

OIL SPILL PUBLIC INFO. CENTER



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EVOS
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S42
1991
v.18

[Shoreline evaluations, 1991].

Kodiak K0921 KU 005 to K1002 AS 007

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SHORELINE EVALUATION

SEGMENT ST/ K09-21-KU-005 SUBDIVISION A (1 OF 1) DATE 5/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1C Salmon by nursery area (4/31 to 7/31)
2M Herring spawning (4/1 to 6/15)
4LL National Park - Katmai
7JJ Subsistence area: Invertebrate harvesting
7Z Subsistence area: Salmon harvesting
9LM Land mammals

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 32 m: No Oil 1935 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 Art Warner Art Warner
EXXON Andy Tse
NOAA Bur/Wescott
USCG Mr. J. Hall

FOSC: [Signature] DATE: 6/7/90

KU

U

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

active
nest
(upper cliff)
2 adults incubating

ECOLOGY MAP

KU-5

(1 of 2)

(Page 3 of 4)

5T + 5R identified in NOAA database dated 4/22/90, but not documented on 1989 USFWS eagle nest/landbird Colony map. Eagle photo marked here not documented on 8/4/89 NPS eagle nest map.

1C (fry nursery area).

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

7J5 (subadults invertebrate harvesting).

7Z (subadults salmon harvesting 6/15 - 9/30).

9LM (land mammals).

XXX Wide

/// Medium

--- Narrow

TTTT Very Light

KU-5

Approx. Segment Length: 2314m

Map Key: AKP-KU-5a

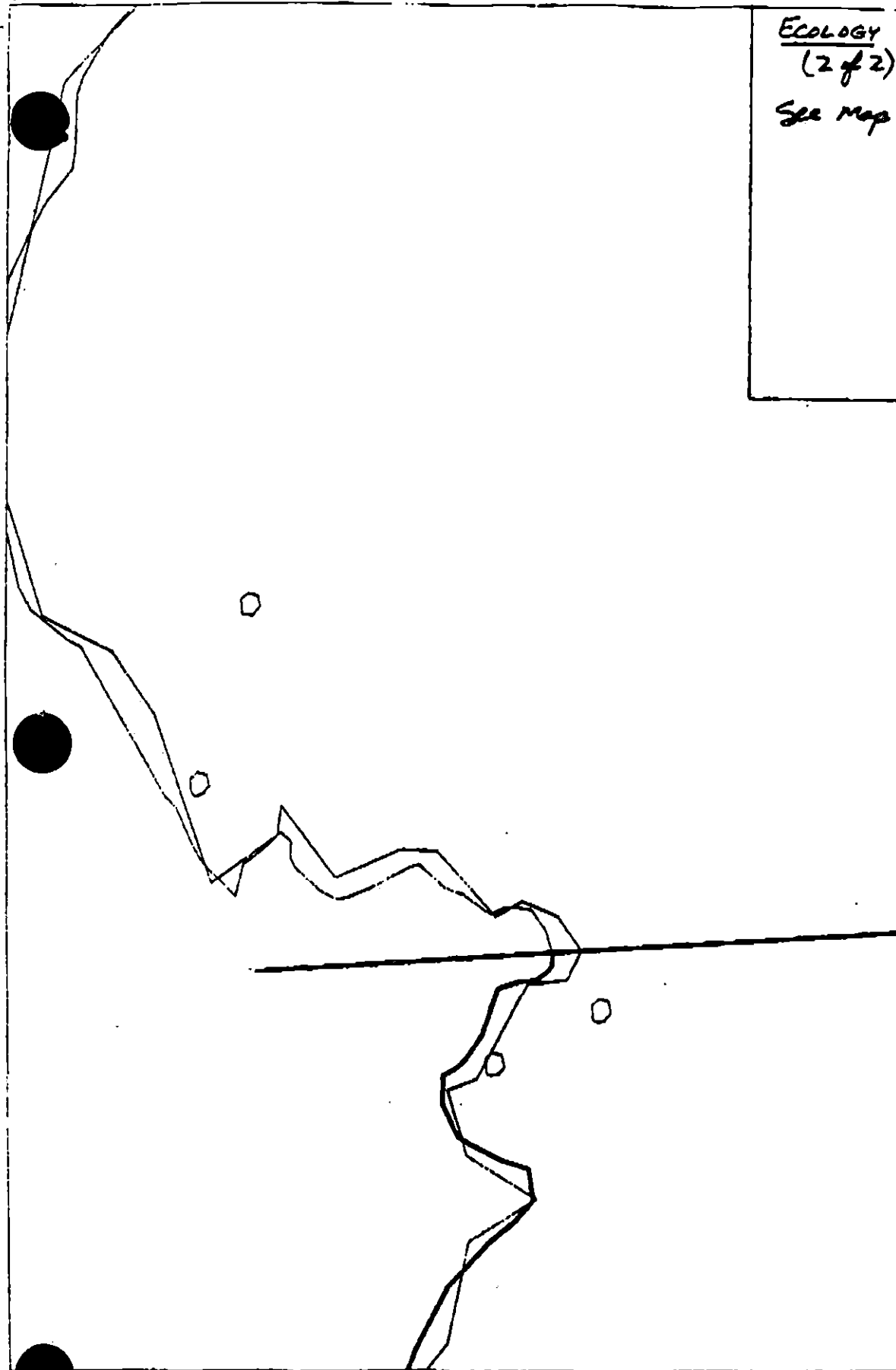
Name: _____

Date: _____

ECOLOGY MAP
(2 of 2)

KU-5
(Page 4 of 4)

See map page 1.



XXXX Wide

//// Medium

--- Narrow

TTTT Very light

KU-5

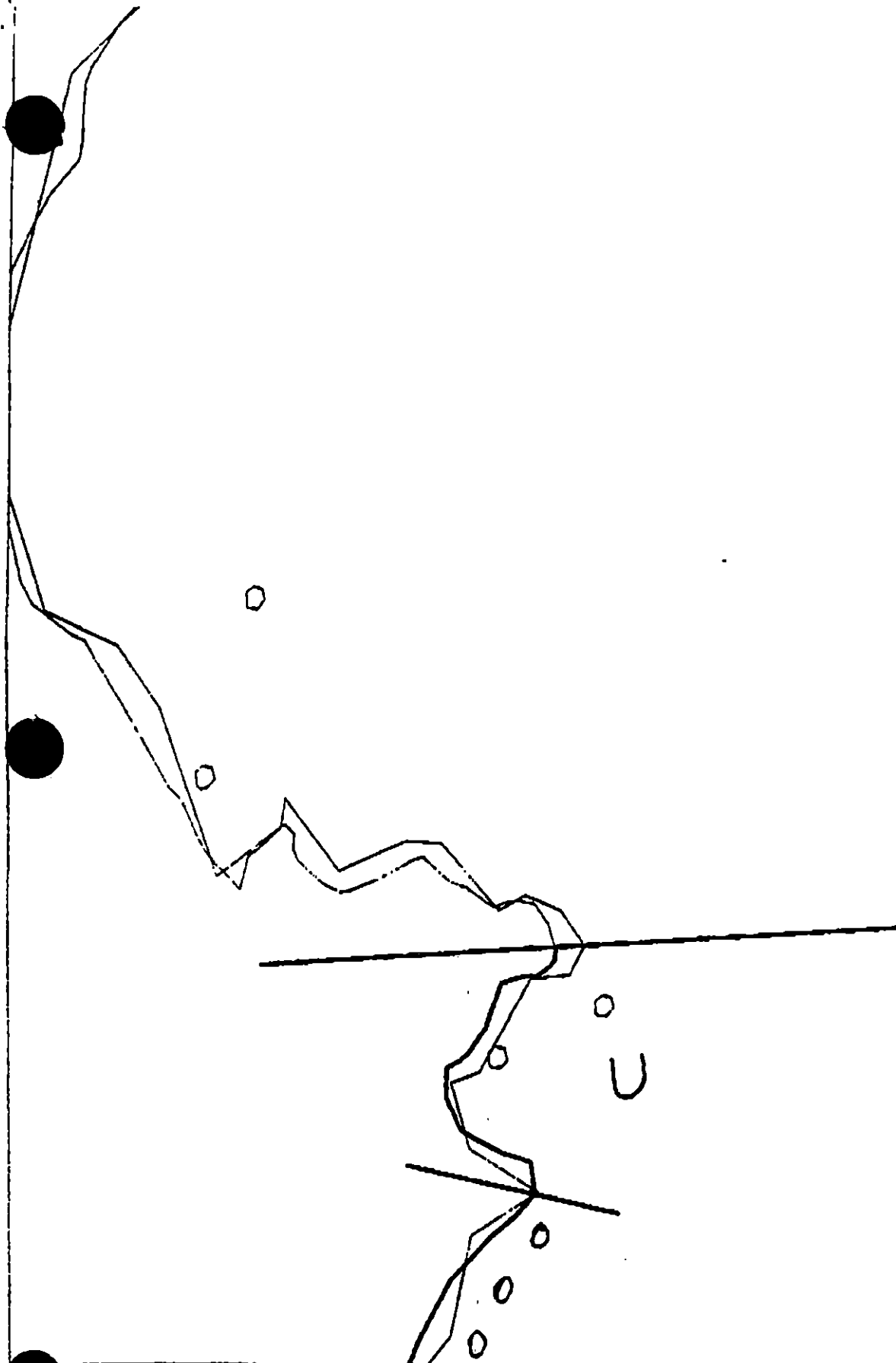
Approx. Segment Length: 2314m



Map Key: AKP-KU-5b

Name: _____

Date: _____



XXX Wide

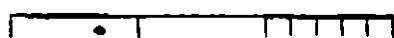
//// Medium

--- Narrow

TTTT Very Light

KU-5

Approx. Segment Length: 2314m



Map Key: AKP-KU-5b

Name: G. Heyman

Date: 5-5-90

KU

← 1m Very Light

← 1m very light
at each area

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

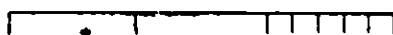
KU-5

Approx. Segment Length: 2314m

Map Key: AKP-KU-5a

Name: G. Heyner

Date: 5-5-90



REGION: KODIAK

SEGMENT: ST/K09-21-KU-005

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ K09-21-KU-005 SUBDIVISION A (1 OF 1) DATE 5/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1C Salmon by nursery area (4/31 to 7/31)
2M Herring spawning (4/1 to 6/15)
4LL National Park - Katmai
7JJ Subsistence area: Invertebrate harvesting
7Z Subsistence area: Salmon 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 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 32 m: No Oil 1935 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 Kotol Bay Hatchery release
 Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G for confirmation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1I Gill net area
 1J Purse seine area
 Mainland, West side Kodiak, Shuyak & Moser/Olga Bay (6/9 to 10/1)
 East side Kodiak, East side Afognak (7/4 to 10/1)
 1K Purse seine hook-off
 1L Set net sites
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 6/30)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Nicholson 486-4791
- 3N 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 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 (5/1 to 9/15)
 6W Anchorages (5/1 to 9/15)
 6X Forest Service cabins (5/1 to 9/15)
 6Y Lodge (5/1 to 9/15)
 Special use destination
- 7P Subistence area: Salmon harvesting (5/1 to 9/30)
 7Q Finfish harvesting
 Deer harvesting (3/1 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/ K09-21-K4005 SUBDIVISION: A DATE 5/5/90

NAME STEPHEN LEHMANN SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

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

ADEC NAME Terry Ellsworth SIGNATURE Terry Ellsworth

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

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

LAND MANAGER NAME Carl Scheeb SIGNATURE Carl Scheeb

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

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

SHORELINE OILING SUMMARY

REVISION NO. 24-12-90

OG G. HEYMAN ^{NOAA} S. LEHMANN SEGMENT ST/ K 0921-KU-005
 BIO L. SHARMAN LAND REPC S. SCHUCH SUBDIVISION A (1 OF 1)
 EXXON NOT PRESENT ADEC T. ELLSWORTH TIME 13:00 to 20:45
 TEAM NO. 19 TIDE LEVEL +2 to +3 3/4 DATE 5/5/90
 EST. SUBDIVISION LENGTH: 2314 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 35 % B 45 % C 10 % P 10 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 40 % Hang 50 % Vert 10 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 30 m NO 1924 m
U 360

SURFACE OIL

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

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 _____
				#BAGS _____

Photographs:

Roll No. _____

Frames _____

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SHEEN (Y/N)	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UO	1	2	3	4	BU	U	M	U			
1	20					X	0-0	X						X				N	-	CP/PGC

COMMENTS This segment consists of 6 pocket beaches separated by rock points. The beaches were coarse grained, predominantly cobble-boulder- pebbles w/ some granules. The northernmost beach was unsurveyed as we could not walk around the point immediately to the south. Oiling consisted generally of random splatters. Most oiling on the segment was on Beach 3 in the SE corner. At this location, a 2x20 m band of MS+ST+CT was REVIEWED BAT DATE 10 MAY 90 observed, total cover < 1.90, MS occurred as splatters 1-2 mm thick, 2x3 cm area.

OG G. HE

SKETCH MAP

SEGMENT ST 09-21-KU-005

SUBDIVISION A

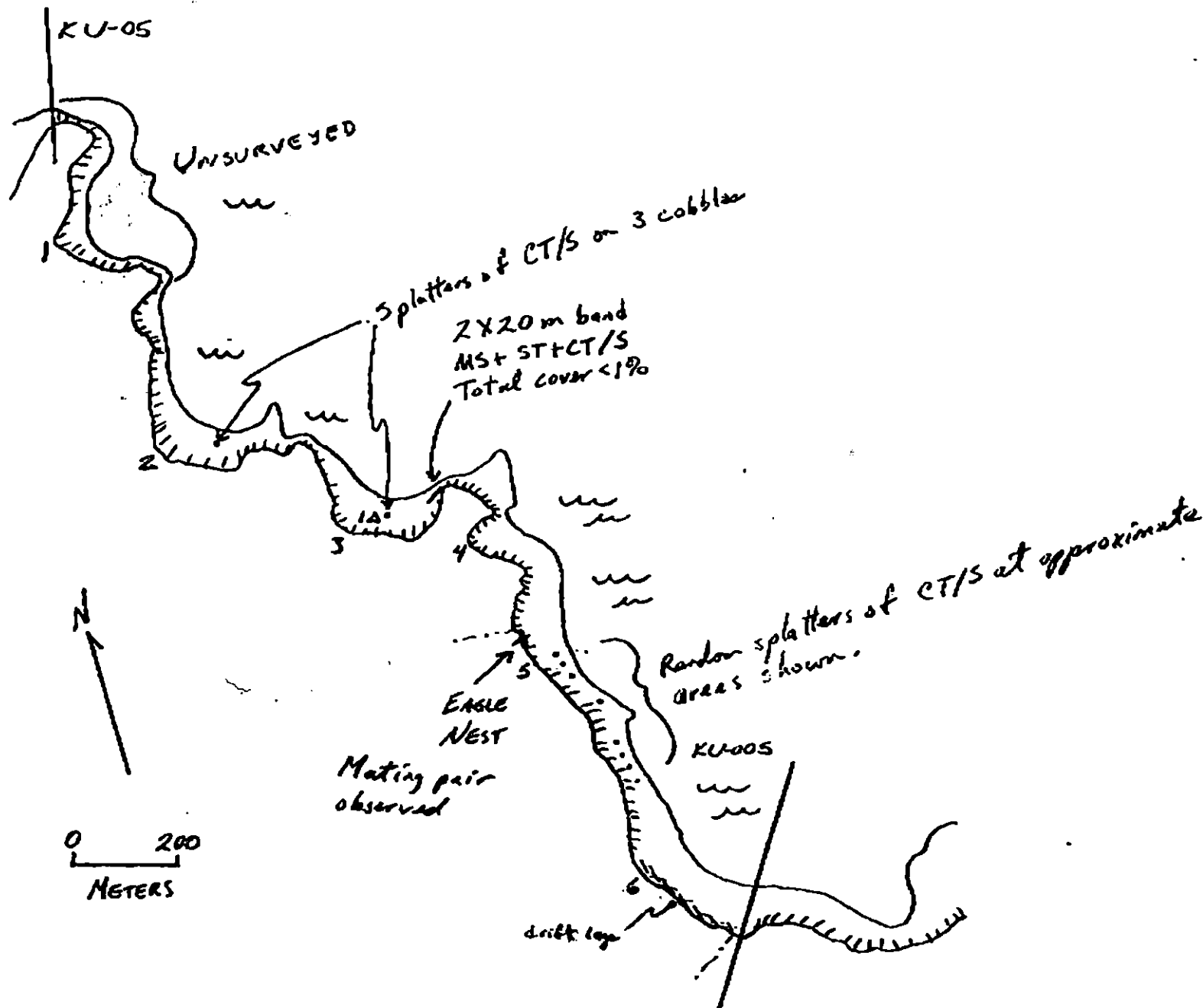
DATE 5/5/90

CHECKLIST

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

LEGEND

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



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

REVISION: 03/24/90

SHORELINE ECOLOGICAL SUMMARY (Page 1 of 4)

REVISED: 02/22/77

Segment ST / KU-5 Subdivision A Date (mo / day / yr) 5/5/90Time (24 hr) 1900-2230 Biologist SHARMAN(A) Substrate type and % of segments: SUBDIV.(1) Bedrock 35 (2) Boulder 45 (3) Cobble 10 (4) Pebble 10 (5) Sand (6) Silt (B) Overall % cover of biota (% of segment): Dense Moderate Y Low SUBDIV.

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

Photographs:

Roll No. Frames

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	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 (ALICELLA, 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: 15 sub-adulted cormorants, 4 red-faced cormorants, 2 pair harlequin ducks, 3 unidentified cormorants. 2 adult eagles with active nest (see Ecol. Considerations). Uplands above cliffs have lots of mouse nest (brown bear nest (last year)). Moose have been browsing willows + some alders (moderate). 1 osprey nest with 2 chicks in supratidal. This segment is a cliffy beach subtended generally by boulder beaches. (cont.)

Ecological Considerations:

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

KU-5

Shoreline Ecological Summary (cont.)
(Page 2 of 4)Sharma
5/5/90General Comments (cont.):+ supra

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

Muscle + Fucus are also recruiting well where adults are established. The LTZ includes discontinuous renewal bands along with locally abundant + large Palanus ceriseus, 1 Picaster (first I've seen on this coast so far), and very abundant Enteromorpha. Beach boulders are barnacles, littorines, pricklybacks, and amphipods - not a particularly rich sub-boulder biota. The amphipods, however, are breeding (recruitment). Amongst the boulders on the pocket beach, shells of Saxidomus (butter clam) are common. Subaerial intertidal rock surfaces are covered with barnacle molts.

K

U

K

Possible
old nest in disrepair
(top of inlet rock cliff)active
nest
(upper cliff)
2 adults incubatingECOLOGY MAP

(1 of 2)

KU-5

(Page 3 of 4)

ST + SR identified in NOAA database
dated 4/22/90, but not documented
on 1989 USFWS eagle nest/possible
Clayton map. Eagle photo marked here
not documented on 2/4/89 NPS eagle
nest map.

1C (fry nursery area).

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

7.5J (salmon spawning 4/15 - 6/30).

7.5J (salmon spawning 4/15 - 6/30).

9LM (land mammal).

XXX Wide

/// Medium

--- Narrow

TTTT Very Light

KU-5

Approx. Segment Length: 2314m

Map Key: AKP-KU-5a

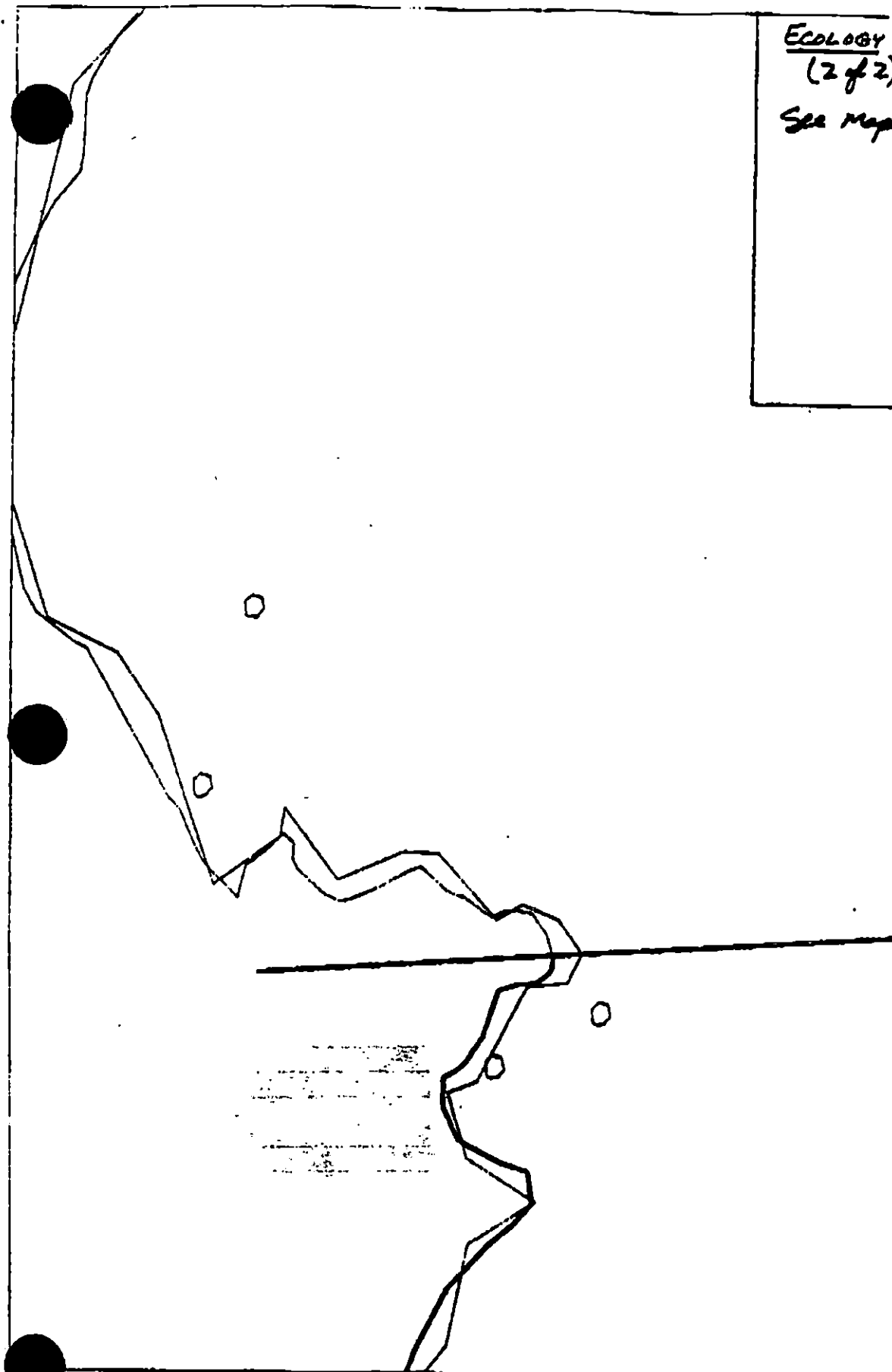
Name: _____

Date: _____

ECOLOGY MAP
(2 of 2)

KU-5
(Page 4 of 4)

See map page 1.



XXXX Wide

//// Medium

---- Narrow

TTTT Very Narrow

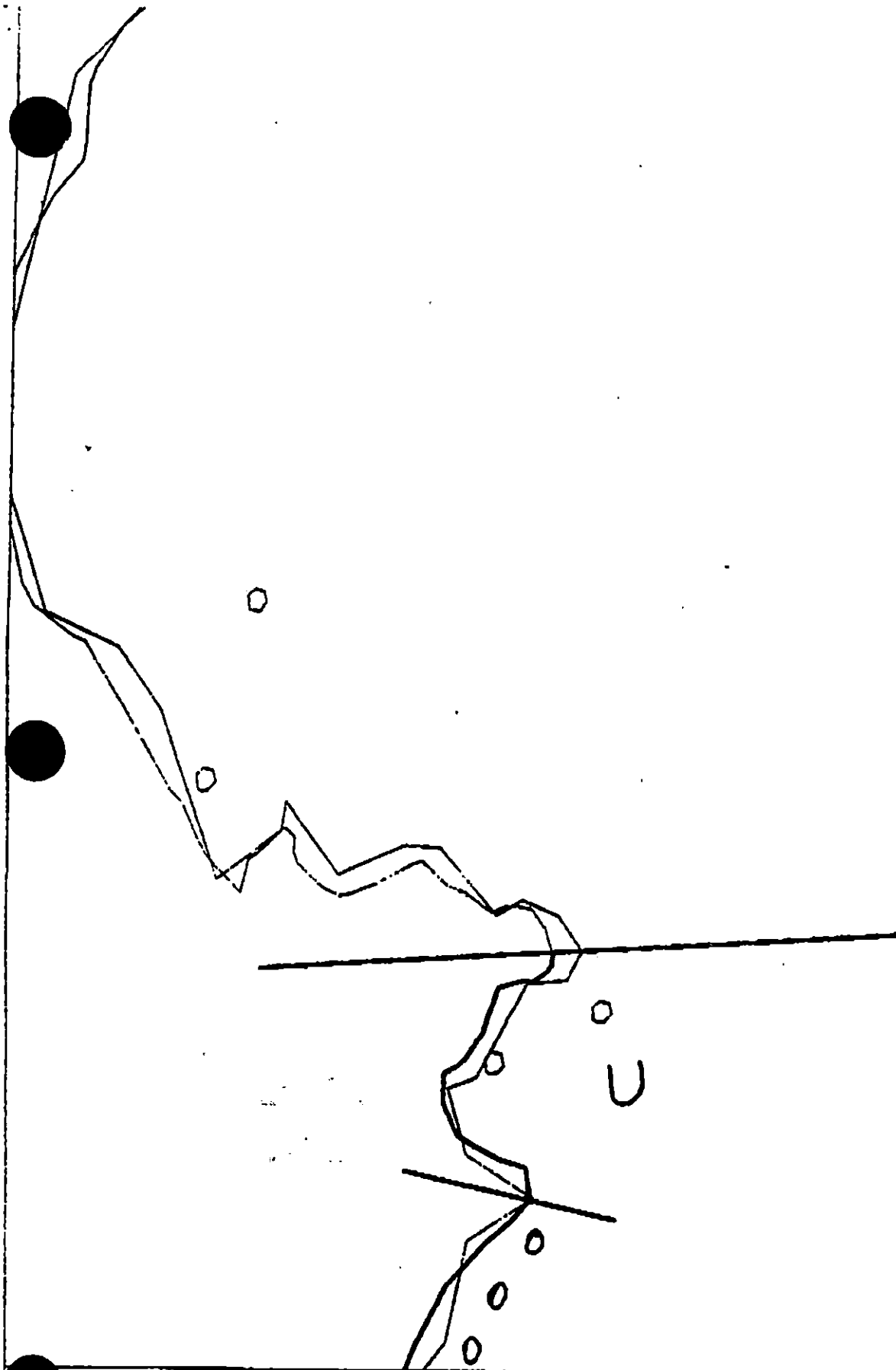
KU-5

Approx. Segment Length: 2314m

Map Key: AKP-KU-5b

Name: _____

Date: _____



XXX Wide

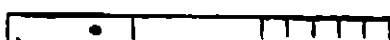
//// Medium

--- Narrow

TTTT Very Light

KU-5

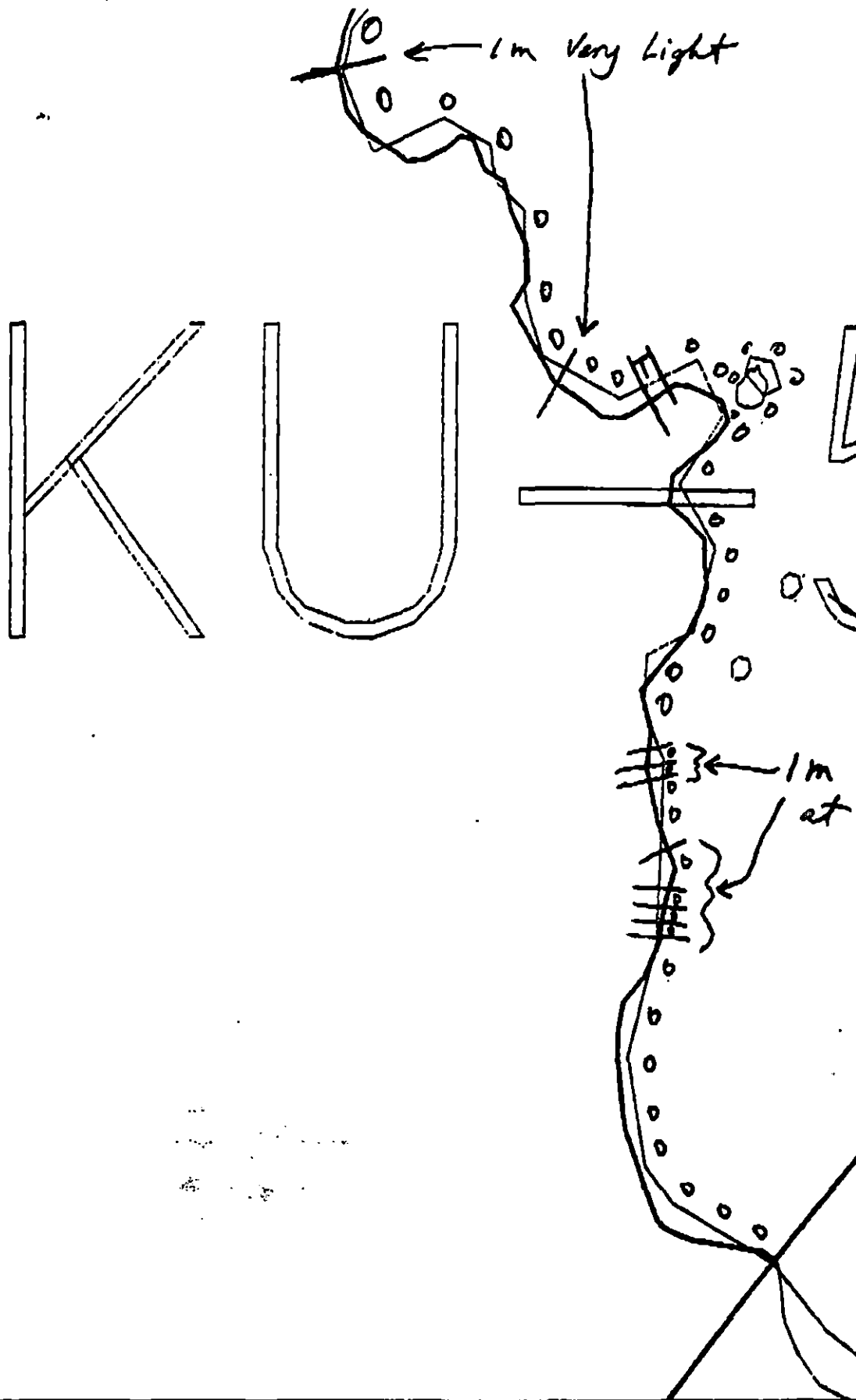
Approx. Segment Length: 2314m



Map Key: AKP-KU-5b

Name: G. Heyman

Date: 5-5-90



XXXX Wide

/// Medium

---- Narrow

TTTT Very Light

KU-5

Approx. Segment Length: 2314m

Map Key: AKP-KU-5a

Name: G. Heymer

Date: 5-5-90

REGION: KODIAK

SEGMENT: ST/K09-21-KU-06

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Katmai National Park

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

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

RECOMMENDATIONS:

☐ 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 and oiled debris (debris, trash, vegetation and logs) followed by bioremediation in the areas indicated on the sketch map. No specific working time constraints identified.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

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

CCG

NAMED D. Haven Jr, GMS, KSC68

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

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

ADEC

NAME Francine J. Bennis SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

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

1. A 3m x 15m band of MS saturated fine sediments among cobbles, & 5x10m area of mouse deposited in supratidal zone grasses.
2. A 6m x 15m band of oil CP & MS (Sketch map #2)
3. A 10m x 30m band & 15m x 35m band of MS, MS pattern, & MS saturated fine sediments (Sketch map #3)
4. A 6m x 35m band of oil CP, CV, & MS

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

LAND MANAGER

NAME WILL TROYER

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

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

SHORELINE OILING SUMMARY

OG Acton USCG Haven SEGMENT ST/ K9-21-KU-6
 BIO Davis LAND REP NPS Troyer, James SUBDIVISION KA-21-KU-6A (1 OF 2)
 EXXON Avery ADEC Dennis TIME 8:30 10/11:45
 TEAM NO. 20 TIDE LEVEL -2.5 to +6 DATE 4/24/90
 ST. SUBDIVISION LENGTH: 3920 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 PLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SE to NW
 SURFACE SEDIMENTS: R 30 % B 30 % C 10 % P 10 % G 10 % S 10 % M 0 % V 0 %
 SLOPE: Long 40 % Hang 40 % Vert 30 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 130 m N 100 m VL 3600 m NO 0 m

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

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

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒

TYPE +

#BAGS 0

Photographs:

Roll No. ST-20-6 ST-20-7

Frames 35,36 2-7

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	STEEN (Y/N)	↓	SURFACE-SUBSURFACE SEDIMENTS
		OP	OR	OL	OP	NO		UO	UG	30	35	40	45	50	55	60	65	SU	U	M	U				
1	15					✓	•		✓									✓							C, P
2	20					✓	•		✓									✓							C, P
3	20					✓	•		✓									✓							C, P
4	10					✓	•		✓									✓							C, B
5	10					✓	•		✓									✓							C, B
6	10					✓	•		✓									✓							C, B

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

REVIEWED BAT DATE 25 Apr 90

OG A

SEGMENT ST/ K9-21- KJ-6

SUBDIVISION K9-21- KJ-6A

DATE 4 / 24 / 90

CHECKLIST

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

LEGEND

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

Continuous Distribution
- CT/B

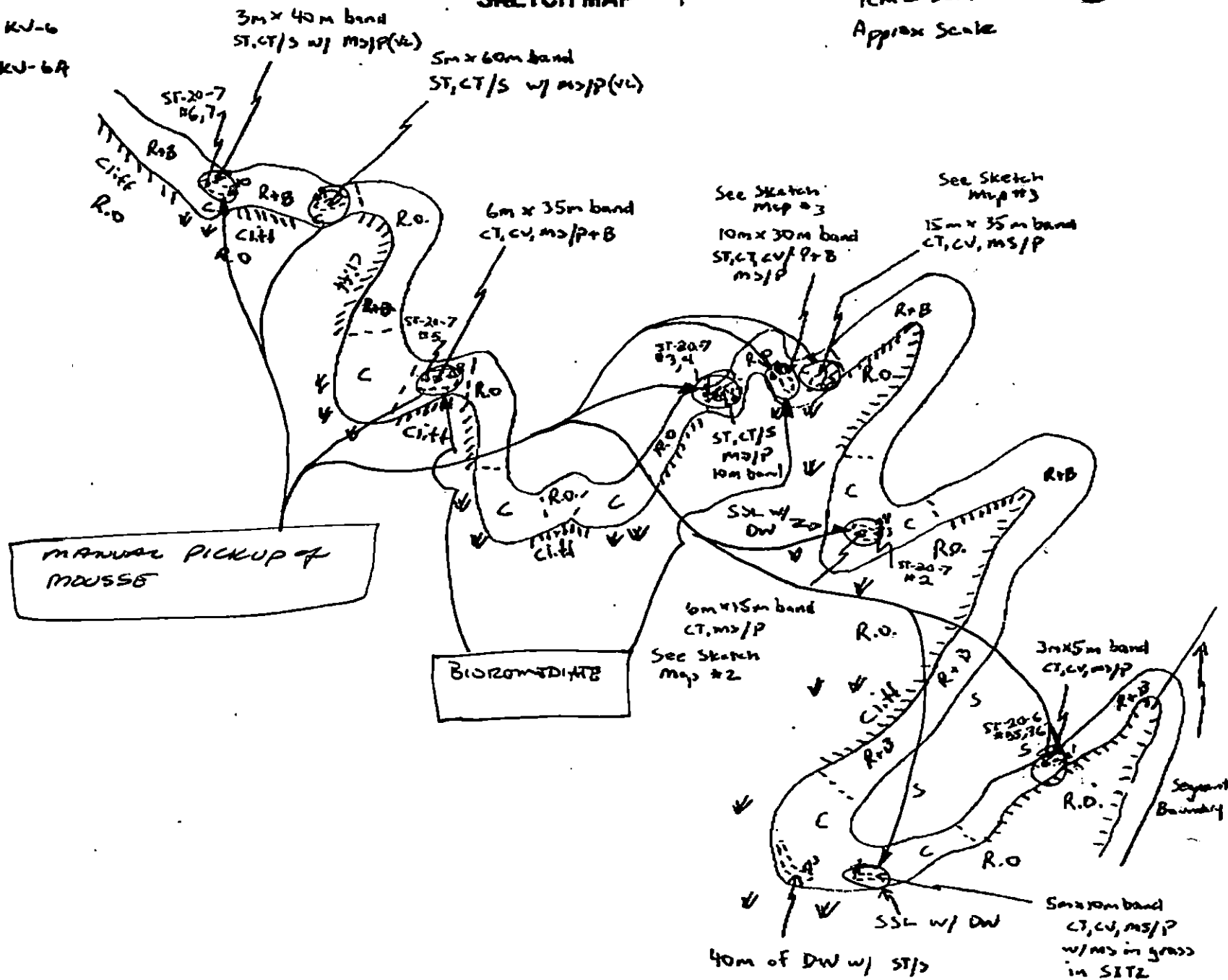
Broken Distribution
- CT/P

Patchy Distribution
- CT/S

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

SKETCH MAP #1

N $\uparrow$
1cm = 30m
Approx Scale



Oil Character Length (m): AP 0 PO 0 CV 230 CT 230 ST 3690 MS 230 PT 0 TB 0 FL 0 NO 0

REVISION 02/04/90

OG A

SEGMENT ST/K9-21-KJ-6

SUBDIVISION K9-21-KJ-6A

DATE 9/24/90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. H₂W/L₂H₂L
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PI Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

PI - No Subsurface Oil

2 Δ

PI - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

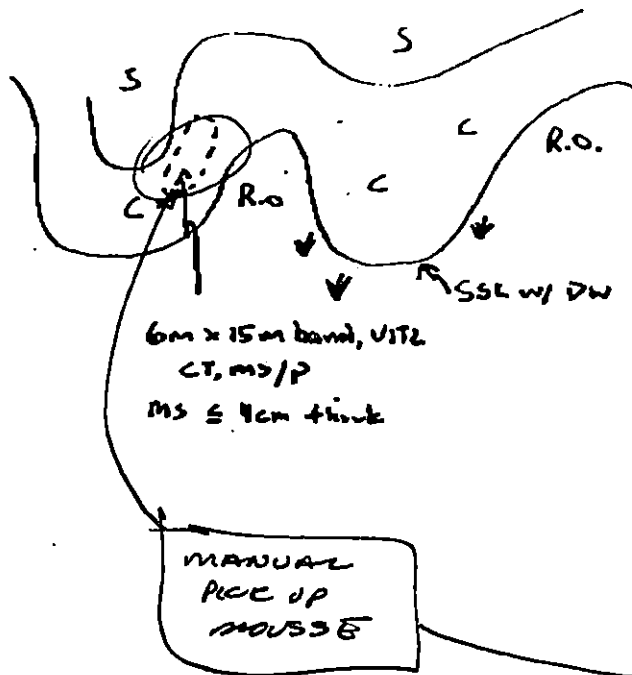
Oiled Vegetation

1 $\Rightarrow$

Photo location, direction,
and number

SKETCH MAP

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



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

BIOREMEDIATION

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

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

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

REVISION: 932466

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/23/7

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

(A) Substrate type and % of segments:

(1) Bedrock 30 (2) Boulder 30 (3) Cobble 15 (4) Pebble 15 (5) Sand 10 (6) Silt -(B) Overall % cover of biota (% of segment): Dense 10% Moderate 50% Low 40% (60%)

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

Photographs:

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

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

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

MYTILUS small 2mm in upper intertidal crevices. Patchy mats between cobbles.

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

NOT PRESENT
4, 5, 6

GASTROPODS continuous limpet, littorines. Small groups 20-30 Nucella.

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

NOT PRESENT
4, 5, 6

FUCUS moderate, continuous patches

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

NOT PRESENT
4, 5, 6

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

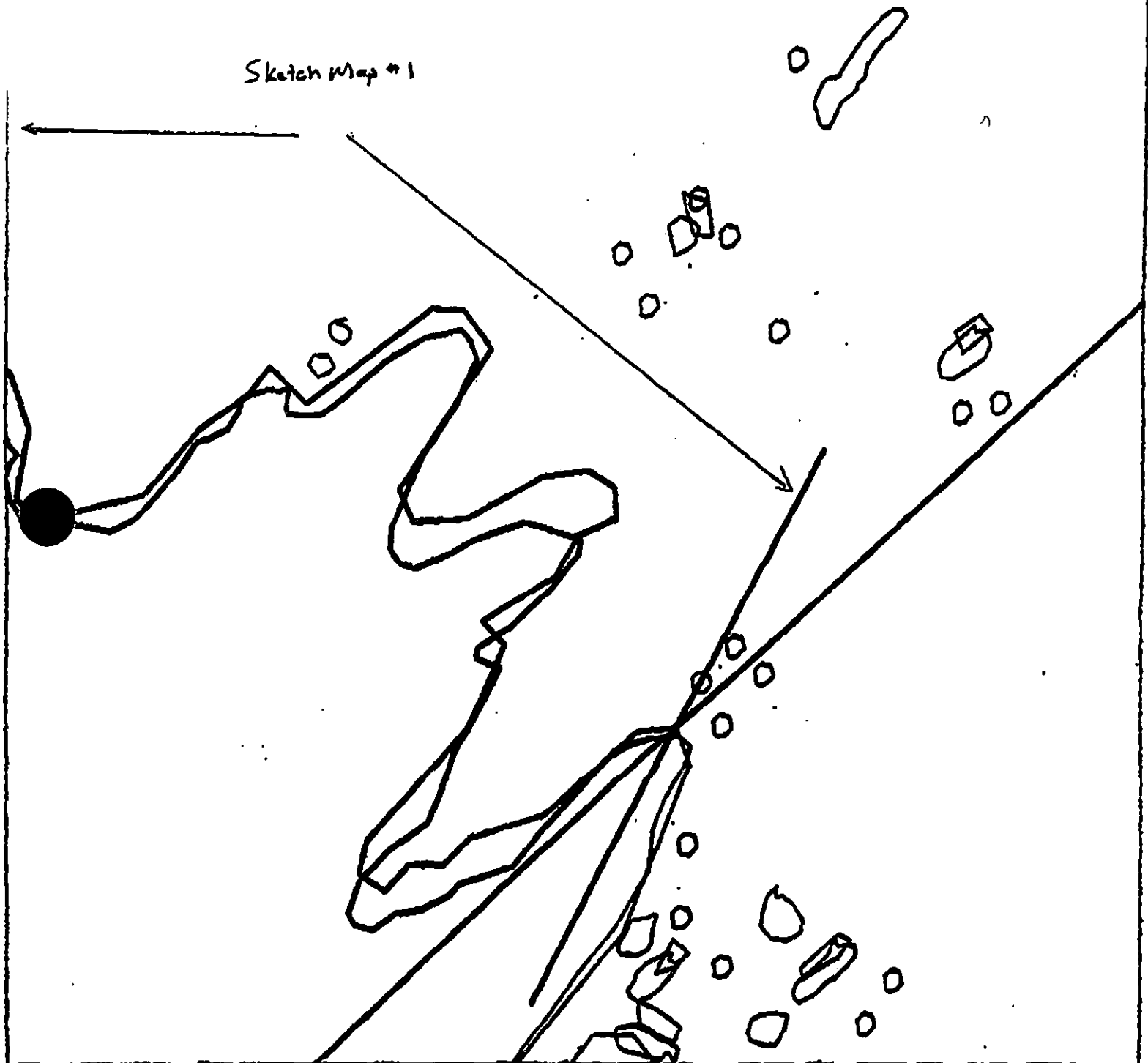
Ecological Considerations: NONE. There are anadromous streams above and below this area.

ROLL NO. ST-20-6 FROM 4/24 TO
TEAM NO. #20 PWS / KENAI / KODIAK / AK. PENINSULA

FRAME NO. 1010	DATE: 10-10-68	TIME: 10:10	NO. OF PAGES: 10
NUMBER GRAPHED	FILE NO.	SEARCHED	INDEXED

[illegible]

Sketch Map #1



XXXX Wide

KU-6

K9-21-KU-6A

/// Medium

Map Key: AKP-KU-6b

--- Narrow

Approx. Segment Length: 3950m

Name: Acton

TTTT Very Light

Date: 4-24-90

0000 No Oil

0 100 200 300
METERS

Date Entered:

KU

Sketch Map #1 →

XXXX Wide

KU-6

/// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

Approx. Segment Length: 3950m

0 100 200 300

METERS



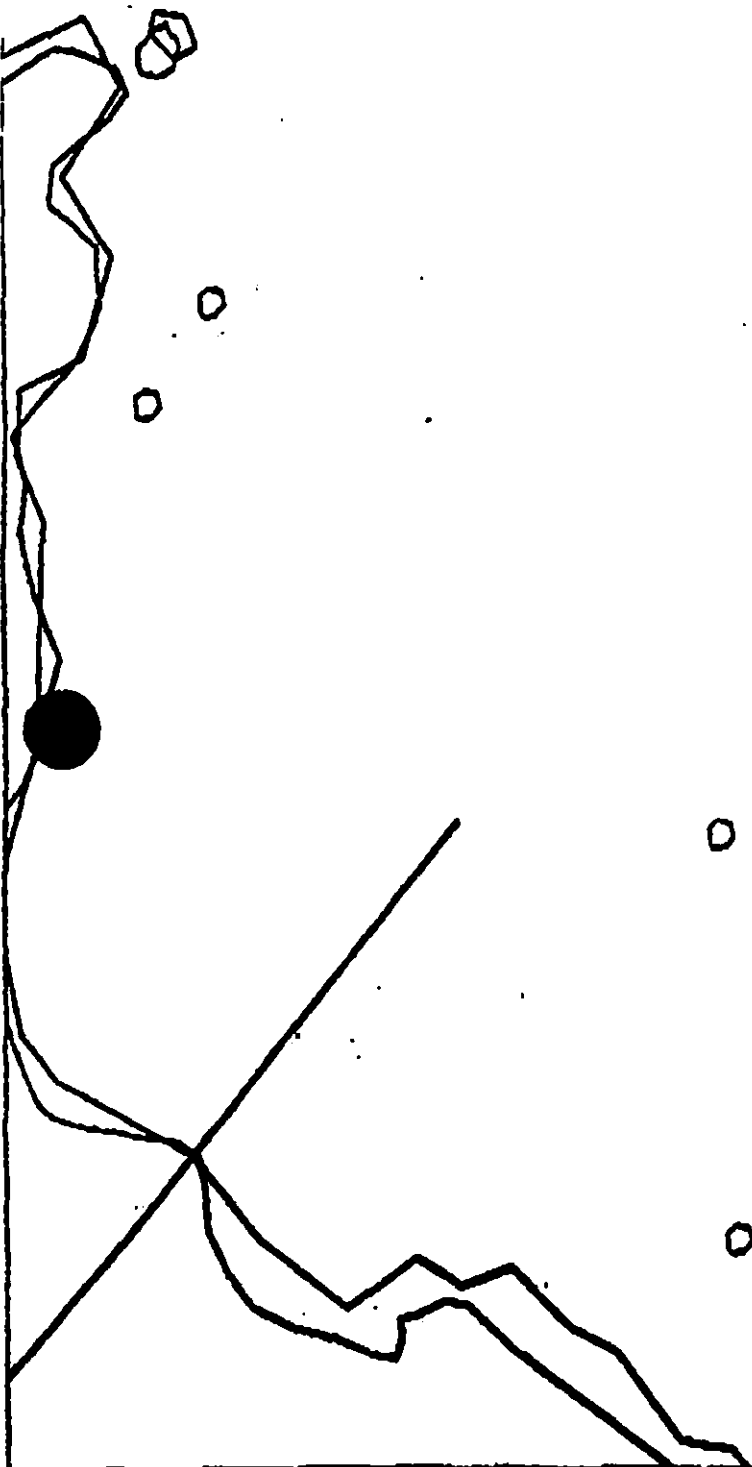
K9-21-KV-6A

Map Key: AKP-KU-6a

Name: Acton

Date: 4-24-90

Data Entered:



XXXX Wide

KU-6

K9-21-KU-6A

/// Medium

Map Key: AKP-KU-6c

--- Narrow

Approx. Segment Length: 3950m

Name: Acron

TTTT Very Light

Date: 4-24-90

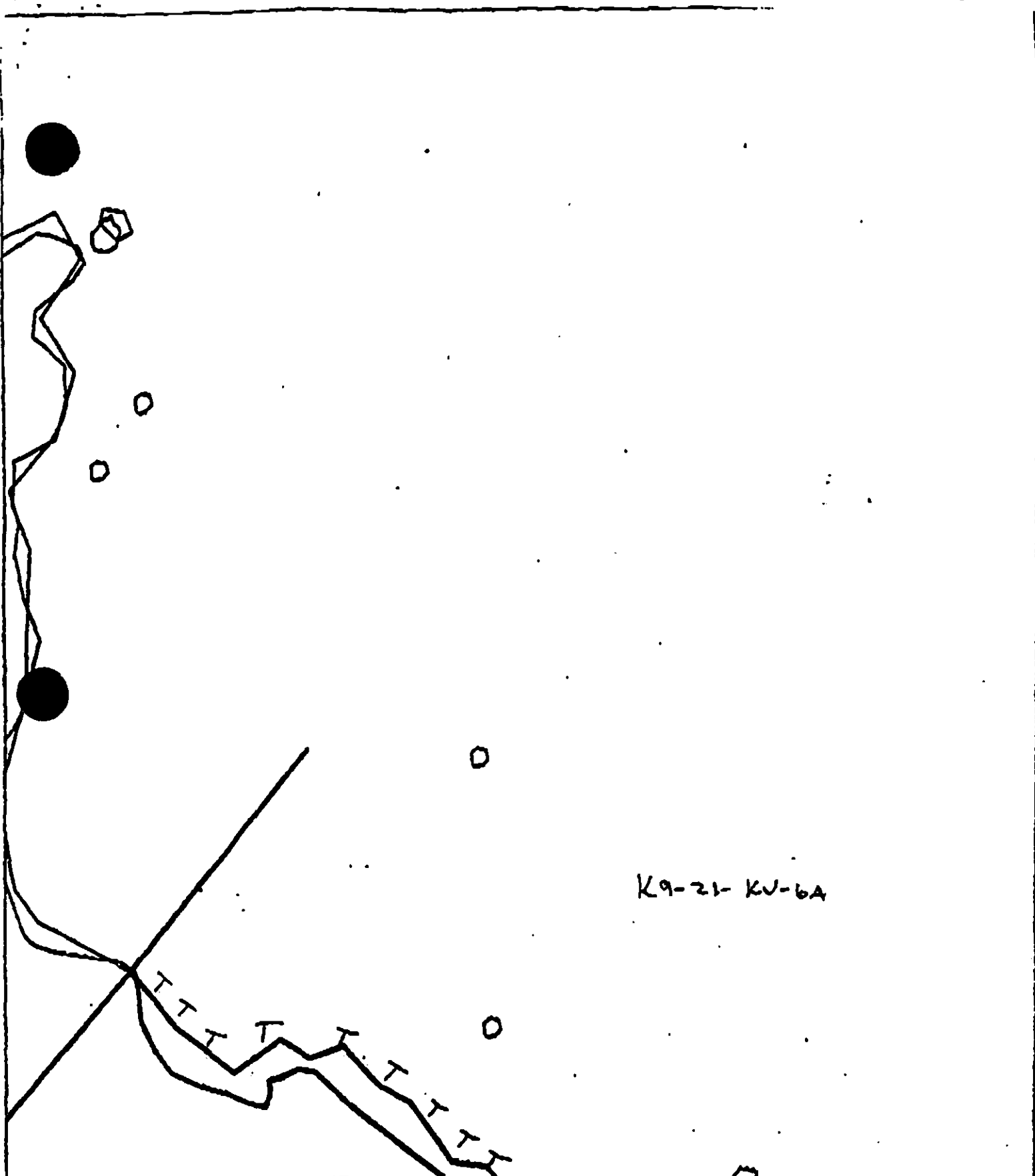
0000 No Oil



METERS



Date Entered:



XXXX Wide

KU-6

K9-21-KU-6A

/// Medium

Map Key: AKP-KU-6c

--- Narrow

Approx. Segment Length: 3950m

Name: Acton

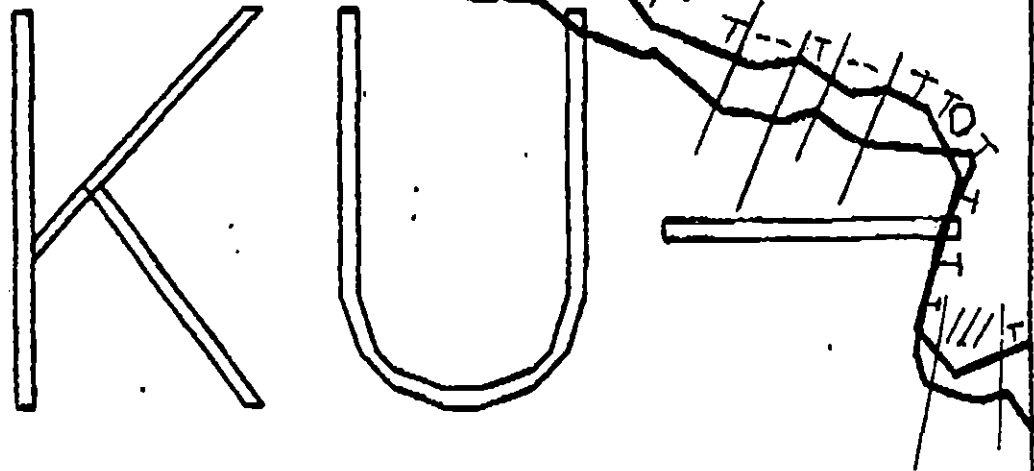
TTTT Very Light

Date: 4-24-90

0000 No Oil



Date Entered:



K9-21-KU-6A

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

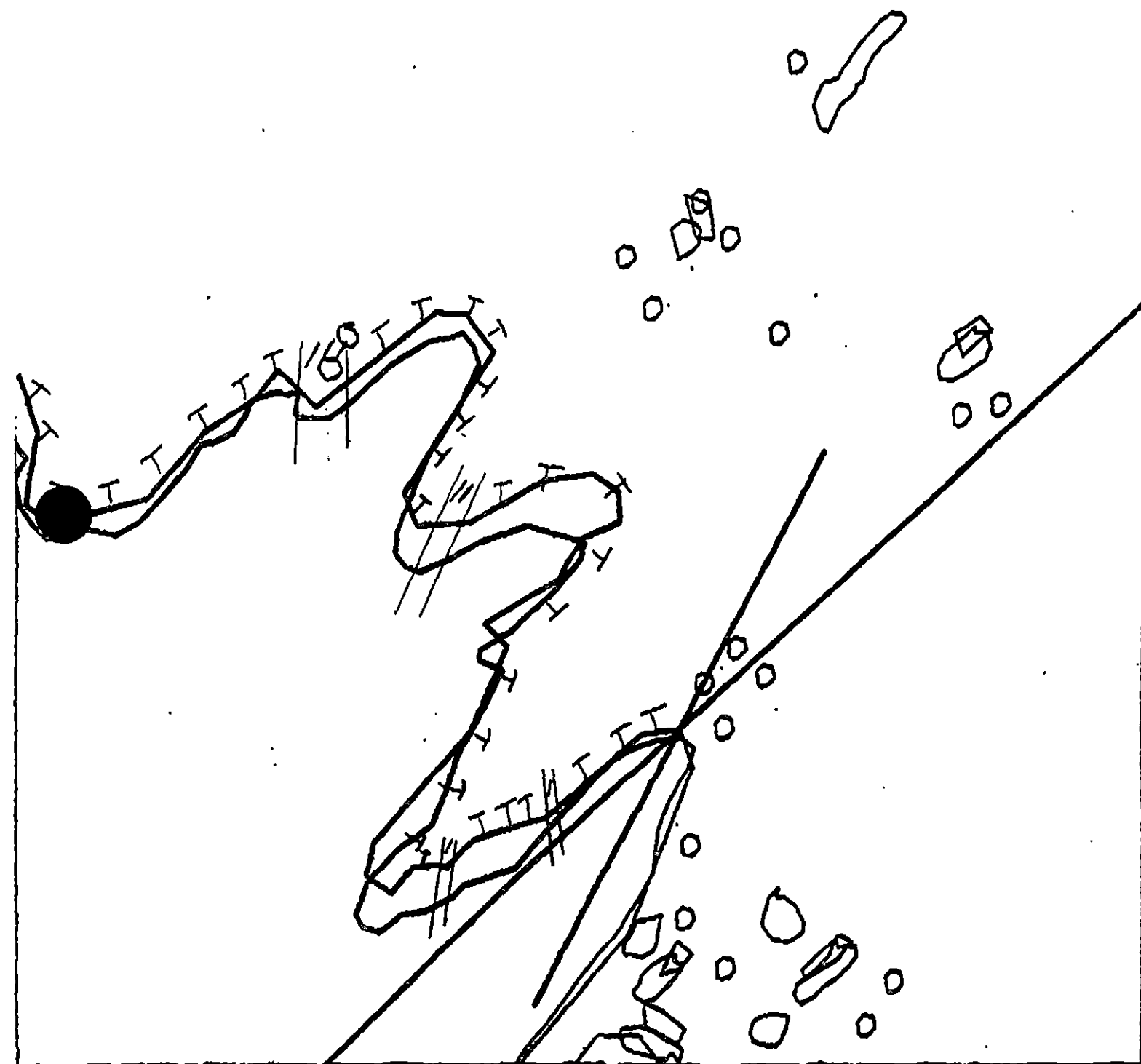
OOOO No Oil

KU-6

Approx. Segment Length: 3950m

K9-21-KU-6A
Map Key: AKP-KU-6aName: ActonDate: 4-24-90

Date Entered:



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

KU-6

Approx. Segment Length: 3950m



METERS

K9-21-KU-6A

Map Key: AKP-KU-6b

Name: ActonDate: 4-24-90

Data Entered:

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Katmai National Park

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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. H. H. H. DATE: 5/5/90

OILING CATEGORIZATION:

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

RECOMMENDATIONS:

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

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

TAG COMMENTS: Monitors to assess logs

TAG APPROVAL DATE: May 5, 1990

ADEC ART WEINER Art Weiner

EXXON Mark N. H. H. H. Mark N. H. H. H.

NOAA Gary Petrac Gary Petrac

USCG G.A. KETTER G.A. Ketter

FOSC: My L DATE: 5-12-90

Treat after 30 May. Fu, pol NOT approved. However, CUSTOMERS are approved. no beach burning of logs. Access to shoreline by boat only.

DATE 4 / 24 90

CHECKLIST

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

LEGEND

Fig - No Subsurface Oil

2 ▲
Fig - Subsurface Oil

CT/C
Continuous Distribution

CT/B

Broken Constitution

CT/P

Patchy Distribution

[CT/S]
Spliced Distribution

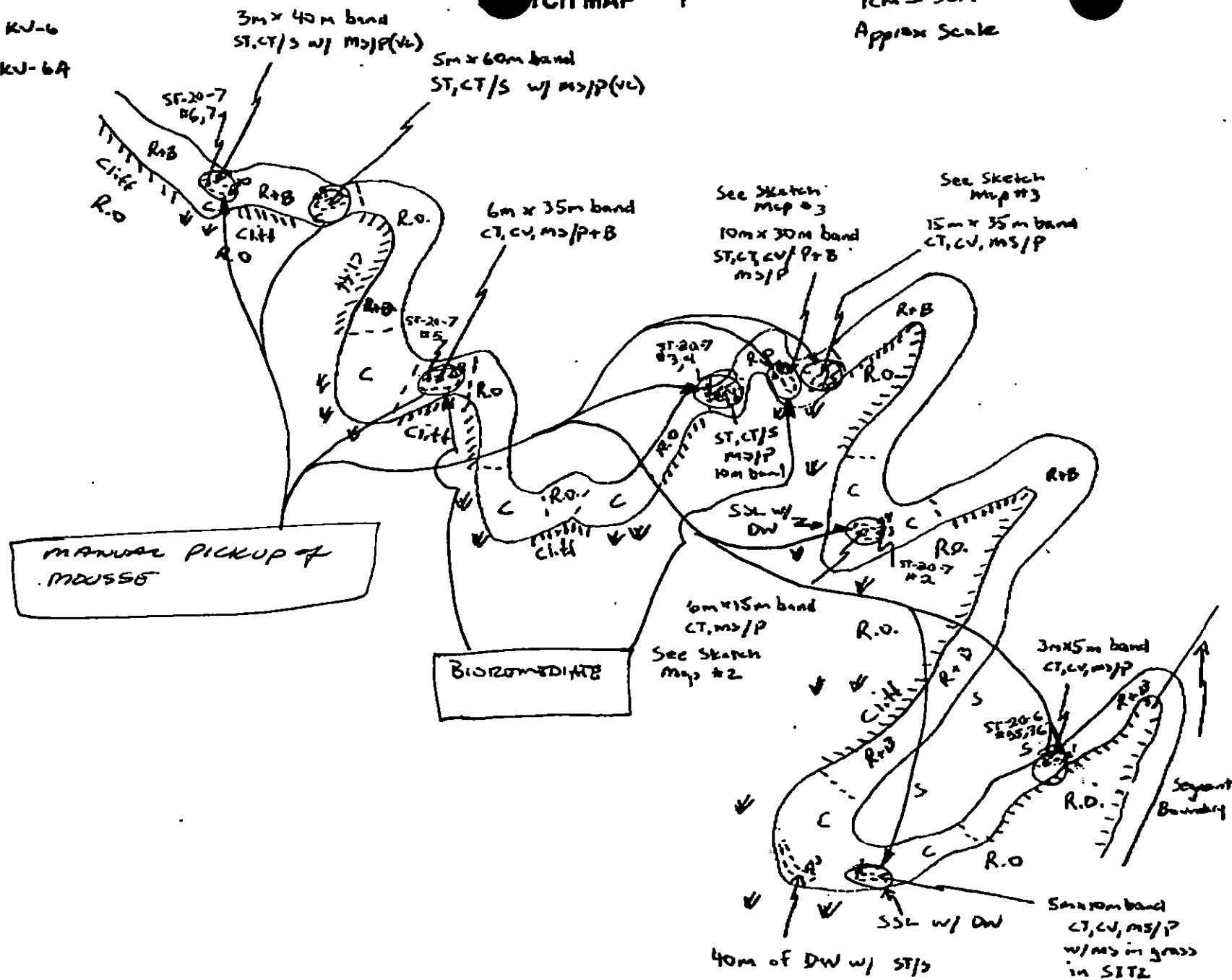
Cited Vegetation

1 

Photo location, direction,
and number

ATCH MAP

$N \uparrow$
 $1\text{cm} \approx 30\text{m}$
 Approx Scale



Oil Character Length (m): AP 0 PO 0 CV 230 CT 230 ST 3640 MS 230 PT 0 TB 0 FL 0 NO 0

REG-WAY-DIV-22-0000

OG A

SEGMENT ST/ K9-21-KJ-6

SUBDIVISION K9-21-KJ-6A

DATE 9 / 24 90

CHECKLIST

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

LEGEND

1 Δ

PI - No Subsurface Oil

2 Δ

PI - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

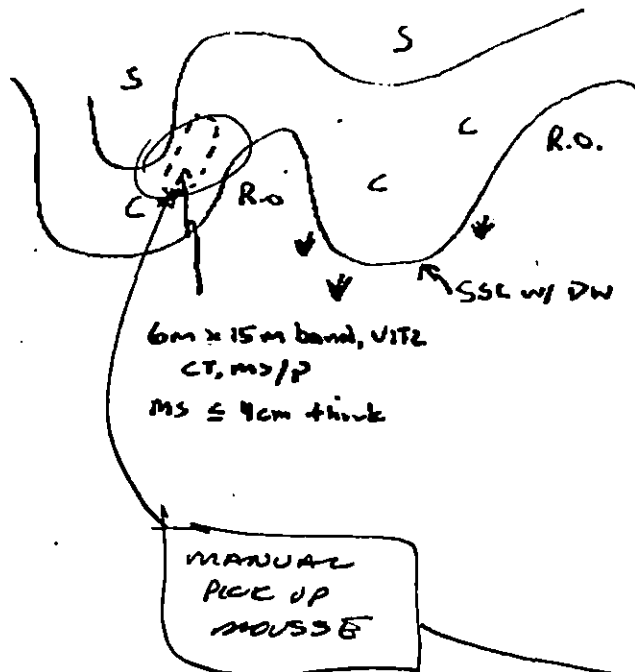
Oiled Vegetation

1 $\Rightarrow$

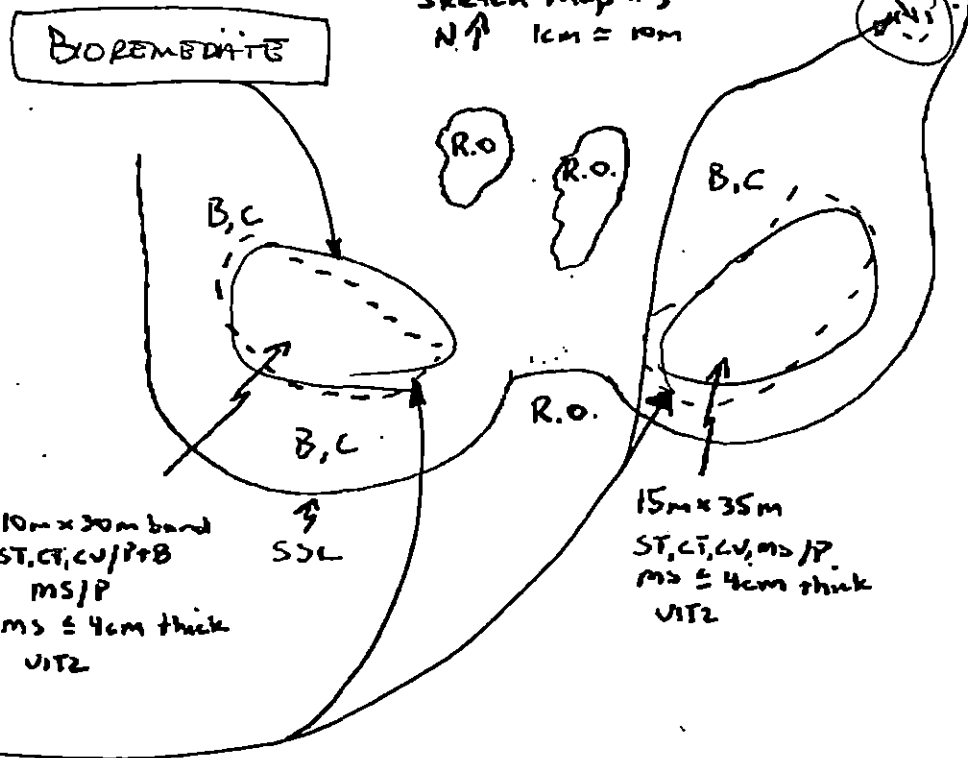
Photo location, direction,
and number

ETCH MAP

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



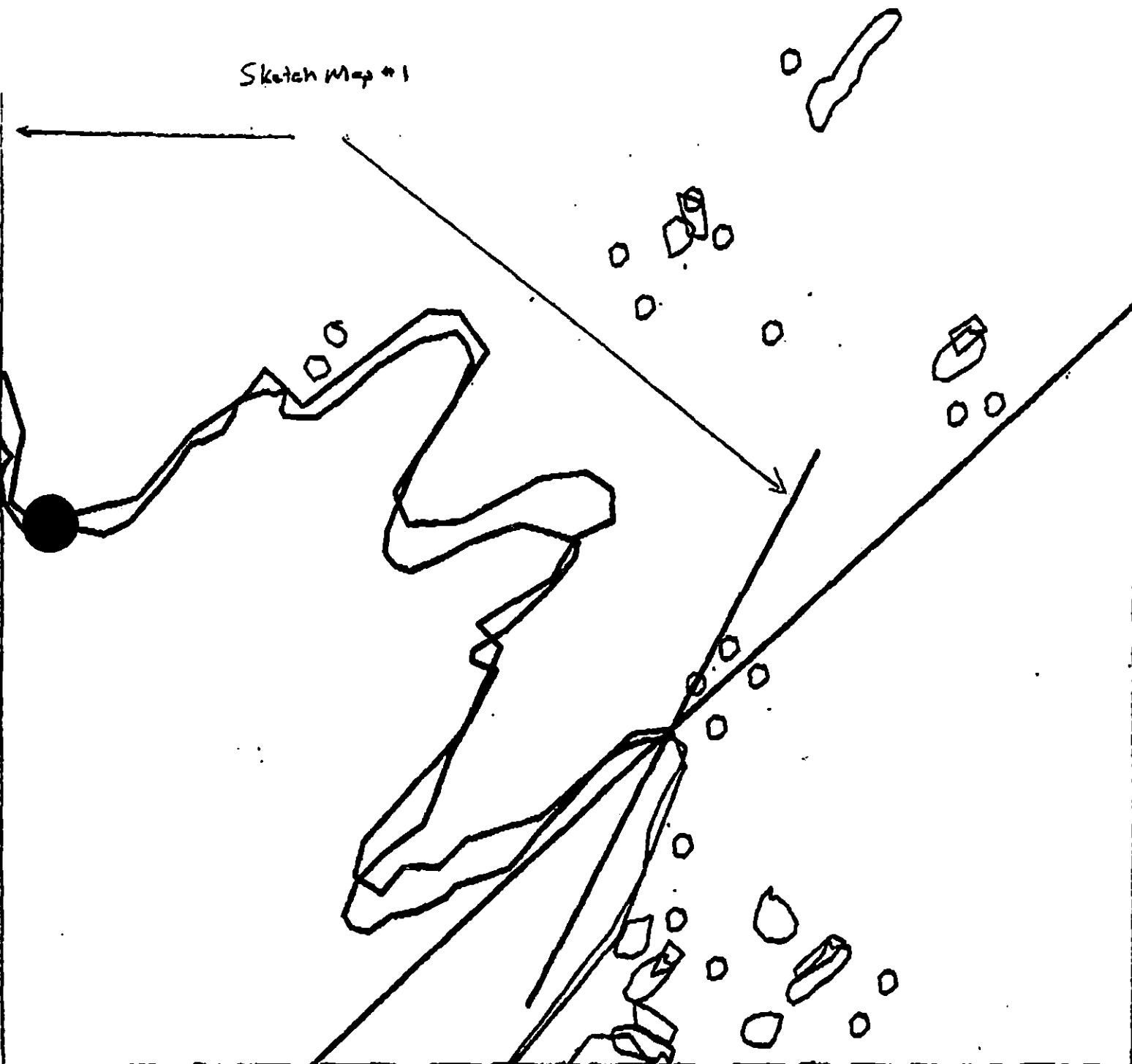
Sketch Map #3
N $\uparrow$ 1cm $\approx$ 10m



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

REVISION: 032400

Sketch Map #1



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KU-6

Approx. Segment Length: 3950m



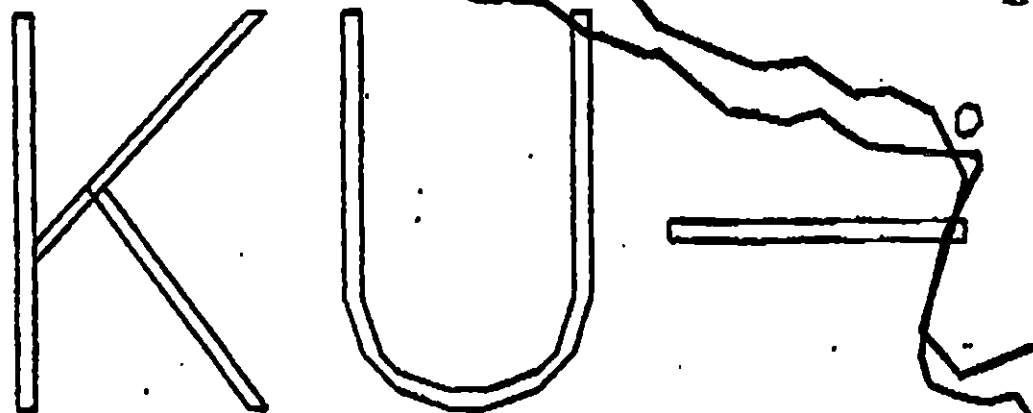
K9-21-KU-6A

Map Key: AKP-KU-6b

Name: Acton

Date: 4-24-90

Date Entered:



XXXX Wide

KU-6

/// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

Approx. Segment Length: 3950m



METERS

K9-21-KU-6A
Map Key: AKP-KU-6aName: ActonDate: 4-24-90

Date Entered:



XXXX Wide

KU-6

K9-21-KU-6A

Map Key: AKP-KU-6c

/// Medium

--- Narrow

Approx. Segment Length: 3950m

Name: Action

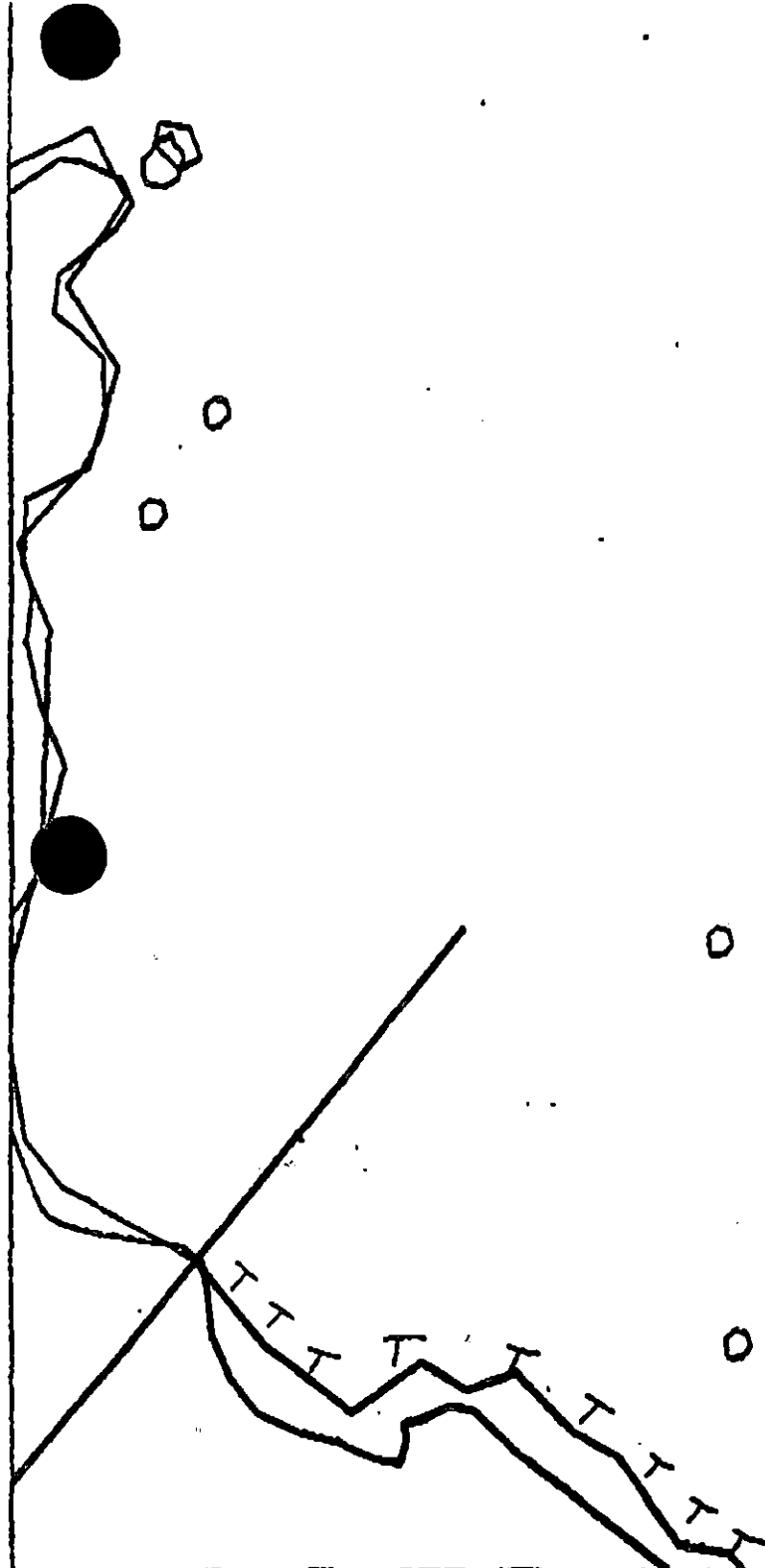
TTTT Very Light

Date: 4-24-90

0000 No Oil

METERS

Data Entered:



K9-21-KV-6A

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KU-6

Approx. Segment Length: 3950m



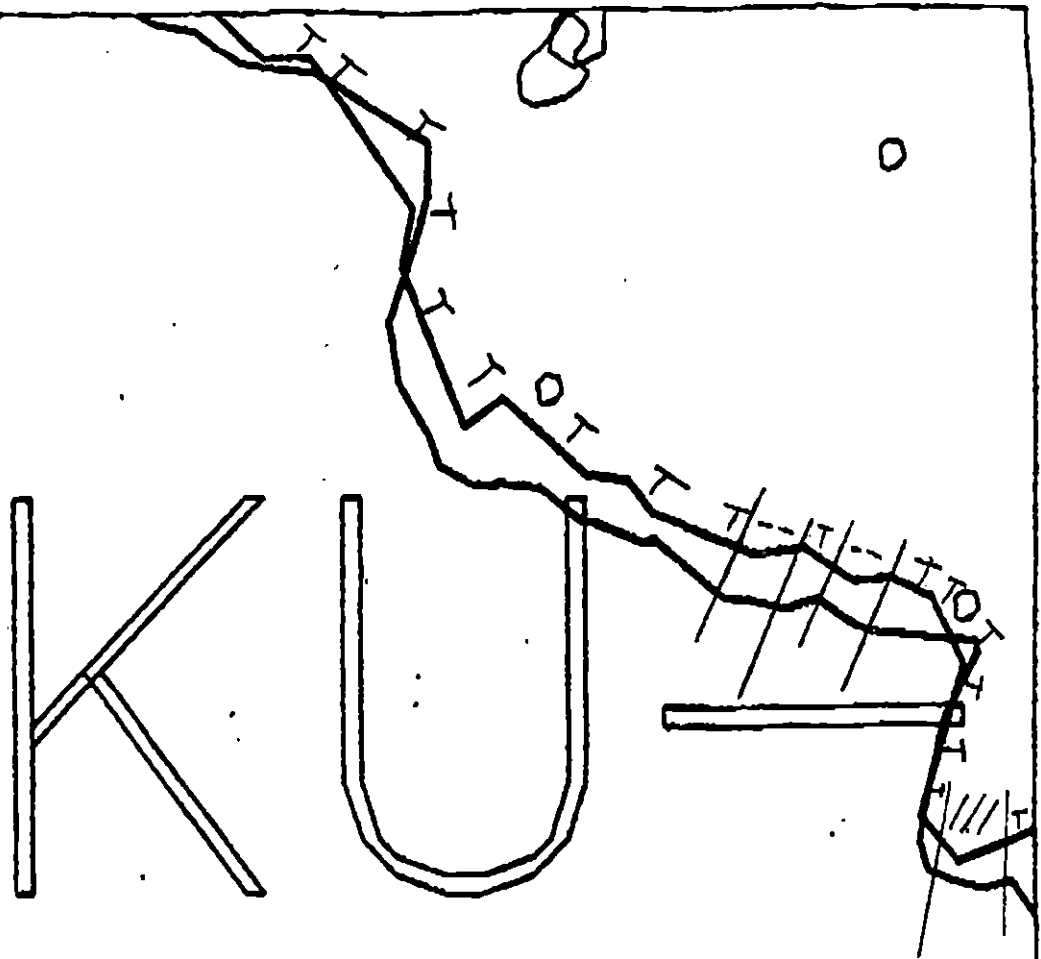
K9-21-KV-6A

Map Key: AKP-KU-6c

Name: Acton

Date: 4-24-90

Date Entered:



K9-21-KU-6A

XXXX Wide

/// Medium

----- Narrow

TTTT Very Light

00000000

KU - 6

Approx. Segment Length: 3950m



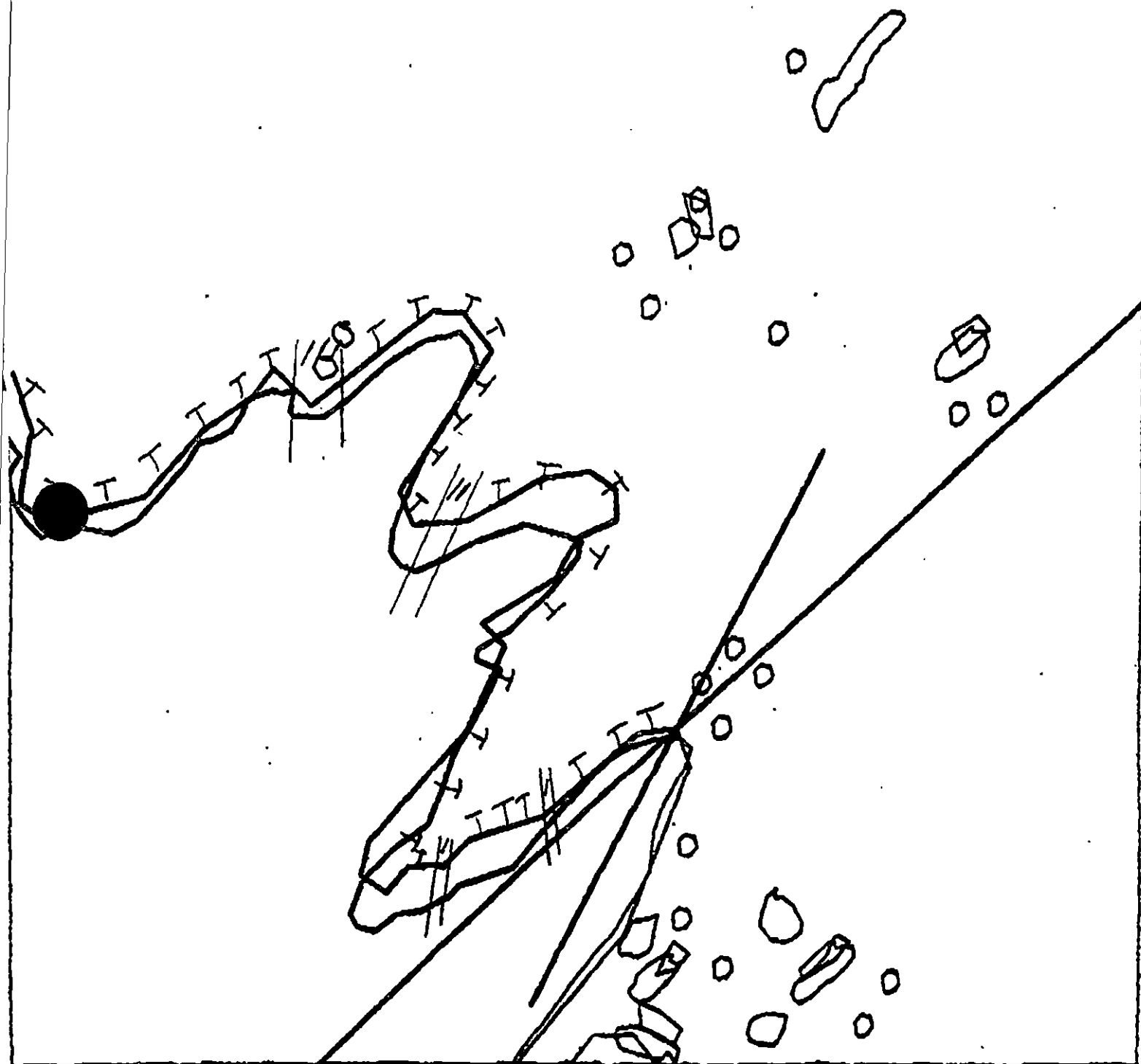
K9-21-KV-6A

Map Key: AKP-KU-6a

Name: Acton

Date: 4-24-90

Data Entered:



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

KU-6

Approx. Segment Length: 3950m



K9-21-KU-6A

Map Key: AKP-KU-6b

Name: Acton

Date: 4-24-90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

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

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

*No Inpol - Use Customblen Only

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

7Z Subsistence: Salmon Harvesting

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

OTHER ECOLOGICAL CONSIDERATIONS

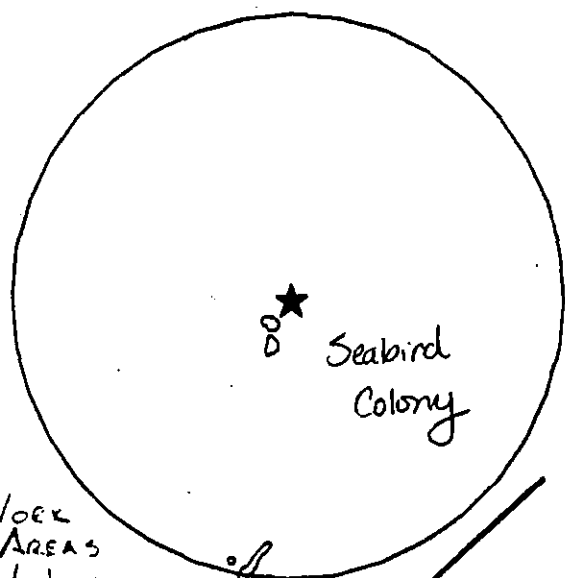
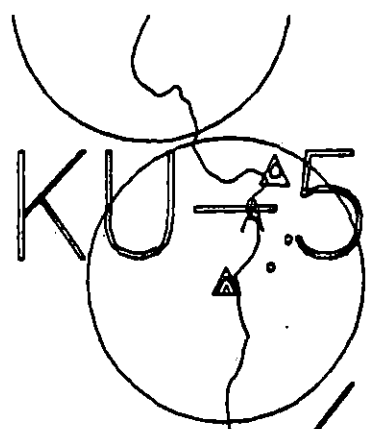
Access by boat only. Restrict boat and air traffic and beach disturbance to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

NO Inpol
FOSC *[Signature]*

Date 6-16-90

Prepared by *[Signature]*

Date 6/15/90



KF-2

TREATMENT



Exxon Company, USA
Map Key: AKP-KU-6
Date 10, 1990



ECOLOGY MAP
SEGMENT K9N-21 KU-6
SUBDIVISION A (1 of 1)
METERS
0 566 1132

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

1 inch = 1856 feet

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Katmai National Park

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

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

RECOMMENDATIONS:

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

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

SEE CONDRAWT ADDENDUM dated
6/15/90 (JP)

TAG COMMENTS: Monitors to assess logs

TAG APPROVAL DATE: May 5 1990

ADEC ART WEINER Art Weiner

EXXON Mark N. Silbert Mark N. Silbert

NOAA Gary Petrac Gary Petrac

USCG Carl Ketter Carl Ketter

FOSC: My L DATE: 5-12-90

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

REGION: KODIAK

SEGMENT: ST/K09-22-CG-01

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

No specific ecological constraints identified.
Katmai National Park.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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.

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

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

RECOMMENDATIONS:

☐ No Treatment Recommended	☐ 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,
oiled debris and oiled logs in conjunction with pom poms followed by
2) bioremediation (access permitting) in areas indicated on attached
sketch map.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

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

SCG

MED. D. Haver Jr., GM3 USCGR SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Concur fully with ADEC Rep.

ADEC

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

COMMENTS

MANUAL PICK-UP OF REMAINING OIL IS HIGHLY RECOMMENDED.

MAIN OIL BAND
IS IN LOW ENERGY
AREA.

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

LAND MANAGER NPSNAME WILL TROYERSIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

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

OG Acton USCG Haven SEGMENT ST/ K9-22-66-1
 BIO Davis LAND REP NPS Taylor, James SUBDIVISION K9-22-66-1A (1 OF 1)
 EXXON Avery ADEC Bennis TIME 3:15 to 6:30
 TEAM NO. 20 TIDE LEVEL +6 to +1 DATE 4 / 21 / 90
 EST. SUBDIVISION LENGTH: 1555 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: NW to SE
 SURFACE SEDIMENTS: R 20 % B 30 % C 20 % P 10 % G 10 % S 10 % M 0 % V 0 %
 SLOPE: Long 70 % Hang 20 % Vert 10 % WAVE EXPOSURE: ☐ Low ☒ Med ☒ High
 OIL CATEGORY LENGTH: W 100 m M 200 m N 100 m VL 50 m NO 1105 m

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

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

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒

TYPE 1

#BAGS 0

Photographs:

Roll No. ST-20-6

Frames #2-18

see * below

SUBSURFACE OIL

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

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

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

Pits were dry in areas where surface oiling was observed.

REVIEWED EAT DATE 23 APR 90

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 06/13/90

SEGMENT ST/ K9-22-667 SUBDIVISION K9-22-66-1A (2 OF 2)

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR							PIT ZONE				A N A	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	BR	OR	RE	OL	TL	DR	LSH	SU	U	M	L				
7	25					✓	.		✓								✓					N		P.G.S
8	25					✓	.		✓								✓					N		P.G.S
9	30					✓	.		✓								✓					N		P.G.S
10	10					✓	.		✓								✓					N		R.B
11	5					✓	.		✓								✓					N		R.B
12	10					✓	.		✓								✓					N		R.B
13	20		✓				0-15	✓							✓		✓					Y		P.G.S
14	10					✓	.		✓								✓					N		R.B
15	10					✓	.		✓								✓					N		R.B
							.																	
							.																	
							.																	
							.																	
							.																	

COMMENTS

REVIEWED EAT DATE 23 Apr 90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / K09-22 Subdivision CG - 01 Date (mo / day / yr) 4 / 21 / 90Time (24 hr) 14:30 Biologist H. Davis(A) Substrate type and % of segments:
(1) Bedrock 20 (2) Boulder 20 (3) Cobble 25 (4) Pebble 25 (5) Sand 10 (6) Silt -(B) Overall % cover of biota (% of segment): Dense 30% Moderate 30% Low 40% (40%)(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L):
juveniles / adults (X) . new settlement (3)Photographs:
Roll No. ST-20-6Frames 2-18

BARNACLES Continuously sparse with patches of Dense, Moderate, Rare

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

NOT PRESENT
4, 5, 6

MYTILUS Very Patchy

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

NOT PRESENT
4, 5, 6

GASTROPODS continuous moderate - sparse. Patches of dense Littorina in upper, dense mid murella in mid-upper.

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

NOT PRESENT
4, 5, 6

FUCUS Very Patchy

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

NOT PRESENT
4, 5, 6

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

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

DATE 4/21/90 TIME 15:00 - 18:00 TIDE HEIGHT +6 - +1

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

4=cobbles

FLORA:

SPECIES	UITZ	MITZ	LITZ	COMMENTS
BOSSIELLA/CORALLINA				
CALLIARTHRON/CORALLINA	1	1	1,2	In Pools
CLADOPHORA SPP	-	-	-	
COSTARIA SPP	-	-	-	Found in drift
ENDOCLADIA MURICATA	1,2	1,2		
FILMAENTOUS GREENS	2,3	2		
FILAMENTOUS REDS		1		On Rock
GLOIOPELTIS FURCATA	-	-	-	
HALOSACCION GLANDIFORME	1,2	1,2		
LAMINARIA SPP	-	-	-	In drift
LITHOTHAMNION	1	1,2		
NEREOCYSTIS SPP				as drift on even bottom of shore
PORPHYRA SPP	-	-	-	
RALPHSIA/HILDENBRANDIA/P. thodii				
RHODOMELA LARIX	-	-	-	
RHOZOMENIA PALMATA	-	-	-	
SCYTOSIPHON SPP	1,2	1,2	-	Vertical Faces.
ULVA SPP	1	1,2,3	(5 drift)	Found in pools and floating in cove
ZOSTERA MARINA	-	-	-	
ENTEROMORPHA			5,3	Found as drift in tufts in cove
<i>Odenthalia clausa</i>	1,2	1,2		on open points in pools

FAUNA:

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

OG A-10pSEGMENT K9-22-CG-1SUBDIVISION K9-22-CG-1ADATE 4 / 21 / 90**CHECKLIST**

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

LEGEND

1 Δ
 PH - No Subsurface Oil

2 Δ
 PH - Subsurface Oil

$\square$ CT/C
 Continuous Distribution

$\square$ CT/B
 Broken Distribution

$\square$ CT/P
 Patchy Distribution

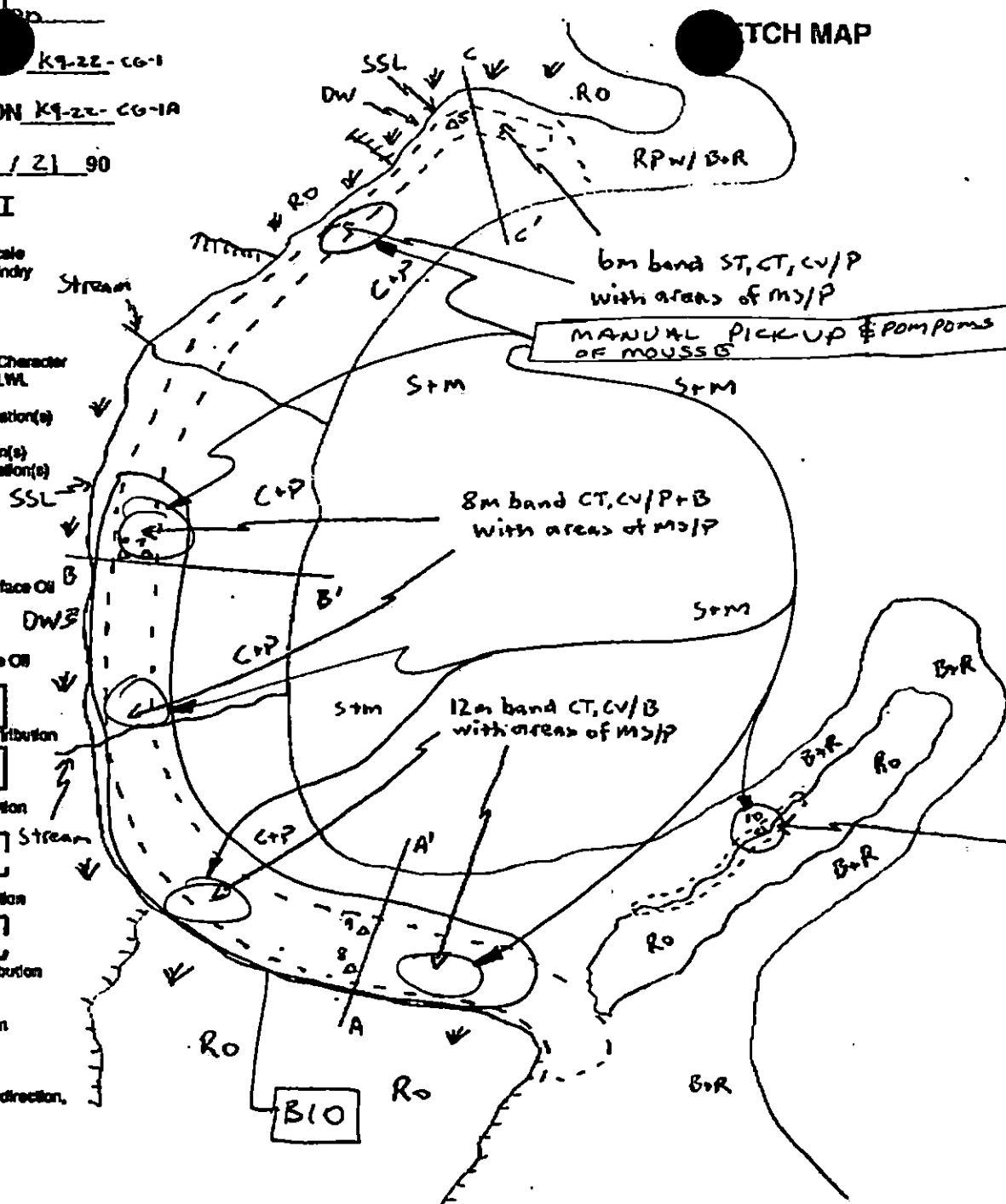
$\square$ CT/S
 Splashed Distribution

$\bullet$
 Oiled Vegetation

$\circ$
 Photo location, direction, and number

SKETCH MAP

Approx Scale
 1cm $\approx$ 15m



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

1m x 25m band ST, CT/S and MS/P on wall of Ro

During a minus tide this baylet has no standing water and is comprised of S+M sediments.

