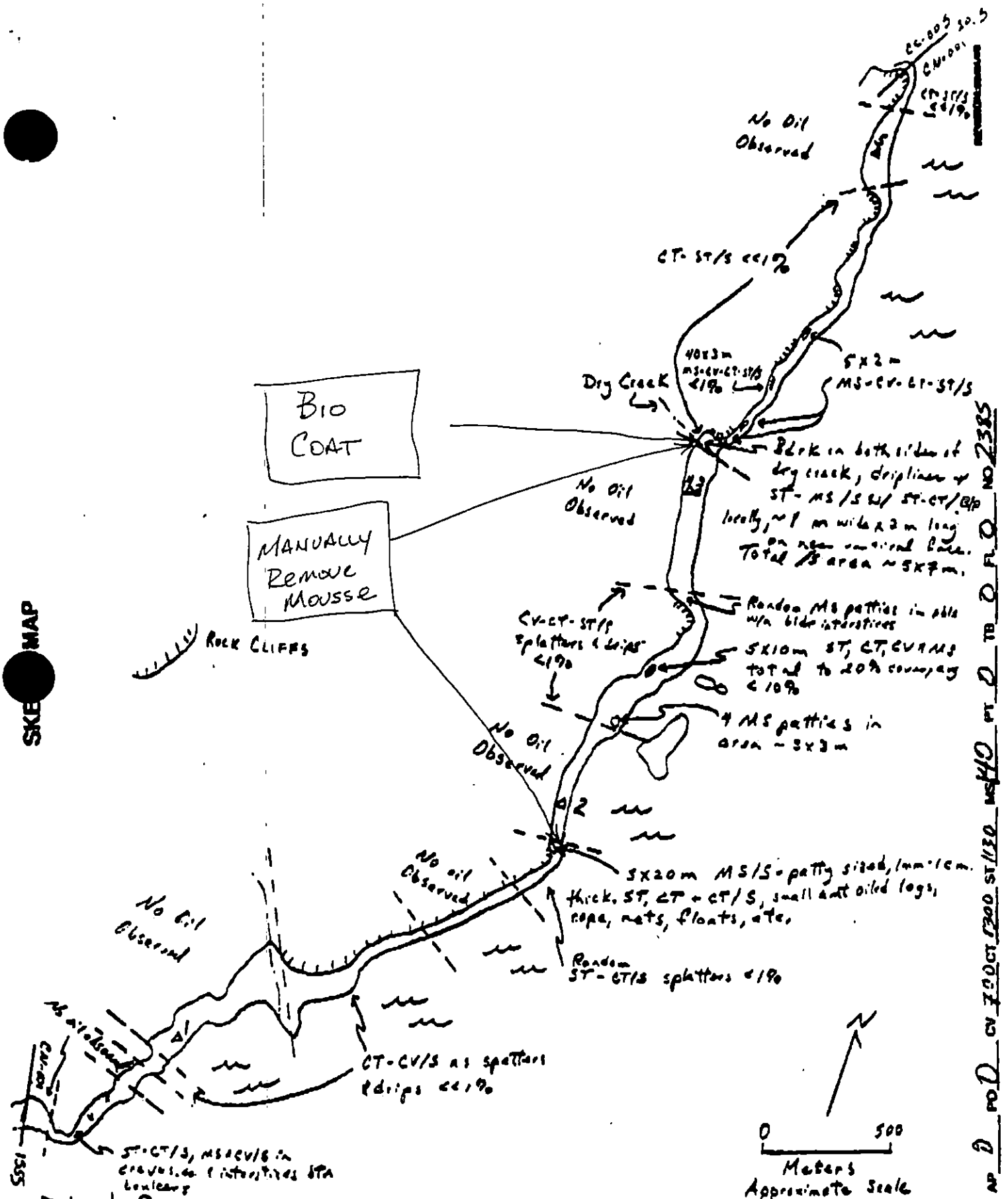
DATE 5/14/90

CHECKLIST

- ☐ M Area
- ☐ Approx. Scale
- ☐ Segment Boundary
- ☐ Oil Drip
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Eas. HML/LML
- ☐ SSI
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PH Location(s)
- ☐ Photo Location(s)

LEGEND

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



Oil Character Length (m): AP D PO D CV 700 CT 1300 ST 1150 MS 410 PT D TB D FLO NO 2385

SKETCH MAP



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.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: Rachel Jean Darr 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 TBA Andy TBA
NOAA Burt Wescott Burt Wescott
USCG G.A. REITER G.A. REITER

FOSC: DATE: 5-19-90

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

ECOLOGY MAP

CN-1

(1 of 2)

(Page 3 of 4)

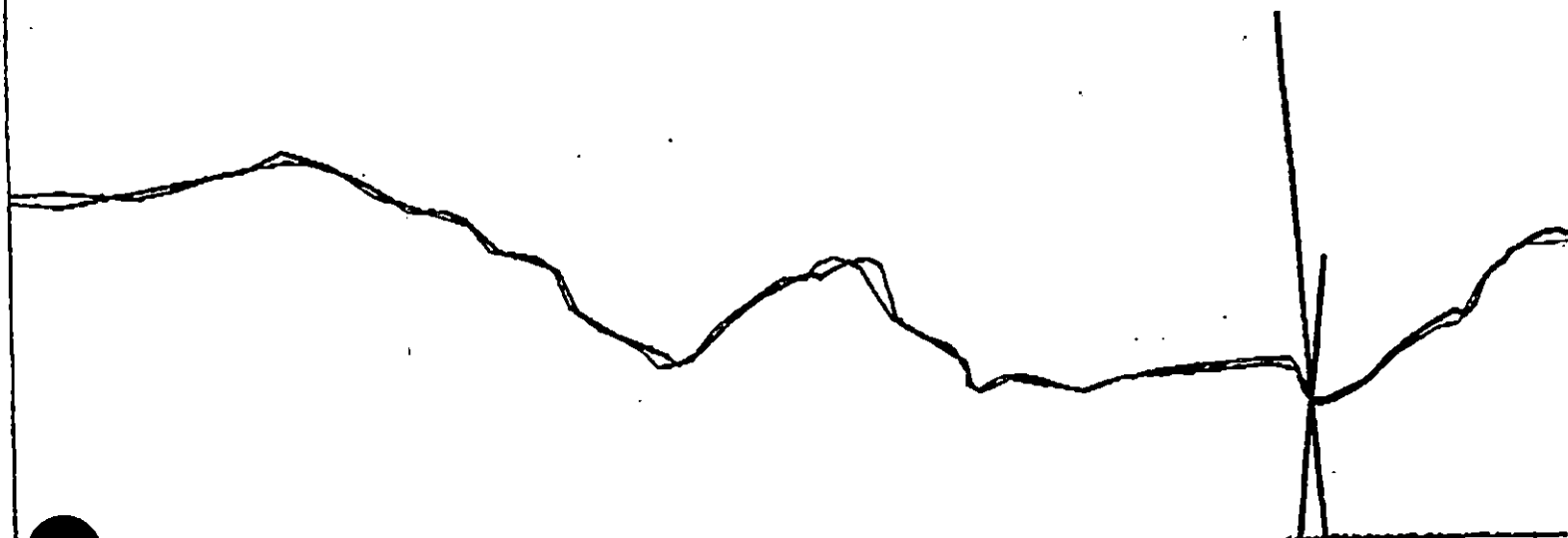
1A Stream mouth (fry outmigration)
4/15 - 7/31.

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

8AA Straitie satuary.

9LM Food mammals.

K9N



XXXX Wide

//// Medium

--- Narrow

TTTT Very little

CN-1

ADEC Segment Length: 8962m

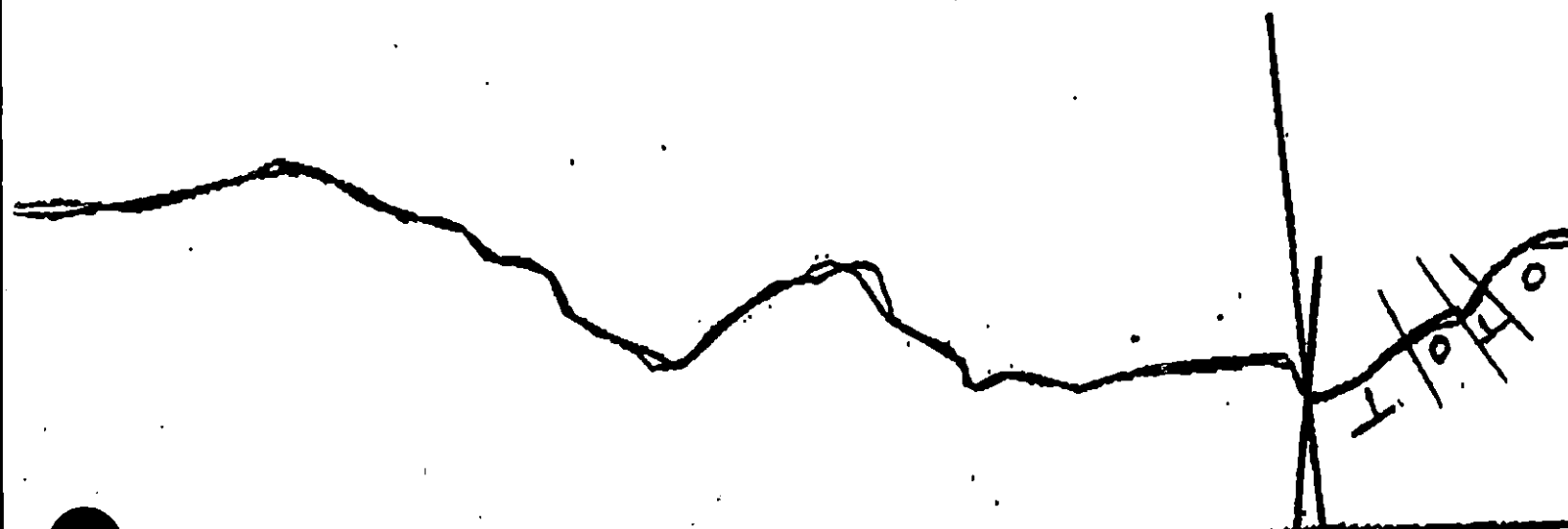
Map Key: AKP-CN-1w

Name: _____

Date: _____



K9N



XXXX Wide
//// Medium
--- Narrow
TTTT

K9N18-CN-1

ADEC Segment Length: 8982m



Map Key: AKP-CN-1w

Name: DG HEJMAN

Date: 5-04-90

CC-2 SB-104

CN

Medium

Narrow ~20m

XXXX Wide

//// Medium

--- Narrow

TTTT Very light

K291E-CN-1

ADEC Segment Length: 8962m

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

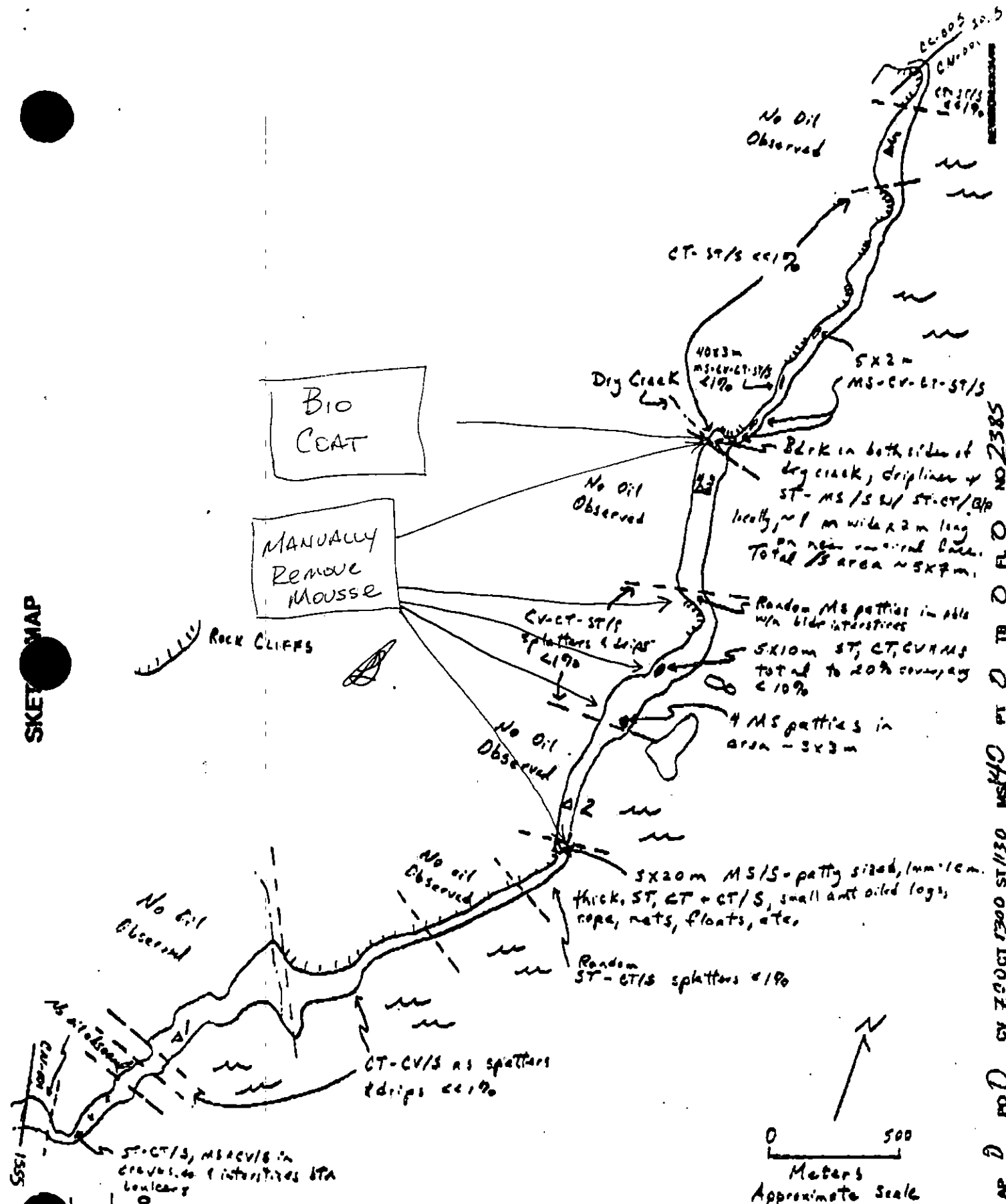


Map Key: AKP-CN-1x

Name: _____

Date: _____

Scale: 1:10000



DATE 5/14/90

SECTION 511

ADMISSION A

CHECKLIST

- Map Area
- Approx. Scale
- Seaplane Entry
- Oil Diet
- When
- Length
- % Cover
- Substrate Character
- Ext. HAZARD
- SSI
- Profile Location(s)
- Profile(s)
- Photo 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 Spotted Distribution

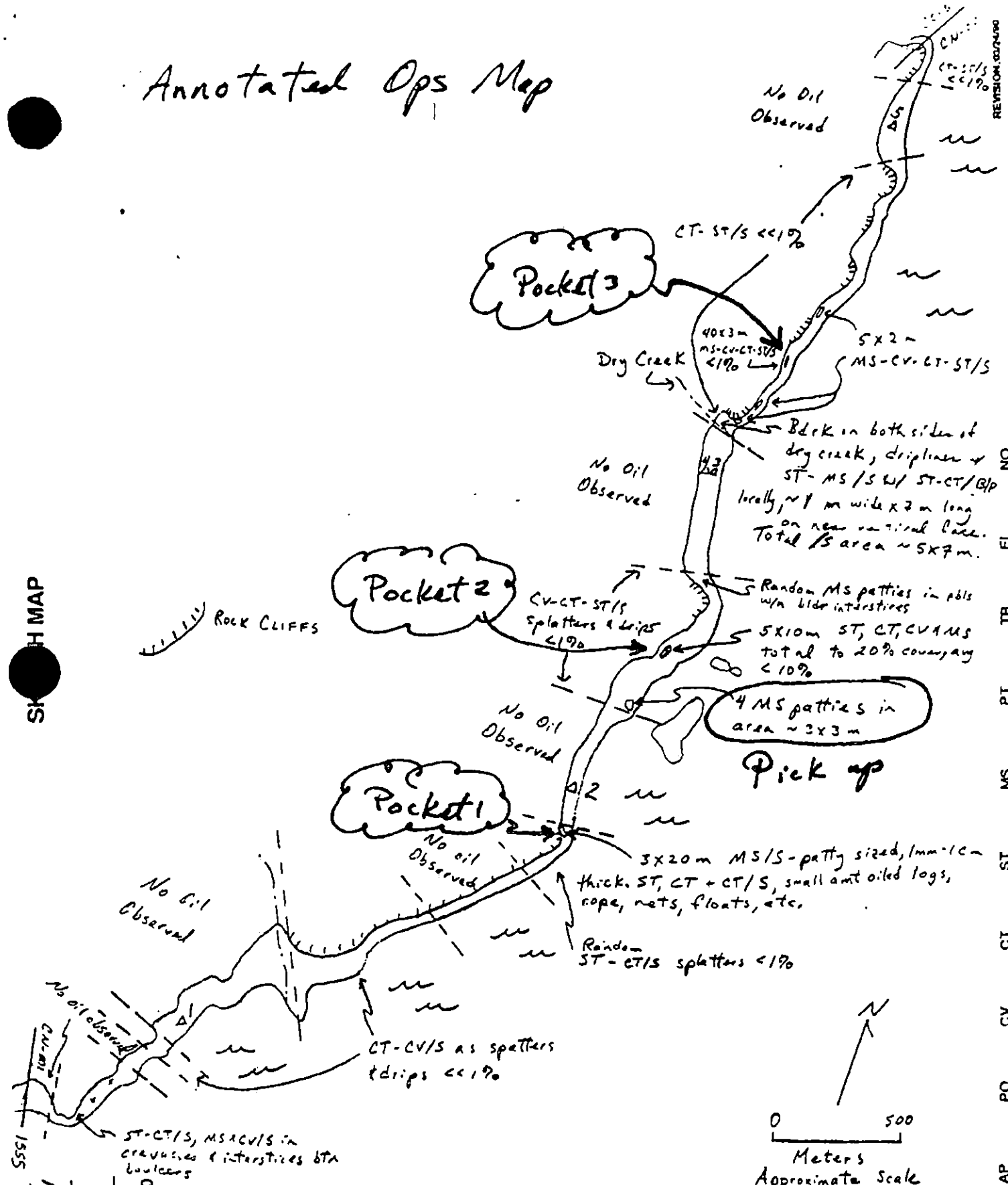
3 Δ Vegetation

4 Δ Photo location, direction, and number

Character Length (m): AP D PD CV 700CT 1300 ST 1130 MS 410 PT D TB D FLO NO 2385

Annotated Ops Map

SKETCH MAP



OGS
K09-18-001
SEGMENT ST/

SUBDIVISION A

DATE 5/14/90

CHECKLIST

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

LEGEND

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

Oil Character Length (m): AP _____ PO _____ CV _____ CT _____ ST _____ 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 unrolled biota and substrate. Sensitive estuary.

FOSC

Date

6-22-90

Prepared by

Date

6/22/90

K9N-18

CC-100

CC-5

CC-2

ANADROMOUS
STREAM ★
262-20-10050

CN-1

Active
Nest

TREATMENT



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



ECOLOGY MAP
SEGMENT K9N-18 CN-1
SUBDIVISION A (1011)
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.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: Rachel J. Davis

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.

SEE CONSTRAINTS ADDENDUM DATED 6/22/90

TAG COMMENTS: MONITORS TO ASSESS LOGS

TAG APPROVAL DATE: 5/29/90

ADEC Art Weisner Art Weisner
EXXON Andy Tsa Andy Tsa
NOAA Barl Weisner Barl Weisner
USCG G.A. REITER G.A. REITER

FOSC: DATE: 6-19-90

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

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 Hallo Creek.

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

FOSC

Date

6-12-90

Prepared by

Date

6-10-90
6/11/90

ANADROMOUS
STREAM
#262-20-10035

HB-1

Work Area

STREAM # 262-20-10040
Halle Creek

HB-2

TREATMENT



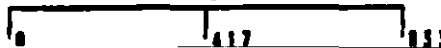
Exxon Company, USA

Map Key: MP-HB-1

Mar. 21, 1990



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



★	Seabird Colony
▲	Eagle Nest

1 inch = 1387 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 unhoiled biota and substrate. Avoid disturbance or damage to clam bed in sand beach near Hallo Creek.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3276 (Anchorage) or 229-1508 (24 hrs.)).

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

Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

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

- POSSIBLE TIME WINDOW 7/15 - 7/31

SEE CONSTRAINTS ADDENDUM dated 6/11/90

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/23/90

ADEC Ant Weiner Det. Weiner

EXXON Andy Gtz

NOAA Burt Wesscott

USCG G.A. Frazier

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

ANADROMOUS FISH STREAM ASSESSMENT

REGION: KODIAK

SEGMENT: K09-19-HB-001

SUBDIVISION: A

STREAM NO: 262-20-10040

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

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3276 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: _____ DATE: _____

Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

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

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

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 unilled 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

3I
3O

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

Anchorage (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)

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

7KR

SEGMENT ST / 10919-H800 ^{STREAM} SUBDIVISION: 262-20 10090 DATE _____

USCG

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

~~NAME~~ ADFG

NAME EDWARD W. WEISS SIGNATURE Edward W. Weiss

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

MANUAL REMOVAL OF TARBALLS/PATIES 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 JOHN NAUGHTON SEGMENT ST/ K 0919-HB 001
 BIO JIM BARR LAND REP CARL SCHUCH A/P/S SUBDIVISION A (1 OF 1)
 EXXON FRED BYARS ADEC TERRELL ELLSWORTH TIME 13:20 / 16:30
 TEAM NO. 19 TIDE LEVEL -0.5 to +0.5 DATE 4/30/90
 SUBDIVISION LENGTH: _____ m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 LANDS 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			
	C	B	P	R	1	2	3	4	5	6	7	8	SU	U	M	V
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
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 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	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

Drilling 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 fw DATE 5-10

SEGMENT K0919-H8001

SUBDIVISION A 262-20-1004D

DATE 4/30/90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ 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
Continuous Distribution

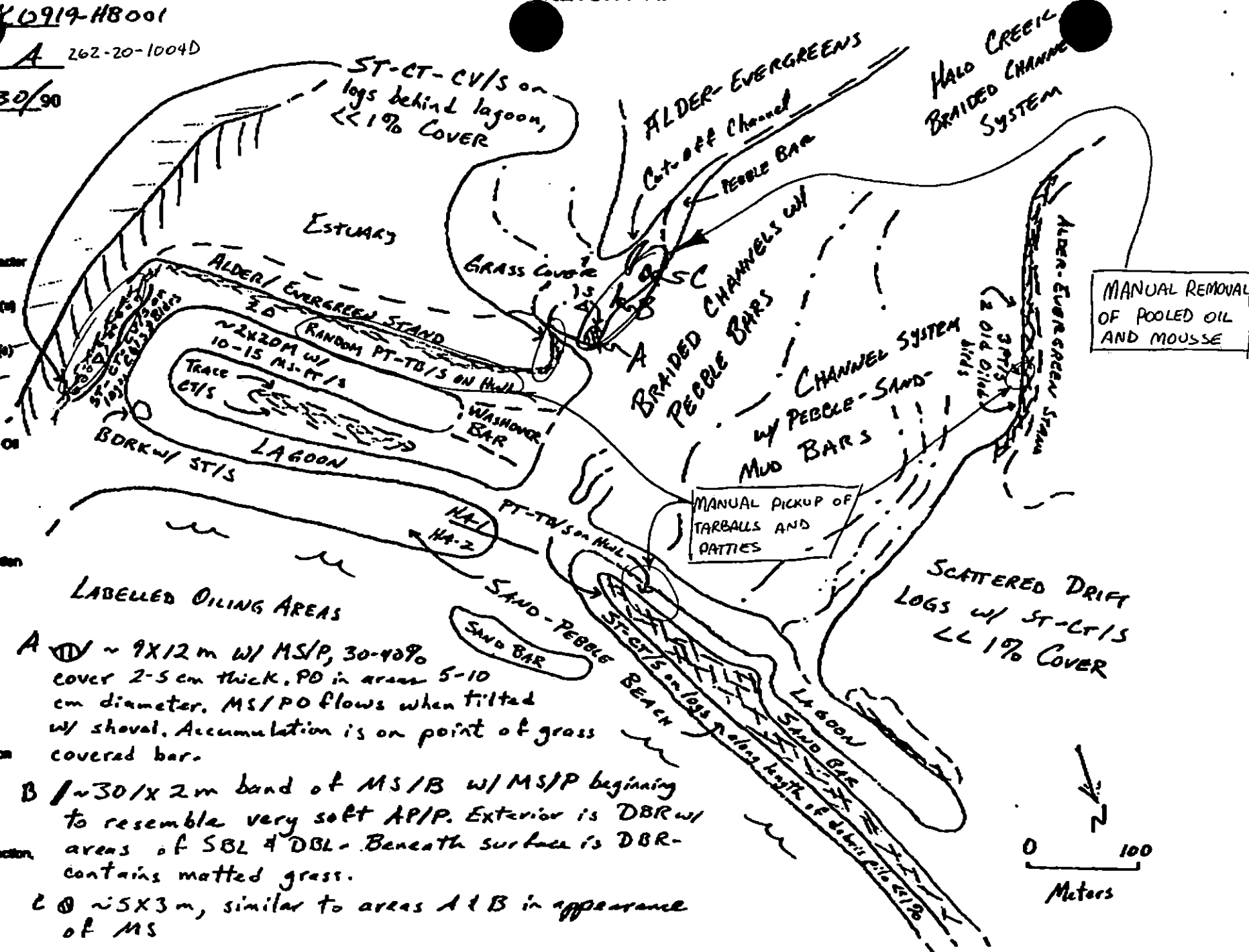
CT/B
Broken Distribution

CT/P
Patched Distribution

CT/S
Splashed Distribution

lll
Oiled Vegetation

1 ●
Photo location, direction, and number



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

ADFG MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS GS DS TS AVS SCH HRGS PTA SSAT

2 REGION: PWS XP,CI

K,AP

METHOD: Aerial Ground Boat

3 DATE: 4/30/90

16 HIGH TIDE TIMES: 0637 / 20:04

21 TEAM RECORDED: Jim Barry

4 START TIME: 1320

18 HIGH TIDE HTS: 12.8 / 11.3

22 OBSERVERS: SSAT TEAM #19

6 STOP TIME: 1640

17 LOW TIDE TIMES: 01:48 / 13:38

23 AGENCY: _____

8 SEGMENT #: K9-19-HB-1A

19 LOW TIDE HTS: 2.9 / -0.5

24 PHOTOS TAKEN: (Y) N

7 STATION #: _____

19 TIDE HT AT SURVEY: -0.5 → +4.5

Roll #: 37-6-7 Frame: 20-27

9 K-UNIT: K9-19

Ebb Stack Flood Stack

25 VIDEO TAKEN: Y N TAPES: _____

10 STAT AREA: _____

20 USCG QUAD: _____

Starts: _____ Ends: _____

11 LAT: 154° 35' W

11 LONG: 58° 24' N

26 SAMPLES TAKEN: Y (H) Number _____

12 SOURCE: Map Loran

Oil _____

13 LOCATION: HALLO BAY

Sediment _____

14 DESCRIPTION: STREAM MOUTH / LAGOON for HALLO CREEK

Biological _____

Water _____

EXTENT OF OIL

27 SURFACE COVERAGE

SHORELINE				STREAM			
L	W	N	S	L	W	N	S
				0	0	0	0

36 CATALOGED ANAD. FISH STREAM? (Y) N

28 SURFACE THICKNESS

				0	0	0	0

37 CATALOG #: 10040

29 PENETRATION

				0	0	0	0

38 STREAM NAME: HALLO CREEK

30 OVERALL OIL IMPACT: N (Y) L N H

39 OIL IN STREAM BED? Y (H)

31 OIL TYPE: Pooled Mousse Tar Asphalt Sticky Slats

40 OIL ON STREAM BANKS? (Y) N

32 OILED DEBRIS? (Y) N

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

42 OIL WITHIN 1 MILE OF STREAM? (Y) N

33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cove

Where: _____

Lagoon Marsh

43 ANADROMOUS FISH PRESENT? Y (1)

34 WAVE EXPOSURE: High Moderate Low

44 ANADROMOUS FISH OBSERVATION

35 SUBSTRATE TYPE: Bedrock Boulder Coarse

Gravel Sand Mud/silt

Species Aerial Ground

COMMENTS: _____

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

48 PHOTOLOG

DESCRIPTION

MOUSSE PATCHES ON STREAM BANK MARSH
30 x 2m PATCH OF PATCHES/MOUSSE

48 OIL DISTRIBUTION DIAGRAM

ATTACHED

SHORELINE ECOLOGICAL SUMMARY

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 MERMAISER - 6

MOOSE TRACKS/SCAT

BARROWS GOLDFINCH - 1

RIVER OTTER TRACKS

FOX TRACKS - ABUNDANT

BEAR TRACKS/SCAT

Ecological Considerations:

1) ANADROMOUS STREAM 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**

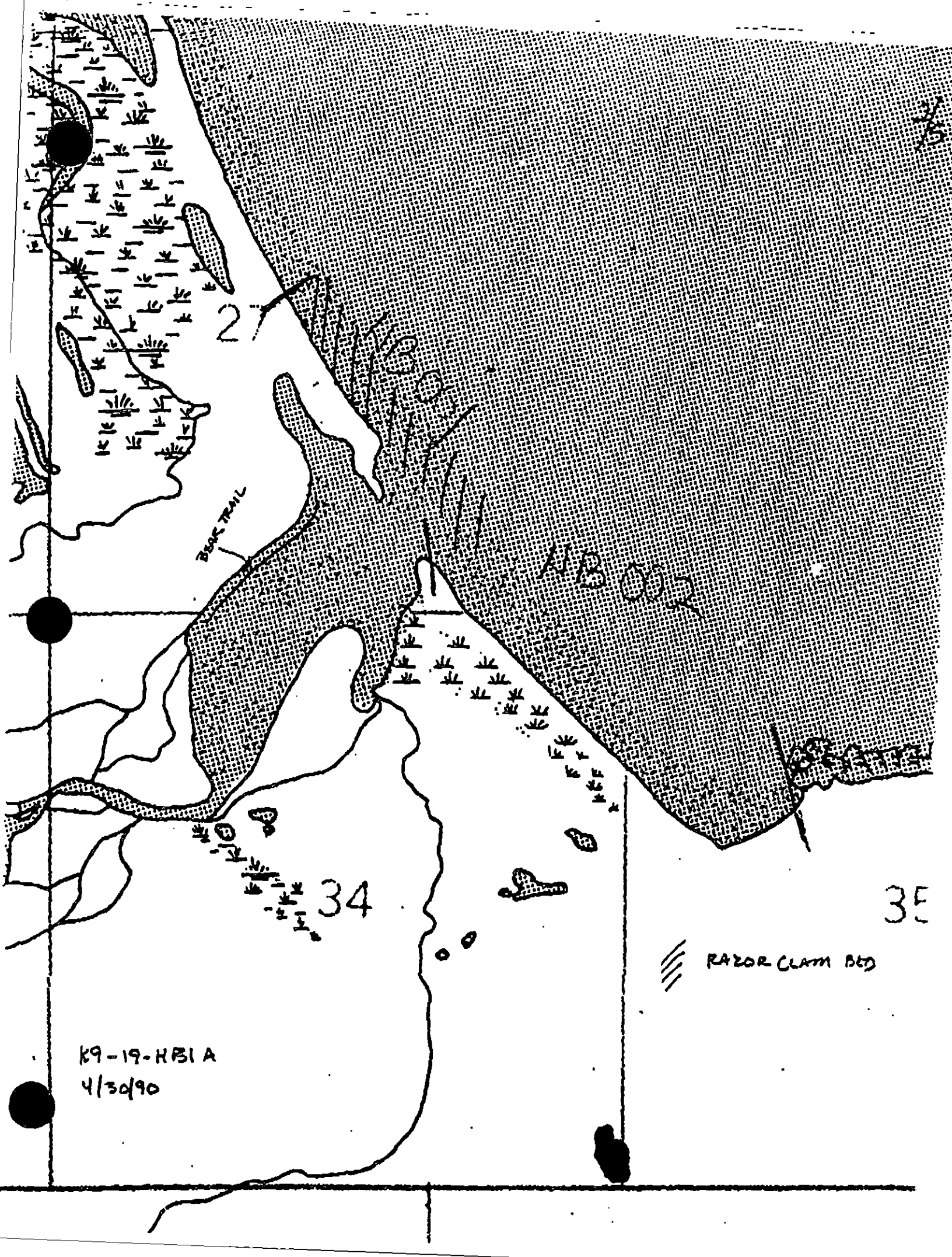
D	Dense	A	High Tidal Zone
M	Moderate	B	Middle Tidal Zone
S	Sparse	C	Low Tidal Zone
R	Rare	U	Subtidal Zone
1	Bedrock	J	Juveniles Present
2	Boulder	E	Eggs Present
3	Cobble	X	Probably Present
4	Pebble		
5	Sand/mud		

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 nuttalli X
Macoma balthica X
Siliqua patula X
Tresus capax X
3. **FISH**
Salmon Smolts - Rare in stream



2

BEACH TRAIL

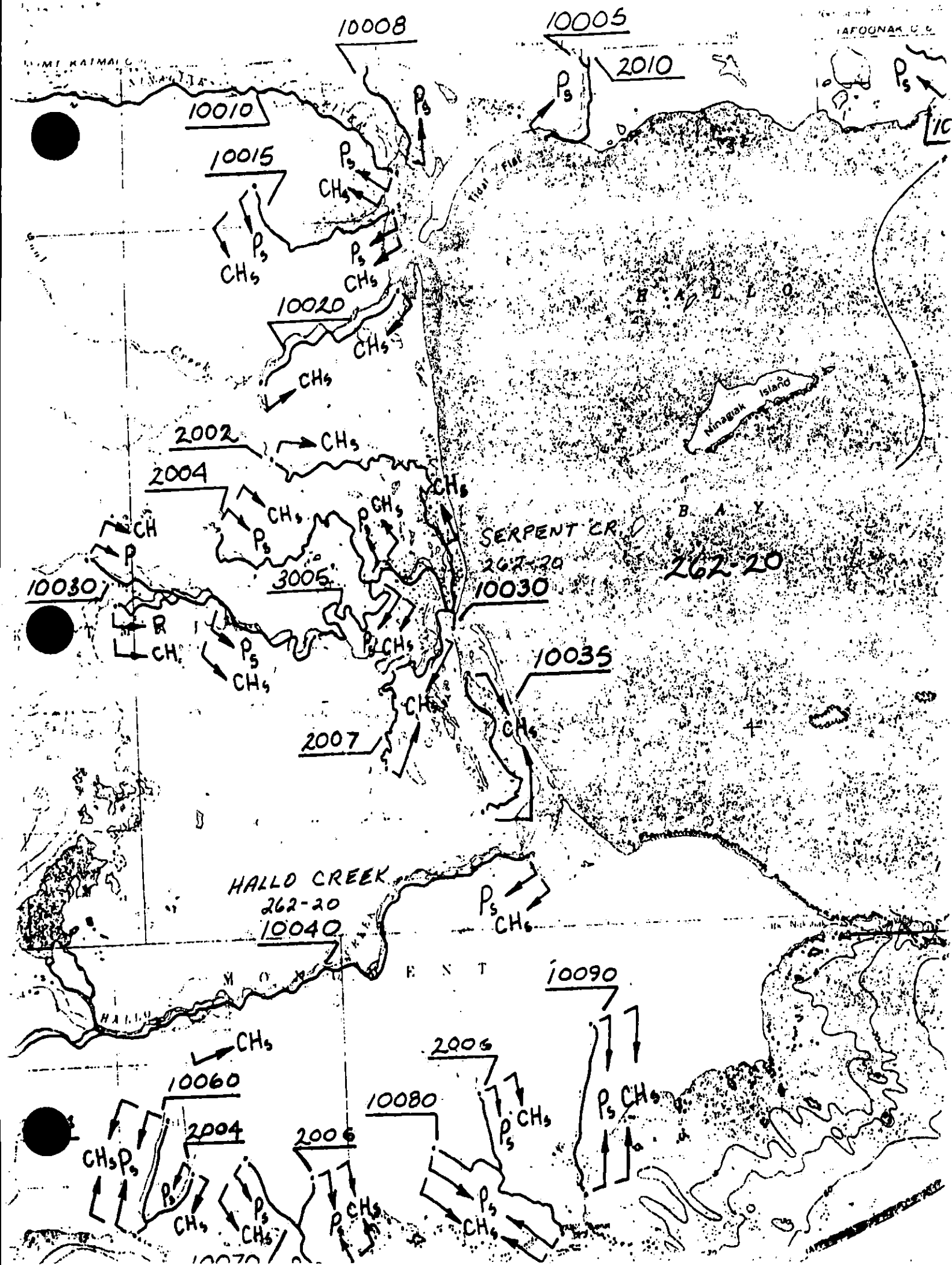
HB 002

34

35

K9-19-HB1A
4/30/90

RAZOR CLAM BEDS



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

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3276 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: Rachel Jean Dore 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

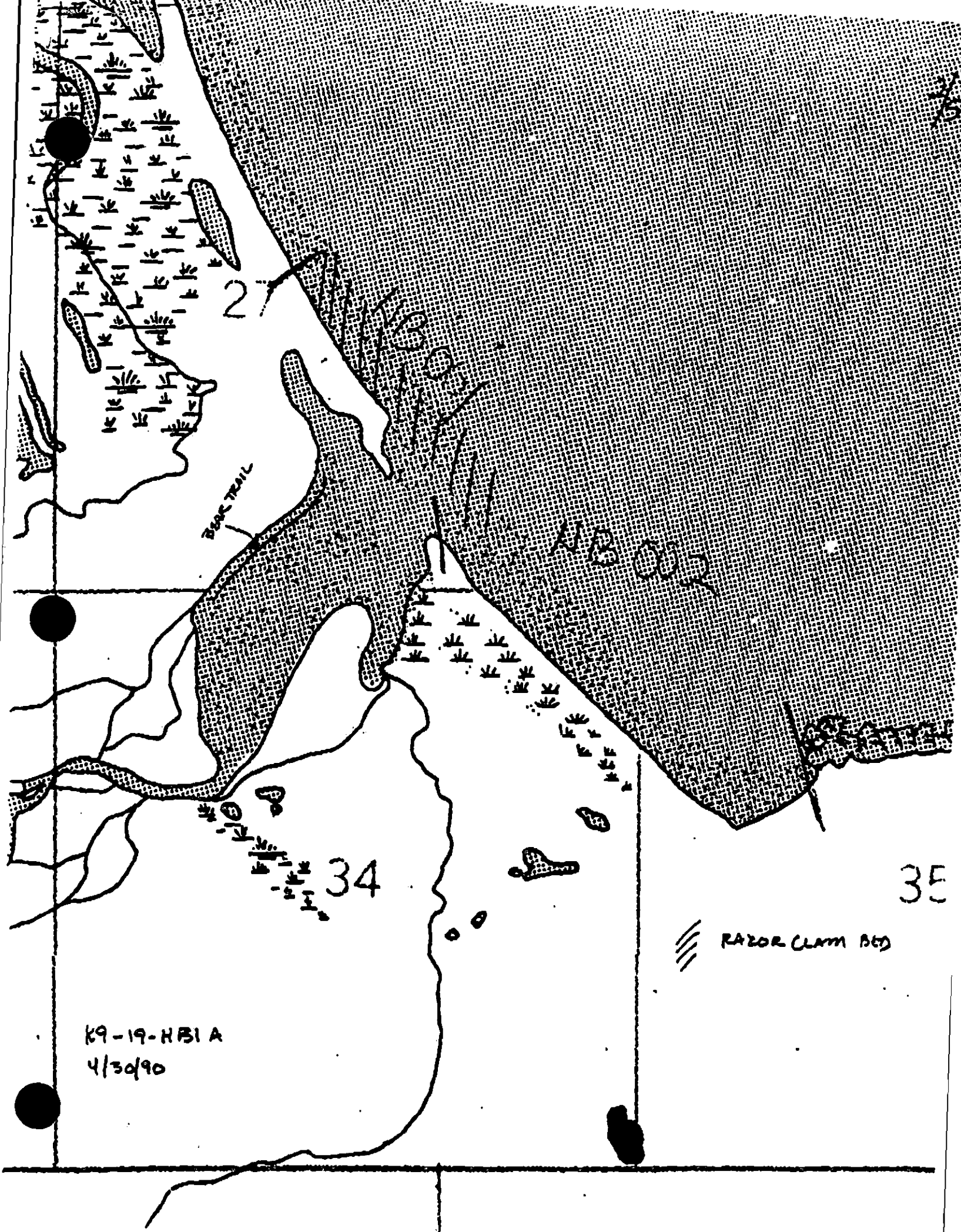
ADEC ART WEINER Art Weiner

EXXON ANDY GIL Andy Gil

NOAA Burt Wescott Burt Wescott

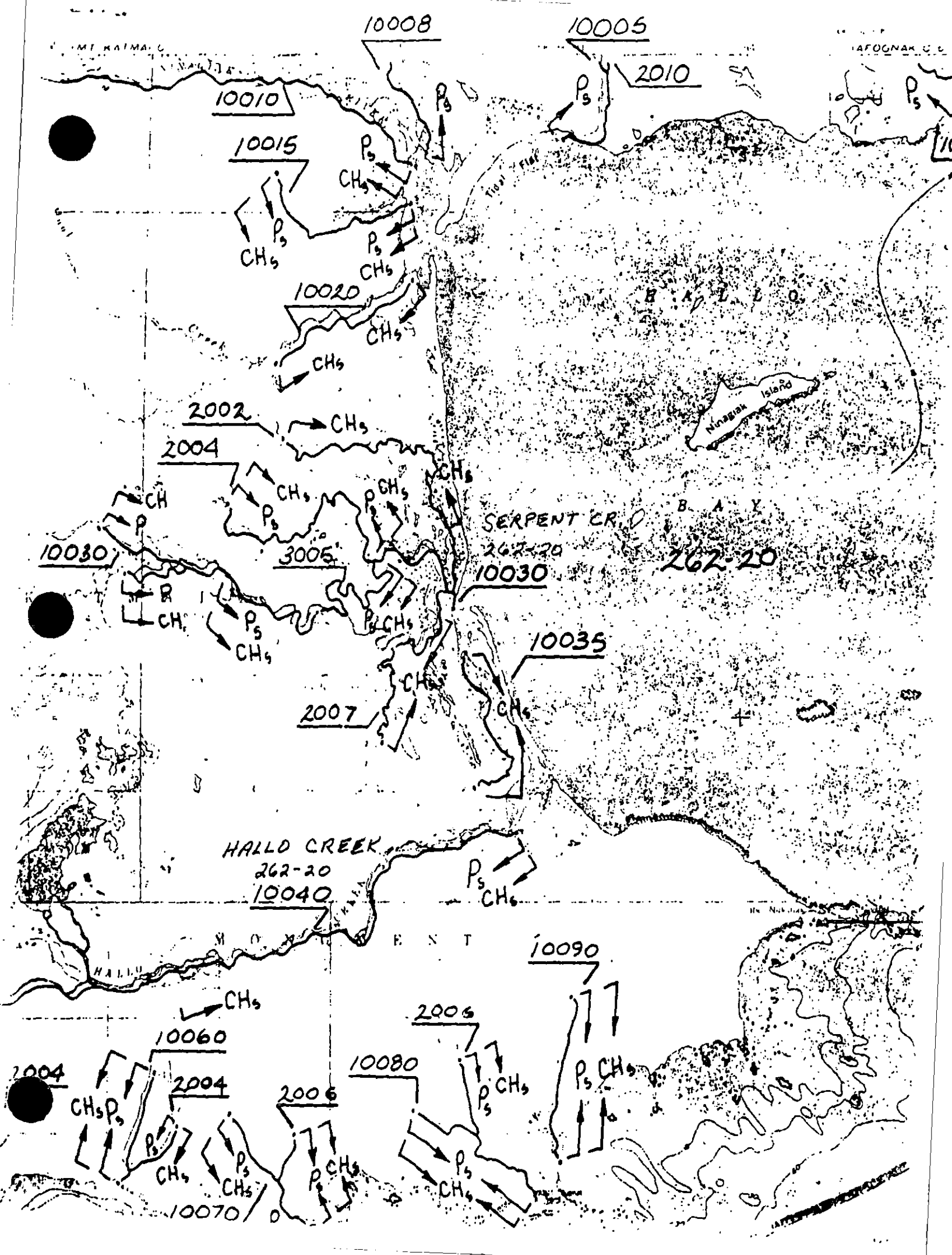
USCG G.A. REITER G.A. Reiter

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



K9-19-HB1A
4/30/90

RAZOR CLAM BED



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 unrolled biota and substrate.

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

FOSC [Signature] Date 6-12-90

Prepared by [Signature] ⁶⁻¹⁰⁻⁹⁰ _{mm} 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

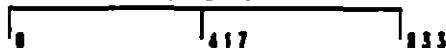
Map Key: AKP-HB-1

May 21, 1990



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

METERS



- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1367 feet

SHORELINE EVALUATION

SEGMENT ST/ K09-19-HB-001 SUBDIVISION A (1 OF 1) DATE 4/30/90

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 262-20-10030
7JJ Subsistence area: Invertebrate harvesting
9LM Other: 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.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: Rocky Dean O'Neil DATE: 5/18/90

OILING CATEGORIZATION:

Wide 0 m: Medium 11 m: Narrow 38 m: V.Light 2100 m: No Oil 1574 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 and pooled oil in UITZ and SUTZ indicated on attached sketch map. Work after 9/10 due to anadromous stream constraints.

WORK FROM MAY 15 → JULY 10

SEE CONSTRAINTS ADDENDUM dated 6/11/90

TAG COMMENTS: Monitors to assess LOGS

TAG APPROVAL DATE: 5/17/90

ADEC Art Weiner Art Weiner

EXXON Art Weiner

NOAA Greg Pattee

USCG G.A. Reiter

FOSC:

DATE: 5-23-90

SHORELINE EVALUATION

SEGMENT ST/ K09-19-HB-001 SUBDIVISION A (1 OF 1) DATE 4/30/90

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 262-20-10030
7JJ Subsistence area: Invertebrate harvesting
9LM Other: 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.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: Rachel Jean Dale DATE: 5/10/90

OILING CATEGORIZATION:

Wide 0 m: Medium 11 m: Narrow 38 m: V.Light 2100 m: No Oil 1574 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) <u> </u>

COMMENTS: Recommend manual pick up of mousse and pooled oil in UITZ and SUTZ indicated on attached sketch map. Work after 9/10 due to anadromeous stream constraints.

WORK FROM MAY 15 -> JULY 10

TAG COMMENTS: MONITORS TO ASSES LOGS

TAG APPROVAL DATE: 5/17/90

ADEC ART WEINER Art Weiner
EXXON ANDY TGAZ Andy TGAZ
NOAA GARY PETRAE Gary Petrae
USCG G.A. BEITER G.A. Beiter

FOSC: DATE: 5-23-90

OG G. MAN

SEGMENT ST K0919-HB001

SUBDIVISION A

DATE 4/30/90

CHECKLIST

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

$\square$ CT/C
Continuous Distribution

$\square$ CT/B
Broken Distribution

$\square$ CT/P
Patchy Distribution

$\square$ CT/S
Splashed Distribution

$\square$ CT/S
Oiled Vegetation

$\square$ CT/S
Oiled Vegetation

$\square$ CT/S
Oiled Vegetation

$\square$ CT/S
Oiled Vegetation

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Oiled Vegetation

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Oiled Vegetation

$\square$ CT/S
Oiled Vegetation

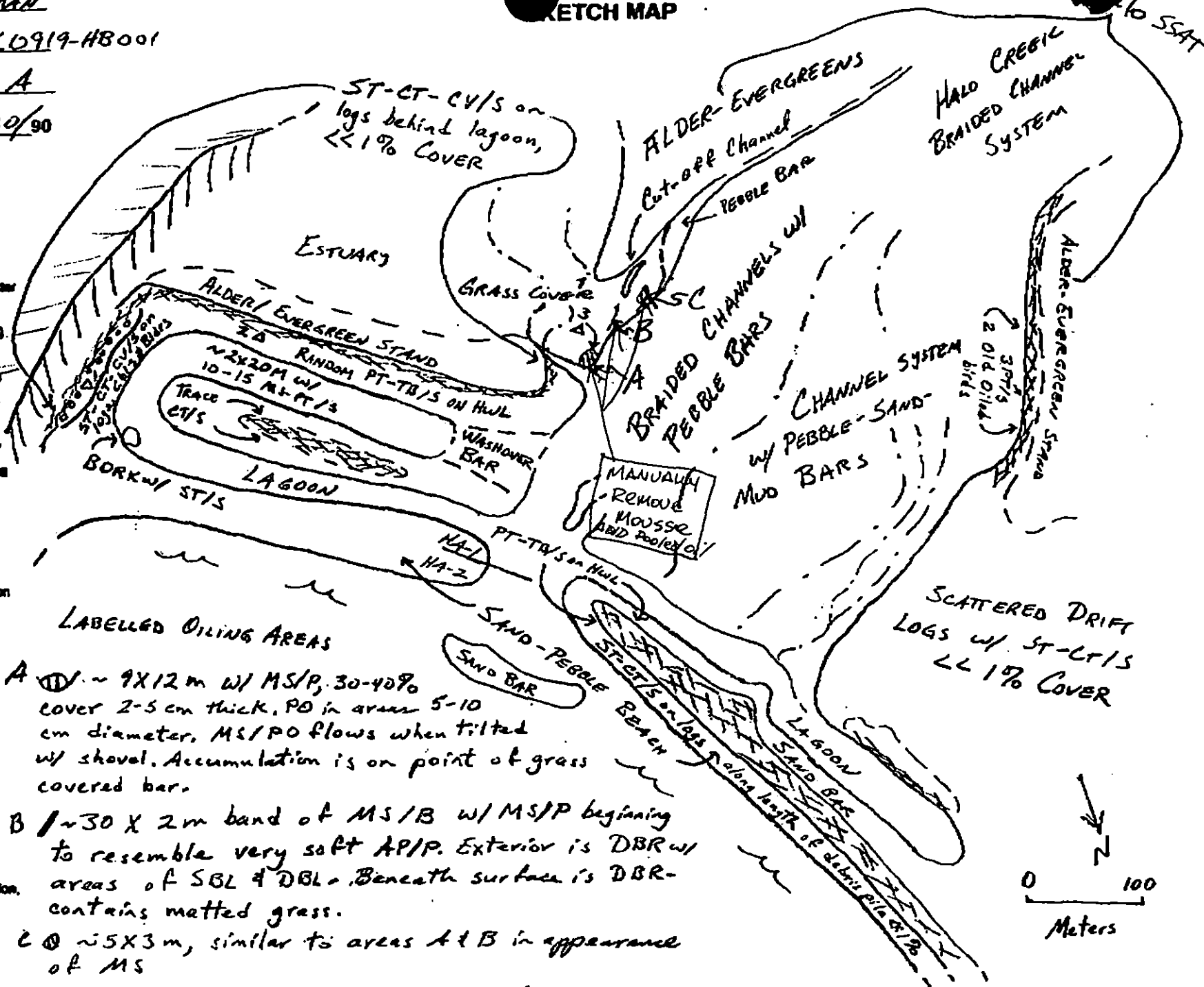
$\square$ CT/S
Oiled Vegetation

$\square$ CT/S
Oiled Vegetation

$\square$ CT/S
Oiled Vegetation

$\square$ CT/S
Oiled Vegetation

SKETCH MAP



Oil Character Length (m): AP 1 PO 1 CV 50 CT 400 ST 1000 MS 46 PT 100 TB 550 FL NO 1577

HEWLETT/21400

2/5

2

BOAT TRAIL

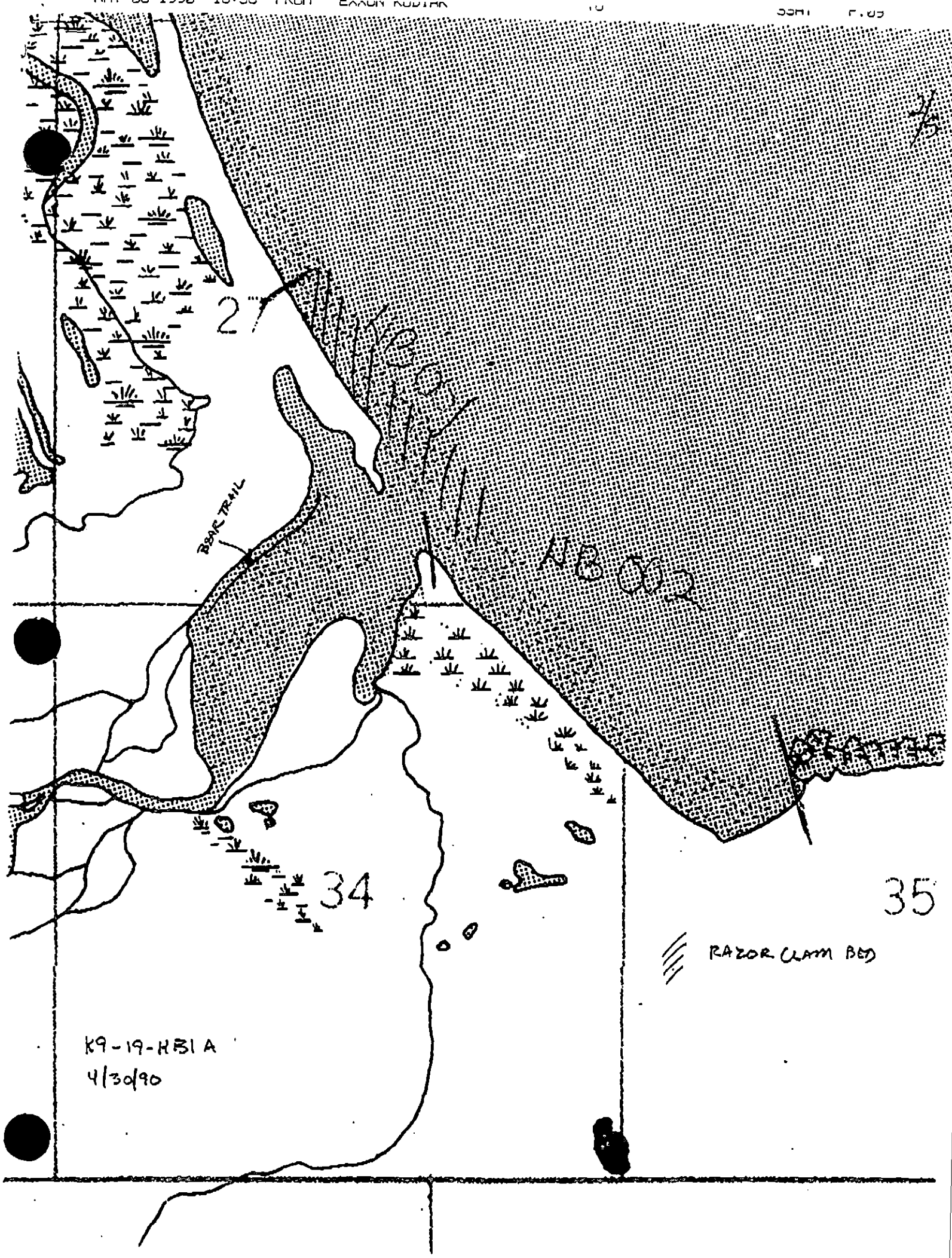
NB 002

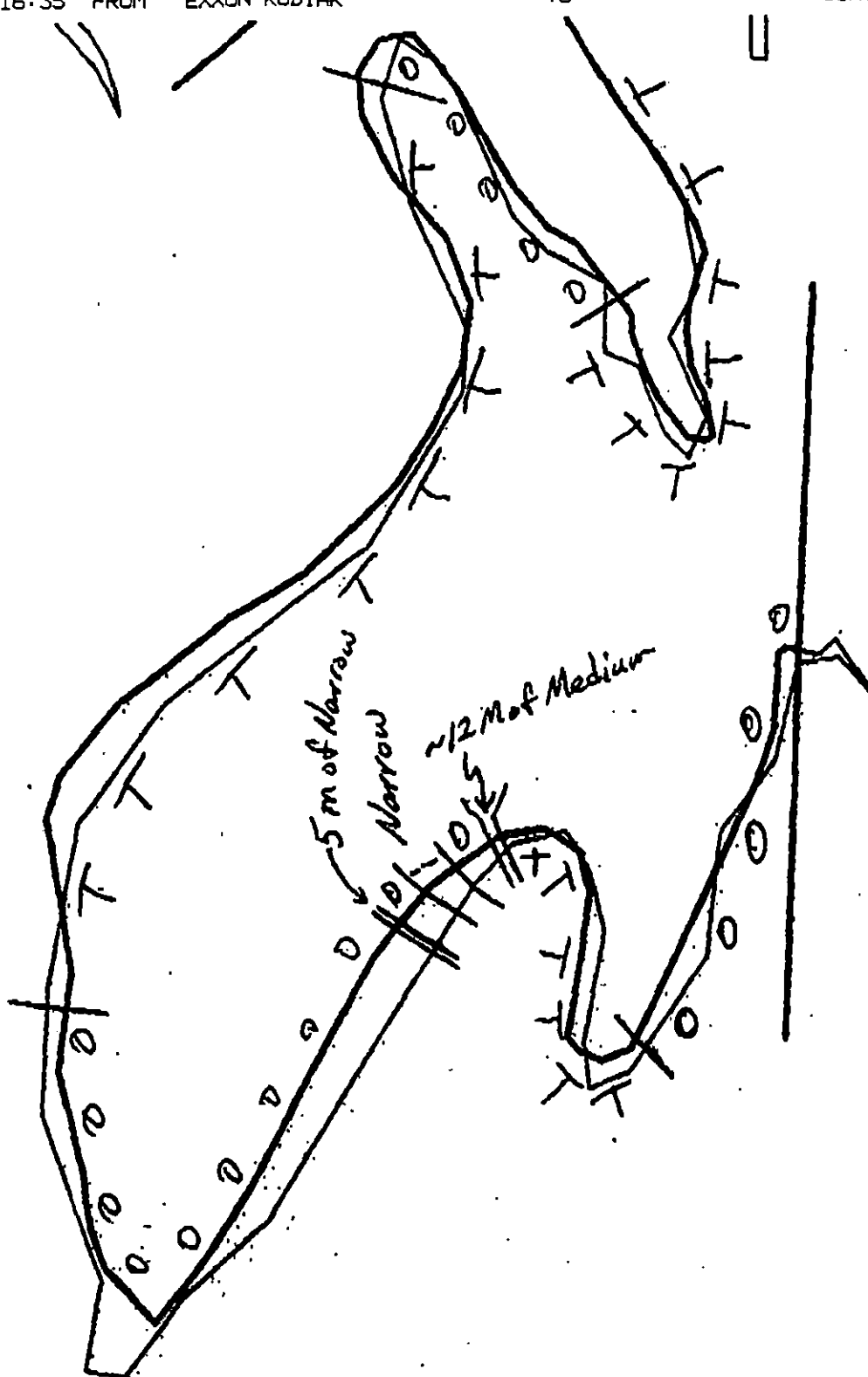
34

35

RAZOR CLAM BED

K9-19-HB1A
4/30/90





XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

HB-1

ADEC Segment Length: 3724m

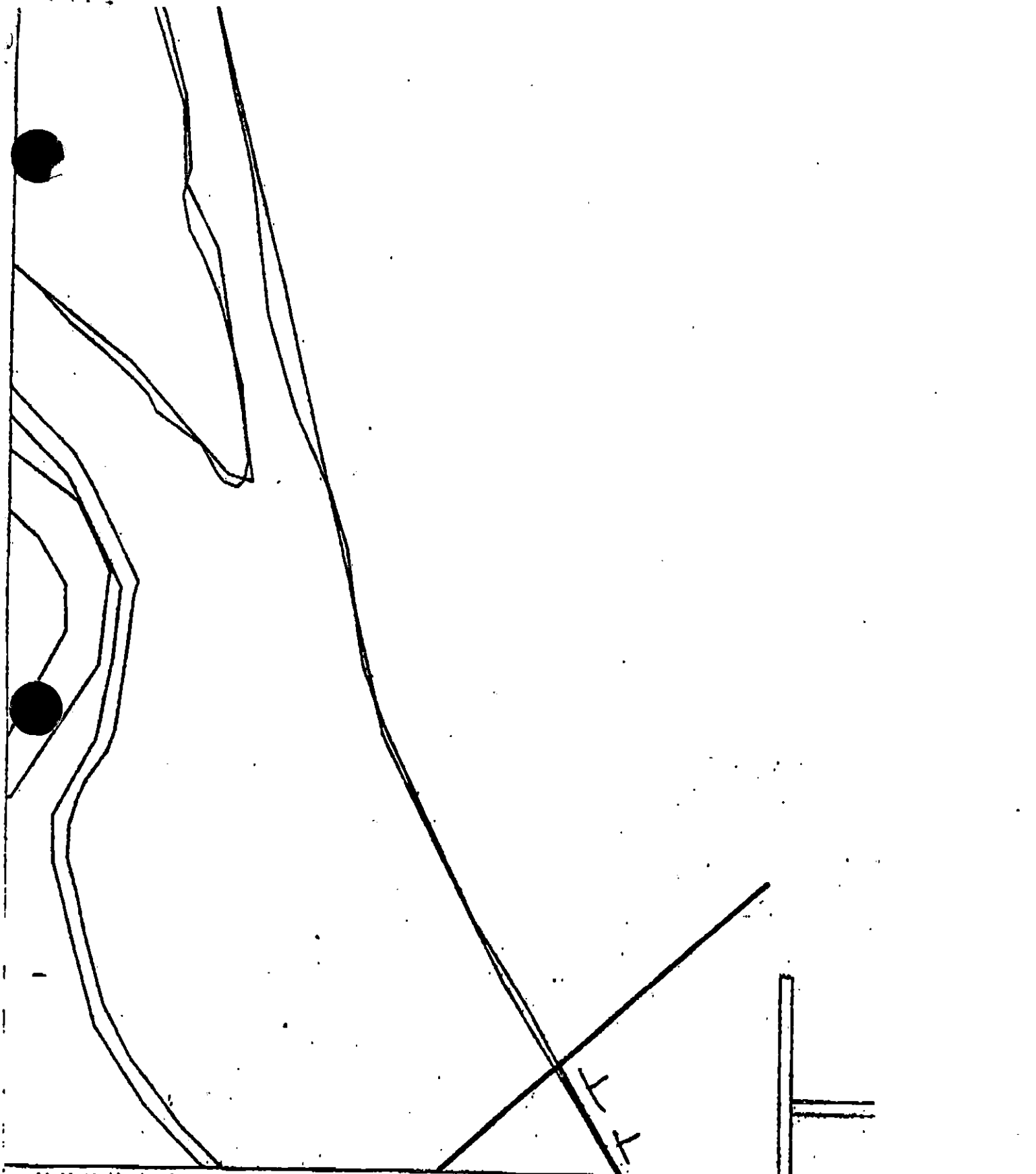


Map Key: AKP-HB-1a

Name: G. Heyman

Date: 4-30-10

Data Entered:



XXXX Wide

HB-1

/// Medium

--- Narrow

ADEC Segment Length: 3724m

TTTT Very Light

0000 No Oil



METERS

Map Key: AKP-HB-1b

Name: G. HeymanDate: 4-30-90

Data Entered:

REGION: KODIAK

SEGMENT: ST/K09-19-HB-001

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ K09-19-HB-001 SUBDIVISION A (1 OF 1) DATE 4/30/90

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 262-20-10030
7JJ Subsistence area: Invertebrate harvesting
9IM Other: 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.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 11 m: Narrow 38 m: V.Light 2100 m: No Oil 1574 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of mousse and pooled oil in UITZ and SUTZ indicated on attached sketch map. Work after 9/10 due to anadromous stream constraints.

TAG COMMENTS: _____

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

FOSC: _____ DATE: _____

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 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)
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
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 / K0919-HB001 SUBDIVISION: A DATE 4-30-90

NOAA
10666

NAME John Naughton SIGNATURE John J. Naughton

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

This segment along the southerly portion of Hallo Bay, included the delta of Hallo Creek, should receive treatment in specific areas. Splashes of stain and crust were found in the large debris lines on either side of the river, especially to the south. Unusual areas of concentrated mounds were found back on matted grass bank (Areas A, B, C on sketch map) well behind shoreline. Recommend manual removal of this broken and patchy mousse. Oiled debris is very light and need not be treated except for removal of heavily oiled rope, line and fishing net.

ADEC

NAME Terry Ellsworth SIGNATURE Terry Ellsworth

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

This segment is located primarily along Hallo Creek delta. Staining, coat and cover occurs very sporadically (<1%) over much of the area. On the SW side of the lagoon (see map) tarballs and patties are present in a 2x20m area. Three areas of broken or patchy mousse occur on the S side of the segment on the grass bank above the creek channel. Manual treatment is recommended for the areas containing mousse, patties, and tarballs as well as removal of the more heavily oiled small wood debris and oiled rope, net, etc.

LAND MANAGER

NAME Carl Sebech SIGNATURE Carl Sebech

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

The upper intertidal perimeter of the south-branch Lagoon in the Hallo Cr. estuary contains oiled debris, nets, rope, etc. that should be removed. The 20 x 2 m area of mousse patties should also be treated. Sites A, B, and C indicated on the sketch map should be treated by shoveling the oiled grass and sand down to about 3 inches. Only the grass mat under the oil patches should be removed, not the entire dimensional area indicated.

SEGMENT ST / 10919-H800 SUBDIVISION: A 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

SHORELINE OILING SUMMARY

REVISION NO. 06/13/90

OG GLENN HEYMAN ^{NOAA} USCG JOHN NAUGHTON SEGMENT ST/ K 0919-H8001
 BIO JIM BARRS LAND REP CARL SCHOCK NPS SUBDIVISION A (1 OF 1)
 EXXON FRED BYARS ADEC TERRY GILBERT TIME 13:20 16:30
 TEAM NO. 19 TIDE LEVEL -0.5 to +0.5 DATE 4/30/90
 EST. SUBDIVISION LENGTH: 3724 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 0 m M 12 m N 3.5 m VL 2100 m NO 577 m

SURFACE OIL

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

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		X	
Vegetation			
Trash	X		
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 A	SHEEN (Y/N)	↓	SURFACE-SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UG	UC	W	Y	OR	GR	BL	PK	LT	DR	SU	U	M	L				
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/B & P. This is grading in areas to AP, but is included on the surface oil matrix as MS only.

REVIEWED BAT DATE 8 MAY 90

OG G. MAN

SEGMENT ST K0919-H8001

SUBDIVISION A

DATE 4/30/90

CHECKLIST

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

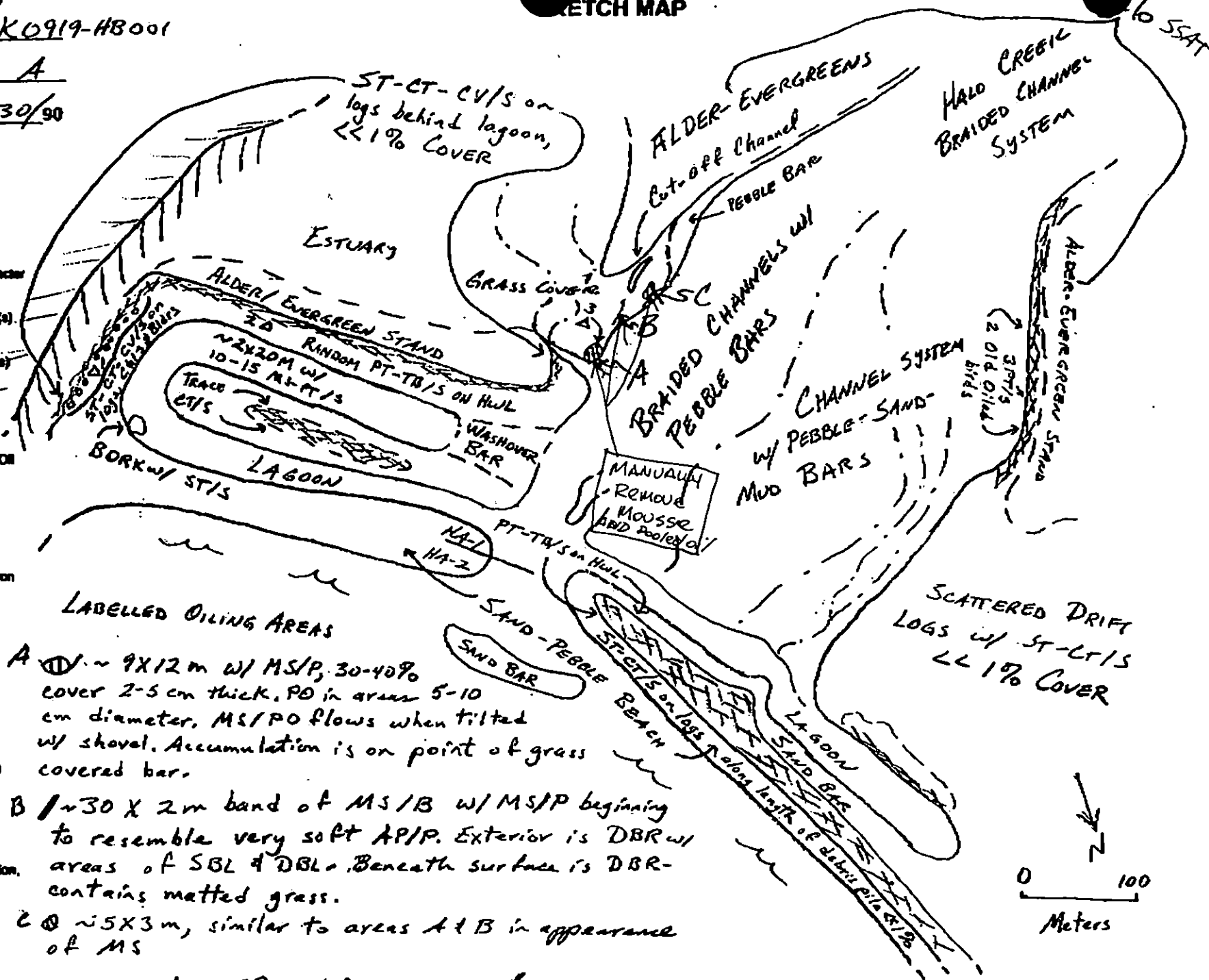
CT/S
Splashed Distribution

Oil Vegetation

1 $\Rightarrow$

Photo location, direction, and number

SKETCH MAP



LABELLED OILING AREAS

A $\odot$ ~ 9X12 m w/ MS/P, 30-40% cover 2-5 cm thick. PO in areas 5-10 cm diameter. MS/PO flows when tilted w/ shovel. Accumulation is on point of grass covered bar.

B $\nearrow$ ~ 30 X 2 m band of MS/B w/ MS/P beginning to resemble very soft AP/P. Exterior is DBR w/ areas of SBL & DBL. Beneath surface is DBR - contains matted grass.

C $\odot$ ~ 5X3 m, similar to areas A & B in appearance of MS

Oil Character Length (m): AP 1 PO 1 CV 50 CT 400 ST 1000 MS 46 PT 100 TB 550 FL NO 1577

REVISION 02/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

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

1/5

(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:
Roll No. ST-6/19-7Frames 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 MERRINGER - 6

BARROW'S GOLDENROD - 1

FOX TRACKS - ABUNDANT

BEAR TRACKS/SCAT

MOOSE TRACKS/SCAT

RIVER OTTER TRACKS

Remnants of 2 dead oiled Murres from last fall.

