

MAYSAP-1991

TONGINA
NORTH
Creek

ASC NUMBER: 232-10-10340 SEGMENT NUMBER: TB-02 YR CATALOGED:
 LOCATION: Tongina Bay
 DAM NAME:
 CIAK K-UNIT: LOCAL STREAM #:
 USGS QUADRANGLE: Seldovia B-3
 SHORELINE TYPE: Beach ALL SEGMENTS:
 WAVE EXPOSURE: Low LEGAL: S 10S ROWIS

ASC NUMBER:
 SURVEY TYPE: SS, BS
 METHOD: Feet
 DATE: 5/20/91
 START TIME: 1407
 STOP TIME: 1600
 TEAM RECORDER: CLARA Crosby (ADEC)
 OBSERVERS: Duncan Fitzgerald (OG)
 Jeff Johnson (AONR)
 AGENCY (IES): ADEL, NOAA, EXXON, USCG, AONR
 PHOTOS TAKEN?
 Roll #: Frames:
 VIDEO TAKEN? Tape Number:
 Counter Start:

SAMPLES TAKEN?
 SAMPLE I.D. NUMBERS: 1. 2. 3.
 4. 5. 6.

	LENGTH m	WIDTH m	H2	%	THICK cm	PEN cm	OIL TYPE
SITE 1	80cm .080	80cm .080	.0064	90	—	—	HSOR
SITE 2	20	2	40	5	<1	—	LSOR
SITE 3	60	1	60	10	—	—	CT, CV
SITE 4							
SITE 5							

OVERALL OIL IMPACT: VL
 OIL IN STREAM CHANNEL? OIL ON BEACH WITHIN 50M OF STREAM MOUTH?

SUBSTRATE

Bedrock	Granule
Boulder	Sand 10
Cobble 20	Silt
Pebble 70	Veget.

SPECIES					
COUNT					

COMMENTS: Five HSOR patties on north bank of stream near mouth (all less than 20 cm diameter) => these were picked up by MAYSAP team.
 - This ANAD. Segment was surveyed by beach segment crew because ~~it~~ logistically it was much simpler for this team to conduct survey.

ACE 9961650+1F/SP

Sketch Map

13.000. A

17 Samples
May 20/91

1107 - 1600

Legend

- Area to sign
- ▭ ramp
- ▭ cob / Bd
- ▭ Boulders / cobbles

A3

LSOR 40%
2x3 over 20cm
mud has small
5mm brown plate
filled as
pours
water

Ap. 10%
2x3, around
cb over 6.0...
ramp
10/20 on

Few small patches of
very weathered cb
on bed rock walls
< 20 cm dia

LSOR very thin 2.5%
5x10
very weathered
Broken up

Few patches < 20cm
LSOR very thin
and weathered
not recoverable
Broken up

Site #2*
LSOR 5%
2x20m round
cb, too weathered
and thin (< 1cm)
to be picked up
Broken up

1 HSOR patch
< 20cm dia
Picked up

4 HSOR patches
picked up
all < 20cm
dia

SITE #1*

A1 Site #3*

ct. cv, 1x60
cm bed rock dip
< 10% very weathered

Zodiac 1400



MAYSAP 4.7

Small area
6x6, centre
2x4 50%
HSOR/AP
outer area
20% HSOR
Between P.3
& P.4 among
boulders
Picked up

LSOR, 10x50
5% down to
water line
between and under
cobbles

P.4
Few patches of HSOR
< 30cm dia, 5cm thick

ANAROMOUS Stream

MAYSAP 4.8

MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 4

OG J. M. Semple

ADEC Crosby

BIO J. Barry

LANDMANAGER Johnson for ADNR

USCG/NOAA McMahon/McDonald

SEGMENT TB002-A

SUBDIVISION A

DATE 5, 21, 1991

TIME 14:27 to 16:00

TIDE LEVEL +0.6 ft. to +3.6 ft.

ENERGY LEVEL: H M L

SURVEYED FROM: FOOT BOAT HELO

WEATHER: SUN CLOUDS FOG RAIN SNOW

TOTAL LENGTH SHORELINE SURVEYED: 850 m

NEAR SHORE SHEEN: BR RB SL NONE

EST. OIL CATEGORY LENGTH: W _____ m M _____ m N _____ m VL 66 m NO 784 m US _____ m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	BOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A1						S					Bud	V	1	60		X			
A2	S										"	L	2	3			X		
A3				S							740'	L	2	3			X		<u>See map</u>

DISTRIBUTION: C = 91-100%; B = 51-90%; P = 11-50%; S = 1-10%; T = <1%
 SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- _____ FRAMES _____

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		
									-									Several pits dug to - check, none showed
									-									subsurface oil
									-									
									-									
									-									
									-									

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

OG COMMENTS: Long section of plate LITZ ch/ps - B0 - cliffs backshore - wide intertidal delta to the north. Oil consists of ct/cv on bedrock inlets. Very scattered patchy; L50A thin and weathered; and in northern part have small patches of up (on bedrock ramp) L50A on anaerobic mud, and a few ct on bedrock walls. The island included in the segment showed heavier oiling. L50A on the north side and AD/HSOR on the south side.

Soil Sketch Map

TB-002-A

17 Samples
MAY 20/91

1107 - 1600

Leaves

- 200g / 100g
- 200g / 100g
- 200g / 100g
- 200g / 100g
- 200g / 100g

A3

SOA 40%
2x3 over area
mid few small
5mm brown plates

Ap. 10%
2x3, brown
cb over low
ramp
water on

Few small patches of
very weathered cl
on bed rock walls
< 20cm dia

SOA very thin, 45%
5x10
very weathered
Broken up

Few patches < 20cm
SOA very thin
and weathered
not recoverable

Broken up

Site #2*

LSOR 5%
2x20m around
cb, too weathered
and thin (< 1cm)
to be picked up
Broken up

1 HSOR patch
< 20cm dia
Picked up

4 HSOR patches
Picked up
all < 20cm
dia

Zo dia 1000

A, Site #3*

et, cv, 1x60
on bedrock dip
< 10% very weathered

SITE #4*

Zo dia

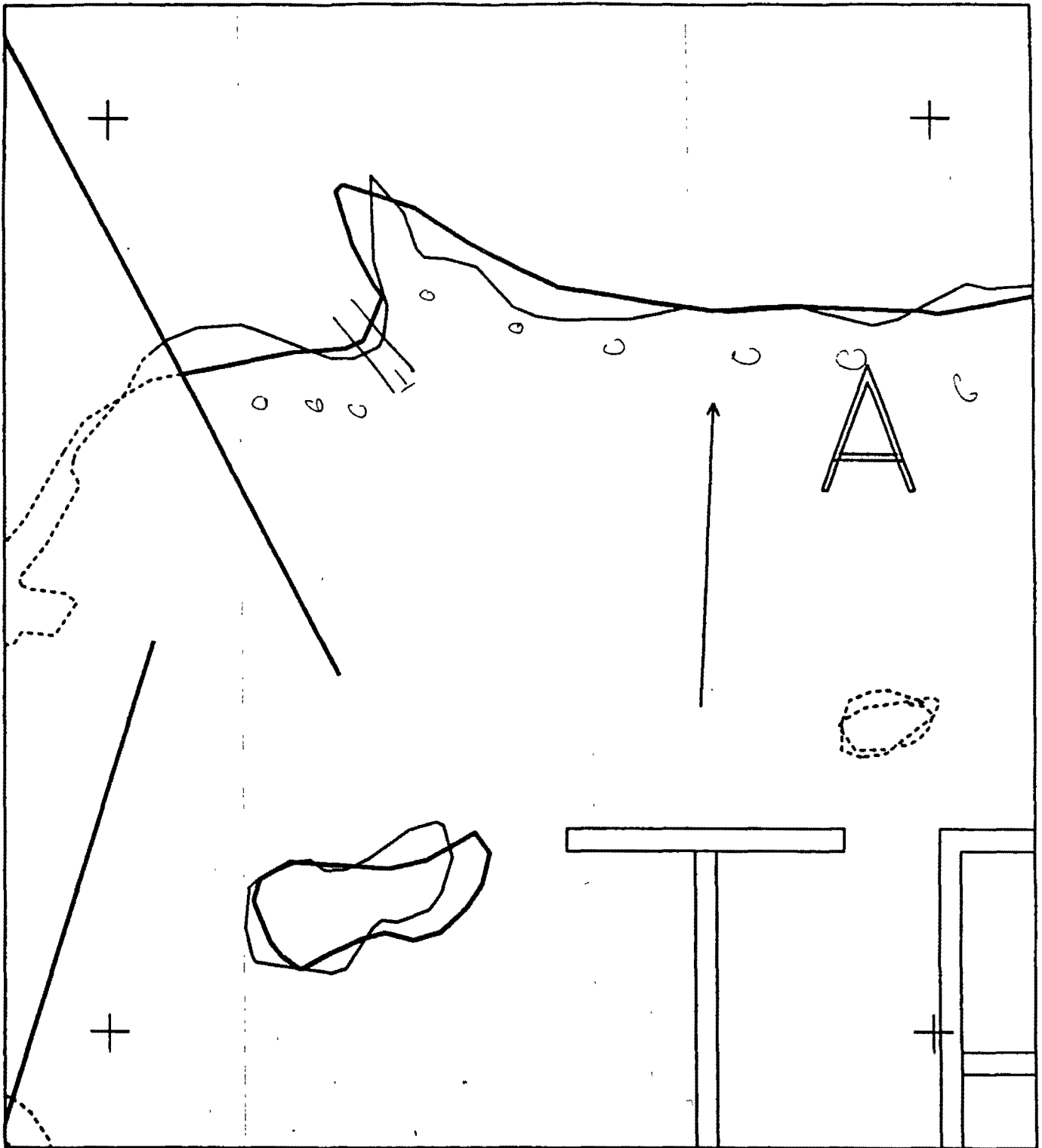
LSOR, 10x50
5% down to
water line
between and under
cubies

P.U. → Few patches of HSOR
< 30cm dia, 5cm thick

MAYSAP 4.7

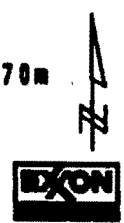
Overall area
6x6, centre
2x4 SOA
HSOR/Ap
outer area
20's HSOR
Between P.O
& cb among
fence rails
Picked up

MAYSAP 4.8

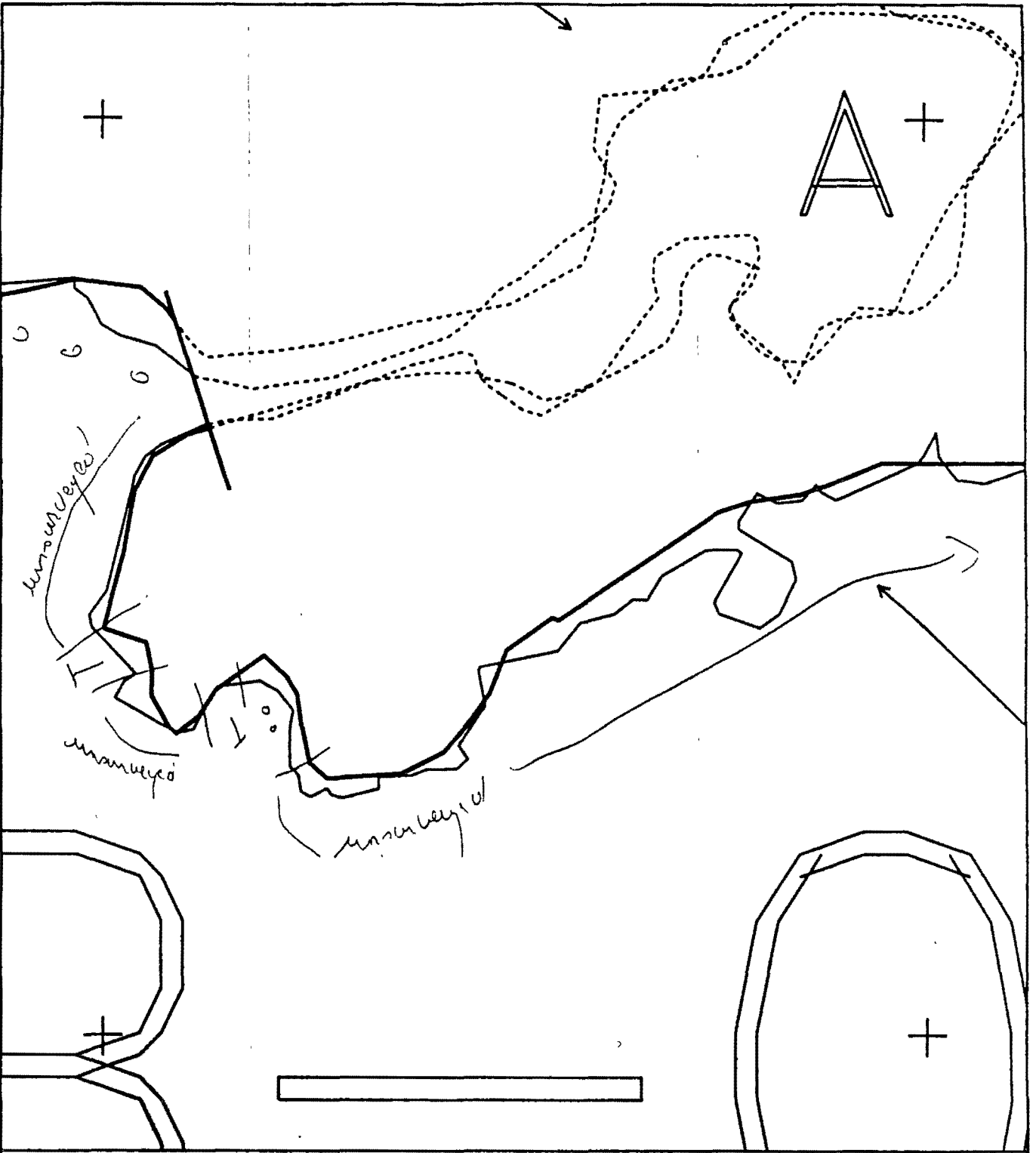


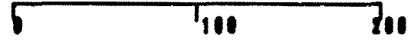

XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

TB002 A
 ADEC Subsegment Length: 2870m
 METERS
 0 100 200
 AK State Plane Zone 4
 816882aa

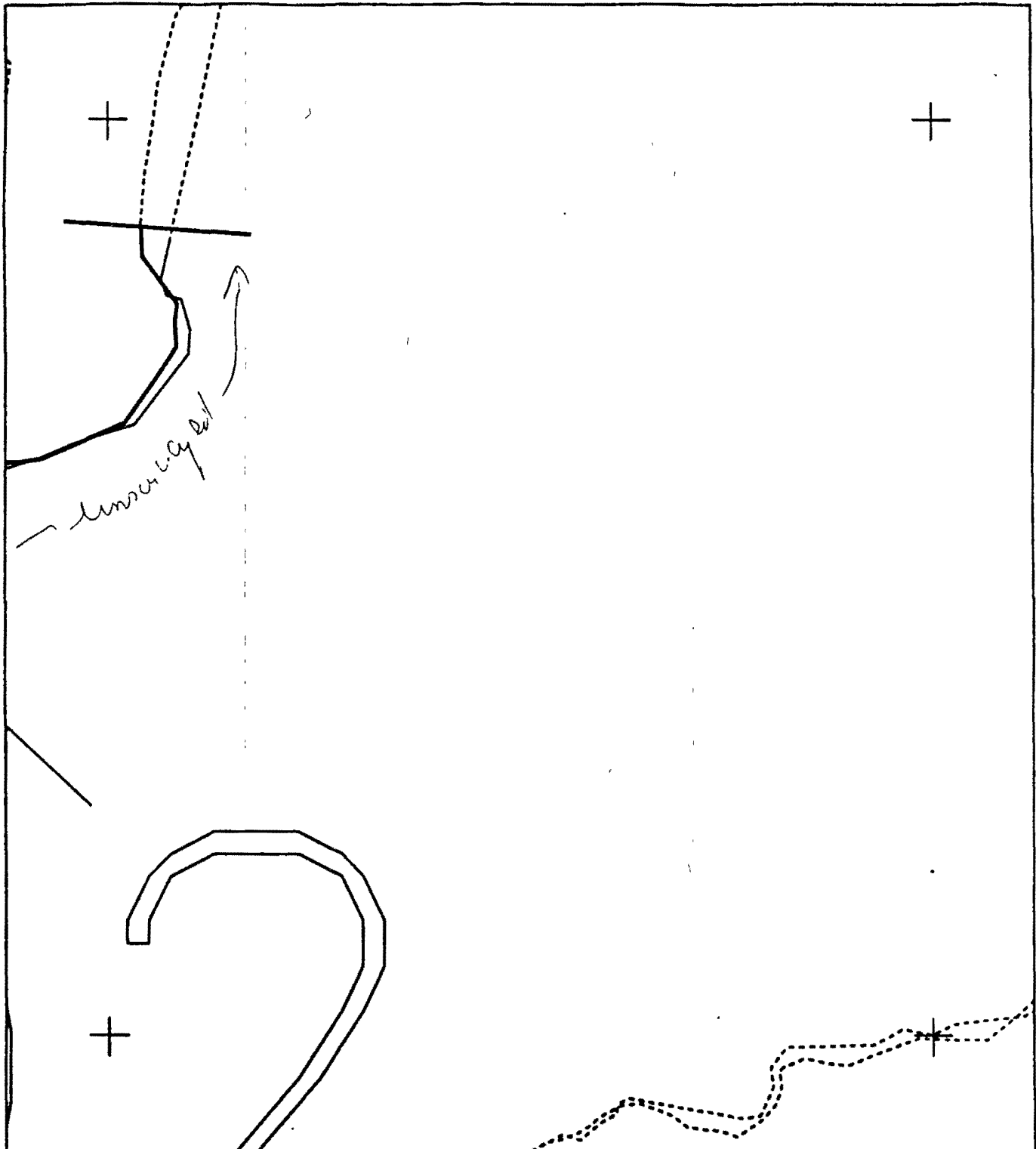


Subdivision Field Map
 Map Key: KENTB002Aa
 Name: John Sample
 Date: May 20 1991
 Date Entered:

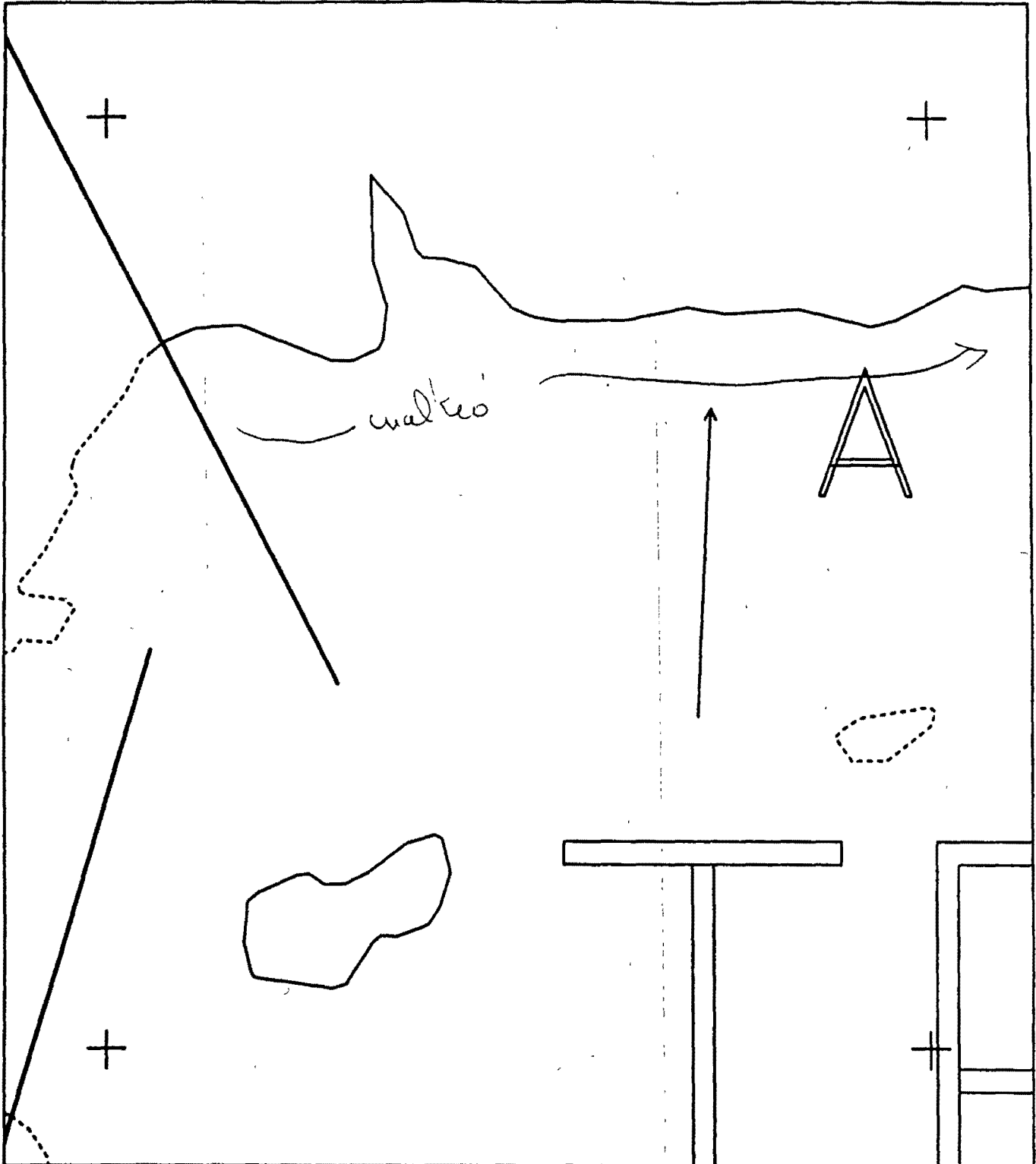


XXXX	Wide	TB002 A ADEC Subsegment Length: 2670m METERS  AR State Plane Zone 4 116002ab	 EXON	Subdivision Field Map
////	Medium			Map Key: KENTB002ab
----	Narrow			Name: <u>JM Semple</u>
TTTT	Very Light			Date: <u>May 20/91</u>
0000	No Oil			Date Entered:

ACE 9961656



XXXX	Wide	TB002 A ADEC Subsegment Length: 2670m METERS AK State Plane Zone 4 1160200	 EXON	Subdivision Field Map
////	Medium			Map Key: KENTB002Ac
----	Narrow			Name: <u>JR Sempels</u>
TTTT	Very Light			Date: <u>May 20/91</u>
0000	No Oil			Date Entered:



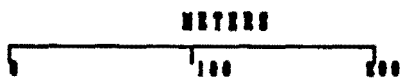
TB002 A

Subdivision Field Map

Map Key: KENTB002As

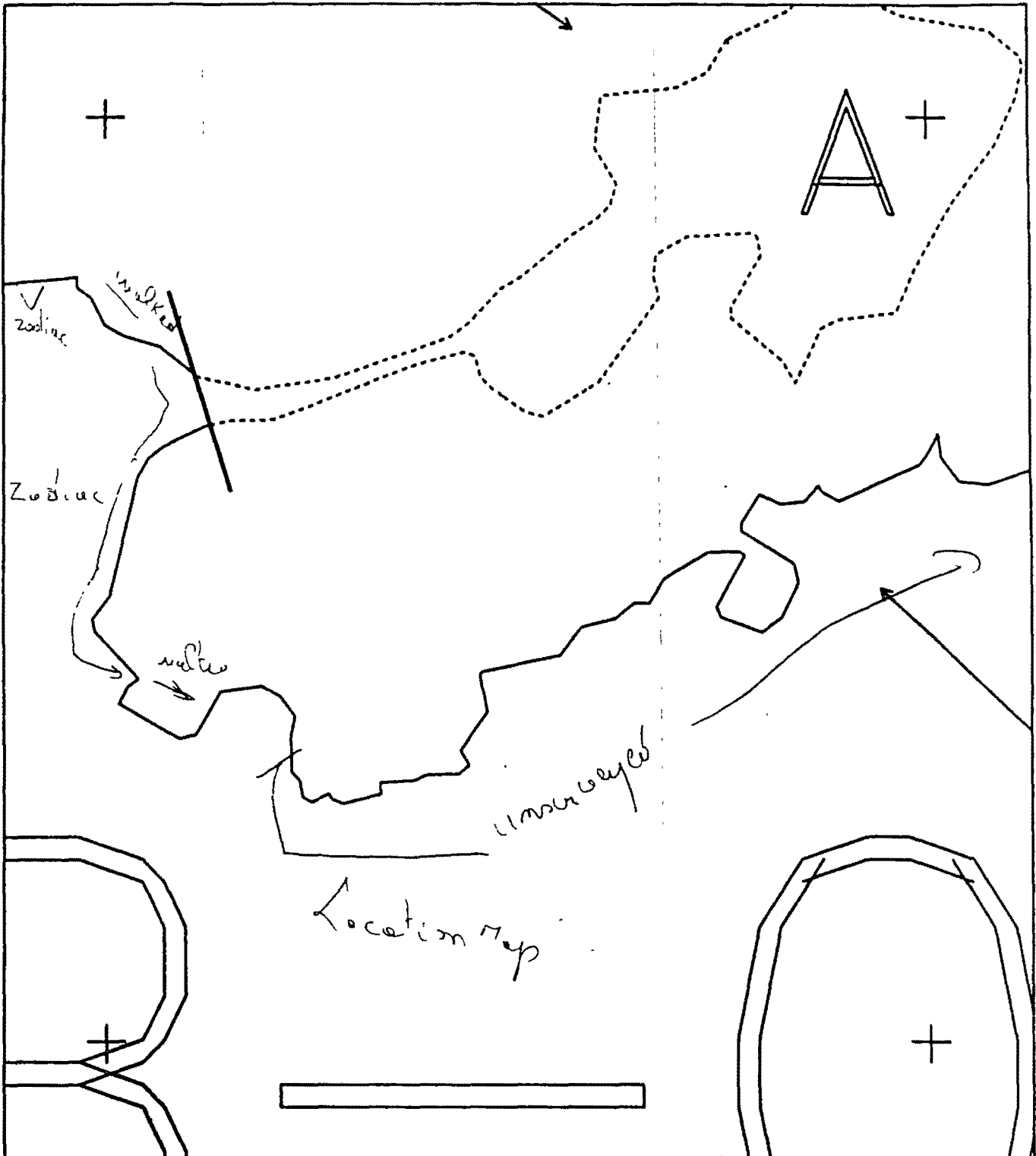
Name: J. Samples

Date: May 2019



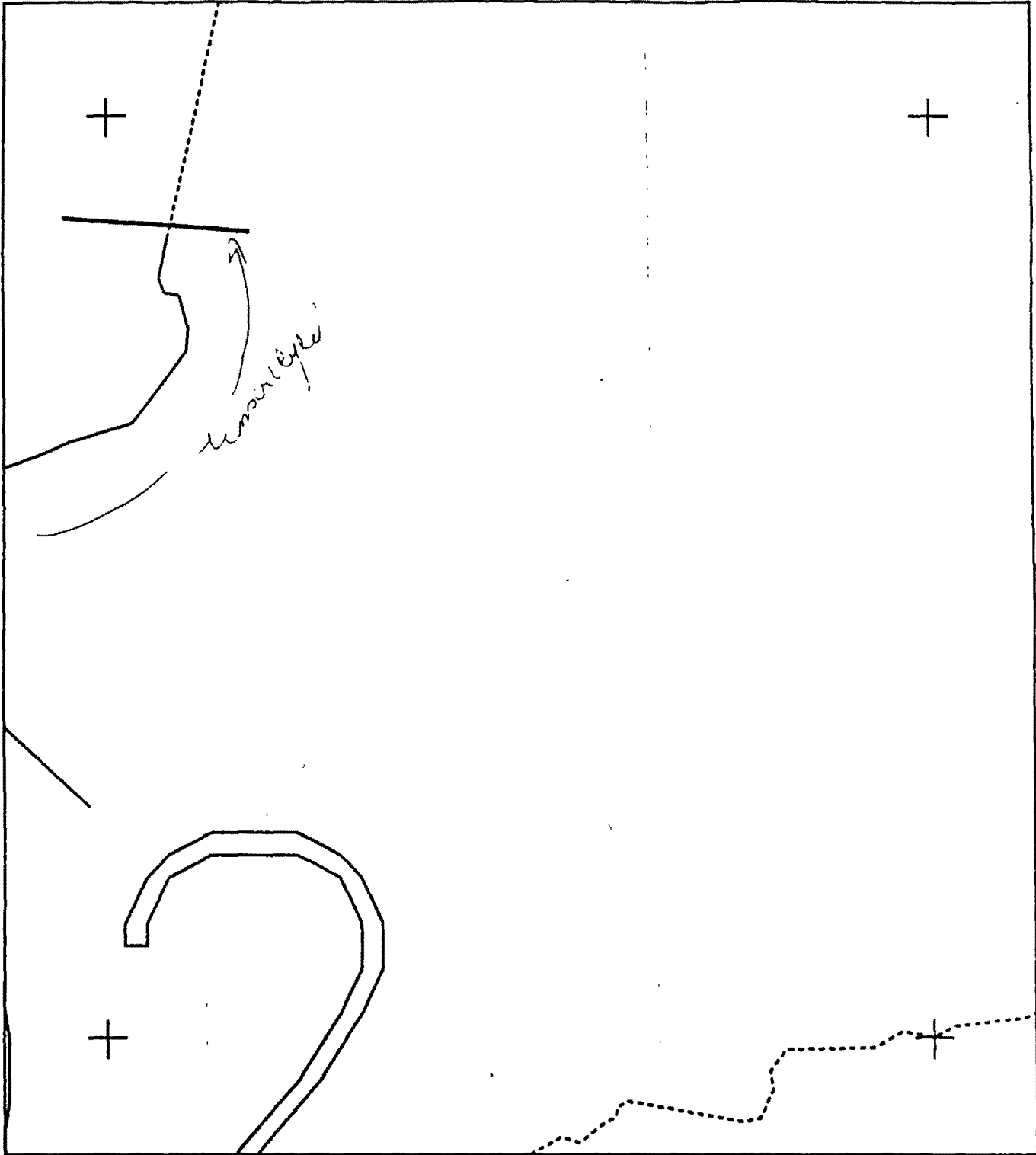
AK State Plane Zone 4
2160200

ACE 9961658



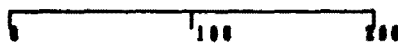
	TB002 A	Subdivision Field Map Map Key: KENTB002AB Name: <u>Jim Sample</u> Date: <u>May 30/91</u>
METERS 		
<small>AK State Plan Book 4 215002AB</small>		

ACE 9961659



TB002 A

METERS



AK State Plane Zone 4
NAD83

Subdivision Field Map

Map Key: KENT002Ac

Name: J. Semple

Date: May 20/91

ACE 9961660

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #	4	DATE/TIME	May 20, 1991 1415 - 1600
SEGMENT #	TB002	TIDAL HEIGHT (Range)	+0.6 => +3.6
SUBDIVISION	A	BIOLOGIST	JIM BARRY
SEA STATE	Calm	WIND SPEED/DIRECTION	Variable 0-5 kt., clear

COMMENTS / OBSERVATIONS - OILED SUBDIVISIONS

Oil Related Comments

- A1 Oil (CT) on bedrock cliffs. Little biota present in oiled area. Occasional barnacles, black lichen. Low zones have a moderately dense band of Fucus, with moderate littorine snail and limpet densities. Barnacles are moderately dense in Fucus zone. Mussels are sparse to moderate in the cobble talus, and somewhat more abundant on the tidal flat formed by the anadromous stream delta.
- A2 Oil (AP) is present in the upper to middle intertidal zone, amongst cobble and boulder on the bedrock ramp. The biota in this area are sparse to moderately abundant. Acorn barnacles are moderately abundant towards the lower zone, especially under cobble or on bedrock. Mussels are common in patches along crevices or under boulders. Amphipods, littorine snails, limpets, and occasional hermit crabs are the most common mobile invertebrates.
- A3 The oil (LSOR) at this site is located within a dense mussel bed in the middle intertidal zone. The oil is sparse and the bed is quite dense. Recent recruitment by the mussels has extended the bed size during the past year. The sediments underneath the bed are black, due to anaerobic conditions unrelated to the presence of oil. Clams are also present in this area. Barnacles are present in patches over some of the cobble. The nearby cobble and bedrock outcrops have moderate to dense cover of Fucus. Littorine snails and limpets are patchy within the nearby cobble.

