

OIL SPILL PUBLIC INFO. CENTER



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[Shoreline evaluations, 1991].

Kenai US-05 to WB-01

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REGION: KENAI

SEGMENT: ST/US-05

SUBDIVISIONS: A (1 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ US-05 SUBDIVISION A (1 OF 2) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 322 m: No Oil 37 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pickup of oiled trash and oiled logs. Work to be done in conjunction with other cleanup activity on Ushagat Island. Work should be conducted prior to 5/15 with permission from USFWS regarding Seabird constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 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 unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3A Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (6/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (5/1 to 9/15)
 6V Anchorages (5/1 to 9/15)
 6W Forest Service cabins (5/1 to 9/15)
 6X Lodge (5/1 to 9/15)
 6Y Special use destination
- 7Z Subistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7II Deer harvesting (8/15 to 2/28)
 Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2350

USCG

NAME Miles D. Hayes SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Spectacular geological feature - crumpled bay. Very high energy (wave) conditions, this beach undergoes considerable natural cleansing.
Only cleanup required is gathering oiled trash.

ADEC

NAME Russell Nunibe SIGNATURE Russell Nunibe

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

There was surface oiling consisting of little splatters of coat on the gravel above the high tide line. At this time we did not observe any treatable oiled sediments, there was a small amount of oiled trash that could be picked up.

LAND MANAGER

NAME Gerald M. Nugent SIGNATURE Gerald M. Nugent (USFWS)

☒ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Manual removal of oily trash should be conducted in conjunction with other trash/debris pick-up in the Barrens. Activities should be completed as close to May 1, 1990, as possible. A Service monitor should be present.

SHORELINE OILING SUMMARY

REVISION NO 3472

OG. CLENN HEYMAN ^{NOAA} USCG MILES HAYES SEGMENT ST/ US-00.5
 BIO: DAVID RAIDER USEWISLAND REP JERRY MUGENT SUBDIVISION A (1 OF 2)
 EXXON JOHN DEAN ADEC RUSSEL KUNIRE TIME 14:10 to 15:45
 TEAM NO. 17 TIDE LEVEL +8 - +3.5 DATE 4/22/90
 EST SUBDIVISION LENGTH: 400 m ☐ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock See sketch
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SE to NW
 SURFACE SEDIMENTS: R 8 % B 2 % C 35 % P 55 % G 0 % S 0 % M 0 % V 0
 SLOPE: Lang 90 % Hang 10 % Vert 0 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 360 m NO 40 m

SURFACE OIL

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

Lower ITZ not surveyed

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

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

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE 0#BAGS 0

Photographs:

Roll No. 3Frames 12-15

SUBSURFACE OIL

PIT NO	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UG	35	40	45	50	55	SU	U	M	U				
1	45					X	.	X							X				N	-	-	C-P/CP
2	38					X	.	X							X				N	-	-	C-P/CP
3	46					X	.	X							X				N	-	-	PG/GPG&P
4	38					X	.	X							X				N	-	-	C/P&P
5	32					X	.	X							X				N	-	-	P.G/GPG

COMMENTS

Subdivision consists of crenulate bay between rocky headlands. No subsurface oil observed. Surface oil limited to < 1 % coverage of C.T/S in ~10 m band in upper ITZ below log pile/storm boom on Cbls/phls, few logs & trash, & on bedrock (2) SE end of ...

REVIEWED

TW

DATE 4/27/90

6. Haysman

SEGMENT L15-005

SUBDIVISION A

DATE 4 122/90

CHECKLIST

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

LEGEND

1 Δ
 Pit - No Subsurface Oil

2 Δ
 Pit - Subsurface Oil

CT/C
 Continuous Distribution

CT/B
 Broken Distribution

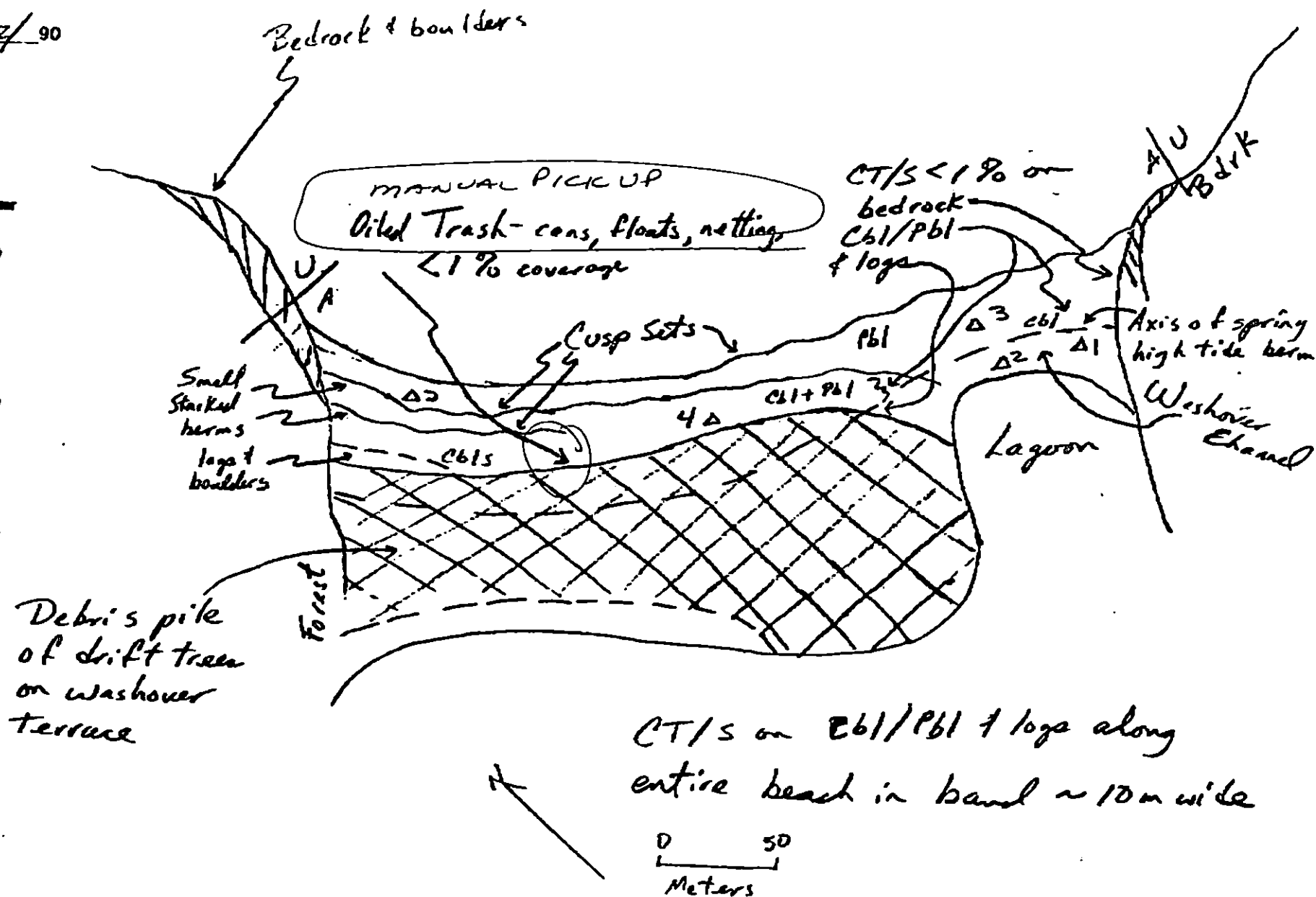
CT/P
 Patchy Distribution

CT/S
 Splashed Distribution

eee
 Oiled Vegetation

1 ●
 Photo location, direction, and number

SKETCH MAP



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

SHORELINE ECOLOGICAL SUMMARY

REVISION: 002

Segment ST/ US 005 Subdivision ADate (mo / day / yr) 4 / 22 / 90Time (24 hr) 13:35 Biologist DANIEL RAIDER

(A) Substrate type and % of segments:

(1) Bedrock 8 (2) Boulder 2 (3) Cobble 35 (4) Pebble 55 (5) Sand 0 (6) Silt 1(B) Overall % cover of biota (% of segment): Dense 0 Moderate 0 Low 0

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

Photographs:

Roll No. 3Frames 12-15

BARNACLES

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

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

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

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

NOT PRESENT

MYTILUS

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

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

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

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

NOT PRESENT

GASTROPODS

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

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

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

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

NOT PRESENT

FUCUS

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

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

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

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

NOT PRESENT

Wildlife Observations/ General Comments:

See attached "Wildlife cited" list

This is a very high energy beach with much sediment deposition and erosion and consequently, little biota; beach eye grass in the drenched forest area and Sitka spruce above the storm berm and into the headlands compose the dominant biota of the region; alpine willow in the headland

ECOLOGICAL CONSIDERATIONS:

SA - See attached sheet for bird counts taken.
 1. Seabird colony

BIRD SITINGS - US OOSA + B

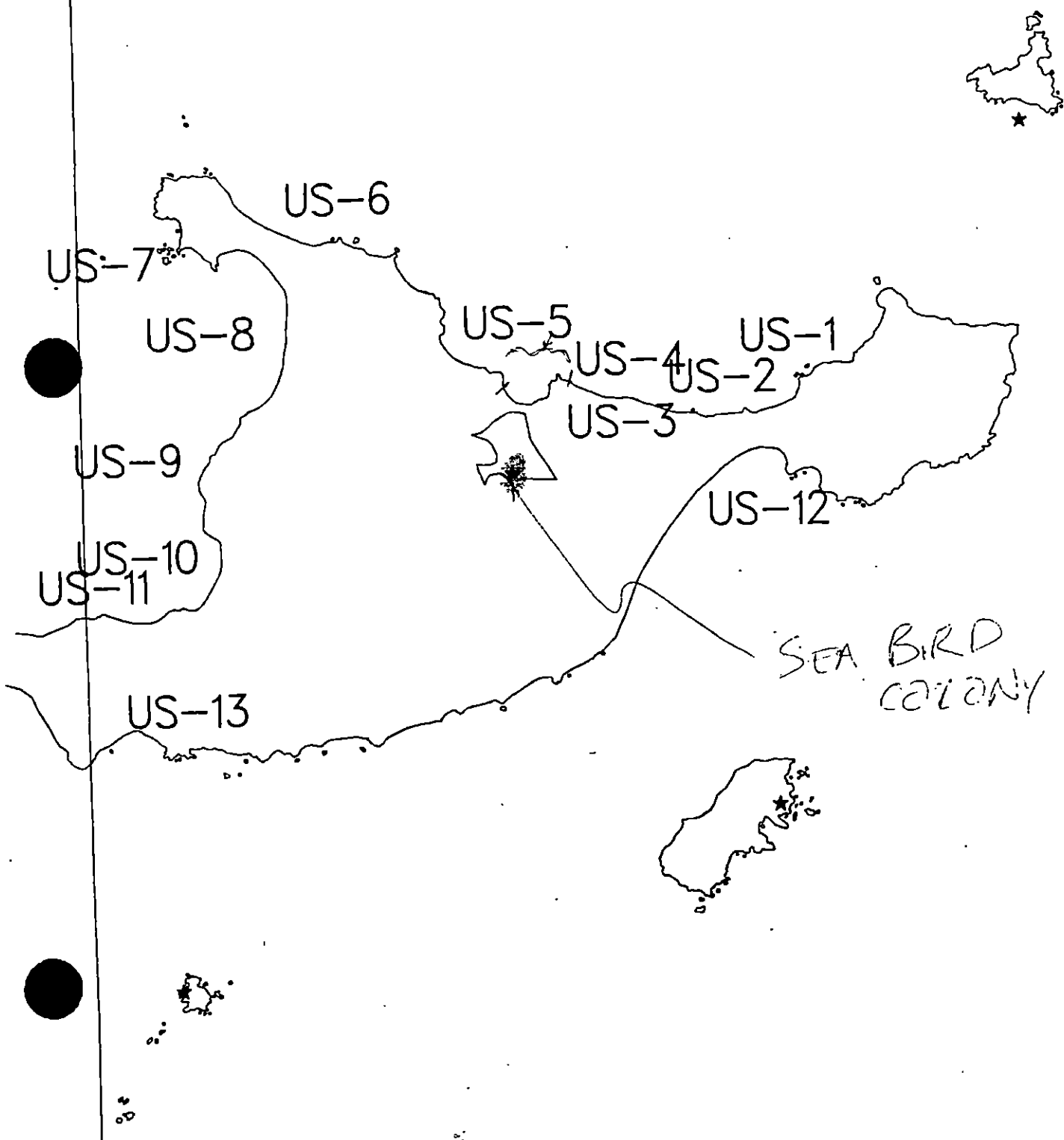
TEAM 17

22 APRIL, 1990

Name	amount	Comments
1) Song Sparrow	20 ±	{ abundant; either Aleutian or Pacific N.W. dark subspecies
2) Glaucous - Winged Gull	4	
3) Bald Eagle	1	either Pelagic or Red-faced (whiter)
4) Varied Thrush	1	
5) Cormorant sp.	1	
- Credit to Miles Hayes for helping compile this list		

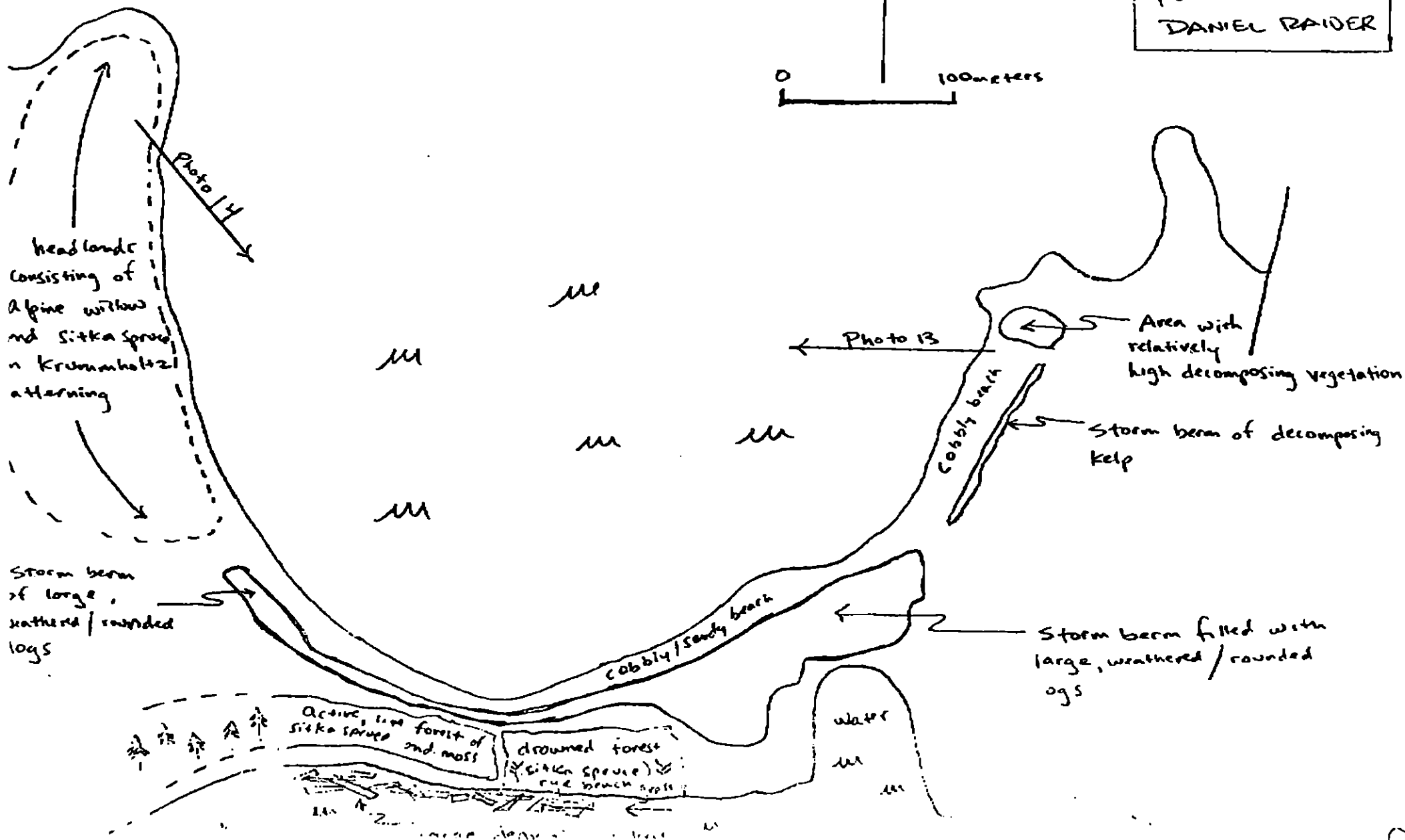
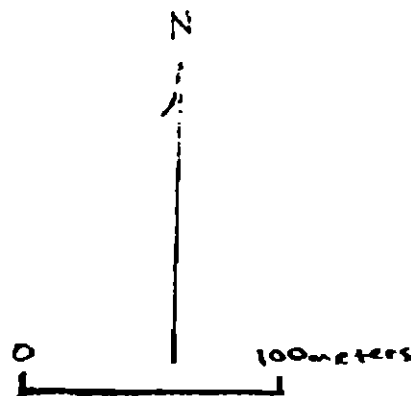
ECOLOGICAL MAP

SR



→ US 5A

US 5A
TEAM 7
BIO SKETCH
22 APRIL 1990
13:35
DANIEL RAIDER



US

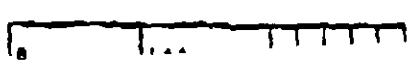
UNSURVEYED

← KEN
138A

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

US-5A

ADEC Segment Length: 2541m

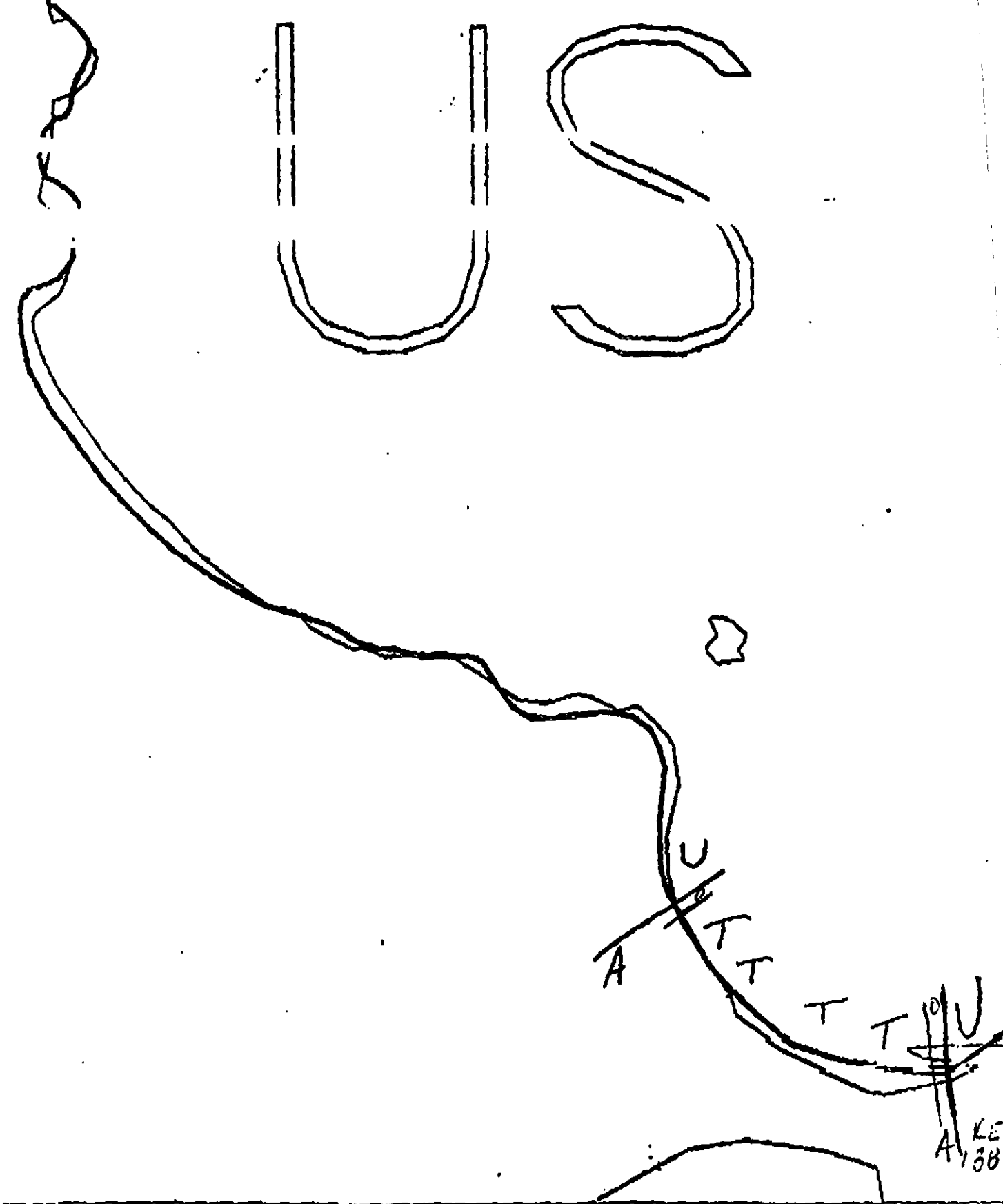


Map Key: KEN-138b

Name: G. Heyman

Date: 4-22-90





XXXX Wide
// Medium
--- Narrow ADEC Segment Length: 2541m
TTTT Very Light

US-5A



Map Key: KEN-138a
Name: G. Heyman

REGION: KENAI

SEGMENT: ST/US-05

SUBDIVISIONS: B (2 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ US-05 SUBDIVISION B (2 OF 2) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time.