Oil Character Length (m): AP 0 PO 0 CV 300 CT 300 ST 300 MS 300 PT 0 TB 0 FL 0 NO 1105

NEWSONE/00/000

OG

SEGMENT ST/ K9-22-CG-1

SUBDIVISION K9-22-CG-1A

DATE 4 / 21 / 90

CHECKLIST

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

LEGEND

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

Continuous Distribution
- CT/B

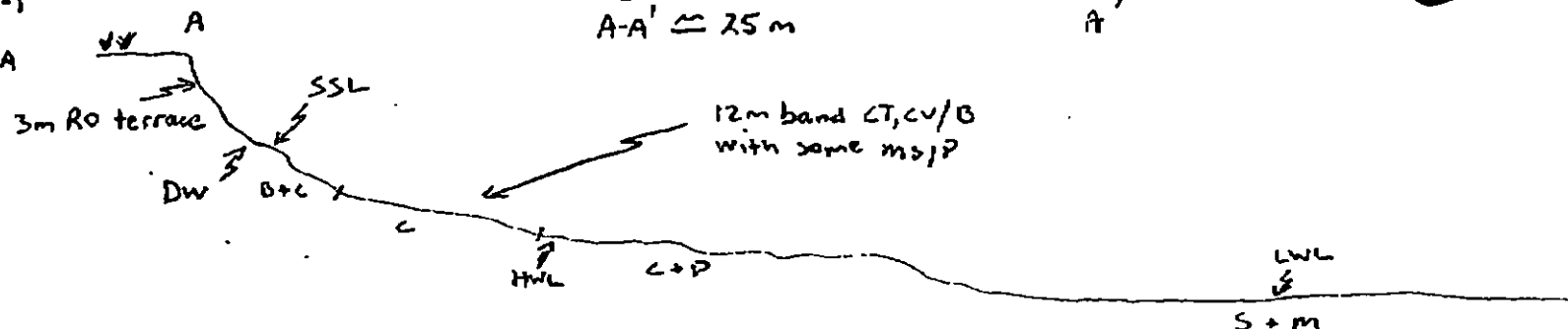
Broken Distribution
- CT/P

Patchy Distribution
- CT/S

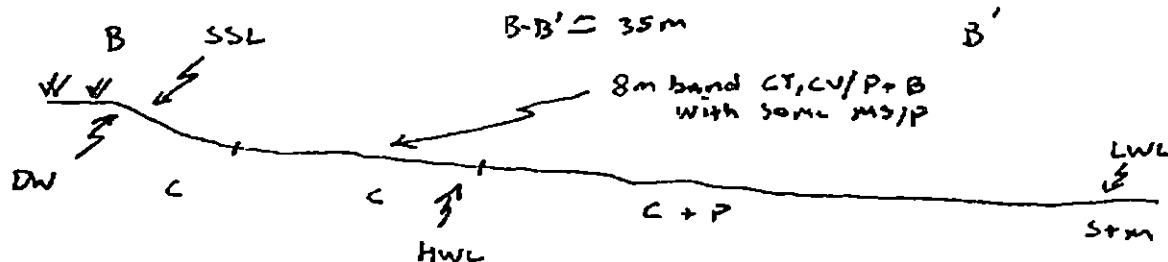
Splashed Distribution
- $\Rightarrow$
Oil Vegetation
- $\Rightarrow$
Photo location, direction, and number

ETCH MAP

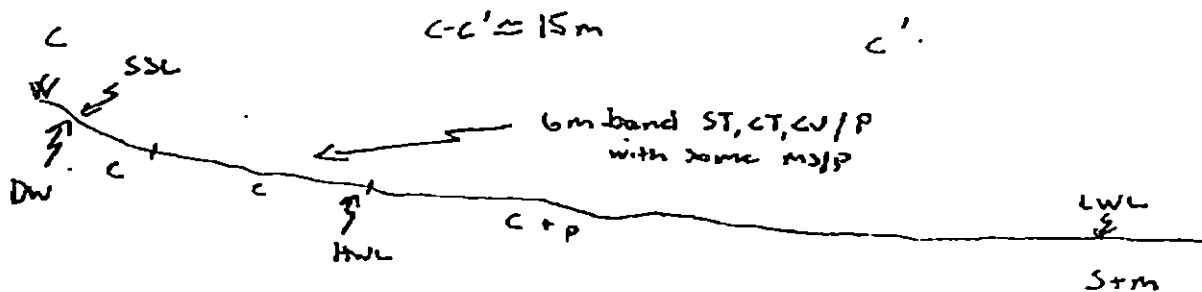
A-A' $\approx$ 25 m



B-B' $\approx$ 35 m



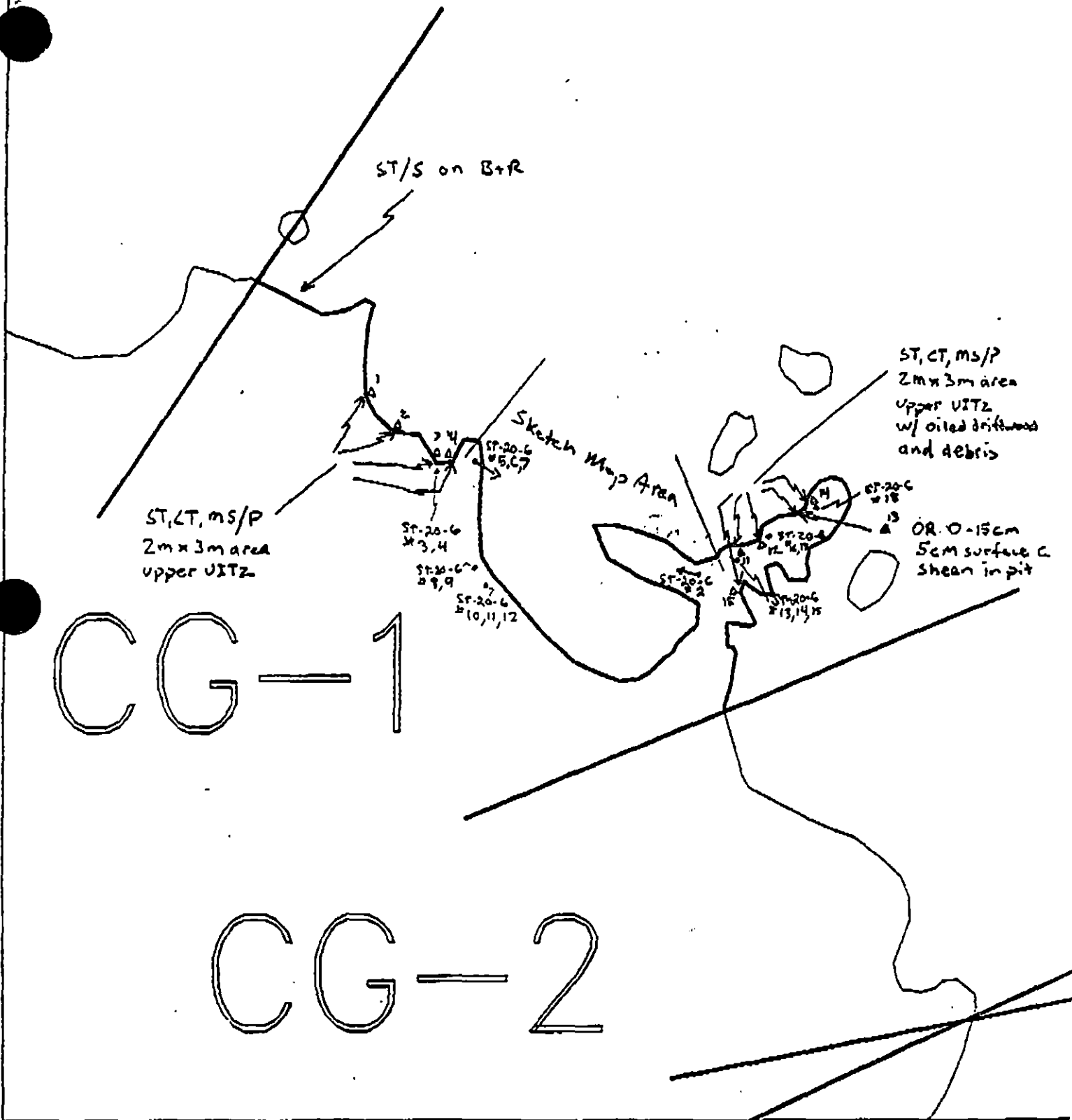
C-C' $\approx$ 15 m



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

REVISION: 03/24/90

15643771 P.07
 EXAMINER
 10:10 FROM
 15643771



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

CG-1

ADEC Segment Length: 1825m

0 100 200 300
METERS

K9-22- CG-1A

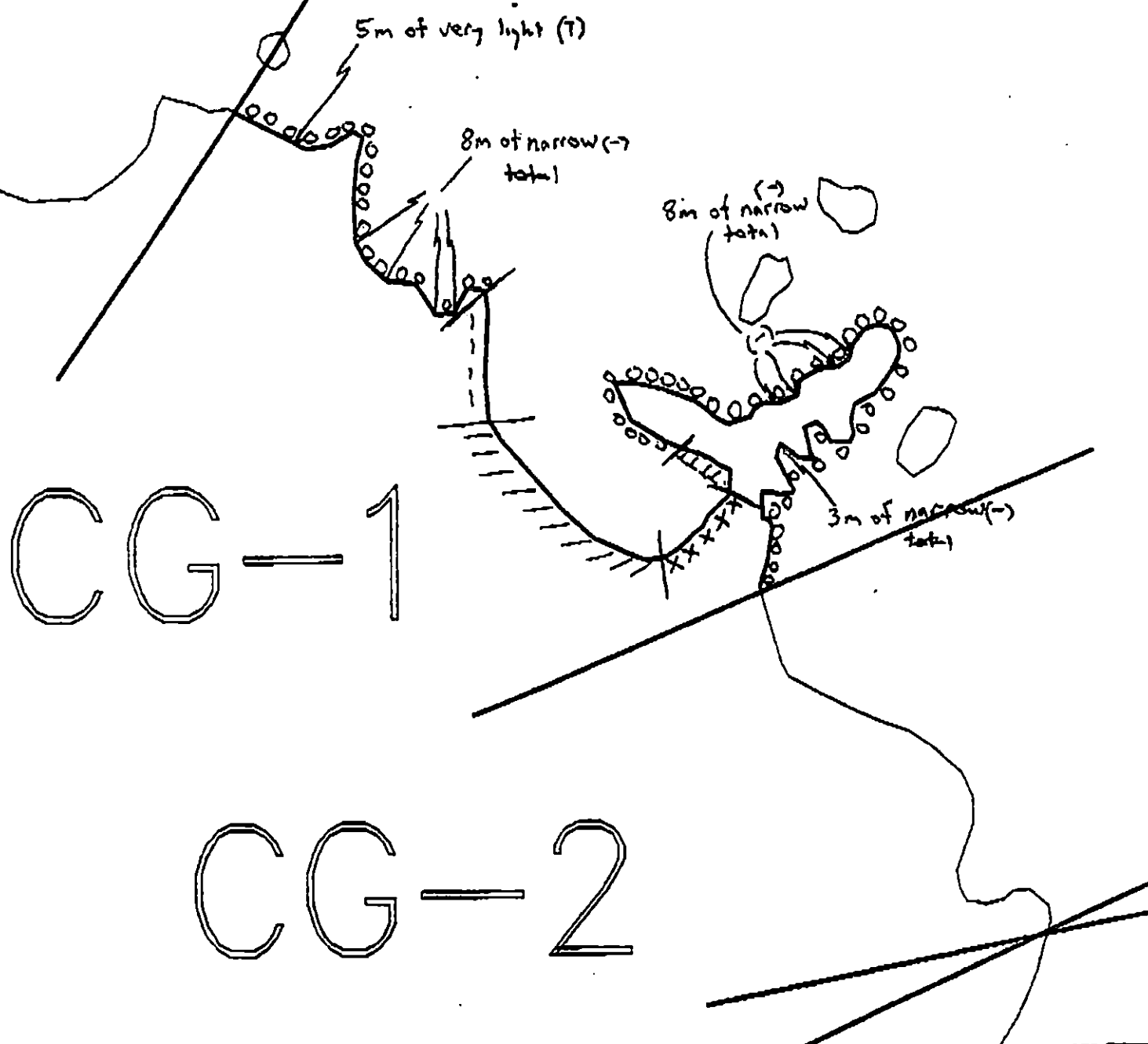
Map Key: GOA-50

Name: Acton

Date: 4-21-90

Data Entered:

K9-22-CG-1A



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

CG-1

ADEC Segment Length: 1825m



K9-22-CG-1A

Map Key: GOA-50

Name: ActonDate: 4-21-90

Data Entered:

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

No specific ecological constraints identified.
Katmai National Park.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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.

SHPO SIGNATURE: Chuck E. Horman DATE: 5/5/90

OILING CATEGORIZATION:

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

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u>X</u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </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 in conjunction with pom poms followed by
2) bioremediation (access permitting) in areas indicated on attached
sketch map.

TAG COMMENTS: Monitors to assess logs.

TAG APPROVAL DATE: May 5 1990

ADEC Art Weiner Art Weiner

EXXON Mark N. Gilbert Mark N. Gilbert

NOAA Gary Petrac Gary Petrac

USCG G.A. Reiter G.A. Reiter

FOSC: W L DATE: 5-12-90

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

REVISION: 01/24/99

OG A

SEGMENT K9-22-CG-1

SUBDIVISION K9-22-CG-1A

DATE 4 / 21 / 90

CHECKLIST

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

LEGEND

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

Continuous Distribution
- CT/B

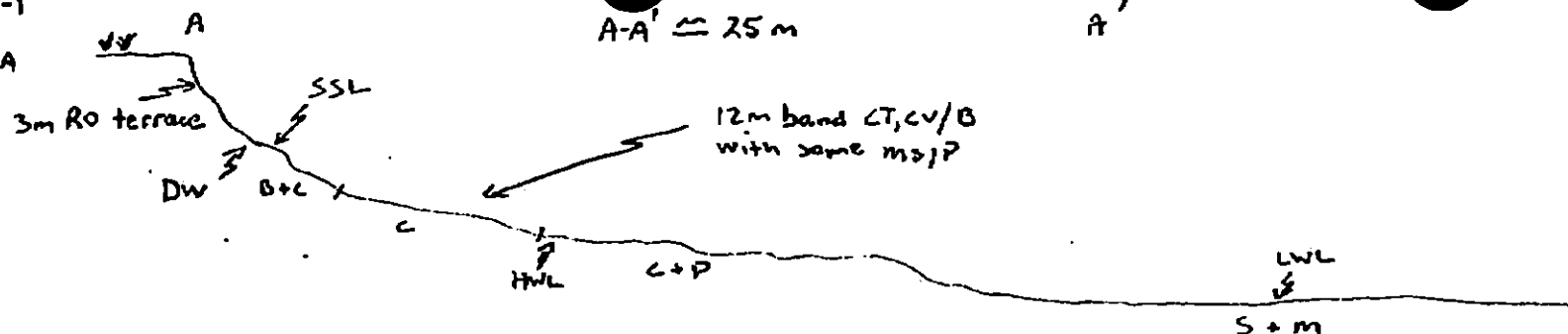
Broken Distribution
- CT/P

Patchy Distribution
- CT/S

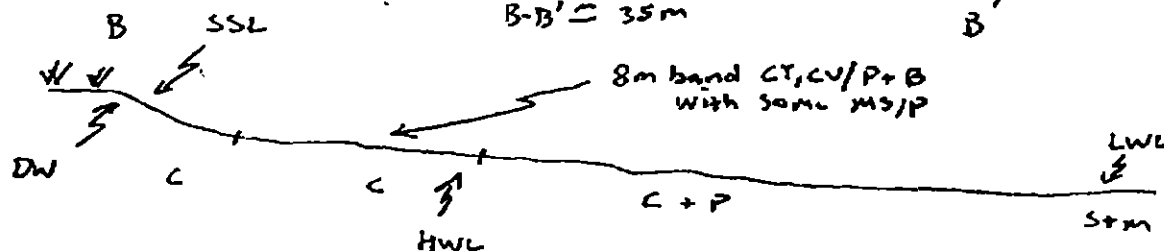
Splashed Distribution
- Oiled Vegetation
- Photo location, direction, and number

SKETCH MAP

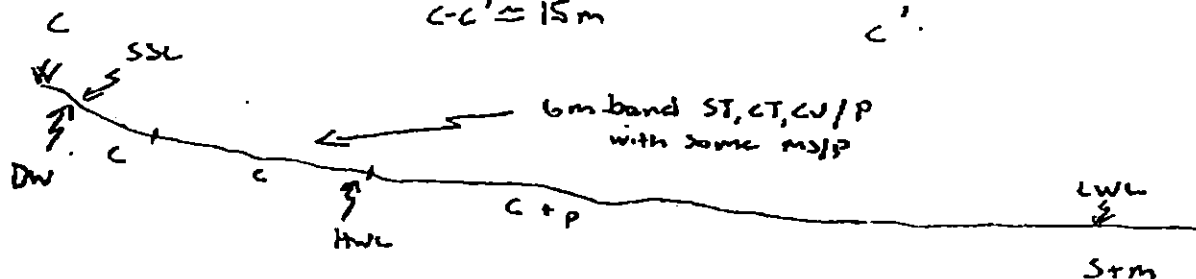
A-A' $\approx$ 25 m



B-B' $\approx$ 35 m

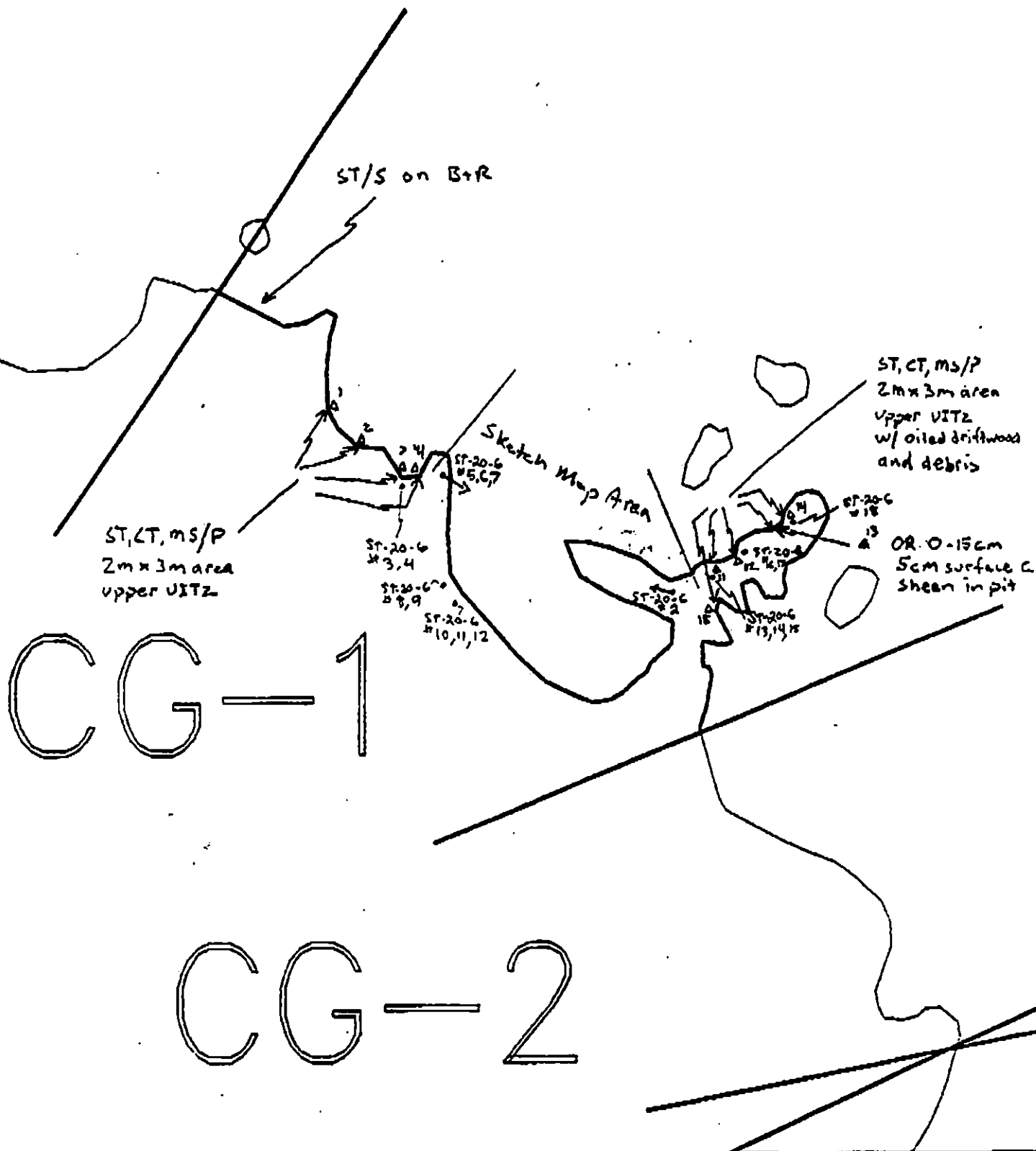


C-C' $\approx$ 15 m



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

CG-1

ADEC Segment Length: 1825m

0 100 200 300
METERS

K9-22-CG-1A

Map Key: GOA-50

Name: Acton

Date: 4-21-90

Data Entered: _____

K9-22-CG-1A

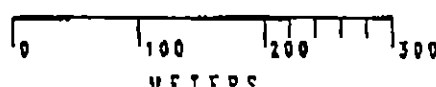
CG-1

CG-2

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

CG-1

AOEC Segment Length: 1825m



K9-22-CG-1A

Map Key: GOA-50

Name: ActonDate: 4-21-90

Data Entered:

Revision 1
06/27/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-22-CG-01 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	WORK AFTER 8/15 OPEN
Other Approved Treatment (Oil Snares)	WORK AFTER 8/15 OPEN

No bioremediation as per FOSC

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

No specific ecological constraints identified for manual pickup or other approved treatment (oil snares).

OTHER ECOLOGICAL CONSIDERATIONS

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

ADDENDUM REVISED
PER CONVERSATION WITH
DAN HAMSON (NPS) AND
BUZZ ROME (USCG).

Rex Coulter 06/27/90

Concur - DD Rome 6/29/90

Appvd - [Signature] 6/29/90

FOSC

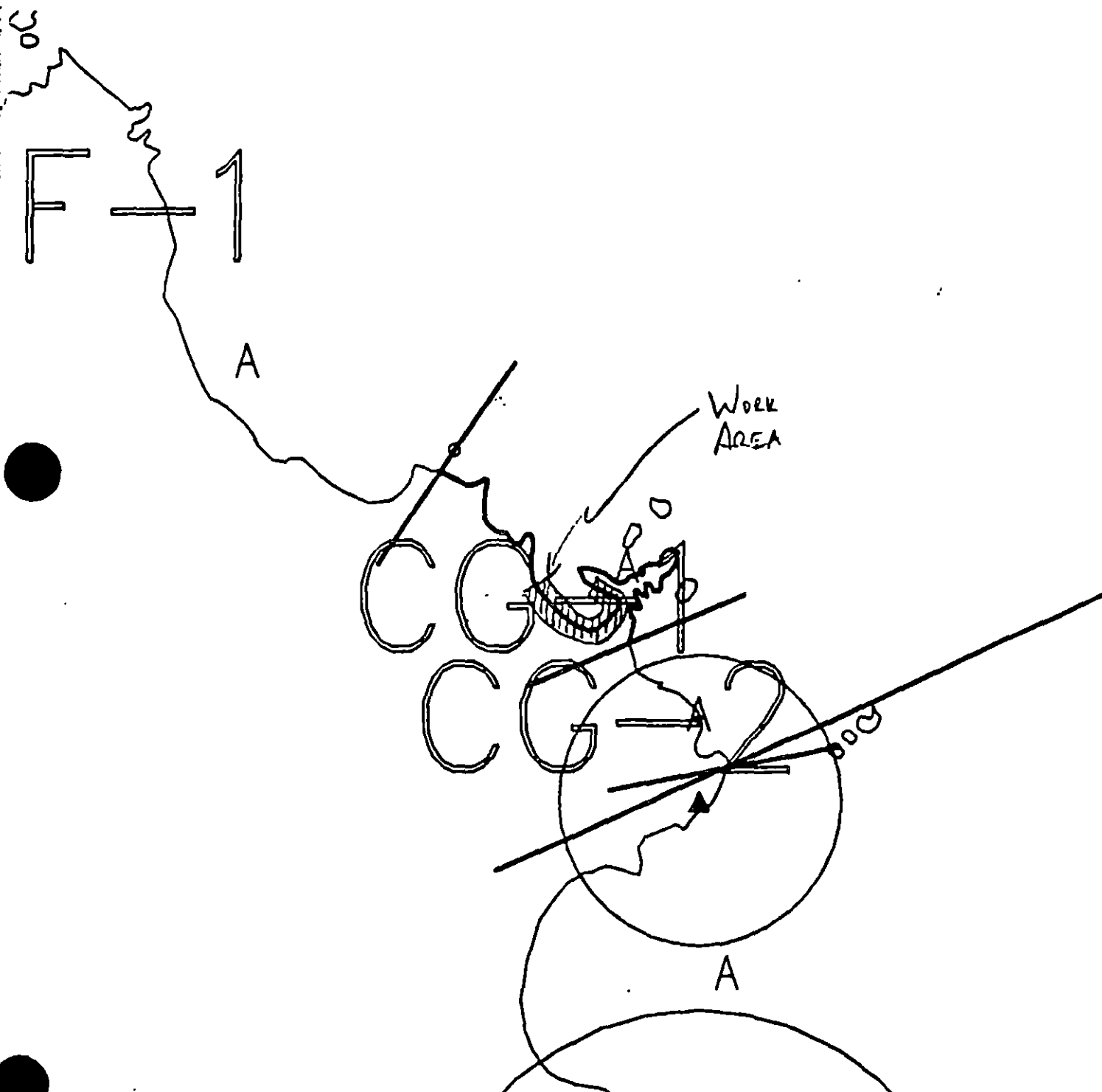
Date

6-19-90

Prepared by

Date

6/16/90



Exxon Company, USA



ECOLOGY MAP
 SEGMENT K9N-22 CG-1
 SUBDIVISION A (--- of 1 ---)
 METERS

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

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

No specific ecological constraints identified.

Katmai National Park.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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.

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

OILING CATEGORIZATION:

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

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u>X</u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </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 in conjunction with pom poms followed by 2) bioremediation (access permitting) in areas indicated on attached sketch map.

SEE CONSTRAINTS ADDENDUM DATED 6/16/90. JP

TAG COMMENTS: Monitors to assess loss.

TAG APPROVAL DATE: May 5 1990

ADEC Art Weimer Art Weimer
EXXON Mark N. Gilbert Mark N. Gilbert FOSC: W L DATE: 5-12-90
NOAA Gary Petros Gary Petros
USCG GA BELTER GA BELTER

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

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-22-CG-01 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	WORK AFTER 8/15
Other Approved Treatment (Oil Snares)	WORK AFTER 8/15

No bioremediation as per FOSC

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

No specific ecological constraints identified for manual pickup or other approved treatment (oil snares).

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

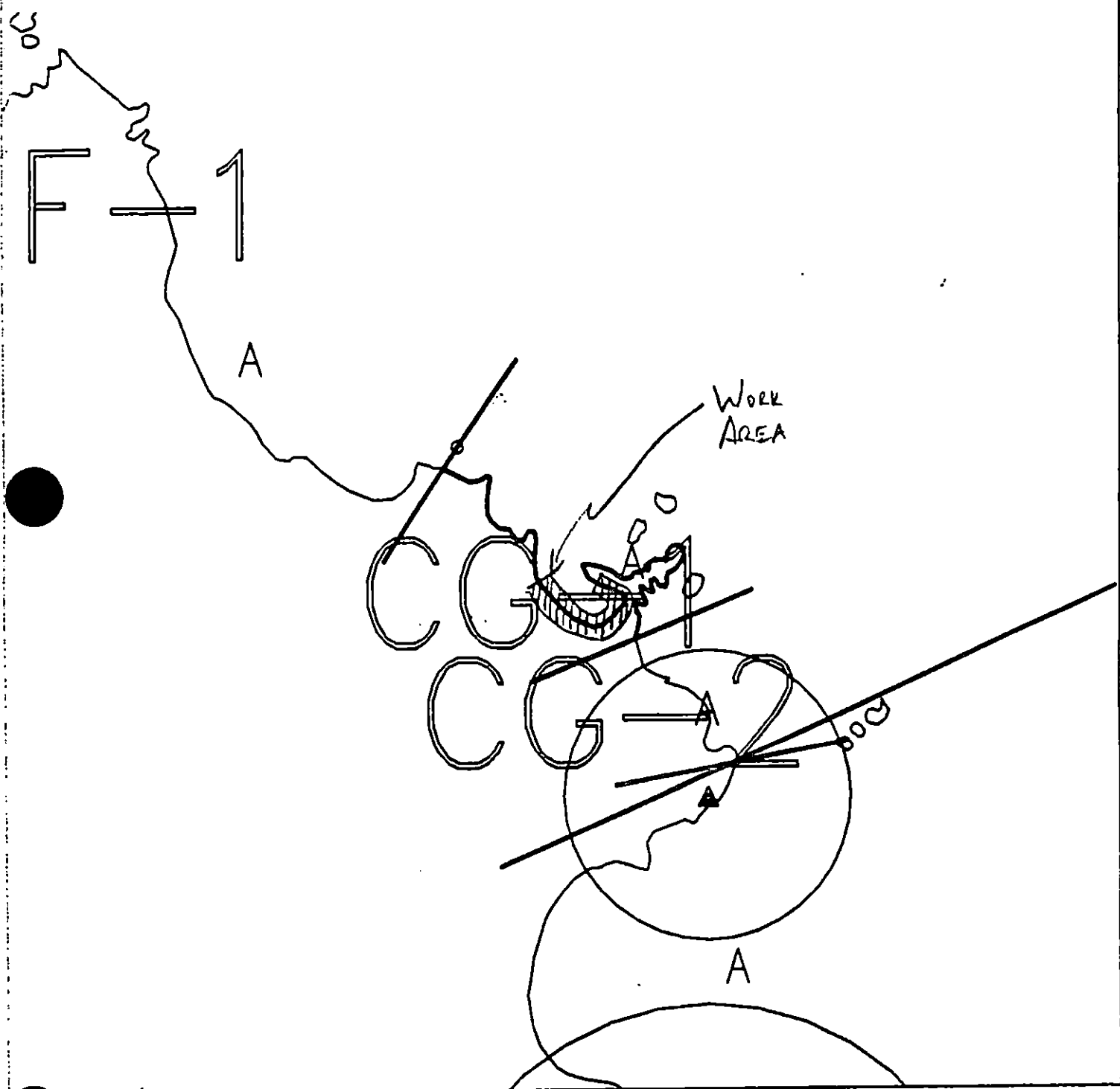
Date

6-19-90

Prepared by

Date

6/16/90



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



ECOLOGY MAP
SEGMENT K9N-22 CG-1
SUBDIVISION A (---Lol---)
METERS

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

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

No specific ecological constraints identified.
Katmai National Park.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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.

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

OILING CATEGORIZATION:

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

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u> X </u> Treatment Recommended	<u> X </u> Oil Snares (pom poms)
<u> X </u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u> X </u> Bioremediation	<u> </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 in conjunction with pom poms followed by 2) bioremediation (access permitting) in areas indicated on attached sketch map.

SEE CONSTRAINTS ADDENDUM DATED 6/16/90.

TAG COMMENTS: Monitors to assess loss.

TAG APPROVAL DATE: May 5 1990

ADEC Art Weir Art Weir

EXXON Mark N. Gilbert Mark N. Gilbert

NOAA Gary Petrac Gary Petrac

USCG G.A. BEITER G.A. BEITER

FOSC: W L DATE: 5-12-90

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

SHORELINE EVALUATION

SEGMENT ST/ K09-21-CG-02 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/10 to 6/30)

30,3Q Harbor seal and sea lion molting (8/15 to 9/15)

4LL National Parks

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: J. David McManis

DATE: 5/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 13 m: No Oil 557 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

X No Treatment Recommended
 Treatment Recommended
 Manual Pickup
 Bioremediation
 Tarmat Removal

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

COMMENTS:

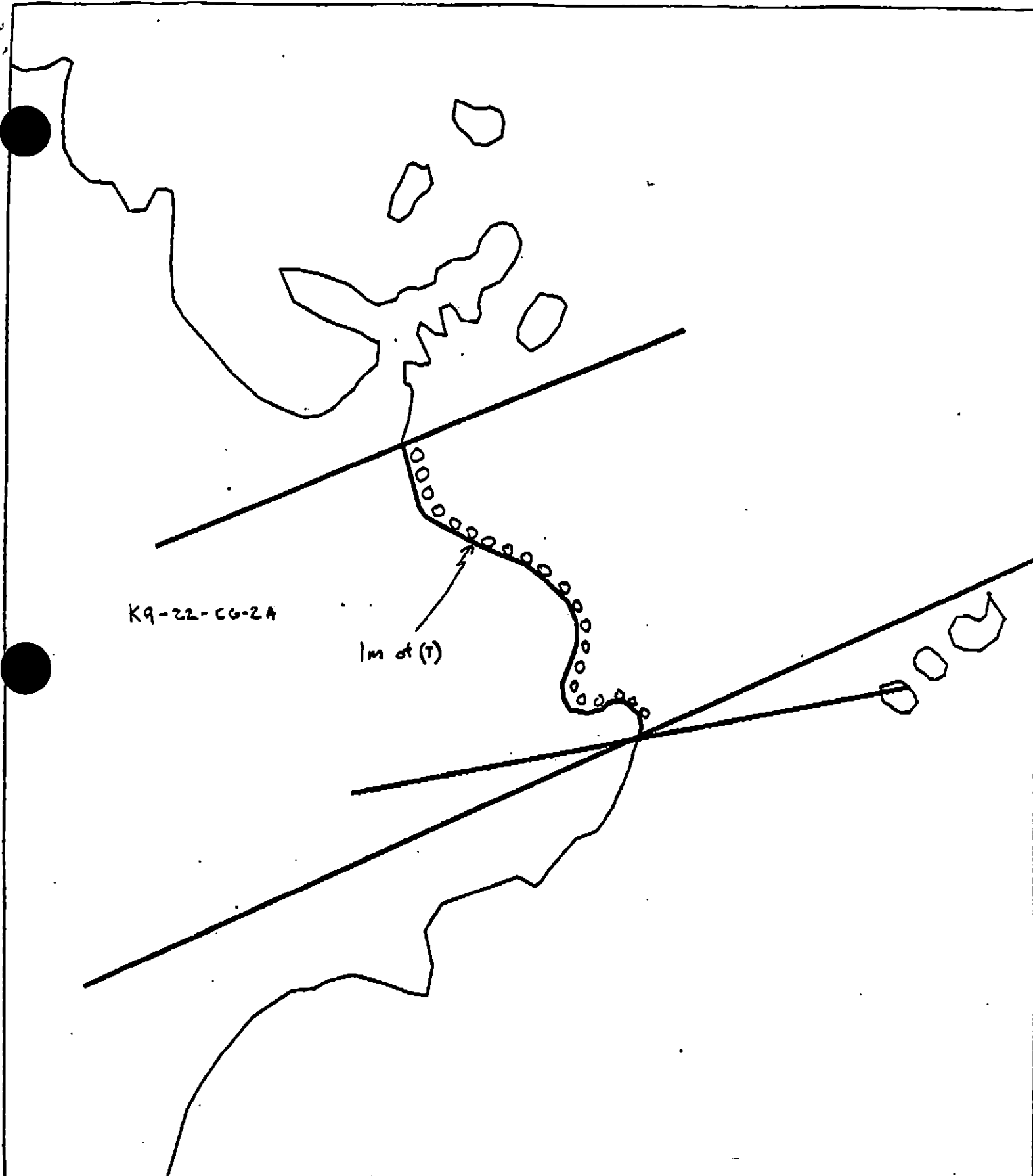
TAG COMMENTS:

TAG APPROVAL DATE: 5/1/90

ADEC Art Weiner Dist. Weir
EXXON Amor Teal
NOAA Gary Petros
USCG Kenneth Keane

FOSC: WJL

DATE: 5-9-90



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

CG-2

ADEC Segment Length: 541m

0 100 200 300

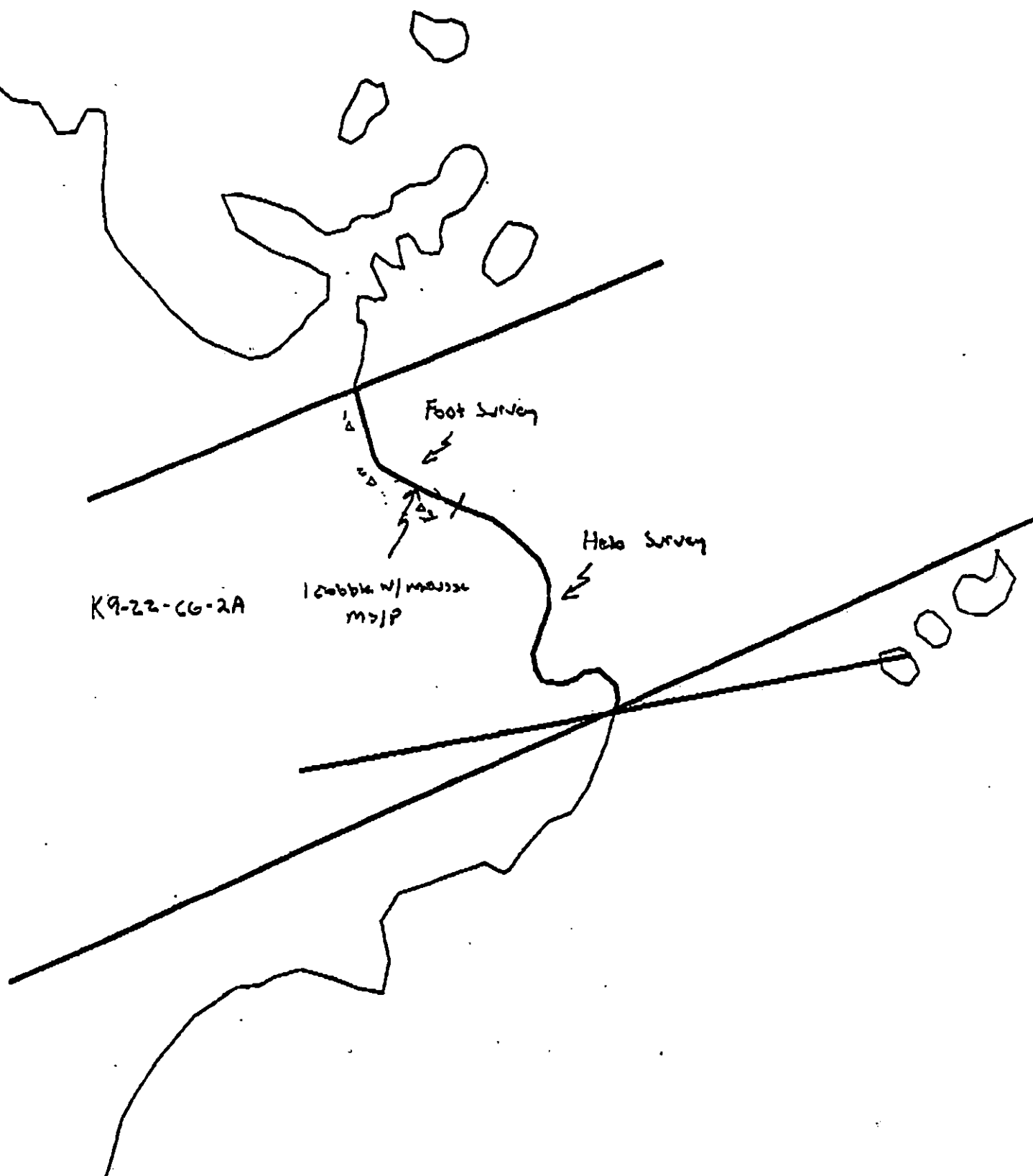
K9-22-CG-2A

Map Key: GOA-51

Name: Acton

Date: 4-22-90

Data Entered:



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

CG-2

ADEC Segment Length: 541m



K9-22-CG-2A

Map Key: GOA-51

Name: Acton

Date: 4-2-90

Data Entered:



REGION: KODIAK

SEGMENT: ST/K09-22-CG-02

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ K09-23-CG-02 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/10 to 6/30)

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 13 m: No Oil 557 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. 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/Oiga Bay - 6/9 to 10/1.
 East side Kodiak, East side Afognak - 7/4 to 10/1.
- 1K** Purse seine hook-off
- 1L** Set net sites
 USFWS setnet uplands permit 5/15 to 9/15.
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M** Herring spawning (4/15 to 6/30)
 Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P** Harbor seal and sea lion pupping (5/10 to 6/30)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 3O, 3Q** Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R** Seabird colony (5/1 to 8/31)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S** Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T** All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U** Recreation: Tent sites (8/1 to 9/15)
- 6V** Anchorages (6/1 to 9/15)
- 6W** Forest Service cabins (6/1 to 9/15)
- 6X** Lodge (8/1 to 9/15)
- 6Y** Special use destination
- 7Z** Subsistence area: Salmon harvesting (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)
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / K9.22 CG002 SUBDIVISION: A DATE 4.21.90USCGNAME D.D. Haven Jr., GM3, USCGR SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Not enough oil to justify cleanup. Only one small patch of mousse.

ADECNAME Francine T. Bennis SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Only a very small amount of mousse is present in UITE, in the accessible area of this segment.

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

COMMENTS

only one or two small spots of mousse found in this segment of high energy beach. Probably not possible to remove small amount to improve beach.

SHORELINE OILING SUMMARY

REVISION NO. 04-12-90

OG Acton USCG Haven SEGMENT ST/ K9-22-C6-2
 BIO Davis LAND REP NPS Troyer, James SUBDIVISION K9-22-C6-2A(1 OF 1)
 EXXON Avery ADEC Bennis TIME 6:30 to 7:35
 TEAM NO. 20 TIDE LEVEL +1 to +3 DATE 4/23/90
 EST. SUBDIVISION LENGTH: 541 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☒ Helo WORKING DIRECTION: NW to SE
 SURFACE SEDIMENTS: R 40 % B 20 % C 20 % P 20 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 40 % Hang 20 % Vert 40 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 1 m NO 540 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	G	B	P	N	SP	BR	PR	OR	OT	BL	TL	LR	SU	U	M	L
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE				✓								✓	✓			
PATTIES																
TARBALLS																
FILM																
NO OIL														✓	✓	✓

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE —#BAGS 0

Photographs:

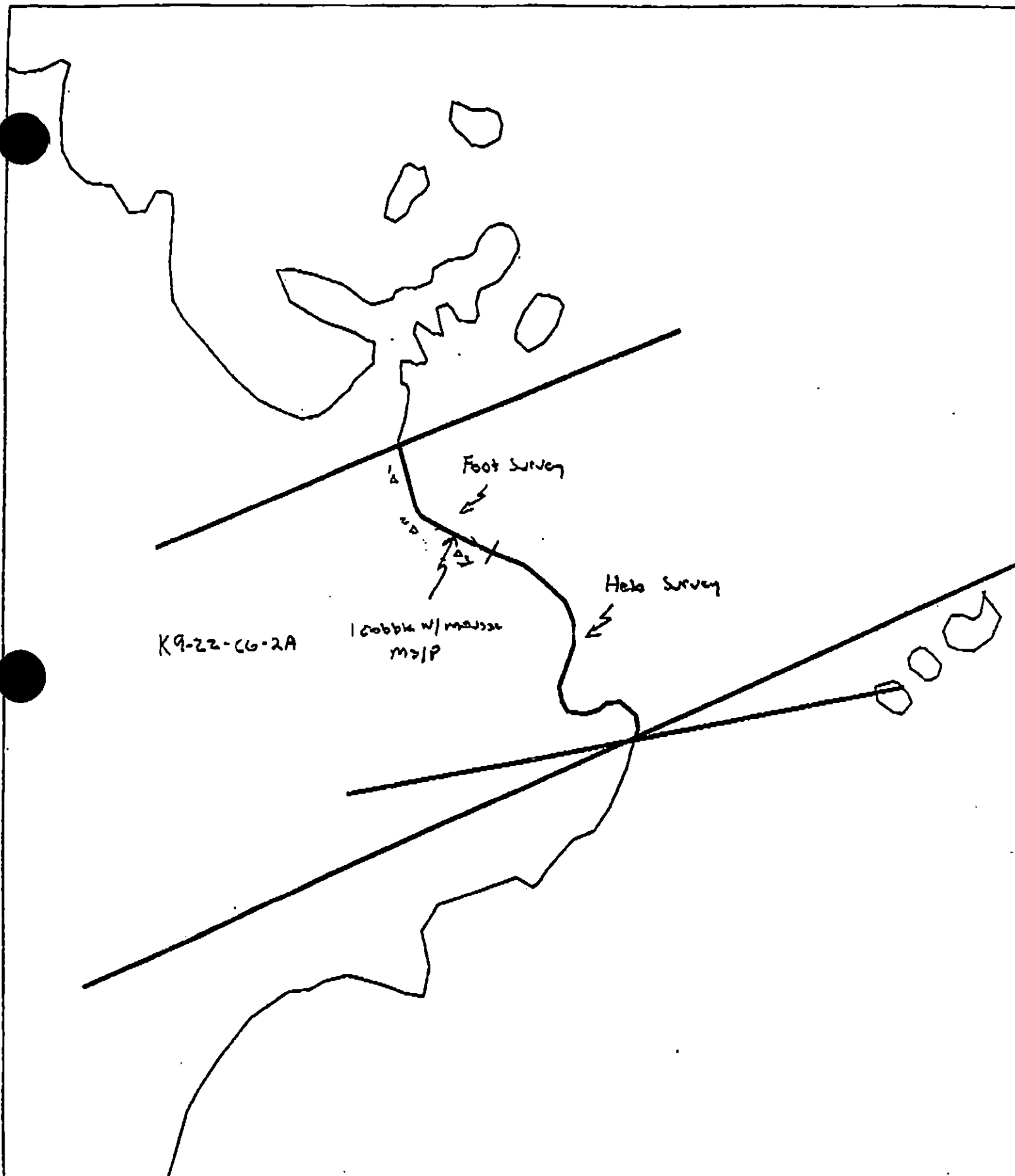
Roll No. —Frames —

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE-SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SP	BR	PR	OR	OT	BL	TL	LR	SU	U	M	L				
1	20					✓	•	✓										✓					N		PGS
2	25					✓	•	✓										✓					N		PGS
3	20					✓	•	✓										✓					N		PGS
							•																		
							•																		
							•																		

COMMENTS NW portion (200m) was surveyed on foot. One cobb w/ mousse was observed in the SSL. The SE portion (341m) was surveyed by helo due to cliffs and wave exposure.

REVIEWED BAT DATE 23 Apr 90



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

CG-2

ADEC Segment Length: 541m



K9-22-C6-2A

Map Key: GOA-51

Name: Acton

Date: 4-2-90

Data Entered:

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/79

Segment ST / K09-22 Subdivision CG-02 Date (mo / day / yr) 4/21/90Time (24 hr) 18:00 Biologist H. Davis

(A) Substrate type and % of segments:

(1) Bedrock 40 (2) Boulder 20 (3) Cobble 20 (4) Pebble 20 (5) Sand - (6) Silt -(B) Overall % cover of biota (% of segment): Dense 20 Moderate 30 Low 50 (30%)

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

Photographs: -Roll No. -Frames -

BARNACLES Continuous along segment (Sparse) patches of Dense-Moderate

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

NOT PRESENT

MYTILUS Very patchy, not many mytilus.

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

NOT PRESENT

GASTROPODS continuous sparse-moderate depending on species

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

NOT PRESENT

FUCUS Very Patchy

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

NOT PRESENT

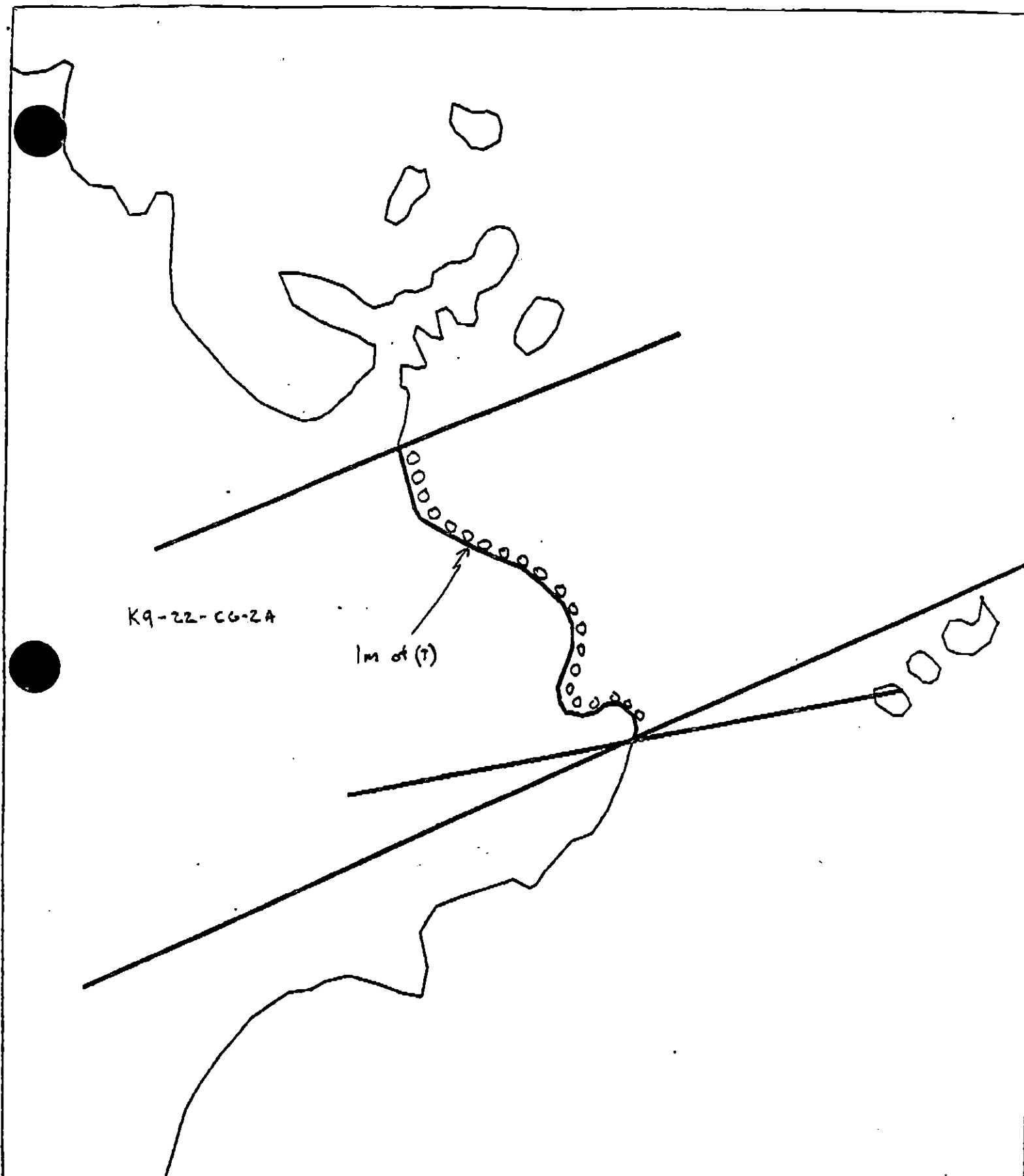
Wildlife Observations/ General Comments: Glaucous-winged gull, Harlequin ducks and two adult eagles on pinnacles off shore. This segment is small boulder large cobbles in front of cliffs. The lower intertidal areas have fewer cobbles. Filamentous green algae cover the tops of rocks.

Ecological Considerations: Gull rookeries in the area. 2 eagles possibly nesting on pinnacles off shore. No anadromous streams in the section. Pinkies, Chum, and sockeye spawn in streams above and below the segments.

DATE 4/21/90 TIME 18:00 - 19:00 TIDE HEIGHT +1 - +3

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

	SPECIES	UITZ	MITZ	LITZ	COMMENTS
FLORA:	BOSSIELLA/CORALLINA	-	1	-	species I.D. not certain
	CALLIARTHRON/CORALLINA	-	1	-	
	CLADOPHORA SPP	-	-	-	
	COSTARIA SPP	-	-	-	
	ENDOCLADIA MURICATA	1-2-3	1,2	1,2	
	FILAMENTOUS GREENS	1,2,3	1,2,3	-	covers tops of boulders, cobbles etc
	FILAMENTOUS REDS	-	-	-	
	OLOIOPELTIS FURCATA	1,2,3	1,2,3	2	on tops of boulders, cobbles
	HALOSACCION GLANDIFORME	-	1,2	1,2	
	LAMINARIA SPP	-	-	-	In drift
	LITHOTHAMNION	-	1,2,3	1,2,3	In pools
	NEREOCYSTIS SPP	-	-	-	off shore in drift
	PORPHYRA SPP	-	-	-	
	RALFISIA/HILDENBRANDIA	-	-	-	
	RHODOMELA LARIX	-	-	-	
	RHODOMENIA PALMATA	-	-	-	
	SCYTOSIPHON SPP	1,2	1,2	-	
	ULVA SPP	-	-	-	
	ZOSTERA MARINA	-	-	-	
FAUNA:	ENTEROMORPHA	-	-	-	
	ANTHOPELURA SPP	-	-	-	
	(SEM) BALUNUS CARIOSUS	-	1,2	1,2	
	B. OLANDULA	1,2,3	1,2,3	1,2	
	BRYOZOANS	-	-	-	
	CHITONS (other than K. TUNICATA)	-	-	-	
	CLAMS	-	-	-	shells tossed up
	CRABS	-	-	-	See Pagurus spp
	DERMASTERIAS IMBRICATA	-	-	-	
	KATHARINA TUNICATA	-	1,2	1	In pools and areas without cobbles
	LEPTASTERIAS HEXACTIS	-	-	-	
	LIMPETS	1,2,3	1,2,3	1,2,3	large Notacmaea
	LITTORINA SPP	1,2,3	1,2,3	-	
	NUCELLA SPP	-	1,2	-	
	PAGURUS SPP	-	1,2,3	-	moving around pools
	PISASTER OCHRACEUS	-	-	-	
	POLYCHAETES	-	-	-	
	PYCNOPODIA HELIANTHOIDES	-	-	-	
	SEARLESIA DIRA	-	-	-	
	SERPULIDS	-	-	-	
	SIPHONARIA THERSITES	-	-	-	
	TEALIA	-	1,2	1,2	In area protected from cobble movement



XXX Wide
/// Medium
--- Narrow
TTTT Very Light
CG-2
ADEC Segment Length: 541m
0 100 200 300



K9-22-CG-2A
Map Key: CGA-51
Name: Acton
Date: 4-21-90

REGION: KODIAK

SEGMENT: ST/K09-22-KF-001

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ K09-22-KF-001 SUBDIVISION A (1 OF 1) DATE 5/11/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1) - (Adjacent segment)
4LL State Marine Park National Parks
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 12 m: V.Light 951 m: No Oil 3713 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

<u>X</u> No Treatment Recommended	_____ 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/Olga Bay (6/9 to 10/1)
 East side Kodiak, East side Afognak (7/4 to 10/1)
 1K Purse seine hook-off
 1L Set net sites
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 6/30)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Nicholson 486-4791
- 3P Harbor seal and sea lion pupping (5/10 to 7/1)
 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (8/1 to 9/15)
 6V Anchorages (8/1 to 9/15)
 6W Forest Service cabins (8/1 to 9/15)
 6X Lodge (8/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (8/1 to 9/30)
 7H Finfish harvesting
 7I Deer harvesting (8/1 to 1/7)
 7J Invertebrate harvesting
 7K Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / K9-22-KF-01 SUBDIVISION: A DATE 5-11-90

USCG

NAME Kenneth M. TRABUE SIGNATURE K Trabue

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

a very little splash of Coal and stain on boulders.
occasional mouse.

ADEC

NAME Francine T. Bennis SIGNATURE Francine T Bennis

☐ NO TREATMENT RECOMMENDED ☒ ^{SPOT CHECK} TREATMENT SUGGESTED

COMMENTS

Crew will be conducting clean up in adjacent segment (CG-1, K9-22). To wrap up treatment in this area, 1 or 2 people could skiff over to specific locations in KF-1 as indicated on SSAT field map to retrieve oiled debris + small amounts of mouse.

LAND MANAGER NPS

NAME Will TROYER SIGNATURE Will Troyer

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

a few splatters of mouse & stain seen, most ^{is} difficult to retrieve, a little debris with oil could be such as nets and wet suit could be removed.

COMMENTS
SEGMENT STK09-22-KF001

Greg Chaney

May 11 1990

Segment STK09-22-KF001 consists of rocky headlands and pocket beaches. Little oil was observed however the oil which was found was spread thinly along the segment. It occurred primarily in the form of splattered tar coats and stain. A few small mousse patches were located. The mousse had melted into the sediments and was not easy to find. One very oiled pompos was recovered from the segment as well as a lightly oiled hard hat. Roughly one bag of oiled trash remains. In addition, a lightly oiled survival suit was found on the beach but was too big to be carried out by our helicopter team. A small amount of the tar drips noted were very hard, black and friable. These broke like obsidian. A few lightly oiled logs were also noted.

SHORELINE OILING SUMMARY

REVISION NO. 04/12/88

OG Greg Chaney USCG Ken Tralove SEGMENT ST/ K0922K5001
 BIO Hedley Davis LAND REP Will Tralove (NP) SUBDIVISION A (LOFL)
 EXXON - ADEC Frank Bennett TIME 07:30 10/13/90
 TEAM NO. 20 TIDE LEVEL 6.0 ft to -1.5 ft DATE May 11 /90
 EST. SUBDIVISION LENGTH: 4412 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock alders
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: North to South
 SURFACE SEDIMENTS: R 35 % B 35 % C 10 % P 10 % G 5 % S 5 % M 0 % V 0 %
 SLOPE: Long 10 % Hang 60 % Vert 30 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 5 m VL 200 m NO 3607 m

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0 cm

PATTIES / TARBALLS _____ BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

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

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE random
#BAGS less than 1

Photographs:

Roll No. ST-20-10Frames 30, 31, 32, 33

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					BELOW	OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	SURFACE-SUBSURFACE SEDIMENTS
		CP	CR	CL	CF	NO		1	2	3	4	5	SU	U	M	U			
1	35					X								X				N	0 sand

COMMENTS

See attached.

REVIEWED FWDATE 5/15/90

OG Greg Chaney

SEGMENT ST/K0922KF001

SUBDIVISION A

DATE May 11 90

CHECKLIST

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

LEGEND

1 ▲

Pit - No Subsurface Oil

2 ▲

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

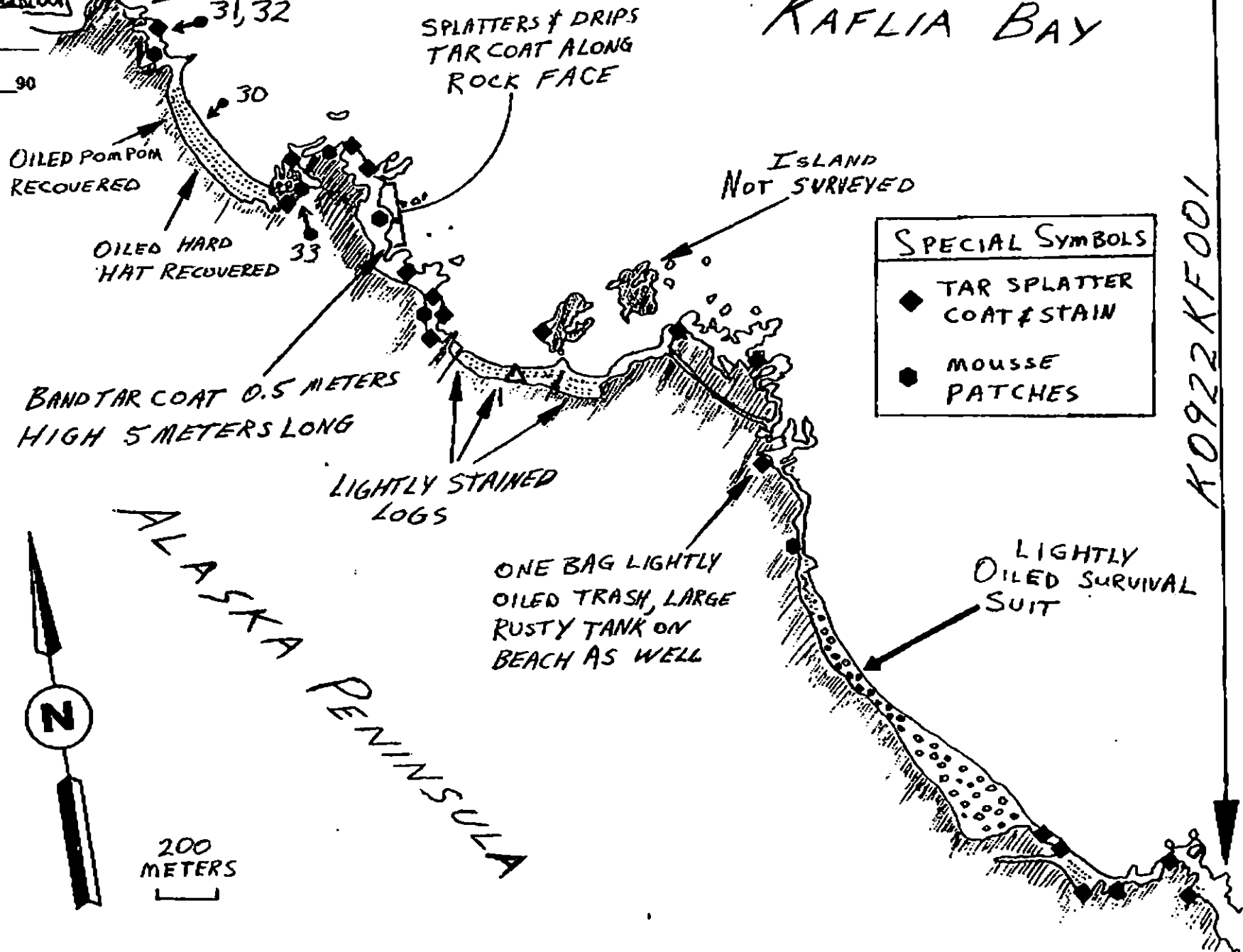
Splashed Distribution

Oiled Vegetation

1 ●
Photo location, direction,
and number

SKETCH MAP

KAFLIA BAY



SPECIAL SYMBOLS

- ◆ TAR SPLATTER
COAT & STAIN
- MOUSSE
PATCHES

Oil Character Length (m): AP 0 PO 0 CV 0 CT 400 ST 400 MS 20 PT 0 TB 0 FL 0 NO 3607

REVISION: 03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / K9-22 Subdivision KF-01 Date (mo / day / yr) 5/11/90Time (24 hr) 07:30 Biologist H. DavisA) Substrate type and % of segments:
(1) Bedrock 35 (2) Boulder 35 (3) Cobble 10 (4) Pebble 15 (5) Sand 15 (6) Silt -(B) Overall % cover of biota (% of segment): Dense 10% Moderate 40% Low 50% (40%)

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

Photographs:

Roll No. ST-20-10Frames 30-33BARNACLES Patchy, variable density on Rock, and Boulder, Rare on gravel/cobble beach.

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

NOT PRESENT
4,5,6MYTILUS Patchy, a few sparse bbs. Some small (1M) dense bbs. Scattered individuals.

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

NOT PRESENT
4,5,6ASTROPODS Patchy, Littorina - moderate, limpets moderate, Nucella sparse w/ small dense patches

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

NOT PRESENT
4,5,6FUCUS Patchy, In places dense. Overall Sparse.

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

NOT PRESENT
4,5,6Wildlife Observations/ General Comments: See attached page.

Ecological Considerations: No Ecological constraints. Sockeye, Pinkies and Chum migrate past this segment to the stream at the head of the bay. There is an Eagle nesting on a pinnacle (KF-3) to the north of the west end of the segment. On a promontory to the east of the segment there was a second Eagle nest. (CG-1)

Sierra
Parks
Camp

Eagle
Nest

Ecology Sketch Map

200
meters

North

K9-22-01
5/11/71
H. Davis

Segment
Boundary

Gravel beach
Chladophora
amphipods
and drift.

Sand Flat

Sand flat covered with:
Crasterius trachelii
Stomatopoda droebachiensis
Vendosira excrucians
Ulva and *Polinices* egg cases.

Segment
Boundary

Eagle Nest

This segment was made
up of Bedrock platforms, boulder
fields, and cobble beaches. The
cobble beaches had very little biota on them.

The best *Orchestrea* was under cobbles, and in kelp beds
from the UTZ to the LTZ. Cobbles in the MTZ
to the LTZ had filamentous green algae and *Chladophora*.

In the boulder fields UTZ was dominated by *Balanus* sp., a few
tuffs of *Glaucopelta*, limpets (*Nudoscaea* spp.), *Ulva*, and *Porphyra*.
Below this *Fucus*, *Mytilus*, and *Rhodomenia* start becoming more
prominent. Under the boulders: *Heptasterias* (brooding eggs), *Idotea*,
Amphipods, *Pagurus* sp., *Pycnogonida* sp., *Eupentacta*, *Sculpins* and
Pricklebacks were all common. In the LTZ *Ulva*, *Idotea*,
Rhodomenia, *Scytosiphon*, *Costaria*, *Telia*, *Holochondria*, *Anthophora*,
and *Mytilus* were the most visible biota. On one beach (see map) the
LTZ was a sand flat with *Ulva*, *Idotea*, and *Pleuraphysus gardneri* on
cobbles. *Clinocardium nuttallii*, *Saxidomus giganteus*, *Proclitus staminea*
and *Macoma nasuta* were found in the sand (*Clinocardium* has a shell only).

- Birds

Oyster catchers (2)
Eagles (4)
Black scoter (4)
Harlequin duck (2 ♂ 3 ♀)
Golden Crowned Sparrows

- Mammals

Fox (tracks)
Otter (tracks)
Bear (tracks)

OG GREG

SEGMENT ST/K0922KF001

SUBDIVISION A

DATE May 11 90

CHECKLIST

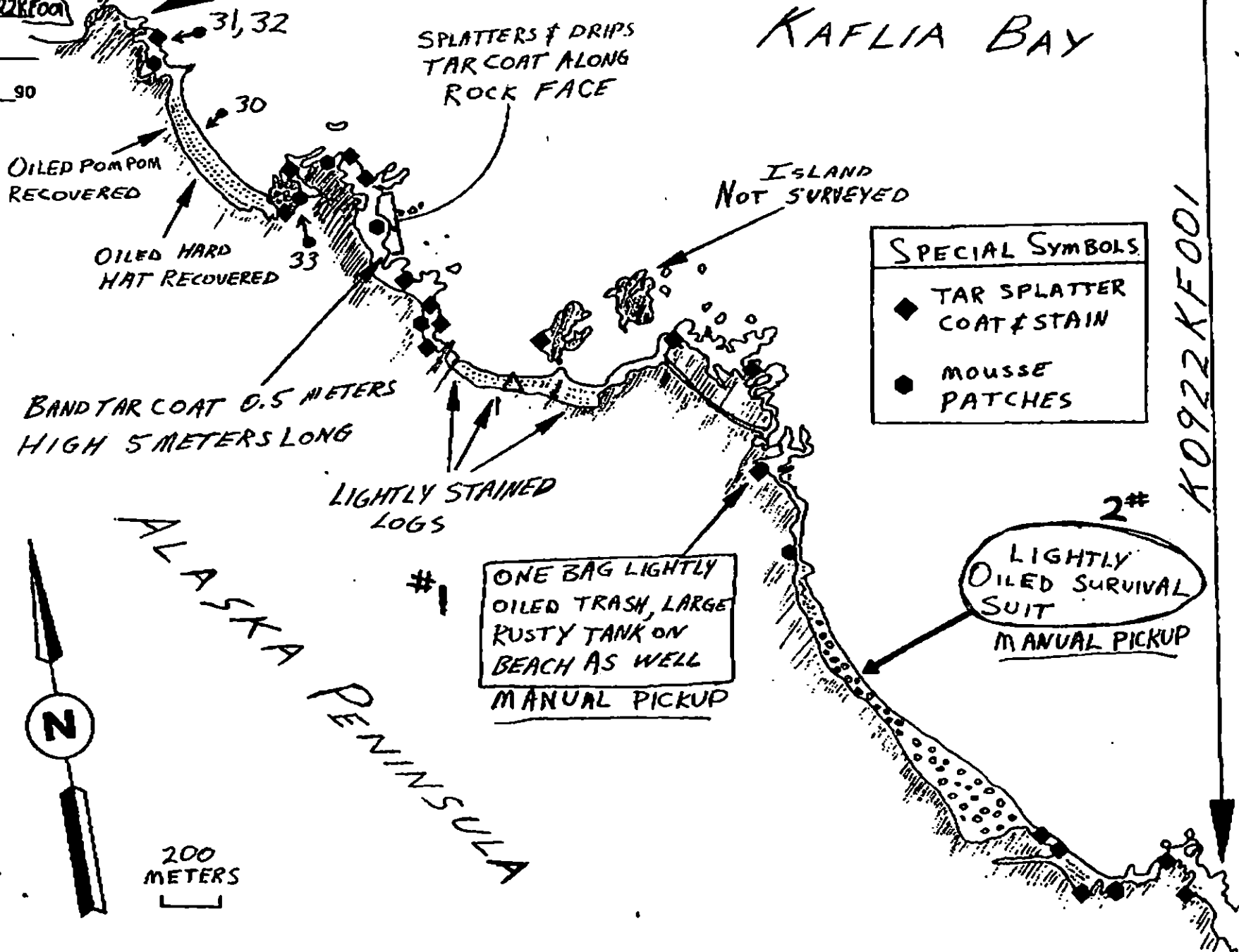
- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWA/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PR Location(s)
- ☐ Photo Location(s)

LEGEND

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

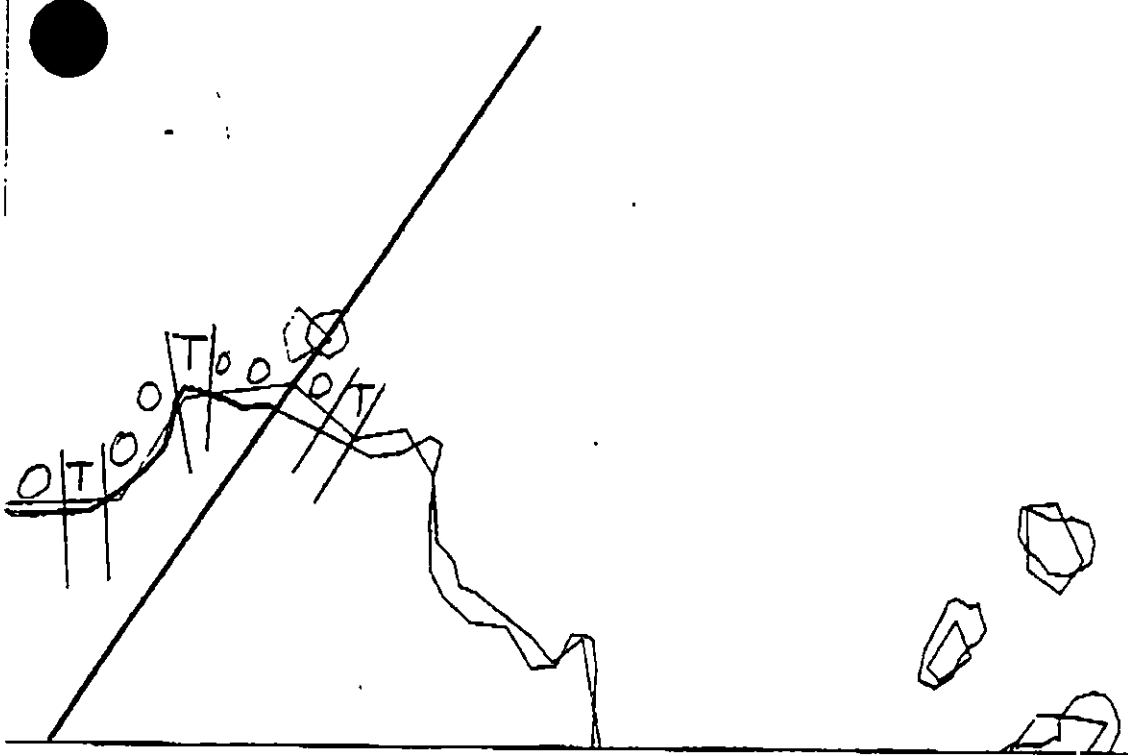
SKETCH MAP

KAFLIA BAY



Oil Character Length (m): AP 0 PO 0 CV 0 CT 400 ST 400 MS 20 PT 0 TB 0 FL 0 NO 3607

REVISION: 03/24/90



XXXX Wide

KF-1

/// Medium

-- Narrow

Approx. Segment Length: 4544m

TTTT Very Light

0000 No Oil

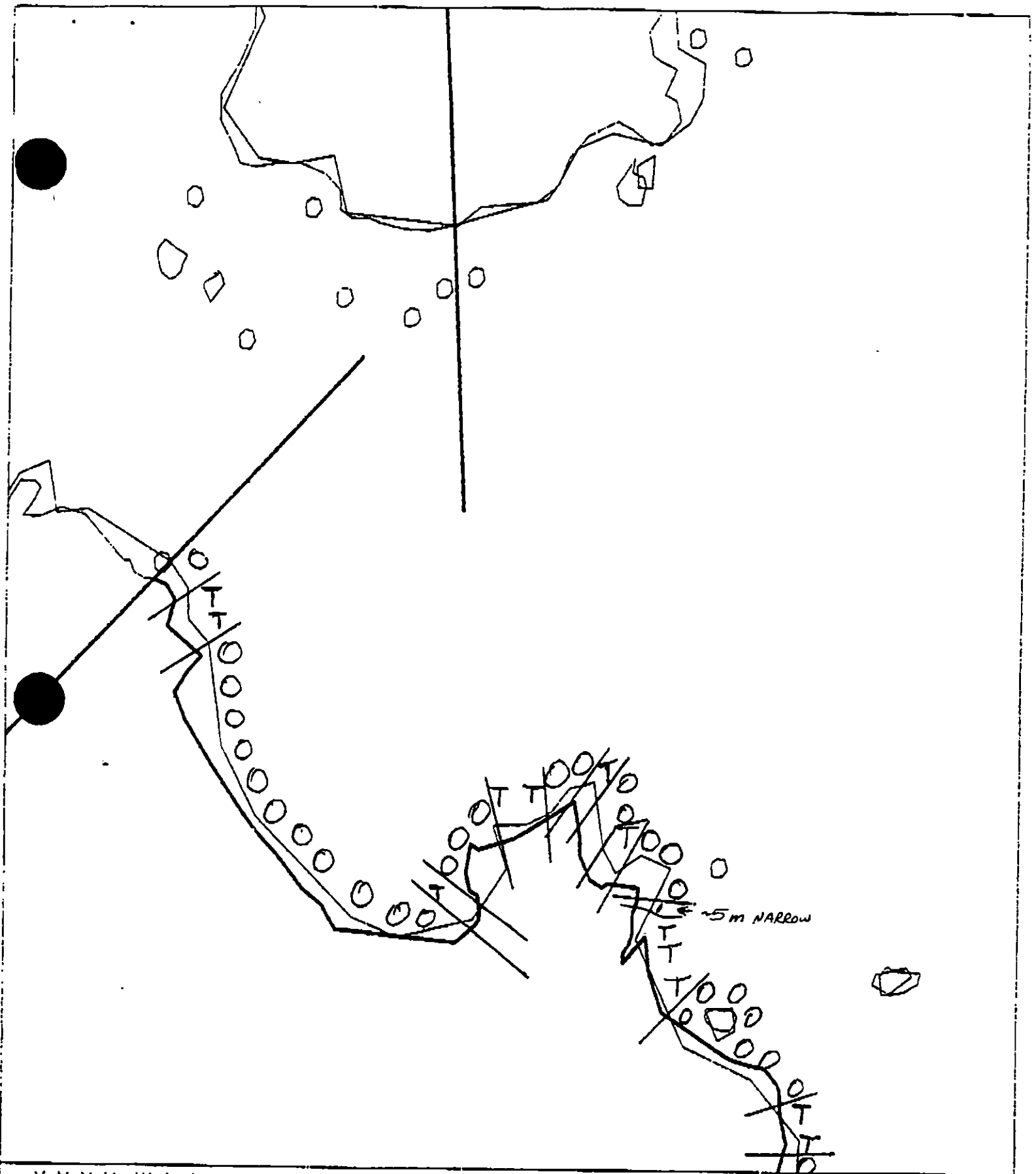


Map Key: AKP-KF-1c

Name: Greg Chaney

Date: May 11 1990

Data Entered:



XXXX Wide

/// Medium

-- Narrow

TTTT Very Light

OOOO No Oil

KF-1

Approx. Segment Length: 4544m

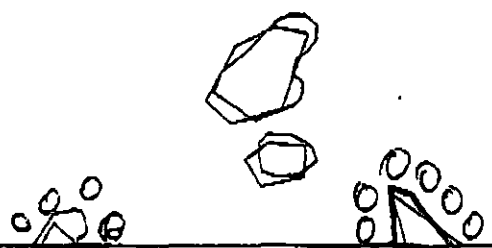


Map Key: AKP-KF-1d

Name: Greg Chaney

Date: May 11 1990

Data Entered:



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KF-1

Approx. Segment Length: 4544m

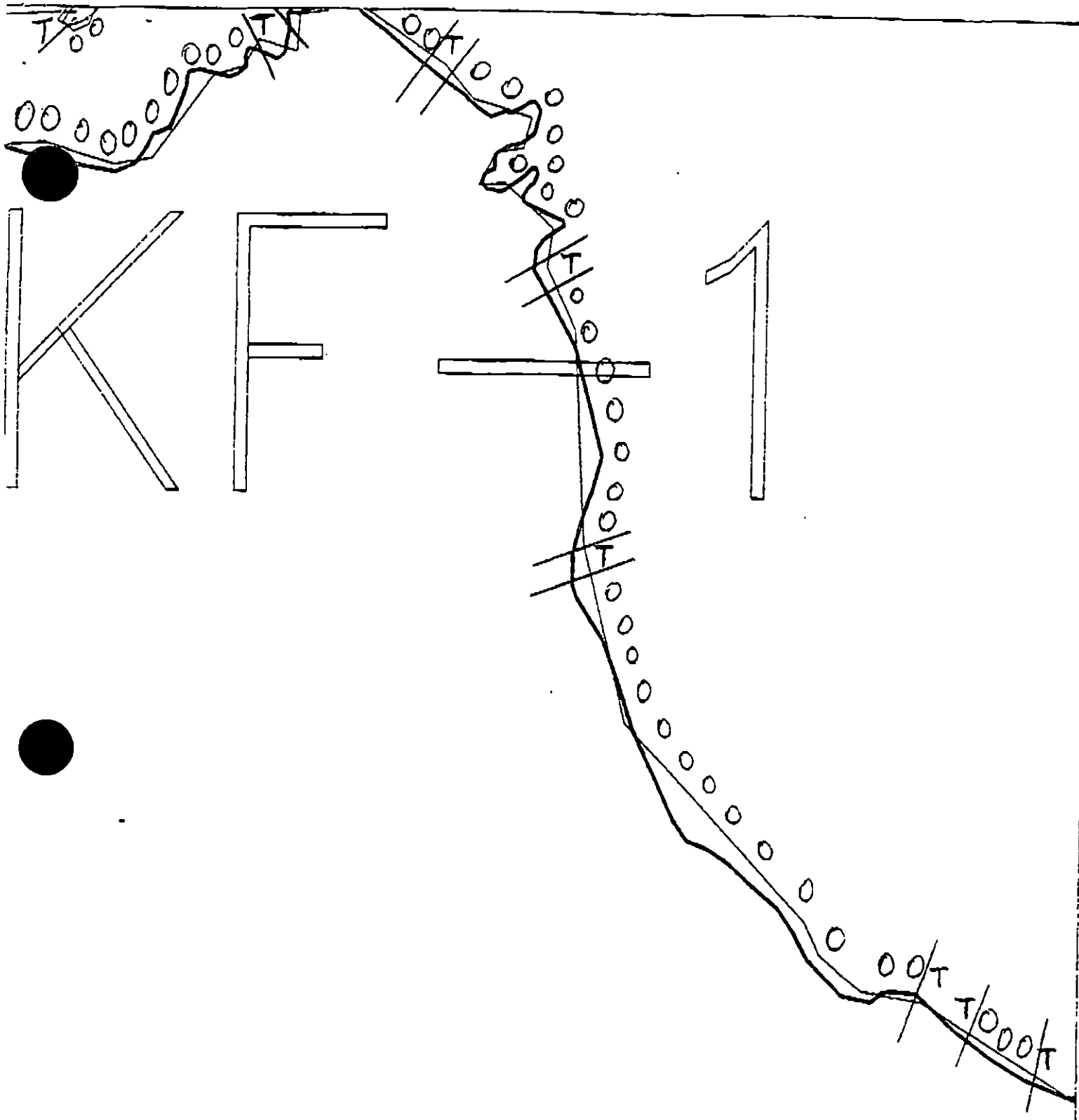


Map Key: AKP-KF-1e

Name: Greg Chaney

Date: May 11 1990

Data Entered:



XXXX Wide

// Medium

- - - Narrow

TTTT Very Light

OOOO No Oil

KF-1

Approx. Segment Length: 4544m



Map Key: AKP-KF-1b
 Name: May 11 1990
 Date: Greg Chaney
 Data Entered:

TO 0000000

XXXX Wide

KF-1

/// Medium

--- Narrow

Approx. Segment Length: 4544m

TTTT Very Light

0000 No Oil



Map Key: AKP-KF-1a

Name: Greg Chaney

Date: May 11, 1998

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ K09-22-KF-001 SUBDIVISION A (1 OF 1) DATE 5/11/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1) - (Adjacent segment)
4LL State Marine Park National Parks
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Rachel Jo-Dave

DATE: 5/30/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 12 m: V.Light 951 m: No Oil 3713 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS: FRED BEYER RETURNED + PICKUP THE SURVIVAL SUIT
AND ASSOCIATED TRASH

TAG APPROVAL DATE: 5/29/90

ADEC ART WEINER

EXXON AMY TGA

NOAA BILL WESCOTT

USCG G.A. PRATER

FOSC:

DATE: 6-19-90

OG Greg

SEGMENT ST/K0922KF001

SUBDIVISION A

DATE May 11 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HMA/LM
- ☐ 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
Patched Distribution

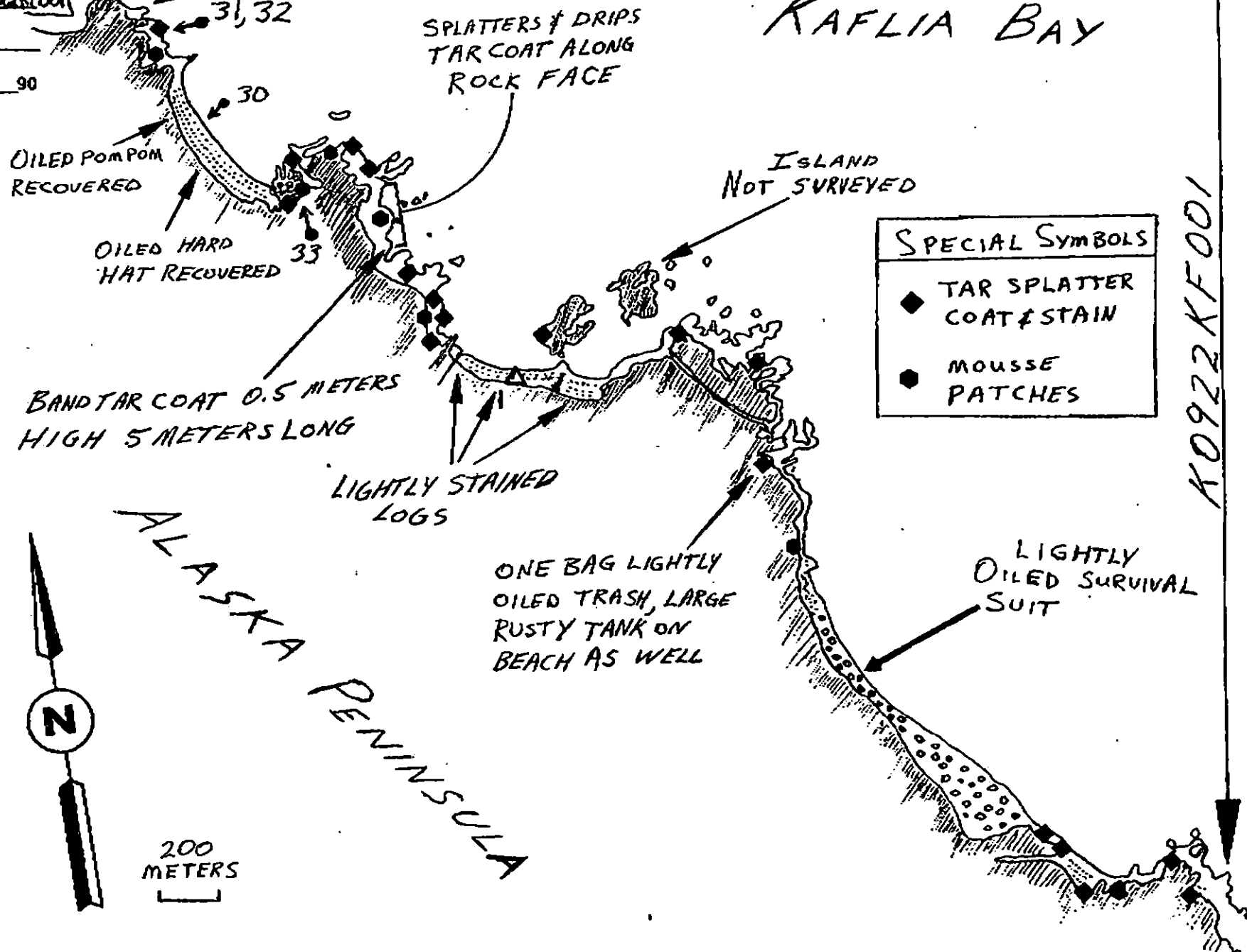
CT/S
Splashed Distribution

Oiled Vegetation

1 →
Photo location, direction, and number

SKETCH MAP

KAFLIA BAY



Oil Character Length (m): AP 0 PO 0 CV 0 CT 400 ST 400 MS 20 PT 0 TB 0 FL 0 NO 3607

REVISION: 03/20/90

Sage
Pinks
Cham

Geology Sketch Map

200
meters

North

K9-22 K5-01
5/11/01
H. Davis

Segment
Boundary

Gravel beach
Chlorophyta
amphipods
and drift.

Sand Flat

Sand flat covered with:
Crinoid *trachelii*
Strongylocentrotus droebachiensis
Dendroaster excentricus
Ulna and *Pollenicea* egg cases.

Segment
Boundary

Eagle Nest

- Birds
Oyster catchers (2)
Eagles (4)
Black Scoter (4)
Harlequin Duck (20-30)
Golden Crowned Sparrows

- Mammals
Fox (tracks)
Otter (tracks)
Bear (tracks)

This segment was made
up of bedrock platforms, boulder
fields, and cobble beaches. The
cobble beaches had very little biota on them.

~~Under~~ *Orchestia* was under cobbles. and in kelp beds
from the UTZ to the LTZ. Cobbles in the MTZ
to the LTZ had filamentous green algae and *Chlorophyta*.

In the boulder fields UTZ was dominated by *Balanus* sp., a few
tuffs of *Glaucopella*, limpets (*Nucula* *reticulata*), *Littorina*, and *Porphyra*.
Below this *Fucus*, *Mytilus*, and *Rhodomenia* start becoming more
prominent. Under the boulders: *Heptasterias* (brooding eggs), *Idotea*,
Amphipods, *Pagurus* sp., *Pycnogonida* sp., *Eupentacta*, *Sculpin* and
Pricklebacks were all common. In the LTZ *Ulva*, *Bridaea*,
Rhodomenia, *Scytosiphon*, *Costaria*, *Talia*, *Holochondria*, *Anthopleura*,
and *Agilis* were the most visible biota. On one beach (see map) the
LTZ was a sand flat with *Ulva*, *Bridaea*, and *Pleurophyscus gardneri* on
cobbles. *Clinocardium nuttallii*, *Saxidomus giganteus*, *Protolittorina staminea*
and *Macoma nasuta* were found in the sand (*Clinocardium* has a shell only).

OG Greg Chaney

SEGMENT ST/K0922KF001

SUBDIVISION A

DATE May 11 90

SKETCH MAP

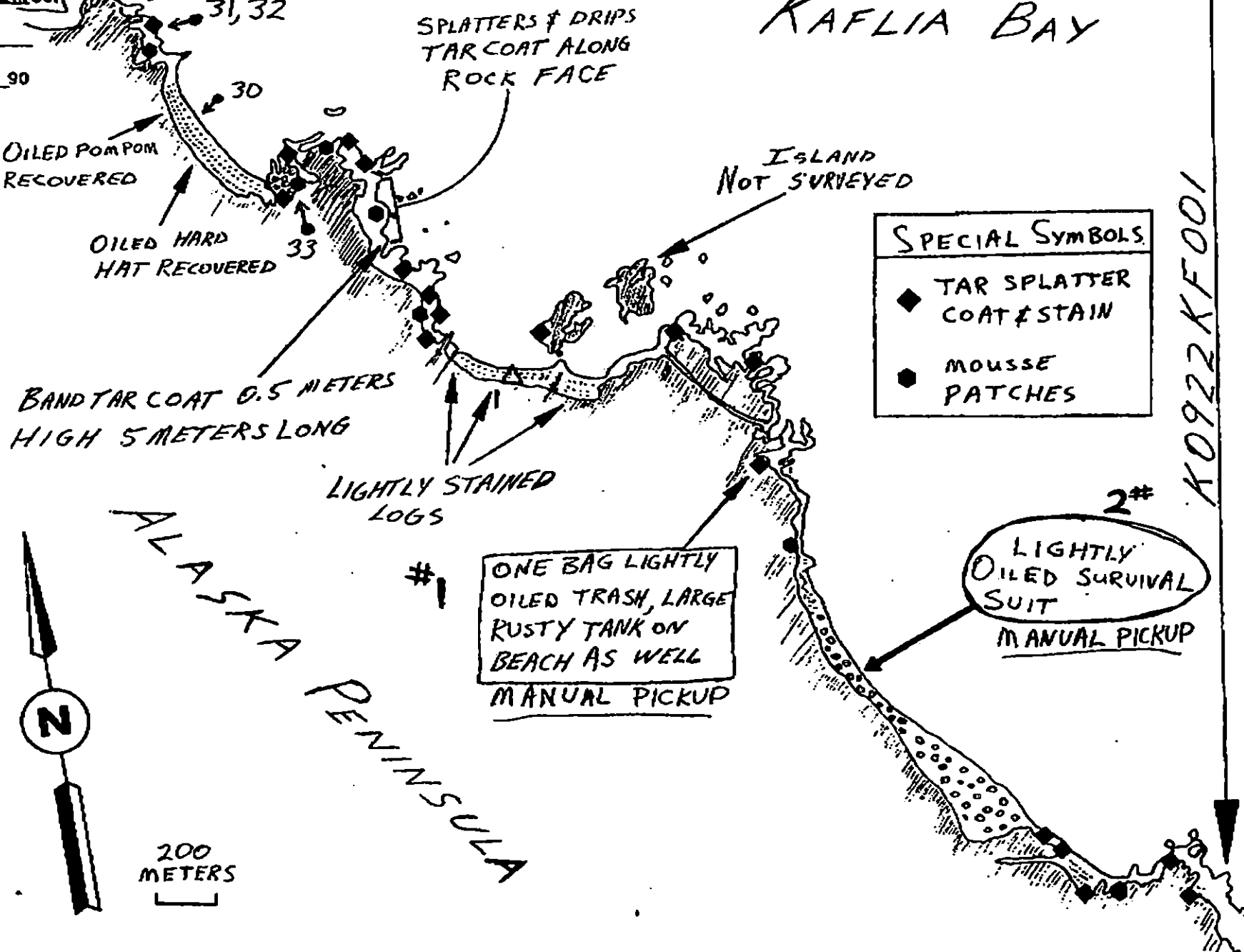
KAFLIA BAY

CHECKLIST

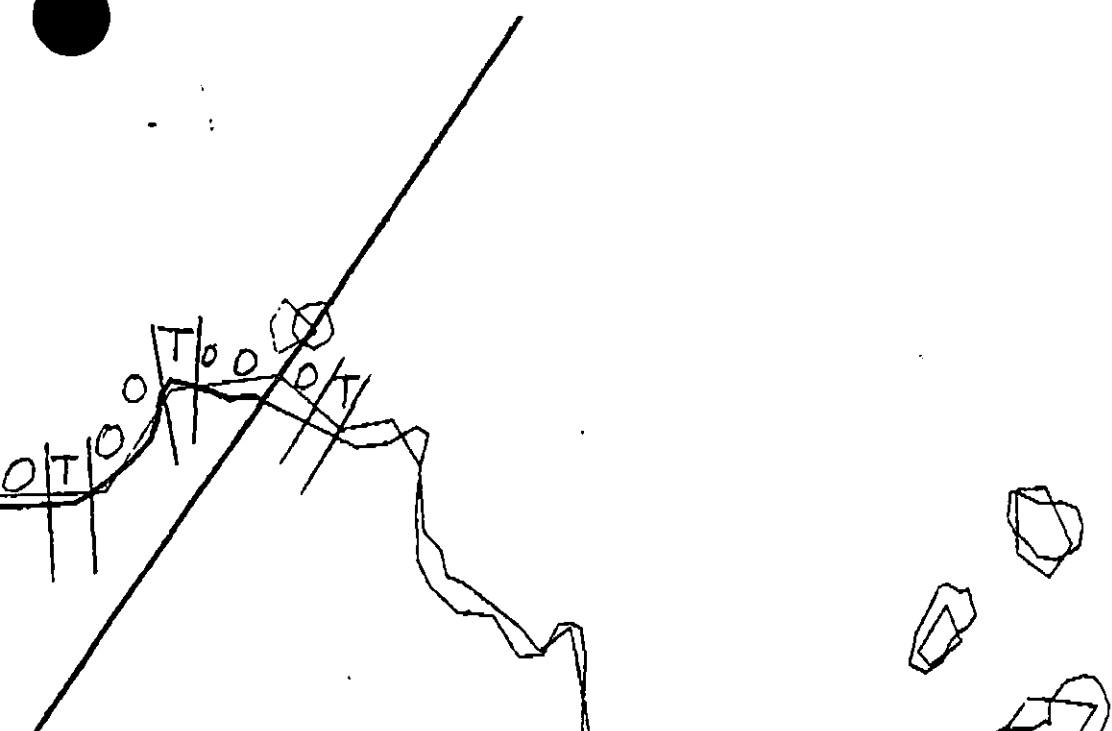
- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HAWAIIAN
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

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



Oil Character Length (m): AP 0 PO 0 CV 0 CT 400 ST 400 MS 20 PT 0 TB 0 FL 0 NO 3607



XXXX Wide

● / Medium

--- Narrow

TTTT Very Light

0000 No Oil

KF-1

Approx. Segment Length: 4544m

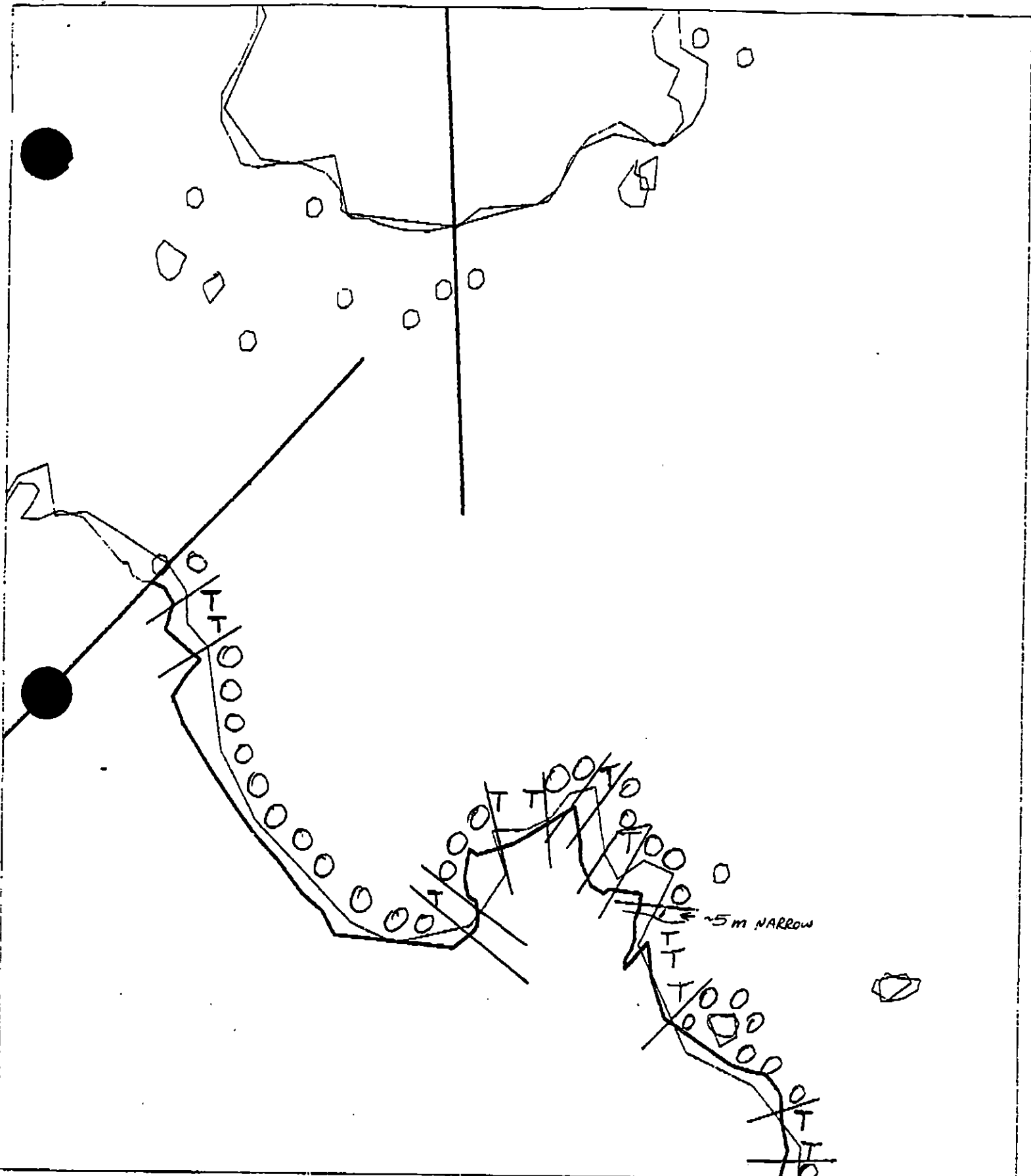


Map Key: AKP-KF-1c

Name: Greg Chaney

Date: May 11 1990

Data Entered:



XXXX Wide

● // Medium

--- Narrow

TTTT Very Light

0000 No Oil

KF-1

Approx. Segment Length: 4544m

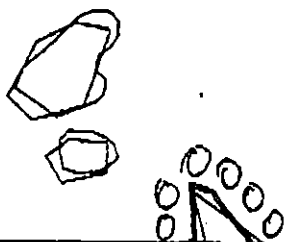


Map Key: AKP-KF-1d

Name: Greg Chaney

Date: May 11 1990

Data Entered:



XXXX Wide

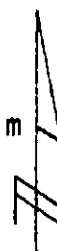
KF-1

● // Medium

---- Narrow Approx. Segment Length: 4544m

TTTT Very Light

0000 No Oil



Map Key: AKP-KF-1a

Name: Greg Chaney

Date: May 11 1990

Data Entered:

XXXX Wide

Medium

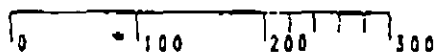
                                                                                  

TTTT Very Light

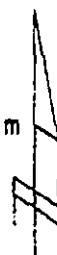
0000 No Oil

KF - 1

Approx. Segment Length: 4544m



METERS



Map Key: AKP-KF-1b

Name: May 11 1990

Date: Greg Chaney

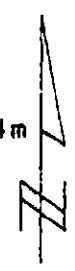
Data Entered:

10000000

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

KF-1

Approx. Segment Length: 4544m



Map Key: AKP-KF-1a
Name: Greg Chaney
Date: May 11 1996
Data Entered:

REGION: KODIAK

SEGMENT: ST/K09-24-KU-01

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ K09-24-KU-01 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/10 to 6/30)

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

Katmai National Park

Seabird colony in NOAA data base (unmapped)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 1510 m: No Oil 1542 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 tarmats in areas
shown on sketch map. Work should be conducted between 7/1 and 8/15
based on pinniped constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

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. 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 6/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (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)
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / K0924-K0001 SUBDIVISION: K0924-A DATE 7/21/90NOAA
1000
NAMEJohn Naughton

SIGNATURE

John J. Naughton☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Concentrations of medium oil in two locations in this segment. Appears like pavement but actually a mousse cover, approximately 2 meters wide in upper intertidal. Several areas continuous for 10 meters and varying in depth from 2 to 5 cms. Should be fairly easy to manually pick up and bag.