(continued)

WILDLIFE OBSERVATIONS - Completed on all subdivisions

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1 Nest (unattended)		
Seabirds			
Waterfowl	2	24	
Gulls/Kittiwakes	2	25	
Shorebirds	1	1	
Corvids	1	20	
Other Birds			
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters		River Otter	1
Pinnipeds (specify)			
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

ACE 9961661

Other areas

The island site, where some oil was found and treated, had fairly dense cover of Fucus in the middle zone, with sparse densities of mussels. The oil was located in the upper zone above the Fucus, where biota were much less abundant. Littorine snails, limpets, and the isopod, *Ligia pallasii*, as well as oligochaete worms, were found amongst the cobble, but in fairly low densities. Filamentous green algae were the most abundant species, and formed a sparse film on most cobble in the high zone.

Cleanup Considerations

Manual cleanup was performed at several locations on this subdivision. Additional manual cleanup will have little or no adverse effect on the biota at A1 or A2. Cleanup should not be performed at site A3. This will undoubtedly impact the mussel bed and there is so little oil remaining that the benefits would not balance the biological impact.

General Characteristics of TB002-A

This subdivision includes an island with boulder talus and bedrock outcrop shores, an anadromous stream and stream delta, a long medium angle cobble and pebble beach, and a few pocket beaches of pebbles to cobble. Most sites are protected shores, though a couple are exposed to low to moderate surf at times. The biota vary according to the habitat type. Bedrock shores typically have quite high cover or densities of organisms, with a zone of green filamentous algae above a band of Fucus and barnacles. The biota of cobble and pebble shores vary according to slope and exposure. The cobble shores on the northwestern shore are well protected, and have fairly high cover of Fucus on most cobble in the middle zone, as well as moderate, and patchy, densities of barnacles. Littorines, limpets, and oligochaetes are usually moderate in density. Higher in the intertidal the abundances of most species are low. Barnacles appear to be very scarce, but can be found on the underside of many cobbles. Similarly, oligochaete worms are fairly common under cobble, especially where some organic detritus is present.

The tidal flat formed by the delta of the anadromous stream may be an important local site for bird roosting and foraging. The flat has a moderately dense mussel and clam bed.

(continued)

General Zonation Pattern : Bedrock or Boulder/Cobble Talus Shores

Biota:	Tide Level	SupraTidal	Upper	Middle	Low	Subtidal
Oil Spatters						
Black Lichen		- - - - -				
Bare Rock			- - - - -			
Green Filamentous Algae			- - + + + + + - - - - -			
Rockweed (Fucus)				- - + + + + + - - - - -		
Barnacles (Balanus)			- - + + + - - - - -			
Red Algae					+ + + + + - - - - -	
Green Algae (Ulva/other)			- - - - -	+ + + + +		- - - - -
Mussels (Mytilus)				- - - + + + - - -		
Crustose Red Algae (Hildenbrandia)				- - - + + + + + - - -		
Upright Brown Algae (not Fucus)					- - - + + + + + * * * * * * * * * * * * * * *	
Eel Grass						- - - + + + *
Clams						- - - - -

Legend: (-) Sparse to rare, (+) Moderate, (*) Abundant

Common Species on TB002-A

A. Marine Plants

1. Diatoms, Blue Greens
2. Green Algae - Chlorophyta
Enteromorpha sp., Ulva sp., Urospora sp.
3. Brown Algae - Phaeophyta
Ectocarpus spp., Fucus distichus, Hildenbrandia sp., Ralfsia sp.,
Syctosiphon lomentaria
4. Red Algae - Rhodophyta
Endocladia muricata,, Halosaccion glandiforme, Iridaea sp.,
Odonthalia floccosa, Petrocelis sp., Porphyra sp., Rhodomela larix
5. Higher Plants - Zostera marina (eel grass), Leymus mollis (beach rye grass)

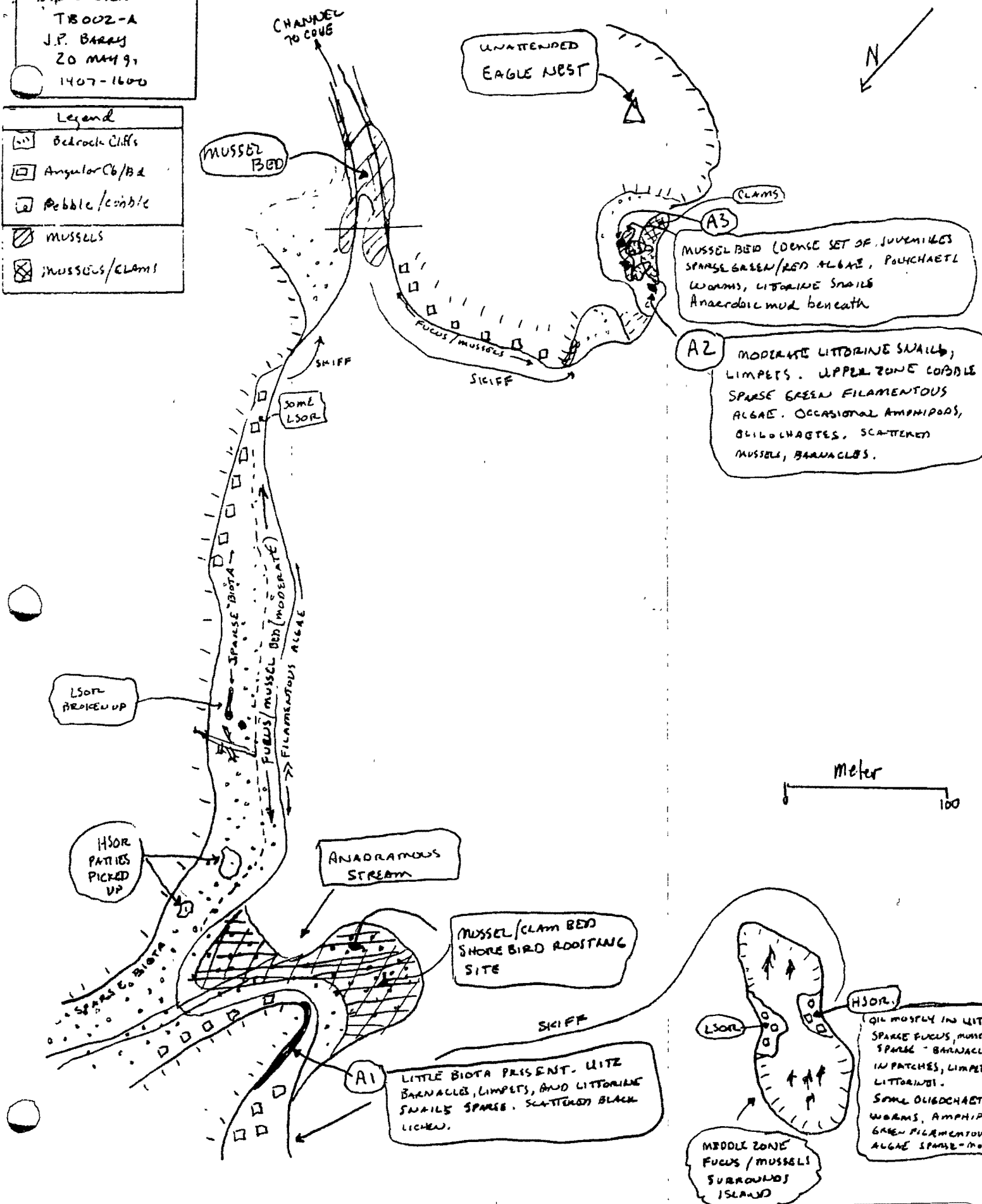
II. Marine Animals

1. Sponges - Porifera - Halichondria bowerbanki?,
2. Anemones - Anthopleura artemesia, Epiactis ritteri,
3. Hydroids - Sertulariidae
5. Flatworms - Platyhelminthes - Polyclads
6. Nemertean Worms - Ribbon Worms - Emplectonema sp.
8. Polychaete Worms
Nereidae - Nereis spp.
Spirorbidae - Spirorbis sp.
10. Crustaceans
 - a. Amphipods - Traskorchestia traskiana
 - b. Barnacles - Balanus glandula
 - c. Crabs - Paguridae (hermit crabs)
 - d. Isopods - Idotea wosnesenskii, Gnorimorsphaeroma oregonensis, Ligia pallasii
11. Mollusca
 - a. Chitons - Mopalia mucosa, Tonicella lineata,
 - b. Snails - Gastropods
Littorina sitkana, L. keenae, Natica clausa, Nucella lamellosa,
N. lima, Searlesia dira

- c. Limpets - *Lottia digitalis*, *L. limatula*, *L. persona*, *Tectura fenestrata*, *T. persona*, *T. scutum*
 - d. Nudibranches - *Lamellidoris fusca*, *Melibe leonina*, *Onchidella borealis*
 - e. Bivalves - *Clinocardium* sp., *C. nuttalli*, *Hiatella arctica*, *Macoma nasuta*, *Modiolus modiolus*, *Mytilus edulis*, *Pododesmus cepio*, *Prototheca staminea*, *Saxidomus giganteus*.
12. Echinoderms
- a. Brittle Stars - *Ophiolus aculeatus?*, *Ophiothrix spiculata?*, *Amphipholis?*
 - b. Sea stars - *Dermasterias imbricata*, *Leptasterias hexactis*, *Pycnopoda helianthoides*
 - c. Sea Cucumbers - Holothurians - *Eupentacta* sp.,
 - d. Urchins - *Strongylocentrotus droebachiensis*
13. Bryozoans - *Membranipora* sp., *Schizoporella* sp.
14. Ascidians - *Synocium?* sp., *Aplidium?*
15. Fishes
- Cottidae -
 - Stichaeidae - *Xiphister atropurpureus*, *X. mucosus*
- III. Birds - Crow (20), Lesser Scaup (20), Glaucous-winged Gull (20), Black-bellied plover (1), Bonaparte's Gull (5), Harlequin Duck (4).

DIP SKETCH MAP
TB002-A
J.P. Barry
20 MAY 91
1407-1600

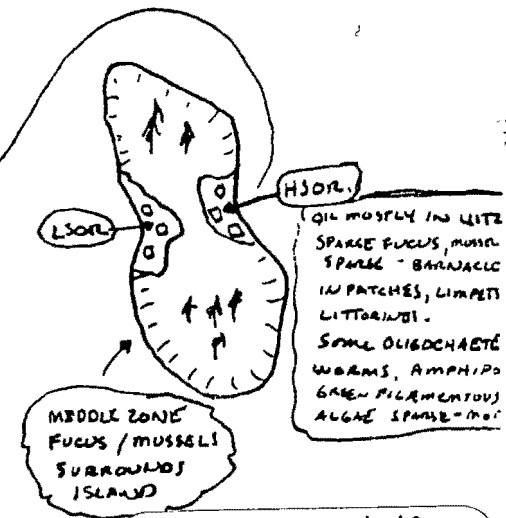
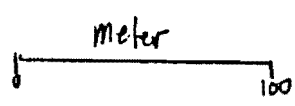
- Legend
- Bedrock Cliffs
 - Angular Cb/Bd
 - Pebble/cobble
 - MUSSELS
 - MUSSELS/CLAMS



A3
MUSSEL BED (DENSE SET OF JUVENILES
SPARSE GREEN/RED ALGAE, POUCHNET
WORMS, LITTORINE SNAILS
Anaerobic mud beneath

A2
MODERATE LITTORINE SNAILS,
LIMPETS. UPPER ZONE COBBLE.
SPARSE GREEN FILAMENTOUS
ALGAE. OCCASIONAL AMPHIPODS,
OLIGOCHAETES, SCATTERED
MUSSEL, BARNACLES.

A1
LITTLE BIOTA PRESENT. LITE
BARNACLES, LIMPETS, AND LITTORINE
SNAILS SPARSE. SCATTERED BLACK
LICHEN.



ALASKA DEPARTMENT OF FISH AND GAME
HABITAT DIVISION

OILED ANADROMOUS FISH STREAM FORM

Recorded by: Lee Glenn Date: 9-26-89 Time: 1730 Tide: _____
Rick Randall

Stream Location: Tensina Bay TB-3 Stream Catalog No: 232-10-10340
~~V-10340~~

Lat.: 59 18 00 Long.: 151 57 00

Presence of oil: Up stream 82.2 Down stream 104.7

Oil Sample No(s)	Location(s)
<u>RDR-9-26-89-1758</u> <u>Tensina Bay</u>	<u>104.7 meters below stream mouth outside flats</u>
_____	_____
_____	_____
_____	_____

35 mm Photos Roll No(s): _____

Exposure No(s)	Description(s)
_____	_____
_____	_____
_____	_____
_____	_____

Video Footage Cassette No(s): TB 89-LP6-004-H-Video

Description: 3862-4298-4426 oil sheen coming off tide
flats as tide moves out. degree of oiling in intertidal
zone - set up of photo transect - Aerial of stream & bay

ACE 9961666

ACE 1940351

ALASKA DEPARTMENT OF FISH AND GAME
HABITAT DIVISION

OILED ANADROMOUS FISH STREAM FORM

Recorded by: Lee Glenn Date: 9-26-89 Time: 1730 Tide: _____
Rick Randall

Stream Location: Tonsina Bay TB-2A Stream Catalog No: 232-10-10340

Lat.: 59 18 80 Long.: 150 56 15

Presence of oil: Up stream 60 meters Down stream 7.5 yds below stream mouth

Oil Sample No(s)

Location(s)

ROR-9/26/89-1781
Tonsina Bay

60 meters above stream mouth in grass on stream bank

35 mm Photos

Roll No(s): _____

Exposure No(s)

Description(s)

Video Footage

Cassette No(s): 89-LPG-04-H-Video

Description: 3559-3861 - Record of degree of oiling and
presence of salmon

ACE 9961708

ACE 1940350

097 9/22/89

1230 Tonsing Bay when Biore
site was very head of Bay. Intine
bits still covered. (saturated in oil
as before. The grass etc. in
the hole after water is dead,
highest.

Found pink in stream 100?
019 found on both sides of the
stream but mainly in the right
side facing up stream

Samples Tonsing A 2 samples
VYKX 13:00
82.2 meters up the

Small Tonsing B 2 samples

Lower 1324
30 meters below math on tide flats

Ton A 82.2 meters of stream from
point at math of stream.
222 meters from math to base of falls
Tide was not low enough but looks
like mussels may be out 60
or more meters below math.

Stream to left of main stream
found oil along math. Fish

ACE 99617094/S

ACE 1940379+1/S/et

9/26
started at Tansing right hand creek
just before head of bay, where Susa & I
loaded. We collected sample # 1731
took DUPE sample taken 60 meters upstream
from ~~mouth measured stream~~.

loaded at Head of Tansing bio site
at 1745 and collected sample #
1755 \swarrow meters below mouth
of stream $60 \times 1 + 44.7 = 104.7$ meters
PHOTO STAKE \swarrow ^{Head} 37.4 meters
below top of ^{marker} stake beach from
marker ^{stake} the other stake
is 60 meters ^{mouth} below top stake
loaded at Pike Is! to locate site &
put earth anchors in beach for photo
traces.

ACE 9961710 -145/HF

ACE 1940380 -1S

Alaska Department of Fish and Game

Homer Office - Exxon Valdez Spill Response

ALASKA DEPT. OF
FISH & GAME

MAY 6 1991

Phone Number (907) 235-5322 (Lynette for fax questions)
Telefax Number (907) 235-5385

REGION II
HABITAT DIVISION

Transmittal Sheet

Distribution:

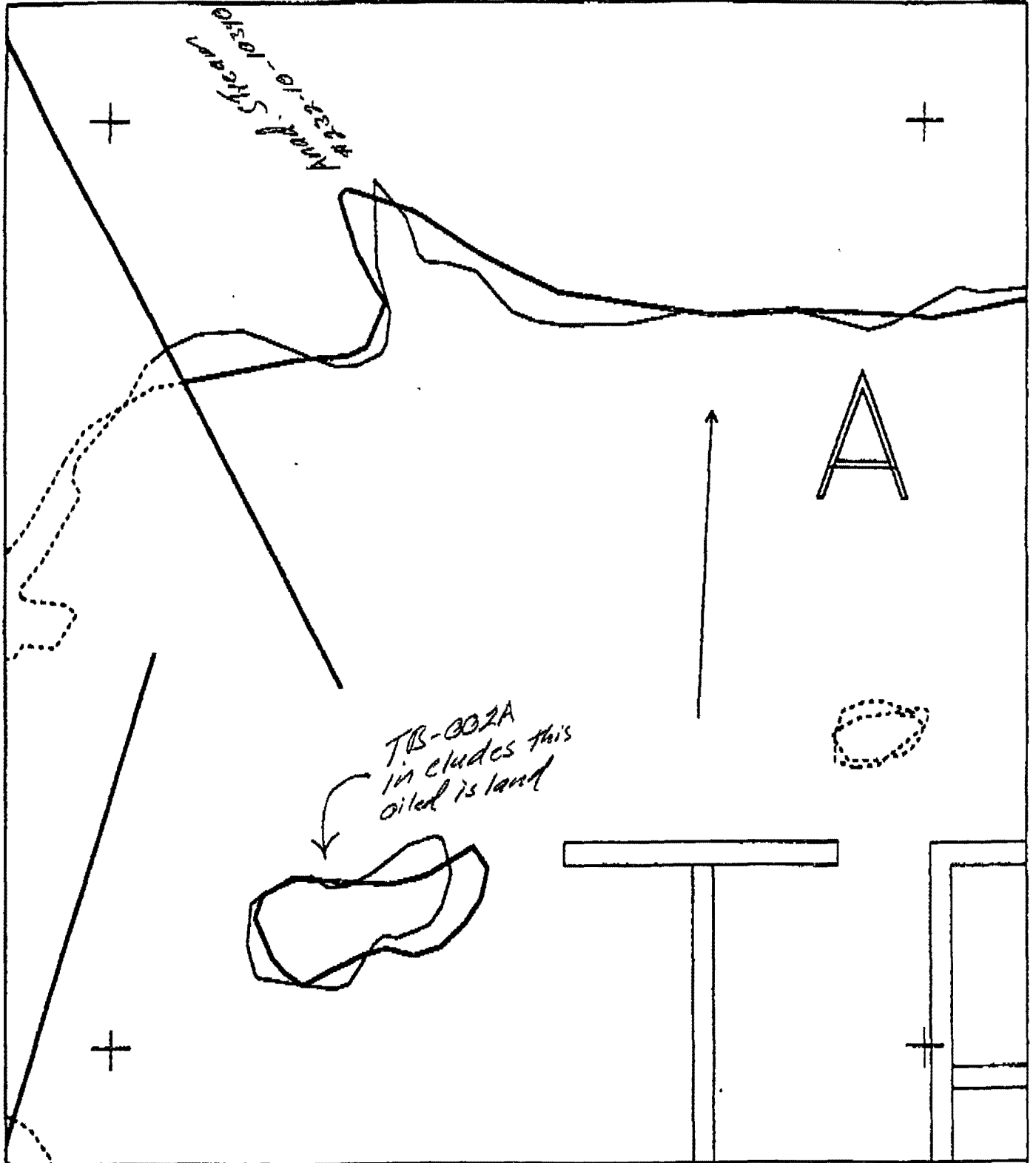
- Anchorage ADF&G (349-1723): Mark Kinnala
- Valdez ADF&G (835-8071): _____
- Seward ADF&G (224-7025): _____
- Kodiak ADF&G (486-4969): _____
- Homer ADF&G (235-2448): _____
- Homer USFWS (235-): _____
- Other (): _____

From: Lee Glenn

Number of Pages including the Cover Sheet: 8

Comments and Notes: Includes for your info. The
1990 ASAP of the oiling on this segment.
This ASAP does not show subsurface oil as
the crew did not have time

(1)



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

TB002 A

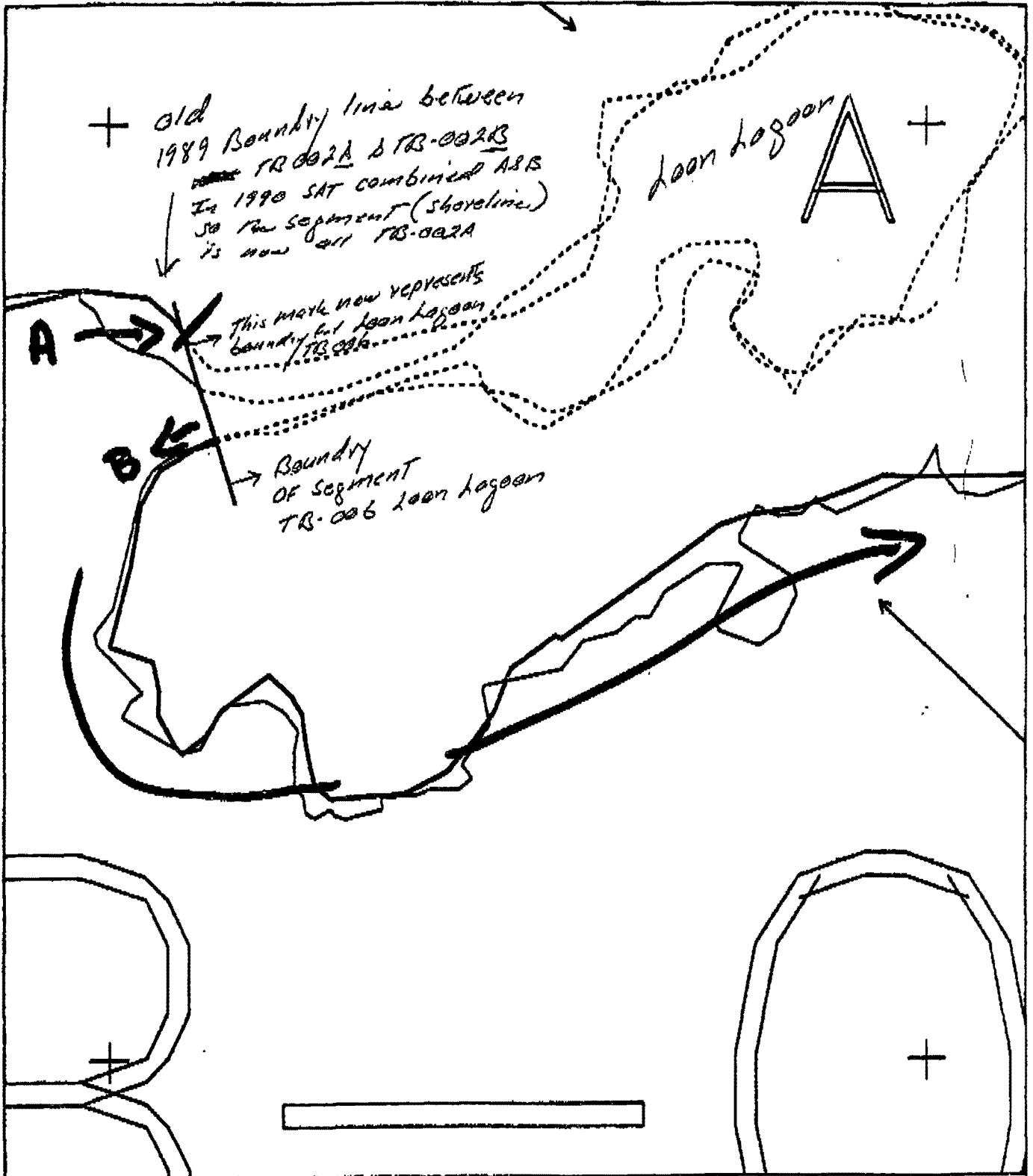
ADEC Subsegment Length: 2670m
METERS

0 100 200
 AK State Plane Zone 4
 815002m



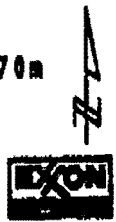
Subdivision Field Map
 Map Key: KENT0002A
 Name: _____
 Date: _____
 Date Entered: _____

#2



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

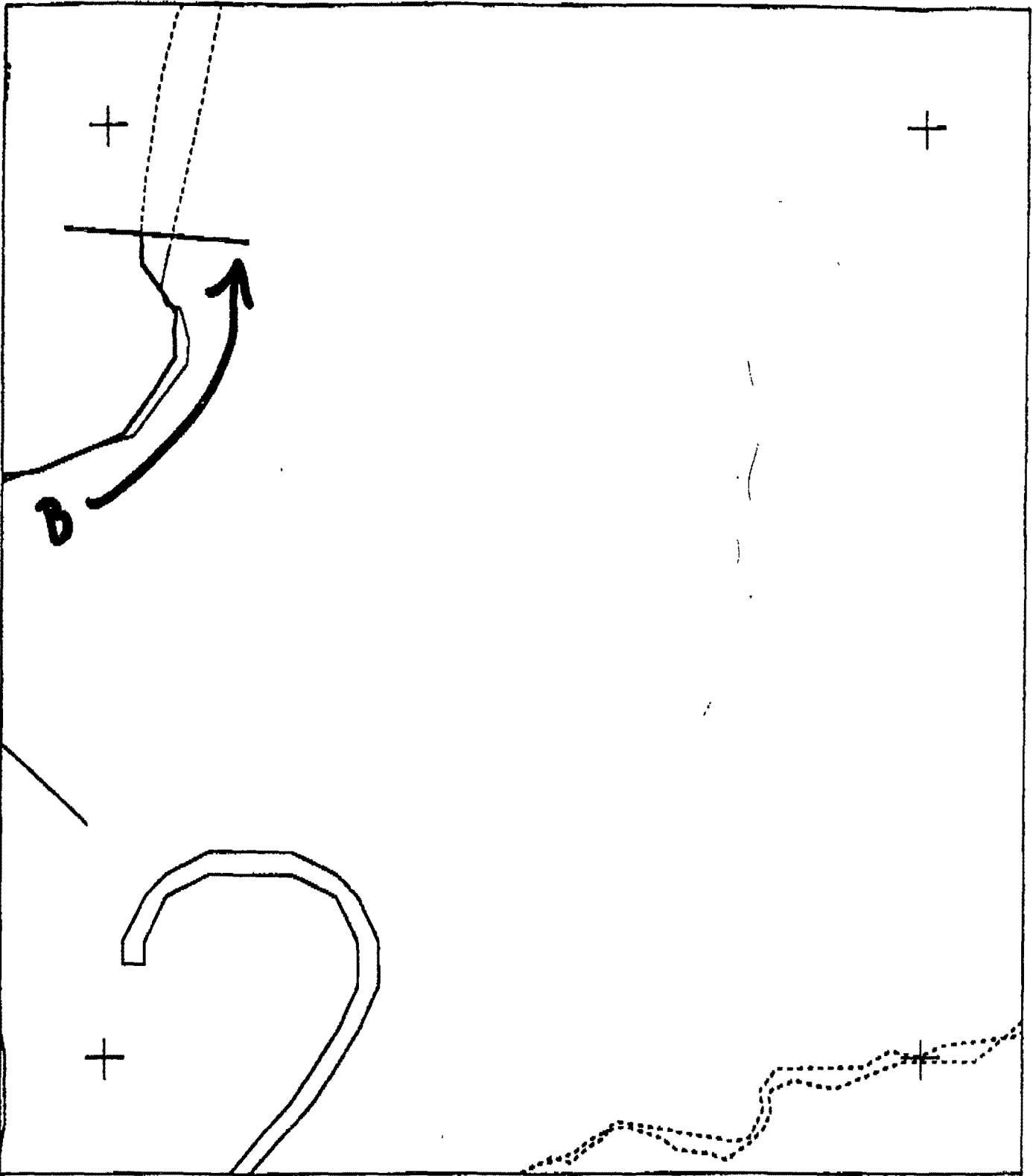
TB002 A
 ADEC Subsegment Length: 2670m
 METERS
 5 100 200
 AK State Plane Zone 4
 418020b

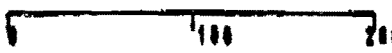


Subdivision Field Map
 Map Key: KENTB002Ab
 Name: _____
 Date: _____
 Date Entered: _____

(3)

#3



XXXX	Wide	TB002 A ADEC Subsegment Length: 2670m METERS  AK State Plane Zone 6 41200200	Subdivision Field Map
////	Medium		Map Key: KENTB002Ac
----	Narrow		Name: _____
TTTT	Very Light		Date: _____
0000	No Oil		Date Entered: _____



4

SKETCH MAP - A

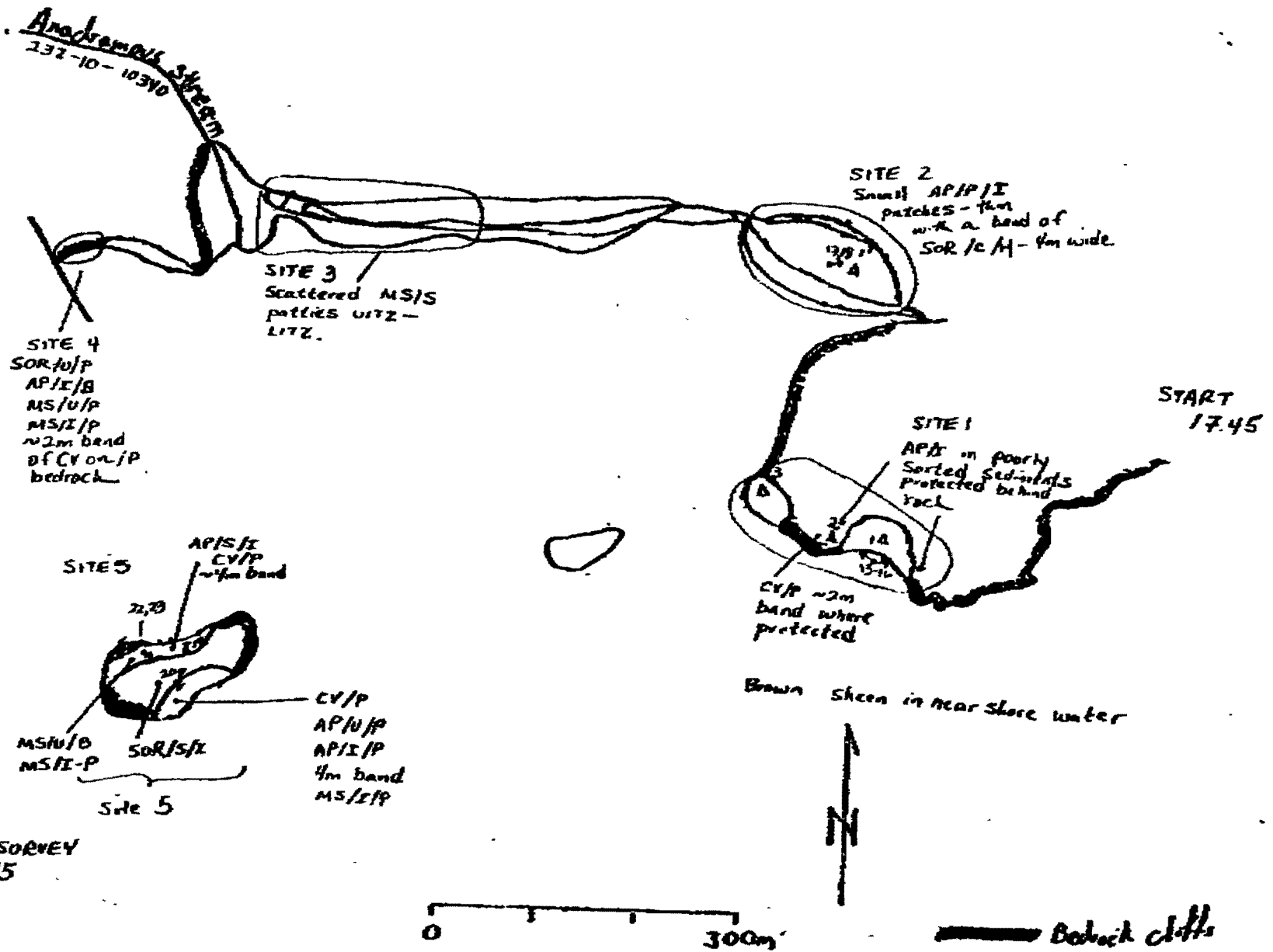
SENT BY: ST. Oil Spill Resp Ctr: 5-8-91; 12:01; HOMER, ALASKA 99603-

13491723: # 5

SEGMENT TB-02
 SUBMISSION A
 DATE 04 Aug 90

- CHECKLIST**
- Di Area
 - Approx. Scale
 - Sp/ Sub Body
 - Cl Det
 - Width
 - Length
 - % Cover
 - Substrate Character
 - Est. H/W/L/A/W/L
 - SSC
 - Profile Location(s)
 - Profile(s)
 - T Location(s)
 - Site Location(s)

- LEGEND**
- 1 Δ
 - 2 Δ
 - CT/C
 - CT/B
 - CT/P
 - CT/S
 - lll



NP 210 PO - CV 150 CT - ST - MS 350w - SOR 150

STATE OF ALASKA FIELD MEMO

Permit Number ASAP Serial Number 1099

To (Name and Organization) JON CEARNECKI (EXXON) CHIEF AEC VANDEPELS (USCG)

Date and Time 8/10/90 1520 Area GOA, Kenai, HOMER ZONE.