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 18 m: Medium 5 m: Narrow 12 m: V.Light 302 m: No Oil 244 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 61+cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of pooled oil, mousse oiled debris and oiled logs. Relocate UITZ and SUTZ to MITZ, 2) spot wash and bioremediate in areas indicated on sketch map. Work should be conducted prior to 5/15 with permission from USFWS.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
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 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- C Salmon fry nursery area (4/31 to 7/31)
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 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
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 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).
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 ADF&G Don Calkins 267-2403
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 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
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 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

SEGMENT ST/ 115-5 SUBDIVISION: B DATE 9/22/90

USCG NOAA

NAME Miles D. Hayes SIGNATURE Miles D. Hayes

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

This is a high-energy crenulate bay. Oil accumulation is mostly in the western, deeply hooked part of the bay.

The buried oil layer (80x10m; buried 10m on avg.) will not be eroded out during storms within a year or two; therefore, I recommend that it be left alone as long as it remains buried.

I agree with suggestions by Kunibe (see comments below) and John Dean, to place more booms around the oiled boulders in the western extremity of the bay in an effort to protect pelicans and petrels.

ADEC

NAME Russell Kunibe SIGNATURE Russell Kunibe

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Please see attached 1 page.

LAND MANAGER

NAME Gerald M Nugent SIGNATURE Gerald M Nugent (USFWS)

☒ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

I agree with the recommendations of Russell Kunibe, ADEC (attached 1 page). A Service monitor should be present during any cleanup activities on the Barrens. Manual pick-up should be done in conjunction with pick-up on other segments. Pom-Pom "sinker booms" should be placed by May 1, 1990 or as close to that time as possible.

SEGMENT: US-5

SUBDIVISION: B

DATE: 4/22/90

ADEC COMMENTS:

RUSSELL KUNIBE, EFOII ADEC

Russell Kunibe

Most of the oiling was at the west end of the segment. There was an area in the boulders and cobbles which had mousse, and mousse saturated sediments on the surface in the upper MITZ and lower UITZ. This area is approximately 6 M. x 20 M., surrounded by an area of similar oiling but less concentrated. There was sheen noted on the pools of water in this area.

The other area of significant oiling was a buried lens of oil that we guessed was approximately 10 M. X 80 M. This area was located above the high tide line. The oiling in pits # 7 and 8 was mousse saturated pea gravel 9 cm. to 12 cm. thick and 25 cm. below the surface. The oiling in pits # 4, 5 and 6 was a mousse coating on the larger pebbles and 25 cm. to 53 cm below the surface.

Recommended treatment:

Gerry Nugent, USFW, informed me that the release of sheen in this area was a problem because Storm Petrels and Fulmars are attracted to the sheen and will dive through it. Therefore I would recommend anchoring snare booms in the boulder cobble area at the west end of the subdivision during the time that sea birds will be in this area and the manual pick up of any mousse or mousse saturated sediments that can be picked up. For the subsurface lens of oil I am not aware of an effective treatment method. I would recommend that this area be monitored on a regular basis this summer to check the snare booms and to watch for the subsurface lens of oil to be exposed. If the subsurface lens of oil becomes exposed then Exxon should be informed and they should manually pick up the layer before it washes out and has the opportunity to form sheens. This may be an area which the "dredge and wash" may be appropriate. Additionally it may be appropriate to "doze" the oil into the active surf zone after the fall bird migration.

SHORELINE OILING SUMMARY

REVISION NO. 04.1

JG GLENN HEYMAN 6666 MILES HAYES SEGMENT ST/ US-005
 BIO DANIEL PAIDER USFWS LAND REP JERRY NUGENT SUBDIVISION B 12 OF 2
 EXXON JOHN DEAN ADEC RUSSEL KUNIR TIME 15:45 to 17:45
 TEAM NO. 12 TIDE LEVEL +2.5 to +3 DATE 4/22/90
 EST SUBDIVISION LENGTH: 446 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SE to NW
 SURFACE SEDIMENTS: R 10 % B 5 % C 25 % P 60 % G 0 % S 0 % M 0 % V 0
 SLOPE: Long 85 % Hang 10 % Vert 5 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 20 m M 2 m N 4 m VL 300 m NO 120 m

SURFACE OIL

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

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

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

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE 0#BAGS 0

Photographs:

Roll No. 3Frames 16-31

SUBSURFACE OIL

PIT NO	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UG	US	10	10	10	10	10	SU	U	M	U				
1	35					X	.								X				N	-	-	PG/GP
2	35					X	.								X				N	-	-	P/PG
3	35					X	.								X				N	-	-	P-C/P
4	45			X			25-35	X				X			X				N	-	-	P-C/PGCP
5	61			X			53-61	X				X			X				N	-	-	P-C/PGP
6	65			X			50-55	X				X			X				N	-	-	P/PGP

COMMENTS Subdivision B is composed of a crenulate bay with rocky headlands at each end. The headlands were largely unsurveyed due to their steepness and high wave energy. Surface oil in the subdivision is observed as a splash of oil on pebbles, cobbles and logs in the UITE along the SE 2/3 of the subdivision. This occurs in a band ~10 m

REVIEWED /W DATE 4/27/90

[illegible]

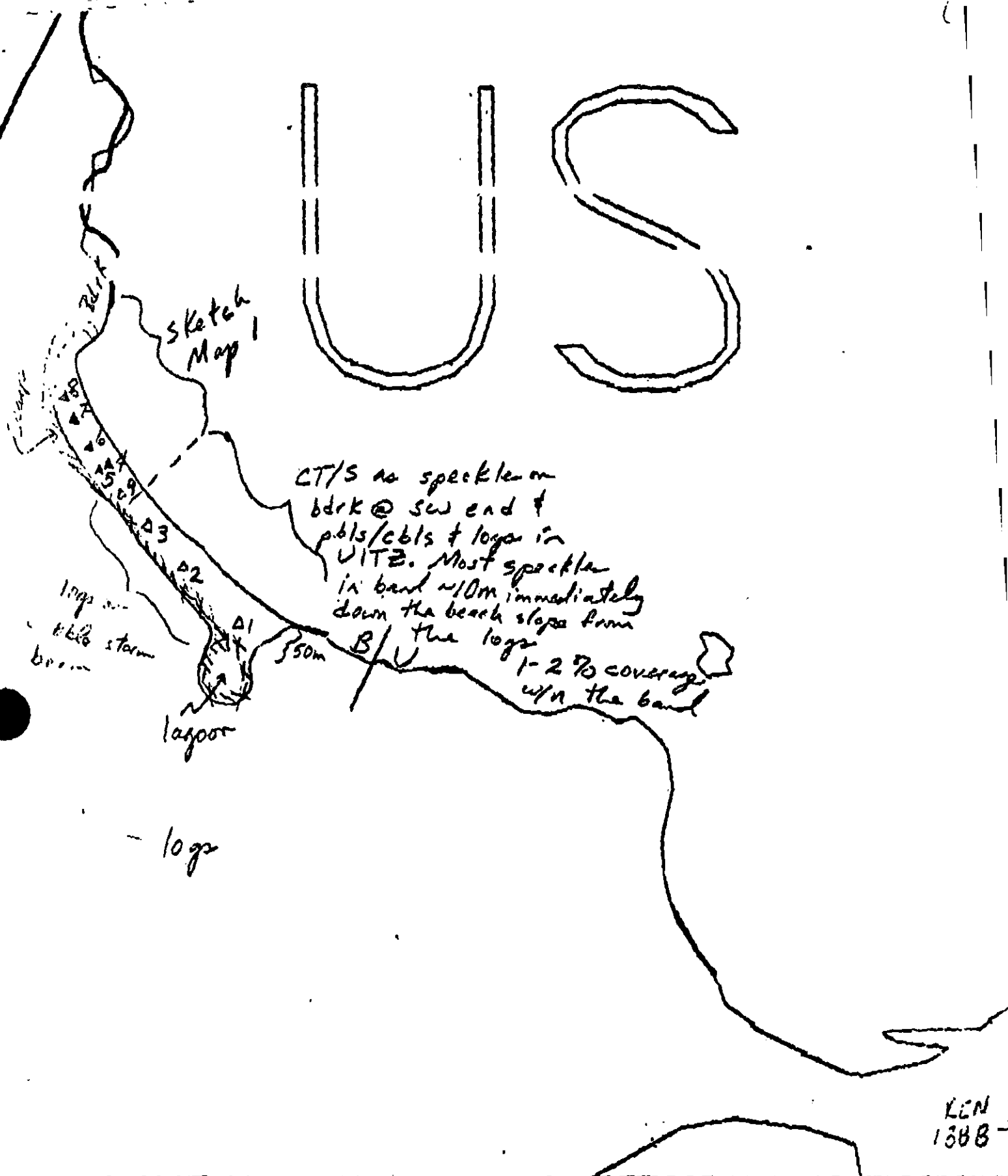
Subsurface oil was observed in a near continuous layer with filled pores between 25 and 53 cm below surface and 5 cm thick. The layer appears to have a distribution of at least 80% oil based on pit observations. The oil has a dark brown moussey appearance and has been covered by pebbles and fine sediment partly from the steep bank.

REVIEWED W DATE 4/27/90

REVIEWED

DATE 4/27/90

US



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

US-5

ADEC Segment Length: 2541m



Map Key: KEN-1380

Name: G. Heyman

Date: 4/22/90

REVISION: 08/24/99

SHORELINE ECOLOGICAL SUMMARY

REVISED: 03/22/90

Segment ST / V5005 Subdivision B Date (mo / day / yr) 4/22/90Time (24 hr) 15:45 Biologist DANIEL RAIDER

- (A) Substrate type and % of segments:
 (1) Bedrock 10 (2) Boulder 5 (3) Cobble 25 (4) Pebble 60 (5) Sand 0 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 5 Moderate 3 Low 92
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:

Roll No. 3Frames 16-31

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

see attached sheet for bird observations

Tidal zone life for ^{entire} subdivision located directly with dense oil accumulation

Ecological Considerations:

may become mobile with heat (summer) and move into US 12

CR

Tidal Zone is actually densely populated in this small protected pond
 at low tide, yet statistics (i.e. "Sparse" & "Rare" reflect average)
 over entire segment.

(11)

BIRD SIGHTINGS - US BOS A+B

NAME	AMOUNT	COMMENTS
1) SONG SPARROW	20±	{ abundant; Paley, 2 or Pacific N.W.
2) GLAUCOUS-WINGED GULL	4	
3) BALD EAGLE	1	
4) VARIED THRUSH	1	
5) CORMORANT <u>SP</u>	1	Paley, 2 or Red-Faced

EXHIBIT EXHIBIT EXHIBIT

14

FLORA:

FAUNA:

BIO SKETCH

TEAM 17

DANIEL TRAIDEN

22 APRIL 1975

(10)

Black

Black

STORM BEACH

WITH MANY LARGE LOGS

Lagoon

- SEA SPRUCE FOREST

(L. Horina (much recent)
(USUS (X)

1. L. Horina Boulders - dark
2. L. Horina (X)
3. L. Horina muricata
4. L. Horina furus on bdrk. (O)

5. L. Horina baltanus on bdrk. + boulders - sparse
6. L. Horina on boulders

XXXX Wide

● / Medium

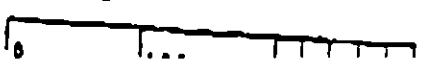
--- Narrow

TTTT Very Light

0000 No

US-5B

ADEC Segment Length: 2541m

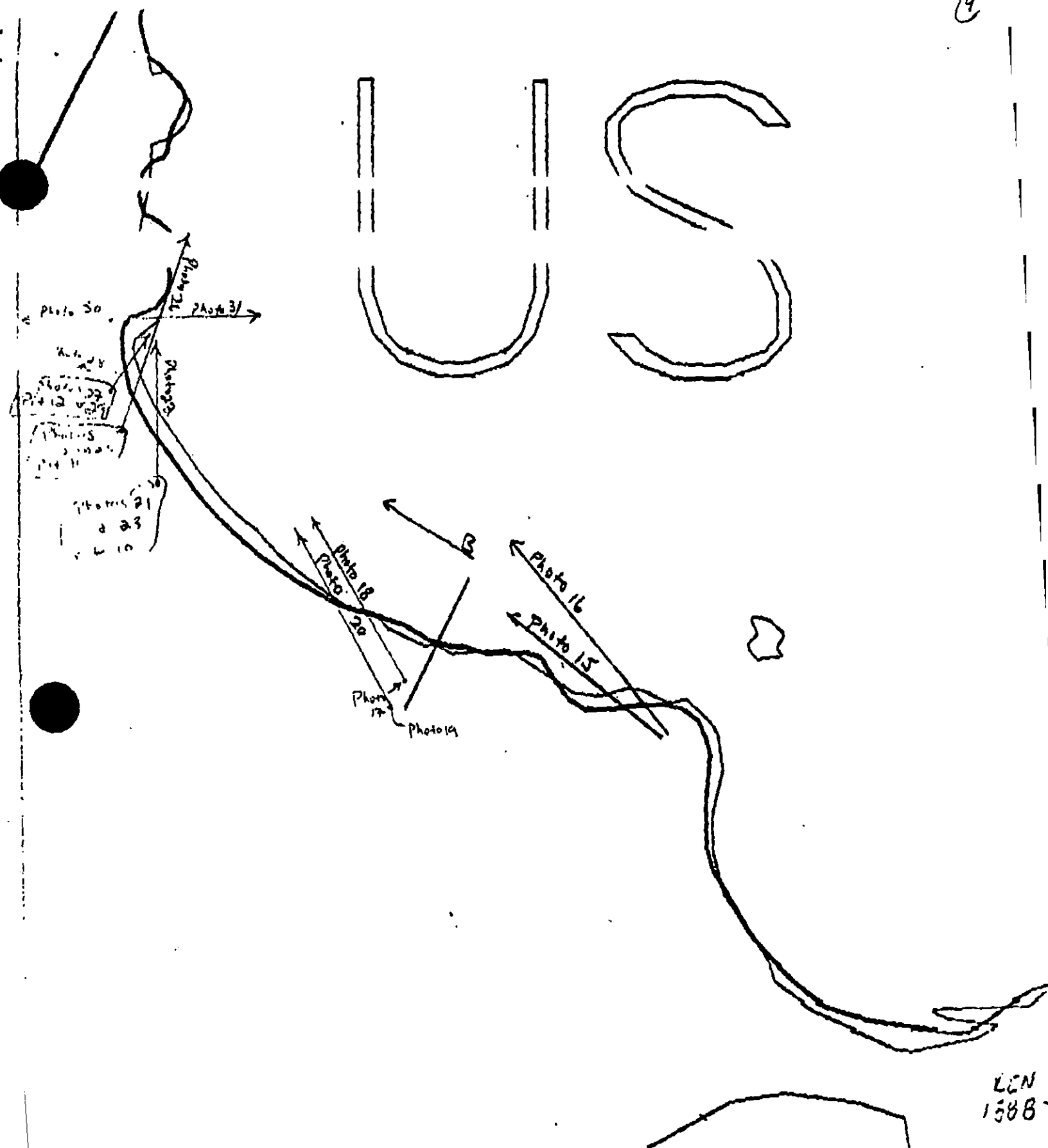


Map Key: KEN-138a

Name: _____

Date: _____

KEN
138B



XXXX Wide

//// Medium

-- Narrow

TTTT Very Light

0000 No Oil

US-5

ADEC Segment Length: 2941m



Map Key: KEN-138a

Name: _____

Date: _____

Notes: _____

US

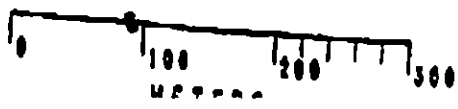
Hand-drawn map of a river bend. The river is represented by a curved line. Labels include 'U' at the top, 'B' below it, 'C' on the left, and 'B/U' on the right. Annotations include '~2m medium', '~20m wide', and '~4m narrow'. The map shows a curved river channel with various markers and labels.



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

US - 5B

ADEC Segment Length: 2541m



Map Key: KEN-138a

Name: G. Heyman

Date: 4/22/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT US-5 SUBDIVISION A (1 of 2)

WORK WINDOW	
Manual Pickup	CLOSED

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5R Seabird Colony

Closed to manual pickup. Work area is less than 800m from the nearest seabird colony.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

h y l

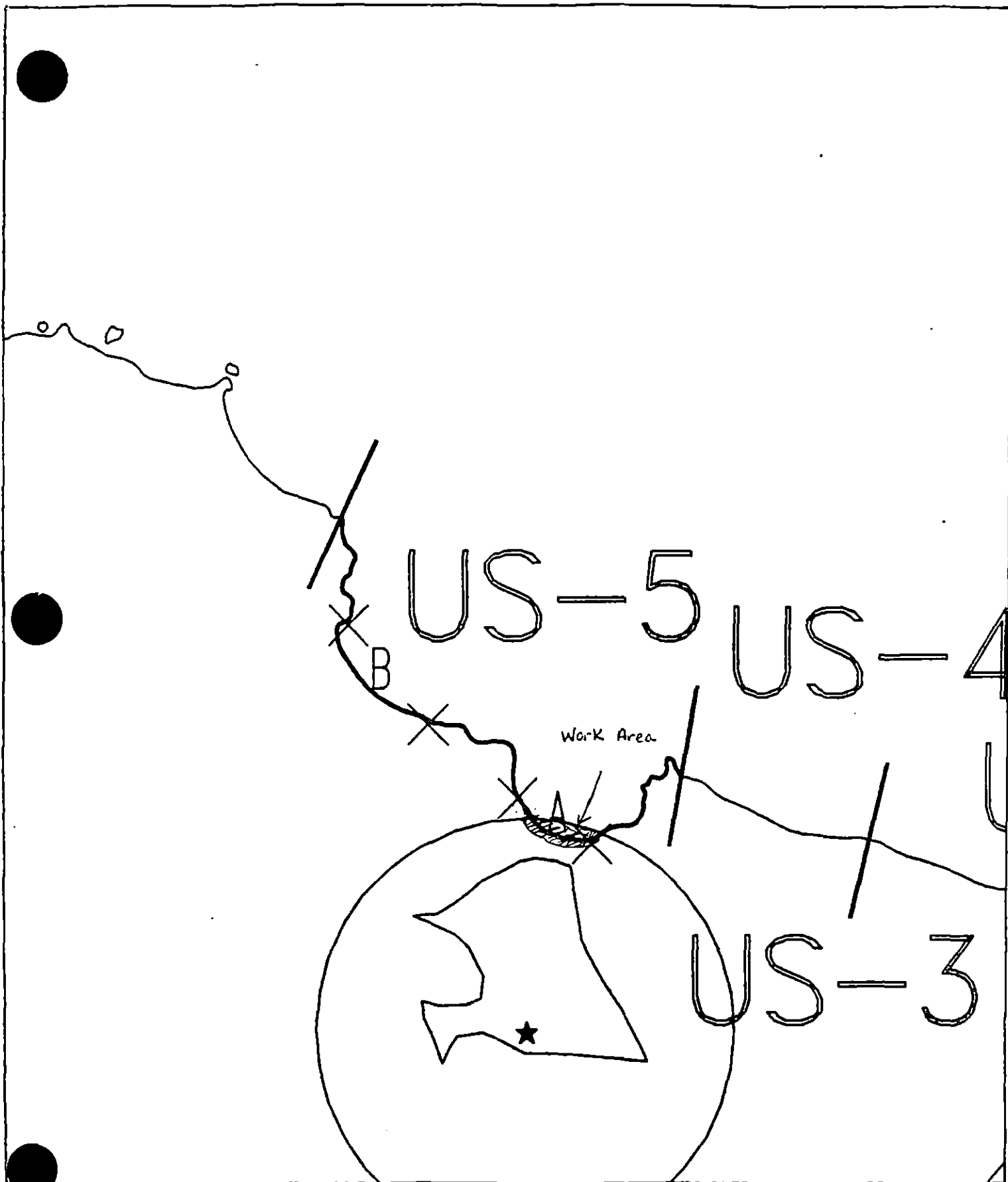
DATE 6-10-90

Prepared By:

J. P. Phillips

Date

6/10/90



Exxon Company, USA



ECOLOGY MAP
SEGMENT US-5 6/2/90
SUBDIVISION US-25 (1 of 2)
MCTDC



Seabird Colony



Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ US-05 SUBDIVISION A (1 OF 2) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time. *CH*

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 322 m: No Oil 37 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pickup of oiled trash and oiled logs. Work to be done in conjunction with other cleanup activity on Ushagat Island. Work should be conducted prior to 5/15 with permission from USFWS regarding Seabird constraints.

CONSTRAINTS
SEE ADDENDUM dated 6/14/90 PFP

TAG COMMENTS: Monitors to assess logs.