ADEC

NAME

Terry Ellsworth

SIGNATURE

Terry Ellsworth☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

This segment contains approximately 1400M of sporadic stain and mousse/sediment patties and 3 areas of broken mousse/sediment mat (soft asphalt) in the mid-intertidal zone. These areas have a thickness of up to 5cm and widths up to 3M. This area should be fairly easy to clean by manual methods.

LAND MANAGER

NAME

Carl Sabach

SIGNATURE

Carl Sabach☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

The indicated mats of asphalt/mousse can be manually removed. The remaining impacted sections should be walked by the work crew to manually remove scattered mousse patties.

REVISION NO. 05/21/90

OG LINDSAY NAKASHIMA

SEGMENT K0924-KU001

SUBDIVISION A

DATE 4/2/90

CHECKLIST

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

LEGEND

1 Δ
FR - No Subsurface Oil

2 Δ
FR - 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

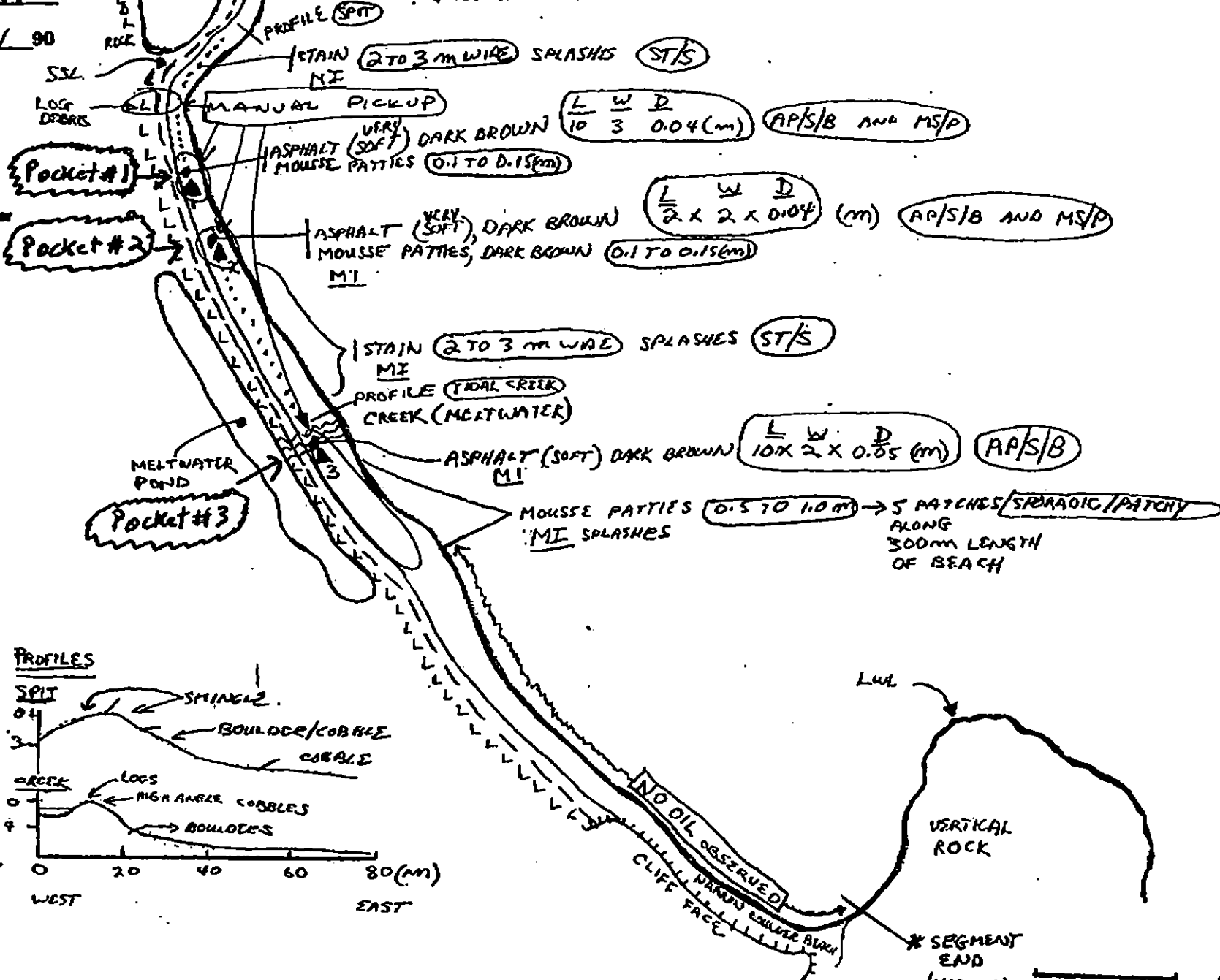
1 →
Photo location, direction, and number

1 →
Photo location, direction, and number

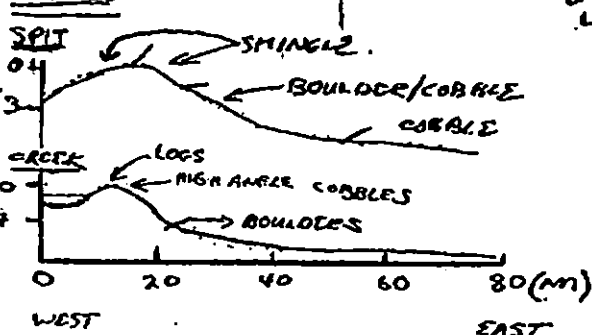
SEGMENT SKETCH MAP

START (14:40 HR)

WALKING DIRECTION



PROFILES



Oil Character Length (m): AP 22 PO 0 CV 0 CT 0 ST 1050 MS 0 PT 344 TB 0 FL 0 NO 1575

350 (m) REVISION 03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/K924K4001 Subdivision A Date (mo / day / yr) 4/21/90

Time (24 hr) 1440-1625 Biologist D. McCormick

(A) Substrate type and % of segments:
(1) Bedrock (2) Boulder 20 (3) Cobble 60 (4) Pebble 18 (5) Sand 2 (6) Silt

(B) Overall % cover of biota (% of segment): Dense 5 Moderate 50 Low 45

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

Photographs:
Roll No. ST-19-15

Frames 1-13

BARNACLES *Generally continuous throughout segment.*

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

NOT PRESENT

MYTILUS *Very patchy over the course of segment.*

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

NOT PRESENT

GASTROPODS *Littorines, limpets, L. lucina*

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

NOT PRESENT

FUCUS *Very patchy throughout, often dense when it occurs*

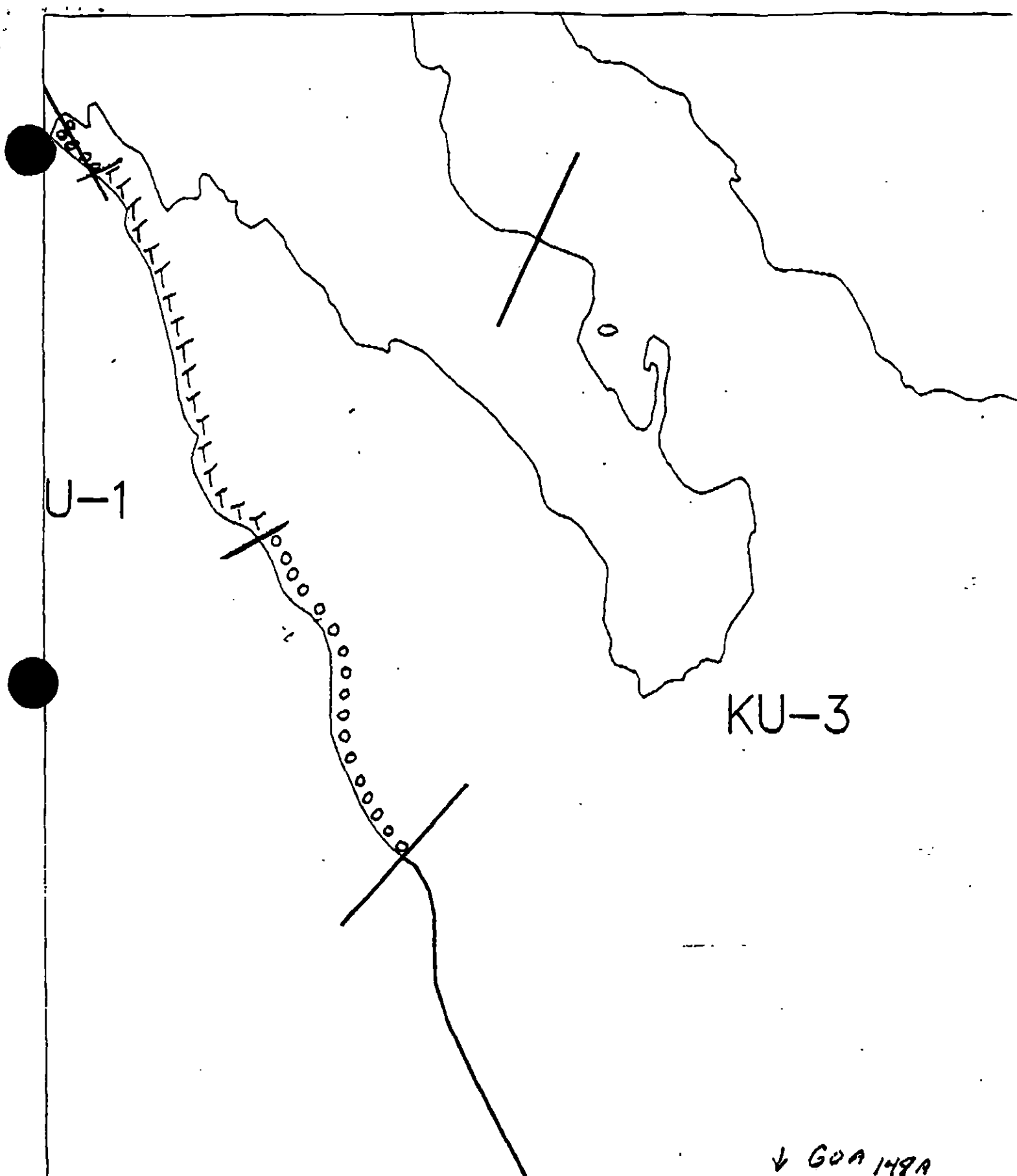
Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	3	2	3	3	2	3	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments: Birds seen: surf scoters, ravens, glauc-wing gulls; 1 stranded *Placochelone cantabrigiae*. Heavy recruitment in the lower ITZ of *Littorines* and *Balanus*. Filamentous green algae common in low- to mid ITZ. Ulva patchy in lower ITZ. Juvenile *Endocladia* patchy near east end of segment. No fauna seen in direct contact with oil (primarily in UITZ)

Ecological Considerations:

Salmon spawning stream (pinks, chums) at head of bay (segment). No known eagle nests. No marine mammals observed.



U-1

KU-3

KU-2

↓ GOA 148A

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

ADEC Segment Length: 8995m

0 300 600 900



Map Key: GOA-148c

Name: LINDSAY NAKASHIMI

Date: 4/21/90

SHORELINE EVALUATION

SEGMENT ST/ K09-24-KU-01 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/10 to 6/30)

30,3Q Harbor seal and sea lion molting (8/15 to 9/15)

Katmai National Park

Seabird colony in NOAA data base (unmapped)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 1510 m: No Oil 1542 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommend manual removal of mousse and tarmats in areas shown on sketch map. Work should be conducted between 7/1 and 8/15 based on pinniped constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 5/1/90

ADEC ART WEINER
EXXON ANDY TALL
NOAA Gregory Peters
USCG KENNETH KENNEDY

FOSC: WJL DATE: 5-12-90

OG LINDSAY NAKASHIMA

SEGMENT K0924-
K0001

SUBDIVISION A

DATE 4/2/90

CHECKLIST

- N Arrow
- Approx. Scale
- Seg/Box Backy
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HAWAII
- SSL
- Profile Location(s)
- Profile(s)
- PI 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

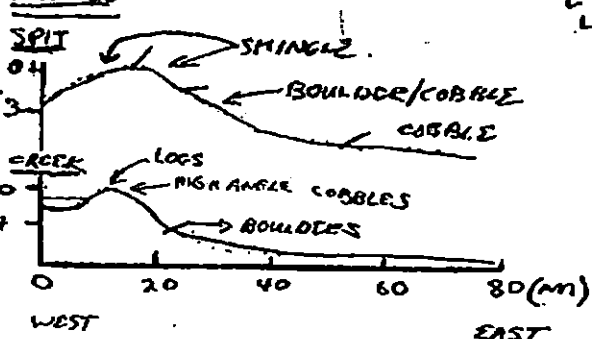
CT/P
Patchy Distribution

CT/S
Splashed Distribution

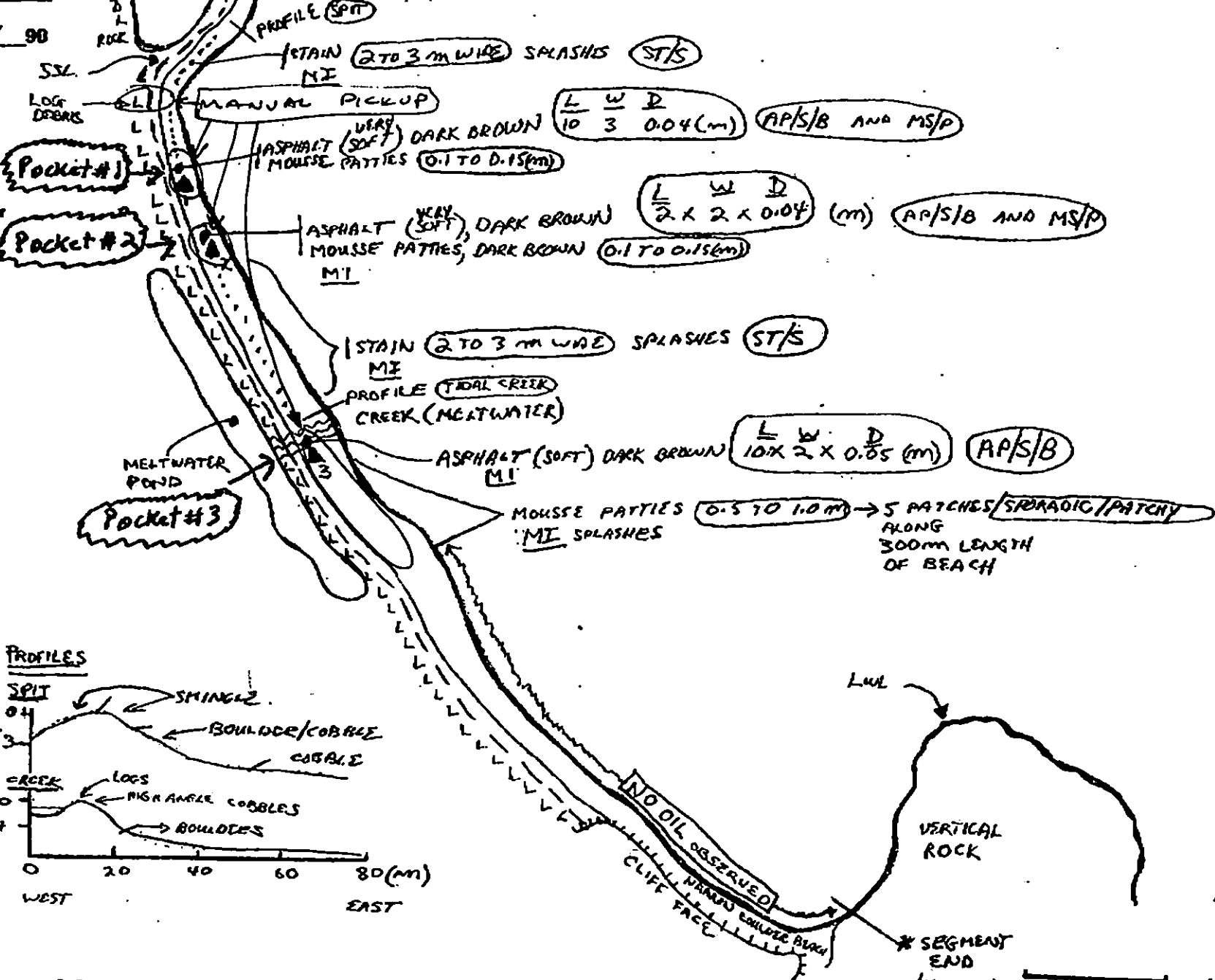
Oil Vegetation

1 →
Photo location, direction, and number

PROFILES

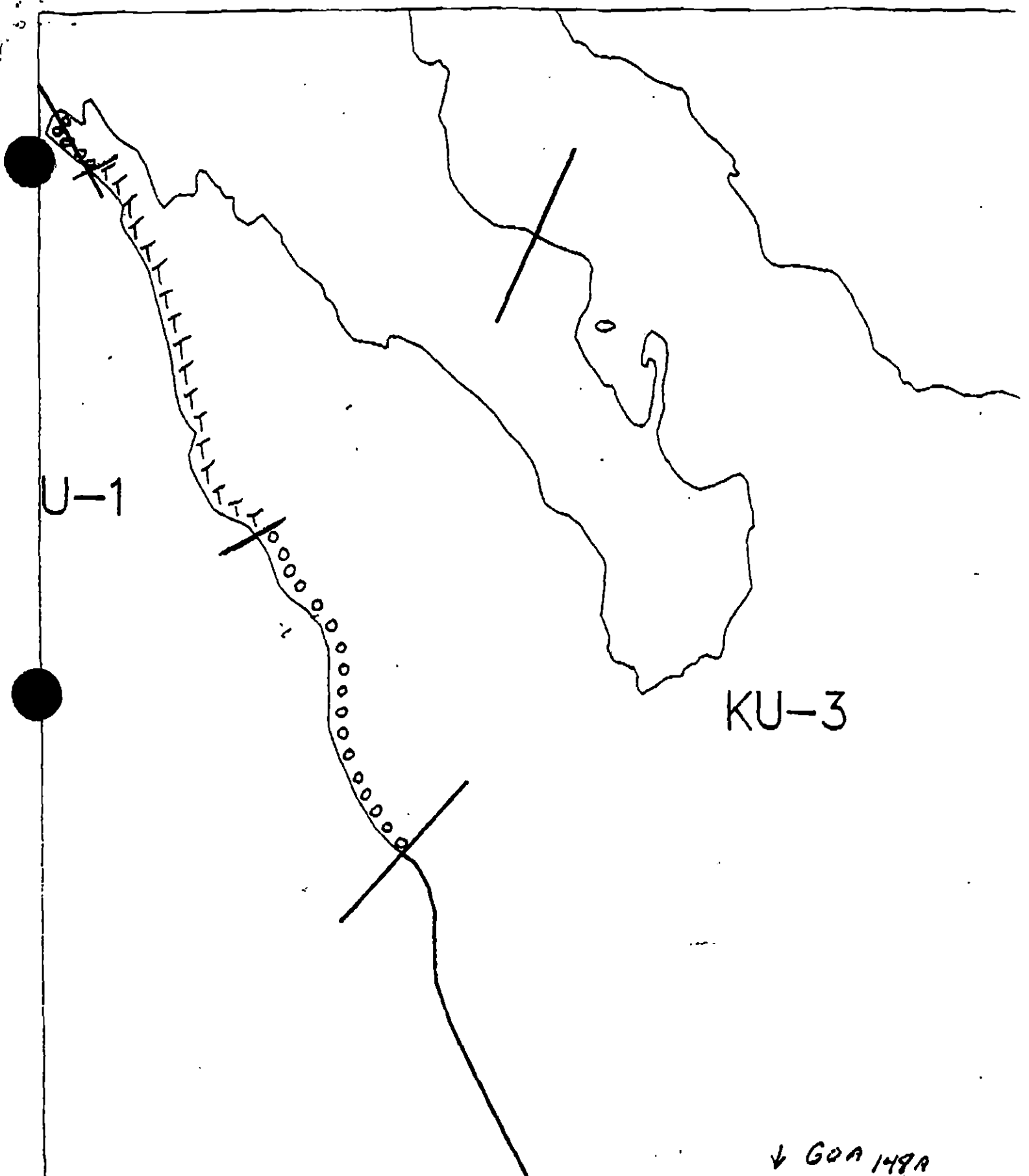


SEGMENT SKETCH MAP
START (14:40 HR)
WALKING DIRECTION



Oil Character Lengths (m): AP 22 PO 0 CV 0 CT 0 ST 1050 MS 0 PT 344 TB 0 FL 0 NO 1575

350 (m)
N
REVISION: 03/01/90

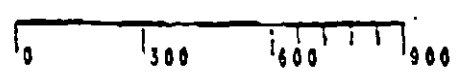


↓ GOA 148A

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

ADEC Segment Length: 8995m

KU-2



Map Key: GOA-148c
Name: LINDSAY NAKASHIMA
Date: 4/21/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-24-KU-01 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous stream (262-35-10010) is more than 100m from work site. No constraint to manual pickup.
3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Molting	No constraint to manual pickup (Donald Calkins/ADF&G) per 6/11/90 memorandum from Sam Stoker.
5R	Seabird Colony	No documented seabird colonies. No constraint to manual pickup as per Letter dated 6/15/90 to Rex Coulter/Exxon from WALTER STIEGLITZ, USFWS.

OTHER ECOLOGICAL CONSIDERATIONS

Beach is to be approached with caution, by boat, and carefully scrutinized. If seals are present on the beach or in the water nearby, operations are to be suspended until after expiration of the previously defined constraint period. If seals are not present, treatment is to be completed as quickly as possible, with as few personnel and equipment as possible, and with an absolute minimum level of noise and general disturbance. Any application of bioremediation should be confined to above the mid-tide zone.

FOSC

[Signature]

Date

6-15-90

Prepared by

[Signature]

Date

6/15/90

SHORELINE EVALUATION

SEGMENT ST/ K09-24-KU-01 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/10 to 6/30)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
Katmai National Park
Seabird colony in NOAA data base (unmapped)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 1510 m: No Oil 1542 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommend manual removal of mousse and tarmats in areas shown on sketch map. Work should be conducted between 7/1 and 8/15 based on pinniped constraints.

SEE CONSTRAINTS ADDENDUM DATED 6/15/90

TAG COMMENTS:

TAG APPROVAL DATE: 5/1/90
ADEC DET WENDE
EXXON ANDY TGM
NOAA BOB PETERSON
USCG KEVIN M. KILPATRICK

FOSC: WJL DATE: 5-12-90

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (4/15 to 7/31)
1B Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)
5R Seabird colony (5/1 to 8/31)
5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: A. David McManis DATE: 3/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 10 m: V.Light 0 m: No Oil 3548 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS:_____

TAG APPROVAL DATE: 5/1/90.
ADEC Art Weiner Art Weiner
EXXON Andy Tea Andy Tea
NOAA Gary Petrac Gary Petrac
USCG KENNETH KEANE Kenneth Keane

FOSC: DATE: 5-12-90

OG Acton

SEGMENT ST/ K9-23 - CG-3

SUBDIVISION K9-23 - CG-3A

DATE 4 / 23 / 90

CHECKLIST

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

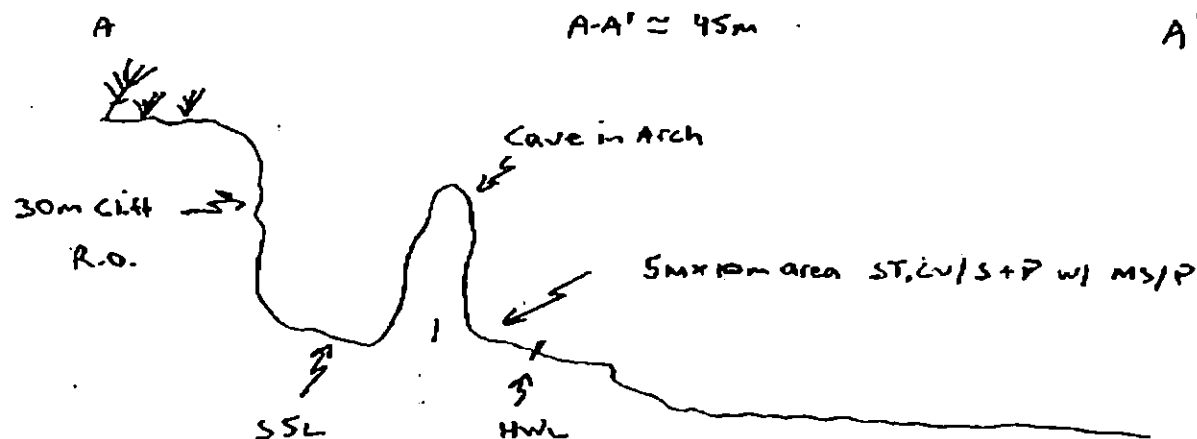
Splashed Distribution

Oiled Vegetation

1 $\Rightarrow$

Photo location, direction,
and number

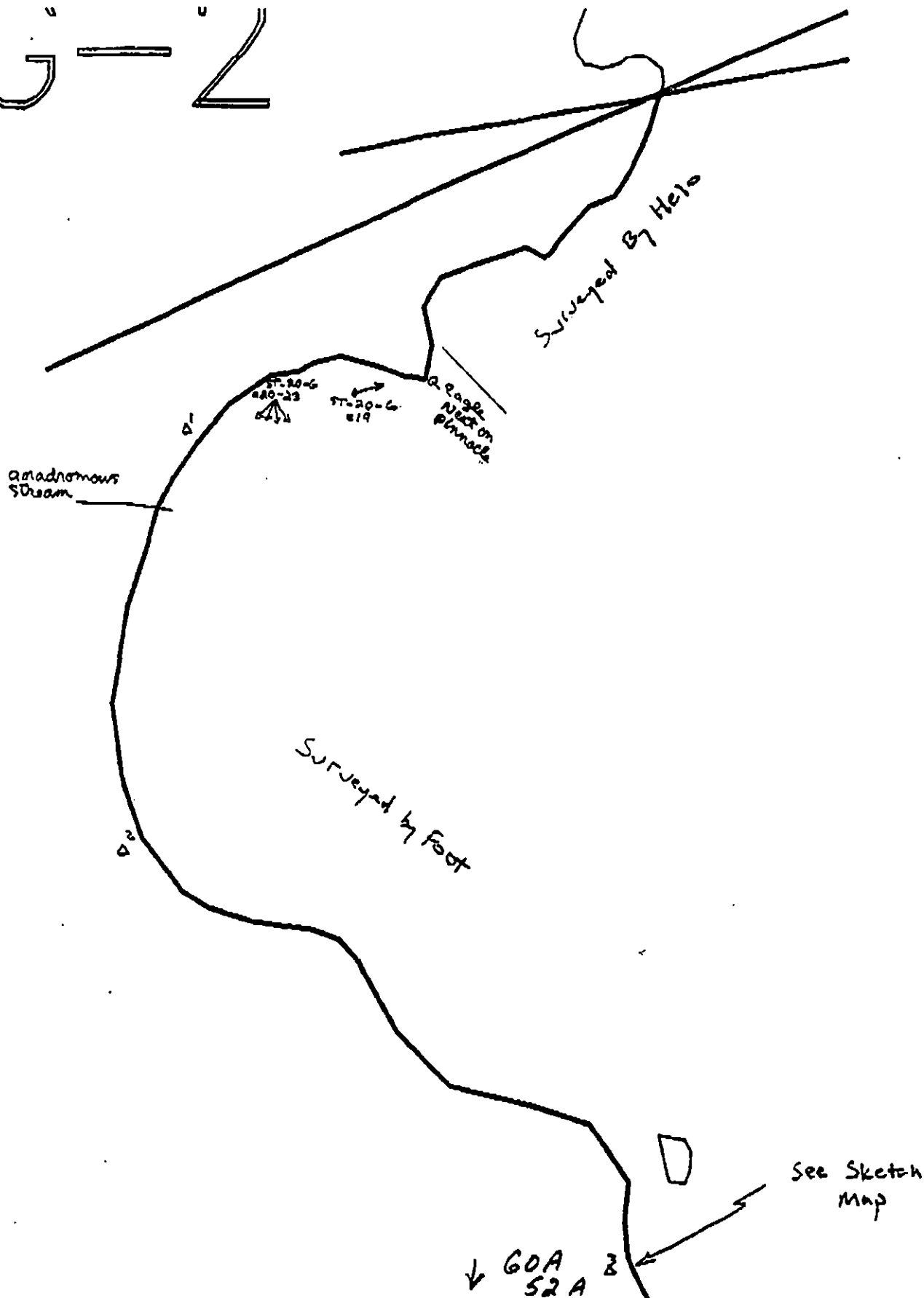
SKETCH MAP



Oil Character Length (m): AP 0 PO 0 CV 0 CT 10 ST 10 MS 10 PT 0 TB 0 FL 0 NO 3508

REVISION: 02/24/90

CG-2



XXX Wide	CG-3	K9-23-CG-3A
/// Medium		Map Key: GOA-52b
--- Narrow	ADEC Segment Length: 3557m	Name: <u>Acton</u>
TTTT Very Light	0 100 200 300	Date: <u>4-23-90</u>

GOA
52B

CG-3

Surveyed By Foot

Surveyed by Helo

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

CG-3

ADEC Segment Length: 3557m

0 100 200 300

K9-23 - CG-3A

Map Key: GOA-52a

Name: Acton

Date: 4-23-90

Data Entered:

GOA
52B

CG-3

K9-23-CG-3A

XXXX Wide

CG-3

/// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ADEC Segment Length: 3557m



K9-23-CG-3A

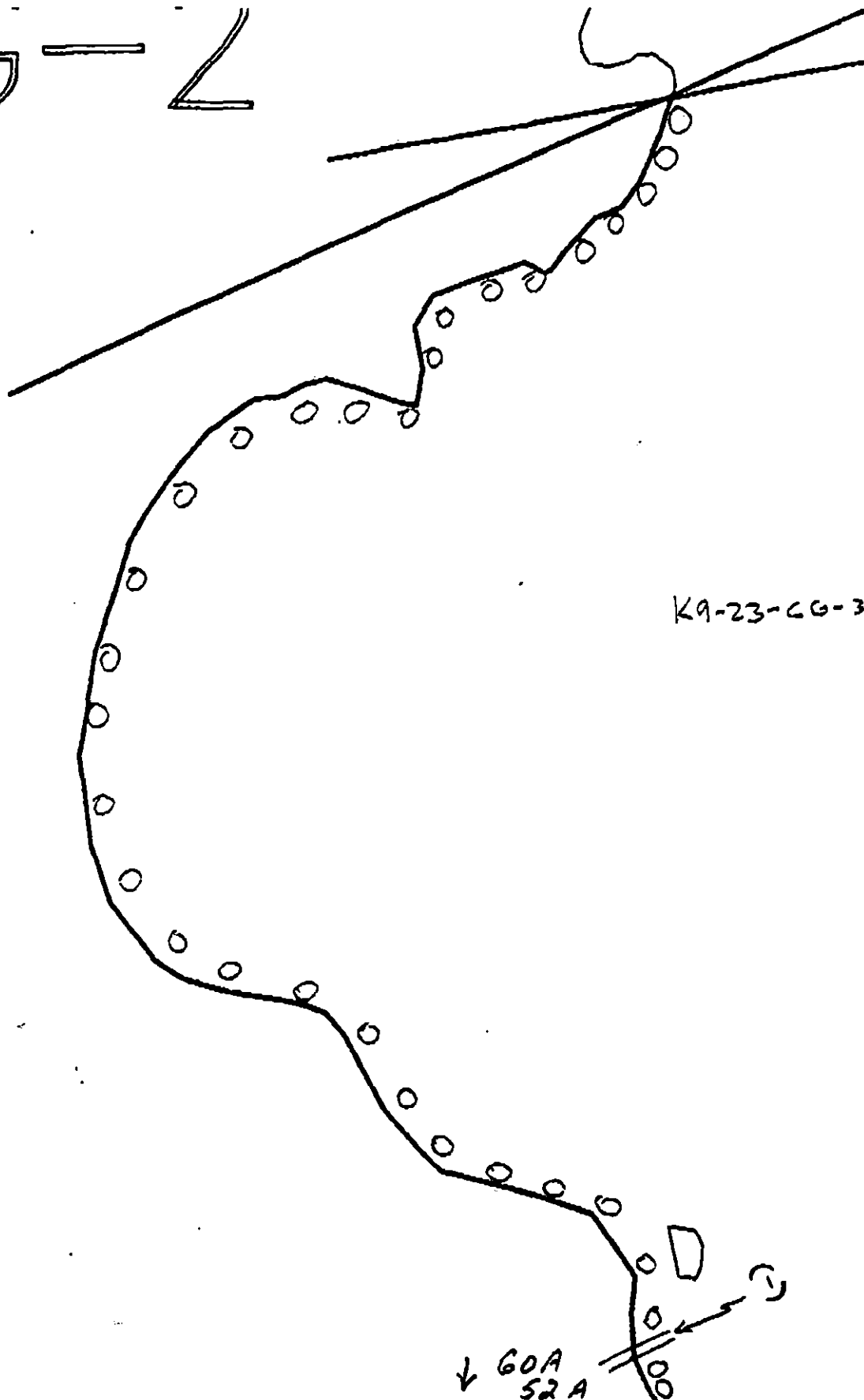
Map Key: GOA-52a

Name: Acton

Date: 4-23-90

Data Entered:

CG-2



K9-23-CG-3A

↓ GOA 52A

XXX Wide

CG-3

K9-23-CG-3A

/// Medium

Map Key: GOA-52b

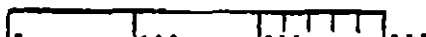
--- Narrow

ADEC Segment Length: 3557m

Name: Acton

TTTT Very Light

Date: 4-23-90



REGION: KODIAK

SEGMENT: ST/K09-23-CG-03

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (4/15 to 7/31)
1B Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)
5R Seabird colony (5/1 to 8/31)
5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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 10 m: V.Light 0 m: No Oil 3548 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

SUPERCEDED

- 1A Salmon stream mouth - fry outmigration (4/15 to 7/31)
 1B Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
- 1D 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.
- 6J 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 (8/1 to 1/7)
- 7JJ Invertebrate harvesting
- 7KK Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

SEGMENT ST/ K 9-23 CG-003 SUBDIVISION: K9-23-CG-3A DATE 4.23.90

USCG

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

Oil not recoverable.

ADEC

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

One small area of LIGHT oil remains here in the form of CT, CV, ST, and MS. The mousse is trapped in rock crevices & under boulders, & is relatively unretrievable by manual methods.

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

oil very scattered and not much there. Do not feel it is possible to clean by manual means or would be worth the effort

SHORELINE OILING SUMMARY

REVISION NO. 34-1390

OG Acton USCG Haven SEGMENT ST/ K9-23-C6-3
 BIO Davis LAND REP NPJ Trevor, James SUBDIVISION K9-23-C6-34 (1 OF 1)
 EXXON Avery ADEC Bennis TIME 7:15 10 9:30
 TEAM NO. 20 TIDE LEVEL -1 to +1 DATE 4 / 23 / 90
 EST. SUBDIVISION LENGTH: 3518 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☒ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 25 % B 25 % C 20 % P 10 % G 10 % S 10 % M 0 % V 0 %
 SLOPE: Long 60 % Hang 20 % Vert 20 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 10 m VL 0 m NO 3508 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	IC	IS	IP	IR	SL	SP	OL	OP	OR	NO	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. _____

Frames _____

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SEES (Y/N)	▽	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OP	NO		VO	UC	SL	SP	OL	OP	OR	NO	SU	U	M	L				
1	20					✓	.		✓							✓							P _G
2	20					✓	.		✓							✓							P _G
3	10					✓	.		✓							✓							B, R
							.																
							.																
							.																

COMMENTS Oil was observed at one location in band approx 5m wide x 10 m long, ST, CT/S+P and M3/P. M3 was in between some B/R/C up to 3-4cm thick. This area is classified as narrow. Other than this area, only very light, very occasional splot on driftwood was observed.

The 5m x 10m band is located in and around a rock cave.

REVIEWED BAT DATE 24 Apr 90

DATE 4 / 23 90

SKETCH MAP

CHECKLIST

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

LEGEND

1 Δ

Fig - No Subsurface Oil

24

Flt - Subsurface CH

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

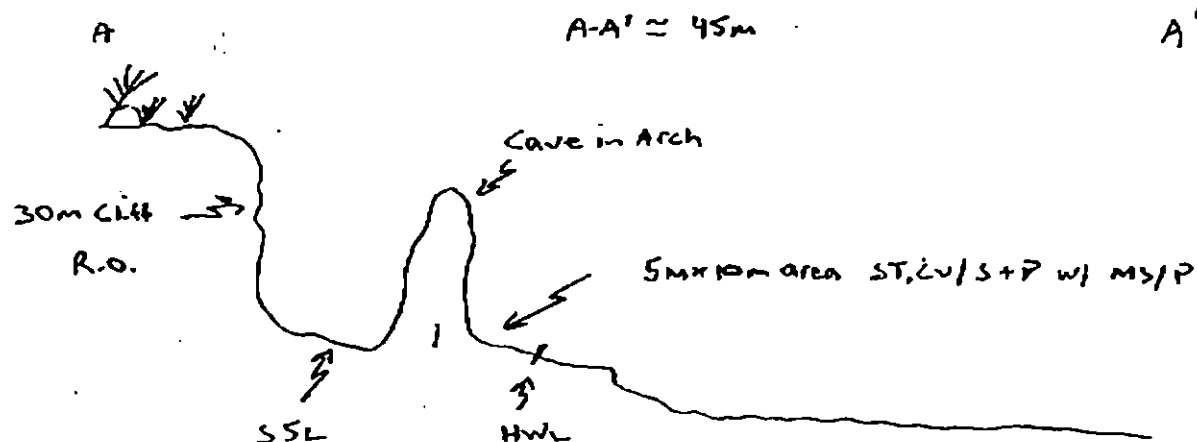
Patchy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

1.

**Photo location, direction,
and number**

Oil Character Length (m): AP ☐ PO ☐ CV ☐ CT ☒ ST ☒ MS ☒ PT ☐ TB ☐ FL ☐ NO 3508

REVISION: 02/24/99

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/79

Segment ST / K09-23 Subdivision CG-03 Date (mo / day / yr) 4/23/90Time (24 hr) 07:15 Biologist H. Davis

(A) Substrate type and % of segments:

(1) Bedrock 25 (2) Boulder 25 (3) Cobble 20 (4) Pebble 20 (5) Sand 20 (6) Silt(B) Overall % cover of biota (% of segment): Dense 15% Moderate 40% Low 45% (50%)

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

Photographs:

Roll No. ST-20-6Frames 19-24

BARNACLES continuous except in sand covered areas

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

MYTILUS very patchy, in LTZ No Bkts.

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

GASTROPODS continuous except in sand covered areas. Limpets + Littorina on underside of Rocks.

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

FUCUS Patchy Tops of Rocks + bedrock.

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

Wildlife Observations/ General Comments: Eagles nesting at northern tip. Bluffs above sand, cobble, boulder and bedrock beaches. Sandy areas have fewer animals. No Barnacles. No Mytilus. No Littorina. Bedrock and large boulder in the mid-low intertidal had dense flora and fauna. Mid to upper boulders and cobbles had continuous moderate barnacles, limpets + littorina cover. Alginatum green - fucus covered the tops of rocks.

Ecological Considerations: IA, IB, ST-1, Anadromous stream on the northern end of the segment. On one of the pinnacles at the northern end of CG-03 there is a pair of eagles and a nest. SR

DATE 4/23/90 TIME 07:15 - 09:20 TIDE HEIGHT -1.4 to +11 = BEDROCK 2 = BOULDER 3 = COBBLE 5 = SAND 6 = SILT
4 = pebble

	SPECIES	UITZ	MITZ	LITZ	COMMENTS
FLORA:	BOSSIELLA/CORALLINA	-	1, 2	1, 2	In pools only
	CALLIARTHRON/CORALLINA	-	1, 2	1, 2	In pools only
	CLADOPHORA SPP	-	2, 3		
	COSTARIA SPP	-	-	-	In drift
	ENDOCLADIA MURICATA	1, 2, 3	1, 2, 4	-	Patches (tufts ~ 6cm)
	FILAMENTOUS GREENS	2, 3	2, 3	1, 2, 3	On the tops of cobbles/boulders.
	FILAMENTOUS REDS	-	2, 3	1, 2, 3	On the tops of cobbles/boulders
	GLOIOPELTIS FURCATA	-	-	-	
	HALOSACCION GLANDIFORME	1, 2	1, 2	1	
	LAMINARIA SPP	-	-	1	
	LITHOTHAMNION	-	-	-	
	NEREOCYSTIS SPP	-	-	-	Off shore or in drift on beach.
	PORPHYRA SPP	-	-	-	
	RALPHSIA/HILDENBRANDIA/PeDactyl	-	-	-	
	RHODOMELA LARIX	-	1, 2, 3	1, 2	
	RHODOMENIA PALMATA	1, 2	1, 2, 3	1, 2	In pools in the MITZ
	SCYTOSIPHON SPP	1, 2	1, 2, 3		
	ULVA SPP	-	1, 2	1, 2	
	ZOSTERA MARINA	-	-	-	
	ENTOMORPHA	1, 2	1, 2		Near freshwater flow
FAUNA:	ANTHOPLEURA SPP	1	1	1	seen in pools
	(SEMI) BALUNUS CARIOSUS	-	1, 2, 3	1, 2, 3	
	B. GLANDULA	1, 2, 3	1, 2, 3	1, 2	
	BRYOZOANS	-	-	-	
	CHITONS (other than K. TUNICATA)	-	-	-	
	CLAMS	-	-	-	As shell debris some had been drilled
	CRABS	-	-	-	
	DERMASTERIAS IMBRICATA	-	-	-	
	KATHARINA TUNICATA	1, 2	1, 2	1	
	LEPTASTERIAS HEXACTIS	2	-	-	one large (7cm) specimen alone on a boulder
	LIMPETS	1, 2, 3	1, 2, 3	1, 2, 3	crowded on the underside of rocks.
	LITTORINA SPP	1, 2, 3	1, 2, 3	1, 2	very dense in spots, under rocks (no eggs)
	NUCELLA SPP	2	1, 2	-	Found eating barnacles
	PAGURUS SPP	-	-	-	
	PISASTER OCHRACEUS	-	-	-	
	POLYCHAETES	-	-	-	
	PYCNOPODIA HELIANTHOIDES	-	-	-	
	SEARLESIA DIRA	-	-	-	
	SERPULIDS	-	-	-	
	SIPHONARIA THERSITES	-	-	-	
	TEALIA	-	1, 2	1	

CG-2

anadromous stream

ST-20-6
40-23
434

ST-20-6
a19

2 eagle
Nest on
pinacle

Surveyed by Helo

Surveyed by Foot

See Sketch Map

↓ GOA 52A 2

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

CG-3

ADEC Segment Length: 3557m

0 100 200 300

K9-23-CG-3A

Map Key: GOA-52b

Name: Acton

Date: 4-23-90

T
GOA
52B

CG-3

Surveyed By Foot

Surveyed by Helo

CG-3

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ADEC Segment Length: 3557m



K9-23 - CG-3A

Map Key: GOA-52a

Name: Acton

Date: 4-23-90

Data Entered:

71
60A
52B

CG-3

K9-23-CG-3A

XXXX Wide

/// Medium

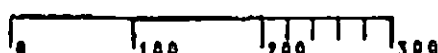
---- Narrow

TTTT Very Light

0000 No Oil

CG-3

ADEC Segment Length: 3557m

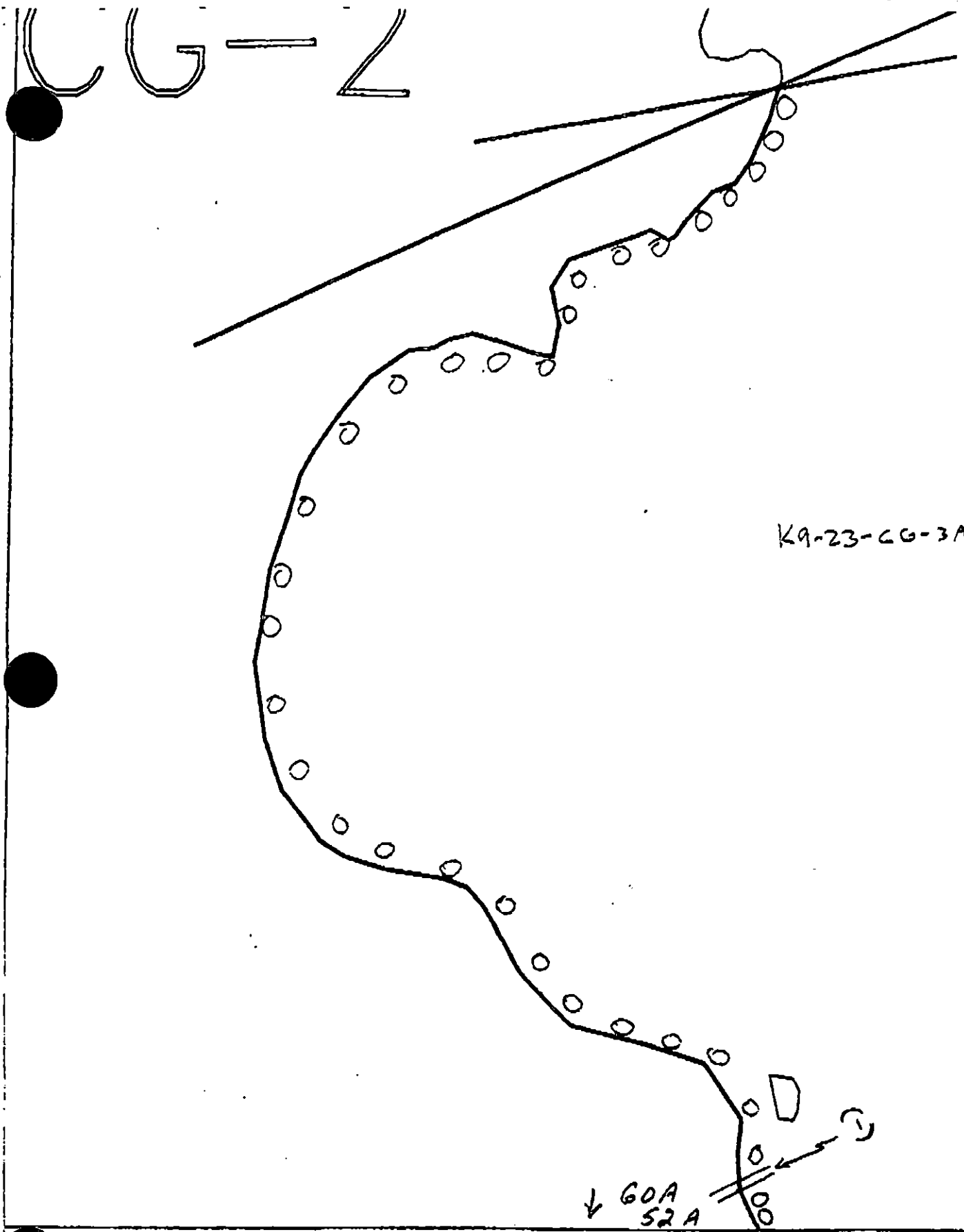

METERS

K9-23-CG-3A

Map Key: GOA-52a

Name: ActonDate: 4-23-90

Data Entered:



XXX Wide

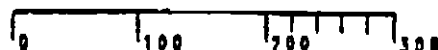
//// Medium

--- Narrow

TTTT Very Light

CG-3

ADEC Segment Length: 3557m



K9-23-CG-3A

Map Key: GOA-52b

Name: Acton

Date: 4-23-90

REGION: KODIAK

SEGMENT: ST/K09-24-KU-02

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ K09-24-KU-02 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

30,3Q Harbor seal and sea lion molting (8/15 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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 90 m: Narrow 215 m: V.Light 4535 m: No Oil 1286 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,
patties, and oiled debris, 2) bioremediation in areas indicated on
sketch map. Work should be conducted between 6/30 and 8/1 due to
above pinniped constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

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

SEGMENT ST / K0924-KU002 SUBDIVISION: K0924-A DATE 4/21/90NOAA
USCGNAME John Naughton SIGNATURE John Naughton☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

This extensive segment had very little oil on the inner (north) two-thirds portion, with occasional splatters and stain observed high in the upper intertidal. As approach Kuliak Bay mouth more high energy environment with four areas of continuous stain and coat on large boulders. Mousse pooled at base of large boulders. However very difficult for manual removal without moving large rocks. Because of high energy will weather and dissipate naturally - recommend no treatment.

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

Two areas in the segment, a narrow area in the middle of segment and a medium area near the SE end of segment, contain coats, stains and mousse/sediment trapped at the base of large (5'-6') boulders. Although in high energy areas the mousse trapped between the boulders will not quickly or easily be removed naturally. I recommend manual treatment of these Areas, best accomplished by use of small hand tools.

LAND MANAGER

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

The indicated 4 areas of pooled mousse, cover, coat and stain have not changed significantly over the winter. These areas are generally protected by large boulders and may persist for a long time. Areas with pooled mousse and cover should be manually removed. Ciled fishing nets should be cut away from angular boulders and logs and removed. With a work crew in this area, the remaining impacted section should be walked, and patches of scattered pooled mousse should be manually removed.

REVISION NO. 012190

NOAA JOHN NAKHON

OG LINDSAY NAKASHIMA USCG BILL MILLER (NRS) SEGMENT STI K0924-KH062
 BIO DER MCCORMICK LAND REP CARL SCHACH (NRS) SUBDIVISION K0924-A (1 OF 1)
 EXXON FRED BYARS ADEC TERRY BILLSWORTH TIME 4:45 to 8:10 PM
 TEAM NO. 19 TIDE LEVEL +1.1 to +2.33 AT DATE 4/21/90

EST. SUBDIVISION LENGTH: 6170 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 PLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock SPARSELY VEGETATED
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: NW to SE
 SURFACE SEDIMENTS: R 70 % B 20 % C 5 % P 4.5 % S 0.5 % M 0 % V 0 %
 SLOPE: Lang 30 % Hang 40 % Vert 30 % WAVE EXPOSURE: ☒ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 52 m N 80 m VL 4798 m NO 1240 m

SURFACE OIL

CHARACTER	DISTRIBUTION					OIL / FILM COLOR					IMPACTED ZONES			
	TC	TS	PS	PS	PS	SW	SW	SW	SW	SW	SU	U	M	U
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT		X	X			X					X			
STAIN		X	X			X					X			
MOUSSE			X					X			X	X		
PATTIES				X				X			X			
TARBALLS			X					X			X			
FILM														
NO OIL											X			X

PAVEMENT H F S NONE sq. m by C cm

PATTIES / TARBALLS NONE 250 BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

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

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒

TYPE ---

#BAGS 0

Photographs:

Roll No. ST-19-15

Frames 14-23

SUBSURFACE OIL — NO PITS DUE DUE TO SUBSTRATE CHARACTER

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (%)	YIN	V	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	VO	SW	SW	SW	SW	SW	SU	U	M	U					

COMMENTS — TIDE FALLING AT START OF SURVEY, RISING AT END OF SURVEY
 — LAST 100M NOT SURVEYED

13 PP

REVISED LN
 4/23

REVIEWED BAT DATE 24A290

OG LINDSAY NAKASHIMA
 SEGMENT K0924-K4002
 SUBDIVISION K0924-K4002A

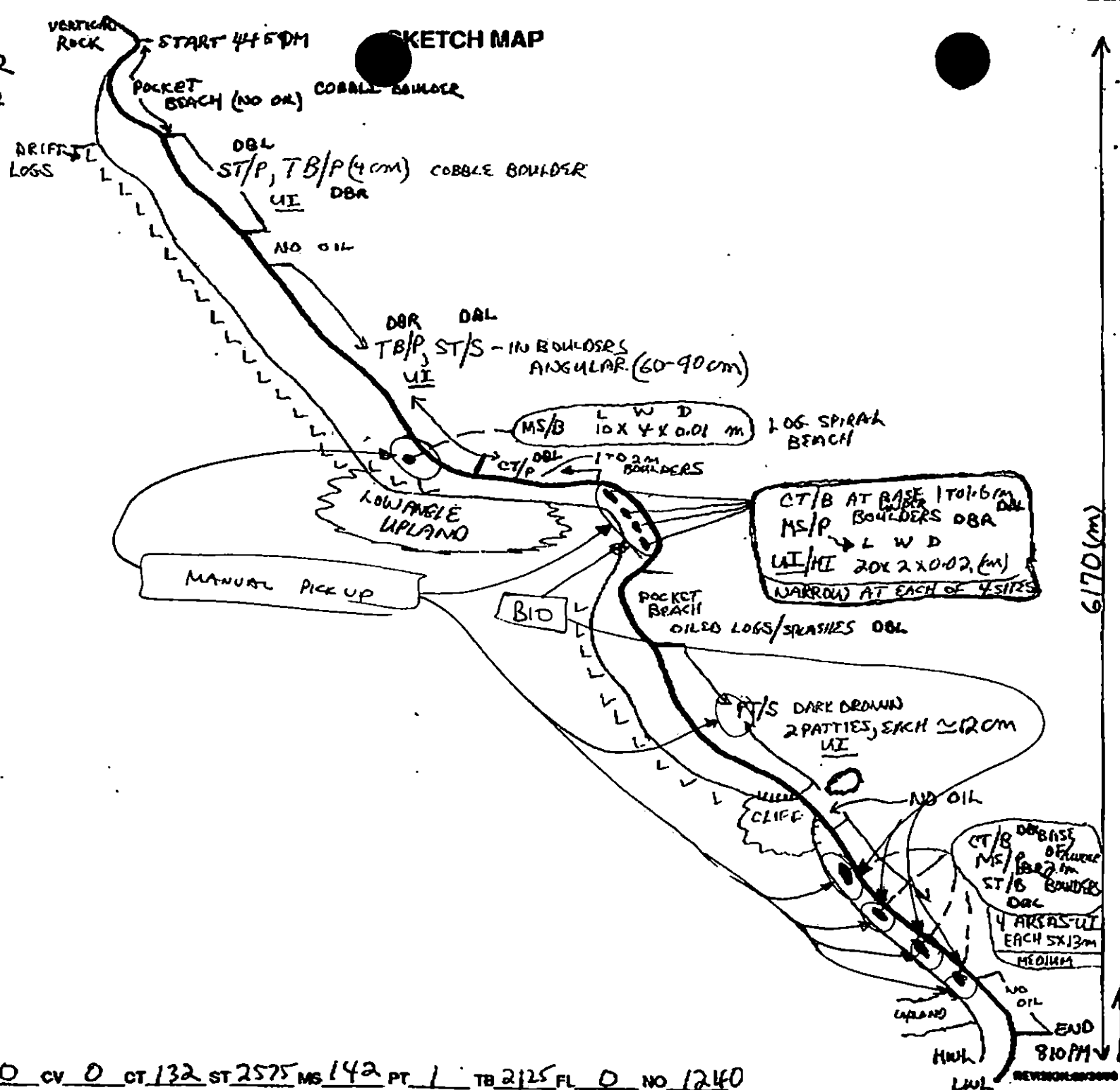
DATE 4/2/90

CHECKLIST

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

LEGEND

- 1 Δ
 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 132 ST 2575 MS 142 PT 1 TB 2125 FL 0 NO 1240

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / K924 K4002 Subdivision A Date (mo / day / yr) 4-21-90Time (24 hr) 1640-2000 Biologist D. McCORMICK

- (A) Substrate type and % of segments:
 (1) Bedrock _____ (2) Boulder 70 (3) Cobble 20 (4) Pebble 9 (5) Sand 1 (6) Silt _____
- (B) Overall % cover of biota (% of segment): Dense 10 Moderate 60 Low 30
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
Roll No. ST-19-15Frames 14-23

BARNACLES Generally continuous, moderately dense esp. in LITZ, not on pebble/cobb beaches

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

NOT PRESENT
on peb, sand

MYTILUS Present mostly in patchy dense clumps on boulders - new recruits in crevices.

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

NOT PRESENT
on peb, sand

GASTROPODS Littorines continuous throughout segment; recruits abundant; not present on sand/peb pocket beach

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

NOT PRESENT
on peb, sand

FUCUS Usually patchy - juveniles prevalent

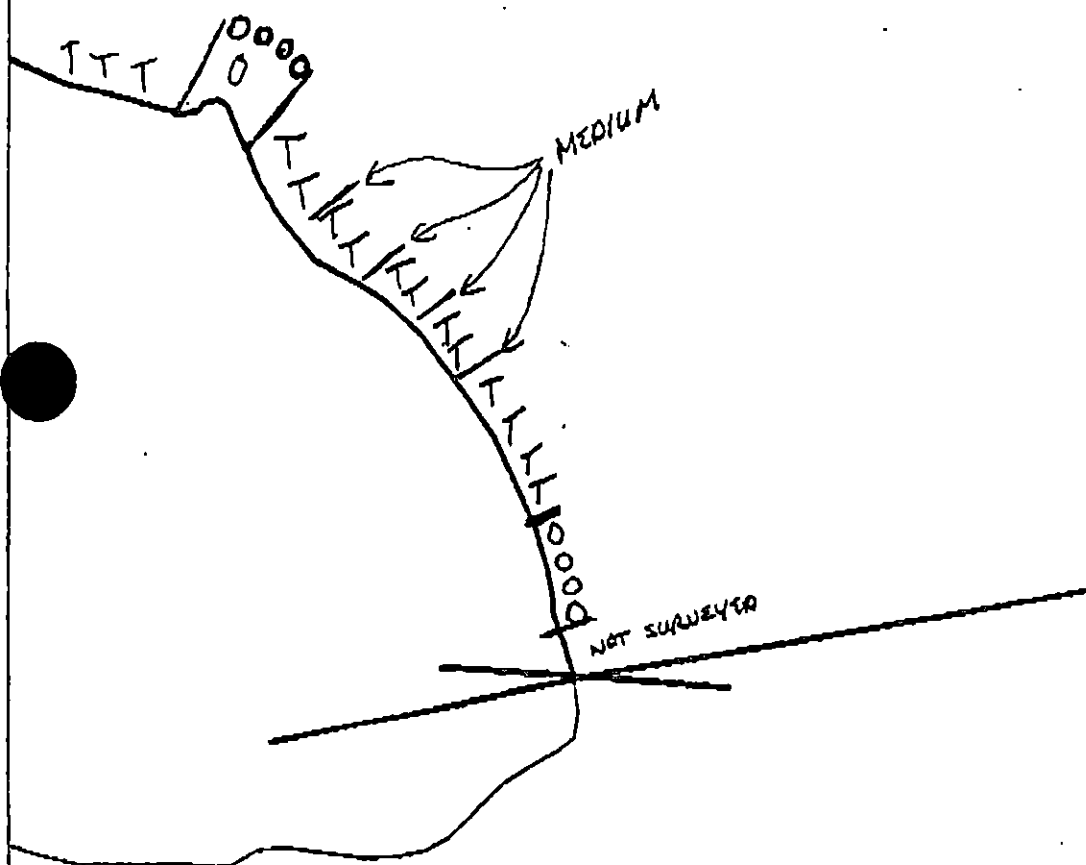
Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT
on peb, sand

Wildlife Observations/ General Comments: Algae noted: *Petrelia* or *Ralfsia* occasionally seen in mid to upper ITZ, *Littorhamnum* in tidal pools; *Helicodonta* and *Ulva* in tidal pools, *Enteromorpha* commonly dense in lower ITZ at eastern end of segment, completely covering boulders. Other fauna - Filamentous red + green algae in mid - lower ITZ; *Anthopleura* + *Tessell* in tidal pools; patchily dense *Nucella* eating barnacles. No fauna in direct contact with oil.

Ecological Considerations

2 bald eagles seen @ 1 mi W of Cape Kuliak - no nest observed. Glaucous-winged gulls. No marine mammals observed.



← GOA
148A

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO

KU-2

ADEC Segment Length: 8995m

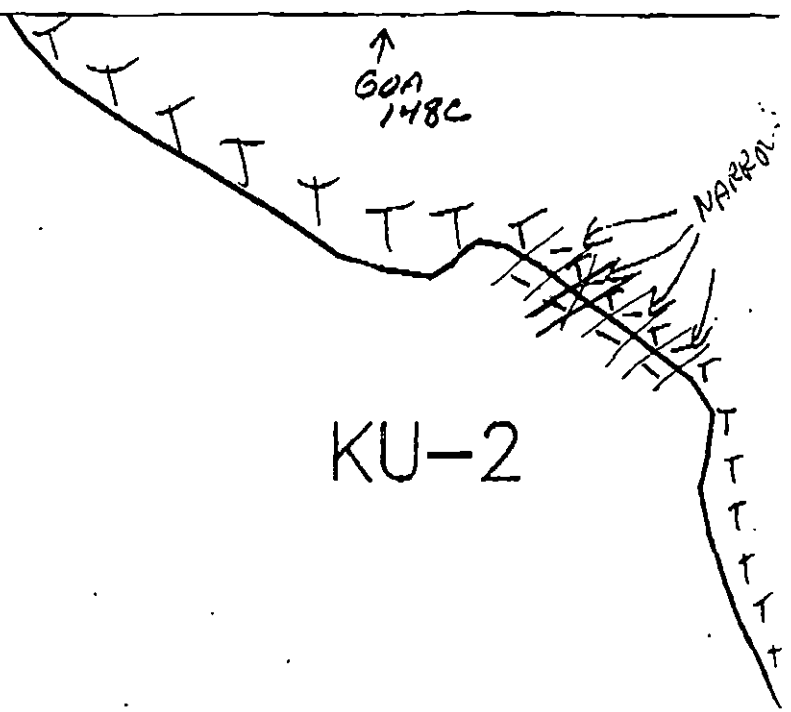
0 300 600 900



Map Key: GOA-148b

Name: L. NAKASHIMA

Date: 4/21/90



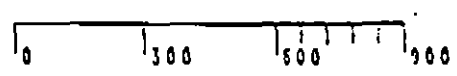
KU-2

GOA
148B

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

KU-2

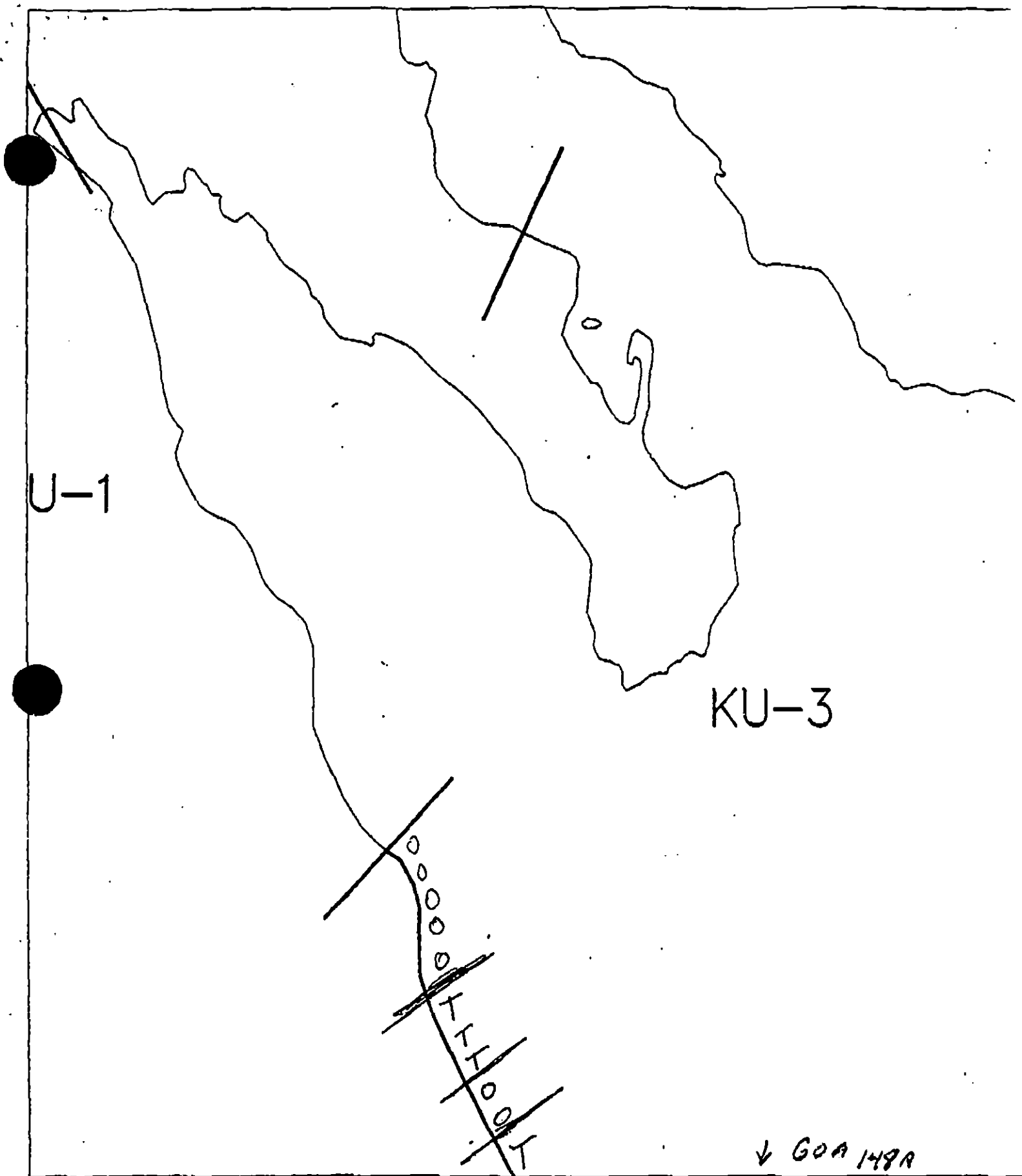
ADEC Segment Length: 8995m



Map Key: GOA-148a

Name: L. DIAKPSHUMB

Date: 4/21/90



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

ADEC Segment Length: 8995m



Map Key: GOA-148c

Name: L. NAKASHIMA

Date: 4/21/90

SHORELINE EVALUATION

SEGMENT ST/ K09-24-KU-02 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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: 5/2/90

OILING CATEGORIZATION:

Wide 0 m: Medium 90 m: Narrow 215 m: V.Light 4535 m: No Oil 1286 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of mousse, patties, and oiled debris, 2) bioremediation in areas indicated on sketch map. Work should be conducted between 6/30 and 8/1 due to above pinniped constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 5/2/90
ADEC [Signature]
EXXON [Signature]
NOAA [Signature]
USCG [Signature]

FOSC: [Signature] DATE: 5-8-90
NO INIPDL - Customblend only in upper,
Supra intertidal at discretion of NPS monitor.

OG LINDSLEY NAKK10171713
 SEGMENT K0924-K4002
 SUBDIVISION K0924-K4002A
 DATE 4/2/90

CHECKLIST

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

LEGEND

1 Δ
 Pt - No Subsurface Oil

2 Δ
 Pt - Subsurface Oil

CT/C
 Continuous Distribution

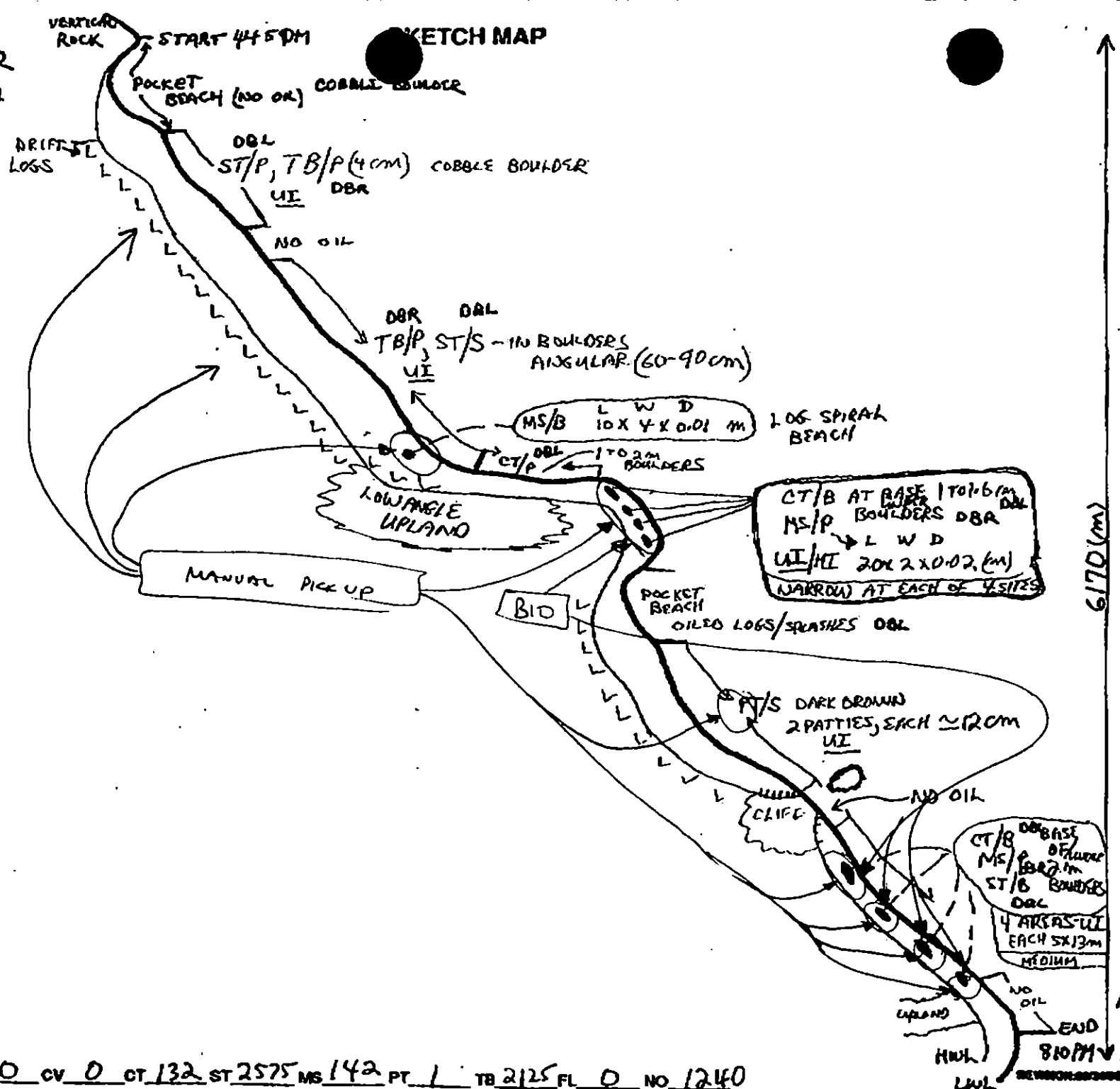
CT/B
 Broken Distribution

CT/P
 Patchy Distribution

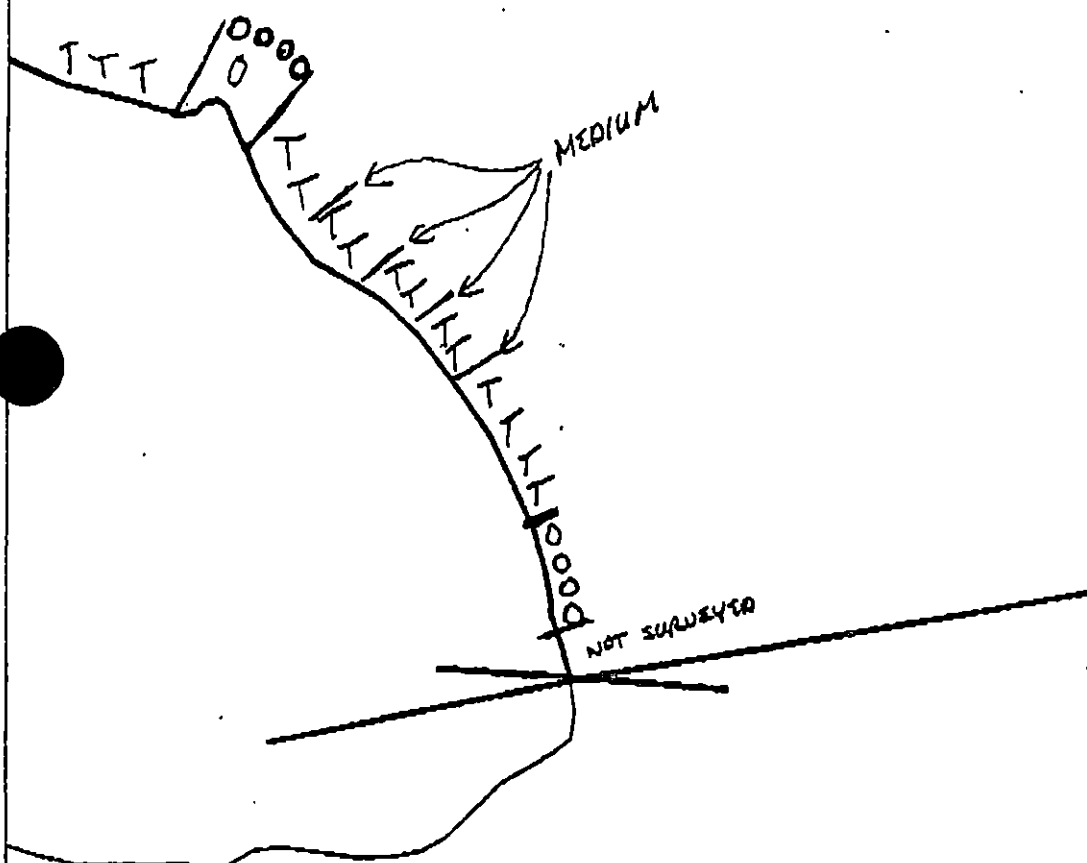
CT/S
 Splashed Distribution

lll
 Old Vegetation

1 ●
 Photo location, direction,
 and number



Oil Character Length (m): AP 0 PO 0 CV 0 CT 132 ST 2575 MS 142 PT 1 TB 2125 FL 0 NO 1240

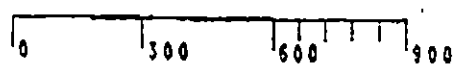


← GOA
148A

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

KU-2

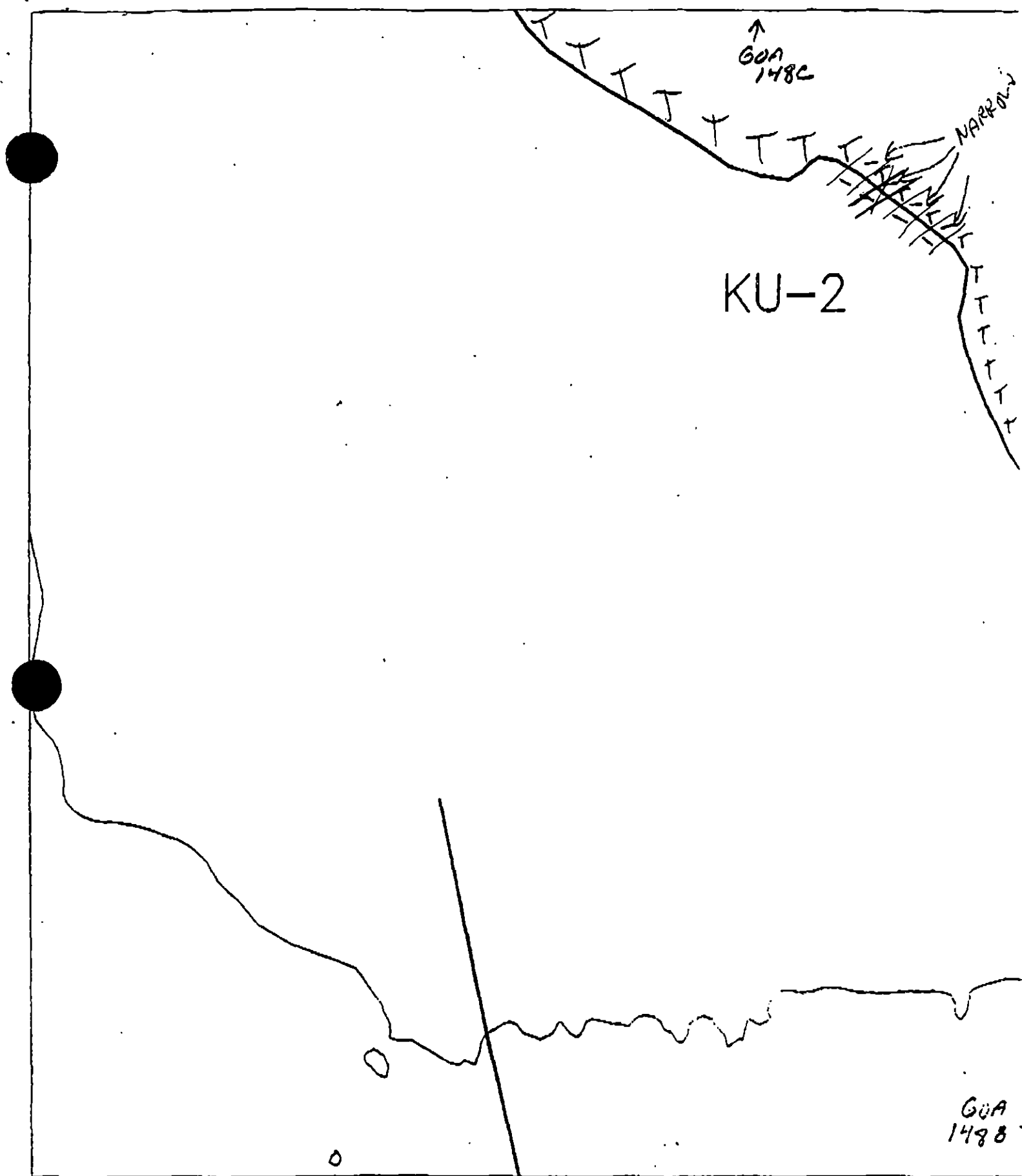
ADEC Segment Length: 8995m



Map Key: GOA-148b

Name: L. NAKASHIMA

Date: 4/21/90



KU-2

↑
GOA
148C

NARROW

GOA
148B

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

KU-2

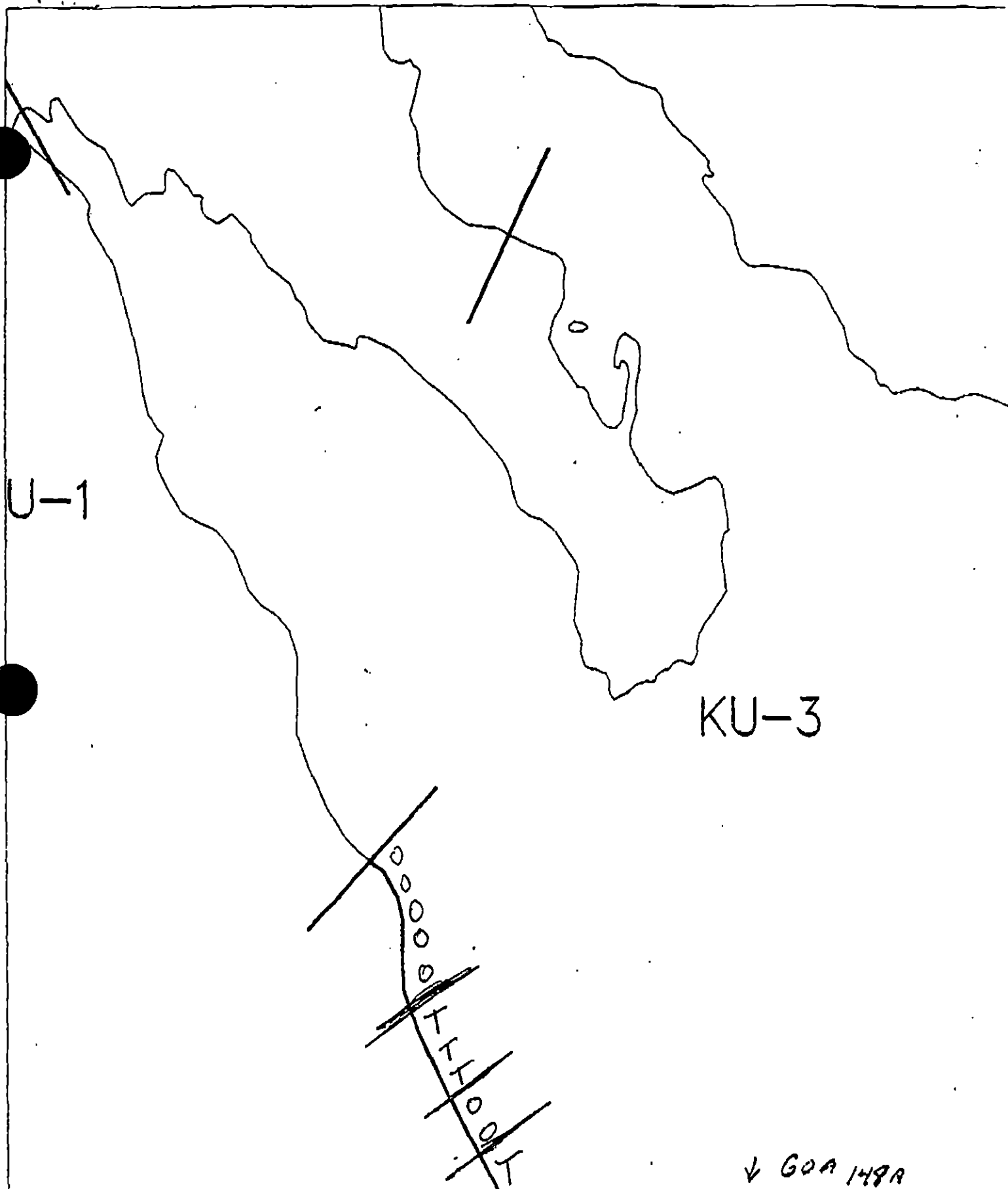
ADEC Segment Length: 8995m

0 300 600 900

Map Key: GOA-148a

Name: L. NAKASHIMA

Date: 4/21/90



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

ADEC Segment Length: 8995m

0 300 600 900

KU-2

Map Key: GOA-148c

Name: L. NAKASHIMA

Date: 4/21/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-24-KU-02 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation	OPEN

*No Inipol - Use Customblen only in upper supra intertidal at discretion of NPS monitor.

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,O,P,Q Harbor Seal & Sea Lion
Pupping and Molting

No constraint to manual pickup and bioremediation (Donald Calkins/ADF&G) per 6/11/90 memorandum from Sam Stoker.

5R Seabird Colony

No documented seabird colonies. No constraint to manual pickup as per LETTER DATED 6/15/90 Rex Coulter/Exxon from WALTER STEGLITZ, USFWS.

OTHER ECOLOGICAL CONSIDERATIONS

Beach is to be approached with caution, by boat, and carefully scrutinized. If seals are present on the beach or in the water nearby, operations are to be suspended until after expiration of the previously defined constraint period. If seals are not present, treatment is to be completed as quickly as possible, with as few personnel and equipment as possible, and with an absolute minimum level of noise and general disturbance. Any application of bioremediation should be confined to above the mid-tide zone. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

10
FOSC

Date

Prepared by

Date

KU-1

KU-3

Site KU-2

1. Access denied within buffer zone. Recheck may be possible after end of July.

Mike Luke 6/13/90

A

WORK AREAS

KU-2

Active Nest

Active Nest

TREATMENT



Exxon Company, USA

Map Key: KP-KU-2

ECOLOGY MAP
SEGMENT K9N-24 KU-2
SUBDIVISION A (1 of 1)

METERS



Seabird Colony



Active Eagle Nest



Inactive Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ K09-24-KU-02 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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: 5/2/90

OILING CATEGORIZATION:

Wide 0 m: Medium 90 m: Narrow 215 m: V.Light 4535 m: No Oil 1286 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of mousse,
patties, and oiled debris, 2) bioremediation in areas indicated on
sketch map. Work should be conducted between 6/30 and 8/1 due to
above pinniped constraints.

SEE CONSTRAINTS ADDENDUM dated 6/15/90 [Signature]

TAG COMMENTS:

TAG APPROVAL DATE: 5/2/90

ADEC [Signature]
EXXON ANDY TEAL
NOAA GARY PATRONE
USCG KENNETH KEANE

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

NO IN.Pdk - Customblend only in upper,
Supra intertidal at discretion of NPS monitor.

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-24-KU-02 SUBDIVISION A (1 of 1)

WORK WINDOW		
Manual Pickup		
Greater Than 400m From Eagle Nest		OPEN
Less Than 400m From Eagle Nest		WORK AFTER 7/1 **
Bioremediation		
Greater Than 400m From Eagle Nest		OPEN
Less Than 400m From Eagle Nest		WORK AFTER 7/1**

*No Inipol - Use Customblen only in upper supra intertidal at discretion of NPS monitor.
 **USFWS monitor on site during treatment.

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

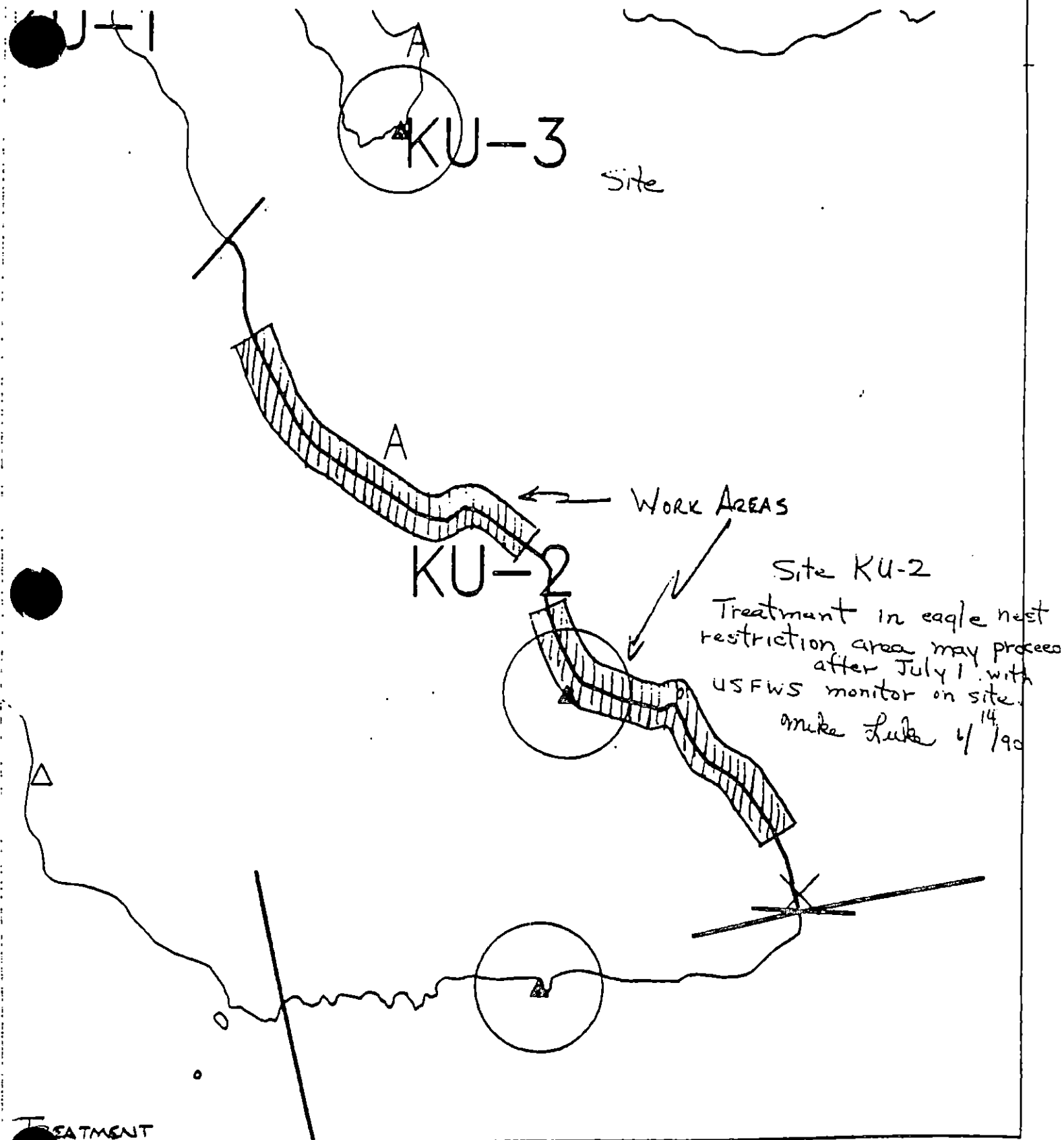
3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Molting	No constraint to manual pickup and bioremediation (Donald Calkins/ADF&G) per 6/11/90 memorandum from Sam Stoker.
5R	Seabird Colony	No documented seabird colonies. No constraint to manual pickup as per memorandum to Rex Coulter/Exxon from Mary Portner/USFWS.
5T	Eagle Nest	No constraint to manual pickup and bioremediation less than 400m from eagle nest, USFWS needs to be present.

OTHER ECOLOGICAL CONSIDERATIONS

Beach is to be approached with caution, by boat, and carefully scrutinized. If seals are present on the beach or in the water nearby, operations are to be suspended until after expiration of the previously defined constraint period. If seals are not present, treatment is to be completed as quickly as possible, with as few personnel and equipment as possible, and with an absolute minimum level of noise and general disturbance. Any application of bioremediation should be confined to above the mid-tide zone. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

FOSC W L Date 6-22-90

Prepared by J P Phillips Date 6/20/90



SHORELINE EVALUATION

SEGMENT ST/ K09-24-KU-02 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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: *Mark H. Hume*

DATE: 5/2/90

OILING CATEGORIZATION:

Wide 0 m: Medium 90 m: Narrow 215 m: V.Light 4535 m: No Oil 1286 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

 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, patties, and oiled debris, 2) bioremediation in areas indicated on sketch map. Work should be conducted between 6/30 and 8/1 due to above pinniped constraints.

SFE CONSTRAINTS ADDENDUM dated 6/15/90

SFE REVISION 1 CONSTRAINTS ADDENDUM dated 6/20/90

TAG COMMENTS:

TAG APPROVAL DATE: 5/2/90

ADEC *Art L...*
EXXON *AMY SEAL*
NOAA *Gary Rob...*
USCG *Kenneth Keane*

FOSC: *My L*

DATE: 5-8-90

NO IN, Pdk - Customblend only in upper, Supra intertidal at discretion of NPS monitor.

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-24-KU-02 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup
 Greater Than 400m From Eagle Nest **OPEN**
 Less Than 400m From Eagle Nest **WORK AFTER 7/1 ****

Bioremediation
 Greater Than 400m From Eagle Nest **OPEN**
 Less Than 400m From Eagle Nest **WORK AFTER 7/1****

*No Inipol - Use Customblen only in upper supra Intertidal at discretion of NPS monitor.
 **USFWS monitor on site during treatment.

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Molting	No constraint to manual pickup and bioremediation (Donald Calkins/ADF&G) per 6/11/90 memorandum from Sam Stoker.
5R	Seabird Colony	No documented seabird colonies. No constraint to manual pickup as per memorandum to Rex Coulter/Exxon from Mary Portner/USFWS.
5T	Eagle Nest	No constraint to manual pickup and bioremediation less than 400m from eagle nest, USFWS needs to be present.

OTHER ECOLOGICAL CONSIDERATIONS

Beach is to be approached with caution, by boat, and carefully scrutinized. If seals are present on the beach or in the water nearby, operations are to be suspended until after expiration of the previously defined constraint period. If seals are not present, treatment is to be completed as quickly as possible, with as few personnel and equipment as possible, and with an absolute minimum level of noise and general disturbance. Any application of bioremediation should be confined to above the mid-tide zone. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

FOSC

Date

6-20-90

Prepared by

Date

6/20/90

KU-1

KU-3

Site

A

KU-2

Work Areas

Site KU-2

Treatment in eagle nest
restriction area may proceed
after July 1 with
USFWS monitor on site.
Mike Luke 4/14/90

TREATMENT



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



ECOLOGY MAP
SEGMENT K9N-24 KU-2
SUBDIVISION A (1 of 1)
METERS

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

SHORELINE EVALUATION

SEGMENT ST/ K09-24-KU-02 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

30, 30 Harbor seal and sea lion molting (8/15 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE:

DATE:

5/2/90

OILING CATEGORIZATION:

Wide 0 m: Medium 90 m: Narrow 215 m: V.Light 4535 m: No Oil 1286 m
Subsurface Oil Observed: Yes _____ No X _____ Maximum Depth _____

RECOMMENDATIONS:

 No Treatment Recommended

☒ Treatment Recommended

X Manual Pickup

X Bioremediation

Tarmat Removal

Snare/Absorbent Booms

Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

Spot Washing: Wands

Beach Cleaner

Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pickup of mousse, patties, and oiled debris, 2) bioremediation in areas indicated on sketch map. Work should be conducted between 6/30 and 8/1 due to above pinniped constraints.