Location and Section of Work TONSINA Bay - TBOOZA

Authorization to Proceed Non Conformance ADEC Permit ADF&G Permit
 ADNR Permit Problem Identification Other

ADEC RECOMMENDS THE FOLLOWING TREATMENT FOR TBOOZA.

ASAP SURVEY SITE #1:

- A) MANUALLY REMOVE H/SOR, AP
- B) MANUALLY EXPOSE SUBSURFACE OIL, FOLLOWING SEAM & REMOVE H/SOR.
- C) MANUALLY REMOVE H/SOR IN LITE IN THE VICINITY OF PIT #3.

ASAP SURVEY SITE #2:

- A) MANUALLY REMOVE H/SOR & AP.

ASAP SURVEY SITE #3, ANADROMOUS STREAM & B/C/G SHORELINE:

- A) MANUALLY REMOVE MS PATIES, MS & ANY H/SOR OR AP.
- B) ROLLING & B/C WHEN POSSIBLE TO ACCESS OILING WHEN PASS USING POM POMS AS NEEDED.

ASAP SURVEY SITE #5, SMALL ISLAND - SADDLE IN CENTER OF ISLAND:

- A) MANUALLY REMOVE AP/MS FROM INTERSTICES.
- B) ROLLING B/C WHEN POSSIBLE FOR REMOVAL OF AP/MS.
- C) SPOT WASH OF COVER & INACCESSIBLE OIL USING POM-POMS TO RECOVER OIL, & WIPE ROCKS.

SM TOMBOLO ON W. END OF ISLAND.

- A) MANUALLY REMOVE MS & OILED SED. (SM C, P)

Permit Expiration Date

State Representative

Chris S. Crosby

Recipient

Action Taken by Recipient

6

FIELD SHORELINE COMMENT SHEET

SEGMENT AS / TB-02 SUBDIVISION: A SITE: 1-5 DATE 8/5/90

USCG

NAME AEC Vandepelt SIGNATURE AEC Vandepelt

YES NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: The island in TB2 A should be reassessed. It is not oiled to the point where I feel it should be worked again this year. I would let it weather over the winter because it is a high energy beach.

ADEC

NAME Chara J. Crosby SIGNATURE Chara J. Crosby

YES NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Work Plan Modification was submitted for further work on TB002A (Island) - site # 5. This site can benefit the most from further work this year (1990) - site # 4 & 3 adjacent to head stream need re-assessment & removal of MS. Site # 2: Manual removal of AP & SOR the removal of which was called for in '90 work order - treatment here was incomplete. SITE # 1 - Camp Beach. This area has H/SOR & AP (Please note pits # 1-3) The SOR/H was patchy to broken. 1990 work order called for its removal - treatment incomplete - SEE photo I concur with Kenagy's observations that these are low to MOD energy sites. 13-16.

LAND MANAGER

NAME David K. Kenagy ADNR SIGNATURE [Signature]

YES NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: All beach areas in this subdivision are low to moderate energy areas. Scattered patches of Mousse, SOR & Cover were observed adjacent to the anadromous fish stream in this subdivision. On the island, mousse, asphalt cover were observed in boulder area as well as a thin to where mousse was observed in fractured gravels and small cobble. Additional treatment recommended in 1990. Priority for re-assessment due to anadromous stream and wildlife utilization.

EXXON

NAME Tom Czarnicki SIGNATURE Tom Czarnicki

YES NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: The oiling on this segment is such that a kayaker may see it or get into it. However after the winter I would hope this segment would be signed off. The surface oil residual (SOR) is there but may break up during winter.

(7)

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT TB-02 SUBDIVISION A DATED 8/5/90.

MODIFICATION CLASS I _____ CLASS II ✓ CLASS III _____

1. REASON FOR MODIFICATION

The small island, as shown the ASAP sketchmap (site 5) has one area with a 4 m. band of asphalt / U & I / P. The majority of this asphalt is readily recoverable. Pooled mousse is also present and can be recovered, as well. A tumbolo on the west end of the island has mousse / U / B. This site bleeds silver and rainbow sheen. Sea otters, birds and migratory waterfowl frequent this area. This is a low to moderate energy area and will likely be minimally affected by winter storms.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

Manual removal of asphalt and mousse, as well as oiled sediments.

3. TIMING ISSUES

Complete by September 15, 1990.

ADEC Clara J. Crosby

EXXON _____

USCG A.E.C. Vandenberg - I disagree, wait until after reassessment is completed 15 Sept. 90.

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

Sketch Map
 B.003.A
 14 Samples
 17/20/91
 1107 - 1600
 Legend:
 --- 100% clay
 --- ramp
 --- 20/30
 [] 20/30/col/30

A3
 50A < 5%
 2x3 area around
 mid few small
 5mm brown rubble
 (filled with
 ground
 water)

A2
 Ap. 10%
 2x3, around
 cb over 100% of
 ramp
 water on

Few small patches of
 very weathered ct &
 on bed rock walls
 < 20cm dia

50R. very thin. 25%
 5x10
 very weathered
 Broken up

Few patches < 20cm
 2500 very thin
 and weathered
 not recoverable
 Broken up

Site #2 *
 L50R 5%
 2x20m around
 cb, too weathered
 and thin (< 1cm)
 to be picked up
 Broken up

1 H50R patch
 < 20cm dia
 Picked up

4 H50A patches
 Picked up
 all < 20cm
 dia

A1 Site #3 *
 ct, cv, 1x60
 cm bedrock diff
 < 10% very weathered

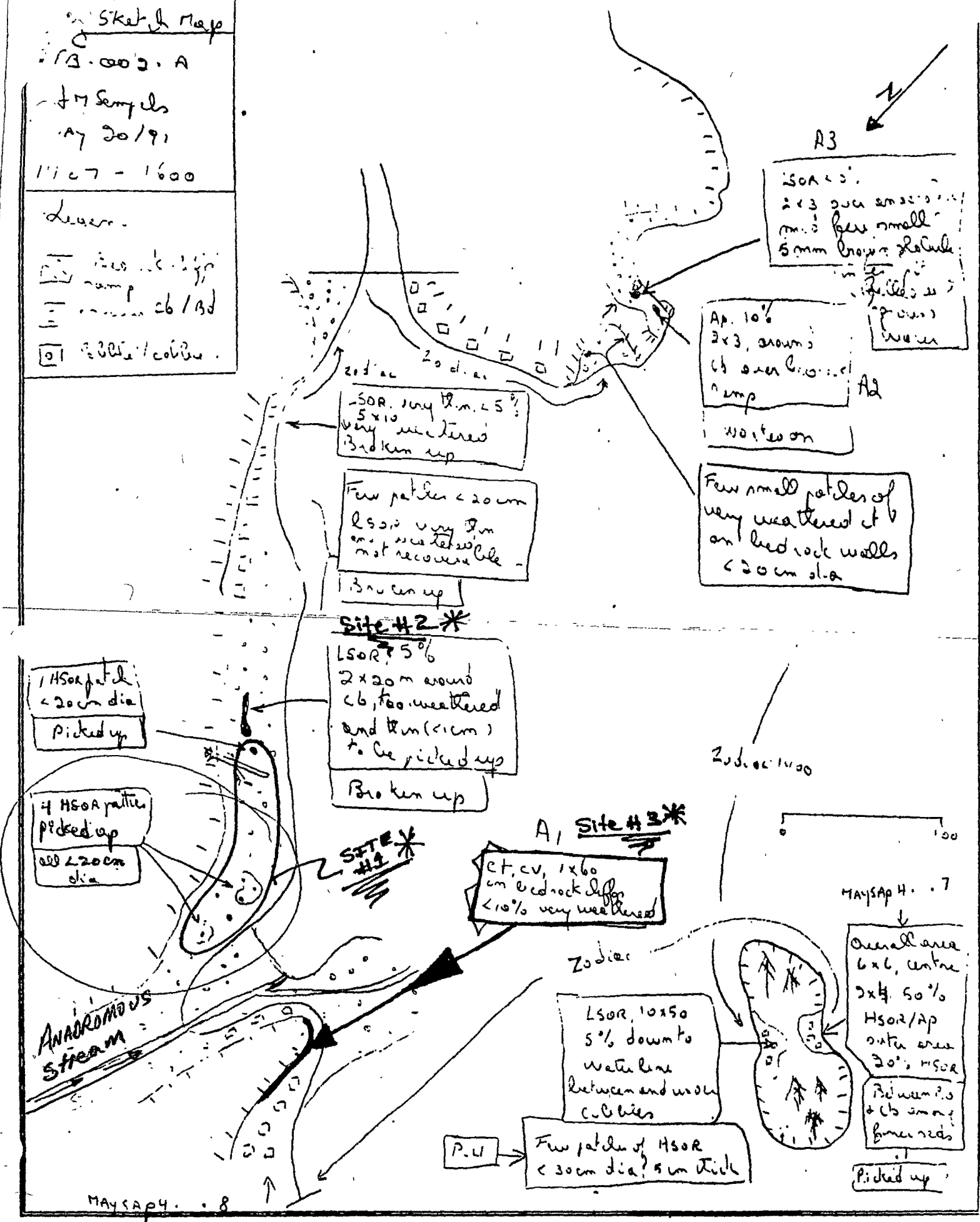
L50R, 10x50
 5% down to
 water line
 between and under
 c.b. hills

P.U. → Few patches of H50R
 < 30cm dia, 5cm thick

MAYSAP 4. .7
 Overall area
 6x6, centre
 2x4, 50%
 H50R/Ap
 outer area
 20% H50R
 Between 2.0
 & 3.0 some
 brown reds
 Picked up

ANAROMOUS
 Stream

MAYSAP 4. .8





MAYSAP-1991

TONGINA NORTH Creek

ASC NUMBER: 232-10-10340 SEGMENT NUMBER: TB-02 YR CATALOGED:

LOCATION: Tongina Bay LATITUDE: 59°18'44"

MAP NAME: LONGITUDE: 150°56'17"

NAK K-UNIT: LOCAL STREAM #:

USGS QUADRANGLE: Seldovia B-3 LEGAL: S 10S 10W15

SHORELINE TYPE: Beach ALL SEGMENTS:

WAVE EXPOSURE: Low

SC NUMBER: TEAM RECORDER: CLARA Crosby (AOEC)

SURVEY TYPE: SS, BS OBSERVERS: Duncan Fitzgerald (OG)

METHOD: Foot Jeff Johnson (AONR)

DATE: 5/20/91 AGENCY (IES): AOEL, NOAA, Exxon, USCG, AONR

START TIME: 1407 PHOTOS TAKEN?

STOP TIME: 1600 Roll #: Frames:

VIDEO TAKEN? Tape Number:

Counter Start:

SAMPLES TAKEN?

SAMPLE I.D. NUMBERS: 1. 2. 3.

 4. 5. 6.

	LENGTH m	WIDTH m	M2	%	THICK cm	PEN cm	OIL TYPE
SITE 1	80cm .080	80cm .080	.0064	90	—	—	HSOR
SITE 2	20	2	40	5	<1	—	LSOR
SITE 3	60	1	60	10	—	—	CT, CV
SITE 4							
SITE 5							

OVERALL OIL IMPACT: VL

OIL IN STREAM CHANNEL?

OIL ON BEACH WITHIN 50M OF STREAM MOUTH?

SUBSTRATE

Bedrock	Granule
Boulder	Sand 10
Cobble 20	silt
Pebble 70	Veget.

SPECIES					
COUNT					

REMARKS: Five HSOR patties on north bank of stream near mouth (all less than 20 cm diameter) => these were picked up by MAYSAP team.

- This ANAD. segment was surveyed by beach segment crew because ~~it~~ logistically it was much simpler for this team to conduct survey.

Sketch Map

1/3.000. A

17 Samples

Aug 20/91

1107 - 1600

Levee

- ▬ 100% clay
- ▬ 100% sand
- ▬ 100% cb/Bd
- ▬ 100% 200/300/400

A3

LSOR 4.5%
 2x3 over small
 mud less small
 5mm brown plate
 filled as
 water

Ap. 10%
 2x3, brown
 cb over 100%
 comp
 no test on

Few small patches of
 very weathered cl
 and bed rock walls
 < 20 cm dia

LSOR, very thin 4.5%
 5x10
 very weathered
 Broken up

Few patches < 20cm
 LSOR very thin
 and weathered
 not recoverable
 Broken up

Site #2*
 LSOR 5%
 2x20m round
 cb, too weathered
 and thin (< 1cm)
 to be picked up
 Broken up

1 HSOR patch
 < 20cm dia
 Picked up

4 HSOR patches
 Picked up
 all < 20cm
 dia

Site #3*
 A1
 ct. cv, 1x60
 cm bedrock diff
 < 10% very weathered

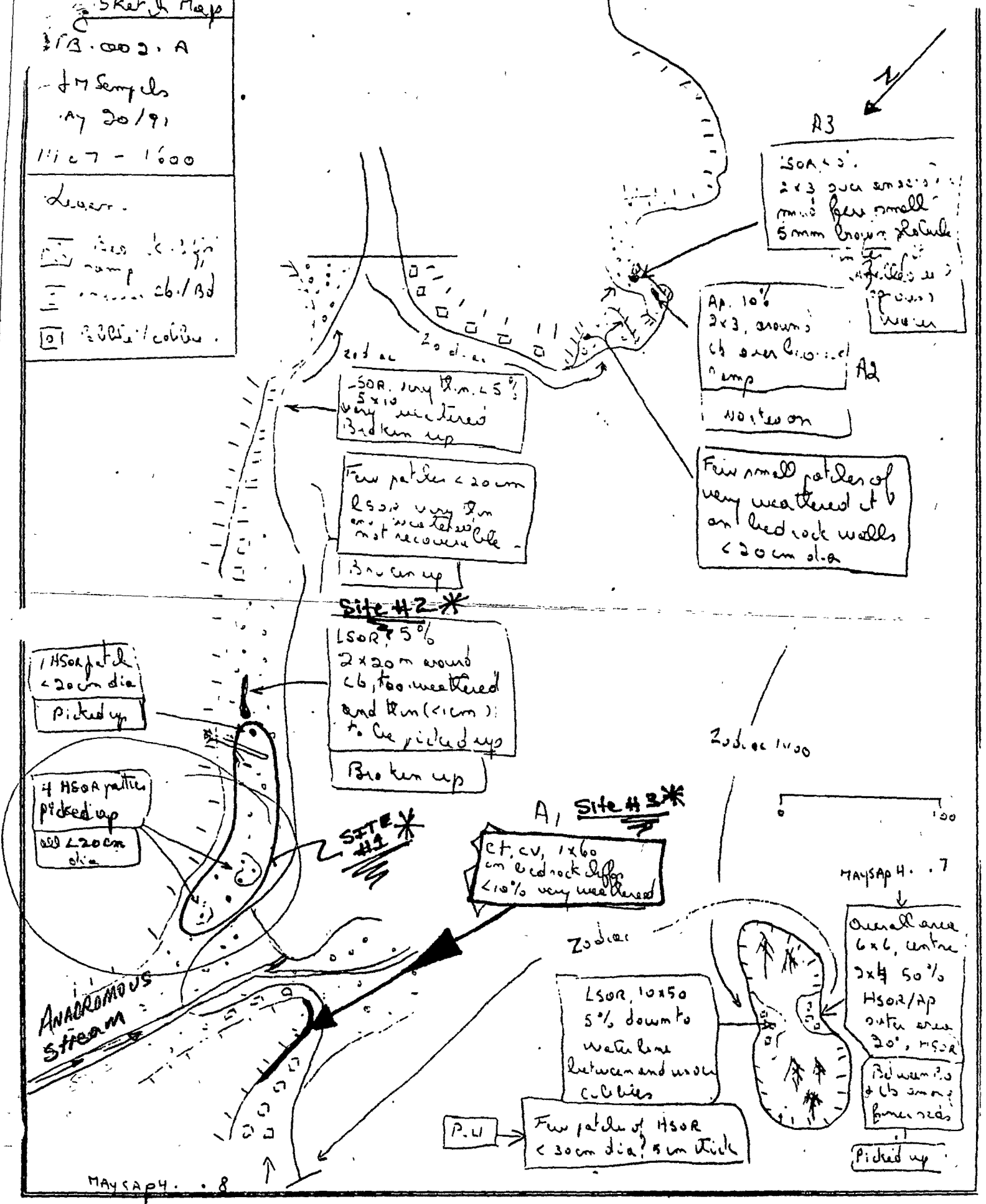
LSOR, 10x50
 5% down to
 water line
 between and under
 cobbles

P.U. → Few patches of HSOR
 < 30cm dia, 5cm thick

MAYSAP 4.7
 Overall area
 6x6, centre
 2x4 50%
 HSOR/AP
 outer area
 20% HSOR
 Between 20
 & 40 mm
 fines reds
 Picked up

ANACROMOUS Stream

MAYSAP 4.8



ADF&G MULTI-ASSESSMENT FORM
1991 GENERAL ENTRY CHECKLIST

STREAM#: 2321010340
SEGMENT: TB002

PAGE 31

DATE PRINTED: 10/15/91

LOCATION: TONSINA BAY, NORTH SHORE

SURVEY TYPE: 91 MAYSAP - SS/BS

METHOD: GROUND

DATE: 05/20/91

TEAM RECORDER: CROSBY

START TIME: 1407

OBSERVERS: DUNCAN FITZGERALD JOHNSON

END TIME: 1600

TIDES: -0-

AGENCY: DEC NOAA EXX USCG ADN

OG/HAB DISCREPANCIES: -

PHOTOS TAKEN: -

STATION: 2321010340

ROLL#: -0-

FRAME: -0-

VIDEO TAKEN: N

TAPE#: -0-

START: -0-

END: -0-

SAMPLES TAKEN: N

SAMPLE NUMBERS: -0-

-0-

-0-

-0-

-0-

-0-

OIL IN STREAM BED: N

OVERALL OIL IMPACT: VL

OIL ON BEACH BY MOUTH: Y

WAVE EXPOSURE: LOW

SHORELINE TYPE: BEACH

SUBSTRATE TYPE: BEDROCK -0- BOULDER -0- COBBLE 20 VEGETAT -0-

GRAVEL 70 SAND 10 MUD/SILT -0- GRANULE -0-

ANADROMOUS FISH PRESENT: -

SPECIES: -0-

COUNT: -0-

-0-

-0-

-0-

-0-

-0-

-0-

-0-

-0-

ADF&G MULTI-ASSESSMENT FORM
1991 OILING ENTRY CHECKLIST

PAGE 31

DATE PRINTED: 10/15/91

STREAM# : 2321010340
SEGMENT#: T8002

SURVEY TYPE : 91 MAYSAP - SS/BS LOCATION: TONSINA BAY, NORTH SHORE
DATE: 05/20/91
TIMES: 1407 - 1600 TEAM RECORDER: CROSBY

-- OILING EXTENT --

SITE#	SITE TYPE	DEPTH (cm)	LENGTH (m)	WIDTH (m)	AREA (m)	%	THICK (cm)	PEN (cm)	OIL TYPE CODES
1	-0-	-0-	80	80	.0064	90	-0-	-0-	HSOR
2	-0-	-0-	20	2	40	5	<1	-0-	LSOR
3	-0-	-0-	60	1	60	10	-0-	-0-	CT CV

COMMENTS:
FIVE 'HSOR' PATTIES ON NORTH BANK OF THE STREAM NEAR MOUTH (ALL LESS THAN 20CM DIAMETER). THESE WERE PICKED UP BY MAYSAP TEAM. THIS ANAD SEGMENT WAS SURVEYED BY BEACH SEGMENT CREW BECAUSE LOGISTICALLY IT WAS MUCH SIMPLIER FOR THIS TREAM TO CONDUCT SURVEY.

90-A

maysap-4
2321010340

1991 MAYSAP EVALUATION

SEGMENT: TB 002 SUB: A REGION: KEN SURVEY DATE: 5/20/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) **Eagle nest, Herring spawning, Fish harvest area, 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)	<u>N</u>	_____	_____
Manual Pickup (Check as Req.)	_____	_____	_____
Spot Washing	_____	_____	_____
Bio-Customblen Only	_____	_____	_____
Bio-Inipol/Customblen	_____	_____	_____
Other _____	_____	_____	_____
Other _____	_____	_____	_____

COMMENTS:

INITIAL: NTR

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.

Herring Spawning: No treatment before June 1. Avoid disturbance to kelp and eelgrass.

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

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

ADEC
NAME Clara Crosby SIGNATURE Clara J. Crosby

NTR Crew of 6 worked the island for approximately 2-3 hours. The area is significantly improved. ~~There is no more oil in the area to be removed by the crew. The oil that had spilled out is not a threat to the birds. It will be washed back.~~ ~~There is no more oil in the area to be removed by the crew. The oil that had spilled out is not a threat to the birds. It will be washed back.~~ ~~There is no more oil in the area to be removed by the crew. The oil that had spilled out is not a threat to the birds. It will be washed back.~~ ~~There is no more oil in the area to be removed by the crew. The oil that had spilled out is not a threat to the birds. It will be washed back.~~

EXXON
NAME George P. Stile SIGNATURE George P. Stile

NTR No appreciable oil remaining. 56 bags of ~~oil~~ oily sediment were taken off during the survey mainly from the large Island. No treatment recommended.

LANDMANAGER
NAME Jeff Johnson OF ADNR SIGNATURE Jeff Johnson

NTR Significant oil deposits were located on a small island in this segment. Treatment was recommended, but some crew members elected to attempt removal and were successful. I inspected the site following treatment, and do not recommend further treatment at this time. Very little oil found in the rest of the segment.

USCG/NOAA
NAME John McMath/McDonald SIGNATURE John McMath

NTR Segment was manually clean-up around the island especially thus leaving no appreciable oil. Remainder of segment showed very little oil which was picked up by the VEO crew.

Donald McDonald

MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 4
 OG J. M. Sempich
 ADEC Crosby
 EXXON George P. Stiles

BIO J. Barry
 LANDMANAGER Johnson for ADNR
 USCG/NOAA McMahon/McDonald

SEGMENT TB002-A
 SUBDIVISION A
 DATE 5/21/91

TIME 14:27 to 16:00 TIDE LEVEL +0.6 ft. to +3.6 ft. ENERGY LEVEL: H M L

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

TOTAL LENGTH SHORELINE SURVEYED: 1106 m NEAR SHORE SHEEN: BR RB SL NONE

EST. OIL CATEGORY LENGTH: W _____ m M _____ m N 3 m VL 103 m NO 1000 m US 1564 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOF	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A1					S	S					Red	V	1	60		*			
A2	S										"	L	2	3			*		
A3				S							Mud	L	2	3			*		
A4						T					Bed	V	1	40		*			

See L-SOR map

DISTRIBUTION: C = 91-100%; B = 51-80%; P = 11-50%; S = 1-10%; T = <1%

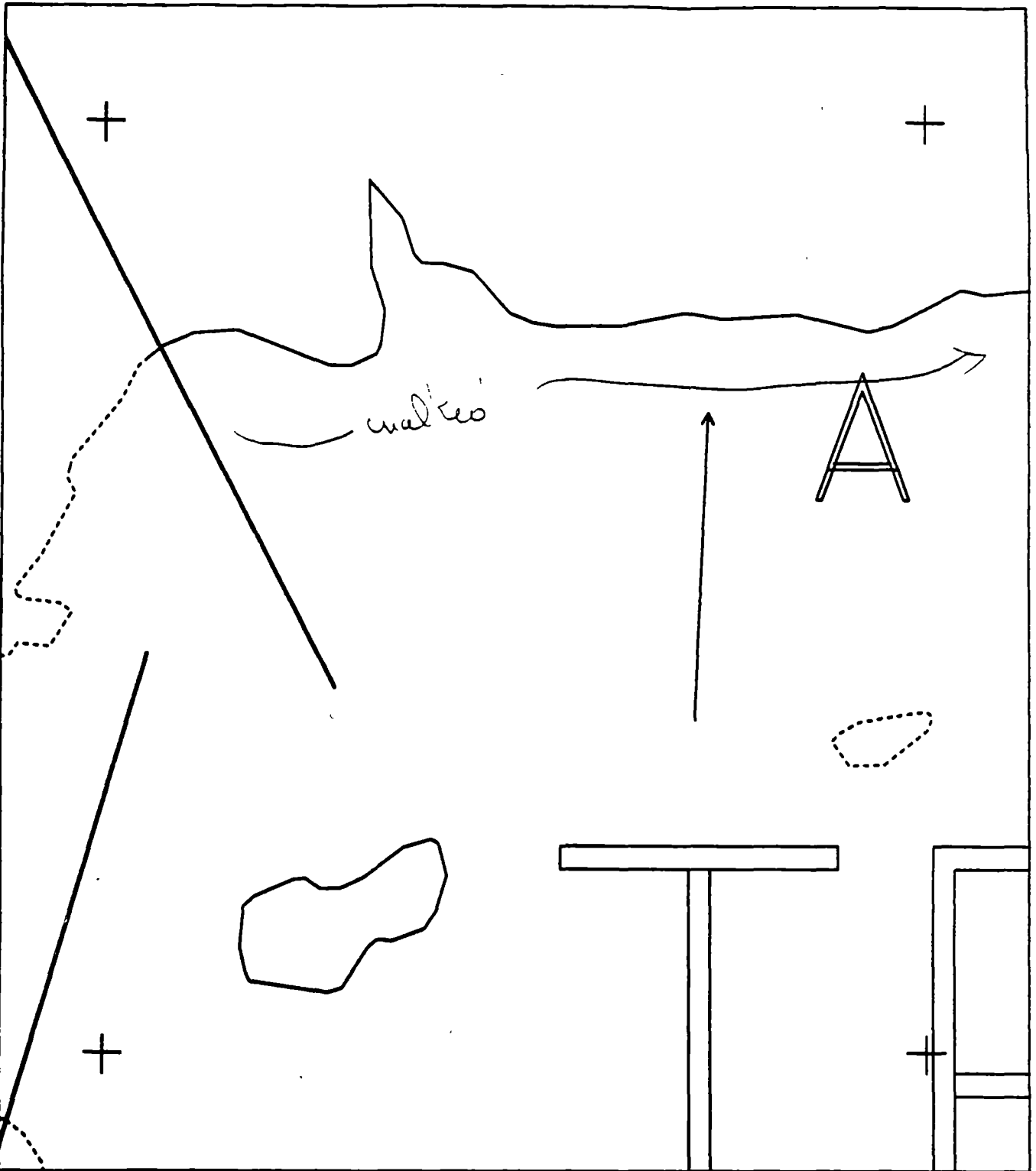
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- _____ FRAMES _____

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			
		Several references to deck, none observed																	
		Subsurface oil																	