TAG APPROVAL DATE: May 5, 1990

ADEC *Art Wenger*
EXXON *Mark N. Gilbert* *Mark N. Gilbert* FOSC: *WJL* DATE: 5-8-90
NOAA *Gary Petroe* *Harry Petroe*
USCG *G.A. Reiter* *G.A. Reiter* USF+WL Rep to be on Scene

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT US-5 SUBDIVISION B (2 of 2)

WORK WINDOW	
Manual Pickup Other Approved Treatment	OPEN
Bioremediation Spot Washing Mechanical Relocation	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5R Seabird Colony NO CONSTRAINT. Seabird colony in Segment US-3 is more than 800m from work area.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 6/03/90
ADEC Ray Morris
EXXON ANDY GALT
NOAA JACOB TULLAM
USCG SA. BEITER

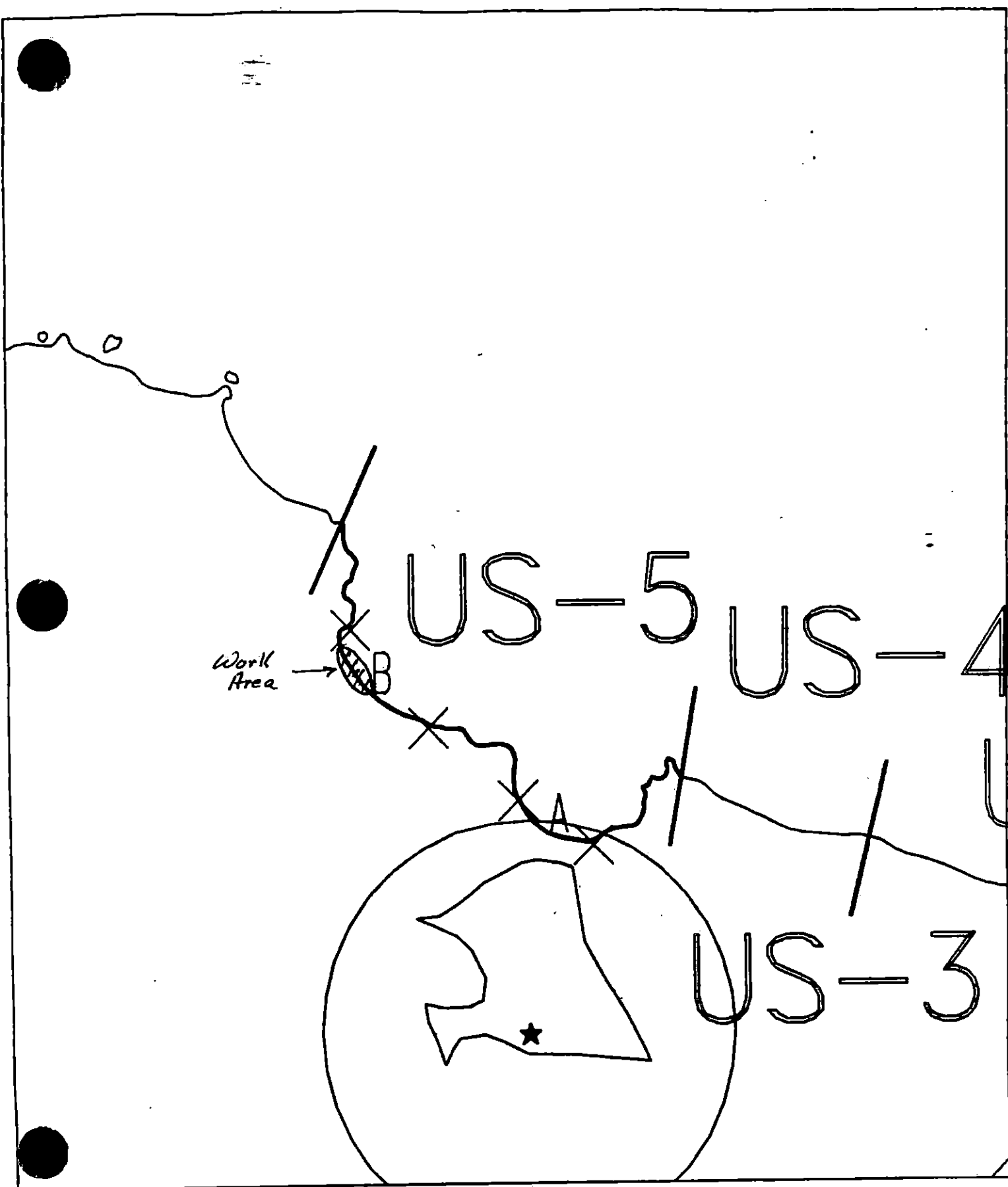
FOSC

DATE

Prepared By:

Date

6/3/90



ECOLOGY MAP
SEGMENT US-5

SUBDIVISION B (2 of 2)



Seabird Colony



Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ US-05 SUBDIVISION B (2 OF 2) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time.

SHPO SIGNATURE: Clark R. Horner DATE: 5/5/90

OILING CATEGORIZATION:

Wide 18 m: Medium 5 m: Narrow 12 m: V.Light 302 m: No Oil 244 m
Subsurface Oil Observed: Yes X No Maximum Depth 61+cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of pooled oil, mousse oiled debris and oiled logs. Relocate UITZ and SUTZ to MITZ. 2) spot wash and bioremediate in areas indicated on sketch map. Work should be conducted prior to 5/15 with permission from USFWS.

See Addendum dated 6/3/90

TAG COMMENTS:

TAG APPROVAL DATE: May 5, 1990

ADEC Art Werner Dick Werner

EXXON

NOAA

USCG

FOSC: DATE: 5-15-90

Perform manual pickup after 5-1 with approval of land manager. Submit to and CUSTOMER after 1 Sept. No IMPACT.

SHORELINE EVALUATION

SEGMENT ST/ US-05 SUBDIVISION A (1 OF 2) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time. CH

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 322 m: No Oil 37 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pickup of oiled trash and oiled logs. Work to be done in conjunction with other cleanup activity on Ushagat Island. Work should be conducted prior to 5/15 with permission from USFWS regarding Seabird constraints.

TAG COMMENTS: Monitors to assess logs.

TAG APPROVAL DATE: May 5, 1990

ADEC Art Wenzel Art Wenzel
EXXON Mark N. Gilbert Mark N. Gilbert FOSC: WJL DATE: 5-9-90

NOAA Gary Petros Gary Petros
USCG G.A. Reiter G.A. Reiter USF+WL Rep to be on Scene

... (G. H. Harrison)

SEGMENT 15-005

SUBDIVISION A

DATE 4/22/90

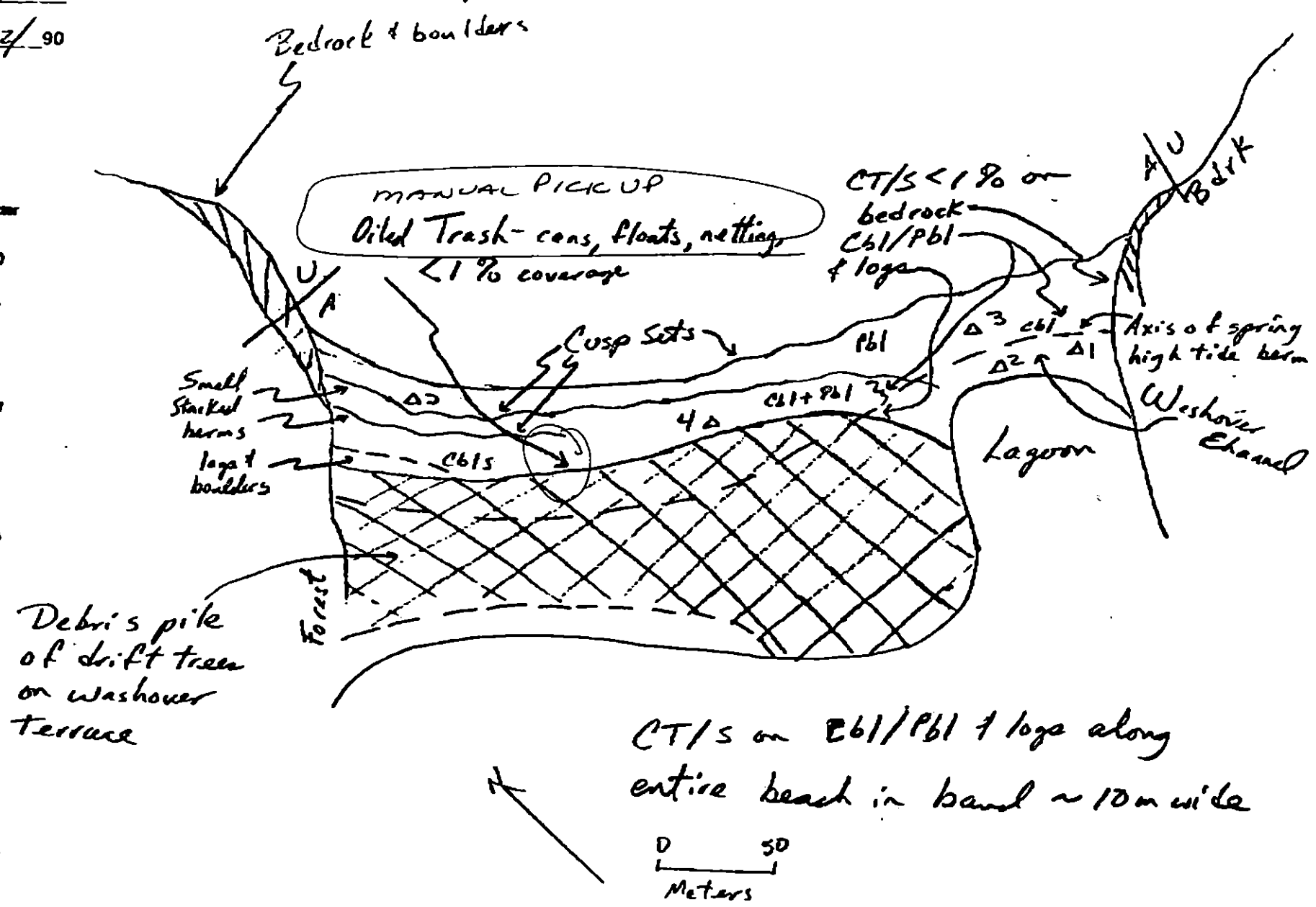
CHECKLIST

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

LEGEND

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

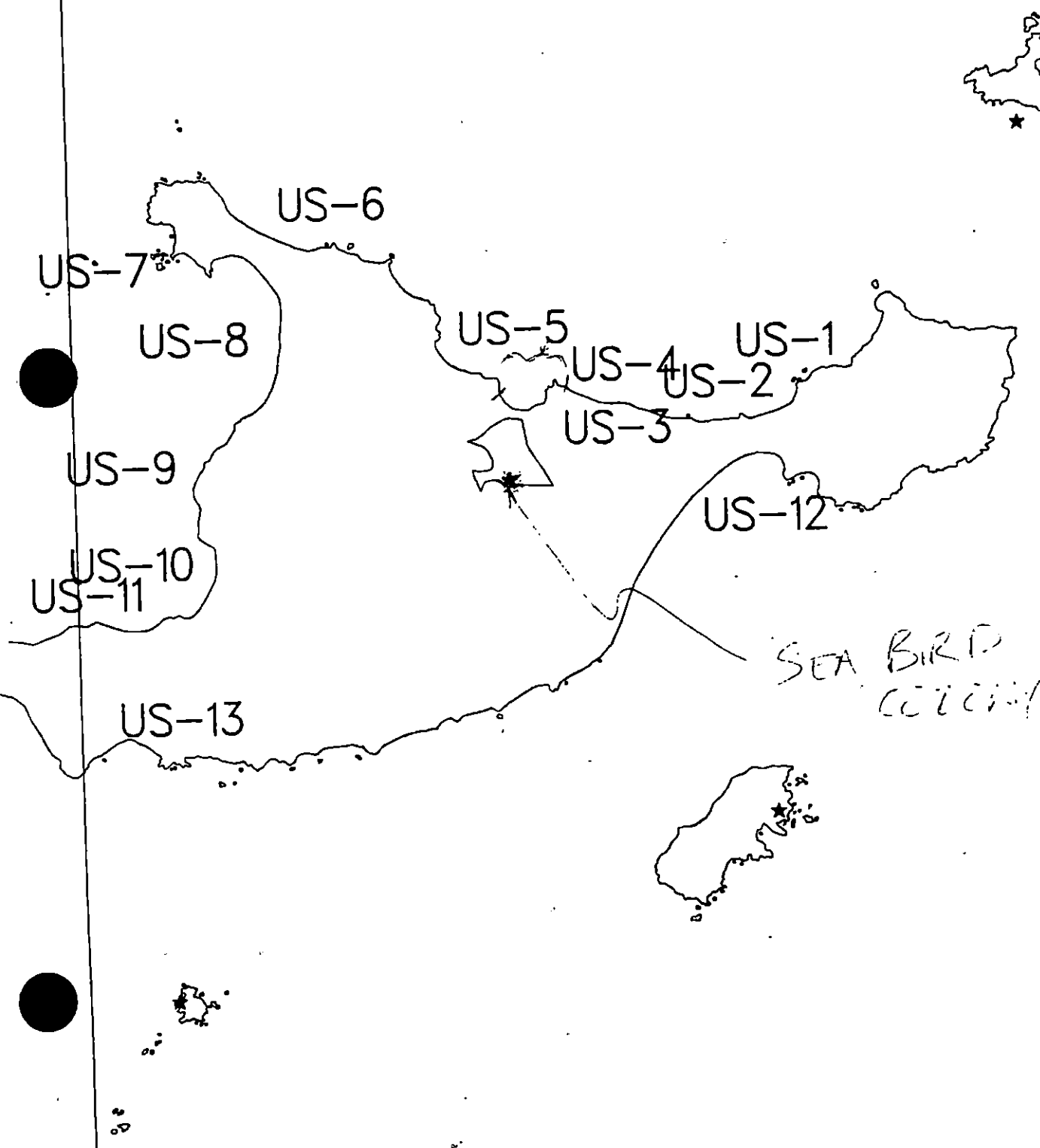
SKETCH MAP



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

ECOLOGICAL MAP

SR1



→ SE CA

USA

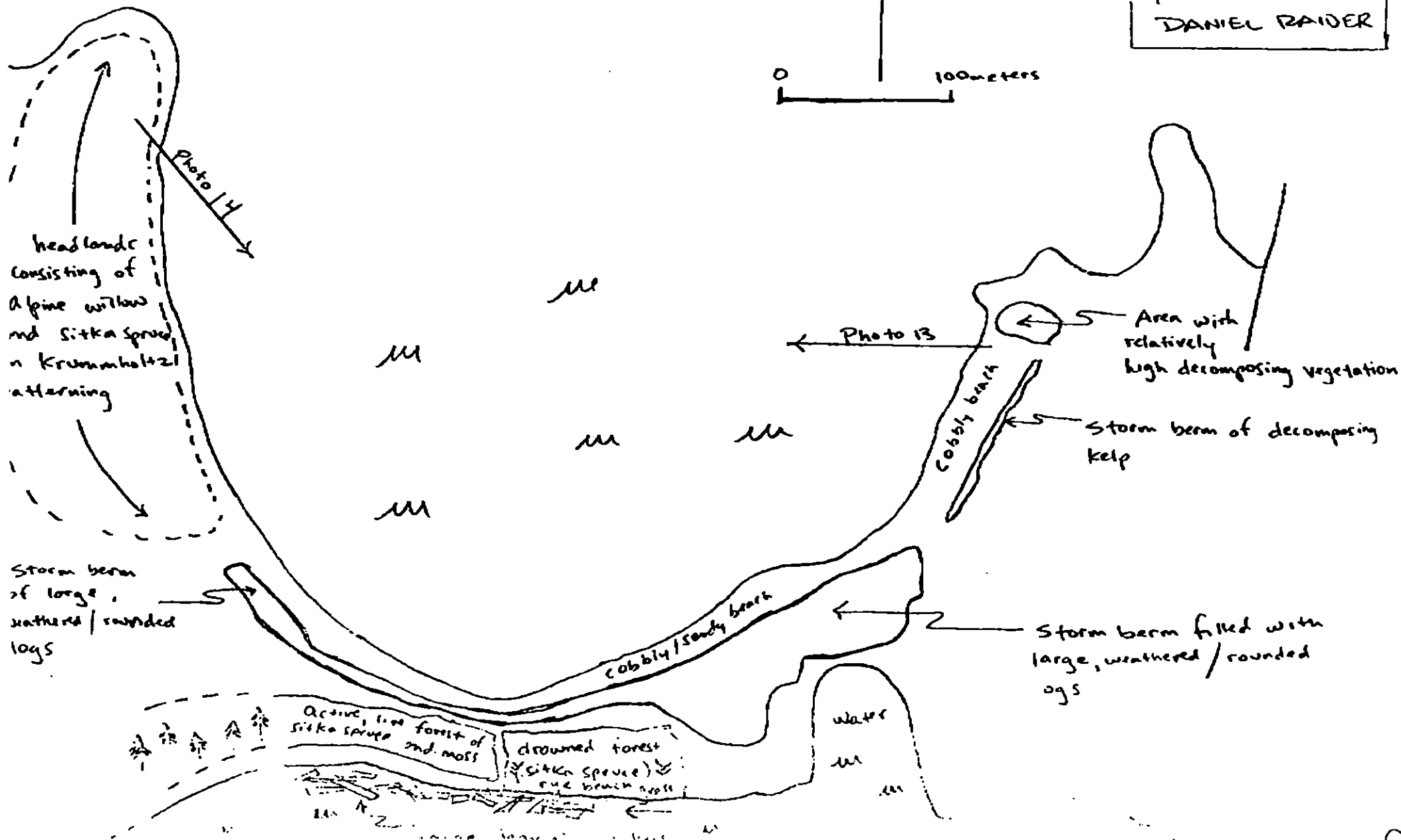
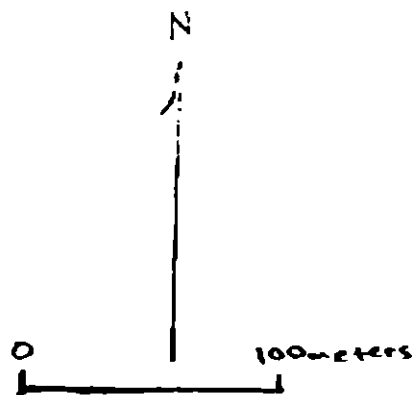
TEAM 7

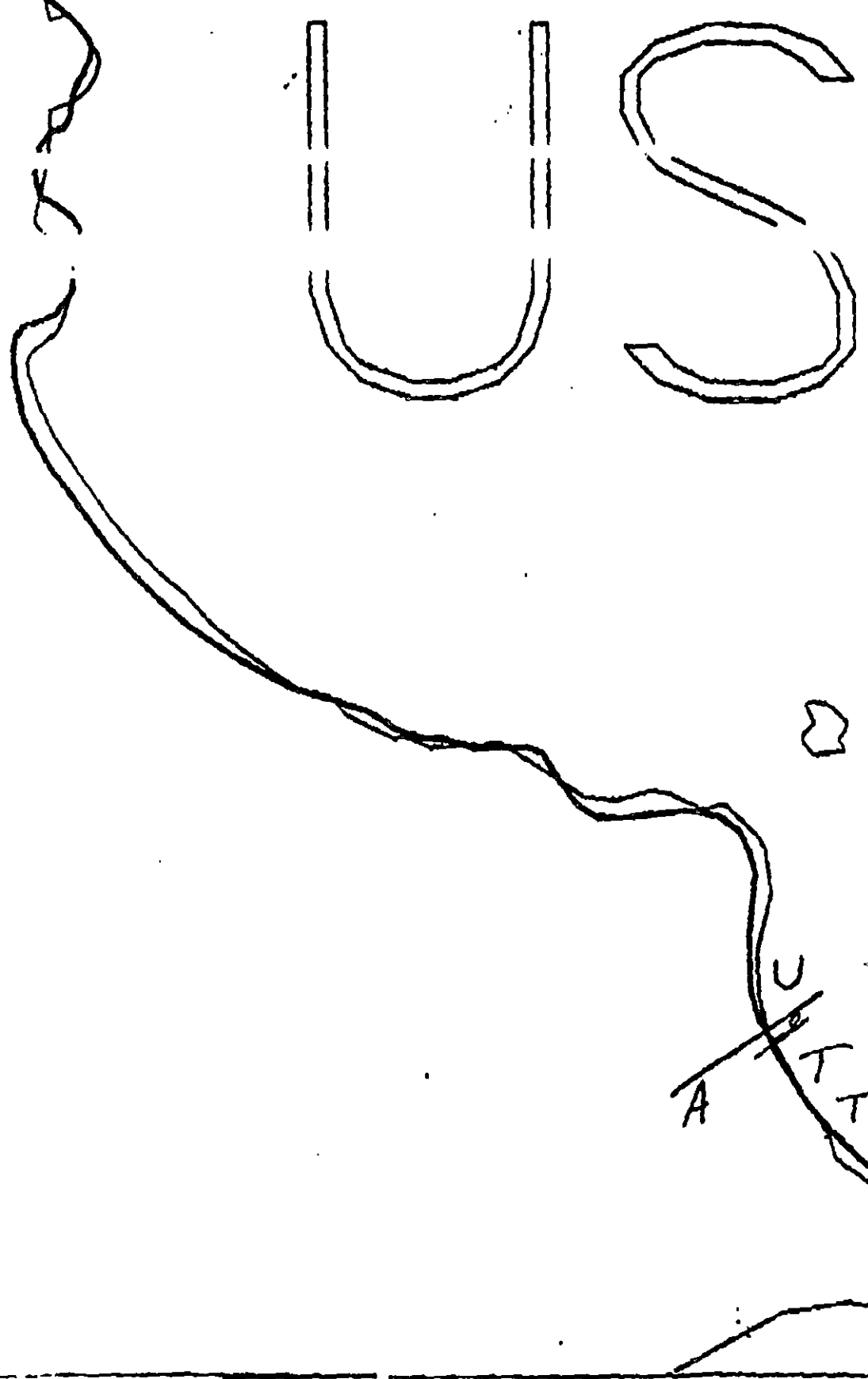
BIO SKETCH

22 APRIL 1990

13:35

DANIEL RAIDER





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

US-5A

ADEC Segment Length: 2561m

Map Key: KEN-138a
Name: G. Heyman

US

UNSURVEYED

← KEN
138A

XXXX Wide

/// Medium

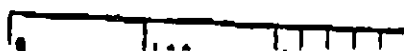
--- Narrow

TTTT Very Light

0000 "

US-54

ADEC Segment Length: 2541m



Map Key: KEN-138b

Name: Gu Heyman

Date: 4-22-90

SHORELINE EVALUATION

SEGMENT ST/ US-05 SUBDIVISION B (2 OF 2) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time.