Ecological Considerations:

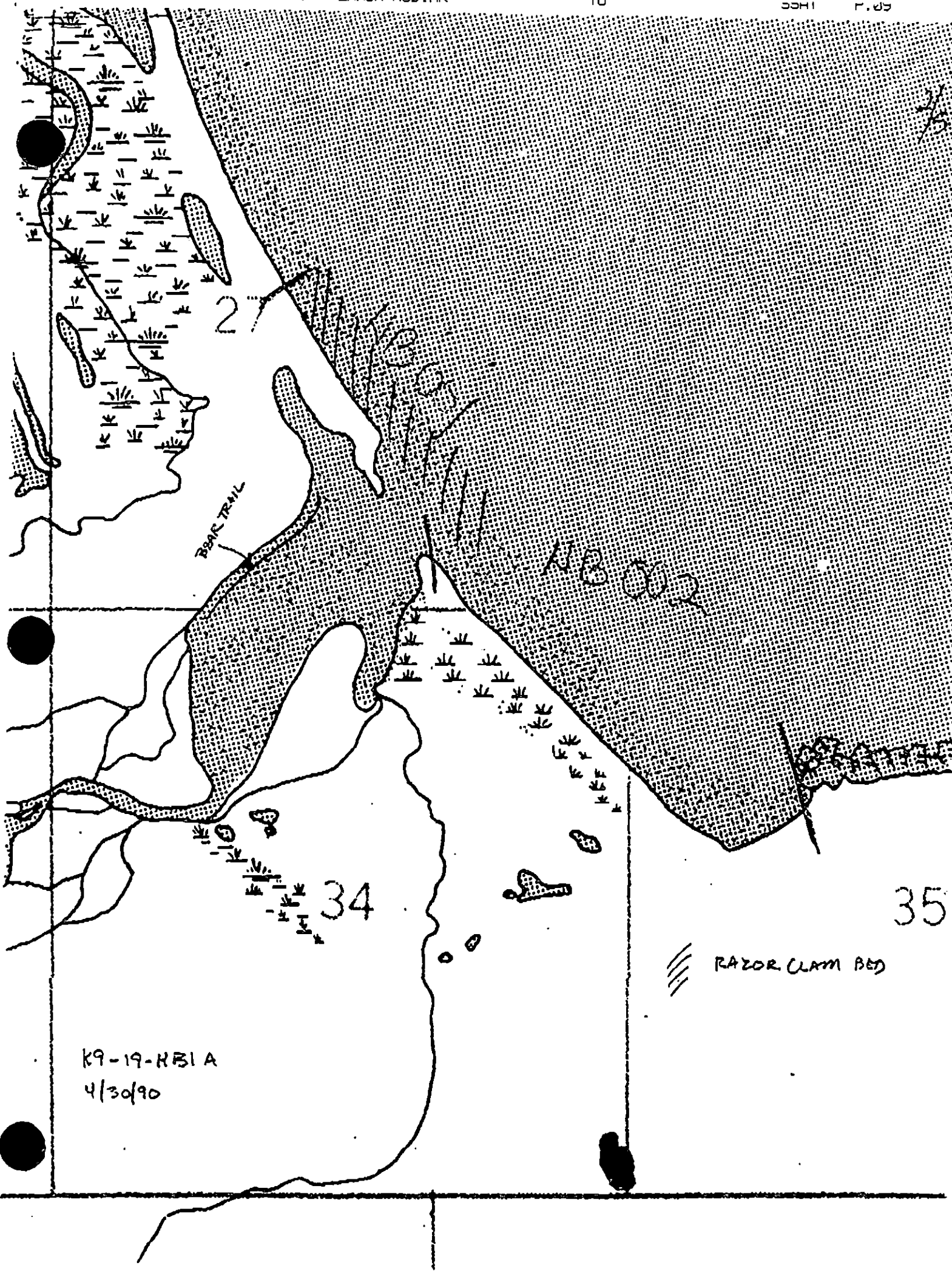
1) ANADROMOUS STREAM LOCATION

CHUM SALMON (SPAWNING)

PINK SALMON (SPAWNING)

2) OIL CLEANUP WILL BE MINOR & WILL LIKELY NOT IMPACT SENSITIVITIES

2/5



K9-19-RB1A

4/30/90

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 10040³⁰ 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

K9-19-HB-1-

APRIL 30, 1990 - BIOLOGY REPORT

5

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

ADP&C MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS SS DS TS AVS SCMA HHS PTA SSAT 2 REGION: PWS KP,CI K,AP
 METHOD: Aerial Ground Boat
 3 DATE: 4/30/90 16 HIGH TIDE TIMES: 0637 , 20:04 21 TEAM RECORDER: Jim Barry
 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 , 13.33 23 AGENCY: _____
 6 SEGMENT #: K9-19-HB-1A 19 LOW TIDE HTS: 2.9 , -0.9 24 PHOTOS TAKEN: (Y) N
 7 STATION #: _____ 18 TIDE HT AT SURVEY: -0.5 → +4.5 Roll #: 57-6-7 Frame: 20-27
 8 K-UNIT: K9-19 Ebb Slack Flood Slack 25 VIDEO TAKEN: Y (N) TAPES: _____
 9 STAT AREA: _____ 20 USCG QUAD: _____ Start: _____ 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	M	H	N	L	M	H	N
27 SURFACE COVERAGE					○	○	○	○
28 SURFACE THICKNESS					○	○	○	○
29 PENETRATION					○	○	○	○

30 OVERALL OIL IMPACT: N (VL) L M H
 31 OIL TYPE: Pooled House Tar Asphalt Sticky Stain
 32 OILED DEBRIS? (Y) N
 33 SHORELINE TYPE: Headland Lagoon Low-lying Rocks Marsh Beach Cave
 34 WAVE EXPOSURE: High Medium Low
 35 SUBSTRATE TYPE: Bedrock 0 Boulder 3% Cobble 3%
 Gravel 53% Sand 20% Mud/silt 20%

36 CATALOGED ANAD. 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: See Sketch Map
 43 ANADROMOUS FISH PRESENT? Y (N)
 44 ANADROMOUS FISH OBSERVATION
 Species Aerial Ground

COMMENTS:

48 PHOTOLOG

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

FRAME(S)DESCRIPTION

20

MOUSSE PATCHES ON STREAM BANK MARK

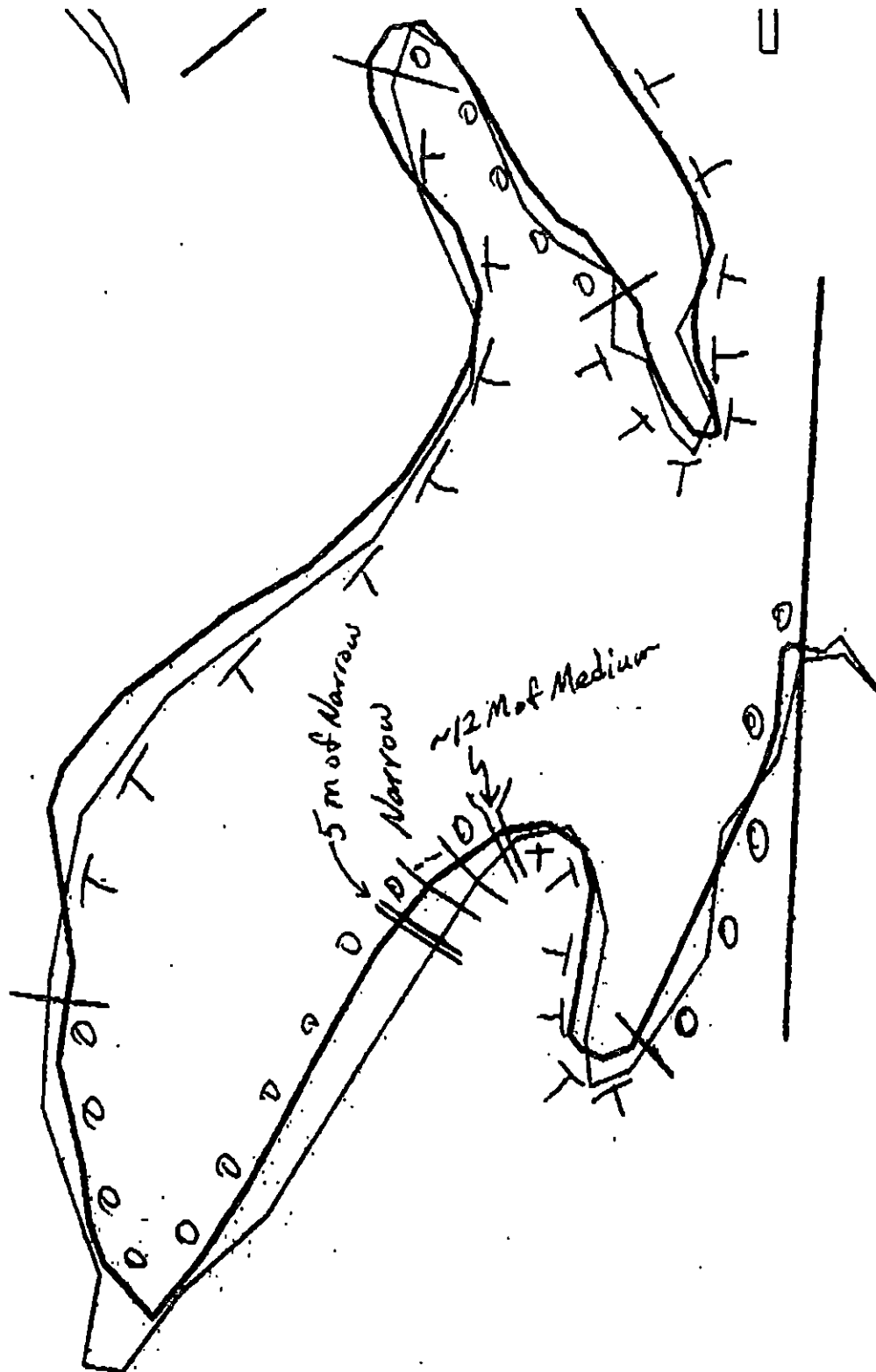
21

30 x 2m PATCH OF PATTIES/MOUSSE

49 OIL DISTRIBUTION DIAGRAM

ATTACHED SKETCH

- Sample taken
- Photo frame # and shot direction.



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

HB-1

ADEC Segment Length: 3724m

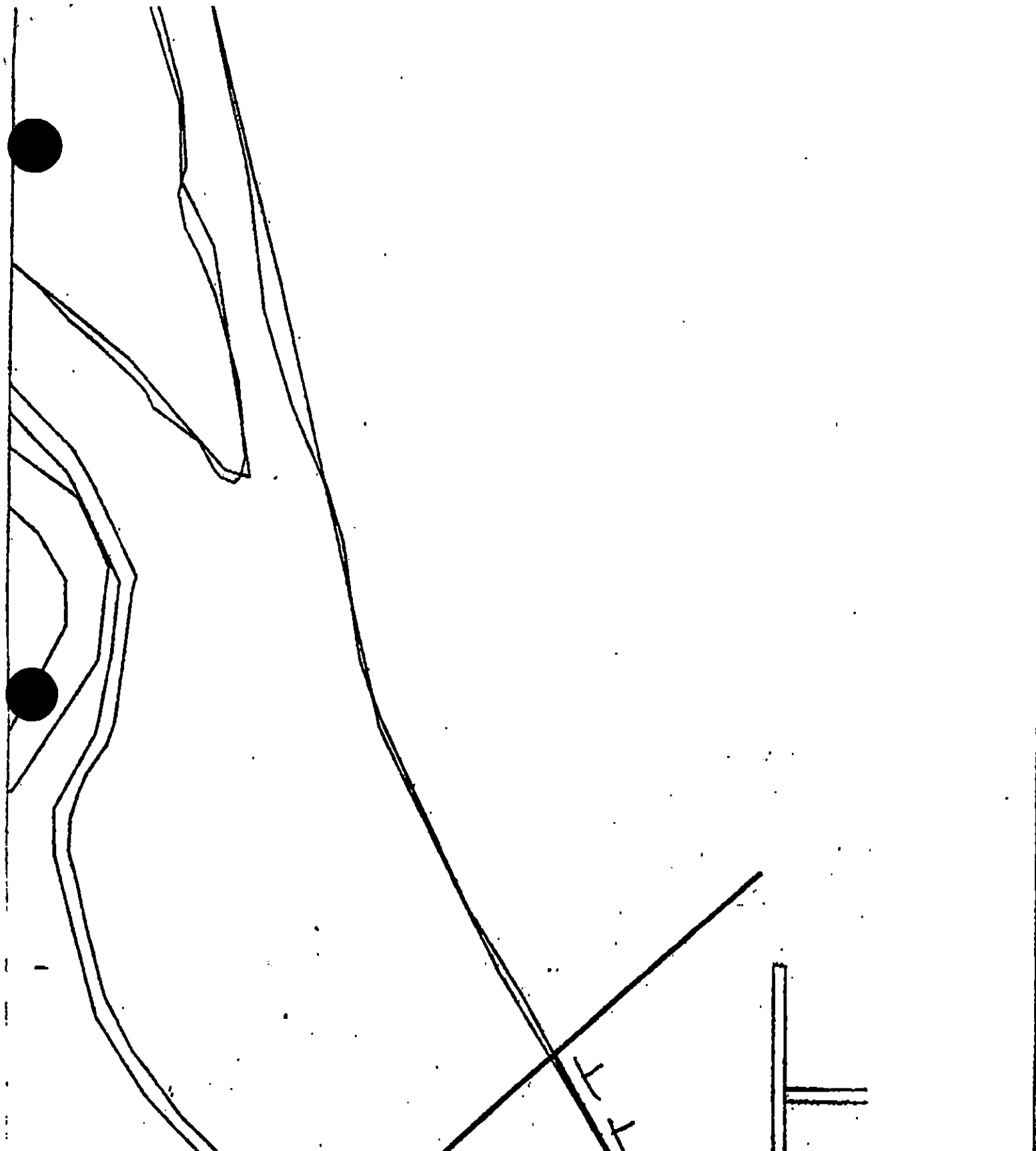


Map Key: AKP-HB-10

Name: G. Heymer

Date: 8-30-90

Data Entered:



XXXX Wide

HB-1

/// Medium

--- Narrow

ADEC Segment Length: 3724m

TTTT Very Light

0000 No Oil

0 100 200 300
METERS

Map Key: AKP-HB-1b

Name: G. HeymanDate: 4-30-90

Data Entered:

1991 MAYSAP EVALUATION

SEGMENT: KO919HB001 SUB: A REGION: KOD SURVEY DATE: 5/20/91ENVIRONMENTAL SENSITIVITIES:Work Window(s) RESTRICTED 3/1 - 9/15Ecological/Constraints (see page two for details) Eagle nest,
Anadromous streamARCHAEOLOGICAL CONSTRAINTS:If treatment is planned, a cultural resource evaluation is
required prior to shoreline treatment.

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____ FOSC APPROVAL DATE: _____

ADEC _____ FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

ADEC

NAME J BARNHART ADFCSIGNATURE Jeff Barnhart☒ NTR ☐ Treatment Recommended.

Very occasional TB picked up in area B+C. Trace amounts of SOR removed from the grass in area D, on the bank of this anadromous stream. Trace amounts of TB remain in area B+C. No additional Treatment recommended.

EXXON

NAME R. HARRELSONSIGNATURE R. Harrelson☒ NTR The area is recovering nicely.

LANDMANAGER

NAME F. BENNETTOF NPSSIGNATURE F. Bennett☒ NTR

Scattered patties observed at sites B, C, + D have been collected. Very little other oil (ST, SOR) has been observed at sites A + D 1+2.

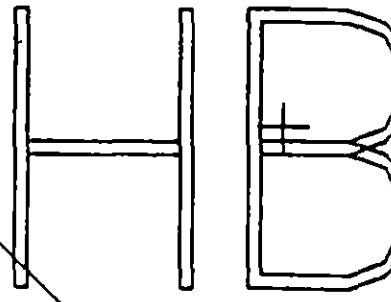
USCG/NOAA

NAME CWO SPURGESIGNATURE R. P. Spurge☒ NTR

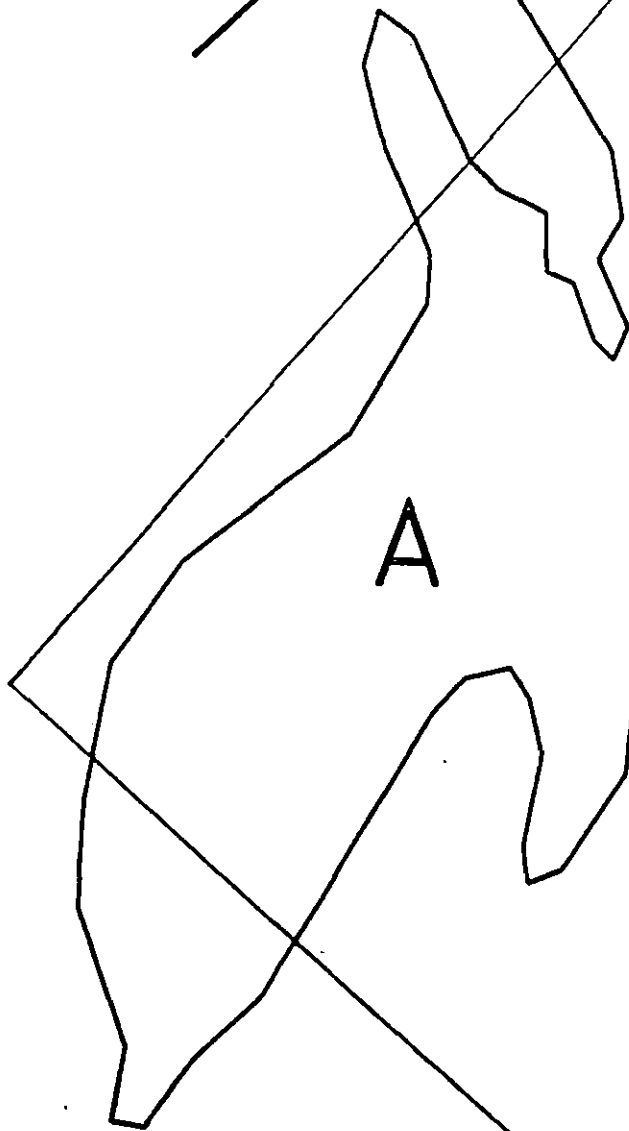
SURVEYED PORTION OF THE SEGMENT WAS A COMPLEX SERIES OF STREAM- AND TIDALLY-CUT CHANNELS ACROSS A BROAD SAND/MUD FLAT. SUPRATIDAL PORTIONS OF MIGRATING BERMS WERE STREWN WITH DRIFT LOGS, AS WAS THE SUPRATIDAL AROUND THE PERIMETER OF THE SURVEYED AREA. BEAR AND RIVER OTTER TRACKS WERE SEEN ALONG THE SEGMENT. THE SURVEY CONCENTRATED ON THOSE AREAS KNOWN TO HAVE BEEN OILED. ALONG THE EASTERN SHORELINE, SPLATTERS OF FRESH (FAIRLY FLUID) TAR WERE FOUND, PRIMARILY ALONG THE HIGH TIDE LINE BUT THESE WERE BELIEVED TO NOT BE OF EXXON VALDEZ ORIGIN. FURTHER TO THE WEST, SOR (EXXON VALDEZ) WAS FOUND SCATTERED IN THE UITS. ALL OF THIS MATERIAL WAS RECOVERED. ALONG THE SEGMENT TO THE SOUTHWEST, A SMALL STREAM FED IN FROM THE EAST AND TWO PATCHES OF ASPHALT WERE FOUND ON ITS SOUTH BANK. — THESE WERE REMOVED BY THE VECO CREW. LITTLE OTHER EVIDENCE OF OILING WAS SEEN IN THE SURVEYED PORTION.

Revised 5.26 per D.F. & R.C.

+

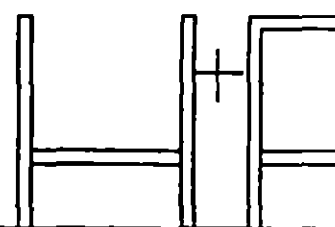


MAP #1



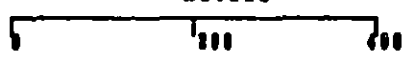
A

+



K0919 HB001 A

METERS



AS SHOWN BY THE SURVEY

Subdivision Field Map

Map Key: 00200100001A

Name: D. FITZGERALD

Date: 20 MAY 1991

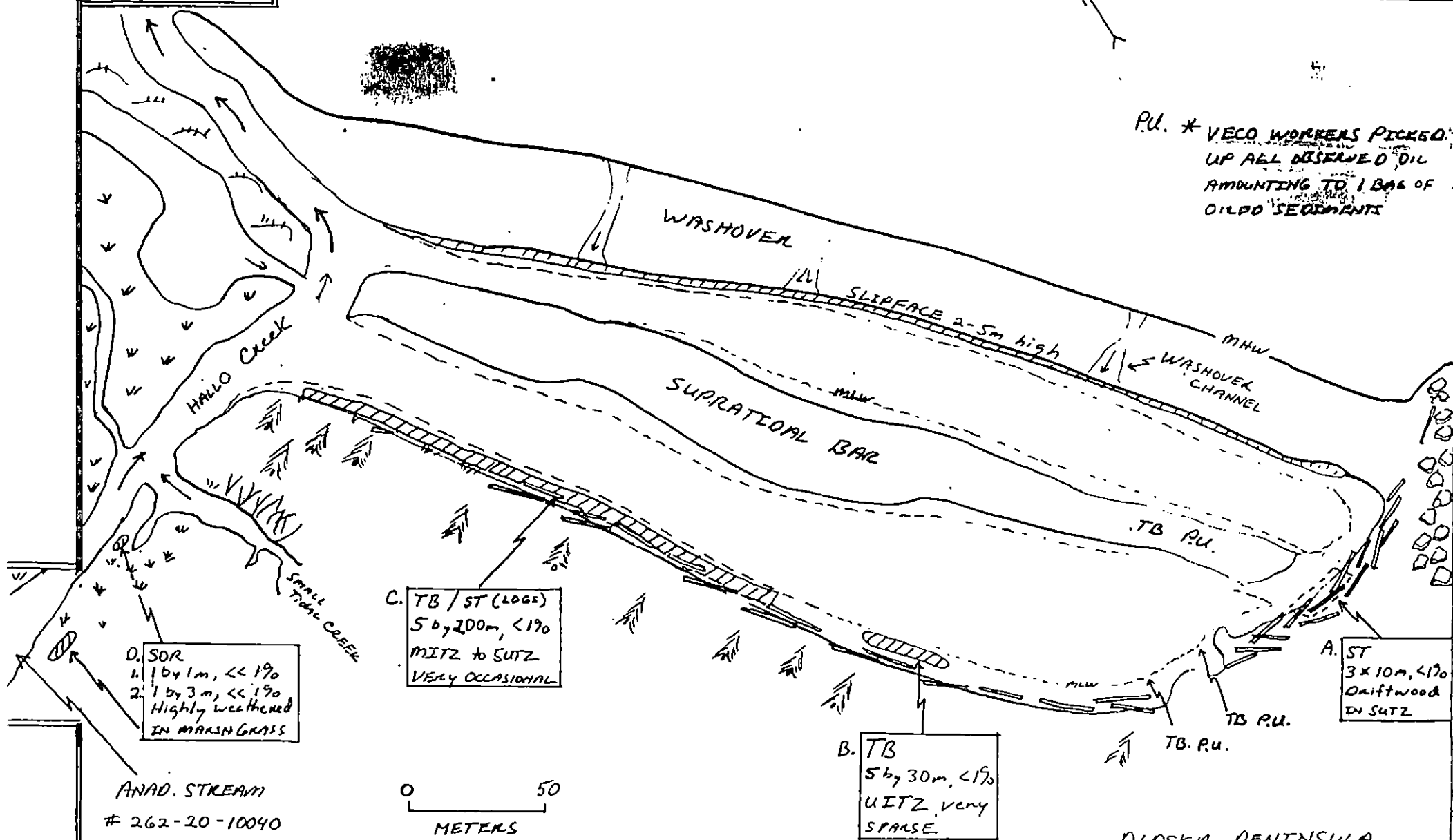
reviewed 5.25.94

- EVERGREENS
- VEGETATED DUNE
- W + GRASSES
- LOGS
- PHOTO SITES

Sketch MAP (OG)
K0919-HB-1-A
D. FITZGERALD
20 MAY 1991
1120-1250

HALLO BAY

P.U. * VECO WORKERS PICKED UP ALL OBSERVED OIL AMOUNTING TO 1 BAG OF OILPO SEGMENTS

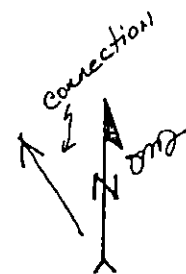


- EVERGREENS
- VEGETATED DUNE
- GRASSES
- LOGS
- PHOTO SITES

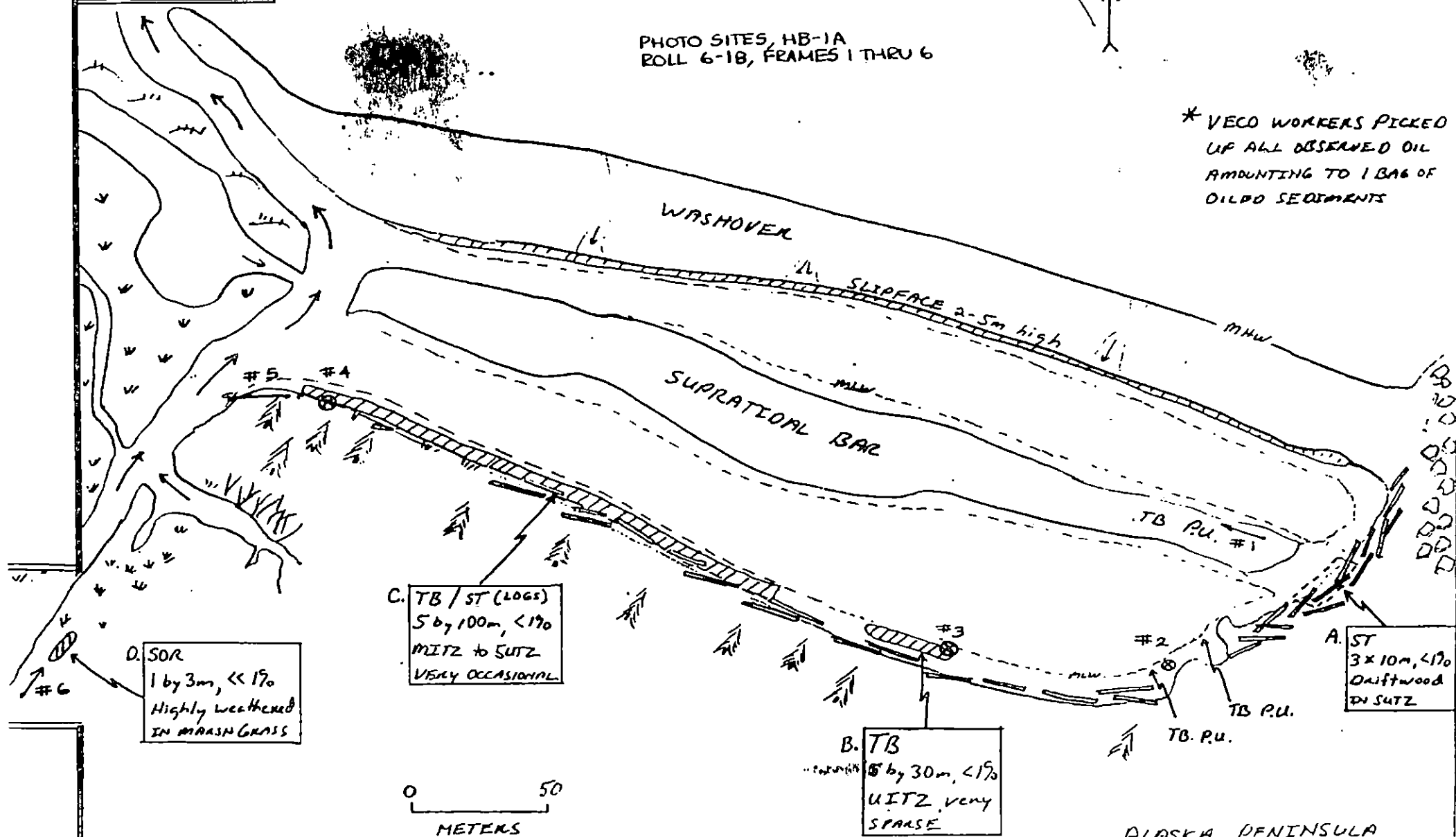
Sketch Map (06)
K0919-HB-1-A
D. Fitzgerald
20 MAY 1991
1120-1250

HALLO BAY

PHOTO SITES, HB-1A
ROLL 6-1B, FRAMES 1 THRU 6



* VECO WORKERS PICKED UP ALL OBSERVED OIL AMOUNTING TO 1 BAG OF OILED SEDIMENTS



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 Helo

DATE May 20 1991

SEGMENT # K9N-18 HB-01

TIDAL HEIGHT (Range) 5.0 ft - 1.5 ft (11:15 - 12:45)

SUBDIVISION A

BIOLOGIST H. Davis

SEA STATE < 1 ft Calm

WIND SPEED/DIRECTION light breeze 5 kt NW

PHOTOGRAPHS: ROLL # 6-18

FRAME # 1-6

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

This area was the sand-bar and migrating birds below anadromous stream # 242-29-10040. The intertidal biology is very sparse in this area. A, C, B Littorina Barnacles (*B. cariosus*), limpets and filamentous greens were on cobbles and small rocks 5-10 meters below sites C+B. The rest of the area is sand/gravel with logs debris and some kelp drift. *Nonheyeria peruviana* and *Elymus mollis* are beginning their spring growth (possibly *amorphila aeneus*) in the beams. Bear, Moose, Fox, and River Otter tracks were found throughout this area. D. This was a small area upon the grassy bank next to the stream. The grasses are growing up through the thin soil.

Waterfowl and mammals' feed extensively throughout this area. Grass and plants are sprouting.

The Veco crew picked up the oil found in the areas surveyed. Any clean up work here would be much more disruptive (to the wildlife) than beneficial.

Goldencrowned sparrow (4) variegated sparrow (3) sand pipers (3) Kittiwakes (5) Glaucous-winged G. (2) Widgeon (24) Shorelarks (30+) Buffleheads (20+ 14) Barnard's Golden eye (10+ 29) Mallards (8)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	0		0
Seabirds	0		
Waterfowl	5	68+	
Gulls/Kittiwake	2	11+	
Shorebirds	1	3	
Corvids			
Other Birds <i>sparrows</i>	2	7	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	0	Fox, Bear, River Otter	
Pinnipeds (specify)	0	and Moose tracks	
Whales (specify)	0		

Shoreline subdivision map showing important biological features attached.

Point 5/10/2 2001

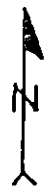
EVERGREENS

- VEGETATED DUNE
- W + GRASSES
- LOGS
- PHOTO SITES

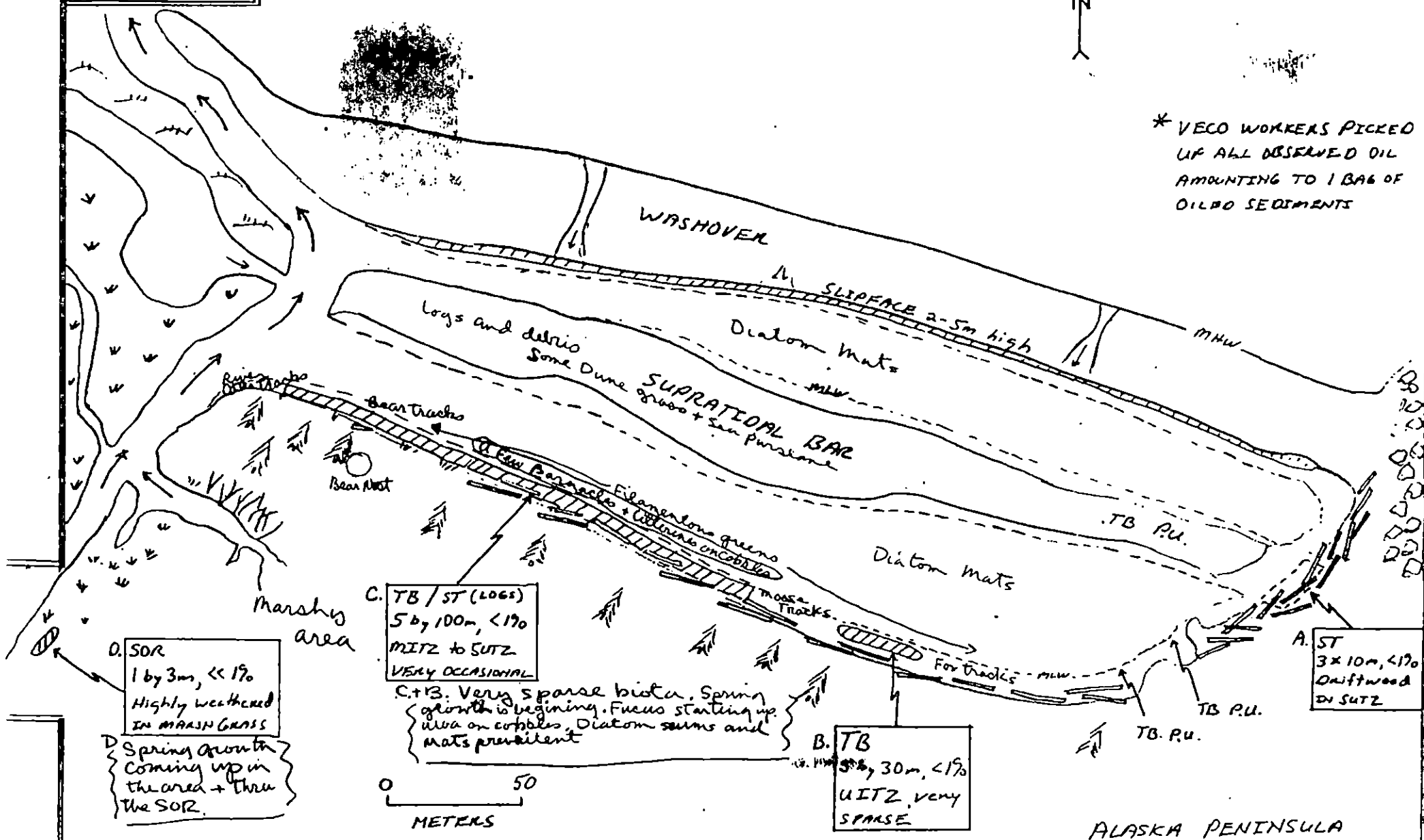
Bio Map
H. Davis

Sketch MAP (OG).
K0919-HB-1-A
D. FITZGERALD
20 MAY 1991
1120-1250

HALLO BAY

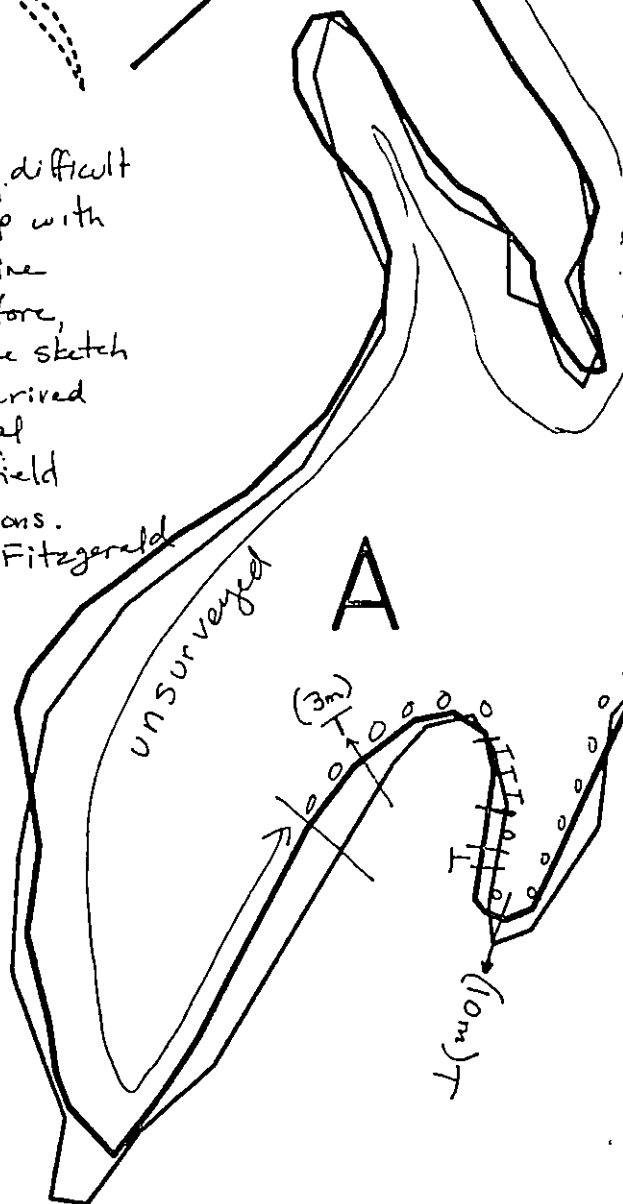


* VECO WORKERS PICKED UP ALL OBSERVED OIL AMOUNTING TO 1 BAG OF OILBO SEDIMENTS



* It was extremely difficult to reconcile this map with the actual shoreline configuration. Therefore, please refer to the sketch map which was derived from vertical aerial photographs with field survey modifications.

D. Fitzgerald



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

K0919 HB001 A
 ADEC Subsegment Length: 3724m
 METERS

AK State Plane Zone 4
 90019hb001a-1



Subdivision Field Map

Map Key: GOAK0919HB001A

Name: D. Fitzgerald (JY)

Date: 20 May '91

Date Entered:

redone 5.28.91 gy

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

**· ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 6-Helo SEGMENT K9N-19-HB-1 SUBDIVISION A DATE 20 MAY 1991

ADEC

NAME J BARNHART ADFG

SIGNATURE

Jeff Barnhart☒ NTR ☐ Treatment Recommended.

Very occasional TB picked up in area B+C. Trace amounts of SOR removed from the grass in area D, on the bank of this anodorous stream. Trace amounts of TB remain in area B+C. No additional Treatment recommended.

EXXON

NAME R. HARRELSON

SIGNATURE

R. Harrelson☒ NTR The area is recovering nicely.

LANDMANAGER

NAME F. BENNESOF NPS

SIGNATURE

F. Benness☒ NTR

Scattered patches observed at sites B, C, + D have been collected. Very little other oil (ST, SOR) has been observed at sites A + D 1+2.

USCG/NOAA

NAME CWO SPURR G. SHIGEMURA

SIGNATURE

R. P. Spurr Gary Shigemura☒ NTR

SURVEYED PORTION OF THE SEGMENT WAS A COMPLEX SERIES OF STREAM- AND TIDALLY-CUT CHANNELS ACROSS A BROAD SAND/MUD FLAT. SUPRATIDAL PORTIONS OF MIGRATING BERMS WERE STREWED WITH DRIFT LOGS, AS WAS THE SUPRATIDAL AROUND THE PERIMETER OF THE SURVEYED AREA. BEAR AND RIVER OTTER TRACKS WERE SEEN ALONG THE SEGMENT. THE SURVEY CONCENTRATED ON THOSE AREAS KNOWN TO HAVE BEEN OILED. ALONG THE EASTERN SHORELINE, SPLATTERS OF FRESH (FAIRLY FLUID) TAR WERE FOUND, PRIMARILY ALONG THE HIGH TIDE LINE, BUT THESE WERE BELIEVED TO NOT BE OF EXXON VALDEZ ORIGIN. FURTHER TO THE WEST, SOR (EXXON VALDEZ) WAS FOUND SCATTERED IN THE MUD. ALL OF THIS MATERIAL WAS RECOVERED. ALONG THE SEGMENT TO THE SOUTHWEST, A SMALL STREAM FED IN FROM THE EAST AND TWO PATCHES OF ASPHALT WERE FOUND ON ITS SOUTH BANK. — THESE WERE REMOVED BY THE VECO CREW. LITTLE OTHER EVIDENCE OF OILING WAS SEEN IN THE SURVEYED PORTION.

PAGE 1 OF 1

SEGMENT K09-19-HB-1

SUBDIVISION A

DATE 20 / MAY / 91

ENERGY LEVEL: ☐ H ☐ M ☒ L

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

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

EST. OIL CATEGORY LENGTH: W — m M — m N — m VL ^{*}244 m NO ^{*}956 m US ^{*}2524 m

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 1. - 18 FRAMES 1-6

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

OG COMMENTS: THIS SEGMENT IS LOCATED AT THE MOUTH OF HALLO CREEK WITHIN HALLO BAY. THE REGION SURVEYED WAS SHELTERED AND CONSISTED OF THE SHORELINE INSIDE THE INLET ALONG A SERIES OF TIDAL CHANNELS AND BARS INCLUDING A PORTION OF THE INNER LAGOON MARSH SYSTEM. THE OILING WAS IN SPORADIC TRACE AMOUNTS AND INCLUDED INFREQUENT FINE PARTICLES ALONG THE MAINLAND BEACH AND VERY MINOR RESIDUE OF SOM AT TWO SMALL SITES WITHIN THE MARSH ADJACENT TO THE CREEK. WHAT APPEARED TO BE ROOFING TANK WAS FOUND AT SEVERAL LOCATIONS ALONG THE BEACHES. SURVEY TEAM RETRIEVED ALL OBSERVED OILING IN THE AREA WHICH AMOUNTED TO ONE BAG OF OILED SEDIMENT.

* Due to bar migration - this segment does not agree with computer shoreline map. (see map)

Revised 5.26 per D.F. & R.C.

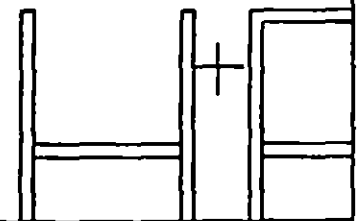
+

HB

MAP #1

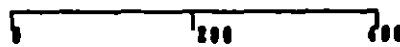
A

+



K0919 HB001 A

METERS



AK State Plans Zone 4.

Subdivision Field Map

Map Key: COAKODIB001A

Name: D. FITZGERALD

Date: 20 MAY 1991

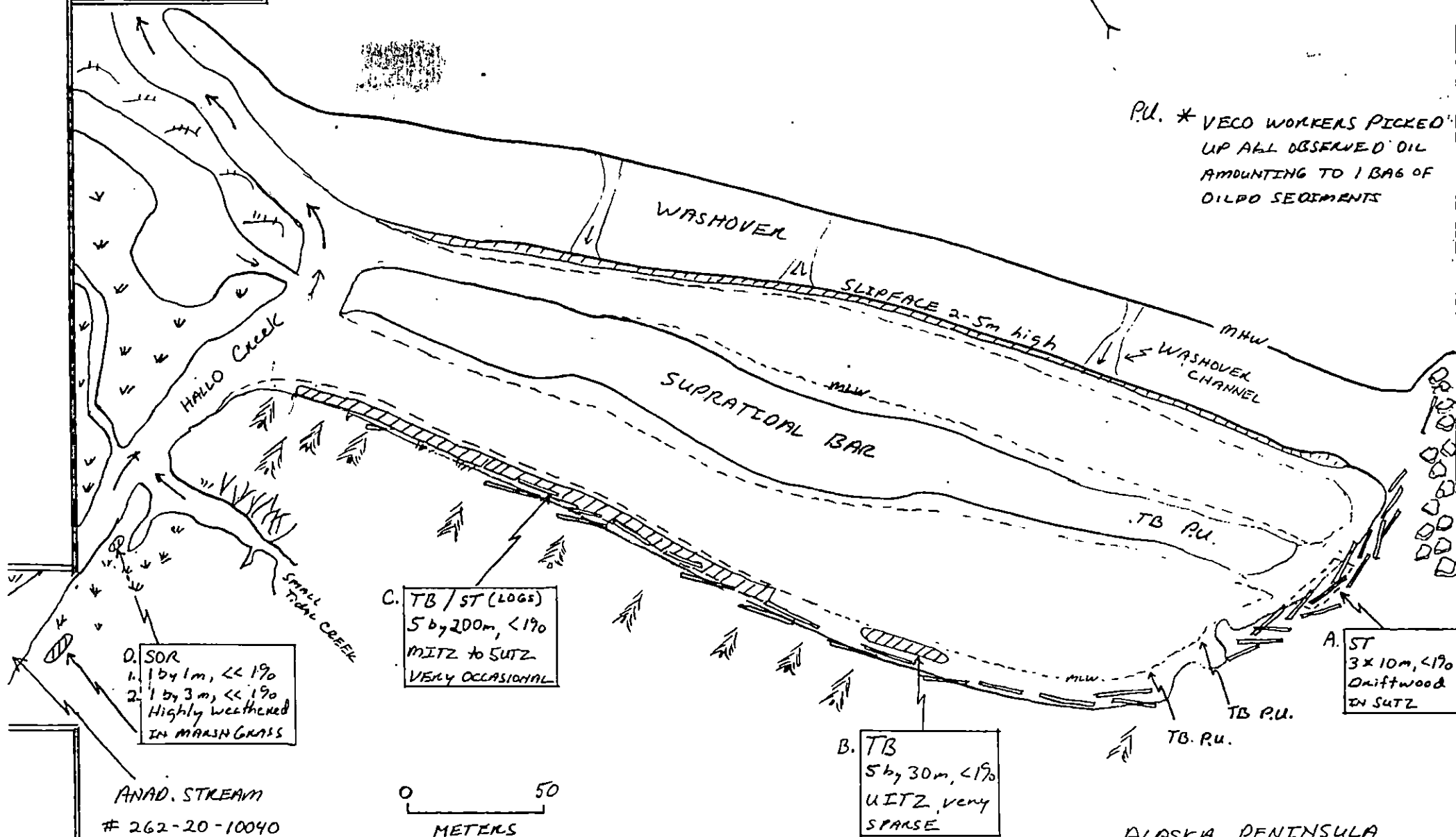
reviewed 5.25.94

- EVERGREENS
- VEGETATED DUNE
- GRASSES
- LOGS
- PHOTO SITES

Sketch MAP (OG)
K0919-HB-1-A
D. FITZGERALD
20 MAY 1991
1120-1250

HALLO BAY

P.U. * VECO WORKERS PICKED
UP ALL OBSERVED OIL
AMOUNTING TO 1 BAG OF
OILPO SEDIMENTS



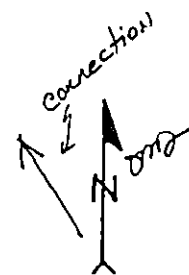
ALASKA PENINSULA
reviewed 5.25.94

- EVERGREENS
- VEGETATED DUNE
- W + GRASSES
- LOGS
- PHOTO SITES

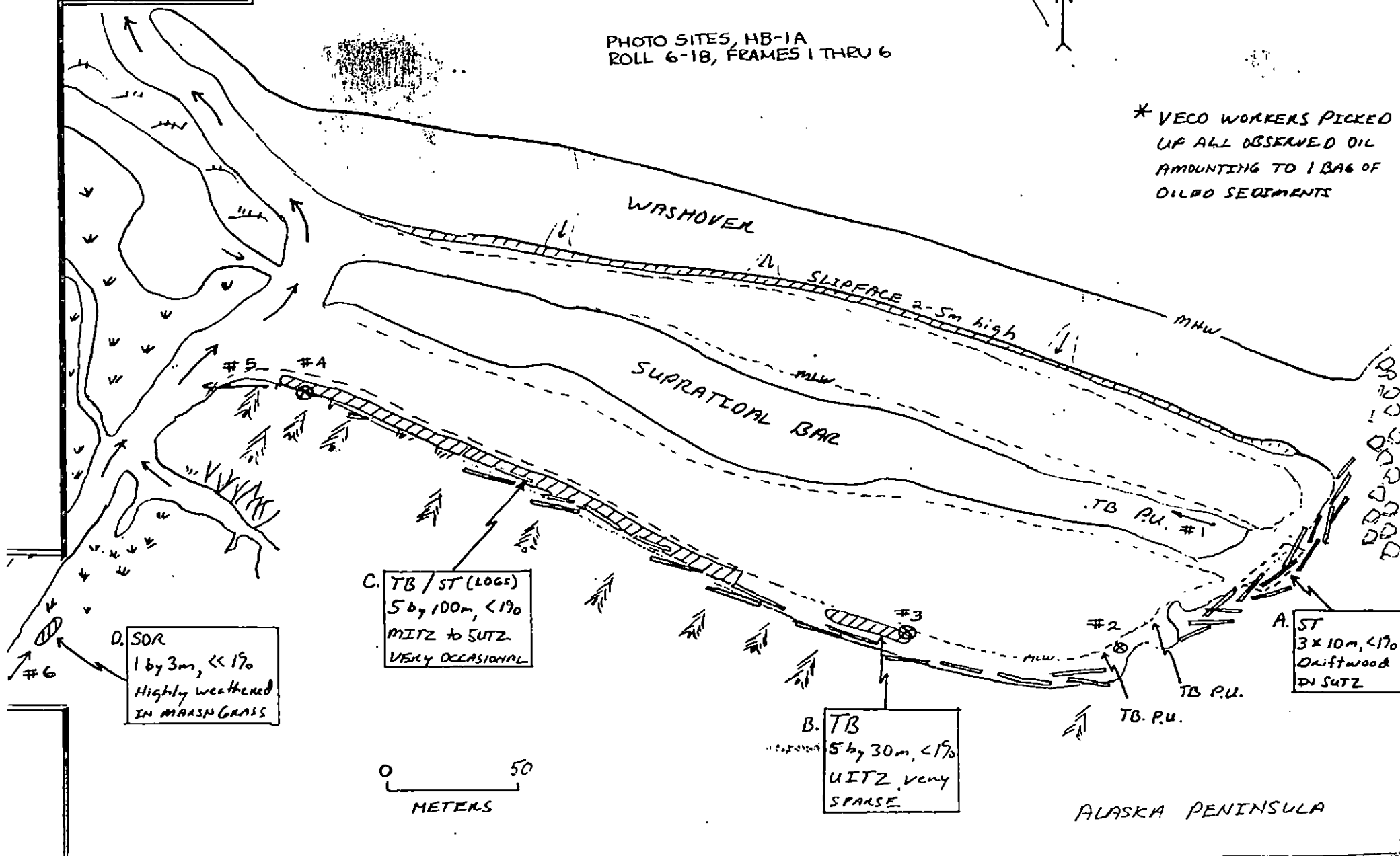
HALLO BAY

PHOTO SITES, HB-1A
ROLL 6-18, FRAMES 1 THRU 6

Sketch MAP (OG).
K0919-HB-1-A
D. FITZGERALD
20 MAY 1991
1120-1250



* VECO WORKERS PICKED
UP ALL OBSERVED OIL
AMOUNTING TO 1 BAG OF
OIL/O SEDIMENTS



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 Helo

DATE May 20 1991

SEGMENT # K9N-19 HB-01

TIDAL HEIGHT (Range) 5.0 ft - 1.5 ft (11:15 - 12:45)

SUBDIVISION A

BIOLOGIST H. Davis

SEA STATE < 1 ft Calm

WIND SPEED/DIRECTION light breeze 5 ft NW

PHOTOGRAPHS: ROLL # 6-18

FRAME # 1-6

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

This area was the sand bar and migrating birds below anadromous stream # 242-20-10040. The intertidal biology is very sparse in this area. A, C, B Littorina, Barnacles (B. cariosus), limpets and Filamentous greens were on cobbles and small rocks 5-10 meters below site C+B. The rest of the area is sand/gravel with logs debris and some kelp drift. Nontenusa peploids and Elymus mollis are beginning their spring growth (possibly ammophila aeneas) on the bars. Bear, Moose, Fox, and River Otter tracks were found throughout this area. D. This was a small area upon the grassy bank next to the stream. The grasses are growing up through the thin s.o.e.

Waterfowl and mammals feed extensively throughout this area. Grass and plants are sprouting.

The Vico crew picked up the oil found in the areas surveyed. Any clean up work here would be much more disruptive (to the wildlife) than beneficial.

Goldencrowned sparrow (4) Variegated sparrow (3) sand pipers (3) Kittiwakes (5) Glaucous-winged Gull (6) Widgeon (24) Shoveler (30+) Buffleheads (20, 19) Barnard's Golden eye (10, 24) Mallards (8)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	0		0
Seabirds	0		
Waterfowl	5	68 +	
Gulls/Kittiwakes	2	11 +	
Shorebirds	1	3	
Corvids			
Other Birds sparrows	2	7	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	0	Fox, Bear, River Otter	
Pinnipeds (specify)	0	and Moose tracks	
Es (specify)	0		

Shoreline subdivision map showing important biological features attached.

EVERGREENS

VEGETATED DUNE

W + GRASSES

LOGS

PHOTO SITES



VEGETATED
DUNE

W ↓ GRASSES

LOGS

→ PHOTO SETS

Bio Map
H. Davis

SK [REDACTED] MAP (OG)
K0919-HB-1-A
D. FITZGERALD
20 MAY 1991
1120-1250

D. FITZGERALD

20 MAY 1991

1120 - 1250

HALLO BAY.

* VECO WORKERS PICKED UP ALL OBSERVED OIL AMOUNTING TO 1 BAG OF OILBO SEDIMENTS

WASHOVER

SLIPFACE 2-5m high

— тнч

Logs and debris
Some

Diatom Mats

Supratidal Bar
of sand + sea purlstone

~~Bear tracks~~

Bear post

Marshy area

0.50R

1 by 3m, < 1%
Highly weathered
IN MARSH GRASS

C. TB / ST (LOGS)
5 by 100m, < 170
MITZ to SUTZ
VERY OCCASIONAL

C.+B. Very sparse biota. Spring growth is beginning. Fucus starting up. Alga on cobbles. Diatom scums and mats prevalent.

B. TB
Shy, 30m, <1%
UITZ, very
SPARSE

A. ST
3x10m, 417
Driftwood
IN SUTZ

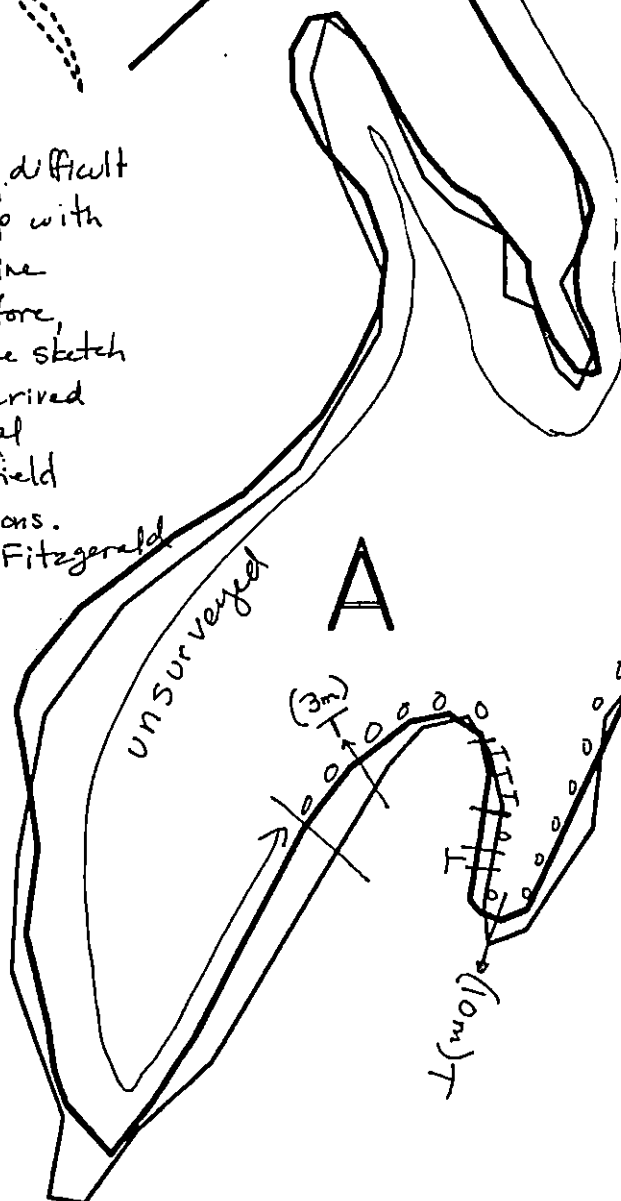
ALASKA PENINSULA

A scale bar labeled "METERS" with markings at 0 and 50.

HB

* It was extremely difficult to reconcile this map with the actual shoreline configuration. Therefore, please refer to the sketch map which was derived from vertical aerial photographs with field survey modifications.

D. Fitzgerald



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

K0919 HB001 A
 ADEC Subsegment Length: 3724m
 METERS

AK State Plane Zone 4
 900198001a-1



Subdivision Field Map

Map Key: 60AK0019HB001A

Name: D. Fitzgerald (Jr)

Date: 20 May '91

Date Entered:

redone 5.28.91 gfy

REGION: KODIAK

SEGMENT: ST/K09-19-HB-02

SUBDIVISIONS: A (1 OF 1)

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.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 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: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE CURRENT SHEET

SEGMENT ST / K0919-HB002 SUBDIVISION: A DATE 4/23/90

1000
0000

NAME 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 UI to MI. Manual removal recommended.

Only the southern 150m were survey 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. 06-13 P

OG LINDSAY NAKASHIMA USCG (NOAA) JOHN NAKASHIMA SEGMENT ST/ K0919-HB002
 BIO DEB McCORMICK LAND REP (NM) CARL SCHUCH SUBDIVISION HB002A (1 OF 1)
 EXXON FRED BYARS ADEC TERRY ELLESWORTH TIME 7:15 to 7:30 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 25 % B 25 % C 20 % P 15 % G 40 % S 0 % M 0 % V 0
 SLOPE: Long 90 % Hang 5 % Vert 5 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 100 m N 0 m VL 0 m NO 1220 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 crPATTIES / 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					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	UC	30	35	40	45	50	SU	U	M	U				
0							.															
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							.															
							.															

COMMENTS SEGMENT WAS MOSTLY CHARACTERIZED AS NOT OILED, (ADEC H 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 BAF DATE 24 Apr 90

OG LINDSEY NAKASHIMA
 SEGMENT TI K0919-HB002
 SUBDIVISION HB002 141
 DATE 4.23.90

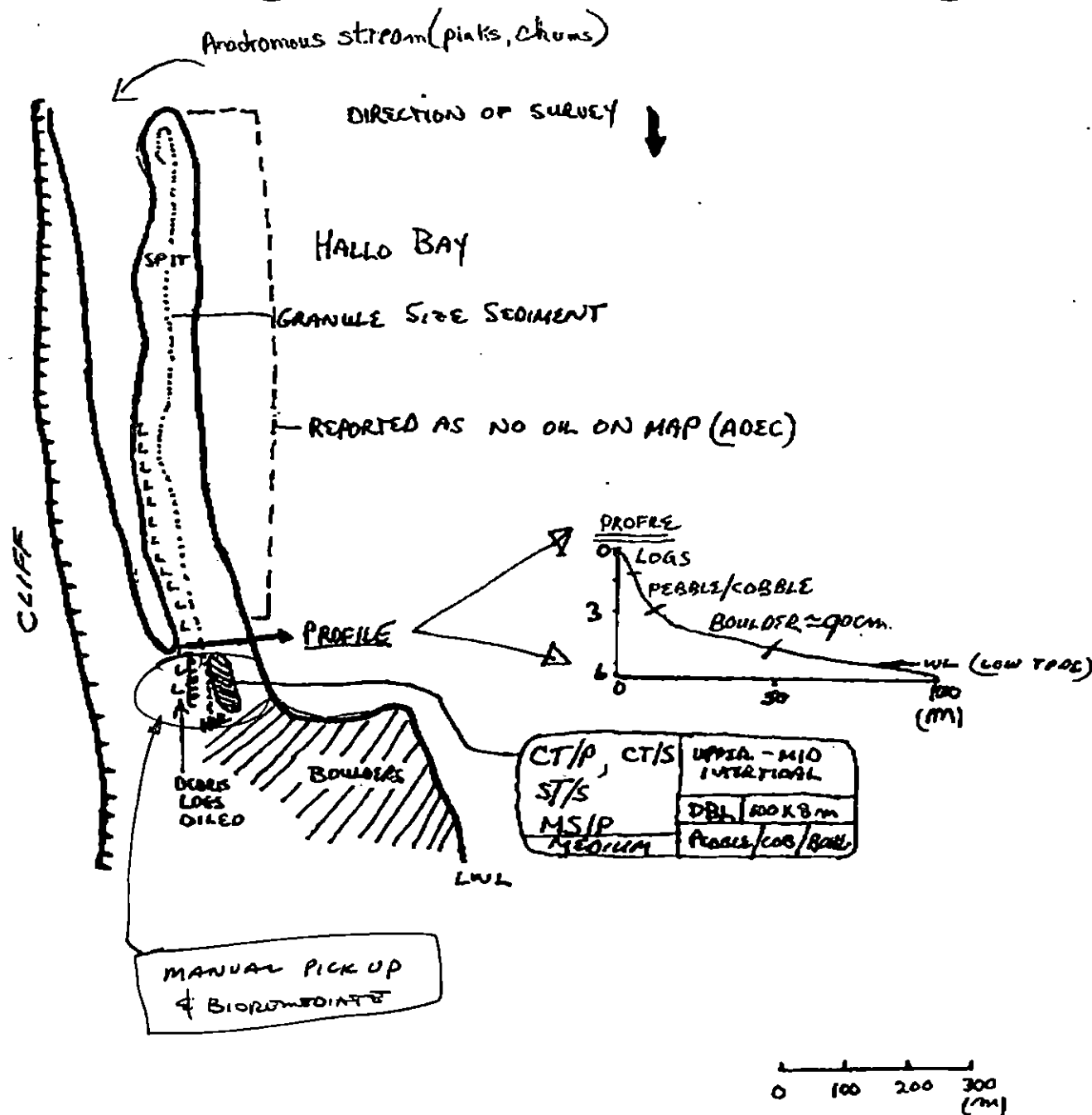
SKETCH MAP

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bndry
- ☐ 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
 Pt - No Subsurface Oil
- 2 Δ
 Pt - Subsurface Oil
- CT/C
 Continuous Distribution
- CT/B
 Broken Distribution
- CT/P
 Patchy Distribution
- CT/S
 Splashed Distribution
- eee
 Oiled Vegetation
- 1 $\Rightarrow$
 Photo location, direction, and number



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 03/24/90

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 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 (6/1 to 9/15)
- 6V Anchorages (6/1 to 9/15)
- 6W Forest Service cabins (6/1 to 9/15)
- 6X Lodge (6/1 to 9/15)
- 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (6/1 to 9/30)
- 7HH Finfish harvesting
- 7II Deer harvesting (8/1 to 1/7)
- 7JJ Invertebrate harvesting
- 7KK Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

CAT

CAMP MOUNTAINS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / KO919H602 Subdivision A Date (mo / day / yr) 4-23-90

Time (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 56 (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 (3)
Photographs: _____
Roll No. ST-19-15

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

NOT PRESENT

Wildlife Observations/ General Comments: Bear tracks on beach.
Filamentous green algal layer continuous in lower ITZ on boulders, patchy in mid ITZ

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

HB-2

Revised 4/24/90 (M)

UNSURVEYED - NO OIL AS PER ADEC WATER-TOWN

ST-19-15-24, 25, 26

ST-14-15-3

SUBDIVISION A

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

HB-2

ADEC Segment Length: 1238m

Map Key: GOA-106

Name: LINDSAY KIRKSHAW

Date: 4/23/90

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.

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 106 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>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, 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 WENGER

EXXON ANDY TIER

NOAA Gary Petrac

USCG GA. HEITER

FOSC: W L DATE: 5-9-90

INIPOL not authorized.

OG LINDSEY ALAKASHIMA
 SEG STI K0919-HB002
 SUBDIVISION HB002 141
 DATE 4 123 90

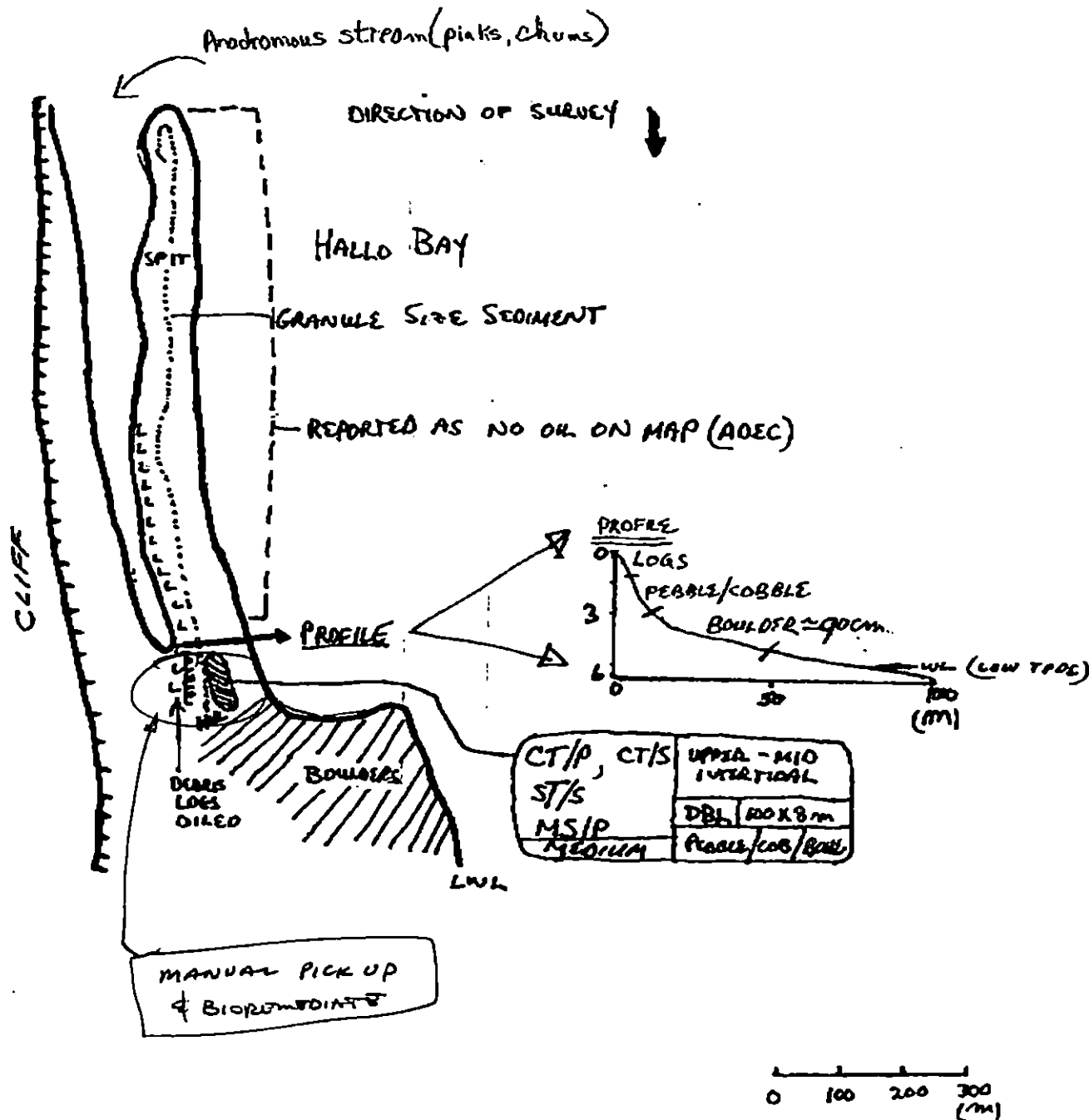
SKETCH MAP

CHECKLIST

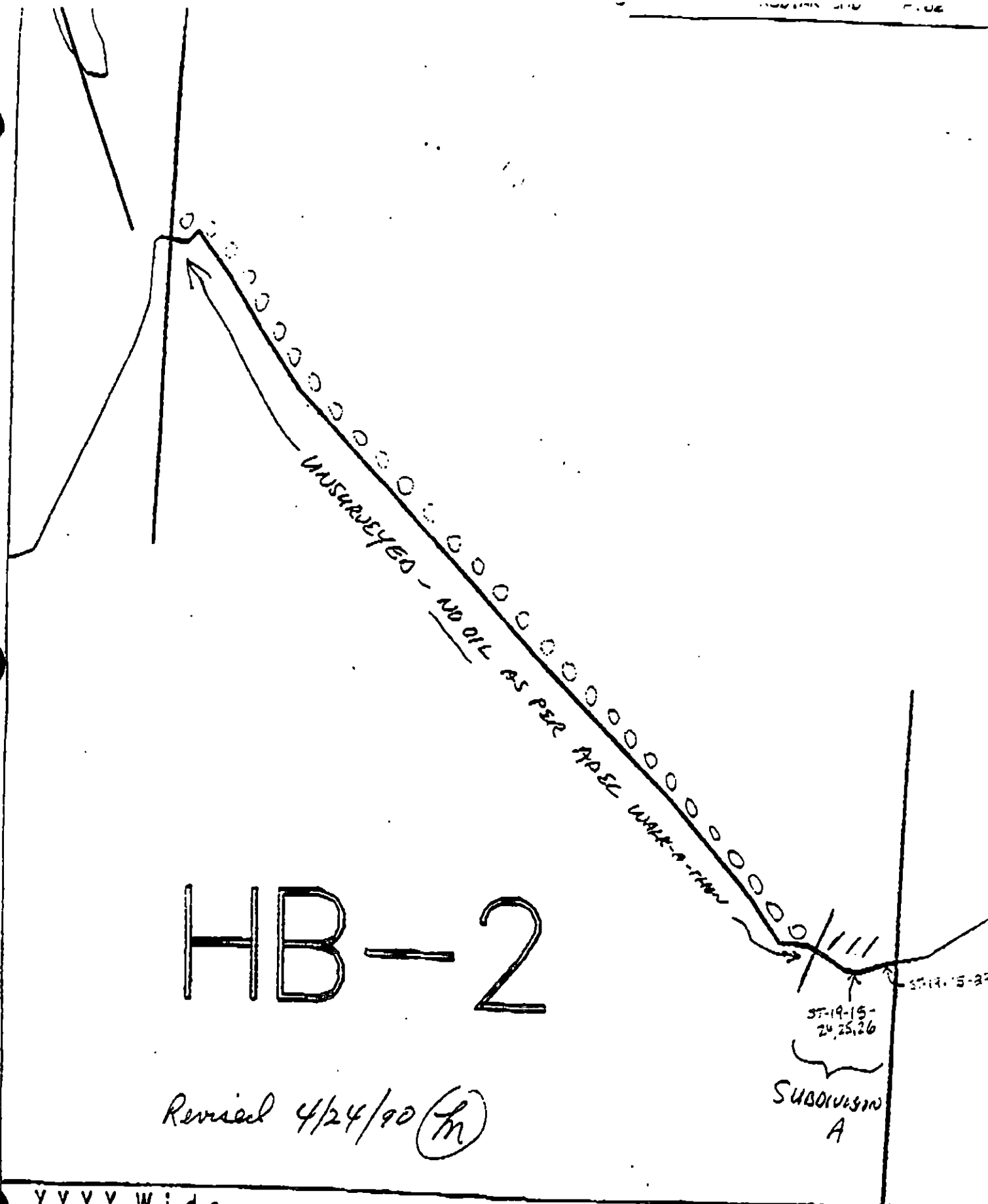
- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Sep/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. IWM/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Photo(s)
- ☐ P/L Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 Δ
 PH - No Subsurface Oil
- 2 Δ
 PH - Subsurface Oil
- CT/C
 Continuous Distribution
- CT/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 0 PO 0 CV 0 CT 100 ST 100 MS 10 PT 0 TB 0 FL 0 NO 0



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

HB-2

ADEC Segment Length: 1238m

Map Key: GOA-106

Name: LINDSAY NIKKISHA

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

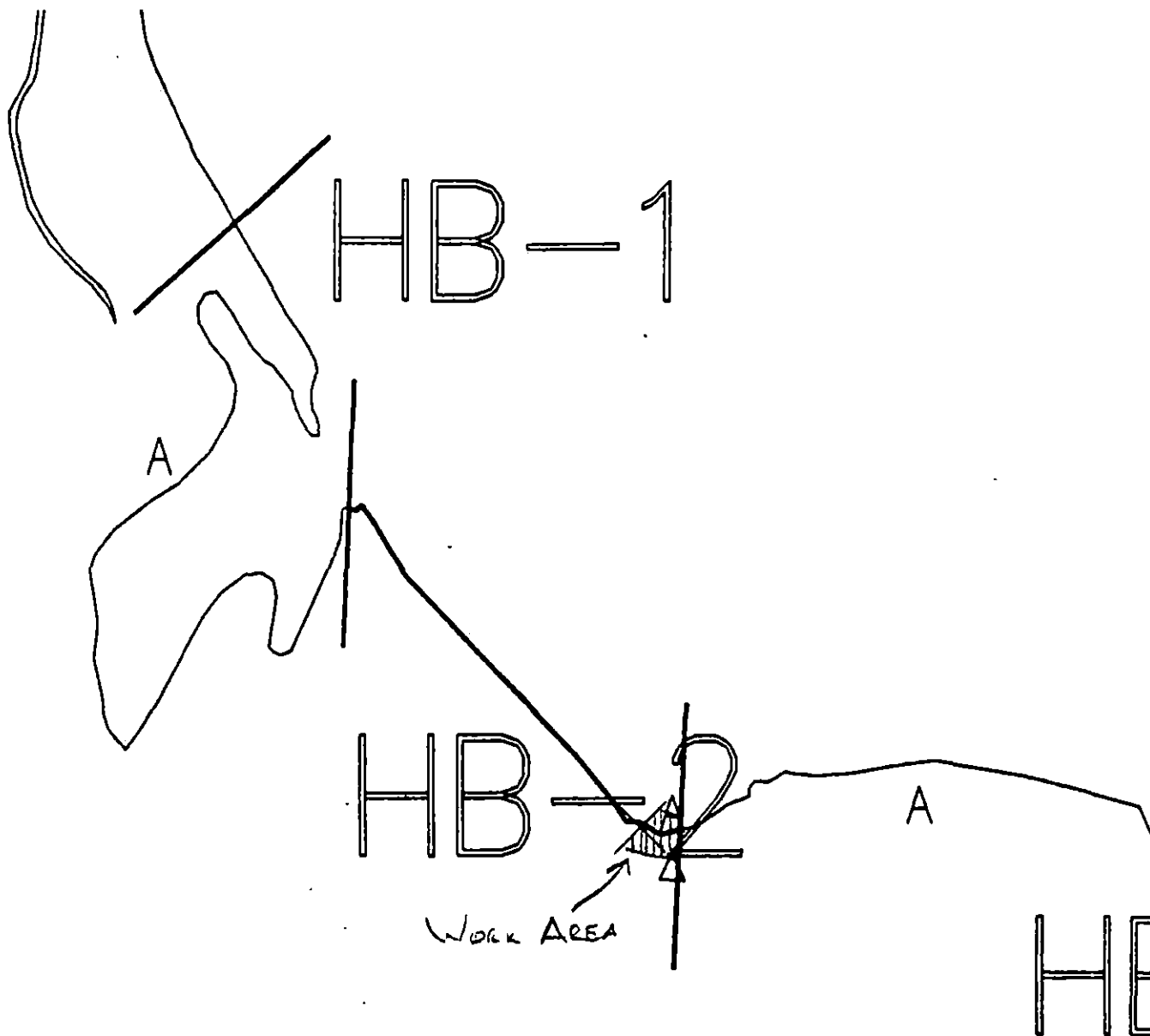
NO Inpol Ag

Prepared by

[Signature]

Date

6/16/90



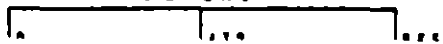
TREATMENT



Exxon Company, USA
Map Key: AKP-HB-2
1:10,000



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



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

1 inch = 1418 feet

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Subsistence area: Invertebrate harvesting
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.

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 106 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>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, 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.

SEE CONSTRAINTS ADDENDUM dated 6/16/90 RP

TAG COMMENTS: MONITORING TO ASSESS NEED TO REMOVE LOGS

TAG APPROVAL DATE: 5/4/90

DEC DET WELTZ
EXXON ANDY TEE
NOAA GARY PETERSON
USCG G.A. TREITER

FOSC: W L DATE: 5-9-90

INIPOL not authorized.