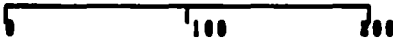
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS: Long section of patch LITZ, cl/ps - B6 - cliffs backshore. wide intertidal delta to the north. Oil consists of cl/cv on beach. Very numerous patches; L-SOR thin and weathered; and in northern part have small patches of ip (on beach on ramp) R-SOR on macrobenthic mud, and a few cl on beach walls. The island included in the segment showed heavier oiling. L-SOR on the north side and AD/HSOR on the north side.

revised 5.29.91
 REVISED: mc 5/31/91

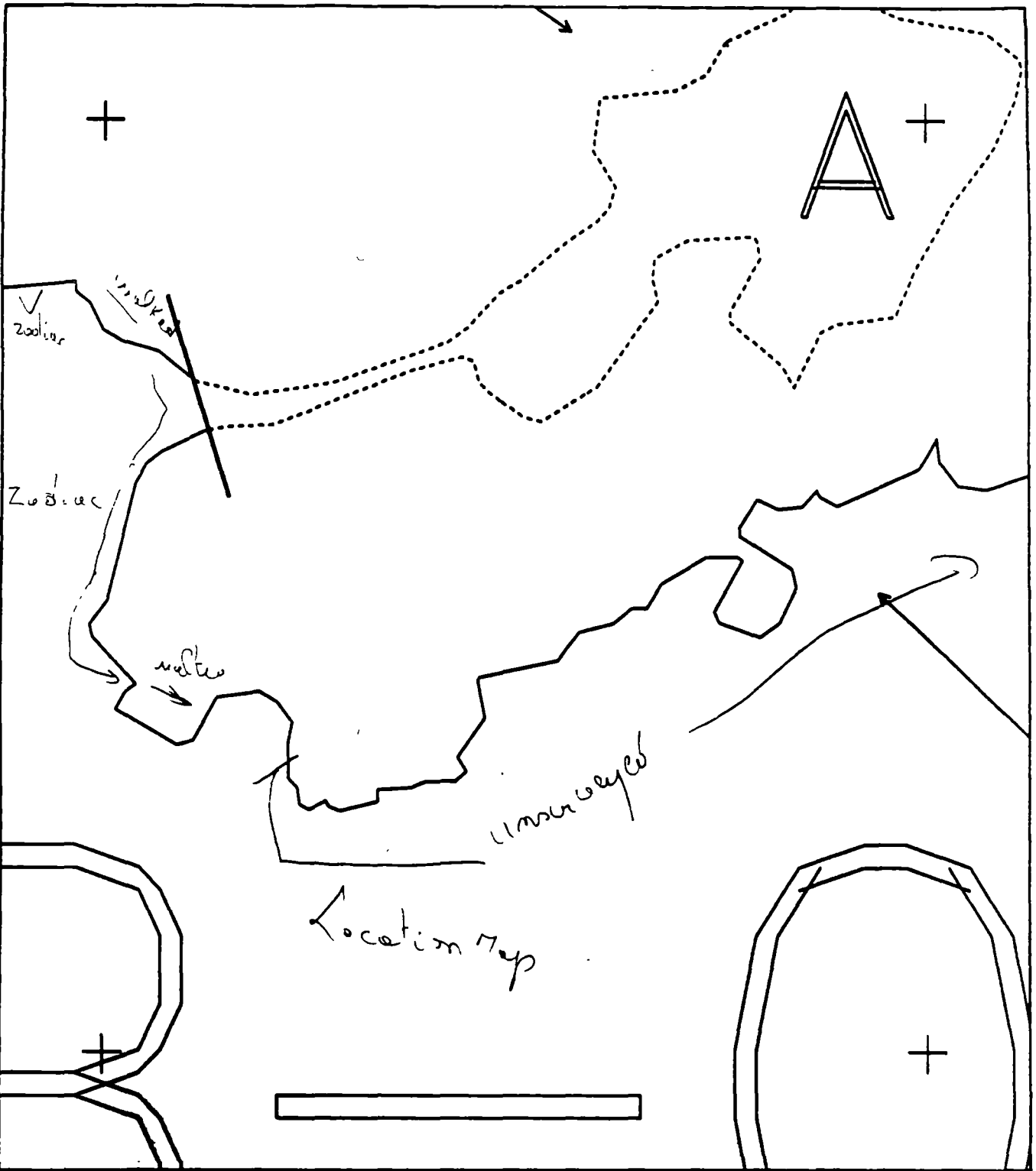


TB002 A

METERS

 AS State Plane Zone 4
 81500200

Subdivision Field Map
 Map Key: KENTB002Aa
 Name: J. Samples
 Date: May 20 19





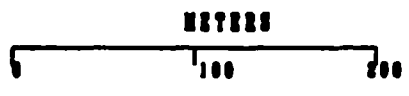
TB002 A

Subdivision Field Map

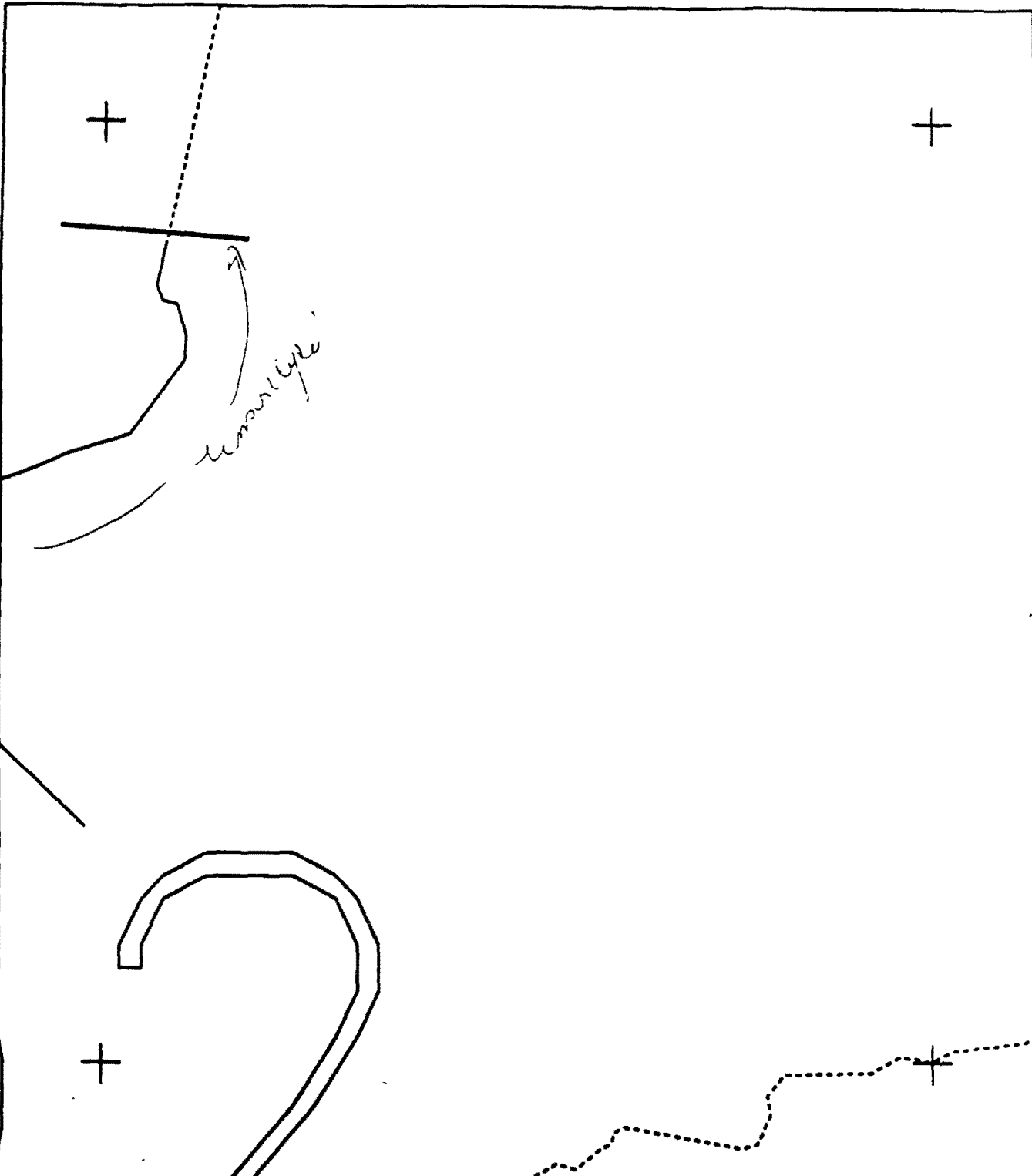
Map Key: KBNTB002Ab

Name: Jim Semple

Date: May 20/91



AK State Plane Zone 4
815002ab



boundary

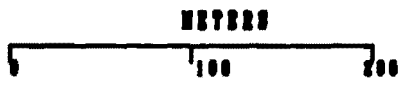
TB002 A

Subdivision Field Map

Map Key: KENT002A

Name: J. Semple

Date: May 20/91



AK State Plans, Zone 4
21000200

3g Sketch Map

TB.002.A

17 Samples

MAY 20/91

1107 - 1600

Legend:

- 200m scale
- ▭ ramp
- ▭ massive cb / Ad
- ▭ rubble / cobble

A3

50A 4.5
 2x3 200m area
 m. 5 few small
 5mm brown platelets

Ap. 10%
 2x3, 200m
 cb over 200m
 ramp
 worked on

Few small patches of
 very weathered cb
 on bedrock walls
 < 20cm dia
 1 x 40

LSOR, very thin, 4.5%
 5x10
 very weathered
 Broken up

Few patches < 20cm
 LSOR very thin
 on weathered
 not recoverable
 Broken up

LSOR, 5%
 2x20m round
 cb, too weathered
 and thin (< 1cm)
 to be picked up
 Broken up

1 HSOR patch
 < 20cm dia
 Picked up

1 HSOR patch
 all < 20cm
 dia

A1

ct. cv, 1x60
 cm bedrock diff
 < 10% very weathered

Zodiac

LSOR, 10x50
 5% down to
 water line
 between and under
 cobbles

Few patches of HSOR
 < 30cm dia, 5cm thick

MAYSAP 4.7

Overall area
 6x6, centre
 2x4 50%
 HSOR/AP
 outer area
 20% HSOR
 Between 30
 + 40 among
 finer sed

Picked up

MAYSAP 4.8

REVIEWED: MC 5/31/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #	4	DATE/TIME	May 20, 1991	1415 - 1600
SEGMENT #	TB002	TIDAL HEIGHT (Range)	+0.6 => +3.6	
SUBDIVISION	A	BIOLOGIST	JIM BARRY	
SEA STATE	Calm	WIND SPEED/DIRECTION	Variable 0-5 kt., clear	

COMMENTS / OBSERVATIONS - OILED SUBDIVISIONS

Oil Related Comments

- A1 Oil (CT) on bedrock cliffs. Little biota present in oiled area. Occasional barnacles, black lichen. Low zones have a moderately dense band of Fucus, with moderate littorine snail and limpet densities. Barnacles are moderately dense in Fucus zone. Mussels are sparse to moderate in the cobble talus, and somewhat more abundant on the tidal flat formed by the anadromous stream delta.

- A2 Oil (AP) is present in the upper to middle intertidal zone, amongst cobble and boulder on the bedrock ramp. The biota in this area are sparse to moderately abundant. Acorn barnacles are moderately abundant towards the lower zone, especially under cobble or on bedrock. Mussels are common in patches along crevices or under boulders. Amphipods, littorine snails, limpets, and occasional hermit crabs are the most common mobile invertebrates.

- A3 The oil (LSOR) at this site is located within a dense mussel bed in the middle intertidal zone. The oil is sparse and the bed is quite dense. Recent recruitment by the mussels has extended the bed size during the past year. The sediments underneath the bed are black, due to anaerobic conditions unrelated to the presence of oil. Clams are also present in this area. Barnacles are present in patches over some of the cobble. The nearby cobble and bedrock outcrops have moderate to dense cover of Fucus. Littorine snails and limpets are patchy within the nearby cobble.

(continued)

WILDLIFE OBSERVATIONS - Completed on all subdivisions

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1 Nest (unattended)		
Seabirds			
Waterfowl	2	24	
Gulls/Kittiwakes	2	25	
Shorebirds	1	1	
Corvids	1	20	
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

Reviewed MB 5/30/91

Other areas

The island site, where some oil was found and treated, had fairly dense cover of Fucus in the middle zone, with sparse densities of mussels. The oil was located in the upper zone above the Fucus, where biota were much less abundant. Littorine snails, limpets, and the isopod, *Ligia pallasii*, as well as oligochaete worms, were found amongst the cobble, but in fairly low densities. Filamentous green algae were the most abundant species, and formed a sparse film on most cobble in the high zone.

Cleanup Considerations

Manual cleanup was performed at several locations on this subdivision. Additional manual cleanup will have little or no adverse effect on the biota at A1 or A2. Cleanup should not be performed at site A3. This will undoubtedly impact the mussel bed and there is so little oil remaining that the benefits would not balance the biological impact.

General Characteristics of TB002-A

This subdivision includes an island with boulder talus and bedrock outcrop shores, an anadromous stream and stream delta, a long medium angle cobble and pebble beach, and a few pocket beaches of pebbles to cobble. Most sites are protected shores, though a couple are exposed to low to moderate surf at times. The biota vary according to the habitat type. Bedrock shores typically have quite high cover or densities of organisms, with a zone of green filamentous algae above a band of Fucus and barnacles. The biota of cobble and pebble shores vary according to slope and exposure. The cobble shores on the northwestern shore are well protected, and have fairly high cover of Fucus on most cobble in the middle zone, as well as moderate, and patchy, densities of barnacles. Littorines, limpets, and oligochaetes are usually moderate in density. Higher in the intertidal the abundances of most species are low. Barnacles appear to be very scarce, but can be found on the underside of many cobbles. Similarly, oligochaete worms are fairly common under cobble, especially where some organic detritus is present.

The tidal flat formed by the delta of the anadromous stream may be an important local site for bird roosting and foraging. The flat has a moderately dense mussel and clam bed.

(continued)

Reviewed MB 5/3/41

General Zonation Pattern : Bedrock or Boulder/Cobble Talus Shores

Biota:	Tide Level	SupraTidal	Upper	Middle	Low	Subtidal
Oil Spatters						
Black Lichen		- - - - -				
Bare Rock			- - -			
Green Filamentous Algae			--_+++***+--			
Rockweed (Fucus)				---+***+***+--+-		
Barnacles (Balanus)			- - + + +	-+***-		
Red Algae				- - - - -	+***+--+***	
Green Algae (Ulva/other)			- -	---+-	-+ + - -	- - - - -
Mussels (Mytilus)				- - - + + + -		
Crustose Red Algae (Hildenbrandia)				-----+***+--+-		
Upright Brown Algae (not Fucus)					-- - -+***	*****
Eel Grass						- -+***
Clams						- - - - -

Legend: (-) Sparse to rare, (+) Moderate, (*) Abundant

Common Species on TB002-A

A. Marine Plants

1. Diatoms, Blue Greens
2. Green Algae - Chlorophyta
Enteromorpha sp., Ulva sp., Urospora sp.
3. Brown Algae - Phaeophyta
Ectocarpus spp., Fucus distichus, Hildenbrandia sp., Ralfsia sp.,
Syctosiphon lomentaria
4. Red Algae - Rhodophyta
Endocladia muricata,, Halosaccion glandiforme, Iridaea sp.,
Odonthalia floccosa, Petrocelis sp., Porphyra sp., Rhodomela larix
5. Higher Plants - Zostera marina (eel grass), Leymus mollis (beach rye
grass)

II. Marine Animals

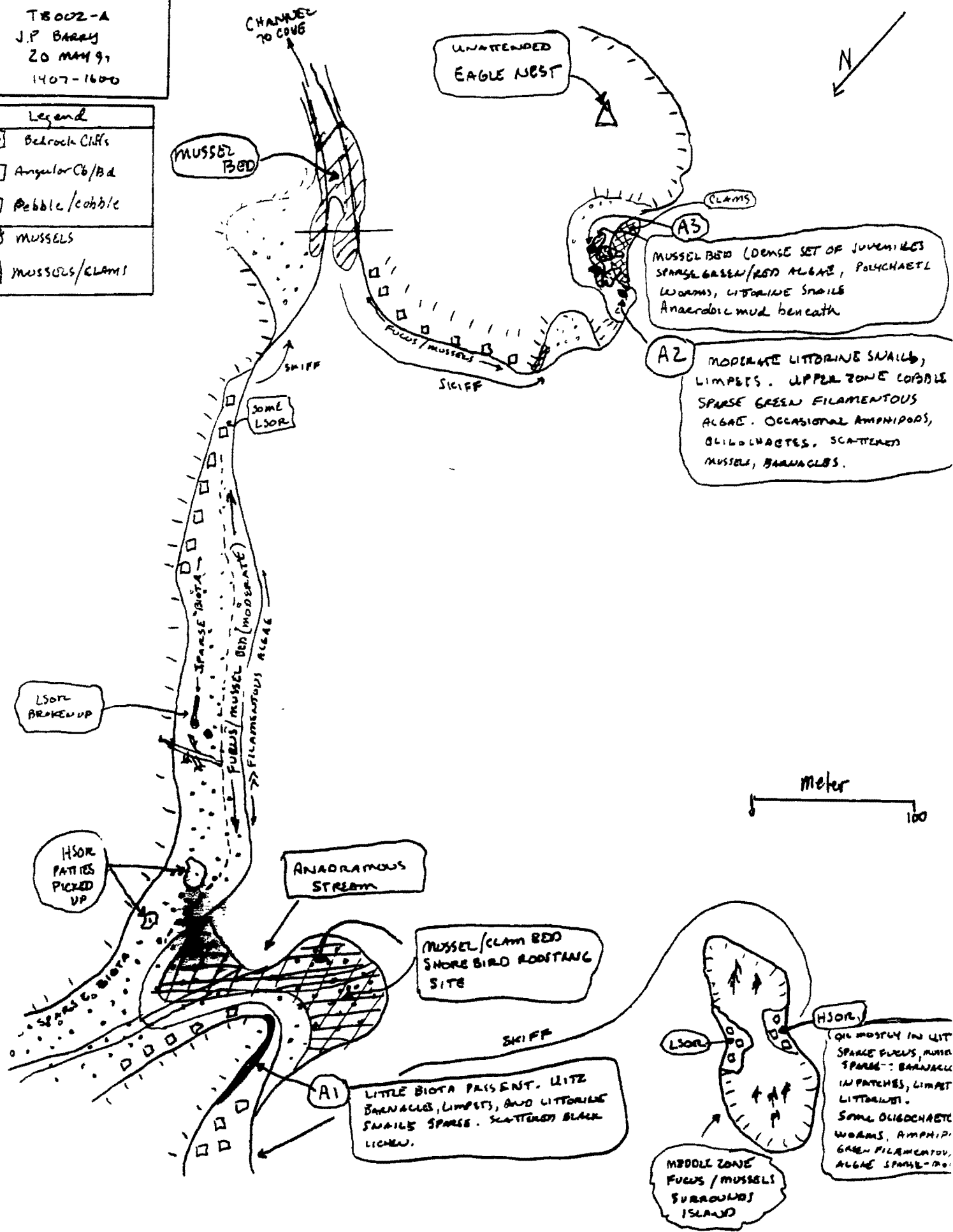
1. Sponges - Porifera - Halichondria bowerbanki?,
2. Anemones - Anthopleura artemesia, Epiactis ritteri,
3. Hydroids - Sertulariidae
5. Flatworms - Platyhelminthes - Polyclads
6. ~~Nereis~~ Nereis Worms - Ribbon Worms - Euplectonema sp.
8. Polychaete Worms
Nereidae - Nereis spp.
Spirorbidae - Spirorbis sp.
10. Crustaceans
 - a. Amphipods - Traskorchestia traskiana
 - b. Barnacles - Balanus glandula
 - c. Crabs - Paguridae (hermit crabs)
 - d. Isopods - Idotea wosnesenskii, Gnorimorsphaeroma oregonensis, Ligia pallasii
11. Mollusca
 - a. Chitons - Mopalia mucosa, Tonicella lineata,
 - b. Snails - Gastropods
Littorina sitkana, L. keenae, Natica clausa, Nucella lamellosa,
N. lima, Searlesia dira

Reviewed MS 5/30/91

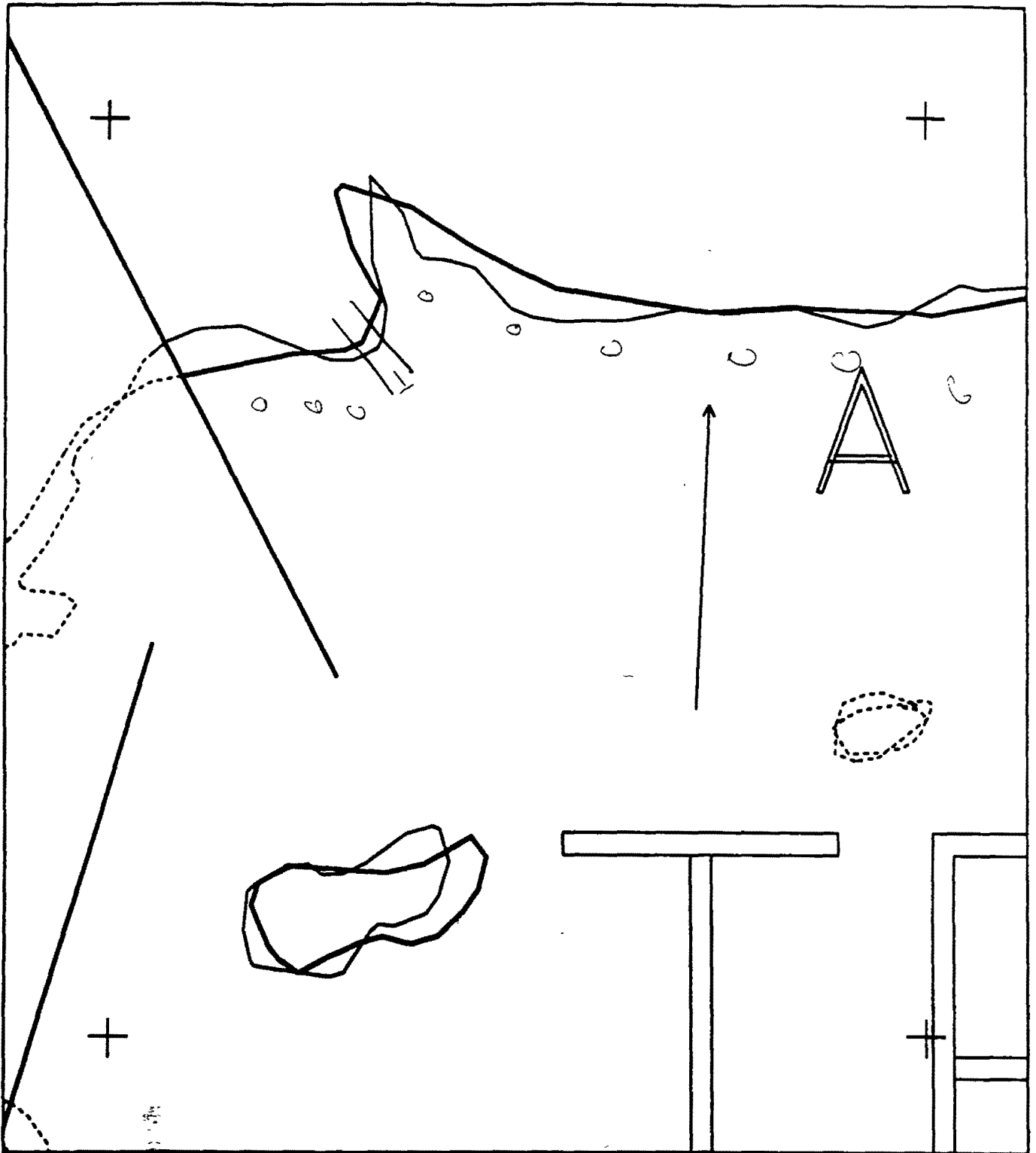
- c. Limpets - *Lottia digitalis*, *L. limatula*, *L. persona*, *Tectura fenestrata*, *T. persona*, *T. scutum*
 - d. Nudibranches - *Lamellidoris fusca*, *Melibe leonina*, *Onchidella borealis*
 - e. Bivalves - *Clinocardium* sp., *C. nuttalli*, *Hiatella arctica*, *Macoma nasuta*, *Modiolus modiolus*, *Mytilus edulis*, *Pododesmus cepio*, *Prototheca staminea*, *Saxidomus giganteus*.
12. Echinoderms
- a. Brittle Stars - *Ophiolus aculeatus?*, *Ophiothrix spiculata?*, *Amphipholis?*
 - b. Sea stars - *Dermasterias imbricata*, *Leptasterias hexactis*, *Pycnopoda helianthoides*
 - c. Sea Cucumbers - Holothurians - *Eupentacta* sp.,
 - d. Urchins - *Strongylocentrotus droebachiensis*
13. Bryozoans - *Membranipora* sp., *Schizoporella* sp.
14. Ascidians - *Synocium?* sp., *Aplidium?*
15. Fishes
- Cottidae -
 - Stichaeidae - *Xiphister atropurpureus*, *X. mucosus*
- III. Birds - Crow (20), Lesser Scaup (20), Glaucous-winged Gull (20), Black-bellied plover (1), Bonaparte's Gull (5), Harlequin Duck (4).

BIO SKETCH MAP
T8002-A
J.P. Barry
20 MAY 91
1407-1600

- Legend
- Bedrock Cliffs
 - Angular Cb/Bd
 - Pebble/cobble
 - MUSSELS
 - MUSSELS/CLAMS



Reviewed MB 5/30/91



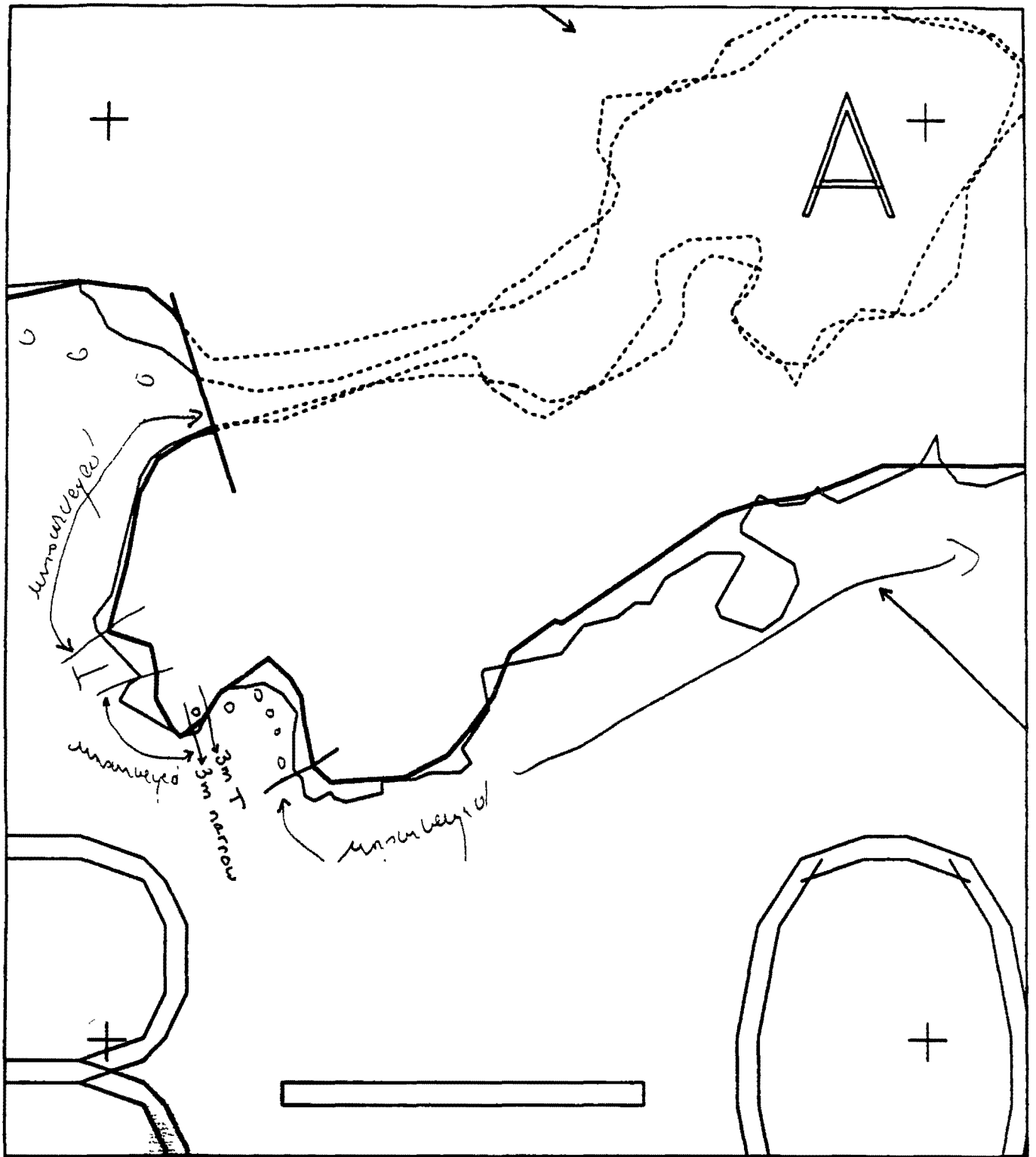
XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

TB002 A
 ADEC Subsegment Length: 2670m
 METERS
 0 100 200
 AK State Plane Zone 4
 81500200

Subdivision Field Map
 Map Key: KENTB002Ac
 Name: J. J. Smith
 Date: May 20 1991
 Date Entered:



Reviewed: MC 5/31/91
 reviewed 5.23 91



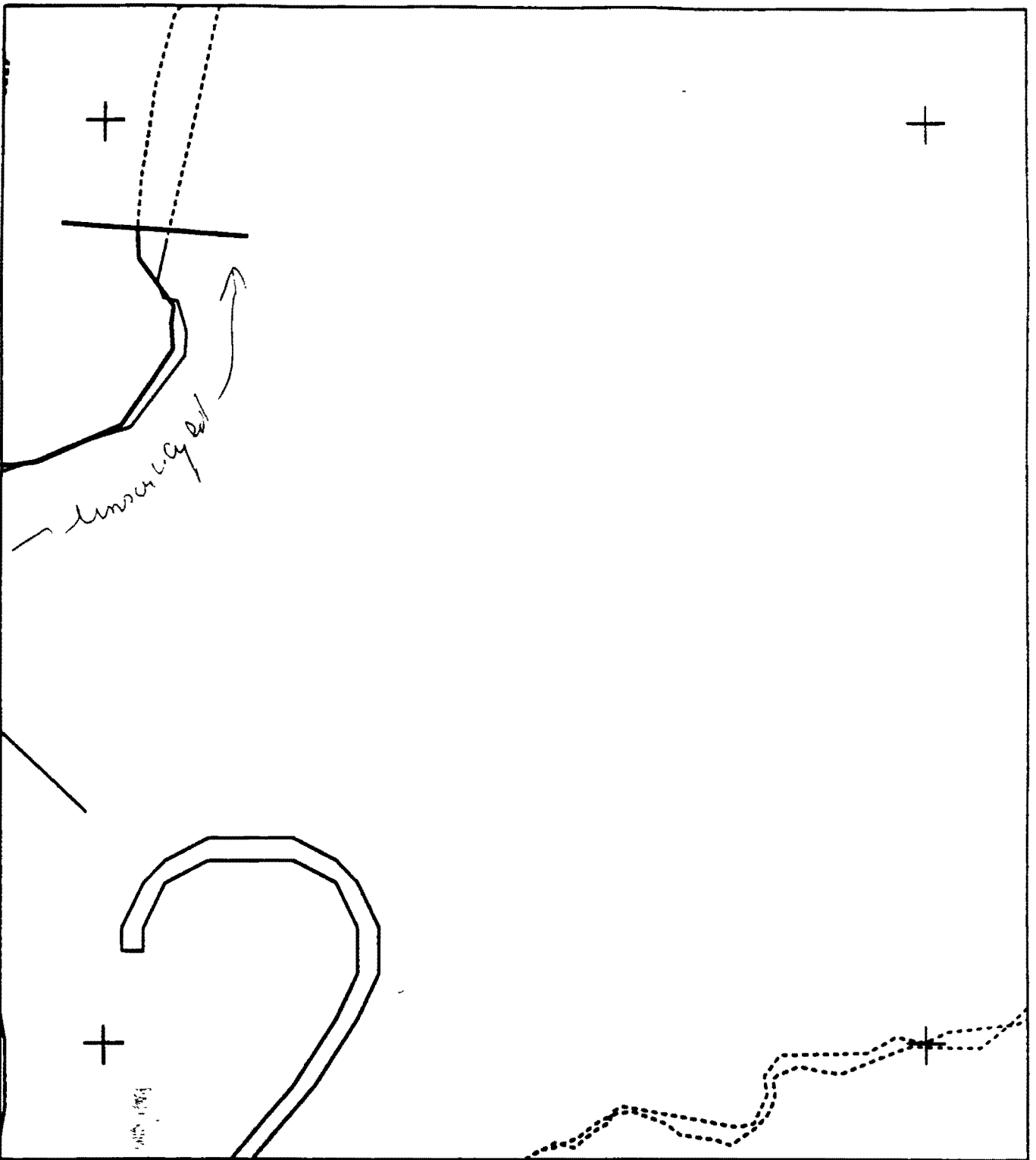
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

TB002 A
 ADEC Subsegment Length: 2670m
 METERS
 0 100 200
 AZ State Plane Zone 4
 s1b002ab

Subdivision Field Map
 Map Key: KENTB002Ab
 Name: *JM Semple*
 Date: *May 20/91*
 Date Entered:



REVIEWED: MC 5/31/91



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

TB002 A
 ADEC Subsegment Length: 2670m
 METERS
 0 100 200
 AK State Plane Zone 4
 atb002ac



Subdivision Field Map
 Map Key: KENTB002Ac
 Name: JH Sempels
 Date: May 20/91
 Date Entered:

REVIEWED: MC 5/31/91

Date: 5/20/91 No. 945

Title: TB002A





Segment No TB-002 subdivision 11
Date 5/20/91 Log Frame No 7
Photographer J. M. SAMPLE
Location SW SIDE OF ISLAND
Comments ARBA WITH HSOP/AP WHICH
WAS LATER COLLECTED-UP

Roll No MAYSAP-4(AR)-7 Neg. No 6
Control No 945 (Office Use Only)



Segment No TB-002 Subdivision A
Date 5/20/91 Log Frame No 8
Photographer J.M. SAMPKL
Location NW END OF SEGMENT
Comments VIEW LOOKING SE

Roll No MAYSAP-4(III)-7 Neg. No 7
Control No 945 (Office Use Only)

MAYSAP-4

1991 MAYSAP EVALUATION

SEGMENT: TB 002 SUB: A REGION: KEN SURVEY DATE: 5/20/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest, Herring spawning, Fish harvest area, 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)	<u>N</u>	<u>N</u>	<u>N</u>
Manual Pickup (Check as Req.)	_____	_____	_____
Spot Washing	_____	_____	_____
Bio-Customblen Only	_____	_____	_____
Bio-Inipol/Customblen	_____	_____	_____
Other _____	_____	_____	_____
Other _____	_____	_____	_____

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: June 6 1991 FOSC APPROVAL DATE: 6/8/91

ADEC John Bauer

FOSC E. E. PAGE

EXXON Beal

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

USCG Z. n. Murphy et

NOAA [Signature]



MAY 1991 - Y

232-10-10340

1991 STATE WORK ORDER
EXXON VALDEZ OIL SPILL PROJECT
STATE OF ALASKA

KENAI REGION

SEGMENT: TB002

SUBDIVISION: A

SITE:

RECOMMENDED TREATMENT:

NO TREATMENT RECOMMENDED AT THIS TIME

ENVIRONMENTAL SENSITIVITIES:

WORK WINDOW: -

CLEANUP PLAN AND COST ESTIMATE DUE:

DATE SUBMITTED: 06/06/91

STATE ON SCENE COORDINATOR:

John Bauer for A. Rijn

Alaska Department of Fish and Game

Homer Office - Exxon Valdez Spill Response

ALASKA DEPT. OF
FISH & GAME

MAY 6 1991

Phone Number (907) 235-5322 (Lynette for fax questions)
Telefax Number (907) 235-5385

REGION II
HABITAT DIVISION

Transmittal Sheet

Distribution:

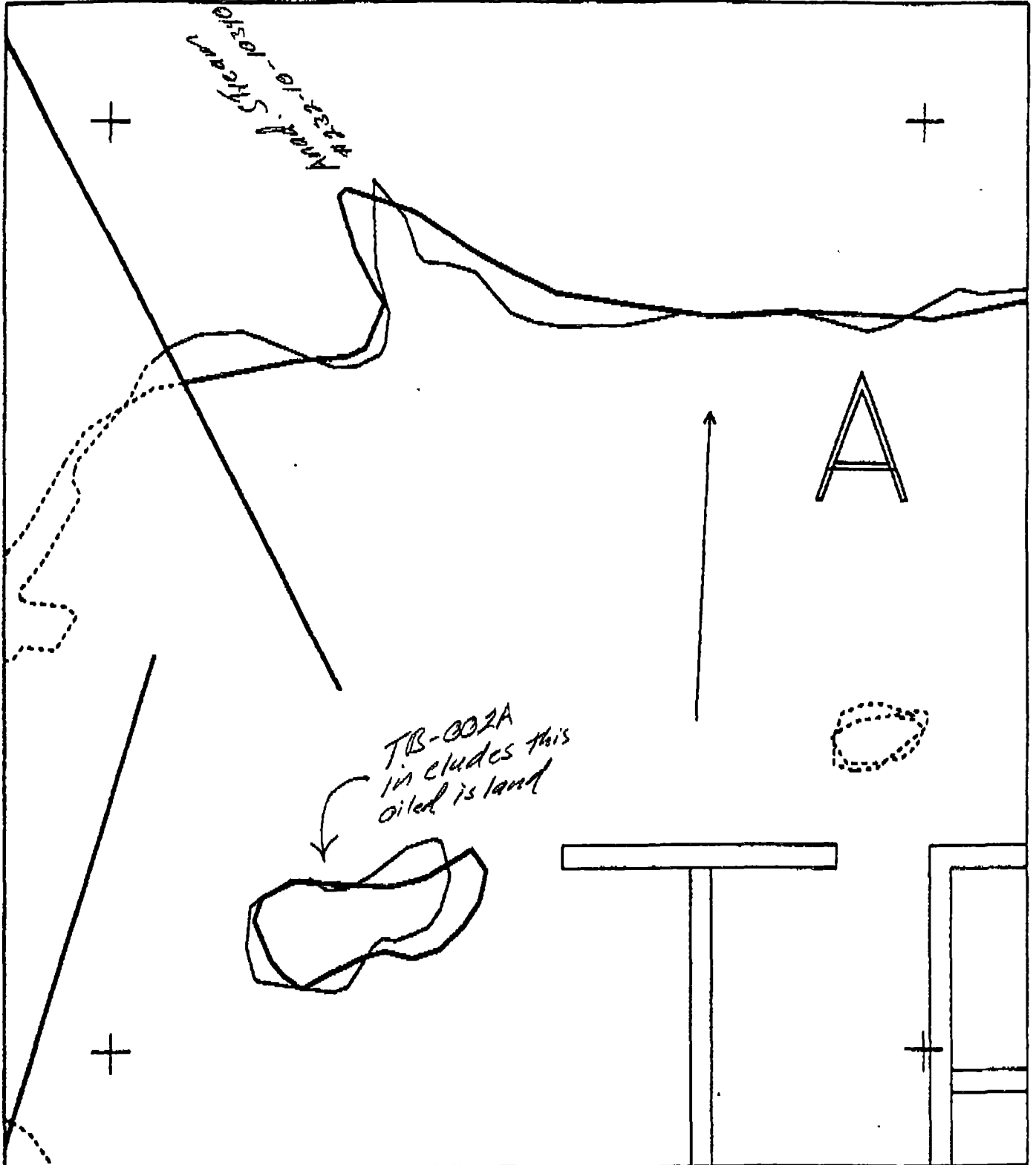
- Anchorage ADF&G (349-1723): Mark Kusuda
- Valdez ADF&G (835-8071): _____
- Seward ADF&G (224-7025): _____
- Kodiak ADF&G (486-4969): _____
- Homer ADF&G (235-2448): _____
- Homer USFWS (235-): _____
- Other (): _____

From: Lee Glenn

Number of Pages including the Cover Sheet: 8

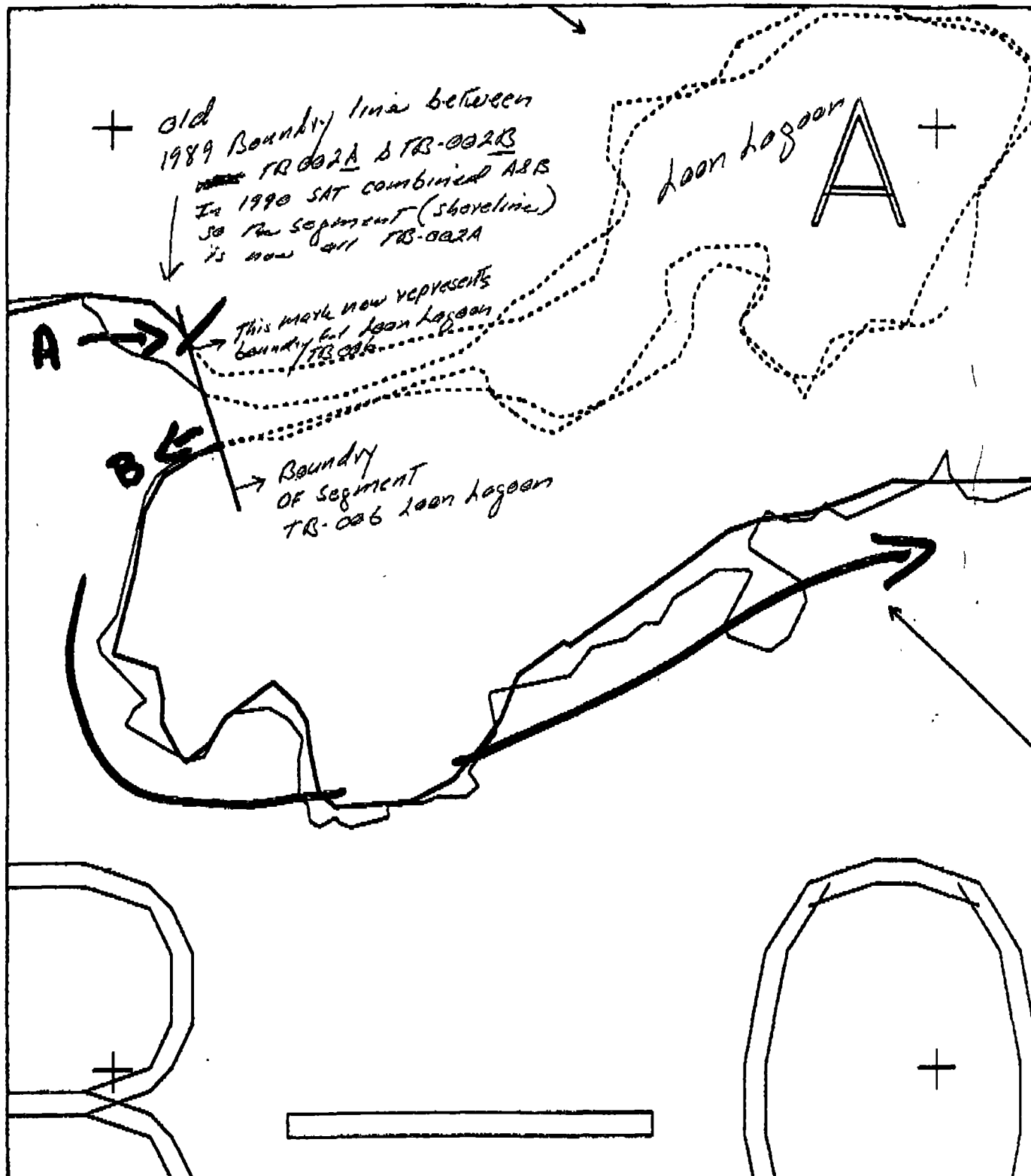
Comments and Notes: Includes for your info. The
1990 ASAP of the oiling on this segment.
This ASAP does not show subsurface oil as
the crew did not have time

(1)



XXXX	Wide	TB002 A	Subdivision Field Map
////	Medium	ADEC Subsegment Length: 2670m	Map Key: KENTB002Au
---	Narrow	METERS	Name: _____
TTTT	Very Light	5 100 200	Date: _____
0000	No Oil	AK State Plane Zone 4 #13002au	Date Entered: _____

2



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

TB002 A
 ADEC Subsegment Length: 2670m
 METERS

5 100 200

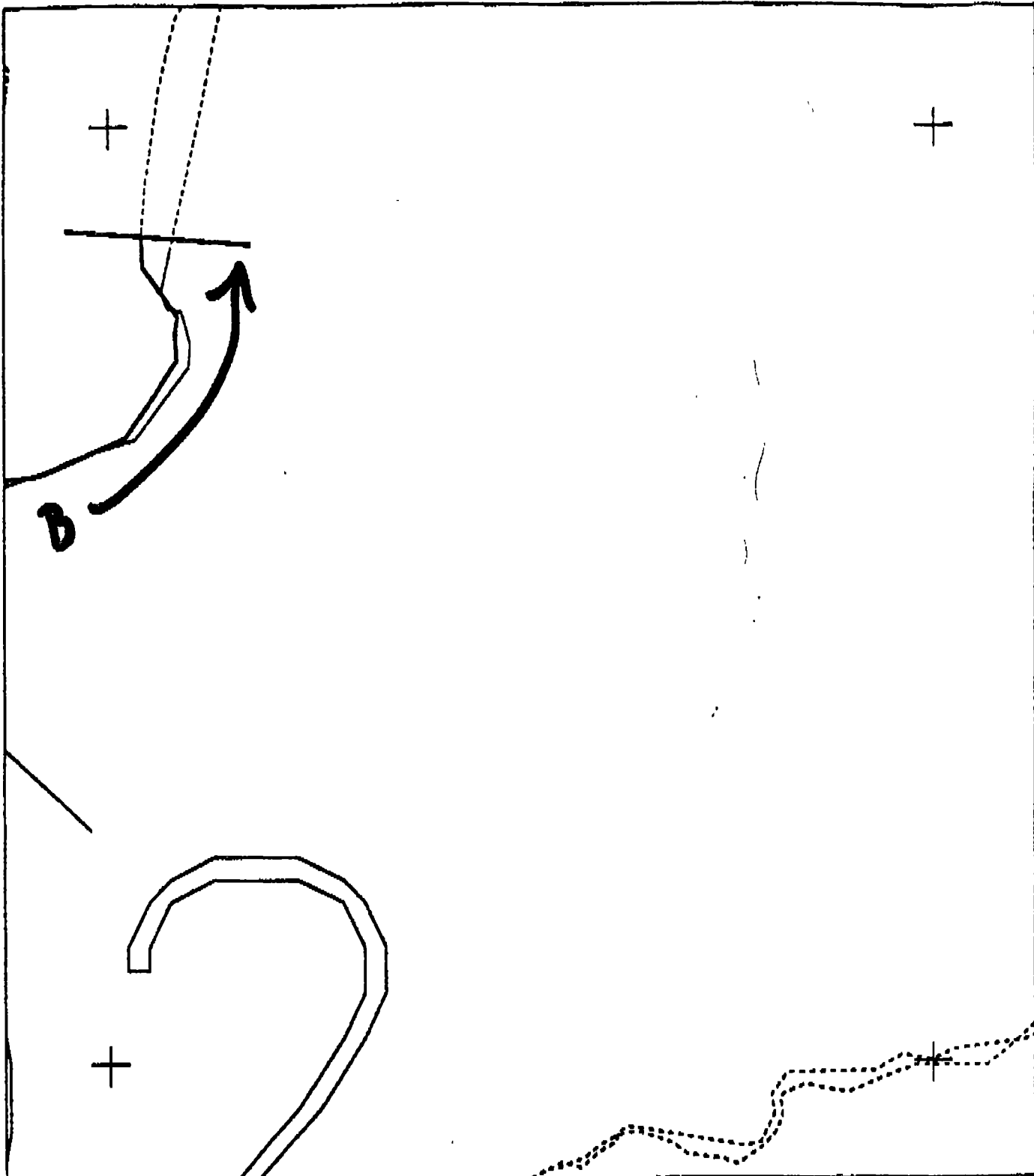
AK State Plane Zone 4
 116002ab

Subdivision Field Map
 Map Key: KENTB002Ab
 Name: _____
 Date: _____
 Date Entered: _____



(3)

#3



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

TB002 A
 ADEC Subsegment Length: 2670m
 METERS
 0 100 200
 AK State Plane Zone 4
 9180200



Subdivision Field Map
 Map Key: KENTB002Ac
 Name: _____
 Date: _____
 Date Entered: _____

4

SKETCH MAP - A

SEGMENT TB-02

SUBDIVISION A

DATE 04 Aug 90

SENT BY: ST. 011 Spill Resp Ctr; 5-6-91; 12:01; HOWER, ALASKA 99603-

134917231# 5

CHECKLIST

- M Area
- Approx. South
- Top/Sub Body
- Oil Dist
- Width
- Length
- % Cover
- Substrate Character
- Est. HULLAGE
- SIZ
- Profile Location(s)
- Profile(s)
- Location(s)
- No Location(s)

LEGEND

1 A
No Substrate CE

2 A
Substrate CE

CT/C
Substrate CE

CT/B
Substrate CE

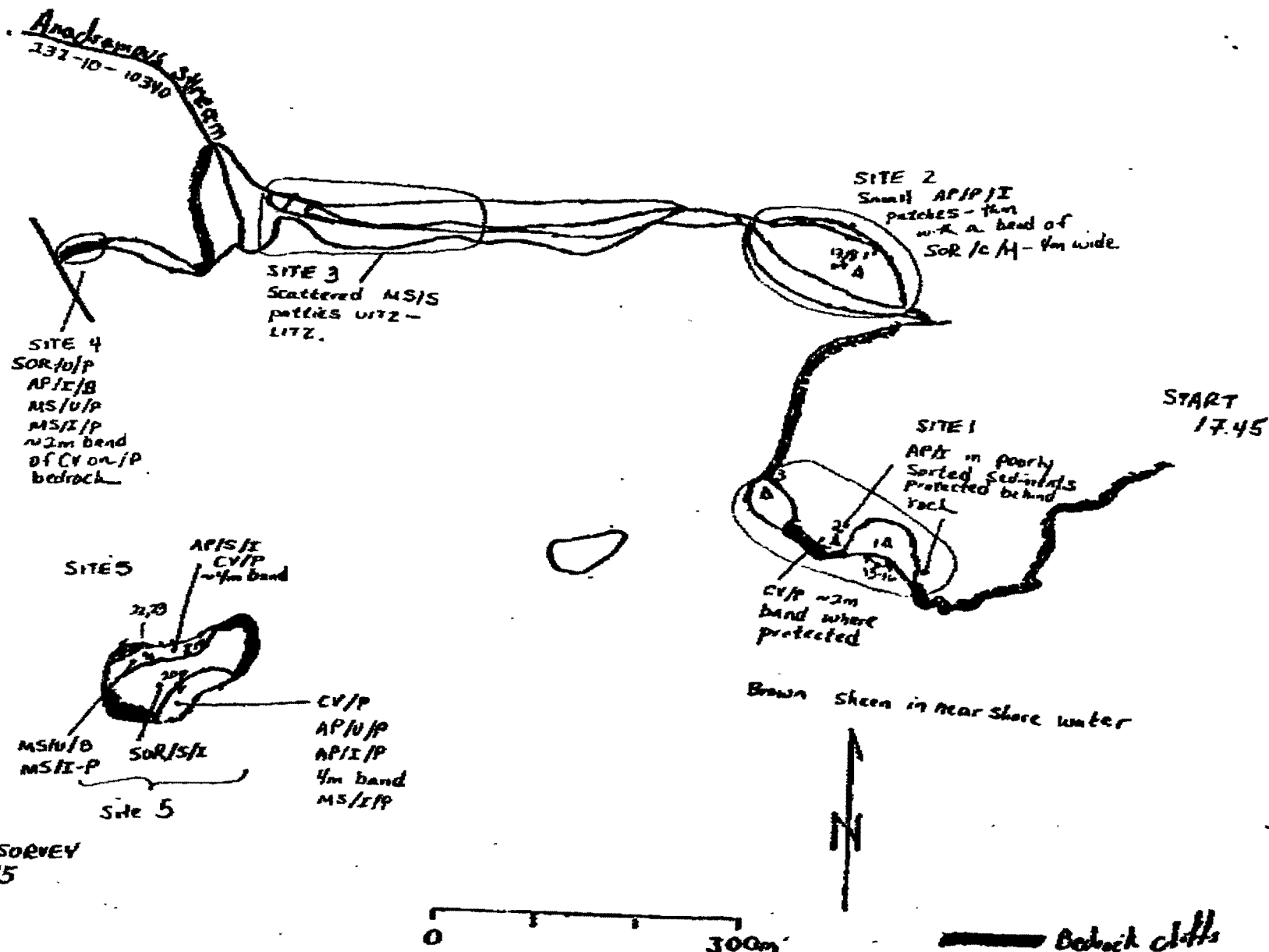
CT/P
Substrate CE

CT/S
Substrate CE

lll
Substrate CE

o
Substrate CE

o
Substrate CE



#210 90 - CV 150 CT - ST - MS 350m - SOL 150

STATE OF ALASKA FIELD MEMO

Permit Number **ASAP** Serial Number **1099**

To (Name and Organization) **JON (EARNECKI) (EXXON) CHIEF AEC VANDEPPELS (USCG)**

Date and Time **8/10/90 1520** Area **GOA, Kenai, HOMER ZONE.**

Location and Section of Work **TONSINA BAY - TBOOZA**

— Authorization to Proceed — Non Conformance — ADEC Permit — ADF&G Permit
— ADNR Permit — Problem Identification Other

ADEC RECOMMENDS THE FOLLOWING TREATMENT FOR TBOOZA.

ASAP SURVEY SITE #1:

- A) MANUALLY REMOVE H/SOR, AP
- B) MANUALLY EXPOSE SUBSURFACE OIL, FOLLOWING SEAM & REMOVE H/SOR.
- C) MANUALLY REMOVE H/SOR IN LITE IN THE VICINITY OF PIT #3.

ASAP SURVEY SITE #2:

- A) MANUALLY REMOVE H/SOR & AP.

ASAP SURVEY SITE #3, ANADROMOUS STREAM & B/C/G SHORELINE:

- A) MANUALLY REMOVE MS PATIES, MS & ANY H/SOR OR AP.
- B) ROLLING S/B/C WHEN POSSIBLE TO ACCESS OILING WHEN POSS USING POMPOMS AS NEEDED -

ASAP SURVEY SITE #5, SMALL ISLAND - SADDLE IN CENTER OF ISLAND:

- A) MANUALLY REMOVE AP/MS FROM INTERSTICES.
- B) ROLLING B/C WHEN POSSIBLE FOR REMOVAL OF AP/MS
- C) SPOT WASH OF COVER & INACCESSIBLE OIL USING POMPOMS TO RECOVER OIL, & WIPE ROCKS.

SM TOMBOLO ON W. END OF ISLAND.

- A) MANUALLY REMOVE MS & OILED SED. (SMC, P)

Permit Expiration Date

State Representative

Chris S. Crosby

Recipient

Action Taken by Recipient

6

FIELD SHORELINE COMMENT SHEET

SEGMENT AS / TB-02 SUBDIVISION: A SITE: 1-5 DATE 8/5/90

USCG

NAME AEC Vaadepels SIGNATURE AEC Vaadepels YES NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: The island in TB2 A should be reassessed. It is not oiled to the point where I feel it should be worked again this year. I would let it weather over the winter because it is a high energy beach.

ADEC

NAME Clara J. Crosby SIGNATURE Clara J. Crosby YES NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Work Plan Modification was submitted for further work on T8002A (Island) - site # 5. → This site can benefit the most from further work this year (1990) → site # 4 & 3 adjacent to Anad. stream. need reassessment & removal of MS. → Site # 2: Manual removal of AP & SOR the removal of which was called for in '90 work order - treatment here was incomplete. SITE # 1 - Camp Beach. This area has H/SOR & AP/2 (Please note pits # 1-3). The SOR/H was patchy to broken. 1990 work order called for its removal - treatment incomplete - SEE photo I concur with Kenagy's observations that these are low to mod energy sites. 13-16.

LAND MANAGER

NAME David K. Kenagy ADNR SIGNATURE DK YES NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: All beach areas in this subdivision are low to moderate energy areas. Scattered patches of Mousse, SOR & Cover were observed adjacent to the anadromous fish stream in this subdivision. On the island, mousse, asphalt cover were observed in boulder area as well as a thin. Mousse was observed in fractured gravels and small cobble. Additional treatment recommended in 1990. Priority for reassessment due to anadromous stream and wildlife utilization.

EXXON

NAME Tom Czarnicki SIGNATURE Tom Czarnicki YES NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: The oiling on this segment is such that a kayaker may see it or get into it. However after the winter I would hope this segment would be cleaned off. The surface oil residual (SOR) is there but may be cleaned during winter.

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT TB-02 SUBDIVISION A DATED 8/5/90MODIFICATION CLASS I CLASS II ✓ CLASS III

1. REASON FOR MODIFICATION

The small island, as shown the ASAP sketchmap (site 5) has one area with a 4 m. band of asphalt / U & I / P. The majority of this asphalt is readily recoverable. Pooled mousse is also present and can be recovered, as well. A tombolo on the west end of the island has mousse / U/B. This site bleeds silver and rainbow sheen. Sea otters, birds and migratory water-fowl frequent this area. This is a low to moderate energy area and will likely be minimally affected by winter storms.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

Manual removal of asphalt and mousse, as well as oiled sediments.

3. TIMING ISSUES

Complete by September 15, 1990.

ADEC Chris J. CrosbyEXXON USCG A.E.C. Vandenberg - I disagree, wait until after reassessment is completed 15 Sept. 90.LAND MANAGER [Signature] ADNR (its field rep is on scene)

(8)

ADF&G MULTI-ASSESSMENT FORM
1991 GENERAL ENTRY CHECKLIST



STREAM#: 2321010340
SEGMENT: TB002

PAGE 4

DATE PRINTED: 06/21/91

LOCATION: TONSINA BAY, NORTH SHORE

SURVEY TYPE: 90 PRE SCREEN - ~~86~~ 93

METHOD: GROUND

DATE: 04/25/91

TEAM RECORDER: HILL

START TIME: 1102

OBSERVERS: DUDIAK

END TIME: 1110

OG/HAB DISCREPANCIES: -

AGENCY: FG

PHOTOS TAKEN: - Y

STATION: 2321010340

ROLL#: -0-

FRAME: -0-

VIDEO TAKEN: -

TAPE#: -0-

START: -0-

END: -0-

SAMPLES TAKEN: Y

SAMPLE NUMBERS: ?? *DOH/ND-4/25/90-1105*
90DDH075H -0-

-0- *OK* -0-

-0- -0-

OIL IN STREAM BED: N

OVERALL OIL IMPACT: VL

OIL ON BEACH BY MOUTH: Y

WAVE EXPOSURE: LOW

SHORELINE TYPE: BEACH

SUBSTRATE TYPE: BEDROCK -0- BOULDER -0- COBBLE 60 VEGETAT -0-

GRAVEL 40 SAND -0- MUD/SILT -0- GRANULE -0-

ANADROMOUS FISH PRESENT: -

SPECIES: -0-

COUNT: -0-

-0-

-0-

-0-

-0-

-0-

-0-

-0-

-0-

ADF&G MULTI-ASSESSMENT FORM
1991 OILING ENTRY CHECKLIST



PAGE 5

DATE PRINTED: 06/21/91

STREAM# : 2321010340
SEGMENT#: TB002

SURVEY TYPE : 90 PRE SCREEN - ~~0657~~ LOCATION: TONSINA BAY, NORTH SHORE
DATE: 04/25/91
TIMES: 1102 - 1110 TEAM RECORDER: HILL

-- OILING EXTENT --

SITE#	SITE TYPE	DEPTH (cm)	LENGTH (m)	WIDTH (m)	AREA (m)	%	THICK (cm)	PEN (cm)	OIL TYPE CODES
1	-0-	-0-	10	1.0 1.0	10	50	<3	-0-	AP TP

COMMENTS:

STOPPED TO TAKE SAMPLE OF OIL FROM SMALL TARMAT ON NE SHORE OF STREAM MOUTH.