SHPO SIGNATURE: *Charles R. Homan* DATE: 5/5/90

OILING CATEGORIZATION:

Wide 18 m: Medium 5 m: Narrow 12 m: V.Light 302 m: No Oil 244 m
Subsurface Oil Observed: Yes X No Maximum Depth 61+cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of pooled oil, mousse oiled debris and oiled logs. Relocate UITZ and SUTZ to MITZ, 2) spot wash and bioremediate in areas indicated on sketch map. Work should be conducted prior to 5/15 with permission from USFWS.

TAG COMMENTS: Monitors to assess logs.

TAG APPROVAL DATE: May 5, 1990

ADEC *Art Wetters* *Pat Wetters*

EXXON *Mark N. Willett* *Mark N. Silbert*

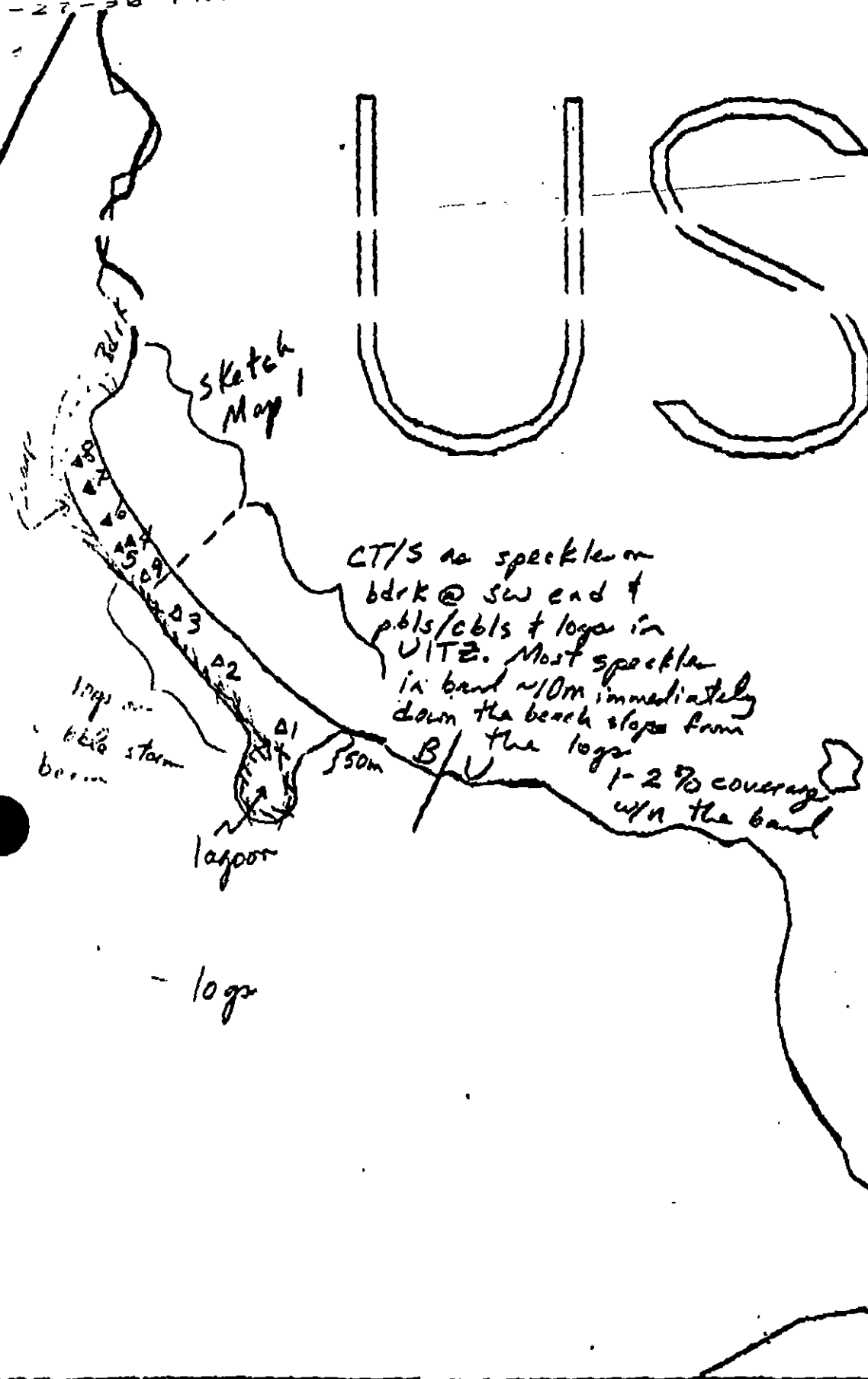
NOAA *Gary Petras* *Dany Petras*

USCG *G.A. BETER* *G.A. Beter*

FOSC: *[Signature]* DATE: 5-15-90

Perform manual pickup after 5-1 with approval of land manager. Sediment relocation and CUSTOMBLE N after 1 Sept. NO INIPOL.

US



KEN
138B

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

US-5

AOEC Segment Length: 2541m



Map Key: KEN-138a

Name: G. Heyman

Date: 4/22/50

SEGMENT US-005

SUBDIVISION B

DATE 4/22/90

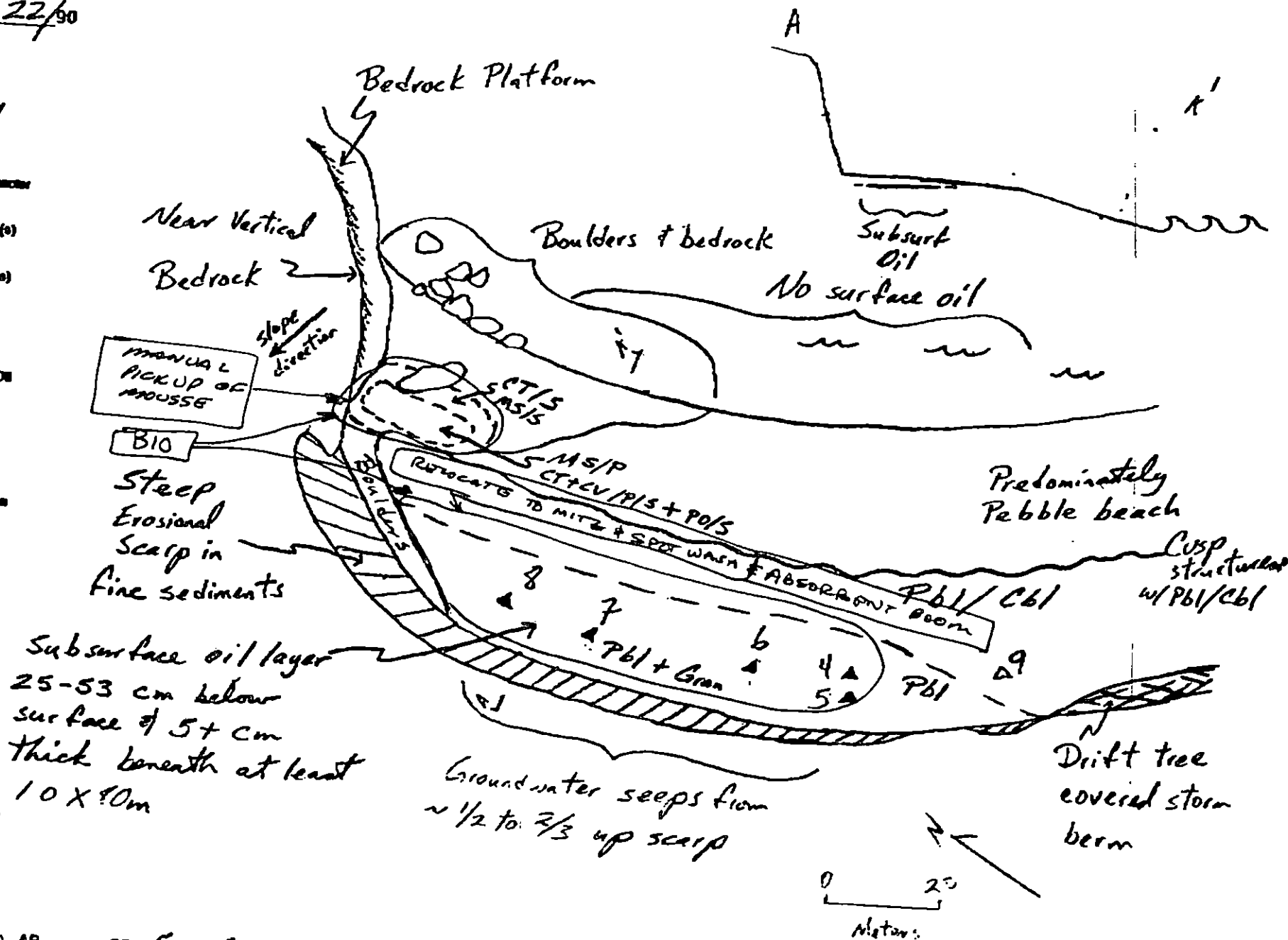
CHECKLIST

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

LEGEND

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

SKETCH MAP /



N Character Length (m) AP 5 PO 5 CV 2.1 CT 32.4 ST 2.6 MS 2.6 PT ... TB ... FI ... NO 120

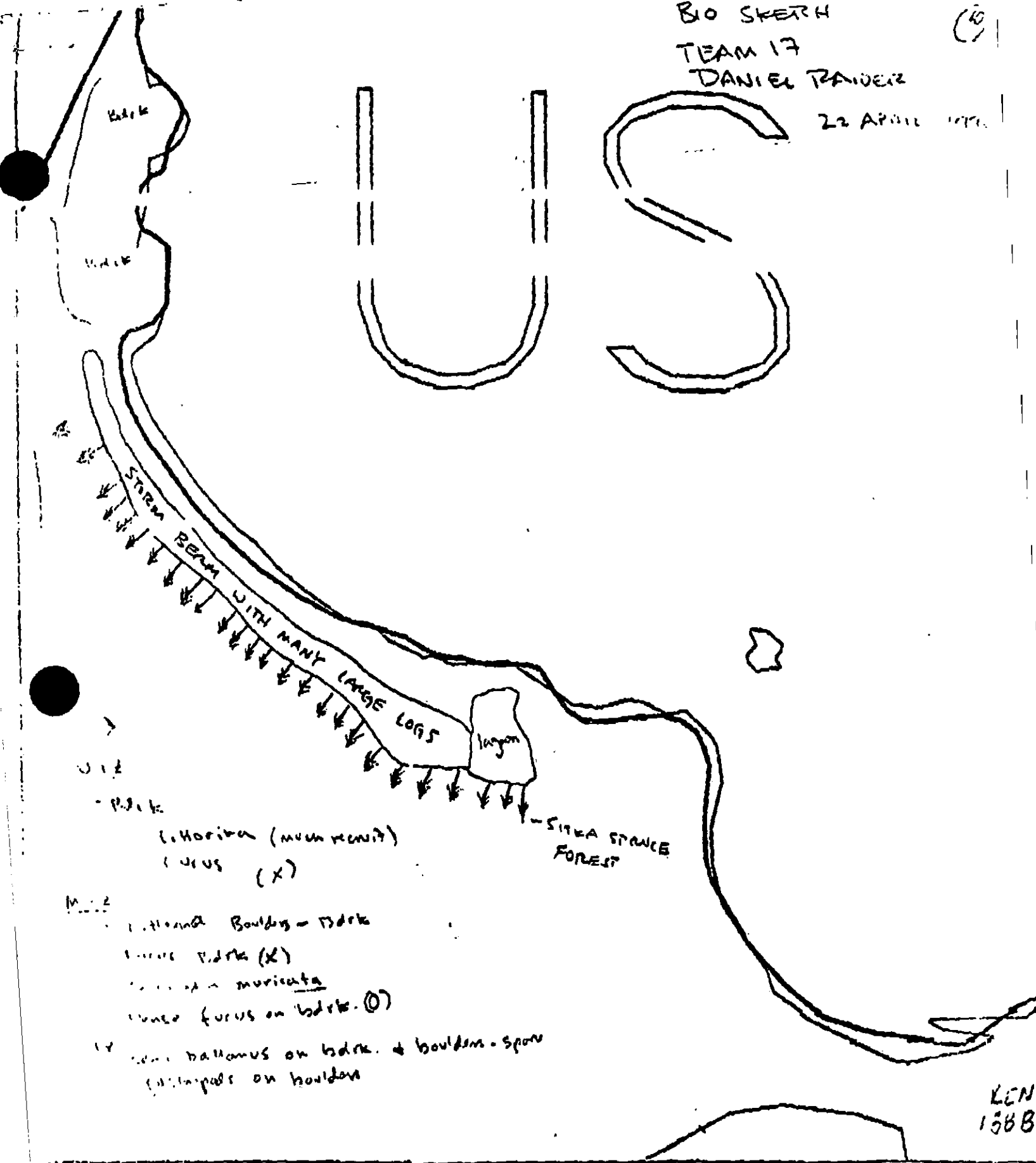
BIO SKETCH

TEAM 17

DANIEL RAIVERZ

22 APRIL 1971

(10)



XXXX Wide

● // Medium

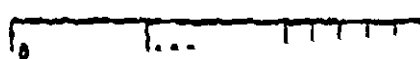
--- Narrow

TTTT Very Light

0000 No

US-5B

ADEC Segment Length: 2541m

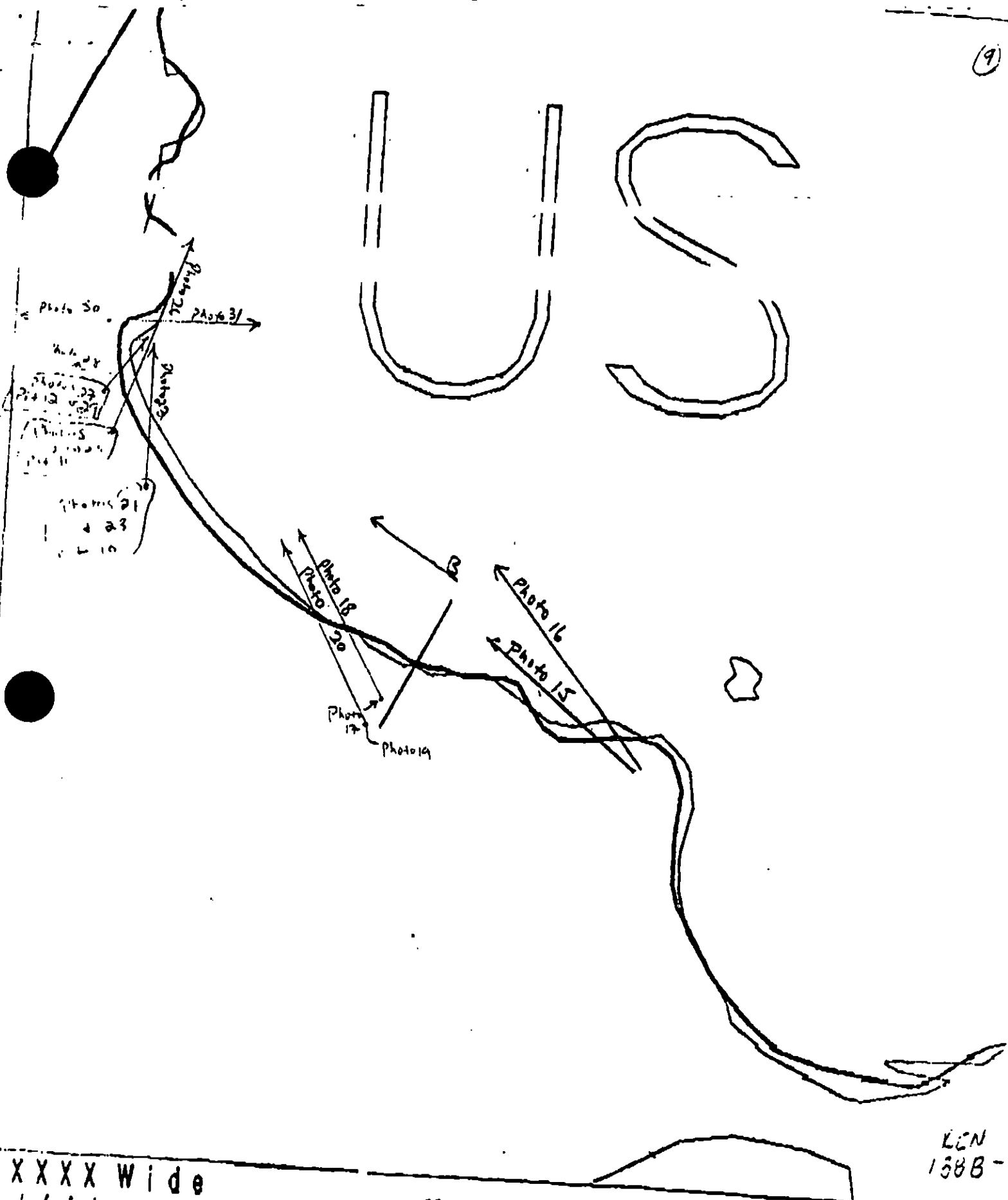


Map Key: KEN-138a

Name: _____

Date: _____

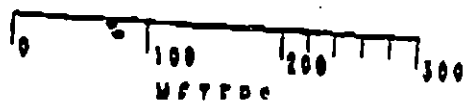
KEN
1568



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

US-5

ADEC Segment Length: 2541m



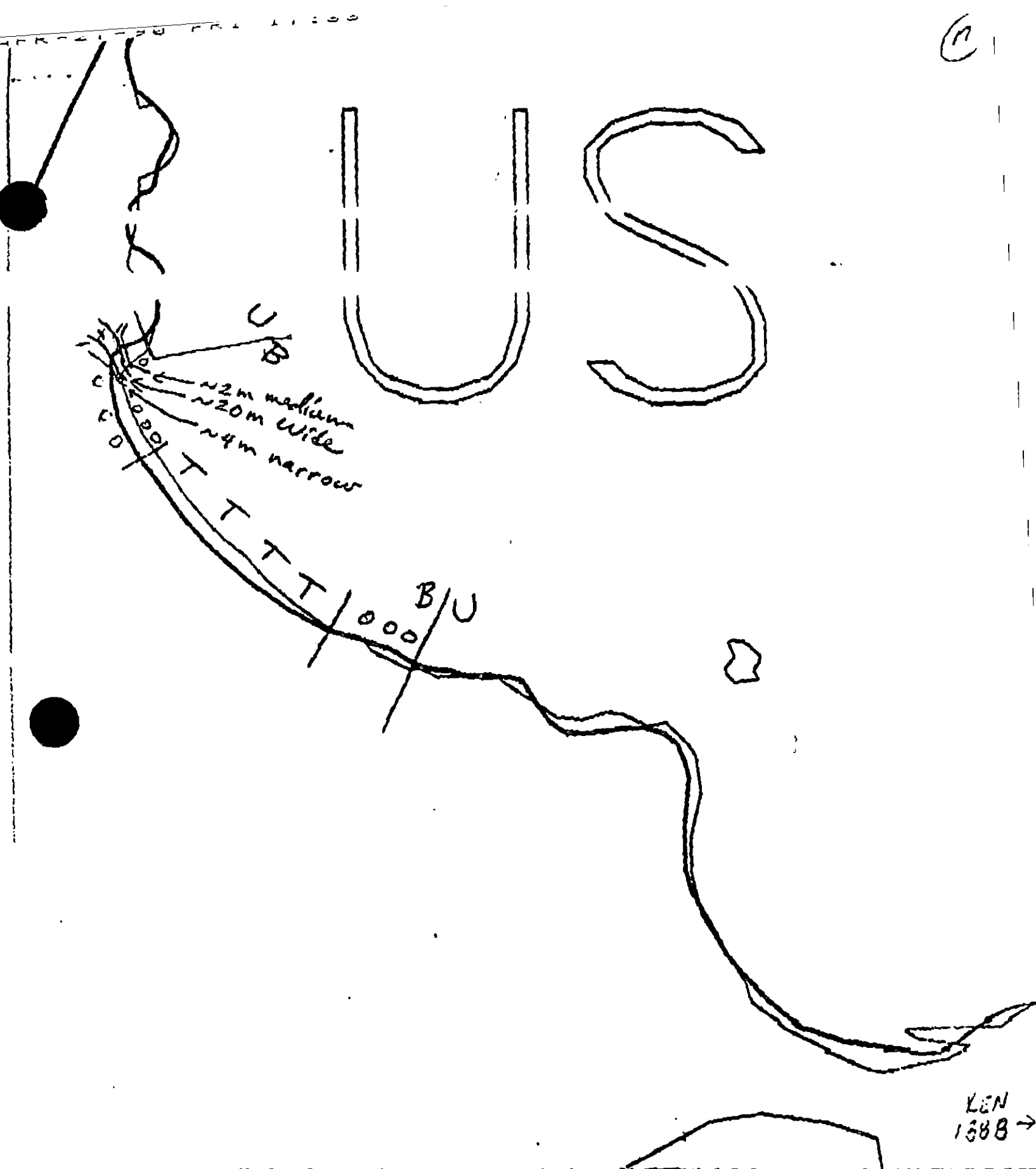
Map Key: KEN-138a

Name: _____

Date: _____

KEN
138B-

(11)



XXXX Wide

US-5B

/// Medium

- - - Narrow

ADEC Segment Length: 2541m

TTTT Very Light

0000 No Oil



Map Key: KEN-138a

Name: G. Heyman

Date: 4/22/90

SHORELINE EVALUATION

SEGMENT ST/ US-05 SUBDIVISION B (2 OF 2) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time.