REGION: KODIAK

SEGMENT: ST/K09-19-HB-03

SUBDIVISIONS: A (1 OF 1)

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 unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 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	☐ Snare/Absorbent Booms
☒ Treatment Recommended	☐ Oil Snares (pom poms)
☒ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☒ Bioremediation	☐ Spot Washing: _____ Wands
☐ Tarmat Removal	☐ Beach Cleaner
	☐ Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of 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 _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / K 0919-H0003 SUBDIVISION: A DATE 4/23/90NOAA
BOCNAME 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 need not be removed, however mousse should be treated by manual removal. Unusual concentration of oiled debris found near Cape Nukshak. 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 ME in the remainder of the segment. Manual removal of mousse/sediment, cover, and oil/debris/veg. was recommended.

LAND MANAGER

NAME Carl Sebeck SIGNATURE Carl Sebeck☐ 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. 04/12/90

OG LINDSAY NAKASHIMA USCG (NCAA) JOHN NAUGHTON SEGMENT STI K0919-H8003
 BIO DEB MCCORMICK LAND REP CARL SCHOCH (NPS) 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: 3503 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 85 % Hang 15 % 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			
	10	15	20	25	30	35	40	45	50	55	60	65	SU	U	M	L
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																
FILM			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			DID YOU COLLECT DEBRIS?
	SM	MD	LG	
Logs			X	YES ☐ NO ☒
Vegetation			X	
Trash				
Debris				
				TYPE <u> </u>
				#BAGS <u> </u>

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	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	30	35	40	45	50	55	60	65	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 LINDSAY NAKASHIMA

SEGMENT STI K0919-HB003

SUBDIVISION HB003A

DATE 4 123 90

SKETCH MAP

CHECKLIST

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

LEGEND

1 Δ
PH - No Subsurface Oil

2 Δ
PH - Subsurface Oil

CT/C
Continuous Distribution

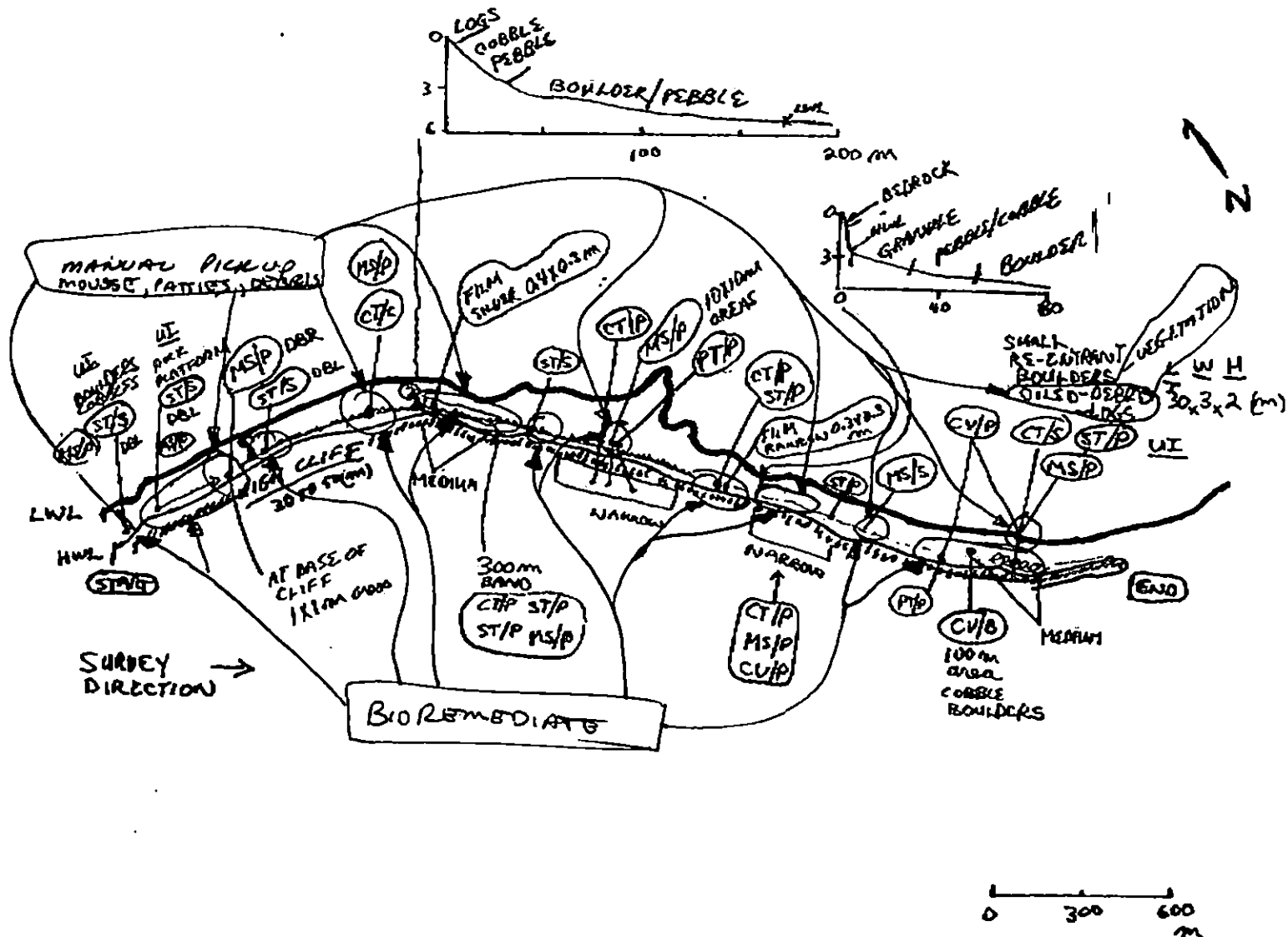
CT/B
Broken Distribution

CT/P
Patched Distribution

CT/S
Splashed Distribution

eee
Oiled Vegetation

1 ●→
Photo location, direction, and number



Oil Character Length (m): AP 0 PO 0 CV/850 CT 1500 ST 2000 MS 200 PT 300 TB 0 FL 2 NO 0

REVISION: 532400

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 unrolled intertidal and subtidal algae and seagrass.
 Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/10 to 6/30)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m
 horizontal and 300m vertical distance from haulouts.
- 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m
 horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 8/31)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m
 vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from
 and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to
 treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
- 6V Anchorages (6/1 to 9/15)
- 6W Forest Service cabins (6/1 to 9/15)
- 6X Lodge (6/1 to 9/15)
- 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (6/1 to 9/30)
- 7HH Finfish harvesting
- 7II Deer harvesting (8/1 to 1/7)
- 7JJ Invertebrate harvesting
- 7KK Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / K0919H8603 Subdivision A Date (mo / day / yr) 4-23-90Time (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% (20%) Moderate 55% (55%) 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-19-15Frames 28-36Roll #: ST-18-16

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

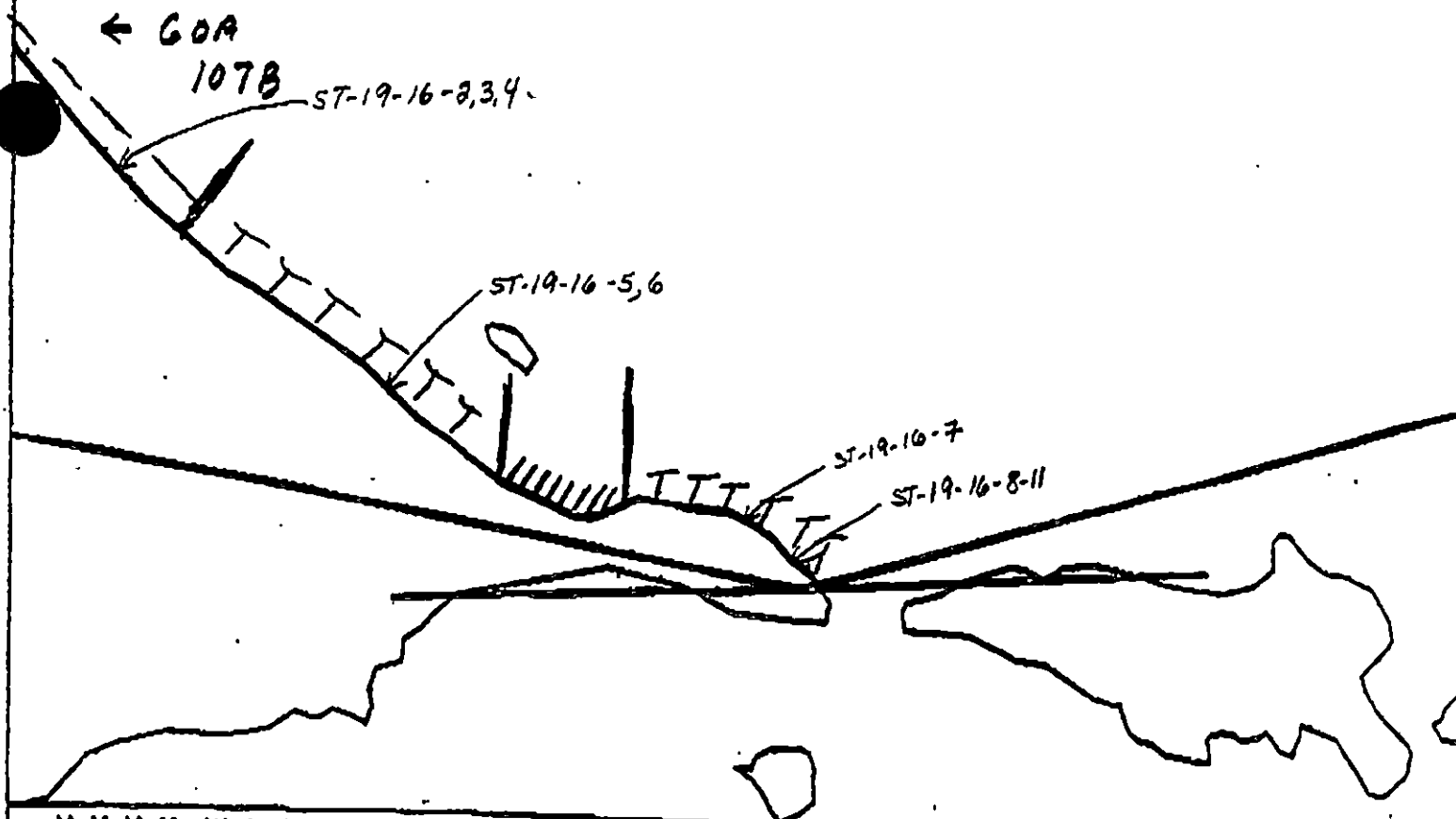
Wildlife Observations/ General Comments: See page 2 for list of fauna seen.

Ecological Considerations: 1 bald eagle on bluff above beach (see OG map for location), no nest observed. 3 harlequin ducks offshore, also 2 1 day. black scoters; several oystercatchers in lower ITZ; gulls in area; 1 unidentified gull.

1A, 1B, 7JJ, 9LM

60000/100
(1000)

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



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

HB-3

ADEC Segment Length: 3579m

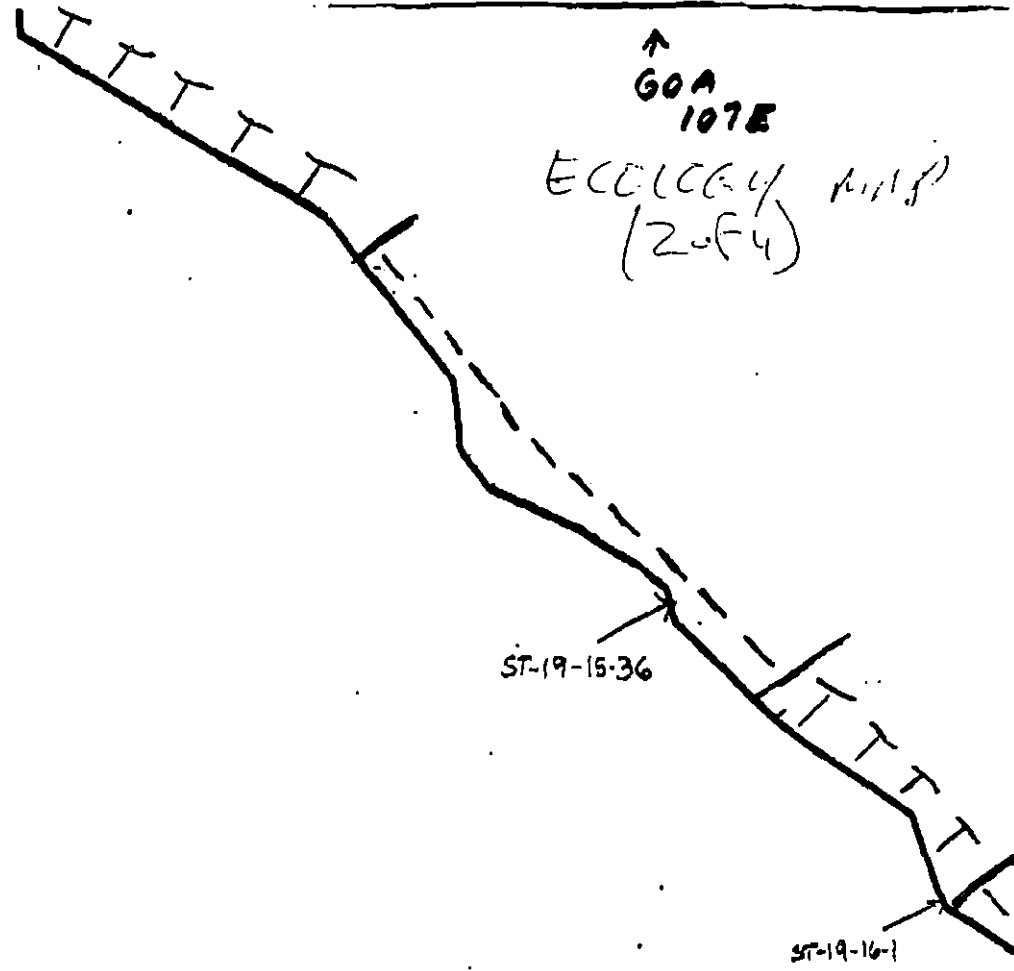
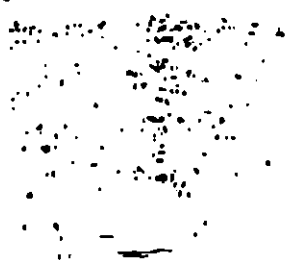


Map Key: GOA-107c

Name: NAKASHIMA

Date: 24 Apr 90

Data Entered:



GOA
107C

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

HB-3

ADEC Segment Length: 3579m



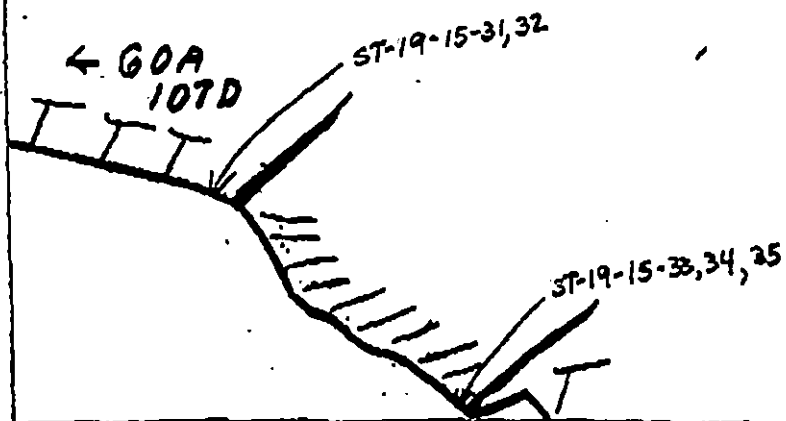
Map Key: GOA-107b

Name: NAKASHIMA

Date: 24 Apr 90

Date Entered:

60000 / 1110
(30041)



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

HB-3

ADEC Segment Length: 3579m



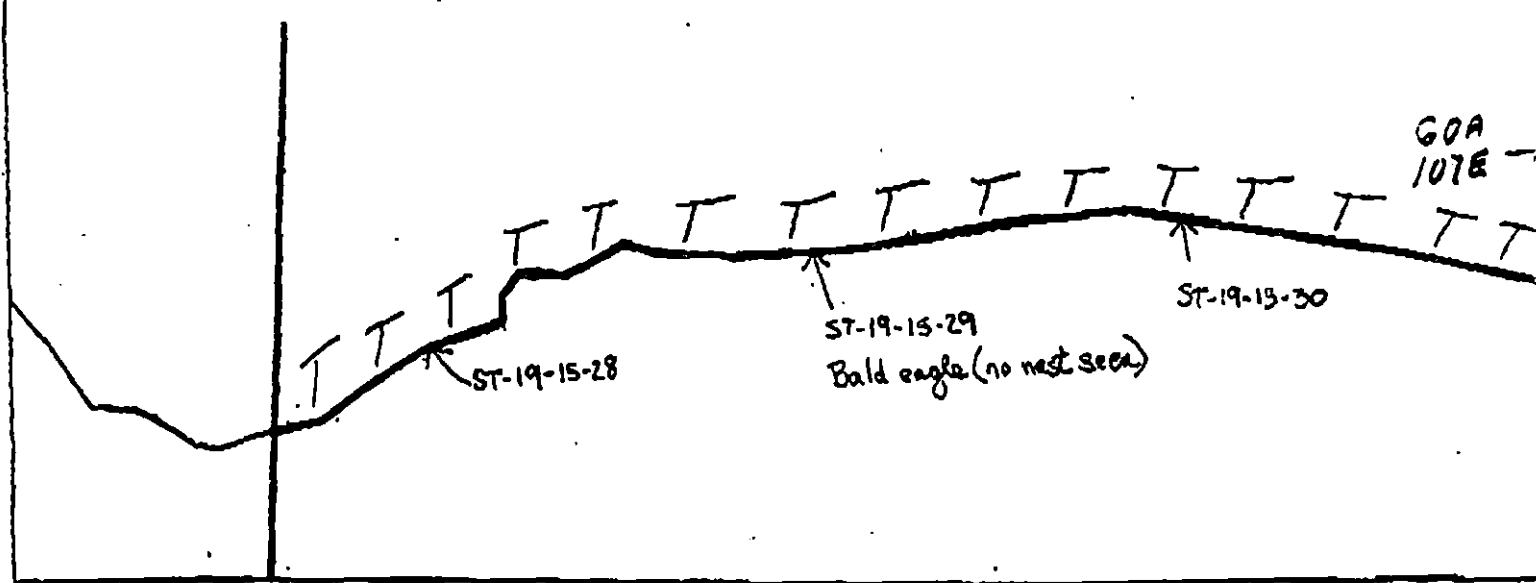
Map Key: GOA-1070

Name: NAKASHIMA

Date: 24 Apr 90

Date Entered:

50M. F. 10-
 MODIAN 110 P. 34
 E.C. 11/11/71
 (494)



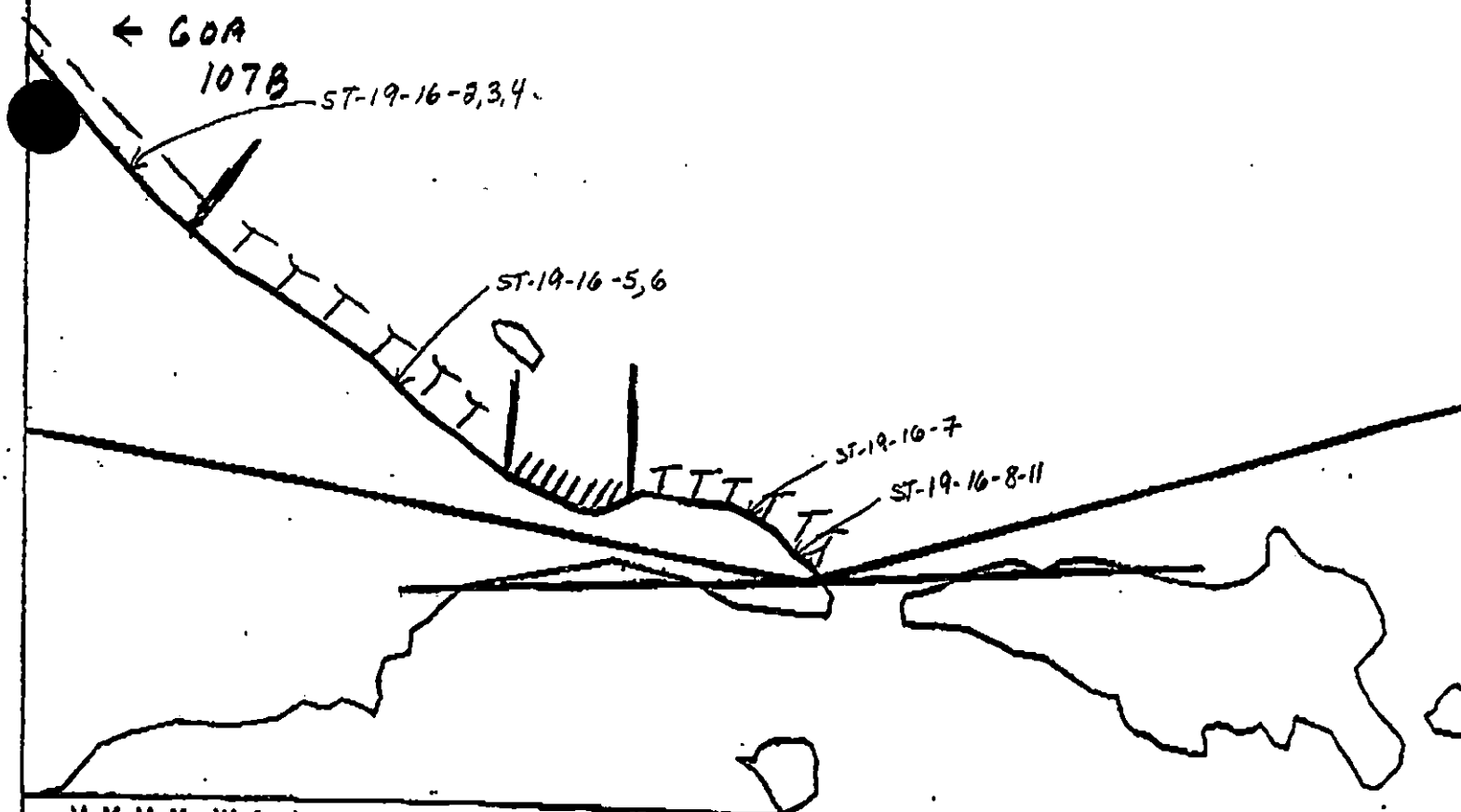
XXXX Wide
 /// Medium
 --- Narrow
 TTTT Very Light
 OOOO No Oil

HB-3

ADEC Segment Length: 3579m



Map Key: GOA-107d
 Name: NAKASHIMA
 Date: 24 Apr 90
 Date Entered:



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

HB-3

ADEC Segment Length: 3579m

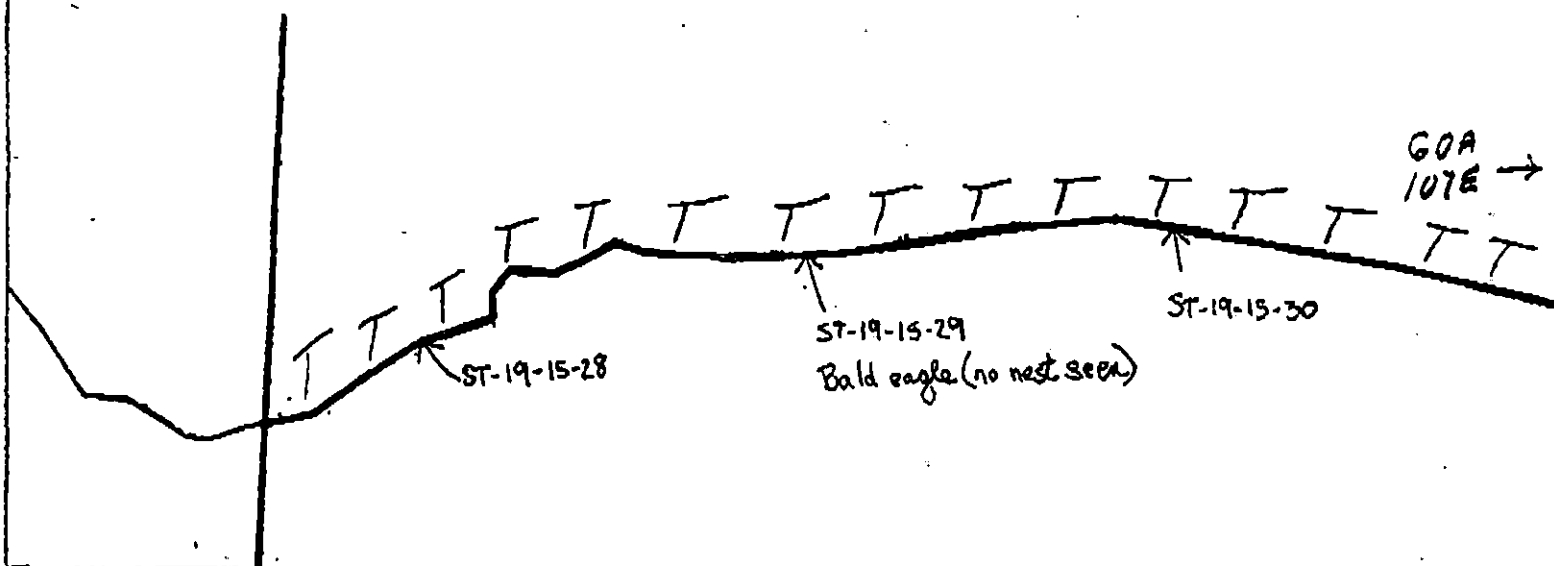


Map Key: GOA-107c

Name: NAKASHIMA

Date: 24 Apr 90

Data Entered:



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

HB-3

ADEC Segment Length: 3579m

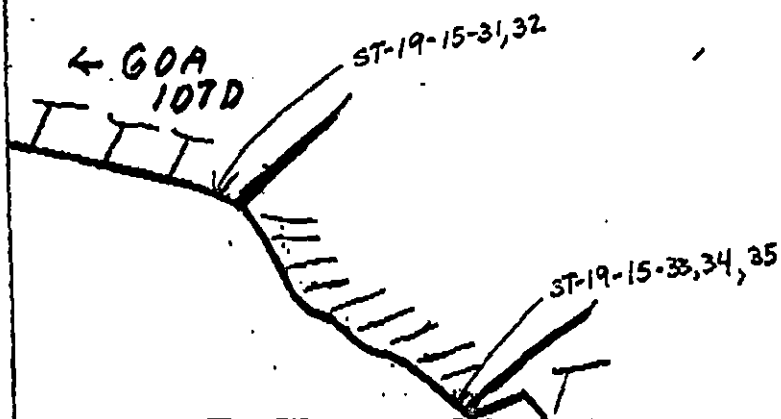


Map Key: GOA-107d

Name: NAKASHIMA

Date: 24 Apr 90

Date Entered:



↓ GOA 107B

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

HB-3

ADEC Segment Length: 3579m

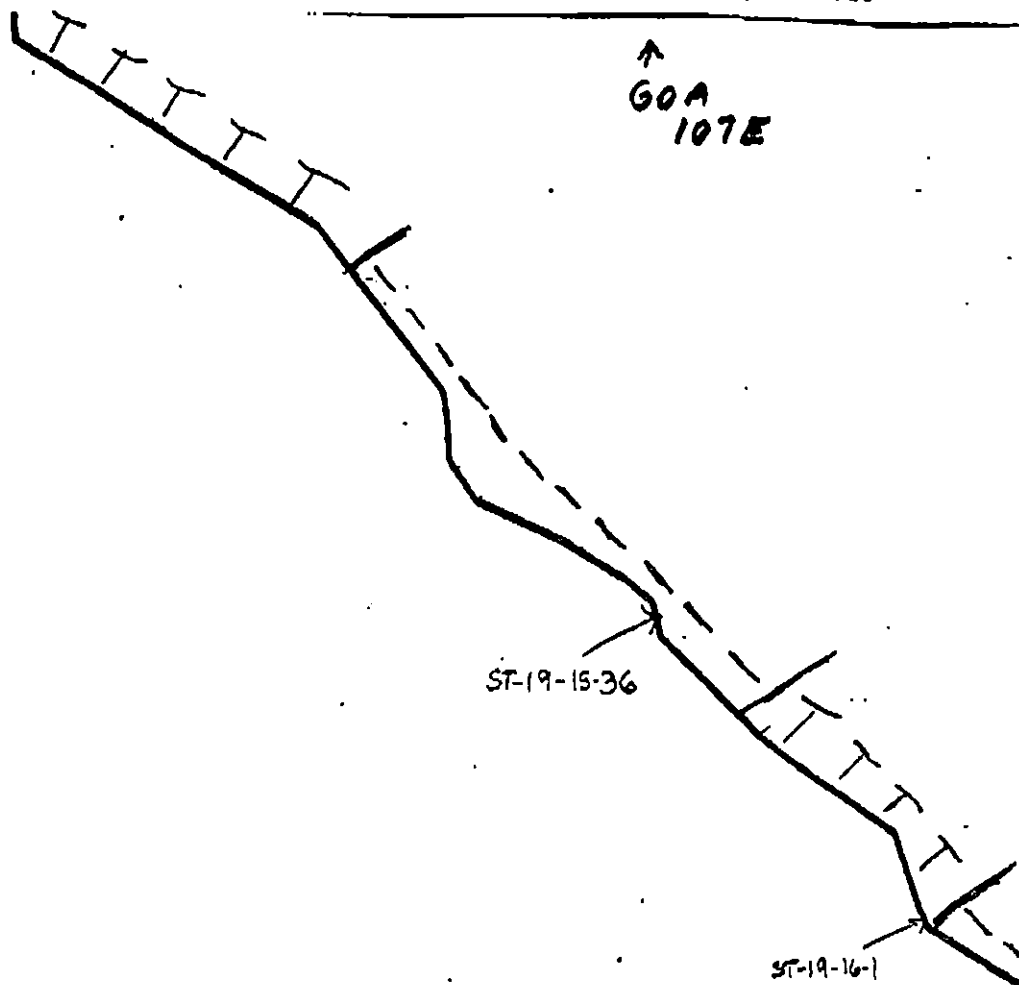


Map Key: GOA-1070

Name: NAKASHIMA

Date: 24 Apr 90

Data Entered:



GOA
107c →

XXXX Wide

/// Medium

----- Narrow

TTTT Very Light

0000 No Oil

HB - 3

ADFC Segment Length: 3579m



Map Key: GOA-107b

Name: NAKASHIMA

Date: 24 Dec 90

Data Entered:

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 unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Holmes DATE: 5/3/90

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:

<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 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: 5/3/90

ADEC ART WEINER
EXXON AMY TOL
NOAA GARY PETRAE
USCG KENNETH KENNIS

FOSC: DATE: 5-8-90

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

OG LINDSAY NAKASHIMA

SEGMENT 11 K0919-HB003

SUBDIVISION HB003A

DATE 4 123 90

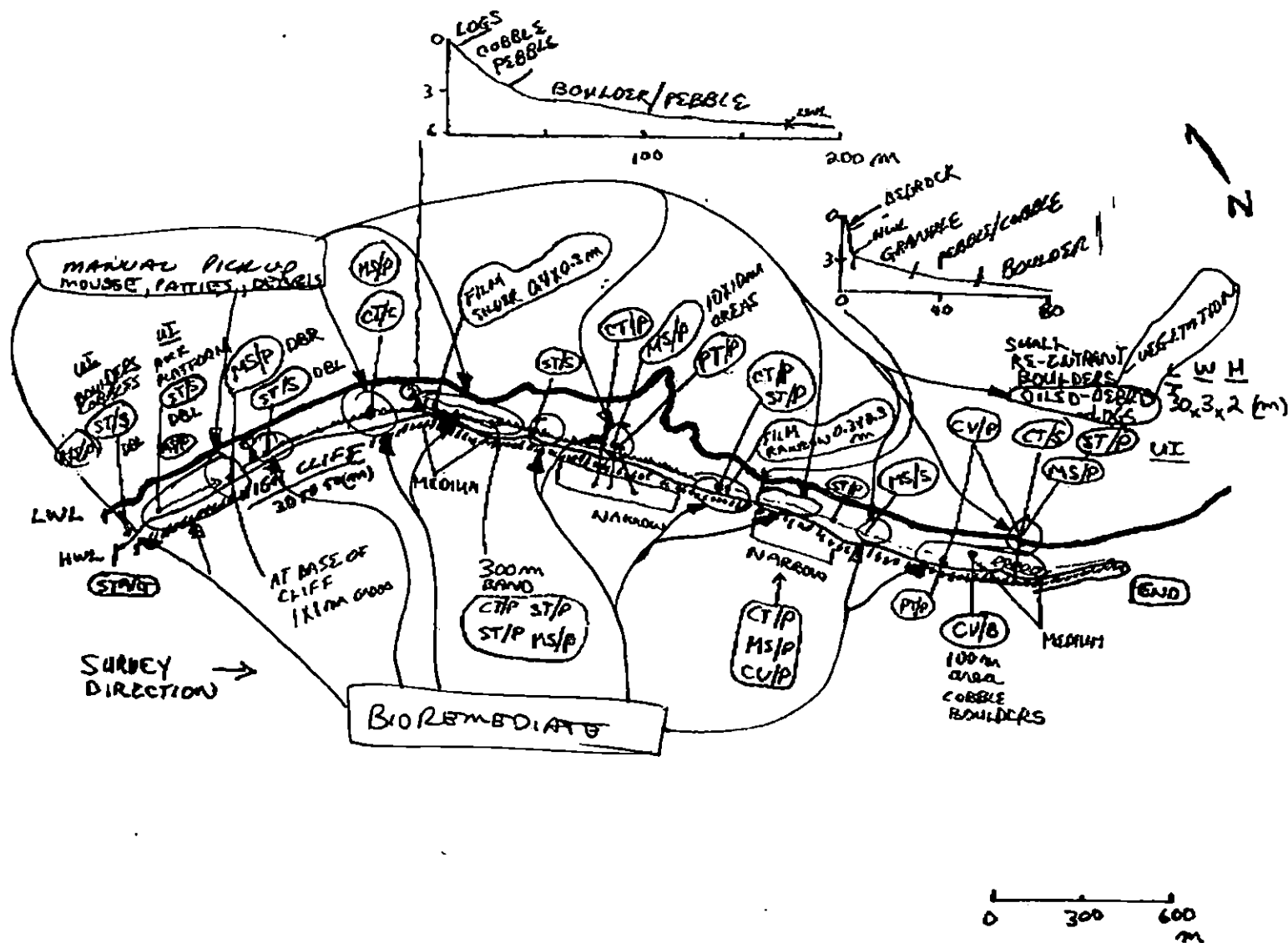
CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bdry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/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
- $\square$ CT/C
Continuous Distribution
- $\square$ CT/B
Broken Distribution
- $\square$ CT/P
Patchy Distribution
- $\square$ CT/S
Splotched Distribution
- $\lll$
Oiled Vegetation
- 1 $\rightarrow$
Photo location, direction, and number

SKETCH MAP

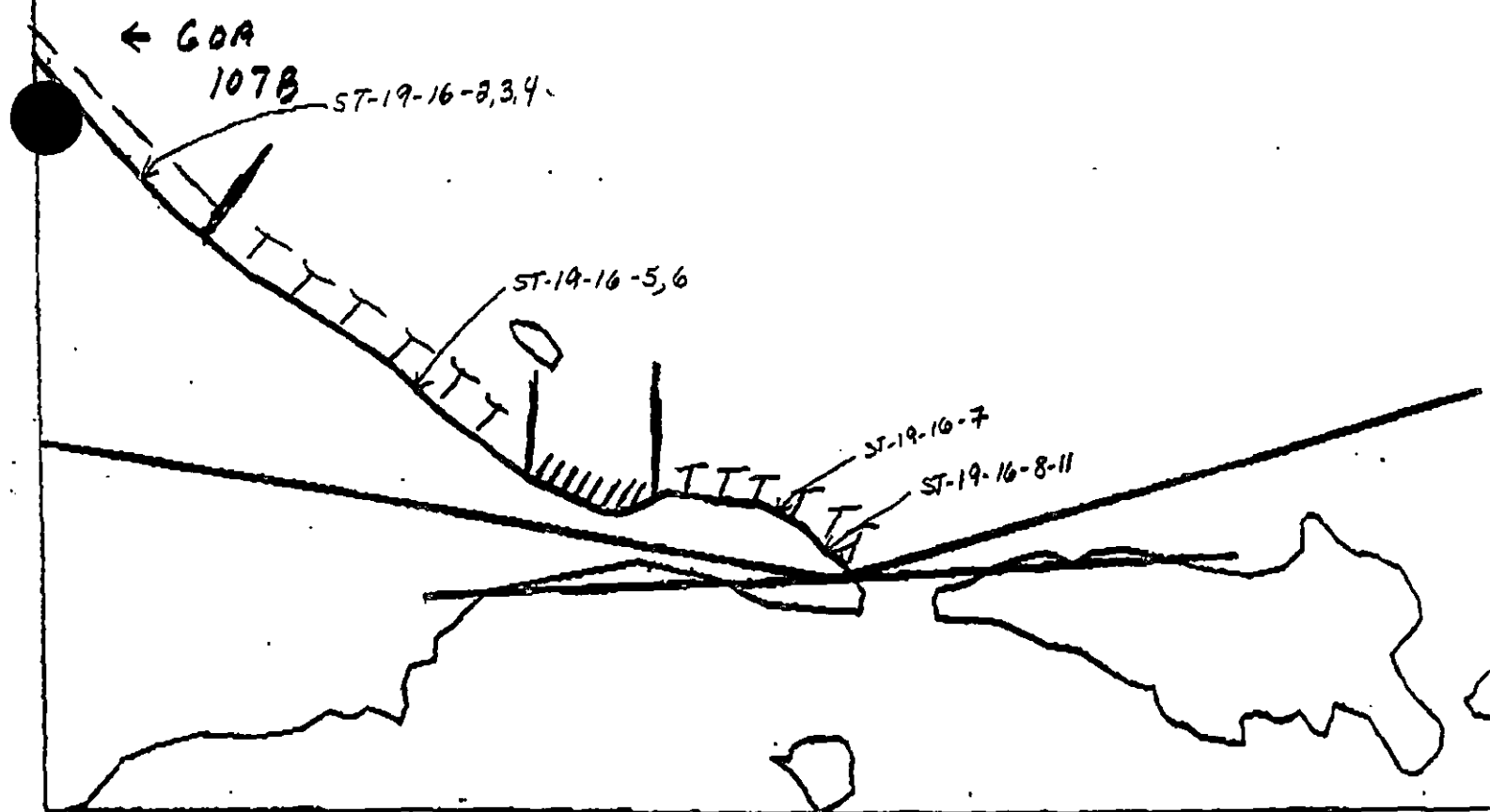


Oil Character Length (m): AP 0 PO 0 CV 1850 CT 1500 ST 2000 MS 200 PT 300 TB 0 FL 2 NO 0

REVISION 03/96

E 00000 / 111
(1044)

(NOTE)
- NO STREAMS
IN SEGMENT
755, 96M



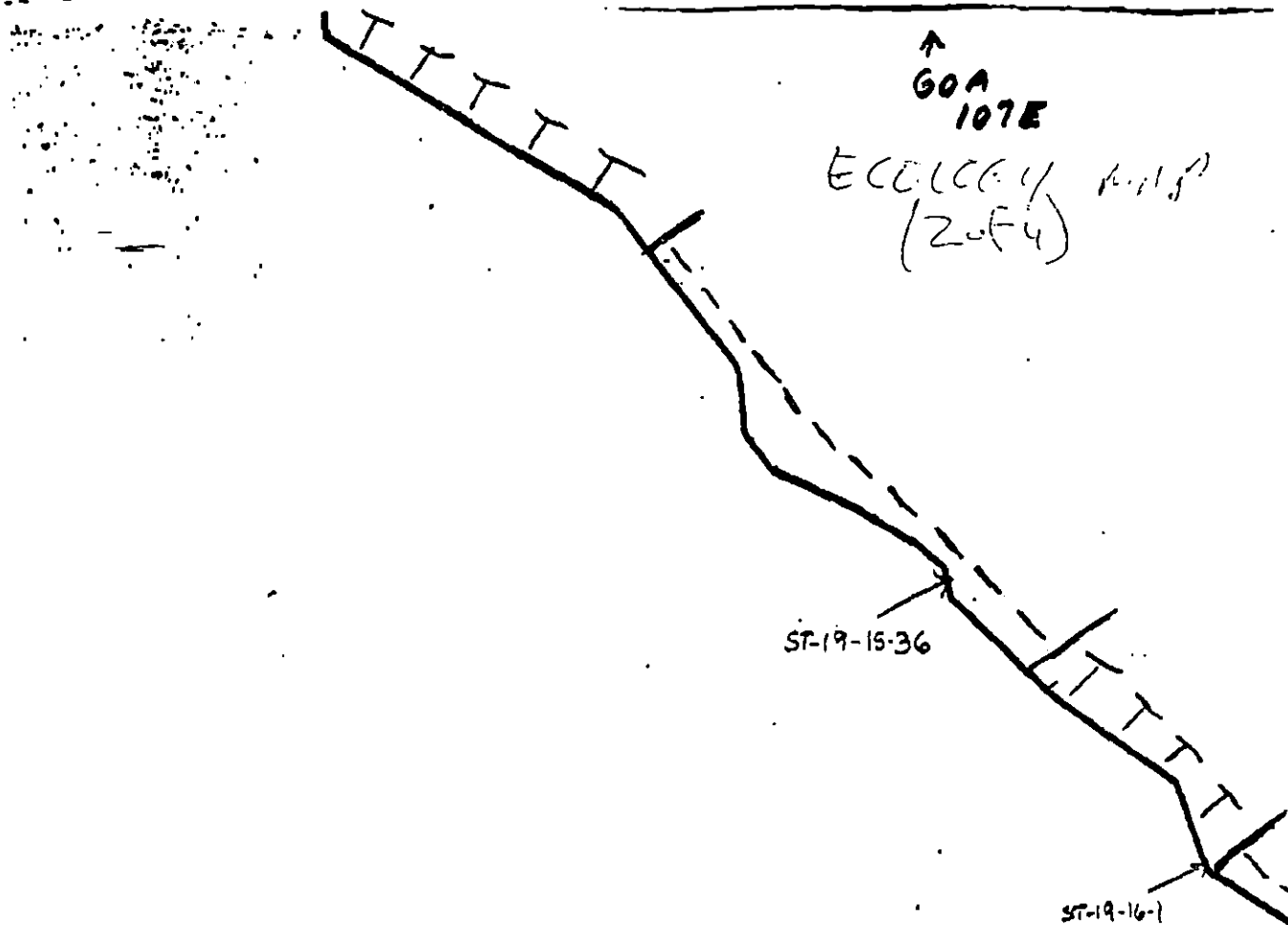
XXXX Wide
/// Medium
--- Narrow
TTTT Very Light
0000 No Oil

HB-3

ADEC Segment Length: 3579m



Map Key: GOA-107c
Name: NAKASHIMA
Date: 24 Apr 90
Data Entered:



GOA
107E →

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

HB-3

ADEC Segment Length: 3579m



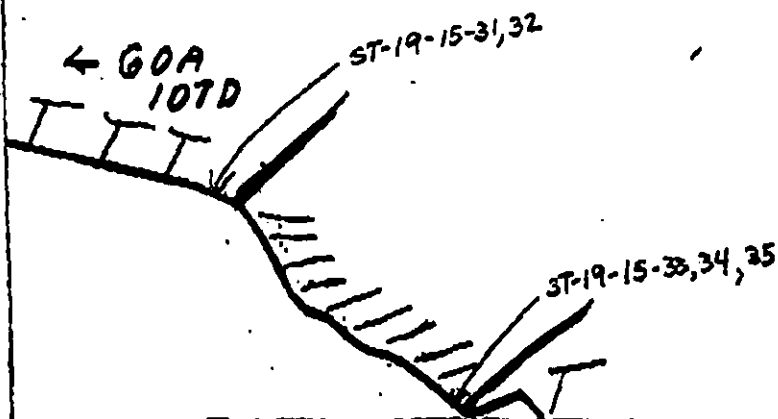
Map Key: GOA-107E

Name: NAKASHIMA

Date: 24 Apr 90

Date Entered:

CCCCCY 111
(3 of 4)



XXXX Wide

HB-3

//// Medium

--- Narrow

ADEC Segment Length: 3570m

TTTT Very Light

0000 No Oil



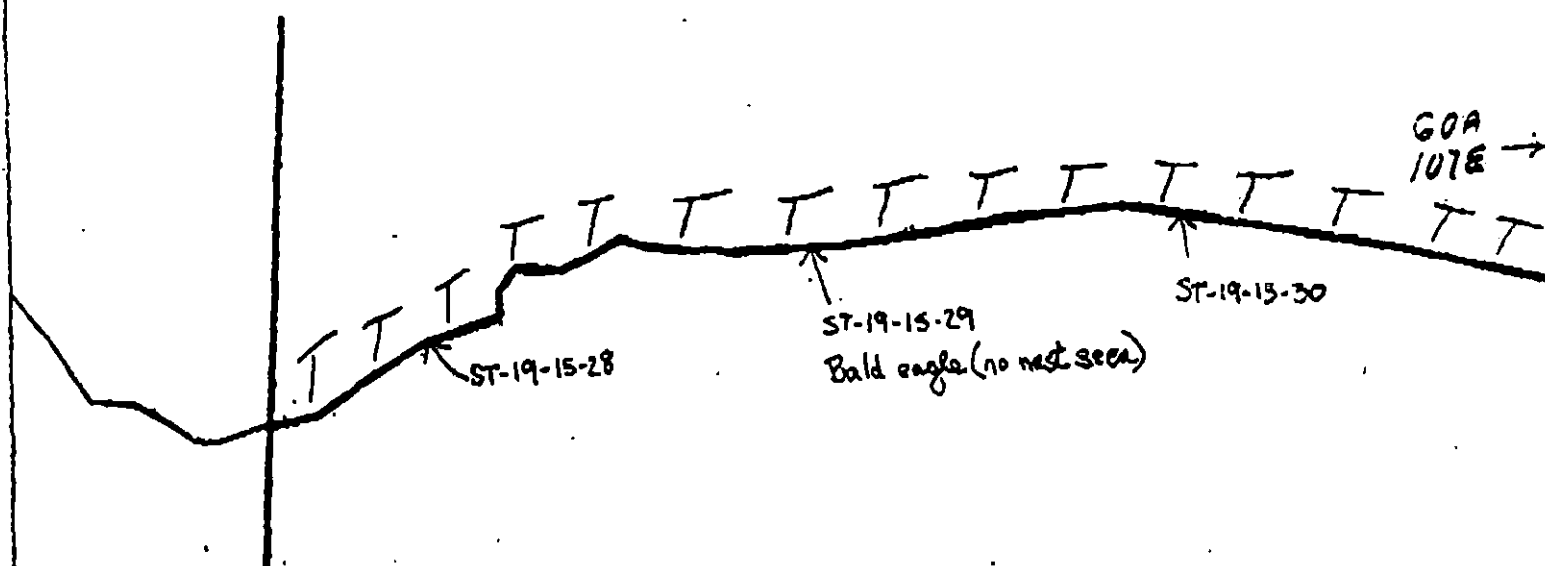
Map Key: GOA-1070

Name: NARASHIMA

Date: 24 Apr 90

Date Entered:

EC: 4:44



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

HB-3

ADEC Segment Length: 3579m

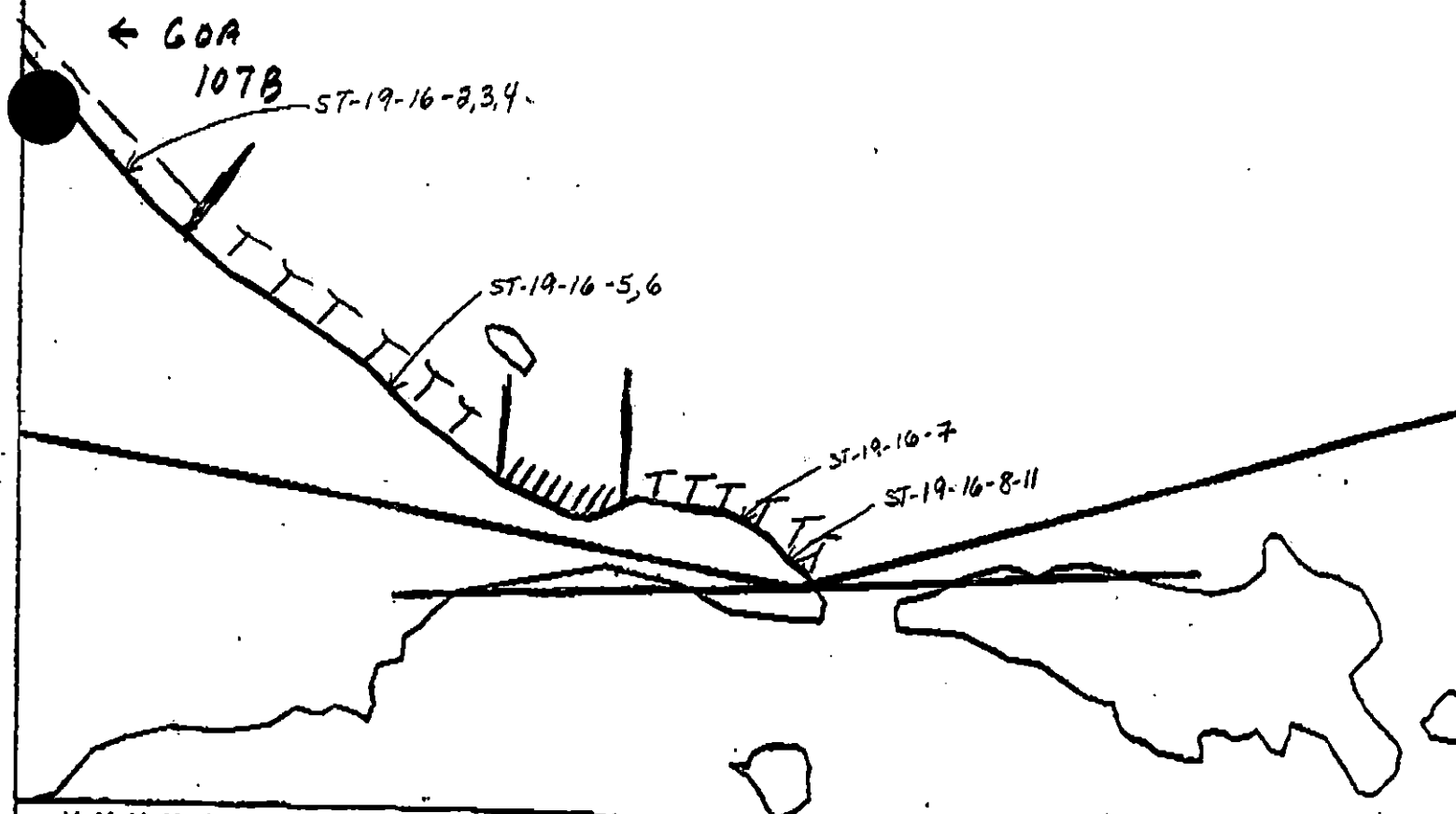


Map Key: GOA-107d

Name: NAKASHIMA

Date: 24 Apr 90

Date Entered:



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

HB-3

ADEC Segment Length: 3579m

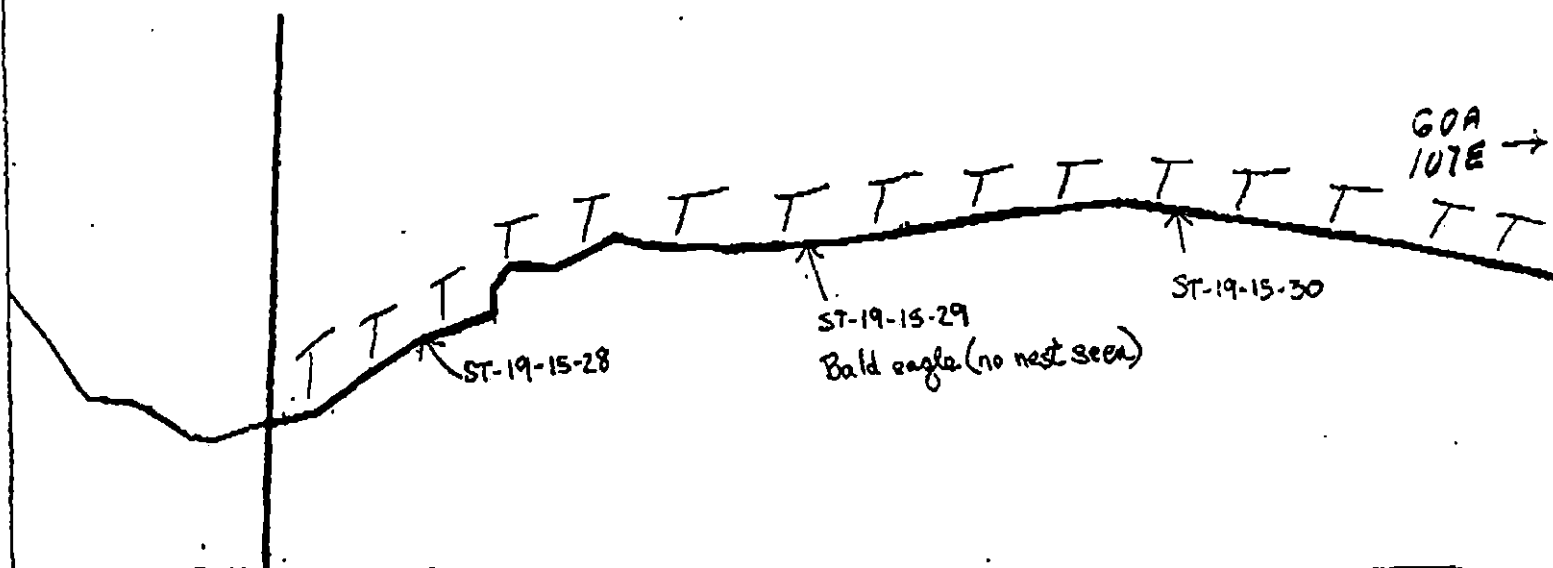


Map Key: GOA-107c

Name: NAKASHIMA

Date: 24 Apr 90

Data Entered:



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

HB-3

ADEC Segment Length: 3579m

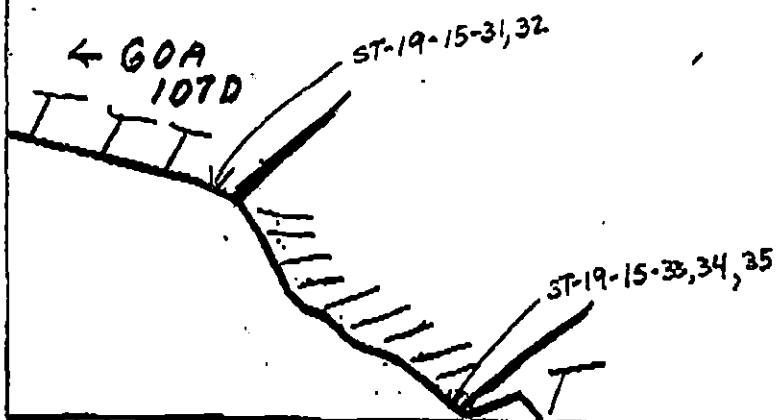


Map Key: GOA-107d

Name: NAKASHIMA

Date: 24 Apr 90

Date Entered:



↓ GOA 107B

XXXX Wide

HB-3

/// Medium

--- Narrow

ADEC Segment Length: 3579m

TTTT Very Light

0000 No Oil

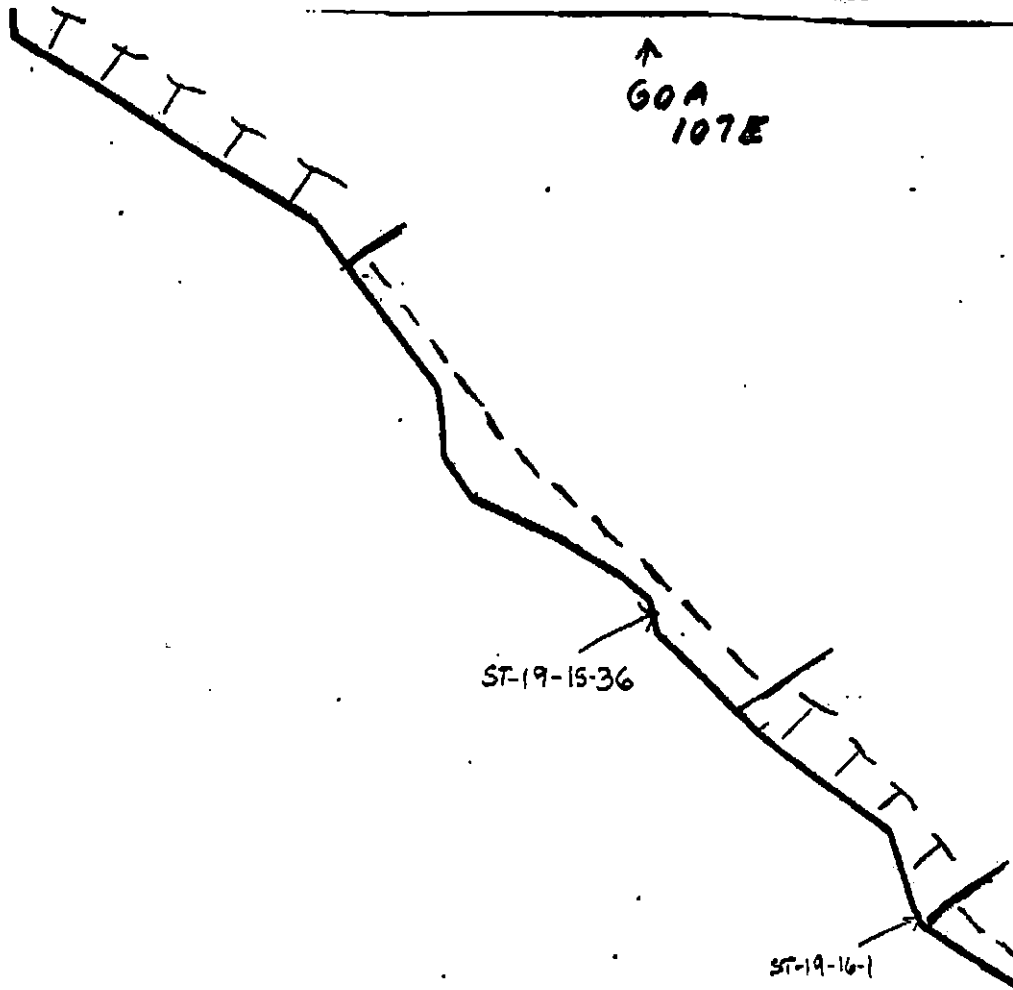


Map Key: GOA-1070

Name: NAKASHIMA

Date: 24 Apr 90

Date Entered:



GOA
107E →

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

HB-3

ADEC Segment Length: 3579m



Map Key: GOA-107b

Name: NAKASHIMA

Date: 24 Apr 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 unloiled biota and substrate.

FOSC

[Signature]

Date

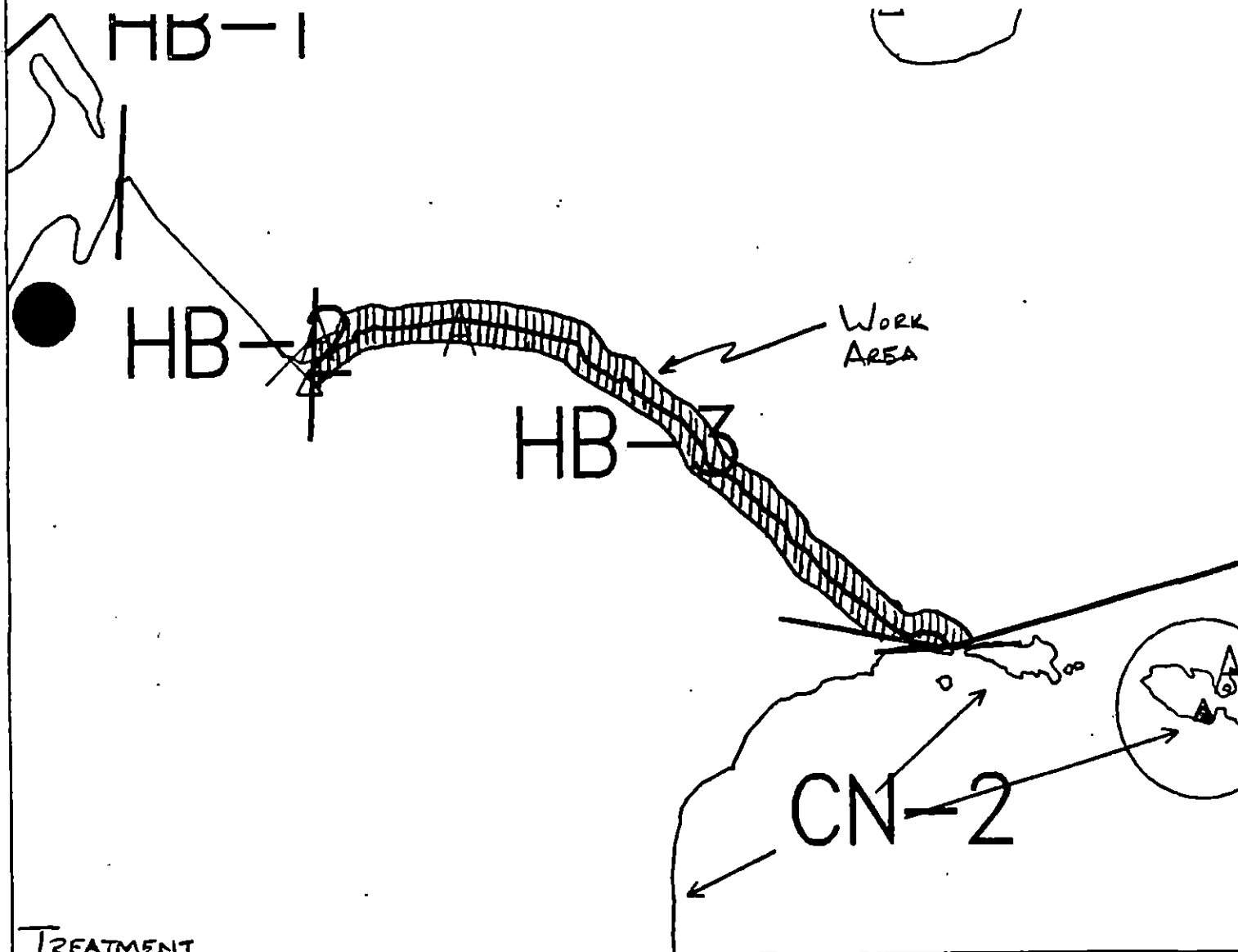
6/21/90

Prepared by

[Signature]

Date

6/21/90



Exxon Company, USA
Map Key: AKP-1B-3
1:10,000



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

METERS



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

1 inch = 2571 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 unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Haden DATE: 5/3/90

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:

<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 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: SEE CONSTRAINTS ADDENDUM DATED 2/21/90

TAG APPROVAL DATE: 5/3/90
ADEC Art Wener
EXXON Andy TBR
NOAA Gary Petrone
USCG

FOSC: DATE: 5-5-90

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

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 unaltered biota and substrate. Restrict all activity to essential minimum, especially air traffic. Restrict boat and air traffic and beach disturbance to essential minimum.

FOSC

DP Rome

Date

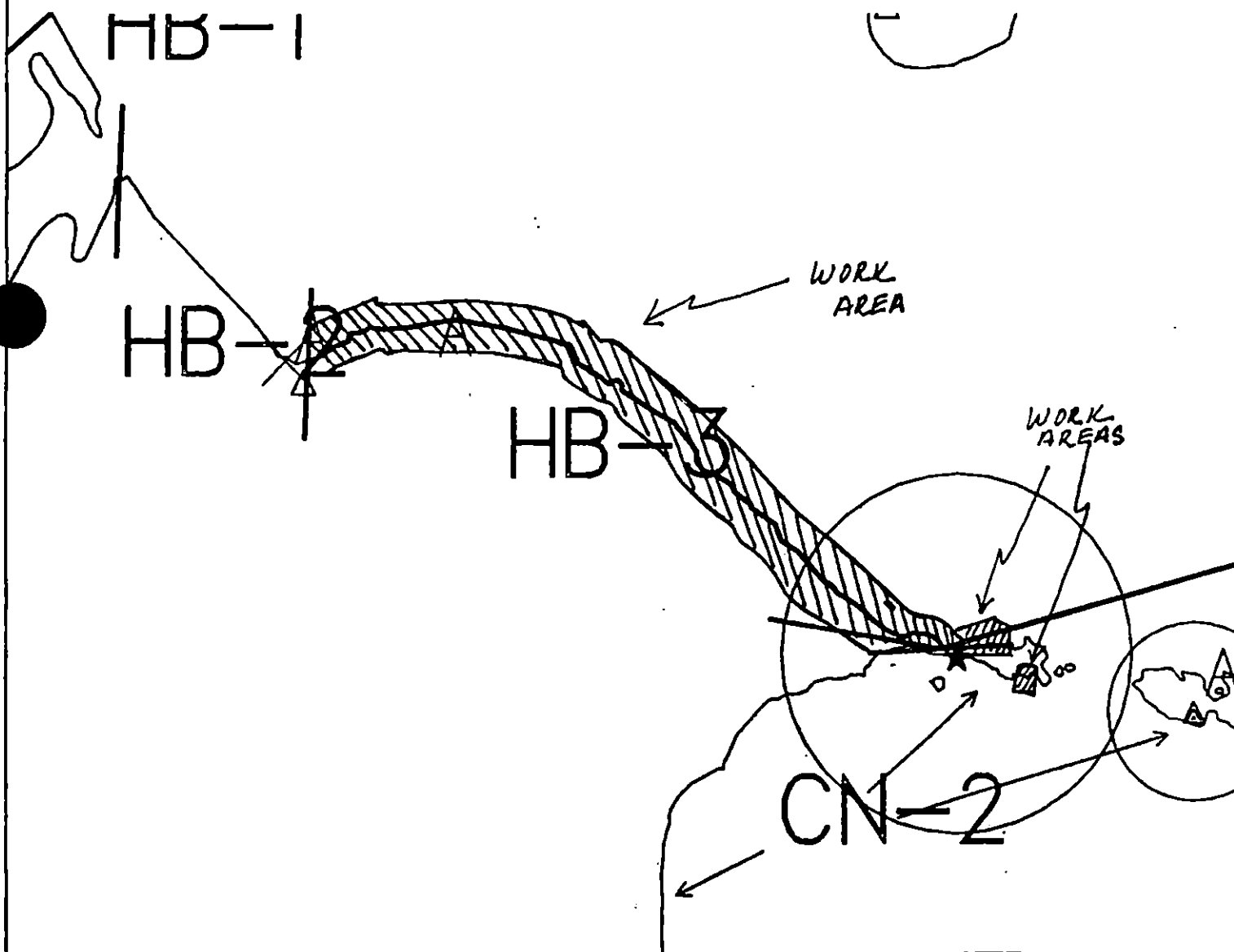
6/24/90

Prepared by

DP Phillips

Date

6/22/90



Exxon Company, USA
Map Key: NP-1B-3



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

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

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 unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Holmes DATE: 5/3/90

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: SEE CONSTRAINTS ADDENDUM DATED 2/22/90

TAG APPROVAL DATE: 5/3/90
ADEC ART WEINER
EXXON ANNY TATE
NOAA GARY PETRAE
USCG ANNY PETRAE

FOSC: L DATE: 5-5-90

No Involvement. All work to be performed between 1 June and 31 August. No beach burning. Access to shoreline via boat only.

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. M. Morris R. M. Morris

EXXON ANDY TEAL Real

NOAA Joseph Kilbott Joseph C. Jones

USCG G.A. REITER G.A. Reiter

FOSC [Signature] DATE 7/5/90

ANADROMOUS FISH STREAM ASSESSMENT

REGION: KODIAK

SEGMENT: K09-19-HB-004

SUBDIVISION: A

STREAM NO: 262-20-10030

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.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

<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: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

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
- 3 Harbor seal and sea lion pupping (5/10 to 7/1)
 30, 32 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)
 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/ K9-19 HB4 SUBDIVISION: STREAM 262-20-10030 UNCATALOGED DATE 5/1/90

USCG

NAME

SIGNATURE

☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

ADFAG

~~ADFC~~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 PRACTICE. EWW.

LAND MANAGER

NAME

SIGNATURE

☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

FIELD SHORELINE COMMENT SHEET

ORIG SSAT SURVEY

SEGMENT ST 1 K9.19 HB-4 SUBDIVISION: K9-1A-HB-4A DATE 4-30-90

USCG

NAME: D. Haven Jr. LMS USCLR 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. Bennis 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 HB-4 is time permit.

LAND MANAGER: VPS

NAME: Will TROPER SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

The segment has a few scattered mouse piddies, primarily in the estuary inland 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/ K9-10-42-4
 BIO Devin LAND REP UPS Trevor Jones SUBDIVISION K9-10-42-4A (J.O.F.)
 EXXON Avery ADEC Bennis TIME 1:20:10.5:00
 TEAM NO. 20 TIDE LEVEL 0 to +6 DATE 4/30/90
 SUBDIVISION LENGTH: m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 LANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to 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			
	0	1	2	3	1	2	3	4	5	SU	U	M	U
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT													
STAIN				✓	✓					✓			
MOUSSE			✓				✓			✓	✓		
PATTIES													
TARBALLS													
NO OIL												✓	✓

 PAVEMENT H F S sq. m by cm

 PATTIES / TARBALLS BAGS

 NEAR SHORE SHEEN? ☒ BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	✓		
Vegetation			
Trash			
Debris			

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					BELOW	OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	V	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		1	2	3	4	5	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 (2.7cm) 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 A

SEGMENT ST-19-19-H12-4

SUBDIVISION K9-19-H10-4A

DATE 4 / 21 / 80

SCH MAP

N
Approx Scale
1cm = 200m

CHECKLIST

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

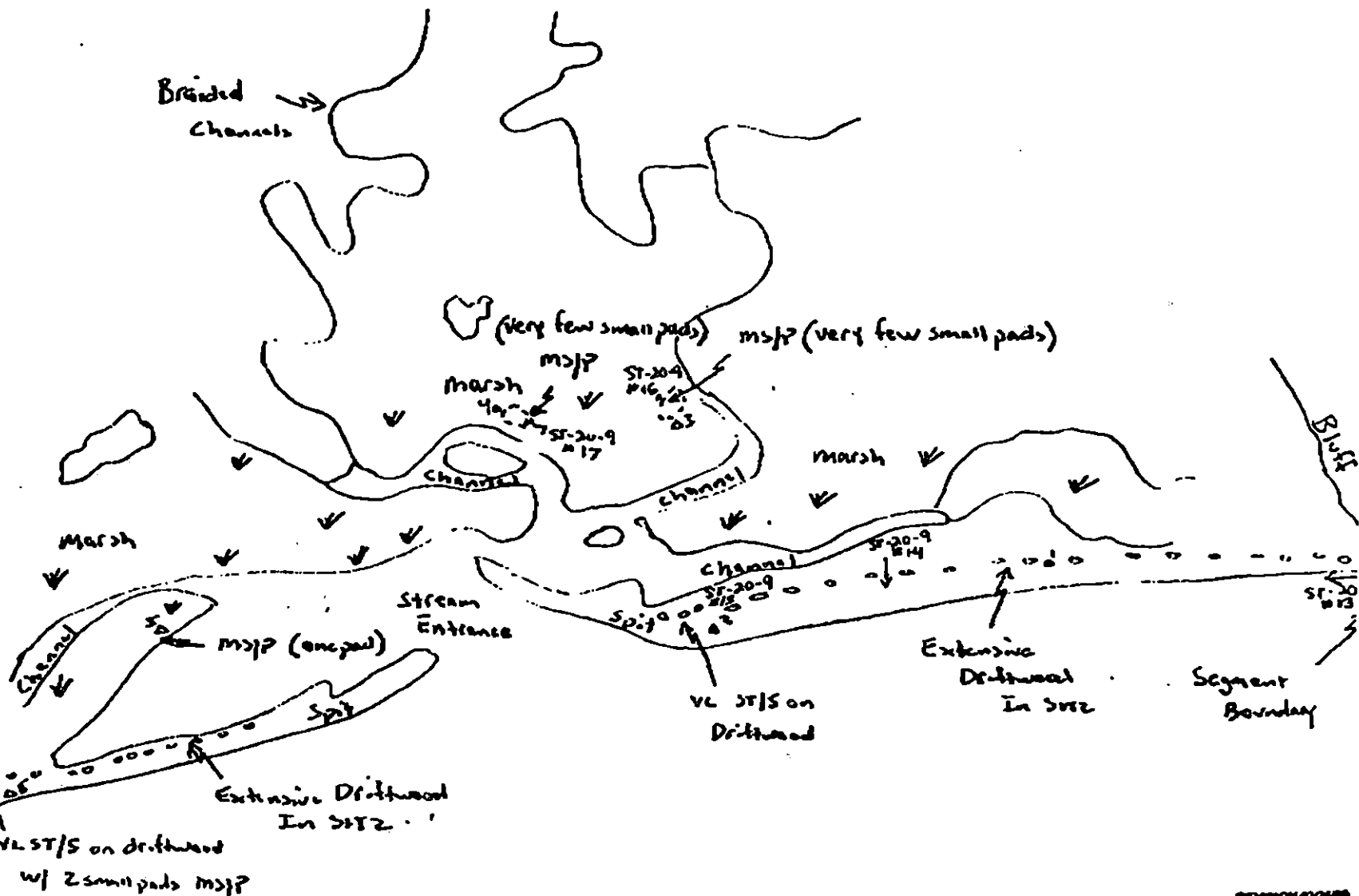
Broken Distribution
- CT/P

Patchy Distribution
- CT/S

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

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

Segment



REVISION 02/2000

OG ActonSEGMENT S-19-HQ-4SUBDIVISION K9-M-HQ-4ADATE 4 / 21 / 90

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

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patched 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

SKETCH MAP

N
→

ADF+G pre-cannal survey 4/27/90

Between point A to B discovered Mouse/Tar
 patties/balls mixed with sand Ranging in size 1cm ± 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 1/4 - 3/8" Thick Tar. Jeffrey Barnhart

Approx Scale



REVISIONS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/02/90

Segment ST, K9-19 Subdivision HB-604 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 100% (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

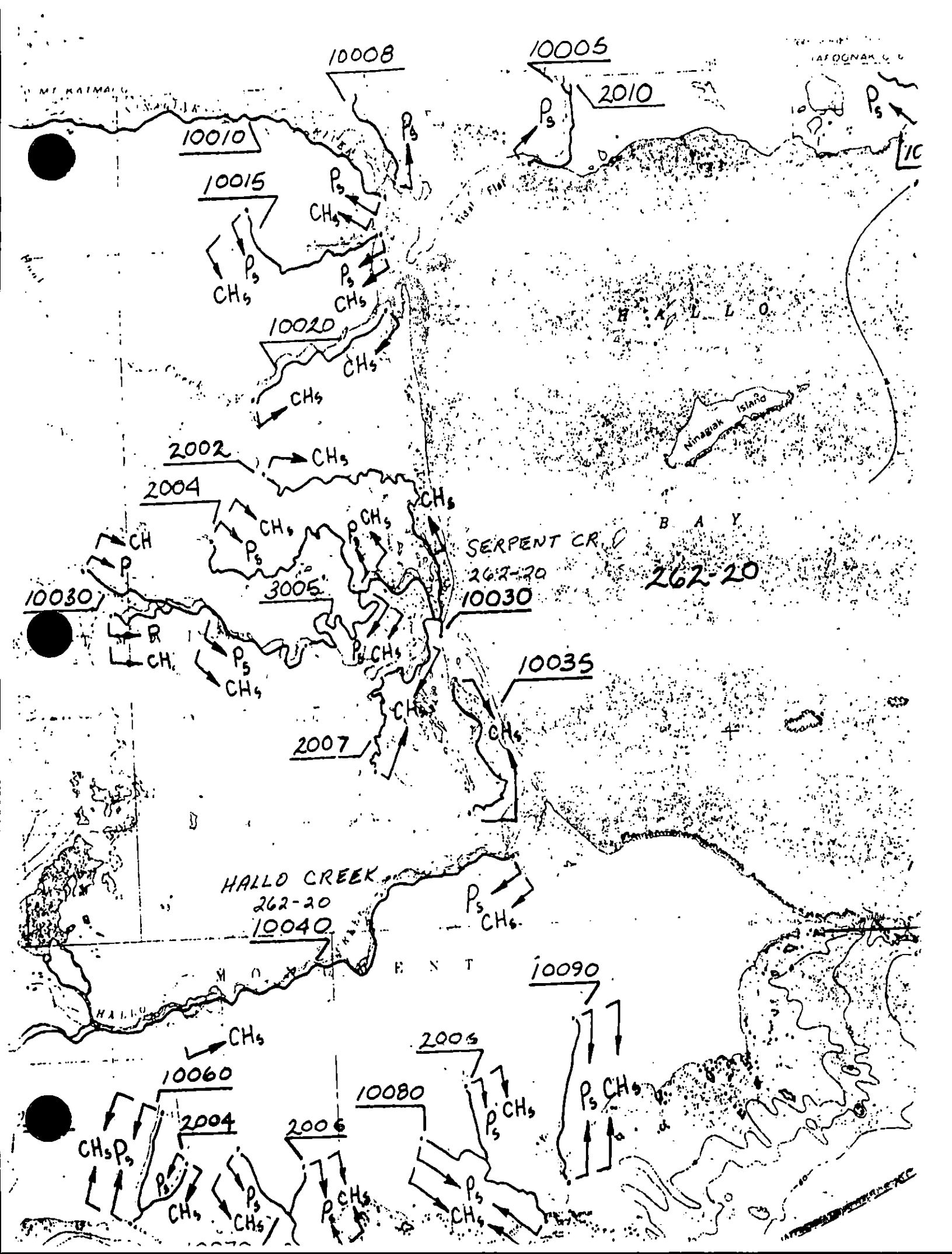
Wildlife Observations/ General Comments: Birds seen in the area: 2 adult eagles, 1 juvenile eagle, 1 Raven, 10-15 Glaucous-winged gulls, 3 Greater white-fronted Goose, and (10) Golden plover. Mammal tracks: River Otter, Fox, Wolf, Moose and Bear. One bear clawing out on the mudflats. Thick flat limpet, Littorina littorea, Siliqua patula, Saxidomus giganteus, Mya sp (eliquans?) and Macoma sp.