SSR CONSTRAINTS ADDENDUM (date) 6/15/90

SPR REVISION 1 CONSTRUCTS ADDENDUM dated
6/20/90 PPD

TAG COMMENTS:

TAG APPROVAL DATE:

ADEC

EXXON

NOAA

USCG

FOSC:

DATE:

5-8-90

NO IN.Pd - Customblend only in upper,
Supra intertidal at discretion of NIS monitor.

SHORELINE EVALUATION

SEGMENT ST/ K09-24-KU-003 SUBDIVISION A (1 OF 1) DATE 5/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and seal lion molting (8/15 to 9/15)
9LM Other: Land Mammals
4LL State Marine Park National Parks

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINT: If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment. b7

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 1099 m: No Oil 5705 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

☒ 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: 5/23/90
ADEC Art Weinert Art Weinert
EXXON Andy Goe Andy Goe
NOAA Burt Westcott Burt Westcott
USCG G.A. Reiter G.A. Reiter
FOSC: [Signature] DATE: 5/8/90

OG Acton

SEGMENT 9-24-KV-3

SUBDIVISION K9-24-KV-3A

DATE 5 / 4 / 90

CHECKLIST

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

LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

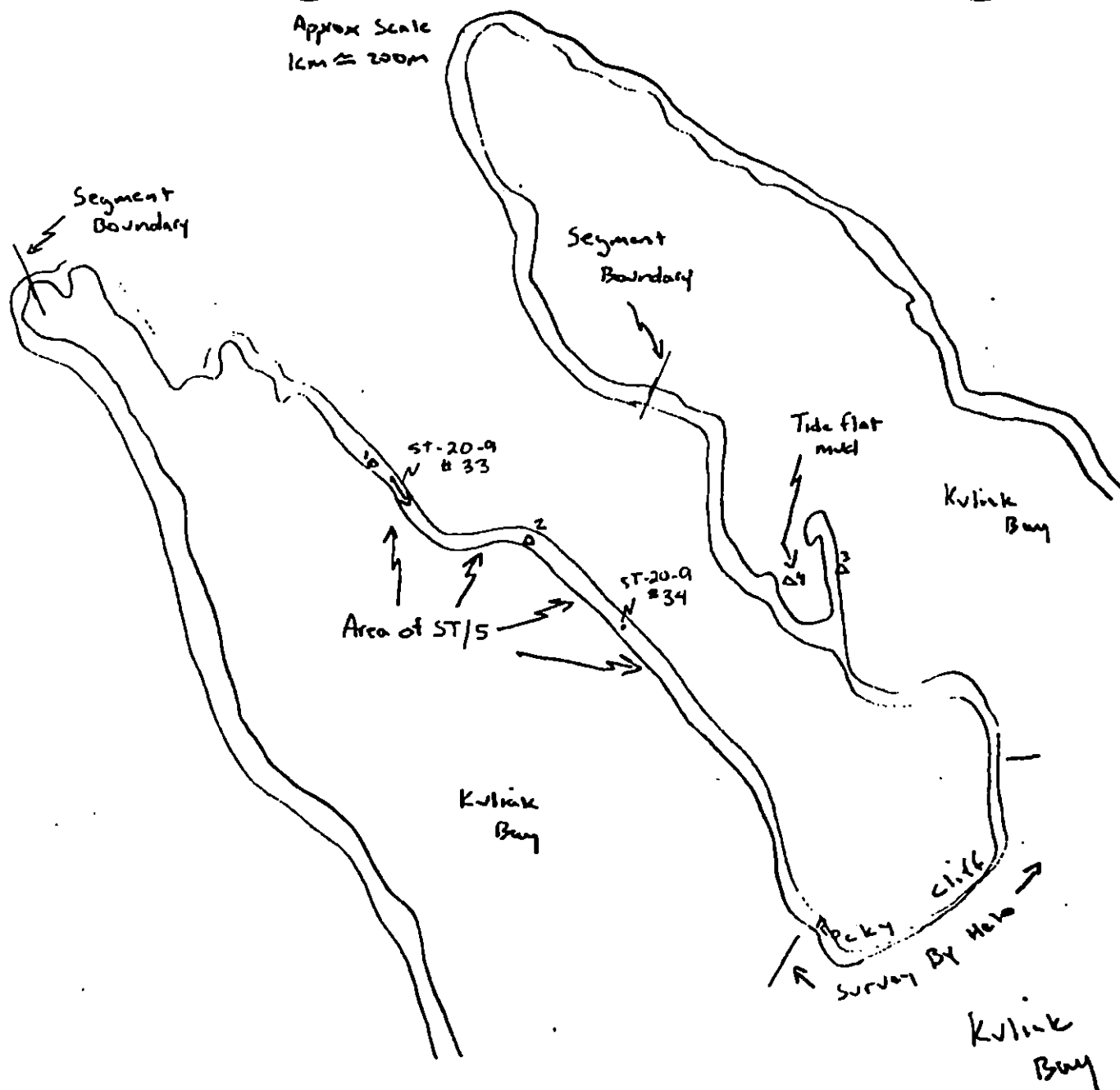
Oiled Vegetation

1 $\Rightarrow$

Photo location, direction,
and number

ATCH MAP

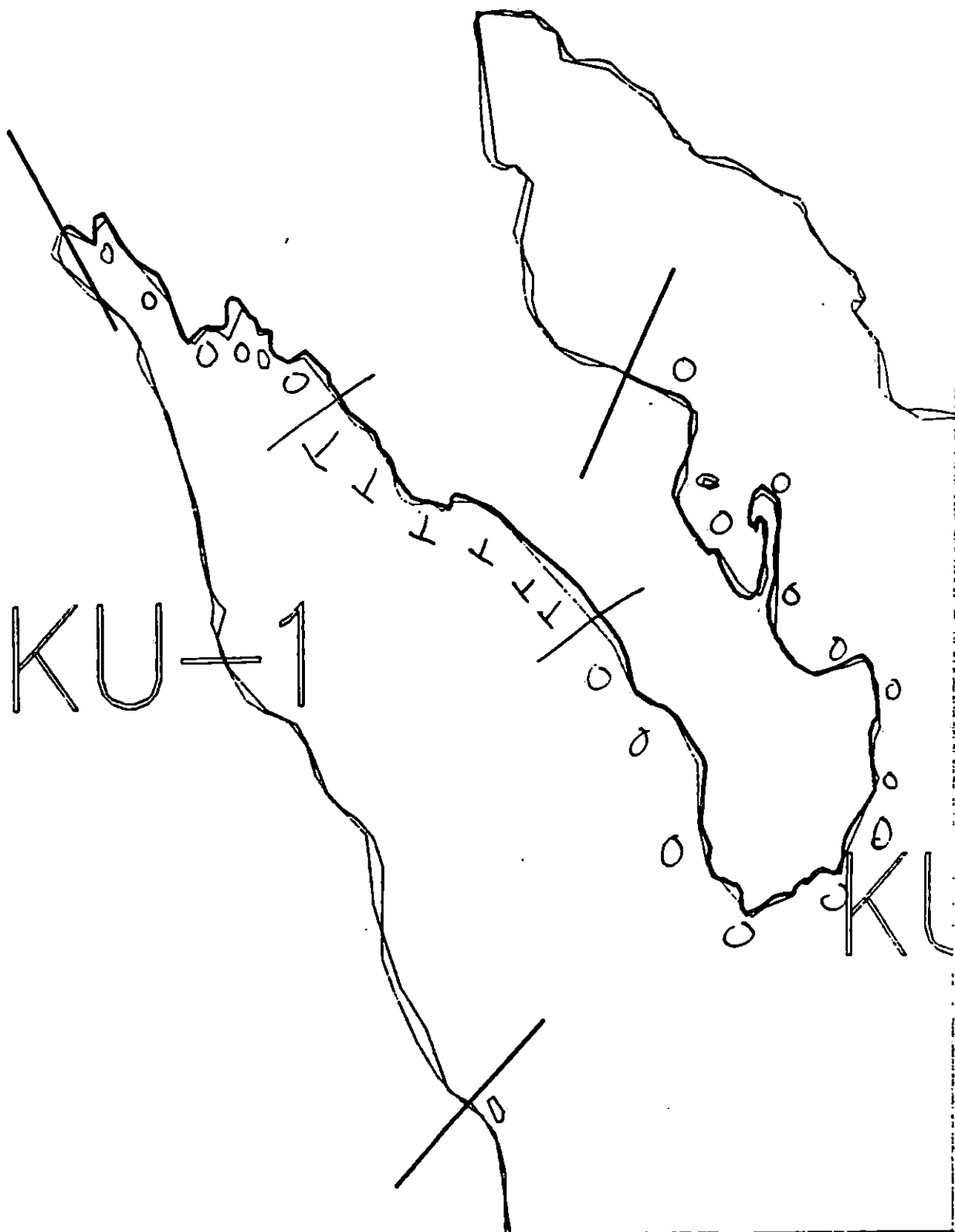
Approx Scale
1cm $\approx$ 200m



Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 1000 MS 0 PT 0 TB 0 FL 0 NO 5629

REVISION: 03/24/90

K9-24-KU-3A



XXXX Wide

KU-3

K9-24-KU-3A

Map Key: AKP-KU-3a

Name: Acton

Date: 5-4-90

Data Entered:

/// Medium

---- Narrow

TTTT Very Light

0000 No Oil

Approx. Segment Length: 9878m

0 300 600 900

METERS

SHORELINE EVALUATION

SEGMENT ST/ K09-24-KU-003 SUBDIVISION A (1 OF 1) DATE 5/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

11A Salmon stream mouth - fry outmigration (3/1 to 5/15)

1B Salmon stream mouth - spawning (7/10 to 8/31)

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

30, 30 Harbor seal and seal lion molting (8/15 to 9/15)

9LM Other: Land Mammals

4LL State Marine Park National Parks

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Rachel Dean Pace DATE: 5/18/20

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 1099 m: No Oil 5705 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

X No Treatment Recommended

Treatment Recommended

Manual Pickup

Bioremediation

Tarmat Removal

_____ Snare/Absorbent Booms

Oil Snares (pom poms)

Absorbents (pads, rolls, etc)

Spot Washing: _____ Wands _____

Beach Cleaner

Other (see comments)

COMMENTS: _____

TAG COMMENTS:

TAG APPROVAL DATE: 5/17/90.

DEC ART WENGER Art Wenger

EXXON *Amoy Gate Sea*

NOAA Gary Petrac Gary Petrac

USCG G.A. REITER (G.A. Reiter)

FOSC: 7 1 DATE: 8-23-90

TAG APPROVAL DATE: 5/17/90.
 ADEC Art Warner Art Warner
 EXXON Andy Earl Andy Earl FOSC: ML DATE: 5-23-90
 NOAA Gary Petrac Gary Petrac
 USCG C. A. FEETER C. A. Feeter

OG Acton

SEGMENT 9-24-KV-3

SUBDIVISION K9-24-KV-3A

DATE 5 / 4 / 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 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

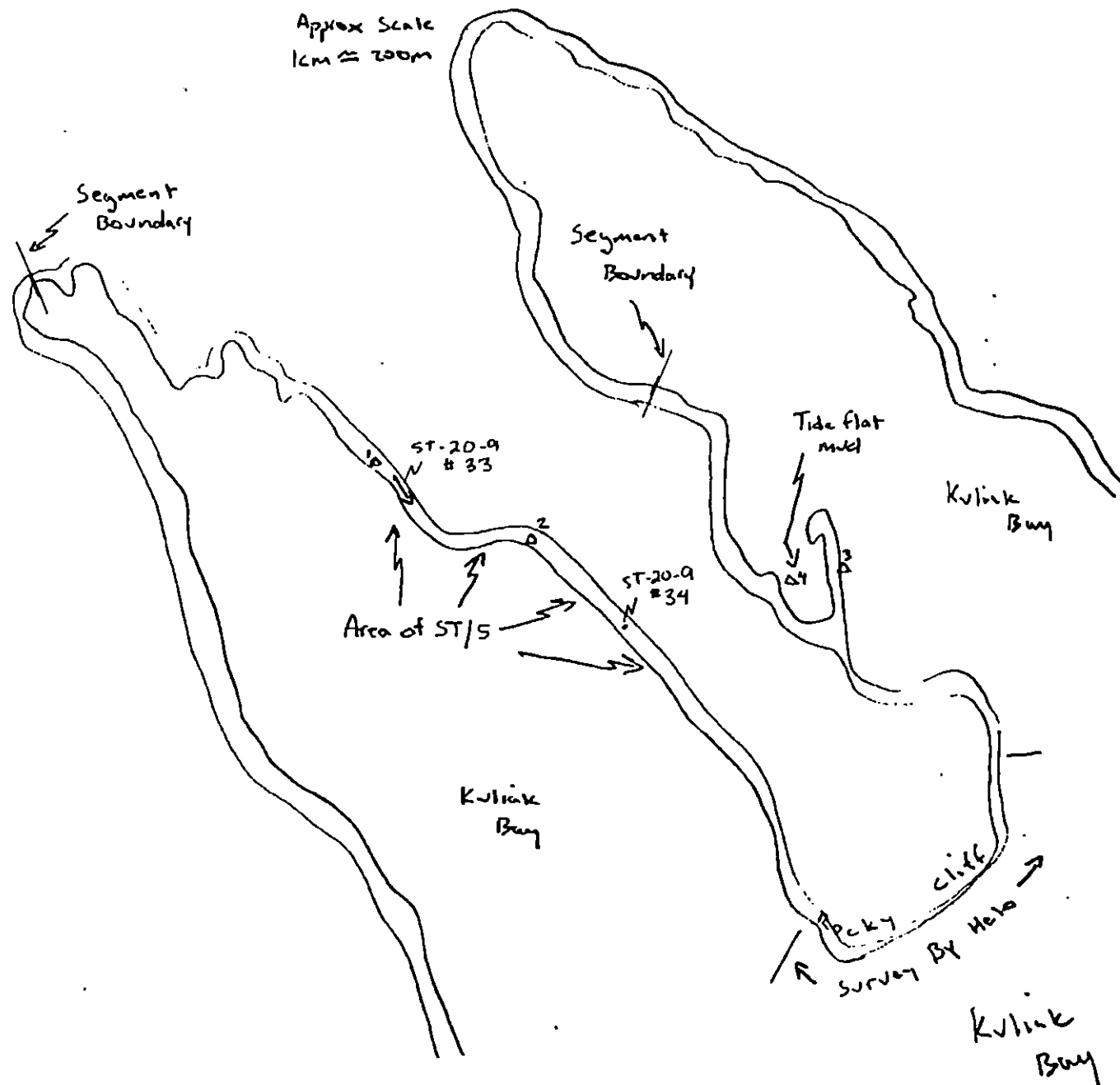
Oiled Vegetation

1 $\rightarrow$

Photo location, direction,
and number

SKETCH MAP

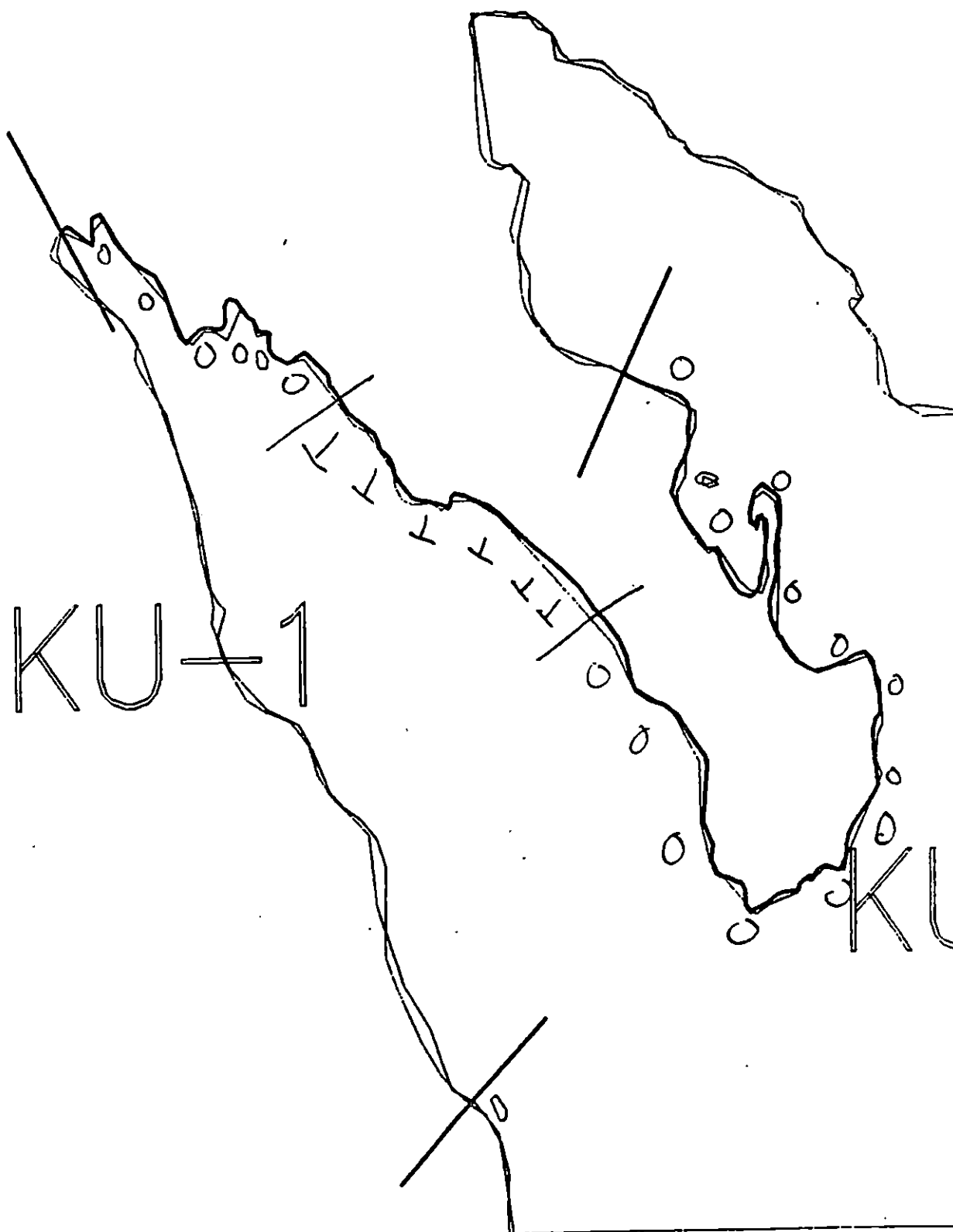
Approx Scale
1cm $\approx$ 200m



Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 1000 MS 0 PT 0 TB 0 FL 0 NO 5629

REVISION 23/24/90

K9-24-KU-3A



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KU-3

Approx. Segment Length: 9878m



K9-24-KU-3A

Map Key: AKP-KU-3a

Name: Acton

Date: 5-4-90

Data Entered:

REGION: KODIAK

SEGMENT: ST/K09-24-KU-003

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ K09-24-KU-003 SUBDIVISION A (1 OF 1) DATE 5/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and seal lion molting (8/15 to 9/15)
9LM Other: Land Mammals
4LL State Marine Park National Parks

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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 1099 m: No Oil 5705 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** Kotol Bay Hatchery release
 Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H** Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G for confirmation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1I** Gill net area
1J Purse seine area
 Mainland, West side Kodiak, Shuyak & Moser/Olga Bay (6/9 to 10/1)
 East side Kodiak, East side Afognak (7/4 to 10/1)
1K Purse seine hook-off
1L Set net sites
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Nicholson 424-4791
- 2M** Herring spawning (4/15 to 6/30)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncultivated intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Nicholson 486-4791
- 3P** Harbor seal and sea lion pupping (5/10 to 7/1)
3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R** Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S** Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Rothy 267-2208
- 5T** All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U** Recreation: Tent sites (8/1 to 9/15)
6V Anchorages (8/1 to 9/15)
6W Forest Service cabins (8/1 to 9/15)
6X Lodge (8/1 to 9/15)
6Y Special use destination
- 7Z** Subsistence area: Salmon harvesting (8/1 to 9/30)
7H Finfish harvesting
7I Deer harvesting (8/1 to 1/7)
7J Invertebrate harvesting
7K Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

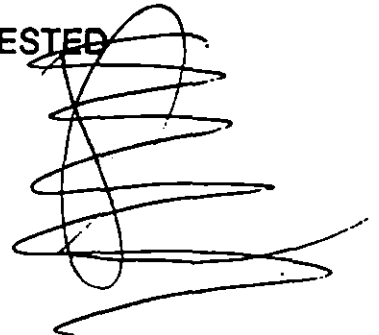
SEGMENT ST / K9.24 KU.3 SUBDIVISION: K9-24-KU-3A DATE 5-4-90

SCG

NAMED D.D. Haven Jr., GMS, USCGR SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED



ADEC

NAME Francine J. Bennis SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Only VL oil observed : stain + splatters.

LAND MANAGER NPS

NAME WILL TROYER SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

only light splatter & stain observed

SHORELINE OILING SUMMARY

REVISION NO. 04 13 90

OG Acton USCG Haven SEGMENT ST/ K9-24-KV-3
 BIO Davis LAND REP NPS Troyer, Ponchartraine SUBDIVISION K9-24-KV-3 (1 OF 1)
 EXXON Avery ADEC Benois TIME 5:40 10:50
 TEAM NO. 20 TIDE LEVEL +2 to +3.5 DATE 5/1/90
 EST. SUBDIVISION LENGTH: 6.29 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☒ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 30 % B 30 % C 15 % P - % G 5 % S 10 % M 10 % V - %
 SLOPE: Long 70 % Hang 15 % Vert 15 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 1000 m NO 5629 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	B	P	S	SU	U	M	U	SU	U	M	U	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN				✓	✓				✓							
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL									✓		✓	✓				

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE ---#BAGS 0

Photographs:

Roll No. ST-20-9Frames 33, 34

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	▽	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SU	U	M	U	SU	U	M	U	SU	U	M	U				
1	5					✓	.		✓					✓											BC
2	5					✓	.		✓					✓											BC
3	20					✓	.		✓					✓											BC
4	30					✓	.		✓					✓											SM
							.																		
							.																		

COMMENTS Shoreline in this segment is primarily narrow width (< 20m) boulder, flat cobbles beach. Area of oiling was approx 1000m long and was comprised of VL stain on boulders (very occasional). The tip of the peninsula was surveyed by helo due to vertical cliffs. The stream area at the extreme NW segment end was not surveyed ^{on foot} due to the presence of bears.

REVIEWED BAT DATE 8 MAY 90

OG Acton

SEGMENT 9-24-KU-3

SUBDIVISION K9-24-KU-3A

DATE 5 / 4 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

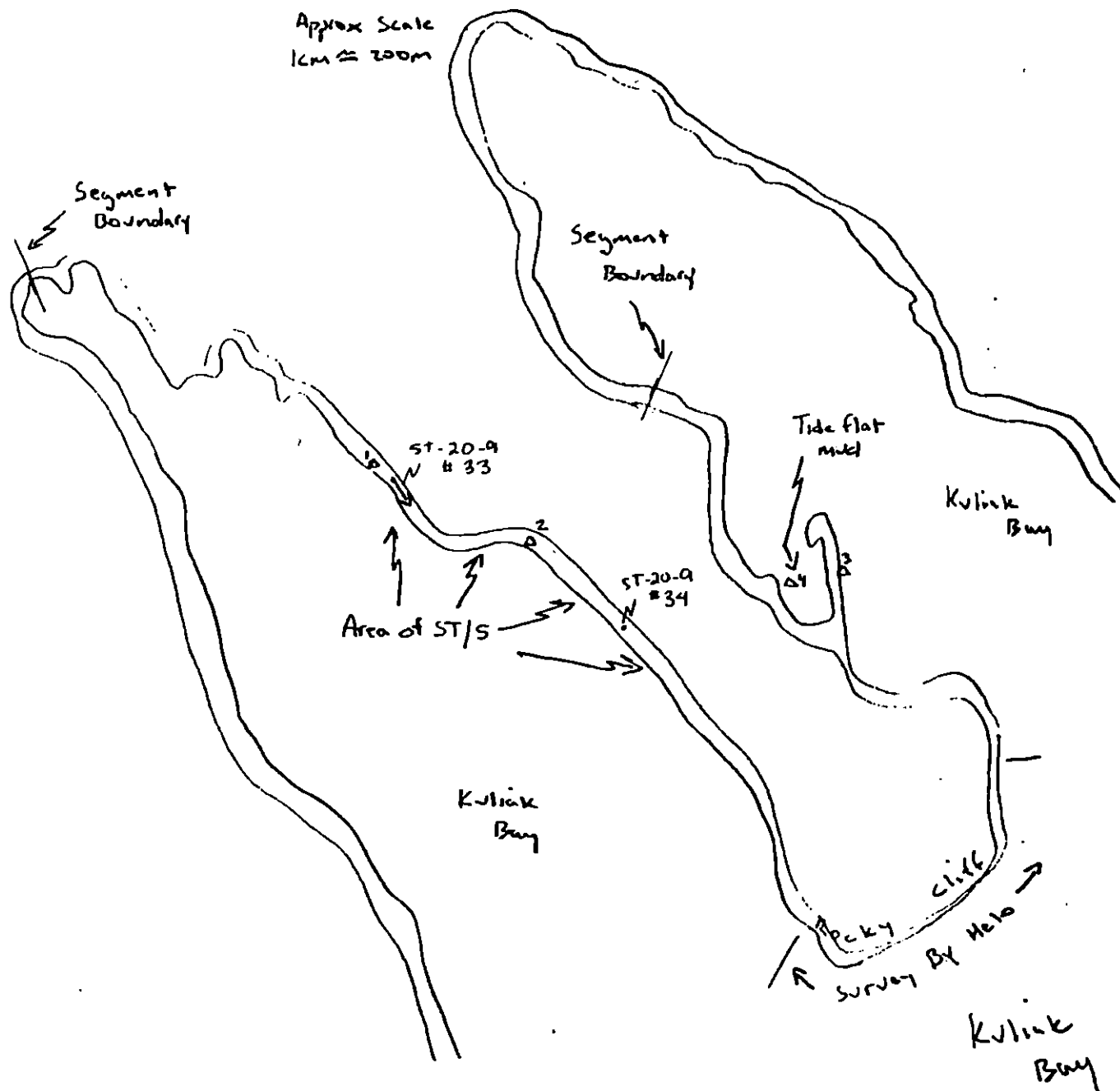
Oiled Vegetation

1

Photo location, direction,
and number

SKETCH MAP

Approx Scale
1cm $\approx$ 200m



Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 1000 MS 0 PT 0 TB 0 FL 0 NO 5629

REVISION 02/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03227

Segment ST / K9-24 Subdivision KU-3 Date (mo / day / yr) 5/4/90Time (24 hr) 18:00 Biologist H. Davis

- (A) Substrate type and % of segments:
 (1) Bedrock 30 (2) Boulder 30 (3) Cobble 15 (4) Pebble 5 (5) Sand 10 (6) Silt 10
- (B) Overall % cover of biota (% of segment): Dense 20% Moderate 30% Low 50% (60%)
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (O)

Photographs:
 Roll No. ST-20-9
 Frames 33 34

BARNACLES Dense-Moderate Throughout the segment.

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

NOT PRESENT
4, 5, 6

MYTILUS Small (3x1 meter) dense patches of large mytilus

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

NOT PRESENT
4, 5, 6

GASTROPODS continuous along segment. Littorina Dense-moderate, limpets Mod, Nucella Sparse

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

NOT PRESENT
4, 5, 6

FUCUS Dense patches scattered along whole segment.

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

NOT PRESENT
4, 5, 6

Wildlife Observations/ General Comments: The southern side had a sharper boundary between the rocky slope and the tide flat than the northern side. All the oil was found on the southern side above the inhabited area.

Ecological Considerations: 3NOPE, 1A1B

Harbor seal and Sea lion haul out, for molting and having pups. Streams coming into the south side of the segment have Pink and Chum salmon spawning in it. Schools of fry were observed in the water along the segment.

K9-24 KH-03

5/4/90

Bio H. Davis

Birds:

Mallards
Buffleheads
Glaucous winged gulls
1 adult Eagle
1 juvenile Eagle
Greater Scaup
Harlequins
Surf Scoters
Oystercatchers
Cormorant

North

← Pinkies and Chum
Spawn in these
streams.
1 Bear seen here

The northern side of the segment was a more
gentler sloping area. Shingle and sand in the
LTZ with mud and sand below. Balanus sp.
were very dense on all hard substrates.
Mytilus beds were patchy with large Mytilus and
some Modiolus. Dominant Algae are Ulva,
Halosaccion, small patches of Odonthalia, and Fucus.
Zostera marina beds are in the LTZ. Animals
found among the shingles are Littorina, limpets,
Katharina tunicata, Serpula, Spirobrachia, Anthopleura,
Holothurids, Leptasterias and Platyhelminthes.

On the mud flats phoronids
Clinocardium, Protothaca, Sepala,
Neomysis sp., Anthopleura artemesia,
Neptunea, Saccostoma, and
Natica. Diatom mats present.

The south side of the
segment is a sand and silt
leading up to a slope
of bedrock, boulders and shingles.

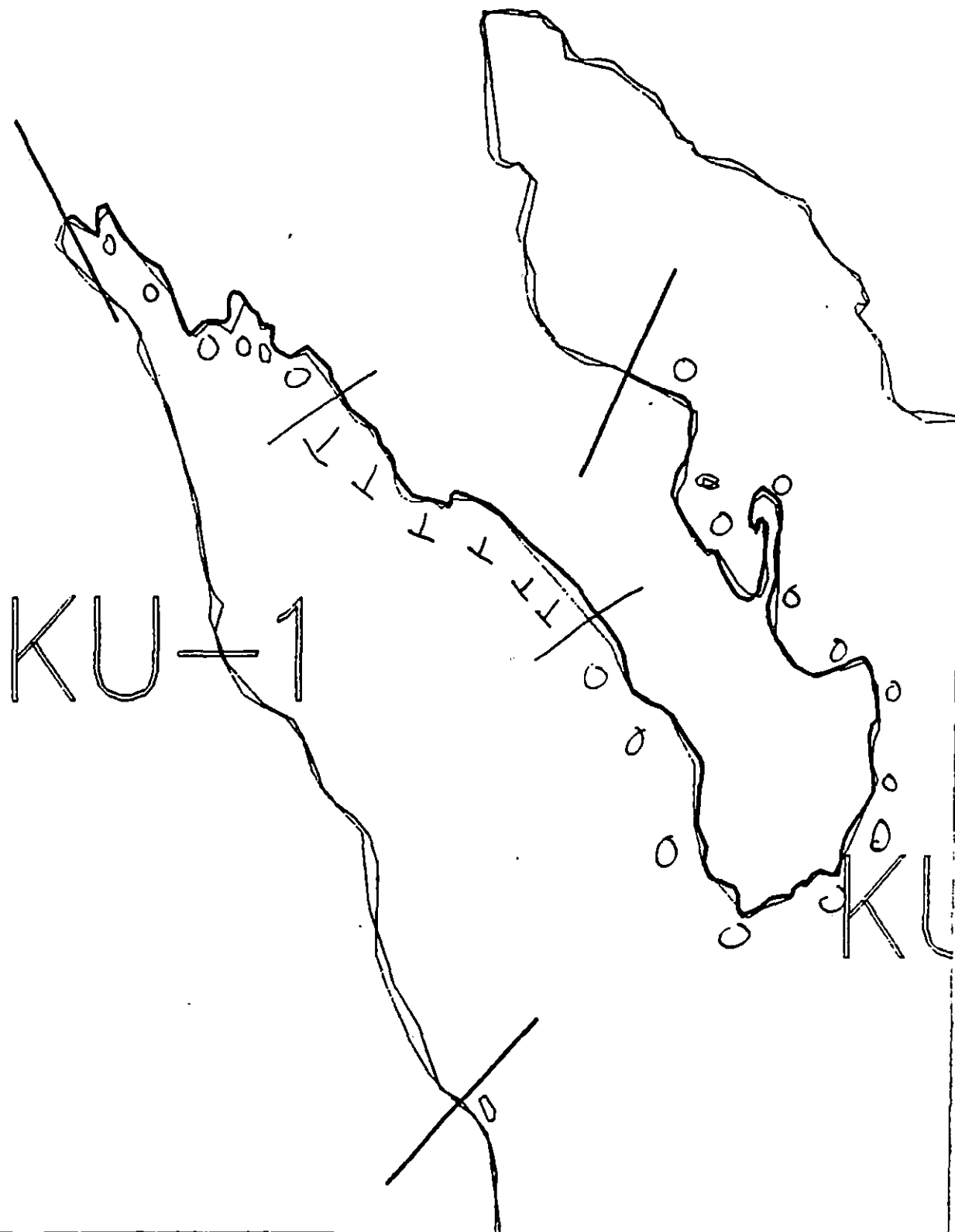
On the slope: Balanus glandula, Fucus,
Porphyra, Odonthalia, Scytosiphon, green
filamentous, Chladophora, patchy bands of
dense large Mytilus, Littorina, limpets
Nucella and Katharina tunicata. On the
sand-silt flat phoronids, Ulva, some Zostera,
Gorgonales sp., Halosaccion, Clinocardium nuttallii,
Protothaca, Saxidomus, Cancer magister, and Telmessus.
Salmon fry were in small schools around slope
sand interface.

Fly-by area Fucus, Barnacles
Mussels, Porphyra, seemed
similar to south side.

800 m.

Ecology Sketch Map

K9-24-KU-3A



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KU-3

Approx. Segment Length: 9878m



K9-24-KU-3A

Map Key: AKP-KU-3a

Name: Acton

Date: 5-4-90

Data Entered:

REGION: KODIAK

SEGMENT: ST/K09-24-KU-003

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ K09-24-KU-003 SUBDIVISION A (1 OF 1) DATE 5/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and seal lion molting (8/15 to 9/15)
9LM Other: Land Mammals
4LL State Marine Park National Parks

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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 1099 m: No Oil 5705 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)
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AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 1C** Salmon fry nursery area (4/31 to 7/31)
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- 1D** Kotol Bay Hatchery release
Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
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- 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
- 2P** 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)
7-H 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/ K9.24 KU.3 SUBDIVISION: K9.24-KU.3A DATE 5-4-90

SCG

NAMED D.D. Haven Jr, GMD, USCGR

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

[Handwritten scribble]

ADEC

NAME Francine J. Bennis

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Only VL oil observed: stains & splatters.

LAND MANAGER NPS

NAME WILL TROYER

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

oil light splatter & stain observed

SHORELINE OILING SUMMARY

REVISION NO. 04 13 90

OG Acton USCG Haven SEGMENT ST/ K9-24-KV-3
 BIO Davis LAND REP PPS Trayer, Pontreland SUBDIVISION K9-24-KV-3 (1 OF 1)
 EXXON Avery ADEC Bennis TIME 5:40 to 7:50
 TEAM NO. 20 TIDE LEVEL +2 to +3.5 DATE 5 / 4 / 90
 ST. SUBDIVISION LENGTH: 6.29 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 LANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☒ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 30 % B 30 % C 15 % P - % G 5 % S 10 % M 10 % V - %
 SLOPE: Long 70 % Hang 15 % Vert 15 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 1000 m NO 5629 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	B	P	S	SBL BR	DBL BW	GY SL	DBR TL	LBR	SU	U	M	U			
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		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE #BAGS 0

Photographs:

Roll No. ST-20-9Frames 33, 34

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR							PIT ZONE				A N A	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS		
		OP	OR	OL	OF	NO		UO	UC	SBL BR	DBL RW	GY SL	DBR TL	LOR	SU	U	M	U								
1	5					✓	.		✓								✓									BC
2	5					✓	.		✓								✓									BC
3	20					✓	.		✓								✓									BC
4	30					✓	.		✓								✓									SM
							.																			
							.																			

COMMENTS Shoreline in this segment is primarily narrow width (< 20m) boulder, flat cobbles beach. Area of oiling was approx 1000m long and was comprised of VL stain on boulders (very occasional). The tip of the peninsula was surveyed by helo due to vertical cliffs. The stream area at the extreme NW segment end was not surveyed ^{on foot} due to the presence of bears.

REVIEWED BAT DATE 8 MAY 90

OG Acton

SEGMENT 9-24-KV-3

SUBDIVISION K9-24-KV-3A

DATE 5 / 4 90

CHECKLIST

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

LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

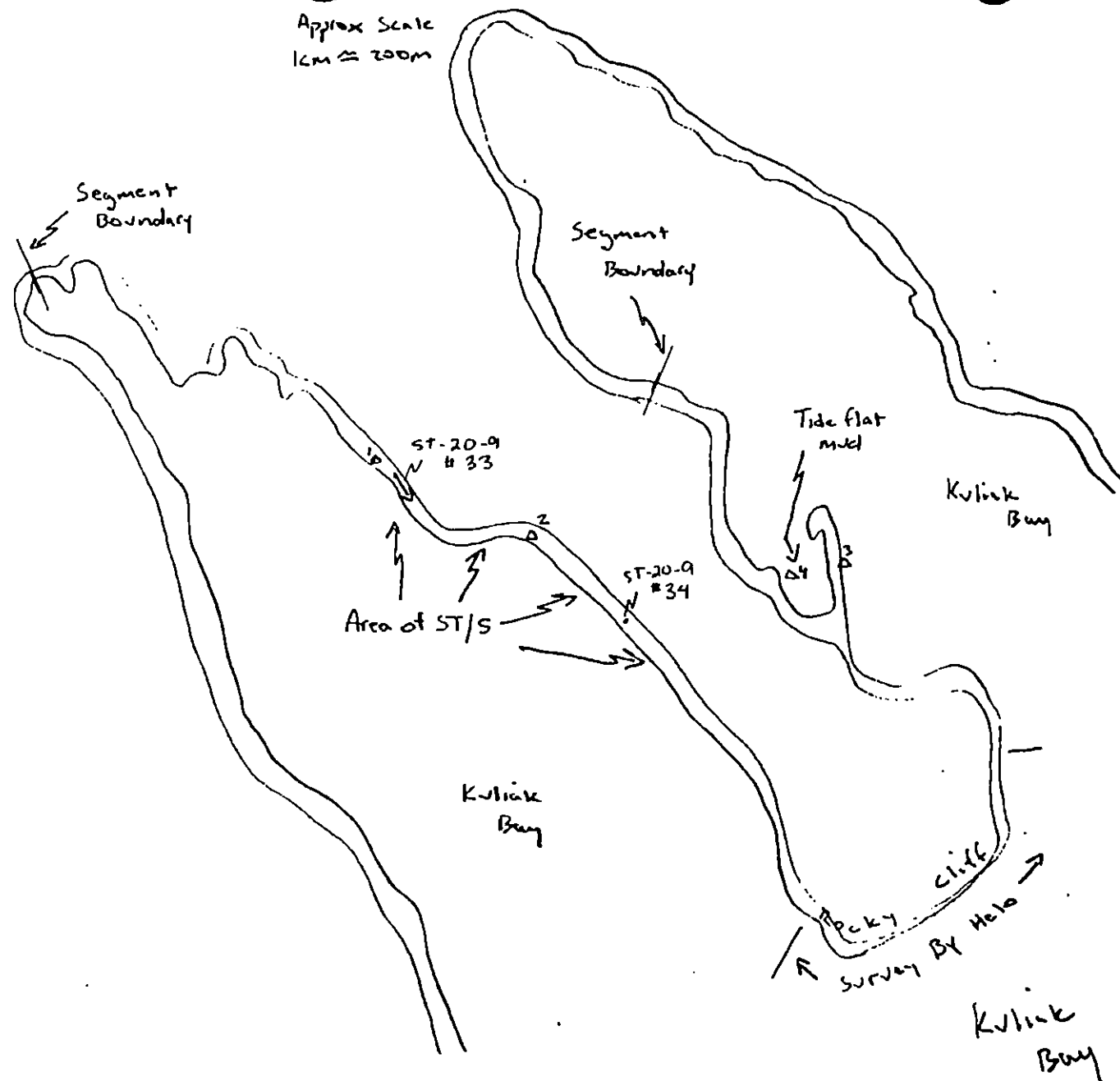
Oiled Vegetation

1 $\rightarrow$

Photo location, direction,
and number

SKETCH MAP

Approx Scale
1cm $\approx$ 200m



Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 1000 MS 0 PT 0 TB 0 FL 0 NO 5629

REVISION: 03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 33227

Segment ST / K9-24 Subdivision KU-3 Date (mo / day / yr) 5/4/90Time (24 hr) 18:00 Biologist H. Davis(A) Substrate type and % of segments:
(1) Bedrock 30 (2) Boulder 30 (3) Cobble 15 (4) Pebble 5 (5) Sand 10 (6) Silt 10(B) Overall % cover of biota (% of segment): Dense 20% Moderate 30% Low 50% (60%)

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

Photographs:
Roll No. ST-20-9Frames 33 34

BARNACLES Dense-Moderate Throughout the segment.

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

NOT PRESEN
4,5,6

MYTILUS Small (3x1 meter) dense patches of large mytilus

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

NOT PRESEN
4,5,6

GASTROPODS continuous along segment. Littorina Dense-Moderate, limpets Mod, Nucella Sp.:

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

NOT PRESEN
4,5,6

FUCUS Dense patches scattered along whole segment.

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

NOT PRESEN
4,5,6

Wildlife Observations/ General Comments: The southern side had a sharper boundary between the rocky slope and the tide flat than the northern side. All the oil was found on the southern side above the inhabited area.

Ecological Considerations: 3N0PG, 1A1B

Harbor seal and Sea lion haulout, for molting and having pups. Streams coming into the south side of the segment have Pink and Chum salmon spawning in it. Schools of fry were observed in the water along the segment.

K9-24 Ku-03

5/4/90

Bio N. Davis

Birds:

Mallards
Buffleheads
Glaucous winged gulls
1 adult Eagle
1 juvenile Eagle
Greater Scaup
Harlequins
Surf Scoters
Oystercatchers
Cormorant

North

← Pink and Chum
spawn in these
streams.
1 Bear seen here

boundary

The south side of the
segment is a sand and silt
leading up to a slope
of bedrock, boulders and shingles.

On the slope: *Balanus glandula*, *Fucus*,
Porphyra, *Odenthalia*, *Scytosiphon*, green
filamentous, *Chladophora*, patchy bands of
dense large *Mytilus*, *Littorina*, limpets
Nucella and *Katharina tunicata*. On the
sand-silt flat *poronids*, *Ulva*, some *Zostera*,
Gigartinales sp., *Halosaccion*, *Clinocardium nuttallii*,
Protothaca, *Saxidomus*, *Cancer magister*, and *Telmessus*.
Salmon Fry were in small schools around slope
sand interface.

The northern side of the segment was a more
gentle sloping area. Shingle and sand in the
UTZ with mud and sand below. *Balanus* sp.
were very dense on all hard substrates.
Mytilus beds were patchy with large *Mytilus* and
some *Modiolus*. Dominant algae are *Ulva*,
Halosaccion, small patches of *Odenthalia*, and *Fucus*.
Zostera marina beds are in the LTZ. Animals
found among the shingles are *Littorina*, limpets,
Katharina tunicata, *Serpula*, *Spirorbis*, *Anthopleura*,
Holothurids, *Leptasterias* and *Platyhelminths*.

Boundary

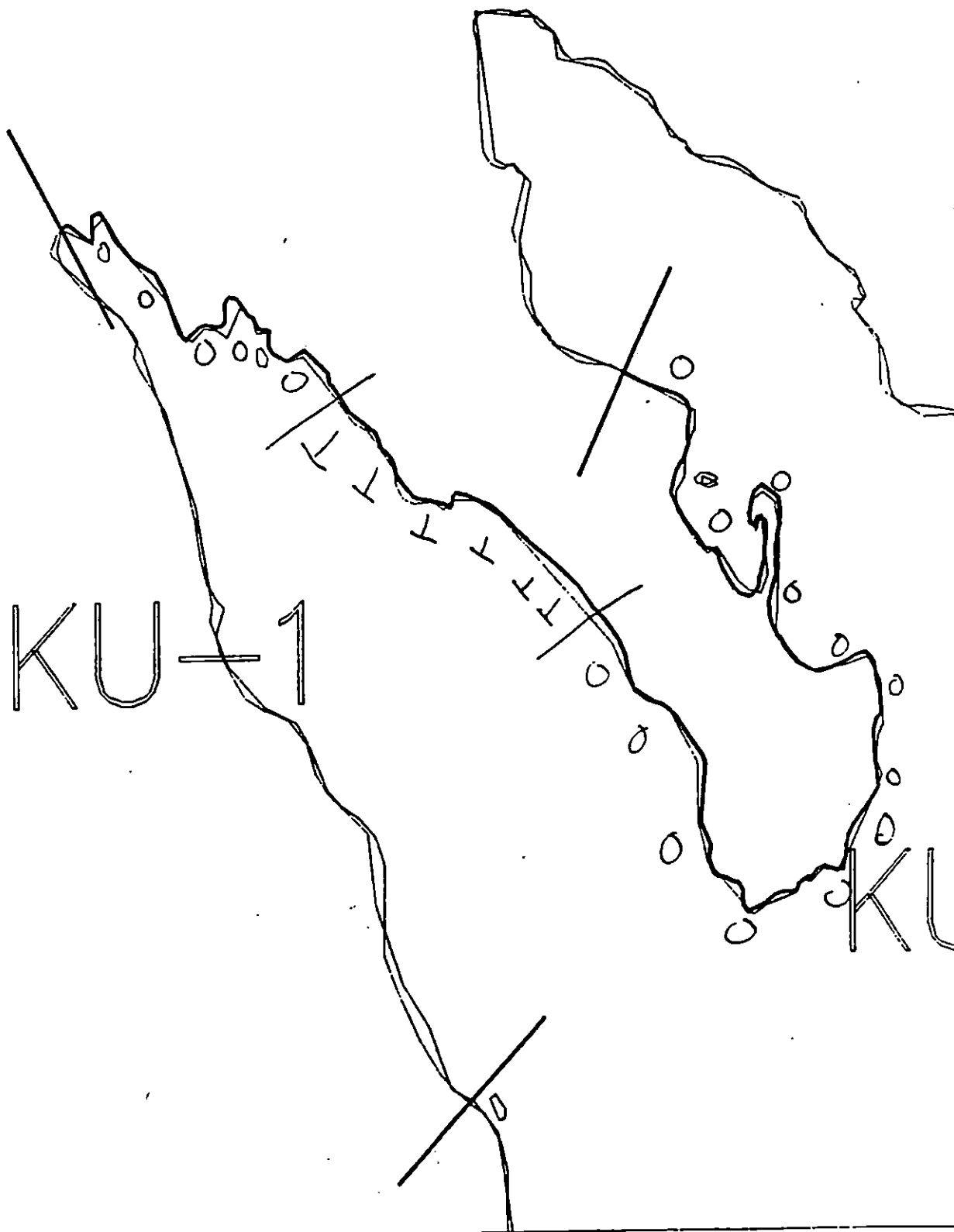
On the mud flats *poronids*,
Clinocardium, *Protothaca*, *Sepia*,
Neomysis sp., *Anthopleura artemesia*,
Neptunaea, *Saxidomus*, and
Natica. Diatom mats present

fly-by area *Fucus*, *Barracks*
Mussels, *Porphyra* seemed
similar to south side.

800 m.

Ecology Sketch Map

K9-24-KU-3A



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

KU-3

Approx. Segment Length: 9878m

0 300 600 900

METERS

K9-24-KU-3A

Map Key: AKP-KU-3a

Name: Acton

Date: 5490

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ K09-30-1K-001 SUBDIVISION A (1 OF 1) DATE 5/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

4LL State Marine Park National Parks

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

SHPO SIGNATURE: Rachel Ann Dore DATE: 5/18/20

OILING CATEGORIZATION:

Wide_0_m: Medium_0_m: Narrow_0_m: V.Light_376_m: No Oil_6826_m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

☒ No Treatment Recommended
☐ Treatment Recommended
☐ Manual Pickup
☐ Bioremediation
☐ Tarmat Removal

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/17/90
ADEC Art Weiner Art Weiner
EXXON Andy Petr Andy Petr
NOAA Gary Petras Gary Petras
USCG G.A. REITER G.A.

FOSC:

DATE: 5-23-88

OG

SEGMENT K9-30-1K-1

SUBDIVISION K9-30-1K-1A

DATE 5 / 4 / 90

ETCH MAP

N →

Approx Scale
1cm ≈ 200m

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

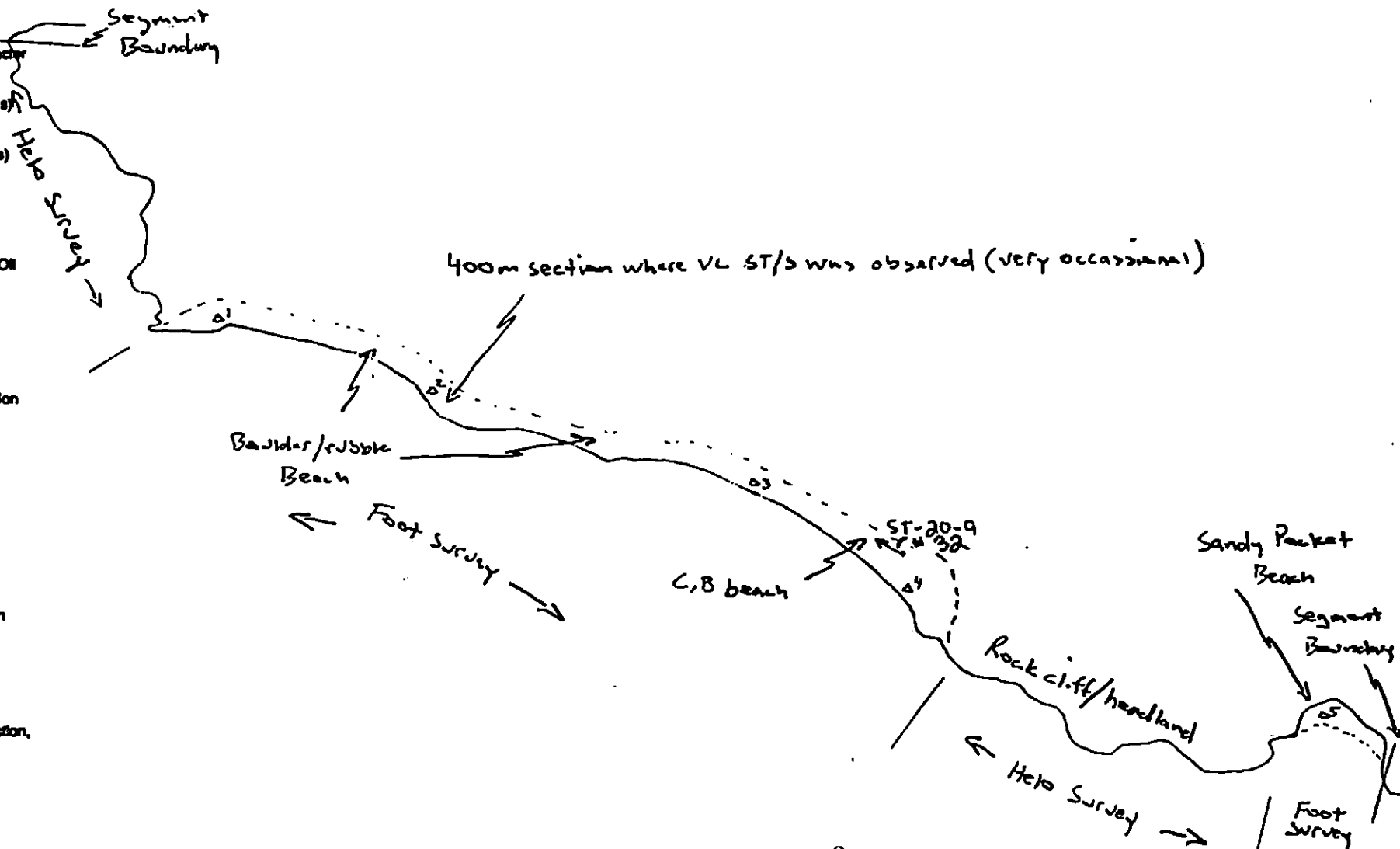
Splashed Distribution

Oiled Vegetation

1 ●→

Photo location, direction,
and number

Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 400 MS 0 PT 0 TB 0 FL 0 NO 6712



REVISION: 02/24/90

DATE 5 / 4 80

CHECKLIST

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

LEGEND

1 Δ
Pl - No Subsurface Oil

2 ▲
P11 - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

[CT/S]
Splashed Distribution

Oiled Vegetation

1  .

**Photo location, direction,
and number**

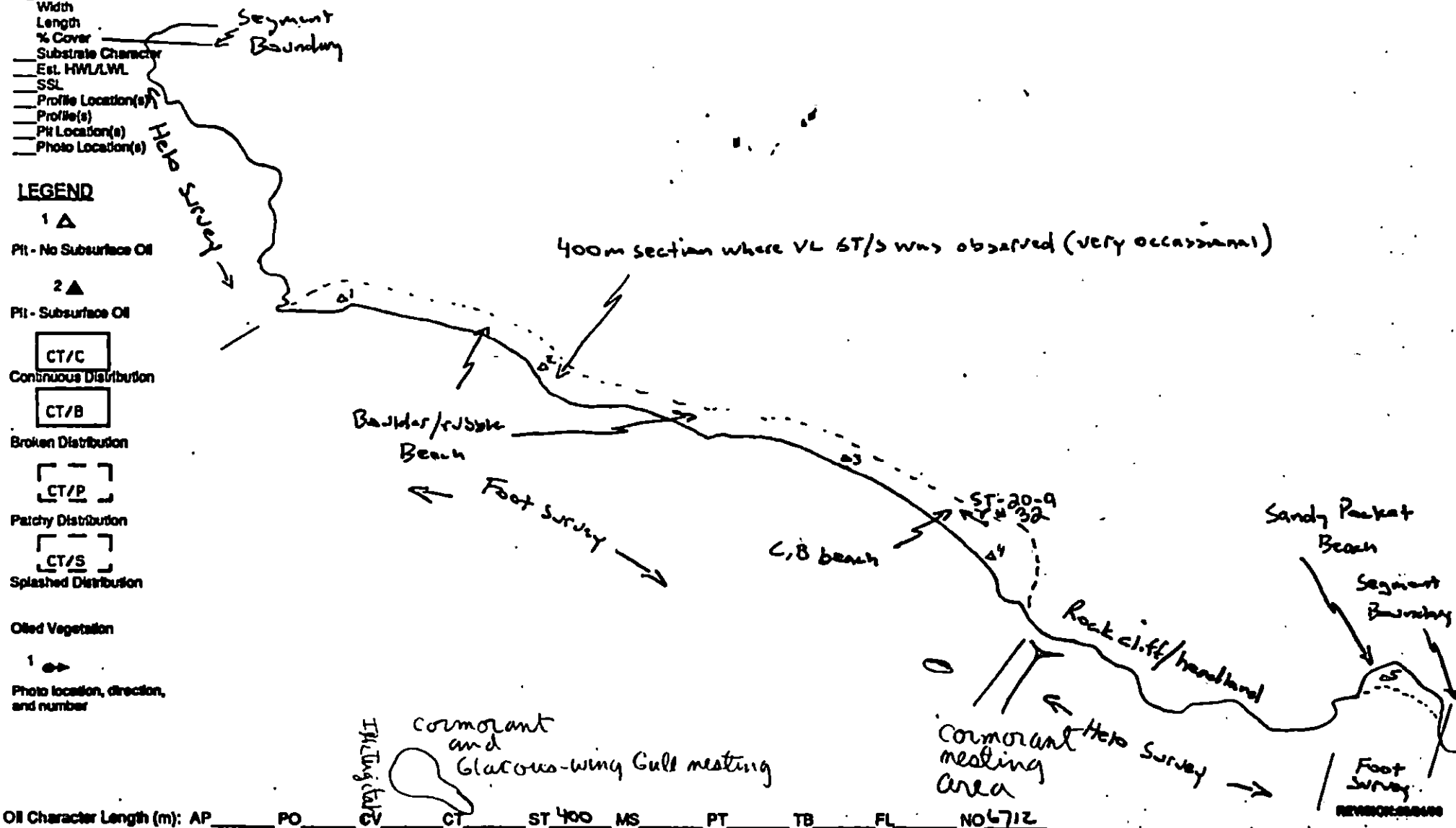
Oil Character Length (m): AP PO CV CT ST 400 MS PT TB FL NO 6712

Geology

ETCH MAP

 $N \rightarrow$

Approx Scale
1cm $\approx$ 200m



K9-30-IK-1A

9S-30

XXXX Wide

IK-1

//// Medium

-- Narrow

Approx. Segment Length: 7156m

TTT Very Light

0000 No Oil



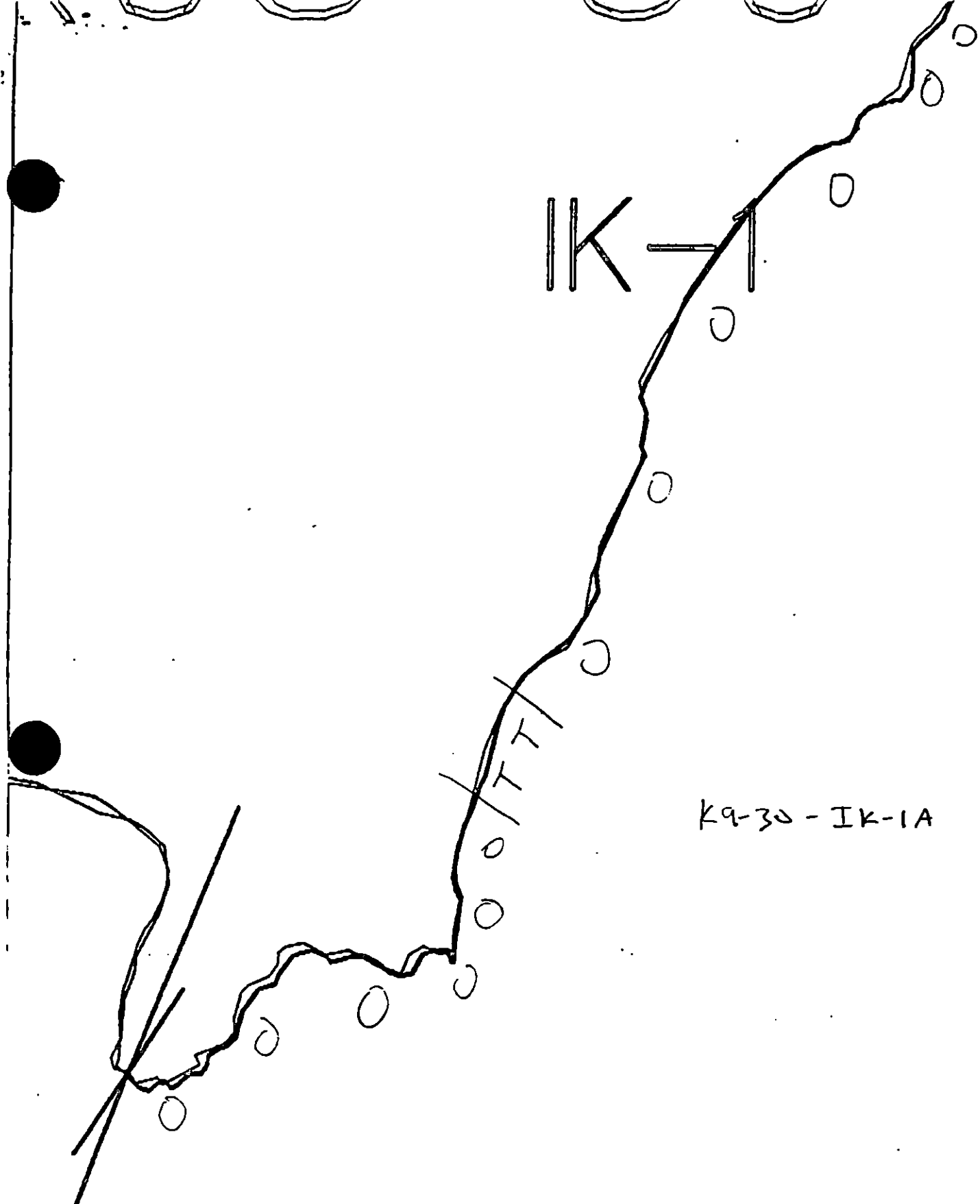
K9-30-IK-1A

Map Key: AKP-IK-1c

Name: Acton

Date: 5-4-90

Date Entered:



IK-1

K9-30-1K-1A

XXXX Wide

/// Medium

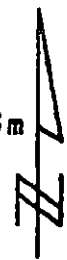
--- Narrow

TTTT Very Light

0000 No Oil

IK-1

Approx. Segment Length: 7156m



K9-30-1K-1A

Map Key: AKP-1K-1a

Name: Acton

Date: 5-4-90

Data Entered:

REGION: KODIAK

SEGMENT: ST/K09-30-IK-001

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ K09-30-IK-001 SUBDIVISION A (1 OF 1) DATE 5/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5R Seabird colony (5/1 to 9/1)
4LL State Marine Park National Parks
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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 0 m: Narrow 0 m: V.Light 376 m: No Oil 6826 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 _____

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 486-4791
- 3P Harbor seal and sea lion pupping (5/10 to 7/1)
 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Rothy 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subistence area: Salmon harvesting (6/1 to 9/30)
 7HH Finfish harvesting
 7II 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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / K9-30 IK-1 SUBDIVISION: K9-30-1K-1A DATE 5-4-90

SCG

NAME D.D. Haven Jr, GM3, LSCGR

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME Francine J. Bennis

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Only VL oil observed in the form of stains & splatters.

LAND MANAGER N/PS

NAME WILL TROYER

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

only light splatter & stain observed.

SHORELINE OILING SUMMARY

REVISION NO. 04 13 90

OG Acton USCG Haven SEGMENT ST/ K9-30-1K-1
 BIO Davis LAND REP NPs Taylor, James SUBDIVISION K9-30-1K-1A (1 OF 1)
 EXXON Avery ADEC Bennis TIME 3:00 to 5:40
 TEAM NO. 20 TIDE LEVEL +5 to +2 DATE 5/4/90
 EST. SUBDIVISION LENGTH: 7112 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☒ Helo WORKING DIRECTION: SSW to NNE
 SURFACE SEDIMENTS: R 30 % B 30 % C 25 % P 5 % G 5 % S 5 % M - % V - %
 SLOPE: Long 70 % Hang 15 % Vert 15 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W - m M - m N - m VL 400 m NO 6712 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	B	P	S	SL	BR	FW	GY	SL	TL	LR		SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN				✓		✓							✓			
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													✓		✓	✓

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE ---#BAGS 0

Photographs:

Roll No. ST-20-9Frames #32

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-INT)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	▽	SURFACE-SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SL	BR	FW	GY	SL	TL	LR		SU	U	M	U				
1	10					✓	.		✓									✓							CB
2	10					✓	.		✓									✓							CB
3	10					✓	.		✓									✓							CB
4	10					✓	.		✓									✓							CB
5	35					✓	.		✓									✓							S
							.																		

COMMENTS SSW end of segment is cliff/rock platform and was surveyed by helo; no oil was observed. Rocky cliff at NNE end was surveyed by helo; no oil was observed. Effectiveness of helo survey in observing oil is limited. Most of the segment is boulder/rubble/rubble shoreline (where accessible) with the exception of a sand pocket beach at the extreme NNE end. Oil was observed at one area in the form of VL stain on boulders in the U122 frequency of observed stain was very occasional.

REVIEWED BAF DATE 8 May 90

OG Station

SEGMENT ST/K9-30-1K-1

SUBDIVISION K9-30-1K-1A

DATE 5/4/90

SKETCH MAP

N →

Approx Scale
1cm = 200m

CHECKLIST

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

LEGEND

1 ▲

Pit - No Subsurface Oil

2 ▲

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

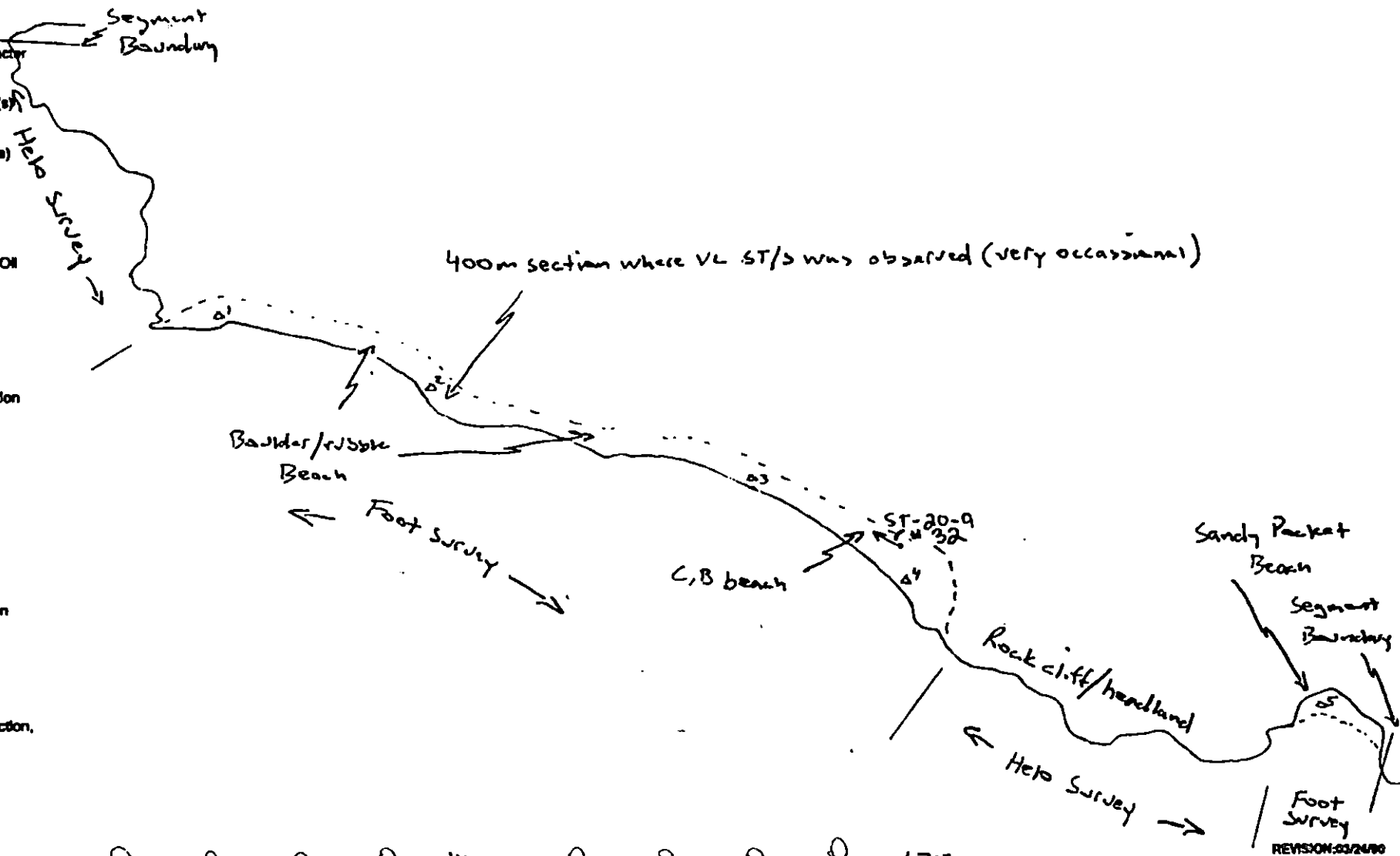
Splashed Distribution

Oiled Vegetation

1 ➡

Photo location, direction,
and number

Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 400 MS 0 PT 0 TB 0 FL 0 NO 6712



REVISION: 03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03-22-79

Segment ST / K9-30 Subdivision IK-01 Date (mo / day / yr) 5/4/9Time (24 hr) 15:00 Biologist H. Davis(A) Substrate type and % of segments:
(1) Bedrock _____ (2) Boulder _____ (3) Cobble _____ (4) Pebble _____ (5) Sand _____ (6) Silt _____(B) Overall % cover of biota (% of segment): Dense 40% Moderate 30% Low 30% (50%)

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

Photographs:
Roll No. ST-20-9
Frames #32

BARNACLES Continuous except where cobble-sand beaches occur.

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

NOT PRESENT
4, 5, 6

MYTILUS Patchy, Ave size (1x1 meter) Dense clusters.

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

NOT PRESENT
3, 4, 5, 6

GASTROPODS Continuous with variable numbers.

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

NOT PRESENT
4, 5, 6

FUCUS Patchy but dense cover where it occurs

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

NOT PRESENT
4, 5, 6

Wildlife Observations/ General Comments: Oil observed (very light and only occasionally) was above the inhabited area at the intertidal. This segment had a very diverse and abundant biota. Birds seen were: Rock Ptarmigan, Glaucous-winged gulls, cormorants, mew Gulls, Raven, Crows, Whimbrels, wandering Tattler, Baldt. Eagle, and oystercatchers. Bear tracks.

Ecological Considerations: SR seabird colony. Cormorants and Glaucous-wing gulls nest on Alkingtons ss. and on some of the cliffs in the segment. Eagles were seen mating but no nests were seen.

Comment cont.

The 400 m area with very light stain paralleled an extremely rich intertidal area. Mostly boulders and cobbles over a bedrock and sand base. The upper intertidal had a very dense *Balanus* and *Littorina* population. Small <3mm *Littorina* were found in empty *Balanus* shell or in crevices. *Littorina* egg masses were found under boulders and cobbles. Limpets (*Notocmaea* + *Calliactis*) were found in protected areas (crevices and the undersides of boulders). *Porphyra* was on the tops of boulders. *Fucus* covered large cobbles and raised bedrock. *Odenthalia* ringed pools and covered flat areas. *Calliarthron*, *Corallina* and *Lithothamnion* were in pools. MTZ pools also had *Zostera marina*. The tops of boulders had tufts of both *Ectocarpus* and *Gloiopeltis*. *Alaria* started in the MTZ and increased into the LTZ. *Ulva*, *Rhodomenia*, *Gracilaria*, *Enteromorpha*, *Nalaeccia* and *Petrocelus* was present. Some species observed: *Nalaeccia pinnata*, *Nalaeccia* sp, *Tubaria crassicornis*, *Anthopleura artemesia*, *Epicatena* sp, unknown *Polysiphonia*, *Tonicella lineata*, *M. palia* sp., *Katamnia tunicata*, *Notocmaea scutum* and *persona*?, *Calliostoma ligatum*, *Murella*, *Fusitriton* shell, *Mytilus edulis*, *modiolus*, *Pododesmus cepio*, *Clinocardium nuttallii* (shells), *Nereis* sp?, *Terebellidae*, *Spirorbis*, *Serpula*, *Melanocarpa*?, *Sabella* sp. *Strongylocentrotus* sp shells, *Holothuroida* (small slate grey 5 rows tube feet), *Amphipods* *Pagurus*, *Membranipora* sp, *Leptasterias hexactis*. Sculpins and prickly backs were seen in larger pools. *Nereocystis* was off shore around rocky points and around the island. 4 harbor seals were seen off-shore.

OG

Bio H. Davis

SEGMENT ST/ K9-3a-1k-1.SUBDIVISION K9-3a-1k-1ADATE 5/4/90CHECKLIST

☐ 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 ▲

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

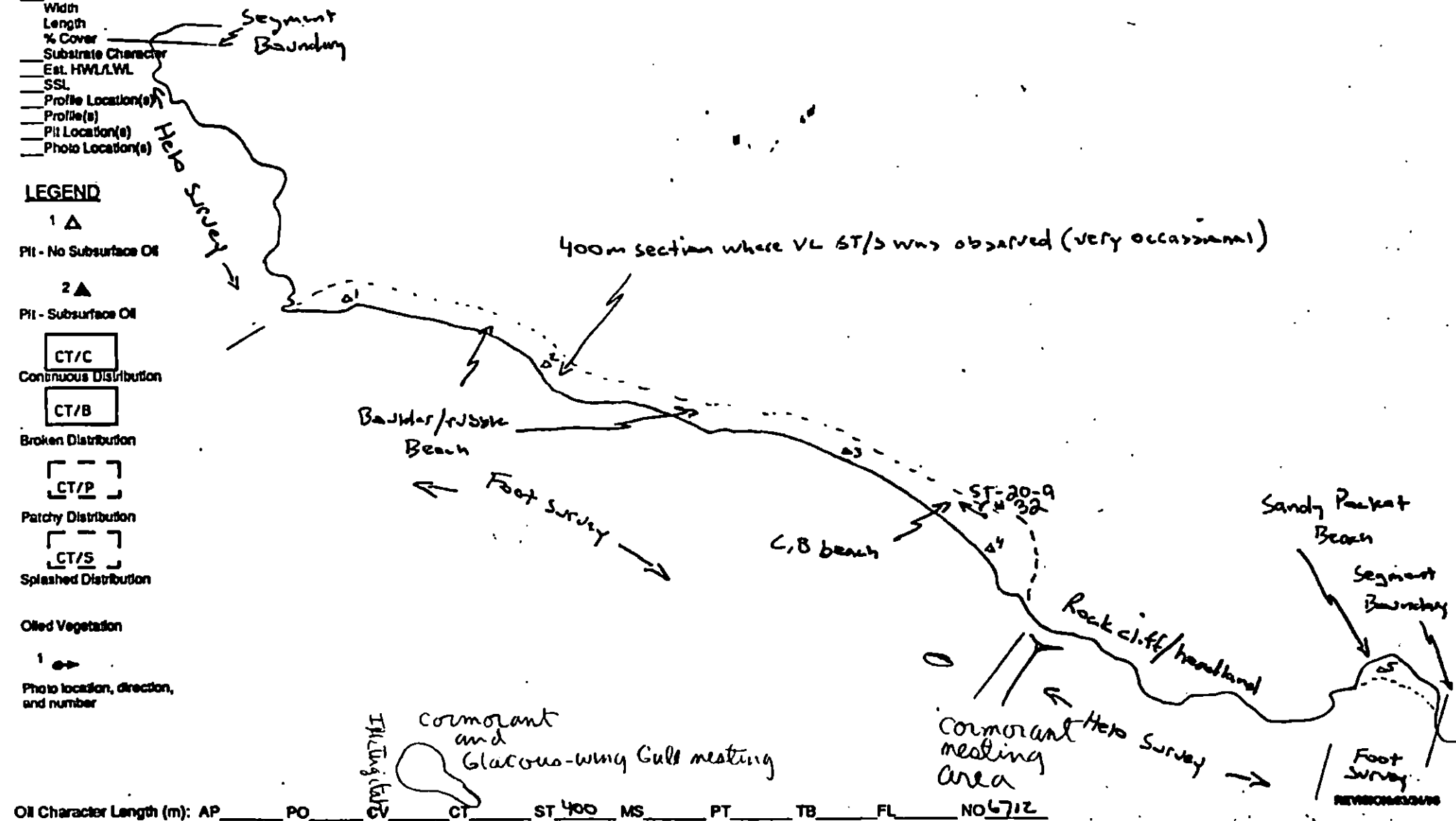
Oiled Vegetation

1 →

Photo location, direction, and number

Ecology
 SKETCH MAP
 N →

Approx Scale
 1cm = 200m



K9-30-IK-1A

9S-30

XXXX Wide

IK-1

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

Approx. Segment Length: 7156m



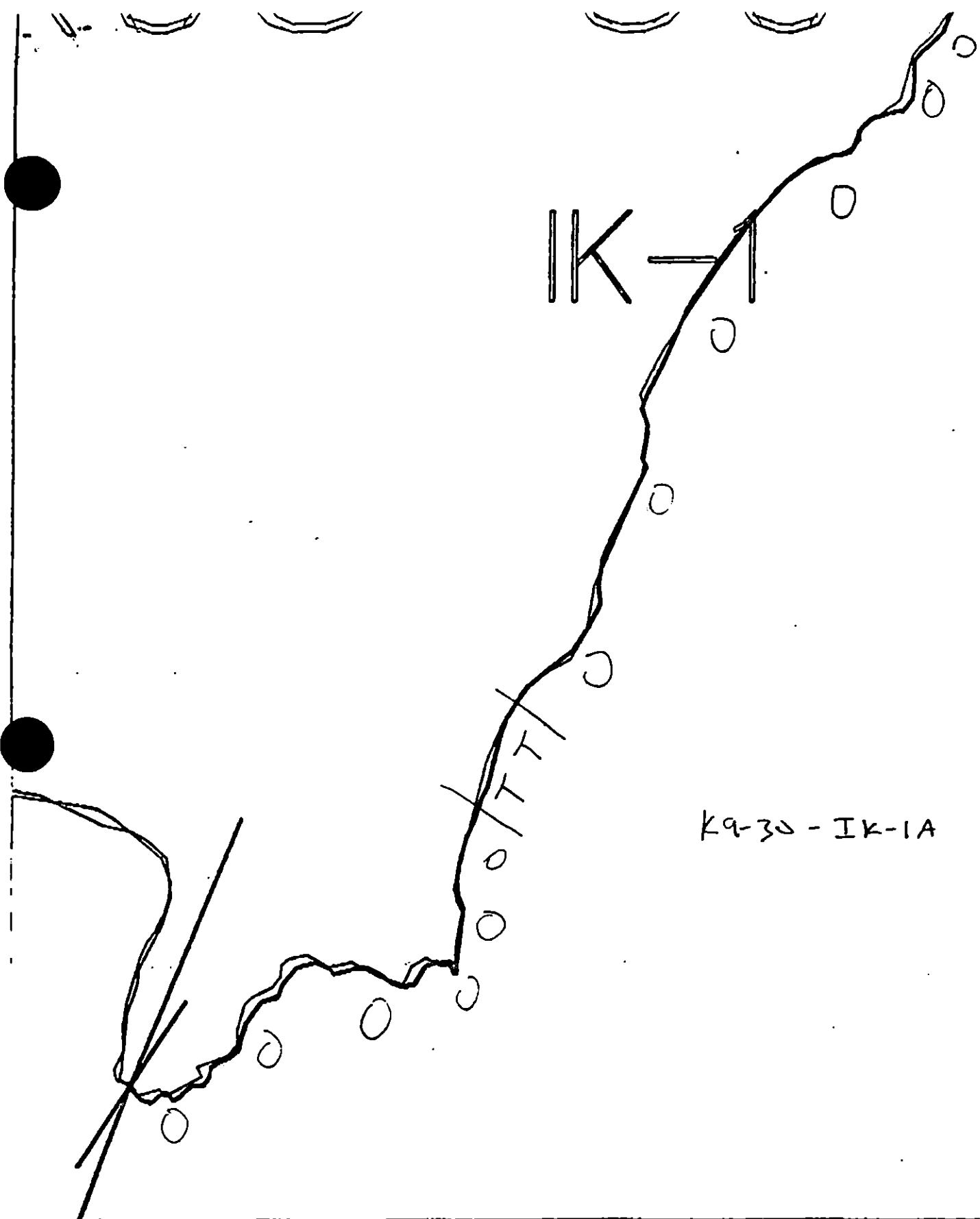
K9-30-IK-1A

Map Key: AKP-IK-1c

Name: Acton

Date: 5-4-90

Data Entered:



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

IK-1

Approx. Segment Length: 7156m



K9-30-1K-1A

Map Key: AKP-1K-1a

Name: Acton

Date: 5-4-90

Data Entered:

REGION: KODIAK

SEGMENT: ST/K09-30A-TL-001

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ K09-30A-TL-001 SUBDIVISION A (1 OF 1) DATE 5/13/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5R Seabird colony (5/1 to 9/1)
5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
4LL State Marine Park National Parks

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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 334 m: Narrow 245 m: V. Light 1165 m: No Oil 5800 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 as indicated on attached sketch map. Consult USFWS for appropriate work dates, regarding eagle nests and seabird colonies.

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 287-2299
- 1C Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Kotol Bay Hatchery release
Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G for confirmation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1I Gill net area
1J Purse seine area
Mainland, West side Kodiak, Shuyak & Moser/Oiga Bay (6/9 to 10/1)
East side Kodiak, East side Afognak (7/4 to 10/1)
1K Purse seine hook-off
1L Set net sites
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 6/30)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Nicholson 486-4791
- 30 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 287-2403
- 5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 6/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Roth 287-2208
- 5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (8/1 to 9/15)
6V Anchorages (8/1 to 9/15)
6W Forest Service cabins (8/1 to 9/15)
6X Lodge (8/1 to 9/15)
6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (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)
7KK Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 287-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 K09-30A-TL-2 SUBDIVISION: A DATE 5/13/90

USCG

NAME Kenneth M. TRABUE SIGNATURE K. Trabue

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Three different wide (>6m) sections of Broken coast and stain with sporadic mousse. Occasional stain throughout rest of segment. The oil and substrate characteristics make clean-up infeasible. The only oily section near NW part of segment (Pit #1) does have recoverable oil.

ADEC

NAME Francine J. Benais SIGNATURE Francine J. Benais

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Manual clean-up recommended in area designated as 'Rough Band' 6' x 7.5m. SSAT map on western side of islet located in 4th major bay from our survey starting in lagoon (SW corner of Takli). [Other areas of light oil exist but are not worth recovering]. This band could be cleaned w/frames to remove persistent mousse among cobbles & boulders

LAND MANAGER NPS

NAME Will TROYER SIGNATURE Will Troyer

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Band #2 in the lagoon is close to archeological site, eagle nests and rookery, little recoverable oil. Band probably should not receive cleanup effort.
Band #6 has an extremely amount of mousse that is recoverable. It doesn't lie close to the rookery that would be harm so it can be removed with manual cleanup methods

SHORELINE OILING SUMMARY

REVISION NO. 04/12/90

OG Greg Chaney USCG Ken Tralove SEGMENT ST/ K09-30A-TL1
 BIO Nathan Danks LAND REP Will Traylor (VP) SUBDIVISION A (LOF 1)
 EXXON - ADEC Frank Benchis TIME 08:00:15:10
 TEAM NO. 20 TIDE LEVEL -0.5 to 6.0 DATE May 13/90
 EST. SUBDIVISION LENGTH: 9570 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock Others
 SURVEYED FROM: ☒ Foot ☐ Boat ☒ Helo WORKING DIRECTION: West to East
 SURFACE SEDIMENTS: R 50 % B 25 % C 5 % P 5 % G 5 % S 10 % M 0 % V 0 %
 SLOPE: Long 10 % Hang 60 % Vert 30 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 224 m N 190 m VL 1200 m NO 7956 m

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0 cmPATTIES / TARBALLS 4 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE marine patty
#BAGS less than 1

Photographs:

Roll No. ST-20-11Frames 2 to 7

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	V	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	SU	U	M	U				
1	40					X	.								X					N	0	GS
2	30					X	.								X					N	0	S
3	40					X	.								X					N	0	S
4	55					X	.								X					N	0	S
							.															
							.															

COMMENTS

See attached.

REVIEWED BAT DATE 17 MAY 90

Note: Further SSAT of this segment was not
conducted due to NPS request. May 14 1990

COMMENTS
BT-K09-30A-TL1-A

Greg Chaney

May 13 1990

Subdivision "A" of segment BT-K09-30A-TL1 consists of the small fjord like embayments along Takli Island's southern coast. Although the linear distance from the beginning to the end of the subdivision is just over a mile, the length along it's meandering coastline is roughly six miles. The shore is composed of rocky headlands, steep sided bays and pocket sand beaches. At the western edge of the subdivision is a protected lagoon system. Within this lagoon, between pits 1 and 2, are two low boulder strewn rocky points. These features retain splatters of cover, coat and stain. Also scattered randomly in this area are mousse patties which have weathered to dark black on the surface. Since the local rock is also black, these patties are very difficult to see. When the surface of the mousse is disturbed it is a rich chocolate brown. In a few locations mousse was pooled at least 2 centimeters deep in bedrock cracks and between boulders. Along the protected shores of the rest of the segment small splatters of stain and tar coats were occasionally observed as noted on the sketch map. The agency personnel on our team did not feel that these rare splatters and drops were of serious consequence. The exceptions to this were noted near the center of the subdivision. In the location where three low islands are clustered in a small bay the wave energy was low enough that oil remained from last year. Scattered pooled mousse and patches of tar cover, coat and stain were observed near the intersection of the two western islands in a rough band 6 meters wide, 75 meters long with 10% coverage. Random pooled mousse was lodged between the boulders at least 5 centimeters deep. Although the total area effected by oil was less than in the western lagoon, mousse between the two islands seemed more concentrated and recoverable. Estimates of mousse concentration were very difficult to develop in both locations due to the very dark nature of both mousse and bedrock. Translucent sheen was observed on tide pools associated with local mousse deposits. The final notable concentration of mousse was located near the eastern edge of the subdivision. Here a rough band of sporadic splattered cover, coat, stain and pooled mousse was deposited along a 30 meter section of boulder beach, 4 meters wide. Again coverage within this band was near 10%, with rare pooled mousse to 4 centimeters deep. Recovery of mousse mentioned in this report, although tedious, is possible with hand trowels etc.

SKETCH MAP

KG. Shag.aney

SEGMENT ST/ K09-30A-TL1A

SUBDIVISION A

DATE May 13 90

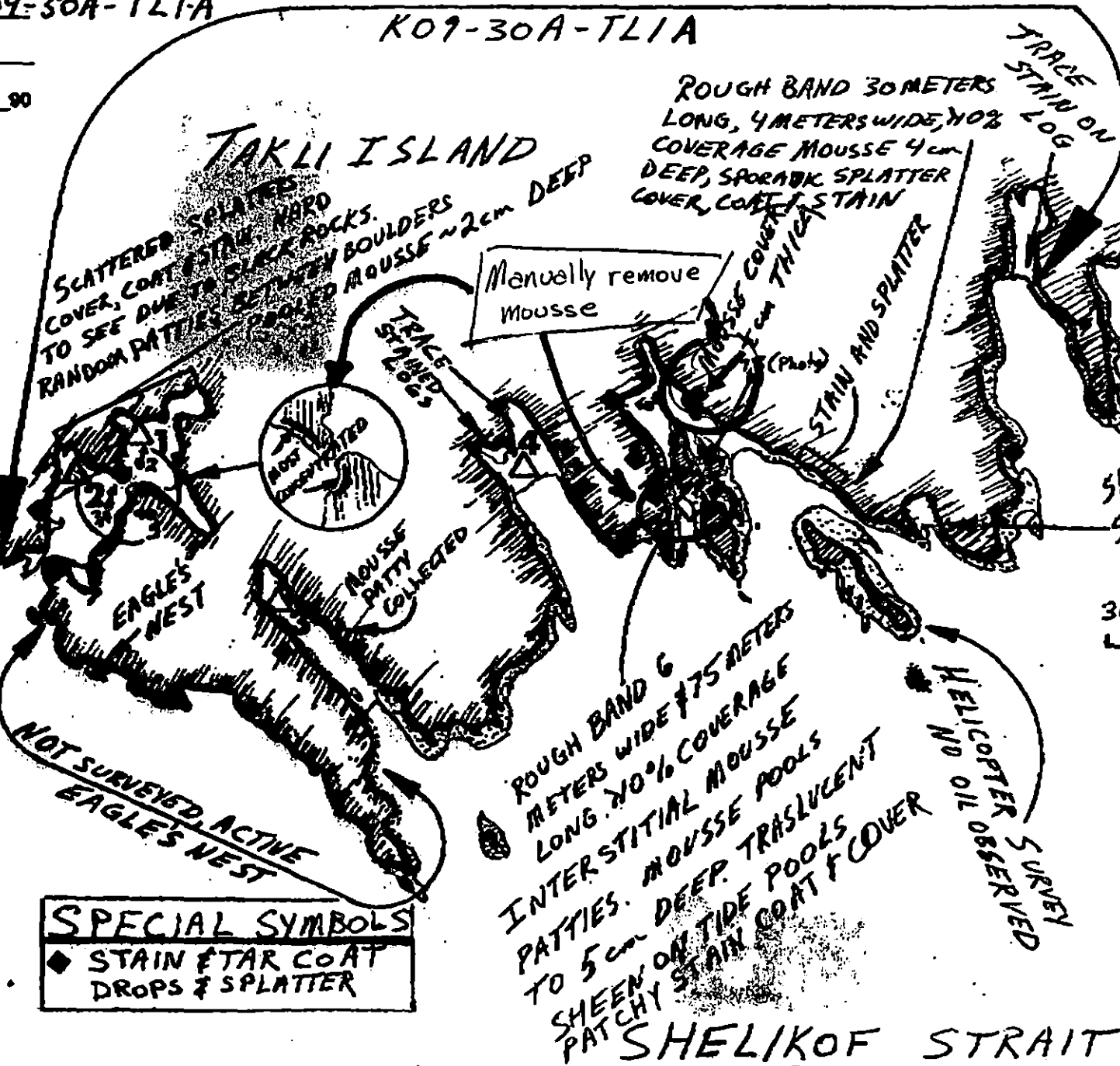
CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. MARLAW
- ☐ SCL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pt. Location(s)
- ☐ Photo Location(s)

LEGEND

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

SPECIAL SYMBOLS
◆ STAIN & TAR COAT DROPS & SPLATTER



Oil Character Length (m): AP 0 PO 20 CV 100 CT 300 ST 1200 MS 200 PT 200 TB 0 FL 0 NO 7956

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/28/88

Segment ST / K09-30A Subdivision TL-01 A

Date (mo / day / yr) 5 / 13 / 90

Time (24 hr) 08:00 Observer H. Davis

- (A) Substrate type and % of segments:
 (1) Bedrock 50 (2) Boulder 25 (3) Cobble 5 (4) Pebble 5 (5) Sand 15 (6) Silt _____
- (B) Overall % cover of biota (% of segment): Dense 20% Moderate 40% Low 40% (40%)
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:

Roll No. ST-20-11

Frames 2-8

BARNACLES *continuous except across the sand and grass at the heads of inlets.*
New settlement had occurred recently.

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

NOT PRESENT
4, 5, 6

MYTILUS *Patchy all along the segment*

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

NOT PRESENT
5, 6

GASTROPODS *littorina Dense-Sparse, limpets moderate-Sparse, Nucella Moderate-Sparse. all were patchy*

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

NOT PRESENT
5, 6

FUCUS *Patchy. Along some places there was a dense band of fucus in others only patches on the tops of boulders*

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

NOT PRESENT
4, 5, 6

Wildlife Observations: General Comments: *See Ecology maps.*

Ecological Considerations: *SR. On the western edge of the island, north of the lagoon there is a cormorant rookery (Pisagil and Red faced?). There is also an Eagle Nest on the south west corner of the island (see Map) and possibly another*

K04 TL-01A
 5/15/40
 H. Davis

This segment is made up of several deep inlets alternating with sloping rocky points. The inlets have sand bottoms with bedrock, boulder and cobble walls that get smaller toward the head of the inlet. The heads of these inlets are usually sloping grass hills with sand dunes and debris. At the south-west end of the segment was a lagoon with a sand bottom and boulder/bedrock edges. In the lagoon the rocks were most commonly occupied by: Ulva, Scytosiphon, Enteromorpha, Gloiopelta, Fucus, Odonthalia, Mytilus, Nereis, Littorina, Balanus and Pogonocherus. On the sand shells of Clonostomum, Sardinia, protolacca and Chlamys were found. Some had drill holes from a predatory snail possibly Polymesia or Natica. A few Charonia were found. Near the mouth of the lagoon the boulders had been settled by cyprids. (Barnacle larvae) The flora and fauna in the inlets was very similar to that of the lagoon with the addition of Cancer magister, Pycnonotus ochraceus, Ligia, unknowned not mite, and sculpins. On the rocky headlands there was a more diverse community visible. The algae: Porphyra, Ulva, Fucus, Odonthalia, Rhodomenia, Bridelia, Corallina, Alaria and Laminaria. Barnacles (Balanus glandula and cuneatus), Cellulosa digitata, Anthracoceros scutum, Holothuria persiana, Nereis canaliculata, Sabellid sp, Katharina tunicata, Cryptochiton stelleri (dead), Buccinum sp., Epiactus prolifera?, Anthopleura anthracina, Anthopleura artemesia, Toalia crassicornis, Mytilus, Spirorbis, Tonicella lineata, Hali-chondria pumila, Allopia porphyra?, Melanochlamys taylori and Strongylocentrotus droebachiensis.

Stream
 Abundant
 that it's anachronism.

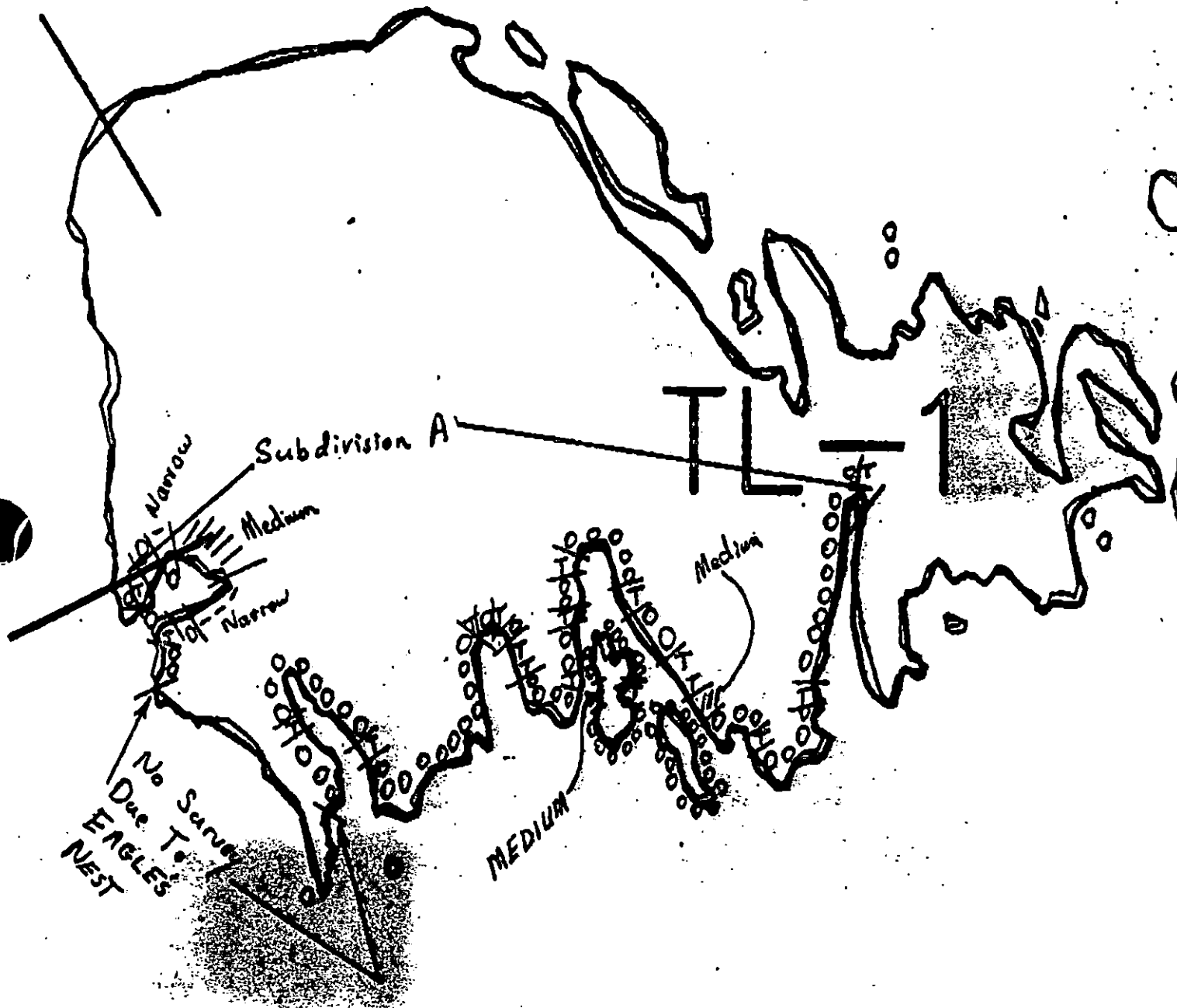
Seagulls
 Pigeons

Mammals
 Bear (Trapper)
 Fox (Trapper)
 Mink (seen in the intertidal)

Eagle
 X West

Birds
 Eagle (2 pair 1 juvenile)
 Herring (20-40)
 Surf Scoter
 White Winged Scoter
 Red Breasted Merganser
 Glaucous-wing Gull
 Pelagic + Red Crested Cormorant
 Hermit Thrush
 Crow (2)
 Song Sparrow
 Fox Sparrow
 Oystercatchers (6)

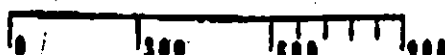




KAS

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

TL-1
 KAS-30A
 ADEC Segment Length: 24993m



Map Key: AKP-TL-1a

Name: Greg Chasen

Date: May 13, 1990

SHORELINE EVALUATION

SEGMENT ST/ K09-30A-TL-001 SUBDIVISION A (1 OF 1) DATE 5/13/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5R Seabird colony (5/1 to 9/1)
5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
4LL State Marine Park National Parks

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINT: An Exxon archaeological monitor is required on-site during shoreline treatment.