SHPO SIGNATURE: Mark Z. AdnerDATE: 5/5/90

OILING CATEGORIZATION:

Wide 18 m: Medium 5 m: Narrow 12 m: V. Light 302 m: No Oil 244 m
Subsurface Oil Observed: Yes X No Maximum Depth 61+cm

RECOMMENDATIONS:

 No Treatment RecommendedX Treatment RecommendedX Manual PickupX Bioremediation Tarmat RemovalX Snare/Absorbent BoomsX Oil Snares (pom poms) Absorbents (pads, rolls, etc)X Spot Washing: X Wands Beach CleanerX Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pickup of pooled oil, mousse oiled debris and oiled logs. Relocate UITZ and SUTZ to MITZ, 2) spot wash and bioremediate in areas indicated on sketch map. Work should be conducted prior to 5/15 with permission from USFWS.

TAG COMMENTS: Monitors to assess logs.TAG APPROVAL DATE: May 5, 1990ADEC ART WEINER Next to DebrisEXXON Mark N. Villett Mark N. SilberNOAA Gary Petras Gary PetrasUSCG G.A. BEYER G.A. BesterFOSC: DATE: 5-15-90

Perform manual pickup after 5-1 week approval of land manager. Sediment relocation and CUSTOMER N after 1 Sept. No INIPOL.

on 28 June 1990, Sediment Relocation + Customken application can be done prior to 1 Sept. by USFWS Rep on scene. FOSC DATE 6/28/90

WORK PLAN ADDENDUM

Segment US-5

Subdivision B

Dated 6/27/90.

MODIFICATION

1. REASON FOR MODIFICATION

RELIEF FROM USFTW TIMING CONSTRAINT SPECIFIC
TIMING TO BE CLARIFIED BY USFTW.

2. ADJUSTMENT TO WORK PLAN

RELIEF FROM TIMING CONSTRAINTS FOR BERM RELOCATION
TRIAL.

SHPO APPROVAL NEEDED YES X
NO ~~X~~

SHPO SIGNATURE Chuck Z. Holmes 6/29/90

TAG APPROVAL DATE _____

ADEC Ray Morris, R. Morris

EXXON Andy Tan

NOAA Joseph Tuller

USCG G.A. Reiter, G.A. REITER

Inspection constraint applies.
refer original work plane (shoreline evaluation for

FOSC B. J. J. J. J. DATE 6/30/90

1991 MAYSAP EVALUATION

SEGMENT: US 005 **SUB:** A **REGION:** KEN **SURVEY DATE:** 5/6/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 5/15 - 9/1

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ **Date:** _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

ADEC

NAME S. FERGUSON

SIGNATURE

[Signature]

☒ NTR

☐ TREATMENT RECOMMENDED

NO TREATMENT RECOMMENDED AT US-5A. OILING OBSERVED IN 1990 SSAT'S (OILED LOGS AND OILED TRASH.). WORK CONDUCTED IN 1990 ADDRESSED THE PICK UP OF THIS OILED DEBRIS. A BRIEF SURVEY WAS CONDUCTED, ~~THE~~ CONCENTRATION ON DRIFT LINE UP INTO STORM BERM, NO OILING OBSERVED.

EXXON

NAME G. STILES

SIGNATURE

[Signature] 5/7/91

☒ NTR

The area where oily debris had previously been located was walked and no trace of oil was noted.

LANDMANAGER

NAME J. HARDISTER

OF USFWS

SIGNATURE

[Signature] 5/7/91

☒ NTR

concur with other team members. oily debris was not present.

USCG/NOAA

NAME CWO SPURR / R. Hoff

SIGNATURE

[Signature] / Rebecca Hoff

☒ NTR

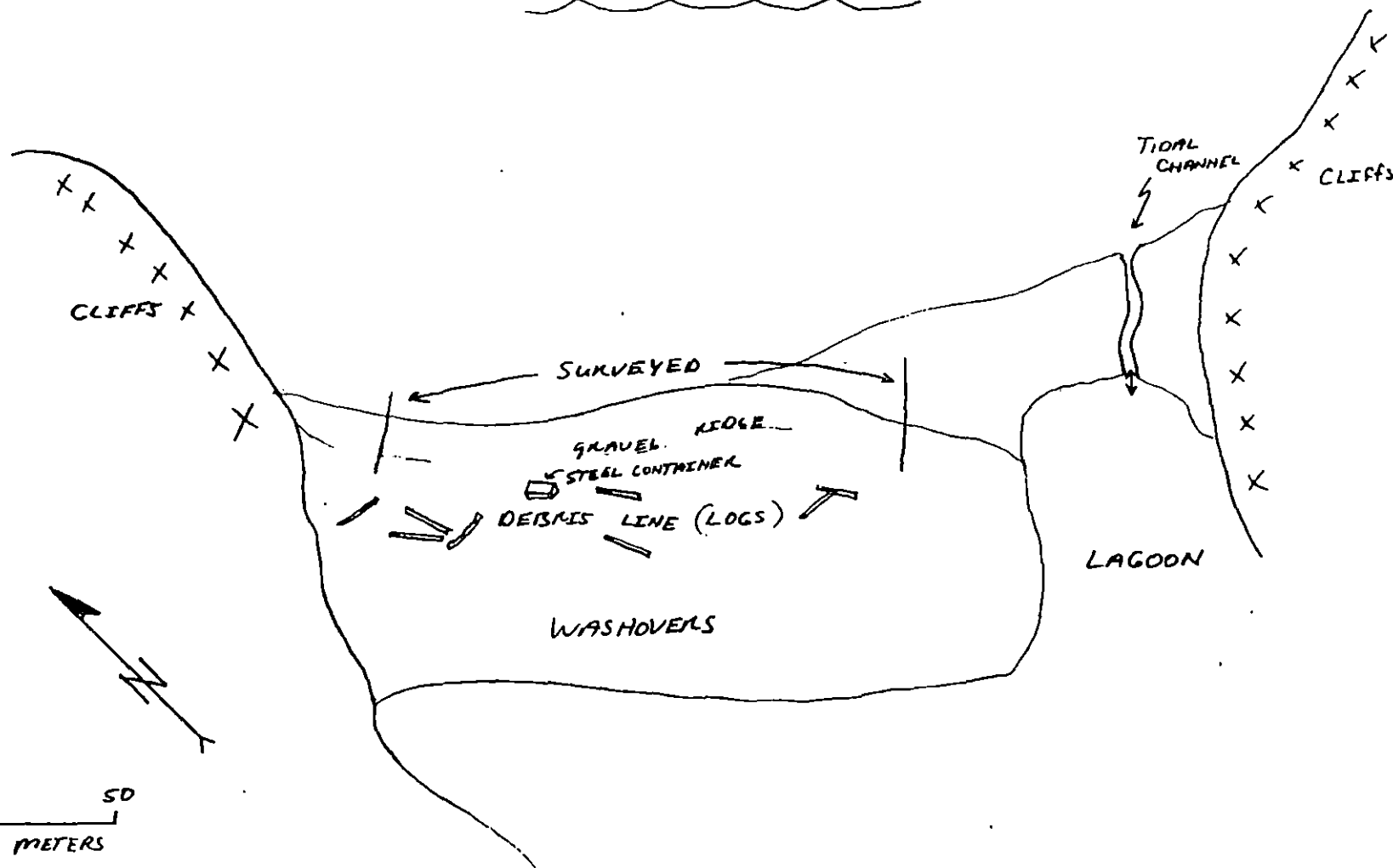
Extensive pits were dug but no oil found. This segment looks fine.

reviewed 5/9/91 EG
Revised ET 5/12

 Bedrock
 LOGS
 PHOTOS

SKETCH MAP (OG)
 US-5-A
 D. FITZGERALD
 6 MAY 1991
 1535 - 1600

GULF OF ALASKA



reviewed 5/9/91 KC
 SS reviewed 5/12

ET reviewed 5/12

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6

DATE May 6 1991

SEGMENT # US-5

TIDAL HEIGHT (Range) 4ft - 5 1/2 ft (1535-1600)

SUBDIVISION A

BIOLOGIST N Davis

SEA STATE 4'

WIND SPEED/DIRECTION Very Gusty N/NE

PHOTOGRAPHS: ROLL # No Photos

FRAME #

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

The lagoon was a very active feeding area for water fowl.
The debris line had some live trees (spruce) at the top of the ridge and several dead trees standing.

No oil was found in this area

Song (2) Fox (1) Savannah (3) Golden Crowned (3) Sparrows

Gadwall (2) Mallards (30) Northern Pintail (60) American Widgeon (20) Shorelens (6) Green wing teal (200)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1 immature	
Seabirds <i>cormorant</i>	1	4	
Waterfowl	6	± 350	
Gulls/Kittiwakes	2	10	
Shorebirds	0		
Corvids	0		
Other Birds	4	9	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	0	0	
Pinnipeds (specify)	0	0	
les (specify)	0	0	

Shoreline subdivision map showing important biological features attached.

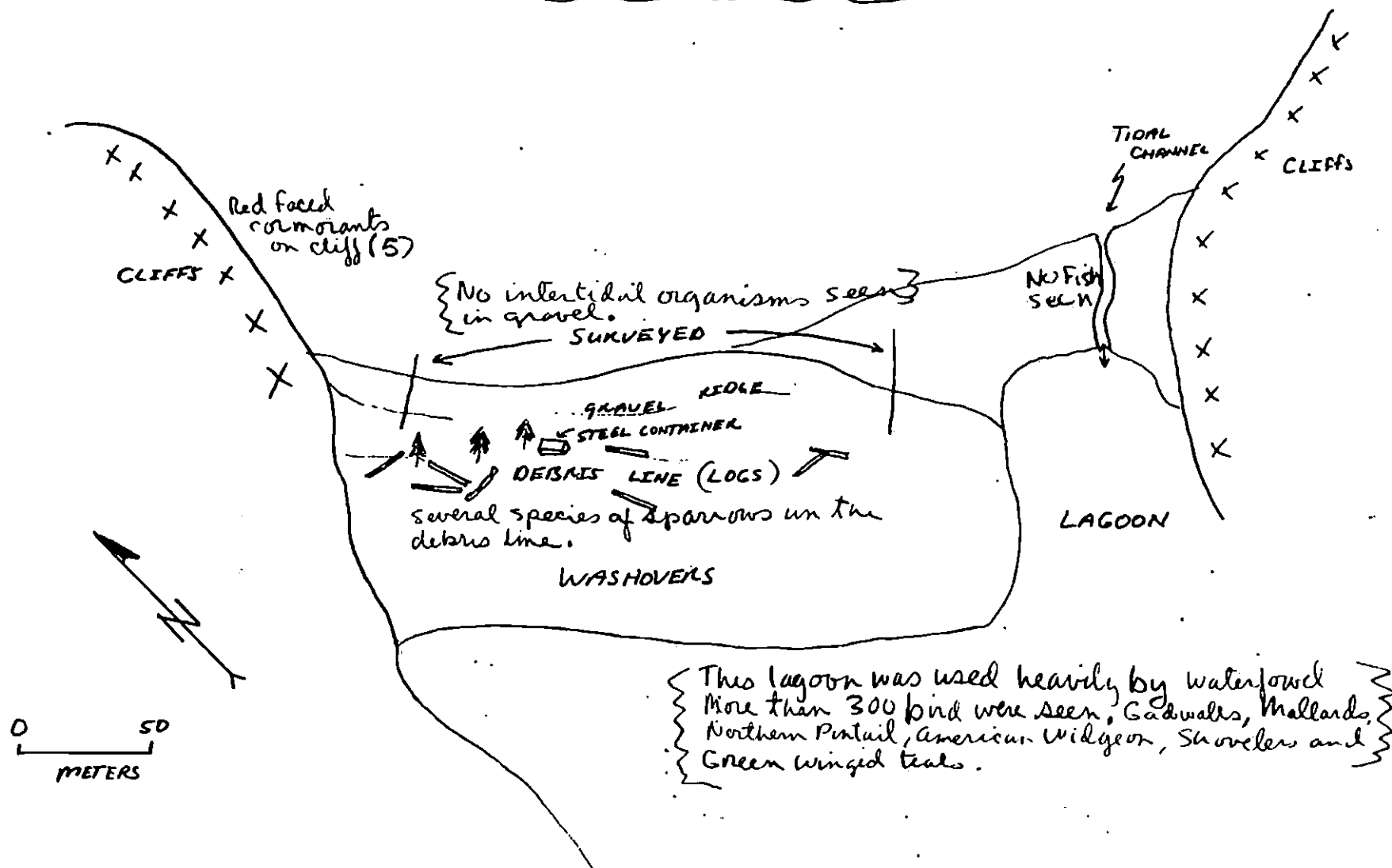
Print 5/10/91 m

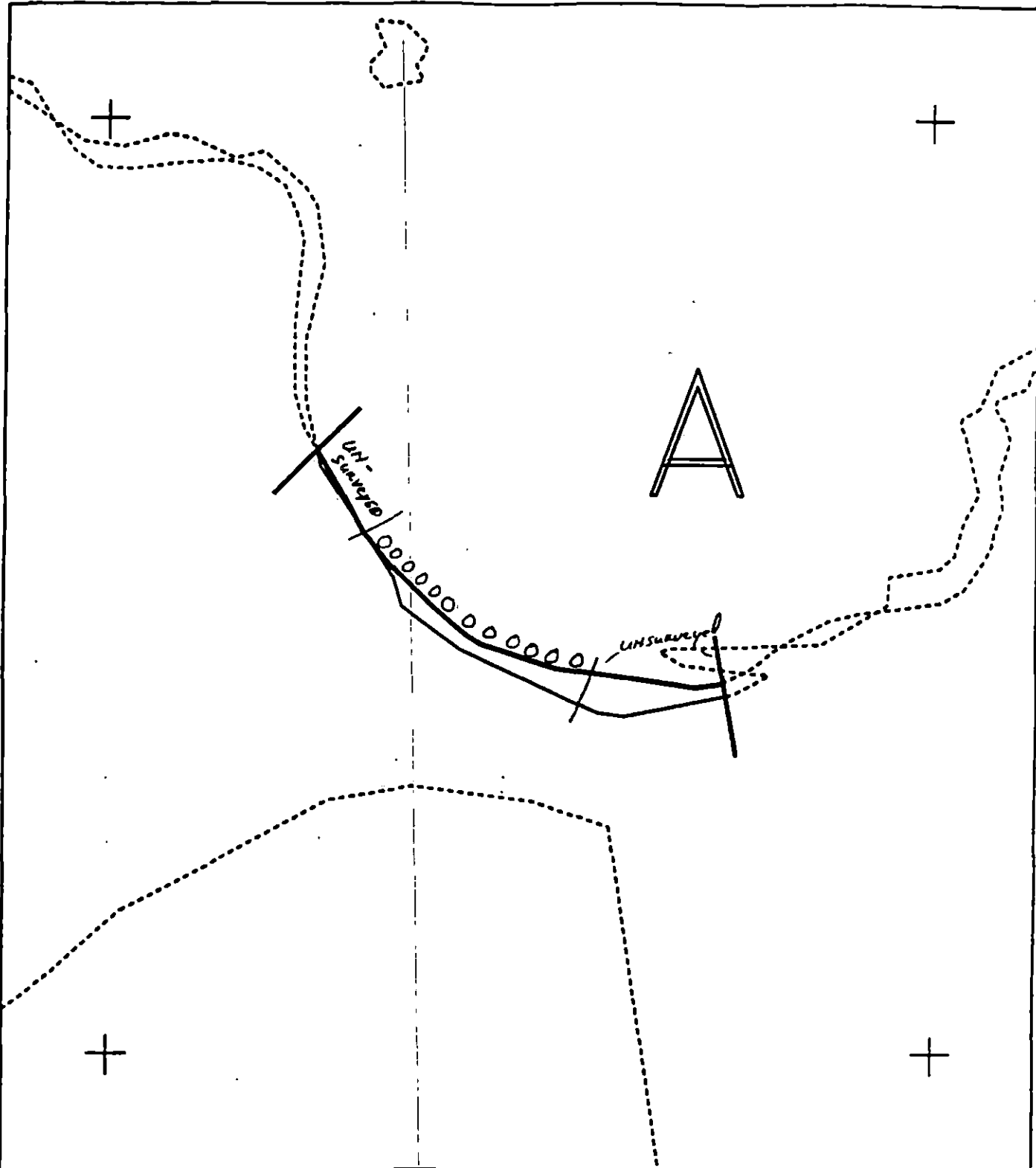
XX Bedrock
LOGS
PHOTOS

Bio Map
Heather Davis

SK MAP (OG)
US-5-A
O. FITZGERALD
6 May 1991
1535 - 1600

GULF OF ALASKA





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

US005 A

ADEC Subsegment Length: 350m

METERS

0 100 200
 AK State Plane Zone 4
 4800050



Subdivision Field Map

Map Key: KENUS005A

Name: FitzGerald

Date: 6 May 1991

Date Entered:

reviewed 5/9/91 XG

ET reviewed 5/12

SEGMENT: US 005 SUB: A REGION: KEN SURVEY DATE: 5/6/91

Work Window(s) RESTRICTED 5/15 - 9/1

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

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

SHPO Signature: Lochel Dan Oren Date: 5/22/91

FOSC

N

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 22 1991

FOSC APPROVAL DATE: 6/1/91

ADEC

FOSC

EXXON

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

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

TEAM NO. 6-Helo SEGMENT US-5 SUBDIVISION A DATE 6/1/91

ADEC

NAME S. FERGUSON

SIGNATURE

S. Ferguson

☒ NTR ☐ TREATMENT RECOMMENDED

NO TREATMENT RECOMMENDED AT US-5A. OILING OBSERVED IN 1990 SSAT'S (OILED LOGS AND OILED TRASH.). WORK CONDUCTED IN 1990 ADDRESSED THE PICK UP OF THIS OILED DEBRIS. A BRIEF SURVEY WAS CONDUCTED, ~~CONCENTRATING~~ ON DRIFT LINE UP INTO STORM BERM, NO OILING OBSERVED.

EXXON

NAME G. STILES

SIGNATURE

G. Stiles 5/7/91

☒ NTR The area where oily debris had previously been located was walked and no trace of oil was noted.

LANDMANAGER

NAME J. HARDISTER

OF USFWS

SIGNATURE

J. P. Hardister 5/7/91

☒ NTR concurred with other team members, oily debris was not present.