Ecological Considerations: IAB, 75T, 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.

1990

ROLL NO. ST-20-9 FROM 4/30 TO
TEAM NO. 20 PWS / KENAI / KODIAK / AK. PENINSULA

[illegible]



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.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Rachel Jan Dan 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 Weiler Art Weiler

EXXON Andy Tamm Andy Tamm

NOAA Burt Wescott Burt Wescott

CG G.A. Reiter G.A. Reiter

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

OG Ad

SCH MAP

N
Approx Scale
1cm $\approx$ 200m

SEGMENT ST/ K9-19-HQ-4

SUBDIVISION K9-19-HQ-4A

DATE 4 / 21 90

CHECKLIST

- ☐ M Area
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HW/LA/WL
- ☐ SCL
- ☐ 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

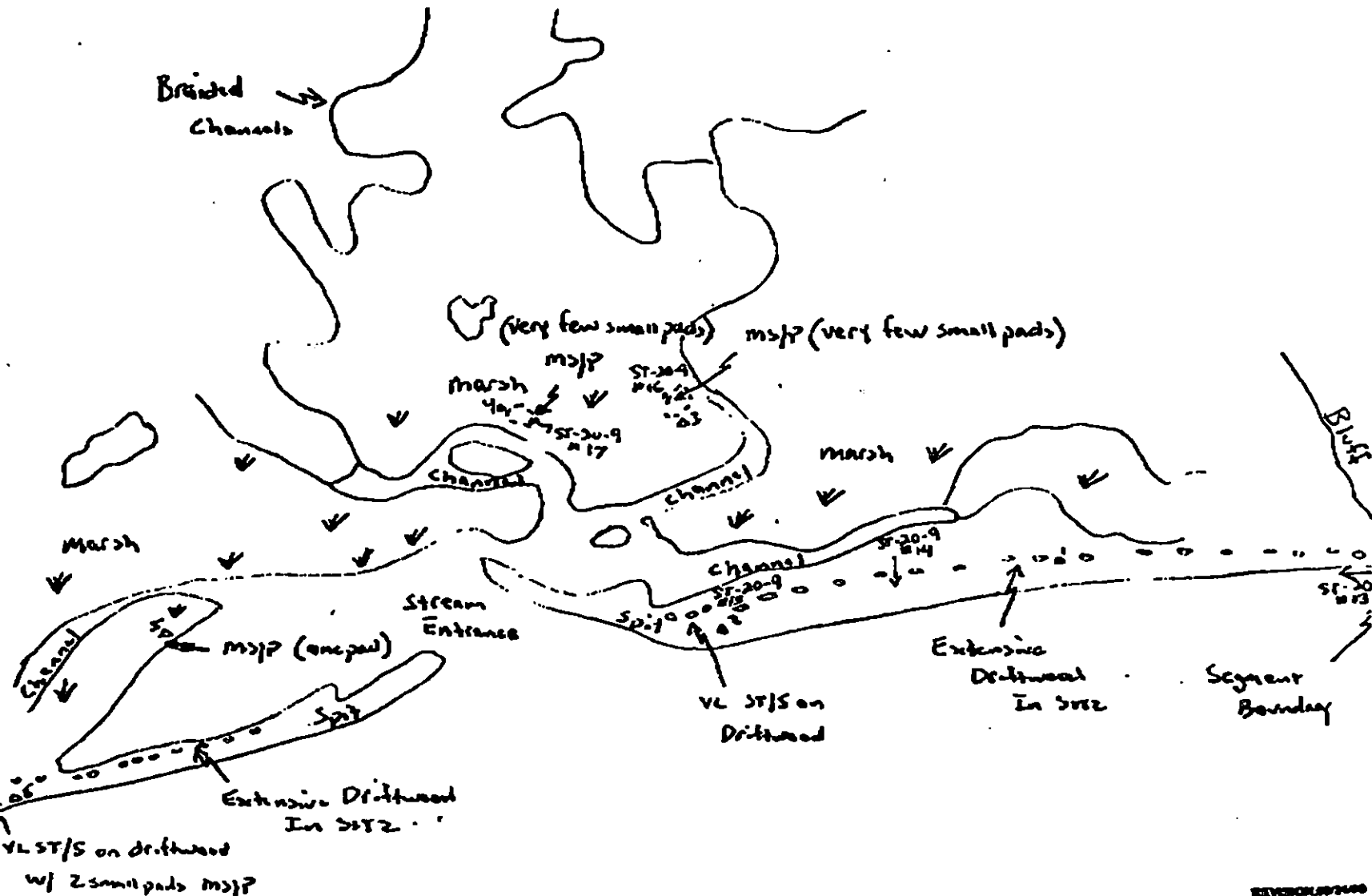
Oil on Vegetation

1 $\rightarrow$

Photo location, direction, and number

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

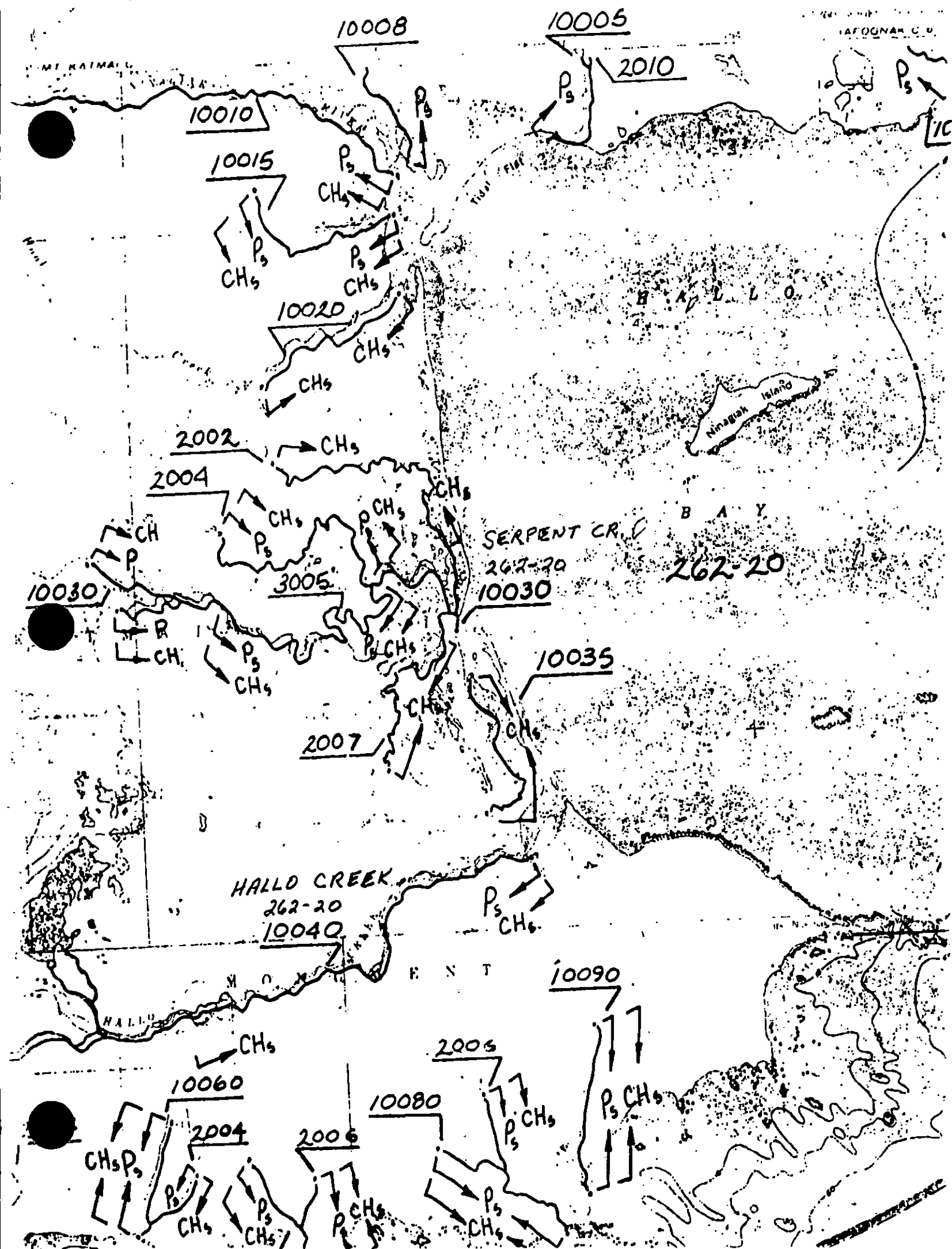
Segment



REVISION 07/90

A hand-drawn map of a coastal area, likely a marsh or wetland. The map shows a network of channels and a stream. Key features and labels include:

- Channels:** Several channels are labeled, including "Branched Channels" at the top left, "Channel" in the center, and "Channel" near the bottom right.
- Marsh:** Areas of marsh are labeled, including "Marsh" near the top center and "Marsh" near the bottom left.
- Stream Entrance:** A dashed line indicates the "Stream Entrance" near the bottom center.
- Spit:** A "Spit" is labeled near the bottom left, adjacent to a "Marsh" area.
- Driftwood:** "Extensive Driftwood In Site" is labeled twice, once near the bottom left and once near the bottom right.
- Segment Boundary:** A dashed line on the right side is labeled "Segment Boundary".
- Bluff:** A "Bluff" is labeled on the far right edge.
- Other Labels:** "msjp (very few small patches)" is labeled twice, once near the top center and once near the top right. "msjp (one patch)" is labeled near the bottom left. "vl srs on Driftwood" is labeled near the bottom center. "sr-20-9 #17" and "sr-20-9 #14" are labeled near the center and bottom right respectively. "sr-20-9 #23" is labeled near the top center. "sr-20-9 #20" is labeled near the bottom right. "sr-20-9 #21" is labeled near the top center. "sr-20-9 #22" is labeled near the top center. "sr-20-9 #23" is labeled near the top center. "sr-20-9 #24" is labeled near the top center. "sr-20-9 #25" is labeled near the top center. "sr-20-9 #26" is labeled near the top center. "sr-20-9 #27" is labeled near the top center. "sr-20-9 #28" is labeled near the top center. "sr-20-9 #29" is labeled near the top center. "sr-20-9 #30" is labeled near the top center. "sr-20-9 #31" is labeled near the top center. "sr-20-9 #32" is labeled near the top center. "sr-20-9 #33" is labeled near the top center. "sr-20-9 #34" is labeled near the top center. "sr-20-9 #35" is labeled near the top center. "sr-20-9 #36" is labeled near the top center. "sr-20-9 #37" is labeled near the top center. "sr-20-9 #38" is labeled near the top center. "sr-20-9 #39" is labeled near the top center. "sr-20-9 #40" is labeled near the top center. "sr-20-9 #41" is labeled near the top center. "sr-20-9 #42" is labeled near the top center. "sr-20-9 #43" is labeled near the top center. "sr-20-9 #44" is labeled near the top center. "sr-20-9 #45" is labeled near the top center. "sr-20-9 #46" is labeled near the top center. "sr-20-9 #47" is labeled near the top center. "sr-20-9 #48" is labeled near the top center. "sr-20-9 #49" is labeled near the top center. "sr-20-9 #50" is labeled near the top center. "sr-20-9 #51" is labeled near the top center. "sr-20-9 #52" is labeled near the top center. "sr-20-9 #53" is labeled near the top center. "sr-20-9 #54" is labeled near the top center. "sr-20-9 #55" is labeled near the top center. "sr-20-9 #56" is labeled near the top center. "sr-20-9 #57" is labeled near the top center. "sr-20-9 #58" is labeled near the top center. "sr-20-9 #59" is labeled near the top center. "sr-20-9 #60" is labeled near the top center. "sr-20-9 #61" is labeled near the top center. "sr-20-9 #62" is labeled near the top center. "sr-20-9 #63" is labeled near the top center. "sr-20-9 #64" is labeled near the top center. "sr-20-9 #65" is labeled near the top center. "sr-20-9 #66" is labeled near the top center. "sr-20-9 #67" is labeled near the top center. "sr-20-9 #68" is labeled near the top center. "sr-20-9 #69" is labeled near the top center. "sr-20-9 #70" is labeled near the top center. "sr-20-9 #71" is labeled near the top center. "sr-20-9 #72" is labeled near the top center. "sr-20-9 #73" is labeled near the top center. "sr-20-9 #74" is labeled near the top center. "sr-20-9 #75" is labeled near the top center. "sr-20-9 #76" is labeled near the top center. "sr-20-9 #77" is labeled near the top center. "sr-20-9 #78" is labeled near the top center. "sr-20-9 #79" is labeled near the top center. "sr-20-9 #80" is labeled near the top center. "sr-20-9 #81" is labeled near the top center. "sr-20-9 #82" is labeled near the top center. "sr-20-9 #83" is labeled near the top center. "sr-20-9 #84" is labeled near the top center. "sr-20-9 #85" is labeled near the top center. "sr-20-9 #86" is labeled near the top center. "sr-20-9 #87" is labeled near the top center. "sr-20-9 #88" is labeled near the top center. "sr-20-9 #89" is labeled near the top center. "sr-20-9 #90" is labeled near the top center. "sr-20-9 #91" is labeled near the top center. "sr-20-9 #92" is labeled near the top center. "sr-20-9 #93" is labeled near the top center. "sr-20-9 #94" is labeled near the top center. "sr-20-9 #95" is labeled near the top center. "sr-20-9 #96" is labeled near the top center. "sr-20-9 #97" is labeled near the top center. "sr-20-9 #98" is labeled near the top center. "sr-20-9 #99" is labeled near the top center. "sr-20-9 #100" is labeled near the top center.



SHORELINE EVALUATION

SEGMENT ST/ K09-19-HB-004 SUBDIVISION A (1 OF 1) DATE 4/30/90

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)
7JJ Subsistence area: Invertebrate harvesting
9LM 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.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Rachel Jean Ode DATE: 5/19/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 197 m: No Oil 14964 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: 5/17/90

ADEC ART WEINER Art Weiner
EXXON AMY TATE Amy Tate
NOAA GARY PETRAE Gary Petrae
USCG G.A. FEITER G.A. Feiter

FOSC: DATE: 5-23-90

OG

SEGMENT ST/ K9-19-H3-4

SUBDIVISION K9-1A-H3-4A

DATE 4 / 21 90

SKETCH MAP

N
Approx Scale
1cm = 200m

CHECKLIST

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

LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

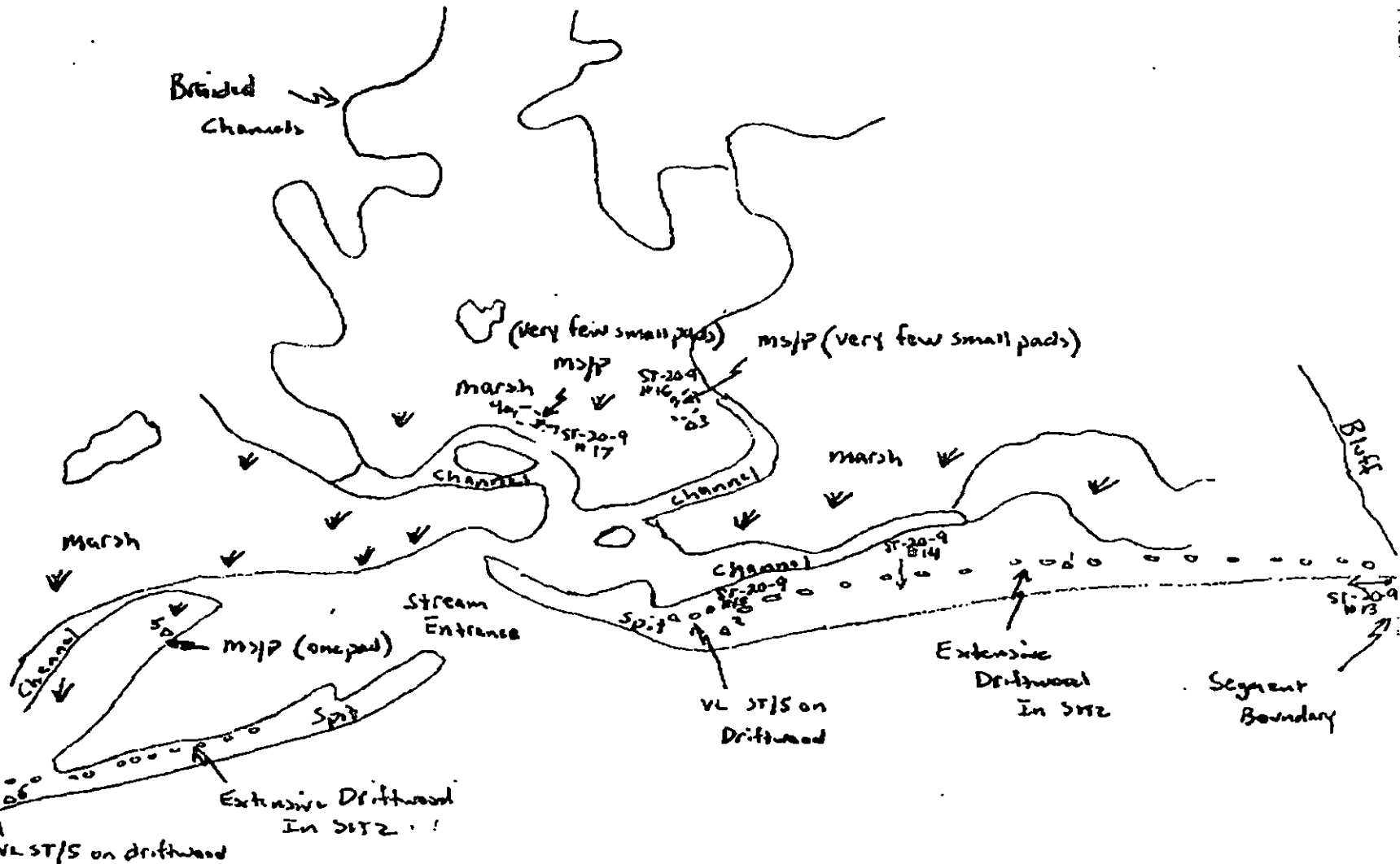
Oiled Vegetation

1 ●

Photo location, direction, and number

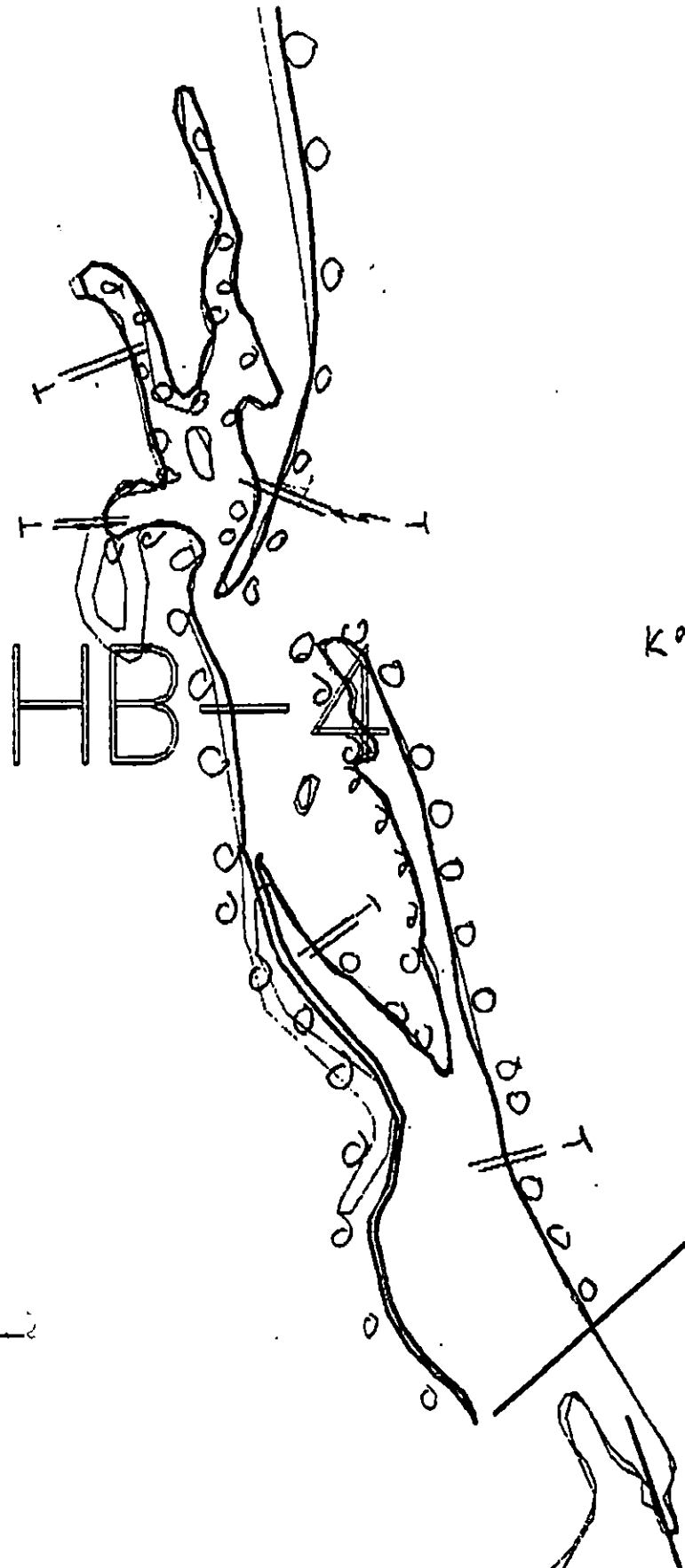
Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 50 MS 50 PT 0 TB 0 FL 0 NO 14491

Segment Boundary



TD
SRAT P.35
3 MAY-04-1990 09:22 FROM EXXON KODIAK

REVISION: 002140



K9-19-HB-4A

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

HB-4

Approx. Segment Length: 14850m



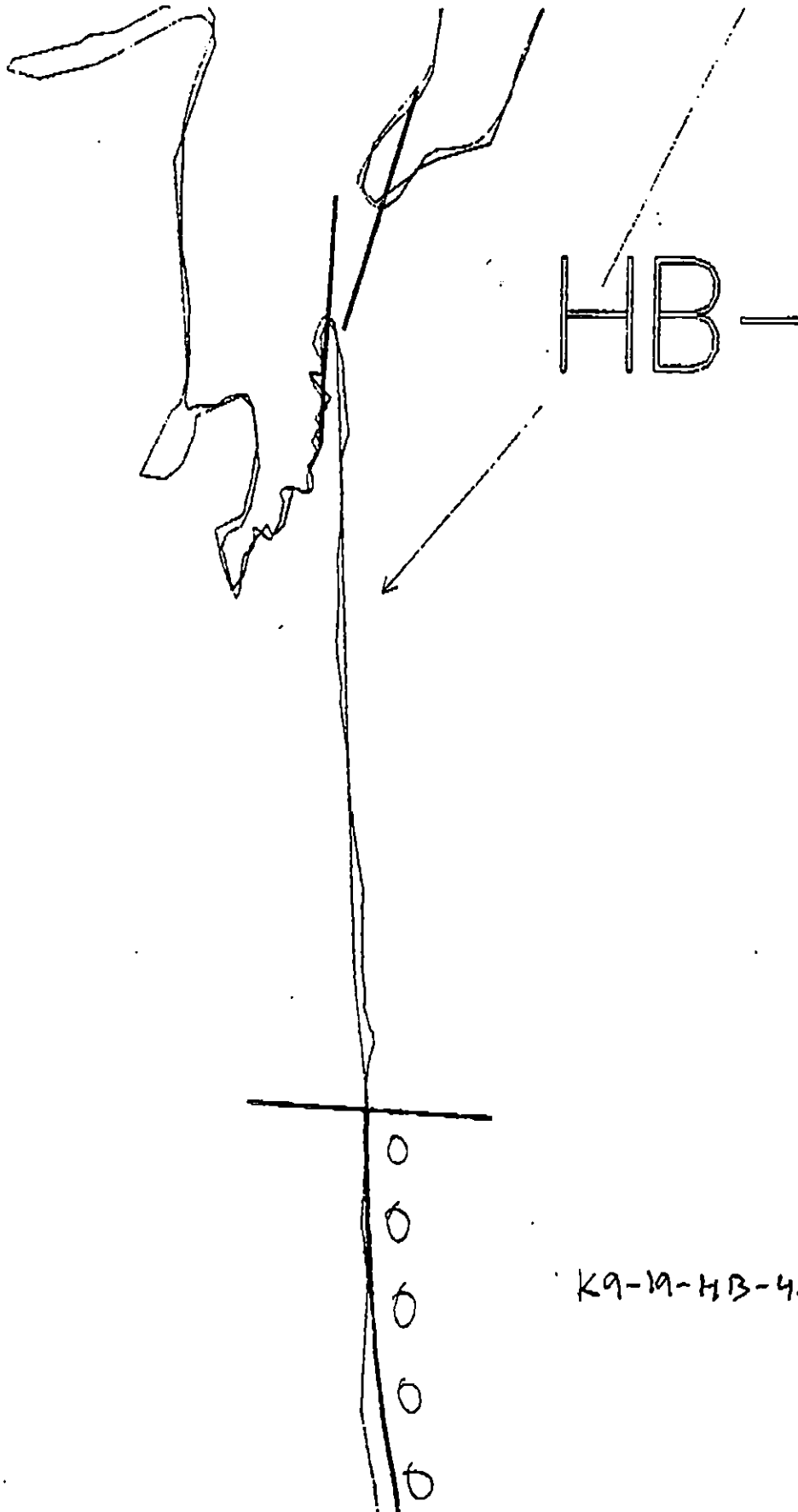
K9-19-HB-4A

Map Key: AKP-HB-4a

Name: Acton

Date: 4-30-90

Data Entered: ..



XXXX Wide

//// Medium

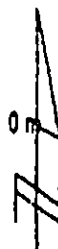
--- Narrow

TTTT Very Light

0000 No Oil

HB-4

Approx. Segment Length: 14850m



K9-19-HB-4A

Map Key: AKP-HB-4b

Name: Acton

Date: 4-30-90

Data Entered:

REGION: KODIAK

SEGMENT: ST/K09-19-HB-004

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ K09-19-HB-004 SUBDIVISION A (1 OF 1) DATE 4/30/90

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)
7JJ Subsistence area: Invertebrate harvesting
9LM 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.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 197 m: No Oil 14964 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

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

FOSC: _____ DATE: _____

SHORELINE EVALUATION

SEGMENT ST/K09-19-HB-004 SUBDIVISION A (1 OF 1) DATE 4/30/90

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)
7JJ Subsistence area: Invertebrate harvesting
9LM Land Mammals
4LL State Marine Park: National Parks

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 197 m: No Oil 14964 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: No Treatment recommended.

TAG COMMENTS: _____

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

FOSC: _____ DATE: _____

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 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 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
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 / K9-19 HB-4 SUBDIVISION: K9-1A-HB-4A DATE 4-30-90

USCG

NAME D. Haven Jr. (W3) USCLR 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. Beani'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 HB4 if time perm.

LAND MANAGER VPSNAME WILL TROPER SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

The segment has a few scattered mouse droppings, primarily in the stream inland 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 Dev LAND REP NPS Taylor James SUBDIVISION K9-19-412-4A (1 OF 1)
 EXXON Alsea ADEC Bear TIME 1:30 to 5:00
 TEAM NO. 20 TIDE LEVEL 0 to +6 DATE 4/30/90
 EST. SUBDIVISION LENGTH: 14541 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to 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 14491 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	0	1	2	3	4	5	6	7	8	9	10	11	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 13-17

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR								PIT ZONE	A	N	A	SHEEN (V/L)	V	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UG	UC	4	5	6	7	8	9	10	11							
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 smms (< 7cm) mousse pads were observed. Two small areas of mousse pads were observed several hundred meters inland from the beach spits, in the marsh area.

REVIEWED BAT DATE 5 May 90

OG

SEGMENT ST/ K9-19-H2-4

SUBDIVISION K9-1A-HB-4A

DATE 4 / 21 90

SKETCH MAP

N
→
Approx Scale
1cm = 200m

CHECKLIST

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

LEGEND

1 Δ

Pt - No Subsurface Oil

2 Δ

Pt - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

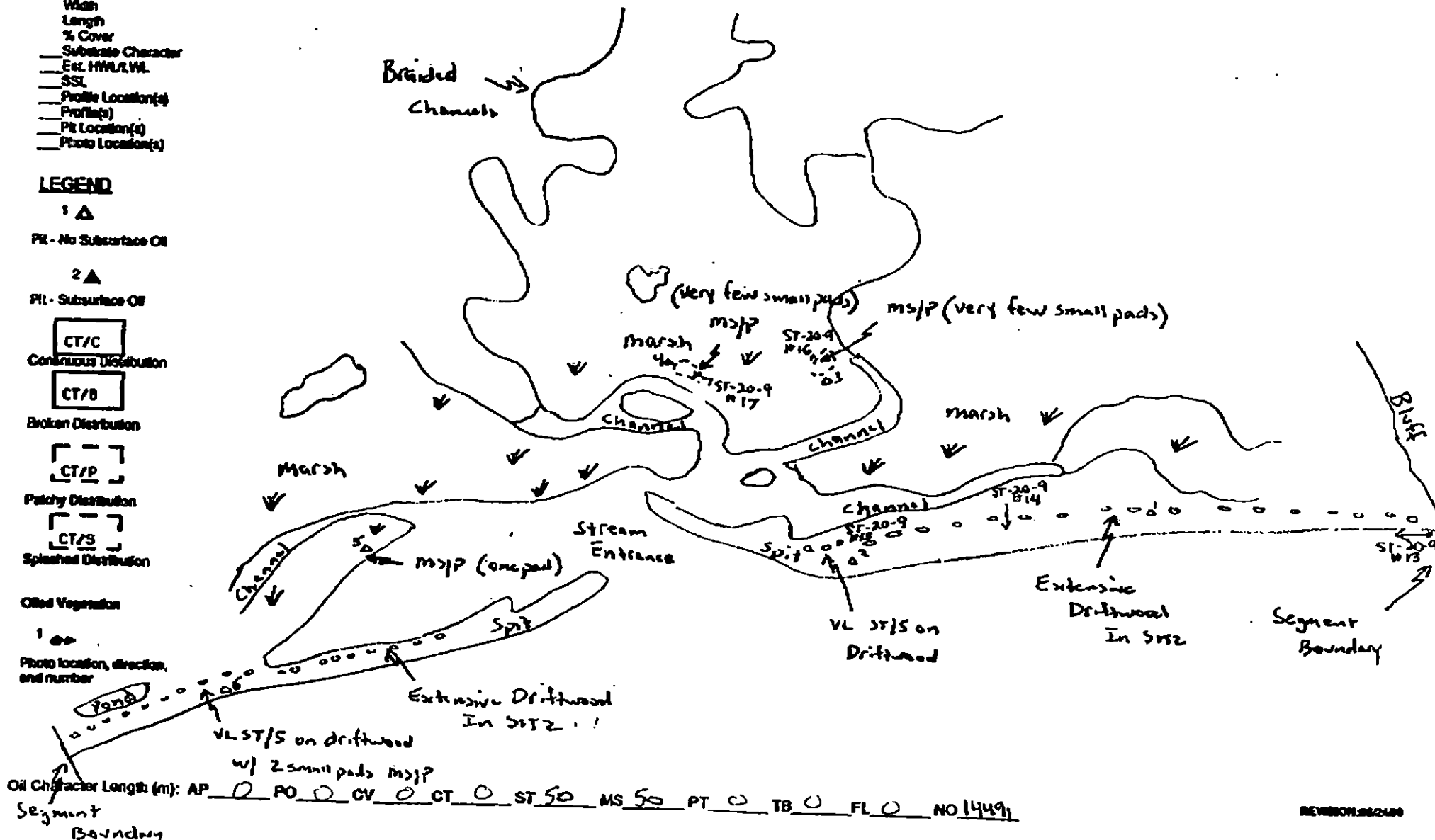
CT/S

Splashed Distribution

Oiled Vegetation

1 ●

Photo location, direction, and number



SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22

Segment ST / 1K9-19 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 100% (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 PRESEN
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 PRESEN
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 PRESEN
1-6

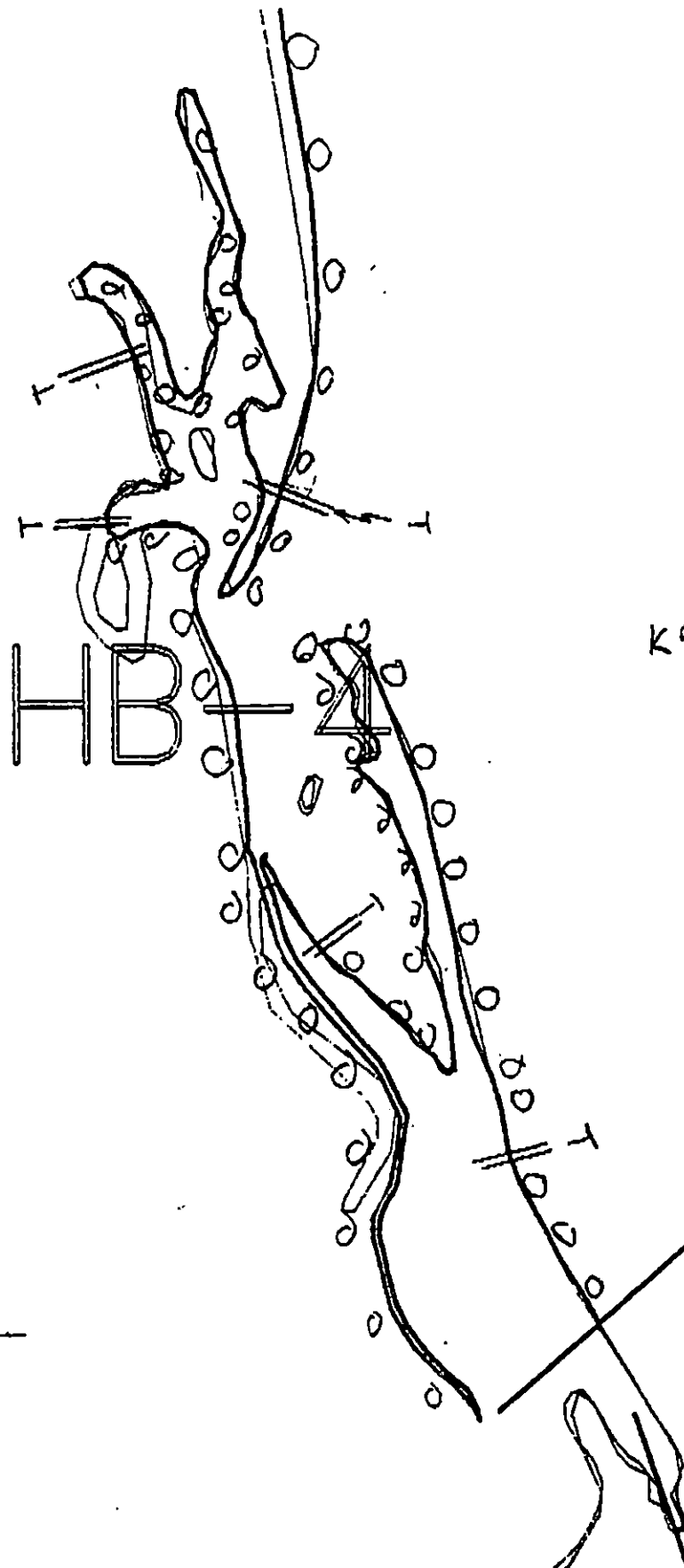
FUCUS *Fucus found as drift and in the beach wrack.*

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 PRESEN
1-6

Wildlife Observations/ General Comments: Birds seen in the area. 2 adult eagles, 1 juvenile eagle, 10-15 Glaucous-winged gulls, 3 Greater white-fronted geese, and (10) Golden plovers. Mammal tracks: River Otter, Fox, Wolf, Moose and Bear. One Bear clanging out on the mudflats. Bird flat inhabitants: *Clinocephalum nuttallii*, *Siliqua patula*; *Sax. doming. gigantis*, *Mya* sp. (*elegans*?) and *Macoma* sp.

Ecological Considerations: 1A1B, 7J5, 9LM. Anadromous stream (Serpent creek) with Pinkies and Chum spawn in this area. Clams are harvested in Hallo Bay. The area is used heavily by land mammals. Marsh area around stream used by waterfowl.



K9-19-HB-4A

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

HB-4

Approx. Segment Length: 14850m

0 500 600 900

METERS

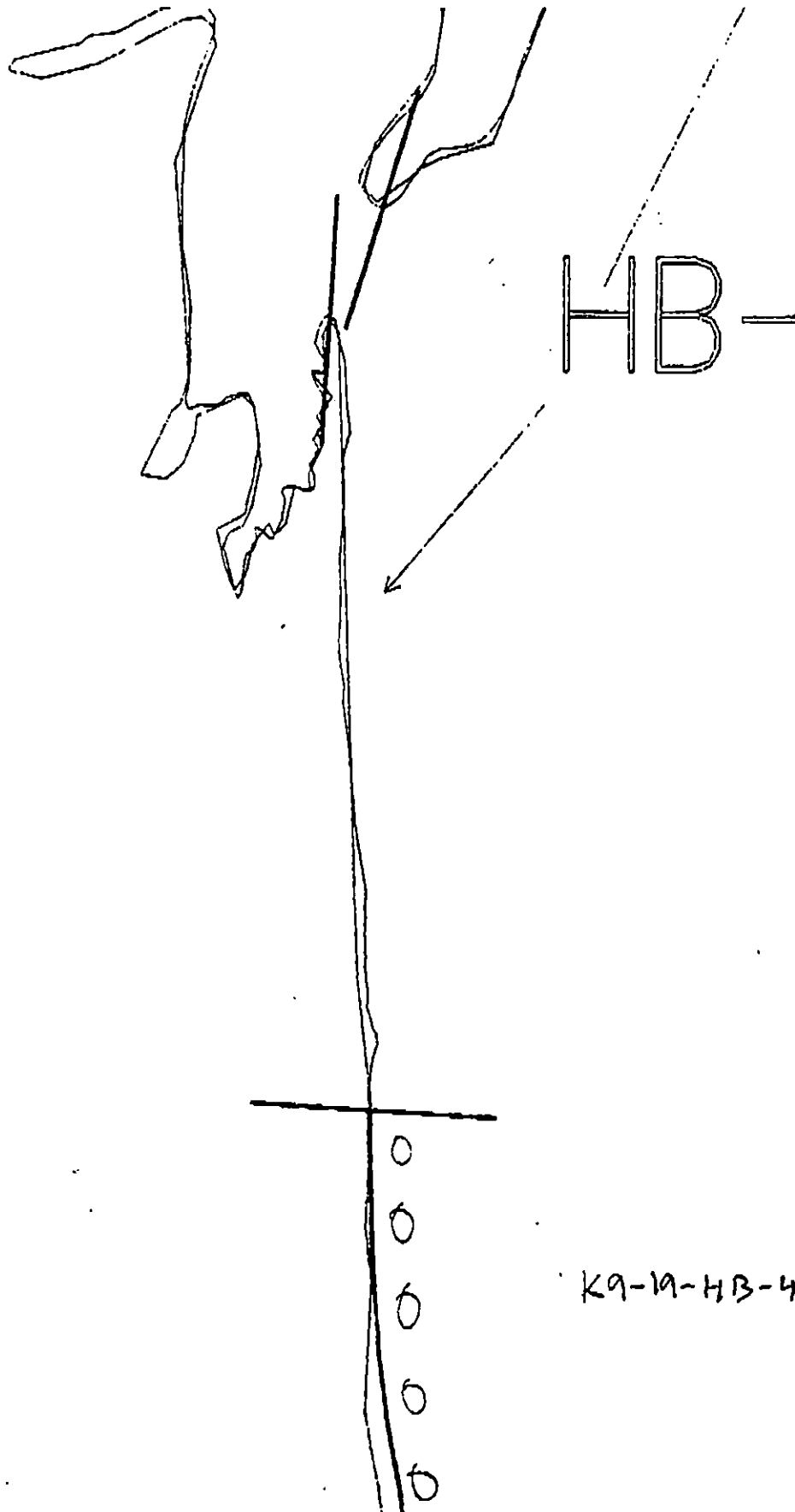
K9-19-HB-4A

Map Key: AKP-HB-4a

Name: Acton

Date: 4-30-90

Date Entered: ...



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

HB-4

Approx. Segment Length: 14850m



K9-19-HB-4A

Map Key: AKP-HB-4b

Name: Acton

Date: 4-30-90

Data Entered:

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.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Michael Antagon 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 Weimer
EXXON Andy Teal
NOAA Joseph J. Galt
USCG G.A. Heiter
FOSC: My L DATE: 5-18-90

OG Acton

SEGMENT ST/ K9-19-MD-5

SUBDIVISION K9-19-MD-5A

DATE 5 / 3 / 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)
- ☐ 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

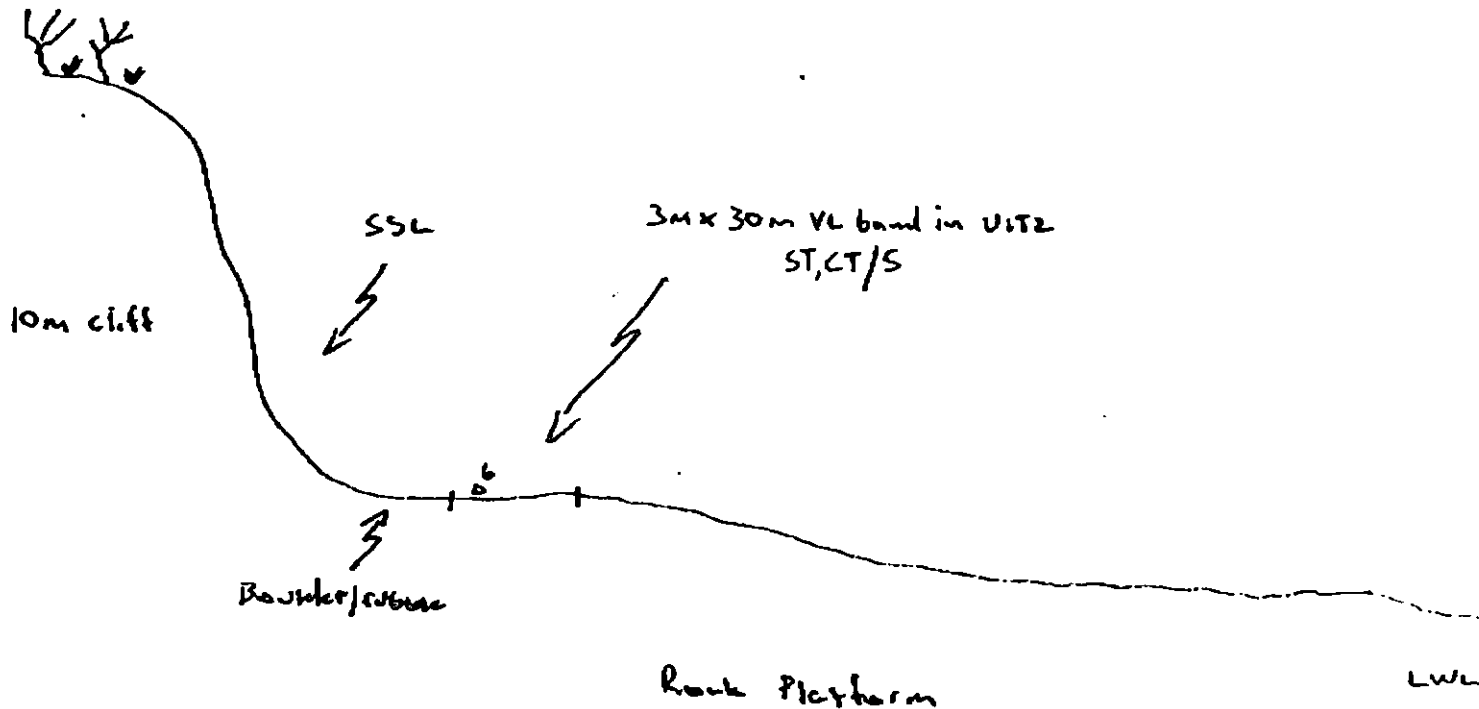
Splashed Distribution

Oil Vegetation

1 $\Rightarrow$

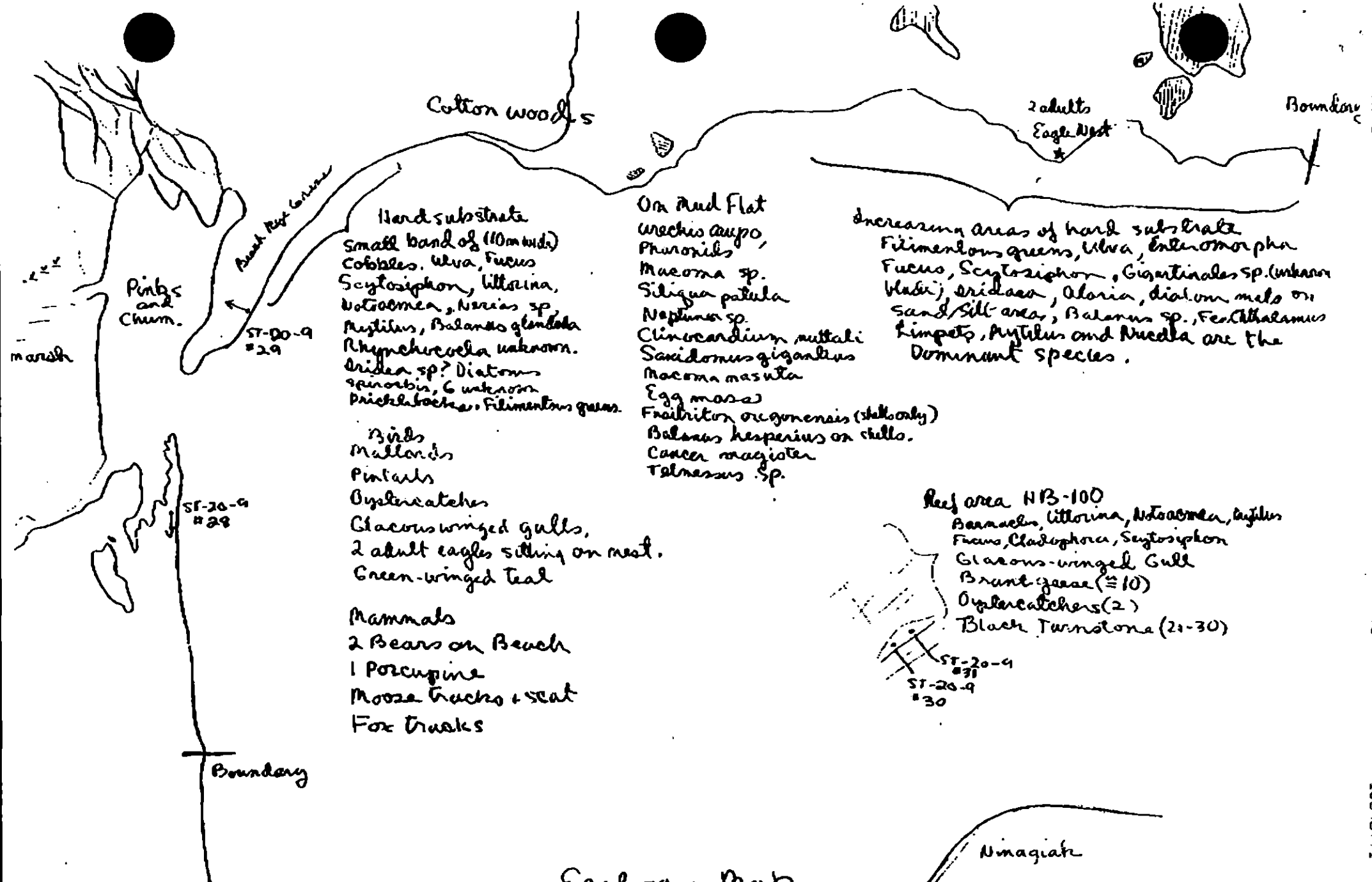
Photo location, direction,
and number

SKETCH MAP



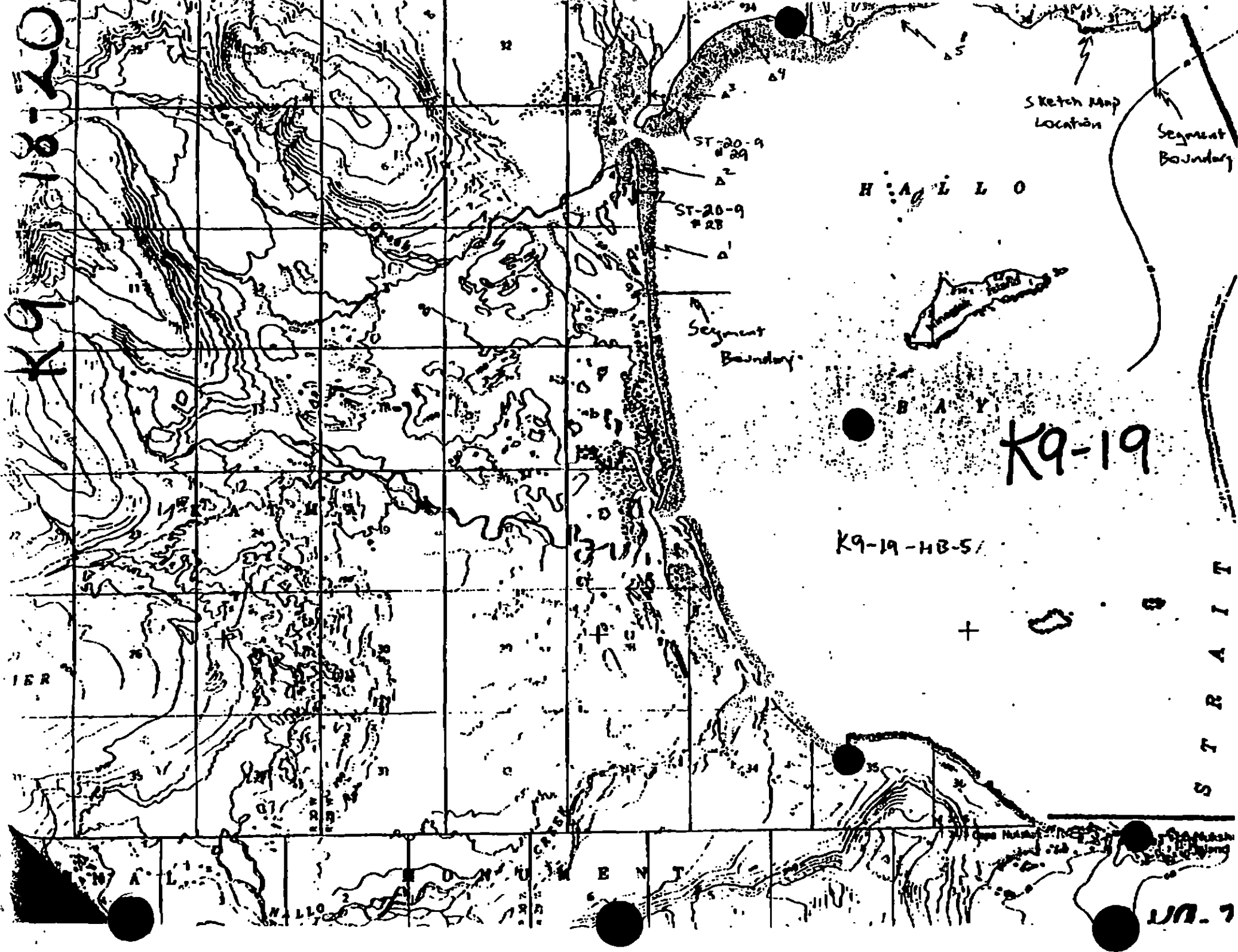
Oil Character Length (m): AP ☐ PO ☐ CV ☐ CT 30 ST 30 MS ☐ PT ☐ TB ☐ FL ☐ NO 10204

REVISION: 22/24/90



Bio H. Davis
 K09-19, NP05
 5/3/90

K9-18-KO



Sketch Map Location

Segment Boundary

HALL L O

ST-20-9 #29

ST-20-9 #28

Segment Boundary

BAY

K9-19

K9-19-HB-51

STRAIT

UN-7

K9-19-H13-5A

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

HB-5

Approx. Segment Length: 10234m



K9-19-H13-5A

Map Key: AKP-HB-5d

Name: Acton

Date: 5-3-90

Data Entered:

HB-5

K9-19-HB-5A

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

HB-5

Approx. Segment Length: 10234m

0 500 1000 1500

METERS

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

Name: Aslan

Date: 5-3-90

Data Entered:

K9

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: 5-3-90

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



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

Name: Acton

Date: 5-3-90

Data Entered:

REGION: KODIAK

SEGMENT: ST/K09-19-HB-005

SUBDIVISIONS: A (1 OF 1)

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.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 63 m: No Oil 10172 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

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/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 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)
 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)
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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ K9-19-HB-3 SUBDIVISION: HB-5a DATE 5/3/90

USCG

NAME DD Haven Jr, GMD, USCG SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

No oil sighted.

ADEC

NAME Fernando J. Benais SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

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

LAND MANAGER NPS

NAME WILL TROYER SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

This segment only had a few splatters in stain 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 Tanager, James SUBDIVISION K9-19-H3-5A (1 OF 1)
 EXXON Avery ADEC Bennis TIME 1:50 to 7:40
 TEAM NO. 20 TIDE LEVEL +6 to +1.5 DATE 5/3/90
 EST. SUBDIVISION LENGTH: 18234 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 PLANTS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SW to NE
 SURFACE SEDIMENTS: R 20 % 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			
	NO	AS	SP	IS	1	2	3	4	5	SU	U	M	L
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT				✓		✓					✓		
STAIN				✓		✓					✓		
MOUSSE													
PATTIES													
TARBALLS													
FILM													
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 28, 29

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	UO	1	2	3	4	5	SU	U	M	L				
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 Acton

SEGMENT VI/K9-19-MD-5

SUBDIVISION K9-19-MD-5A

DATE 5/3/90

KETCH MAP

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Endry
- ☐ 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

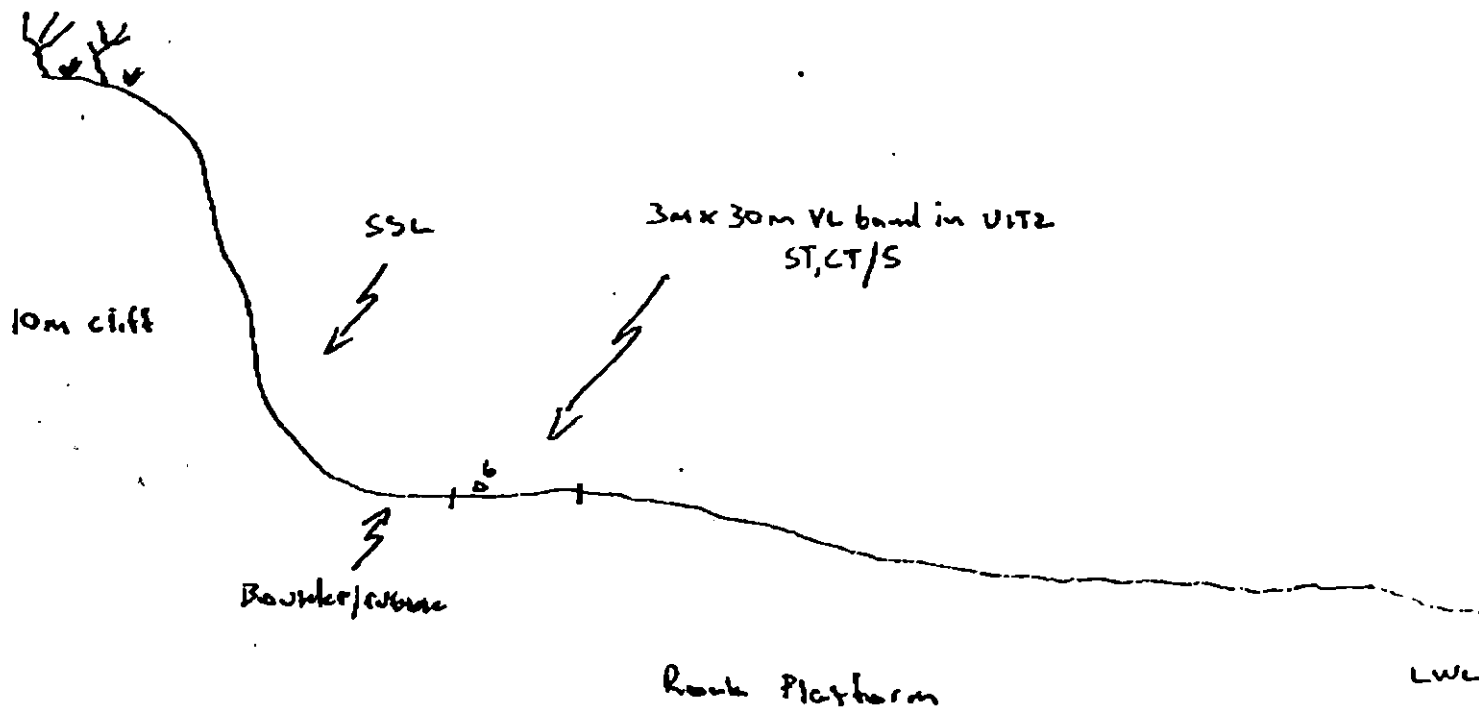
CT/S

Splashed Distribution

Oil Vegetation

1 $\Rightarrow$

Photo location, direction,
and number



Oil Character Length (m): AP ☐ PO ☐ CV ☐ CT ☒ ST ☒ MS ☐ PT ☐ TB ☐ FL ☐ NO ☐ 204

REVISION: 3/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / K09-19 Subdivision H B-05A Date (mo / day / yr) 5/3/90

Time (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-20-9
 Frames 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. Nucella 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

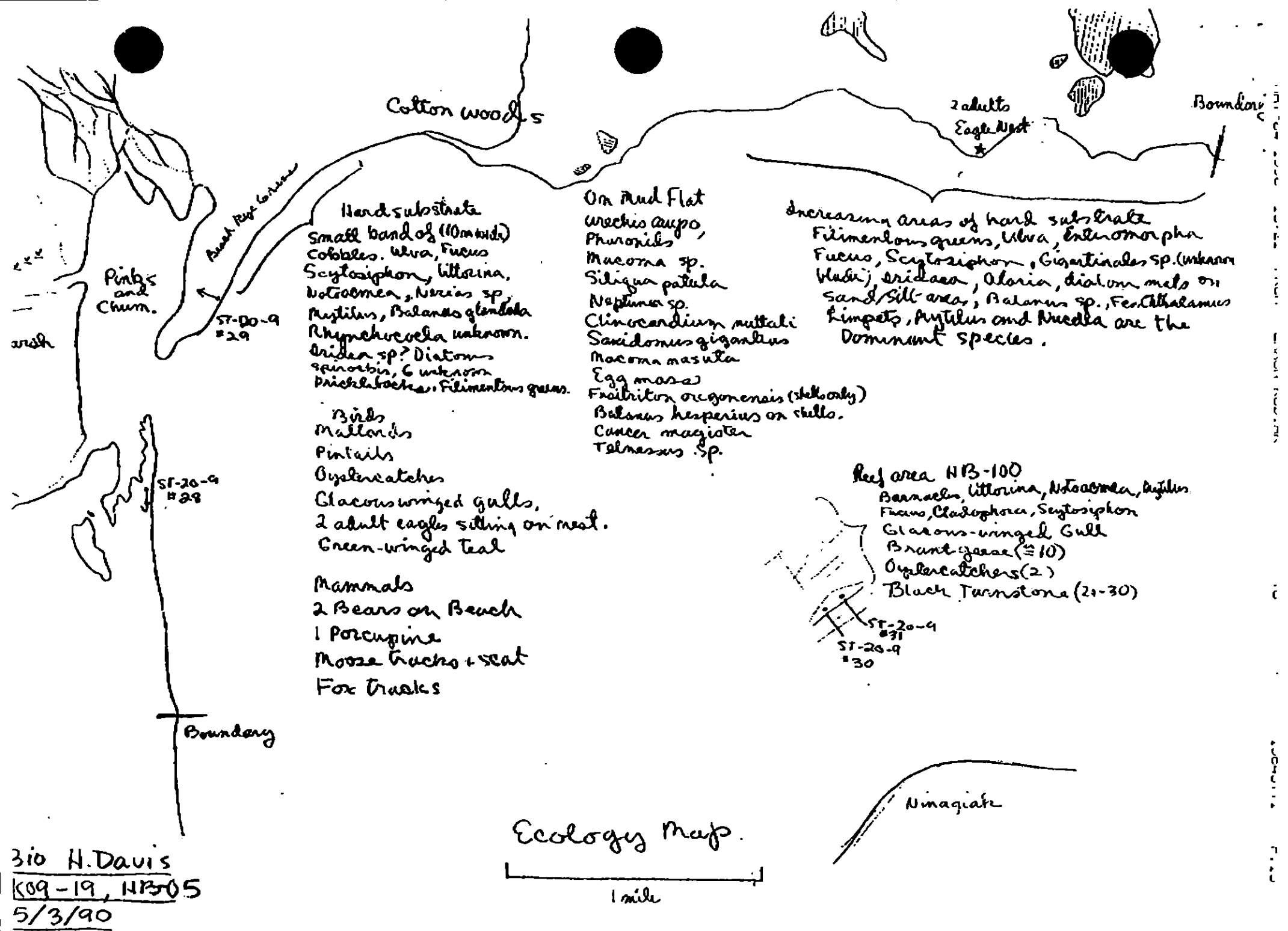
Dense			Moderate			Sparse			Rare		
~~1U~~	1M	1L	~~1U~~	1M	1L	~~1U~~	~~1M~~	~~1L~~	~~1U~~	~~1M~~	~~1L~~
~~2~~	2	2	~~2~~	2	2	~~2~~	~~2~~	2	~~2~~	2	2
~~3~~	3	3	~~3~~	3	3	~~3~~	~~3~~	3	~~3~~	3	~~3~~
~~4~~	4	4	~~4~~	4	4	~~4~~	~~4~~	4	~~4~~	4	4
~~5~~	5	5	~~5~~	5	5	~~5~~	~~5~~	5	~~5~~	5	5
~~6~~	6	6	~~6~~	6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

NOT PRESENT
2, 4, 5, 6

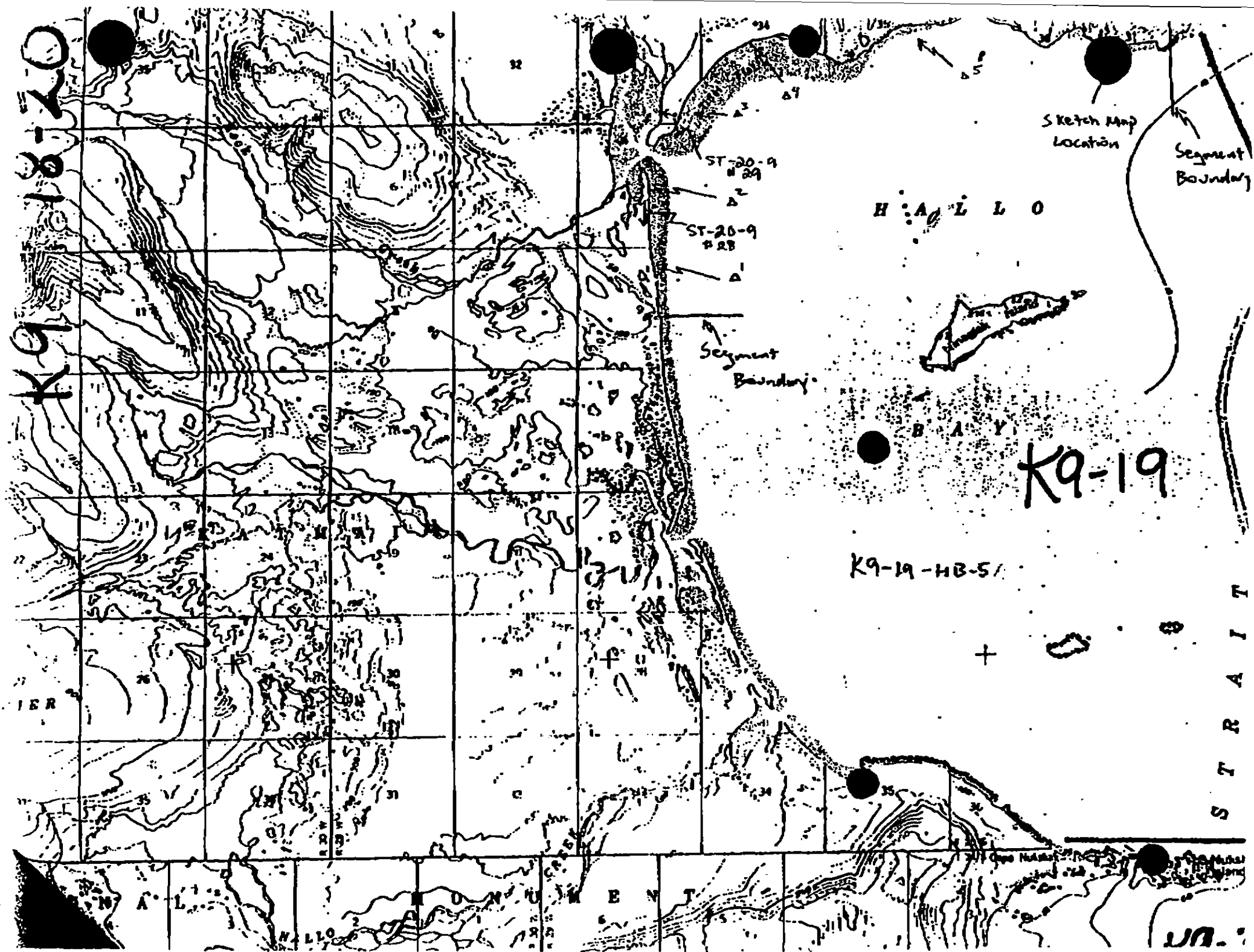
Wildlife Observations/ General Comments: See Ecology Map.

Ecological Considerations: 3 NOPA, 1A 1B. ST

This area is a Harbor seal and Sea Lion haul out area (Both Popping and molting). Pinkies and Chum make use of the Ninagiah 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 map for location.



310 H. Davis
 K09-19, NPB-05
 5/3/90



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

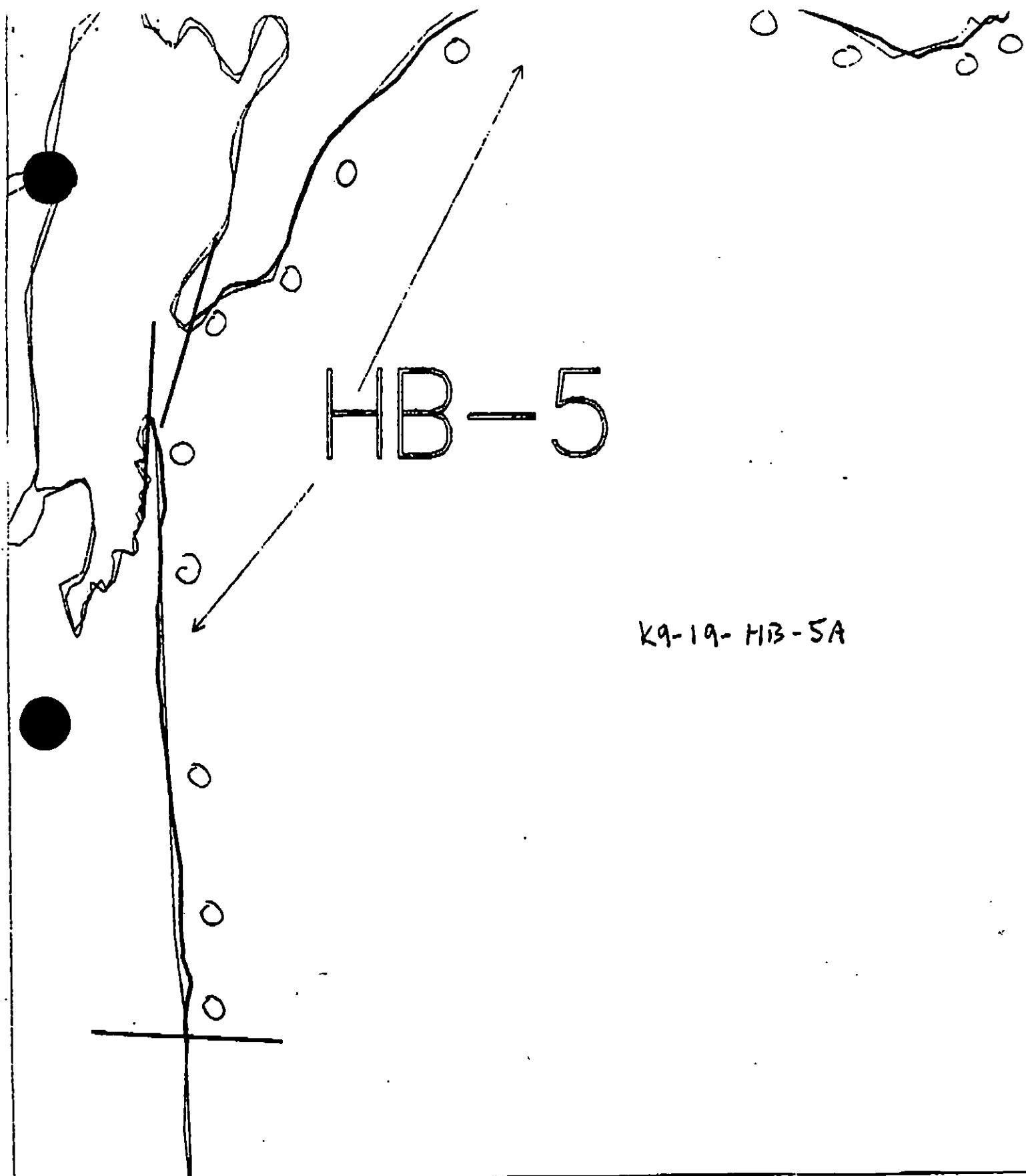
Date: 5-3-90

0000 No Oil

0 500 1000 1500
METERS



Data Entered:



HB-5

K9-19-HB-5A

XXXX Wide

HB-5

//// Medium

Approx. Segment Length: 10234m

--- Narrow

TTTT Very Light

0000 No Oil



K9-19-HB-5A

Map Key: AKP-HB-5a

Name: Acton

Date: 5-3-90

Data Entered:

K9

K9-19-HB-5A



XXXX Wide

HB-5

K9-19-HB-5A

Map Key: AKP-HB-5a

/// Medium

Name: Acton

--- Narrow

Approx. Segment Length: 10234m

Date: 5-3-90

TTTT Very Light

0000 No Oil

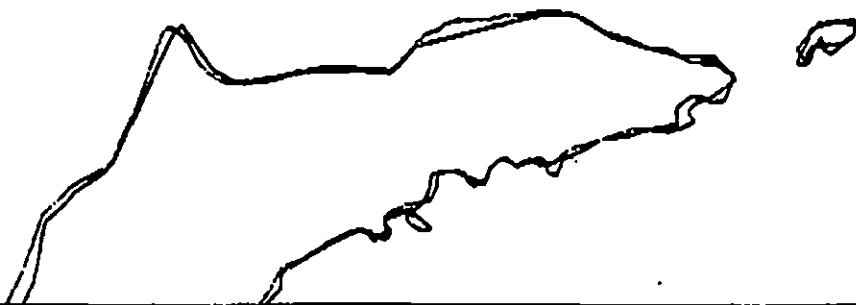


Data Entered:

K9-19-HB-5A

HB-100

HB-50



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

HB-5

Approx. Segment Length: 10234m



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

Name: Acton

Date: 5-3-90

Data Entered:

REGION: KODIAK

SEGMENT: ST/K09-19-HB-050

SUBDIVISIONS: A (1 OF 2)

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.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: _____ DATE: _____

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: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

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 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 (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

SEGMENT ST / K0919-HB050 SUBDIVISION: HB050 A DATE 4/24/90NOAA
100NAME 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 10m 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 Schuch SIGNATURE Carl Schuch☐ 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.