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

SHPO SIGNATURE: Michael Centurion DATE: July 12, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 334 m: Narrow 245 m: V. Light 1165 m: No Oil 5800 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

X No Treatment Recommended _____ Snare/Absorbent Booms
X Treatment Recommended _____ Oil Snares (pom poms)
X Manual Pickup _____ Absorbents (pads, rolls, etc)
7-20 _____ Bioremediation _____ Spot Washing: _____ Wands
_____ Tarmat Removal _____ Beach Cleaner
_____ Other (see comments)

COMMENTS: Recommend manual pick up of mousse as indicated on attached sketch map. Consult USFWS for appropriate work dates, regarding eagle nests and seabird colonies.

TAG COMMENTS: MONITORS TO ASSESS OILED LOGS

TAG APPROVAL DATE: 6/04/90

ADEC Ray Morris

EXXON Andy Ten

NOAA John Talbot

USCG G.A. BEITER

FOSC: [Signature]

DATE: 7-20-90

no treatment!

KODIAK ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (4/15 to 7/31)
 1B Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299
- 1C Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Kotol Bay Hatchery release
 Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
- 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G for confirmation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1I Gill net area
 1J Purse seine area
 Mainland, West side Kodiak, Shuyak & Moser/Oiga Bay (6/9 to 10/1)
 East side Kodiak, East side Afognak (7/4 to 10/1)
 1K Purse seine hook-off
 1L Set net sites
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Nicholson 424-4791
- 2M Herring spawning (4/15 to 6/30)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Larry Nicholson 486-4791
- 30, 30 Harbor seal and sea lion pupping (5/10 to 7/1)
 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 6/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Rothy 267-2206
- 5T All Bald Eagle nests (5/1 to 6/1)
 Active Bald Eagle nests (5/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (5/1 to 9/15)
 6V Anchorage (5/1 to 9/15)
 6W Forest Service cabins (5/1 to 9/15)
 6X Lodge (5/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 Finfish harvesting
 Deer harvesting (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 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST K09-30A-TL-2 SUBDIVISION: A DATE 5/13/90

USCG
NAME Kenneth M. TRABUE SIGNATURE K. Trabue

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Three different wide (>6m) sections of broken coast and stain with sporadic mousse. Occasional stain throughout rest of segment. The oil and substrate characteristics make clean-up unfeasible. The sub oily section near far NW end of segment (Pit #2) does have recoverable oil.

ADEC
NAME Francine J. Benais SIGNATURE Francine J. Benais

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

Manual clean-up recommended in area designated as 'Rough Band' 6' x 7.5m. SSAT map on western side of islets located in 4th major bay from our survey starting in lagoon (SW corner of Takli). [Other areas of light oil exist but are not worth recovering]. This band could be cleaned w/frames to remove persistent mousse among cobbles & boulders

LAND MANAGER NPS
NAME Will TRAYER SIGNATURE Will Trayer

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Band #2 in the lagoon is close to archaeological site, eagle nests and rookery, little recoverable oil here. Band probably should be as not recent cleanup effort.
Band #6 has an off-lying amount of mousse that is recoverable. It doesn't lie close to the rookery that would be hard so it can be removed with manual cleaning methods.

SHORELINE OILING SUMMARY

REVISION NO. 04-13-90

OG Greg Chaney USCG Ken Tralove SEGMENT ST/ K09-30A-TL1
 BIO Nathan Dofin LAND REP Will Tralove (NP) SUBDIVISION A (LOF 1)
 XON --- ADEC Travis Bernhis TIME 08:00:15:10
 TEAM NO. 20 TIDE LEVEL -0.5 to 6.0 DATE May 13/90
 EST. SUBDIVISION LENGTH: 9570 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock Alakula
 SURVEYED FROM: ☒ Foot ☐ Boat ☒ Helo WORKING DIRECTION: West to East
 SURFACE SEDIMENTS: R 50 % B 25 % C 5 % P 5 % G 5 % S 10 % M 0 % V 0 %
 SLOPE: Long 10 % Hang 60 % Vert 30 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 224 m N 190 m VL 1200 m NO 7956 m

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0 cm

PATTIES / TARBALLS 4 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 mouse patty
#BAGS plus then 1

Photographs:

Roll No. ST-20-11

Frames 2 to 7

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UO	1	2	3	4	SU	U	M	U				
1	40					X	.												N	0	GS
2	30					X	.												N	0	S
3	40					X	.												N	0	S
4	55					X	.												N	0	S
							.														
							.														

COMMENTS

See attached.

REVIEWED BAT DATE 17 MAY 90

KG Greg Waney

SEGMENT ST/ K09-30A-TL1A

SUBDIVISION A

DATE May 13 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. MARLAW
- ☐ SCL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pt Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
FI - No Subsurface Oil

2 Δ
FI - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

[CT/P]
Patchy Distribution

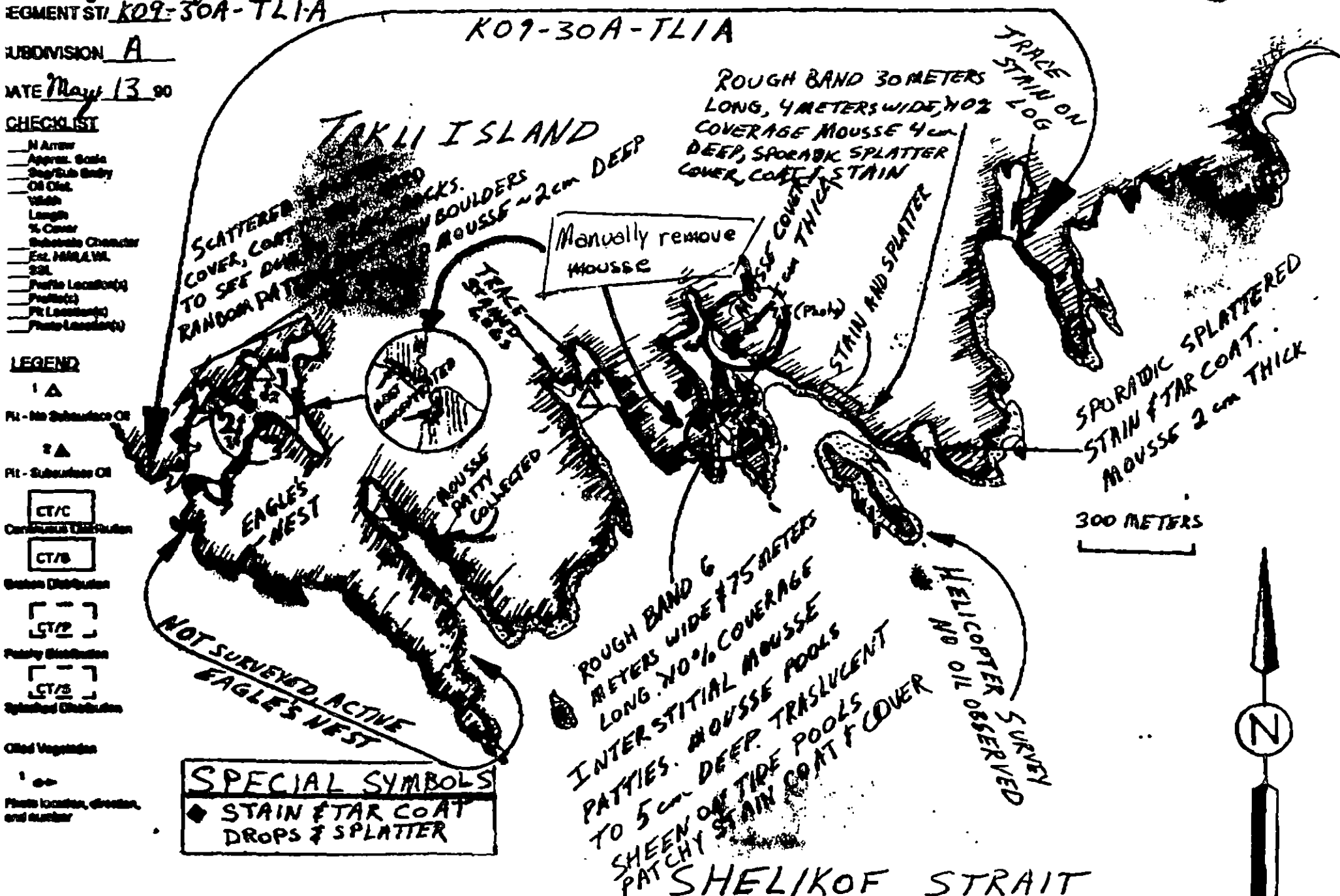
[CT/S]
Splashed Distribution

Clad Vegetation

1 ●●●
Photo location, direction, and number

SKETCH MAP

K09-30A-TL1A



SPECIAL SYMBOLS
◆ STAIN & TAR COAT DROPS & SPLATTER

SHELIKOF STRAIT

Oil Character Length (m): AP 0 PO 20 CV 100 CT 300 ST 1200 MS 200 PT 300 TB 0 FL 0 NO 7956

Notes: Further SSAT of this segment was not
conducted due to NPS request. May 14/1990
COMMENTS
ST-K09-30A-TL1-A

Greg Chaney

May 13 1990

Subdivision "A" of segment ST-K09-30A-TL1 consists of the small fjord like embayments along Takli Island's southern coast. Although the linear distance from the beginning to the end of the subdivision is just over a mile, the length along it's meandering coastline is roughly six miles. The shore is composed of rocky headlands, steep sided bays and pocket sand beaches. At the western edge of the subdivision is a protected lagoonal system. Within this lagoon, between pits 1 and 2, are two low boulder strewn rocky points. These features retain splatters of cover, coat and stain. Also scattered randomly in this area are mousse patties which have weathered to dark black on the surface. Since the local rock is also black, these patties are very difficult to see. When the surface of the mousse is disturbed it is a rich chocolate brown. In a few locations mousse was pooled at least 2 centimeters deep in bedrock cracks and between boulders. Along the protected shores of the rest of the segment small splatters of stain and tar coats were occasionally observed as noted on the sketch map. The agency personnel on our team did not feel that these rare splatters and drops were of serious consequence. The exceptions to this were noted near the center of the subdivision. In the location where three low islands are clustered in a small bay the wave energy was low enough that oil remained from last year. Scattered pooled mousse and patches of tar cover, coat and stain were observed near the intersection of the two western islands in a rough band 8 meters wide, 75 meters long with 10% coverage. Random pooled mousse was lodged between the boulders at least 5 centimeters deep. Although the total area effected by oil was less than in the western lagoon, mousse between the two islands seemed more concentrated and recoverable. Estimates of mousse concentration were very difficult to develop in both locations due to the very dark nature of both mousse and bedrock. Translucent sheen was observed on tide pools associated with local mousse deposits. The final notable concentration of mousse was located near the eastern edge of the subdivision. Here a rough band of sporadic splattered cover, coat, stain and pooled mousse was deposited along a 30 meter section of boulder beach, 4 meters wide. Again coverage within this band was near 10%, with rare pooled mousse to 4 centimeters deep. Recovery of mousse mentioned in this report, although tedious, is possible with hand trowels etc.

K09: TL-01A
5/13/90
H. Davis

This segment is made up of several deep inlets alternating with sloping rocky points. The inlets have sand bottoms with bedrock, boulder and cobble walls that get smaller toward the head of the inlet. The heads of these inlets are usually sloping grass hills with sand dunes and debris. At the south-west end of the segment was a lagoon with sand bottom and boulder/bedrock edges. In the lagoon the rocks were commonly occupied by: *Urosalpinx*, *Scytodonta*, *Ensis*, *Cladocera*, *Gloiopecta*, *Fucus*, *Odenthalia*, *Nitidul*, *Nitidul*, *Littorina*, *Balanus* and *Pogon*. On the sand shells of *Cladocera*, *Saxidomus*, *Procladia* and *Chlorostoma* were found. Some had drill holes from a predatory snail possibly *Polydora* or *Natica*. A few *Phoronis* were found. Near the mouth of the lagoon the boulders had been settled by *Crepidula* (*Barnacle* larvae). The flora and fauna in the inlets was very similar to that of the lagoon with the addition of *Cancer magister*, *Pagurus ochraceus*, *Ligia*, *Antennaria*, *Hydractinia*, and sculpins. On the rocky headlands there was a more diverse community of plants. The algae: *Porphyra*, *Ulva*, *Fucus*, *Odenthalia*, *Rhodomenia*, *Bryopsis*, *Codium*, *Alaria*, *Enteromorpha* and *Laminaria*. *Barnacles* (*Balanus glandiformis* and *unus*), *Collisella digitata*, *Hydrobia ulvae*, *Hydrobia personata*, *Nucella canaliculata*, *Sabellid* sp., *Katharina tunicata*, *Cryptochiton stelleri* (dead), *Buccinum* sp., *Epiaulus prolifica*, *Anthopleura*, *Anthopleura artemisia*, *Tosia crassicornis*, *Mytilus*, *Spizella*, *Tonnoia lineata*, *Hydrobia*, *Chondria pumila*, *Allopora porphyra*, *Melandroscopa* *Tigrid* and *Strongylocentrotus drobachensis*.



- Birds
- Falcons (1 pair) (1 juvenile)
 - Herring (20-40)
 - Sand Seals
 - White Winged Scoter
 - Red Breasted Merganser
 - Glaucous-wing Gull
 - Pelagic Red Crested Cormorant
 - Hermit Thrush
 - Crow (2)
 - Song Sparrow
 - For Sparrow
 - Oystercatcher (6)



SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/28/90

Segment ST / K09-30A Subdivision TL-01A Date (mo / day / yr) 5/13/90Time (24 hr) 07:00 Investigator U. Davis(A) Substrate type (% of segment):
(1) Bedrock 0 (2) Boulder 25 (3) Cobble 5 (4) Pebble 5 (5) Sand 15 (6) SM 40(B) Overall % cover of biota (% of segment): Dense 20% Moderate 40% Low 40% (40%)

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

Photographs:
Roll No. ST-20-11Frames 2-8BARNACLES *continuous except across the sand and grass at the heads of inlets.*
New settlement had arrived recently.

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

NOT PRESENT

4, 5, 6

MYTILUS *Patchy all along the segment*

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

NOT PRESENT

5, 6

GASTROPODS *littorina Dense-Sparse, limpets Moderate-Sparse, Nucella Moderate-Sparse, all were patchy*

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

NOT PRESENT

5, 6

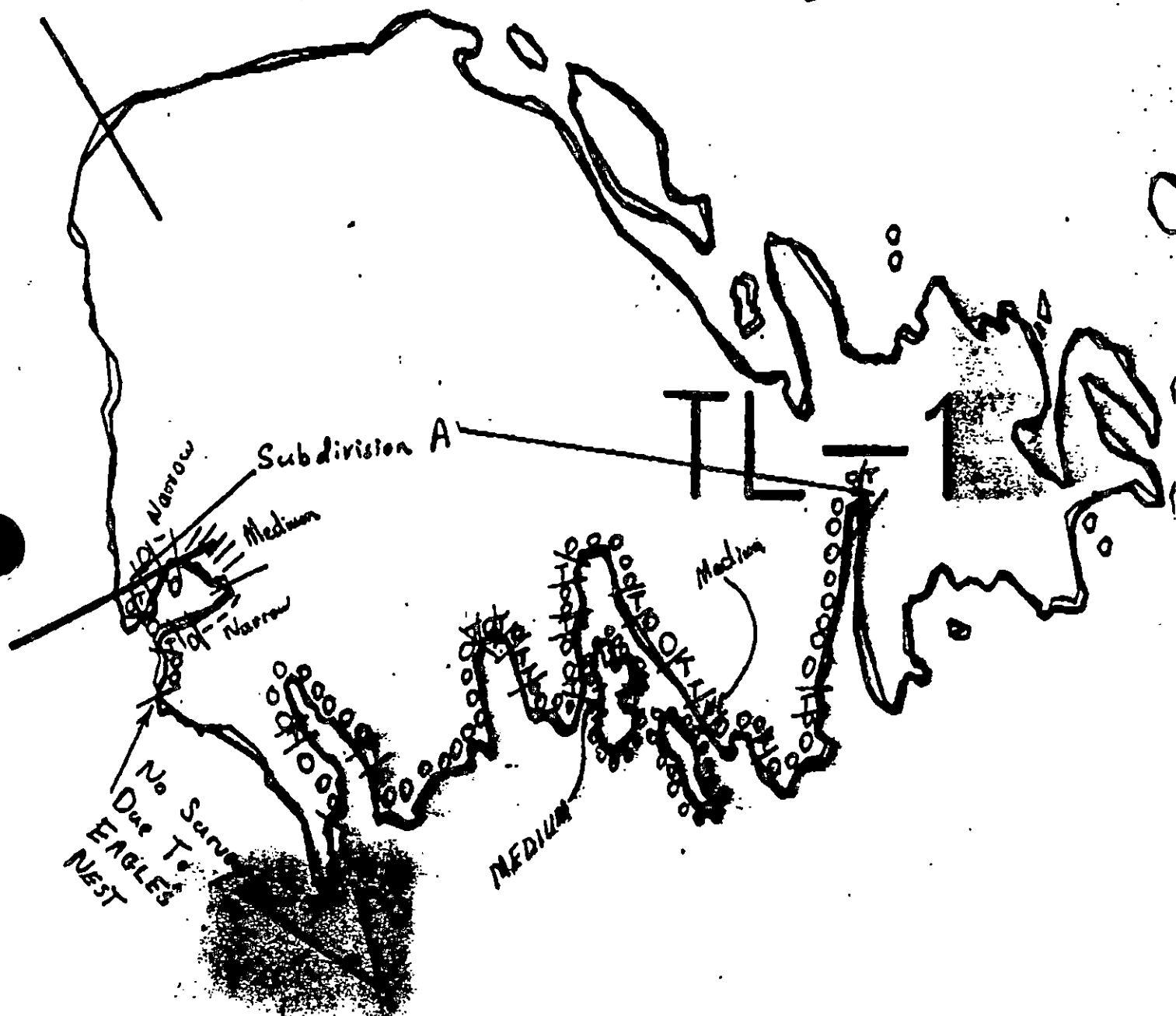
FUCUS *Patchy, along some places there was a dense band of Fucus in others only patches on the tops of boulder*

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

NOT PRESENT

4, 5, 6

Wildlife Observations: *See Ecology maps.*Ecological Considerations: *SR. On the western edge of the island, north of the lagoon there is a cormorant rookery (Pied and Red faced?) There is also an Eagle Nest on the south west corner of the island (see map) and possibly another*



KAS

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

TL-1
 KAS-30A
 ADEC Segment Length: 24993m



Map Key: AKP-TL-1a

Name: Greg Chary

Date: May 13, 1970

REGION: KODIAK

SEGMENT: ST/K09-34-KB-001

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ K09-34-KB-001 SUBDIVISION A (1 OF 1) DATE 4/28/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and seal lion molting (8/15 to 9/15)
9LM Other: Land Mammals
4LL State Marine Park National Parks

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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 1753 m: No Oil 2583 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/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 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 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/ K9-34 KB-1 SUBDIVISION: K9-34-KB-1A DATE 4-28-90

CG

NAMED D. Haven Jr. USCGR

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Very small amount of hardened mousse patties + tarballs.

ADEC

NAME Francine T. Bennis

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

MANUAL PICK-UP OF ENCRUSTED Mousse (w/pumice), MS PATTIES, TAR BALLS
RECOMMENDED ALONG THIS BEACH IF CREWS WILL BE IN THE AREA
ANYWAY.

Beach is High Energy, very dynamic. Over the course of the winter
I've observed a band of oil (encrusted pumice) in November that was
evident in September. With that in mind, as a precautionary measure
a clean-up crew should walk this beach w/shovels + pick-up any
collectable oil.

LAND MANAGER NPS

NAME Will TROYER

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

a few tarballs and patties remain on the
surface that could be picked up with a small
crew with a half day work. Basically most
of the oil found there last year is gone.

SHORELINE OILING SUMMARY

REVISION NO. 06/12/90

OG Acton USCG Haven SEGMENT ST/ K9-34-KB-1
 BIO Davis LAND REP UPS Tanager, James SUBDIVISION K9-34-KB-1A (11 OF 1)
 EXXON Avery ADEC Bannis TIME 8:10 10:11:20
 TEAM NO. 20 TIDE LEVEL +5.5 to -3.5 DATE 4 / 28 / 90
 ST. SUBDIVISION LENGTH: 4314 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: NE 10 SW
 SURFACE SEDIMENTS: R - % B - % C - % P - % G 20 % S 80 % M - % V - %
 SLOPE: Long 100 % Hang - % Vert - % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W - m M - m N - m VL 2500 m NO 2314 m

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0 cmPATTIES / TARBALLS 4-6 BAGSNEAR SHORE SHEEN? ☒ BR RW SL TL

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

Photographs:

Roll No. ST-20-8Frames 31-35

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	VS	1	2	3	4	5	SU	U	M	U				
1	30					✓	.		✓						✓							SG
2	30					✓	.		✓						✓							SG
3	30					✓	.		✓						✓							SG
4	60					✓	.		✓						✓							SG
5	40					✓	.		✓						✓							SG
6	30					✓	.		✓						✓							SG

COMMENTS Segment consists of wide (100+ meter) low angle beach. Oil was observed in upper VITZ and SITZ and consisted of small <10cm tar balls (hard mousse mixed w/ sand and/or pumice) in a 50m x 200m band of very light oiling (very occasional, very sporadic).

Approx 100 pits up to 70cm were dug by the team, no subsurface oil was encountered. In many pits, frozen sand/pumice was encountered at approx 30 cm. below area.

REVIEWED BAT DATE 5 May 90

REVISION: 00/00/20

SHORELINE ECOLOGICAL SUMMARY

REVISION: 3.22

Segment ST / 19-34 Subdivision KB-001 Date (mo / day / yr) 4 / 28 / 90

Time (24 hr) 8:10 Biologist N. Davis

- (A) Substrate type and % of segments:
 (1) Bedrock — (2) Boulder — (3) Cobble — (4) Pebble — (5) Sand 100 (6) Silt —
- (B) Overall % cover of biota (% of segment): Dense — Moderate — Low 100% (1%)
- (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-20-8

Frames 31-35

BARNACLES No 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
 1-6

MYTILUS NO mytilus except as shells in splash zone

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	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 Limpet shells in splash zone

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	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 as drift in kelp-branch

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	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: Floor & plain with willow, alder, birch and grass. Shells common in the area include *Clinocardium nuttallii*, *Mytilus edulis*, *Trusmiopsis*, *Siliqua patula* and *Saxidomus giganteus*. Crab parts were common on the beach, Cancer sp.

* most common on the sand most common. Ecological Considerations: 3 NO PG, 9 LM, seabird colony. Seals and harbor seals molt and have pups on sand spits in this segment. Chiffs at the eastern end of the segment have Glaucous-winged gulls, and Cormorants (Red-faced, Pelagic and Brandt's) nesting.

K9-34-KB-1A

T T T T

← GOA
128G

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

KB-1

ADEC Segment Length: 4335m

0 100 200 300

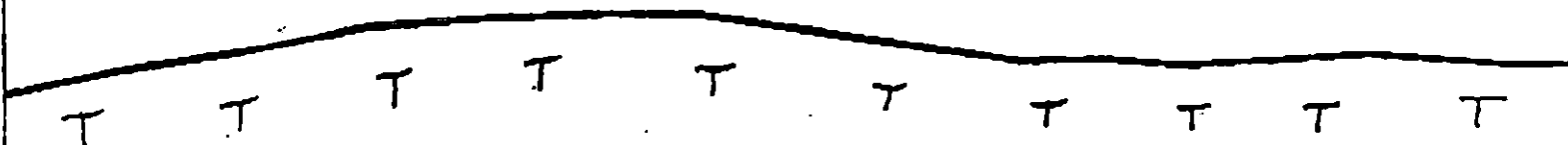
K9-34-KB-1A

Map Key: 60A-128h

Name: Acton

Date: 4-28-90

Data Entered:



K 9-34-KB-1A

← GOA
128F

GOA
128H →

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

KB-1

ADEC Segment Length: 4335m

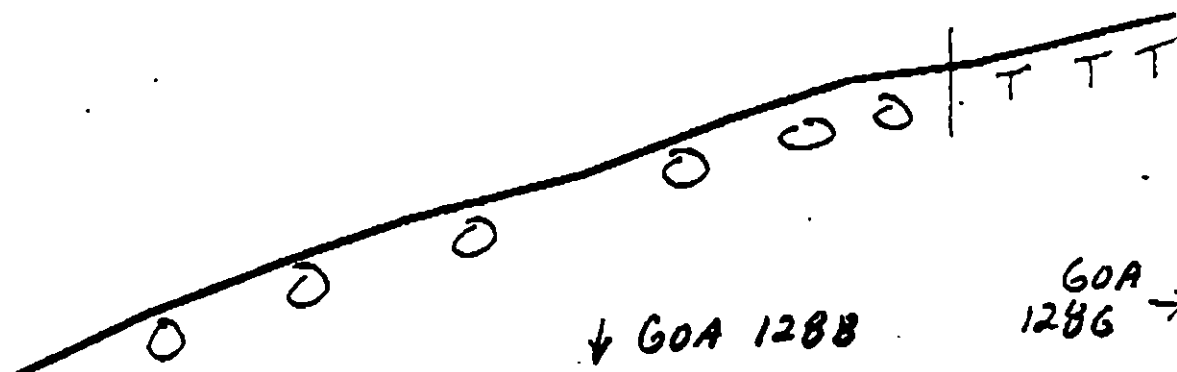
0 100 200 300



K9-34-KB-1A
Map Key: GOA-128g
Name: Acton
Date: 7-28-90
Data Entered:

K

K9-34-KB-1A



↓ GOA 1288

GOA 1286 →

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

KB-1

ADEC Segment Length: 4335m



K9-34-KB-1A

Map Key: GOA-128f

Name: Acton

Date: 4-28-90

Data Entered:

↑
GOA
128 F

K9-34-KB-1A

← GOA
128A

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO

KB-1

ADEC Segment Length: 4335m

0 100 200 300

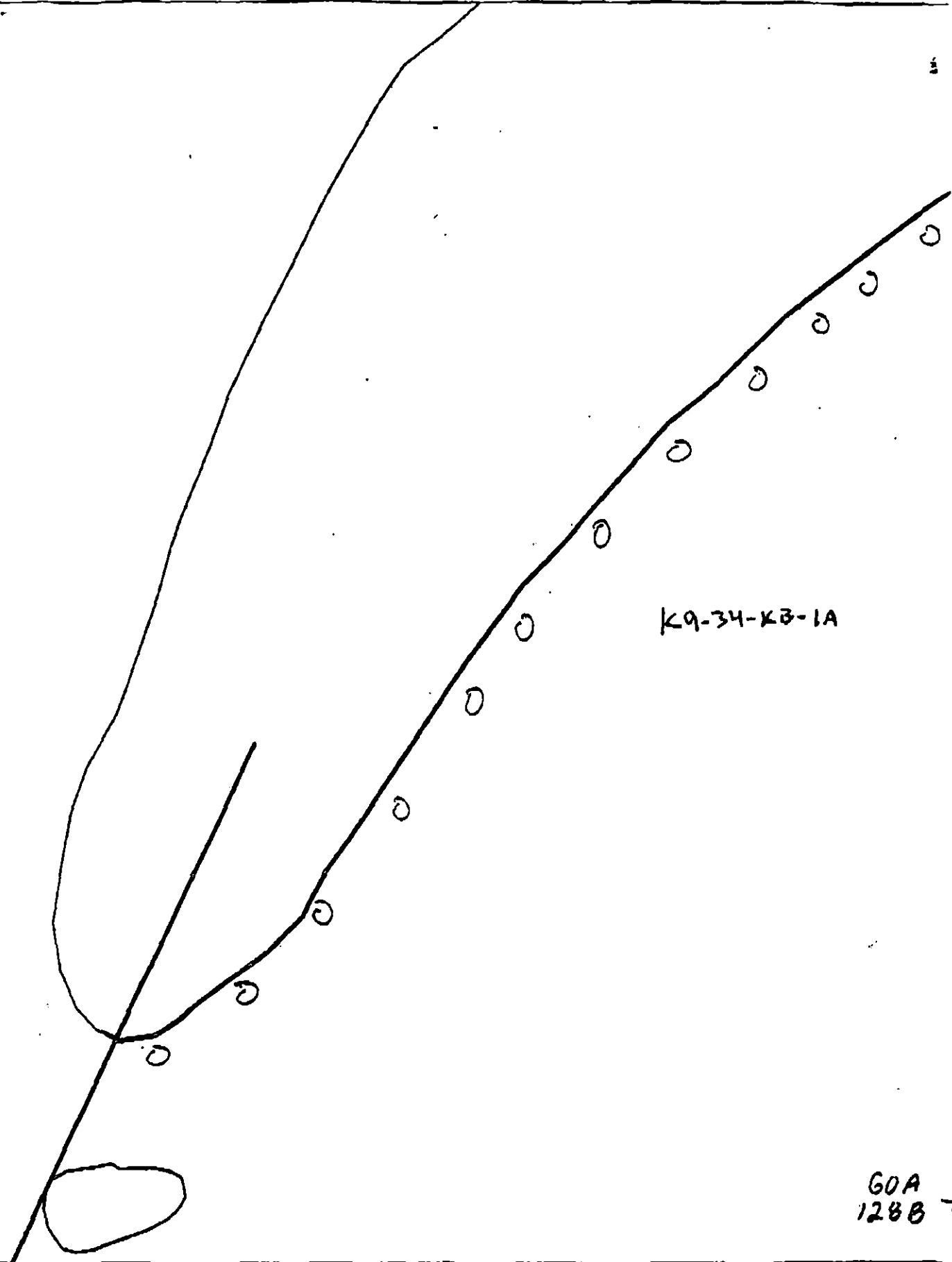
K9-34-KB-1A

Map Key: GOA-128b

Name: Acton

Date: 4-30-90

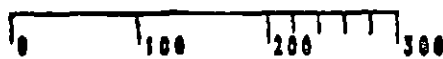
Data Entered:



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

KB-1

ADEC Segment Length: 4335m



K9-34-KB-1A

Map Key: GOA-128a

Name: Acton

Date: 4-28-90

Not Released

SHORELINE EVALUATION

SEGMENT ST/ K09-34-KB-001 SUBDIVISION A (1 OF 1) DATE 4/28/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and seal lion molting (8/15 to 9/15)
9LM Other: Land Mammals
4LL State Marine Park National Parks

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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.)). or

SHPO SIGNATURE: Rachel van Dine DATE: 5/18/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 1753 m: No Oil 2583 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

☒ No Treatment Recommended	<u> </u> Snare/Absorbent Booms
☒ Treatment Recommended	<u> </u> Oil Snares (pom poms)
☒ 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: MANUAL PICKUP OF TARBALLS.

TAG APPROVAL DATE: 5/17/90.

ADEC ART WENNER Art Wenner
EXXON ANDY TETZ Andy Tetz
NOAA GARY PETRAE Gary Petrae
USCG G.A. REITER G.A. Reiter

FOSC: DATE: 5-23-90

DATE 4 / 28 90

CHECKLIST

☐ N Arrow
☐ Approx. Scale
☐ Seg/Sub Bndry
☐ Oil Dst.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HW/L/VL
☐ SSL
☐ Profile Location(s)
☐ Profile(s)
☐ PR Location(s)
☐ Photo Location(s)

LEGEND

1 Δ
Plt - No Subsurface Oil

2 ▲
Flt - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oiled Vegetation

**Photo location, direction,
and number**

SKETCH MAP

$N \uparrow$
 $1 \text{ cm} \approx 200 \text{ m}$

Braided River Channels

DW 570

UW 7

Handwritten: 308 m

ST-20-8
#31-33

50m x 200m VL band
in upper VITZ + SITZ
TBJP

$$A-A' \approx 175 \mu$$

50m x 2000m VC
Band in upper SITE
and SITE
TB/P

Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 0 MS 0 PT 0 TB 2000 FL 0 NO 23M

POLYMER LETTERS

K9-34-KB-1A

T T T T

← 60A
128G

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KB-1

ADEC Segment Length: 4335m

0 100 200 300

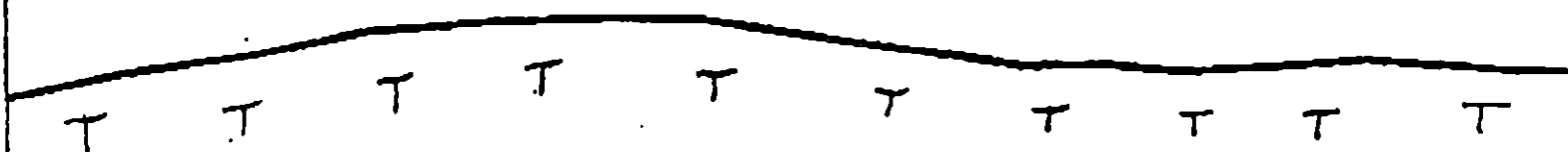
K9-34-KB-1A

Map Key: 60A-128h

Name: Acton

Date: 4-28-90

Data Entered:



K 9-34-KB-1A

← GOA
128F

GOA
128H →

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

KB-1

ADEC Segment Length: 4335m



K9-34-K13-1A

Map Key: GOA-128g

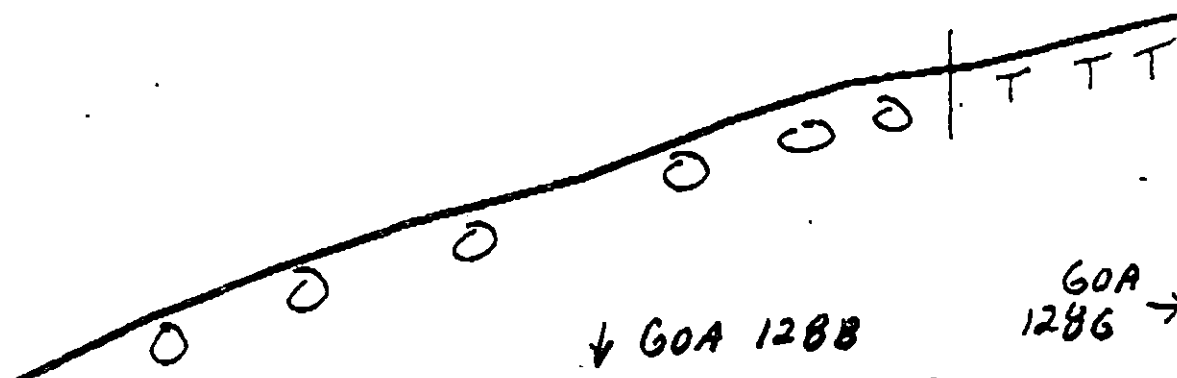
Name: Acton

Date: 4-28-90

Data Entered:

K

K9-34-KB-1A



XXXX Wide

//// Medium

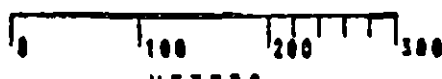
---- Narrow

TTTT Very Light

OOOO No Oil

KB-1

ADEC Segment Length: 4335m



K9-34-KB-1A

Map Key: GOA-1281

Name: Acton

Date: 4-28-90

Data Entered:

↑
GOA
128 F

K9-34-KB-1A

← GOA
128A

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

KB-1

ADEC Segment Length: 4335m

0 100 200 300

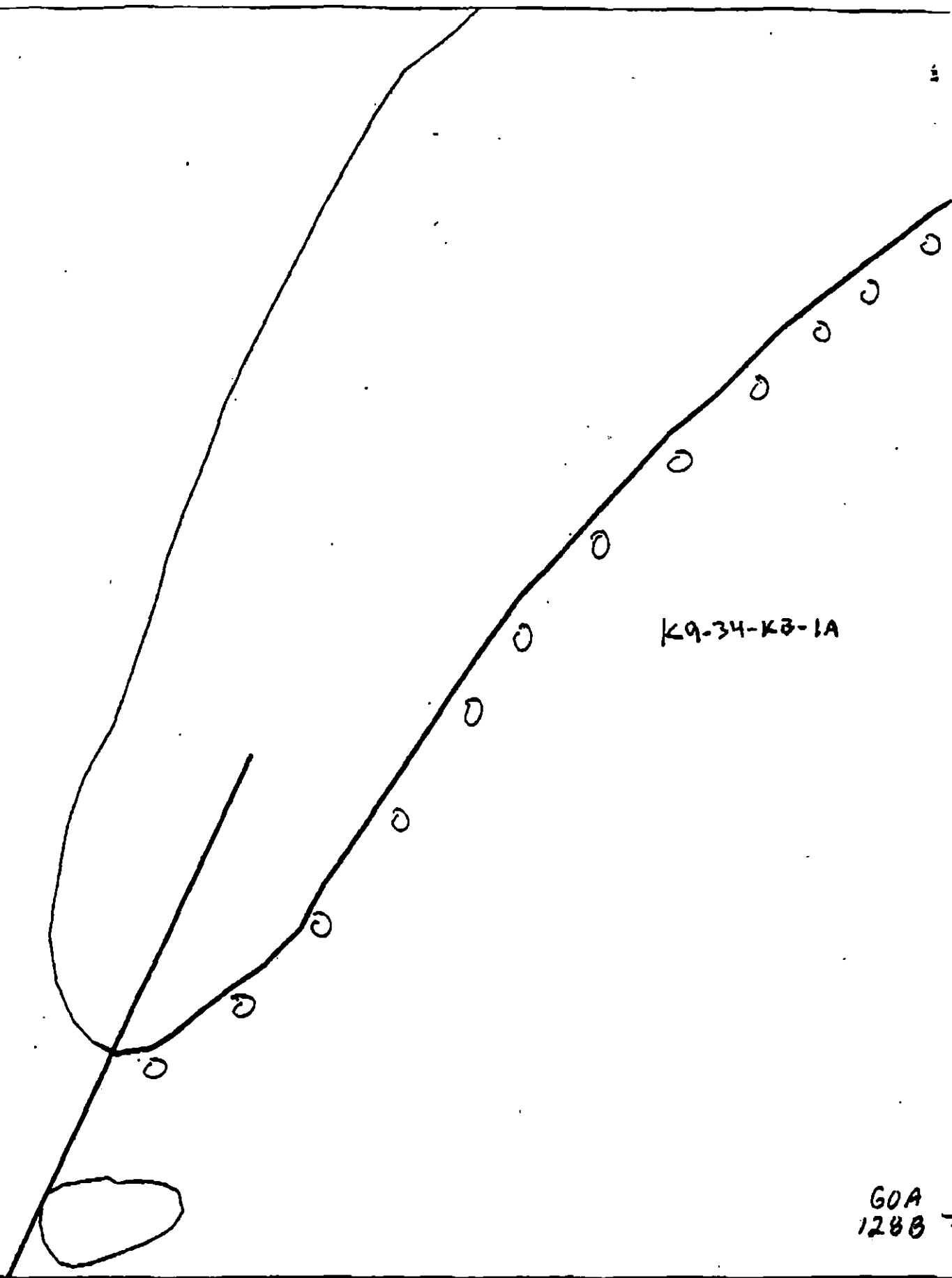
K9-34-KB-1A

Map Key: GOA-128b

Name: Acton

Date: 4-30-90

Data Entered:



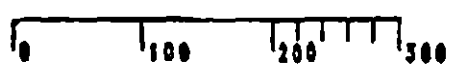
K9-34-K3-1A

GOA
1288

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

KB-1

ADEC Segment Length: 4335m



K9-34-K3-1A
 Map Key: GOA-1280
 Name: Acton
 Date: 4-28-90
 Data Released:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-34-KB-001 SUBDIVISION A (1 of 1)

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

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous stream (262-60-1006, 262-60-1008, and 262-60-10010) are more than 100m from work site. No constraint to manual pickup.
3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Molting	Closed to manual pickup prior to 7/1 and after 8/15.
5R	Seabird Colony	NO CONSTRAINT. Work site is more than 800m from seabird colony.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

[Signature]

Date

6-16-90

Prepared by

Date

STREAM #
262-60-10010

STREAM #
262-60-10080

STREAM #
262-20-10060

KB-1

Active
Nest

WORK AREA

Seabird
Colony

TREATMENT



Exxon Company, USA
Map Key: AKP-KB-1
June 10, 1990

ECOLOGY MAP
SEGMENT K9S-34 KB-1
SUBDIVISION A (L of L)
METERS

0 851 1703

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

1 inch = 2794 feet

SHORELINE EVALUATION

SEGMENT ST/ K09-34-KB-001 SUBDIVISION A (1 OF 1) DATE 4/28/90

ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3P Harbor seal and sea lion pupping (5/15 to 7/1)
3Q Harbor seal and seal lion molting (8/15 to 9/15)
9LM Other: Land Mammals
4LL State Marine Park National Parks

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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.)).

or

SHPO SIGNATURE: Rachel de la Cruz DATE: 5/18/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 1753 m: No Oil 2583 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: SEE CONSTRAINTS ADDENDUM dated 6/15/90 *[Signature]*

TAG COMMENTS: MANUAL PICKUP OF TAGGERS

TAG APPROVAL DATE: 5/17/90

ADEC Art Wehner Art Wehner

EXXON Andy Tetz Andy Tetz

NOAA Gary Petrac Gary Petrac

USCG G.A. PETER G.A. Peter

FOSC: [Signature] DATE: 5-23-90

SHORELINE EVALUATION

SEGMENT ST/K09-35-KA-002 SUBDIVISION A (1 OF 1) DATE 4/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5R Seabird colony (5/1 to 9/1)
5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
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 (24hrs.)).

SHPO SIGNATURE: Rachel Ann Orr DATE: 5/18/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 178 m: V.Light 99 m: No Oil 1367 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 in UITZ and MITZ as indicated on attached sketch map. Spot wash if not accessible. Work after 9/1 due to eagle nest and seabird colony constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/17/90
 ADEC Art Weiner Art Weiner
 EXXON ANDY TGA Andy FO
 NOAA Gary Petrac Gary Petrac
 USCG G.A. Reiter G.A. Reiter

FOSC: W L DATE: 5-24-90

OG Acton

SKETCH MAP

SEGMENT ST/ K9-35-KA-2

SUBDIVISION K9-35-KA-2A

DATE 4/29/90

A

A-A' $\approx$ 100m

A'

CHECKLIST

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

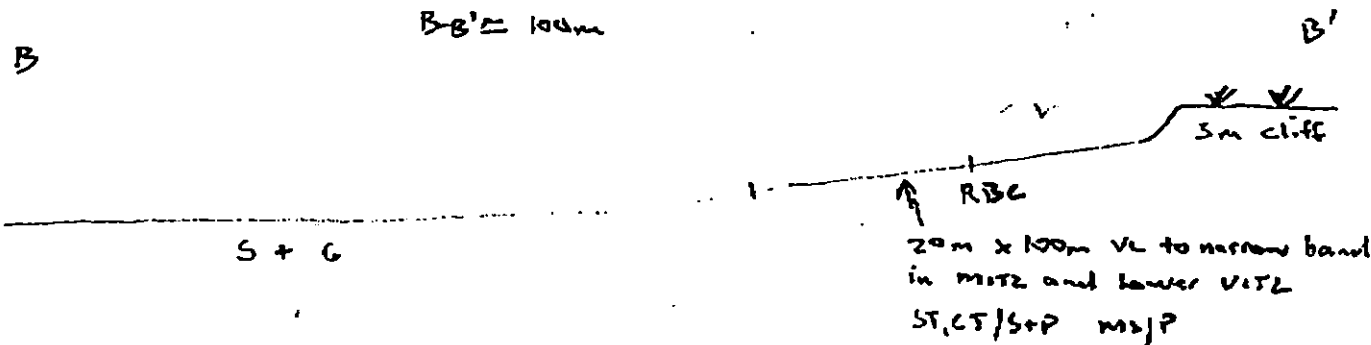
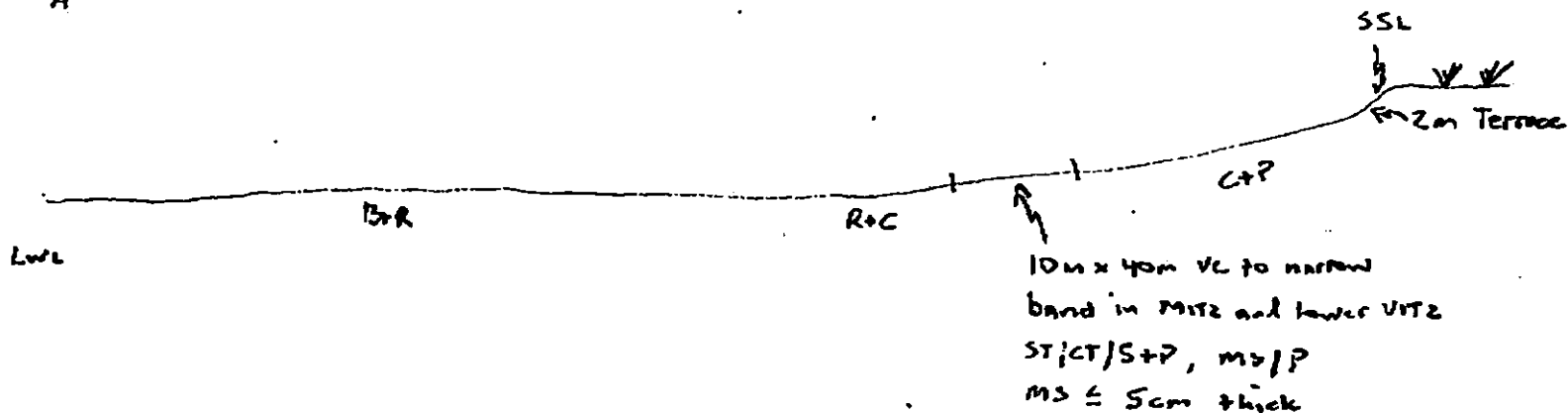
CT/S

Splashed Distribution

Other Vegetation

1 $\Rightarrow$

Photo location, direction,
and number



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

REVISION: 03/24/90

OG Acton Bio H. Davis

Ecological SKETCH MAP

N ↑
Approx Scale
1cm = 30m

SEGMENT ST/ K9-35-KA-2

SUBDIVISION K9-35-KA-2A

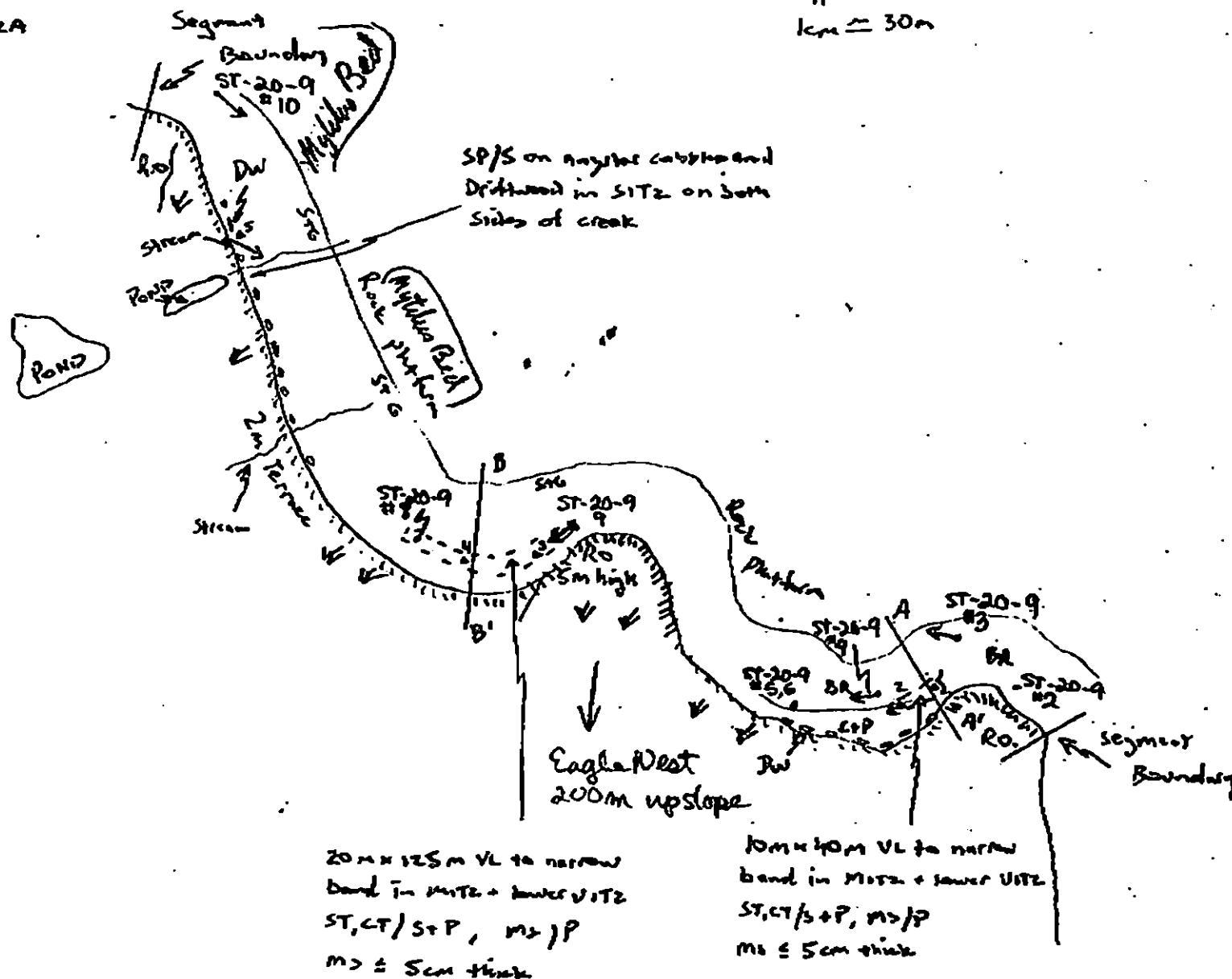
DATE 4/29/90

CHECKLIST

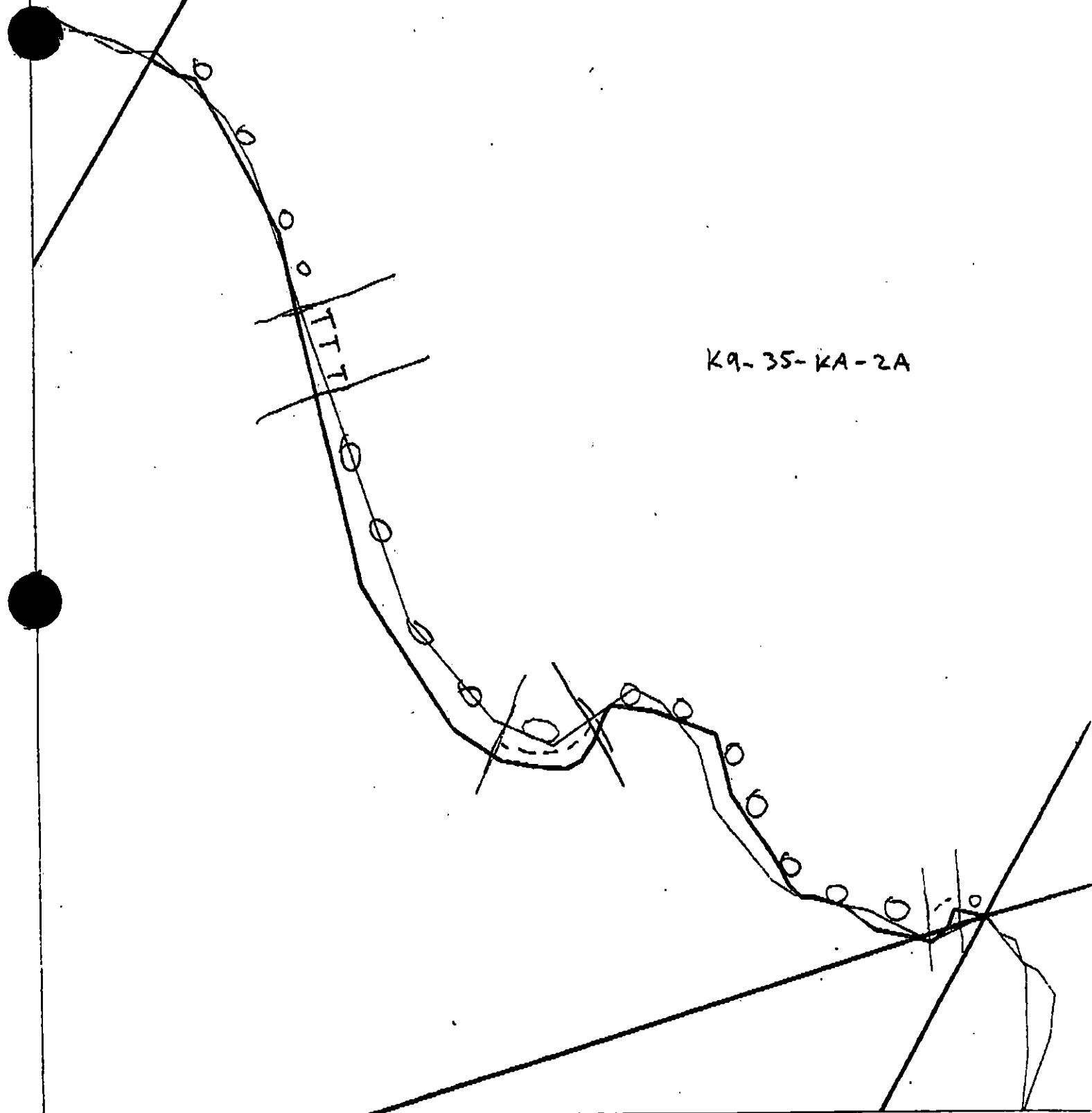
- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Body
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. H/W/L/V/L
- ☐ SSI
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 Δ
Pit - No Subsurface Oil
- 2 Δ_o
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 Legend: AP PO CV CT ST MS TB FL NO



K9-35-KA-2A

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

KA-2

Approx. Segment Length: 1608m



K9-35-KA-2A

Map Key: AKP-KA-2

Name: Acton

Date: 4-20-90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-35-KA-002 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN
Spot Washing	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

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

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

[Signature]

Date

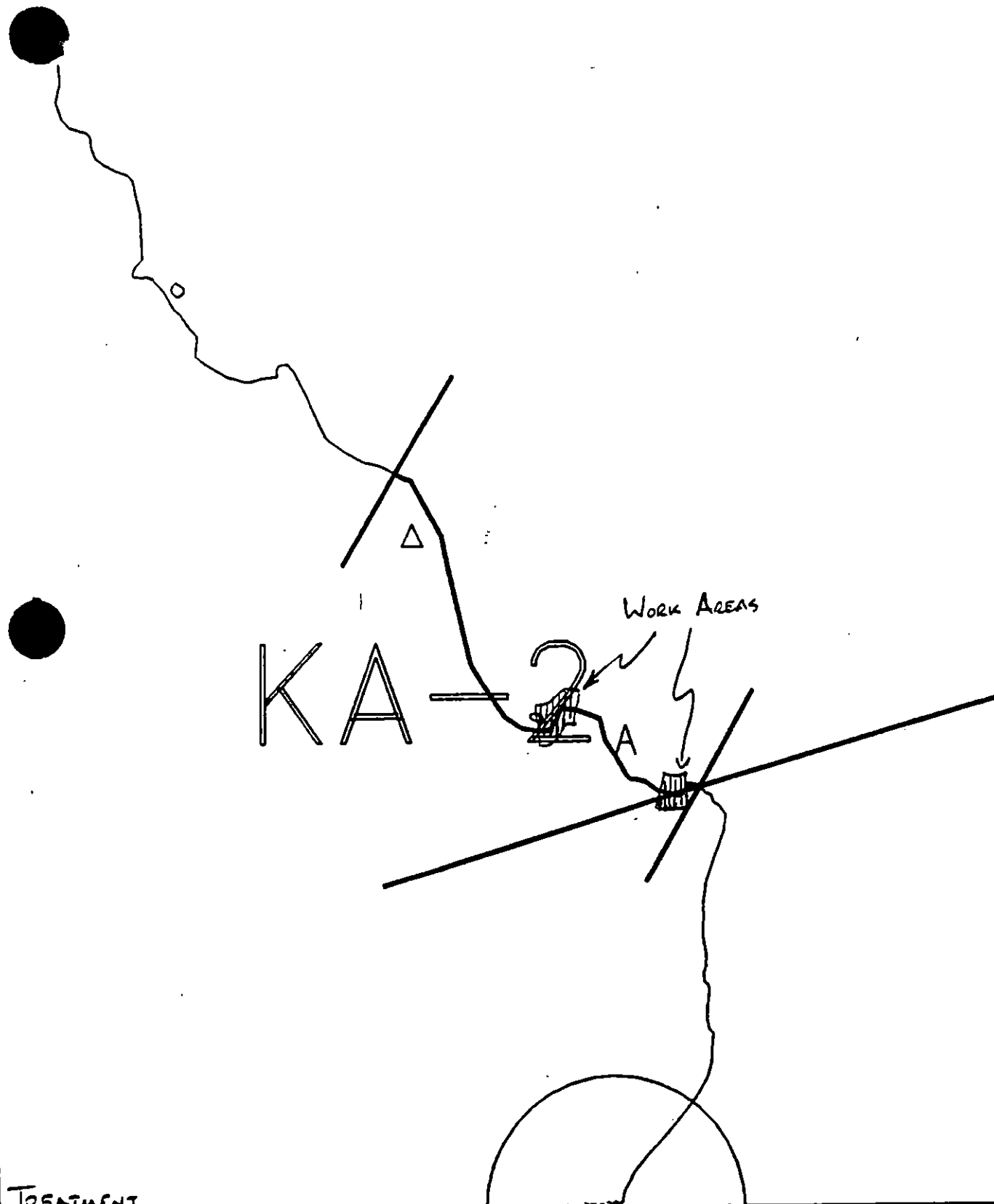
6-16-90

Prepared by

[Signature]

Date

6/15/90



Exxon Company, USA
Map Key: AP-KA-2



ECOLOGY MAP
SEGMENT K9S-35 KA-2
SUBDIVISION A (1 of 1)
METERS

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

SHORELINE EVALUATION

SEGMENT ST/K09-35-KA-002 SUBDIVISION A (1 OF 1) DATE 4/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

SR Seabird colony (5/1 to 9/1)
5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
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 (24hrs.)).

SHPO SIGNATURE: Rachel Ann Olson DATE: 5/18/90

SOILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 178 m: V.Light 99 m: No Oil 1367 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick-up of mousse in UITZ and MITZ as indicated on attached sketch map. Spot wash if not accessible. Work after 9/1 due to eagle nest and seabird colony constraints.

SEE CONSTRAINTS ADDENDUM DATED 6/15/90 JPP

TAG COMMENTS:

TAG APPROVAL DATE: 5/17/90

ADEC Art Weimer Art Weimer

EXXON ANDY TGA Beal

NOAA Gary Petrac Gary Petrac

USCG G.A. REITER G.A. Reiter

FOSC: W L

DATE: 5-24-90

WORK PLAN ADDENDUM

Segment K09-35-KA-002

Subdivision A.

Dated 06/20/90.

MODIFICATION

1. REASON FOR MODIFICATION

- LAND MANAGER REQUEST - NO SPOT WASH.

2. ADJUSTMENT TO WORK PLAN

- NO SPOT WASH.

SHPO APPROVAL NEEDED YES ✓

NO X

SHPO SIGNATURE

Chuck Adams 6/22/90

TAG APPROVAL DATE

06/20/90

ADEC

Ray Morris R. Morris

EXXON

Amoy TGA Deal

NOAA

Joseph Talbott

USCG

G.A. REITER G.A. Reiter

FOSC

[Signature]

DATE

2/5/90

REGION: KODIAK

SEGMENT: ST/K09-35-KA-002

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/K09-35-KA-002 SUBDIVISION A (1 OF 1) DATE 4/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5R Seabird colony (5/1 to 9/1)
5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
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 (24hrs.)).

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 178 m: V.Light 99 m: No Oil 1367 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 in UITZ and MITZ as indicated on attached sketch map. Spot wash if not accessible. Work after 9/1 due to eagle nest and seabird colony constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____
ADEC _____
EXXON _____
NOAA _____

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
- 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 267-2206
- 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 Lodges (6/1 to 9/15)
 6Y Special use destination
- 7Z Subistence area: Salmon harvesting (6/1 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

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

OG Acton USCG Havlen SEGMENT ST/ K9-35-KA-2
 BIO Paris LAND REP NPS Troyer James SUBDIVISION K9-35-KA-2A (1 OF 1)
 EXXON Avery ADEC Kenais TIME 10:15 10:20
 TEAM NO. 20 TIDE LEVEL +2 to -1.5 DATE 4 / 29 / 90
 EST. SUBDIVISION LENGTH: 572 m ☐ Sun ☒ Clouds ☒ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SE to NW
 SURFACE SEDIMENTS: R 30 % B 30 % C 30 % P 5 % G 3 % S 2 % M - % V - %
 SLOPE: Long 90 % Hang 10 % Vert - % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W - m M - m N 165 m VL 100 m NO 1327 m

SURFACE OIL

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

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs		✓	
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE -#BAGS -

Photographs:

Roll No. ST-20-9Frames 2-10

SUBSURFACE OIL

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

COMMENTS Area of primary interest was where Exxon cleanup took place last year.
 Mostly stain and coat w/ mousse in between boulders/tarballs.

REVIEWED - DATE -

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / K9-35-KA-2 SUBDIVISION: K9-35-KA-2A DATE 4-29-90

USCG

NAME DD Haven Jr. GM3/USCGR SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Concur with ADEC Rep.

ADEC

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

MANUAL CLEAN-UP WITH SHOVELS + TROWELS HIGHLY RECOMMENDED.

There are 2 main areas with ST, CT, MS, + MS saturated sediments, which lie within the bands described as 'Narrow'.

- 1) 10m x 45m in the SE part of the segment
- 2) 10m x 60m area in the NW part of the segment.

Both have collectable mousse/mosse saturated sediments which have persisted throughout the winter, & should be removed. Only a small scale effort is required.

LAND MANAGER NPS

NAME Will TROYER SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

The first band of oil near the eastern end of the segment has some mousse that could be cleaned by shovel and trowel. The middle portion of the segment received intensive cleaning last year and winter storm reduced the impact more. A few spots within this area still have some mousse. The NW end of the segment appears relatively clean. A small team could probably get the major part of the mousse in a day.

OG Don

SEGMENT ST/ K9-35-KA-2

SUBDIVISION K9-35-KA-2A

DATE 4 / 29 80

CHECKLIST

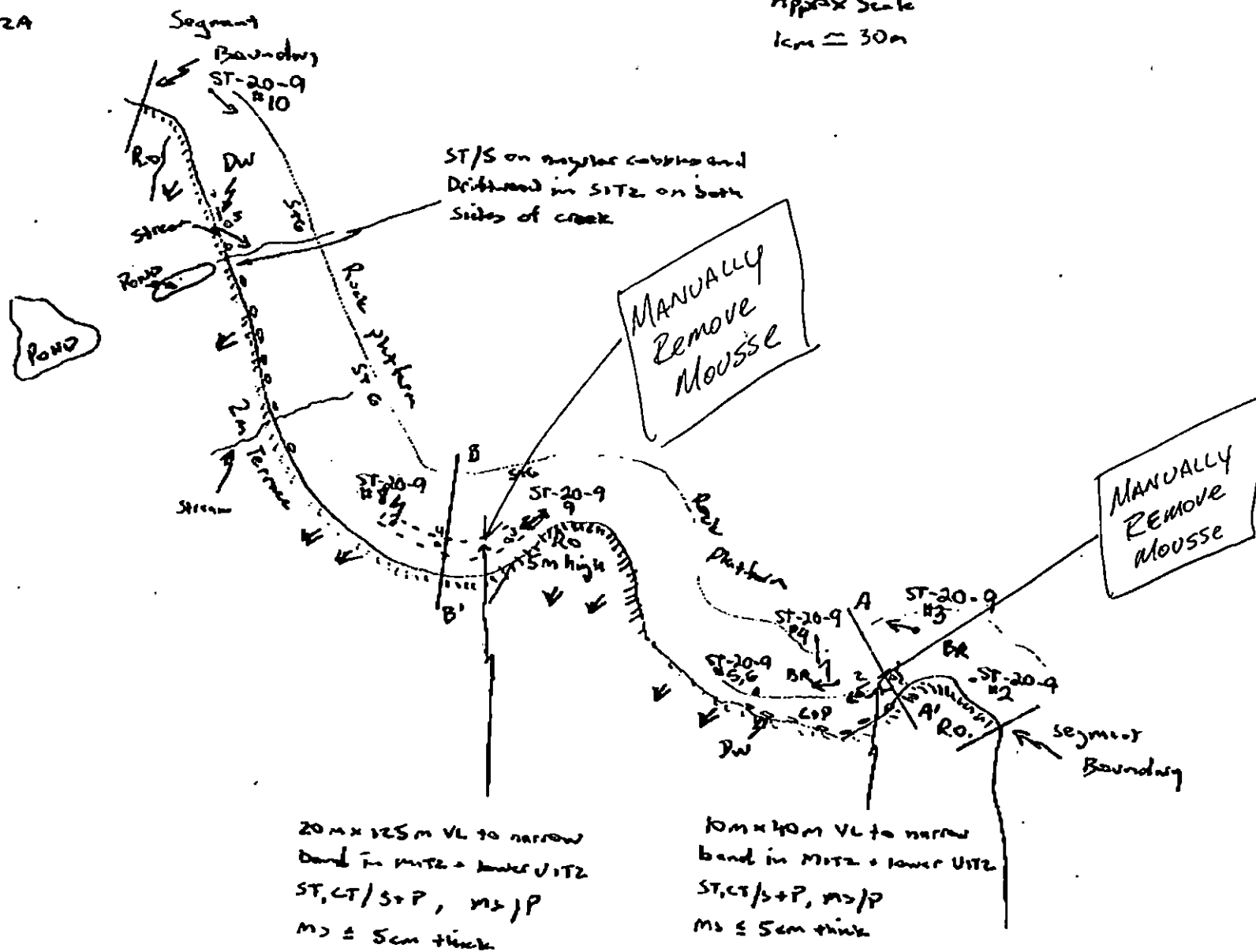
- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bndy
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/VL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PT Location(s)
- ☐ Photo Location(s)

LEGEND

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

SKETCH MAP

N $\uparrow$
Approx Scale
1cm = 30m



Oil Character Length (m): AP PO CV CT 205 ST 205 MS 205 PT TB FL NO 1307

REASON/REASON

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/ K9-35 Subdivision KA-002 Date (mo / day / yr) 4/29/90Time (24 hr) 10:10 Biologist H. Davis

(A) Substrate type and % of segments:

(1) Bedrock 30 (2) Boulder 36 (3) Cobble 30 (4) Pebble 5 (5) Sand 5 (6) Silt —(B) Overall % cover of biota (% of segment): Dense 50% Moderate 30% Low 20% (60%)

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

Photographs:

Roll No. ST-20-9Frames 2-10

BARNACLES Continuous across Rock-Cobble areas

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

NOT PRESENT
4, 5, 6

MYTILUS moll patches in crevices to large beds. Patchy across segment

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

NOT PRESENT

GASTROPODS Littorina Dense + Continuous, limpets Sparse-moderate continuous, Nucella patchy, Sparse

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

NOT PRESENT
4, 5, 6

FUCUS Patchy. large dense areas to small sparse tufts

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

NOT PRESENT
4, 5, 6

Wildlife Observations/ General Comments: Rocky areas. Lower intertidal Laminaria, Alaria, Pleurophyucus, Gracilaria, Ulva, Ideosira, Leptasterias, Telia, Anthopleura, MTZ-Rhodomenia, Fucus, Rhodomenia, Zostera, Odonthalia, Lithothamnion, Corallina, Halosaccion, limpets, Anthopleura, Caprellids, amphipods. MTZ - Endocladia, Gloripeltis, Porphyra, Alaria, Barnacles, Mollusks, Nucella, Fucus. Eagles, Glaucous-winged Gulls and yellow legs were the only birds observed. Bear tracks on beach. Fox dens in bluffs above beach. On sandy areas Poronids, Saxidomus, Siliqua and Sp? of Sedentaria.

Ecological Considerations: 9LM, 7JJ, 5R, 5T. One nest was observed, and 1 adult pair of eagles was seen in the area. Pinkies, Chums, and Dolly Varden spawn at the head of Kachivik Bay. Siliqua and Saxidomus harvested. No colonies of seabirds in the segment, according to the N.P.S. Rep. None seen.

OG

SEGMENT BT/K9-35-KA-2

SUBDIVISION K9-35-KA-2A

DATE 4/29/90

A

A-A' $\approx$ 100m

A'

CHECKLIST

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

LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

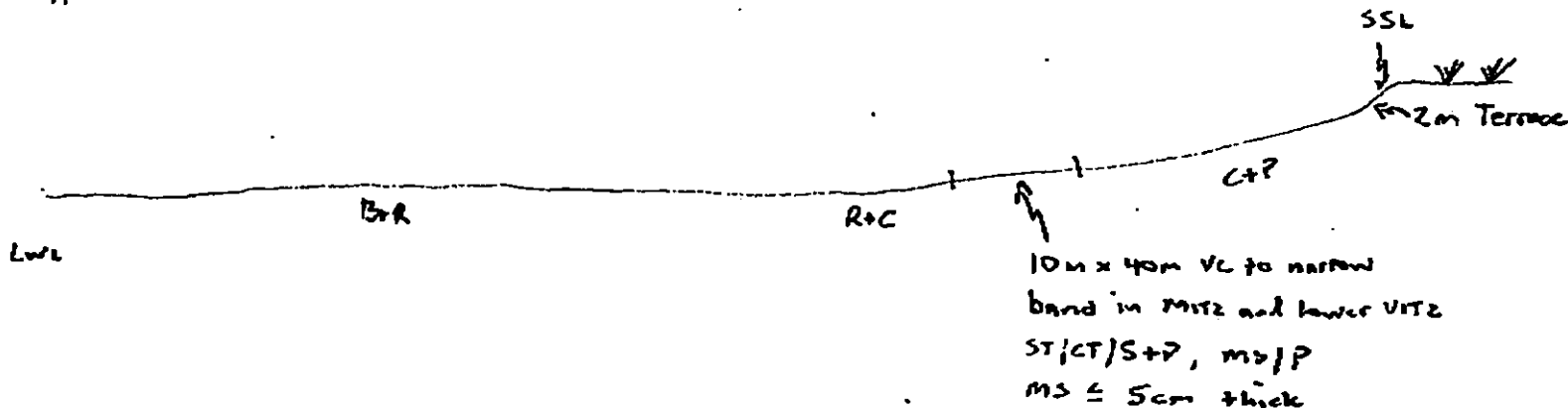
CT/S

Splashed Distribution

Oiled Vegetation

1 $\Rightarrow$

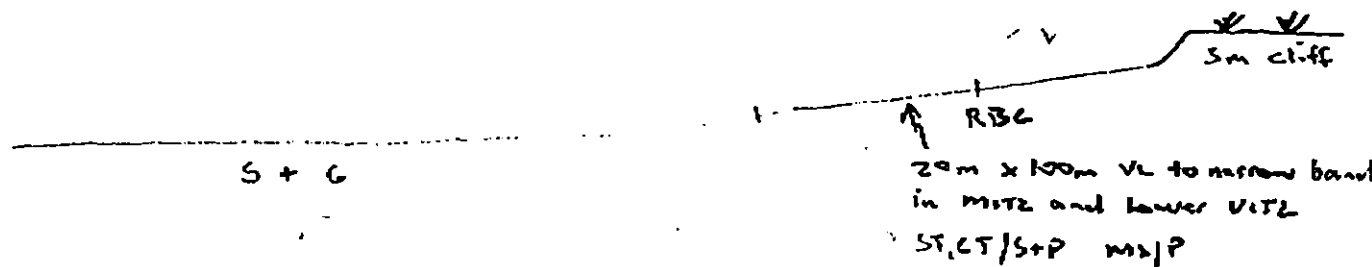
Photo location, direction,
and number



B

B-B' $\approx$ 100m

B'



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

REVISION 03/24/90

OG Antony Bio H. Davis

SEGMENT K9-35-KA-2

SUBDIVISION K9-25-KA-2A

DATE 4 / 29 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)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

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

Continuous Distribution
- CT/B

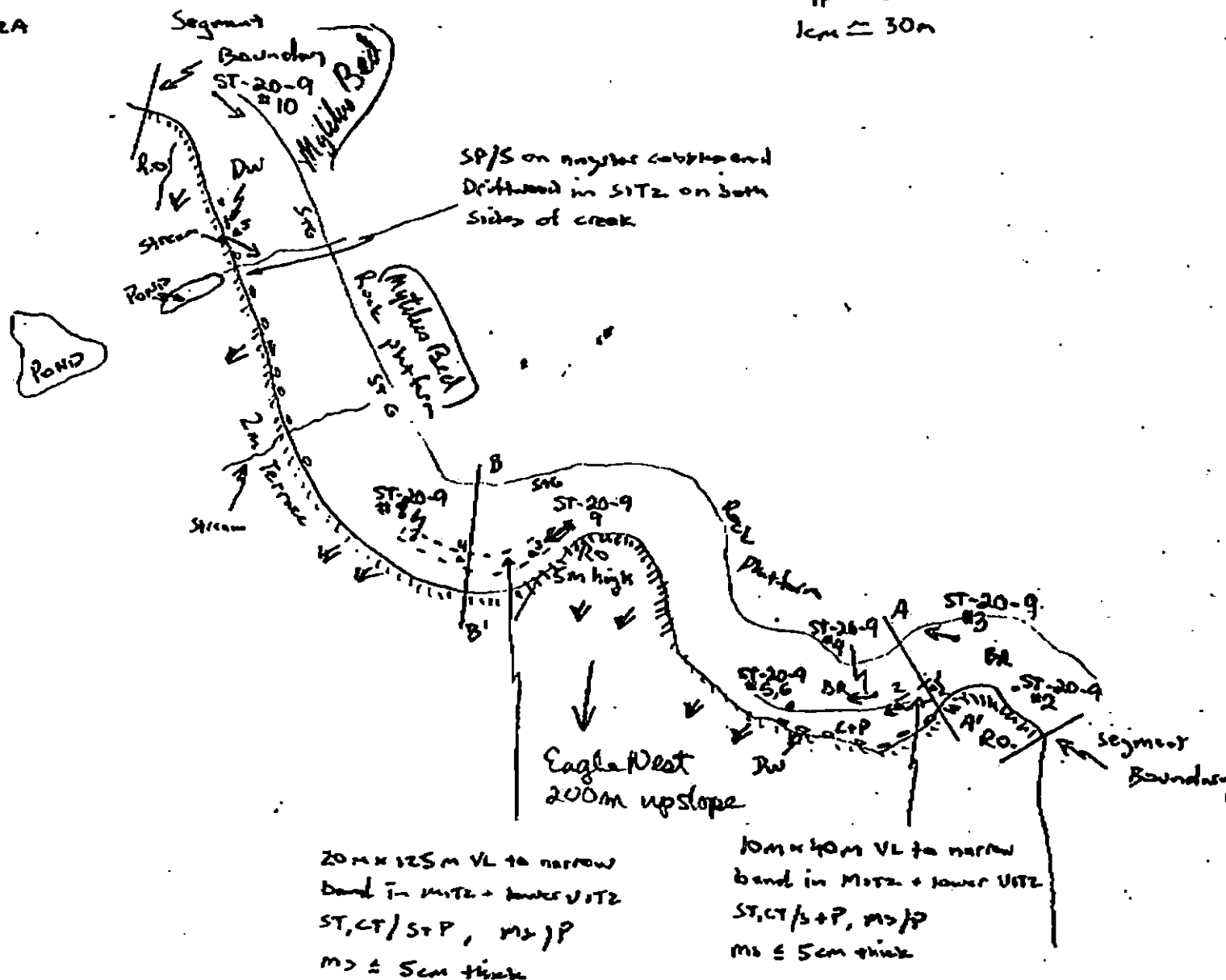
Broken Distribution
- CT/P

Patchy Distribution
- CT/S

Splashed Distribution
- $\odot \rightarrow$
Oiled Vegetation
- $\odot \rightarrow$
Photo location, direction, and number

ECOLOGICAL SKETCH MAP

N ↑
Approx Scale
1cm = 30m



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

K9-35-KA-2A

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

KA-2

Approx. Segment Length: 1608m



0 100 200 300
METERS

K9-35-KA-2A

Map Key: AKP-KA-2

Name: ActonDate: 4-20-90

Data Entered:

REGION: KODIAK

SEGMENT: ST/K09-35-KA-03

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ K09-35-KA-03 SUBDIVISION A (1 OF 1) DATE 4/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no: 262-65-10030 and 262-65-10040

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

1B Salmon stream mouth - spawning (7/10 to 8/31)

4LL National Parks

5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)

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

9LM Land Mammals

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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 1560 m: No Oil 9155 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 is manual pickup of mousse from areas indicated on attached sketch map. Work should be conducted between 6/1 and 7/10 based on eagle nest and salmon constraints with approval of USFWS regarding eagle nest. Consult ADF&G for specific working times regarding invertebrate harvesting.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

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 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 (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)
7ZH Finfish harvesting
Deer harvesting (8/1 to 1/7)
Invertebrate harvesting
Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 K0936-KA003 SUBDIVISION: KA003A DATE 4/29/90

JOAA

USCG

NAME John Naughton SIGNATURE John J. Naughton

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

This segment at the head of Kashvik Bay had only very light oil. Patches of mousse were found in a few locations, primarily along rock outcrop adjacent to an anadromous stream. This area is a rich resource area consisting primarily of extensive intertidal mud/sand flats, anadromous streams, eagle nesting, bear and other large land mammal habitats. Because of potential disturbance from clean up activities and small amounts of oil observed, recommend no treat

ADEC

NAME Terry Ellsworth SIGNATURE Terry Ellsworth

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Four areas containing recoverable mousse were found in this segment. Mousse occurs interstitially between boulders and cobbles and in crevices. One area is located along the North side of Kashvik Bay easterly from the head of the bay. The remaining areas occur along the south side of the bay. Manual removal is recommended and would be best accomplished using shovels and small garden tools. The possible presence of nesting eagles should be considered when scheduling clean up.

LAND MANAGER

NAME Carl Sabach SIGNATURE Carl Sabach

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Recoverable oil consists primarily of scattered mousse patches with entrained sediments. The larger patches could be removed with shovels or trowels. The cleanup crew should access oiled sections only and not disturb sensitive eagle and bear habitats adjacent to these sections. Helicopters should avoid flying along bluffs where eagles commonly roost. Oil along the north shore is limited to the banks of an anadromous stream.

SHORELINE OILING SUMMARY

REVISION NO 04-12-90

OG LINDSAY NARASHIMA (NOAA) JOHN NAUGHTON SEGMENT ST/ K0936-KA003
 BIO JIM BARRY LAND REP CARL SCHOCH SUBDIVISION KA003A (1 OF 1)
 EXXON FRED BYARS ADEC TERRY ELLSWORTH TIME 10:15 to 12:40 PM
 TEAM NO. 19 TIDE LEVEL +1.80' TO -1.80' FT. DATE 4/29/90
 EST. SUBDIVISION LENGTH: 10388 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: NORTH to SOUTH
 SURFACE SEDIMENTS: R 50 % B 30 % C 10 % P 5 % G 3 % S 2 % M 0 % V 0 %
 SLOPE: Long 50 % Hang 30 % Vert 20 % WAVE EXPOSURE: ☐ Low ☒ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 375 m NO 10013 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	R	B	P	S	BR	OR	OL	OT	SL	TL	SU	U	M	L
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT			X	X		X						X		
STAIN			X	X		X						X		
MOUSSE			X	X					X			X		
PATTIES														
TARBALLS														
FILM				X			X					X		
NO OIL											X		X	X

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE →#BAGS 0

Photographs:

Roll No. _____

Frames _____

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SHEEN (Y/N)	▽	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OT	NO		UD	UC	BR	OR	OL	OT	SL	TL	SU	U	M	L				
1	5			X			0-3		X				X			X				N	N	—	PK
2	5			X			0-1		X				X			X				N	N	—	PIC/G
							.																
							.																
							.																
							.																

COMMENTS THE NORTH SHORE IS PRIMARILY INTERTIDAL TO A HIGH CLIFF BASE, OTHER AREAS TO THE WEST ARE COMPOSED OF LOWER ROCK CLIFFS OR TILL, WHICH IS ERODING AND CONTRIBUTING SEDIMENT TO THE NEARSHORE BOWE. OIL CONSISTS OF ISOLATED SPALLS ON A FEW (5 MGS) BOULDERS IN THE CENTRAL AND EASTERN PORTION OF THE NORTH SIDE OF KASHUK BAY. THE WESTERN END HAS MOUSSE, COAT, & STAIN ON A BEDROCK OUTCROP/APRON THAT PROJECTS INTO THE BAY. MOUSSE AND STAIN SPALLS OCCUR ON THE BOULDERS TO THE WEST OF THE ROCK OUTCROP. THE SOUTHSIDE OF KASHUK BAY HAS MOUSSE/COAT/STAIN

REVIEWED BAT DATE 3 MAY 90

DATE 4 129 90

CHECKLIST

_____ N Arrow
 _____ Approx. Scale
 _____ Seg/Sub Entry
 _____ Off Diag
 _____ Width
 _____ Length
 _____ % Cover
 _____ Substrate Character
 _____ Est. HMLAYAL
 _____ SSL
 _____ Profile Location(s)
 _____ Profile(s)
 _____ PR Location(s)
 _____ Photo Location(s)

LEGEND

PH - No Subsurface Oil

2 ▲
Fit - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

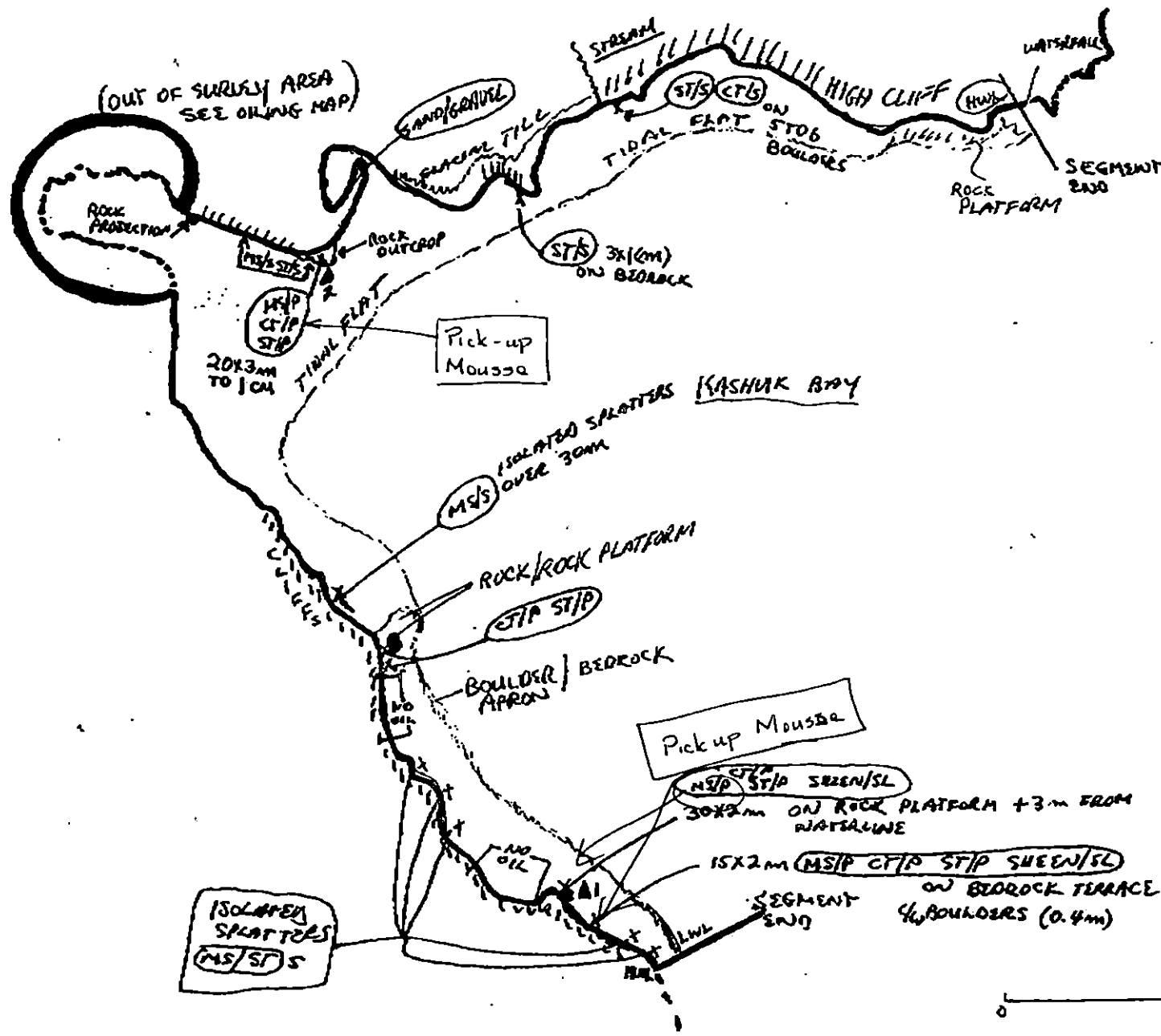
CT/S
Splashed Distribution

Old Vegetation

1 

**Photo location, direction,
and number**

ATCH MAP



Oil Character Length (m): AP 0 PO 0 CV 0 CT 70 ST 375 MS 375 PT 0 TB 0 FL 0 NO 100/3

REVISED 01/24/94

K935-KA003

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / Subdivision A Date (mo / day / yr) 4/29/90

Time (24 hr) 1025-1345 Biologist Jim Barry

(A) Substrate type and % of segments:
(1) Bedrock 50 (2) Boulder 30 (3) Cobble 10 (4) Pebble 5 (5) Sand 3 (6) Silt 2

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

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

Photographs:
Roll No. ST-6-7

Frames 15-16

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

SEE ATTACHED

Ecological Considerations:

ANADROMOUS FISH STREAMS - 2 on segment

0040

DOULY VARDEN
CUMM SALMON (SPAWNING)
PINK SALMON (SPAWNING)

10030

DOULY VARDEN
CUMM SALMON (SPAWNING)
PINK SALMON (SPAWNING)

SEGMENT K9-35-KA003 SUBDIVISION A APRIL 29, 1990
BIOLOGIST - JIM BARRY

Time 1025-1345

Tidal Window +1.8 => -1.8 ft.

I. GENERAL COMMENTS

A. **Exposure** - This segment includes moderate to highly exposed headlands and low to moderately exposed sand flats and cobble shores.

B. Habitats

1. Sand Flats

Extensive intertidal sand flats are by far the dominant habitat type on this segment. Sand flats extend to as much as 1000 m or more from the upper shore. The biota occupying this habitat are patchy. Clams are moderately abundant (razor clams - *Siliqua patula*; *Macoma balthica*, *M. nasuta*, and *Tresus capax*). Polychaete worms also are dense in patches (Neridae?). Well defined patches of an unidentified infaunal worm are evident from their castings on the surface. These worms (Sipunculids?) are dense (>30/m²) in some locations and sparse in others. Few algae are present on the sand flat. Occasional boulders are covered by barnacles, a few mussels, and *Ulva lactuca* and filamentous green algae.

2. Flat Bedrock Shores

This habitat is located in a large patch (ca. 200 x 600 m) in the northern section of the segment, as well as much smaller patches along the southern end. Most of this habitat is located in the middle to low zone and is occupied by a high cover of macroalgae. Dominant species include *Ulva lactuca*, *Laminaria dentigera*, *Alaria marginata*, *Fucus distichus*, *Palmaria palmata*, *Rhodomela larix*, *Zostera marina* (a higher plant), and crustose corallinaceae. Other species include *Grateloupia* sp.,

Iridaea sp., *Membranoptera?* sp.). Occasional boulders and cobble that extend into the middle zone are covered by filamentous and bladelike green algae, and a sparse cover of mussels.

3. High Angle Bedrock and Boulder Headlands

Most of these shores have a dense cover of barnacles (*Balanus glandula*) and periwinkles (*Littorina* sp.) in the upper zone, with a moderate to sparse cover of mussels (*Mytilus edulis*) in slightly lower levels. The middle zone often has a dense to moderate cover of *Fucus distichus*, *Rhodomela larix*, and eel grass (*Zostera marina*). Lower zones are covered by *Fucus distichus*, *Laminaria dentigera*, *Odonthalia floccosa*, *Palmaria palmata*, and others. Common invertebrates include anemones (*Anthopleura artimesia*), sponges (*Halichondria* sp.), chitons, limpets, worms (polychaeta and echiura), hermit crabs, whelks, sea stars, sea cucumbers, isopods and amphipods.

4. Cobble Beaches

Cobble beaches vary considerably in terms of biotic characteristics. In upper zones, cobble beaches usually are nearly devoid of biota, especially on moderate to highly exposed beaches where scour by wave action is severe. On protected beaches, upper zones cobbles have barnacles and mussels, while lower zones are covered by the algae and invertebrates similar to those discussed above. Several intertidal fishes (pricklebacks, gunnels, sculpins) inhabit this area.

5. Cobble and Boulder Fields

This habitats also varies. Flat cobble beaches are present in some parts of the extensive sand flats. Barnacles are moderately abundant on cobble in this habitat. Filamentous green algae are sparse, as are macroalgae. Amphipods, isopods, and a few other invertebrates are present and variable in abundance.

C. Oil-Related Comments

1. Oil or Cleanup Related Mortality

None evident.

2. Ecological Sensitivities to oil or cleanup.

Oil cover on this segment was very light or zero and treatment will likely not be recommended for any of the segment. As such there are no ecological sensitivities that will be affected. Ecological sensitivities are:

a. Anadromous streams (see map)

Streams number 10030 and 10040. Both are utilized by Dolly Varden, Chum Salmon (spawning), and Pink salmon (spawning).

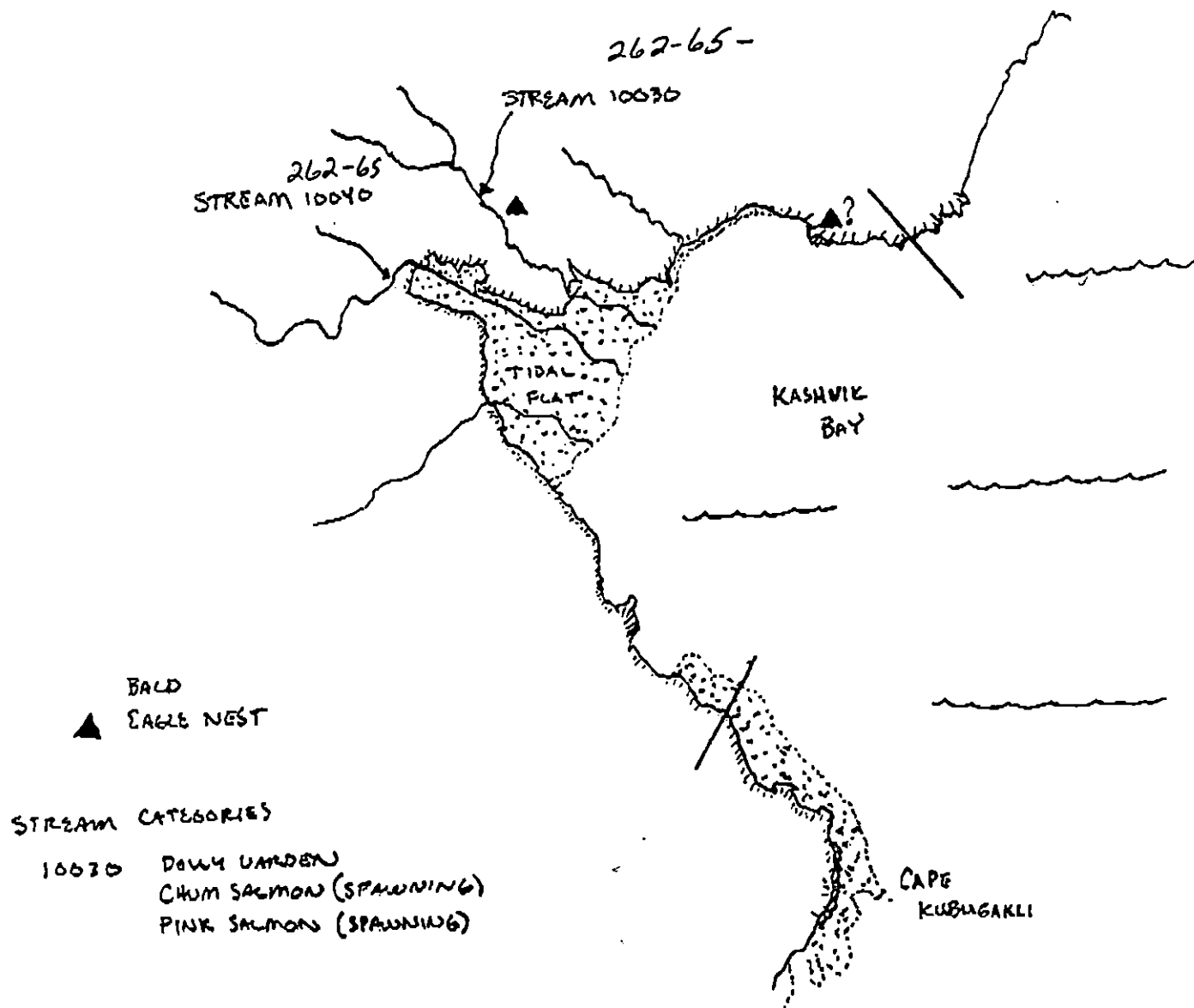
b. Eagle Nesting sites (see map)

One (or possibly two) bald eagle nests are located in the segment.