USCG/NOAA

NAME CWO SPURR / R. Hoff

SIGNATURE

R. Hoff / Rebecca Hoff

☒ NTR Extensive pits were dug but no oil found. This segment looks fine.

reviewed 5/9/91 KG
Revised ex 5/12

xx Bedrock

LOGS

PHOTOS

SKE MAP (OG)

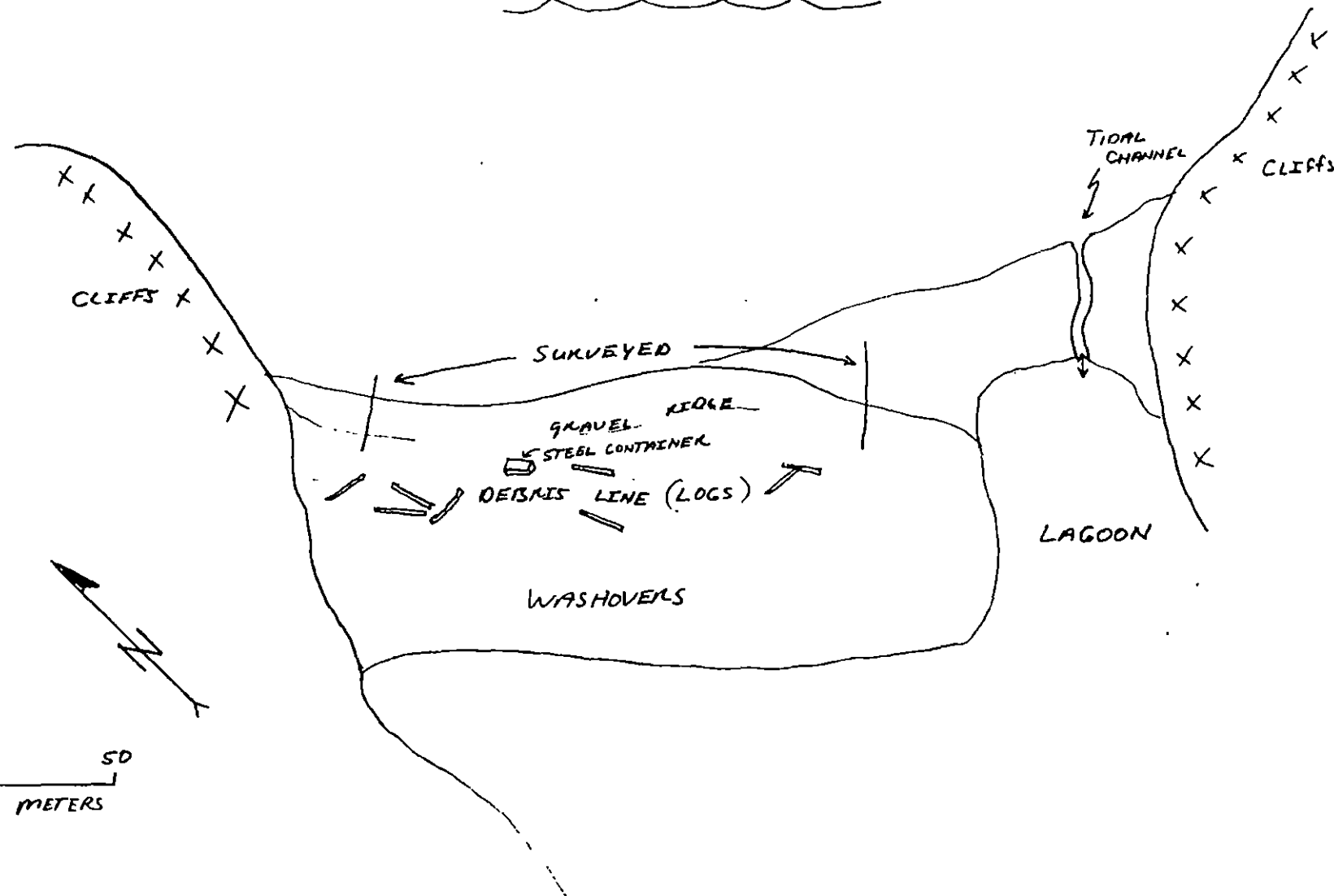
US-5-A

D. FITZGERALD

6 MAY 1991

1535 - 1600

GULF OF ALASKA



ET reviewed 5/12

reviewed 5/9/91 KG
ES reviewed 5/12

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6

DATE May 6 1991

SEGMENT # US-5

TIDAL HEIGHT (Range) 4ft - 5 1/2 ft (1535-1600)

SUBDIVISION A

BIOLOGIST H Davis

SEA STATE 4'

WIND SPEED/DIRECTION Very Gusty N/NE

PHOTOGRAPHS: ROLL # No Photos

FRAME #

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

The lagoon was a very active feeding area for water fowl.
The debris line had some live trees (spruces) at the top of the ridge and several dead trees standing.

No oil was found in this area

Song (2) Fox (1) Savannah (3) Golden Crowed (3) Sparrows

Gadwall (2) Mallards (30) Northern Pintail (60) American Widgeon (20) Shorelens (6) Green wing teal (2000)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1 immature	
Seabirds <i>cormorant</i>	1	4	
Waterfowl	6	± 350	
Gulls/Kittiwakes	2	10	
Shorebirds	0		
Corvids	0		
Other Birds	4	9	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	0	0	
Pinnipeds (specify)	0	0	
ies (specify)	0	0	

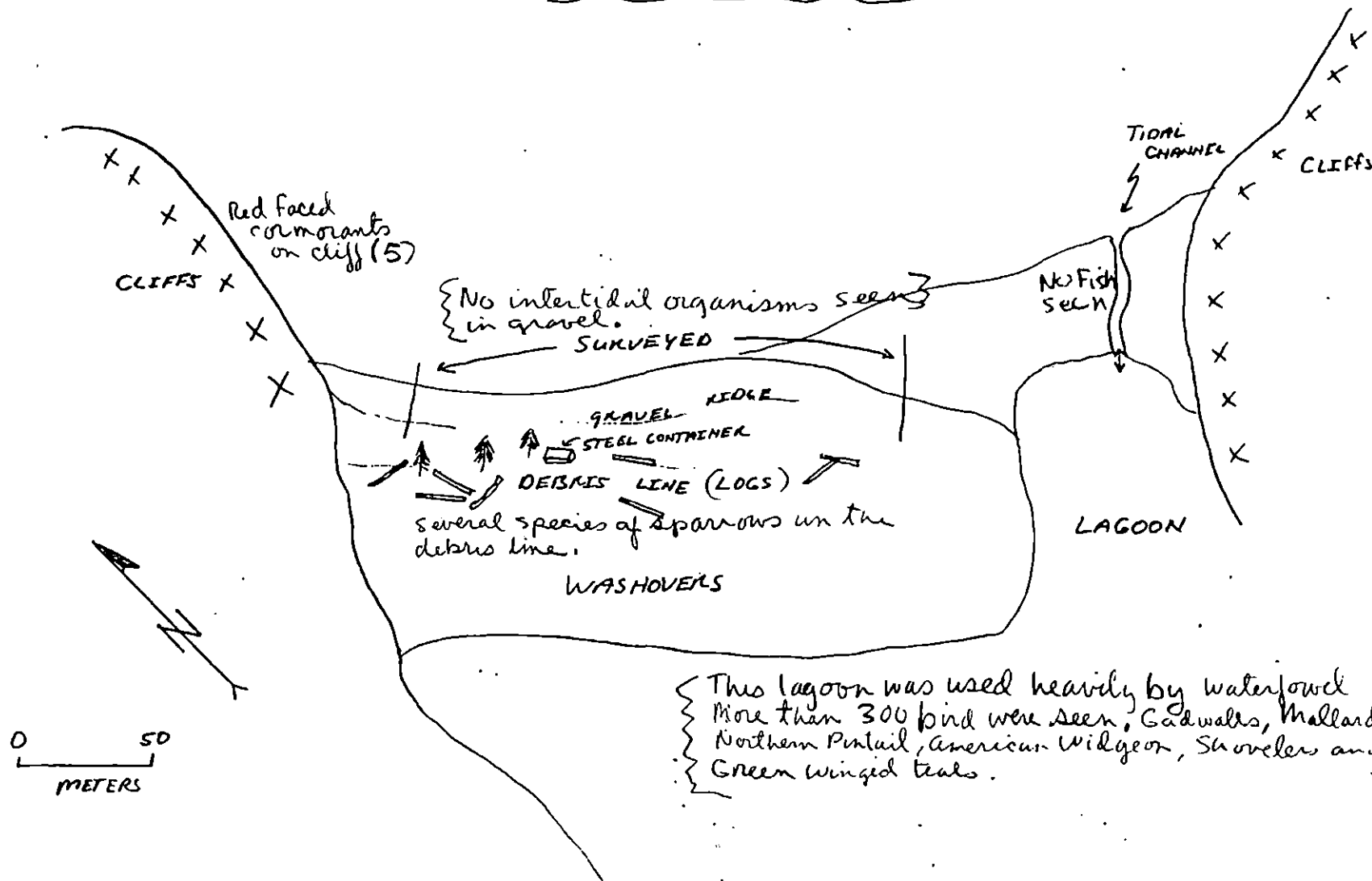
Shoreline subdivision map showing important biological features attached.

xxx bedrock
 // LOGS
 ↑ PHOTOS

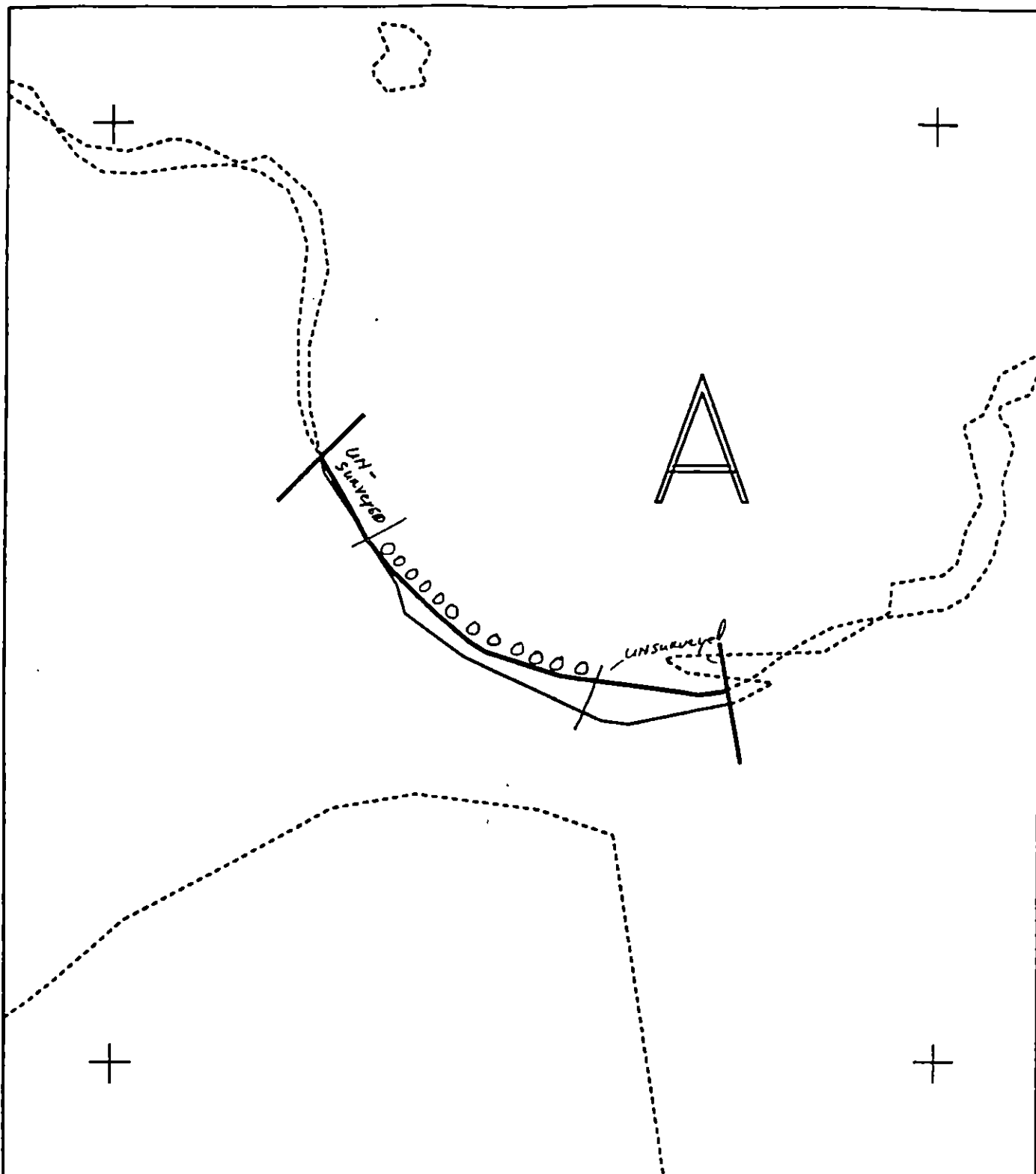
Bio Map
 Heather Davis

SKETCH MAP (DG)
 US-S-A
 D. FITZGERALD
 6 May 1991
 1535 - 1600

GULF OF ALASKA



This lagoon was used heavily by waterfowl
 More than 300 birds were seen. Gadwall, Mallards,
 Northern Pintail, American Widgeon, Shovelers and
 Green winged teals.



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

US005 A

ADEC Subsegment Length: 350m

METERS

0 100 200
 AK State Plane Zone 4
 850050



Subdivision Field Map

Map Key: KENUS005A

Name: FitzGerald

Date: 6 May 1991

Date Entered:

reviewed 5/9/91 KG

ES reviewed 5/12

SEGMENT: US 005 SUB: B REGION: KEN SURVEY DATE: 5/6/91

Work Window(s) **RESTRICTED 5/15 - 9/1**

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

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

SHPO Signature: Reedle Jan Doe Date: 5/22/91

<u>RECOMMENDATIONS:</u>	<u>INITIAL</u>	<u>TAG</u>	<u>FOSC</u>
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 _____	_____	_____	_____

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: MAY 22 1991 FOSC APPROVAL DATE: 6/1/91

ADEC  FOSC 

EXXON *Dea* _____

USCG *A. J. Nasse*

NOAA

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

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 6-Helo SEGMENT US-5 SUBDIVISION B DATE 6 May 1991

ADEC

NAME S. Ferguson SIGNATURE _____☒ NTR ☐ TREATMENT RECOMMENDED

NO TREATMENT RECOMMENDED AT US-SB. SUBSURFACE OILING (SHOWN ON 1990 SSAT MAP) WAS ADDRESSED THROUGH MECHANICAL REMOVAL IN 1990. SURVEY CONCENTRATED ON WESTERN END OF US-SB, PITS DUG EXPOSED NO SUBSURFACE OIL.

EXXON

NAME G. STILES SIGNATURE George P. Stiles 5/7/91☒ NTR No oil located.

Several +100 cm pits were dug in the area where the subsurface oil had been removed by mechanical equipment. No trace of oiling was found.

LANDMANAGER

NAME J. HANDISTER OF USFWS SIGNATURE John P. Handister 5/7/91☒ NTR no oil observed

USCG/NOAA

NAME CWO SPUR / R. Hoff SIGNATURE R. Hoff Rebecca Hoff☒ NTR Mechanical removal treatment in 1990. Several deep pits were dug with no trace of oil found.

TIME 16:05 to 17:00

BIO H DAVIS

LANDMANAGER J HARDISTER for US

USCG/NOAA CWO SPURK / R. Hoff

SEGMENT US-5

SUBDIVISION B

DATE 6 May 1991

TIDE LEVEL 4.6 ft. to 5.3 ft.

ENERGY LEVEL: ☒ H ☐ M ☐ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 241 m

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

EST. OIL CATEGORY LENGTH: W m M m N m VL m NO 24.1m US 340m

[illegible]

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

PHOTO ROLL # MAYSAP-

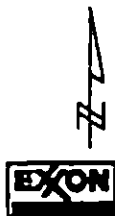
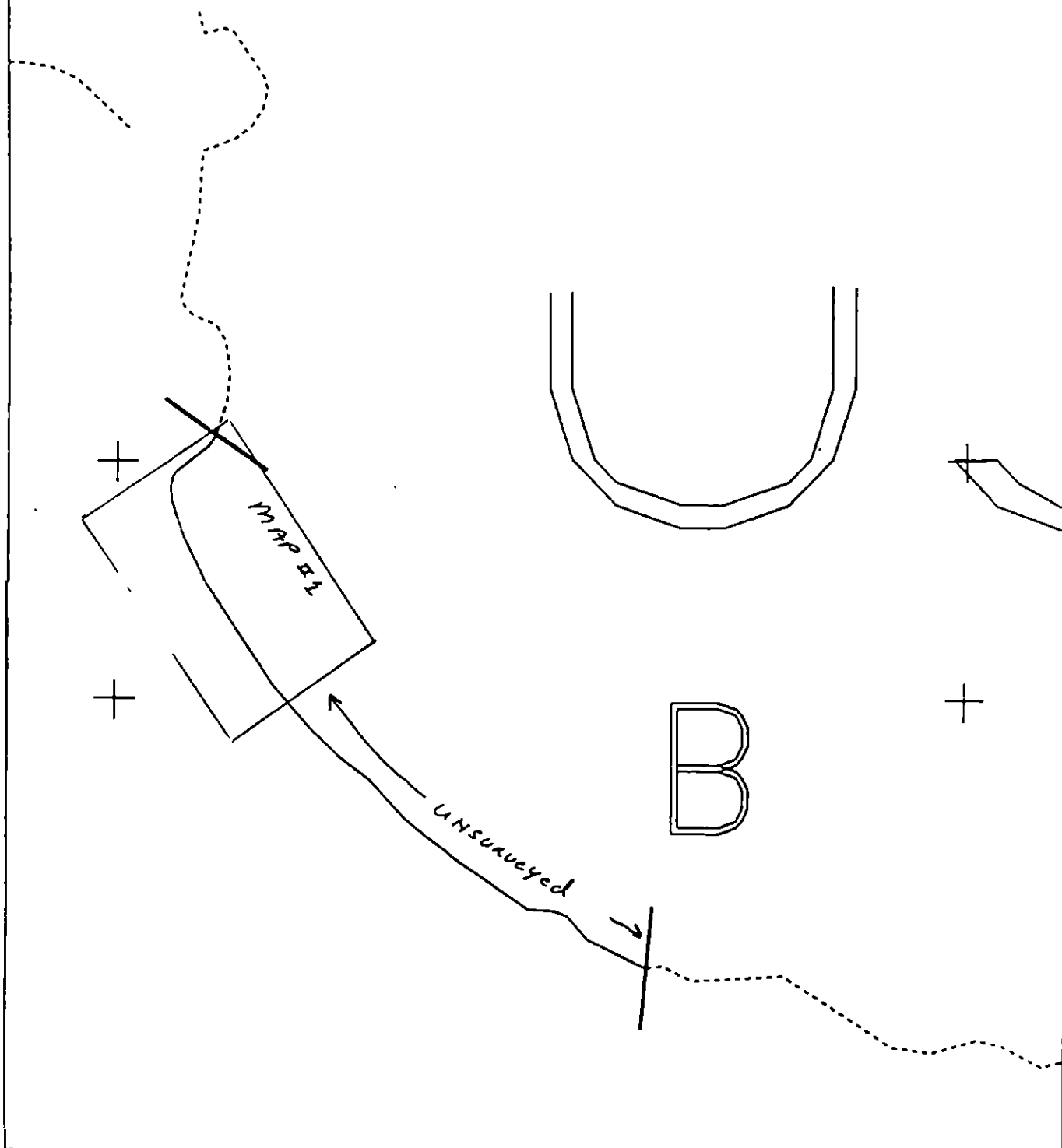
FRAMES 8-10

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		
1	110							X	-				X				P-C	
2	100							X	-				X				P-C	
3	80							X	-				X				P-C-6	
4	120							X	-				X				P-C	
5	70							X	-				X				P-C	
6	60							X	-				X				P-C	
									-									
									-									
									-									

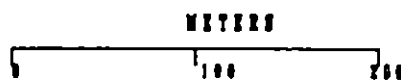
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS: This segment consists of a cobble-pebble beach with multiple storm ridges backed by a vertical cliff. Previous survey of this region indicated the most extensive oil was located at the northern end of the beach occurring as mousse behind large boulders and a subsurface oil layer (25-50 cm deep) covering a 10 by 80 m region. Six pits dug in traverses through this site down to depths of 60 to 120 cm revealed no oil. No oil was found in boulder region (LITZ) at north end of beach.

revised 5/9/91 KG
revised 5/12



US005 B



AS State Plane Zone 4
NAD83

Subdivision Field Map

Map Key: KENUS005Ba

Name: D. FITZGERALD

Date: 6 May 1991

EL reviewed 5/12

EVERGREEN TREES

GRASSY AREA

LOGS

PHOTO-LOCATION

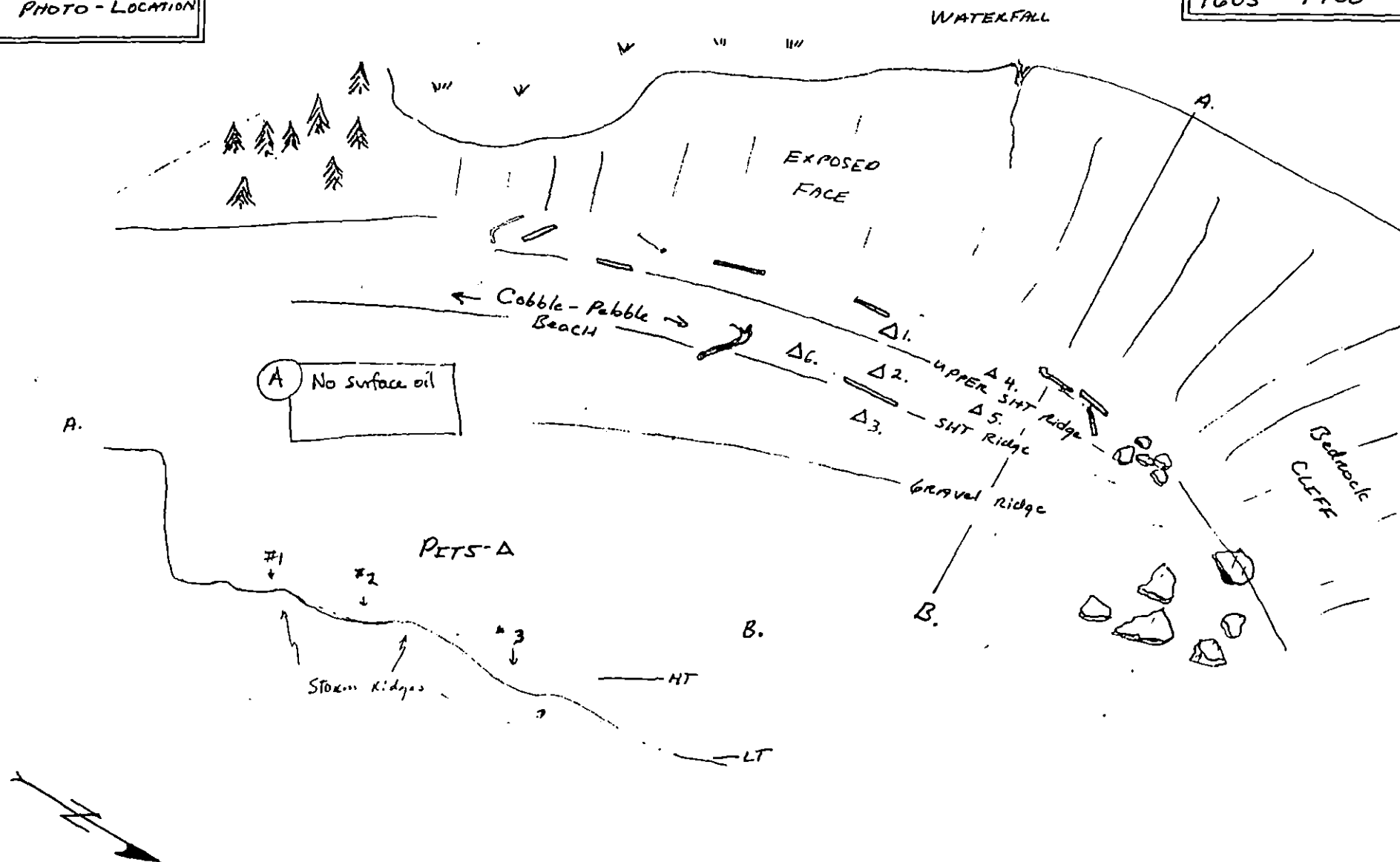
MAP (06)