SHORELINE OILING SUMMARY

REVISION NO. 04-13-88

OG LINDSAY NAKASHIMA USCG (NCAA) JOHN NAUGHTON SEGMENT STI K0919-HB050
 BIO DEB McCLARMICK LAND REP (NPS) CARL SCHOLCH SUBDIVISION HB050A (1 OF 2)
 EXXON FRED BYARS ADEC TERRY ELLEWORTH TIME 10:20 to 11:40
 TEAM NO. 19 TIDE LEVEL 0.40 TO 5.5 FT DATE 4/24/90
 ST. SUBDIVISION LENGTH: 1150 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 PLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SW to NE
 SURFACE SEDIMENTS: R 35 % B 50 % C 5 % P 5 % G 3 % S 2 % M 0 % V 0 %
 SLOPE: Long 25 % Hang 75 % Vert 0 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 10 m M 200 m N 20 m VL 920 m NO 0 m.

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	K	R	P	S	1	2	3	4	5	SU	U	M	U
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			
PATTIES													
TARBALLS													
FILM			X		X	X				X	X		X
NO OIL													

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. 3T-19-17Frames 4-12

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	1	2	3	4	5	SU	U	M	U				
1	7		X				0.5		X				X		X				N	N	—	B/P/C
2	10		X				0.10	X					X		X				N	Y	—	C/P/B
3	10		X				0.10	X					X		X				N	Y	—	B/C
4	10		X				0.6		X				X		X				N	N	—	B/C

COMMENTS

- FILM AFFILIATED WITH MILTWAITE AND SEEPAGE FROM HILLSLOPE
- LARGE Boulders 24cm - size CHARACTERIZE THE SOUTHERN EMBAYMENTS

REVIEWED BAT DATE MAY 90

OG LINDS NAKASHIMA
 SEGMENT ST/ K0919-HB050
 SUBDIVISION HB050A

DATE 4/24/90

CHECKLIST

- ... N Arrow
- ... Approx. Scale
- ... Sep/Sub Entry
- ... Oil Dist.
- ... Width
- ... Length
- ... % Cover
- ... Substrate Character
- ... Est. HW/LWL
- ... SSL
- ... Profile Location(s)
- ... Profile(s)
- ... P/L Location(s)
- ... Photo Location(s)

LEGEND

1 Δ

PN - No Subsurface Oil

2 Δ

PU - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

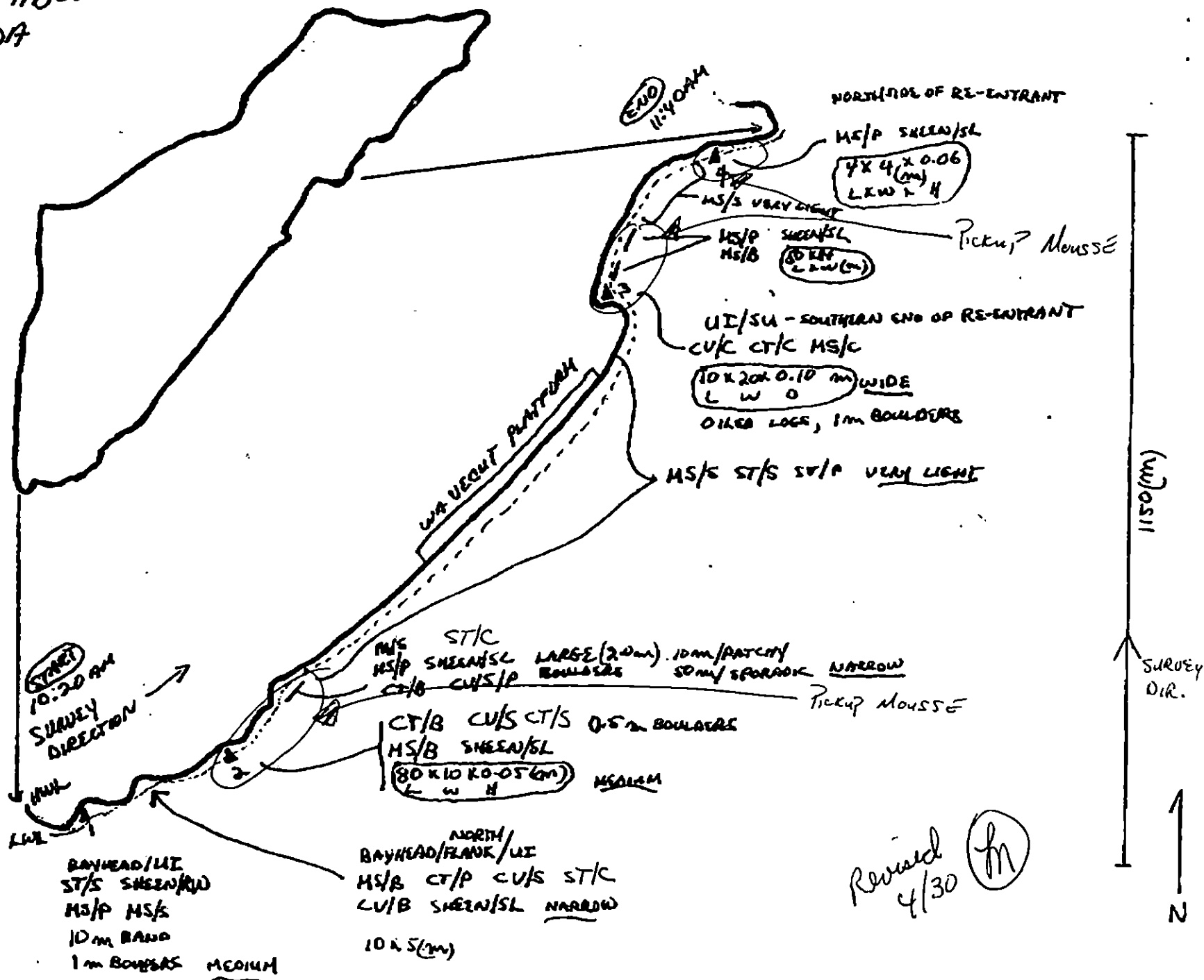
Splashed Distribution

Oil Vegetation

1 $\circ$

Photo location, direction, and number

ATCH MAP



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: 3-72

Segment ST / K919 HB050 Subdivision A Date (mo / day / yr) 4-24-90Time (24 hr) 1020-1140 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 65% Low 15%

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

Photographs:

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

BARNACLES

	Dense		Moderate			Sparse			Rare		
1U	~~XM~~	~~XL~~	1U	~~XM~~	~~XL~~	XU	~~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

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	~~3~~	~~3~~	3	~~3~~	~~3~~	3	3	3
4	4	4	4	~~4~~	~~4~~	4	~~4~~	~~4~~	4	4	4
5	5	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

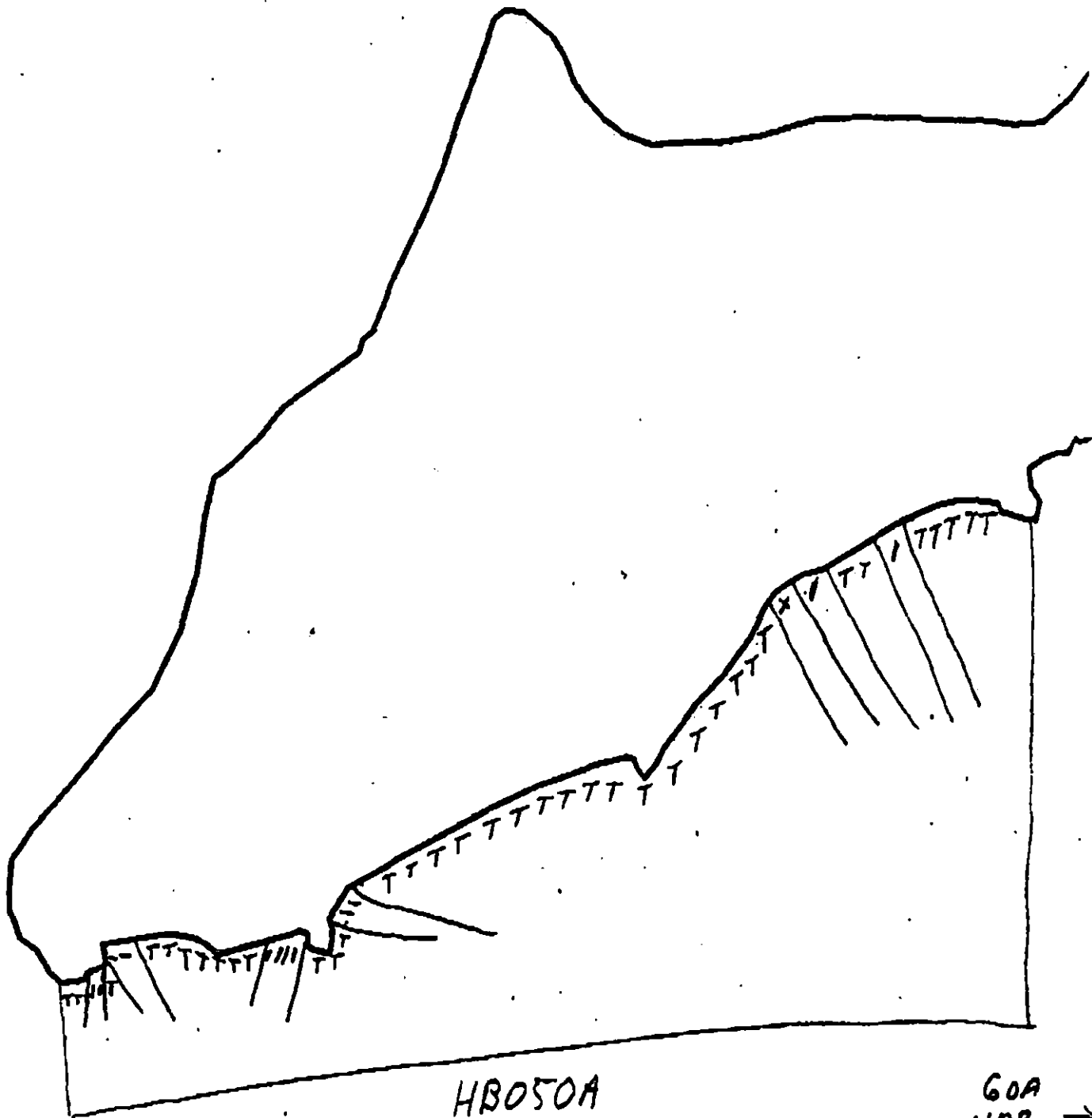
	Dense		Moderate			Sparse			Rare		
1U	1M	1L	1U	~~XM~~	~~XL~~	1U	~~XM~~	~~XL~~	1U	1M	1L
2	2	2	2	~~X~~	~~X~~	2	~~X~~	~~X~~	2	2	2
3	3	3	3	~~3~~	~~3~~	3	~~3~~	~~3~~	3	3	3
4	4	4	4	~~4~~	~~4~~	4	~~4~~	~~4~~	4	4	4
5	5	5	5	~~5~~	~~5~~	5	~~5~~	~~5~~	5	5	5
6	6	6	6	~~6~~	~~6~~	6	~~6~~	~~6~~	6	6	6

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 nested by NOAA. No exact location given—the island clearly serves as a gull rookery.

HB-



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

HB-50

ADEC Segment Length: 4961m



Map Key: GOA-110a

Name: LINDSAY NAKASHIMA

Date: 4/24/90

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:

atmai National Park

UJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

(24 hrs.)).

SHPO SIGNATURE: Rachel Don 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	☐ Snare/Absorbent Booms
☒ Treatment Recommended	☐ Oil Snares (pom poms)
☒ Manual Pickup	☐ Absorbents (pads, rolls, etc)
~~☒ Tarmat Removal~~	☐ Spot Washing: <u> </u> Wands
☐ Tarmat Removal	☐ 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 TALL Andy Tall

NOAA Gary Petroe Gary Petroe

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
Bioremediation.

OG LINE NAKASHIMAT

SEGMENT STI K0919-HB050

SUBDIVISION HB050A

DATE 4/24/90

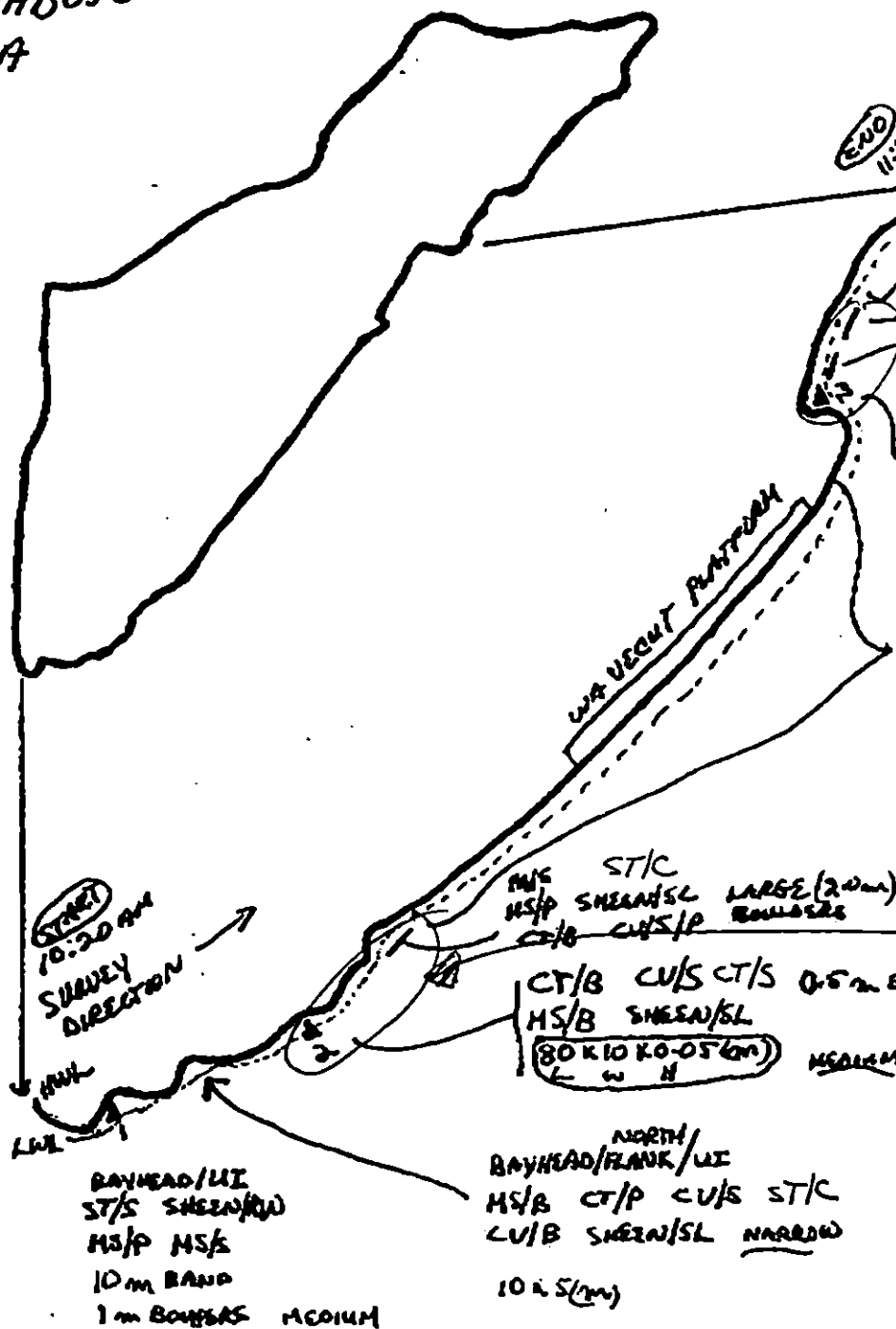
CHECKLIST

- M Area
- Approx. Scale
- Seg/Sub Entry
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HML/LWL
- SSI
- 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
- Patchy Distribution
- CT/S
- Splashed Distribution
- eee
- Oil Vegetation
- 1 $\circ$
- Photo location, direction, and number

SKETCH MAP



NORTH/NOE OF RE-ENTRANT

MS/P SHEEN/SL
 4x4, 2x0.06
 LKWD 1 H
 PICKUP, MOUSSE + BIO

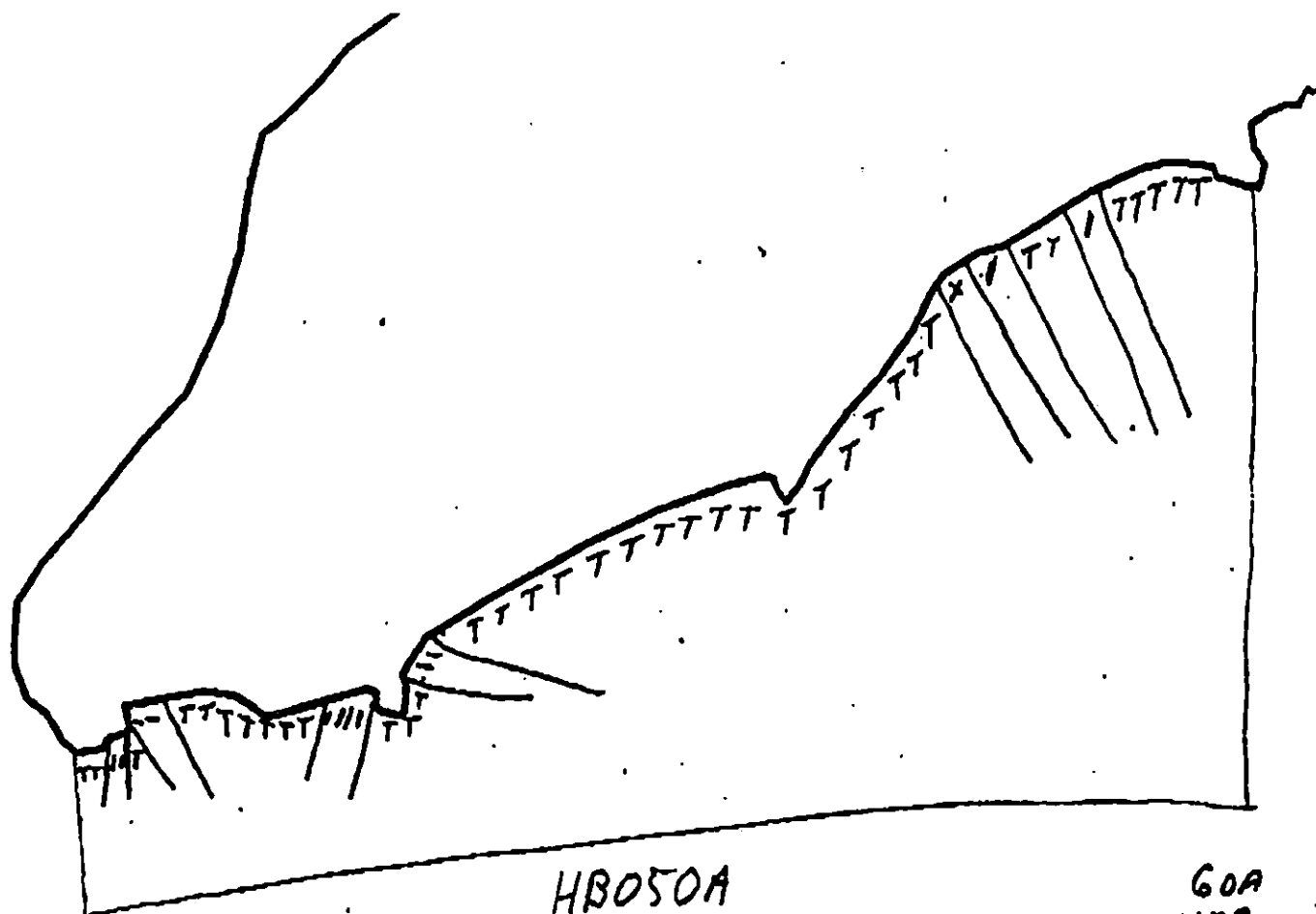
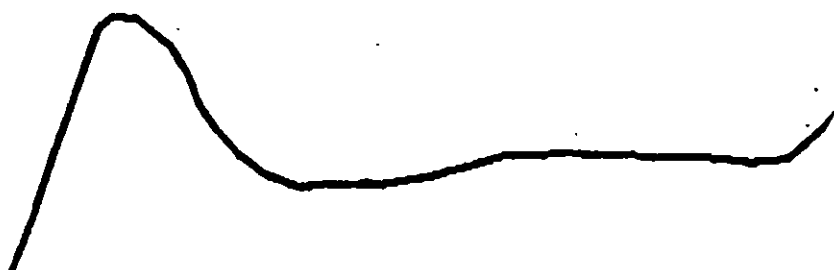
OUTER END OF RE-ENTRANT

MS/C
 7m WIDE
 1m BOUNDRS
 1/P VERY LIGHT

NARROW
 PICKUP MOUSSE + BIO

Revised 4/30 (fn)

HB-



GOA
110B -

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

HB-50

ADEC Segment Length: 4961m



Map Key: GOA-110c

Name: LINDSAY HAKISHIMA

Date: 4/24/90

Data 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

[Signature]

Date

6/16/90

Prepared by

Ray D. Cantor

Date

06-14-90

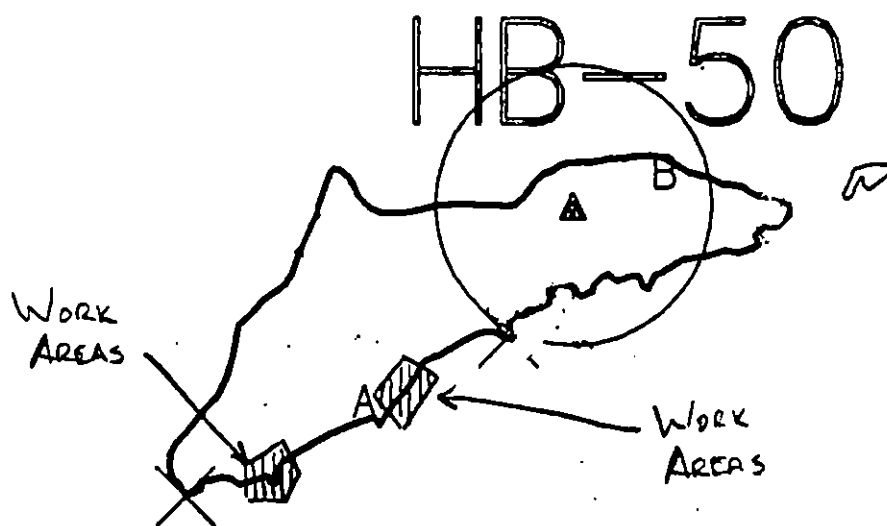
AB-50 Site

1. Access denied within buffer zone.

Possible change after end of July

Mike Luke 6/13/90

HB-100



TREATMENT



Exxon Company, USA

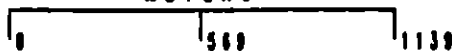
Map Key: AKP+HB-50

June 10, 1990



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

METERS



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

1 inch = 1868 feet

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 uncoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

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:

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

COMMENTS: Recommend manual 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&W's review & subsequent FOSC approval of environmental sensitivity & oldenburger.

"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

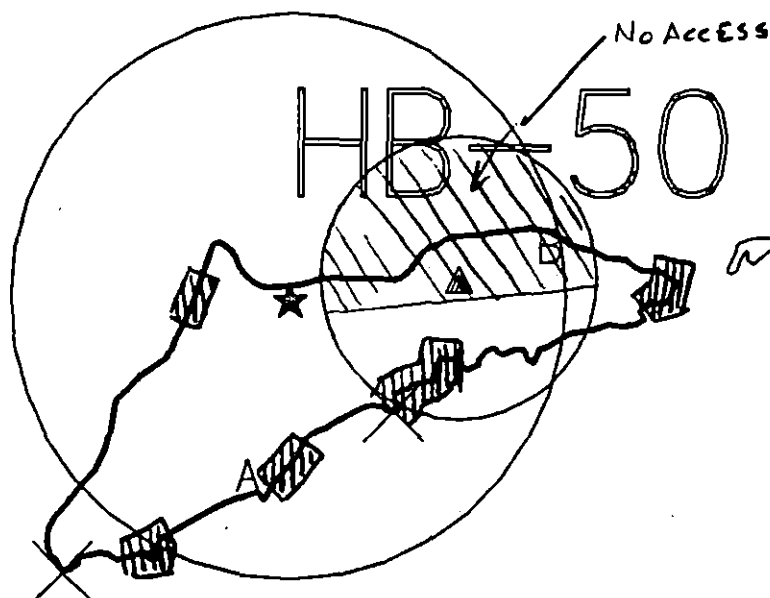
Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

FOSC *[Signature]* Date 7/8/90
 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

1:100,000 12 1000

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

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 uncolled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

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:

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

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

SEE CONSTRAINT ADDENDUM
DATED 7-2-90. REC C.

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 TATE Andy Tate

NOAA GARY PETROSE Gary Petrose

USCG G.A. HEITER G.A. Heiter

FOSC: See below DATE: 5/28/90

* apprd w/ following exceptions:
① Bioremediation not approved;
② work not to be conducted w/o F&S review & subsequent FOSC approval.

WORK PLAN ADDENDUM

Segment K-09-19-HB-50

Subdivision A

Dated Aug 13 1990.

MODIFICATION

1. REASON FOR MODIFICATION

REQUEST BY EXXON TO DEMOBILIZE DUE TO MINIMAL
REMAINING OIL AND SAFETY CONSIDERATIONS OUTLINED IN THE
ATTACHED PACKAGE

2. ADJUSTMENT TO WORK PLAN

TAG RECOMMENDS DEMOBILIZATION DUE TO THE FACTORS CONTAINED WITHIN THE ATTACHED PACKAGE OF INFORMATION

SHPO APPROVAL NEEDED YES
NO X

SHPO SIGNATURE _____

TAG APPROVAL DATE Aug 13 1990

ADEC Ray Morris & Morris

EXXON THROX TEAM BAL

NOAA Burl Wescott Burl Wescott

USCG D. D. Rome *DD Rome*

FOSC DATE 15 AUG 92

Continue to work the subdivision. Requires careful planning with regard to tide, sea & wx conditions. Site can be worked safely — just pick the right time to have everything in your favor in order to complete cleanup operations as safely & quickly as possible.

74

REGION: KODIAK

SEGMENT: ST/K09-19-HB-050

SUBDIVISIONS: B (2 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ K09-19-HB-050 SUBDIVISION B (2 OF 2) DATE 4/25/90

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.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 31 m: Narrow 30 m: V.Light 1224 m: No Oil 2454 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 5 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of mousse and oiled logs as indicated on sketch map. Contact ADF&G for specific working times regarding invertebrate harvesting.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

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
- SR 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
- SS 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
- ST 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

R

SEGMENT ST / K0919-HB050 SUBDIVISION: HB050 B DATE 4/25/90NOAA
CGNAME John Naughton SIGNATURE John J. Naughton☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

This segment consisted of approximately 3/4 of Niinagiale Island. Very light oil (patchy cover and mouse) found throughout segment, primarily on northeast coast. One small area of "narrow" coverage here as well. Recommend only this area of narrow coverage be treated by manual removal. The remaining is light and in high energy, jagged large boulder substrate. In addition, Niinagiale Is is important habitat - gull rookery, possible eagle nest (dead egg found), oyster catchers, sea otters, harbor seal, extensive mud flats with large biomass of various bivalves. Island should receive only minimal and localized disturbance during treatment.

ADEC

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

COMMENTS

The SE side of HB050 B contains 3 small pockets of interstitial mousse/sediment. The NE portion from the east end to ~800m west contains mousse/sediment between large boulders (< 1.5m) which is sporadic with several patches of broken from the east end ~200m to the west. I recommend manual removal of the mousse and cover in these areas using in part small garden tools. Because of the important habitat (see NOAA's comments) on the island, I recommend a small clean up crew to keep disturbance to a minimum.

LAND MANAGER

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

COMMENTS

The 50 meter area of mousse/cover and oiled debris on the NE end of the island could be significantly improved by manual cleanups. Heavy mousse in patches has persisted unchanged through the winter. Oiled debris has accumulated and should also be removed. The oil remaining on the rest of this segment is generally exposed to high energy, difficult to access and mostly subsurface.

SHORELINE OILING SUMMARY

REVISION NO. 3613 93

OG LINDSAY MARSHIMA 0000 (NOAA) JOHN NAUGHTON SEGMENT ST/ K0919
 BIO DEA MCCORMICK LAND REP (NPS) CARL SCHACH SUBDIVISION HB0508 (1 of 2)
 EXXON FRED BYARS ADEC TERRY ELLSWORTH TIME 7:40 10/10/90
 TEAM NO. 19 TIDE LEVEL -1.4' N -3.5' DATE 4/25/90
 EST. SUBDIVISION LENGTH: 3661 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock VEGETICAL GRASS/ROCK FACE
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SW to NE
 SURFACE SEDIMENTS: R 10 % B 70 % C 5 % P 3 % G 2 % S 10 % M 0 % V 0 %
 SLOPE: Long 15 % Hang 75 % Vert 10 % WAVE EXPOSURE: ☒ Low ☐ Med ☒ High SOUTH
 OIL CATEGORY LENGTH: W 0 m M 55 m N 20 m VI NORTH 300 m NO 2286 412
800

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	IC	IB	IP	IR	1	2	3	4	5	SU	U	M	U
ASPHALT PAVEMENT													
POOLED													
COVER		X	X	X	X					X			
COAT		X	X	X	X					X			
STAIN		X	X	X	X					X			
MOUSSE		X	X	X				X		X			
PATTIES			X					X		X			
TARBALLS													
FLM			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	X		
Vegetation			
Trash			
Debris	X		

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒

TYPE _____

#BAGS _____

Photographs:

Roll No. ST-19-17Frames 13-24

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	5	SU	U	M	U				
1	30					X	0-0	X							X				N	—	—	C/B/G
2	20			X			0-5	X				X			X				N	Y	—	G/K/B/P
3	5					X	0-0	X							X				N	—	—	C/P/B
4	30			X			0-2	X				X			X				N	Y	—	P/G/S
5	10			X			0-2	X				X			X				N	Y	—	B/C/P
6	5			X			0-2	X				X			X				N	Y	—	C/B

COMMENTS SOUTH SIDE
 OILED AREAS ON SOUTH SIDE LOCATED IN RE-ENTRANTS/POCKET BEACHES
 COMPOSED OF BOULDERS WITH COBBLES/PIDBLE MATRIX - MUCH OF THIS
 COAST IS HIGH ANGLE - LARGE BOULDER - ROCK PLATFORM SHORELINE

NORTH SIDE

- THE POINT TO THE EAST HAS THE MOST OIL (SEE SKETCH); WHICH GRADES
 TO VERY LIGHT TO THE WEST WHERE A WIDE INTERTIDAL SAND FLAT
 EXISTS

REVIEWED JA DATE 29 Apr 90

REVISION 04/13/00

OG LINE NAKASHIMA

SEGMENT ST/ K0919

SUBDIVISION HB0508

DATE 4/25/90

CHECKLIST

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

LEGEND

- 1 ▲
- PR - No Subsurface Oil
- 2 ▲
- PI - Subsurface Oil
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Splashed Distribution
- eee
- Old Vegetation
- 1 ●
- Photo location, direction, and number

ST/S
Oil 100%

2 TO 3
PT/A
SAND GRAIN
4m WIDE
LOW TIDE
FLAT

ISOLATED
TO 4-5
Boulders
1m.
UI

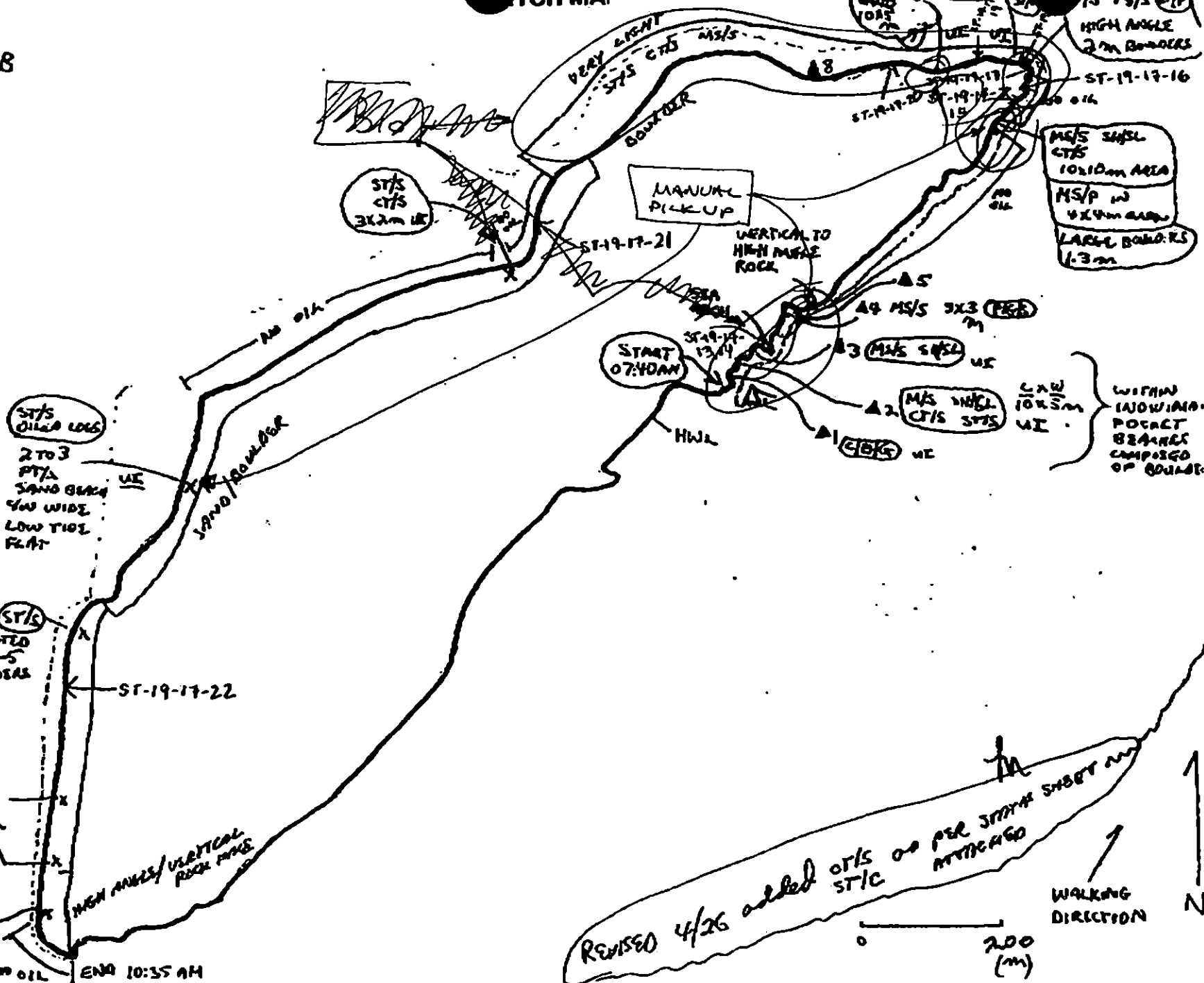
ST/S
CTS

OCCASIONAL
OIL 1-3m
BOULDER
UI

MS/S
1-12m

END 10:35 AM

ATCH MAP



SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / K919 H8050 Subdivision B Date (mo / day / yr) 4-25-90Time (24 hr) 0740-1030 Biologist D. McCormick

- (A) Substrate type and % of segments:
 (1) Bedrock 10 (2) Boulder 70 (3) Cobble 5 (4) Pebble 5 (5) Sand 10 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 100 (50) Moderate 92 (40) Low 10 (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-19-17Frames 13-24

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	X	2	2	X	2	2	X	2	2	2	2
3	3	3	3	X	3	3	X	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	X	5	5	X	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 otter seen together - north end of island. One sea otter S end. Oystercatchers seen on E + W sides of island. One dead eagle found (united) in supratidal vegetation. Not collected.

Ecological Considerations: Ninagishak Is. is a gull rookery - entire island. 3 immatures and one mature eagle seen. Locations marked on ECO map. Adjacent nest on Pg. 3

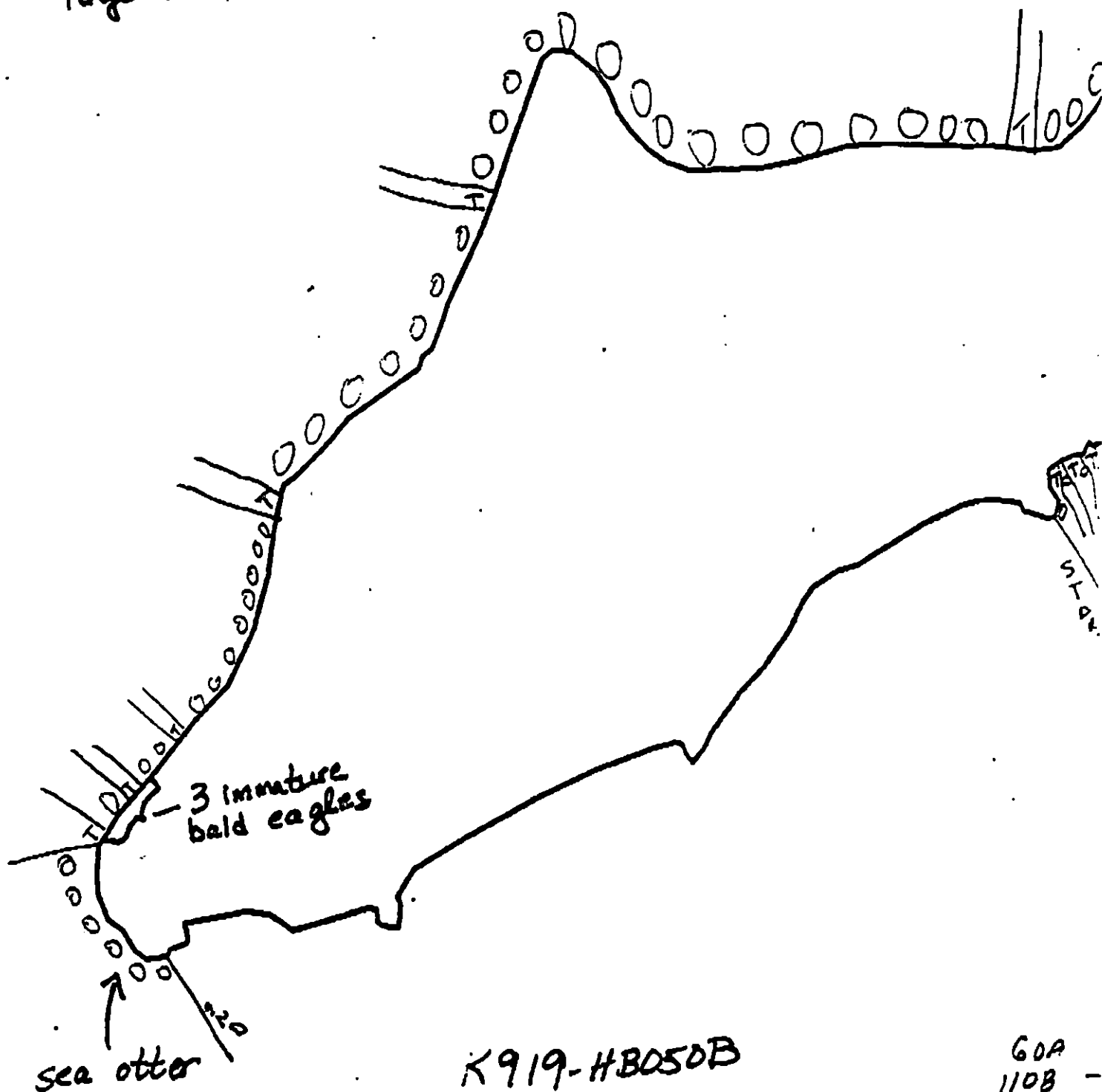
No anachronous streams.

ECO

MAP

HB-

Page 1



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

HB-50

ADEC Segment Length: 4981m



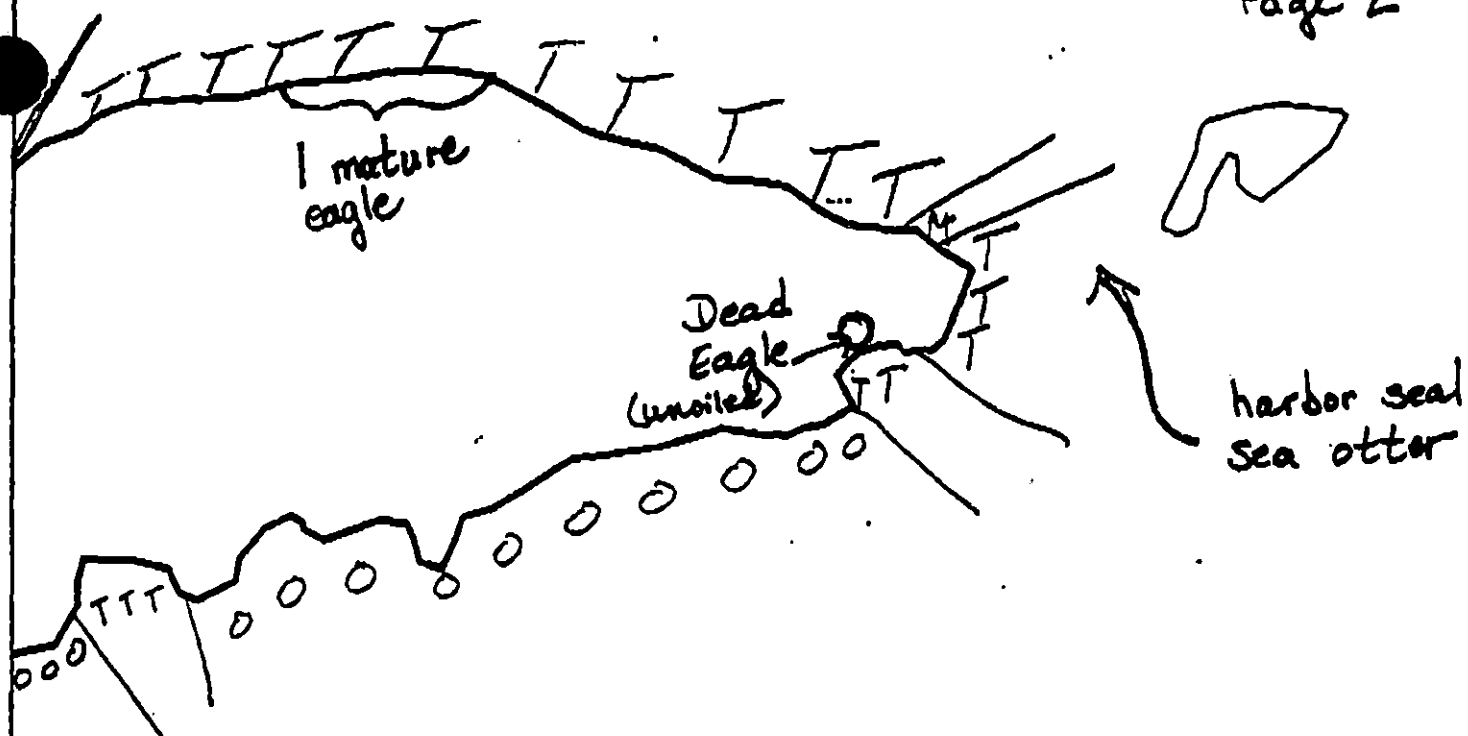
Map Key: GOA-1100

Name: LINDSAY NARASHIM

Date: 4/25/90

Data Entered:

GOA
110B -



← GOA
110A

K919-HB050B

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

HB-50

ADEC Segment Length: 4961m

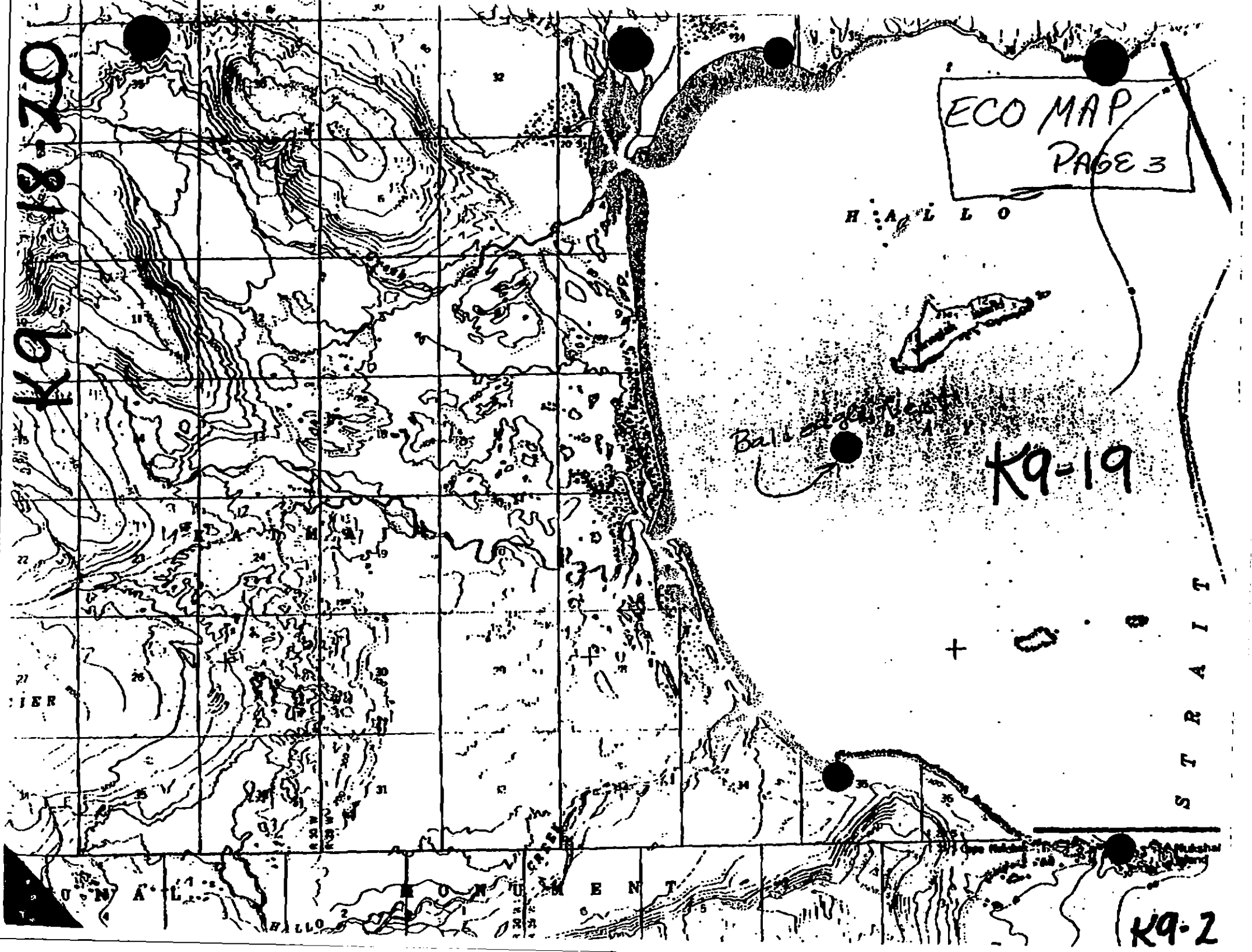


Map Key: GOA-110b

Name: LINDSEY NAKAGAWA

Date: 4/25/90

Data Entered:



ECO MAP
PAGE 3

H.A.L.L.O

Ball's Bay

K9-19

S T R A I T

K9-2

HB-



GOA
110B

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

HB-50

ADEC Segment Length: 4961m

0 100 200 300
METERS



Map Key: GOA-110c

Name: LINDSAY NAKASHI

Date: 4/25/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ K09-19-HB-050 SUBDIVISION B (2 OF 2) DATE 4/25/90

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.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: Lucille Jean O'Neil DATE: 5/18/90

OILING CATEGORIZATION:

Wide 0 m: Medium 31 m: Narrow 30 m: V.Light 1224 m: No Oil 2454 m
Subsurface Oil Observed: Yes X No Maximum Depth 5 cm

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u> X </u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u> X </u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u> </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 and oiled logs^{+ DEBRIS} as indicated on sketch map. Contact ADF&G for specific working times regarding invertebrate harvesting.

TAG COMMENTS: * MONITORS TO ASSESS LOGS
CHECK EAGLE NEST CONSTRAINTS - USF&W

TAG APPROVAL DATE: 5/17/90.

ADEC ART WEINER Art Weiner

EXXON AMY TORR Amy Tor

NOAA GARY PETRAG Gary Petr

USCG G.A. REITER G.A. Reiter

FOSC: W L DATE: 5-23-90

OG LIN NAKASHIMA

SEGMENT ST-19-17

SUBDIVISION HB0508

DATE 4/25/80

CHECKLIST

- N Arrow
- Approx. Scale
- Seg/Sub Boundary
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HML/VL
- SSL
- Profile Location(s)
- Profile(s)
- PH Location(s)
- Photo Location(s)

LEGEND

- 1 Δ
PR - No Subsurface Oil
- 2 Δ
PI - Subsurface Oil
- CT/C
Continuous Distribution
- CT/D
Broken Distribution
- CT/P
Patchy Distribution
- CT/S
Splashed Distribution
- Old Vegetation
ON 1-3m
Boundaries
- Photo location, direction,
and number

ST/S
Oil on logs

2 TO 3
PT/S
SAND GRAY
4m WIDE
LOW TIDE
FLAT

ISOLATED
TO 4-5
BOMBS
1m.
UI

ST/S
CT/S

ST-19-17-22

ST/S
CT/S

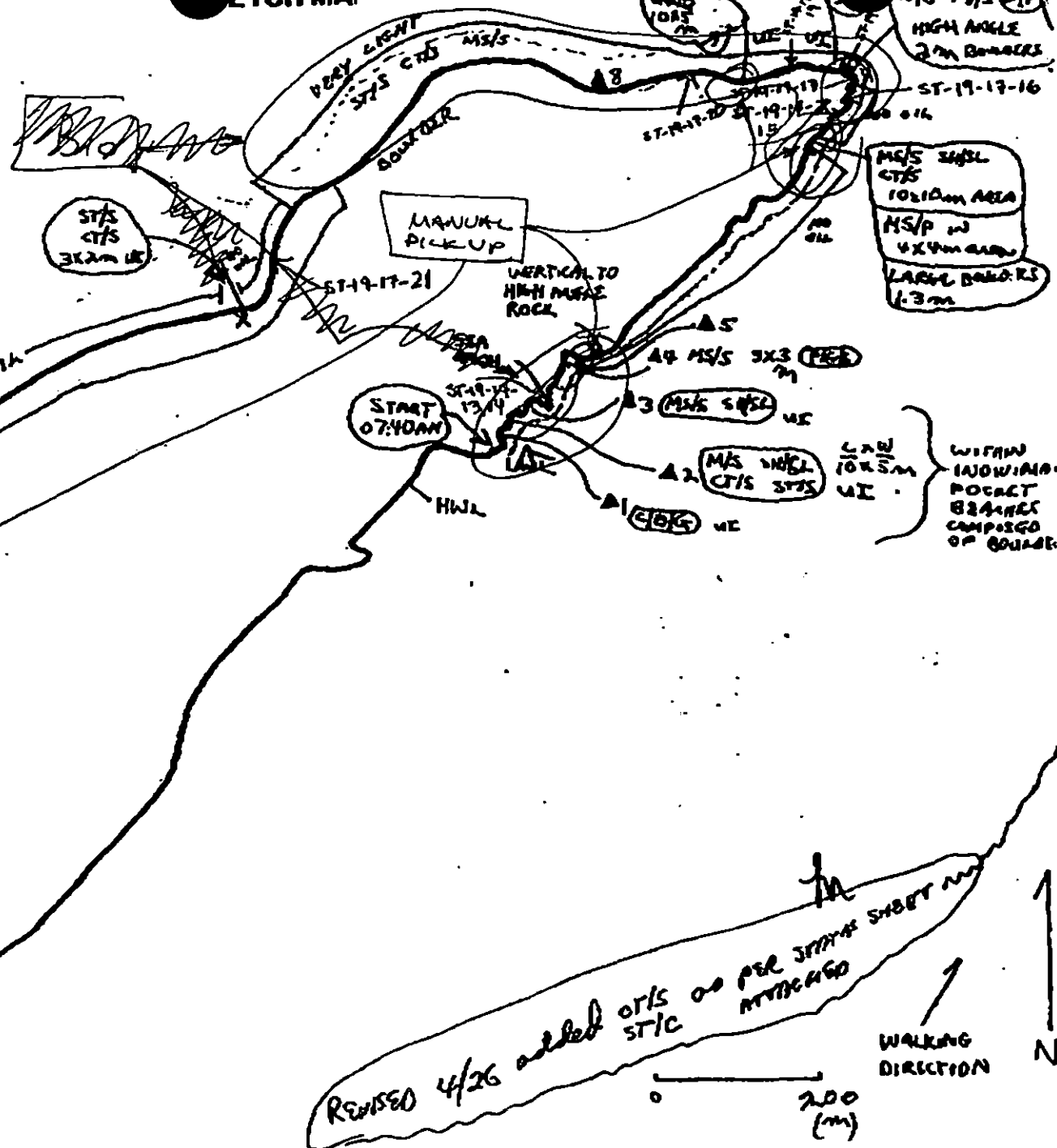
ON 1-3m
Boundaries

UI

MS/S
1-12m

END 10:35 AM

ETCH MAP

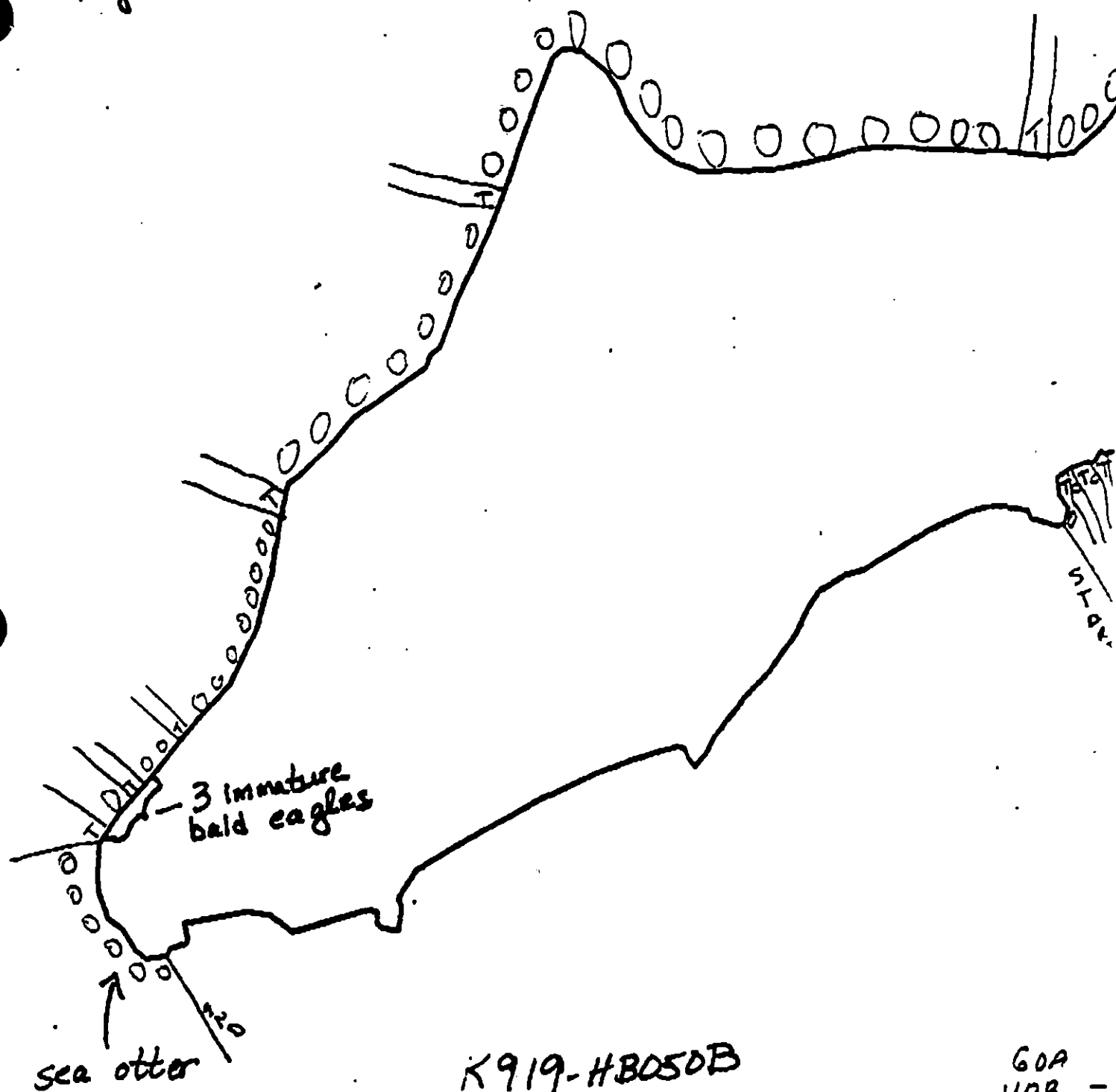


ECO

MAP

HB-

Page 1



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

HB-50

ADEC Segment Length: 4961m



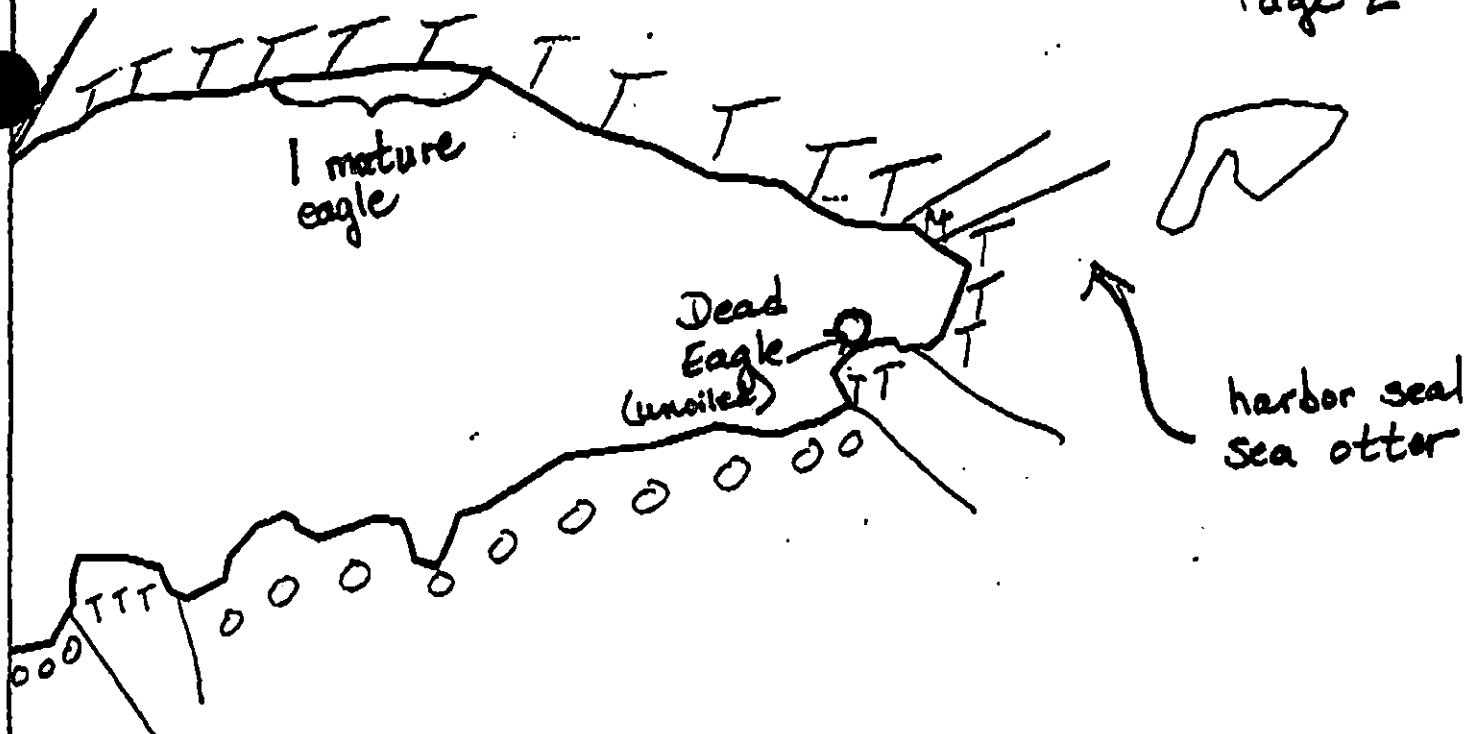
Map Key: GOA-110a

Name: LINDA NAKASHIMA

Date: 4/25/90

Data Entered:

GOA
110B -



← GOA
110A

K919-HB050B

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

HB-50

ADEC Segment Length: 4961m



Map Key: GOA-110b

Name: LINDSEY NAKASHIMA

Date: 4/25/90

Date Entered:

K9-18-20

ECO MAP
PAGE 3

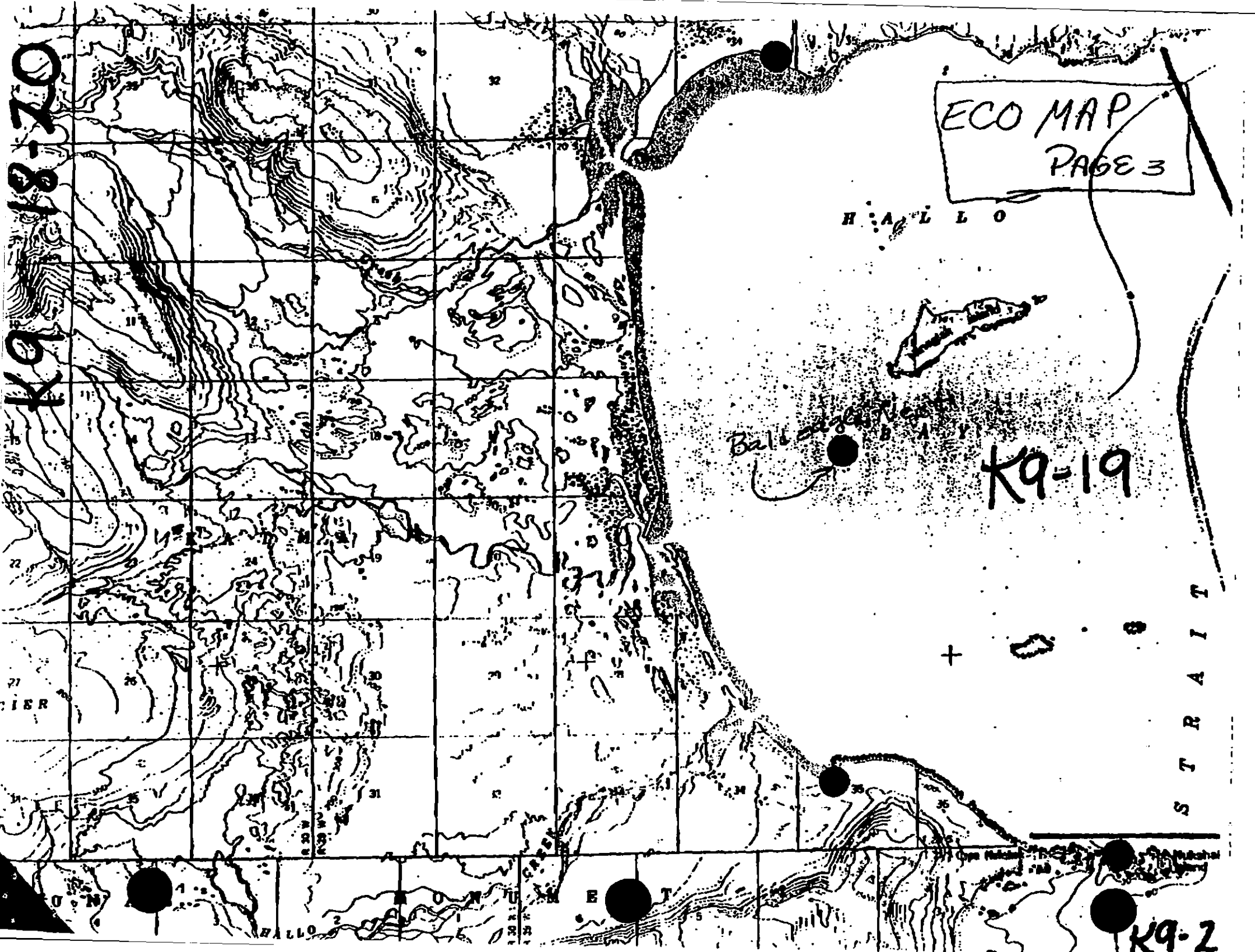
H A L L O

Balt

K9-19

S T R A I T

K9-2



HB-



GOA
110B

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

HB-50

ADEC Segment Length: 4861m

0 100 200 300
METERS

Map Key: GOA-110a

Name: LINDSAY NAKASHI

Date: 4/25/90

Data Entered:

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 Steglitz/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

6-15-90

Prepared by

[Signature]

Date

6/15/90

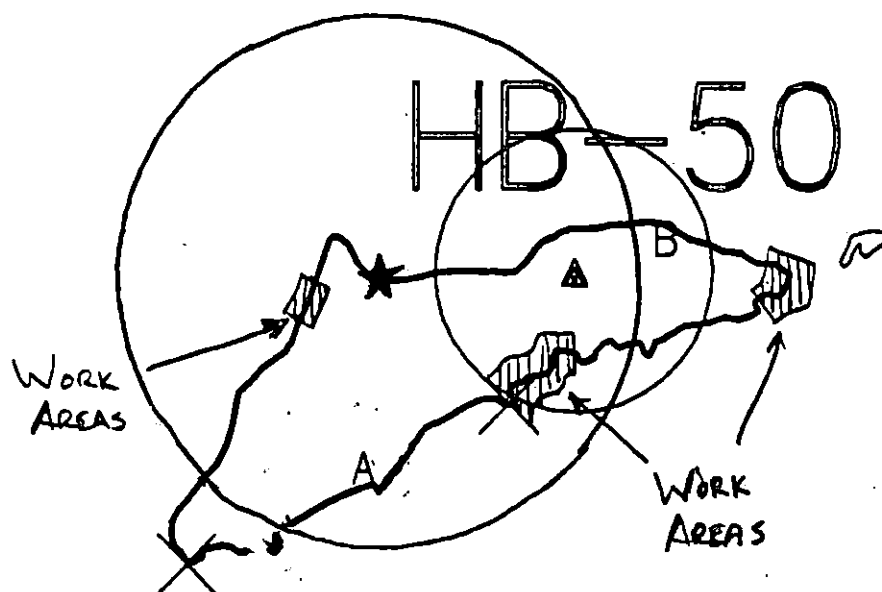
HB-50 Site

1. Access denied within buffer zone.

Possible change after end of July

Mike Luke 6/13/90

HB-100



G



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



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

1 inch = 1868 feet

SHORELINE EVALUATION

SEGMENT ST/ K09-19-HB-050 SUBDIVISION B (2 OF 2) DATE 4/25/90

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.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: Richard O. Lee DATE: 5/18/90

OILING CATEGORIZATION:

Wide 0 m: Medium 31 m: Narrow 30 m: V.Light 1224 m: No Oil 2454 m
Subsurface Oil Observed: Yes X No Maximum Depth 5 cm

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u> </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 and oiled logs as indicated on sketch map. Contact ADF&G for specific working times regarding invertebrate harvesting. SEE CONSTRAINT ADDENDUM dated 6/15/90 (P).

TAG COMMENTS: * MONITORS TO ASSESS LOGS

CHECK EAGLE-NEST CONSTRAINTS - USF&W

SEE CONSTRAINT ADDENDUM
DATED 06-18-90 REYC.

TAG APPROVAL DATE: 5/17/90.

ADEC ART WEINER Art Weinere

EXXON AMY TOR

NOAA GARY PETRAC Gary Petrac

USCG G.A. REITER G.A. Reiter

FOSC: WFL DATE: 5.23.90

1991 MAYSAP EVALUATION

SEGMENT: KO919HB050 SUB: A REGION: KOD SURVEY DATE: 5/23/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC

FOSC

EXXON

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Seabird Colony: Access restricted. USF&WS authorization required after 5/15. Maintain 1000' vertical and 1/2 mile horizontal buffer.

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

ADEC

NAME J. BARNHART, ADEC

SIGNATURE

Jeffrey Barnhart

- ☒ NTR Oil was located throughout this segment in the form of ms, ct, cv, st, as described on the OG map. Recoverable oil exists in small quant.ies. Additional cleanup at this time is not recommended.

EXXON RANDALL K. BOYERNAME R. HARRISON, EXXON

SIGNATURE

Randall K. Boyer

- ☒ NTR AN EXTREMELY HIGH ENERGY SHORELINE. WHERE BANDS OF MOUSSE WERE DESCRIBED ON PREVIOUS SURVEYS, WEATHERED SURFACE RESIDUE EXISTS. PRESENT OILING CONDITIONS DOES NOT POSE AN ENVIRONMENTAL THREAT. TIDE POOLS AND INTER TIDAL ZONES WERE HEALTHY. REMOVAL EFFORTS SHOULD NOT BE CONSIDERED AS THE OILING CONDITIONS ARE NOT PRESENT, SAFETY IS AN ISSUE AND THE ISLAND IS TOO SENSITIVE AS SEA BIRDS ARE PRESENT IN LARGE NUMBERS.

LANDMANAGER

NAME F. BENNISOF NPS

SIGNATURE

Jeanne J. Ben

- ☒ NTR Throughout HB 50A, the west side of the south-facing shoreline of Ninagiak, oil remains as described on OG map as st, ct, cv, sor, with traces of mousse. Clean sediments are deposited intermittently throughout the sites. Surface oil evident does not warrant further intrusion on this sensitive island.

USCG/NOAA

NAME CWO R. SPURR/S. SHIGENAKA

SIGNATURE

R. Spurr / S. Shigenaka

- ☒ NTR Further intrusion in this area is not warranted in view of the amount of oil and seabird colony.