SEGMENT K935-KA003A

APRIL 29 1990

2/11



KA-3

XXXX Wide

//// Medium

--- Narrow

TTTT Very light

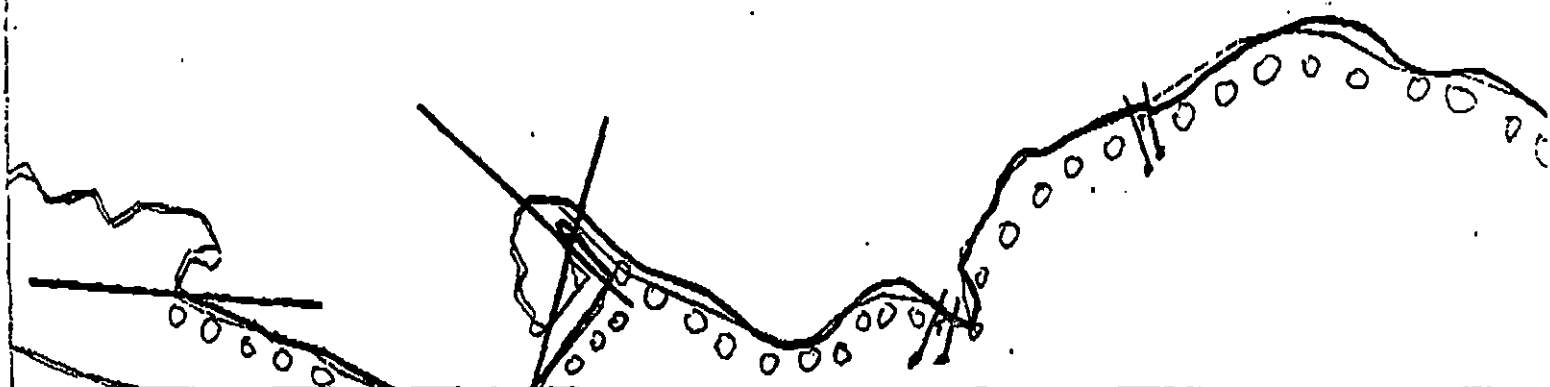
KA-3

Approx. Segment Length: 10551m

Map Key: AKP-KA-30

Name: LINDSAY NAKASHIMA

Date: 4/29/90



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

KA-3

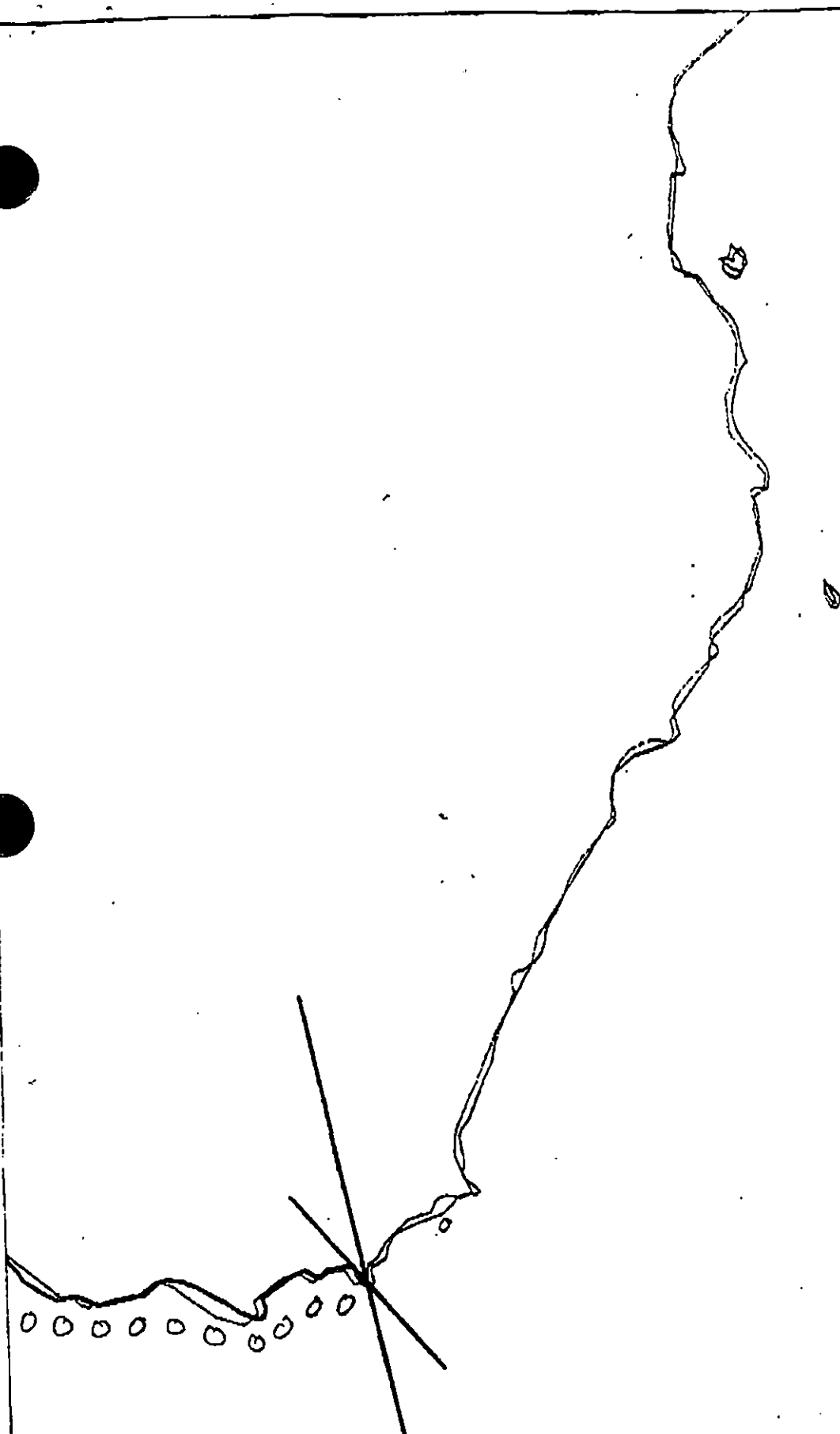
Approx. Segment Length: 1055m

0 300 600 900

Map Key: AKP-KA-3c

Name: LINDSAY NAKASHIMA

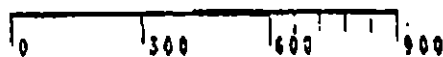
Date: 4/29/90



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

KA-3

Approx. Segment Length: 1055m



Map Key: AKP-KA-3d

Name: LINDSAY NAKASHIMA

Date: 4/29/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ K09-35-KA-03 SUBDIVISION A (1 OF 1) DATE 4/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no: 262-65-10030 and 262-65-10040

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

1B Salmon stream mouth - spawning (7/10 to 8/31)

4LL National Parks

5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)

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

9LM Land Mammals

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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: Michael Antognovich DATE: 5/15/20

OILING CATEGORIZATION:

Wide_0_m: Medium_0_m: Narrow_0_m: V.Light_1560_m: No Oil_9155_m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

No Treatment Recommended

X	Treatment Recommended
1	1
2	1
3	1
4	1
5	1
6	1
7	1
8	1
9	1
10	1
11	1
12	1
13	1
14	1
15	1
16	1
17	1
18	1
19	1
20	1
21	1
22	1
23	1
24	1
25	1
26	1
27	1
28	1
29	1
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78	1
79	1
80	1
81	1
82	1
83	1
84	1
85	1
86	1
87	1
88	1
89	1
90	1
91	1
92	1
93	1
94	1
95	1
96	1
97	1
98	1
99	1
100	1

X Manual Pickup

Bioremediation

Tarmat Removal

____ Snare/Absorbent Booms

 Oil Snares (pom poms)

Absorbents (pads, rolls, etc)

Spot Washing: _____ Wands _____

Beach Cleaner

Other (see comments)

COMMENTS: Recommended treatment is manual pickup of mousse from areas indicated on attached sketch map. Work should be conducted between 6/1 and 7/10 based on eagle nest and salmon constraints with approval of USFWS regarding eagle nest. Consult ADF&G for specific working times regarding invertebrate harvesting.

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/15/90

ADEC ART WEINER Art Weiner

EXXON Amoy TGA Seal

NOAA - Deep Trawl - 1749

USCG G.A. REITER G.A. Reiter

FOSC: ML DATE: 5-18-90

OG LINCOLN PARKS/HIMA
 SEGMENT K0936-KA003
 SUBDIVISION KA003A
 DATE 4 129 90

CHECKLIST

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

LEGEND

1
 P1 - No Subsurface Oil

2
 P1 - Subsurface Oil

Continuous Distribution

Broken Distribution

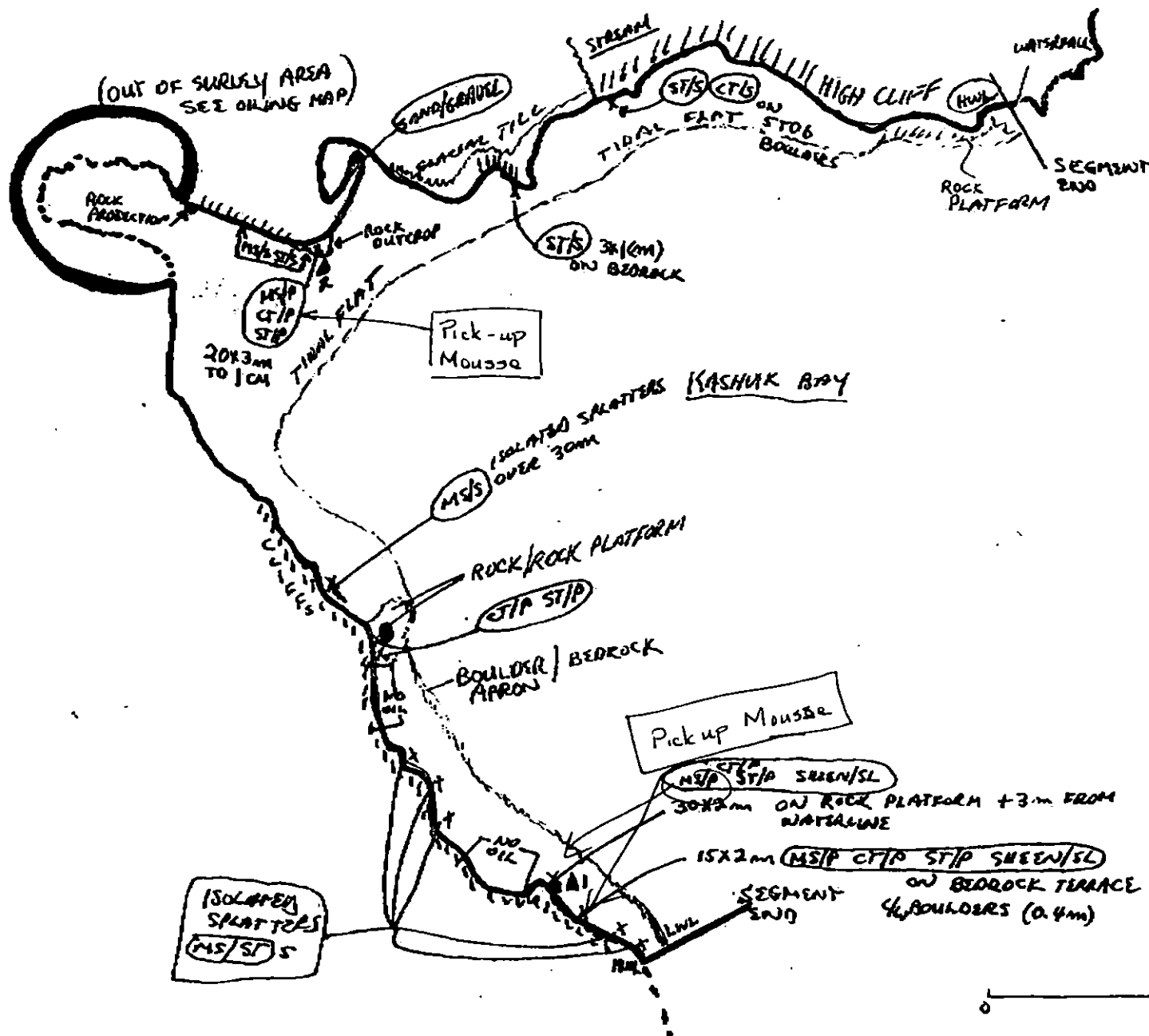
Patchy Distribution

Splashed Distribution

Oiled Vegetation

1
 Photo location, direction, and number

SKETCH MAP

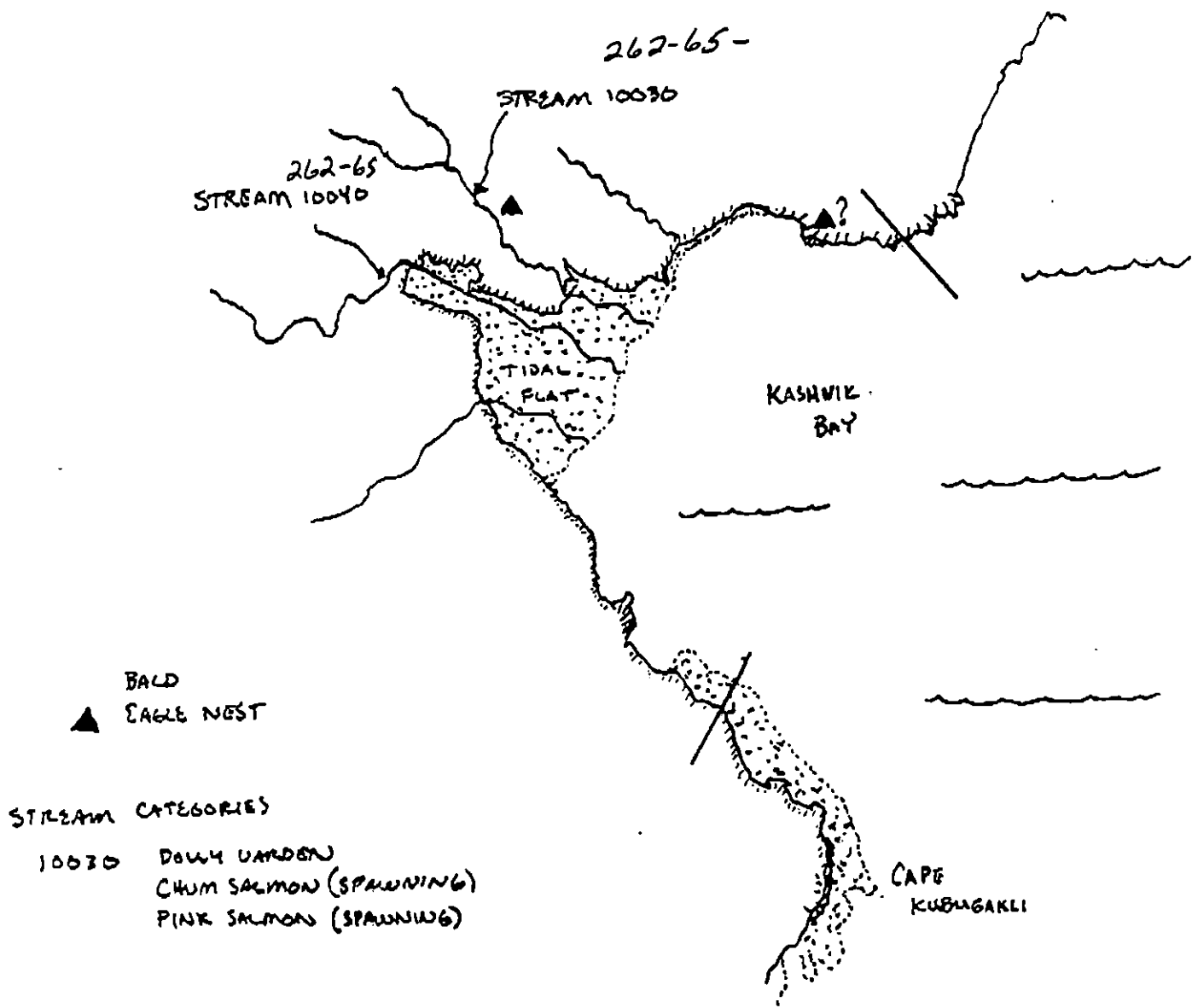


Oil Character Length (m): AP 0 PO 0 CV 0 CT 70 ST 375 MS 375 PT 0 TB 0 FL 0 NO 10013

SEGMENT K935-KA003A

APRIL 29 1990

2/11



KA-3

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

KA-3

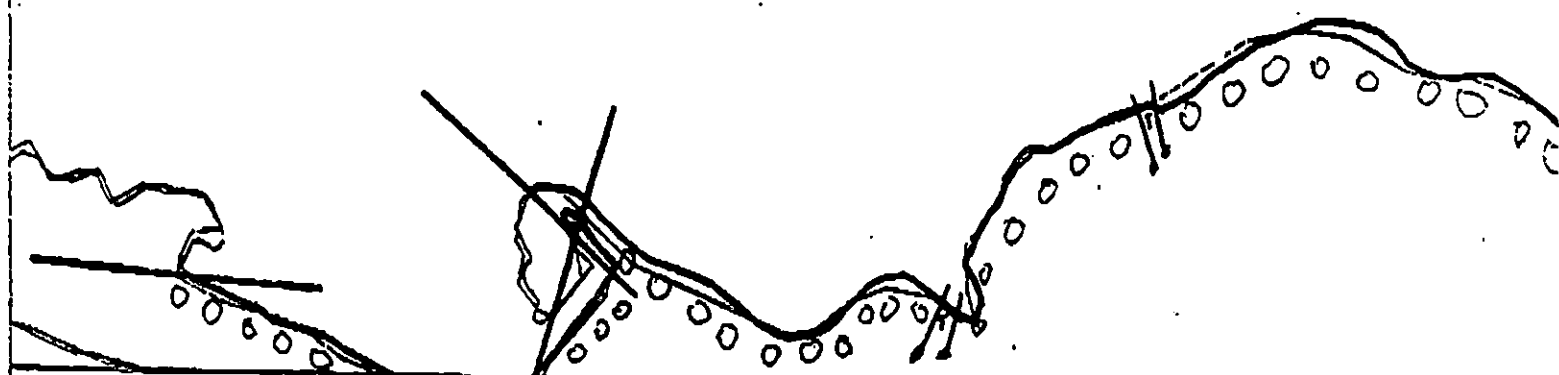
Approx. Segment Length: 1055m

0 300 600 900

Map Key: AKP-KA-3a

Name: LINDSAY NAKASHIMA

Date: 4/29/90



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

KA-3

Approx. Segment Length: 1055m

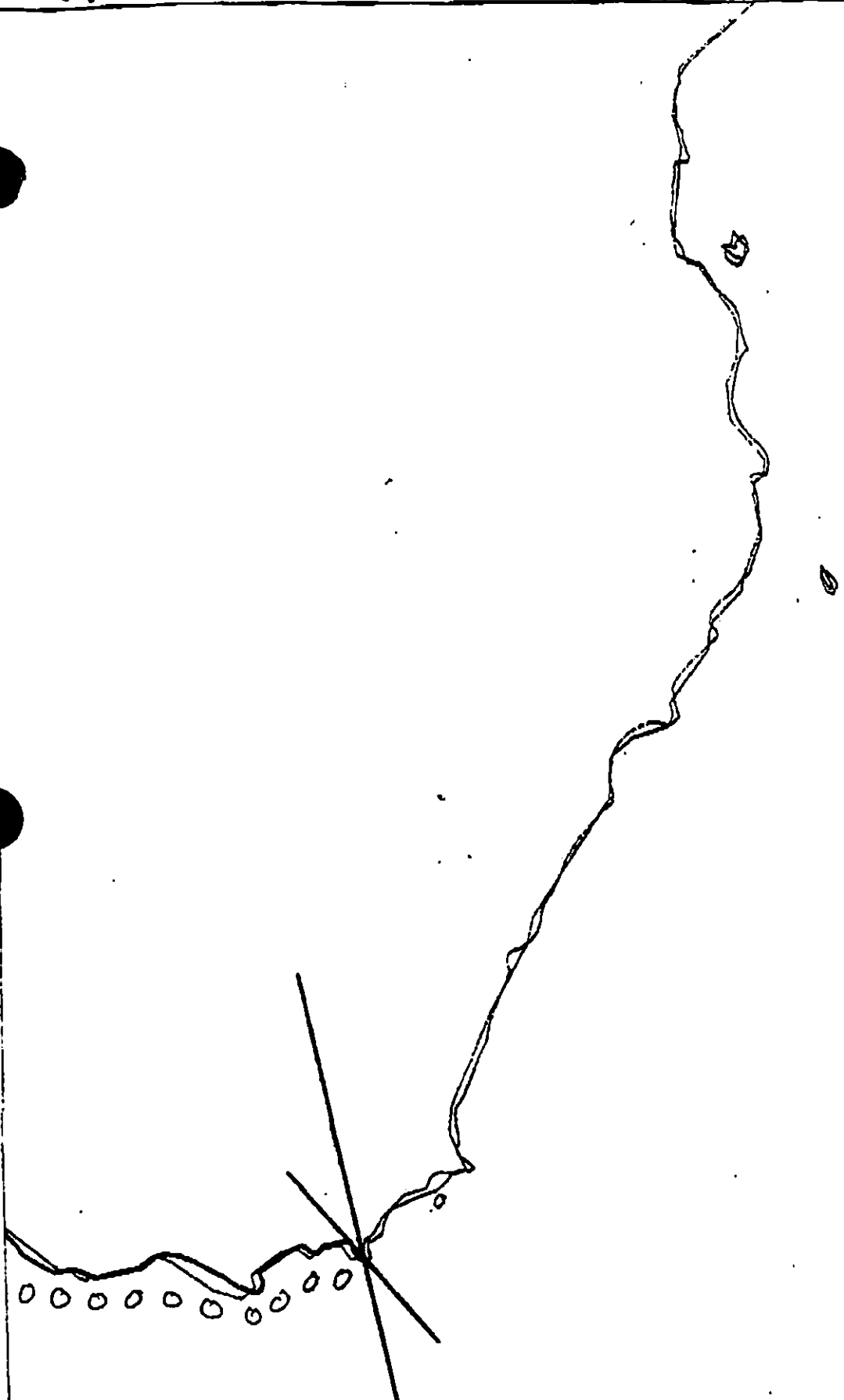


Map Key: AKP-KA-3c

Name: LINDSAY NAKASHIMA

Date: 4/29/90

Date Entered:



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

KA-3

Approx. Segment Length: 1055m



Map Key: AKP-KA-3d
Name: LINDSAY NAKASHIMA
Date: 4/29/90
Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-35-KA-03 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous streams (262-65-10030 and 262-65-10040) are more than 100m from work site. No constraint to manual pickup.
5R	Seabird Colony	NO CONSTRAINT. Work site is more than 800m from seabird colony.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 4/9/90 map indicates no active nest within 400m of Subdivision A work site.
7JJ	Subsistence: Invertebrate Harvesting	No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

[Signature]

Date

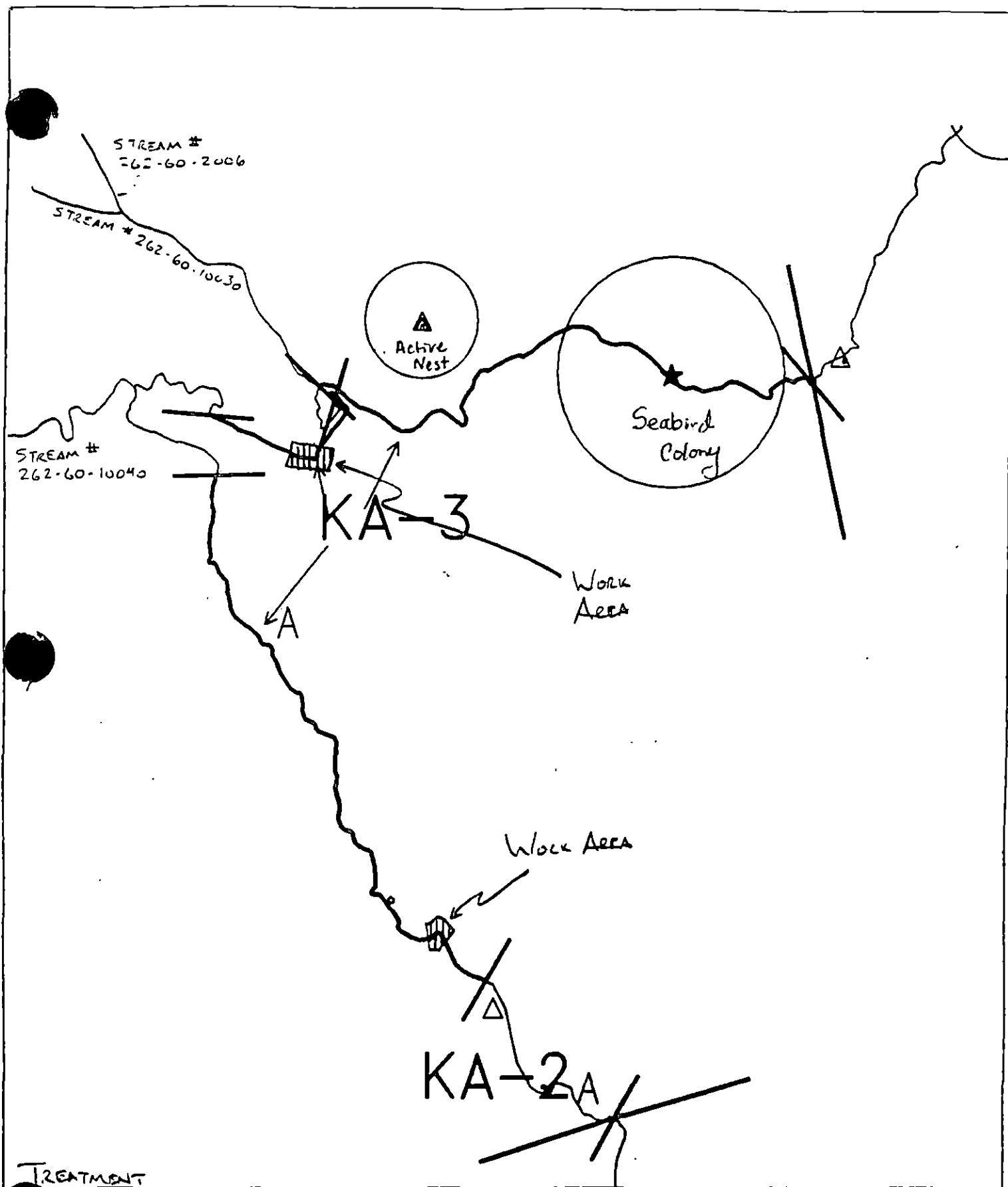
6-15-90

Prepared by

[Signature]

Date

6/15/90



TREATMENT



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



ECOLOGY MAP
SEGMENT K9S-35 KA-3
SUBDIVISION A (1 of 1)
METERS

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

SHORELINE EVALUATION

SEGMENT ST/ K09-35-KA-03 SUBDIVISION A (1 OF 1) DATE 4/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no: 262-65-10030 and 262-65-10040

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

1B Salmon stream mouth - spawning (7/10 to 8/31)

4LL National Parks

5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)

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

9LM Land Mammals

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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: Michael Oltroggen DATE: 5/15/90

SPILLING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 1560 m: No Oil 9155 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment is manual pickup of mousse from areas indicated on attached sketch map. Work should be conducted between 6/1 and 7/10 based on eagle nest and salmon constraints with approval of USFWS regarding eagle nest. Consult ADF&G for specific working times regarding invertebrate harvesting.

TAG COMMENTS:

TAG APPROVAL DATE: 5/15/90
ADEC Art Weimer
EXXON Andy Tera FOSC: ny L DATE: 5-18-90
NOAA Heidi Torgler
USCG G.A. Butler

1991 MAYSAP EVALUATION

SEGMENT: K0935KA003 SUB: A REGION: KOD SURVEY DATE: 5/19/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 5/15 - 9/15

Ecological/Constraints (see page two for details) Seabird colony, Anadromous stream, Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: T. Smith Date: 5/31/91

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: MAY 31 1991 FOSC APPROVAL DATE: 6/5/91

ADEC John Bawn FOSC E. E. Page

EXXON Beal E. E. PAGE, CDR, USCG

USCG Maer CHIEF OF STAFF, FOSC

NOAA Ray Ellis

**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.

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

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

TEAM NO. 6-Helo

SEGMENT

KA-3

SUBDIVISION

ADATE 19 May 1991

ADEC

NAME J. BARNHART OF ADFG

SIGNATURE

Jeff Barnhart☒ NTR ☐ Treatment Suggested

We located five oiled areas. Mousse located around and under cobble. IT was fluid in nature exhibiting a strong odor of oil. Two areas were cleaned by VECO personnel. Trace amounts of MS remain around the cobbles. No additional treatment is recommended. Approx 4 - 40 pound bags, 160 pounds total was removed.

EXXON

NAME R. HANDELSON

SIGNATURE

RC Handel

☒ NTR Further work on this site would have no NEB.

LANDMANAGER

NAME F BENNIS

OF

NPS

SIGNATURE

Tim Bennis☒ NTR

Oil observed in 4 small separate bands near the waterfalls has been largely collected by VECO workers. No further clean-up is warranted in these areas. No oil observed in site 2 to the south, & very little sor persists to the north of the waterfalls.

USCG/NOAA

NAME CWO SPURR / G. SHIGENAKA

SIGNATURE

Gary Shigenaka

☒ NTR Recoverable oil found during survey was removed by VECO workers.

SURVEYED PORTION OF THE SEGMENT CONSISTED OF BOTH IRREGULAR BEDROCK PLATFORMS WITH BOULDER-COBBLE BEACHES IN THE MID/UPPER ITZ, AND BOULDER-COBBLE BEACHES FRONTED IN THE MID/LOWER ITZ BY VERY BROAD LOW-SLOPING SANDY TIDAL FLATS. SOME DIFFICULTY WAS ENCOUNTERED IN IDENTIFYING EXACT LOCATION ALONG THE SEGMENT. AERIAL PHOTOGRAPHS SUPPLIED BY NPS WERE HELPFUL. THE RUGGED, ROCKY AREA BETWEEN THE BORDER OF SEGMENTS KA-2 AND KA-3, AND SITE 1, WAS HEAVILY POPULATED BY LARGE LITTORINA SITKANA. SITE 1, WHERE OILING HAD APPARENTLY BEEN OBSERVED IN 1990, SHOWED NO SIGN OF RESIDUES ON THIS SURVEY. SHIFTING BY HELD TO A POSITION FARTHER NORTH ALONG THE SEGMENT TO A LOCATION JUST SOUTH OF A LARGE WATERFALL, WHERE BROAD SANDY TIDAL FLATS WERE PRESENT BELOW LOWER COBBLE BEACHES, RATHER FLUID MOUSSE WAS FOUND UNDER COBBLES WITH WEATHERED SOR IN THE INTERSTICES BETWEEN COBBLES INDICATING PRESENCE OF OIL. THE MOST HEAVILY OILED SECTION OF THE BEACH

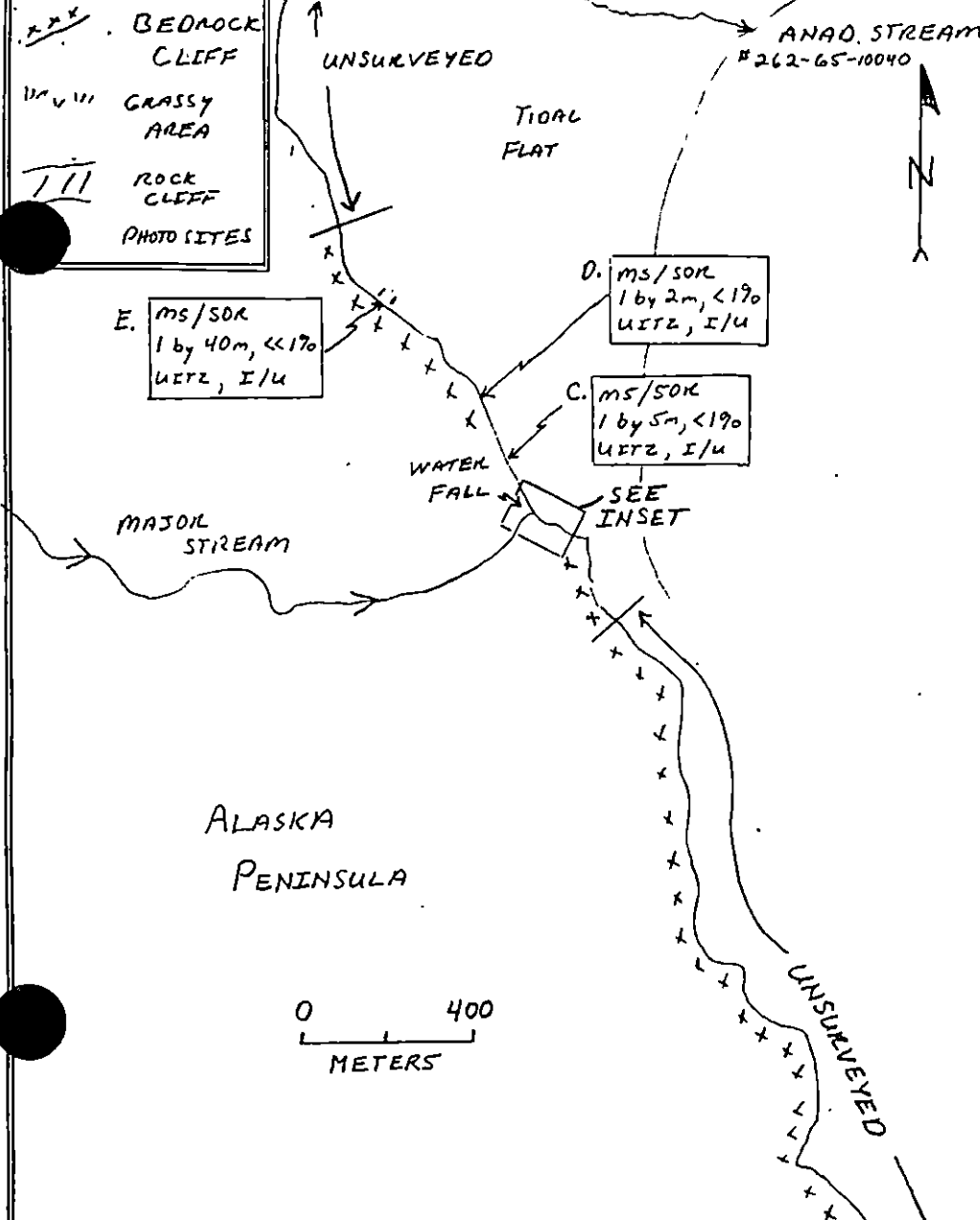
WAS EXTENSIVELY WORKED BY THE VECO CREW AND A LARGE AMOUNT OF MATERIAL WAS REMOVED. FLUID MOUSSE REMAINING ON COBBLE WAS WIPED OFF WITH ABSORBENT PADS.

PAGE 1 OF 1

REVIEWED: MC 5/25/91
revised 5.23.94

*** BEDROCK CLIFF
 III GRASSY AREA
 III ROCK CLIFF
 PHOTO SITES

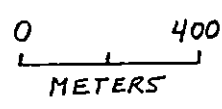
SKETCH MAP (OG)
 K0935-KA-3-A
 D. FITZGERALD
 19 MAY 1991
 1415-1720



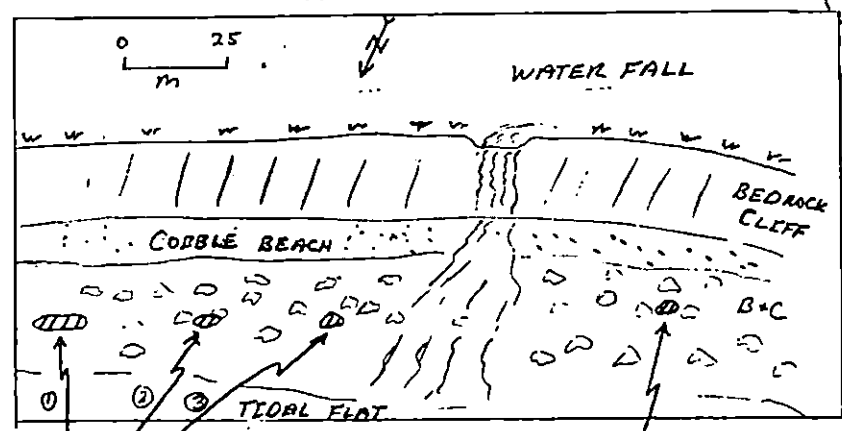
KASHVIC BAY

PU * VECO WORKERS PICKED
 UP ALL ACCESSIBLE OIL
 AT SITE A. WHICH AMOUNTED
 TO 4 BAGS.

ALASKA PENINSULA



INSET



A. MS/SOR
 1. 5 by 15m, 5-10%
 2. 1 by 12m, 5-10%
 3. 1 by 3m, 10-15%
 UETZ, I/U, B+C

B. MS/SOR
 2 by 3m, 10%
 MITZ, I/U

NO OIL FOUND

BEGIN SEGMENT KA-2

REVIEWED: MC 5/23/91
 reviewed 5.23 91

BEA ROCK
CLIFF

GRASSY
AREA

ROCK
CLIFF

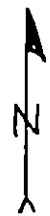
PHOTO SITES

PHOTO SITES, KA-3A
ROLL 6-17, FRAMES 15-24

SKETCH MAP (06)
K0935-KA-3-A
D. FITZGERALD
19 MAY 1991
1415-1720

UNSURVEYED

TIDAL
FLAT



E. ms/SOR
1 by 40m, <1%
UETZ, I/U

D. ms/SOR
1 by 2m, <1%
UETZ, I/U

C. ms/SOR
1 by 5m, <1%
UETZ, I/U

KASHVIC
BAY

MAJOR
STREAM

WATER
FALL

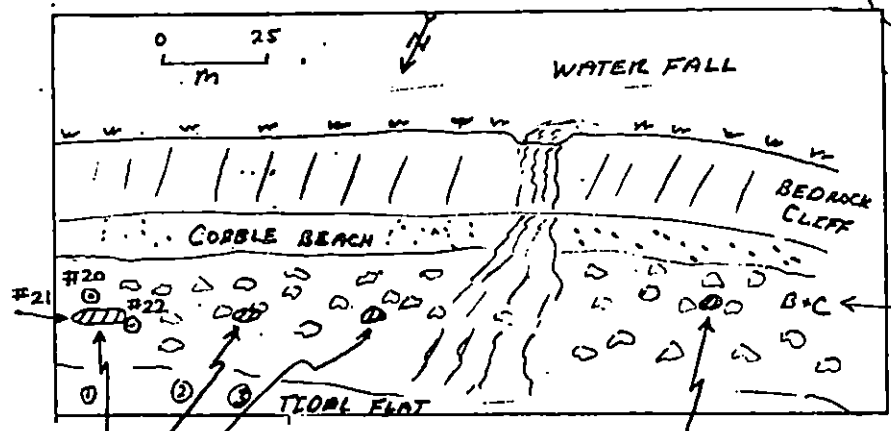
SEE
INSET

ALASKA
PENINSULA

0 400
METERS

UNSURVEYED

INSET



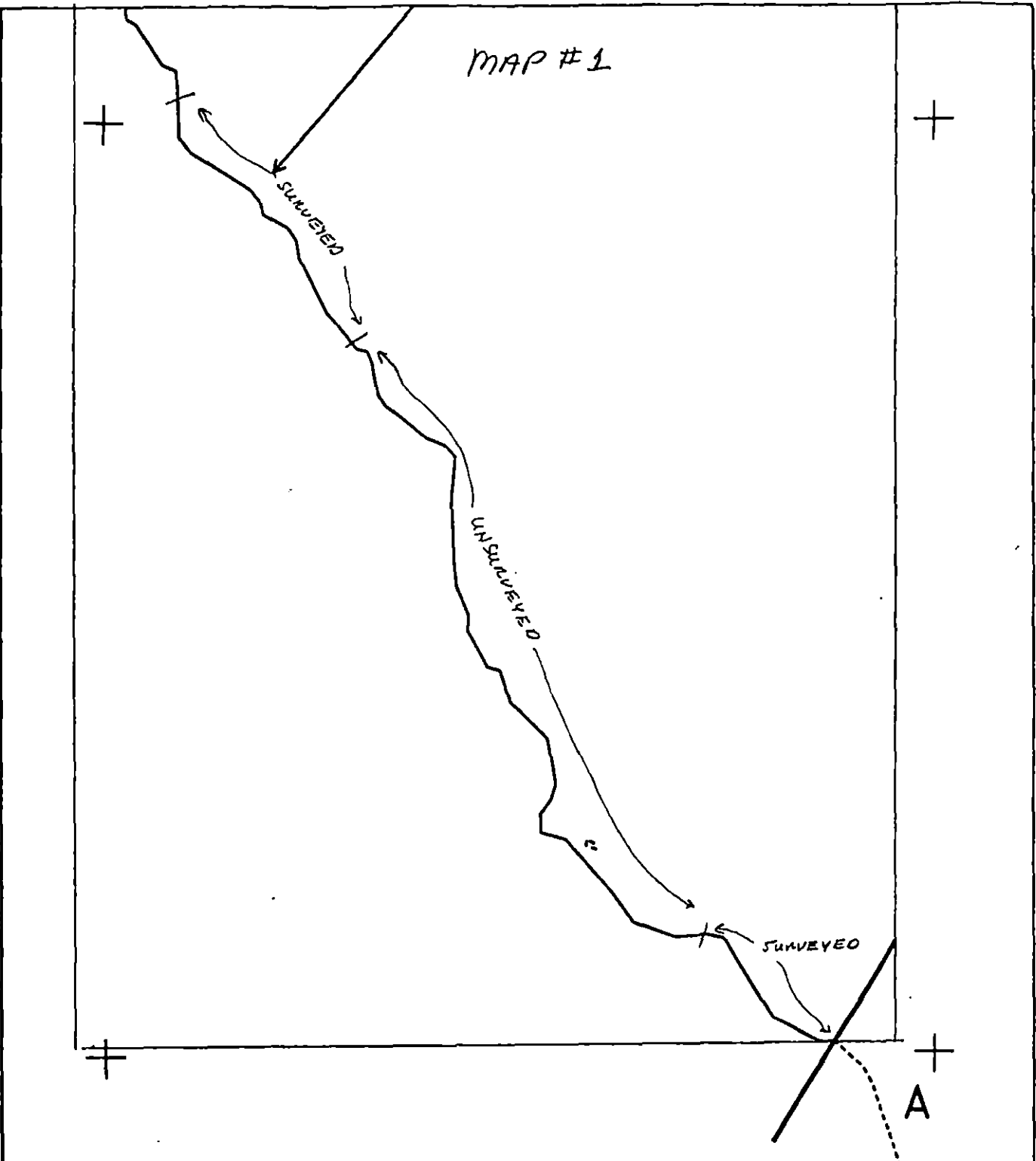
NO OIL
FOUND

BEGIN SEGMENT
KA-2

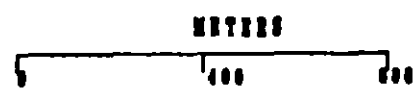
A. ms/SOR
1. 5 by 15m, 5-10%
2. 1 by 12m, 5-10%
3. 1 by 3m, 10-15%
UETZ, I/U, BK

B. ms/SOR
1 by 3m, 10%
METZ, IU

reviewed S.Z.B. 4/9



K0935 KA003 A



AK State Plane Zone 14
NAD83

Subdivision Field Map

Map Key: 604X0935KA003A

Name: D. Fitzgerald

Date: 19 MAY 1991

reviewed 5.23 9y

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 Helo

DATE May 19 1991

SEGMENT # KA-03

TIDAL HEIGHT(Range) -.5ft - 6ft (14:10-17:15)

SUBDIVISION A

BIOLOGIST H. Davis

SEA STATE <1 ft

WIND SPEED/DIRECTION 10-20 kt Strong Breeze NW

PHOTOGRAPHS: ROLL # G-17

FRAME # 15-24

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

KA-03 had a narrow bedrock/boulder/cobble area in front of an extensive sandy tidal flat. The rocky intertidal area is foreshortened by the sandy areas and has a moderate biota.
(A-E) Amphipods, kelp flies, Echinoderms and a few littorines are in the ms/sorted area. Above these spots is a small kelp drift line with more amphipods and kelp flies. Most of the organisms lived about five meters below the oil littorina. Barnacles (dense), limpets, Fucus, Odontothalia (moderately dense), Mytilus (sparse), Nucella, Anthopleura astensis, Scytosiphon and filamentous green algae were the most common. Shells found on the sandy flat were Diligera, Clinocardium and a few Mytilus.

Sandpipers (sp) (3) Pintail (3) Wigeon? (2) Unidentified waterfowl (10+)
Eagles (2) Ravens (2) Glaucous-winged Gulls (5+) Kittiwakes (4+) Swallows (5) Yellow legs (2)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

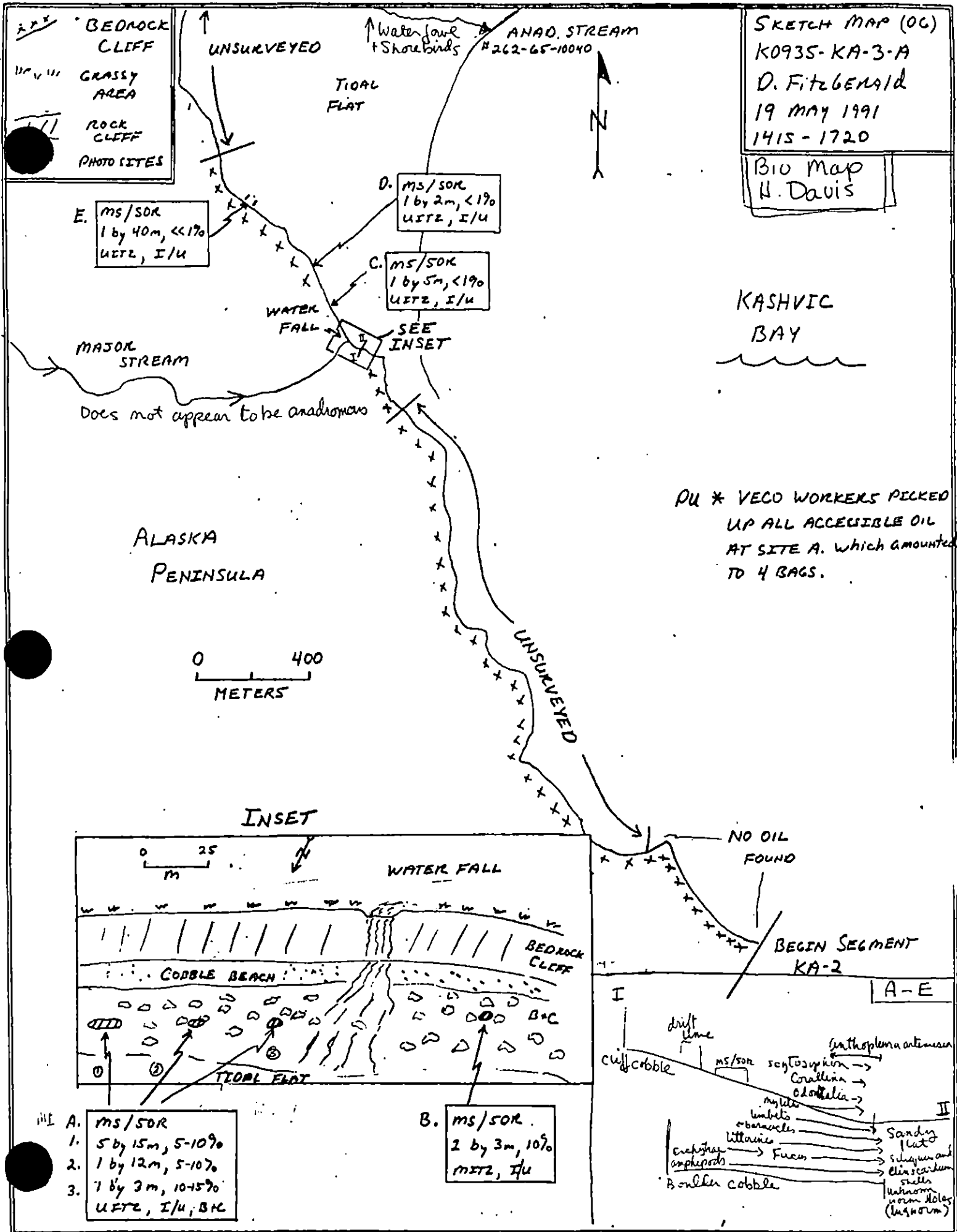
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1 juvenile 2 adult *	0
Seabirds	0		
Waterfowl	2+?	15+	
Gulls/Kittiwakes	2	9+	
Shorebirds	2	5	
Corvids	1	2	
Other Birds swallows	1	5	

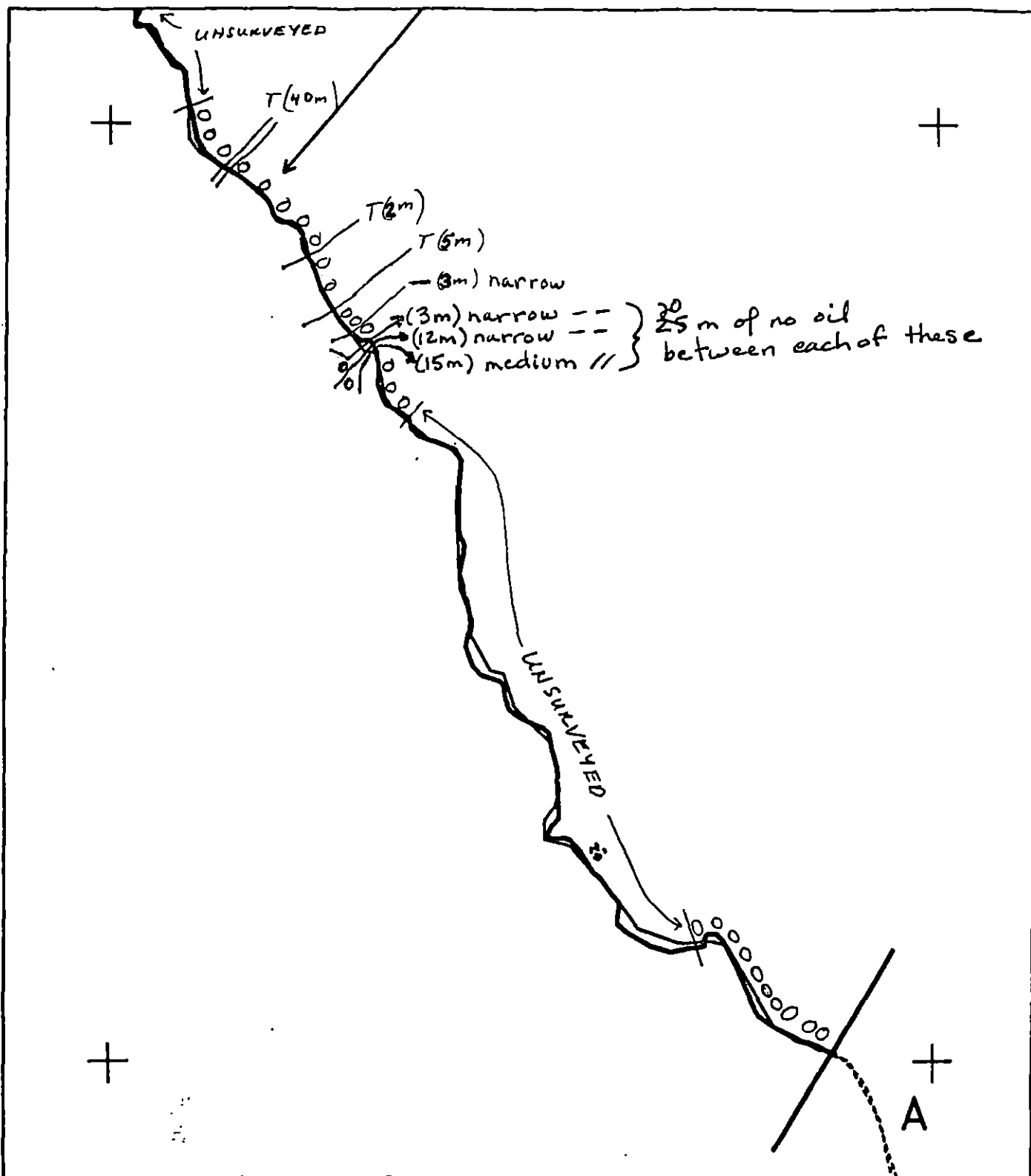
* In uplands.

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	0	Caribou *	2
Pinnipeds (specify)	0		
Es (specify)	0		

Shoreline subdivision map showing important biological features attached.

D. J. 6/23/91 DM





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

K0935 KA003 A
 ADEC Subsegment Length: 10715m

METERS

0 400 800

AK State Plane Zone 4
 90935ka003a...



Subdivision Field Map

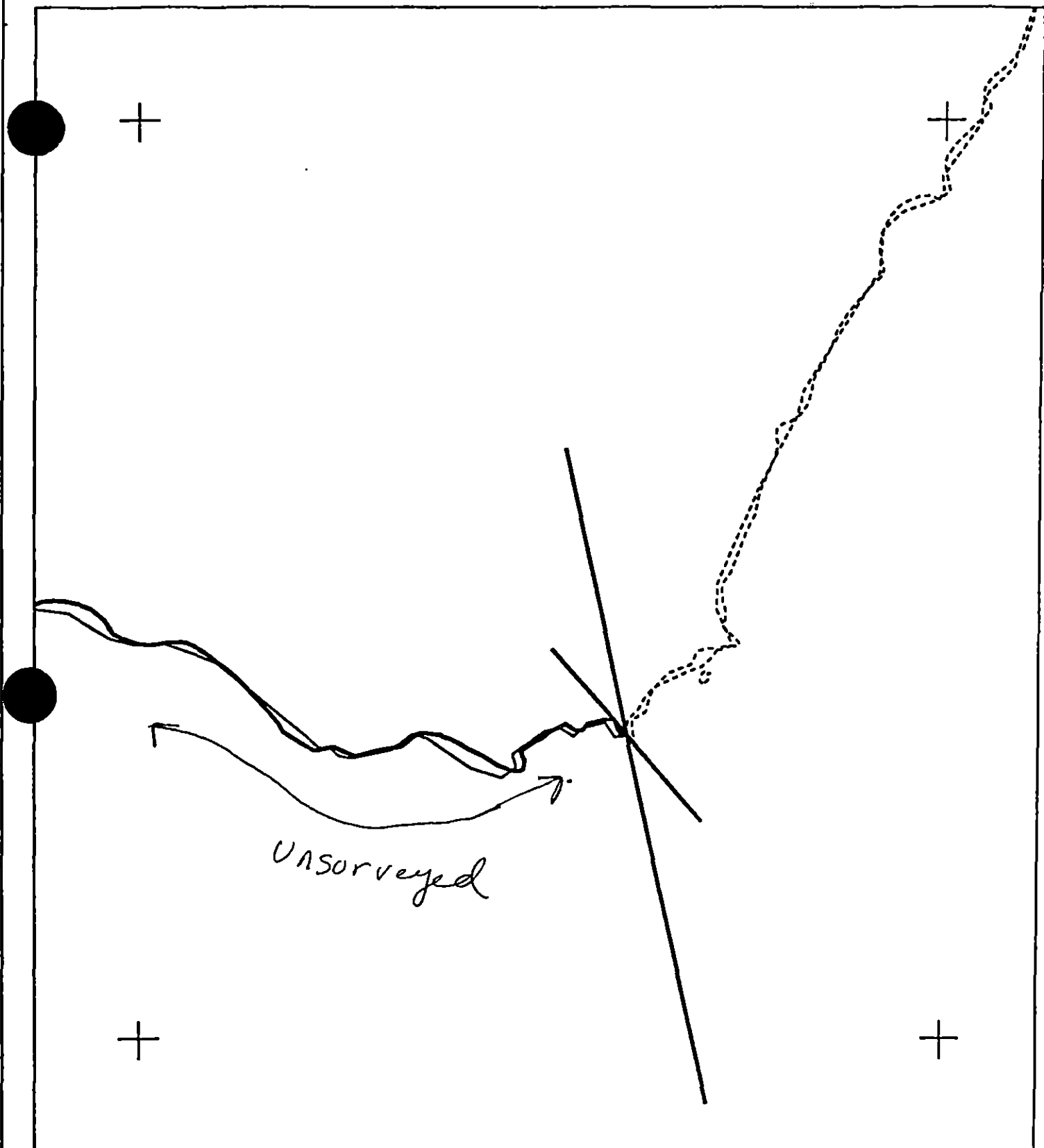
Map Key: 60AK003SKA003A

Name: D. Fitzgerald

Date: 19 MAY 1991

Date Entered:

Revised: MC 5/23/91
 revised 5.23 94



XXXX
 ////

 TTTT
 0000

Wide
 Medium
 Narrow
 Very Light
 No Oil

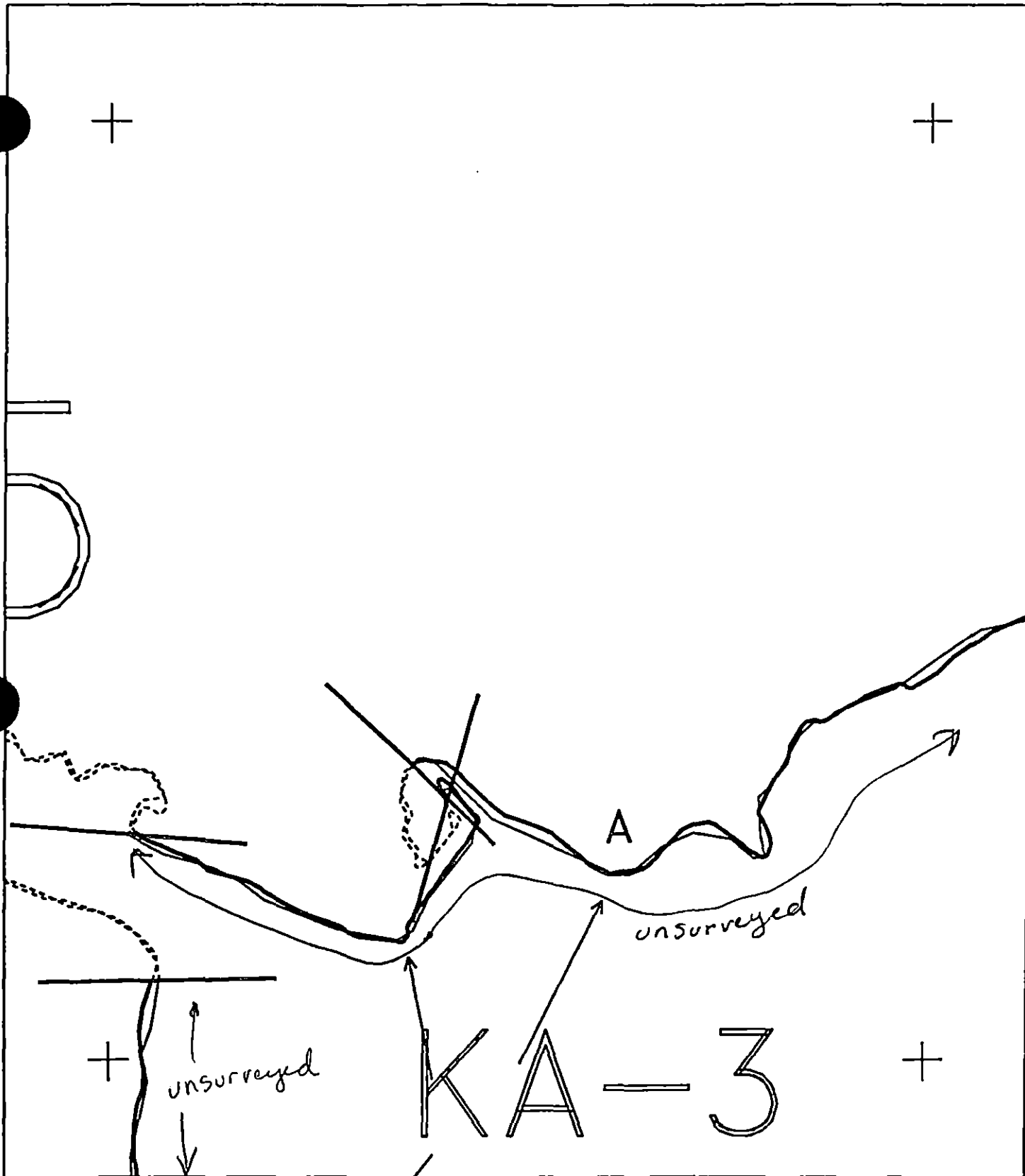
K0935 KA003 A
 ADEC Subsegment Length: 10715m
 METERS

AK State Plane Zone 4
 90935ka003ac



Subdivision Field Map
 Map Key: 60AK0935KA003Ac
 Name: Fitzgerald (J)
 Date: 19 May 1991
 Data Entered:

revised 5.24 94



XXXX
 ////

 TTTT
 0000

Wide
 Medium
 Narrow
 Very Light
 No Oil

K0935 KA003 A
 ADEC Subsegment Length: 10715m
 METERS

AK State Plane Zone 4
 80935ka003ab



Subdivision Field Map

Map Key: 60AK0935KA003Ab

Name: Fitzgerald (51)

Date: 19 May - 91

Data Entered:

1991 MAYSAP EVALUATION

SEGMENT: K0935KA003 SUB: A REGION: KOD SURVEY DATE: 5/19/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 5/15 - 9/15

Ecological/Constraints (see page two for details) Seabird colony,
Anadromous stream, Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

TEAM NO. 6-H6 SEGMENT KA-3 SUBDIVISION A DATE 19 May 1991

ADEC

NAME J. BARNHART OF ADFG SIGNATURE Jeff Barnhart

☒ NTR ☐ Treatment Suggested

We located five oiled areas, Mousse located around and under cobble. IT was fluid in nature exhibiting a strong odor of oil. Two areas were cleaned by VECO personnel. Trace amounts of MS remain around the cobbles. No additional treatment is recommended. Approx 4-40 pound bags, 160 pounds total was removed.

EXXON

NAME R. HANDELSON SIGNATURE RC Handel

☒ NTR Further work on this site would have no NEB.

LANDMANAGER

NAME F BENNIS OF NPS SIGNATURE F Bennis

☒ NTR

Oil observed in 4 small separate bands near the waterfalls has been largely collected by VECO workers. No further clean-up is warranted in these areas. No oil observed in site 2 to the south, & very little sor persists to the north of the waterfalls.

USCG/NOAA

NAME CWO SPURGEON S. SHIGEMAKI SIGNATURE CWO Spurgeon

☒ NTR Recoverable oil found during survey was removed by VECO workers.

SURVEYED PORTION OF THE SEGMENT CONSISTED OF BOTH IRREGULAR BEDROCK PLATFORMS WITH BOULDER-COBBLE BEACHES IN THE MID/UPPER ITZ, AND BOULDER-COBBLE BEACHES FRONTED IN THE MID/LOWER ITZ BY VERY BROAD LOW-SLOPING SANDY TIDAL FLATS. SOME DIFFICULTY WAS ENCOUNTERED IN IDENTIFYING EXACT LOCATION ALONG THE SEGMENT, AERIAL PHOTOGRAPHS SUPPLIED BY NPS WERE HELPFUL. THE RUGGED, ROCKY AREA BETWEEN THE BORDER OF SEGMENTS KA-2 AND KA-3, AND SITE 1, WAS HEAVILY POPULATED BY LARGE LITTORINA SITICANA. SITE 1, WHERE OILING HAD APPARENTLY BEEN OBSERVED IN 1990, SHOWED NO SIGN OF RESIDUES ON THIS SURVEY. SHIFTING BY HELD TO A POSITION FARTHER NORTH ALONG THE SEGMENT TO A LOCATION JUST SOUTH OF A LARGE WATERFALL, WHERE BROAD SANDY TIDAL FLATS WERE PRESENT BELOW THE BOULDER COBBLE BEACHES, RATHER FLUID MOUSSE WAS FOUND UNDER COBBLES WITH WEATHERED SOR IN THE INTERSTICES BETWEEN COBBLES INDICATING PRESENCE OF OIL. THE MOST HEAVILY OILED SECTION OF THE BEACH

WAS EXTENSIVELY WORKED BY THE VECO CREW AND A LARGE AMOUNT OF MATERIAL WAS REMOVED. FLUID MOUSSE REMAINING ON COBBLE WAS WIPE OFF WITH ABSORBENT PADS.

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 1TEAM NO. G-HeloOG D FITZGERALDBIO H DAVESSEGMENT K9S-35-KAADEC J. BARNHART ADFGLANDMANAGER F. BENNIS for NPSSUBDIVISION AEXXON R. HARKELSONUSCG/NOAA CWO SPURR/G. SHIGENAKADATE 19 May 1991TIME 14:15 to 17:20TIDE LEVEL -0.9 ft. to 6.0 ft.ENERGY LEVEL: ☐ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☒ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 1950 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W 0 m M 15 m N 18 m VL 4.7 m NO 1870 m US 8765 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A1		S		S							B-C-P	M-L	5	15			X		Light I/U around B+C
2		S		S								M-L	1	12			X		
3		P		P								M-L	1	3			X		
B		S		S								L	1	3			X		
C		T		T								L	1	5		X			
D		T		T								L	1	2		X			
E		T		T								L	1	40		X			

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

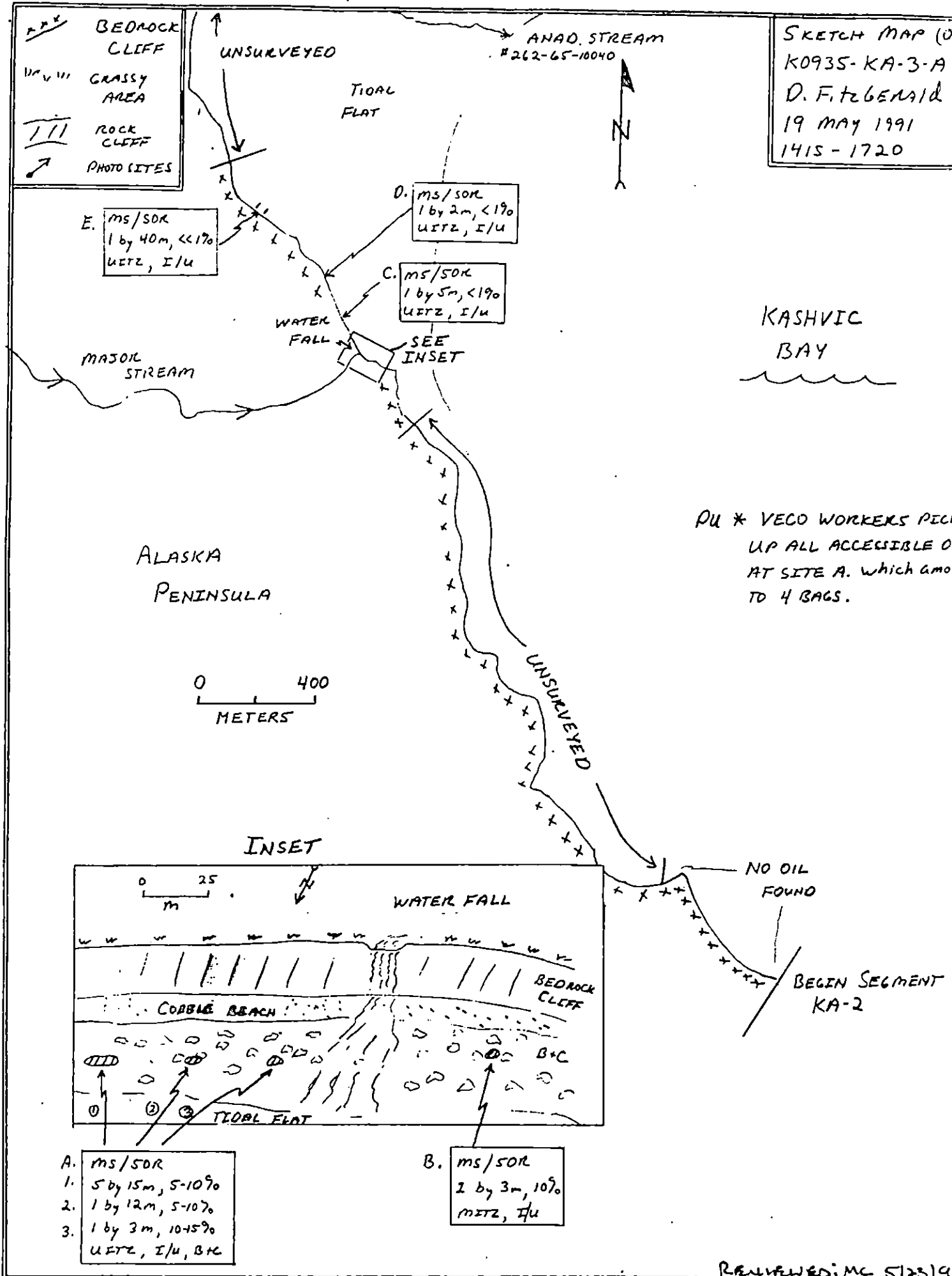
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 6-17 FRAMES 15-2

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

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

OG COMMENTS: THIS SEGMENT IS LOCATED ALONG THE SOUTHWEST IRREGULAR BEDROCK SHORELINE OF KASHVIC BAY. THE SHORELINE IS BACKED BY MODERATE TO LOW BEDROCK CLIFFS AND FRONTED BY WAVECUT ROCK PLATFORMS AND BROAD SANDY TIDAL FLATS. THE BEACHES ARE MODERATE TO LOW ANGLE AND CONSIST OF BOULDERS AND COBBLES UNDERLAIN BY BEDROCK AND FINE-GRAN SEDIMENT. THE OILING OCCURS IN WIDELY SEPARATED SHORT, NARROW BANDS, CONSISTING OF MS/SOX UNDER AND IN THE CRACKS BETWEEN BOULDERS AND COBBLES (F/U). THE MOST CONCENTRATED OILING WAS FOUND JUST SOUTH OF A "HEAT" WATERFALL. VECO WORKERS REMOVED ALL ACCESSIBLE MS/SOX FROM THESE SITES AND SUN-WARMED RUNNY MOUSE WAS WIPEO FROM THE ROCKS. FOUR BAGS OF OILED SEDIMENT WERE RETRIEVED FROM THIS AREA.

REVIEWED: MC 5/25/91
REVISED 5.23.91

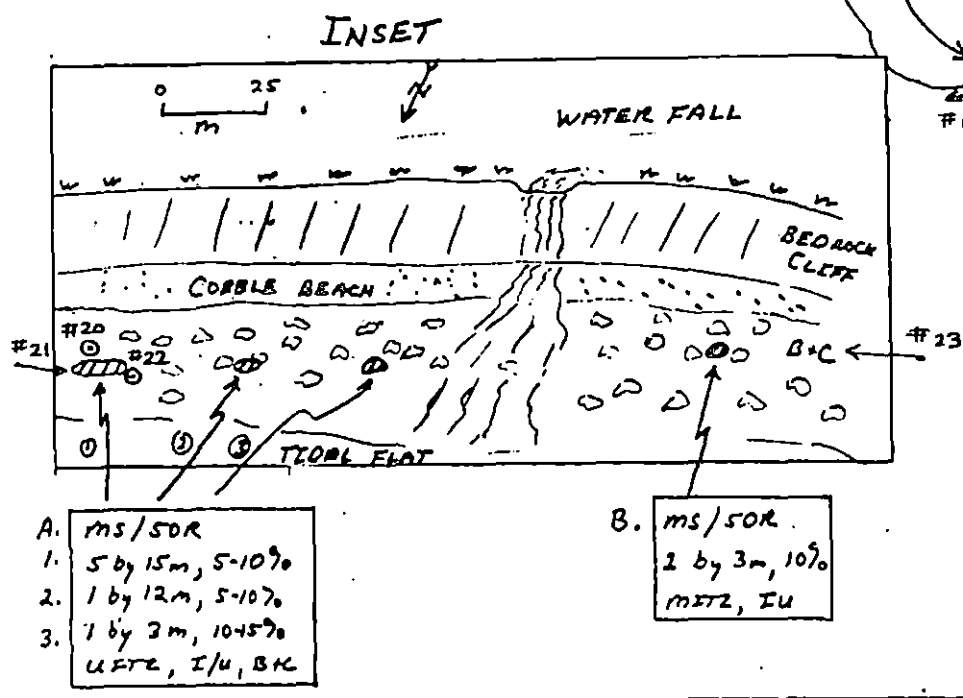
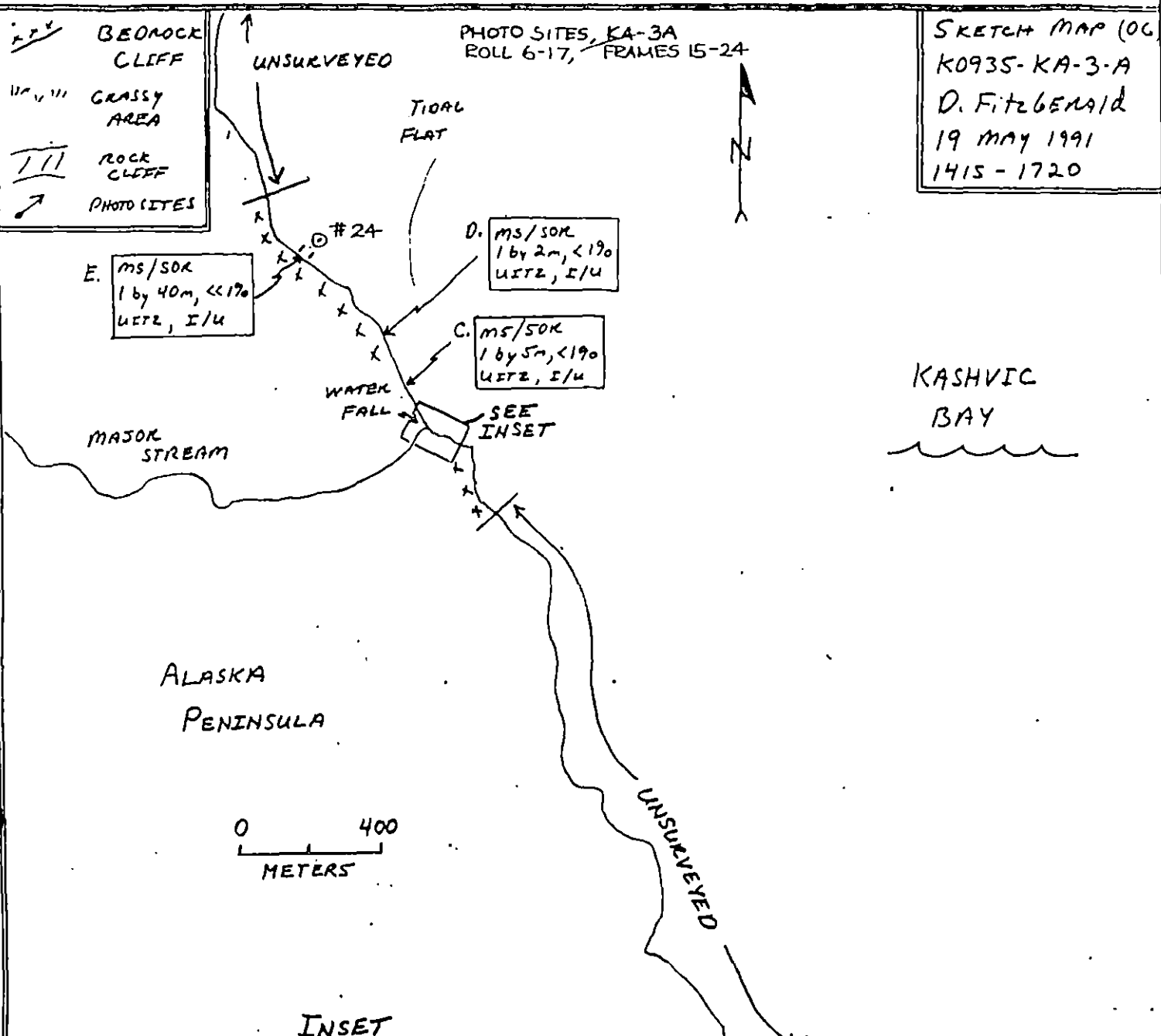


REVIEWED: MC 5/23/91
reviewed 5-23-91

SKETCH MAP (OC
K0935-KA-3-A
D. FITZGERALD
19 MAY 1991
1415-1720

BEACH
CLIFF
GRASSY
AREA
ROCK
CLIFF
PHOTO SITES

PHOTO SITES, KA-3A
ROLL 6-17, FRAMES 15-24



NO OIL FOUND

#19

#18

#17

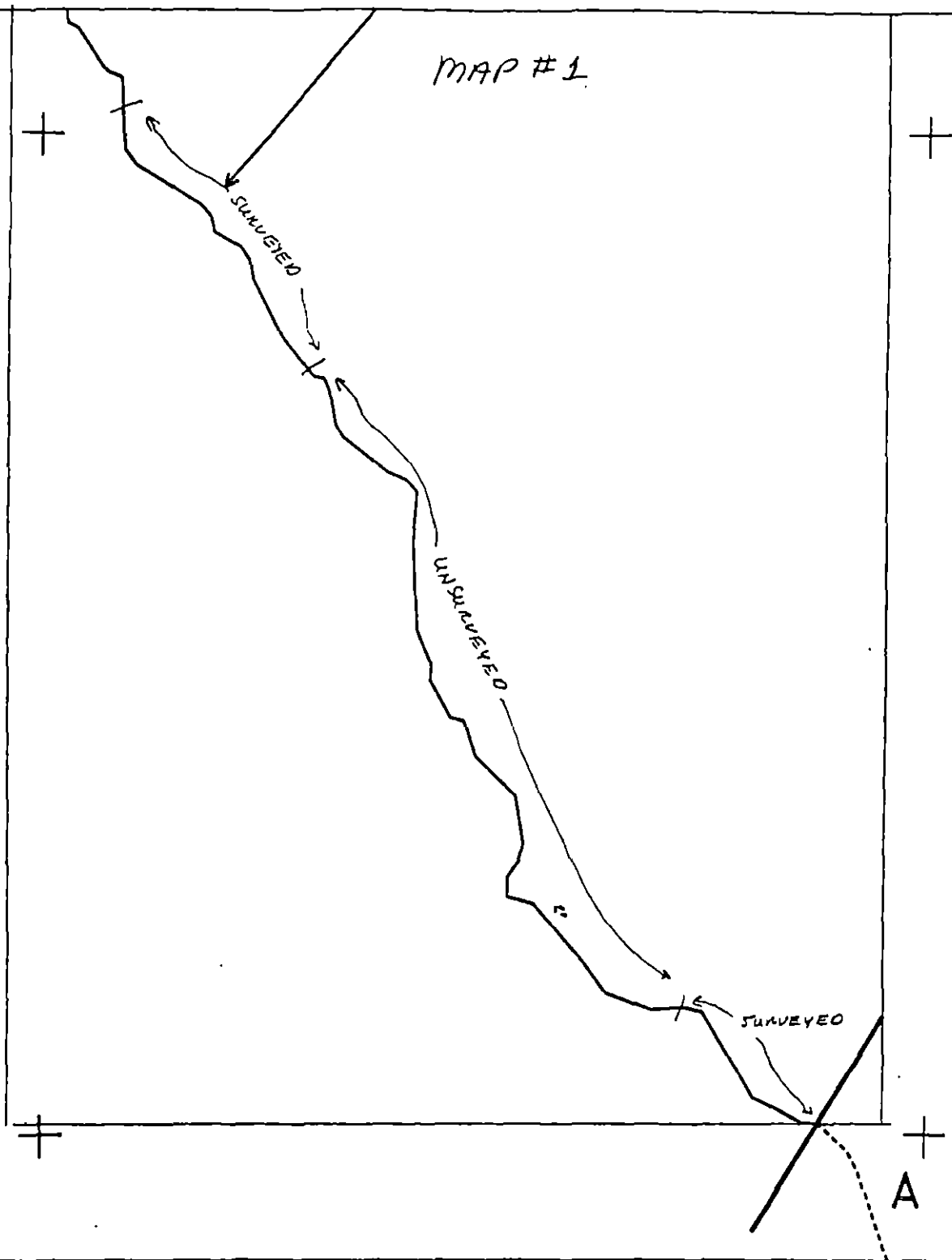
#16

#15

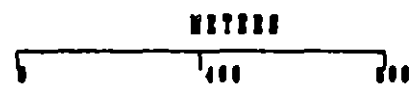
BEGIN SEGMENT KA-2

reviewed S.Z.B. 9y

MAP #1



K0935 KA003 A



AK State Plane Zone 14

Subdivision Field Map
Map Key: 0020035KA003A
Name: D. Fitzgerald
Date: 19 MAY 1991

reviewed 5.23.9

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # G Helo

DATE May 19 1991

SEGMENT # KA-03

TIDAL HEIGHT(Range) -.5ft - 6 ft (14:10-17:15)

SUBDIVISION A

BIOLOGIST H. Davis

SEA STATE <1 ft

WIND SPEED/DIRECTION 10-20 kt Strong Breeze NW

PHOTOGRAPHS: ROLL # G-17

FRAME # 15-24

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

KA-03 had a narrow bedrock/boulder/cobble area in front of an extensive sandy tidal flat. The rocky intertidal area is foreshortened by the sandy areas and has a moderate biota.

(A-E) Amphipods, Kelp flies, Echinoderms and a few Littorina are in the ms/sor'ed area. Above these spots is a small kelp drift line with more amphipods and Kelp flies. Most of the organisms lived about five meters below the oil. Littorina, Barnacles (dense), limpets, Fucus, Odonthalia (moderately dense), Mytilus (sparse), Nucella, Anthopleura artemesia, Scytosiphon and filamentous green algae were the most common. Shells found on the sandy flat were Siligula, Clinocardium and a few Mytilus.

sandpipers (sp) (3) Pintail (3) Wigeon? (2) unidentified waterfowl (10+)

Eagles (2) Ravens (2) Glaucous-winged Gulls (5+) Kittiwakes (4+) Swallows (5) Yellow legs (2)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

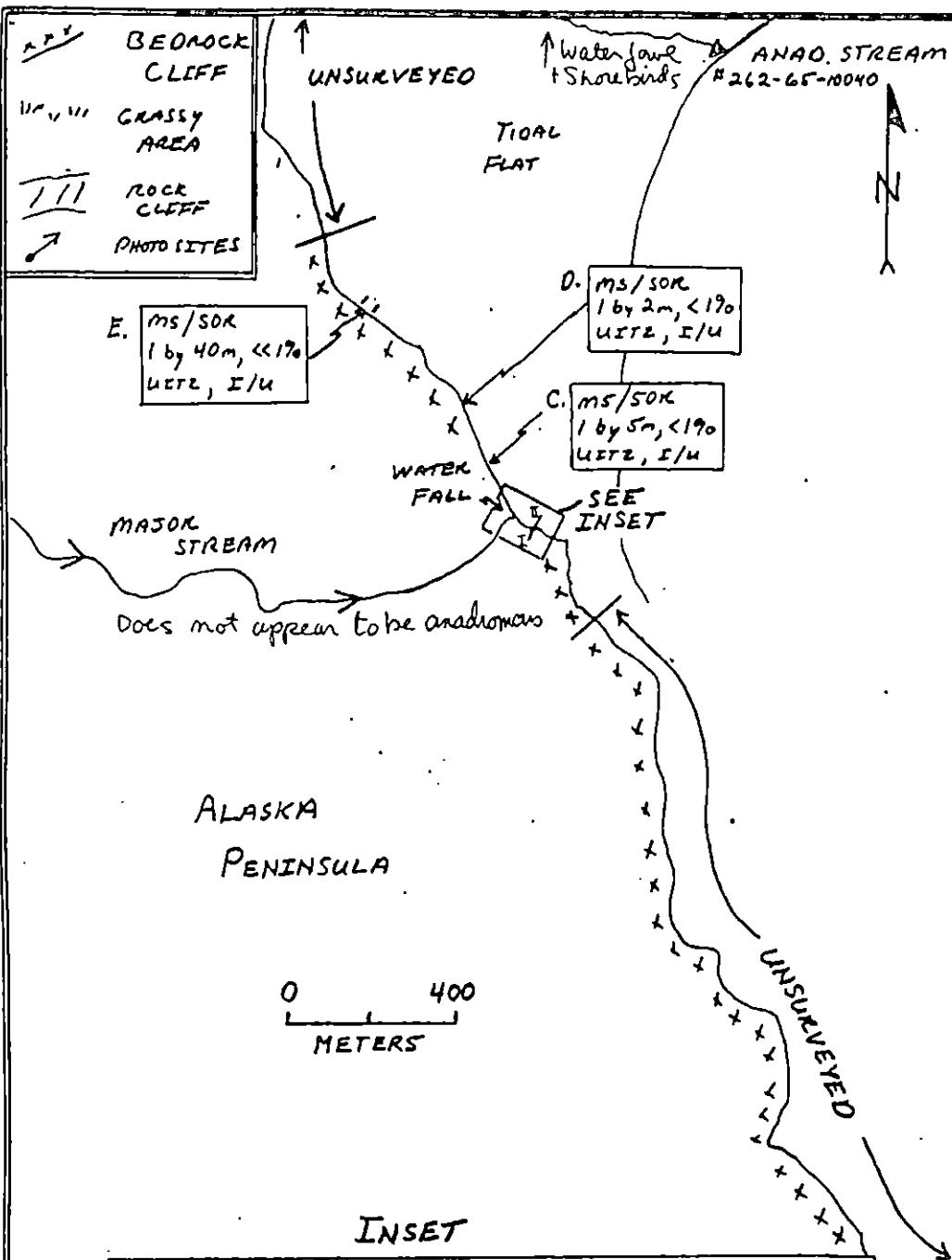
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1 juvenile 2 adult *	0
Seabirds	0		
Waterfowl	2+?	15+	
Gulls/Kittiwakes	2	9+	
Shorebirds	2	5	
Corvids	1	2	
Other Birds swallows	1	5	

* In uplands.

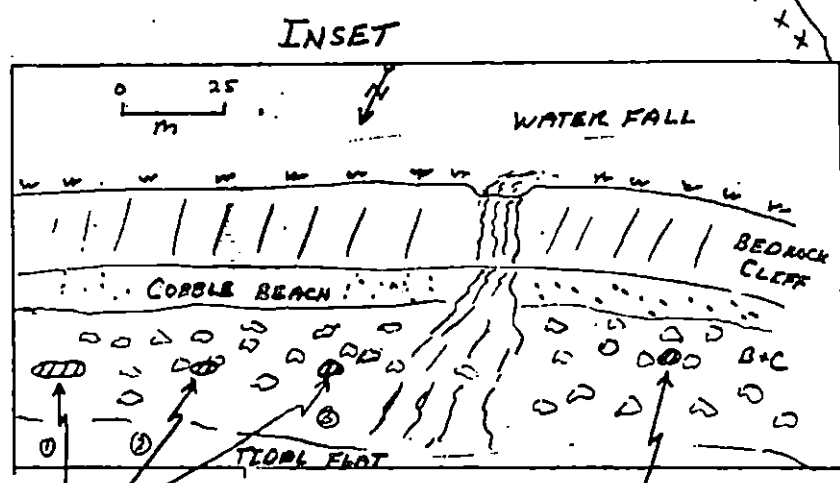
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	0	Caribou *	2
Pinnipeds (specify)	0		
Whales (specify)	0		

Shoreline subdivision map showing important biological features attached.

SKETCH MAP (00
K0935-KA-3-A
D. FITZGERALD
19 MAY 1991
1415-1720
Bio Map
H. Davis

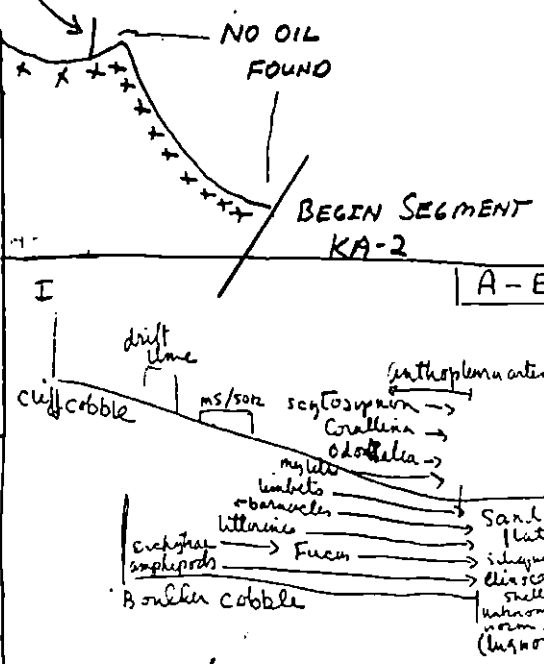


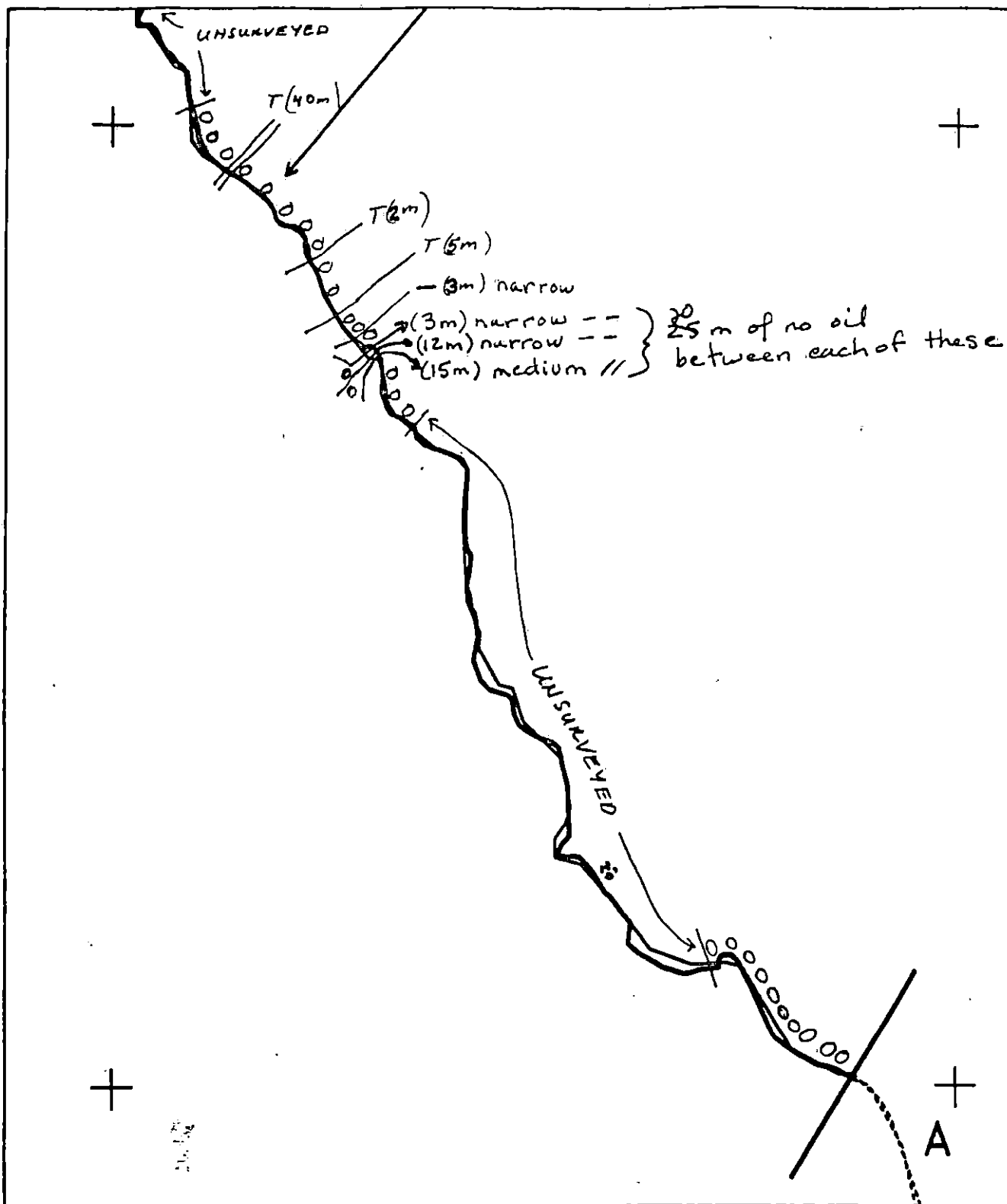
PU * VECO WORKERS PICK UP ALL ACCESSIBLE OIL AT SITE A. WHICH AMOUNTS TO 4 BAGS.



1. A. MS/SOR
- 5 by 15m, 5-10%
 - 1 by 12m, 5-10%
 - 1 by 3m, 10-15%
- UETZ, I/U, B/C

- B. MS/SOR
- 2 by 3m, 10%
- MSRZ, I/U





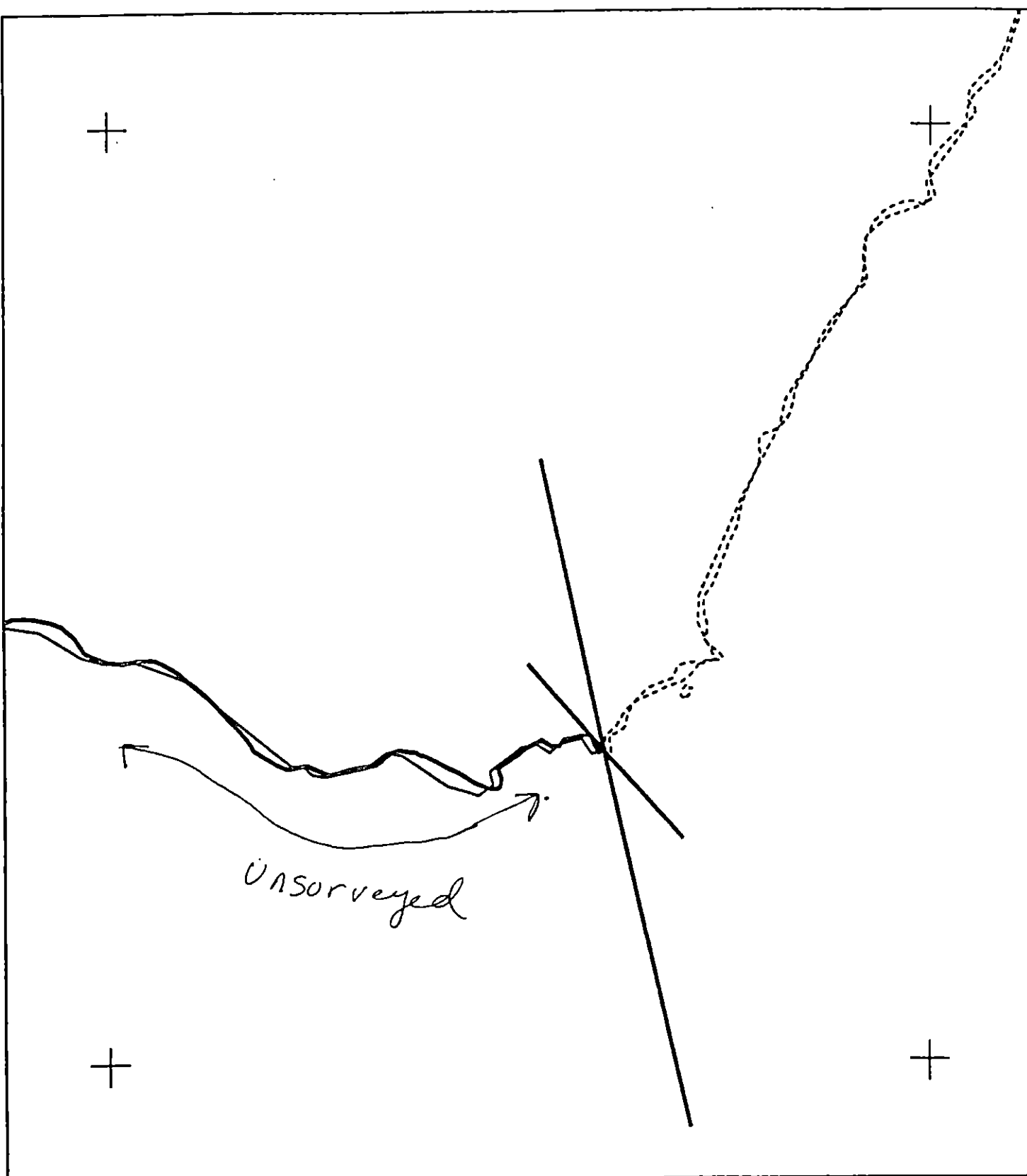
XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

K0935 KA003 A
 ADEC Subsegment Length: 10715m
 METERS
 0 400 800
 AK State Plane Zone 4
 90335400300

Subdivision Field Map
 Map Key: 60AK0935KA003A
 Name: D. Fitzgerald
 Date: 19 MAY 1991
 Date Entered:



Revised: MC 5/23/91
 revised 5.23 94



XXXX
 ////

 TTTT
 0000

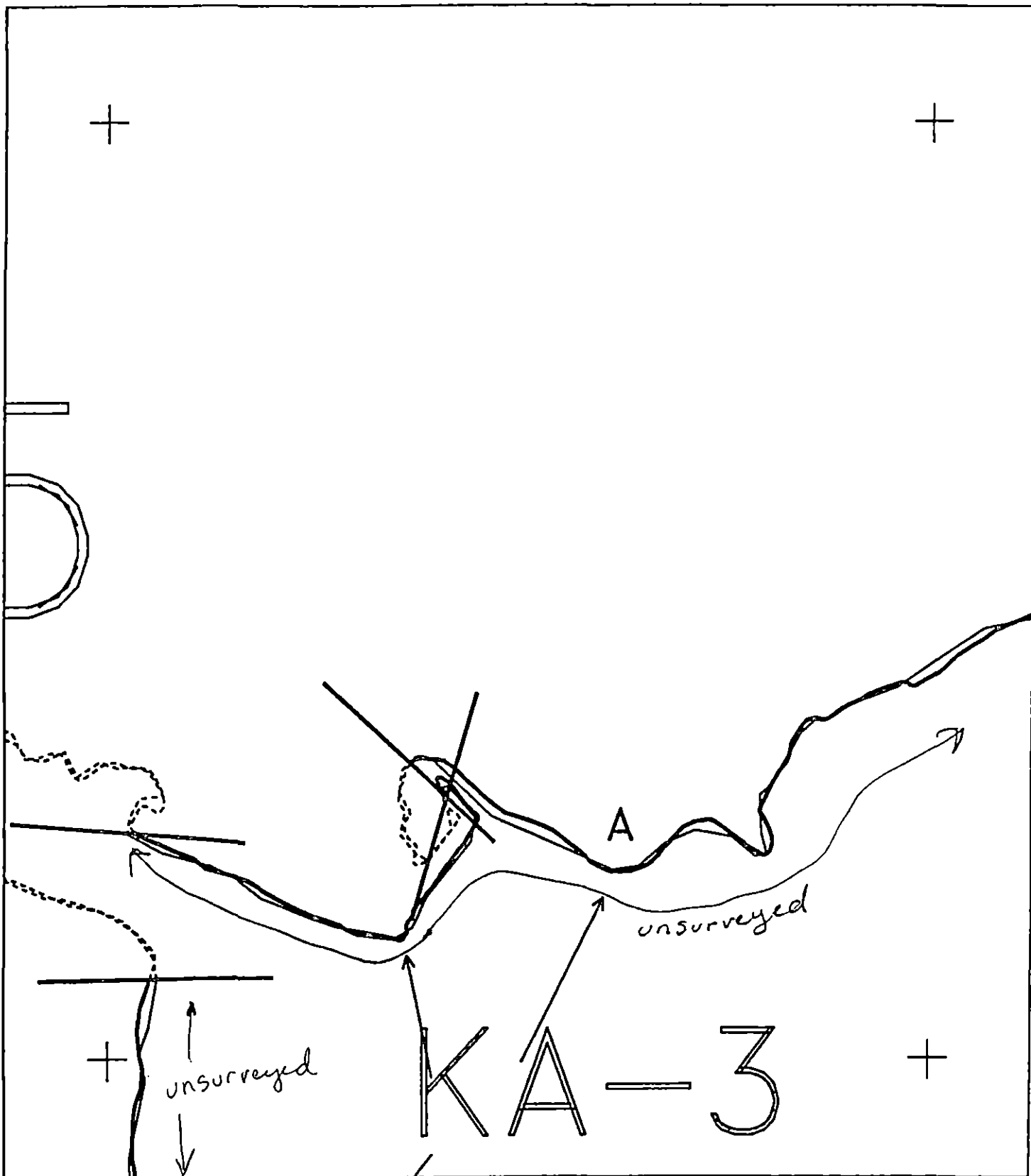
Wide
 Medium
 Narrow
 Very Light
 No Oil

K0935 KA003 A
 ADEC Subsegment Length: 10715m
 METERS

5 400 800
 AK State Plane Zone 4
 90935ka003ac...