US-5-B

D. FITZGERALD

6 MAY 1991

1605 - 1700

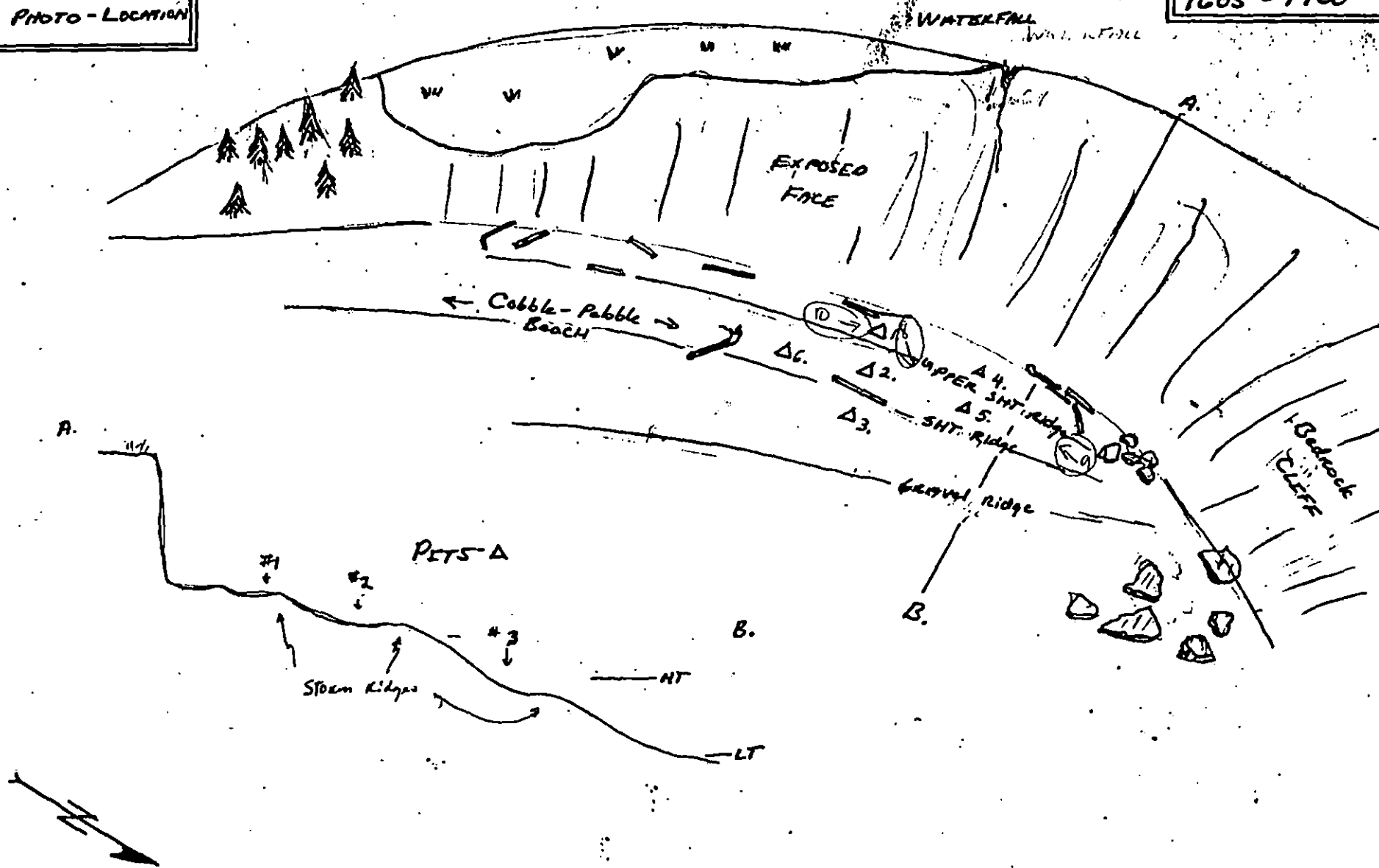


Reviewed 5/19/91 K6
LT revised 5/11

- EXPOSED TREES
- W W GRASSY AREA
- LOGS
- PHOTO-LOCATION

Photo Locations
Maypap 6-08 # 8-10

MAP (06)
U.S.-B
D. FITZGERALD
6 MAY 1991
1605 - 1700



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6

DATE May 6 1991

SEGMENT # US-5

TIDAL HEIGHT (Range) 5 1/2 - 6 1/2 ft (1620-1700)

SUBDIVISION B

BIOLOGIST H. Davis

SEA STATE 5'

WIND SPEED/DIRECTION Very Buxty N/NE

PHOTOGRAPHS: ROLL # G-08

FRAME # 8-10

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

No oil was found on this beach which was for the most part a high-energy pebble/cobble beach with no biota.

The two adult eagles may have a nest somewhere in the area.

At the north end of the beach there is a small rocky intertidal community. Rare barnacles, Rare mussels, Littorina, Fucus (with conceptacles), Gelonothalia and coralline algae. The lower intertidal area is covered but the middle and upper intertidal is healthy with spring growth beginning.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2 (adults) 1 immature *	
Seabirds cormorant	1	5	
Waterfowl	0		
Gulls/Kittiwakes	0		
Shorebirds	0		
Corvids	0		
Other Birds Sand Hill Crane Savanna Sparrow	2	2	

* These were the same birds seen over US-5A

LAND MAMMALS

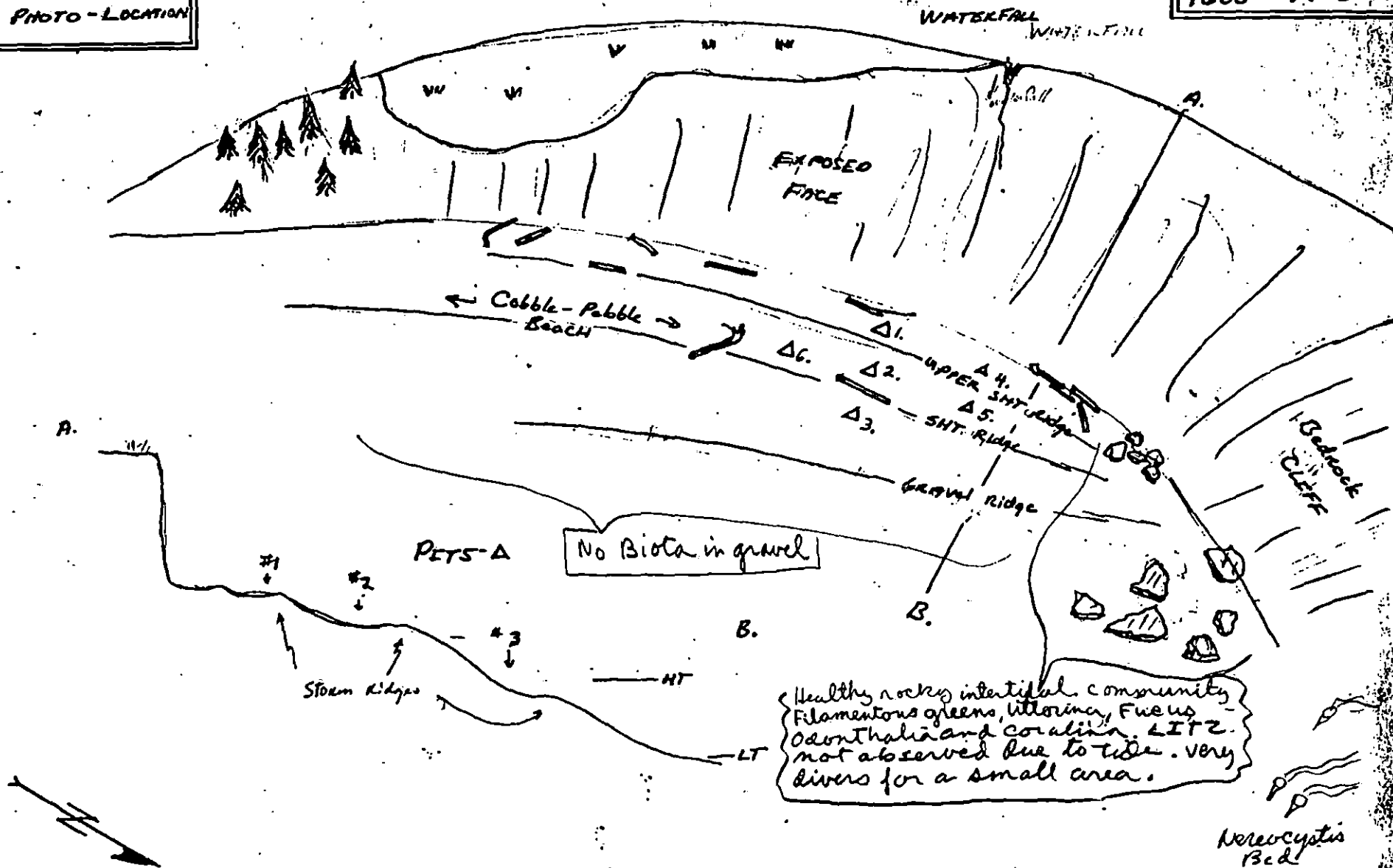
MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters	0	0	
Pinnipeds (specify)	0	0	
les (specify)	0	0	

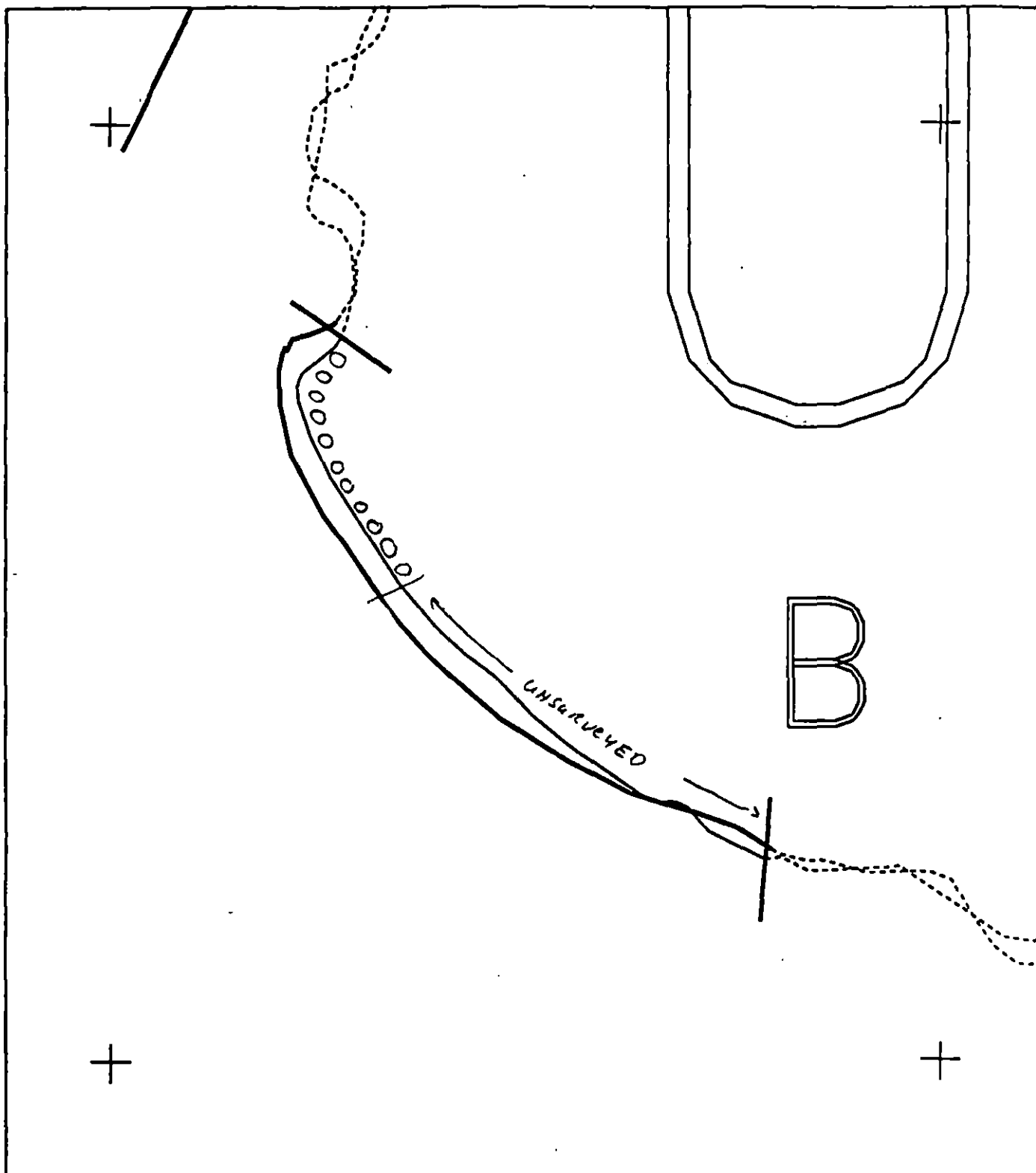
Shoreline subdivision map showing important biological features attached.

 GREEN TREES
 GRASSY AREA
 LOGS
 PHOTO-LOCATION

Bio Map
 Heather Davis

4 MAP (25)
 US-5-B
~~O. F. L. L. L.~~
 6 MAY 1991
 1605 - 1700





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

US005 B
 ADEC Subsegment Length: 581m
 METERS
 0 100 200
 AK State Plane Zone 4
 800005b

Subdivision Field Map
 Map Key: KENUS005B
 Name: D. FITZGERALD
 Date: 6 MAY 1991
 Date Entered:

reviewed 5/9/91 XG
 EC reviewed 5/12

1991 MAYSAP EVALUATION

SEGMENT: US 005 **SUB:** B **REGION:** KEN **SURVEY DATE:** 5/6/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 5/15 - 9/1

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ **Date:** _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.) _____

Spot Washing _____

Bio-Customblen Only _____

Bio-Inipol/Customblen _____

Other _____

Other _____

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

NATIONAL FIELD SHORELINE COMMENT SHEET

TEAM NO. 6-Hel6 SEGMENT US-5 SUBDIVISION B DATE 6 May 91

ADEC

NAME S. Ferguson SIGNATURE _____

☒ NTR ☐ TREATMENT RECOMMENDED

NO TREATMENT RECOMMENDED AT US-SB. SUBSURFACE OILING (SHOWN ON 1990 SSAT MAP) WAS ADDRESSED THROUGH MECHANICAL REMOVAL IN 1990. SURVEY CONCENTRATED ON WESTERN END OF US-SB, PITS DUG EXPOSED NO SUBSURFACE OIL.

EXXON

NAME G. STILES SIGNATURE George P. Stiles 5/7/91

☒ NTR No oil located.

Several +100 cm pits were dug in the area where the subsurface oil had been removed by mechanical equipment. No trace of oiling was found.

LANDMANAGER

NAME J. HANDISTER OF USFWS SIGNATURE John P. Handister 5/7/91

☒ NTR no oil observed

USCG/NOAA

NAME CWO SPURR / R. Hoff SIGNATURE R. Hoff Rebecca Hoff

☒ NTR Mechanical removal treatment in 1990. Several deep pits were dug with no trace of oil found.

OG D. Fitzgerald

BIO H DAVIS

SEGMENT US-5

ADEC S. Ferguson

LANDMANAGER J HARDISTER for US

SUBDIVISION 13

EXXON 6. STILES

USCG/NOAA CWO SPURK / R. Hoff

DATE 6 / May / 91

TIME 16:05 to 17:00

TIDE LEVEL 4.6 ft. to 5.3 ft.

ENERGY LEVEL: ☒ H ☐ M ☐ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 241 m

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

EST. OIL CATEGORY LENGTH: W m M m N m VL m NO 24.1 m US 340 m

[illegible]

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

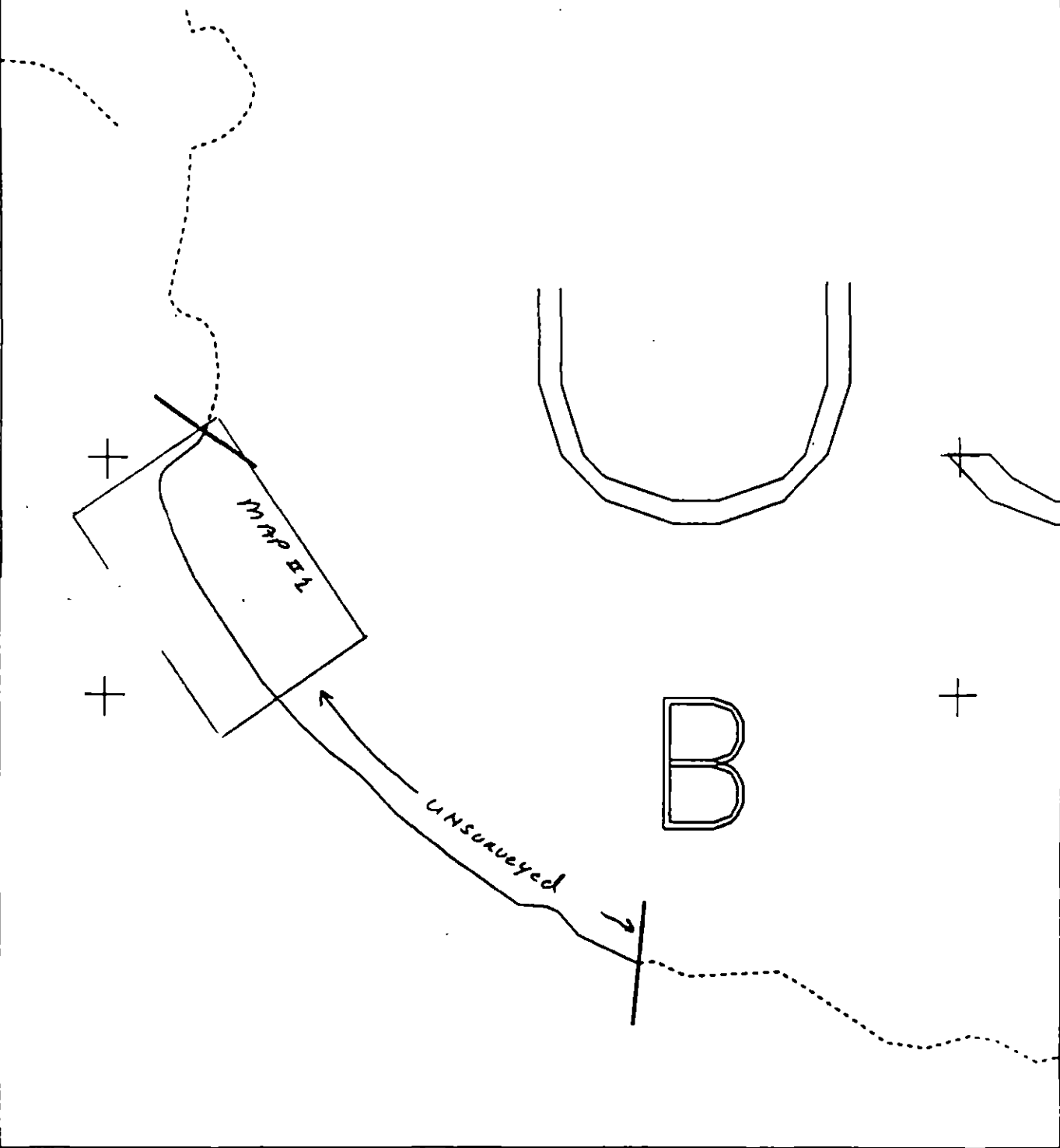
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYBAP- 6 - 07 FRAMES 2-10

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		
1	110							X	-				X				P-C	
2	100							X	-				X				P-C	
3	80							X	-				X				P-C-6	
4	120							X	-				X				P-C	
5	70							X	-				X				P-C	
6	60							X	-				X				P-C	
									-									
									-									
									-									

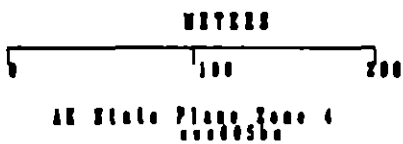
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS: This segment consists of a cobble-pobble beach with multiple storm ridges backed by a vertical cliff. Previous survey of this region indicated the most extensive oil was located at the northern end of the beach occurring as mousse behind large boulders and a subsurface oil layer (25-50 cm deep) covering a 10 by 80 m region. Six pits dug in traverses through this site down to depths of 60 to 120 cm revealed no oil. No oil was found in boulder region (LITZ) at north end of beach.