SURVEYED PORTION OF THE SUBDIVISION CONSISTED OF EXPOSED, IRREGULAR, BEDROCK/BOULDER SHORELINE ALONG THE LOWER SOUTHEASTERN COAST OF NINAGIAK ISLAND IN HALLO BAY. PHYSICAL DESCRIPTION FOR THIS AREA IS THE SAME AS THAT FOR HB-50B. IN PREVIOUS SURVEYS THIS SEGMENT WAS NOTED AS HAVING WIDELY DISTRIBUTED AREAS OF OILING ALONG ITS LENGTH, PRIMARILY IN THE FORM OF BANDS OF MOUSSE. MUCH OF THIS MATERIAL HAS APPARENTLY BEEN REMOVED THROUGH WEATHERING AND PHYSICAL FORCES, AND IN SOME AREAS ONLY WEATHERED COAT/STAIN REMAINS ON BEDROCK AND BOULDER SUBSTRATE. PATCHES OF SOR/MOUSSE WERE STILL FOUND TO BE PRESENT IN THE OIL IN AT LEAST 3 LOCATIONS ALONG THE SUBDIVISION. SOME OF THE MATERIAL HAD WEATHERED TO A NEARLY ASPHALTIC CHARACTER, WHILE SOME REMAINED MORE FLUID PARTICULARLY UNDER THE WEATHERED OUTER LAYER AND ESPECIALLY UNDER THE SUNSHINE WITH WHICH WE HAVE BEEN BLESSED OF LATE. HOWEVER, AREAS WHERE MOUSSE COULD BE FOUND WERE RELATIVELY INFREQUENT ALONG THE SUBDIVISION, AND EXTENT OF COVERAGE WITHIN BANDS WAS NOT GREAT. WITH RESPECT TO FURTHER ACTIVITIES ON THE SUBDIVISION,

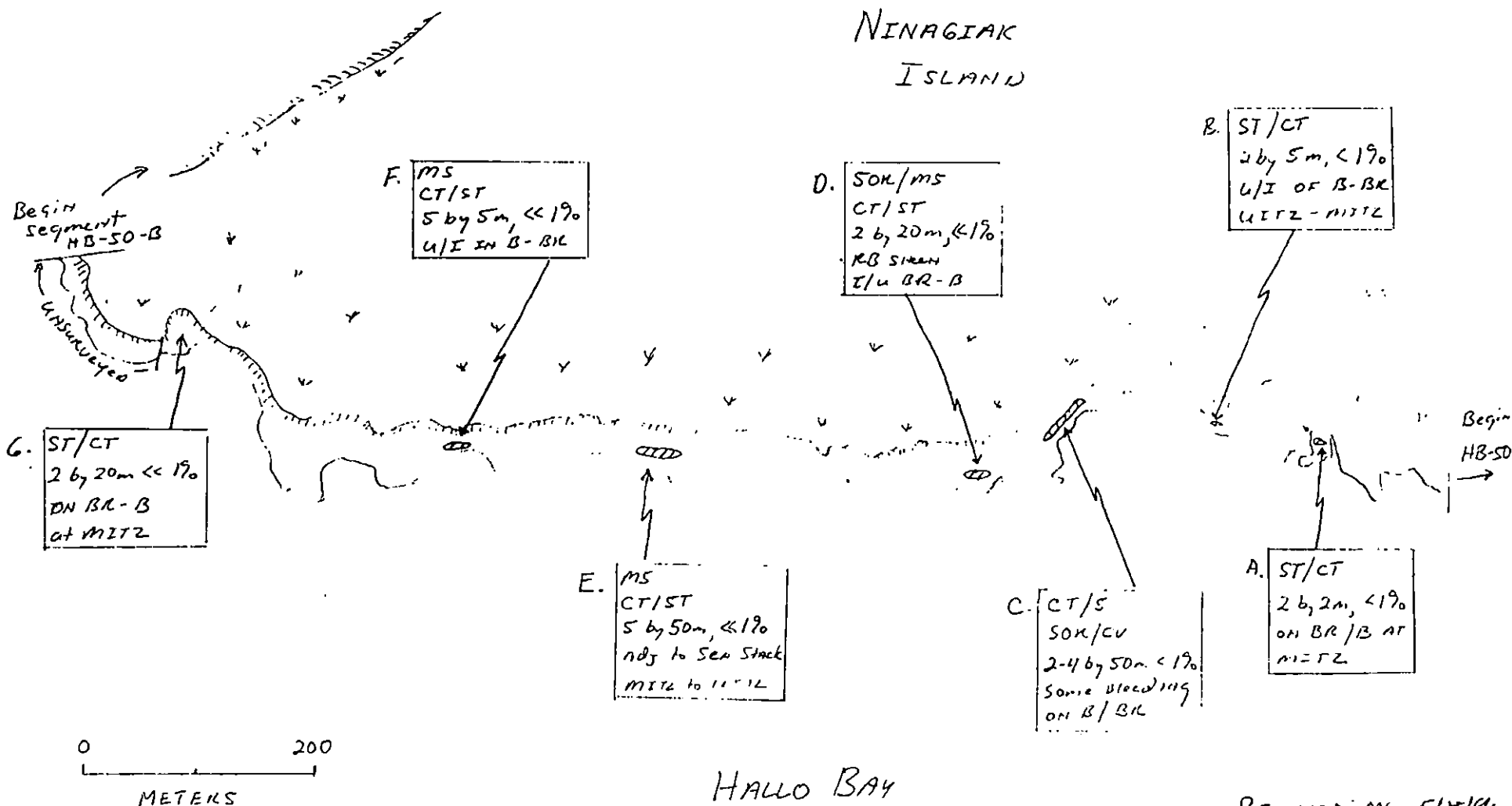
THE SAME CLOSING COMMENTS MADE FOR SUBDIVISION B WOULD APPLY HERE. ECOLOGICAL SENSITIVITIES (SEABIRDS), THE AMOUNT OF OIL REMAINING, AND THE DIFFICULTY IN ACCESSING THE AREA NEED TO BE CAREFULLY BALANCED AND SCRUTINIZED BEFORE RETURNING WITH A CLEANUP-RELATED CREW BECOMES ADVISABLE.

AB 5101, Page 200, 4

Sketch MAP OG
K09-19-HB-50-A
D) M. Fitzgerald
23 MAY 1991
1720 - 1820

P.U. VECO WORKER
RETRIEVED ALL
ACCESSIBLE OIL IN
THIS SEGMENT BUT
IT WAS < .10 BAG.

NINAGIAK ISLAND



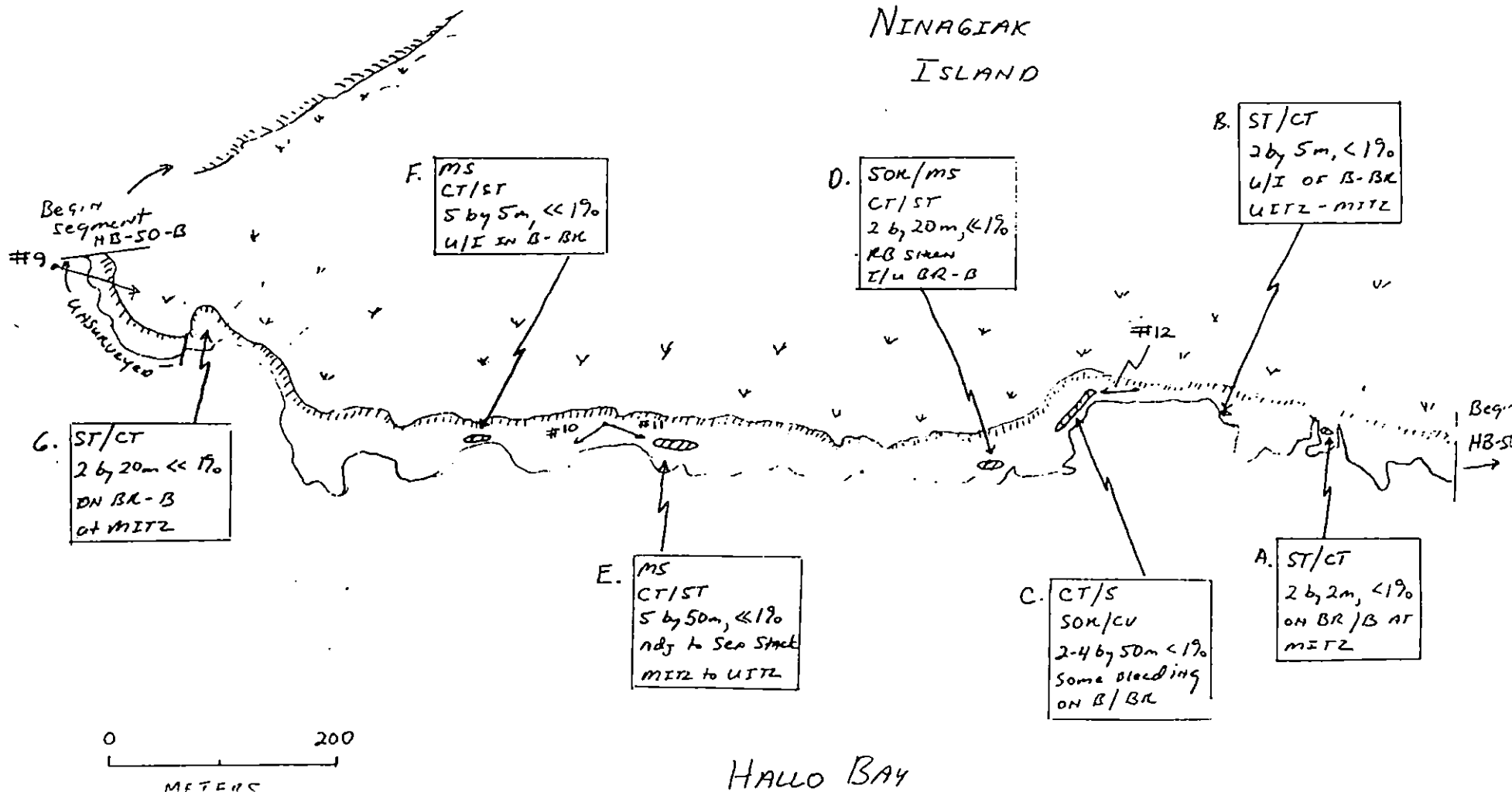
-  Bedrock cliff/slope
 GRASSY UPLANDS
 PHOTO SITES

PHOTO SITES HB-50A
ROLL 6-21, FRAMES 9 THRU 12

Sketch MAP 66
 K09-19-HB-50A
 D M. FITZGERALD
 23 MAY 1991
 1720 - 1820

RU. VECO WORKER
 RETRIEVED ALL
 ACCESSIBLE OIL IN
 THIS SEGMENT BUT
 IT WAS < .10 bag.

NINAGIAK ISLAND



TEAM # 6 Helo

DATE May 23 1991

SEGMENT # K9N-20 HB-50

TIDAL HEIGHT (Range) 1.5 ft - 1.5 ft (17:20 - 18:20)

SUBDIVISION A

BIOLOGIST H. Davis

SEA STATE 1 ft Calm

WIND SPEED/DIRECTION 5-20 kt Breezy SE

PHOTOGRAPHS: ROLL # 6-21

FRAME # 9-12

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

The segment surveyed is a high energy boulder/cobble beach on top of a bedrock platform. The organisms here are only moderately dense and tended to be grouped in protected areas. At the supra tidal level verucariae x anthous conchidia and Physcia caesia are present. Verucaria grew down to the top of the littorine zone. Filamentous green algae porphyra and barnacles begin in the littorine zone. Below this Mytilus, Modiolus, Endocladia, Gloiopelta, Nucella, Scytosiphon, Fucus, Volutharpa, Anthopleura antennata, Balanus, and encrusting coralline are in cracks and crevices. On the underside of rocks (debris, littorina eggs, spirorbis, Nucella eggs, and many small (3mm) flatworms can be found. On the cliffs and upland areas Glaucous-winged Gulls will be laying eggs soon. (They are already preparing nests)

A + G are in the littorine, barnacle, and limpet zone. Porphyra and Fucus are present in patches.

B, C, E These three sites extended from the start of the littorine zone down to where the tide pools start. Verucaria showed the outline where stain had worn off the rock. Filamentous green algae was growing in the "shadow" left by the stain. The most common organisms in sites B, C, and E are littorina, barnacles, porphyra, filamentous green algae and limpets (N. perna).

D + F Verucaria (with stain shadows) and littorina are the most common animals at these two sites. A few barnacles and limpets are in the lower half of the area.

Song sparrows (2) Fox sparrow (1)

Glaucous-winged Gull (>100) Tufted Puffin (2) Kittiwake (1 Dead) Harlequin (2)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	0		
Seabirds	1	2	
Waterfowl	1	2	
Gulls/Kittiwakes	2	>100	
Shorebirds			
Corvids			
Other Birds sparrows Song Fox	2	3	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	1		
Pinnipeds (specify)			
Harbor Seal	2		
Whales (specify)	0		

Shoreline subdivision map showing important biological features attached.

Rec'd 5/27/91. N.V.

Bedrock
Cliff/SLOPE

GRASSY
UPLANDS

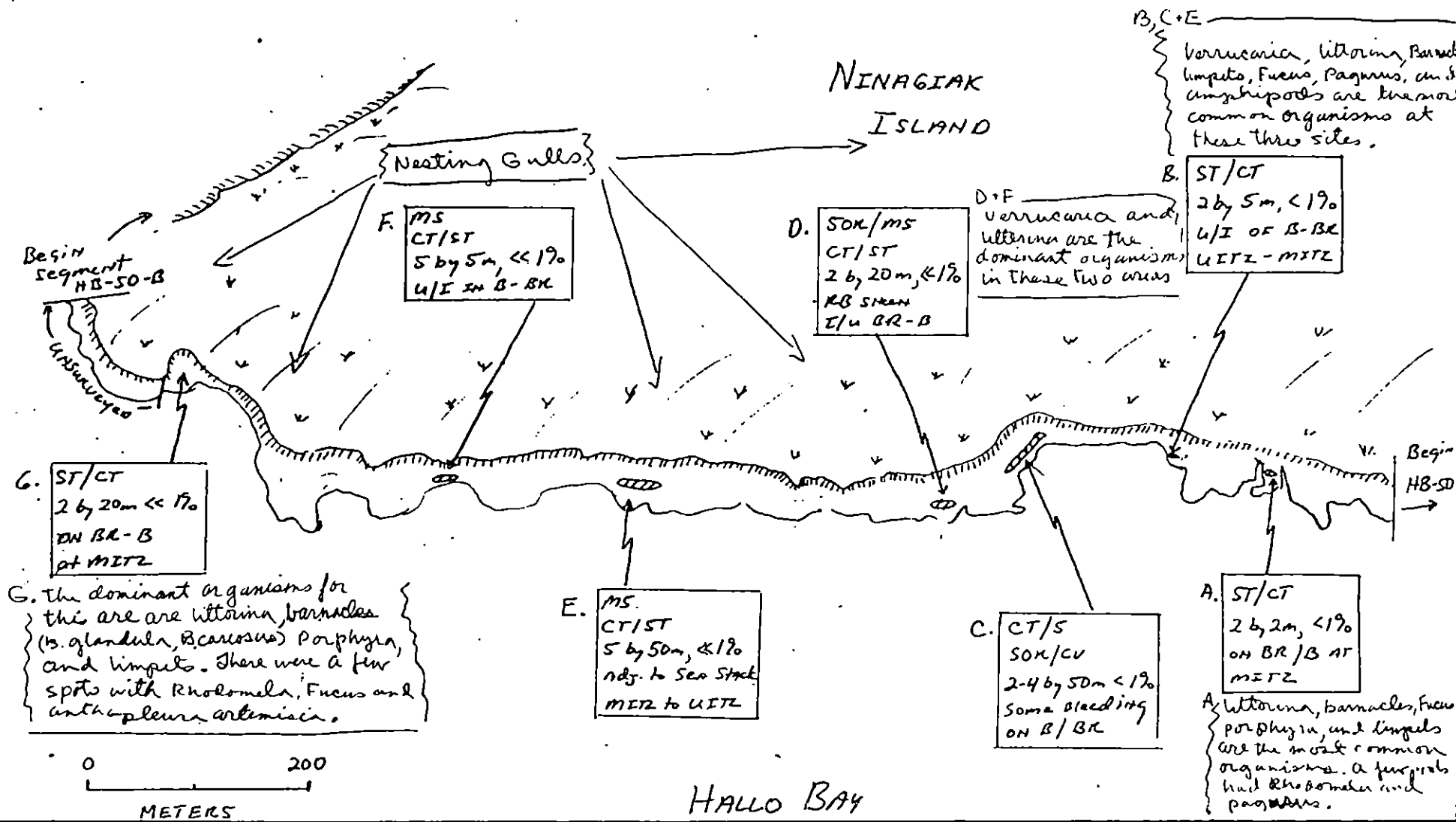
PHOTO SITES

This segment has a diverse community in the intertidal and nesting Gulls on the uplands. Clear up in this area would be more disruptive than productive.

Bio Map
H Davis

Sketch MAP of
K09-19-HB-50-B
D. M. FITZGERALD
23 MAY 1991
1720-1820

P.U. VECO WORKER
RETRIEVED ALL
ACCESSIBLE OIL IN
this segment but
it was < .10 bag.





B

A

UNsurveyed

T(5m) T(2m)

T(20m)

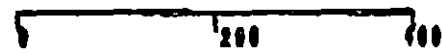
T(5m)

T(20m)



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

K0919 HB050 A
ADEC Subsegment Length: 1222m
METERS



AK State Plane Zone 4
900100005000



Subdivision Field Map
Map Key: 00AK0010H0000A
Name: O. Fitzgerald
Date: 23 MAY 1991
Date Entered:

Reviewed: Mc 512819
reviewed 5.27.94

1991 MAYSAP EVALUATION

SEGMENT: KO919HB050 SUB: A REGION: KOD SURVEY DATE: 5/23/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Timothy Admitt

Date: 6/04/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

N

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: June 4 1991

FOSC APPROVAL DATE: 6/04/91

ADEC

FOSC

EXXON

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

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Seabird Colony: Access restricted. USF&WS authorization required after 5/15. Maintain 1000' vertical and 1/2 mile horizontal buffer.

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

ADEC

NAME J. BARNHART, ADEC

SIGNATURE

Jeffrey Barnhart

- ☒ NTR Oil was located throughout this segment in the form of ms, ct, cv, st. os described on the OG map. Recoverable oil exists in small quantities. Additional cleanup at this time is not recommended.

EXXON RANDALL K. BOYER

NAME R. HARRISON, EXXON

SIGNATURE

Randall K. Boyer

- ☒ NTR AN EXTREMELY HIGH ENERGY SHORELINE. WHERE BANDS OF MOUSSE WERE DESCRIBED ON PREVIOUS SURVEYS, WEATHERED SURFACE RESIDUE EXISTS. PRESENT OILING CONDITIONS DOES NOT POSE AN ENVIRONMENTAL THREAT. TIDE POOLS AND INTERTIDAL ZONES WERE HEALTHY. REMEDIAL EFFORTS SHOULD NOT BE CONSIDERED AS THE OILING CONDITIONS ARE NOT PRESENT, SAFETY IS AN ISSUE AND THE ISLAND IS TOO SENSITIVE AS SEA BIRDS ARE PRESENT IN LARGE NUMBERS.

LANDMANAGER

NAME E. BENNIS

OF NPS

SIGNATURE

Ernie Bennis

- ☒ NTR Throughout HB 50A, the west side of the south-facing shoreline of Ninagiak, oil remains as described on OG map as st, ct, cv, sor, with traces of mousse. Clean sediments are deposited intermittently throughout the sites. Surface oil evident does not warrant further intrusion on this sensitive island.

USCG/NOAA

NAME CWO R. SPURR/G. SHIGENAKA

SIGNATURE

R. Spurr / G. Shigenaka

- ☒ NTR Further intrusion in this area is not warranted in view of the amount of oil and seabird colony.

SURVEYED PORTION OF THE SUBDIVISION CONSISTED OF EXPOSED, IRREGULAR, BEDROCK/BOULDER SHORELINE ALONG THE LOWER SOUTHEASTERN COAST OF NINAGIAK ISLAND IN HALLO BAY. PHYSICAL DESCRIPTION FOR THIS AREA IS THE SAME AS THAT FOR HB-50B. IN PREVIOUS SURVEYS THIS SEGMENT WAS NOTED AS HAVING WIDELY DISTRIBUTED AREAS OF OILING ALONG ITS LENGTH, PRIMARILY IN THE FORM OF BANDS OF MOUSSE. MUCH OF THIS MATERIAL HAS APPARENTLY BEEN REMOVED THROUGH WEATHERING AND PHYSICAL FORCES, AND IN SOME AREAS ONLY WEATHERED COAT/STAIN REMAINS ON BEDROCK AND BOULDER SUBSTRATE. PATCHES OF SOR/MOUSSE WERE STILL FOUND TO BE PRESENT IN THE URTZ IN AT LEAST 3 LOCATIONS ALONG THE SUBDIVISION. SOME OF THE MATERIAL HAD WEATHERED TO A NEARLY ASPHALTIC CHARACTER, WHILE SOME REMAINED MORE FLUID PARTICULARLY UNDER THE WEATHERED OUTER LAYER AND ESPECIALLY UNDER THE SUNSHINE WITH WHICH WE HAVE BEEN BLESSED OF LATE. HOWEVER, AREAS WHERE MOUSSE COULD BE FOUND WERE RELATIVELY INFREQUENT ALONG THE SUBDIVISION, AND EXTENT OF COVERAGE WITHIN BANDS WAS NOT GREAT, WITH RESPECT TO FURTHER ACTIVITIES ON THE SUBDIVISION,

THE SAME CLOSING COMMENTS MADE FOR SUBDIVISION B WOULD APPLY HERE. ECOLOGICAL SENSITIVITIES (SEABIRDS), THE AMOUNT OF OIL REMAINING, AND THE DIFFICULTY IN ACCESSING THE AREA NEED TO BE CAREFULLY BALANCED AND SCRUTINIZED BEFORE RETURNING WITH A CLEANUP-RELATED CREW BECOMES ADVISABLE.

PAGE 1 OF 1

SEGMENT K9-19-H350

SUBDIVISION A

DATE 23 / May 91

ENERGY LEVEL: ☒ H ☐ M ☐ L

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

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

EST. OIL CATEGORY LENGTH: W m M m N m VL 152 m NO 948 m US 122 m

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 6-21 FRAMES 9-12

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

OG COMMENTS: This segment is located along the southwest side of NINAGIAK Island, a region of high wave energy. The shoreline consists of a bedrock platform with numerous stacks and supratidal bedrock outcrops abutting a bedrock cliff-high angle slope. The oiling of this region occurs very infrequently and even within oiling sites, the extent of the oiling is in trace quantities. The most common oiling is CT/ST with very minor occurrences of MS/SOL. There was some bleeding of exposed mousse in the hot sun. VECO workers obtained < .10 bag in an hour time in this segment.

Revised: 5/28/91 m.
revised 5.27 94

HB+

+

B

MAP #1

A

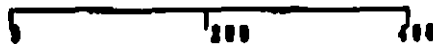
+

+



K0919 HB050 A

METERS



AS SHOWN, PLANS, SEPT. 5, 1988

Subdivision Field Map

Map Key: COAX00102000A

Name: D. Fitzgerald

Date: 23 May 1991

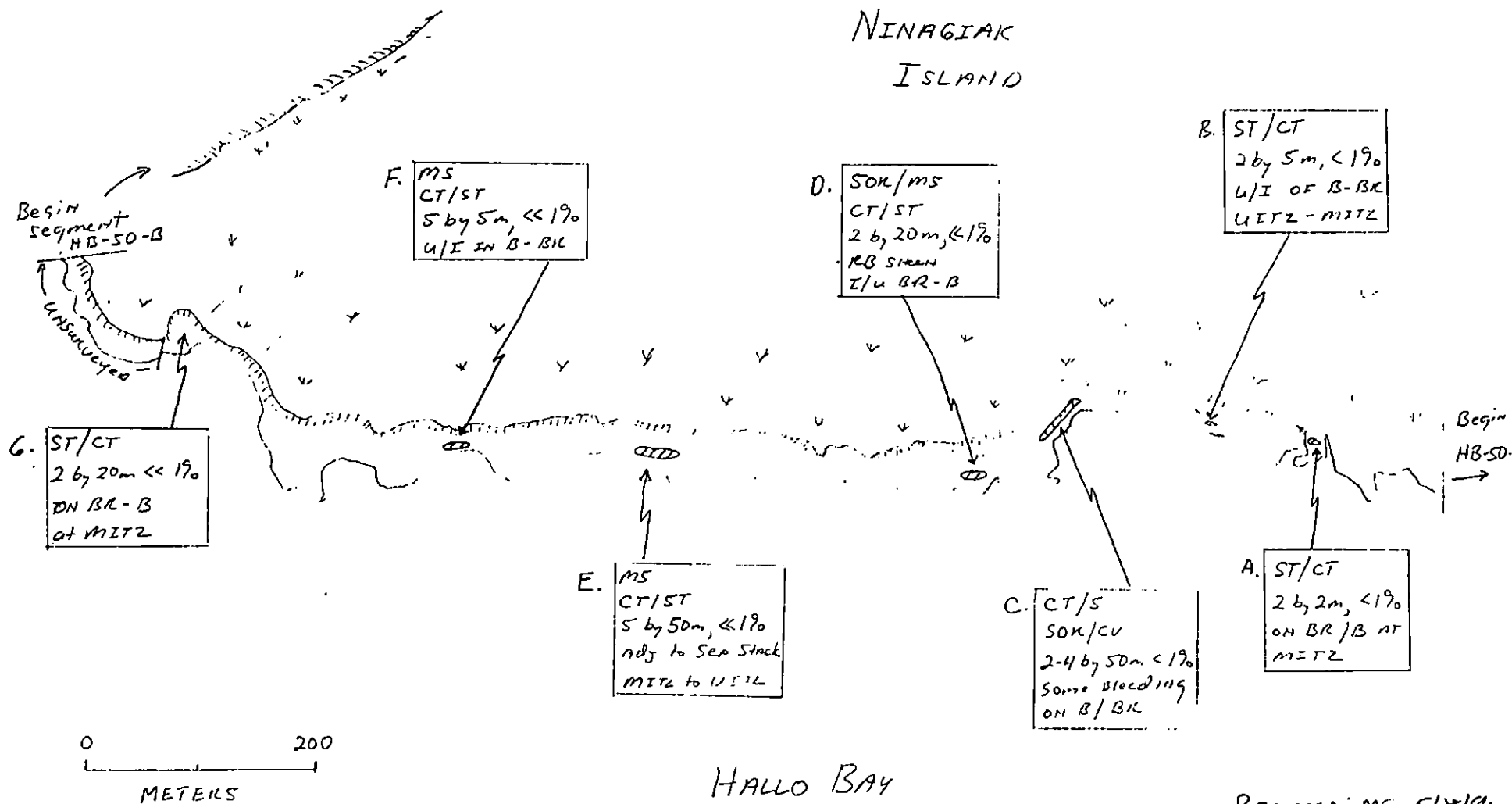
reviewed 5-27 94

-  Bedrock
Cliff/Slope
 GRASSY
UPLANDS
 PHOTO SITES

P.U. VECO WORKER
 RETRIEVED ALL
 ACCESSIBLE OIL IN
 THIS SEGMENT BUT
 IT WAS < .10 BAG.

Hch MAP 061
 K09-19-HB-50-A
 D M. Fitzgerald
 23 MAY 1991
 1720 - 1820

NINAGIAK ISLAND



Reviewed MC 5/28/91
 reviewed 5-27 91

Bedrock
Cliff/Slope

Grassy
Uplands

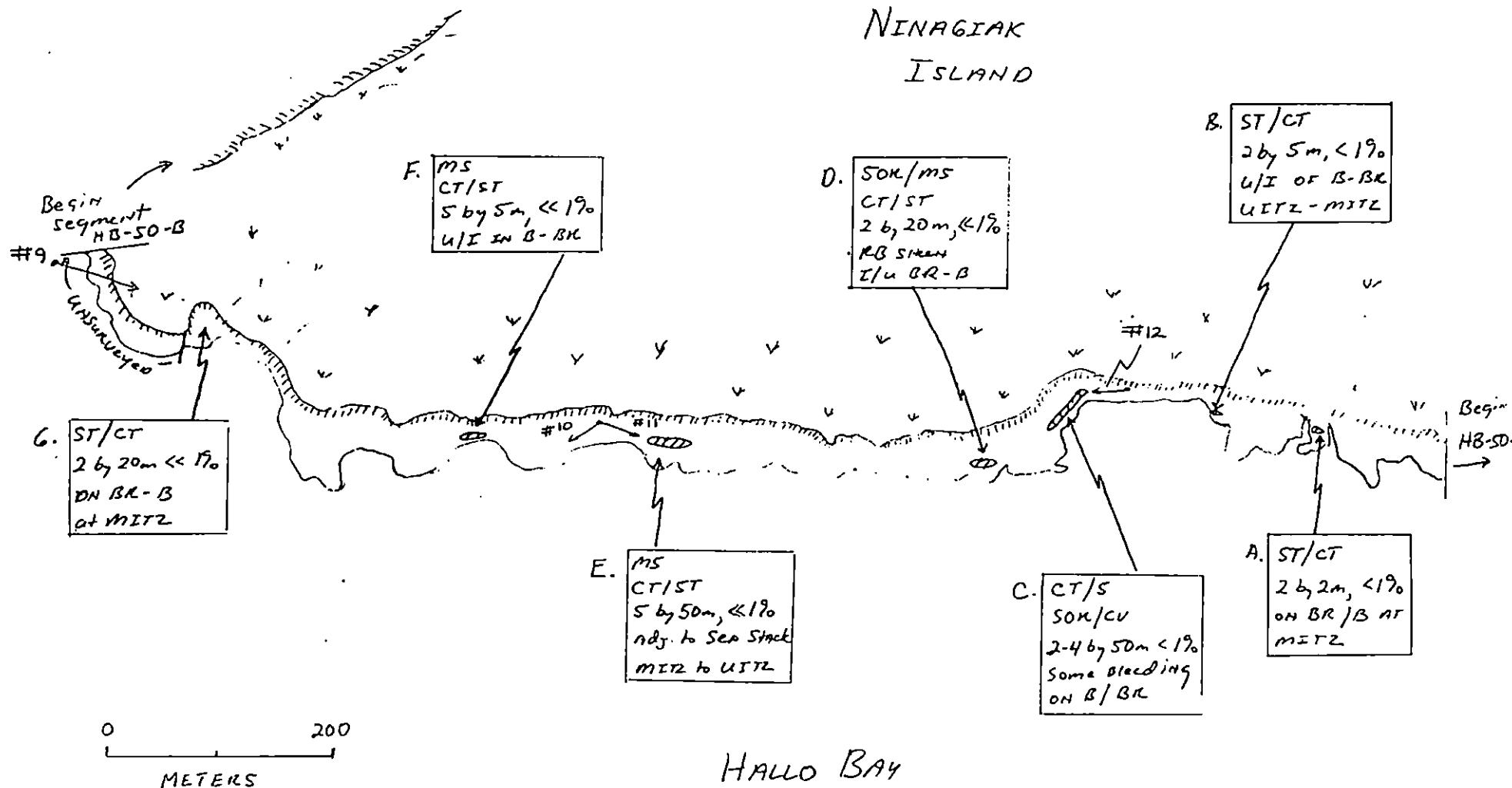
Photo Sites

PHOTO SITES HB-50A
ROLL 6-21, FRAMES 9 THRU 12

Sketch MAP 061
K09-19-HB-50-A
D. M. Fitzgerald
23 MAY 1991
1720 - 1820

P. VECO WORKER
RETRIEVED ALL
ACCESSIBLE OIL IN
this segment but
it was < .10 bag.

NINAGIAK ISLAND



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 Helo

DATE May 23 1991

SEGMENT # K9N-20 HB-50

TIDAL HEIGHT (Range) 1.5 ft - 1.5 ft (17:20 - 18:20)

SUBDIVISION A

BIOLOGIST H. Davis

SEA STATE 1 ft Calm

WIND SPEED/DIRECTION 5-20 kt Breezy SE

PHOTOGRAPHS: ROLL # 6-21

FRAME # 9-12

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

The segment surveyed is a high energy boulder/cobble beach on top of a bedrock platform. The organisms here are only moderately dense and tended to be grouped in protected areas. At the supratidal level verucaria, anthous, candelaria and Physcia caesia are present. Verucaria grew down to the top of the littorine zone. Filamentous green algae porphyra and barnacles begin in the littorine zone. Below this Mytilus, Modiolus, Endocladia, Gloiopelta, Nucella, Scytosiphon, Fucus, Volutharpa, Anthopleura artemesia, Aulacinea incubans, Odontholis and encrusting Crallina are in cracks and crevices. On the underside of rocks (destra, littorina eggs, spirorbis, Nucella eggs, and many small (1-3 mm) flatworms can be found. On the cliffs and upland areas Glaucous-winged Gulls will be laying eggs soon. (They are already preparing nests)

A + G were in the littorine, barnacle, and limpet zone. Porphyra and Fucus are present in patches.

B, C, E. These three sites extended from the start of the littorine zone down to where the tide pools start. Verucaria showed the outline where stain had worn off the rock. Filamentous green algae was growing in the "shadow" left by the stain. The most common organisms in sites B, C, and E are littorina, barnacles, porphyra, filamentous green algae and limpets (N. perona).

+ F Verucaria (with stain shadow) and littorina are the most common animals at these two sites. A few barnacles and limpets are in the lower half of the area.

Song sparrows (2) Fox sparrow (1)

Glaucous-winged Gull (>100) Tufted Puffin (2) Kittiwake (1 Dead) Harlequin (2)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	0		
Seabirds	1	2	
Waterfowl	1	2	
Gulls/Kittiwakes	2	>100	
Shorebirds			
Corvids			
Other Birds sparrows song Fox	2	3	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	1		
Pinnipeds (specify)			
Narwhal Seal	2		
les (specify)	0		

Shoreline subdivision map showing important biological features attached.

Bedrock
Cliff/SLOPE

GRASSY
UPLANDS

PHOTO SITES

This segment has a diverse community in the intertidal and nesting Gulls on the uplands. Clean up in this area would be more disruptive than productive.

Bio Map
H Davis

SKETCH MAP 061
K09-19-HB-50-A
D. M. FITZGERALD
23 MAY 1991
1720 - 1820

P.U. VECO WORKER
RETRIEVED ALL
ACCESSIBLE OIL IN
THIS SEGMENT BUT
IT WAS < .10 bag.

NINAGIAK ISLAND

B, C+E
Verrucaria, Littorina, Barnacle
limpets, Fucus, Pagurus, and
amphipods are the most
common organisms at
these three sites.

Nesting Gulls

F. MS
CT/ST
5 by 5m, < 1%
U/I IN B-BR

D. SOK/MS
CT/ST
2 by 20m, < 1%
RB SMOKE
I/U BR-B

D+F
Verrucaria and
Littorina are the
dominant organisms
in these two areas

B. ST/CT
2 by 5m, < 1%
U/I OF B-BR
UETZ - MITZ

G. ST/CT
2 by 20m < 1%
ON BR-B
at MITZ

G. The dominant organisms for
this area are Littorina, barnacles
(B. glandula, B. carosus) Porphyra,
and limpets. There were a few
spots with Rhodomela, Fucus and
amphiplexus artemisia.

E. MS
CT/ST
5 by 50m, < 1%
adj. to Sea Stack
MITZ to UETZ

C. CT/S
SOK/CV
2-4 by 50m < 1%
Some bleeding
ON B/BR

A. ST/CT
2 by 2m, < 1%
ON BR/B AT
MITZ

A. Littorina, barnacles, Fucus
porphyra, and limpets
are the most common
organisms. A few spots
had Rhodomela and
pagurus.

0 200
METERS

HALLO BAY

+

B

A

T(5m) T(2m)

T(20m)

T(5m)

T(20m)

UNsurveyed



+

+

XXXX

Wide

K0919 HB050 A

Subdivision Field Map

////

Medium

ADEC Subsegment Length: 1222m

Map Key: 00AX001HB050A

Narrow

METERS

Name: D. FITZGERALD

TT

Very Light

Date: 23 MAY 1991

0000

No Oil

AK State Plane Zone 4



Data Entered:

0001940500

 Renewed: MC 512819
 reviewed 5.27.91

1991 MAYSAP EVALUATION

SEGMENT: KO919HB050 SUB: B REGION: KOD SURVEY DATE: 5/23/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC

FOSC

EXXON

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Seabird Colony: Access restricted. USF&WS authorization required after 5/15. Maintain 1000' vertical and 1/2 mile horizontal buffer.

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

ADEC

NAME J. BARNHART, ADECSIGNATURE Jeff Barnhart

- ☒ NTR Two sites on Ninaglak Island, HB-50 B, were surveyed. Both sites contained oil in the form of MS, CT, 1-2 PD. It appears as if clean sediments have moved into the areas between the boulders covering previously documented oil. Additional cleanup activity is not recommended. VECO personnel removed 40 pounds of oil.

EXXON

NAME RANDALL K. BOYER
R. HARRISON, EXXONSIGNATURE Randall K. Boyer

- ☒ NTR A SHELTERED AREA OF AN EXTREMELY HIGH ENERGY BEACH CONTAINED SOME SURFACE RESIDUE. THE VECO MAYSAP CREW REMOVED THE HIGHEST PERCENTAGE SOR. ABOUT 600-800 METERS WAS WALKED ON SUBDIVISION B AND TO FIND ANY RESIDUE WAS DIFFICULT. ONE HAS TO SEARCH TO FIND OILING. THE INTERTIDAL BOTA DID APPEAR HEALTHY AND PROLIFIC IN PROTECTED ZONES AWAY FROM THE WAVE ENERGY. A DANGEROUS, SENSITIVE SITE AND NO TREATMENT IS RECOMMENDED.

LANDMANAGER

NAME E. BENNISOF NPSSIGNATURE James Bennis

- ☒ NTR Oil persists at site A (OG nap) in patches of mousse both pooled & entrained in fine sediments in the boulder/cobble interstices. The oil has a weathered veneer encasing sticky, "fresh" looking mousse. Weathered ST, CT, CV are also present. The 1990 Work Order was not fulfilled by Exxon when clean-up crews had accessed beaches via skiff. SITE B has trace amounts of MS, SOR, and ST, CT, CV. A layer of clean sediments has been deposited in a previously documented (1990 HSA 1991 NPS survey) oiled area of mousse saturated fine sediments just to the west of site B. The area's sensitivity precludes any justification for further intrusion.

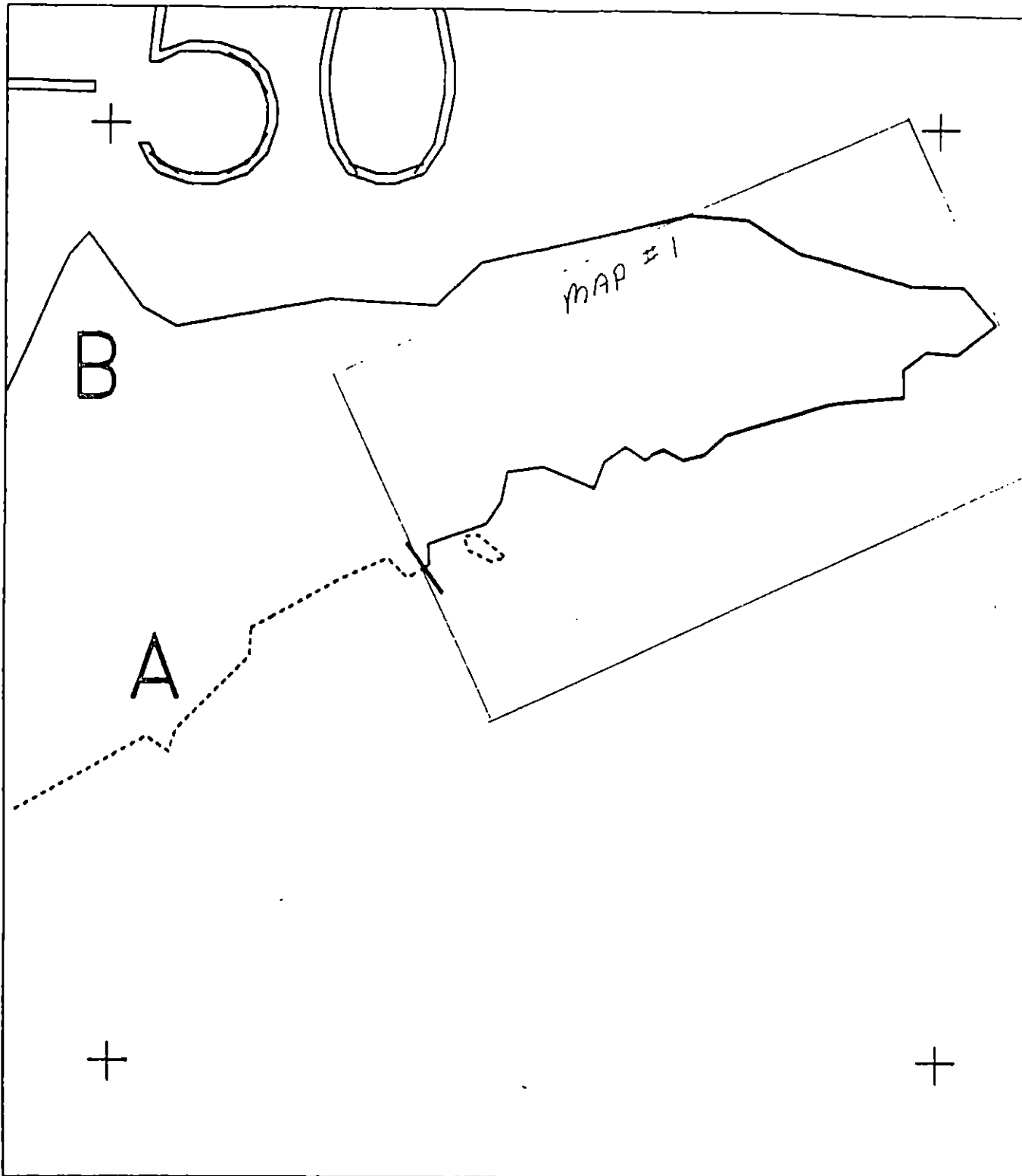
USCG/NOAA

NAME CWO R. SPURR / G. SHIGENAKASIGNATURE R. Spurr / G. Shigenaka

- ☒ NTR Although there is some recoverable oil in this segment, No treatment is recommended due to the presence of a large seabird colony

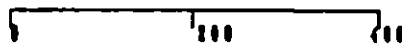
SURVEYED PORTION OF THE SUBDIVISION CONSISTED OF AN EXPOSED, IRREGULAR, BEDROCK/BOULDER SHORELINE ALONG THE SOUTHERN COAST OF NINAGLAK ISLAND, IN HALLO BAY. THE ISLAND IS A SEABIRD NESTING AREA FOR GULLS AND PUFFINS, AND GULLS WERE PRESENT IN NUMBERS ON GRASSY BLUFFS ABOVE SURVEYED SHORELINE. EFFORTS TO MINIMIZE SURVEY IMPACT ON RESIDENT BIRD POPULATIONS INCLUDED LIMITATION OF SURVEY TEAM SIZE AND USE OF ONLY ONE HELICOPTER TO FERRY THE TEAM TO THE ISLAND. A CURSORY EXAMINATION OF THE MIDDLE TO UPPER INTERTIDAL SHOWED A COMMON PATTERN OF FEW ORGANISMS IN THE UPPER, WITH LITTORINA SITKANA AND BARNACLES MORE NUMEROUS BELOW THE MITE, PORPHYRA SP. AND AN UNIDENT. FILAMENTOUS GREEN ALGAE WERE SEEN ON BOULDER FACES. THERE WERE TWO SITES WHERE SUBSTANTIVE OILING WAS OBSERVED. SITE 1, NEAR THE BORDER BETWEEN SUBDIVISIONS A AND B, WAS COMPRISED OF A BAND OF WEATHERED MOUSSE/SOR BETWEEN BOULDER AND COAT ON BOULDER FACES. THE VECO REP (ONLY ONE CAME TO THE ISLAND DUE TO SPACE LIMITATIONS) WORKED THIS SITE AND REMOVED OR BROKE UP ALL OCCURRENCES FOUND. SITE 2, LOCATED FURTHER TO THE EAST, WAS FOUND IN BOULDER SUBSTRATE EAST OF AND ADJACENT TO A SMALL PEBBLE-GRANULE BEACH. WEATHERED SOR/MOUSSE WAS ALSO OBSERVED HERE, BUT IN LESSER QUANTITIES AND NOT AS WIDELY SPREAD AS IN SITE 1. THIS AREA WAS NOT WORKED BY THE VECO REP. NO OTHER OILINGS OF SIGNIFICANCE WAS SEEN ALONG THE SURVEYED PART OF THE SEGMENT. THE AMOUNT OF OIL OBSERVED, THE ECOLOGICAL SENSITIVITIES INVOLVED, AND THE RUGGED EXPOSED NATURE OF THE SEGMENT COMBINE TO MAKE FURTHER ATTEMPTS AT REMOVAL A DEBATABLE UNDERTAKING.

reviewed 5.27.94



K0919 HB050 B

METERS



AK State Plane Zone 4
GCSNAD83Datum

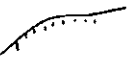
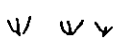
Subdivision Field Map

Map Key: 60A00010000000

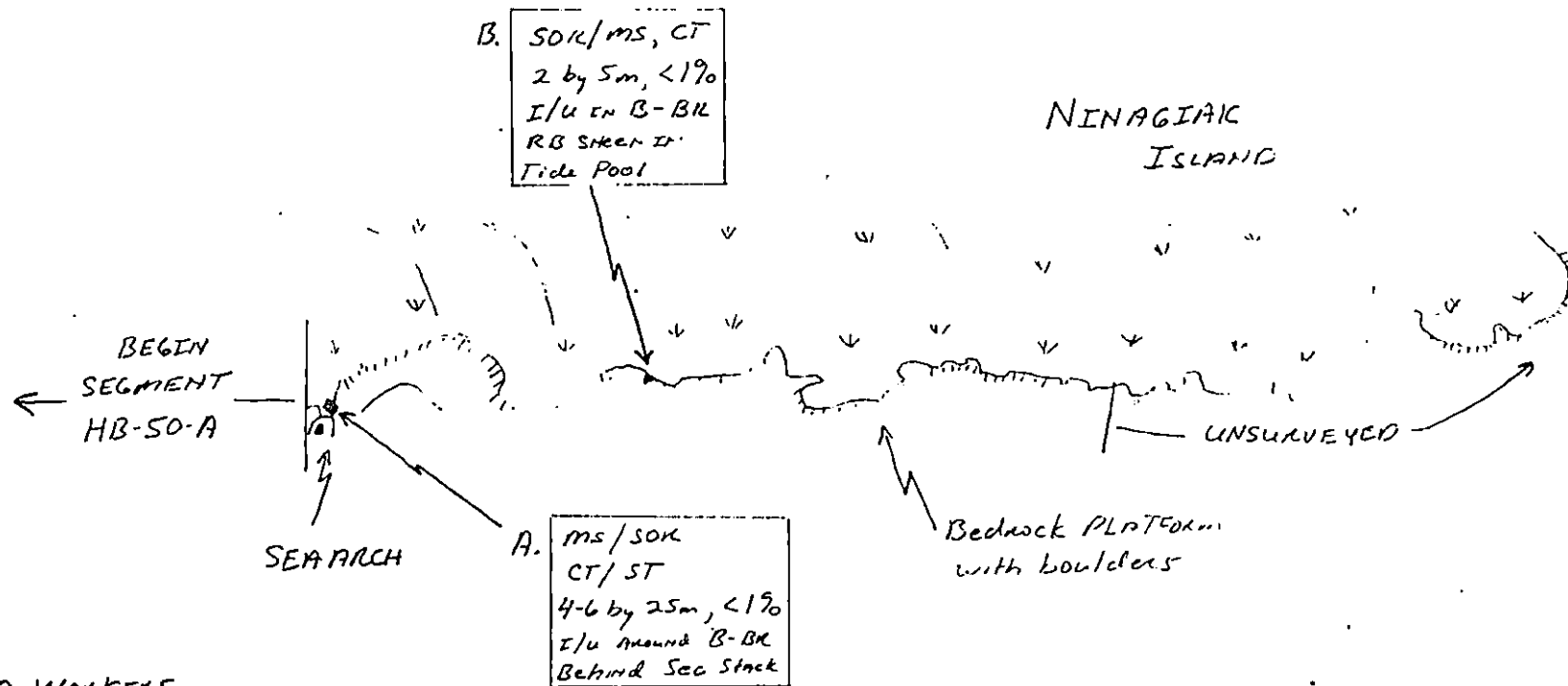
Name: D. Fitzgerald

Date: 23 May 1991

reviewed 5.27.97

 Bedrock CLIFF/
SLOPE
 GRASS Uplands
 PHOTO SITES

SKETCH MAP (06)
 K9-19-HB-50-B
 D. M. F. GERALD
 23 MAY 1991
 1620 - 1720



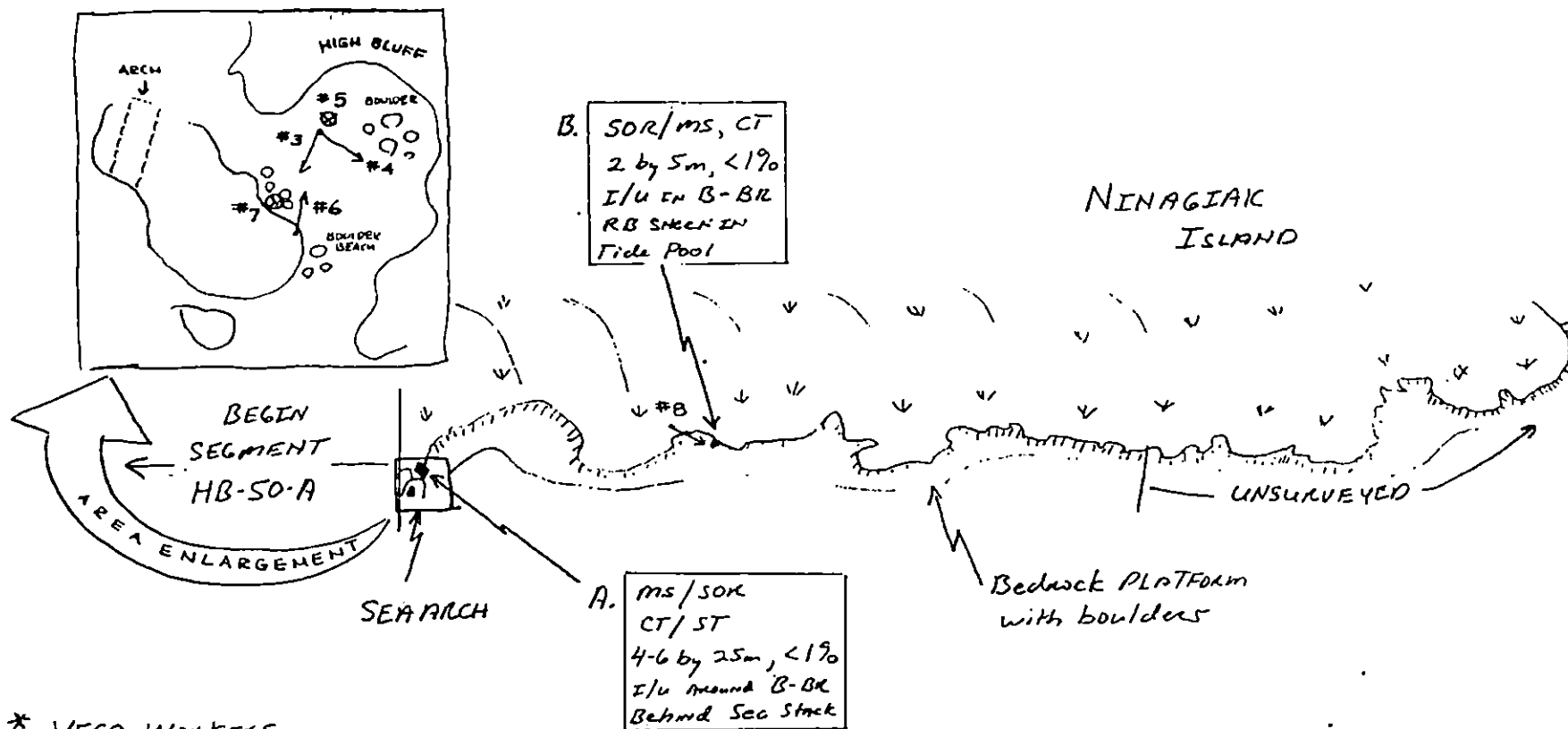
PU * VECO WORKERS
 collected 2 bags of
 oiled sediment at
 site #A.

0 200
 METERS

Bedrock CLIFF/
SLOPE
W W W GRASS Uplands
↗ PHOTO SITES

PHOTO SITES, HB-50B
ROLL 6-21, FRAMES 3 THRU 8

SKETCH MAP (06)
K9-19-HB-50-B
D. M. Fitzgerald
23 MAY 1991
1620 - 1720



P.U. * VECO WORKERS
collected 2 bags of
oiled sediment at
site #A.

HALLO BAY

0 200
METERS

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 Helo

DATE May 23 1991

SEGMENT # K9N-20 HB 50

TIDAL HEIGHT (Range) 2.8 ft - 1.5 ft (16:20:17:20)

SUBDIVISION B

BIOLOGIST H. Davis

SEA STATE 1 ft Calm

WIND SPEED/DIRECTION 5-20 KT Breeze SE

PHOTOGRAPHS: ROLL # 6-21

FRAME # 3-8

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

This area was a high energy boulder/cobble beach on top of a bedrock platform. The organisms here are moderately dense and tend to be grouped in protected areas. At the supralittoral level *Verrucaria* sp., *Xanthopoda canaliculata*, and *Physcia caesia* were present. *Verrucaria* grew down to the top of the littoral zone. Filamentous green algae, *Porphyra*, and *Ulva* (red) were in the littoral zone. Below this *Mytilus modiolus*, *Endocladia*, *Gloiosella*, *Nucella*, *Scytoleptus*, *Fucus*, *Volutharpa*, *Anthopleura artemesia*, *Aulactinia incubans*, *Odonthalia* and encrusting corallines can be found in crevices, crevices and pools. On the underside of rocks *Idotea*, *Littorina* eggs, *Spinolorthis*, *Nucella* eggs, and many small (3mm) flatworms can be found. On the cliffs and the uplands *Glaucous-winged Gulls* are preparing nesting areas.

Sites A+B are at the top of the UETZ. Some *Verrucaria* (with shadows of worm green stain) is present. The dominant organisms were *Littorina*, barnacles and a few limpets. The only alga at these sites was filamentous green algae. Drift algae included *Fucus*, *Ulva*, *Pilota* and *Laminaria*.

Song Sparrow (4) Fox Sparrow (2) Harlequin (4) Sandpiper (2)

Glaucous-winged Gulls (>50) Eagle (1) Tufted Puffin (2) Kittiwake (2 Dead)

WILDLIFE OBSERVATIONS

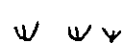
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	0
Seabirds	1	2	
Waterfowl	1	4	
Gulls/Kittiwakes	2	>50 (2 Dead Kittiwakes)	
Shorebirds	1	2	
Corvids	0	—	
Other Birds Sparrow Song Fox	2	6	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	2 + Otter burrow den on shore		
Pinnipeds (specify)	0		
Whales (specify)	0		

Shoreline subdivision map showing important biological features attached.

R. Davis 5/27/91

 BEDROCK CLIFF/
SLOPE
 GRASS UPLANDS
 PHOTO SITES

This part of the segment has a diverse though not populous intertidal community. On the uplands is a gull colony and eagles nest on the other side of the island. Clean up in this area would be more disruptive of the community than beneficial.

Bio Map
 H. Davis

SKETCH MAP (06)
 K9-19-HB-50-B
 D. M. F. GERALD
 23 MAY 1991
 1620 - 1720

A+B

verrucaria, littorina, barnacles, and
 N. personata (unipol) are the major organisms
 in these two areas. Amphipods were B.
 active on drift algae along with littorina.
 Some jaegers were in the pools at
 this level.

SOR/MS, CT
 2 by 5m, <1%
 I/U EN B-BR
 RB SHOWN IN
 Tide Pool

Nesting Gulls

NINAGIAK
ISLAND

BEGIN
 SEGMENT
 HB-50-A

SEARCH

A. MS/SOR
 CT/ST
 4-6 by 25m, <1%
 I/U around B-BR
 Behind Sea Stack

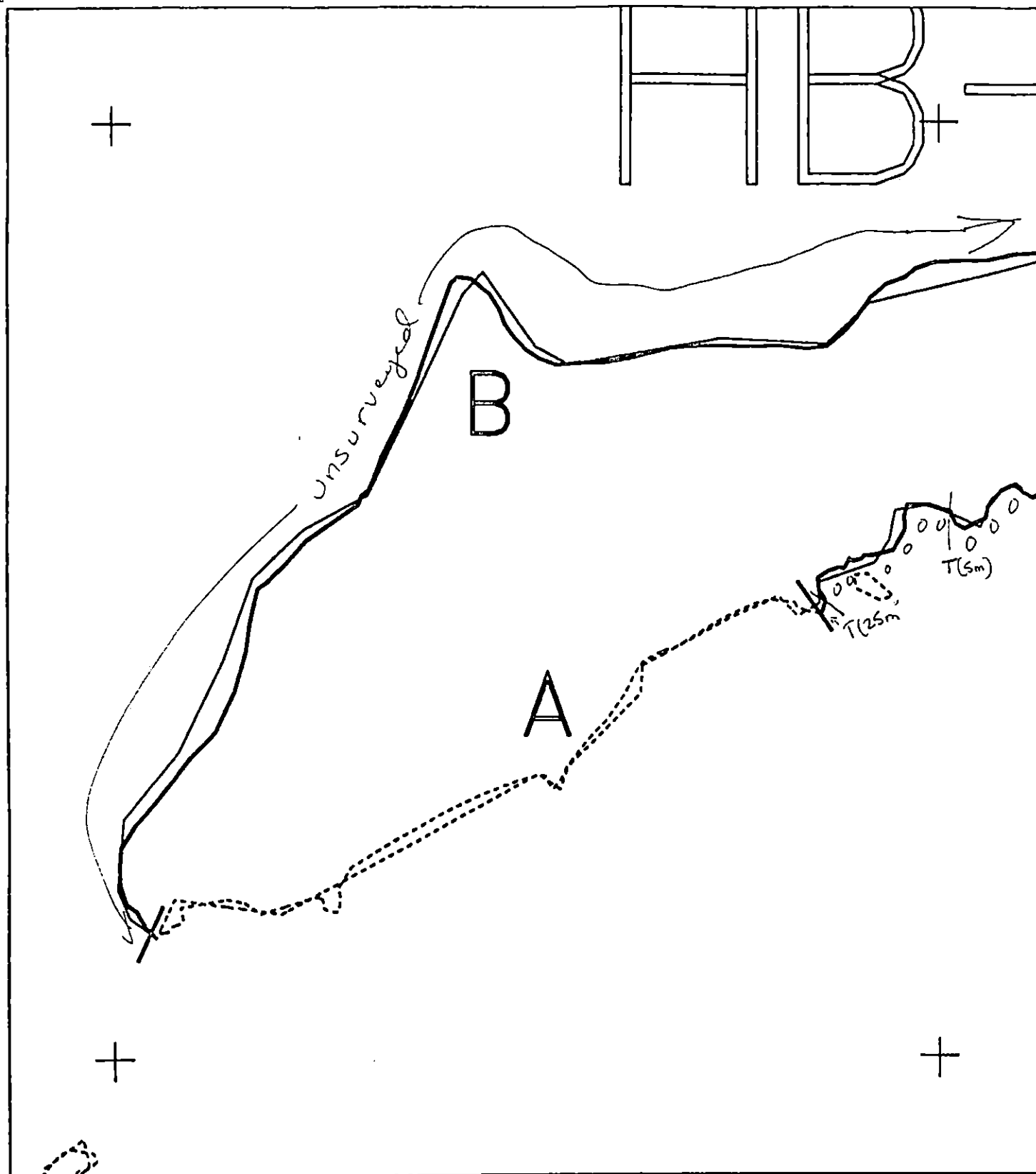
Bedrock PLATFORM
 laminaria with boulders
 stands

UNSURVEYED

PU * VECO WORKERS
 collected 2 bags of
 oiled sediment at
 site #A.

HALLO BAY

0 200
 METERS



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

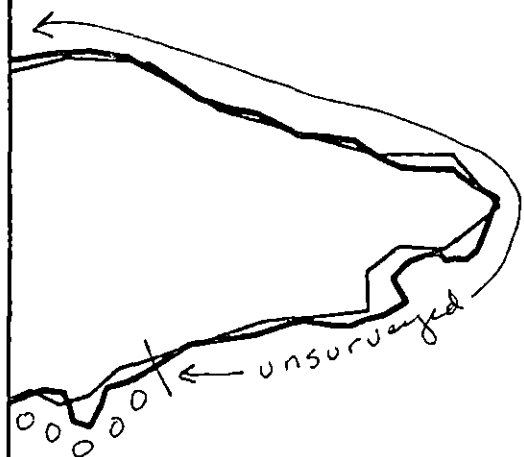
K0919 HB050 B
 ADEC Subsegment Length: 3739m
 METERS

AK State Plane Zone 4
 9019hb050ba- . . .



Subdivision Field Map
 Map Key: 60AK0019HB050B
 Name: Fitzgerald (SY)
 Date: 5.23.91
 Data Entered:

Redone 5.28.91 4y



Date Entered:

redore size 4y

1991 MAYSAP EVALUATION

SEGMENT: KO919HB050 SUB: B REGION: KOD SURVEY DATE: 5/23/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

RECOMMENDATIONS:

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

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: JUNE 4 1991

FOSC APPROVAL DATE: 6/8/91

ADEC John Ban

FOSC E. E. Page

EXXON Steve

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

USCG Mark

NOAA John

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Seabird Colony: Access restricted. USF&WS authorization required after 5/15. Maintain 1000' vertical and 1/2 mile horizontal buffer.

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

ADEC

NAME J. BARNHART, ADEC

SIGNATURE Jeff Barnhart

- ☒ NTR Two sites on Ninagiak Island, HB-50 B, were surveyed. Both sites contained oil in the form of MS, CT, 1-2%. It appears as if clean sediments have moved into the areas between the boulders covering previously documented oil. Additional cleanup activity is not recommended. VECO personnel removed 40 pounds of oil.

EXXON

NAME RANDALL K. BOYER, EXXON

SIGNATURE Randall K. Boyer

- ☒ NTR A sheltered area of an extremely high energy beach contained some surface residue. The VECO MAYSAP crew removed the highest percentage SOR. About 600-800 meters was walked on Subdivision B and to find any residue was difficult. One has to search to find oiling. The intertidal biota did appear healthy and prolific in protected zones away from the wave energy. A dangerous, sensitive site and no treatment is recommended.

LANDMANAGER

NAME F. BENNIS

OF NPS

SIGNATURE F. Bennis

- ☒ NTR Oil persists at site A (og nap) in patches of mousse both pooled & entrained in fine sediments in the boulder/cobble interstices. This oil has a weathered veneer enclosing sticky, "fresh" looking mousse. Weathered ST, CT, CV are also present. The 1990 Work Order was not fulfilled by Exxon when clean-up crews had accessed beaches via skiff. Site B has trace amounts of MS, SOR, and ST, CT, CV. A layer of clean sediments has been deposited in a previously documented (1990 HSON, 1991 NPS survey) oiled area - a mousse saturated fine sediment just to the west of site B. The area's sensitivity precludes any justification for further intrusion.

USCG/NOAA

NAME CWO R. SPURR/G. SHIGENAKA

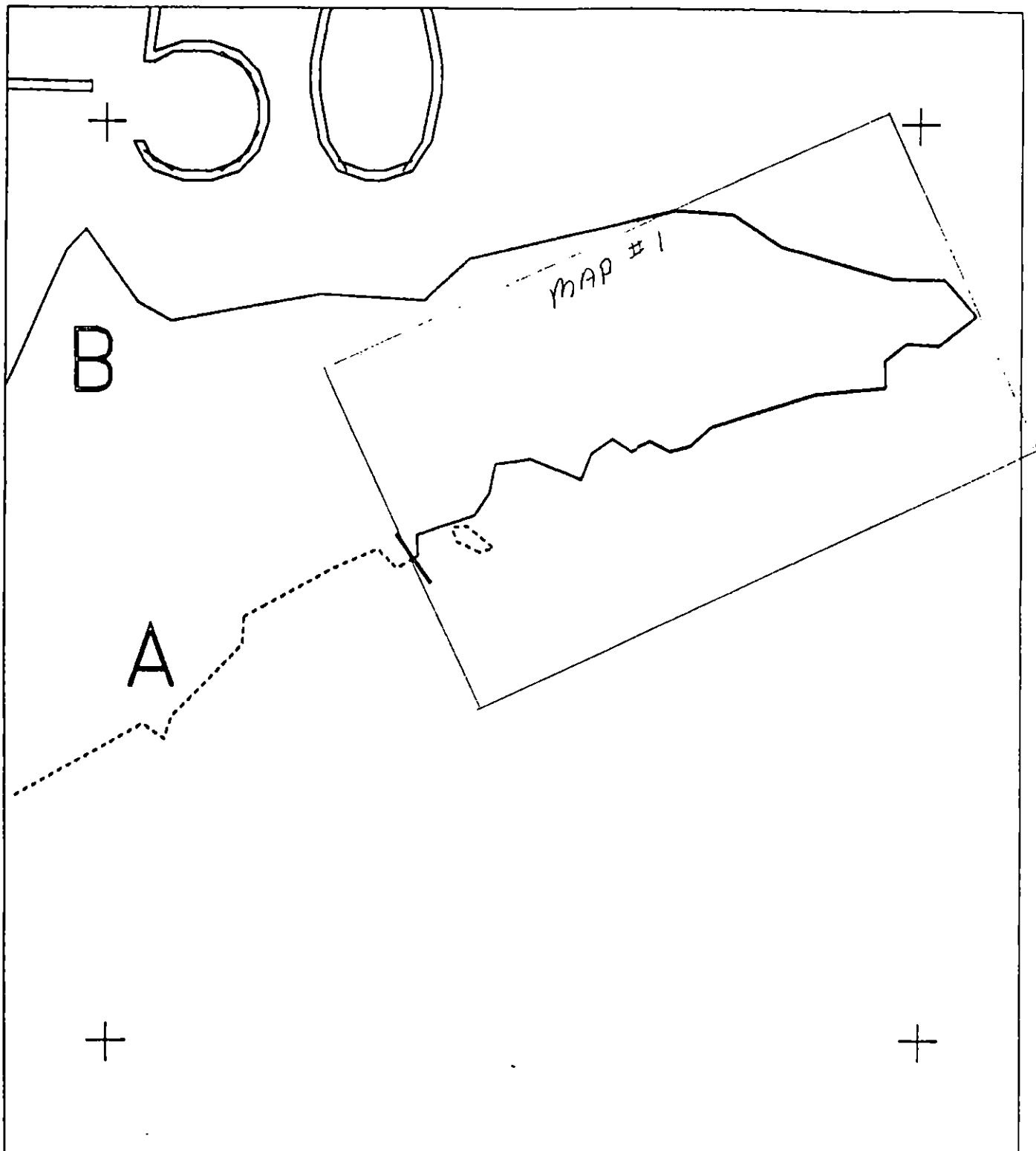
SIGNATURE R. Spurr / G. Shigenaka

- ☒ NTR Although there is some recoverable oil in this segment, no treatment is recommended due to the presence of a large seabird colony

SURVEYED PORTION OF THE SUBDIVISION CONSISTED OF AN EXPOSED, IRREGULAR, BEDROCK/BOULDER SHORELINE ALONG THE SOUTHERN COAST OF NINAGIAK ISLAND, IN HALLO BAY. THE ISLAND IS A SEABIRD NESTING AREA FOR GULLS AND PUFFINS, AND GULLS WERE PRESENT IN NUMBERS ON GRASSY BLUFFS ABOVE SURVEYED SHORELINE. EFFORTS TO MINIMIZE SURVEY IMPACT ON RESIDENT BIRD POPULATIONS INCLUDED LIMITATION OF SURVEY TEAM SIZE AND USE OF ONLY ONE HELICOPTER TO FERRY THE TEAM TO THE ISLAND. A CURSORY EXAMINATION OF THE MIDDLE TO UPPER INTERTIDAL SHOWED A COMMON PATTERN OF FEW ORGANISMS IN THE UPPER, WITH LITTORINA SITKANA AND BARNACLES MORE NUMEROUS BELOW THE MITE. PORPHYRA SP. AND AN UNIDENT. FILAMENTOUS GREEN ALGAE WERE SEEN ON BOULDER FACES. THERE WERE TWO SITES WHERE SUBSTANTIVE OILING WAS OBSERVED. SITE 1, NEAR THE BORDER BETWEEN SUBDIVISIONS A AND B, WAS COMPRISED OF A BAND OF WEATHERED MOUSSE/SOR BETWEEN BOULDERS AND COAT ON BOULDER FACES. THE VECO REP (ONLY ONE CAME TO THE ISLAND DUE TO SPACE LIMITATIONS) WORKED THIS SITE AND REMOVED OR BROKE UP ALL OCCURRENCES FOUND. SITE 2, LOCATED FURTHER TO THE EAST, WAS FOUND IN BOULDER SUBSTRATE EAST OF AND ADJACENT TO A SMALL PEBBLE/GRAVILE BEACH. WEATHERED SOR/MOUSSE WAS ALSO OBSERVED HERE, BUT IN LESSER QUANTITIES AND NOT AS WIDELY SPREAD AS IN SITE 1. THIS AREA WAS NOT WORKED BY THE VECO REP. NO OTHER OILING OF SIGNIFICANCE WAS SEEN ALONG THE SURVEYED PART OF THE SEGMENT. THE AMOUNT OF OIL OBSERVED, THE ECOLOGICAL SENSITIVITIES INVOLVED, AND THE RUGGED EXPOSED NATURE OF THE SEGMENT COMBINE TO MAKE FURTHER ATTEMPTS AT REMOVAL A DEBATABLE UNDERTAKING.

PAGE 1 OF 1

reviewed 5.27.94



K0919 HB050 B

METERS
0 200 400

AK State Plane Zone 5
NAD83

Subdivision Field Map

Map Key: COA0010000000

Name: D. Fitzgerald

Date: 23 MAY 1991

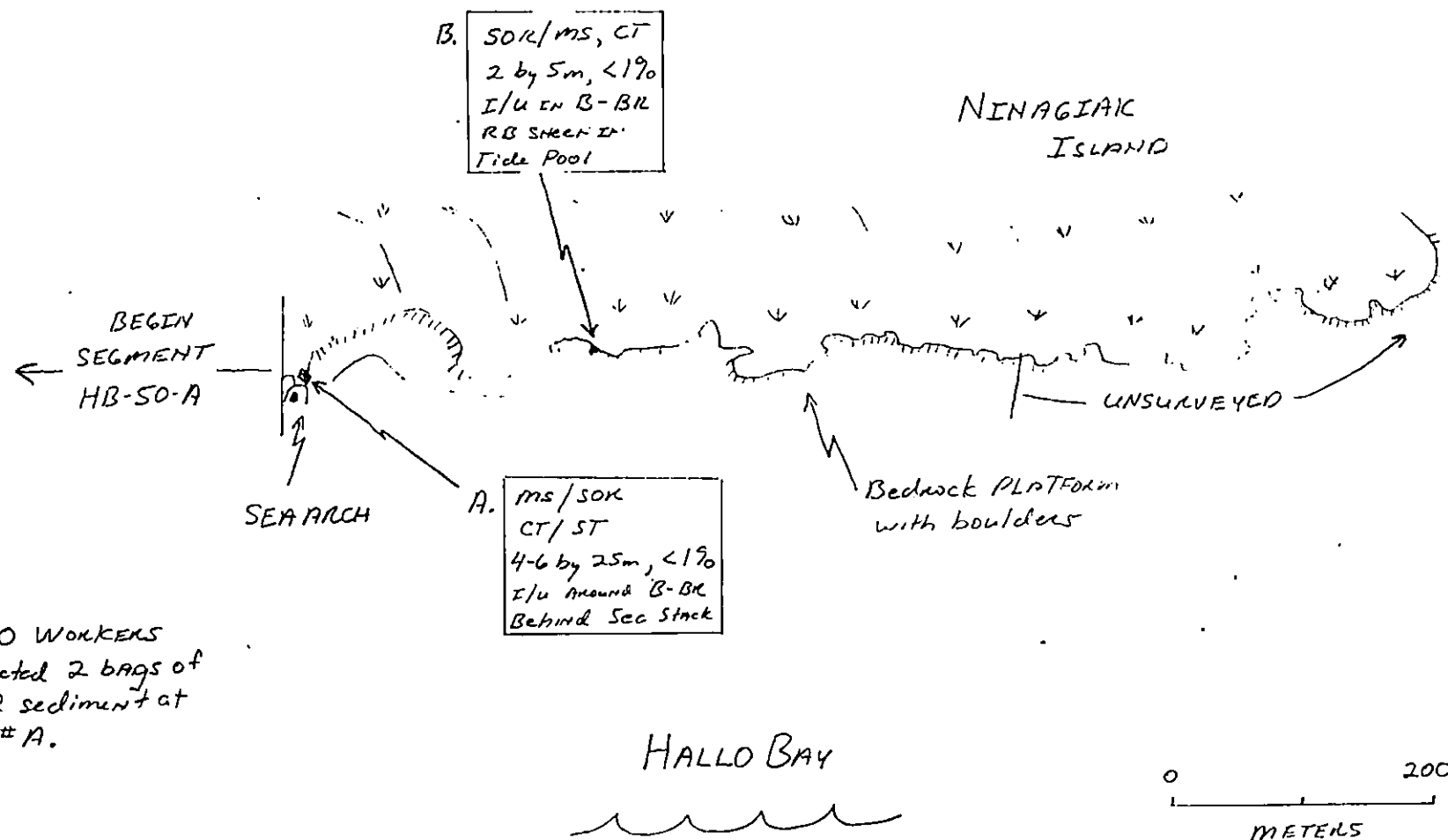
revised 5.27 94

Bedrock CLIFF/
SLOPE

W W W GRASS Uplands

↗ PHOTO SITES

SKETCH MAP (06)
K9-19-B-50-B
D. M. F. GERALD
23 MAY 1991
1620 - 1720



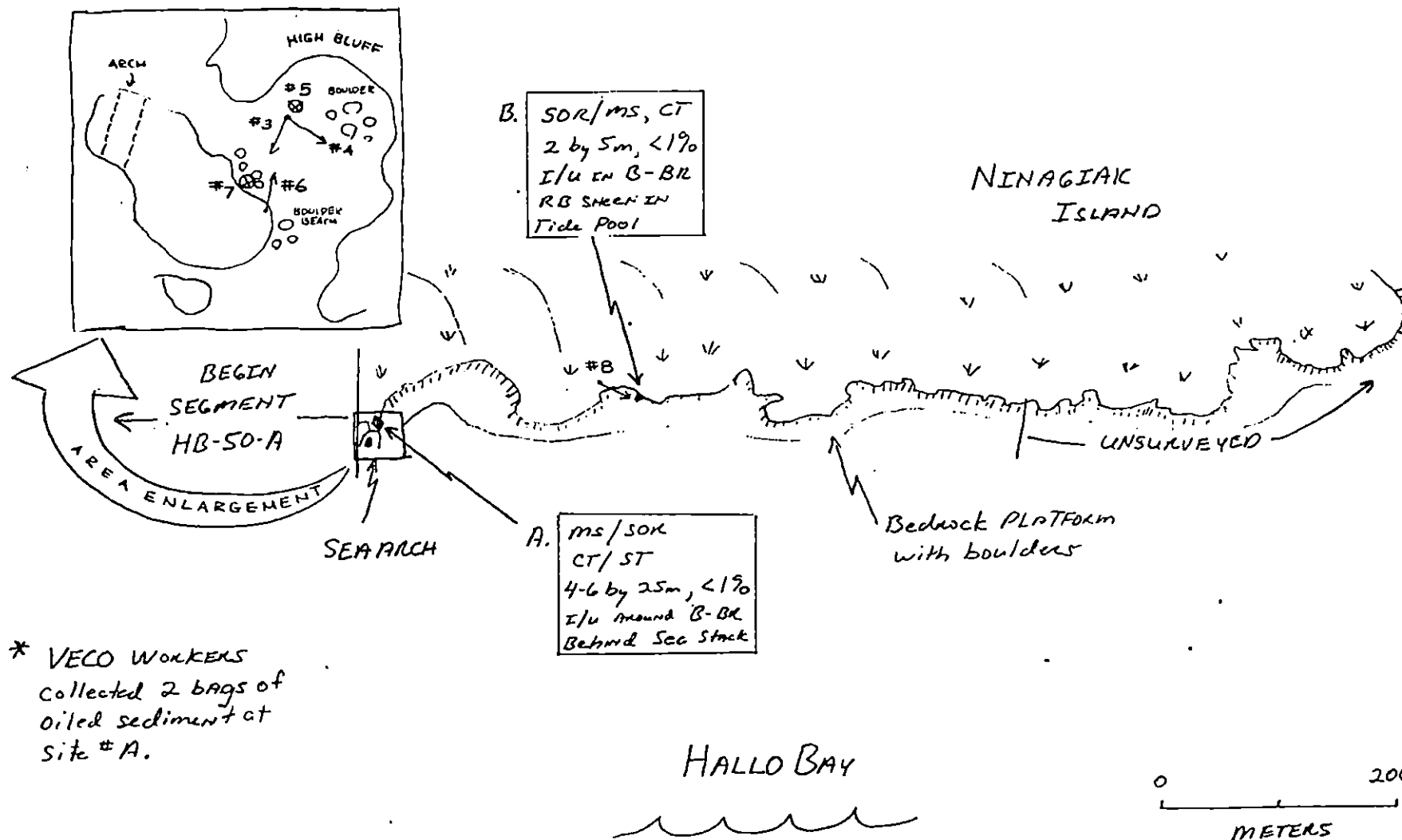
P.4 * VECO WORKERS
collected 2 bags of
oiled sediment at
site #A.

reviewed 5.27.94

 Bedrock CLIFF/
SLOPE
 GRASS Uplands
 PHOTO SITES

PHOTO SITES HB-50B
 ROLL 6-21, PAGES 3 THRU 8

SKETCH MAP (OG)
 K-1-HB-50-B
 D. M. F. GERALD
 23 MAY 1991
 1620 - 1720



P.U. * VECO WORKERS
 collected 2 bags of
 oiled sediment at
 site #A.