Subdivision Field Map
 Map Key: 60AK0935KA003Ac
 Name: Fitzgerald (J)
 Date: 19 May 1991
 Data Entered:



XXXX
 ////

 TTTT
 0000

Wide
 Medium
 Narrow
 Very Light
 No Oil

K0935 KA003 A
 ADEC Subsegment Length: 10715m
 METERS
 0 400 800
 AK State Plane Zone 4
 9035ka003ab-



Subdivision Field Map

Map Key: 60AK0935KA003Ab

Name: Fitzgerald (51)

Date: 19 May - 91

Date Entered:

WORK PLAN ADDENDUM

Segment K09-35 - KA003

Subdivision A

Dated 7/24/20.

MODIFICATION

1. REASON FOR MODIFICATION

.. REQUEST BY FIELD.
.. TAG FIELD ASSESSMENT.

2. ADJUSTMENT TO WORK PLAN

REMOVE TARMATS ^{MOUSSE} AS INDICATED IN ATTACHED DOCUMENT.
RARE REMAINING OILED SEDIMENTS AND CUSTOMER.

SHPO APPROVAL NEEDED YES X
NO

SHPO SIGNATURE Lachlan Dae 7/25/20
STANDARD CONSTRAINT APPLIES

TAG APPROVAL DATE 07/24/20.

ADEC JOHN BAUER
EXXON ANDY TALL
NOAA Carl Wescott
USCG G.A. BEITER

FOSC h L DATE 7-26-20

SEGMENT ST/ K09-36-KA-01 SUBDIVISION A (1 OF 1) DATE 4/28/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4LL National Parks

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Michael Outasgorn DATE: 5/15/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 82 m: No Oil 4069 m

Subsurface Oil Observed: Yes ☐ No ☒ Maximum Depth

RECOMMENDATIONS:

X No Treatment Recommended

Treatment Recommended

Manual Pickup

Bioremediation

Tarmat Removal

Snare/Absorbent Booms

Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

Spot Washing: _____ Wands _____

Beach Cleaner

____ Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/15/90

ADEC ART WEINER Art Weiner

EXXON *Amoy TGA Real*

NOAA Joseph Talbot, Chief

USCG G.A. REITER G.A.

FOSC: DATE: 5-18-90

SEGMENT K0936-K1001

SUBDIVISION KACCA

DATE 4, 28 90

CHECKLIST

_____ N Arrows
 _____ Approx. Scale
 _____ Approx. Grndy
 _____ Of Dist.
 _____ Width
 _____ Length
 _____ % Cover
 _____ Substrate Character
 _____ Est. HRA/LVA
 _____ SCL
 _____ Profile Location(s)
 _____ Profile(s)
 _____ Pit Location(s)
 _____ Photo Location(s)

LEGEND

1 A
PK - No Substance On

PM - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

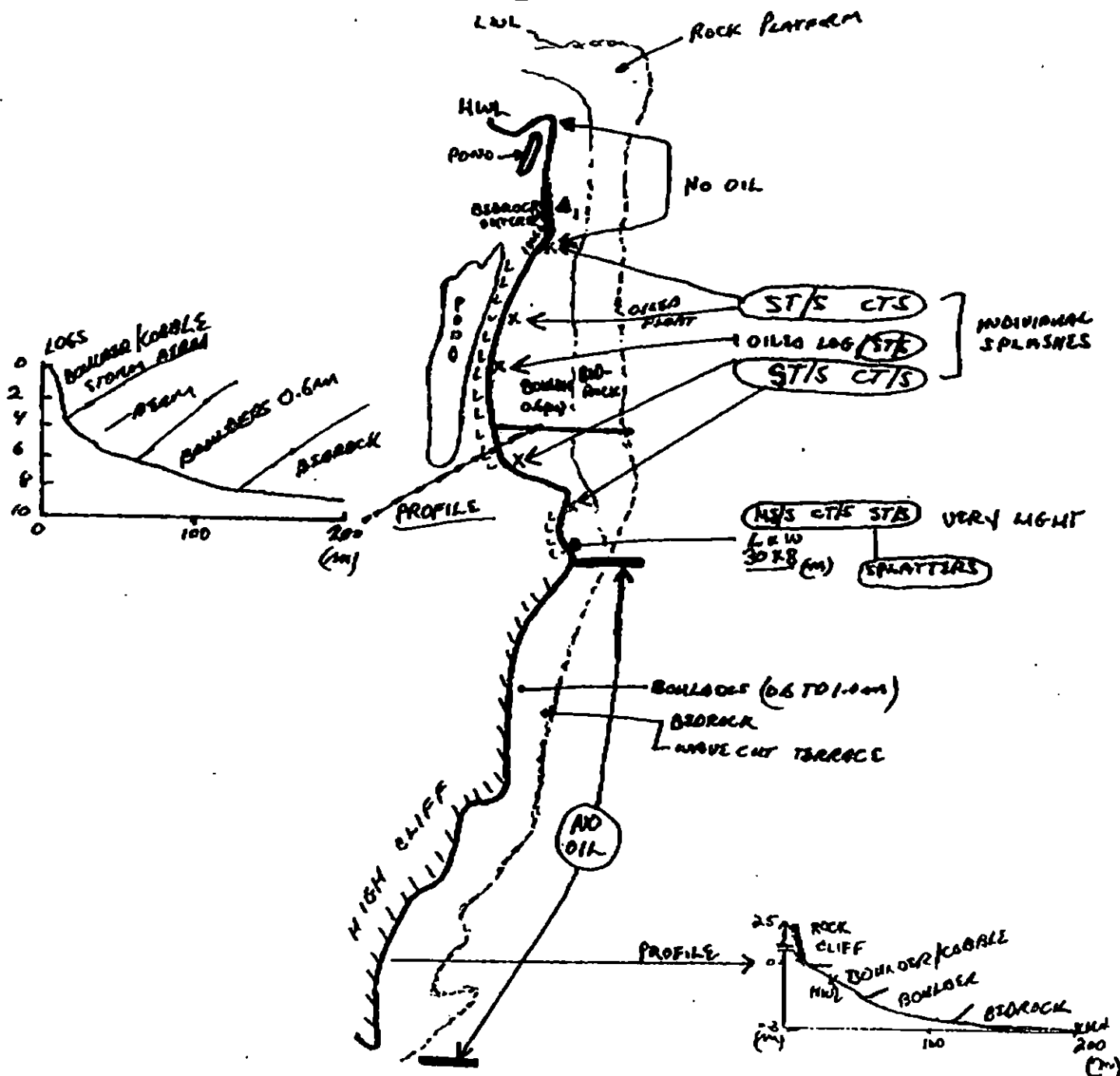
[CT/P]
Patchy Distribution

CT/S
Specialized Distribution

Old Vegetation

Photo location, direction,
and number

SKETCH MAP



12:30
(FAM)

4151 m

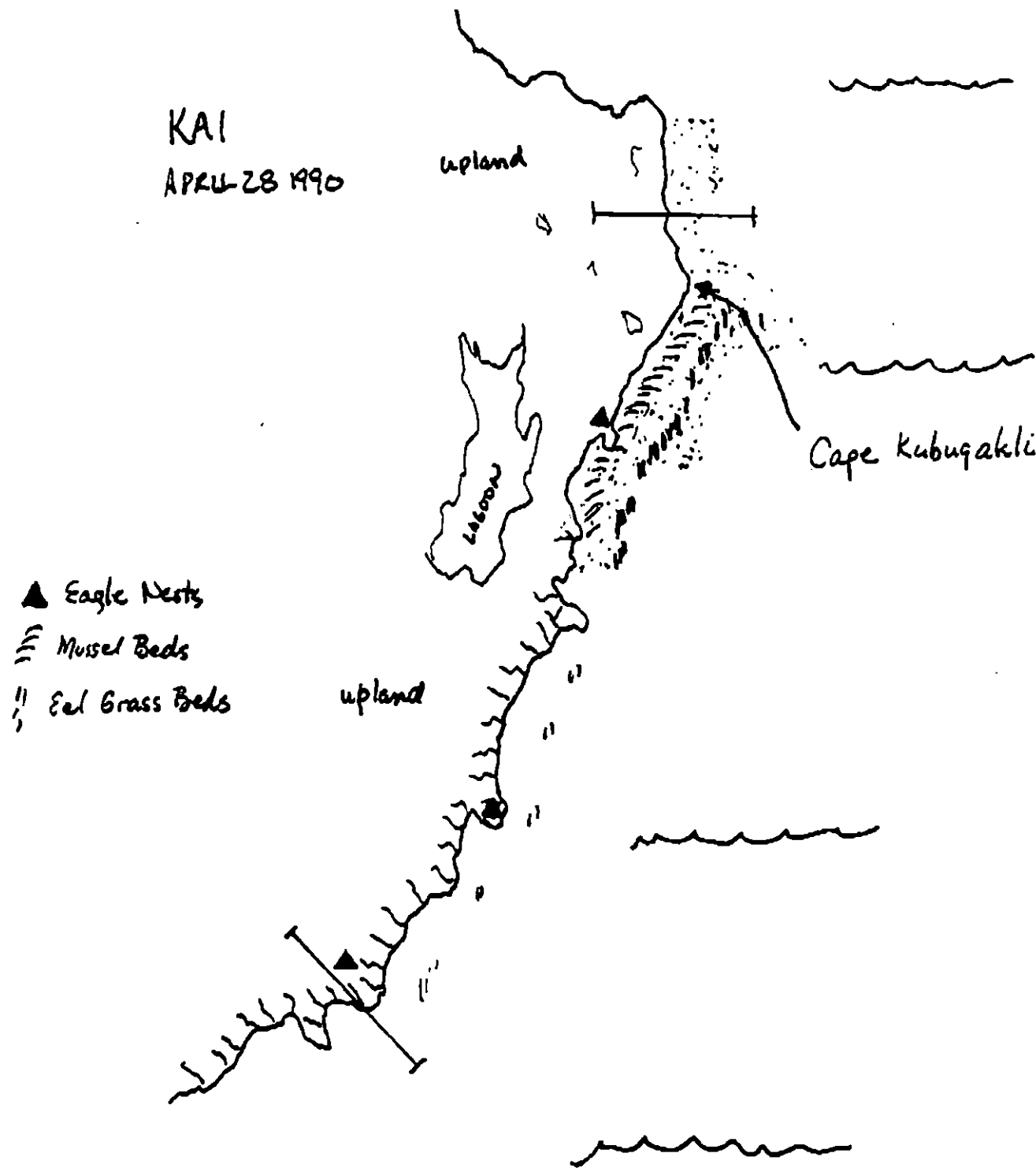
↑ survey
direction

START
9.30 AM

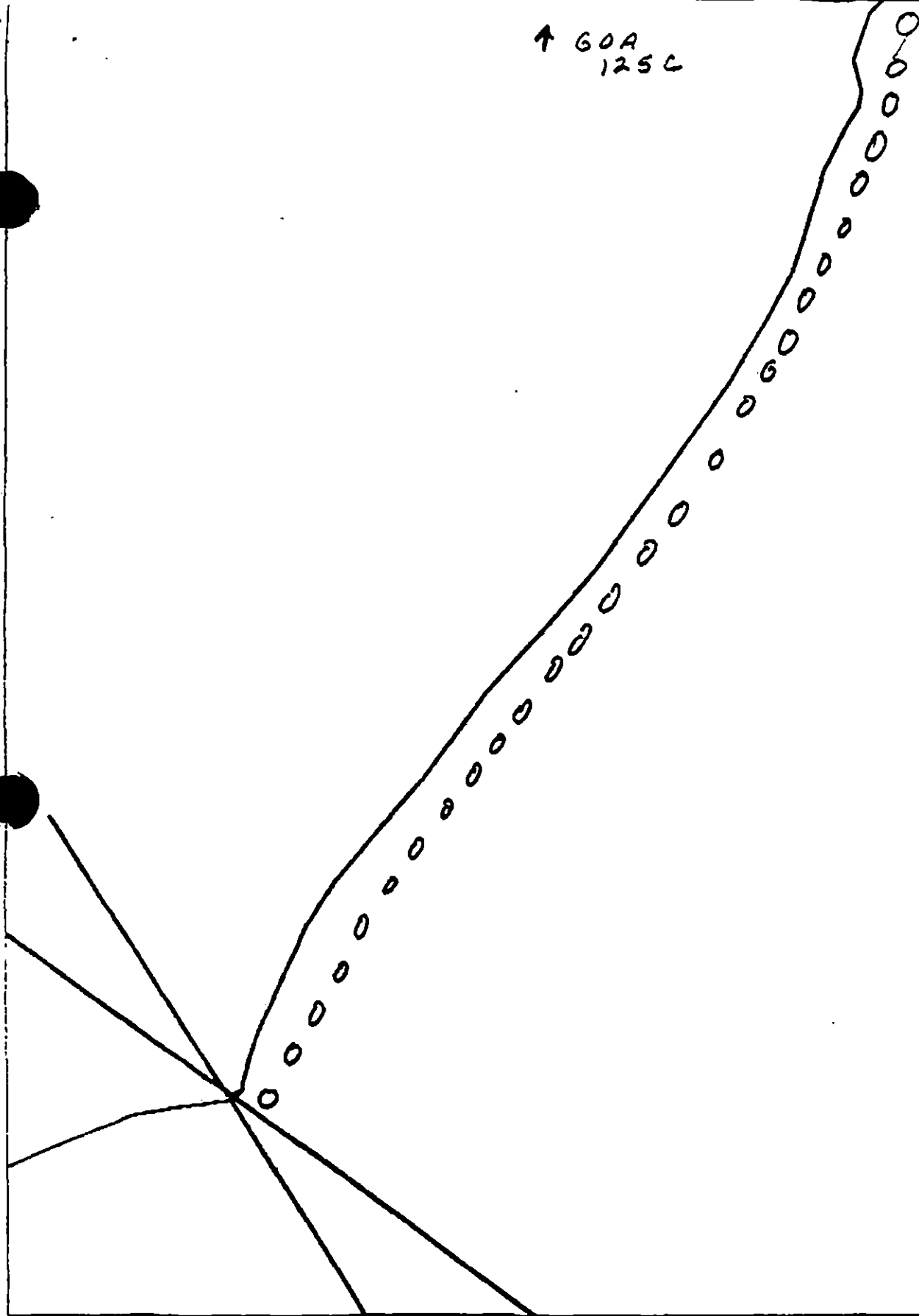
NEW YORK 23, 24, 25

Oil Character Length (in): AP 0 PO 0 CV 0 CT 30 ST 30 MS 70 PT 0 TB 0 FL 0 NO 41/6

KAI
APRIL 28 1990



↑ GOA
125C



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

KA-1

ADEC Segment Length: 415m



Map Key: GOA-125a

Name: LINDA NAKASHIMA

Date: 4/28/90

Data Entered:

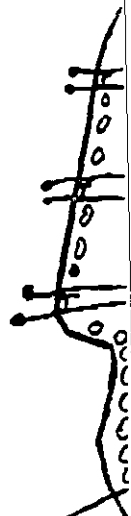
P.08 SSAT

TO

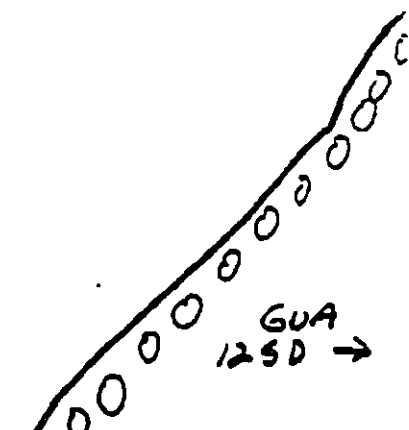
EXXON KODIAK

APR-29-1990 16:41 FROM

KA-1



↓ GOA
125A



GUA
125D →

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KA-1

ADEC Segment Length: 4151m



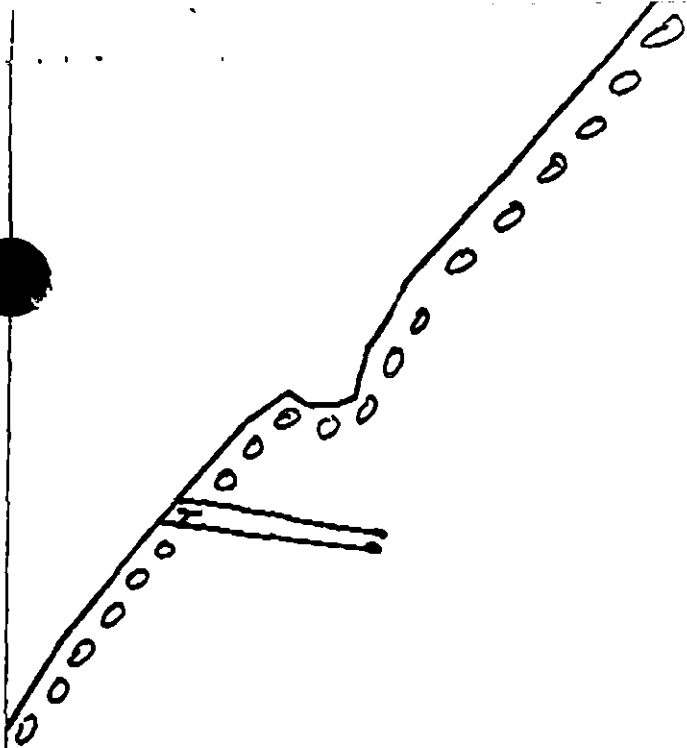
Map Key: GOA-125c

Name: LINDSAY NAKASHIMA

Date: 4/28/90

Date Entered:

↑
GOA
125P



← GOA
125C

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KA-1

ADEC Segment Length: 4151m



Map Key: GOA-125d

Name: LINOSAI NAKASHIMA

Date: 4/28/90

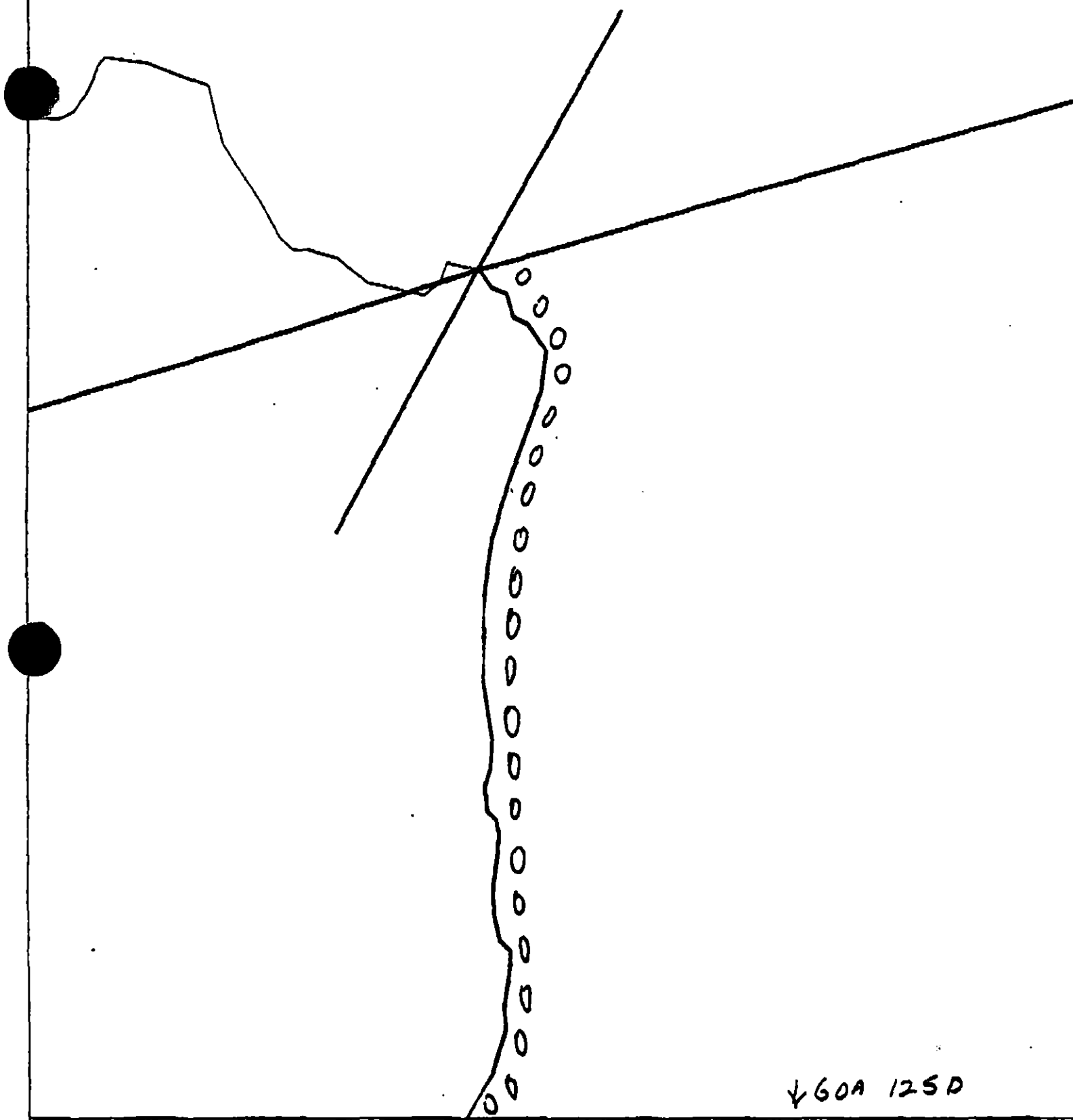
Data Entered:

SSAT P.06

TO

EXXON KODIAK

APR-29-1990 16:48 FROM



↓ GOA 125D

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

KA-1

ADEC Segment Length: 4151m



Map Key: GOA-125f
 Name: LINDSAY MORGAN
 Date: 4/28/90
 Date Entered:

REGION: KODIAK

SEGMENT: ST/K09-36-KA-01

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ K09-36-KA-01 SUBDIVISION A (1 OF 1) DATE 4/28/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4LL National Parks

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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 82 m: No Oil 4069 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 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 prior to treatment 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 unholed 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)
 3C Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subistence area: Salmon harvesting (6/1 to 9/30)
 Finfish harvesting
 Deer harvesting (8/1 to 1/7)
 Invertebrate harvesting
 Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / K0936-KA001 SUBDIVISION: KA001A DATE 4/28/90NOAA
HCS

NAME

John Naughton

SIGNATURE

John J. Naughton☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

This long segment (4151 m) at Cape Kubugakli had very light oil and only in the northern sector. This consisted of mostly stain and a few splatters of mousse. Considerable resources in area — bears, eagle nesting, grey whales nearshore, others, caribou land and water birds. This area should not be treated.

ADEC

NAME

Terry Ellsworth

SIGNATURE

Terry Ellsworth☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

No oil was observed in the southern portion of this segment. At mid segment in a high energy environment mousse occurs very sporadically in a 30x8m area and several small areas contain stain and coat in splashes in the northern portion. Numerous animals were observed in the area, note NOAA's comments. Because of the high energy environment, the small volume of recoverable mousse, and the disturbance of clean up to the animals and birds, no treatment is recommended.

LAND MANAGER

NAME

Carl Schach

SIGNATURE

Carl Schach☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

The small amount of recoverable oil may not warrant the disturbance to wildlife by cleanup crews. Eagle nests, in particular, are vulnerable to beach traffic and low flying aircraft. Brown bear activity is high in this area. Oiled debris located in the supratidal may persist for a very long time. A lot of this debris has been chewed on by bears.

REVISION NO. 02/1/88

SHORELINE OILING SUMMARY

REVISION NO. 04/12/90

OG LINDSAY NAKASHIMA ^{NDAA} ~~4800~~ JOHN NANCYTON SEGMENT STI KD935-KA001
 BIO JIM BARRY LAND REP CARL SCHUCH SUBDIVISION KAD01A (1 OF 1)
 EXXON FRED BYARS ADEC TERRY ELSWORTH TIME 9:10 to 12:30
 TEAM NO. 19 TIDE LEVEL +2.7 TO -2.2 FT DATE 4/28/90
 EST. SUBDIVISION LENGTH: 4151 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SOUTH to NORTH
 SURFACE SEDIMENTS: R 50 % B 25 % C 10 % P 10 % G 3 % S 2 % M 0 % V 0 %
 SLOPE: Long 30 % Hang 65 % Vert 5 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 35 m NO 416 m

SURFACE OIL

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

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

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

DID YOU COLLECT DEBRIS?

YES ☐ - NO ☒

TYPE _____

#BAGS _____

Photographs: ↑ / FLOAT

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		UD	UC	1	2	3	4	SU	UR	ME	U			
1	15					X	0-0	X						X				N	N	PK/G/S

COMMENTS

THE LENGTH OF THIS SEGMENT IS 4151 m AND IS PRINCIPALLY NOT OILED. THE OIL OCCURS IN 2 EMBAYMENTS/POCKET BEACHES. THE LARGEST AREA OCCURS IN THE SOUTHERN EMBAYMENT WITHIN A 30 X 8 m AREA AS LIGHT SPATTERS/SALTSIES OF MOUSSE, STAIN, AND COAT. THE EMBAYMENT TO THE NORTH HAS 5 INDIVIDUAL SALTSIES OR COAT/STAIN IN THE TOP OF THE UPPER INTERIOR ZONE. THE INTERVENING AREAS WERE NOT OILED.

REVIEWED BAI DATE 4 MAY 90

DATE 4, 28 90

CHECKLIST

___ N Arrows
 ___ Approx. Scale
 ___ Seg/Sub Endry
 ___ Oil Dist.
 ___ Width
 ___ Length
 ___ % Cover
 ___ Substrate Character
 ___ Est. HML/LWL
 ___ SGL
 ___ Profile Location(s)
 ___ Profile(s)
 ___ PR Location(s)
 ___ Photo Location(s)

LEGEND

Fig - No Substitution On

PA - Subscription Only

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

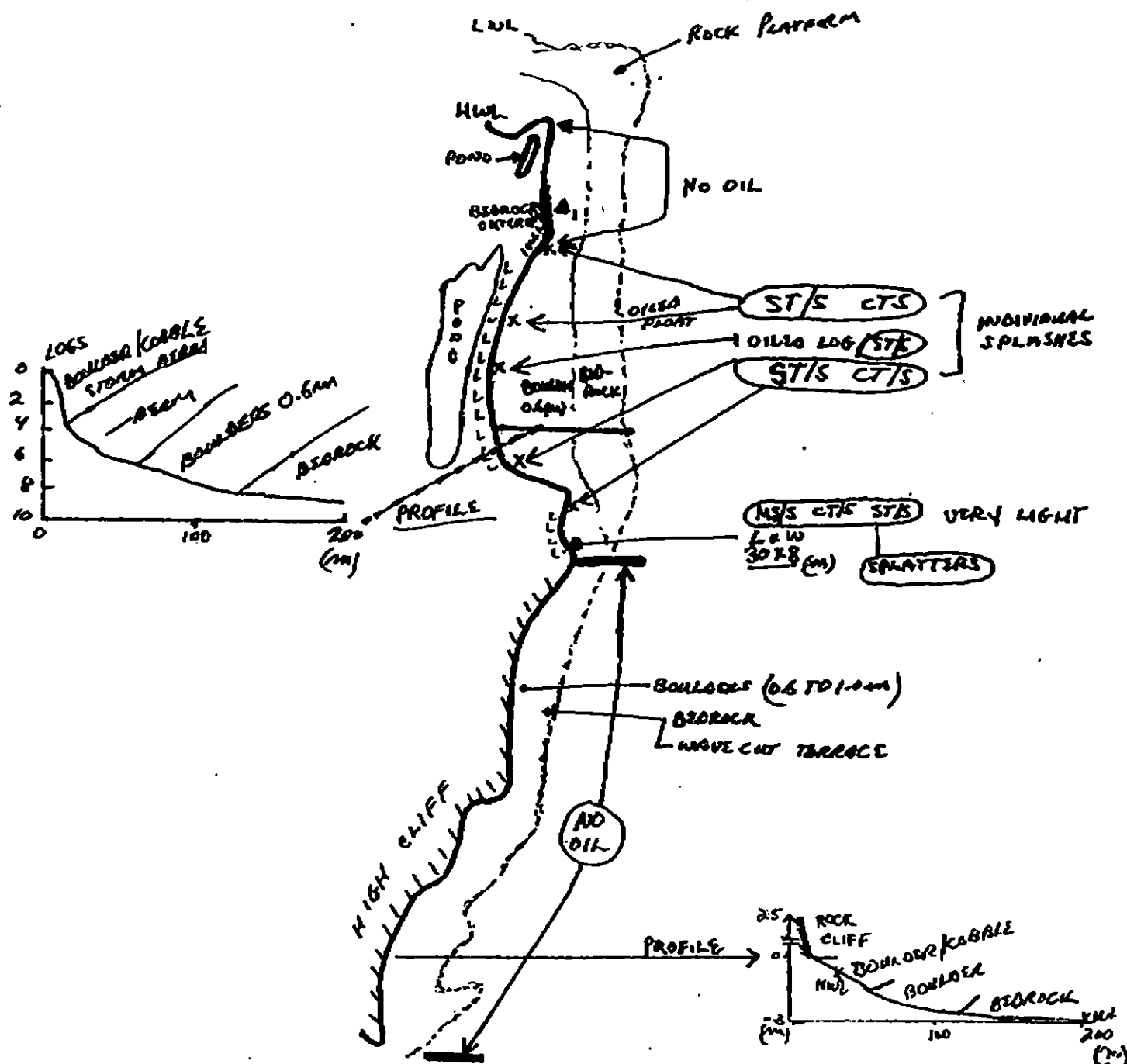
CT/S
Splashed Distribution

lll
Oiled Vegetation

Photo location, direction,
and number

Oil Character Length (in): AP 0 PO 0 CV 0 CT 30 ST 30 MS 70 PT 0 TB 0 FL 0 NO 4/16

SKETCH MAP



12:30
FAM

1517

↑ SURVEY
DIRECTION

START
9:30 AM

REFERENCES

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST / KA1 Subdivision A Date (mo / day / yr) 4/28/90
 Time (24 hr) ^{0900 -} 1230 Biologist Jim Barry

- (A) Substrate type and % of segments:
 (1) Bedrock 50 (2) Boulder 25 (3) Cobble 10 (4) Pebble 10 (5) Sand 5 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 15 Moderate 75 Low 10
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X) , new settlement (O)

Photographs:
 Roll No. ST-6-7

Frames 10-13

BARNACLES

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

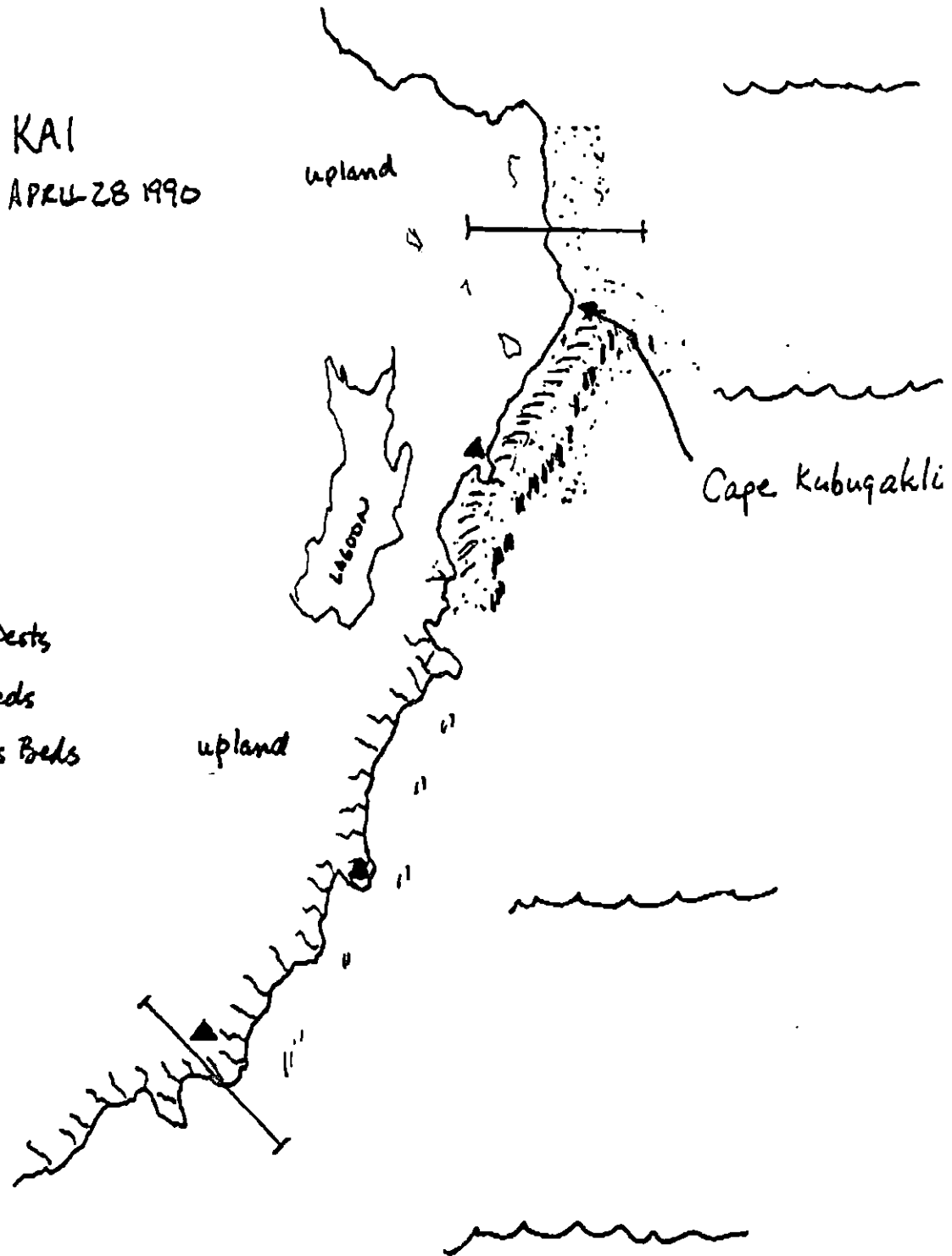
SEE ATTACHED

Ecological Considerations:

- 1) EAGLE NESTS - 3 - LOCATED ON SEGMENT - NO CLEANUP IS RECOMMENDED, thus Eagle nesting will not be impacted.
- 2) NO OTHER SENSITIVITIES ARE LISTED.

KAI
APRIL 28 1990

- ▲ Eagle Nests
- ≡ Mussel Beds
- || Eel Grass Beds



Segment KA-1 Subdivision A
April 28, 1990
Time: 0900-1245
Tidal Window: +2.7 => -2.2 ft.

JIM BARRY - BIOLOGIST

3/9

I. GENERAL COMMENTS

A. **Exposure** KA-1A is located at Cape Kubugakli, a highly exposed shoreline adjacent to the Shelikof Strait.

B. Habitat types

1. Bedrock Platforms

Much of the segment (>75%) is comprized by gently sloping bedrock leading from the extreme low zone to the high zone shoreline where cobble or high angle boulders and bedrock are dominant. Blota generally are moderate to dense in this habitat. Low zones are dominated by stipitate brown algae, mainly *Alaria marginata* and *Laminaria dentigera*. Eel grass (*Zostera marina*), *Ulva lactuca*, *Fucus distichus*, and *Rhodomela larix* dominate the lower middle zone. The upper middle zone is dominated by bare space, barnacles (*Balanus glandula*, *Chthamalus dalli*), and littorine snails (*Littorina sitkana*, *L. scutulata*). Several other invertebrates and algae are common in this zone. The giant feather duster worm (*Eudistylia polymorpha*) is most notable and is present in sparse to moderate densities.

2. Cobble Beaches

Towards the upper zone, large cobble covers most of the segment, except along exposed headlands. Blota are very low in abundance along such shores, especially in the upper zone, due to the high rate of disturbance caused by high waves and rolling cobble. In the middle zone, a sparse to moderate cover of algae are present, including *Ulva lactuca*, *Rhodomela larix*, *Fucus distichus*, and eel grass. Invertebrates are moderate to dense. Littorine snails and isopods (*Idotea*) are very dense, with sparse

abundances of barnacles, mussels, and other invertebrates (colonial polychaete worms, anemones, whelks, limpets, and sponges (*Halichondria* sp.?).

3. Pebble/Sand Beaches

Unlike cobble beaches, occur where wave energy is slightly lower, often where the width of the tidal flat is 50 m or more. Sand flats occur only in the lower zone of parts of the segment, where brown algae are usually abundant. Live clams were not observed on sand flats, but probably were present. In the middle to upper zone of some portions of the segment mussels (*Mytilus edulis*) forms extensive beds covering nearly 100% of the substratum and acting to consolidate the pebble substratum.

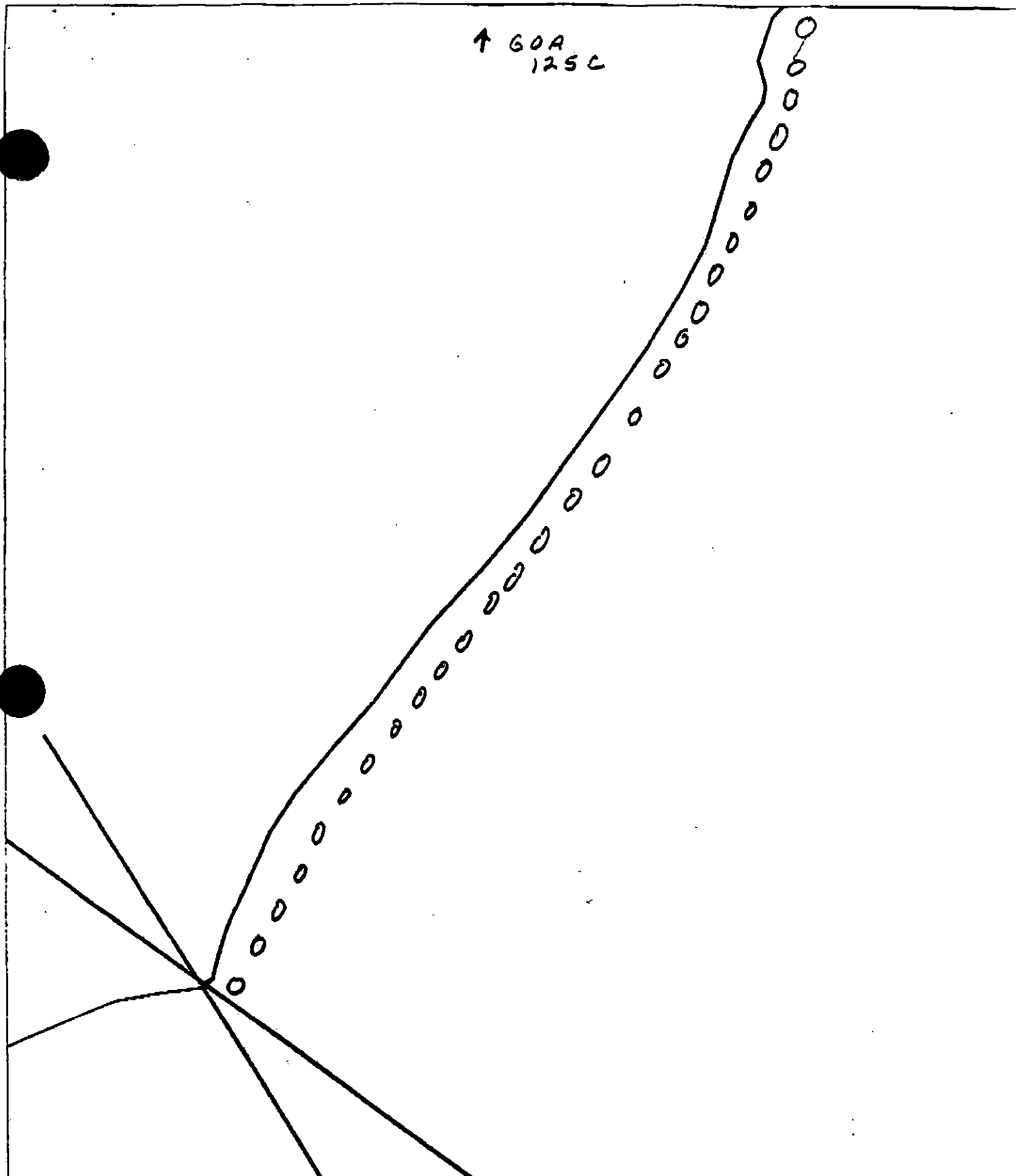
4. High angle boulders and bedrock outcrops

Headlands and exposed outcrops are occupied by a moderate and occasionally dense cover of barnacles (*Balanus glandula*) and a moderate to sparse cover of mussels. *Fucus distichus* is mostly absent from the upper zones, and is usually sparse to moderate in the middle zone of this habitat. Gastropods (mainly littorine snails) are moderate and occasionally dense.

B. OIL-RELATED COMMENTS

Oil contamination is very low on this segment and undetectable in all but the extreme upper intertidal zone. No treatment is recommended for the segment. As such no ecological sensitivities will be impacted. Three eagle nest occur on the segment.

↑ GOA
125C



XXXX Wide

Medium

Narrow

TTTT Very Light

0000 No Oil

KA-1

ADEC Segment Length: 415m

0 100 200 300
METERS

Map Key: GOA-125a

Name: LINDSAY NAKASHINA

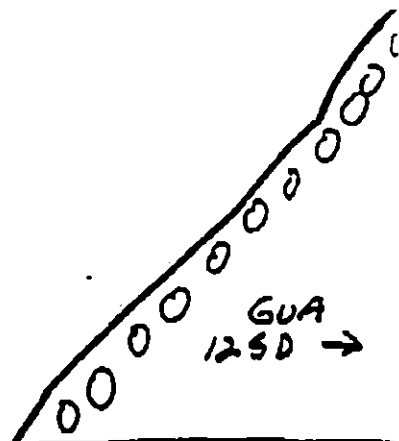
Date: 4/28/90

Data Entered:

KA-1



↓ GOA
125A



XXXX Wide

KA-1

/// Medium

ADEC Segment Length: 4151m

--- Narrow

TTTT Very Light

0000 No Oil



METERS



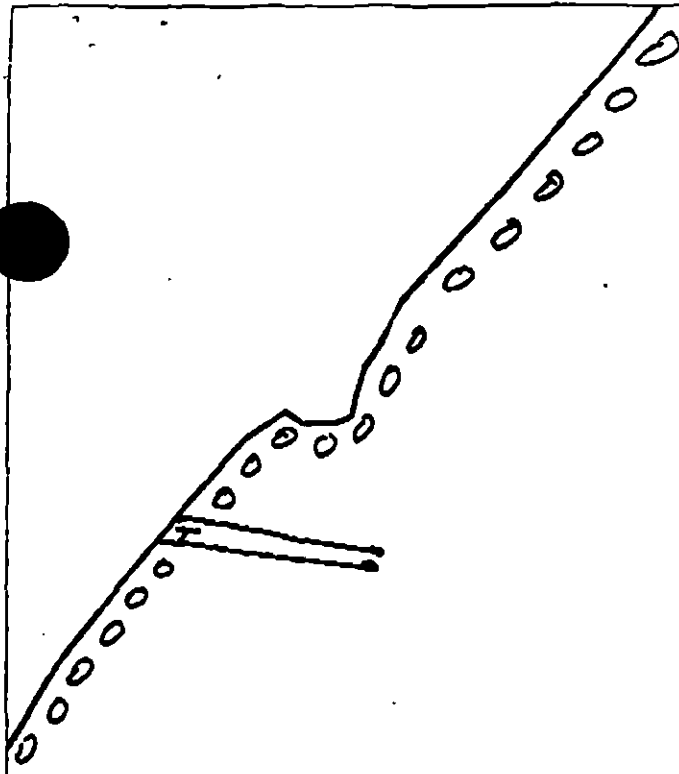
Map Key: GOA-125c

Name: LINDSAY NAKASHIMA

Date: 4/28/90

Data Entered:

↑
GOA
125P



← GOA
125C

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

KA-1

ADEC Segment Length: 4151m

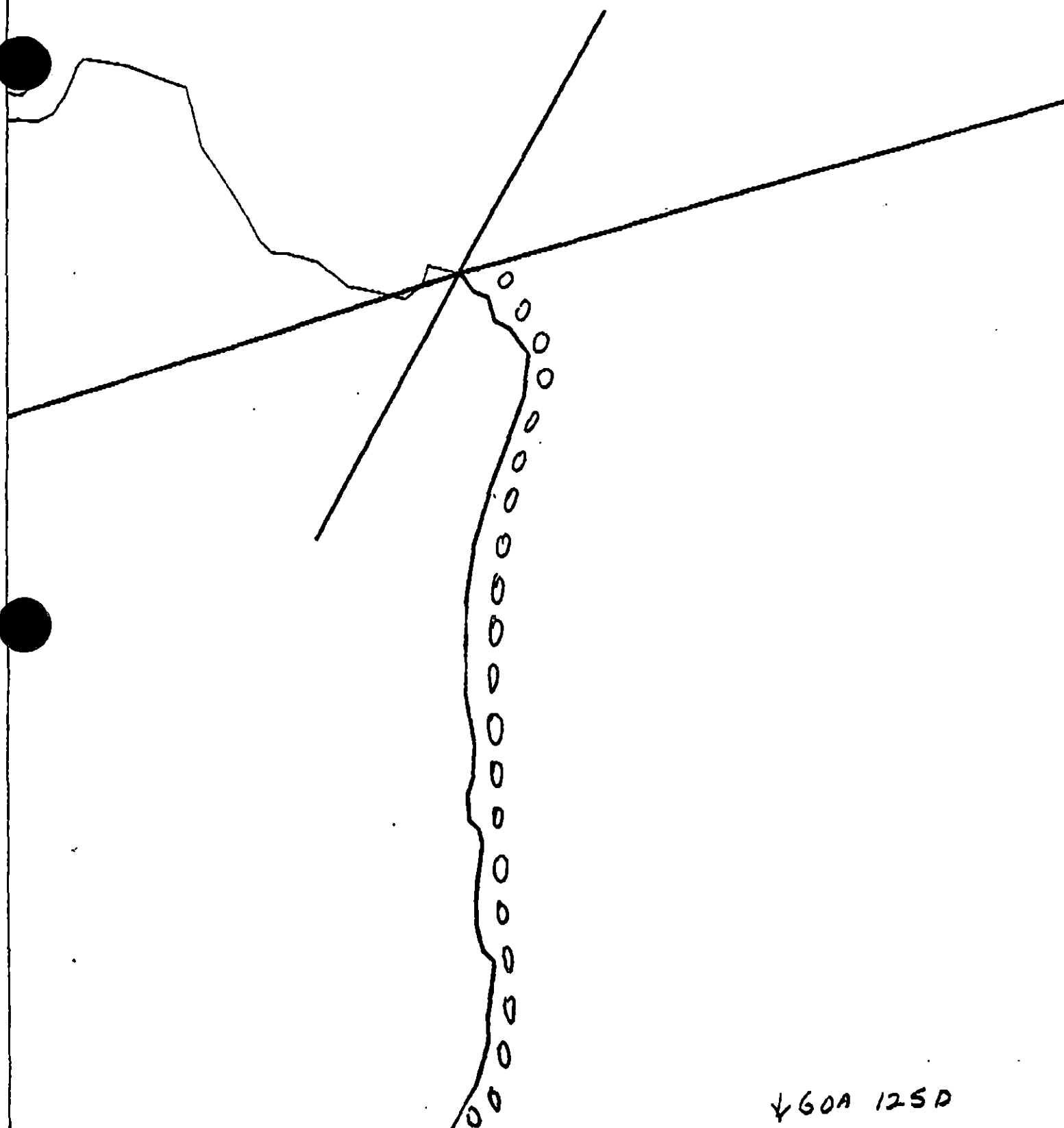


Map Key: GOA-125d

Name: LINOSOL NAWASIMA

Date: 4/28/90

Data Entered:



↓ GOA 125D

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

KA-1

ADEC Segment Length: 4151m



Map Key: GOA-125f

Name: LINDSAY MARRAS

Date: 4/28/90

Data Entered:

REGION: KODIAK

SEGMENT: ST/K10-02-AB-002

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ K10-02-AB-002 SUBDIVISION A (1 OF 1) DATE 5/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4QQ National Wildlife Refuge

8AA Sensitive estuary

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

1B Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)

(None found on ADF&G map)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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 395 m: Narrow 175 m: V.Light 4022 m: No Oil 940 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 15cm

RECOMMENDATIONS:

 No Treatment Recommended

 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

 X Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pick up of mousse, 2)
manual raking and 3) bioremediation using Customblen areas indicated on
attached sketch map.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

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 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
3C

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

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

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

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

ADF&G Don Calkins 267-2403

5R

Seabird colony (5/1 to 9/1)

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Roth 267-2206

5T

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

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U

Recreation:

Tent sites (6/1 to 9/15)

6V

Anchorage (6/1 to 9/15)

6W

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

6X

Lodge (6/1 to 9/15)

6Y

Special use destination

7Z

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

7KK

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / K 10-2 (AB-2) SUBDIVISION: A DATE 31 May 1990

USCG

NAME Michael B. Millner SIGNATURE Michael B. Millner DCI

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

MANUAL PICK-UP RECOMMENDED FOR MOUSSE PATCHES LOCATED ON WEST BANK OF THE SMALL UNNAMED RIVER THAT DIVIDES THIS SEGMENT. SMALL AMOUNT FOUND ON EAST BANK. NO OTHER AREAS OF SEGMENT RECOMMENDED FOR TREATMENT.

ADEC

NAME Francine J. Benoit SIGNATURE Francine J. Benoit

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

MANUAL PICK-UP RECOMMENDED FOR MOUSSE PATCHES:
LARGE mousse patches are present throughout sand flat just west of river. Smaller patches are present along river banks, as well as along high tide mark on east side of river. Clean-up crew should 'police' these areas to pick-up mousse.
Mousse is buried under sand in one location at western end of segment. Can be easily located by the presence of oil silt on boulders scattered from the sand. Should be collected.

LAND MANAGER

NAME OTTO FLORSCHUTZ SIGNATURE Otto Florschutz FW 3

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

River edge tidal flat had large amount of mousse - sand patches. Agree with above recommendations to recover. Manual pickup should take place ASAP as flats appear to be exposure to severe sand erosion and shrinking - see Otto chart #2

3 R. Marty

SKETCH MAP

MENT ST/ K10-2(A8-2)

DIVISION A

TE 31 / May 90

CHECKLIST

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

LEGEND

1 Δ
No Subsurface Oil

2 Δ
Subsurface Oil

CT/C
Mousse Distribution

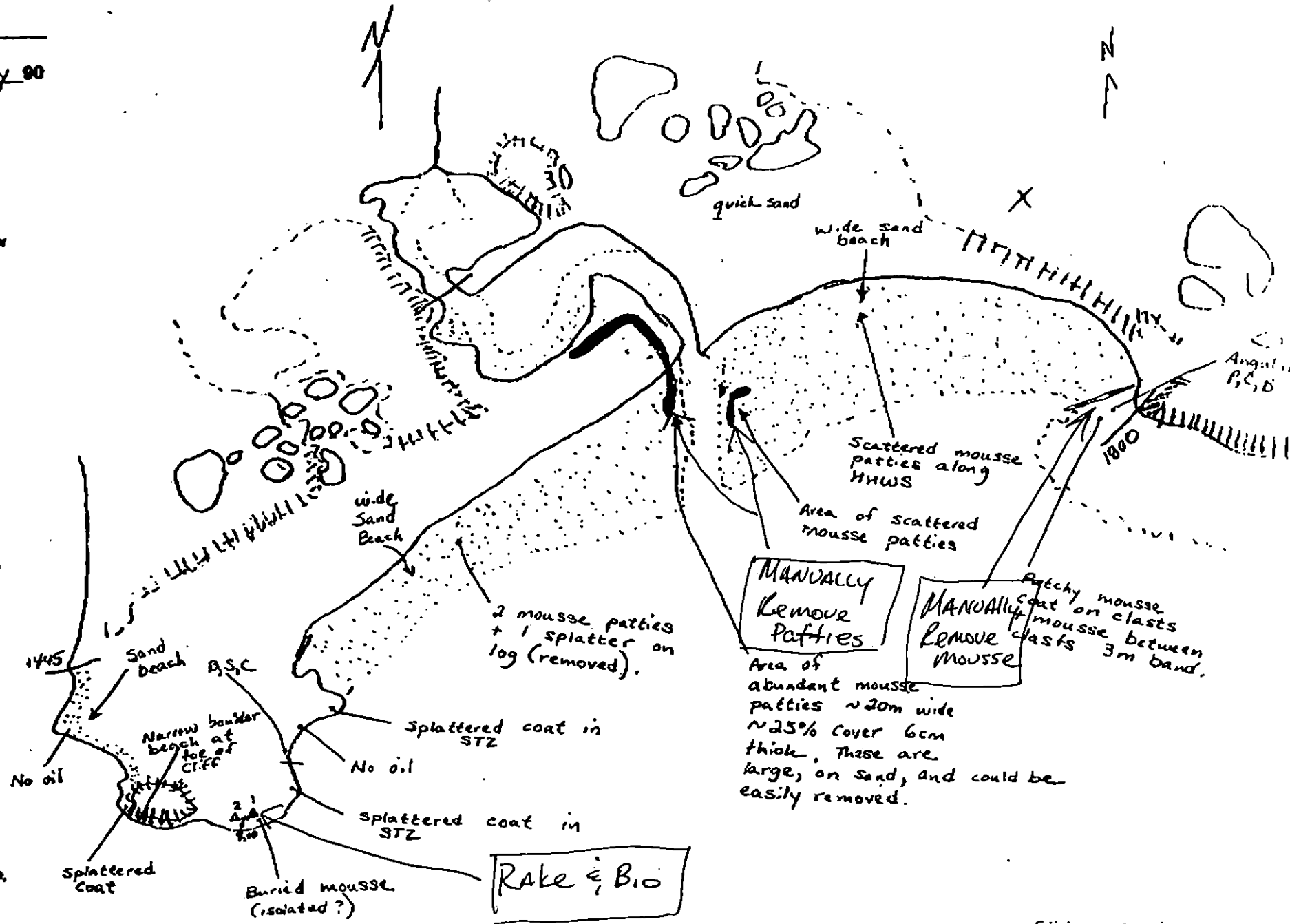
CT/B
Ben Distribution

CT/P
chy Distribution

CT/S
salved Distribution

RRR
of Vegetation

→
to location, direction, number



0 ~ scale

OIL CHARACTER LENGTHS(n) - CT-2500 MS-200 PT-4000 NO-1294

SHORELINE OILING SUMMARY

REVISION NO. 332280

OG R. Marty USCG Barry Milliner SEGMENT ST/ 20-2 (AB-2)
 BIO A. Davis LAND REP Olto Florschutz SUBDIVISION A
 EXXON _____ ADEC Francine Bennis TIME 14:45 to 18:00
 TAM NO.: 20 TIDE LEVEL: +0.15m to +1.69m DATE 31 / May / 190
 EST. SUBDIVISION LENGTH: 5590 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 5 % B 5 % C 5 % P 5 % G 0 % S 80 % M 0 % V 0 %
 SLOPE: Lang 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W _____ m M 962 m N 138 m VL 3496 m NO 1294 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	N	P	R	SP	BP	FW	OW	GL	DR	TL	AB	SU	U	M	V
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT				X		X							X	X		
STAIN																
MOUSSE			X	X								X		X		
PATTIES				X								X		X	X	
TARBALLS																
FILM																
NO OIL																X

PAVEMENT: H F S _____ sq. m by _____ cmPATTIES / TARBALLS 100 BAGS**NEAR SHORE SHEENT NO BR RW SL TL

OILED DEBRIS	NO	AMOUNT		
		SM	MD	LG
Logs	X			
Vegetation	X			
Trash	X			
Debris	X			

DEBRIS COLLECTED
☒ YES ☐ NOTYPE Mousse patties#BAGS 1

Photographs:

Roll No. ST-20-13Frames 9-12

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL cm - cm (10-15)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	SO 10	SO 20	FO 10	FO 20	TL 10	TL 20	SU	U	M	U				
1	20			X			10 - 15		X						X		X			N	S, C		
2	25					X	.		X								X			N	S, C		
							.																
							.																
							.																
							.																

COMMENTS *A highly concentrated area of mousse patties is located on the west bank of the river which divides the Segment in two. These patties are large, fresh but they are on sand & should be easily removed by a small crew. Oil is also present through much of the remainder of the segment. This oil is primarily ~~be~~ widely scattered mousse patties. Locally these patties are buried under the well sorted sand.

Primary sediment is sand.

SHORELINE ECOLOGICAL SUMMARY

REVISION 12/22/76

Segment ST/K10-02 Subdivision AB-002 Date (mo/day/yr) 5/31/70

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

Substrate type and % of segments:

(1) Bedrock 5 (2) Boulder 5 (3) Cobble 5 (4) Pebble 5 (5) Sand 80 (6) Silt —

(B) Overall % cover of biota (% of segment): Dense 5% Moderate 20% Low 75% (20%)

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

Photographs:

Roll No. ST-20-13

Frames 9-12

BARNACLES In areas with rock. Dense - Sparse.

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

NOT PRESENT
4,5,6

MYTILUS Small sparse patches.

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

NOT PRESENT
3,4,6

LITTORINIDS Littorina - moderate, Nucella - Rare, limpets - sparse

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

NOT PRESENT
4,6

FUCUS Small sparse patches

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

NOT PRESENT
4,5,6

Wildlife Observations/ General Comments: Birds: Glaucous-winged gulls, cormorants, Pintails, Surf-birds, semi-palmated & plovers, and sandpipers. Mammals: Fox, Caribou (8-10), and Beartooth (Adult 1, Cub 2). This segment was a low lying area with rock outcroppings at either end. Sand dunes with Beach Ridge (*Persea mollis*) covered the rest of the area. Shells found in the sandy area were *Saxidomus gigas*, *Chionea nuttallii*, *Protolaea staminea*, *Mya* sp. and *Siliqua patula*.

Ecological Considerations: AIB, BAA, AB-IN adjacent. Seabird colony. There is a stream on AB-002 but no Fish and Game # for it. Pinkies, Chum and Big Varden spawn in an adjacent stream in segment AS-005 (262-65-10040). There are Gull colonies in adjacent segments (BS-008/AB-011). There is an small estuary-like area. The rocky areas contained most of the fauna and flora. MTZ Barnacles, limpets, littorines, Porphyra, Fucus and Chlorella. MTZ Barnacles, limpets, littorines, Nucella, some Mytilus, Fucus, Scytosiphon, Ulva and Halosaccion. LTZ Alaria, laminaria?, Ulva, Rhodomenia, Rhodomenia, Nucella, Mytilus, Comptosia.

AS-8

AB-2N

NO	2.9"	1260	1294
VL	7"	3600	3696
L	5.3"	135	138
M	1.0"	450	462
		5465	5570

Normalized

XXXX Wide

//// Medium

--- Narrow

AB-2N

Approx. Segment Length: 5360m

Map Key: AKP-AB-2N

Name: R. Marty

SHORELINE EVALUATION

SEGMENT ST/ K10-02-AB-002 SUBDIVISION A (1 OF 1) DATE 5/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4QQ National Wildlife Refuge

8AA Sensitive estuary

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

1B Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)

(None found on ADF&G map)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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. Adams

DATE: June 19, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 395 m: Narrow 175 m: V. Light 4022 m: No Oil 940 m
Subsurface Oil Observed: Yes X No Maximum Depth 15cm

RECOMMENDATIONS:

 No Treatment Recommended

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

X Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pick up of mousse, 2) manual raking and 3) bioremediation using Customblen areas indicated on attached sketch map.

TAG COMMENTS:

TAG APPROVAL DATE: 6/16/90

ADEC Roy Menden

EXXON Andy Tom

NOAA Joseph C. Hall

USCG G.A. REITER

FOSC: B. Gaurakis

DATE: 7/5/90

*note: Monitor check for oil lens in vicinity of Pt #1

R. Marty
 GMENT ST/ K10-2(AB-2)

SKETCH MAP

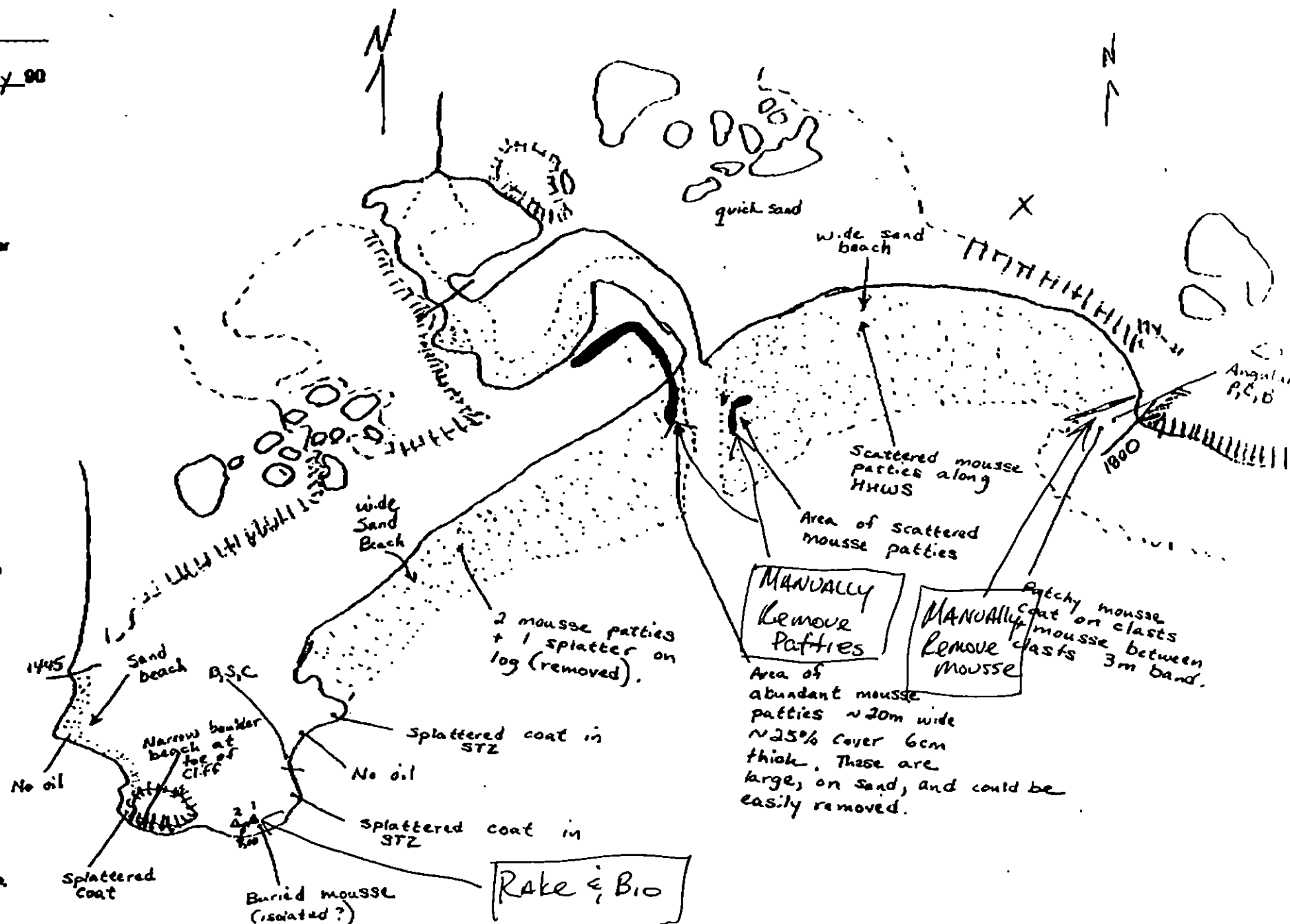
DIVISION A
 DATE 31 May 90

CHECKLIST

N Arrow
 Approx. Scale
 Seg/Sub Entry
 Oil Dist.
 Width
 Length
 % Cover
 Substrate Character
 Est. HW/LW
 SSZ
 Profile Location(s)
 Profile(s)
 Pit Location(s)
 Photo Location(s)

LEGEND

1 Δ
 No Subsurface Oil
 2 Δ
 Subsurface Oil
 CT/C
 CT/B
 CT/P
 CT/S
 No location, direction, number



OIL CHARACTER LENGTHS(m) - CT-2500 MS-200 PT-4000 NO-1294

AS-8

AB-2N

NO	2.9"	1260	1294
VL	9.5"	3660	3696
L	5.3"	135	138
M	1.0"	450	462
			5445 5590

XXXX Wide
 /// Medium
 --- Narrow

AB-2N

Approx. Segment Length: 5360m

Map Key: AKP-AB-2N

Name: R. Marty

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/K10-2-AB-002 STREAM NO: 262-65-655 DATE 5/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

8AA Sensitive estuary

ADF&G Anadromous stream # 262-65-655.

Sensitivity code and general time constraints. See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Do not trample or disturb marsh area.

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.)). *for*

SHPO SIGNATURE: Reche Leon Dala DATE: 6/20/90

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

☒ No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u> </u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
☒ 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: MANUAL PICKUP OF MOUSSE PATTIES AND TARBALLS.

TAG APPROVAL DATE: 5/23/90 6/16/90

ADEC Ray Munnis R. Munnis

EXXON AMY TATE Amy Tate

NOAA Joseph C. J. J. J.

USCG G.A. DEITER G.A. Deiter

FOSC:

DATE: 6-27-90

OG WILLIAM REID

SEGMENT S B002

STREAM 262-65-(655)

DATE / / 90

CHECKLIST

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

LEGEND

1 ▲

PH - No Subsurface Oil

2 ▲

PH - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Isolated Distribution

eee

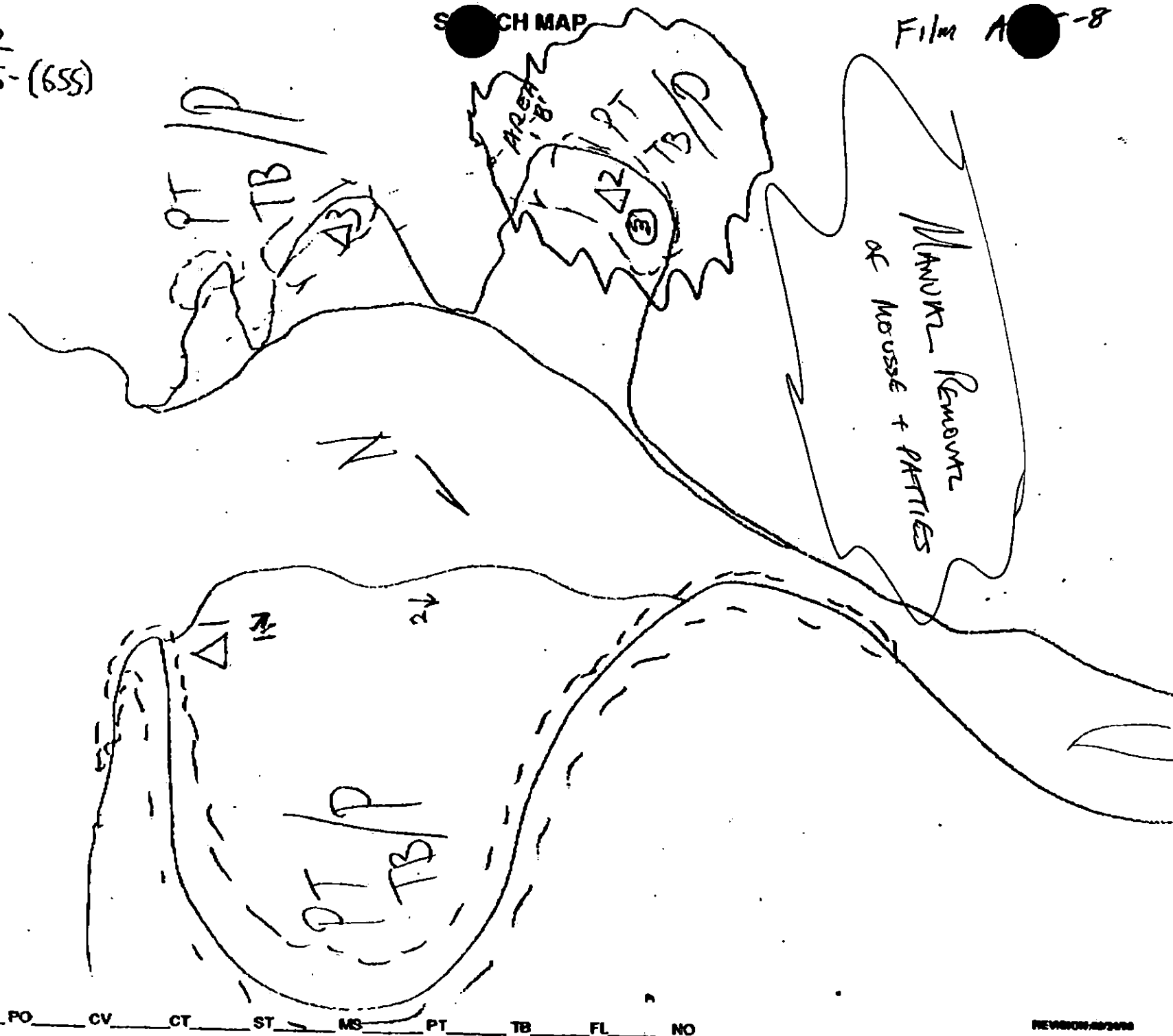
Isolated Vegetation

1 ●

oto location, direction,
d number

SEARCH MAP

Film A-8



REVISION 202000

NAME(S)

DESCRIPTION

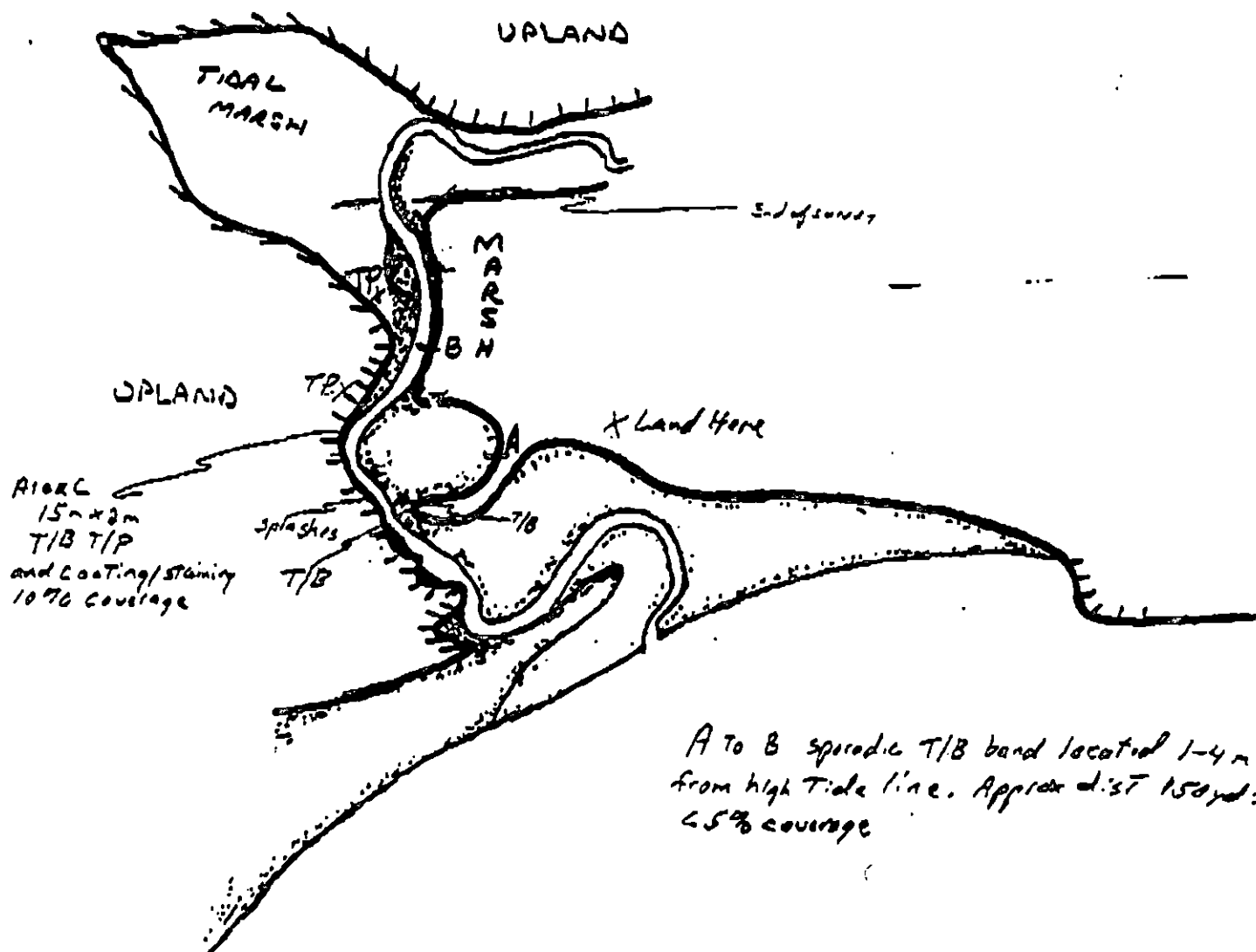
21/38

48 OIL DISTRIBUTION DIAGRAM

4/5 262-65-653

C. KUBAGAKLI

#655

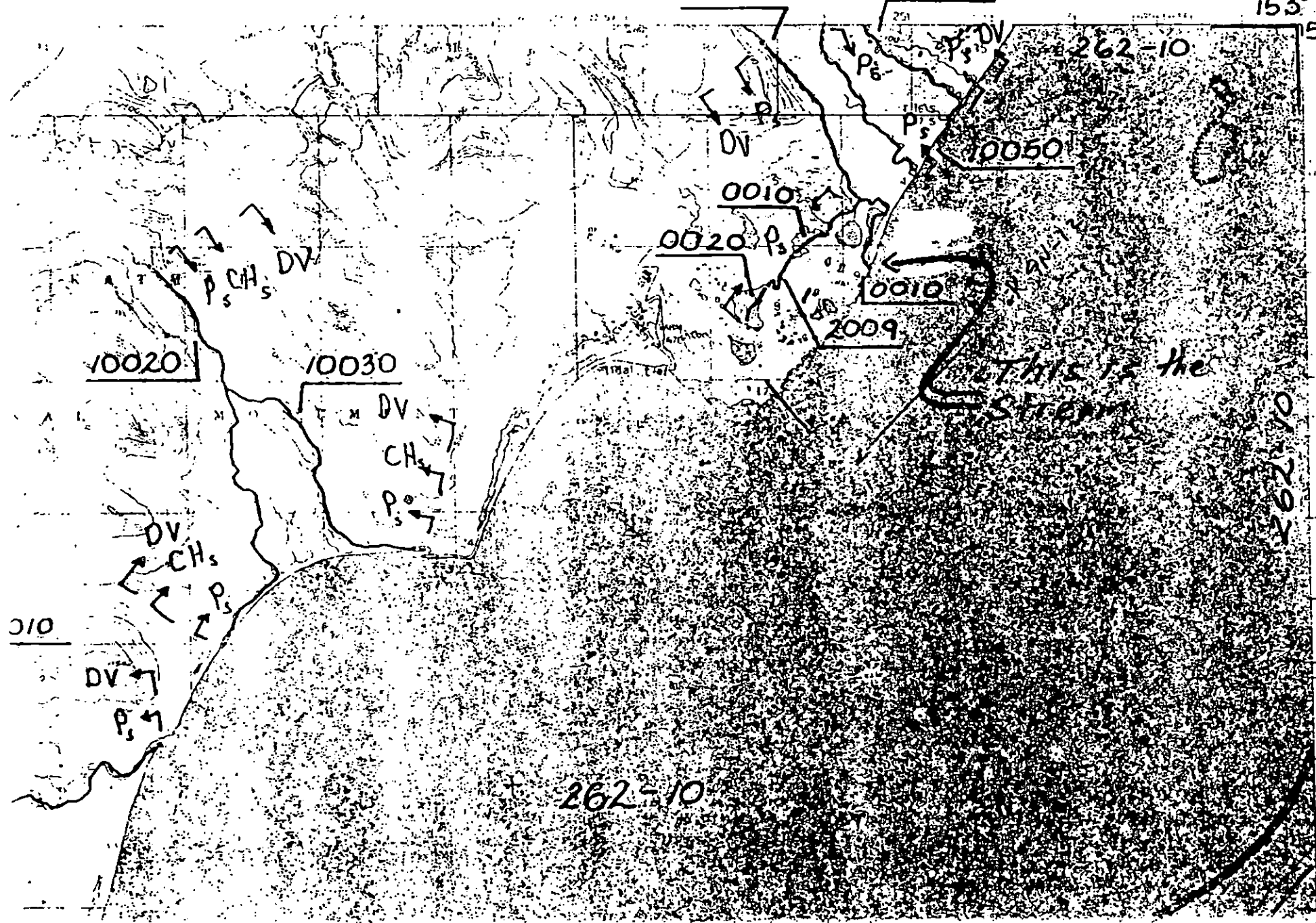


Sample taken
 - Photo frame # and
 shot direction.

TRIPLE LAKES CREEK
262-10-10040

AFOGNAK (C-5) QUADRANGLE
ALASKA
1:63,360 SERIES 1:100,000 GRAPHIC

153° 20'
58° 45'



ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K10-2-AB-2N SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup	OPEN
Bioremediation and Manual Raking Less Than 100m From Stream	WORK PRIOR TO 7/10 & AFTER 8/31 (ADF&G MONITOR REQ.)
Bioremediation and Manual Raking More Than 100m From Stream	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G unmapped catalogued anadromous stream (262-65-655) is more than 100m from work site. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream. No constraint to manual pickup and manual raking.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. No flushing of pollutants or sediments into stream drainage; do not allow inpol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM K10-2-AB-2NA
FOR ADDITIONAL CONSTRAINT INFORMATION

FOSC

[Signature]

Date

7/6/90

Prepared by

Reg R. Coulter

Date

7/6/90

AS-8

KI

Stream not shown with #
on ADE+G Catalogued
ANAD. Stream map.

AB-2N

WORK
AREAS

★



Exxon Company, USA

ECOLOGY MAP
SEGMENT K10-2 AB-2N
SUBDIVISION A (1011)
METERS

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

SHORELINE EVALUATION

SEGMENT ST/ K10-02-AB-002 SUBDIVISION A (1 OF 1) DATE 5/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4QQ National Wildlife Refuge

8AA Sensitive estuary

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

1B Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)

(None found on ADF&G map)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to 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: [Signature]

DATE: June 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 395 m: Narrow 175 m: V.Light 4022 m: No Oil 940 m
Subsurface Oil Observed: Yes X No Maximum Depth 15cm

RECOMMENDATIONS:

<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>X</u> Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pick up of mousse, 2) manual raking and 3) bioremediation using Customblen areas indicated on attached sketch map.

SEE CONSTRAINT ADDENDUM
DATED 6/7/90. REXC

TAG COMMENTS:

APPROVAL DATE: 6/16/90

SEC [Signature]

EXXON [Signature]

NOAA [Signature]

USCG G.A. REITER

FOSC: [Signature] DATE: 7/5/90

*note: monitor check for oil lens in vicinity of Pit #1

1991 MAYSAP EVALUATION

SEGMENT: K1002AB002 SUB: A REGION: KOD SURVEY DATE: 5/19/91

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

Signature: Timothy A. Smith for SITPO Date: May 31, 1991

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

COMMENTS:

INITIAL: _____

TAG: MANUAL P/U OF SURFACE MOUSSE PATTIES. NO RAKING OR SEARCHING FOR PATTIES THAT MAY BE BURIED.

FOSC: _____

TAG APPROVAL DATE: MAY 31 1991 FOSC APPROVAL DATE: 6/5/91

ADEC [Signature] FOSC [Signature]

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

USCG [Signature]

NOAA [Signature]

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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.

MATCAF FIELD SHORELINE COMMENT SHEET

TEAM NO. 6-Helo SEGMENT AB-2N SUBDIVISION B^A DATE 19 May 1991

ADEC

NAME J. BARNHART OF ADFG SIGNATURE Jeffrey P. Barnhart

☐ NTR ☒ Treatment Recommended

Area E+F as shown on the sketch map contain significant quantities of oil. Area E is a tapered band ranging from 8m wide to 26m wide, 80m long, containing 2% to 70% oil coverage respectively. Area F is 80m long x 10m wide, 40% oil coverage within the band. At the end of this band scattered patties can be found for at least an additional 100m. Pattie thickness up to 10cm, with an average thickness of 2.5-5cm. Additional oil is covered by 5-7cm of sand. It is easy to locate as it is within the concentrated bands. Two vep personnel worked approx. one hour and removed ten (10) 45 pound bags of oil. Based on past cleanup efforts I was involved with at this site I estimate a minimum of one ton of oil can be removed from areas E+F. Manual Treatment is strongly recommended in areas E+F adjacent to this anadromous stream. Patties should be removed from the surface followed by raking the concentrated areas to locate and remove the oil located 2.5-7cm under the sand.

☒ TREATMENT RECOMMENDED, CONCUR WITH COMMENTS John Shelton (Kodiak Island Biogeo)

EXXON

NAME R. Hasselton

SIGNATURE R. C. Hasselton

☐ NTR I disagree with the coverage % quoted by the ADEC representative. I would concur with the NOAA figures below. However, the ten patties that were found on the beach have a high sand component and contain relatively low concentrations of oil. They would be recoverable with a reasonable effort but the net environmental benefit would not be significant.

LANDMANAGER

NAME J. HARDISTER

OF USFWS

SIGNATURE John P. Hardister

☐ NTR ☒ Treatment Recommended

I concur with the ADFG comments and recommendations. On July 17, 1990 the TAG team visited area E. The oily material was largely buried under the sand. The survey team found the material exposed. Manual removal is strongly recommended for areas E+F now that the extent and quantity of oily material has been exposed.

USCG/NOAA

NAME CWO SPURK / G. SHIGENAKA

SIGNATURE R. P. Spurk

Guy Shigenaka

☐ NTR

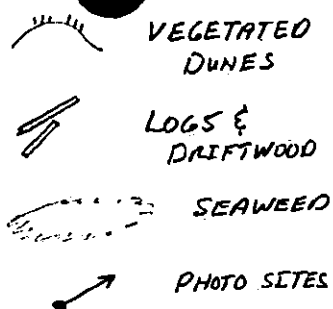
Removal of SOR patties indicated on OG sketch as E and F is highly recommended, 9 bags were removed from this area and it is estimated that an additional 20-30 bags can be recovered by manual pick up.

SURVEYED PORTION OF THE SEGMENT CONSISTED OF THE TERMINAL END OF A WINDING STREAM CHANNEL AND THE BEACH SAND TIDAL FLAT IT CROSSED. BEAR TRACKS WERE OBSERVED ALONG THE HIGH TIDE LINE JUST ABOVE A BAND OF WASHED UP ALGAL DEBRIS ON THE NORTHEAST SIDE OF THE BEACH/TIDAL FLAT. A POSSIBLE ARTIFACT WAS FOUND ON THE NORTH SIDE OF THE BEACH IN THE LITZ. THE SURVEY TEAM FAUNDED OUT ACROSS THE FLAT TO BEST FACILITATE ASSESSMENT FOR OIL RESIDUES; ON THE NORTH SIDE OF THE STREAM CHANNEL, SCATTERED OCCURRENCES OF SOR AND ASPHALT WERE SEEN AND COLLECTED. IT WAS ALONG THE SOUTH SIDE OF THE STREAM THAT PATCHES OF RELATIVELY HIGH CONCENTRATIONS (MAX 15% COVER) OF SOR WERE ENCOUNTERED IN THE LITZ AND SUPRA. ALTHOUGH THE SURVEY TEAM BEGAN THE TASK OF PICKUP OF MATERIAL ENCOUNTERED, IT BECAME READILY APPARENT AFTER THE RAPID FILLING OF ELEVEN BAGS WITH LITTLE IMPACT ON REMOVING THE VISIBLE OIL THAT THE CLEANUP WAS BEYOND THE CAPABILITIES OF BOTH THE TEAM TO PICK UP AND HELOS TO HAUL. THE

REMAINDER OF THE BEACH WAS SURVEYED (NO OTHER OIL WAS FOUND BEYOND THE CHANNEL BANK ON THE SOUTH SIDE). BAGS WERE HAULED TO A HELO PICKUP SITE AND LOADED, AND THE TEAM DEPARTED. THE MATERIAL COLLECTED CONSISTED LARGELY OF SAND AND OIL WEATHERED INTO SOFT PATTIES. SHIFTING SAND SUBSTRATE MAY COMPLICATE RELOCATION BUT THE QUANTITY PRESENT MAKES IT LIKELY THAT THE RESIDUES WILL BE FAIRLY EASY TO FIND.

PAGE 1 OF 1

REVIEWED: 5/24/91 mc
revised & reviewed 5.24 99 Per D.F.



SKETCH MAP (06)
KIO-2-AB-2N-A
D. FITZGERALD
19 MAY 1991
1120 - 1350

A. TB
20 by 250m, <1%
WIDELY SCATTERED
UITZ - MITZ

C. TB
10 by 200m, <1%
OCCASIONAL PATIE

E. TB
50 by 90m, 5-10%
PATIE'S CONC.
IN PLACES
5-60cm IN DIAM
SOME COVERED BY
SAND

B. AP/SOR/TB
2 by 35m, <1%
UITZ

D. TB
2 by 10m, <1%
BASE OF BEACH

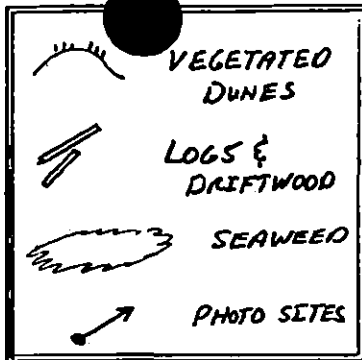
F. TB
10-25 by 250m, <1%
BECOMING MORE INFREQ.
TO THE SOUTHEAST

P.U. * SURVEY TEAM
collected 3 bags of
oiled sediment from
locations A-D and
retrieved all oiled
sediment that was seen.
NINE BAGS OF TAIL PATIE
WERE COLLECTED

LOW SANDY BEACH
SUPRA TO INTERTIDAL

ALINCHAK BAY ↓

0 200
METERS
REVIEWED I.M.C. 5/24/91
reviewed 5-24 98



ANAD STREAM
#262-65-(655)1

PHOTO SITES,
AB-2NA
ROLL 6-17,
FRAMES 7 THRU 14

SKETCH MAP (06)
K10-2-AB-2N-A
D. FITZGERALD
19 MAY 1991
1120 - 1350

A. TB
20 by 250m, <1%
WIDELY SCATTERED
UITZ - MITZ

BEDROCK CLIFF

C. TB
10 by 200m, <1%
OCCASIONAL PATCH

TIDAL FLAT

DUNE SCARP

#7 SANDY TIDAL FLAT

B. AP/SOR/TB
2 by 35m, <1%
UITZ

P.U. * SURVEY TEAM
collected 3 bags of
oiled sediment from
locations A-D and
retrieved all oiled
sediment that was seen.

D. TB
2 by 10m, <1%
BASE OF BENCH

F. TB
10-25 by 250m, <1%
Becoming more INFREQ.
to the southeast

LOW SANDY BEACH
SUPRA TO INTERTIDAL

E. TB
50 by 90m <1%
PATTERNS CONC.
IN PLACES
5-60cm in diam
SOME COVERED BY
SAND

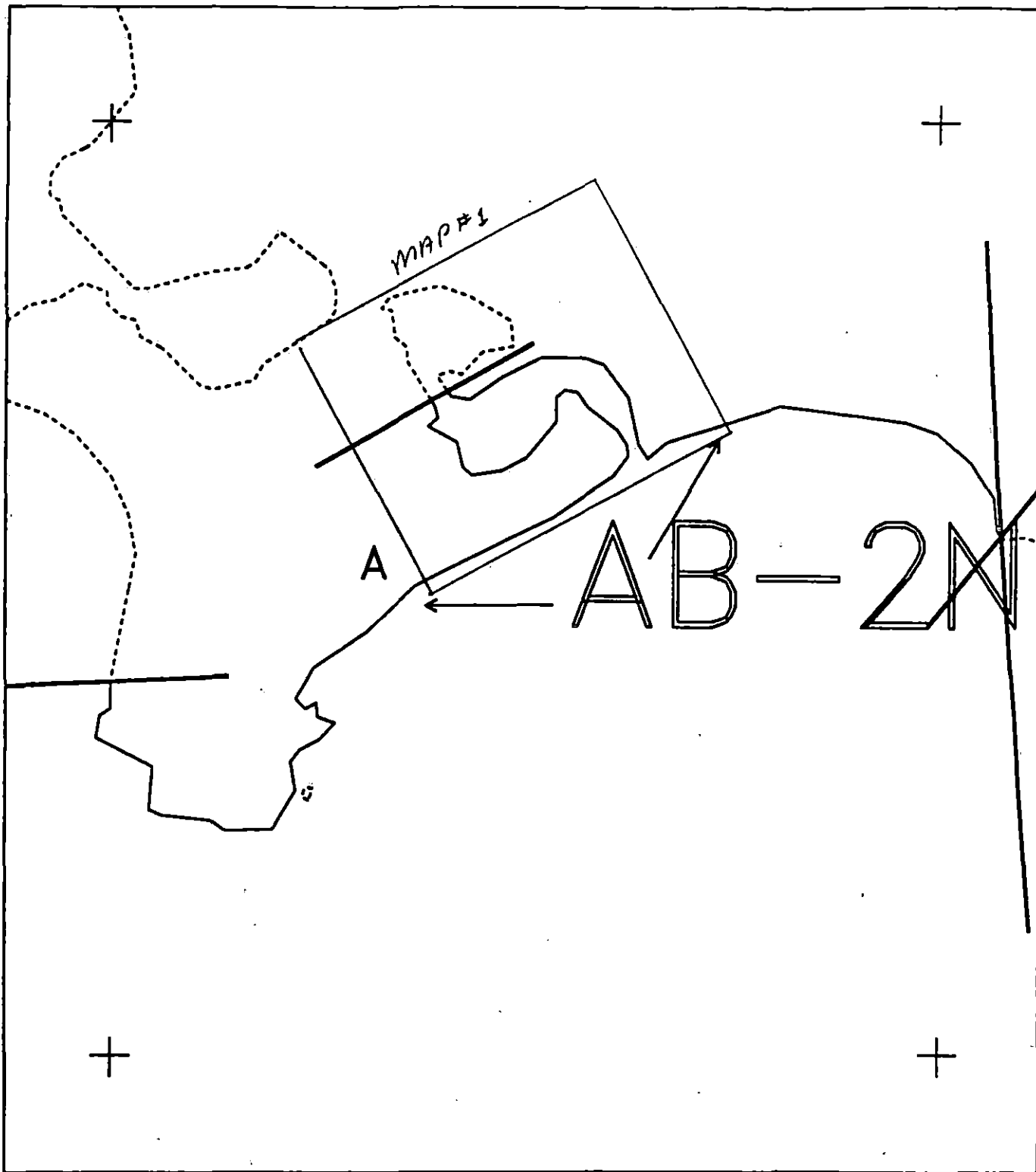
SEA WEED

0 200
METERS

ALINCHAK BAY ↓

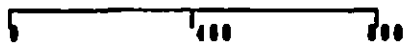
MHW

MHW



K1002 AB002N A

METERS



AK State Plane Zone 4
91002AB002N00-A

Subdivision Field Map

Map Key: 604K1002AB002N00

Name: D. FITZGERALD

Date: 19 MAY 1991

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 Helo

DATE May 19 1991

SEGMENT # AB-02

TIDAL HEIGHT(Range) 2.0ft - 1.4ft (11:20-14:00)

SUBDIVISION 2

BIOLOGIST H. Davis

SEA STATE 1-2 ft

WIND SPEED/DIRECTION 20kt. NW

PHOTOGRAPHS: ROLL # 6-17

FRAME # 7-14

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

The anadromous stream #262-65-(65571) flows thru the lagoon and across a large sandy tidal flat area. The flat has a variable tidal height due to migrating sand and wrack layers. There is very little biota out on the flat except for debris eaters (amphipods, kelp fly maggots, worms and snails) probably inhabit some areas. An area in the center of the flat with dead *Mya arenaria* was being uncovered by the stream. They appeared to have all died at one time probably by being buried. A hole dug on the other side of the stream (near freshly deposited wrack) showed alternating layers of sand and old seaweed. Shells found in the drift were *Siliqua patula*, *Saxidomus giganteus*, *Mya arenaria*, *Mytilus edulis* and *Tresus capax*. The wracks are made of *Nereocystis*, *Laminaria*, *Fucus*, *Ulva* and various reds (decomposed). C.E.F. These areas had no biota close to them except for the anadromous stream which has pink and chum (possibly Dolly Varden). Kelp wracks may move into the area which would attract birds. A.B.D. These sites are up against the drift logs below the dune scarp. Above them are grassy dunes and below is a sandy tidal flat. The larger deposits of wrack were full of amphipods + kelp flies. Shore birds (Plover sandpiper) and sparrows were actively feeding at the wracks. Swallows were feeding across the tidal flat. Caribou (4) were grazing in the uplands and bear tracks were found in the HITZ.

sparrows sp. (3) scoter (surf?) 4 sandpiper (4)

Swallow (2) semipalmated plover (3) kittiwakes (4) Glaucous-winged Gull (3) Gull sp. (20)

WILDLIFE OBSERVATIONS

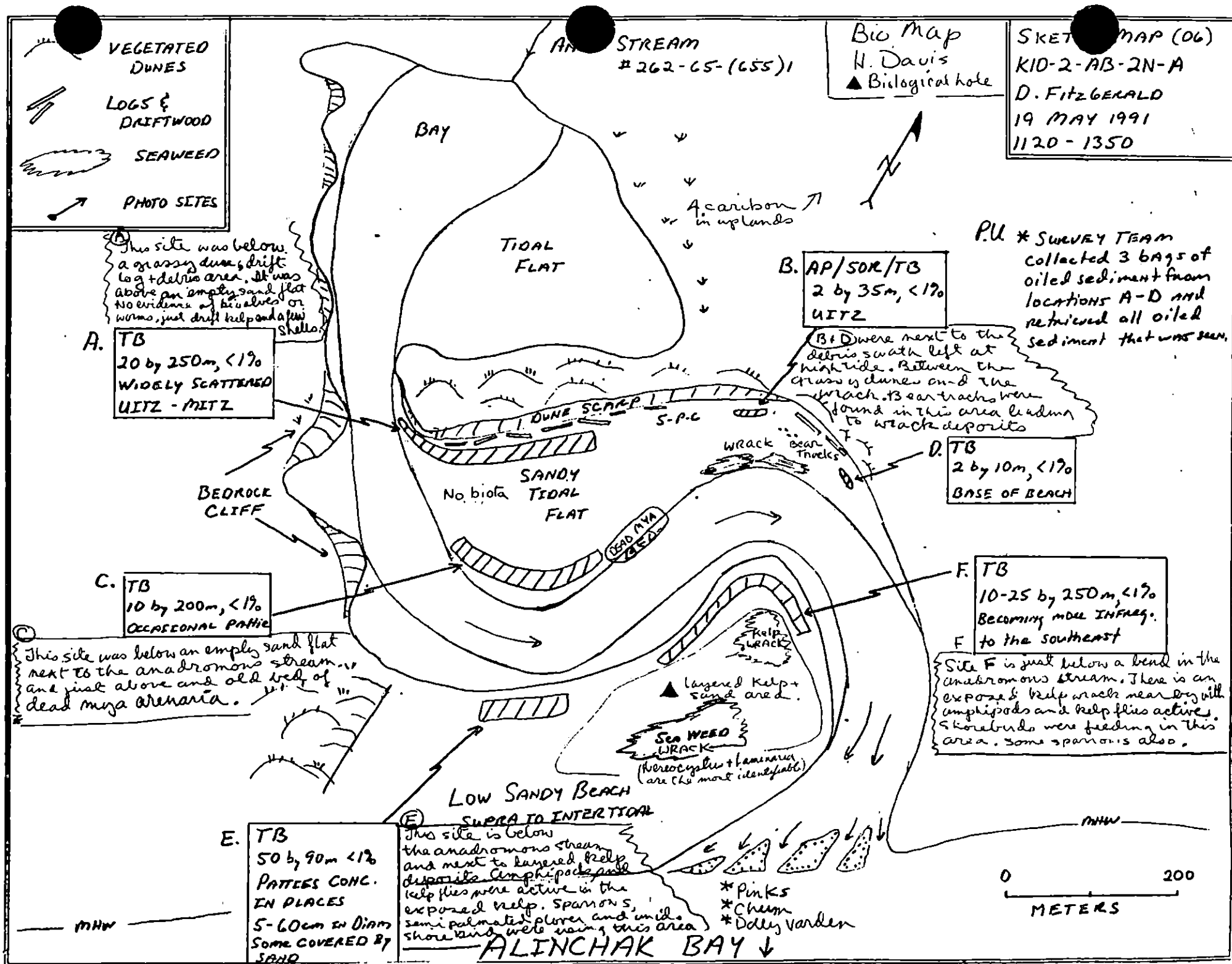
TO BE COMPLETED IN ALL SUBDIVISIONS

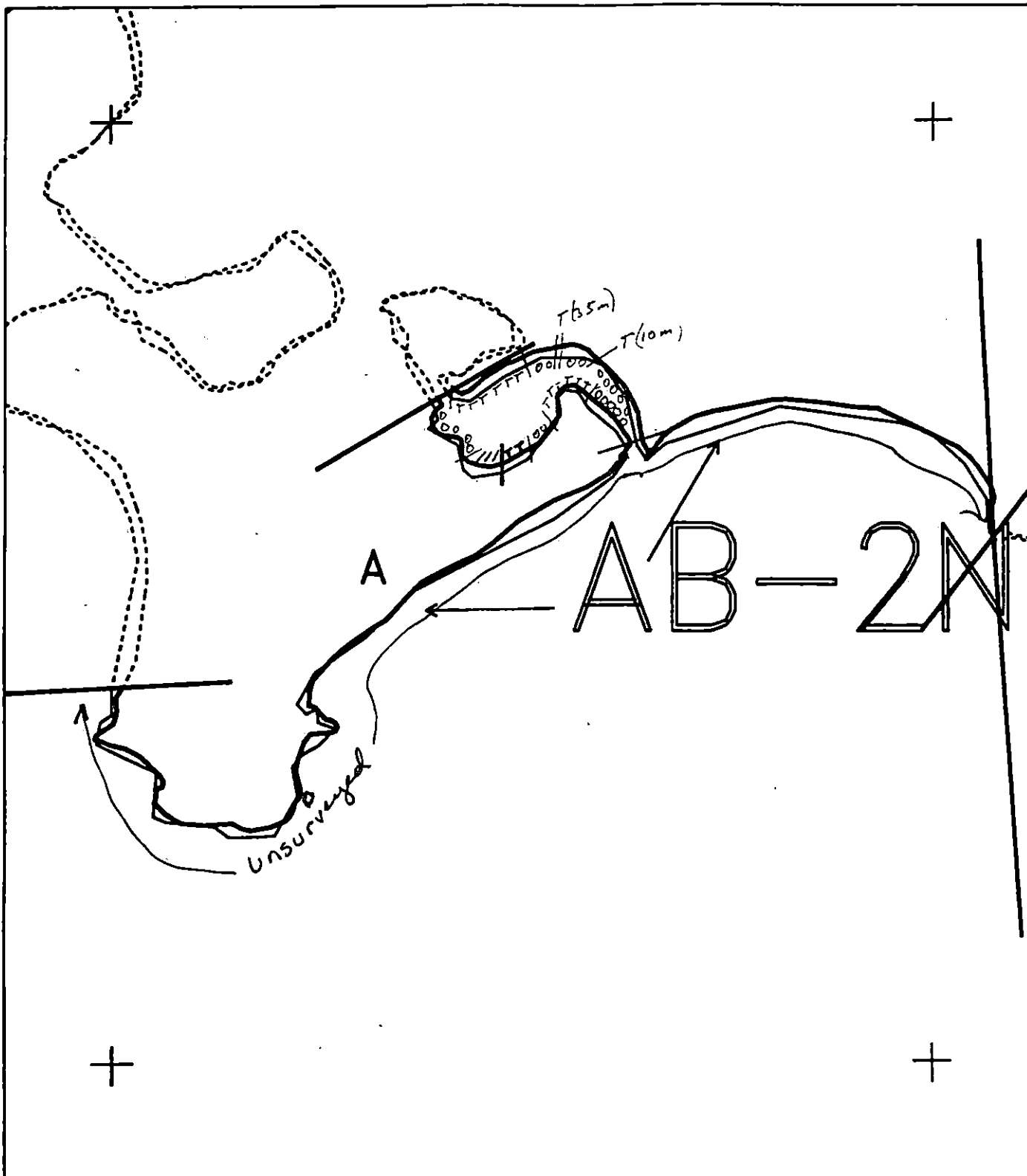
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	0	-	None seen
Seabirds	0	-	Pinks, Chum
Waterfowl	1	4	Dolly Varden are
Gulls/kittiwakes	2	27	supposed to be present.
Shorebirds	2-3?	7	
Corvids	0	-	
Other Birds ^{3 sparrows} _{Swallow}	2	5	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	0	Caribou	4
Pinnipeds (specify)	0	Bear Tracks	
Ceals (specify)	0		

Shoreline subdivision map showing important biological features attached.