TOWSENA Bay - North Creek

ASC NUMBER: 232-10-10340 SEGMENT NUMBER: YR CATALOGED:
 LOCATION:
 STREAM NAME: LATITUDE:
 KODIAK K-UNIT: LOCAL STREAM #: LONGITUDE:
 U.S. QUADRANGLE: LEGAL:
 SHORELINE TYPE: ALL SEGMENTS:
 WAVE EXPOSURE:

ASC NUMBER: TEAM RECORDER:
 SURVEY TYPE: OBSERVERS:
 METHOD:
 DATE: 9/25/90 AGENCY(IES):
 START TIME: 1102 PHOTOS TAKEN? *WAS Norm & D. Dipak (AOFV 6) took photo of oil sample*
 STOP TIME: 1110 Roll #: Frames:
 VIDEO TAKEN? Tape Number:
 Counter Start:

SAMPLES TAKEN?
 SAMPLE I.D. NUMBERS: 1. 2. 3.
 4. 5. 6.

	LENGTH m	WIDTH m	M2	%	THICK cm	PEN cm	OIL TYPE
SITE 1	10	10	10	50	43	—	AP, TP
SITE 2							
SITE 3							
SITE 4							
SITE 5							

OVERALL OIL IMPACT:

OIL IN STREAM CHANNEL?
 SUBSTRATE

Bedrock	Granule
Boulder	Sand
Cobble	Silt
Pebble	Veget.

OIL ON BEACH WITHIN 50M OF STREAM MOUTH?

SPECIES					
COUNT					

COMMENTS:

Pre-Screening

Tauasina Bay - North Creek

ADF&G MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS SS DS TS AVS SCHA MMS PTA
Oil Sample Collection

2 REGION: PWS KP, CI K, AP

METHOD: Aerial Ground Boat

3 DATE: 4/25/90 15 HIGH TIDE TIMES: 0150 11457 21 TEAM RECORDER: Dorcy Hill

4 START TIME: 1102 16 HIGH TIDE HTS: 14.7 112.4 22 OBSERVERS: Norma Dudiak

5 STOP TIME: 1110 17 LOW TIDE TIMES: 0830 10832 23 AGENCY: ADEFG

6 SEGMENT #: TB-02 18 LOW TIDE HTS: -3.3 10.9 24 PHOTOS TAKEN:

7 STATION #: _____ 19 TIDE HT AT SURVEY: _____ Roll #: _____ Frame: _____

8 K-UNIT: _____ Ebb Slack Flood Slack 25 VIDEO TAKEN: Y N TAPE#: N

9 STAT AREA: 232-10 20 USCG QUAD: Seldavia B-3 Start: _____ End: _____

10 LAT: 59 18 44 11 LONG: 150 56 17 26 SAMPLES TAKEN? Y N Number

12 SOURCE: Map Loran 01 DOM/NO-4/25/90-1105

13 LOCATION: K90C, Tauasina Bay, North Shore Sediment _____

14 DESCRIPTION: Stream just east of Lagoon Outlet Biological _____

Water _____

EXTENT OF OIL

	SHORELINE				STREAM			
	L	W	M ²	%	L	W	M ²	%
27 SURFACE COVERAGE								
28 SURFACE THICKNESS								
29 PENETRATION								
30 OVERALL OIL IMPACT:	N	<input checked="" type="radio"/> L	M	H				
31 OIL TYPE:	Pooled	Mousse	<input checked="" type="radio"/> Asphalt	Sticky	Stain			
32 OILED DEBRIS?	Y	<input checked="" type="radio"/>						
33 SHORELINE TYPE:	Headland	Low-lying Rocks	<input checked="" type="radio"/> Beach	Cove				
		Lagoon	Marsh					
34 WAVE EXPOSURE:	High	Moderate	<input checked="" type="radio"/> Low					
35 SUBSTRATE TYPE:	Bedrock	Boulder	<input checked="" type="checkbox"/>	Cobble	<u>60</u>			
	Gravel	<u>40</u>	Sand	Mud/silt				

36 CATALOGED ANAD. FISH SREAM? Y N

37 CATALOG #: 232-10-10340

38 STREAM NAME: _____

39 OIL IN STREAM BED? Y N

40 OIL ON STREAM BANKS? Y N

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

42 OIL WITHIN 1 MILE OF STREAM? Y N
Where: Remainder of TB-2, TB-3, TB-4, TB-5

43 ANADROMOUS FISH PRESENT? Y N

44 ANADROMOUS FISH OBSERVATION

Species	Aerial	Ground

COMMENTS: STOPPED to take sample of oil from small turnout on NE shore of stream mouth.

FRAME(S)

DESCRIPTION

FRAME(S)	DESCRIPTION

46 OIL DISTRIBUTION DIAGRAM

— Sample taken
= Photo frame # and
shot direction.

ACE 9961679

FRAME(S)

DESCRIPTION

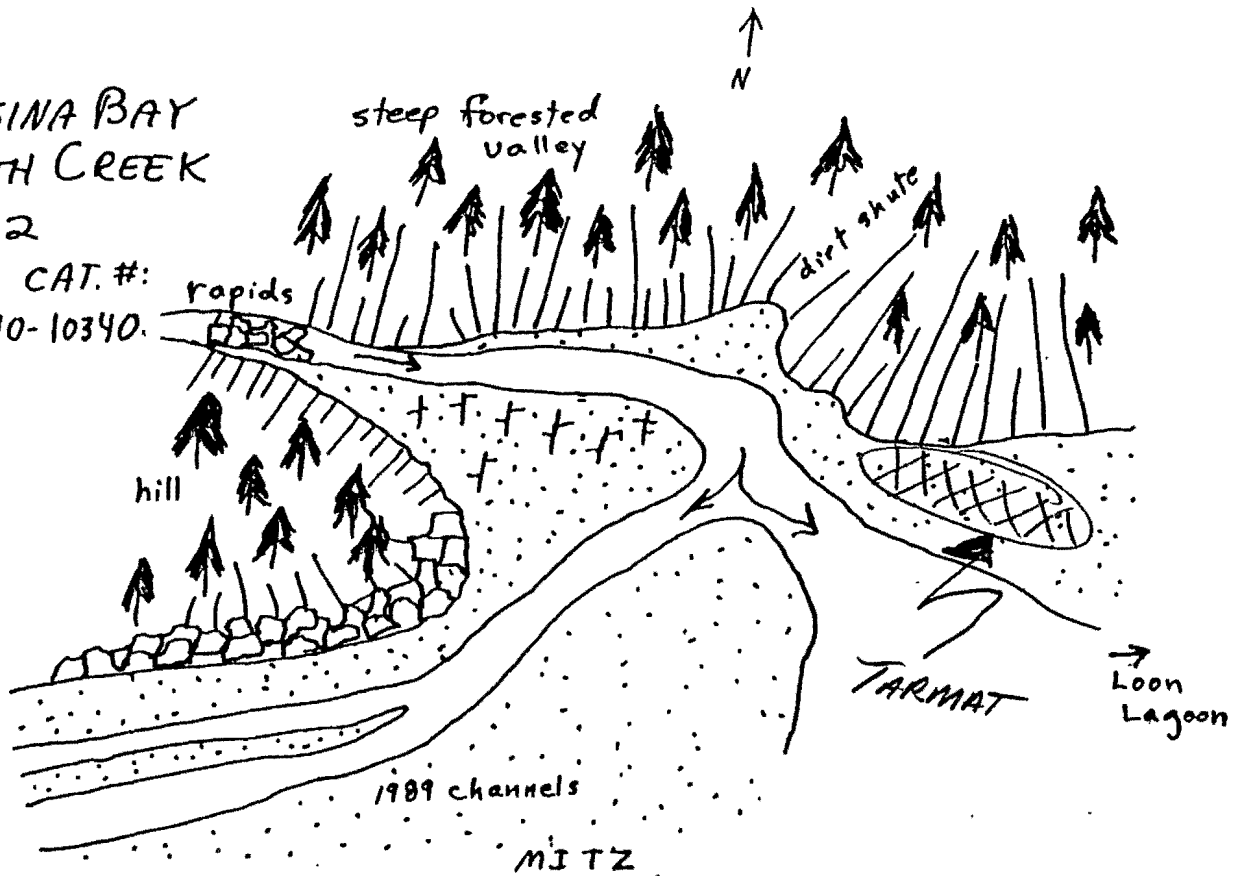
48 OIL DISTRIBUTION DIAGRAM

TONSINA BAY
NORTH CREEK

TB-2

ANAD. CAT. #:

232-10-10340.



- = Sample taken
- = Photo frame # and shot direction.

ACE 9961680 -15

TONGANA BAY - North Creek

ASC NUMBER: 232-10-10340 SEGMENT NUMBER: TB-2 YR CATALOGED:
 LOCATION:
 STREAM NAME:
 DUDIAK K-UNIT:
 US QUADRANGLE: *Sehonua B-7* LOCAL STREAM #:
 SHORELINE TYPE: *Beach* ALL SEGMENTS:
 WAVE EXPOSURE: *Low* LEGAL:

LATITUDE: 59 18 44
 LONGITUDE: 150 56 58

ASC NUMBER:
 SURVEY TYPE: *SS/BS*
 METHOD: *FOOT*
 DATE: *9/25/90*
 START TIME: *1102*
 STOP TIME: *1110*

TEAM RECORDER: ~~Podiat~~ *Hill*
 OBSERVERS: *Podiat*

AGENCY(IES): *ADFG*

PHOTOS TAKEN? *Y* - *Norma Dudiak (ADFG) took*
 Roll #: *photo of oil sample* Frames:
 VIDEO TAKEN? *N* Tape Number:
 Counter Start:

SAMPLES TAKEN? *yes*
 SAMPLE I.D. NUMBERS: 1. *DDH/ND - 4/25/90-1105* 2.
 4. 5. 3. 6.

	LENGTH m	WIDTH m	M2	%	THICK cm	PEN cm	OIL TYPE
SITE 1	<i>10</i>	<i>10</i>	<i>10</i>	<i>50</i>	<i>43</i>	<i>—</i>	<i>AP, TP</i>
SITE 2							
SITE 3							
SITE 4							
SITE 5							

OVERALL OIL IMPACT: *L*

OIL IN STREAM CHANNEL? *N*
 SUBSTRATE

Bedrock	Granule
Boulder	Sand
Cobble	Silt
Pebble	Veget.

OIL ON BEACH WITHIN 50M OF STREAM MOUTH? *y*

SPECIES	<i>NONE</i>				
COUNT					

COMMENTS:

Pac-Screening

TANAINA Bay-North Creek

ADF&G MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: ES SS DS TS AVS SCHA MMS PTA 2 REGION: PWS KP, CI K, AP
METHOD: Aerial Ground Boat
Oil Sample Collection

3 DATE: 4/25/90 16 HIGH TIDE TIMES: 0150 11457 21 TEAM RECORDER: Doug Hill
4 START TIME: 1102 18 HIGH TIDE HTS: 14.7 12.4 22 OBSERVERS: NOMA Dudiak
8 STOP TIME: 1110 17 LOW TIDE TIMES: 0830 10832 23 AGENCY: ADFG

6 SEGMENT #: TB-02 19 LOW TIDE HTS: -3.3 10.9 24 PHOTOS TAKEN: 3
7 STATION #: _____ 10 TIDE HT AT SURVEY: _____ Roll #: _____ Frame: _____

8 K-UNIT: _____ Ebb Slack Flood Slack 25 VIDEO TAKEN: Y N TAPE#: _____
9 STAT AREA: 232-10 20 USCG QUAD: Seldovia B-3 Starts: _____ Ends: _____

10 LAT: 59 18 44 11 LONG: 150 56 17 26 SAMPLES TAKEN: N Number
12 SOURCE: Map Loran 01 DGH/NO-4/25/90-1105

13 LOCATION: K9, OC, TANAINA BAY, North Shore Sediment _____
14 DESCRIPTION: Stream just east of Lagoon Outlet Biological _____
Water _____

EXTENT OF OIL

	SHORELINE				STREAM			
	L	W	M ²	%	L	W	M ²	%
27 SURFACE COVERAGE								
28 SURFACE THICKNESS								
29 PENETRATION								

30 OVERALL OIL IMPACT: M 10 L M H 36 CATALOGED ANAD. FISH STREAM? N
31 OIL TYPE: Pooled Mousse 10 Asphalt Sticky Stain 37 CATALOG #: 232-10-10340
32 OILED DEBRIS? Y 38 STREAM NAME: _____
33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cove 39 OIL IN STREAM BED? Y
Lagoon Marsh 40 OIL ON STREAM BANKS? N

34 WAVE EXPOSURE: High Moderate Low 41 OIL ON BEACH ADJACENT TO MOUTH? N
(within 50 meters)
35 SUBSTRATE TYPE: Bedrock _____ Boulder _____ Cobble 60 42 OIL WITHIN 1 MILE OF STREAM? N
Gravel 90 Sand _____ Mud/silt _____
Where: Remainder of TB-2
TB-3, TB-4, TB-5

43 ANADROMOUS FISH PRESENT? Y ? N

44 ANADROMOUS FISH OBSERVATION

Species	Aerial	Ground

COMMENTS: STOPPED to take sample of oil from small turnout on NE shore of stream mouth.

FRAME(S)

DESCRIPTION

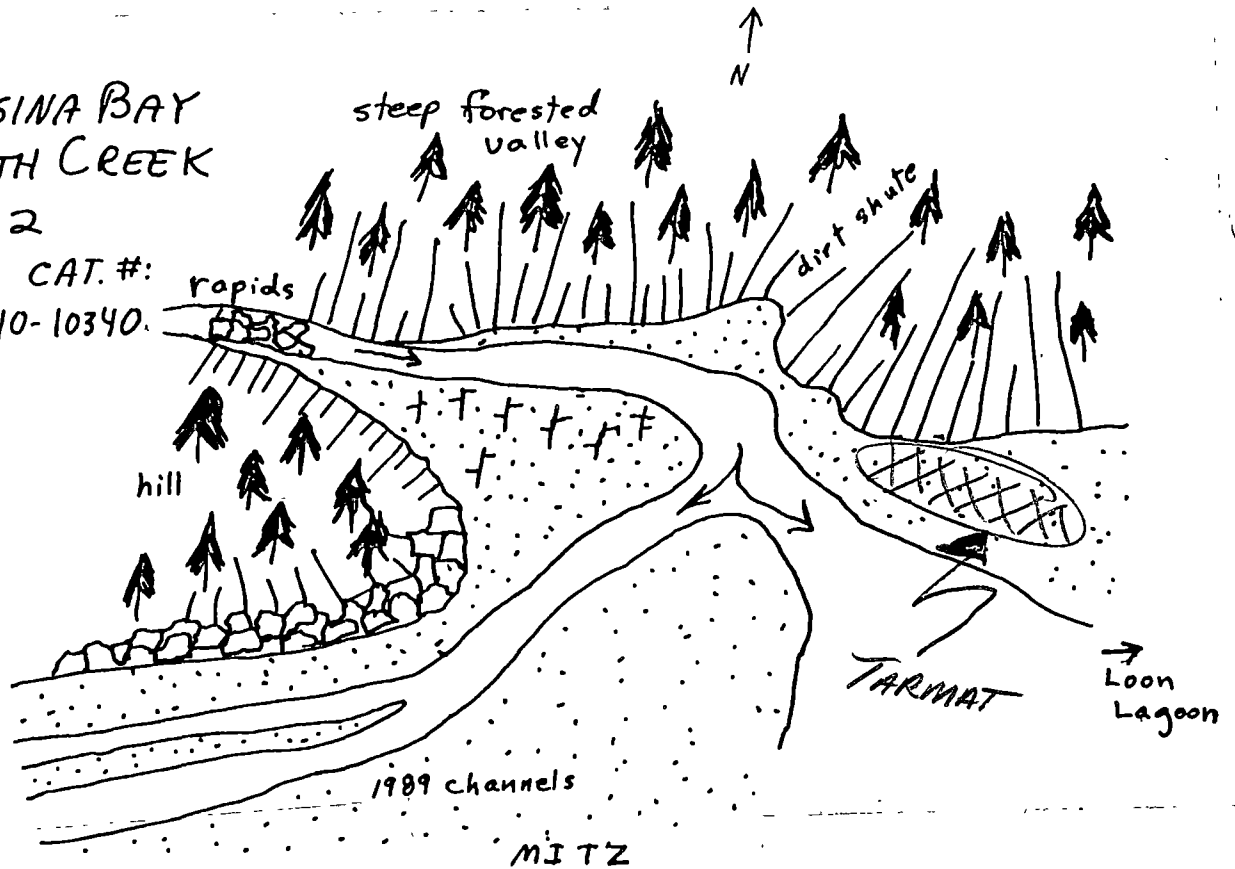
48 OIL DISTRIBUTION DIAGRAM

TONSINA BAY
NORTH CREEK

TB-2

ANAD. CAT. #:

232-10-10340.



= Sample taken
 = Photo frame # and
 shot direction.

ACE 9961683-15

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/TB-002 STREAM NO: 232-10-10340 DATE 4/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

- A Salmon stream mouth - fry outmigration (3/1 to 5/15)
- B Salmon stream mouth - spawning (7/10 to 8/31)
- T All Bald Eagle nests (3/1 to 6/1)
- M Herring spawning (4/1 to 6/15)
- GA State Marine Park Alaska State Wilderness Park
- SNN Recreation: Sportfishing

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 (564-3276 (Anchorage) or 229-1508 (24 hrs.)).

SH SIGNATURE: Rebel Jean Durr DATE: 5/25/90

Subsurface Oil Observed: Yes No Maximum Depth

RECOMMENDATIONS:

- | | |
|---|--|
| <input type="checkbox"/> No Treatment Recommended | <input type="checkbox"/> Snare/Absorbent Booms |
| <input checked="" type="checkbox"/> Treatment Recommended | <input type="checkbox"/> Oil Snares (pom poms) |
| <input checked="" type="checkbox"/> Manual Pickup | <input type="checkbox"/> Absorbents (pads, rolls, etc) |
| <input checked="" type="checkbox"/> Bioremediation | <input type="checkbox"/> Spot Washing: <u> </u> Wands |
| <input checked="" type="checkbox"/> Tarmat Removal | <input type="checkbox"/> Beach Cleaner |
| | <input type="checkbox"/> Other (see comments) |

COMMENTS: Recommend manual removal of tarmat and patties as indicated on the attached ADF&G sketch map. Work from 6/15 to 7/9 with approval of USFWS due to eagle nest.

TAG COMMENTS: Bioremediation (CUSTOMER) IS REQUIRED FOLLOWING TREATMENT
Removal

APPROVAL DATE: 5/24/90

AGC Art Wilson Art Wilson

EXXON Andy Galt

NOAA Burl Wilcott Burl Wilcott

USCG U. J. HALL

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

ACE 9961684 +/S

ACE 1940690 +/S

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A, 99 Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Monson 267-2324

1C Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Esther Hatchery release (4/15 to 6/15)
1E Main Bay Hatchery release (4/20 to 6/15)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511

1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Calkins 267-2403

5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Roth 267-2208

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
6NN Sport Fishing
7Z Subsistence area: Salmon harvesting (8/1 to 9/30)
7HH Finfish harvesting
7I Deer harvesting (8/15 to 2/28)
7J Invertebrate harvesting

Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

ACE 9961685

ACE 1940691

TB 002

EXXON COMMAND CENTER (HOMER)

P.O. Box 4848
4014 Lake St.
Homer, AK 99603
Tel: 235-6444
Fax: 235-5963

April 30, 1990

The attached is a ADF&G survey for segment TB-002. stream #232-10-10340. The stream was not surveyed by AMAD. Please refer to SSAT TB-002. Minor type A clean-up is indicated.

Darryl Yoes

DY/mo

4/30/90

ACE 9961686

ACE 1940692

EXXON COMMAND CENTER (HOMER)

P.O. Box 4848
4014 Lake St.
Homer, AK 99603
Tel: 235-6444
Fax: 235-5963

April 30, 1990

The attached is a ADF&G survey for segment TB-002, stream #232-10-10340. The stream was not surveyed by ANAD. Please refer to SSAT TB-002. Minor type A clean-up is indicated.

Darryl Yoes

DY/mo

4/30/90

TB-2.

232-10-10340

A comprehensive Pre ANAD SCAT was conducted on TB-002, Cat. # 232-10-10340. The ANAD SCAT reviewed the results of this prescreen and decided it was NOT necessary to re-survey this stream. It was decided that they (the ANAD SCAT Team) would take the findings of the Pre-ANAD SCAT.

Manual pick up is recommended, therefore we need to route this on through.

Jack R.

ACE 9961687

ACE 1940693

T.A.G.
53-152
Opan

RECEIVED
MAY 19 1990

DEPT. OF
ENVIRONMENTAL CONSERVATION

ANADROMOUS FISH STREAM ASSESSMENT

REGION: KENAI

SEGMENT: ST/TB-002

SUBDIVISION: A

STREAM NO: 232-10-10340

*Concer 5/22/90
KRM*

ACE 9961688

ACE 1940694

GROUP 4

Prescreening

ADF&G MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS SS DS TS AVS SCH MMS PTA

2 REGION: PWS KP, CI K, AP

METHOD: Aerial Ground Boat Condova (Adjusted)

3 DATE: 4-17-70 15 HIGH TIDE TIMES: 0551

21 TEAM RECORDER: Doug Hill

4 START TIME: 7415 16 HIGH TIDE HTS: 10.41

22 OBSERVERS: Susan McLain

5 STOP TIME: 1428 17 LOW TIDE TIMES: 1318

23 AGENCY: ADF&G

6 SEGMENT #: TB-2 18 LOW TIDE HTS: 2.01

24 PHOTOS TAKEN: Y

7 STATION #: _____ 19 TIDE HT AT SURVEY: 10LD

Roll # 70-COM-006-H Frame: 9, 10

8 K-UNIT: _____ Ebb Stack Flood Stack

25 VIDEO TAKEN: Y TAPE#: _____

9 STAT AREA: 232-10 20 USCG QUAD: Selkovia B-3

Starts: _____ Ends: _____

10 LAT: 59° 25' 0 11 LONG: 151° 19' 0

26 SAMPLES TAKEN? Y Number _____

12 SOURCE: Map Loran

OIT DOH/NO - 4/25/70

13 LOCATION: Tonsina Bay - N Creek, AFS #232-10

Sediment _____

14 DESCRIPTION: North shore of Tonsina Bay, stream mouth approx. 1/4 mile west of hood lagoon.

Biological _____

EXTENT OF OIL

Water _____

	SHORELINE				STREAM			
	L	W	H ²	V	L	W	H ²	V
27 SURFACE COVERAGE								
28 SURFACE THICKNESS								
29 PENETRATION								

36 CATALOGED ANAD. FISH STREAM? Y

37 CATALOG # 232-10-10340

38 STREAM NAME: Tonsina North

39 OIL IN STREAM BED? none observed

40 OIL ON STREAM BANKS? Y

30 OVERALL OIL IMPACT: N VL L M H

41 OIL ON BEACH ADJACENT TO MOUTH? Y

(within 50 meters)

31 OIL TYPE: Pooled Kerosene Tar Asphalt Sticky Stain

42 OIL WITHIN 1 MILE OF STREAM? Y

where: N. W. stream of hood lagoon

32 OILED DEBRIS? Y

43 ANADROMOUS FISH PRESENT? Y

33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cove Lagoon Marsh

44 ANADROMOUS FISH OBSERVATION

34 WAVE EXPOSURE: High Moderate Low

Species Aerial Ground

35 SUBSTRATE TYPES: Bedrock _____ Boulder _____ Cobble 20%

Gravel 20% Sand 10% Mud/silt _____

COMMENTS: 3 observers walked both sides of stream channel up from mouth. No oil was observed on W side. Several large tar mats + tar patties were observed on E side up in 25 yds of mouth of stream.

ACE 9961689

ACE 1940695

1 B-002

FRAME(S)

9, 10

DESCRIPTION

Aspects of Northern Anadromous Fish Stream (232-10-10340)

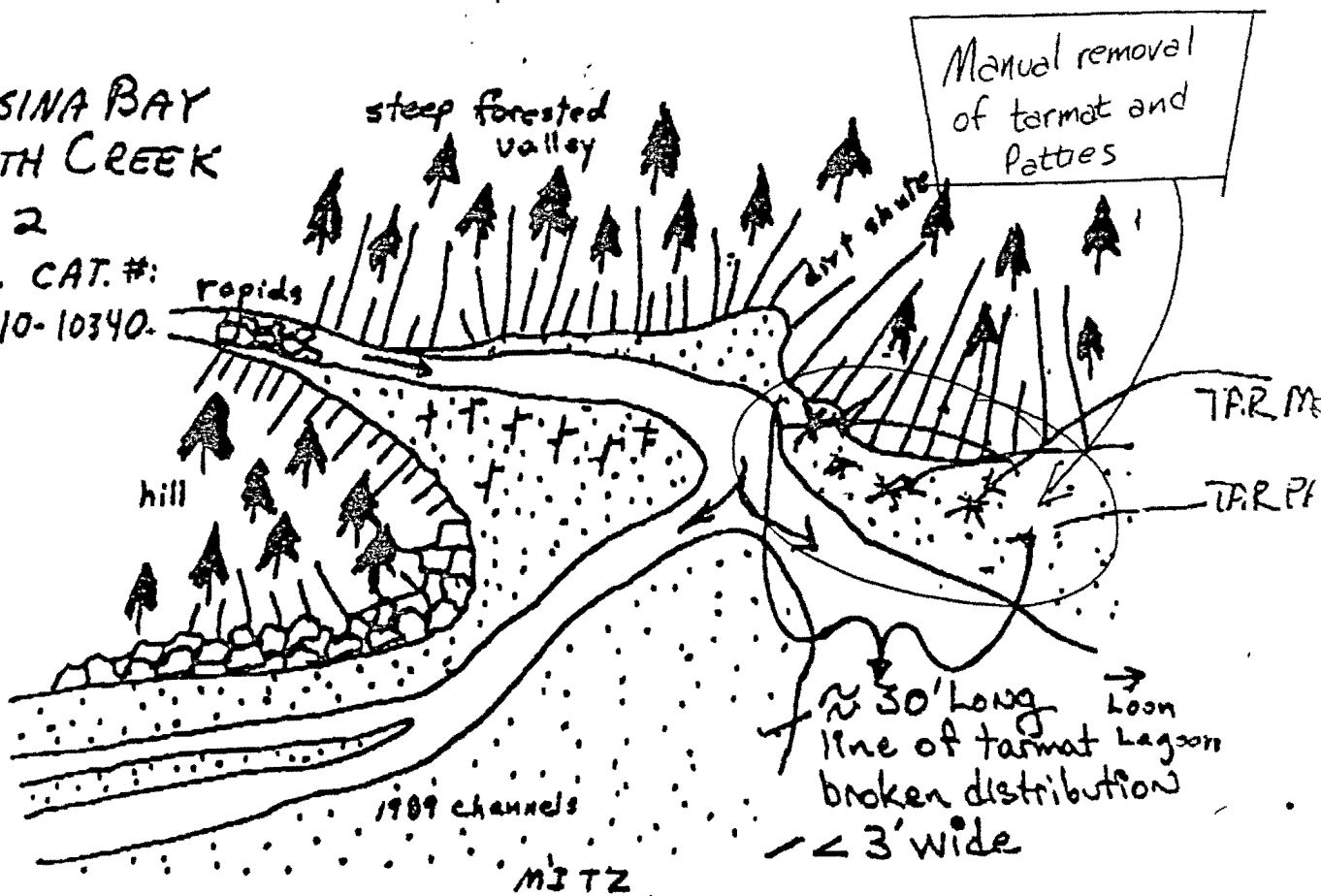
40 OIL DISTRIBUTION DIAGRAM

TONSINA BAY
NORTH CREEK

TB-2

ANAD. CAT. #:

232-10-10340



ACE 9961690

ACE 1940696

ANADSCAT Recommended

- Sample taken
- Photo frame # and shot direction

DRAFT

SEGMENT ST / TB-002 SUBDIVISION: 232-10-10340 DATE 4/30/94

JSCG
NAME _____ SIGNATURE _____

NO TREATMENT RECOMMENDED TREATMENT SUGGESTED
COMMENTS

~~ADFC~~
ADF4G
NAME Doug Hill SIGNATURE Douglas A Hill

NO TREATMENT RECOMMENDED TREATMENT SUGGESTED
COMMENTS

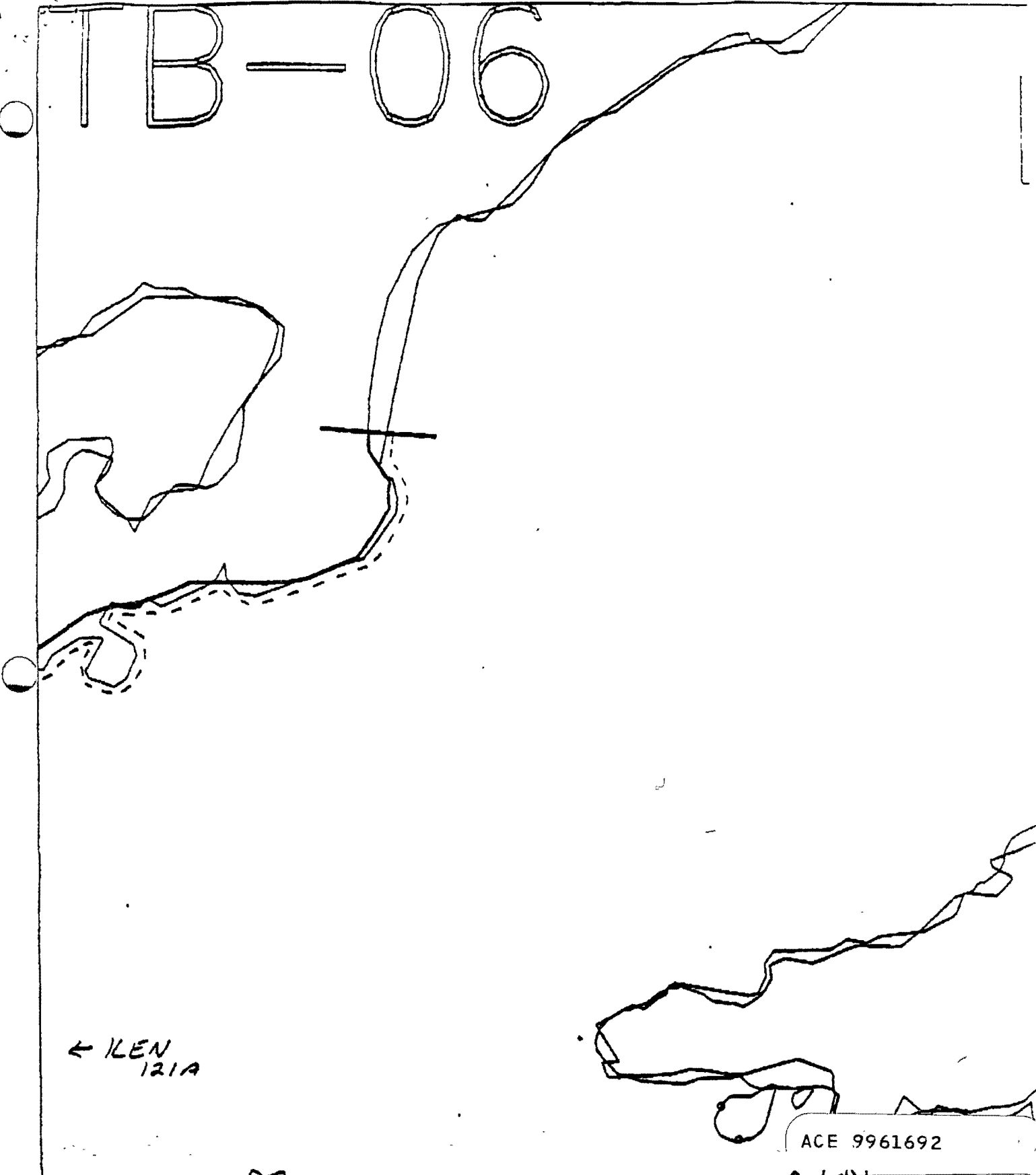
— Recommend Manual pickup and Removal of tar mats and
parties from Eastern bank at mouth of stream.
this is anadromous fish stream (chums + pinks)