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 Helo

DATE May 23 1991

SEGMENT # K9N-20 HB 50

TIDAL HEIGHT (Range) 2.8 ft - 1.5 ft (16:20:17:20)

SUBDIVISION B

BIOLOGIST H. Davis

SEA STATE 1 ft Calm

WIND SPEED/DIRECTION 5-20 KT Breeze SE

PHOTOGRAPHS: ROLL # 6-21

FRAME # 3-8

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

This area was a high energy boulder/cobble beach on top of a bedrock platform. The organisms here are moderately dense and tend to be grouped in protected areas. At the supratidal level *Verrucaria* sp., *Xanthoria canaliculata*, and *Physcia caesia* were present. *Verrucaria* grew down to the top of the littorine zone. Filamentous green algae, *Porphyra*, and *Ulva* (barely) begin in the littorine zone. Below this *Mytilus modiolus*, *Endocladia*, *Gloiopeltis*, *Nucella*, *Scytoleptus*, *Fucus*, *Volutharpa*, *Anthopleura*, *Antennaria*, *Odonthalia* and encrusting corallines can be found in cracks, crevices and pools. On the underside of rocks *Idotea*, *Littorina* eggs, *Spinolus*, *Nucella* eggs, and many small (3mm) flatworms can be found. On the cliffs and the uplands *Glaucous-winged Gulls* are preparing nesting areas.

Sites A+B are at the top of the UCTZ. Some *Verrucaria* (with shadows of worn away stain) is present. The dominant organisms were *Littorina*, *Balanus* and a few limpets. The only alga at these sites was filamentous green algae. Drift algae included *Fucus*, *Ulva*, *Polysiphonia* and *Laminaria*.

Song Sparrow (4) Fox Sparrow (2) Harlequin (4) Sandpiper (2)
Glaucous-winged Gulls (>50) Eagle (1) Tufted Puffin (2) Kittiwake (2 Dead)

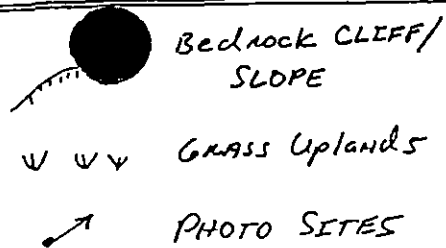
WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	0
Seabirds	1	2	
Waterfowl	1	4	
Gulls/Kittiwakes	2	>50 (2 Dead Kittiwakes)	
Shorebirds	1	2	
Corvids	0	—	
Other Birds Sparrow Song Fox	2	6	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	2 + Otter burrow den on shore		
Pinnipeds (specify)	0		
_____les (specify)	0		

Shoreline subdivision map showing important biological features attached.



This part of the segment has a diverse though
 not populous intertidal community. In the
 uplands is a gull colony and eagles nest on
 the other side of the island. Clean up in
 this area would be more disruptive of
 the community than beneficial.

Bio Map
 H. Davis

SKETCH MAP (06)
 K9-1-B-50-B
 D. M. F. F. GERALD
 23 MAY 1991
 1620 - 1720

A+B

Verrucaria, littorina, barnacles, and
 N. persana (unpet) are the major organisms
 in these two areas. Amphipods were B.
 active on drift algae along with littorina.
 Some jagurus were in the pools at
 this level.

SOR/MS, CT
 2 by 5m, <1%
 I/U EN B-BR
 RB SHEEN IN
 Tide Pool

Nesting Gulls

NINAGIAK
ISLAND

BEGIN
 SEGMENT
 HB-50-A

SEARCH

A. MS/SOR
 CT/ST
 4-6 by 25m, <1%
 I/U mound B-BR
 Behind Sec Stack

Bedrock PLATFORM
 Laminaria with boulders
 stands

UNSURVEYED

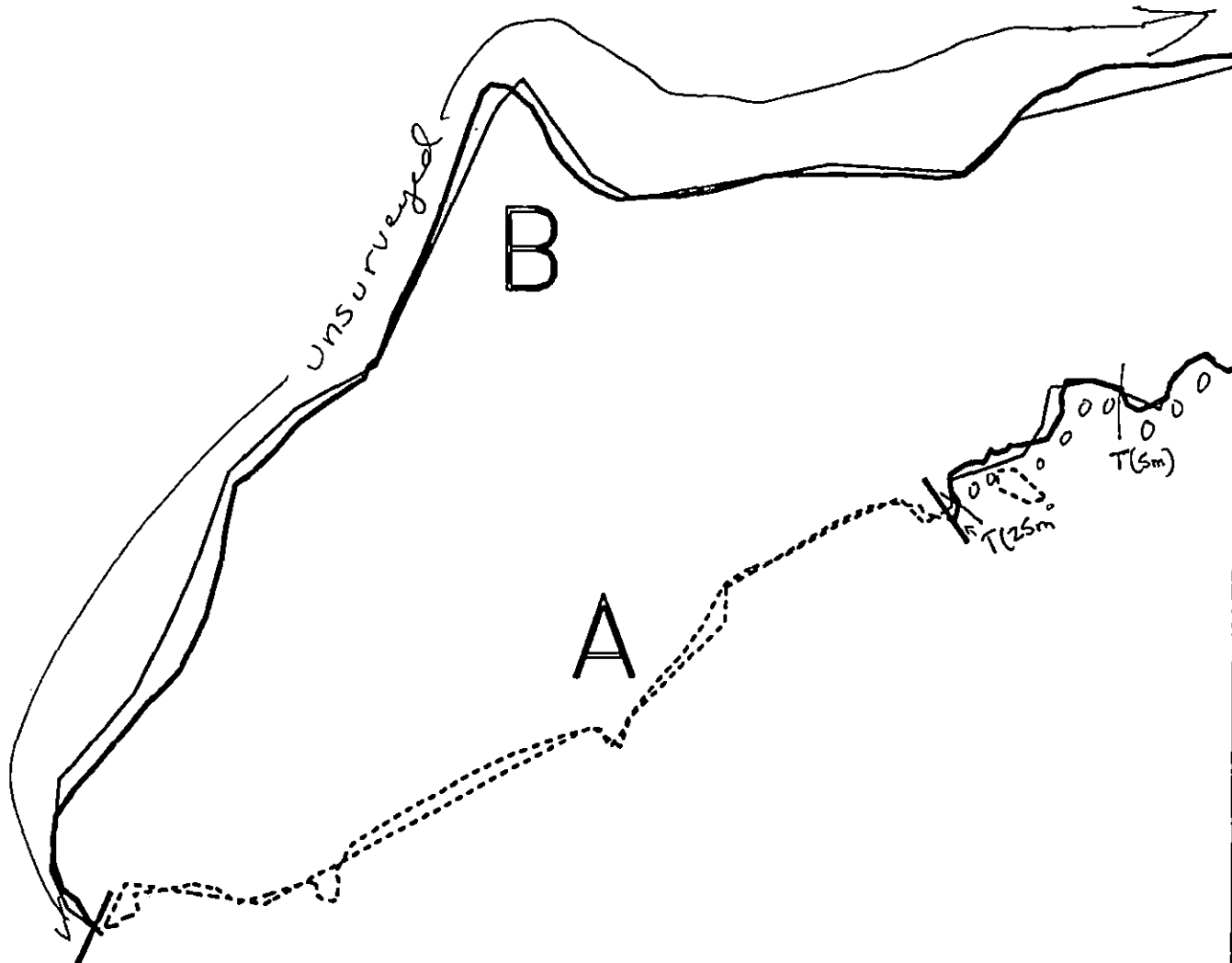
P.U. * VECO WORKERS
 collected 2 bags of
 oiled sediment at
 site # A.

HALLO BAY

0 200
 METERS

+

HBB+



+

+

XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

K0919 HB050 B
ADEC Subsegment Length: 3739m
METERS

0 200 400

AK State Plane Zone 4
90019hb050ba- . . .



Subdivision Field Map

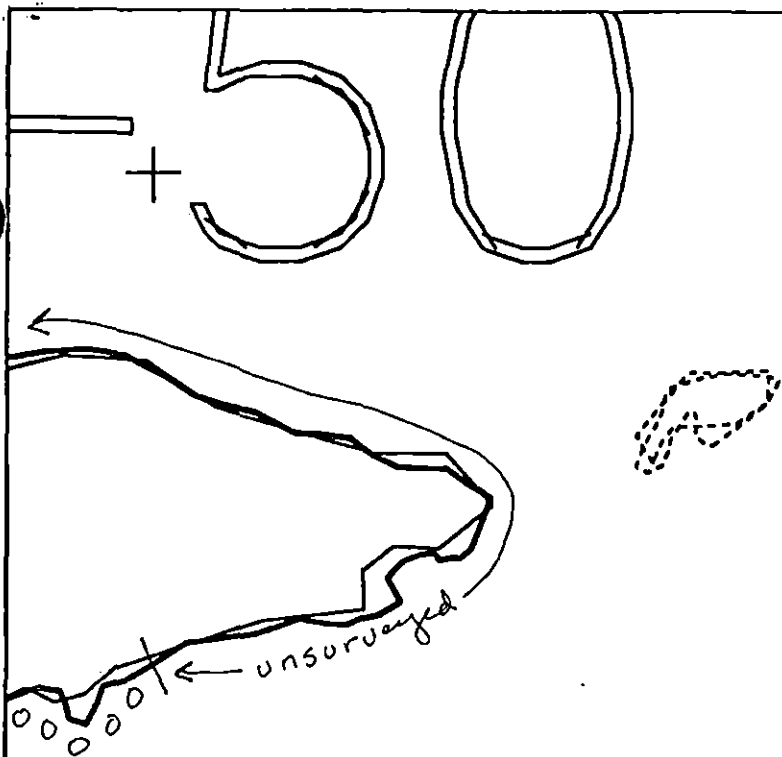
Map Key: GOAK0919HB050Ba

Name: Fitzgerald (JY)

Date: 5.23.91

Data Entered:

Redone 5.28.91 4y



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

K0919 HB050 B
 ADEC Subsegment Length: 3739m
 METERS

AK State Plane Zone 4
 9019hb050bb- . . .



Subdivision Field Map
 Map Key: 60AK0019HB050B
 Name: Fitzgerald (JY)
 Date: 23 May '91
 Date Entered:

redone 5.28.91

REGION: KODIAK

SEGMENT: ST/K09-19-HB-100

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ K09-19-HB-100 SUBDIVISION A (1 OF 1) DATE 5/3/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24hrs.)).

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 6 m: Narrow 10 m: V.Light 101 m: No Oil 363 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes: 1) Manual pickup of mousse in areas shown on attached sketch map. No specific ecological time constraints indicated.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

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 Inpol 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 Inpol 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 Inpol 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 Inpol 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 Inpol 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 Inpol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)**
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)**
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)**
Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation:**
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)**
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 Inpol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / K9-19 - 48-100 SUBDIVISION: A DATE 5-3-91

CG
NAME D. Haven Jr., GM3 USLR SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

I did not walk this area because I felt the conditions were unsafe, but I have monitored this particular area during the winter and the ADEC/NPS comments I feel are accurate.

ADEC
NAME Francine J. Benais SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

MANUAL PICK-UP RECOMMENDED w/ SHOVELS + TROWELS.
Ninagiak Reef in Halls Bay. Area has a total of - 150 meters of mouse + mouse saturated sediments spanning approximately 300 meters of the reef. It did not receive any treatment last year, & although it classified as 'High energy', this mouse has persisted. Width of land varies from 10 to 20 meters, patchy distribution w/ up to 49% coverage.

LAND MANAGER NPS
NAME Will TROYER SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

This reef received no clearing last year and the mouse on the reef is exactly where it was last year. A considerable amount lies on both NE and SW of the small log island in the middle of the reef. It can easily be removed with a shovel. The reef is used as a haulout for harbor seals and is used extensively by shorebirds. Removal of the oil mouse would lessen the danger to these resources.

SHORELINE OILING SUMMARY

REVISION NO. 04/12/90

OG Asten USCG Haven SEGMENT ST/ K9-19-H12-190
 BIO Davis LAND REP NPS Taylor James SUBDIVISION K9-19-H12-190A (1 OF 1)
 EXXON Avery ADEC Beavis TIME 4:20 10:50
 TEAM NO. 20 TIDE LEVEL +3 to +4 DATE 5/3/90
 EST. SUBDIVISION LENGTH: 500 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 PLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 100 % B 20 % C - % P 2 % G 3 % S 15 % M - % V - %
 SLOPE: Long 100 % Hang - % Vert - % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W - m M 50 m N 70 m VL 80 m NO 300 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	10	15	20	25	30	35	40	45	50	55	60	65	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 1#BAGS 0

Photographs:

Roll No. ST-20-9Frames 30, 31

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	30	35	40	45	50	55	60	65	SU	U	M	L				
1	10					✓	-		✓										✓						RS
2	10					✓	-		✓										✓						RS
3	10					✓	-		✓										✓						RS
							-																		
							-																		
							-																		

COMMENTS Segment consists of a reef that is situated NW of Ninagink Island. At very low tides, reef/platform extends above water to Ninagink Is. and NW toward Haska Bay shoreline. Area surveyed was highest part of reef/platform above tide level. Which consists of rock platform/boulders w/ some sand in between the boulders highest above the tide level. Oil was observed primarily on top of sand, in between these boulders, in two areas.

REVIEWED BAT DATE 5 MAY 90

OG

SEGMENT ST/ K919-H2-100SUBDIVISION KA-1A-H2-100ADATE 5/3/90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bdry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Ext. HML/LWL
- ☐ SSI
- ☐ 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

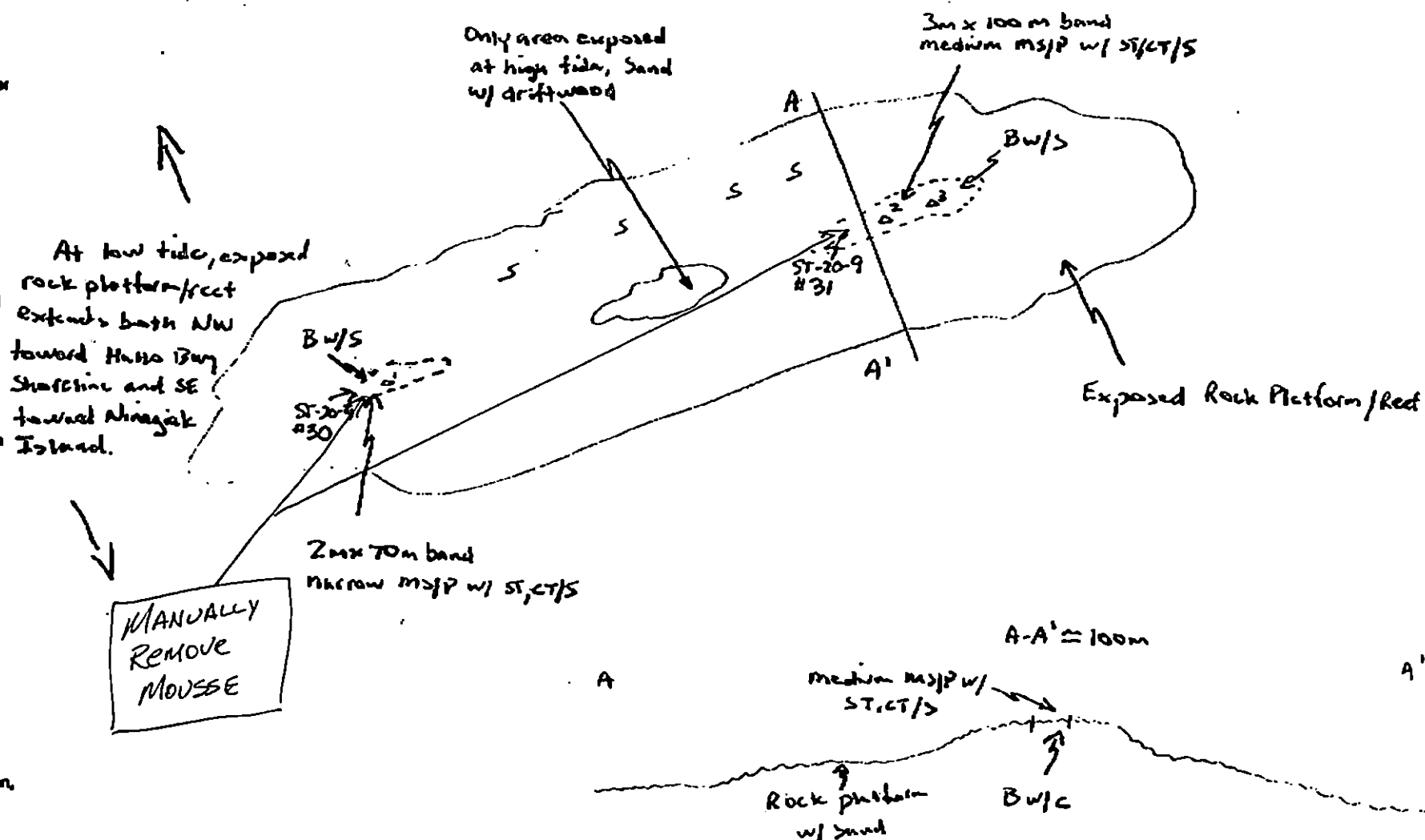
Oiled Vegetation

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

SKETCH MAP

N $\uparrow$

Approx Scale
 1cm $\approx$ 40m



Oil Character Length (m): AP 0 PO 0 CV 0 CT 100 ST 200 MS 200 PT 0 TB 0 FL 0 NO 300

REVISION 03/2000

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/23/90

Segment ST / K09-19 Subdivision HB-100 Date (mo / day / yr) 5 / 3 / 90

Time (24 hr) 16:00 Biologist H. Davis

(A) Substrate type and % of segments:
(1) Bedrock 60 (2) Boulder 20 (3) Cobble - (4) Pebble 5 (5) Sand 15 (6) Silt -

(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-20-9

Frames 30, 31

BARNACLES Continuous + Moderate in LTZ. Sparse in MTZ

Dense			Moderate			Sparse			Rare			NOT PRESENT 4, 5, 6
1U	1M	1L	~~1U~~	~~1M~~	1L	~~1U~~	~~1M~~	~~1L~~	~~1U~~	~~1M~~	~~1L~~	
2	2	2	~~2~~	~~2~~	2	~~2~~	~~2~~	2	~~2~~	~~2~~	2	
3	3	3	~~3~~	~~3~~	3	~~3~~	~~3~~	3	~~3~~	~~3~~	3	
4	4	4	~~4~~	~~4~~	4	~~4~~	~~4~~	4	~~4~~	~~4~~	4	
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 Patches but dense where they occur.

Dense			Moderate			Sparse			Rare			NOT PRESENT 4, 5, 6
~~1U~~	~~1M~~	~~1L~~	~~1U~~	~~1M~~	1L	1U	1M	1L	1U	1M	1L	
~~2~~	~~2~~	~~2~~	~~2~~	~~2~~	2	2	2	2	2	2	2	
~~3~~	~~3~~	3	~~3~~	~~3~~	3	3	3	3	~~3~~	~~3~~	3	
~~4~~	~~4~~	4	~~4~~	~~4~~	4	4	4	4	~~4~~	~~4~~	4	
~~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 were dense only in the MTZ. Sparse in MTZ-LTZ Nucella Sparse. Rare Limpets Sparse

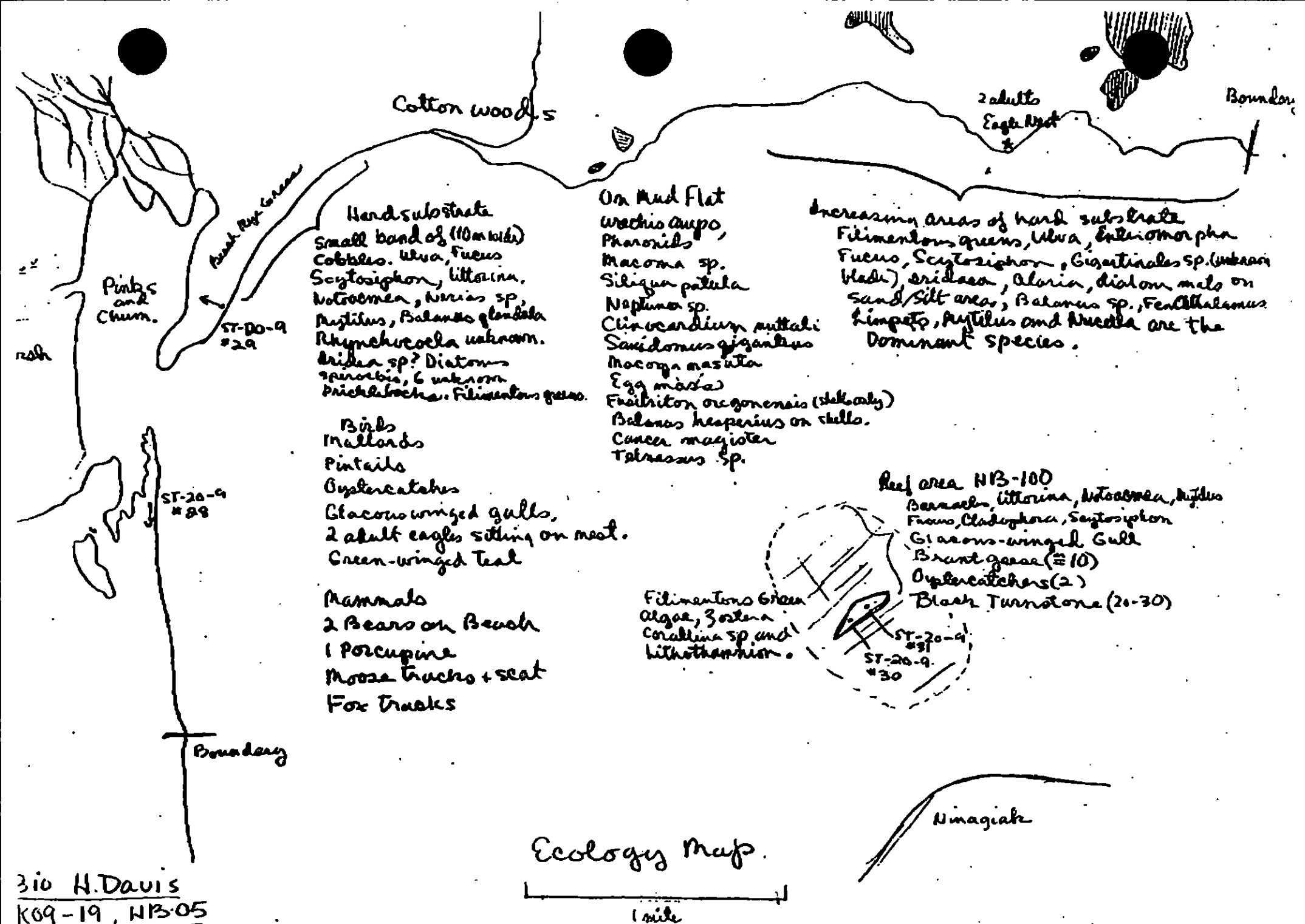
Dense			Moderate			Sparse			Rare			NOT PRESENT 4, 5, 6
~~1U~~	1M	1L	~~1U~~	~~1M~~	1L	1U	~~1M~~	~~1L~~	1U	1M	1L	
~~2~~	2	2	~~2~~	~~2~~	2	~~2~~	~~2~~	2	2	2	2	
~~3~~	3	3	~~3~~	~~3~~	3	~~3~~	~~3~~	3	3	3	3	
~~4~~	4	4	~~4~~	~~4~~	4	~~4~~	~~4~~	4	4	4	4	
~~5~~	5	5	~~5~~	~~5~~	5	~~5~~	~~5~~	5	5	5	5	
~~6~~	6	6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

FUCUS Patchy. On the tops of raised areas.

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	~~2~~	~~2~~	2	2	2	2	
3	3	3	~~3~~	~~3~~	3	~~3~~	~~3~~	3	3	3	3	
4	4	4	~~4~~	~~4~~	4	~~4~~	~~4~~	4	4	4	4	
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: There is a high area of about 300x100 meters in the center of an extensive flat shelf. Cladophora, Ulva sps, and green filamentous dominate the shelf. Fucus, Sargassum, Ulva, Littorina, limpets, and Mytilus dominate the high points.

Ecological Considerations: This segment was not on the Ecological constraints. Scleroglossa is harvested in the area. Harbor seals and sea lions use the reef as a haul out area. Nests were found on the highest points of the island (oystercatchers or gulls)



310 H. Davis
 K09-19, NB-05
 5/3/90

1. The first step is to identify the problem. In this case, the problem is that the system is not working properly.

PHOTOGRAPHY LOG

ROLL NO. ST-20-9 FROM 5/3 TO _____
TEAM NO. 20 PWS / KENAI / KODIAK / AK. PENINSULA

[illegible][illegible]

K9-19-HB-100A

(T)(III)
HB-100

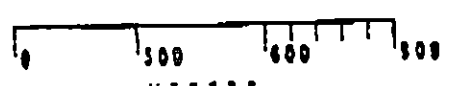
HB-50



XXX Wide
//// Medium
--- Narrow
TTTT Very Light
OOOO N O I

HB-5

Approx. Segment Length: 10234



K9-19-HB-100A
Map Key: AKP-HB-5b
Name: Acton
Date: 5-3-90
Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ K09-19-HB-100 SUBDIVISION A (1 OF 1) DATE 5/3/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24hrs.)).

SHPO SIGNATURE: Loche Joan Doe DATE: 5/18/90

OILING CATEGORIZATION:

Wide 0 m: Medium 6 m: Narrow 10 m: V.Light 101 m: No Oil 363 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes: 1) Manual pickup of mousse in areas shown on attached sketch map. No specific ecological time constraints indicated.

TAG COMMENTS:

TAG APPROVAL DATE: 5/17/90
ADEC Art Weiner
EXXON Andy GSK FOSC: My L DATE: 5-23-90
NOAA Gary Petrac
USCG G.A. REITER G.A. Reiter clean up between 15 Jul - 15 Aug only

OG

SEGMENT ST/ K919-H3-100

SUBDIVISION K9-19-H3-100A

DATE 5/3/90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Boundary
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWA/LWL
- ☐ SSI
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pli 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

CT/S
Splashed Distribution

CT/S
Splashed Distribution

Oiled Vegetation

1 →
Photo location, direction,
and number

At low tide, exposed
rock platform/reef
extends both NW
toward Hula Bay
Shoeline and SE
toward Ninagjak
Island.

MANUALLY
REMOVE
MOUSSE

Only area exposed
at high tide, sand
w/ driftwood

BW/S
ST-20-9
#30

2m x 70m band
narrow msp w/ ST, CT/S

3m x 100m band
medium msp w/ ST/CT/S

Exposed Rock Platform/Reef

A-A' ≈ 100m
medium msp w/
ST, CT/S
Rock platform
w/ sand
BW/C

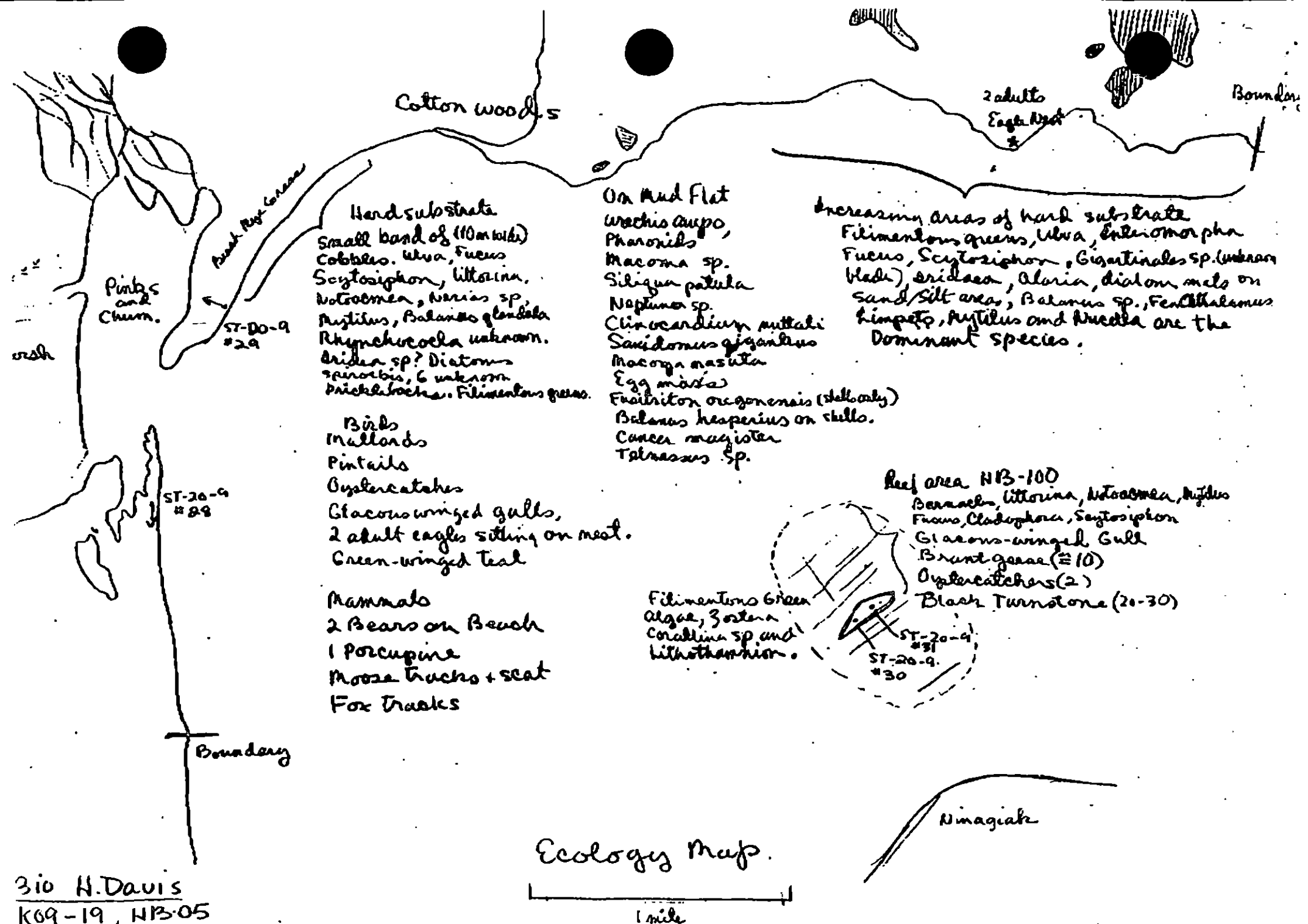
SKETCH MAP

N ↑

Approx Scale
1cm = 40m

Oil Character Length (m): AP 0 PO 0 CV 0 CT 100 ST 200 MS 200 PT 0 TB 0 FL 0 NO 300

REV 3081/03/24/90



310 H. Davis
 K69-19, NPB-05
 5/3/90

K9-19-HB-100A

(T)(III)
HB-100

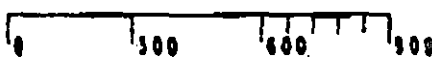
HB-50



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

HB-5

Approx. Segment Length: 10234m



K9-19-HB-100A

Map Key: AKP-HB-5b

Name: Acton

Date: 5-3-90

Data Entered:

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

Date

6-25-90

Prepared by

Ray L. Coulter

Date

6/25/90

HB-10

Work Area

HB

B

TREATMENT

EXXON

Exxon Company, USA
Map Key: AKP-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/ K09-19-HB-100 SUBDIVISION A (1 OF 1) DATE 5/3/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24hrs.)).

SHPO SIGNATURE: Luella Jean Durr DATE: 5/12/90

OILING CATEGORIZATION:

Wide 0 m: Medium 6 m: Narrow 10 m: V.Light 101 m: No Oil 363 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes: 1) Manual pickup of mousse in areas shown on attached sketch map. No specific ecological time constraints indicated.

SEE ATTACHED CONSTRAINT ADDENDUM
DATED 6/25/90 Rev C.

TAG COMMENTS:

TAG APPROVAL DATE: 5/17/90
ADEC Art Weiner Art Weiner
EXXON Andy Gak
NOAA Greg Petros
USCG G.A. Reiter G.A. Reiter FOSC: ML DATE: 5-23-90
Clear up between 12nd - 15 Aug 90

REGION: KODIAK

SEGMENT: ST/K09-20-CN-002

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

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

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)

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: _____ DATE: _____

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:

☐ 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: 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: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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

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

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

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 unrolled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

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

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

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

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

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

ADF&G Don Calkins 267-2403

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Roth 267-2206

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

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation:

Tent sites (6/1 to 9/15)

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

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

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

6Y Special use destination

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

Finfish harvesting

Deer harvesting (8/15 to 2/28)

Invertebrate harvesting

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

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2350

FIELD SHORELINE COMMENT SHEET

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

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 and patchy mounds on the shoreward island (particularly north side) should also be treated by manual removal. Care should be taken during treatment - red foxes observed on island, seals near shore.

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 Scheeb SIGNATURE Carl Scheeb

☐ 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 LINDSEY NAKASHIMA USCG (NDAA) JOHN NAUGHTON SEGMENT ST/ K0920 - CND002
 BIO DEB MCCORMICK LAND REP/OPS CARL SCHUCH SUBDIVISION SW-228 A1 (OF 1)
 EXXON FRED BYARS ADEC TERRY ELLSWORTH TIME 7:30 10:30 14
 TEAM NO. 19 TIDE LEVEL -0.8 FT FALLING DATE 4/24/90
 T. SUBDIVISION LENGTH: 3750 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 ISLANDS 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	B	1	2	3	4	SU	U	M	V
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												
M			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 (cm)	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OF	OR	OL	OP	NO		UO	UC	1	2	3	4	SU	U	M	V				
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

DATE 4, 24 90

CHECKLIST

- N Arrow
 Approx. Scale
 Seg/Deb Badry
 Oil Dist.
 Width
 Length
 % Cover
 Substrate Character
 Est. HML/LWL
 SSL
 Profile Location(s)
 Profile(s)
 Pz Location(s)
 Photo Location(s)

LEGEND

- 1 ▲**
Pl - No Subsurface Oil
- 2 ▲**
Pl - Subsurface Oil

CT/C

Continuous Distribution

CT/D

Broken Distribution

CT/P

Poetry Distillation

CT/5

Sealed Distribution:

222

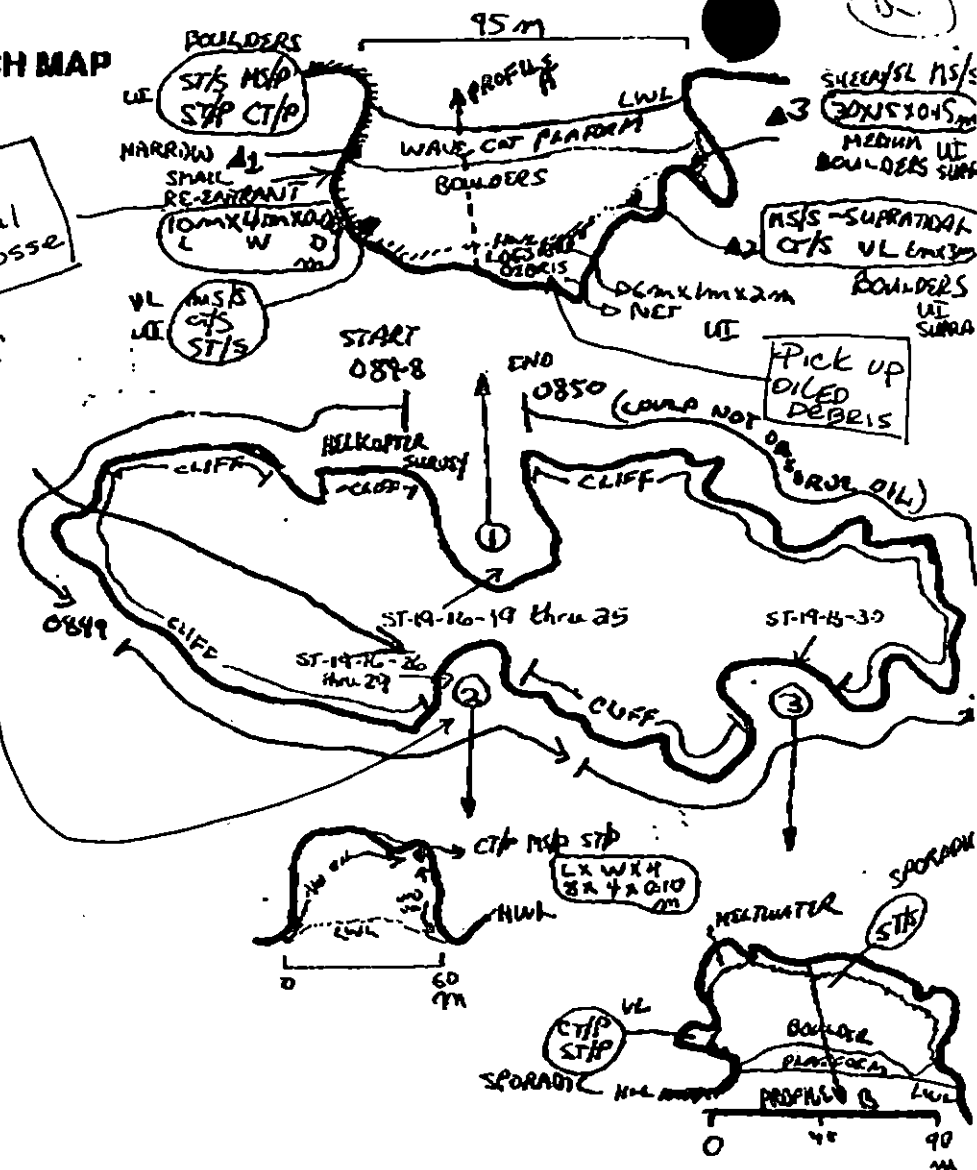
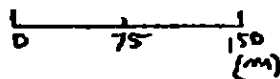
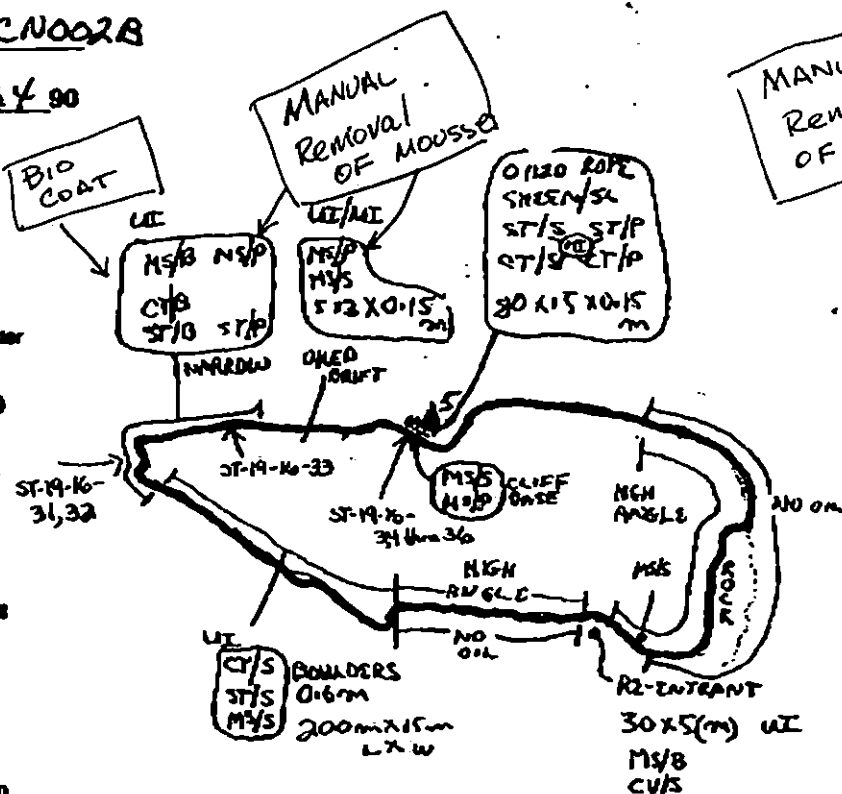
Older Vegetation

1. 2

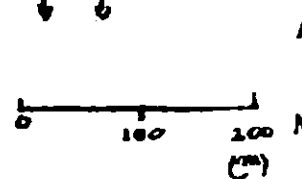
**Photo location, direction,
and number**

SKETCH MAP

MANUAL
Removal
OF Mousse



① ② ③ = FOOT SURVEYS



SHORELINE ECOLOGICAL SUMMARY

REVISION: 12/22/79

Segment ST / K920CNO08 Subdivision A Date (mo / day / yr) 4-24-90

Time (24 hr) 0720-1000 Biologist D. McCormick

(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(10) Moderate 2(35) 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 LINDSAY NAKASHIMA

SEGMENT

SUBDIVISION CN002A

DATE 4 12 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Body
- ☐ Off Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HAP/L/VIL
- ☐ SSI
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

Pit - No Subsurface Off

2 Δ

Pit - Subsurface Off

CT/C

Continuous Distribution

CT/D

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

lee

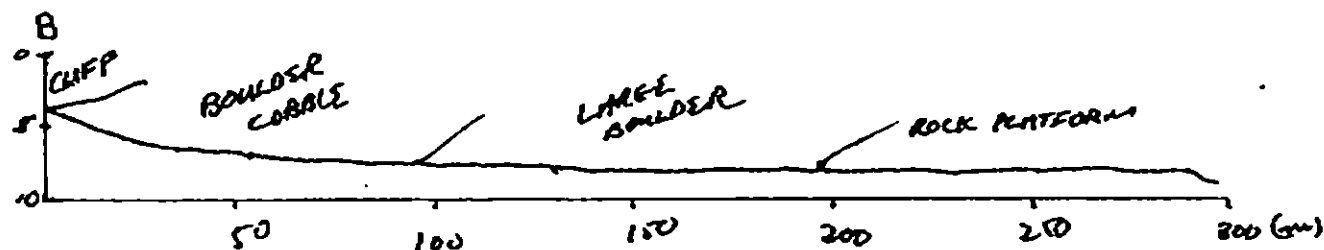
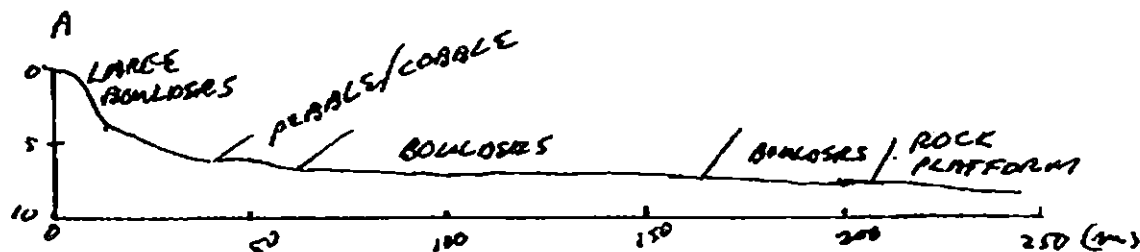
Old Vegetation

1 $\Rightarrow$

Photo location, direction,
and number

SKETCH MAP

PROFILES



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

REVISION: 02/24/90

OG LINDSAY NAKASHIMA

SEGMENT

SUBDIVISION CND02A

DATE 4 124 90

CHECKLIST

☐ N Anchor
☐ Approx. Scale
☐ Seg/Sub Bndry
☐ Oil Desc.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HWS/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/O

Broken Distribution

[CT/P]

Patchy Distribution

[CT/S]

Spliced Distribution

lll

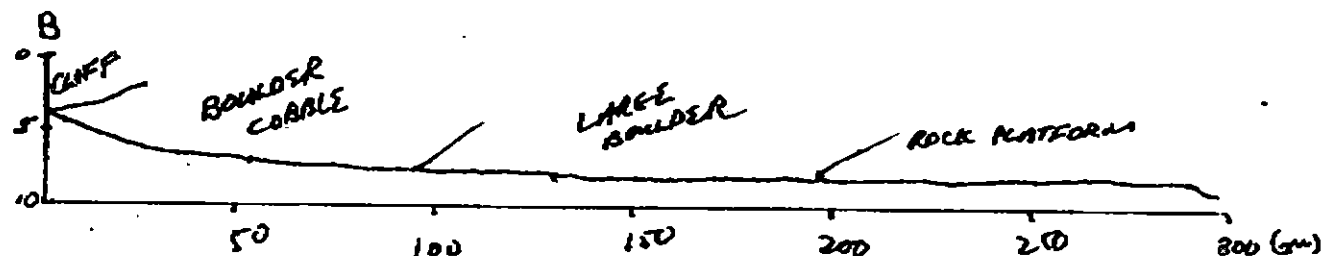
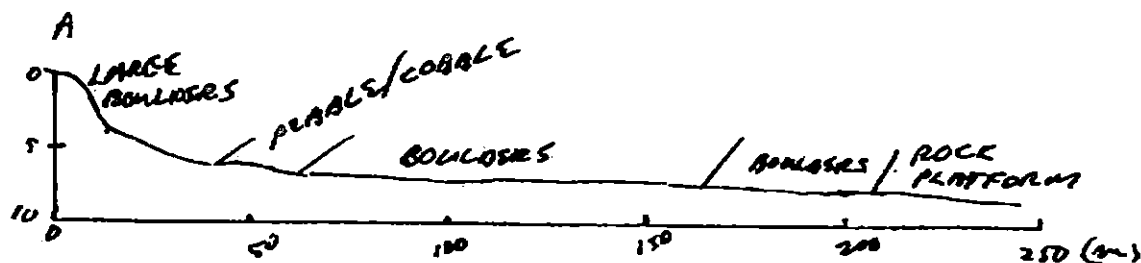
Oil Vegetation

1 $\Rightarrow$

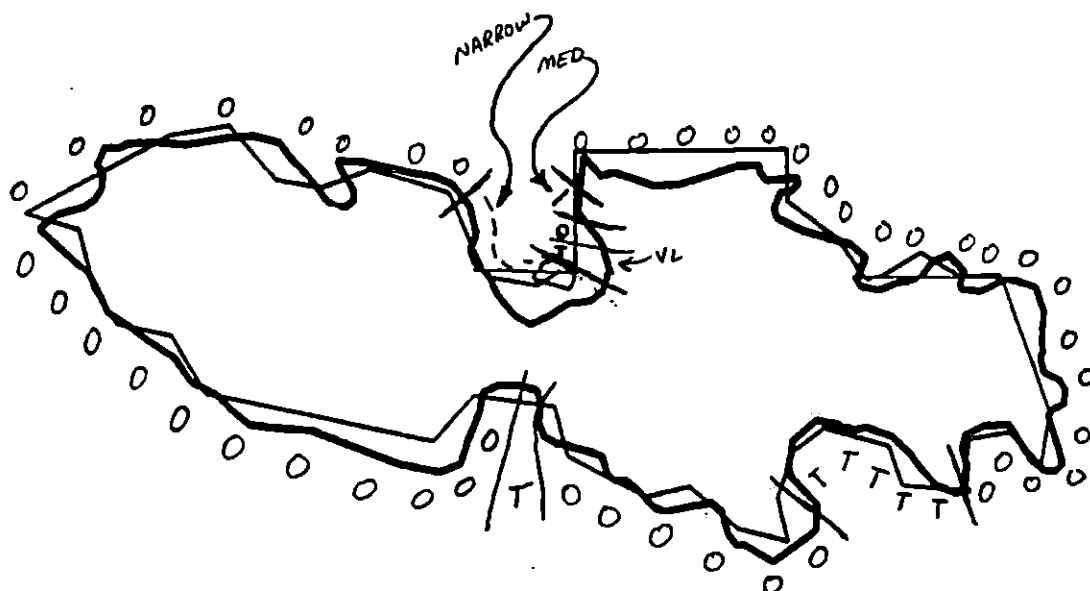
Photo location, direction,
and number

SKETCH MAP

PROFILES



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



XXXX Wide

●// Medium

---- Narrow

TTTT Very Light

0000 No Oil

CN-2A
Revised

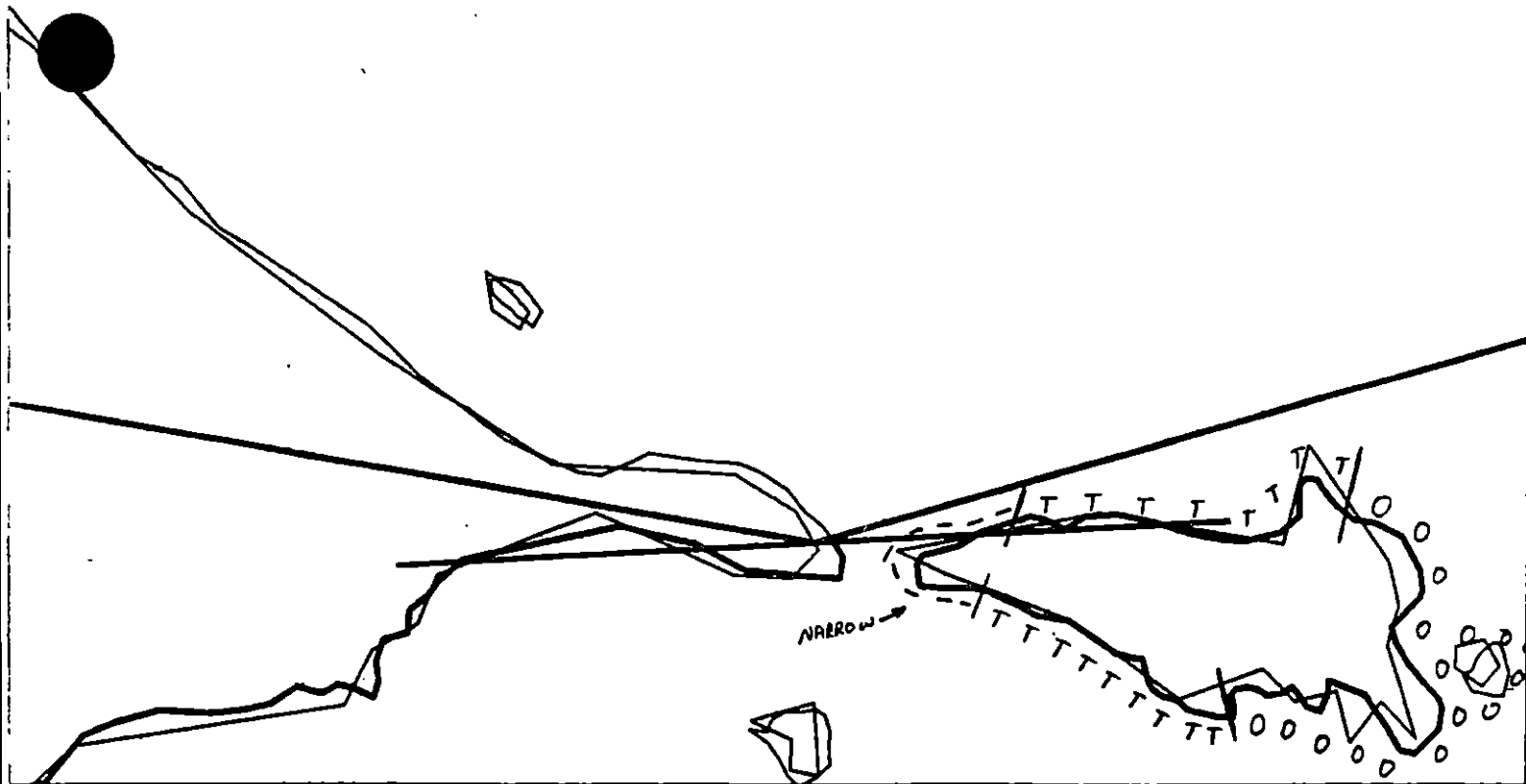


Map Key: CN-2w

Name: Wehrenberg

Date: 5-14-90

Data Entered:



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

CN-2A
 Revised

0 100 200 300
 METERS



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

SHORELINE EVALUATION

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

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)

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

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: MONITOR TO ASSESS LOGS

TAG APPROVAL DATE: 5/23/90
ADEC ART WEINER Art Weiner
EXXON ANDY TGA Andy TGA
NOAA Burl Warcott Burl Warcott
USCG G.A. REITER G.A. Reiter

No Inipol, only customblen, may be used for bio treatment
FOSC: [Signature] DATE: 6/4/90

OG LINDSAY NAKASHIMA

SEGMENT

SUBDIVISION CN002A

DATE 4 12 90

CHECKLIST

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

LEGEND

1 Δ

PII - No Subsurface Oil

2 Δ

PI - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

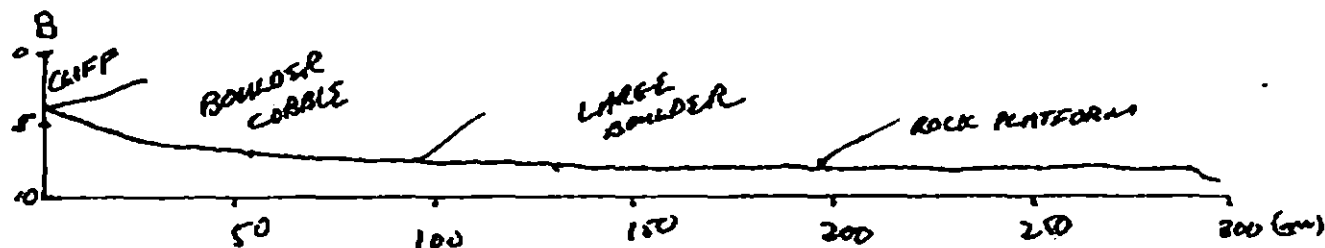
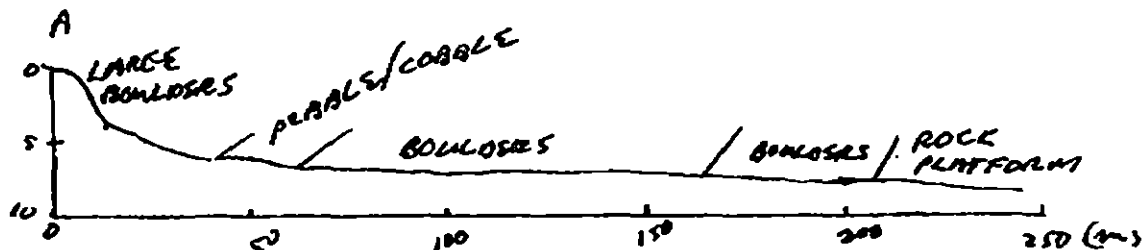
eee
Oiled Vegetation

1 $\Rightarrow$

Photo location, direction,
and number

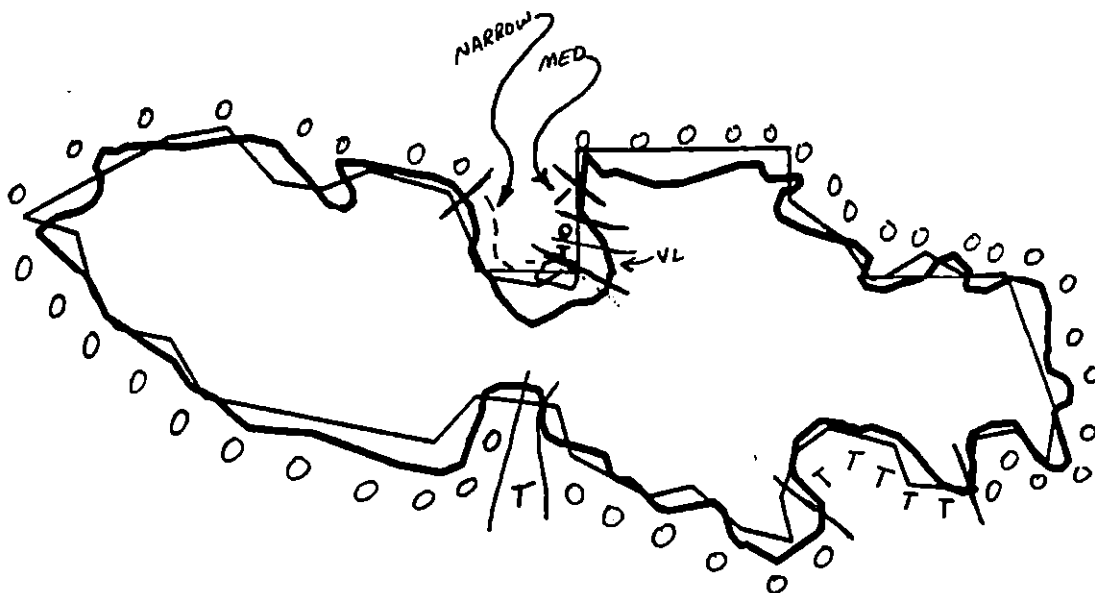
SKETCH MAP

PROFILES



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

REVISION: 02/24/90



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

CN-2A
 Revised

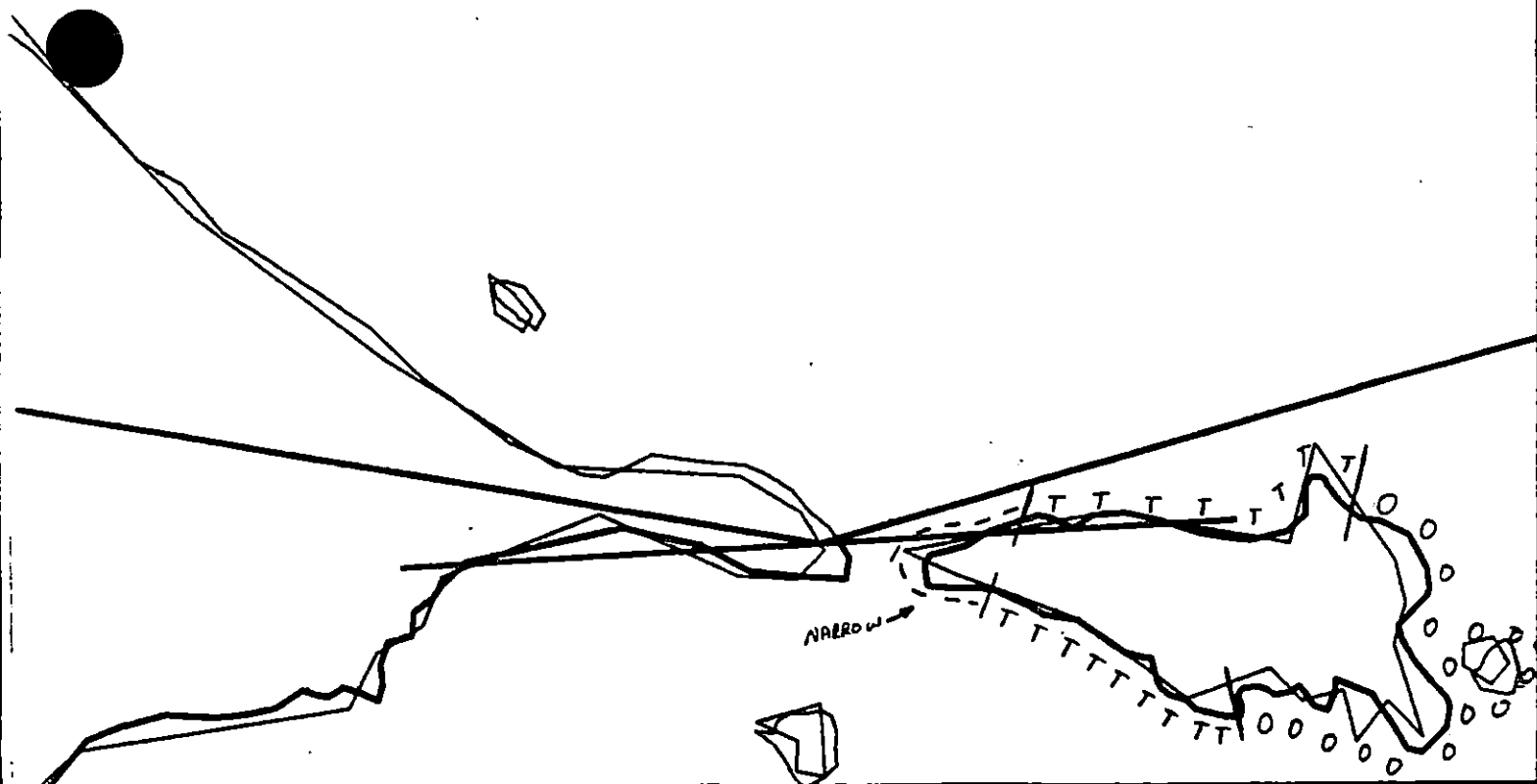
0 100 200 300
 METERS

Map Key: CN-2v

Name: Wehrenberg

Date: 5-14-90

Data Entered:



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

CN-2A
 Revised

0 100 200 300
 METERS



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]

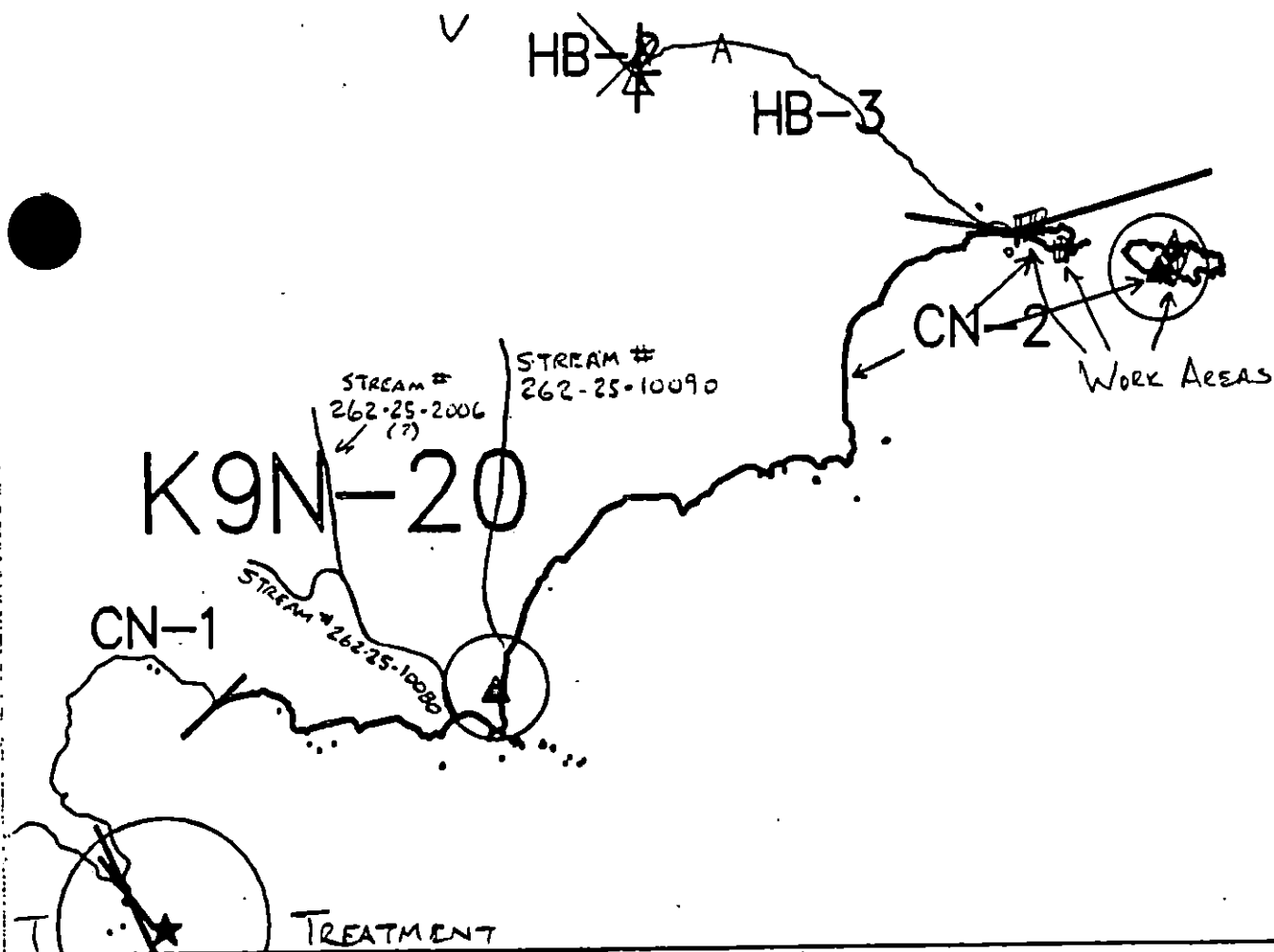
Date

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: AKP-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

SHORELINE EVALUATION

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

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)

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: Rachel Jean Dain 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.

SEE COMMENTS ADDENDUM dated 6/14/90

TAG COMMENTS: MONITOR TO ASSESS LOGS

TAG APPROVAL DATE: 5/23/90

ADEC ART WEINER Art Weiner

EXXON ANDY TGA Andy TGA

NOAA Bruce Wascott Bruce Wascott

USCG G.A. REITER G.A. Reiter

NO Inipol, only custom bln, may be used for bio treatment
FOSC: [Signature] DATE: 6/4/90

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 584-3274.

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. UPDATED MAP, 6/3/90 ATTACHED SHOWING SEABIRD BUFFER ZONE. AREAS OUTSIDE 710M FROM 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.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

Prepared by

Date

Date

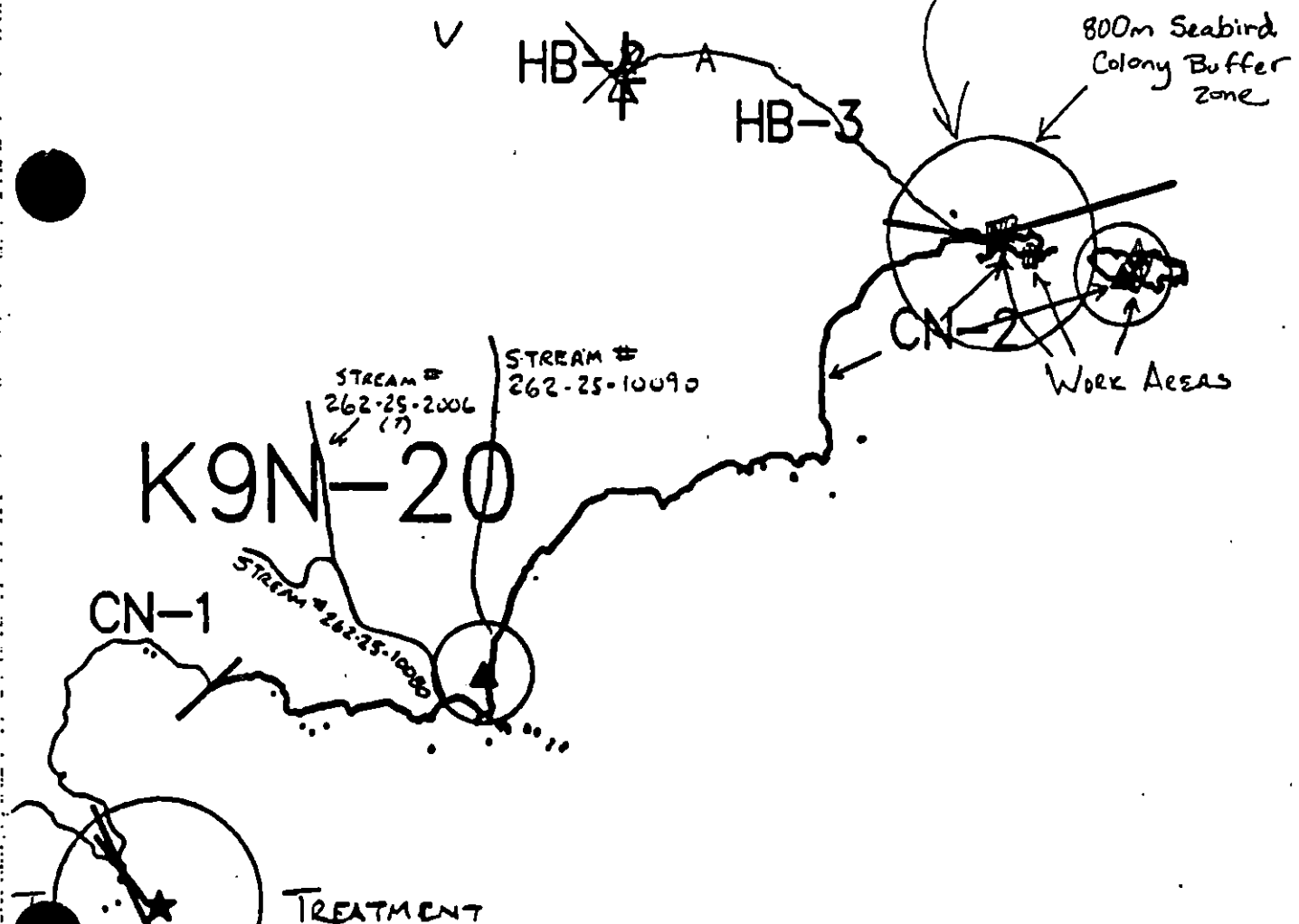
6/16/90

6/14/90

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

Mike Luke 6/13/90

SEABIRD COLONY
BUFFER ZONE
ADDED



Exxon Company, USA
New York, NY 10001

ECOLOGY MAP
SEGMENT K9N-20 CN-2
SUBDIVISION A (1, 2, 3, 4, 5)
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:

- 1A 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.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: Reed Lee Dain 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:

☐ 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: 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.

SEE COMMENTS ADDENDUM dated 6/14/90

TAG COMMENTS: MONITOR TO ASSESS LOGS

TAG APPROVAL DATE: 5/23/90
ADEC ART WEINER
EXXON ANDY TOL
NOAA Bruce Warratt

NO Inipol, only customblen, may be used for treatment
FOSC: DATE: 6/4/90

1991 MAYSAP EVALUATION

SEGMENT: K0920CN002 SUB: A REGION: KOD SURVEY DATE: 5/25/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

ADEC

NAME J. BARNHART, ADECSIGNATURE Jeff Barnhart

- ☒ NTR We surveyed one site within this segment. Two oil bands were observed. The oil is in the form of SOR, CT, CV, ST in trace amounts. SOR-heavy with sediment. No oil was removed by VECO personnel. Sheen was observed in tidal pools. Recommend no additional cleanup at this time.

EXXON

NAME R. BOYER, EXXONSIGNATURE Randall K. Boyer

- ☒ NTR Highly weathered SOR WAS PRESENT. Very difficult to access, AS Helos LANDED OVER $\frac{1}{4}$ MILE FROM THE SITE THEN SURVEY TEAM HAD TO CLIMB DOWN A ^{NEARLY} VERTICAL ^{WEST} CLIFF TO GET TO THE SITE ON THE EAST END OF THE WESTERN PROMONTORY. THE RESIDUE DOES NOT POSE AN ENVIRONMENTAL THREAT AND IS TOO DANGEROUS TO ACCESS. NO FURTHER TREATMENT OR ASSESSMENT. MANY SEABIRDS AND SOME DENIDIDS WERE SEEN IN THE VICINITY.

LANDMANAGER

NAME E. BENNISOF NPSSIGNATURE June Ben

- ☒ NTR

SITE A (OG MAP): oil remaining here is in a weathered state, Very little mousse present. SOR, CT, CV, + traces of weathered mousse in fine sediments remain. 1990 clean-up crew removed bulk of oil.