REVIEWER: M.C. 5/24/91





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

K1002 AB002N A
 ADEC Subsegment Length: 5532m
 METERS

5 400 800
 AK State Plane Zone 4
 g1002ab002nec- ...



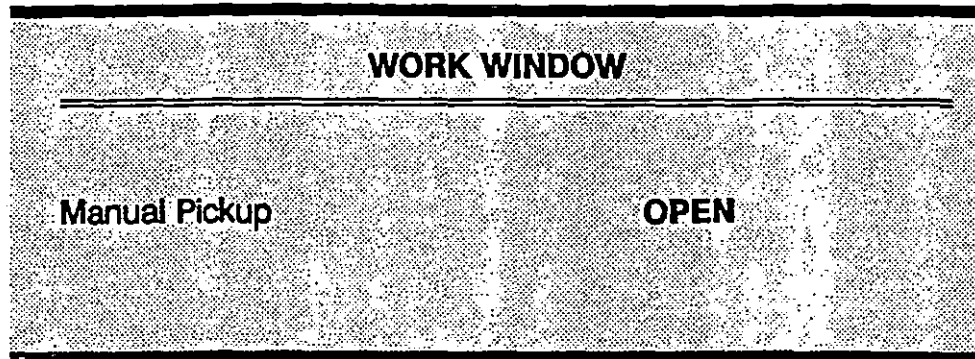
Subdivision Field Map
 Map Key: 60AK1002AB002NA0
 Name: D. Fitzgerald
 Date: 19 MAY 1991
 Date Entered:

REVIEWED: MC 5/24/91
 revised 5.24 Jy

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 262-65-655

SEGMENT K10-2-AB-002 SUBDIVISION A



ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G uncatalogued anadromous stream (262-65-655) is in Subdivision A. No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

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

SEE SUBDIVISION CONSTRAINT ADDENDUM K10-2-AB-002A
FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC

Date

6/89/90

Prepared by

Date

6-28-90

AS-8

K

WORK
AREAS

STREAM NOT SHOWN WITH #
ON ADF+G Catalogued
ANAD. STREAM MAP

AB-2N

Seabird
Colony

ANADROMOUS STREAM EVALUATION



Exxon Company, USA
Map Key: AKP-AB-2N

ECOLOGY MAP
SEGMENT K10-2 AB-2N
SUBDIVISION A (1 of 1)
METERS

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

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/K10-2-AB-002 STREAM NO: 262-65-655 DATE 5/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

8AA Sensitive estuary

ADF&G Anadromous stream # 262-65-655.

Sensitivity code and general time constraints. See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Do not trample or disturb marsh area.

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: Lucy Jean Dale DATE: 6/20/90

Surface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: MANUAL PICKUP OF MOUSSE PATTIES AND TAR BALLS.

TAG APPROVAL DATE: 6/16/90

ADEC Ray Munnis R. Thorne

EXXON Amey Tett

DAA Joseph C. H. H. H.

SCG G. A. H. H. H.

FOSC: M L DATE: 6-27-90

ANADROMOUS FISH STREAM ASSESSMENT

REGION: KODIAK

SEGMENT: K10-02-AB-002

SUBDIVISION: A

STREAM NO: 262-65-655

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/K10-2-AB-002 STREAM NO: 262-65-655 DATE 5/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

8AA Sensitive estuary

ADF&G Anadromous stream # 262-65-655.

Sensitivity code and general time constraints. See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Do not trample or disturb marsh area.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

X No Treatment Recommended

_____ Treatment Recommended

_____ Manual Pickup

_____ Bioremediation

_____ Tarmat Removal

_____ Snare/Absorbent Booms

_____ Oil Snares (pom poms)

_____ Absorbents (pads, rolls, etc)

_____ Spot Washing: _____ Wands

_____ Beach Cleaner

_____ Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

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
- 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 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 Rothy 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 788-3377
- 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

FIELD SHORELINE COMMENT SHEET

20/38-8/

AB-002

SEGMENT ST / ~~AB-001~~ ^{STREAM:} SUBDIVISION: 262-65-655 DATE 5-2-90

USCG NAME CWO McNamee SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

ADFG

~~ADFG~~

NAME JEFFREY BARNHART SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Anadromous Fish Stream, STAT area 262-65. This Lagoon is used by brown bears, caribou, waterfowl and Land Otters as evidenced by the tracks we observed. I suggest manual cleanup of the T/P, T/B.

LAND MANAGER

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

OG WILLIAM LEID USCG McMAHON SEGMENT ST/ A8002
 BIO MICHAEL FAWCETT LAND REP STREAM 262-65-(65571) OF
 EXXON CUS GARCIA ADFG MARK WILSON JEFF BOWHART TIME 11:20 to
 TEAM NO. 15 TIDE LEVEL 6.5 FT DATE 2/1/89
 EST. SUBDIVISION LENGTH: 700 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 8 % B 2 % C 2 % P 8 % G 25 % S 65 % M 0 % V 0
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ Ht
 OIL CATEGORY LENGTH: W 0 m M 0 m N 600 m VL 0 m NO 100

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0

PATTIES / TARBALLS 1 B

NEAR SHORE SHEEN? NO BR RW SL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

Did You Col
DEBRIS ☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. AS-15-8

Frames 1-3

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	SURFAC SUBSURF. SEDIMEN
		OP	OR	OL	OF	NO		SO	SC	1	2	3	4	5	SU	U	M	U			
1	40					X	0-10								X					N	SIPK
2	35					X	0-10								X					N	SIP
3	35					X	0-10								X					N	SIGLI

COMMENTS

REVIEWED FW DATE 5-10-90

OG WILLIAM REID

SEGMENT AB002

STREAM 262-65-(655)

DATE 1 / 1 / 90

CHECKLIST

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

LEGEND



Pli - No Subsurface Oil



Pli - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

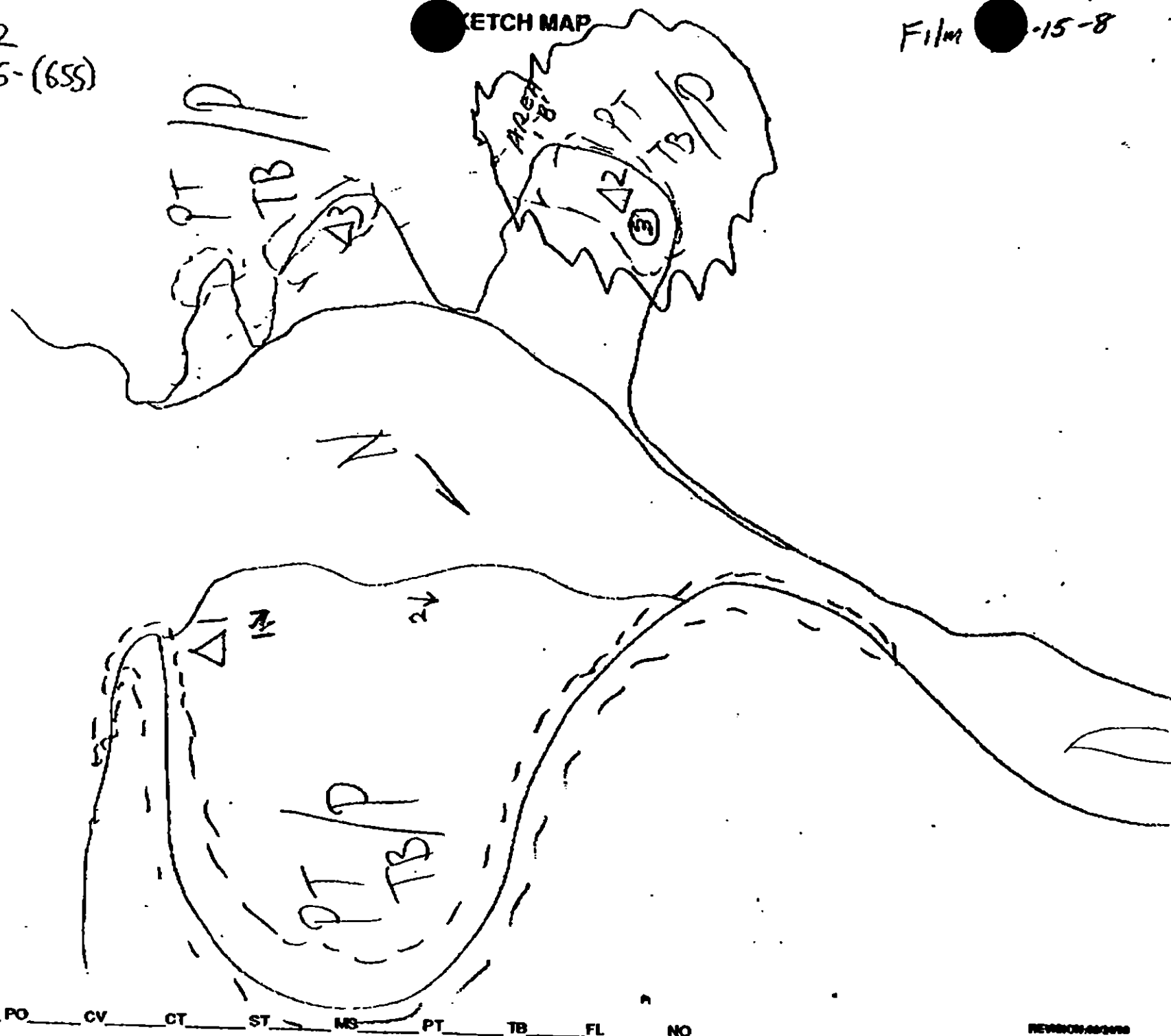
eee
Oiled Vegetation



Photo location, direction,
and number

SKETCH MAP

Film 15-8



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

25/38

Segment AB002
Bear Lake Creek
Stream 262-65-655
Ecological Summary

5/2/90
Michael Fawcett

This large stream has a large flood plain/delta consisting mainly of sand, with some patches of cobble. Some bedrock bluffs on the west side of the stream have sparse barnacles, Fucus and Littorina in the NTZ, but otherwise there is no macro-biota in the intertidal area. The only oil found was a few widely scattered tar balls and patties, very weathered, and spread over a large area. Cleanup is not recommended, as these few bits of weathered oil are unlikely to cause any environmental damage if left to decompose.

One mature eagle was roosting on the bluff overlooking the stream mouth. Tracks of caribou, bears, and river otters were seen along the stream banks.

Michael Fawcett

22/38

1 SURVEY TYPE: SS SS DE TS AVS SCHA NWS PTA2 REGION: PWS KP, CI KAPMETHOD: Aerial Ground Boat3 DATE: 5/2/2016 HIGH TIDE TIMES: 9:00 AM / 10:24 PM21 TEAM RECORDER: JEFFREY BARNHART4 START TIME: 113018 HIGH TIDE HTS: 14.1 / 14.822 OBSERVERS: Gus Garcia, William Rawl5 STOP TIME: 124317 LOW TIDE TIMES: 3:14 AM / 3:54 PM23 AGENCY: ADPEC/Environ/Wing/USCG/W6 SEGMENT #: A300219 LOW TIDE HTS: 5.4 / 1.924 PHOTOS TAKEN: Y (N)7 STATION #: 262-65-(655)

10 TIDE HT AT SURVEY: _____

Roll #1 _____ Frames _____

8 K-WAIT: K10-01ebb Slack Flood Slack25 VIDEO TAKEN: Y (N) TAPED: _____9 STAT AREA: 262-65

20 USCG QUAD: _____

Starts _____ Ends _____

10 LAT: 57° 51' 5" N11 LONG: 155° 11' 5" W26 SAMPLES TAKEN: Y (N) Number _____12 SOURCE: Map Loran Andcat

Oil _____

13 LOCATION: Approx. 5 air miles South of Cape Kuyugakli, AK Penn. Sediment14 DESCRIPTION: Bear Lake Creek

Biological _____

Water _____

EXTENT OF OIL

7 SURFACE COVERAGE	SHORELINE				STREAM			
	L	W	N	S	L	W	N	S
				25				

36 CATALOGED ANAD. FISH BREAST (Y) N

Uncataloged in 1989

37 CATALOG # 262-65-(655)38 STREAM NAME: Bear Lake Creek

20 SURFACE THICKNESS	SHORELINE				STREAM			
	L	W	N	S	L	W	N	S

39 OIL IN STREAM BED? Y (R)

29 PENETRATION	SHORELINE				STREAM			
	L	W	N	S	L	W	N	S

40 OIL ON STREAM BANKS? (Y) N30 OVERALL OIL IMPACT: N VL L N N41 OIL ON BEACH ADJACENT TO MOUTH? (Y) N
(within 50 meters)31 OIL TYPE: Pooler Mouse OP Asphalt Sticky Stain

42 OIL WITHIN 1 MILE OF STREAM? Y N

32 OILED DEBRIS? Y (N)

Where: _____

33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cove

43 ANADROMOUS FISH PRESENT? Y (N)Lagoon Marsh34 WAVE EXPOSURE: High Moderate Low

44 ANADROMOUS FISH OBSERVATION

Species Aerial Ground

35 SUBSTRATE TYPE: Bedrock _____ Boulder _____ Cobble 10Gravel 10 Sand 80 Mud/silt _____

Species	Aerial	Ground

COMMENTS: This lagoon is used by brown bears, caribou, moose, waterfowl
and land otters, as evidenced by the tracks we observed. In addition it is
an anadromous fish stream. I suggest manual cleanup of the area
between A to B and area C Jeff Barnhart

I recommend no treatment as remaining oil is very light
and very weathered. And 2/2/20

NAME(S)

DESCRIPTION

21/38

48 OIL DISTRIBUTION DIAGRAM

HFS 242-65-653

C. KUBRIGAKLI

655

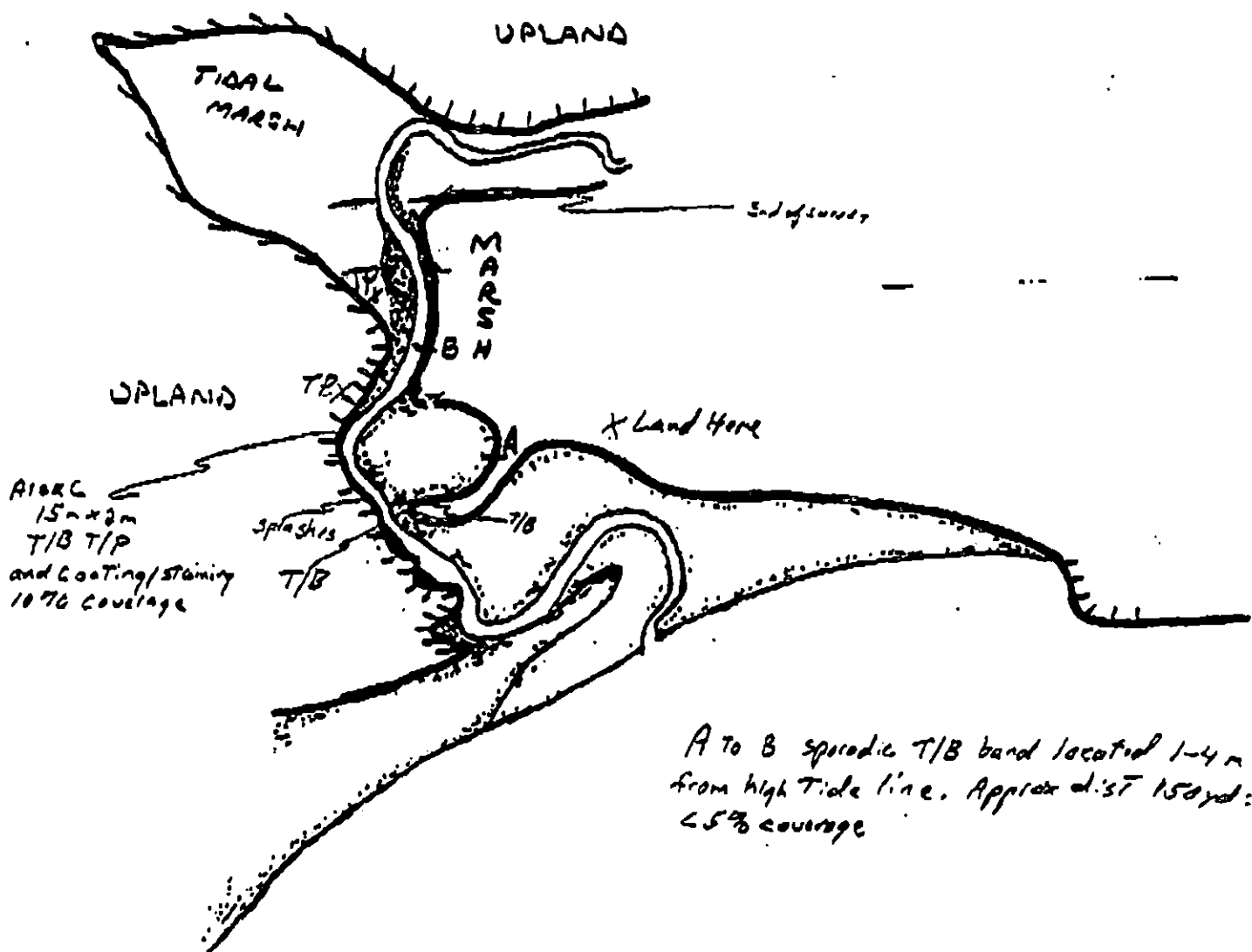
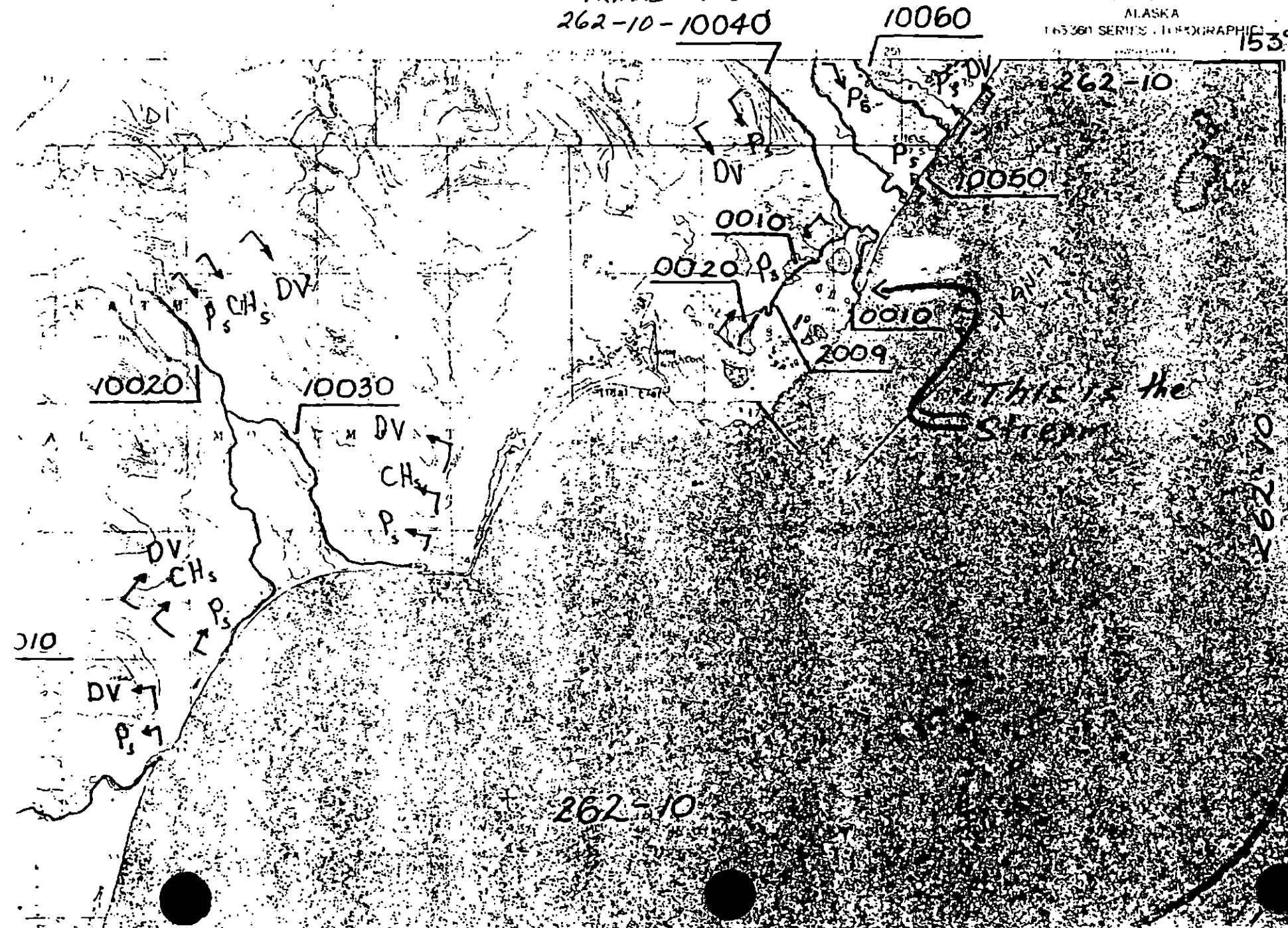


Photo taken
- Photo frame # and
shot direction.

TRIPLE LAKES CREEK
262-10-10040

AFOGNAK (C-5) QUADRANGLE
ALASKA
1:63,360 SERIES TOPOGRAPHIC

153°20'
58°45'



WORK PLAN ADDENDUM

Segment N10-2-AB-002

Subdivision A

Dated 07/24/90

MODIFICATION

1. REASON FOR MODIFICATION

REQUEST FROM FIELD FOR ADDITIONAL WORK EFFORT.

2. ADJUSTMENT TO WORK PLAN

AREAS 1 - 4 ON ATTACHED SKETCH.
- MANUAL PICKUP OF SURFACE MOUSSE PATTIES

SHPO APPROVAL NEEDED YES ☐
NO ☒

SHPO SIGNATURE _____

TAG APPROVAL DATE 07/24/90

ADEC JOHN BAUER [Signature]

EXXON AMY TETZ [Signature]

NOAA Burl Wescott [Signature]

USCG G.A. REITER G.A. Reiter

FOSC [Signature]

DATE 7-26-90

WORK PLAN MODIFICATION RECOMMENDATIONSEGMENT K10-2-AB-002SUBDIVISION ADATE July 23, 1990MODIFICATION1. REASON FOR MODIFICATION:

Noncompliance with original work order for beach portion of the segment (Areas 1, 3, and 4 on attached map). TAG Group visited the site on July 17, 1990 when some members agreed that the work crew should return to complete manual removal of mousse patties on the surface of the sand spit (Area 2) along Bear Lake Creek (Anadromous Stream No. 262-65-655) and in the stream.

TAG visited this site. We decided to do surface pick up near the stream and in the stream bed.

No Raking or tilling. I strongly disagree with the removal of "mousse-impregnated" sand in area #1.

2. SUGGESTED ADJUSTMENT TO WORK PLAN:

Wm Stalings - Exxon

Remove remaining surface mousse patties on sand spit adjacent to the stream and in the stream. ^{Area #2} Complete manual removal of mousse patties on the surface of the beach portion of the segment (Areas 1, 3, and 4). Rake and bioremediation on Area 1 was modified on July 18, 1990 to delete bioremediation component of the work order. We recommend that the bioremediation component of the work order be entirely deleted from this segment. Also, we recommend manual removal of mousse-impregnated sand from Area 1.

3. TIMING ISSUES:

As soon as possible because of returning salmon to Bear Lake Creek and resulting congregation of bears on the sand spit and beach.

USCG

ADEC

LAND MANAGER

John Hardister (If field representative is on site)

EXXON: Disagree with recommendations as noted. Wm Stalings / Exxon 7/24

ADF&G:

Jeffrey P Barnhart

REGION: KODIAK

SEGMENT: ST/K10-02-AS-007

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ ¹⁰~~K2~~-02-AS-007 SUBDIVISION A (1 OF 1) DATE 6/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
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 # 251-65-10040)
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 106 m: V.Light 3907m: No Oil 4019 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 is manual removal of mousse in areas shown on attached sketch map.

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/Oiga Bay (6/9 to 10/1)

East side Kodiak, East side Afognak (7/4 to 10/1)

1K

Purse seine hook-off

1L

Set net sites

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

AGENCY CONTACT PERSON: ADF&G Larry Nicholson 424-4791

2M

Herring spawning (4/15 to 6/30)

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

AGENCY CONTACT PERSON: ADF&G Larry Nicholson 486-4791

30, 3Q

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

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

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

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Calkins 267-2403

5R

Seabird colony (5/1 to 9/1)

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Roth 267-2206

5T

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

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U

Recreation:

6V

Tent sites (6/1 to 9/15)

6W

Anchorage (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 (6/1 to 1/7)

Invertebrate harvesting

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

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

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / K1000 AS-7 SUBDIVISION: A (OFA) DATE 1 June 1990

USCG

NAME Michael B. Miller SIGNATURE Michael B. Miller DE

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

MANUAL PICK-UP IS recommended for NE Segment. LARGE TAR-MAT, 100m x 40m IN SIZE, ≤ 5 cm IN THICKNESS. ACCESSABILITY MAY CAUSE PROBLEMS DUE TO THE TIDE FLUCTUATIONS ON THIS AREA.

ADEC

NAME Francine J. Beards SIGNATURE Francine J. Beards

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

MANUAL PICK-UP OF MOUSSE PATTIES, & MOUSSE 'MAT' RECOMMENDED:

The main concentration of oil in this segment is on the North-Eastern boundary of segment, and extends for approximately 100 meters & spills into adjacent segment, AS-8. It lies in the UITE, BUT clean-up crew should also check the MITE sand flats for mousse patties. Recoverable oil can be collected by crew using shovels & trowels.

LAND MANAGER

NAME OTTO FLORSCHUTZ SIGNATURE Otto Florschütz FWS

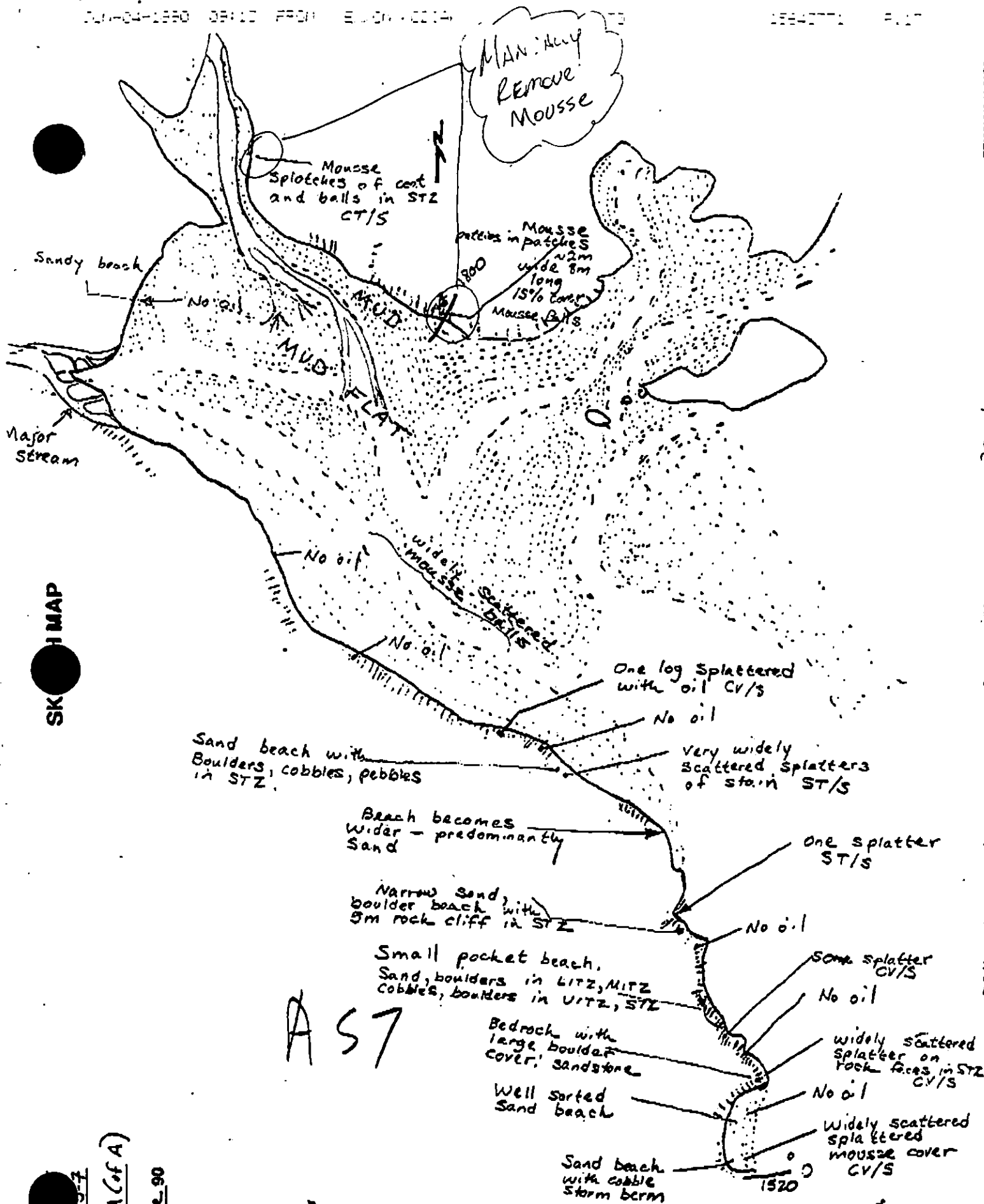
☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Agree with above ADEC recommendation to manually recover large concentration of mousse in vicinity of shore line of large tidal flat. Shell mussels, colonies on 3 small islands off-shore of area. See attachment #2.

Attachment 2**U.S. Fish and Wildlife Service Shoreline Cleanup Disclaimer**

This comment sheet is based on current observations and is solely for the purpose of planning and scheduling of 1990 response treatment actions. It in no way implies that the State or Federal government will not in the future determine that further restoration or other treatment, or compensation is warranted regarding this area, or that the area is considered by the Federal or State government to be adequately "clean" or "restored" for the purpose of any claim which the State or Federal government has brought or may bring against Exxon, Incorporated or any other potentially responsible party.

104
to location, direction,
and number



SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG R. Nardy USCG B. Millner SEGMENT ST/ K1002 AS-7
 BIO H. Davis LAND REP O. Florschutz SUBDIVISION A
 XON _____ ADEC F. Gennis TIME 15:20 to 18:00
 AM NO.: 20 TIDE LEVEL: +0.76m to +1.26m DATE June 1 01 1990
 EST. SUBDIVISION LENGTH: 7863 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R S % B S % C — % P — % G — % S 10 % M 80 % V — %
 SLOPE: Long 100 % Hang — % Vert — % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W — m M — m N 95 m VL 3824 m NO 3944 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	B	P	S	SB	BR	BL	BY	GB	GR	GL	TL	SU	U	M	V
ASPHALT PAVEMENT																
POOLED																
COVER				X		X							X	X		
COAT				X		X							X			
STAIN				X		X							X	X		
MOUSSE																
PATTIES			X										X	X	X	
TARBALLS				X									X		X	X
FILM																
NO OIL																

PAVEMENT: H F S — sq. m by — cmPATTIES / TARBALLS 20 BAGS*NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	No	AMOUNT		
		SM	MD	LG
Logs		X		
Vegetation	X			
Trash	X			
Debris	X			

DEBRIS COLLECTED
☒ YES ☐ NOTYPE Mousse Balls#BAGS < 1

Photographs:

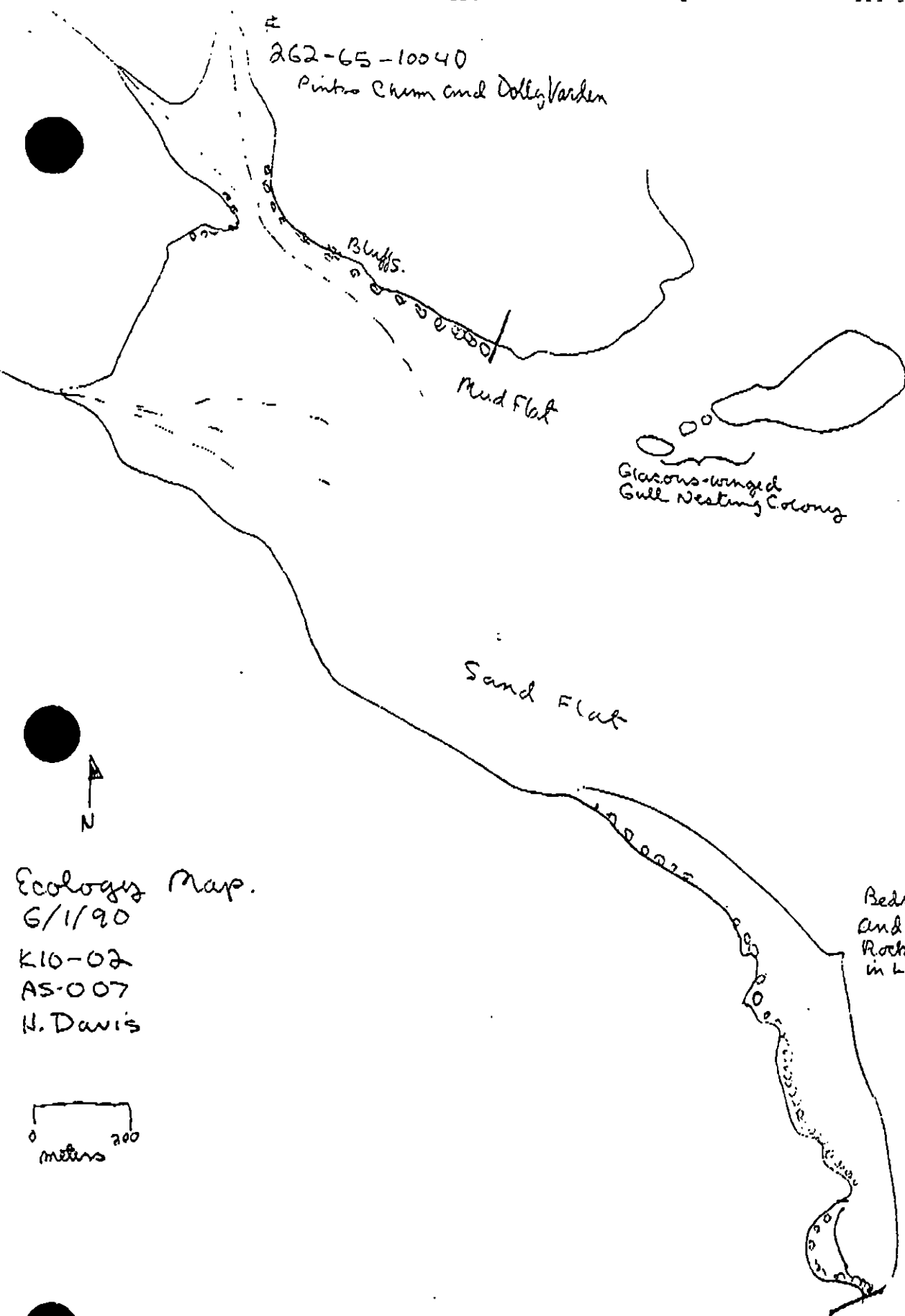
Roll No. _____Frames _____

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		DO	UC	SB	BR	BL	BY	GB	GR	GL	TL	SU	U	M	V		

COMMENTS Segment includes a sandy beach and extensive mud flats which are exposed at low tide. There are some mousse balls on mud flat. These are small and scattered, but commonly are surrounded by an ring of diffuse sheen.
 Mousse "pavement" is formed at far eastern margin of segment. This is down in cobbles & boulders and should be difficult to remove. * Bags are primarily at east end of segment.

262-65-10040
Pinto Creek and Dolly Varden



Ecology Map.

6/1/90

K10-02

AS-007

H. Davis

0 200
meters

Bedrock, Boulders,
and cobbles below
Rock Faces. Sand
in LTZ

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/K10-02 Subdivision AS-007 Date (mo/day/yr) 6/1/90

Time (24 hr) 15:15 Biologist N. Davis

- (A) Substrate type and % of segments:
 (1) Bedrock 5 (2) Boulder 5 (3) Cobble — (4) Pebble — (5) Sand 20 (6) Silt 70
- (B) Overall % cover of biota (% of segment): Dense 10% Moderate 10% Low 80% (20%)
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

Photographs:
 Roll No. ST-20-14

Frames #2-4

BARNACLES Only in rocky areas. Density variable.

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

NOT PRESENT
 5, 6

MYTILUS a very few dense patches.

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

NOT PRESENT
 3, 4, 5, 6

GASTROPODS Littorina - Dense-Sparse, limpets - Sparse, Nucella - Rare

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

NOT PRESENT
 6

FUCUS Patchy on rocky areas.

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

NOT PRESENT
 5, 6

Wildlife Observations/ General Comments: Mammals: 8-10 Caribou (calf) in the uplands. 2 Bears in the brush. Bear tracks in the intertidal, and One Fox seen in the intertidal. Birds seen: Glaucous-winged gulls, Semi-palmated Plover, Yellow-legs (quagga?), Surf-birds, Sand piper(?), Eagle, Pintails, and 1 Raven on rocky areas. LTZ Barnacles, limpets, Littorina, Porphyra, Fucus, Halosaccion and amphipods. MTZ: Halosaccion, Ulva, Rhodomela, Rhodomela, limpets, Barnacles, Littorina, amphipods, Idotea, and Mytilus. LTZ: Mytilus, Barnacles, Littorina, limpets, amphipods, Uridaea, Alaria, Fucus, Rhodomela and

Ecological Considerations: ST-1 No Eagle Nests were seen on the segment but nearby on a pinnacle in AS-006 there was a nest with 2 adult eagles. It was not on the list of ecological Considerations but stream # 262-65-10040 was in AS007. Pines, Chum, and Dolly Varden spawn in the stream.

*Ulva. On the sand flats occasional rocks would have Barnacles, Mytilus, limpets, Littorina, Ulva, Scytosiphon, Uridaea and some Fucus. Phoronids, Clinocardium (shells), Macoma, Mya, Saxidomus (shells), and Siligera were also found out on the mudflats.

AS-7

inches x450 Normal

NO	8.25	3713	3944
VL	8.0	3600	3924
L	0.2	90	95
		7403	7863

K10-3

XXX Wide

K1002 - AS-7

//// Medium

--- Narrow

ADEC Segment Length: 8032m

TTTT Very Light

0000 NA 0:1



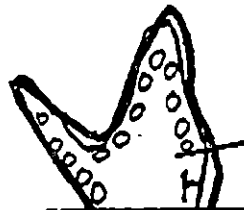
Map Key: AKP-AS-7a

Name: R. Marty

Date: June 01 1990

Data Entered:

K10-



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

K1002 - AS-7

ADEC Segment Length: 8032m



METERS



Map Key: AKP-AS-7b

Name: R. Marty

Date: June 01 1990

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ K01-02-AS-007 SUBDIVISION A (1 OF 1) DATE 6/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
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 # 251-65-10040)
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. Holmes DATE: June 19, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 106 m: V. Light 3907 m: No Oil 4019 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment is manual removal of mousse in areas shown on attached sketch map.

TAG COMMENTS:

TAG APPROVAL DATE: 6/16/90

ADEC Ran Morris R. Morris

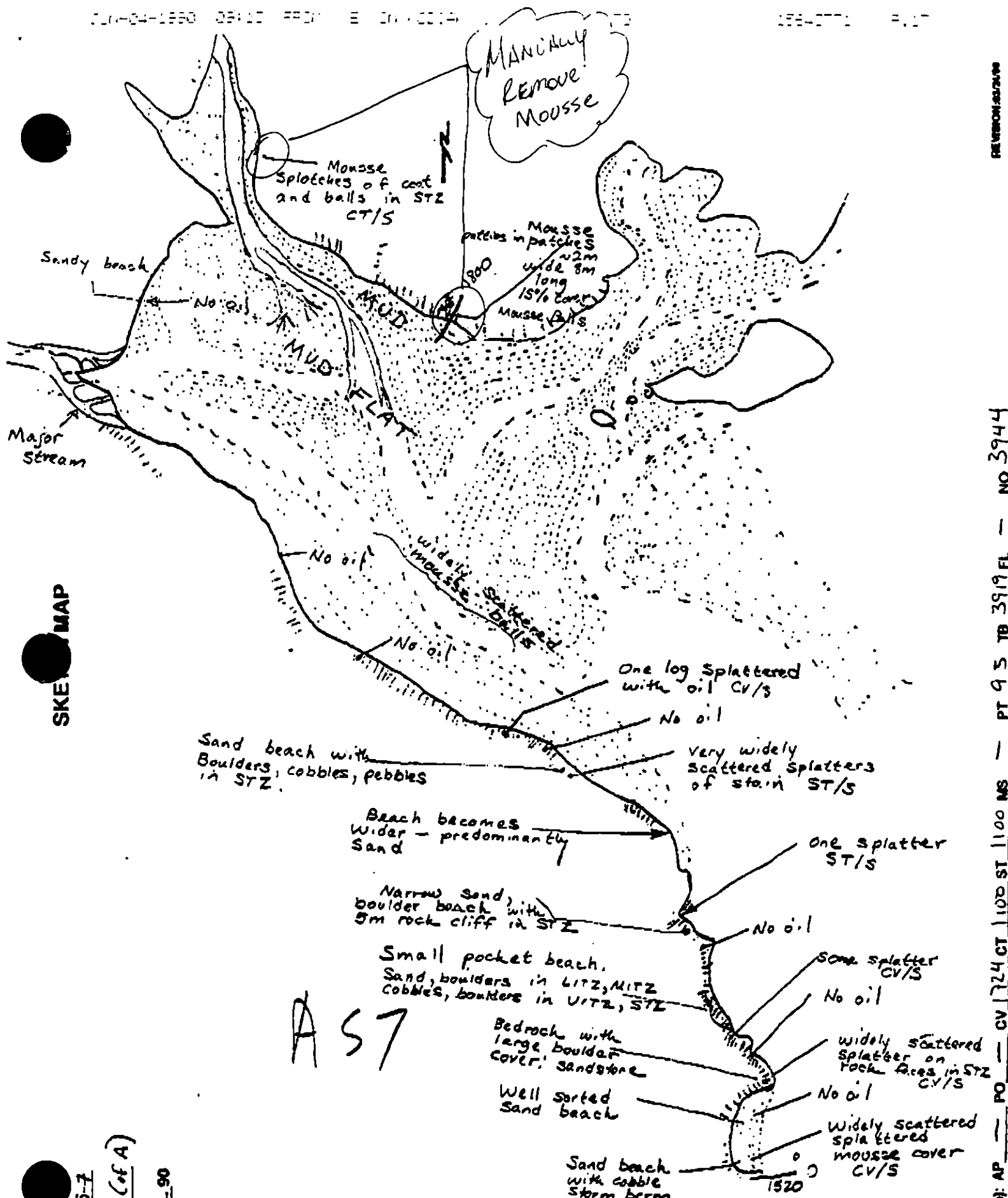
EXXON Andy Tetz Andy Tetz

NOAA Joseph C. Kilbott J. Kilbott

USCG G.A. REITER G.A. Reiter

Monitors Assess MITZ.
FOSC: R. Zauscher DATE: 7/90

SKETCH MAP



OG R. Marty

SEGMENT ST/ AS-7

SUBDIVISION A (of A)

CHECKLIST

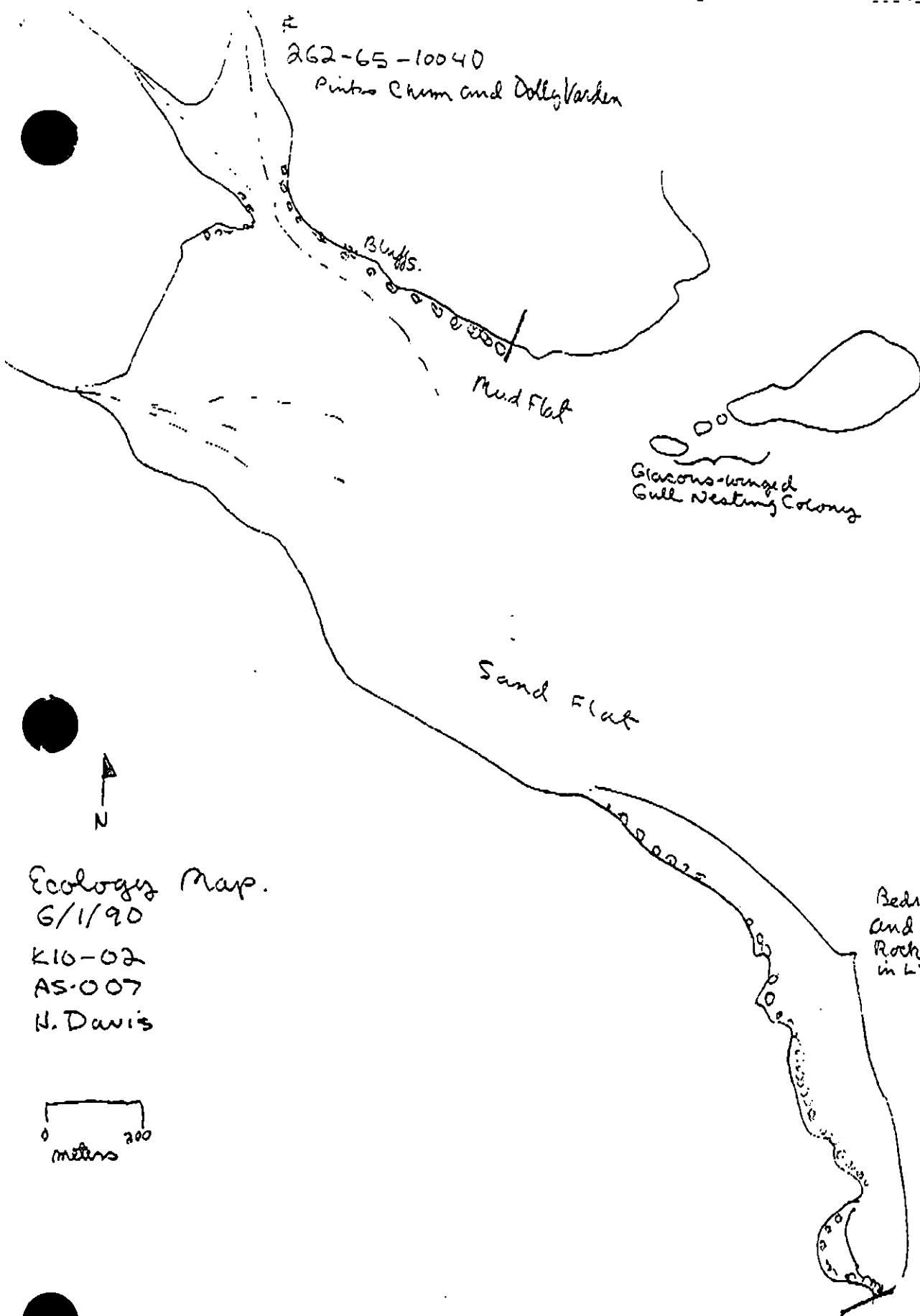
- N Arrow
- Approx. Scale
- Seismic Data
- Oil Data
- Width
- Length
- % Cover
- Substrate Character
- Est. HML/LWL
- SSL
- Profile Location(s)
- Profile(s)
- Photo Location(s)
- Photo Location(s)

LEGEND

- 1 Δ No Subsurface Oil
- 2 Δ Subsurface Oil
- CT/C Confusion Distribution
- CT/B Confusion Distribution
- CT/P Confusion Distribution
- CT/S Confusion Distribution
- CT/V Confusion Distribution
- CT/R Confusion Distribution
- CT/G Confusion Distribution
- CT/B Confusion Distribution
- CT/P Confusion Distribution
- CT/S Confusion Distribution
- CT/V Confusion Distribution
- CT/R Confusion Distribution
- CT/G Confusion Distribution

- CT/C Confusion Distribution
- CT/B Confusion Distribution
- CT/P Confusion Distribution
- CT/S Confusion Distribution
- CT/V Confusion Distribution
- CT/R Confusion Distribution
- CT/G Confusion Distribution
- CT/B Confusion Distribution
- CT/P Confusion Distribution
- CT/S Confusion Distribution
- CT/V Confusion Distribution
- CT/R Confusion Distribution
- CT/G Confusion Distribution

262-65-10040
Pinto Chum and Dolly Varden



Ecology Map.

6/1/90

K16-02

AS-007

H. Davis

0 200
meters

AS-7

inches x450 Normal

NO	8.25	3713	3944
VL	8.0	3600	3824
L	0.2	90	95
		7403	7863

K10-3

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

K1002 - AS-7

ADEC Segment Length: 8032m

0 300 600 900

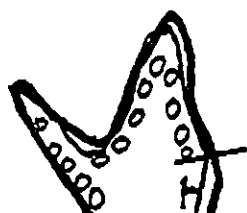
Map Key: AKP-AS-7a

Name: R. Marty

Date: June 01 1990

Data Entered:

K10-



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

K1002 - AS-7

ADEC Segment Length: 8032m



Map Key: AKP-AS-7b

Name: R. Marty

Date: June 01 1990

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K10-02-AS-007 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 (262-65-10040)* is more than 100m from work site. *(Shoreline evaluation form cites ADF&G stream number incorrectly) No constraint to manual pickup.

5T Bald Eagle Nest

NO CONSTRAINT. USFWS 4/9/90 map indicates no active nest within 400m of Subdivision A work site.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

R. Jaenigke

Date

7/6/90

Prepared by

Rev R. Coulter

Date

7/6/90

STREAM #
262-65-10040

K10-2

WORK
AREAS

AS

AS-7

Active
Nests

K10-3

AS-6



Exxon Company, USA
Map Key: AKP-AS-7



ECOLOGY MAP
SEGMENT K10-2 AS-7
SUBDIVISION A (1 of 1)
METERS

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

SHORELINE EVALUATION

SEGMENT ST/ K01-02-AS-007 SUBDIVISION A (1 OF 1) DATE 6/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
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 # 251-65-10040)
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. Holmes DATE: June 19, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 106 m: V.Light 3907m: No Oil 4019 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> </u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommended treatment is manual removal of mousse in areas shown on attached sketch map.

SEE CONSTRAINT ADDENDUM
DATED 7/6/90, Rex C.

TAG COMMENTS:

TAG APPROVAL DATE: 6/16/90

ADEC Ron Morris
ON Andy Tera
AA Joseph C. Kellogg
USCG G.A. REITER

Monitors Assess MITE.
FOSC: R. Gausman DATE: 7/90

1991 MAYSAP EVALUATION

SEGMENT: K1002AS007 SUB: A REGION: KOD SURVEY DATE: 5/27/91

ENVIRONMENTAL SENSITIVITIES:

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

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

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, ADEC

SIGNATURE

Jeff Barnhart☐ NTR ☒ Treatment Recommended

Alinehak Bay, site of concern is located at the segment division line with AS008. The oiled area is 30 m long x 1.5 m wide, 5% SOR - weathered on the surface, wet "mousse" under the weathered surface. An anadromous stream is located in Missagmat. Note: AS007 should be considered together with segments AS008A and AS008B both of which require cleanup. Recommend cleanup using simple manual pickup. Cleanup can be best accomplished using a helo squad.

Concur with USFENS and ADEC. *Subsequent to Kooiak Island Boeugh.*

EXXON

NAME R. COULTER, EXXON

SIGNATURE

Reg R Coulter☒ NTR ALL RECOVERABLE OIL HAS BEEN REMOVED.

LANDMANAGER

NAME J. HARDISTEROF USFWS

SIGNATURE

John P. Hardister

☒ NTR No further treatment necessary, except for the small amount of SOR that is adjacent to AS-008A. If manual pickup occurs at site AS-008A, then pickup at this site is recommended.

USCG/NOAA

NAME CWO R. SPURR, SHIGENAKA

SIGNATURE

R. Spurr / Gary Shigenaka

☒ NTR Recoverable SOR/MS removed by Veco workers during survey.

SURVEYED PORTION OF THE SEGMENT CONSISTED OF A NARROW BEACH CHARACTERIZED BY FLAT BOULDER COBBLE SUBSTRATE, LAYING BETWEEN A VERY BROAD TIDAL SAND FLAT AND LOW BEDROCK CLIFFS. SCATTERED LITTORINES AND BARNACLES WERE OBSERVED ON ROCKY SUBSTRATE BELOW THE UITZ, WHILE VERY LARGE MUSSELS WERE FOUND PRIMARILY IN SANDY SUBSTRATE JUST BELOW THE BAND OF FLAT BOULDER COBBLES. ONE 30X2 (QS ESTIMATE) BAND OF OILING WAS LOCATED IN WHICH WEATHERED SOR WAS EITHER RECOVERED OR BROKEN UP. SOME SHEEN WAS OBSERVED IN THE AREA AS WELL. THE BAND OF RESIDUES OCCURRED IN THE UITZ BETWEEN AND UNDER THE FLATTISH BOULDER COBBLES. NO OTHER OILING WAS OBSERVED ALONG THE SURVEYED SECTION.

OG D. Fitzgerald

BIO H. DAVIS

SEGMENT K10-02-A5-07

ADEC J. BARNHART ADFG

LANDMANAGER J HANDISTER for USFWS

SUBDIVISION A

EXXON R. Coalter

USCG/NOAA CWO SPURL/6 SHIGENAKA

DATE 27 / MAY / 91

TIME 7:45 to 8:10

TIDE LEVEL -1.0 ft. to -1.7 ft.ENERGY LEVEL: ☐ H ☐ M ☒ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 1000 m

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

EST. OIL CATEGORY LENGTH: W m M m N m VL 30 m NO 970 m US 7032 m

[illegible]

DISTRIBUTION: C = 91-100%; B = 51-80%; P = 11-50%; S = 1-10%; T = <1%

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 6 - 23 FRAMES 6-7

[illegible]

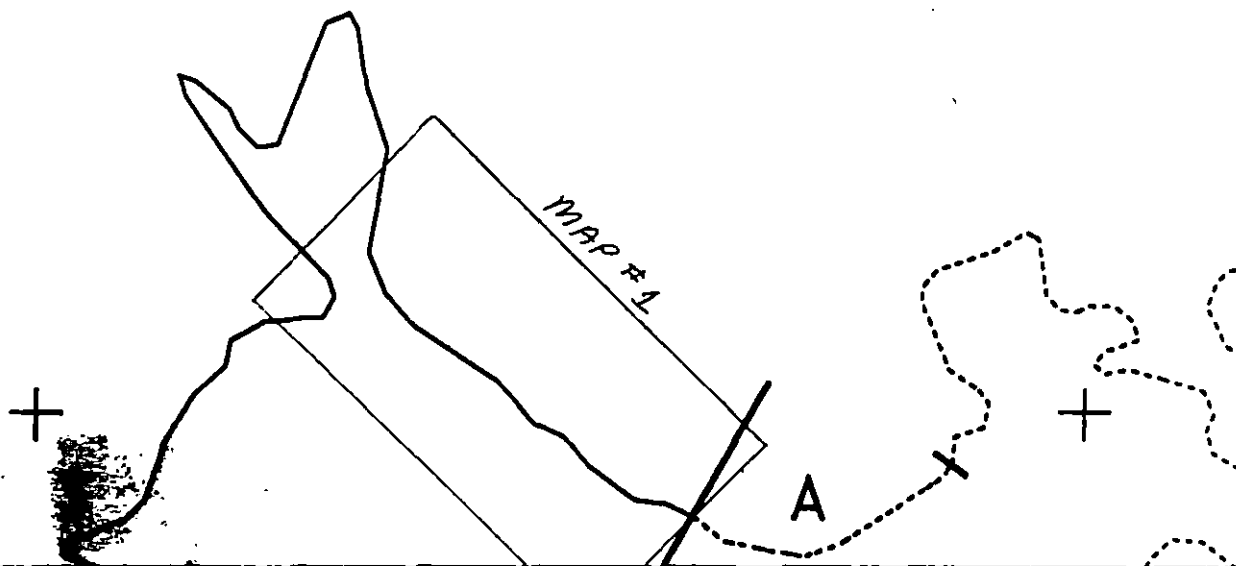
SHOEN COLOR: B - BROWN: R - RAINBOW: S - SILVER: N - NONE

OG COMMENTS: THIS SEGMENT IS LOCATED ALONG THE INNER PORTION OF THE NORTHWEST-
most embayment of Alinchak Bay on the north side of the ANAD. Stream # 262-65-10049.
The surveyed shoreline consists of a narrow flat boulder beach backed by bedrock cliffs
and fringed by an increasingly wide tidal flat that trends in a southeasterly direction.
The only oiling area found along this segment is located at the eastern end consisting of
-SPIL around the flat boulder beach at the UETZ.

REVIEWED: MC 5/31/91

reviewed 5/31/91 KG

K10-



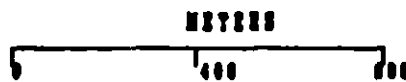
K1002 AS007 A

Subdivision Field Map

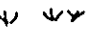
Map Key: 00A1002AS007A

Name: D. Fitzgerald

Date: 27 May 1991



AK State Planning Expo. 5
91002AS007A

-  Bushes & Shrubbery
-  GRASSY AREA
-  ROCK CLIFF
-  PHOTO SITES

SKETCH MAP (06)
K10-02-AS-07-A
D M FITZGERALD
27 May 1991
745-810

ALASKA
PENINSULA

↑
BEGIN SEGMENT.
AS-08-A

A. SOR $< 1\%$
26, 30m
I/U AROUND
Boulders, WITZ

RB SHEEN OCCURS
IN TIDAL POOLS

Narrow Boulder
Beach

ALENCHAK BAY
(MUDDY TIDAL FLAT)

0 300
METERS

Revised: MC 5/31/91
revised 5/31/91 kg

ANAD. STREAM # 262-65-10040

UNSURVEYED

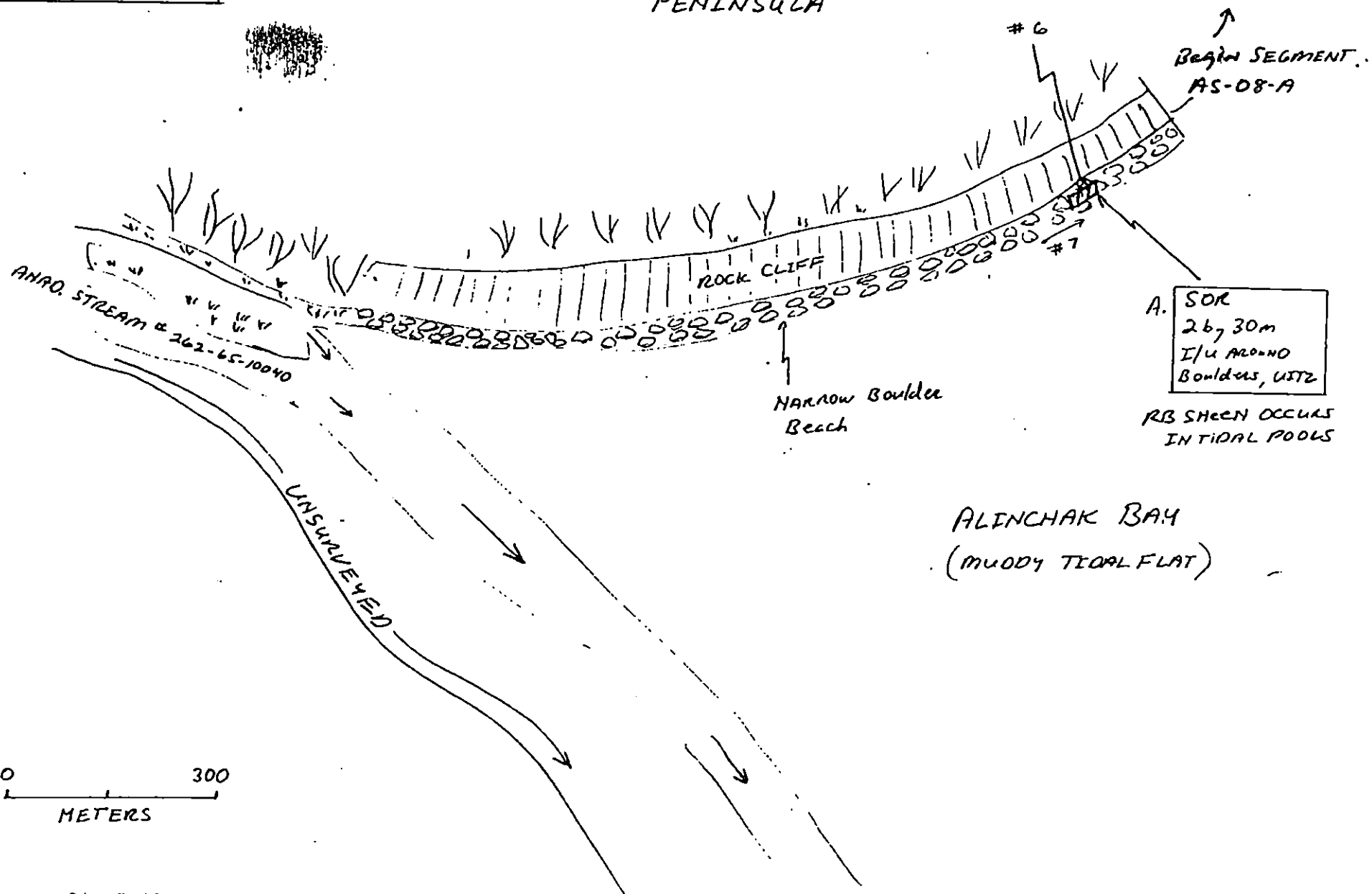
ROCK CLIFF

-  Bushes & SHRUBBERY
 GRASSY AREA
 ROCK CLIFF
 PHOTO SITES

PHOTO SITES, AS-7A
 ROLL 6-23, FRAMES 6 & 7

Sketch MAP (OL)
 K10-02-AS-07-A
 D.M. FITZGERALD
 27 May 1991
 745-810

ALASKA
 PENINSULA



TEAM # 6 Helo

DATE May 27 1991

SEGMENT # K10-02 AS-07

TIDAL HEIGHT (Range) - 1 ft - 7.7 ft (7.45 - 8:10)

SUBDIVISION A

BIOLOGIST H. Davis

SEA STATE Tide was out

WIND SPEED/DIRECTION Gusty (5 to 16 kt) NW

PHOTOGRAPHS: ROLL # 6-23

FRAME # 6+7

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

Rockcliffs with a boulder/cobble rubble band at their base and a large muddy tidal flat extending out made up the surveyed area. Along the rockcliff face *Verrucaria* and *Xanthoria* are growing. *Verrucaria* extends down into the U12. The common organisms on the boulder/cobble rubble are: *Littorina*, barnacles (*B. aculeata*), limpets, *Ulva*, *Fucus*, amphipods, and *Enchytraeus canaliculatus*. The *Littorina* are laying eggs. Out on the mud flats *Mya arenaria*, lugworms (very dense), *Macoma* sp and some *Littorina* can be found.

At Site A the SOR was located in the middle of the boulder/cobble rubble. All of the organisms were present in the area. *Enchytraeus* were very dense under rocks surrounded by SOR.

Anadromous Stream # 262-65-10040 run through this area

Glaucous-winged Gulls (10)

Willow Ptarmigan (4) Raven (1 west) Sandpiper (3) Yellow legs sp (2) Semi-palmated plover (2)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
EAGLES	0		0
SEABIRDS	0		
WATEROWL	0		
GULLS/KITTIWAH	1	10	
SHOREBIRDS	3	7	
CORVIDS	1	1 adult on Nest	
OTHER BIRDS (Pigeon)	1	4	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	0	Brown Bear	1
Pinnipeds (specify)	0	Caribou	3
Whales (specify)	0		

Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/31/91

 BUSHES & SHRUBBERY
 GRASSY AREA
 ROCK CLIFF
 PHOTO SITES

Bio Map
H. Davis

Sketch MAP (06)
K10-02-AS-07-A
D M Fitzgerald
27 May 1991
745-810

ALASKA
PENINSULA

BEGIN SEGMENT
AS-08-A

Willow Ptarmigan
Willows + shrubs

ROCK CLIFF

ANAO. STREAM # 262-65-10040

UNSURVEYED

Narrow Boulder
Beach

Muddy Tide Flat A
with lugworms
Mya arenaria and
Macoma sp. (Tellina)

SDR
267 30m
I/U AROUND
Boulders, UITS

Site A was up among the boulders. Littorina, barnacles, limpets, amphipods, Enchytraids and verucaria were present in moderate to sparse densities. Enchytraids became dense in and around the SOR and algal drift.

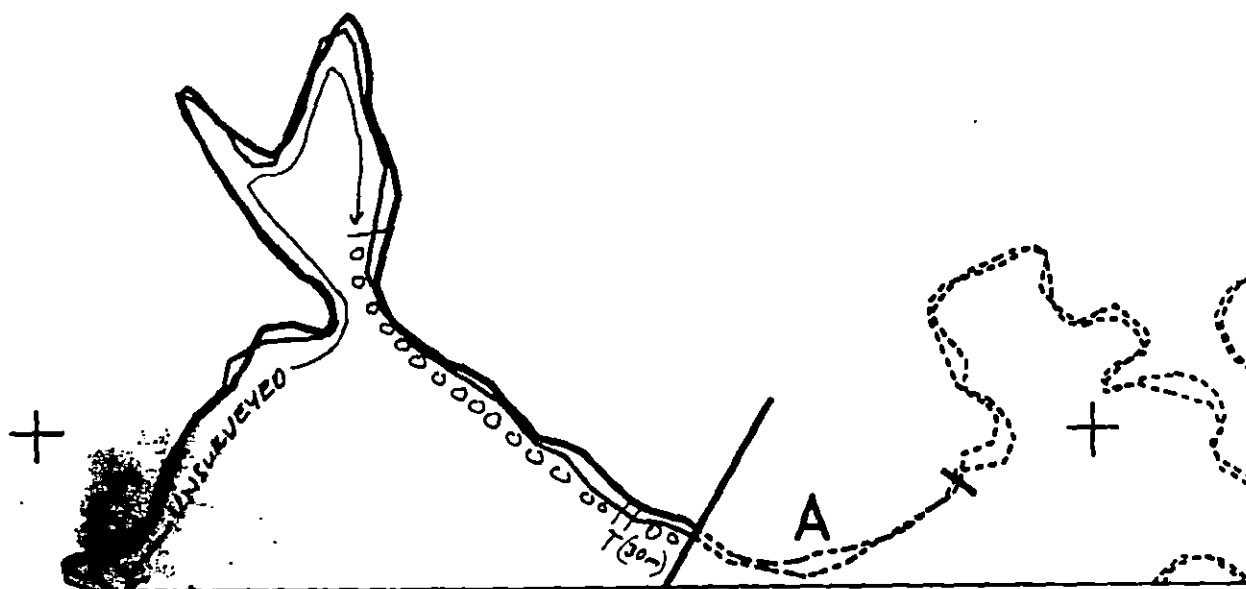
ALINCHAK BAY
(MUDDY TIDAL FLAT)

Islets
with Nesting
Calls and an
Eagle's Nest.

A horizontal number line with arrows at both ends. It is labeled '0' at the left end and '300' at the right end. A single tick mark is placed exactly halfway between 0 and 300. Below the line, the word 'METERS' is written in capital letters.

Reviews MB5/3/21

K10



XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

K1002 AS007 A
ADEC Subsegment Length: 8032m
METERS

0 400 800
AK State Plane Zone 4
g1002as007ab- . . .



Subdivision Field Map
Map Key: 00AK1002AS007AB
Name: D. Fitzgerald
Date: 27 May 1991
Date Entered:

REVIEWED: MC 5/31/91

A
+
AS-7

Unsurveyed

10-3

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

K1002 AS007 A
ADEC Subsegment Length: 8032m
METERS

AK State Plane Zone 4
g1002as007a--' . . .



Subdivision Field Map
Map Key: 60AK1002AS007Ae
Name: D. Fitzgerald
Date: 27 May 1991
Data Entered:

Reviewed: MC 5/31/91 revised 5/31/91 KG

1991 MAYSAP EVALUATION

SEGMENT:K1002AS007 SUB: A REGION: KOD SURVEY DATE:5/27/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

RECOMMENDATIONS:

INITIAL**TAG**

FOSC

TREATMENT REQUIRED (Y or N)

N

2

A

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS :

INITIAL:

TAG:

FOSC: NTR - RECOVERABLE OIL PICKED UP
URING SURVEY - 1

TAG APPROVAL DATE: June 7 1991

FOSC APPROVAL DATE: 6/12/91

ADEC

FOSC

EXXON

USCG

NOAA

1 - PAGE, CDR, USCG
1 - AFF, 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 AS-7 SUBDIVISION A DATE 5/27/91

ADEC

NAME J. BARNHART, ADEC

SIGNATURE

Jeff Barnhart

☐ NTR ☒ Treatment Recommended

Alinehak Bay, site of concern is located at the segment division line with AS008. The oiled area is 30 m long x 1.5 m wide, 5% SOR - weathered on the surface, wet "mousse" under the weathered surface. An anadromous stream is located in this segment. Note: AS007 should be considered together with segments AS008A and AS008B both of which require cleanup. Recommend cleanup using simple manual pickup. Cleanup can be best accomplished using a helo squad.

Concur with USFENS and ADEC. *John P. Hardister Kodiak Island Borough.*

EXXON

NAME R. COULTER, EXXON

SIGNATURE

Ray R. Coulter

☒ NTR ALL RECOVERABLE OIL HAS BEEN REMOVED.

LANDMANAGER

NAME J. HARDISTER

OF USFWS

SIGNATURE

John P. Hardister

☒ NTR No further treatment necessary, except for the small amount of SOR that is adjacent to AS-008A. If manual pickup occurs at site AS-008A, then pickup at this site is recommended.

USCG/NOAA

NAME CWO R. SPURR/G. SHIGENAKA

SIGNATURE

R. Spurr / Gary Shigenaka

☒ NTR Recoverable SOR/MS removed by VECO workers during survey.

SURVEYED PORTION OF THE SEGMENT CONSISTED OF A NARROW BEACH CHARACTERIZED BY FLAT BOULDER COBBLE SUBSTRATE, LAYING BETWEEN A VERY BROAD TIDAL SAND FLAT AND LOW BEDROCK CLIFFS. SCATTERED LITTORINES AND BARNACLES WERE OBSERVED ON ROCKY SUBSTRATE BELOW THE UITZ, WHILE VERY LARGE MUSSELS WERE FOUND PRIMARILY IN SANDY SUBSTRATE JUST BELOW THE BAND OF FLAT BOULDER COBBLES. ONE 30X2 (QS ESTIMATE) BAND OF OILING WAS LOCATED IN WHICH WEATHERED SOR WAS EITHER RECOVERED OR BROKEN UP. SOME SHEEN WAS OBSERVED IN THE AREA AS WELL. THE BAND OF RESIDUES OCCURRED IN THE UITZ BETWEEN AND UNDER THE FLATTISH BOULDER COBBLES. NO OTHER OILING WAS OBSERVED ALONG THE SURVEYED SECTION.

TEAM NO. 6-14210

OG D. Fitzgerald

BIO H. DAVIS

SEGMENT K10-02-A5-07

ADEC J. BARNHART ADF6

LANDMANAGER J HANDISTER for USFWS

SUBDIVISION A

EXXON R. Coulter

USCG/NOAA CWO SPURL/G. SHIGENAKA

DATE 27 / MAY / 91

TIME 7:45 to 8:10

TIDE LEVEL -1.0 ft. to -1.7 ft.ENERGY LEVEL: ☐ H ☐ M ☒ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 1000 m

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

EST. OIL CATEGORY LENGTH: W m M m N m VL 30 m NO 970 m US 7032 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 - 23 FRAMES 6-7

[illegible]

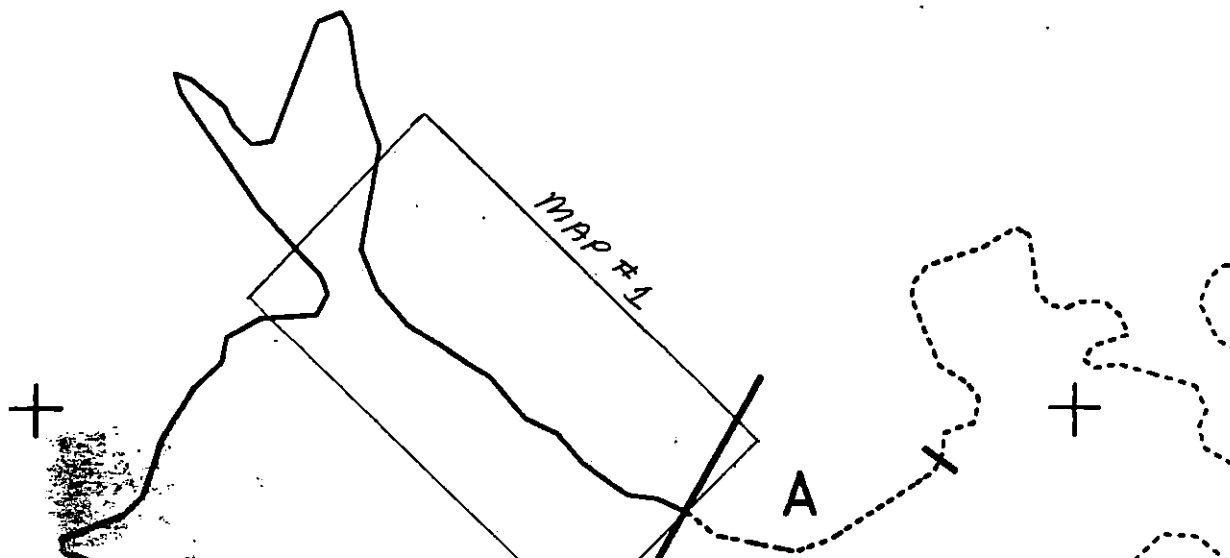
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS: THIS SEGMENT IS LOCATED ALONG THE INNER PORTION OF THE NORTH-
most embayment of Alinchak Bay on the north side of the ANAD. Stream # 262-65-10040.
The surveyed shoreline consists of a narrow flat boulder beach backed by bedrock cliffs
and fronted by an increasingly wide tidal flat that trends in a southeasterly direction.
The only oiling area found along this segment is located at the eastern end consisting of
SPK around the flat boulder beach at the UETZ.

Reviewed: MC 5/31/91

reviewed 5/31/91 KG

K10-



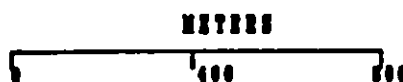
K1002 AS007 A

Subdivision Field Map

Map Key: 604K1002AS007A5

Name: D. Fitzgerald

Date: 27 May 1991

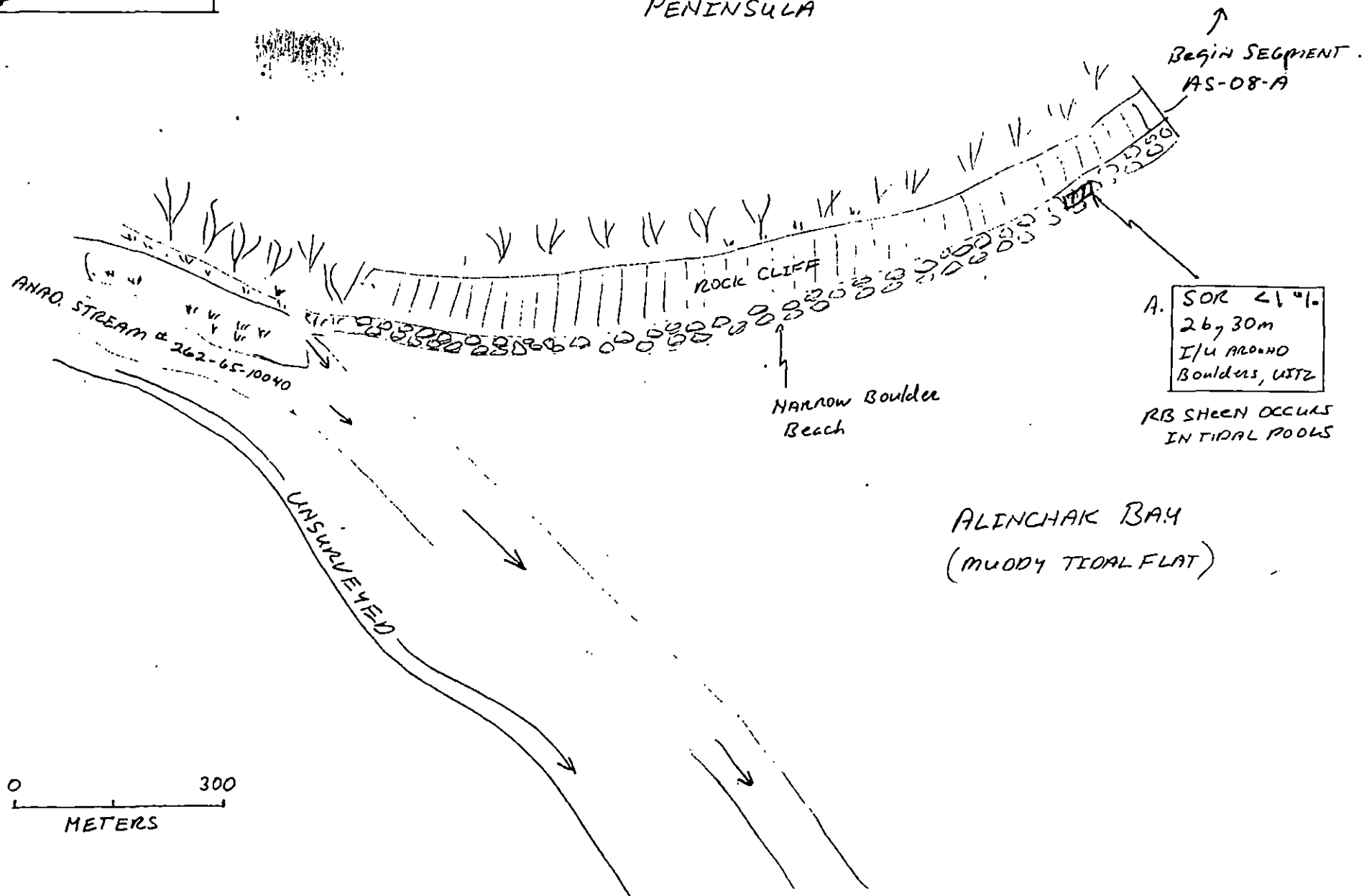


AK State Planning Dept. 5
010020000700-5

-  Bushes & Shrubbery
-  GRASSY AREA
-  ROCK CLIFF
-  PHOTO SITES

Sketch MAP (OG)
K10-02-AS-07-A
D.M. Fitzgerald
27 May 1991
745-810

ALASKA
PENINSULA



Revised 5/31/91 LG
RAULPH: MC 5/31/91



Bushes &
SHRUBBERY



GRASSY
AREA



ROCK CLIFF



PHOTO SITES

PHOTO SITES -7A
ROLL 6-23, FRAMES 6 & 7

Sketch MAP (06)

K10-02-AS-07-A.

D.M. FITZGERALD

27 May 1991

745-810

ALASKA
PENINSULA

↑
BEGIN SEGMENT:
AS-08-A

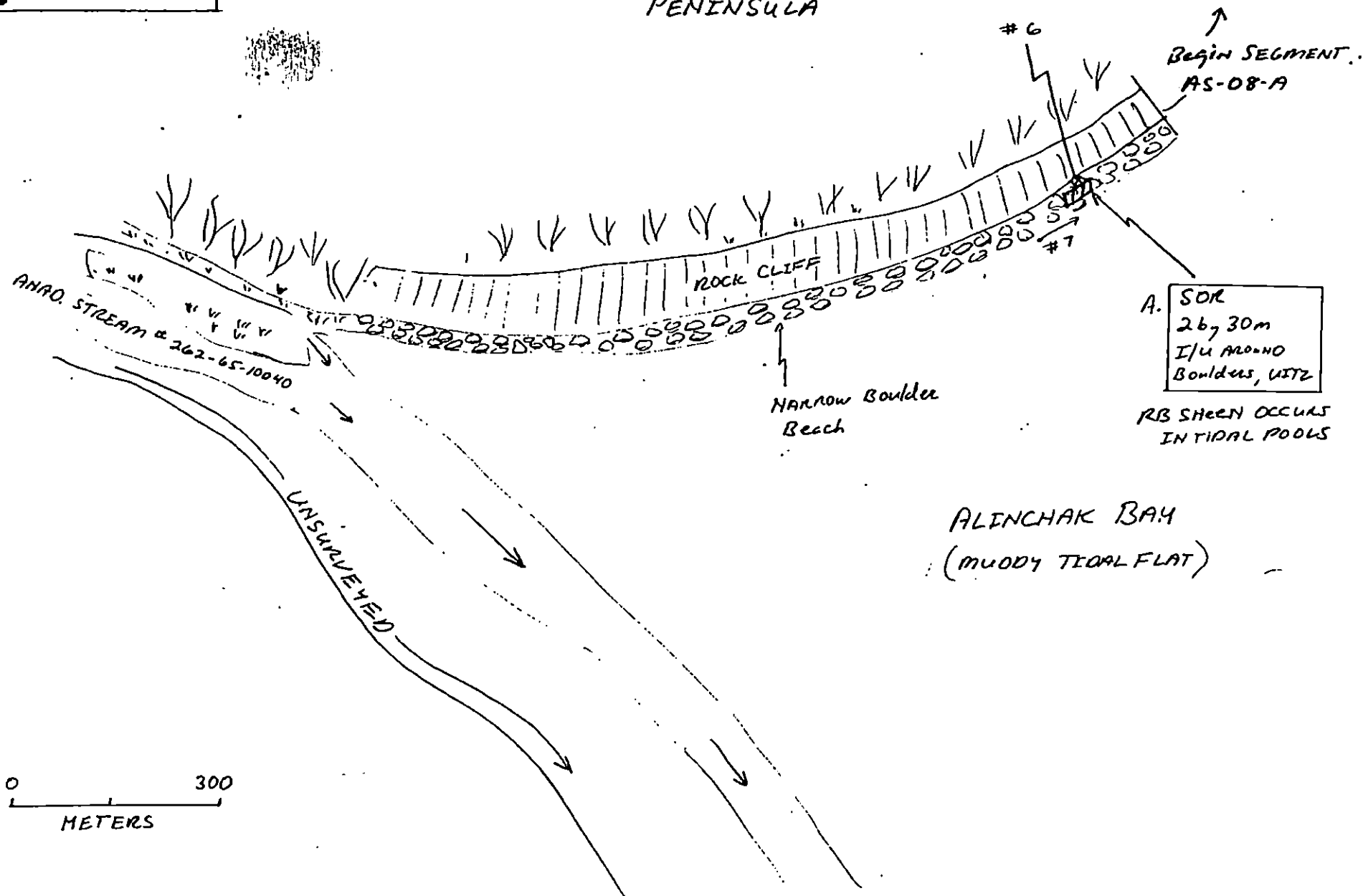
A. SOR
26, 30m
I/U AROUND
BOULDERS, UITS

RB SHEEN OCCURS
IN TIDAL POOLS

NARROW Boulder
Beach

ALINCHAK BAY
(MUDDY TIDAL FLAT)

0 300
METERS



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 Helo

DATE May 27 1991

SEGMENT # K10-02 AS-07

TIDAL HEIGHT (Range) -1ft - 7.7ft (7:45 - 8:10)

SUBDIVISION A

BIOLOGIST H. Davis

SEA STATE Tide was out

WIND SPEED/DIRECTION Gusty (5 to 16 kt) NW

PHOTOGRAPHS: ROLL # 6-23

FRAME # 6+7

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

Rockcliffs with a boulder/cobble rubble band at their base and a large muddy tidal flat extending out made up the surveyed area. Along the rockcliff face *Verrucaria* and *Xanthoria* are growing. *Verrucaria* extends down into the U1T2. The common organisms on the boulder/cobble rubble are: *Littorina*, barnacles (*B. glandula*), limpets (*Uva*, *Fucus*, amphipods, and *Enchytraids* (annelids). The *Littorina* are laying eggs. Out on the mud flats *Mya arenaria*, lugworms (very dense), *Macoma* sp and some *Littorina* can be found.

At Site A the SOR was located in the middle of the boulder/cobble rubble. All of the organisms were present in the area. *Enchytraids* were very dense under rocks surrounded by SOR.

Anadromous Stream # 262-65-10040 ran through this area

Glaucous-winged Gulls (10)

Willow Ptarmigan (4) Raven (1+nest) Sandpiper (3) Yellow legs sp (2) Semi-palmated plover (2)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	0		0
Seabirds	0		
Waterfowl	0		
Gulls/Kittiwakes	1	10	
Shorebirds	3	7	
Corvids	1	1 adult on Nest	
Other Birds Ptarmigan	1	4	

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters	0	Brown Bear	1
Pinnipeds (specify)	0	Caribou	3
Ceals (specify)	0		

Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/31/91

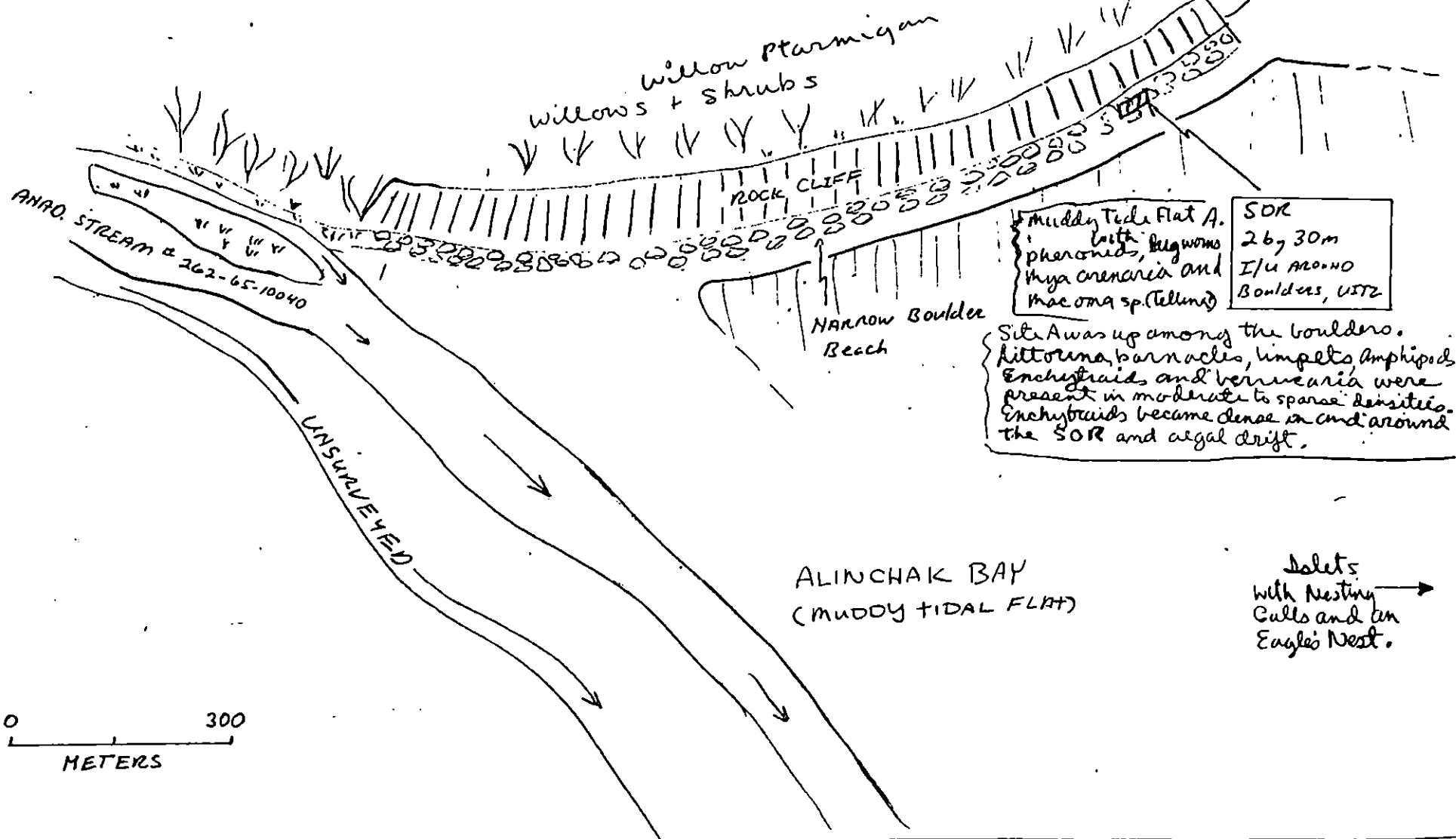
- Y Y Bushes & SHRUBBERY
 v v GRASSY AREA
 III ROCK CLIFF
 → PHOTO SITES

Bio Map
H. Davis

Sketch MAP (06)
 K10-02-AS-07-A
 D. M. FITZGERALD
 27 May 1991
 745-810

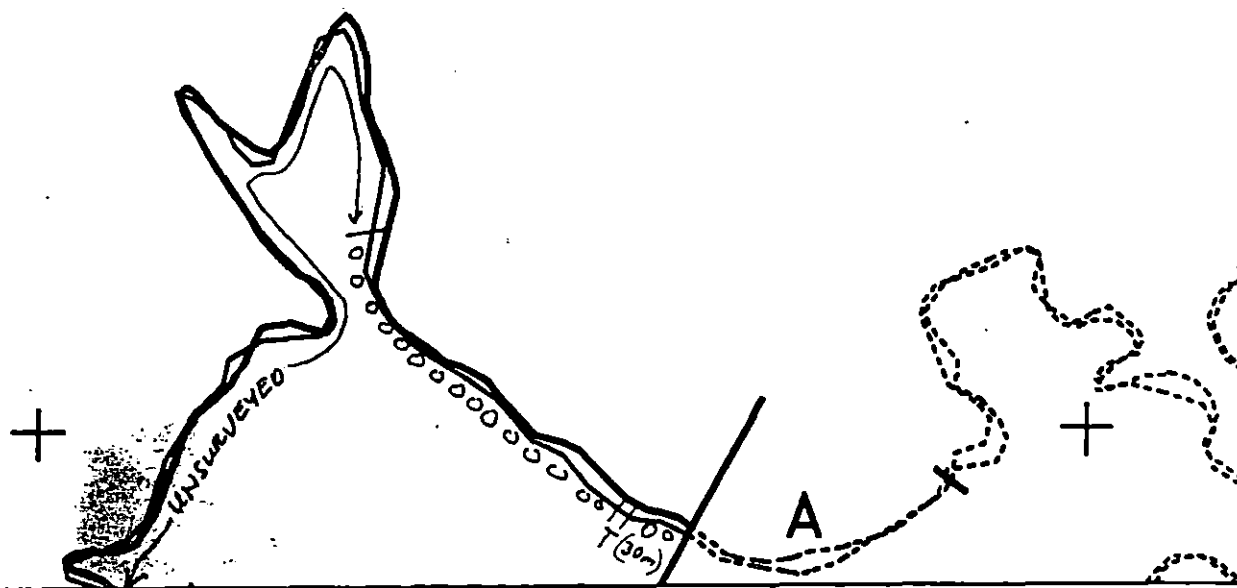
ALASKA
PENINSULA

BEGIN SEGMENT
 AS-08-A



Revised MBS/5/91

K10



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

K1002 AS007 A
 ADEC Subsegment Length: 8032m
 METERS

AK State Plane Zone 4
 1002as007ab



Subdivision Field Map
 Map Key: 00AK1002AS007Ab
 Name: D. F. Fitzgerald
 Date: 27 May 1991
 Date Entered:

Reviewed: MC 5/31/91

AS-7

Unsurveyed

10-3

XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

K1002 AS007 A
ADEC Subsegment Length: 8032m
METERS

AK State Plane Zone 4
g1002as007as

Subdivision Field Map

Map Key: 60AK1002AS007Aa

Name: D. Fitzgerald

Date: 27 May 1991

Date Entered:



Reviewed: MC 5/31/91

revised 5/31/91 KG

5-2A

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