LAND MANAGER
NAME _____ SIGNATURE _____

NO TREATMENT RECOMMENDED TREATMENT SUGGESTED
COMMENTS

ACE 9961691
ACE 1940697

TB-06



← ILEN
121A

ACE 9961692

ACE 1940698

Map Key: KEN-121b

Name: T. Sawyer

Date: 4-21-00

Data Entered:

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

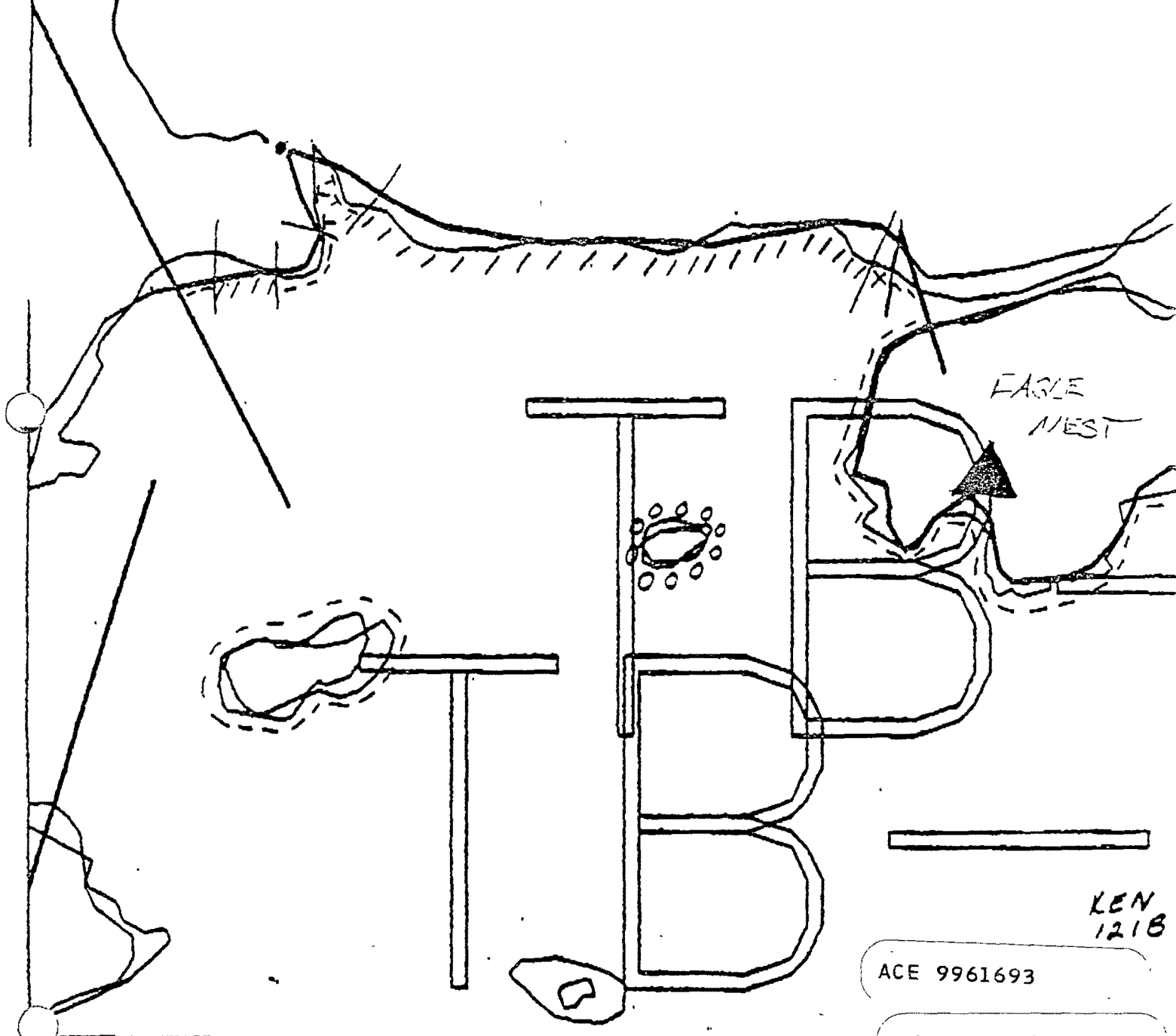
0000 No Oil

TB-2

ADEC Segment Length: 2232m



Anadromous Stream
232-10-10340



EAGLE NEST

KEN
121B

ACE 9961693

ACE 1940699

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

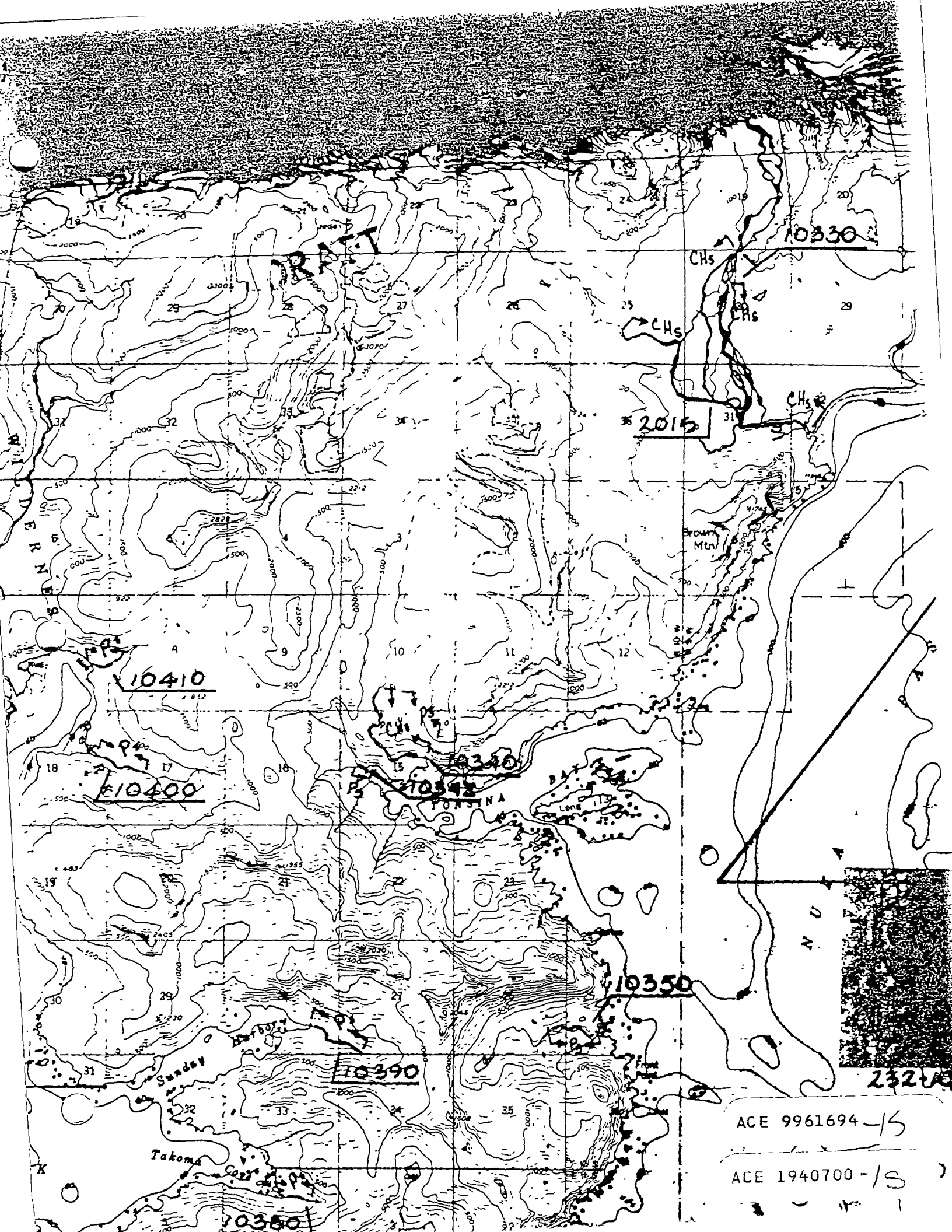
TB-2

ADEC Segment Length: 2232m

Map Key: KEN-121a

Name: T. Sawyer

Date: 4-21-90



10410

10400

10340

10350

10390

10330

23200

ACE 9961694 -15

ACE 1940700 -15

10350

TB 002

EXXON COMMAND CENTER (HOMER)

P.O. Box 4848
4014 Lake St.
Homer, AK 99603
Tel: 235-6444
Fax: 235-5963

April 30, 1990

The attached is a ADF&G survey for segment TB-002. stream #232-10-10340. The stream was not surveyed by AMAD. Please refer to SSAT TB-002. Minor type A clean-up is indicated.

Darryl Yoes

DY/mo

AMAD 4/30/90

ACE 9961695 +/S

ACE 1940701 +/S

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / TB-007 SUBDIVISION: _____ DATE 4/30/90

JSCG

NAME _____ SIGNATURE _____

NO TREATMENT RECOMMENDED
COMMENTS

TREATMENT SUGGESTED

~~ADFG~~
~~ADFC~~

NAME Doug Hill SIGNATURE Douglas D Hill

NO TREATMENT RECOMMENDED
COMMENTS

TREATMENT SUGGESTED

— Recommend Manual pickup and Removal of tar mats and
padding from Eastern bank at mouth of stream.
this is anadromous fish stream (chums + pinks)
ADFG Personnel will be advised as to
when cleanup will occur — To get a monitor
on site

LAND MANAGER

NAME _____ SIGNATURE _____

NO TREATMENT RECOMMENDED
COMMENTS

TREATMENT SUGGESTED

ACE 9961696

ACE 1940702

Group A TB-002 Prescreening

ADF&G MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS SS DS TS AVS SCHA MMS PTA 2 REGION: PWS KP, CI K, AP
 METHOD: Aerial Ground Boat Condover (Adjusted)
 3 DATE: 4-17-90 15 HIGH TIDE TIMES: 0551 21 TEAM RECORDER: Doug Hill
 4 START TIME: 1415 16 HIGH TIDE HTS: 10.4 22 OBSERVERS: Susan McLane
 5 STOP TIME: 1428 17 LOW TIDE TIMES: 1318 23 AGENCY: ADF&G
 6 SEGMENT #: TB-2 18 LOW TIDE HTS: 2.0 24 PHOTOS TAKEN: Y N
 7 STATION #: _____ 19 TIDE HT AT SURVEY: LOW Roll # 90-DOH-006-H Frames: 9, 10
 8 K-UNIT: _____ Ebb Slack Flood Slack 25 VIDEOS TAKEN: Y N TAPE#: _____
 9 STAT AREA: 232-10 20 USCG QUAD: Seldovia B-3 Starts: _____ Ends: _____
 10 LAT: 59° 25' 0 11 LONG: 151° 19' 0 26 SAMPLES TAKEN: Y N Number
 12 SOURCE: Map Loran 011 DOH/NO - 4/25/90-1
 13 LOCATION: Tonsina Bay - N. creek AFS #232-10- Sediment _____
 14 DESCRIPTION: North side of Tonsina Bay, stream mouth approx. 1/4 mile west of Loox Lagoon. Biological _____
 EXTENT OF OIL Water _____

27 SURFACE COVERAGE

	SHORELINE				STREAM			
	L	W	M ²	S	L	W	M ²	S
27 SURFACE COVERAGE								
28 SURFACE THICKNESS								
29 PENETRATION								

30 OVERALL OIL IMPACT: N VL L M H

31 OIL TYPE: Pooled Mousse Tar Asphalt Sticky Stain

32 OILED DEBRIS? Y N

33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cove
Lagoon Marsh

34 WAVE EXPOSURE: High Moderate Low

35 SUBSTRATE TYPE: Bedrock _____ Boulder _____ Cobble 20%
Gravel 70% Sand 10% Mud/silt _____

36 CATALOGED ANAD. FISH STREAM? Y N

37 CATALOG #: 232-10-10340

38 STREAM NAME: Tonsina North

39 OIL IN STREAM BED? Y N
none observed

40 OIL ON STREAM BANKS? Y N

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

42 OIL WITHIN 1 MILE OF STREAM? Y N
Where: N. W. stream at head of Bay

43 ANADROMOUS FISH PRESENT? Y N

44 ANADROMOUS FISH OBSERVATION

Species	Aerial	Ground

COMMENTS: 3 observers walked both sides of stream channel 100 yds up from mouth. No oil was observed on W. side. Several large tar mats + tar patties were observed on E. side w/in 25 yds of mouth of stream.

ACE 9961697
ACE 1940703

TB-002

FRAME(S)

9, 10

DESCRIPTION

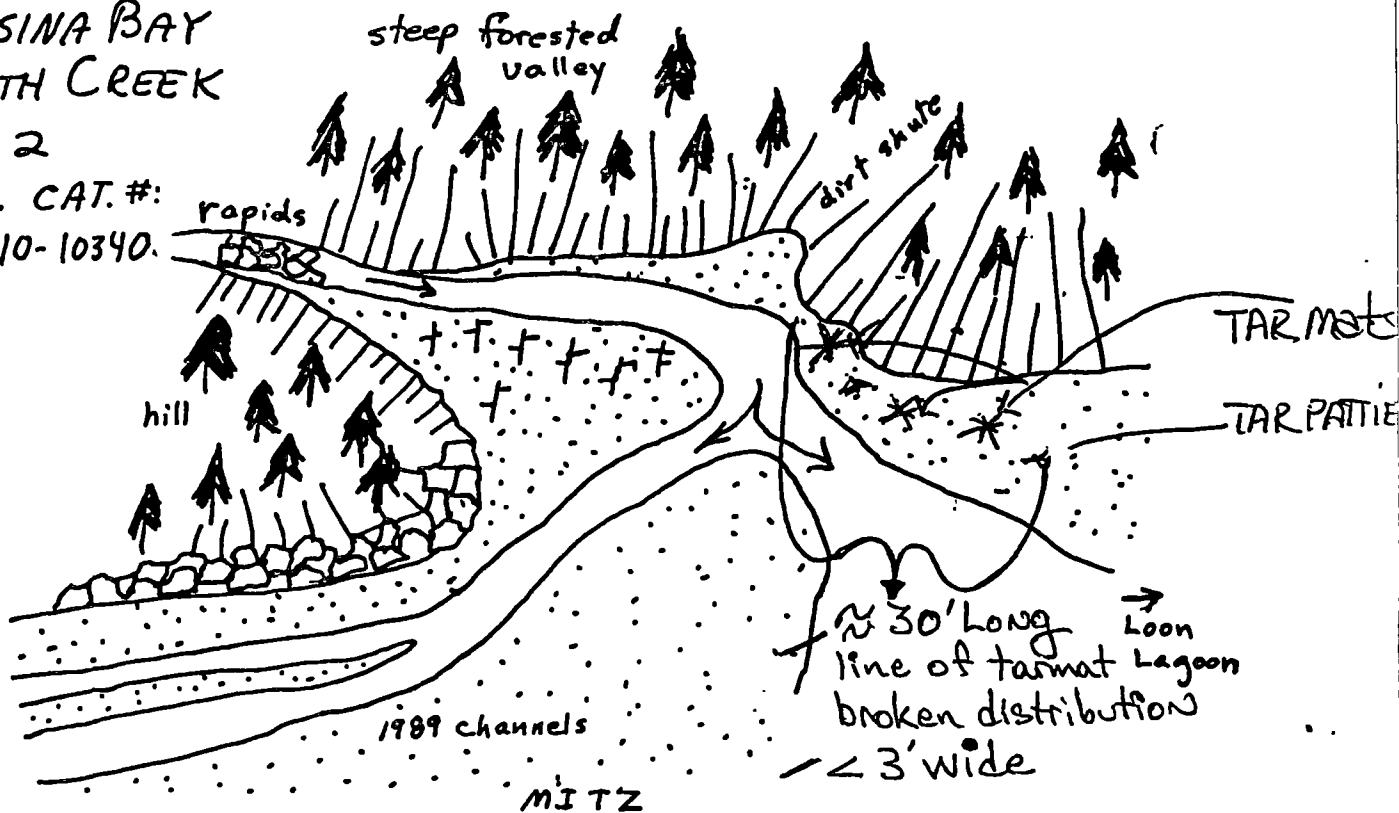
Aerials of Northern Anadromous Fish Stream (232-10-10340)

46 OIL DISTRIBUTION DIAGRAM

TONSINA BAY
NORTH CREEK

TB-2

ANAD. CAT. #:
232-10-10340.



ACE 9961698-15

ACE 1940704-15

ANADSCAT Recommended

- = Sample taken
- = Photo frame # and shot direction.

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT TB-2 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup
Tarmat Removal

OPEN

Bioremediation and Manual Tilling
Less Than 100m From Stream

WORK TO 7/10
(ADF&G MONITOR REQ.)

Bioremediation and Manual Tilling
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 catalogued anadromous stream (232-10-10340) is in Subdivision A. This subdivision is closed to bioremediation and manual tilling less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation and manual tilling are permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation and manual tilling more than 100m from stream. No constraint to manual pickup and tarmat removal.

2M Herring Spawning

No constraint to manual pickup, tarmat removal, bioremediation, and manual tilling.

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

FOSC

Date

6-19-90

ACE 9961699

Prepared by

Date

6/16/90

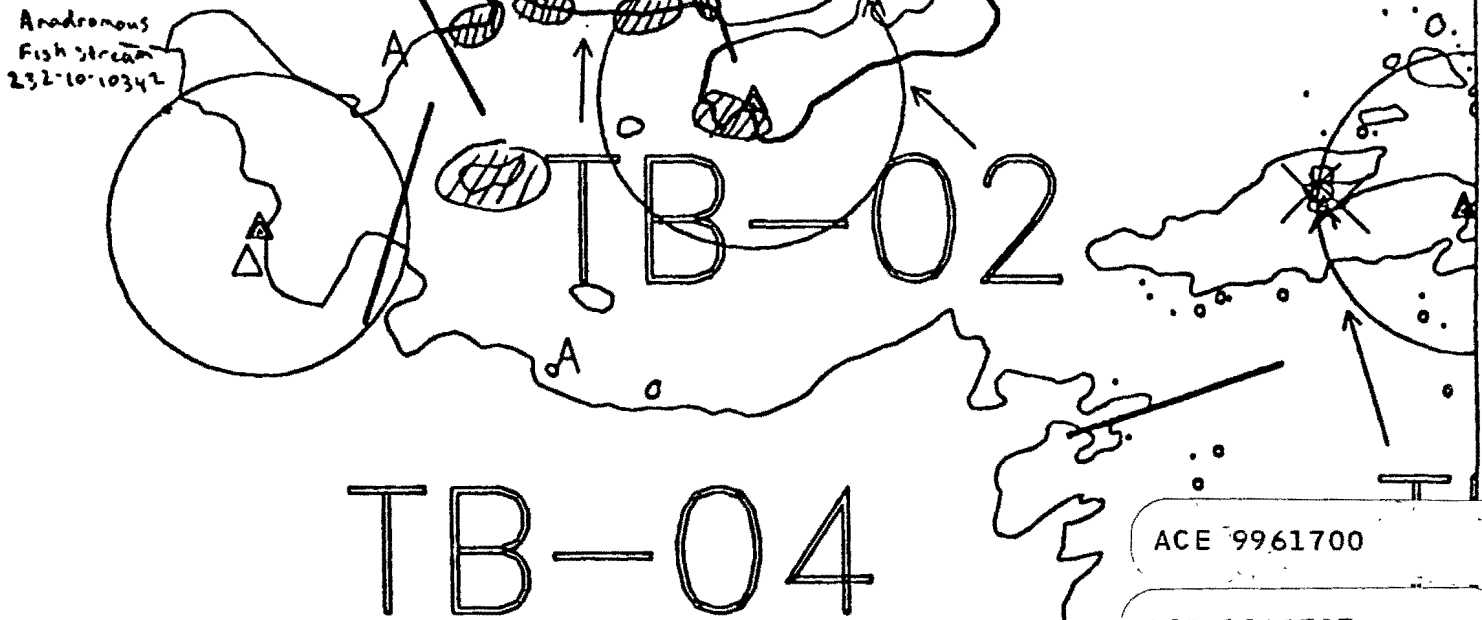
ACE 1940706

TB-01

TB-06

Anadromous Fish stream
232-10-10342

Anadromous Fish stream
No 232-10-10340



ACE 9961700

ACE 1940707



Exxon Company, USA
Map Key: KEN-TB-2
June 10, 1990



ECOLOGY MAP
SEGMENT TB-2
SUBDIVISION A (1 of 1)



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

1 inch = 1721 feet

FIELD SHORELINE COMMENT SHEET

SEGMENT AS / TB-02 SUBDIVISION: A SITE: 1-5 DATE 8/5/90

USCG

NAME AEC Vandepels SIGNATURE AEC Vandepels

YES NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: The island in TB2A should be reassessed. It is not oiled to the point where I feel it should be worked again this year. I would let it weather over the winter because it is a high energy beach.

ADEC

NAME Clara J. Crosby SIGNATURE Clara J. Crosby

YES NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Work Plan Modification was submitted for further work on TB002A (Island) - site # 5. → This site can benefit the most from further work this year (1990) → site #4 & 3 Adjacent to Anad. streams. need reassessment & removal of ms. → Site #2: manual removal of AP & SOR the removal of which was called for in '90 work order - Treatment here was incomplete SITE #1 - Camp Beach. This area has H/SOR & AP (Please note pits #1-3): The SOR/H was Patchy to Broken. 1990 work order called for its removal? - ^{As AP} treatment incomplete - SEE photo I concur with Kenagy's observations THAT THESE ARE low to MOD ENERGY SITES. 13-16.

LAND MANAGER

NAME David K. Kenagy ADNR SIGNATURE [Signature]

YES NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: All beach areas in this subdivision are low to moderate energy areas. Scattered patches of Mousse, SOR & Cover were observed adjacent to the anadromous fish stream in this subdivision. On the island, mousse, asphalt cover were observed. in boulder area as well as a tumbolo where mousse was observed in fractured gravels and small cobbles. Additional treatment recommended in 1990. Priority for reassessment due to anadromous stream and wildlife utilization.

EXXON

NAME Jon Czarnurcki SIGNATURE Jon Czarnurcki

YES NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: The oiling on this segment is such that a kayaker may see it or get into it. However after the winter I would hope this segment would be signed off. The surface oil residual (SOR) is there but may break down during winter.

ACE 9961701 HS
ACE 1940709 +18

ASAP SHORELINE OILING SUMMARY

TEAM NO. 04 EXXON Jon Czanecki SEGMENT AS/ TB-02
 OG Rich Marty USGS USCG AEC Vandepels SUBDIVISION A
 ADEC Clara Crosby LAND REP Dave Kenagy TOTAL NO. SITES 5
 DATE 04 Aug 190 TIME 17:45 to 18:45 TIDE LEVEL +5.5' to +4'
 TOTAL EST LENGTH OF SHORELINE SURVEYED: 510 m
 SURVEYED FROM: Foot Boat Helo WEATHER: Sun Clouds Fog Rain Snow
 OIL CATEGORY LENGTH: W — m M 225 m N 200 m VL 385 m NO — m US — m

SURFACE OIL

SITE 1

SITE 2

SITE 3

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT				I	-	I	I	-
S.O.R.								
POOLED								
COVER			X		-	X	X	-
COAT								
STAIN								
MOUSSE								
PATTIES/T.B.								
FILM								
NO OIL					X	-	-	X
EST. SITE LENGTH					210m			

DISTRIBUTION				OILED ZONES			
/C	/B	/P	/S	SU	UI	MI	LI
		X			X		
H				H			
					X	-	X X
EST. SITE LENGTH				175m			

DISTRIBUTION				OILED ZONES			
/C	/B	/P	/S	SU	UI	MI	LI
			X	-	X	X	X
					X		
EST. SITE LENGTH				225m			

SUBSURFACE OIL

SITE NO.	PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER				OILED INTERVAL (cm)	CLEAN BELOW (Y/N)	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS
			OP	OR	OF	NO			SU	UI	MI	LI	
1	1	9cm	-	H	-	-	2.8	Y	-	-	X	-	PC/GS
1	2	7cm	-	H	-	-	0.55	Y	-	-	X	-	CGP/SGM
1	3	6cm	-	H	-	-	0.55	Y	-	-	-	X	PC/GS
2	1	25cm	-	X	-	-	0.12	Y	-	X	-	-	SGP/SP

Photographs:
 Roll No. ASAP-04-01
 Frames
 * skin on water table

COMMENTS most of the remaining oil is under or interstitial to cobbles & boulders.

ACE 9961702

ACE 1940710

ASAP SHORELINE OILING SUMMARY

SEGMENT AS/ TB-02 SUBDIVISION A

SURFACE OIL (CONTINUED)

CHARACTER	DISTRIBUTION				OILED ZONES				EST. SITE LENGTH
	/C	/B	/P	/S	SU	UI	MI	LI	
ASPHALT	---	---	---	I	I	I	---	---	50 m
S.O.R.	---	U	---	---	U	U	---	---	
POOLED									
COVER	---	X	---	---	X	X	---	---	
COAT									
STAIN									
MOUSSE	---	U	I	---	U	U	I	---	150 m
PATTIES/T.B.									
FILM									
NO OIL					X	---	X		

SUBSURFACE OIL (CONTINUED)

SITE NO.	PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER				OILED INTERVAL (CM-CM)	CLEAN BELOW (Y/N)	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS
			OP	OR	OF	NO			SU	UI	MI	LI	

COMMENTS

ACE 9961703

ACE 1940711

SEGMENT TB-02

SUBMISSION A

DATE, 04 Aug 90

CHECKLIST

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

LEGEND

1 Δ Pit - No Subsurface Oil

2 Δ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oil Vegetation

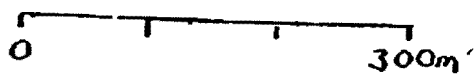
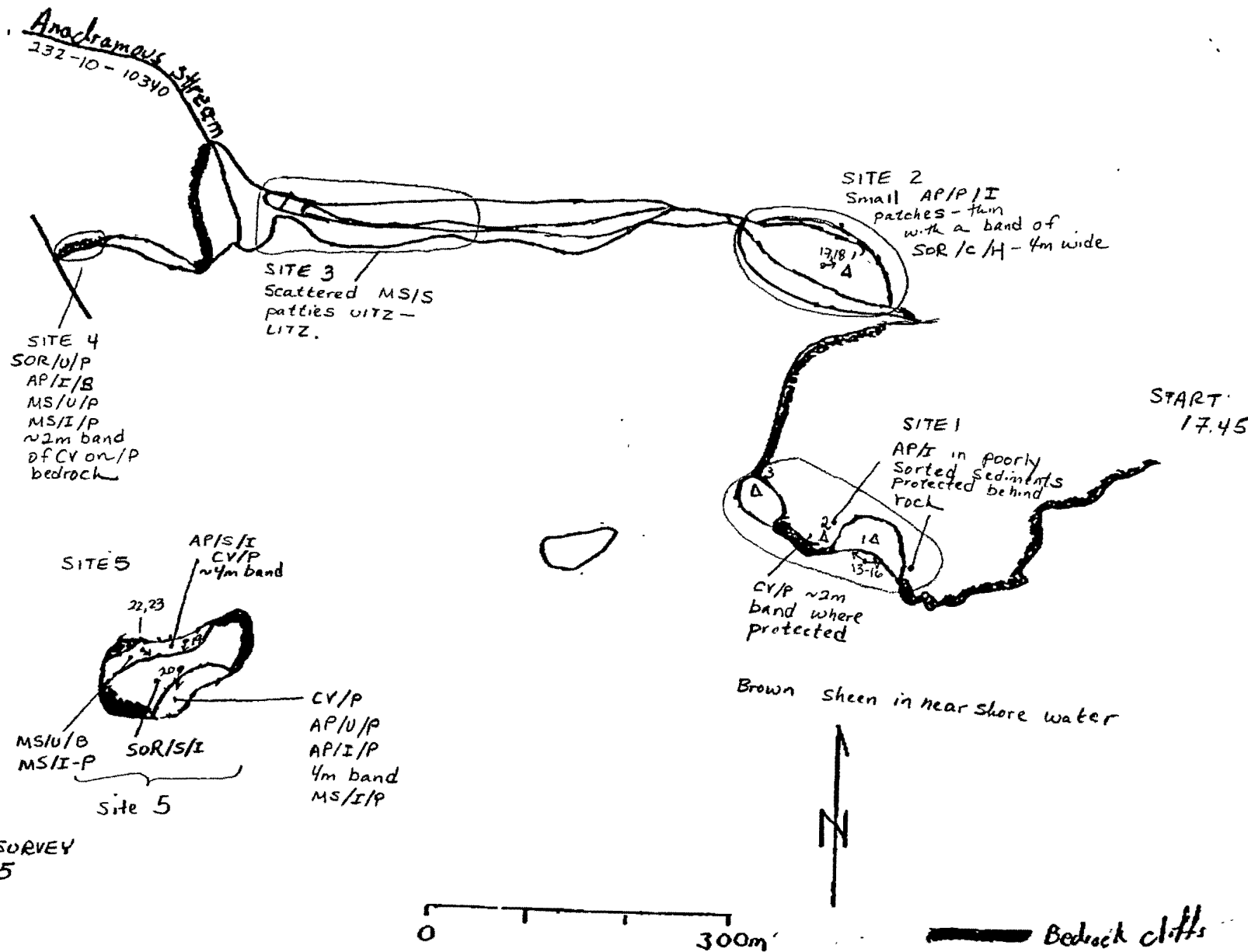
Photo location, direction, and number