SITE B (OG MAP): small amounts of mousse persists in bedrock crevices, boulders interstices. ST, CT, SOR also present.

USCG/NOAA

NAME CWO R. SPURR / G. SHIGENAKASIGNATURE R. Spurr / Gary Shigenaka

- ☒ NTR The remaining oil, SOR & mousse is highly weathered and breaks up when touched. No further treatment in this segment is suggested.

SURVEYED PORTION OF THE SEGMENT CONSISTED OF A LOW BOULDER/BEDROCK SADDLE BETWEEN TWO HIGH-CLIFFED BEDROCK OUTCROPS AT CAPE NUKSHAK, WEST OF NUKSHAK ISLAND. THE AREA IS HIGHLY EXPOSED TO WEATHER AND SEAS IN SHELKOF STRAIT. TYPICAL OF EXPOSED ROCKY SHORELINES WE HAVE SURVEYED IN THE AREA, BIOLOGICAL DIVERSITY IN THE SURVEYED SEGMENT WAS LOW, BUT LITTORINA SITKANA SNAILS WERE PROLIFIC. A DEAD KITTIWAKE WAS FOUND ON THE BEACH AND OTHERS WERE OBSERVED ON BLUFFS IN THE AREA. A 50 X 200M BAND OF OILING HAD BEEN REPORTED IN THE SURVEYED LOCATION IN 1990. IN THE PRESENT SURVEY, TWO BANDS OF RESIDUE CONSISTING LARGELY OF SOR, COAT ANY STAIN WITH SCATTERED OCCURRENCES OF MOUSSE WERE FOUND IN THE AREA, WITH DIMENSIONS ESTIMATED BY THE OG AT 10-18M X 65M, AND 35 X 7. SOME SHEEN IN TIDAL POOLS WAS NOTED. RESIDUES ON THIS BEACH WERE NOT BROKEN UP OR RECOVERED BY VECO CREW WE TO DIFFICULT ACCESS TO THE SITE

reviewed 5.27 gy

V V V GRASSY AREA
 ROCK PENNACLES
 PHOTO SITES

Sketch MAP (06)
 K9-20-CN-2-A
 O M F. & GERALD
 25 MAY 1991
 650 - 730

CAPE Nukshak

Bedrock CLIFF

MLW



A. CT/ST
 SOR
 10-18 by 65m < 1%
 highly weathered
 E/U AROUND B-BR

IMBRICATED FLAT Boulders

B. SOR
 CT/ST
 7 by 35m, < 1%
 I/U, B-BR

RB. SHEENS OBSERVED IN TIDAL POOLS

SUPRATEDAL ZONE

MLW

Rock FACE

High Tide ISLAND

[Connected to Mainland at Low tide]

SMALL ISLAND

0 30
 METERS

SHELIKOF STRAITS

reviewed 5.27.94

v v v GRASSY AREA
 ... ROCK PENNACLES
 → PHOTO SITES

PHOTO SITES, CN-2A
 ROLL 6-22, FRAMES 8 THRU 12

Sketch MAP (00)
 K9-20-CN-2-A
 O. M. FITZGERALD
 25 MAY 1991
 650 - 730

CAPE
 Nukshak

Backrock
 CLIFF

MLW



A. CT/ST
 SOR
 10-18 by 65m <1%
 highly weathered
 I/U AROUND B-BR

IMBRIATED FLAT
 Boulders

B. SOR
 CT/ST
 7 by 35m, <1%
 I/U, B-BR

R.B. SHEEN
 OBSERVED
 IN TIDAL
 POOLS

SUPRAEOLY
 ZONE

MLW
 ROCK FACE

High
 Tide
 Island

Connected to
 Mainland at
 Low tide

Small
 Island

0 30
 METERS

SHELIKOF
 STRAITS

TEAM # 6 Helo

DATE May 25 1991

SEGMENT # K9N-20 CN-02

TIDAL HEIGHT (Range) - 4 ft - (6:45-7:35)

SUBDIVISION A

BIOLOGIST H. Davis

SEA STATE Calm 0

WIND SPEED/DIRECTION No Wind

PHOTOGRAPHS: ROLL # 6-22

FRAME # 8-12

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

Sta A+B The area surveyed is at a saddle between the mainland and an island offshore. At low tide the saddle is exposed. The top of the saddle has verruca. Some Littorina and a few barnacles. Lower down in the UFTZ barnacles (mostly B. glandulosa) Littorina sitkana, limpets, and Mytilus are moderately dense. Littorina cover pieces of drift kelp. Fucus covers the tops of most of the rocks in the MITZ along with some porphyra, Gelidium, Red Algae, Green Filamentous algae and Ulva. At the lowest uncovered areas Alaria, Laminaria setchellii, Ulva, and Halosaccion cover the rocks. In pools, Spirogyra and Ankistrodesmus sp. can be seen. All of the SOR, Ct/St at sites A and B are in the UFTZ. Near the top of the saddle verruca with stain shadows can be seen. Littorina is sparse in the two areas. Barnacles, limpets, porphyra and Fucus occur in the lower half of the sites.

Sparrows song: Fox (3)

Glaucous-winged Gull (5) Oystercatcher (1) White Wing Scoter (5) Kittiwakes (3 dead)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	0		
Seabirds	0		
Waterfowl	1	5	
Gulls/Kittiwakes	2	5 (3 dead Kittiwakes)	
Shorebirds	1	1	
Corvids	0		
Other Birds Sparrows	2	3	

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

Shoreline subdivision map showing important biological features attached.

Rec'd 5/27/91 DM

✓ ✓ ✓ GRASSY AREA
 ⚡ ROCK PENNYACLES
 → PHOTO SITES

This area has a rich intertidal community clean up would be more disruptive than productive.

Bio Map
H. Davis

Sketch MAP 06
 K9-20-CN-2-A
 D. M. Fitzgerald
 25 MAY 1991
 650 - 730

CAPE
Nukshak

0 30
METERS

A. CT/ST
 SOR
 10-18 by 65m <1%
 highly weathered
 I/U around B-BR
 Verrucaria,

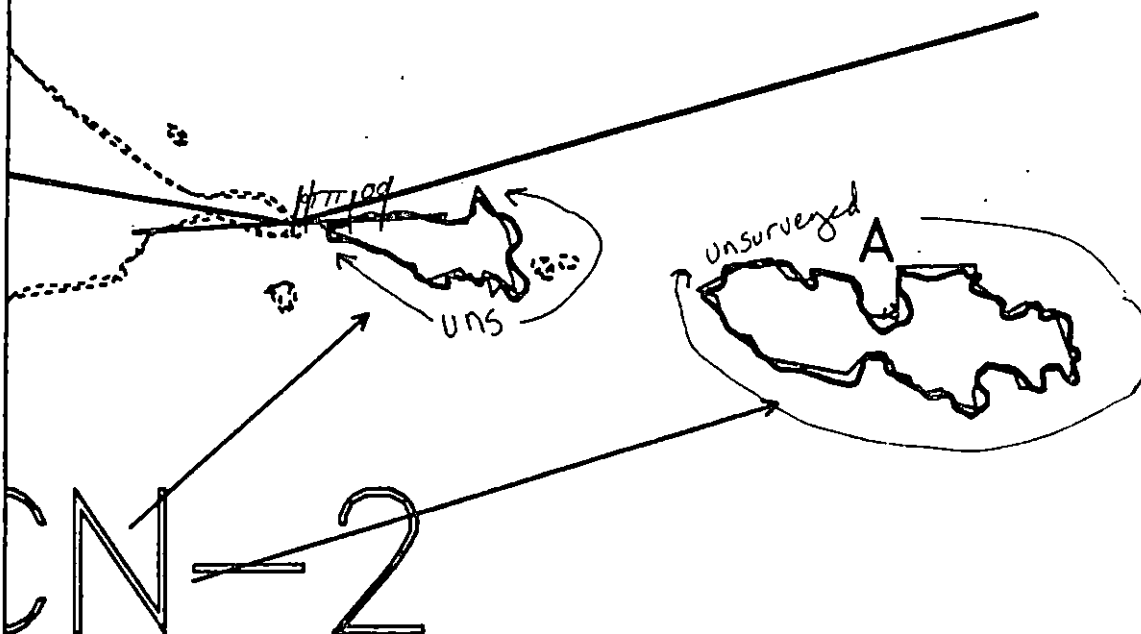
B. SOR
 CT/ST
 7 by 35m, <1%
 I/U, B-BR

RB. SHRENS
 OBSERVED
 IN TIDAL
 POOLS

SMALL
 ISLAND

SHELIKOF
 STRAITS

Verrucaria
 Littorina
 limpets
 Porphyra
 Patches
 Fucus
 Fucus cover
 Alaria
 laminaria
 MLW
 High Tide
 Island
 Connected to
 Mainland at
 Low tide
 (A) (B)
 SOR, CT/ST



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

K0920 CN002 A
 ADEC Subsegment Length: 3814m
 METERS
 0 400 800
 AK State Plane Zone 4
 90920000020-1 . . .



Subdivision Field Map
 Map Key: 60AK0920CN002A
 Name: D. Fitzgerald
 Date: 25 May 1991
 Data Entered:

reviewed 5.27.94

1991 MAYSAP EVALUATION

SEGMENT: KO920CN002 SUB: A REGION: KOD SURVEY DATE: 5/25/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

RECOMMENDATIONS:

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

COMMENTS:

INITIAL:

TAG:

FOSC:

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

ADEC John Bane FOSC E. E. Page

EXXON Beal E. E. PAGE, CDR, USCG

USCG Ed Mall CHIEF OF STAFF, FOSC

NOAA John

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

TEAM NO. 6-HELO SEGMENT CN-2 SUBDIVISION A DATE 5/25/91

ADEC

NAME J. BARNHART, ADECSIGNATURE Jeff Barnhart

- ☒ NTR we surveyed one site within this segment. Two oil bands were observed. The oil is in the form of SOR, CT, CV, ST in trace amounts. SOR-heavy with sediment. No oil was removed by VECO personnel. Sheen was observed in tidal pools. Recommend no additional cleanup at this time.

EXXON

NAME R. BOYER, EXXONSIGNATURE Randall K. Boyer

- ☒ NTR Highly weathered SOR WAS PRESENT. Very difficult to access, AS Helos LANDED OVER $\frac{1}{4}$ MILE FROM THE SITE THEN SURVEY TEAM HAD TO CLIMB DOWN A ^{NARROW} VERTICAL 25' CLIFF TO GET TO THE SITE ON THE ^{WEST} EAST END OF THE WESTERN PROMONTORY. THE RESIDUE DOES NOT POSE AN ENVIRONMENTAL THREAT AND IS TOO DANGEROUS TO ACCESS. NO FURTHER TREATMENT OR ASSESSMENT. MANY SEABIRDS AND SOME DENIPEDS WERE SEEN IN THE VICINITY.

NDMANAGER

NAME F. BENNISOF NPSSIGNATURE F. Bennis

- ☒ NTR
 SITE A (OG MAP): oil remaining here is in a weathered state, Very little mousse present. SOR, CT, CV, & traces of weathered mousse in fine sediments remain. 1990 clean-up crew removed bulk of oil
 Site B (OG Map): small amounts of mousse persists in bedrock crevices, boulders interstices, ST, CT, SOR also present.

USCG/NOAA

NAME CWO R. SPURR / G. SHIGENAKA SIGNATURE R. Spurr / G. Shigenaka

- ☒ NTR The remaining oil, SOR & mousse is highly weathered and breaks up when touched. No further treatment in this segment is suggested.

SURVEYED PORTION OF THE SEGMENT CONSISTED OF A LOW BOULDER/BEDROCK SADDLE BETWEEN TWO HIGH-CLIFFED BEDROCK OUTCROPS AT CAPE NUKSHAK, WEST OF NUKSHAK ISLAND. THE AREA IS HIGHLY EXPOSED TO WEATHER AND SEAS IN SHELKOF STRAIT. TYPICAL OF EXPOSED ROCKY SHORELINES WE HAVE SURVEYED IN THE AREA, BIOLOGICAL DIVERSITY IN THE SURVEYED SEGMENT WAS LOW, BUT LITTORINA SITKANA SNAILS WERE PEOIFIC. A DEAR KITTIWAKE WAS FOUND ON THE BEACH AND OTHERS WERE OBSERVED ON BLUFFS IN THE AREA. SO X 200M BAND OF OILING HAD BEEN REPORTED IN THE SURVEYED LOCATION IN 1990. IN THE PRESENT SURVEY, NO BANDS OF RESIDUES CONSISTING LARGELY OF SOR, COAT ANY STAIN WITH SCATTERED OCCURRENCES OF MOUSSE WERE FOUND IN THE AREA, WITH DIMENSIONS ESTIMATED BY THE OG AT 10-18m X 65m, AND 35 X 7. SOME SHEENING IN TIDAL POOLS WAS NOTED. RESIDUES ON THIS BEACH WERE NOT BROKEN UP OR RECOVERED BY VECO CREW DUE TO DIFFICULT ACCESS TO THE SITE.

PAGE 1 OF 1

SEGMENT K9-20-CN-2

SUBDIVISION A

DATE 25 / May / 91

ENERGY LEVEL: ☐ H ☒ M ☐ L

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

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

EST. OIL CATEGORY LENGTH: W ~ m M ~ m N ~ m VL 100 m NO 100 m US 3614 m

[illegible]

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

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

PHOTO ROLL # MAYSAP- 6 - 22 FRAMES 8-12

[illegible]

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

OG COMMENTS: This segment is located at the SADDLE between Cape Nukshak and the first offshore islet. The area consists of a boulder beach backed by cliffs and fronted by bedrock pinnacles and supratidal, irregular bedrock outcrops. It is these natural breakwaters which have formed semi-protected intertidal boulder regions enabling the oiled sediments to persist. Two oiled zones are delineated on the sketch consisting primarily of CT/ST with sporadic pockets (TU in DR-B) of SON/MS. The most concentrated ms/son (still < 190) occurs at the eastern 20m of site A.

Reviewed 5.27 94

V V V GRASSY
 AREA
 ROCK
 PENNACLES
 PHOTO SITES

Sketch MAP (06)
 K9-20-CN-2-A
 O M. Fitzgerald
 25 MAY 1991
 650 - 730

CAPE
 Nukshak

Backrock
 CLIFF

MLW



A. CT/ST
 SOR
 10-18 by 65m < 1%
 highly weathered
 E/U AROUND B-BR

B. SOR
 CT/ST
 7 by 35m, < 1%
 I/U, B-BR

RB. SHEENS
 OBSERVED
 IN TIDAL
 POOLS

IMBRICATED FLAT Boulders

SUPRATIDAL ZONE

MLW



High
Tide
ISLAND

[Connected to
 Mainland at
 Low tide]



SMALL
 ISLAND

0 30
 METERS

SHELIKOF
 STRAITS

reviewed 5.27.94

GRASSY AREA
ROCK PENNACLES
PHOTO SITES

PHOTO SITES, CN-2A
ROLL 6-22, FRAMES 8 THRU 12

Sketch MAP (06)
169-20-CN-2-A
O. M. Fitzgerald
25 MAY 1991
650 - 730

CAPE
Nukshak

Backrock
CLIFF

MLW



A. CT/ST
SOR
10-18 by 65m <1%
highly weathered
E/U AROUND B-BR

IMBRICATED FLAT
Boulders

B. SOR
CT/ST
7 by 35m, <1%
I/U, B-BR

RB. SHEENS
OBSERVED
IN TIDAL
POOLS

SUPRA TIDAL
ZONE

MLW



High
Tide
ISLAND

Connected to
Mainland at
Low tide



SMALL
ISLAND

0 30
METERS

SHELIKOF
STRAITS

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 Helo

DATE May 25 1991

SEGMENT # K9N-20 CN-02

TIDAL HEIGHT (Range) - 4 ft - (6:45-7:35)

SUBDIVISION A

BIOLOGIST H. Davis

SEA STATE Calm 0

WIND SPEED/DIRECTION No Wind

PHOTOGRAPHS: ROLL # 6-22

FRAME # 8-12

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

Sites A+B The area surveyed is at a saddle between the mainland and an island offshore. At low tide the saddle is exposed. The top of the saddle has verrucaria. Some littorina and a few barnacles. Lower down in the UFTZ barnacles (mostly *B. glandulosa*) *Littorina sithana*, limpets, and *Mytilus* are moderately dense. *Littorina* cover pieces of drift kelp. *Fucus* covers the tops of most of the rocks in the MITZ along with some porphyra, *Scytosiphon*, red algae, green filamentous algae and *Ulva*. At the lowest uncovered areas *Alaria*, *Laminaria setchellii*, *Ulva*, and *Halosaccus* cover the rocks. In pools, *Epilobium* and *Anthopleura* sp. can be seen. All of the S&R, Cr/St at sites A and B are in the UFTZ. Near the top of the saddle verrucaria with "stain shadows" can be seen. *Littorina* is sparse in the two areas. Barnacles, limpets, porphyra and *Fucus* occur in the lower half of the sites.

Sparrows 50g + Fox (3)

Glaucous-winged Gull (5) Oystercatcher (1) White Wing Scoter (5) Kittiwakes (3 dead)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	0		
Seabirds	0		
Waterfowl	1	5	
Gulls/Kittiwakes	2	5 (3 dead Kittiwakes)	
Shorebirds	1	1	
Corvids	0		
Other Birds Sparrows	2	3	

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

Shoreline subdivision map showing important biological features attached.

- ✓ ✓ ✓ GRASSY AREA
- ROCK PINNACLES
- PHOTO SITES

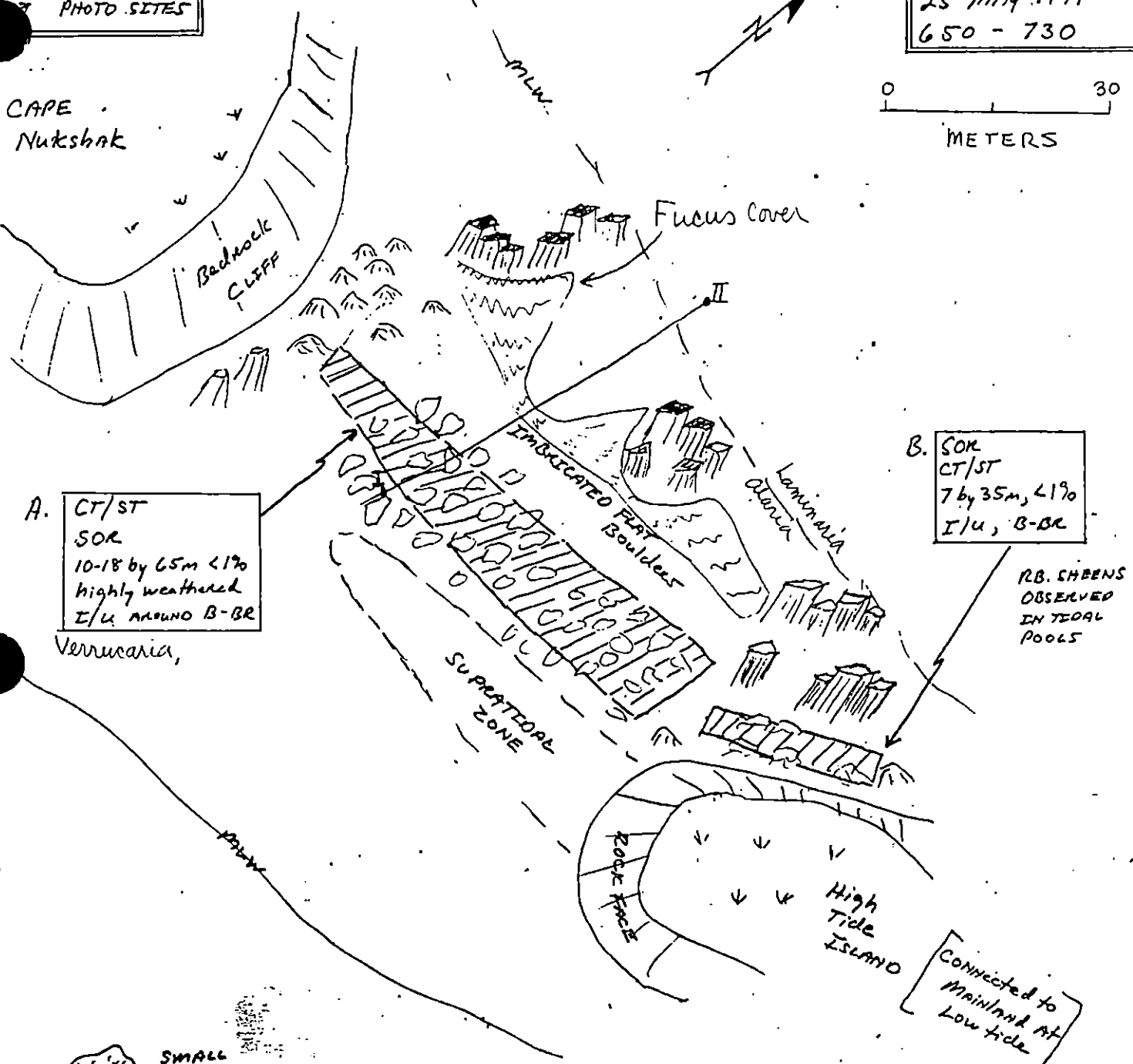
This area has a rich intertidal community, clean up would be more disruptive than productive.

Bio Map
H. DAVIS

Sketch MAP (06)
K9-20-CN-2-A
D. M. FITZGERALD
25 MAY 1991
650 - 730

CAPE
Nukshak

0 30
METERS

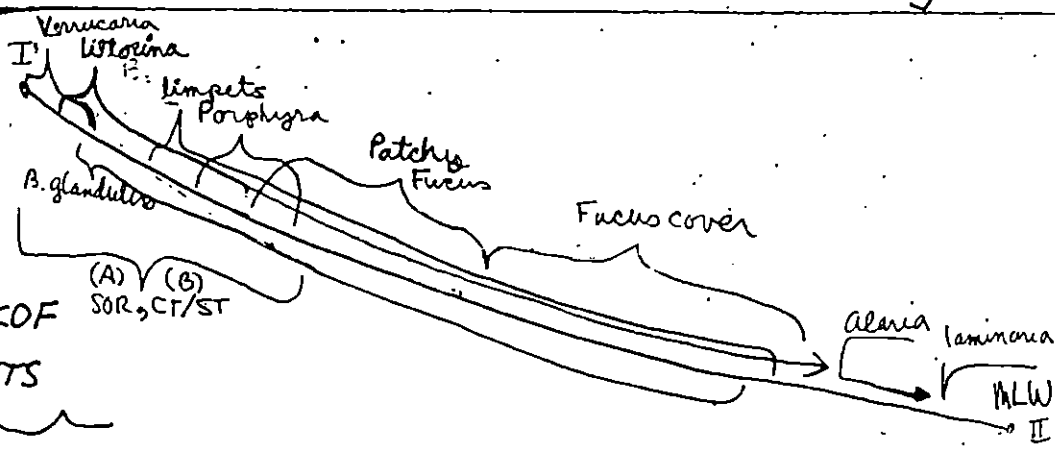


A. CT/ST
SOR
10-18 by 65m <1%
highly weathered
I/U AROUND B-BR
Verrucaria,

B. SOR
CT/ST
7 by 35m, <1%
I/U, B-BR

RB. SHRENS
OBSERVED
IN TIDAL
POOLS

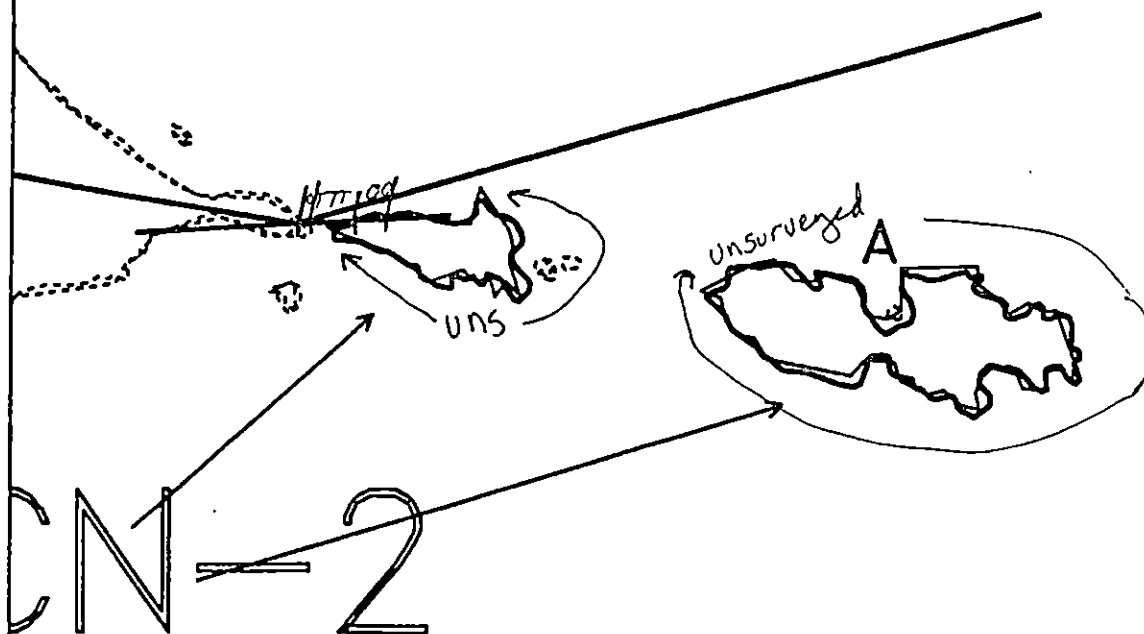
Connected to
Mainland At
Low tide



SHELIKOF
STRAITS

(A) (B)
SOR, CT/ST

Alaria Laminaria
MLW
II



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

K0920 CN002 A
 ADEC Subsegment Length: 3814m
 METERS
 0 400 800
 AK State Plane Zone 4
 90920cn002a-1 . . .



Subdivision Field Map
 Map Key: 60AK0020CN002A
 Name: D. FITZGERALD
 Date: 25 May 1991
 Date Entered:

reviewed 5.27 94

REGION: KODIAK

SEGMENT: ST/K09-21-KU-03

SUBDIVISIONS: A (1 OF 1)

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 unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 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	☐ Snare/Absorbent Booms
☒ Treatment Recommended	☐ Oil Snares (pom poms)
☒ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☐ Bioremediation	☐ Spot Washing: _____ Wands
☐ Tarmat Removal	☐ Beach Cleaner
	☐ Other (see comments)

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

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

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 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

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:

6V Tent sites (6/1 to 9/15)

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

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

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

Special use destination

7Z Subsistence area: Salmon harvesting (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 H9-21-KV-3 SUBDIVISION: H9-21-KV-3A DATE 4/27/90

USCG

NAME D. D. Haven Jr, Gms, USCGRSIGNATURE [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 Francine J. BennisSIGNATURE [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 UITE and mousse saturated grass in supratidal area (observed a mouse track in this 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 + trowel. See SSAT field maps for location.

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

This area has an extensive band of oil in the western portion, consisting of mouse. 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 Tregor, 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 2672 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	NO	1	2	3	SL	BR	OR	OL	OF	NO	LT	TR	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER			✓	✓	✓								✓			
COAT			✓	✓	✓								✓			
STAIN			✓	✓	✓								✓			
MOUSSE			✓								✓		✓	✓		
PATTIES																
TARBALLS																
FLM																
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)	F	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SL	BR	OR	OL	OF	NO	LT	TR	SU	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 400 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+P w/ 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.

REVIEWED AK DATE 4-26-90

OG Ac

SEARCH MAP

N ↑
Approx. Scale
1cm = 15mSEGMENT ST/ K9-21-KV-3SUBDIVISION K9-21-KV-3ADATE 4 / 23 90

CHECKLIST

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

LEGEND

1 ▲

Pk - No Subsurface Oil

2 ▲

Pk - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

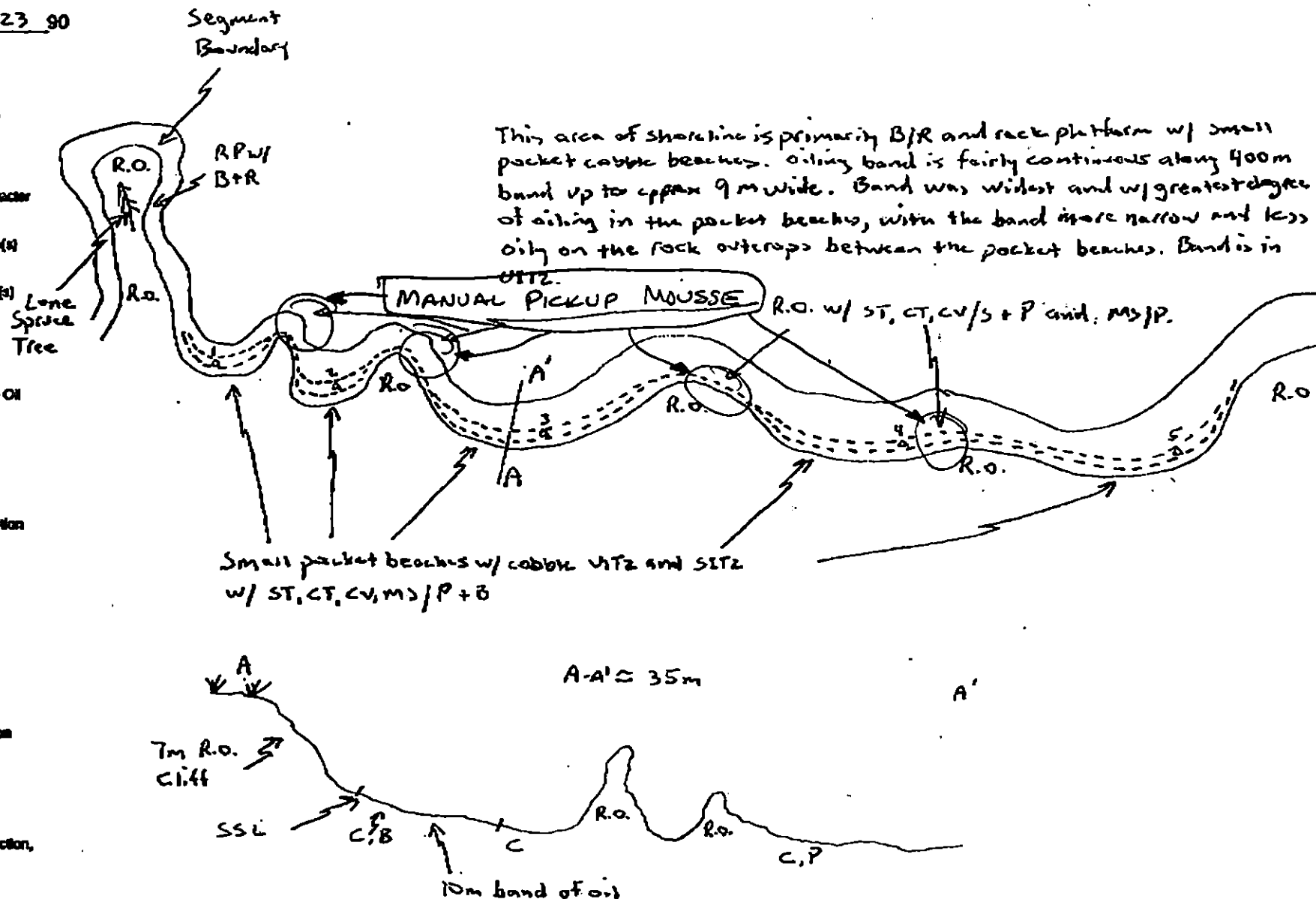
Patchy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

1 ➔

Photo location, direction,
and numberOil Character Length (m): AP _____ PO _____ CV 400 CT 400 ST 400 MS 400 PT _____ TB _____ FL _____ NO 2632

REVISION: 03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

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 (8th)

- (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% (50%)
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (O)

Photographs:

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

BARNACLES continuous along segment. Densest on rock outcroppings 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	O	O	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	X	X	4	NOT PRESENT
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	

MYTILUS a 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	2	X	X	X	X	X	2	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	NOT PRESENT
4	4	4	4	4	4	4	4	4	4	4	4	5,6
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 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	2	X	X	2	O	O	X	1U	1M	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	NOT PRESENT
4	4	4	4	4	4	4	4	4	X	X	4	5,6
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 patchy showing a lot 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	2	O	X	X	X	X	X	2	2	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	NOT PRESENT
4	4	4	4	4	4	4	4	4	X	X	X	5,6
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: Moose tracks and scat in upper intertidal. Harlequin ducks, Oystercatchers, ? Grebe, and Cormorants. The oystercatchers were feeding in the intertidal.

Ecological Considerations: 3NOR; 1A1B Anadromous stream (Chum + Pink?) Salmon and Harbor seals pup and molt in this area.

DATE 4/23/90 TIME 9:40 - 11:30
4/24/90 7:20 - 8:10

TIDE HEIGHT

0 To +6
0 To -2

1 = BEDROCK

2 = BOULDER

3 = COBBLE

5 = SAND

6 = SILT

4 = pebbles

FLORA:

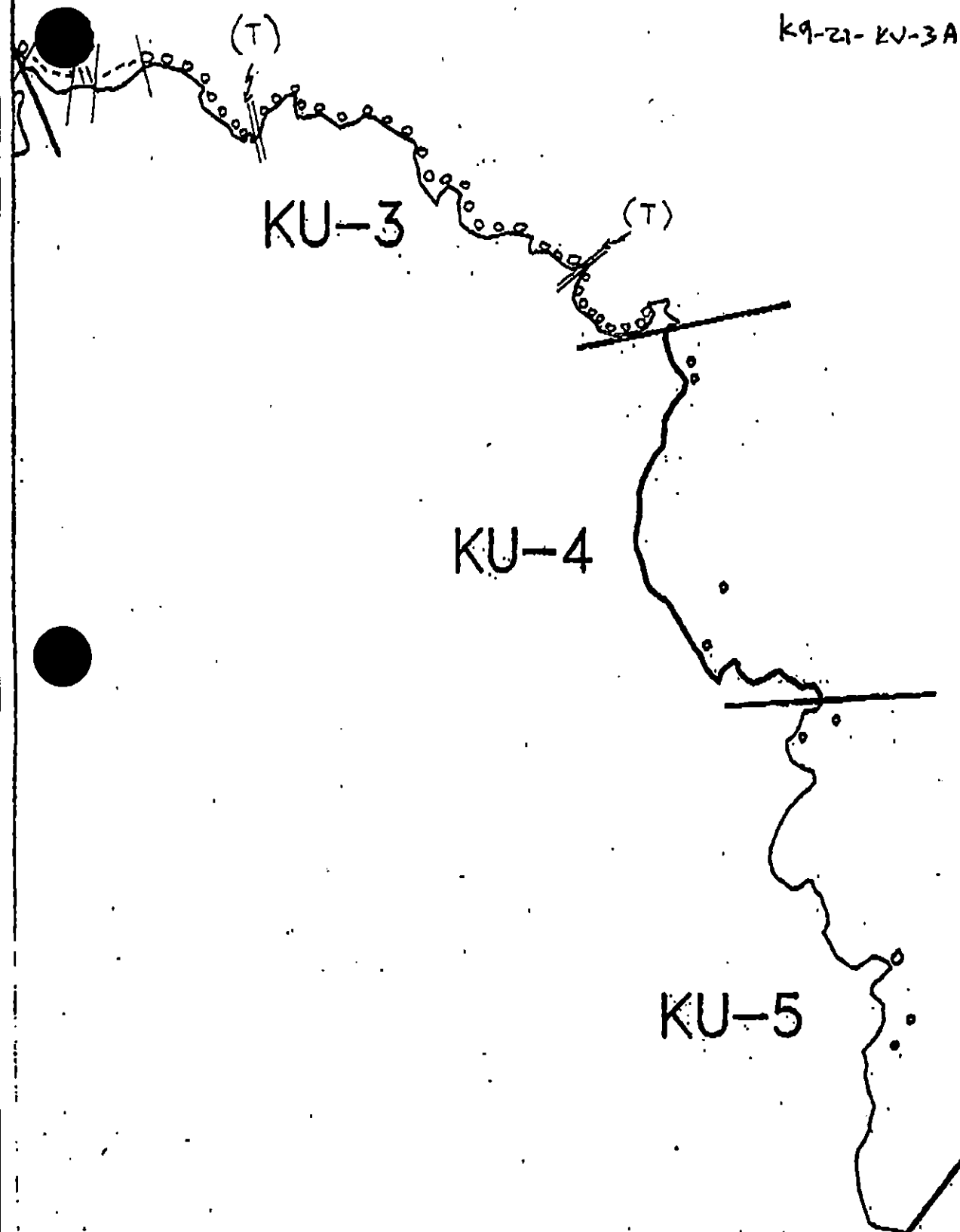
SPECIES	UITZ	MITZ	LITZ	COMMENTS
BOSSIELLA ~~CORALLINA~~	1,2	1,2	1,2	
CALLIARTHRON/CORALLINA	1,2	—	—	
CLADOPHORA SPP	—	1,2,3	—	Near fresh water run off
COSTARIA SPP	—	—	—	
ENDOCLADIA MURICATA	1,2,3	1,2	—	
FILMAENTOUS GREENS	1,2,3	1,2,3,4	2,3	On tops of rocks
FILAMENTOUS REDS	—	—	2,3	
OLOIOPELTIS FURCATA	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	—	
RHOBOMENIA 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	1,3,3	
ENTEROMORPHA	1,2,3	—	—	
Verrucaria (lichen)	1,2	—	—	Upper intertidal / splash zone

FAUNA:

ANTHOPELURA SPP	1,2	1,2	1,2	Antennae and paralogous ion
(SEM) BALUNUS 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	—	—	—	
DERMASTIERIAS IMBRICATA	—	—	—	
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 underside of rock
LITTORINA SPP	1,2,3,4	1,2,3,4	1,2,3,4	" "
NUCELLA SPP	1,2,3	1,2	—	
PAQURUS 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	—	—	
Epistolis nodifera	1	1,2	2	near 2 ... hand ...

KU-5

Date Entered:



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

KU-3

ADEC Segment Length: 11173m

0 500 1000
METERS

K9-21-KV-3A
Map Key: GOA-1501

Name: Acton

Date: 4-23-90

Data Entered:

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 unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. 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 pinniped constraints.

TAG COMMENTS: FOLLOWING REMOVAL OF MOUSSE, BIOREMEDIATE

TAG APPROVAL DATE: 5/4/90

ADEC ART WEINER Art Weiner

EXXON ANDY TGA Andy TGA

NOAA GARY PETROW Gary Petrow

USCG G.A. REITER G.A. Reiter

FOSC: W/L

DATE: 5-12-90

Bioremediation is not authorized.

OG ASEGMENT ST/ K9-21-KV-3SUBDIVISION K9-21-KV-3ADATE 4 / 23 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)
☐ 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

Offed Vegetation

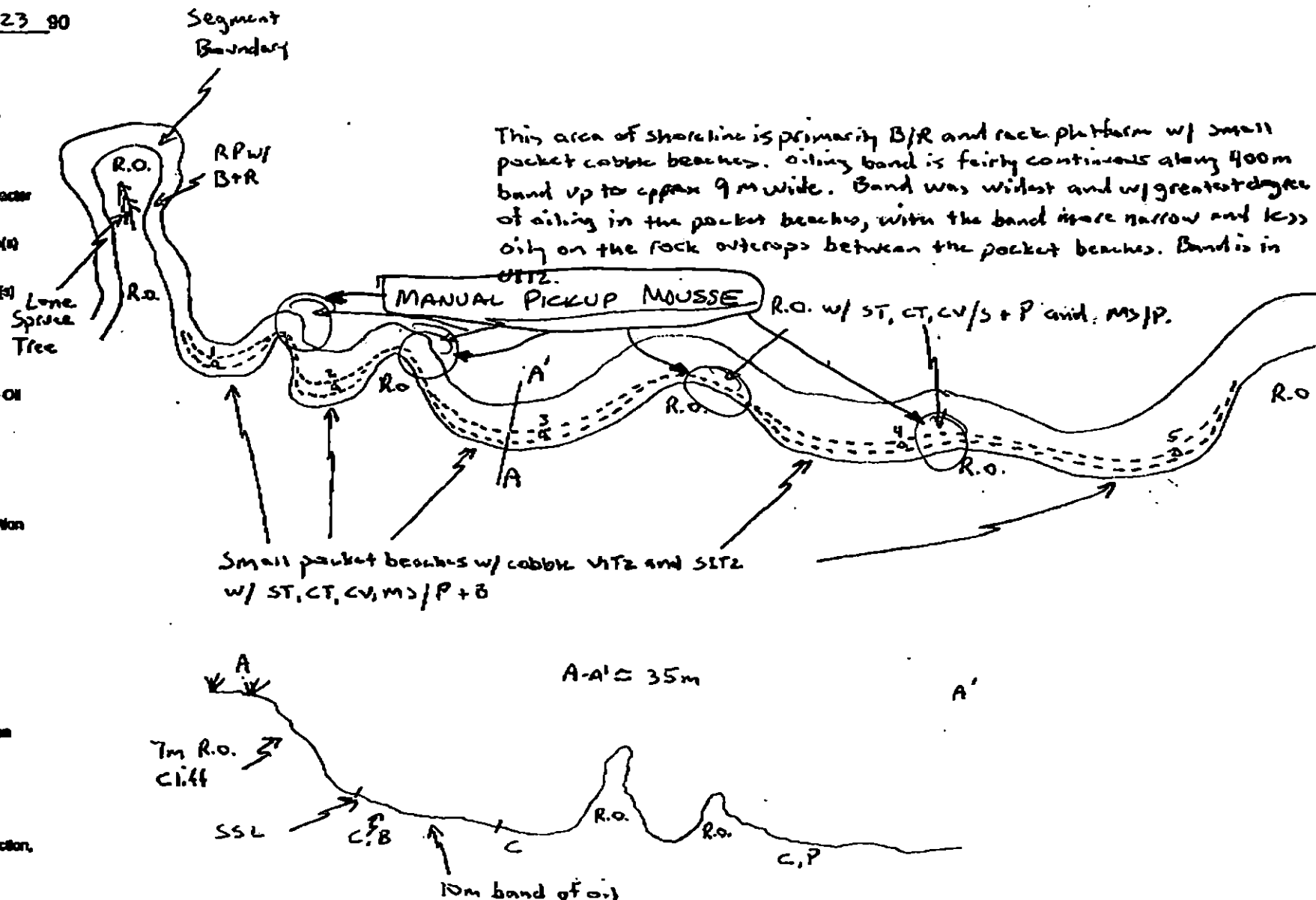
1 $\Rightarrow$

Photo location, direction, and number

SWITCH MAP

N $\uparrow$

Approx. Scale

1cm $\approx$ 15mOil Character Length (m): AP _____ PO _____ CV 400 CT 400 ST 400 MS 400 PT _____ TB _____ FL _____ NO 2632

REVISION: 9/24/98

Sketch Map
Area

KU-3

KU-4

KU-5

XXXX Wide

●// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KU-3

ADEC Segment Length: 11173m

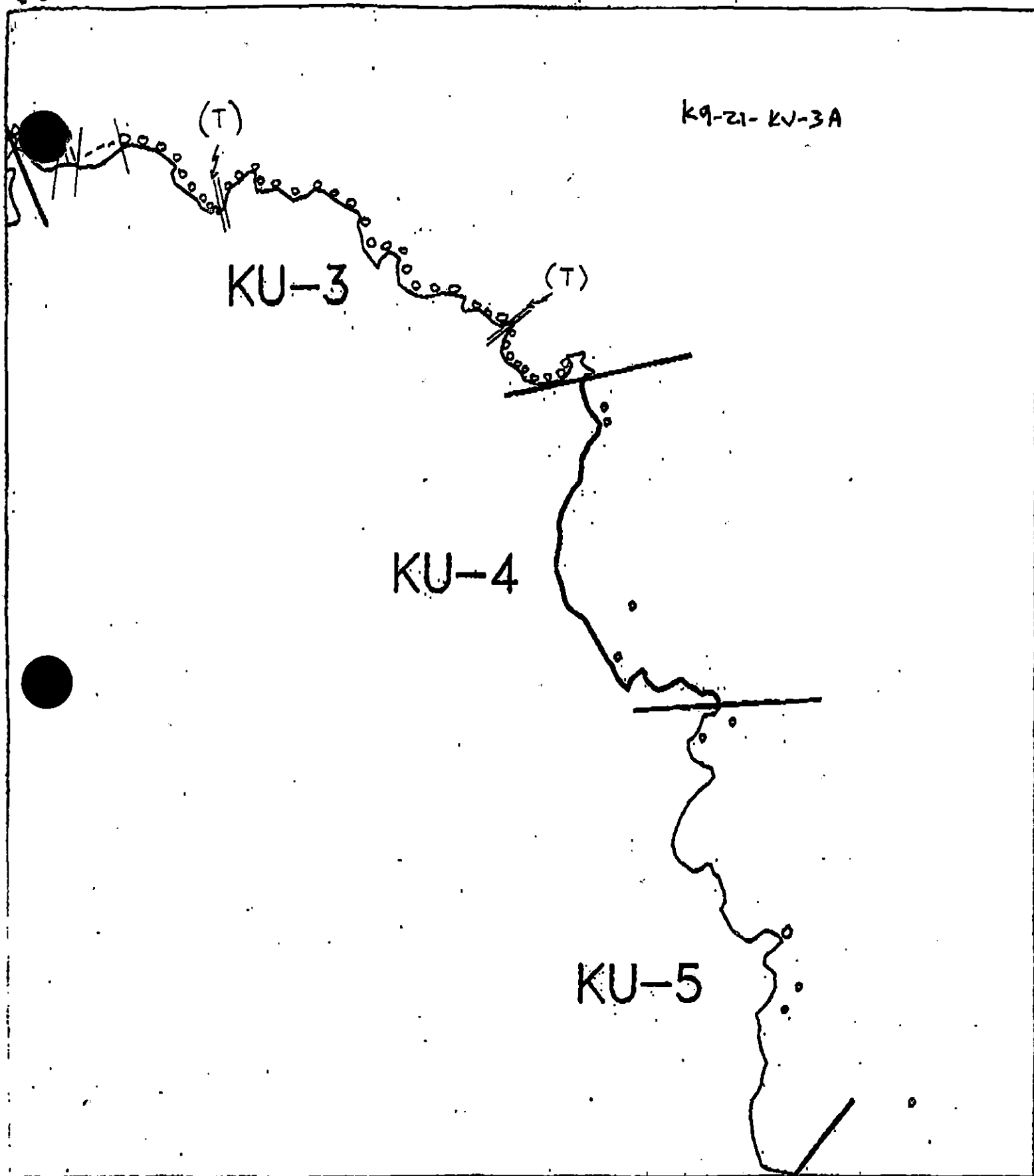


K9-21-KV-3A

Map Key: GOA-1501

Name: ActonDate: 4-23-90

Data Entered:



XXXX Wide

KU-3

K9-21-KV-3A

// Medium

Map Key: 60A-1501

--- Narrow

ADEG Segment Length: 11173m

Name: Acton

TTTT Very Light

Date: 4-23-90

0000 No Oil

0 500 1000 1500

METERS

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

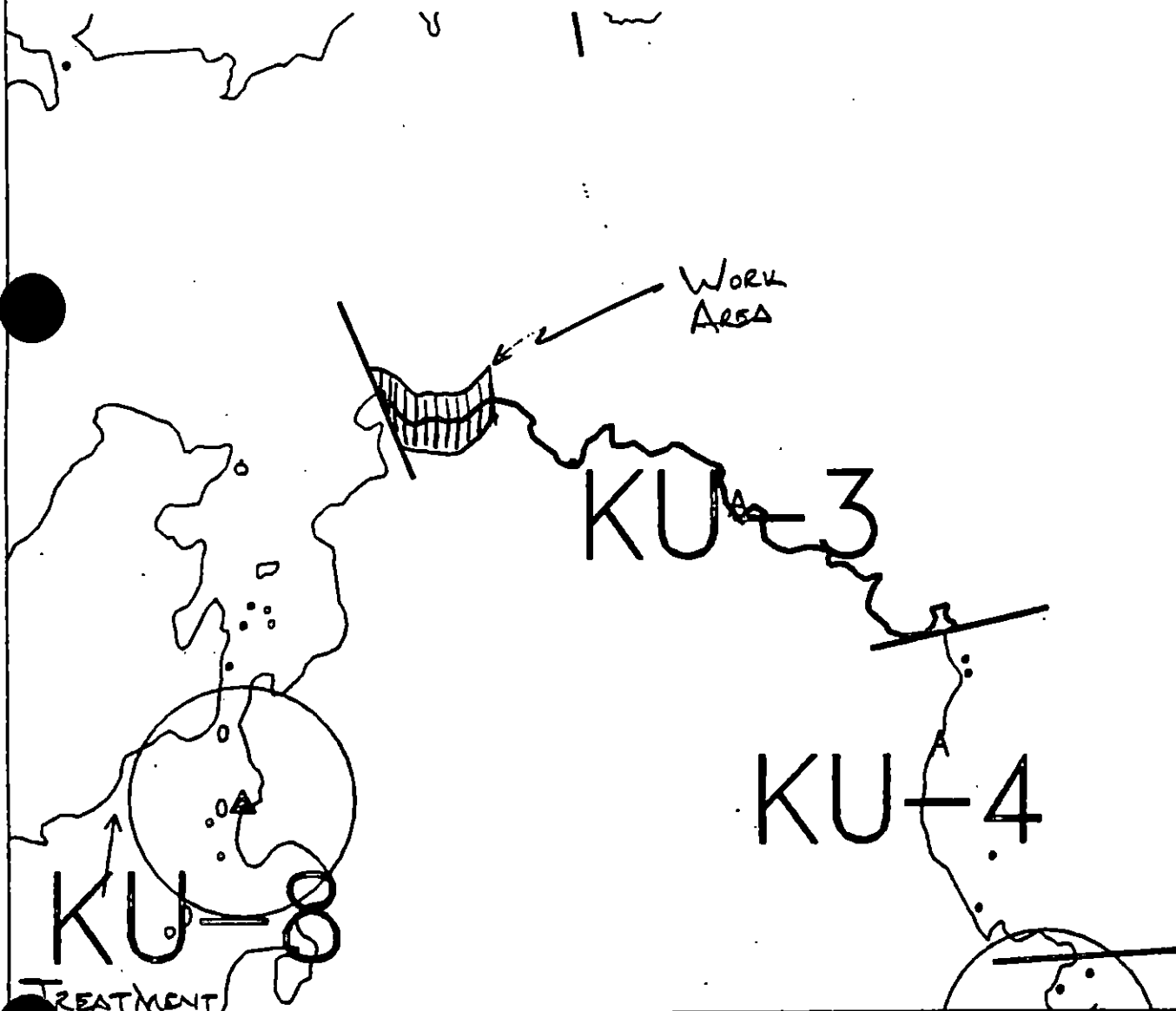
Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. Do not apply bioremediation to specific areas where seals are observed to haulout. When working on or near haulouts, complete the job 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

J. J. Jannoffi Date 6/21/90

Prepared by

J. J. Jannoffi Date 6/20/90



Exxon Company, USA
Map Key: MP-KU-3



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-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.

ARCHAEOLOGICAL CONSTRAINTS:

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

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

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:

<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)

+ 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 pinniped constraints.

SEE CONSTRAINTS ADDENDUM DATED 6/22/90

TAG COMMENTS: FOLLOWING REMOVAL OF MOUSSE, BIOREMEDIATION

TAG APPROVAL DATE: 5/4/90

ADEC ART WHEAT

EXXON ANDY TATE

NOAA ANDY TATE

USCG G.A. RUTER

FOSC: [Signature]

DATE: 5-12-90

Bioremediation is not authorized.

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 Inipol - 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 unrolled 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 unrolled biota and substrate.

FOSC

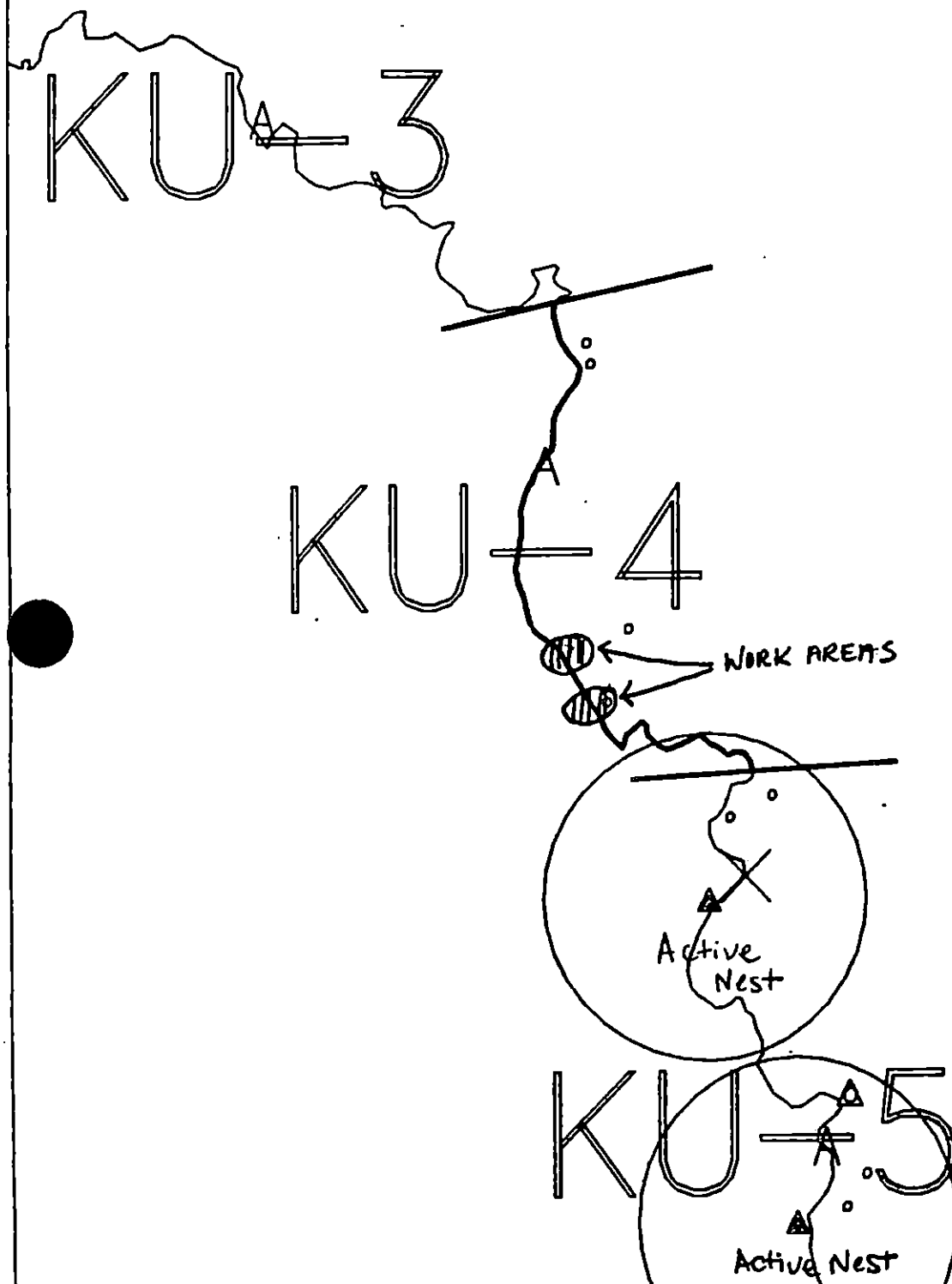
Date

7-11-90

Prepared by

Date

7/10/90



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



ECOLOGY MAP
SEGMENT K9N-21-KU-4
SUBDIVISION A (1 of 1)
METERS
0 415 831

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

1 inch = 1363 feet

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

LL 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.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

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:

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

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

SEE CONSTRAINTS ADDENDUM DATED 7/10/90 PP

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:

DEC RAY MORRIS R. T. Hume
EXXON ANDY TELL
NOAA JOEY TALLANT
USCG G. A. TIEBER

FOSC: ML

DATE: 7-10-90

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ALL National Park - Katmai

SLM 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.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: Charles E. 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 UNACCESSIBLE

TAG APPROVAL DATE:

ADEC RAY MORRIS R. Morris

EXXON ANDY TEAL

NOAA Jean Talbot

USCG G. A. REITER C. A. Bester

FOSC: ML

DATE: 7-10-90

scale

125 m

SKETCH MAP

Legend

--- Boulders

--- steep cliff / backshore

ALASKA
PENINSULA

SHELIKOF
STRAIT

Accup
OILED DEBRIS

Drift logs
in Supra
w/ some
staining

Drift Logs
in Supra
w/ some
stain

Drift logs in
Supra w/ some
staining

River

stream

3m x 100m ST/S in Supra ITZ

2m x 30m CT/S in HITZ on Boulders

1m x 20m CT/S on B/C in Supra ITZ

5m x 40m CT/S in Supra ITZ along B/R

3m x 100m ST/S in Supra ITZ on B/C IR
w/ some localized CT/P

Pocket 1

A14, 3m x 15m AP/B (mouse mat) on Pebble
Supra ITZ

Pocket 2

A15, 2m x 25m CUP in between B crews
HITZ, Supra ITZ

Pocket 3

A16, 5m x 30m AP/P in the
Supra ITZ on Pebble (mouse mats)

TARMAT
Removal

CHECKLIST

1. Arrow
2. Approx. Scale
3. Sup/Sub Body
4. Oil Dist.
5. Width
6. Length
7. % Cover
8. Substrate Character
9. Est. HML/LML
10. Profile Location(s)
11. Profile(s)
12. Photo Location(s)
13. Photo Location(s)

LEGEND

1. Δ

2. Δ - No Subsurface Oil

2. Δ

3. Δ - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Boggy Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

CT/V
Old Vegetation

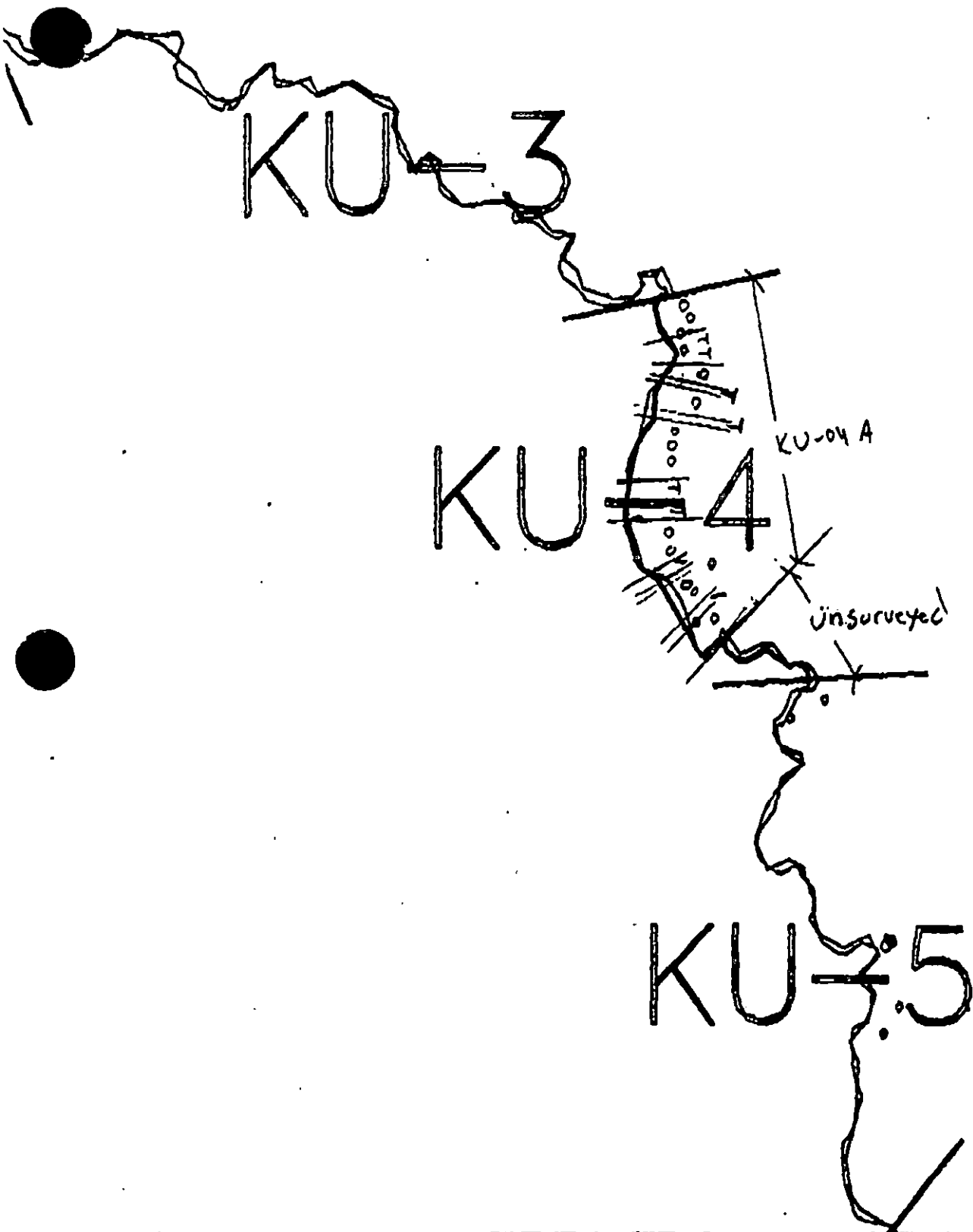
Photo location, direction,
and number

Character Length (m): AP 45 PO - CV 25 CT 90 ST 200 MS - PT - TB - FL - NO 900 UNSUBJECTED 507m

3. Mike F
COMMENT ST/ K0921 - K0004

JO DIVISION A

DATE 5/21/80



YXXX Wide	KU-4		Map Key: AKP-KU-41
/// Medium	K9-21		Name: <u>Mike Foget</u>
--- Narrow	ADEC Segment Length: 11172m		Date: <u>5/21/90</u>
TTTT Very Light			Date Entered:
0000 No Oil			

0 200 400 600 800 METERS

REGION: KODIAK

SEGMENT: ST/K09-21-KU-004

SUBDIVISION: A (1 of 1)

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.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: _____ DATE: _____

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	☐ Snare/Absorbent Booms
☒ Treatment Recommended	☐ Oil Snares (pom poms)
☐ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☐ Bioremediation	☐ Spot Washing: _____ Wands
☒ Tarmat Removal	☐ Beach Cleaner
	☐ Other (see comments)

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

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

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 488-4791
- 3P 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)
 7HH Finfish harvesting
 7H 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 267-2350

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ 16921 / 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 MOUSE 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 MOUSE SATURATED SEDIMENTS AND MOUSE 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 15 m area 'mouse mat'
- 2) 2 m x 25 m area of mouse, mouse saturated sediments
- 3) 8 m x 30 m area of mouse, mouse saturated sediments

Stain, Coar., a 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 Schaub SIGNATURE Carl Schaub

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

not present during assessment

Concur with ADEC and USCG regarding removal of the 3 predominant asphalt / mouse 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 / 10921 / KU004 SUBDIVISION: A DATE 5/20/90

SCG

NAME STAN L. SHIELDS SIGNATURE Stan L. Shields USCG

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

SPOT MANUAL PICKUP OF OILED DEBRIS [✓] 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. [✓] THROUGHOUT SEGMENT

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. ^{See SEAT MAP - The unsurveyed portion of the segment needs to be assessed via boat}

LAND MANAGER

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Not Available

SHORELINE OILING SUMMARY

33-7 1.24

OG Mike Foget USCG Jan Shields SEGMENT ST/ K0921-K0504
 BIO Heather Davis LAND REP Dan Pontand SUBDIVISION A (1 OF 1)
 EXXON - ADEC Fran Benn's TIME 17:00 to 20:00
 TEAM NO. 20 TIDE LEVEL +1.5 - +3.0 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 windows
 SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: A 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			
	W	M	N	VL	W	M	N	VL	NO	W	M	N	U
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 cm

PATTIES / TARBALLS 0 BAGS

NEAR 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 Pom

#BAGS 1

Photographs:

Roll No. ST-20-12

Frames 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		W	M	W	M	N	VL	NO	W	M	N	U				
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 Pocke- 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 Pocke- Beaches. The Northern 1/2 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

SHORELINE OILING SUMMARY (PAGE 2)
SEGMENT ST/ KU921-KU004 SUBDIVISION A (1 OF 1)

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (m)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-FT)	BELOW		OIL / FILM COLOR						PIT ZONE				AN A	SHEET (N)	V	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	US	1	2	3	4	5	6	W	U	M	L				
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, sub section 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

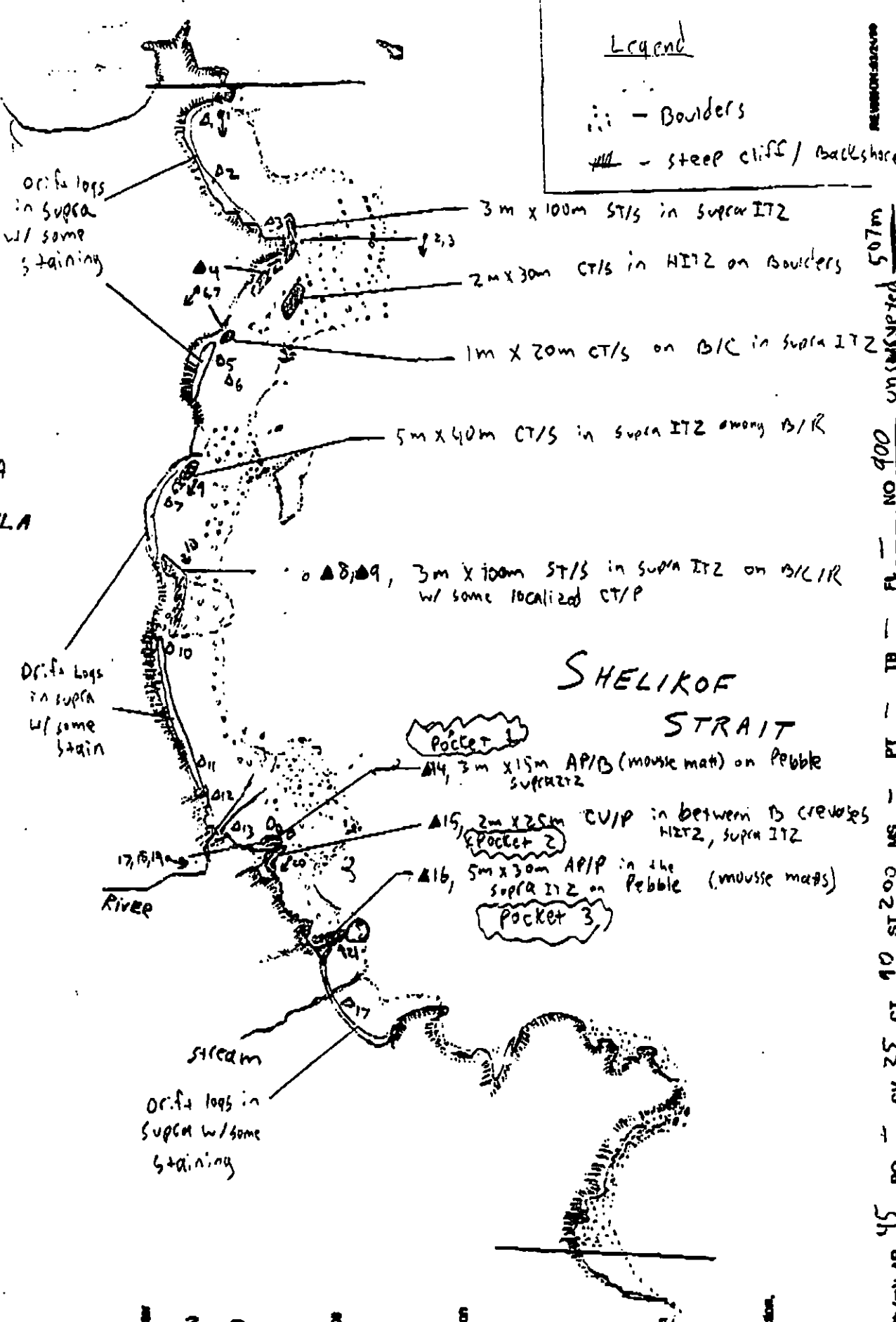
REVISION: 002499

scale
125 m

Legend
--- Boulders
--- steep cliff / backshore

ALASKA
PENINSULA

SKETCH MAP



OG Mike R
SEGMENT ST/ K0921 - K0004
SUBDIVISION A
DATE 5 / 21 / 90

- CHECKLIST
- IN Area
 - Approx. Scale
 - Sup/Sub Study
 - Oil Dist.
 - Witch
 - Length
 - % Cover
 - Substrate Character
 - Est. HML/LWL
 - SOL
 - 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
Patchy Distribution
- CT/S
Splashed Distribution
- RL
Cold Vegetation
- Photo location, direction, and number

Oil Character Length (m): AP 45 PO - CV 25 CT 90 ST 200 MS - PT - TB - FL - NO 900 unsurveyed 507m

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 *Sittans*) limpets (*Notosmna persona*, *Collusella digitalis*) Balanus, a few *Porphyra*, Green filamentous algae and *Chlorophora* (its presence is inversely related to the number of Littorina in the area) *Fucus* and *Sculpins* (in pools)

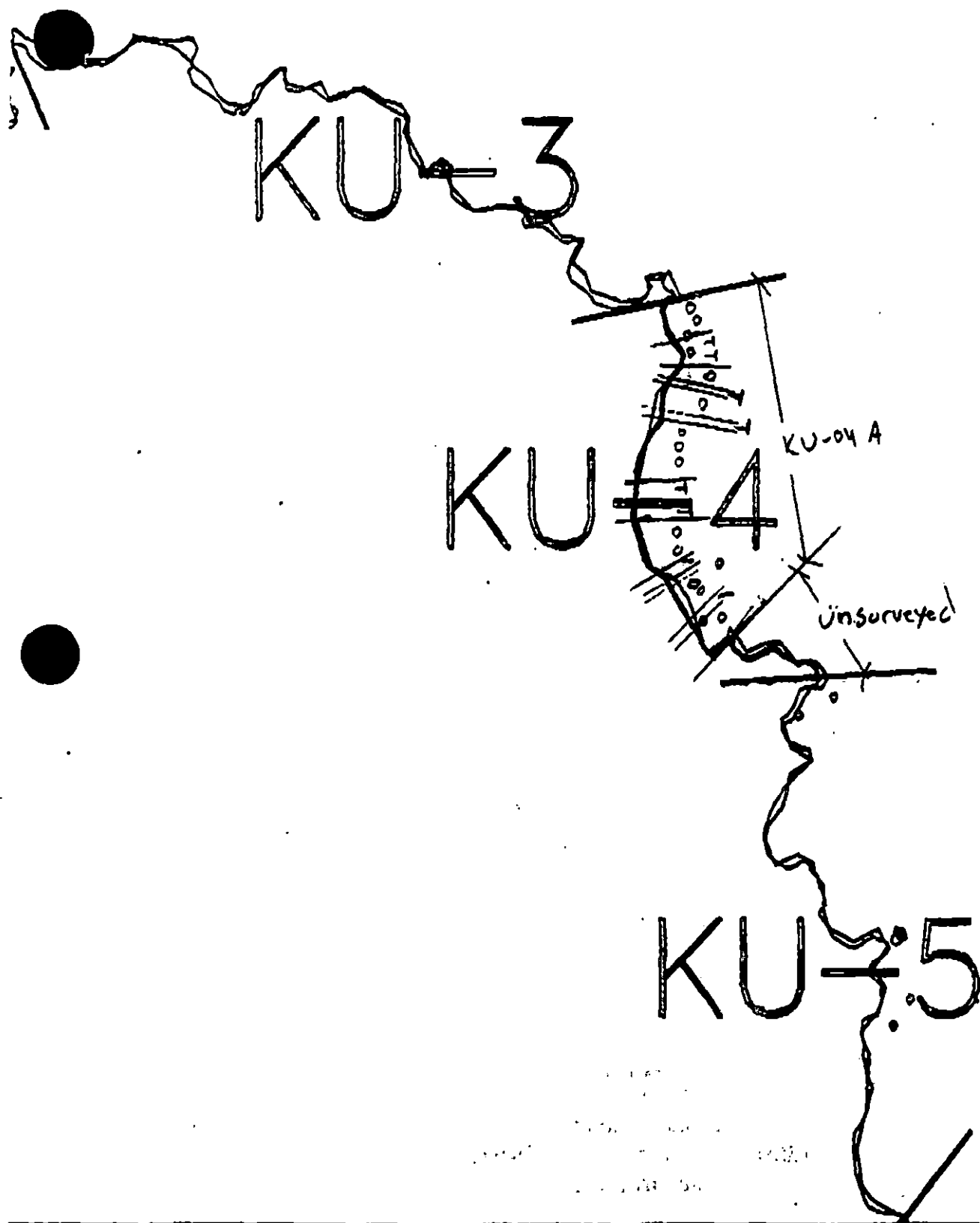
The mid-intertidal zone had *Fucus*, *Odonthalia/Rhodomena*, *Scytosiphon*, *Endocladia* (a few tufts), *Gloiopelta*, *Halosaccus*, *Coralina* sp., *Valoniobrya*, *Nucella* sp., *Littorina*, limpets, *Barnacles*, *Katharina*, *Anthopleura* (*artemisia* and *xanthogramma*) and a few patches of *Mytillus*.

The low-intertidal area was difficult to evaluate, because the lowest point of the tide was +20 ft. *Pleuraphysus*, *Alaria*, *Rhodomenia*, *Ulva*, *Scytosiphon*, *Porphyra*, *Leptasterias*, *Cupentacta*?, *Idotea*, amphipods, *Sculpins*, and *pricklybacks*

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

Birds seen Harlequin Ducks, Black Scoters, Osprey, 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.



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KU-4

K9-21

ADEC Segment Length: 11172m



Map Key: AKP-KU-41

Name: Mike Fogel

Date: 5/21/90

Date Entered:

ARLIS
Alaska Resources
Library & Information Services
Anchorage, AK