ACE 9961704

END SURVEY 18:45

ACE 1940712

SKETCH MAP - A



Oil Character Legend: AP 210 PO CV 150 CT ST MS 350m SOL 150

Site 1
1 50m

VI. 160m

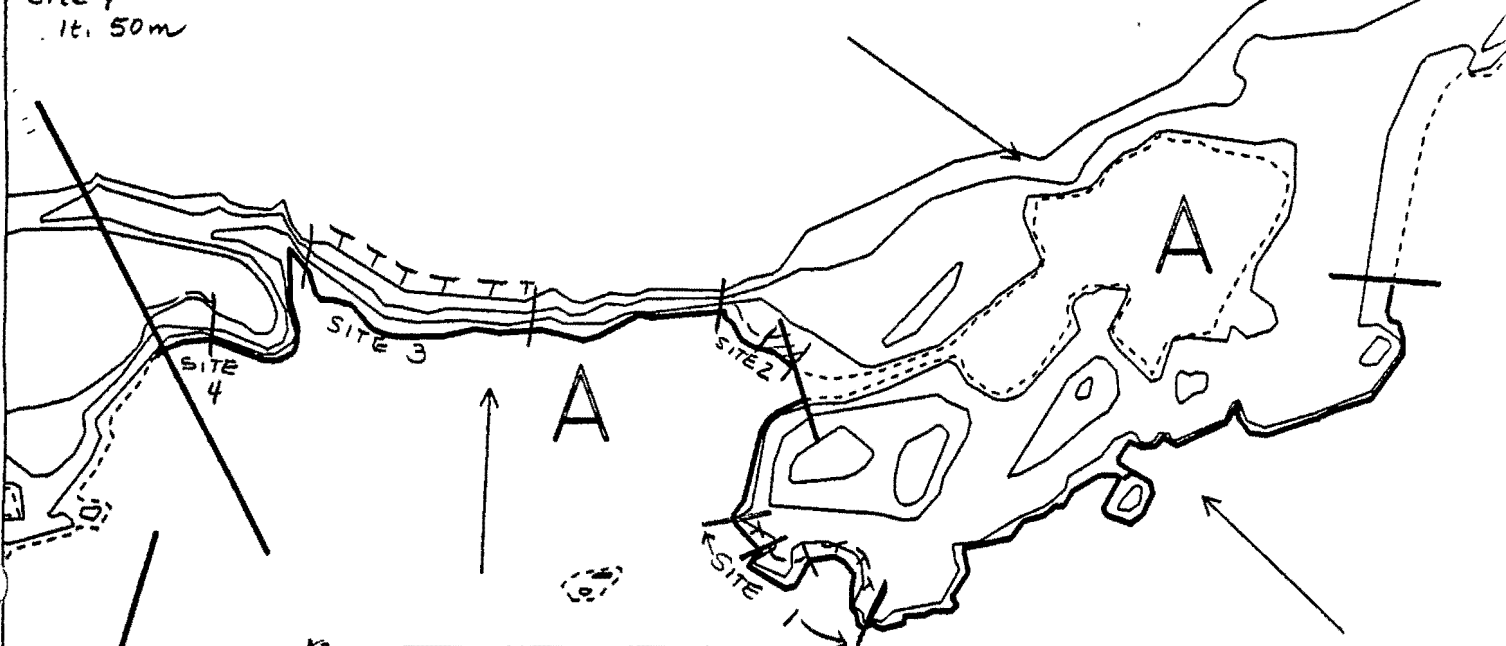
Site 2
1 100m
m 75m

Site 3
VI 225m

Site 4
It. 50m

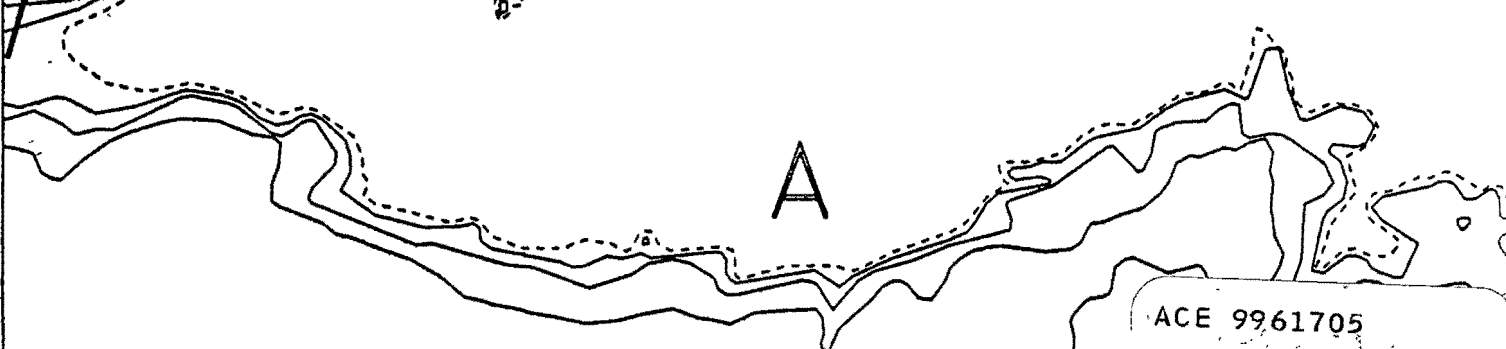
Site 5
mod. 150m

T B - 0 0 6



Note: Island included with TBO2A

T B - 0 0 2



ACE 9961705

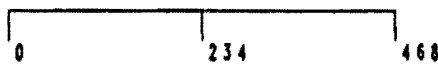
SEGMENT TB-2

Segment Location Map

Map Key: KENTB-2



METERS



July 18, 1990

1-9205

ACE 1940713

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT TB-02 SUBDIVISION A DATED 8/5/90.

MODIFICATION CLASS I _____ CLASS II ✓ CLASS III _____

1. REASON FOR MODIFICATION

The small island, as shown the ASAP sketchmap (site 5) has one area with a 4 m. band of asphalt / U & I / P. The majority of this asphalt is readily recoverable. Pooled mousse is also present and can be recovered, as well. A tumbolo on the west end of the island has mousse / U / B. This site bleeds silver and rainbow sheen. Sea otters, birds and migratory waterfowl frequent this area. This is a low to moderate energy area and will likely be minimally affected by winter storms.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

Manual removal of asphalt and mousse, as well as oiled sediments.

3. TIMING ISSUES

Complete by September 15, 1990.

ADEC Clara J. Crosby

EXXON _____

USCG AEC Vandepols - I disagree, wait until after reassessment in spring not 15 Sept. 90.

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

ACE 9961706-15

ACE 1940714-15

STATE OF ALASKA
FIELD MEMO

Permit Number ASAP Serial Number 1099

To (Name and Organization) JON EARNECKI (EXXON) CHIEF AEC VANDEPOLS (USCG)

Date and Time 8/10/90 1520 Area GOA., Kenai, HOMER ZONE.

Location and Section of Work TONSINA Bay - TBOOZA

Authorization to Proceed Non Conformance ADEC Permit ADF&G Permit

ADNR Permit Problem Identification Other

ADEC RECOMMENDS THE FOLLOWING TREATMENT FOR TBOOZA.

ASAP SURVEY SITE #1:

- A) MANUALLY REMOVE H/SOR, AP
- B) MANUALLY EXPOSE SUBSURFACE OIL, FOLLOWING SEAM & REMOVE H/SOR.
- C) MANUALLY REMOVE H/SOR IN LITZ IN THE VICINITY OF PIT #3.

ASAP SURVEY SITE #2:

- A) MANUALLY REMOVE H/SOR & AP.

ASAP SURVEY SITE #3, ANADROMOUS STREAM & B/C/G SHORELINE;

- A) MANUALLY REMOVE MS PATIES, MS & ANY H/SOR or AP.
- B) ROLLING B/C WHEN POSSIBLE TO ACCESS OILING
WHEN POSS USING POMPOMS AS NEEDED -

ASAP SURVEY SITE #5, SMALL ISLAND - SADDLE IN CENTER OF ISLAND;

- A) MANUALLY REMOVE AP/MS FROM INTERSTICES.
- B) ROLLING B/C WHEN POSSIBLE FOR REMOVAL OF AP/MS.
- C) SPOT WASH OF COVER & INACCESSIBLE OIL USING POMPOMS TO RECOVER OIL, & WIPE ROCKS.

SM TOMBOLO ON W. END OF ISLAND.

- A) MANUALLY REMOVE MS & OILED SED. (SMC, P)

Permit Expiration Date

State Representative

Clara S. Crosby

Recipient

Action Taken by Recipient

ACE 9961707-1P

ACE 1940708

DISTRIBUTION:

WHITE: ADFC-VALDEZ

GREEN: ADEC

YELLOW: EXXON

GOLDENROD: EXXON

PINK: COAST GUARD

EXXON Representative

Date/Time

ADF&G MULTI-ASSESSMENT FORM
1991 GENERAL ENTRY CHECKLIST



STREAM#: 2321010340
SEGMENT: TB002

PAGE 3

DATE PRINTED: 06/21/91

LOCATION: TONSINA BAY, NORTH SHORE

SURVEY TYPE: 90 PRE SCREEN - SS

METHOD: GROUND

DATE: 04/17/91

TEAM RECORDER: HILL

START TIME: 1415

OBSERVERS: MCLANE

END TIME: 1428

OG/HAB DISCREPANCIES: -

AGENCY: FG

PHOTOS TAKEN: Y

STATION: 2321010340

ROLL#: 90DDH006H

FRAME: 9-10

VIDEO TAKEN: N

TAPE#: -0-

START: -0-

END: -0-

SAMPLES TAKEN: N

SAMPLE NUMBERS: -0-

-0-

-0-

-0-

-0-

-0-

OIL IN STREAM BED: N

OVERALL OIL IMPACT: L

OIL ON BEACH BY MOUTH: Y

WAVE EXPOSURE: -0-

SHORELINE TYPE: BEACH COVE

SUBSTRATE TYPE: BEDROCK -0- BOULDER -0- COBBLE 20 VEGETAT -0-

GRAVEL 70 SAND 10 MUD/SILT -0- GRANULE -0-

ANADROMOUS FISH PRESENT: N

SPECIES: -0-

COUNT: -0-

-0-

-0-

-0-

-0-

-0-

-0-

-0-

-0-

ACE 9961667 + 15/P



ADF&G MULTI-ASSESSMENT FORM
1991 OILING ENTRY CHECKLIST

AGE 4

DATE PRINTED: 06/21/91

STREAM# : 2321010340
SEGMENT#: TB002

SURVEY TYPE : 90 PRE SCREEN - SS LOCATION: TONSINA BAY, NORTH SHORE
DATE: 04/17/91
TIMES: 1415 - 1428 TEAM RECORDER: HILL

-- OILING EXTENT --

SITE#	SITE TYPE	DEPTH (cm)	LENGTH (m)	WIDTH (m)	AREA (m)	%	THICK (cm)	PEN (cm)	OIL TYPE CODES
1	-0-	-0-	10	1	10 10	50	<3	-0-	AP TP
-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-

COMMENTS:

3 OBSERVERS WALKED BOTH SIDES OF STREAM CHANNEL 100 YARDS UP FROM MOUTH.
NO OIL WAS OBSERVED ON WEST SIDE. SEVERAL LARGE TARMATS & TAR PATTIES WERE
OBSERVED ON EAST SIDE WITHIN 25 YARDS OF MOUTH OF STREAM.
OIL ON STREAM BANKS: YES
OIL WITHIN 1 MILE OF STREAM: YES, NW STREAM AT HEAD OF BAY

ASC NUMBER: 232-10-10340 SEGMENT NUMBER: TB-3

YR CATALOGED:

LOCATION: KP OC, Tonsina Bay, North Shore

STREAM NAME:

LATITUDE: 59 16 37

KODIAK K-UNIT:

LOCAL STREAM #:

LONGITUDE: 150 53 39

USGS QUADRANGLE: Seldovia B-3

LEGAL:

SHORELINE TYPE: Beach, Cove

ALL SEGMENTS:

WAVE EXPOSURE: Low *OK*

ASC NUMBER:

TEAM RECORDER: Doug Hill

SURVEY TYPE: Pre-Screening

OBSERVERS: Susan McLane

METHOD: Foot

AGENCY(IES): ADF&G

DATE: 4 / 17 / 90

PHOTOS TAKEN? Yes

START TIME: 1415

Roll #: 90-DOH-006-H Frames: 9, 10

STOP TIME: 1428

VIDEO TAKEN? NO Tape Number:

Counter Start:

SAMPLES TAKEN? NO

SAMPLE I.D. NUMBERS: 1. 2. 3.
4. 5. 6.

	LENGTH m	WIDTH m	M2	%	THICK cm	PEN cm	OIL TYPE
SITE 1	10 m	1 m		50%	< 3cm	—	AP, TP
SITE 2							
SITE 3							
SITE 4							
SITE 5							

OVERALL OIL IMPACT: L

OIL IN STREAM CHANNEL? None observed

OIL ON BEACH WITHIN 50M OF STREAM MOUTH?

SUBSTRATE

Bedrock	Granule
Boulder	Sand 10%
Cobble 20%	Silt
Pebble 70%	Veget.

SPECIES					
COUNT					

COMMENTS: 3 observers walked both sides of stream channel 100yds up from mouth. No oil was observed on west side. Several large tar mats & tar patties were observed on East side w/in 25 yds of mouth of stream

observed in 1989

ACE 9961669 + / S

OK

Group A

Prescreening

ADF&G MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS SS DS TS AVS SCHA MMS PTA 2 REGION: PWS KP,C1 K,AP

METHOD: Aerial Ground Boat condouca (Adjusted)

3 DATE: 4-17-90 15 HIGH TIDE TIMES: 0551 21 TEAM RECORDER: Doug Hill

4 START TIME: 1415 16 HIGH TIDE HTS: 10.41 22 OBSERVERS: Susan McLane

5 STOP TIME: 1428 17 LOW TIDE TIMES: 1318 23 AGENCY: ADF&G

6 SEGMENT #: TB-2 18 LOW TIDE HTS: 2.01 24 PHOTOS TAKEN: Y N

7 STATION #: _____ 19 TIDE HT AT SURVEY: LOW Roll #: 90-004-006-4 Frame: 9,10

8 K-UNIT: _____ Ebb Slack Flood Slack 25 VIDEO TAKEN: Y N TAPE#: _____

9 STAT AREA: 232-10 20 USCG QUAD: Selkovia B-3 Start: _____ End: _____

10 LAT: 59° 25' 0 11 LONG: 151° 19' 0 26 SAMPLES TAKEN? Y N Number _____

12 SOURCE: Map Loran 011 3/2

13 LOCATION: Tonsina Bay - N. creek AFS #232-10-10340 Sediment _____

14 DESCRIPTION: North shore of Tonsina Bay, stream mouth approx. 1/4 mile west of Loow Lagoon. Biological _____
EXTENT OF OIL Water _____

27 SURFACE COVERAGE

SHORELINE				STREAM			
L	W	M ²	S	L	W	M ²	S

28 SURFACE THICKNESS

--	--	--	--	--	--	--	--

29 PENETRATION

--	--	--	--	--	--	--	--

30 OVERALL OIL IMPACT: N VL L M H

31 OIL TYPE: Pooled Mousse Tar Asphalt Sticky Stain

32 OILED DEBRIS? Y N

33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cove
Lagoon Marsh

34 WAVE EXPOSURE: High Moderate Low Conflicts

35 SUBSTRATE TYPE: Bedrock _____ Boulder _____ Cobble 20%
Gravel 20% Sand 10% Mud/silt _____

36 CATALOGED ANAD. FISH STREAM? Y N

37 CATALOG #: 232-10-10340

38 STREAM NAME: Tonsina North

39 OIL IN STREAM BED? Y N
none observed

40 OIL ON STREAM BANKS? Y N

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

42 OIL WITHIN 1 MILE OF STREAM? Y N
Where: N. W. stream at head of Bay

43 ANADROMOUS FISH PRESENT? Y N

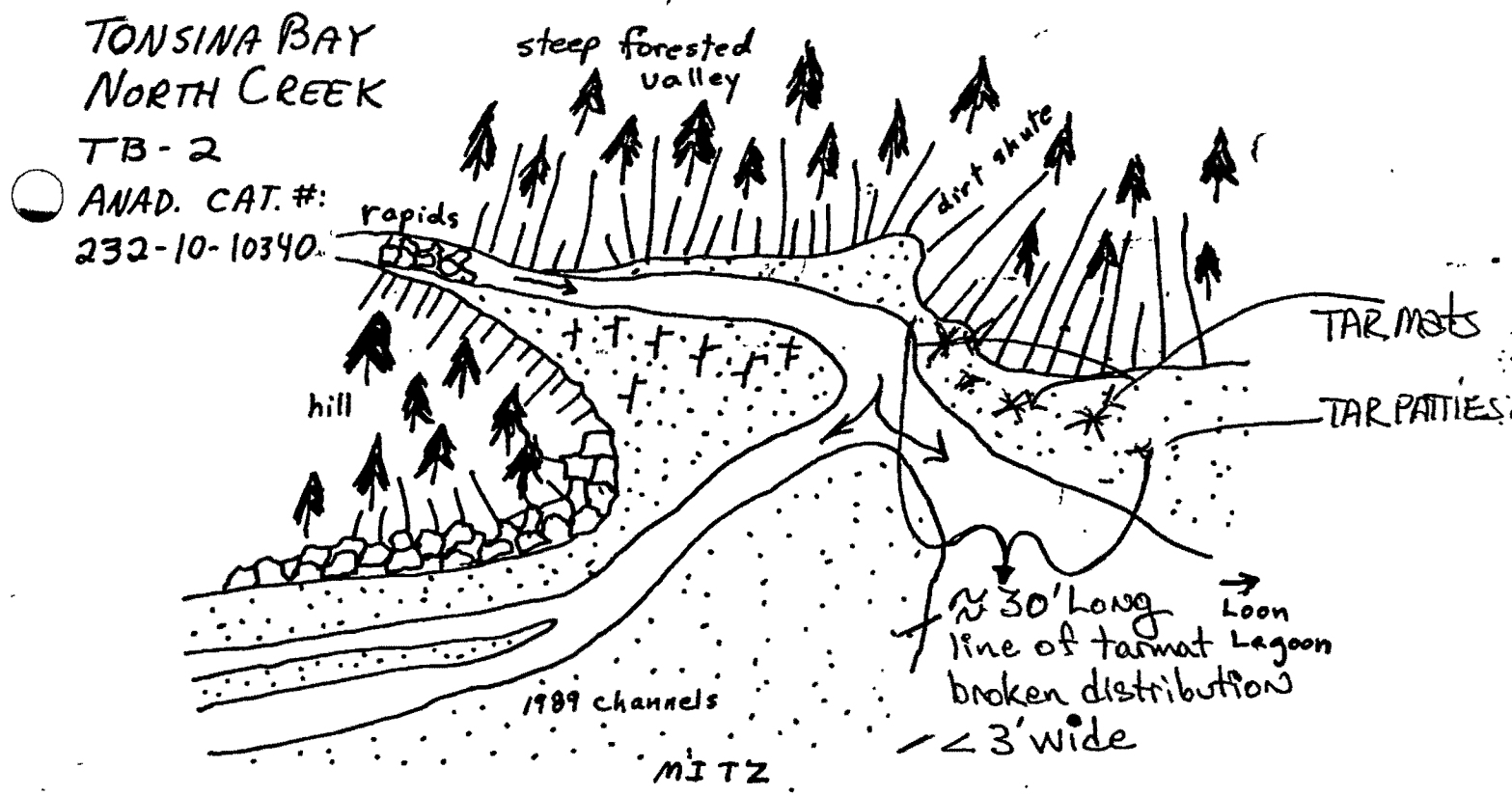
44 ANADROMOUS FISH OBSERVATION

Species	Aerial	Ground

COMMENTS: 3 observers walked both sides of stream channel 100 yds up from mouth. No oil was observed on W. side. Several large tar mats + tar patties were observed on E. side w/in 25 yds of mouth of stream.

FRAME(S)	DESCRIPTION
9, 10	Aerials of Northern Anadromous Fish Stream (232-10-10340)

46 OIL DISTRIBUTION DIAGRAM



ANADSCAT Recommended
 = Sample taken
 = Photo frame # and shot direction.

ACE 9961671-15

ACE 1955677

ASC NUMBER 232-10-10340 SEGMENT NUMBER TB-02 YR CATALOGED
 LOCATION KP 06, Tonsina Bay, North Shore
 STREAM NAME _____ LATITUDE 59 16 37
 DIAK K-UNIT LOCAL STREAM # LONGITUDE 150 53 39
 UGS QUADRANGLE Seldovia B-3 LEGAL
 SHORELINE TYPE Beach, Cove ALL SEGMENTS
 WAVE EXPOSURE low

ASC NUMBER TEAM RECORDER Doug Hill
 SURVEY TYPE Pre-Screening OBSERVERS Susan McLane
 METHOD Foot AGENCY(IES) ADF&G
 DATE 4 / 17 / 90 PHOTOS TAKEN? Yes
 START TIME 1415 Roll # 90-DDH-006-H1 Frames 9,10
 STOP TIME 1428 VIDEO TAKEN? NO Tape Number
 Counter Start

SAMPLES TAKEN? NO
 SAMPLE I D NUMBERS 1 2 3
 4 5 6

	LENGTH m	WIDTH m	M2	%	THICK cm	PEN cm	OIL TYPE
SITE 1	40 m	1m	10	50%	< 3cm	—	AP, TP
SITE 2							
SITE 3							
SITE 4							
SITE 5							

OVERALL OIL IMPACT L
 OIL IN STREAM CHANNEL? None observed OIL ON BEACH WITHIN 50M OF STREAM MOUTH? X

SUBSTRATE

Bedrock	Granule
Boulder	Sand 10%
Cobble 20%	Silt
Pebble 70%	Veget

SPECIES					
COUNT					

COMMENTS 3 observers walked both sides of stream channel 100yds up from mouth No oil was observed on west side. Several large tar mats & tar patties were observed on East side w/in 25 yds of mouth of stream

ACE 9961672 +15

JK

Group A

Prescreening

ADF&G MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS SS DS TS AVS SCHA MHS PTA 2 REGION: PWS KP, CI K, AP

METHOD: Aerial Ground Boat Condouca (Adjusted)

3 DATE: 4-17-90 15 HIGH TIDE TIMES: 0551 21 TEAM RECORDER: Doug Hill

4 START TIME: 1415 16 HIGH TIDE HTS: 10.41 22 OBSERVERS: Susan McLane

5 STOP TIME: 1428 17 LOW TIDE TIMES: 1318 23 AGENCY: ADF&G

6 SEGMENT #: TB-2 18 LOW TIDE HTS: 2.01 24 PHOTOS TAKEN: Y N

7 STATION #: _____ 19 TIDE HT AT SURVEY: LOLD Roll # 90-DOH-006-H Frames 9, 10

8 K-UNIT: _____ Ebb Slack Flood Slack 25 VIDEO TAKEN: Y N TAPE#: _____

9 STAT AREA: 232-10 20 USCG QUAD: Seldovia B-3 Starts: _____ Ends: _____

10 LAT: 59° 25' 0 11 LONG: 151° 19' 0 26 SAMPLES TAKEN Y N Number _____

12 SOURCE: Map Loran 011 SE

13 LOCATION: Tonsina Bay - N. Creek AFS #232-10- Sediment _____

14 DESCRIPTION: North shore of Tonsina Bay, Stream mouth approx. 1/4 mile west of Loop Lagoon. Biological _____

EXTENT OF OIL Water _____

27 SURFACE COVERAGE

SHORELINE				STREAM			
L	W	M ²	N	L	W	M ²	N

28 SURFACE THICKNESS

--	--	--	--	--	--	--	--

29 PENETRATION

--	--	--	--	--	--	--	--

30 OVERALL OIL IMPACT: N VL L M H

31 OIL TYPE: Pooled Mousse Tar Asphalt Sticky Stain

32 OILED DEBRIS? Y N

33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cove
Lagoon Marsh

34 WAVE EXPOSURE: High Moderate Low

35 SUBSTRATE TYPE: Bedrock _____ Boulder _____ Cobble 20%
Gravel 70% Sand 10% Mud/silt _____

36 CATALOGED ANAD. FISH SREAN? Y N

37 CATALOG # 232-10-10340

38 STREAM NAME: Tonsina North

39 OIL IN STREAM BED? Y N
none observed

40 OIL ON STREAM BANKS? Y N

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

42 OIL WITHIN 1 MILE OF STREAM? Y N
Where: N. W. stream of head of Bay

43 ANADROMOUS FISH PRESENT? Y N

44 ANADROMOUS FISH OBSERVATION

Species	Aerial	Ground

COMMENTS: 3 observers walked both sides of stream channel 100 yds up from mouth. No oil was observed on W. side. Several large tar mats + tar patties were observed on E. side w/in 25 yds of mouth of stream.

ACE 9961673-15

TIME(S)
9, 10

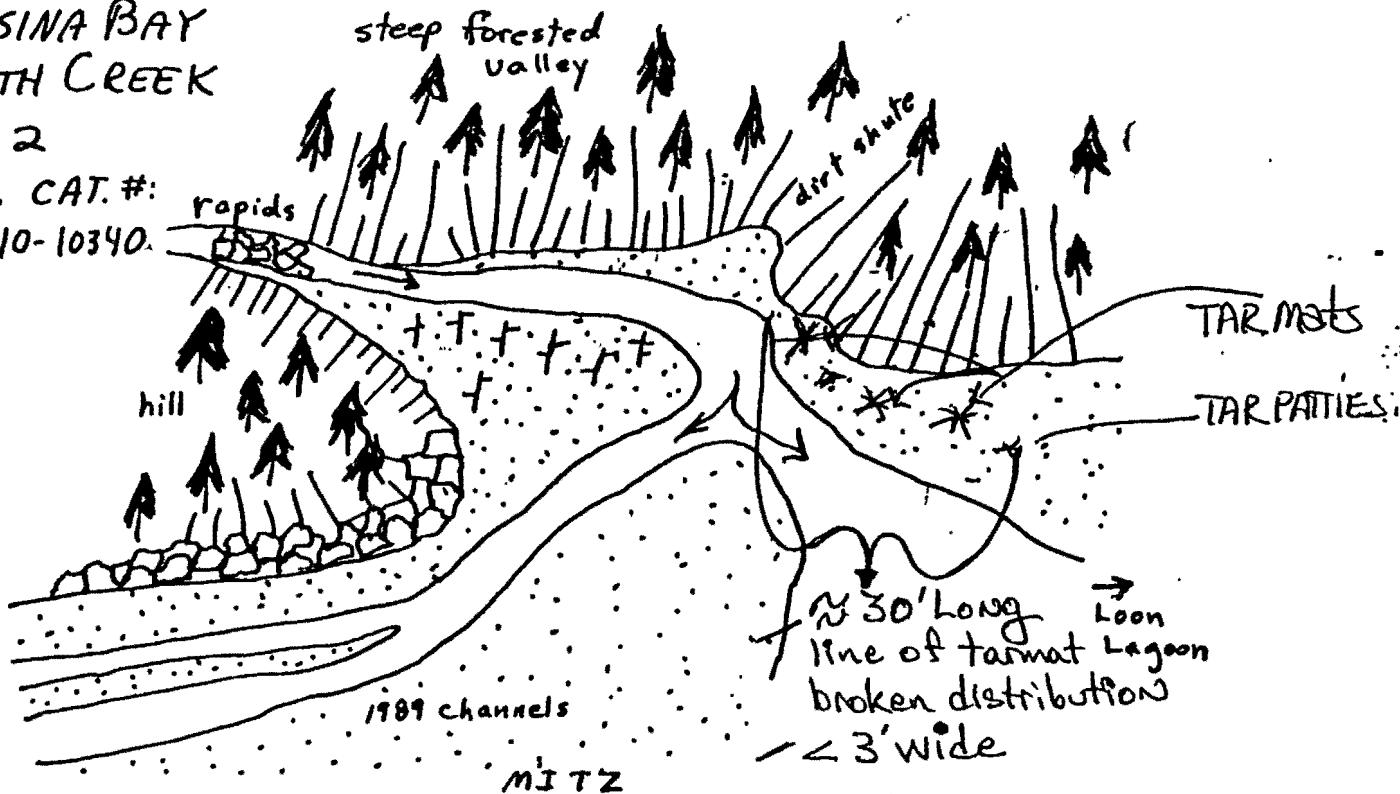
DESCRIPTION
Aerials of Northern Athabasca Fish Stream (232-10-10340)

48 OIL DISTRIBUTION DIAGRAM

TONSINA BAY
NORTH CREEK

TB-2

ANAD. CAT. #:
232-10-10340



ANADSCAT Recommended

- = Sample taken
- = Photo frame # and shot direction.

SHORELINE EVALUATION

SEGMENT ST/ TB-02 SUBDIVISION A (1 OF 1) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
- 1B Salmon stream mouth - spawning (7/10 to 8/31)
- 2M Herring spawning (4/1 to 6/15)
- 4GG Kachemak Bay State Wilderness Park
- 6NN Recreation: Sportfishing

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. 5T - eagle nest.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: J. Daniel McWhorter DATE: 5/1/90

OILING CATEGORIZATION:

Wide 16 m: Medium 602 m: Narrow 1430 m: V. Light 184 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 30 cm

RECOMMENDATIONS:

- | | |
|---|--|
| <input type="checkbox"/> No Treatment Recommended | <input type="checkbox"/> Snare/Absorbent Booms |
| <input checked="" type="checkbox"/> Treatment Recommended | <input type="checkbox"/> Oil Snares (pom poms) |
| <input checked="" type="checkbox"/> Manual Pickup | <input type="checkbox"/> Absorbents (pads, rolls, etc) |
| <input checked="" type="checkbox"/> Bioremediation | <input type="checkbox"/> Spot Washing: <u> </u> Wands |
| <input checked="" type="checkbox"/> Tarmat Removal | <input type="checkbox"/> Beach Cleaner |
| | <input type="checkbox"/> Other (see comments) |

COMMENTS: Recommended treatment includes 1) manual pickup of mousse and pooled oil, 2) removal of tarmat followed by 3) bioremediation of areas indicated on sketch map. Work should be conducted before 6/16 based on herring constraints, after approval of USFWS regarding eagle nest.

TAG COMMENTS: MANUAL TILL STORM BOOM / UITS OF SMALL POCKET BEACH IN AREA OF PILES 9, 10, +11 NOTED ON SKETCH MAP PRIOR TO A.D.

TAG APPROVAL DATE: 5/1/90.
 ADEC: ART WEINER Dit Weiner
 EXXON: ANDY TEEB Andy Teeb
 NOAA: STEPHEN BAY BAY
 USCG: KENNETH KENNEDY

FOSC: W L DATE: 5-6-90

ACE 9961674
ACE 1940705