revised 5/9/91
 entered 5/12



US005 B



Subdivision Field Map

Map Key: KENUS0058a

Name: D. Fitzgerald

Date: 6 May 1991

EC reviewed 5/12

EVERGREEN TREES

W W GRASSY AREA

LOGS

PHOTO-LOCATION

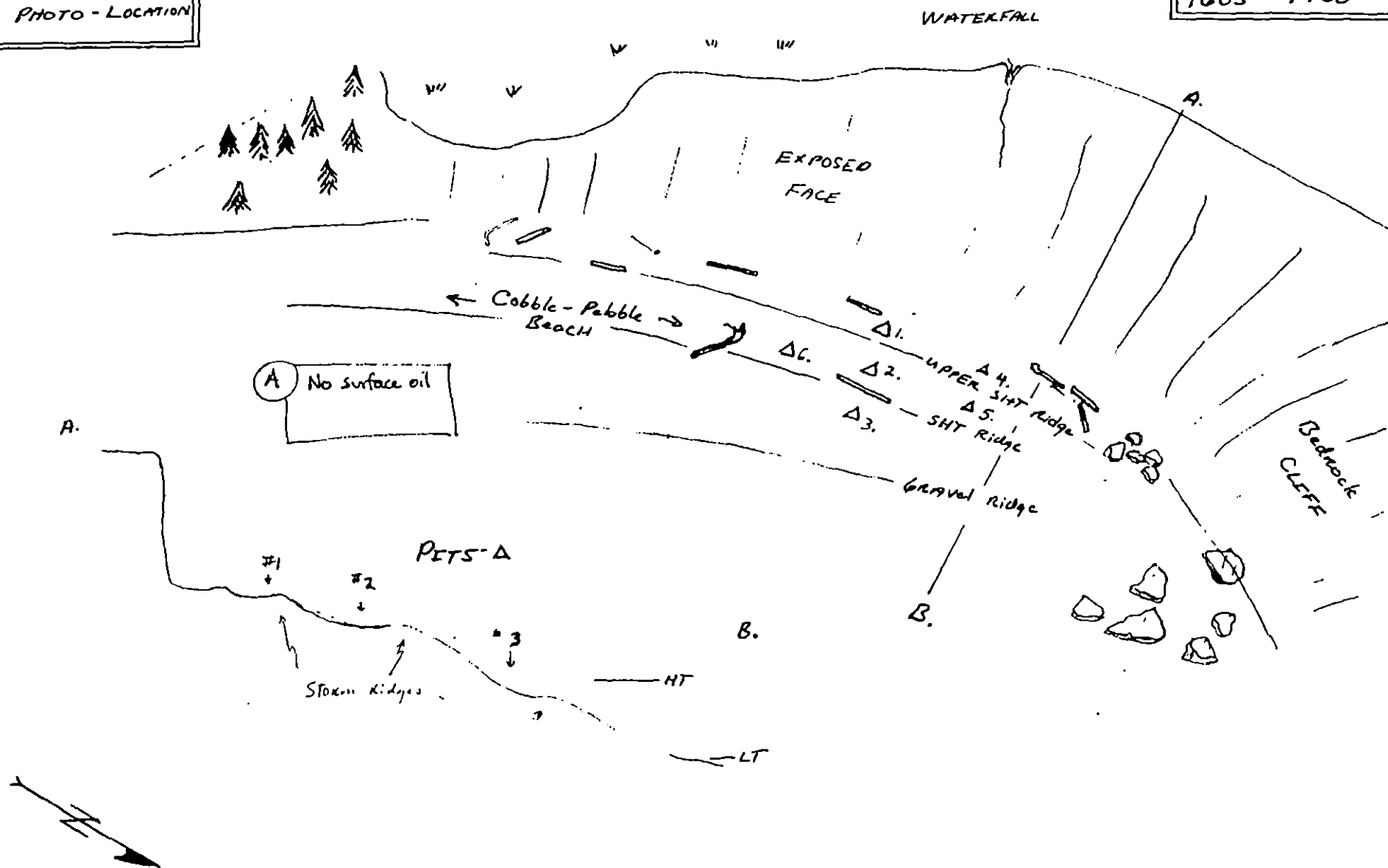
MAP (06)

US-5-B

D. FITZGERALD

6 MAY 1991

1605 - 1700

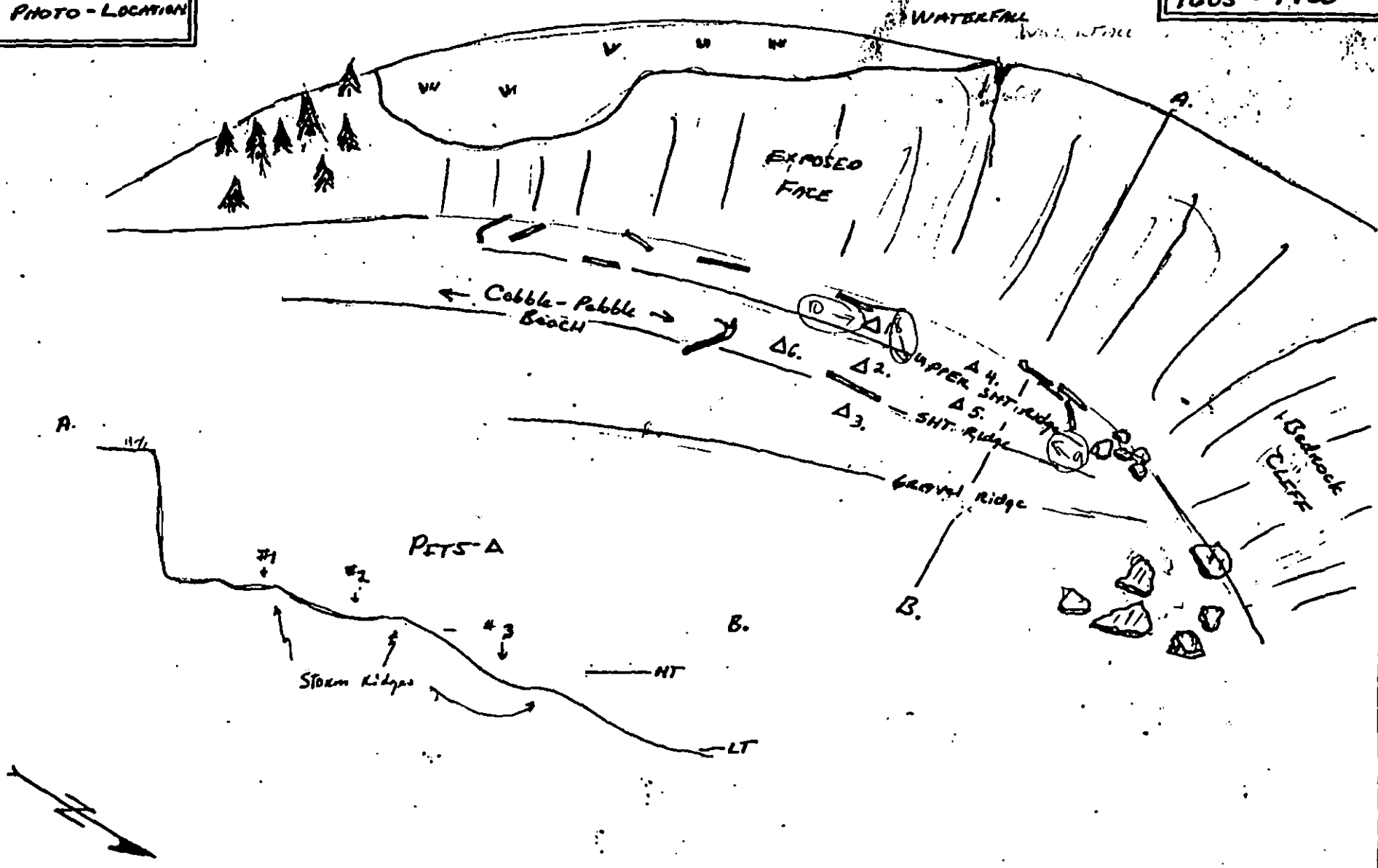


Revised 5/11

- ▲ MOUNTAIN TREES
- W W GRASSY AREA
- ✂ LOGS
- ↗ PHOTO-LOCATION

Photo Locations
 Mapap 6-05 # 8-10

Mapap (05)
 US-5-B
 D. FITZGERALD
 6 MAY 1991
 1605 - 1700



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6

DATE May 6 1991

SEGMENT # US-5

TIDAL HEIGHT (Range) 5½-6½ ft (1620-1700)

SUBDIVISION B

BIOLOGIST H. Davis

SEA STATE 5'

WIND SPEED/DIRECTION Very Gustly N/NE

PHOTOGRAPHS: ROLL # 6-08

FRAME # 8-10

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

No oil was found on this beach which was for the most part a high-energy pebble/cobble beach with no biota.

The two adult eagles may have a nest somewhere in the area.

At the north end of the beach there is a small rocky intertidal community. Rare barnacles, rare mussels, littorina, Fucus (with conceptacles), Gelidium and coralline algae. The lower intertidal area is covered but the middle and upper intertidal is healthy with spring growth beginning.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2 (adults) 1 immature *	
Seabirds Cormorant	1	5	
Waterfowl	0		
Gulls/Kittiwakes	0		
Shorebirds	0		
Corvids	0		
Other Birds Sand Hill Crane Swamp Sparrow	2	2	

* These were the same birds seen over US-5A

LAND MAMMALS

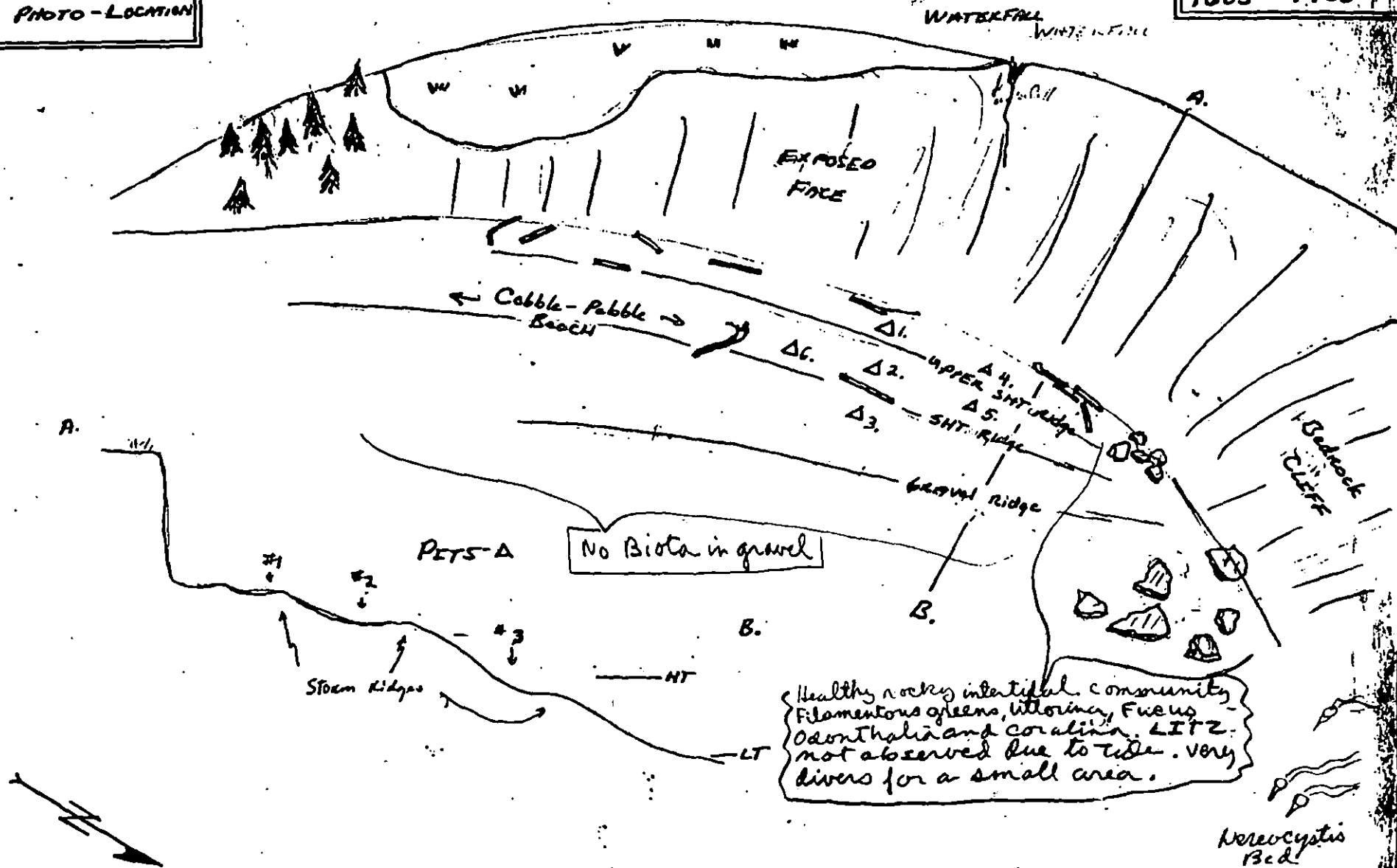
MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters	0	0	
Pinnipeds (specify)	0	0	
Les (specify)	0	0	

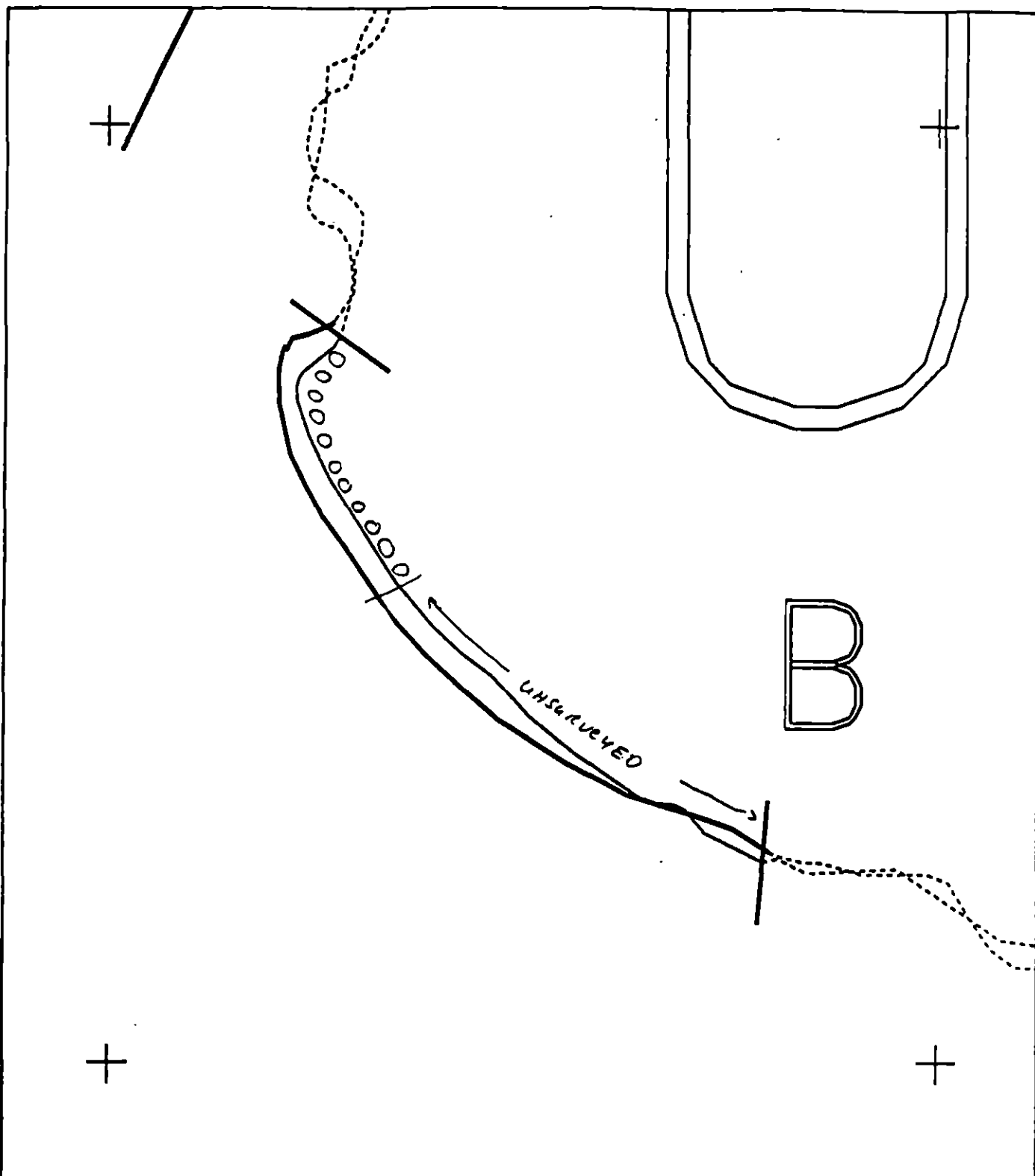
Shoreline subdivision map showing important biological features attached.

Bio Map
Heather Davis

US-5-B
D. Fitzgerald
6 May 1991
1605 - 1700

GREEN TREES
W W GRASSY AREA
LOGS
PHOTO-LOCATION





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

US005 B
 ADEC Subsegment Length: 581m
 METERS
 0 100 200
 AK State Plane Zone 4
 85005b

Subdivision Field Map
 Map Key: KENUS005B
 Name: D. Fitzgerald
 Date: 6 MAY 1991
 Date Entered:

reviewed 5/9/01
 E reviewed 5/12

REGION: KENAI

SEGMENT: ST/US-06

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ US-06 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
USFWS property.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 2921 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/15)
 1E Main Bay Hatchery release (4/20 to 6/15)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3F Harbor seal and sea lion pupping (5/15 to 7/1)
 3G Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (8/1 to 9/15)
 6V Anchorages (8/1 to 9/15)
 6W Forest Service cabins (8/1 to 9/15)
 6X Lodge (8/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 Deer harvesting (8/15 to 2/25)
 Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

P. 82
(2)

SEGMENT ST/ US-006 SUBDIVISION: A DATE 27 April 1990

SCG NOAA
NAME Miles D. Hayes SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

High energy area. No oil. No treatment recommended.

ADEC
NAME Russell Kubiak SIGNATURE Russell Kubiak

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

No oil was observed.

LAND MANAGER
NAME Gerald M. Nugent SIGNATURE Gerald M. Nugent

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

*No treatment recommended on this segment.
The area is high-energy and no oil was
observed. If boat crews are on station
later in summer, a cursory check for storm-
trash might be made.*

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

OG NORMA BIGGAR ^{NORMA} USCG MILES HAYES SEGMENT ST/ US-006
 BIO DAN RAIDER LAND REP JERRY NUGENT (F.W.) SUBDIVISION A (1 OF 1)
 EXXON JOHN DEAN ADEC RUSSELL KUNIBE TIME 6:50 to 10:00
 TEAM NO. 17 TIDE LEVEL +3 to -4 ft DATE 4/25/90
 EST. SUBDIVISION LENGTH: 5086 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 5 % B 5 % C 30 % P 40 % G 20 % S - % M - % V - %
 SLOPE: Lang 50 % Hang 35 % Vert 15 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 5086 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	/C	/B	/P	/S	SB BT	DB BW	GL	DB TL	LB	SU	U	M	U			
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL										X	X	X	X			

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

NEAR SHORE SHEEN? NO BR RW SL TL

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

Photographs:

Roll No. 4Frames 13+14

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM - CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	SURFACE - SUBSURFACE SEDIMENTS		
		OP	OR	OL	OF	NO		UO	UC	SB	BR	DB	RF	GL	SL	DR	TL	LR	SU	U	M				L	
1	38					X	.		X										X					N		c, b
2	115					X	.		X										X							p, g
3	37					X	.		X										X							p, c
4	71					X	.		X										X							s, c, p
5	75					X	.		X										X							s, g, h, c
6	59					X	.		X										X							p, c, g

COMMENTS

Pits A2 and A12 were excavated at base of erosional scarp cut into STZ deposits - Scarp provided X-section of STZ deposits.

This is a clean, high energy beach - lot of erosion and redeposition. In vicinity of pit A3, there's a 2/3 m - high, high tide berm built up at HTL - composed of small stone disks. Beach material not well sorted. Cobble concentrated in HTZ to STZ. Boulder-covered wave cut platform is present near sea stacks on E. part of subdivision.

REVIEWED BA7 DATE 1 MAY 90

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 04-11-83

SEGMENT ST/ US-006 SUBDIVISION A (1 OF 1)

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS	
		OP	OR	OL	OF	HO		UO	UC	20% SP	100% DR	FW	GY	SL	DRY TL	LR	SU	UI	MI	LI						
7	49					X	.		X								X									beh. sh. to w P, g
8	37					X	.		X								X									P, g
9	46					X	.		X								X									P, g
10	48					X	.		X								X									g, s, p
11	46					X	.		X								X									s, g
12	130	(sandy)				X	.		X									X								s, g
							.																			
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COMMENTS

REVIEWED BAT DATE 1 MAY 90

OG N. GAK

SEGMENT ST/ US-206

SUBDIVISION A

DATE 4 1 25 90

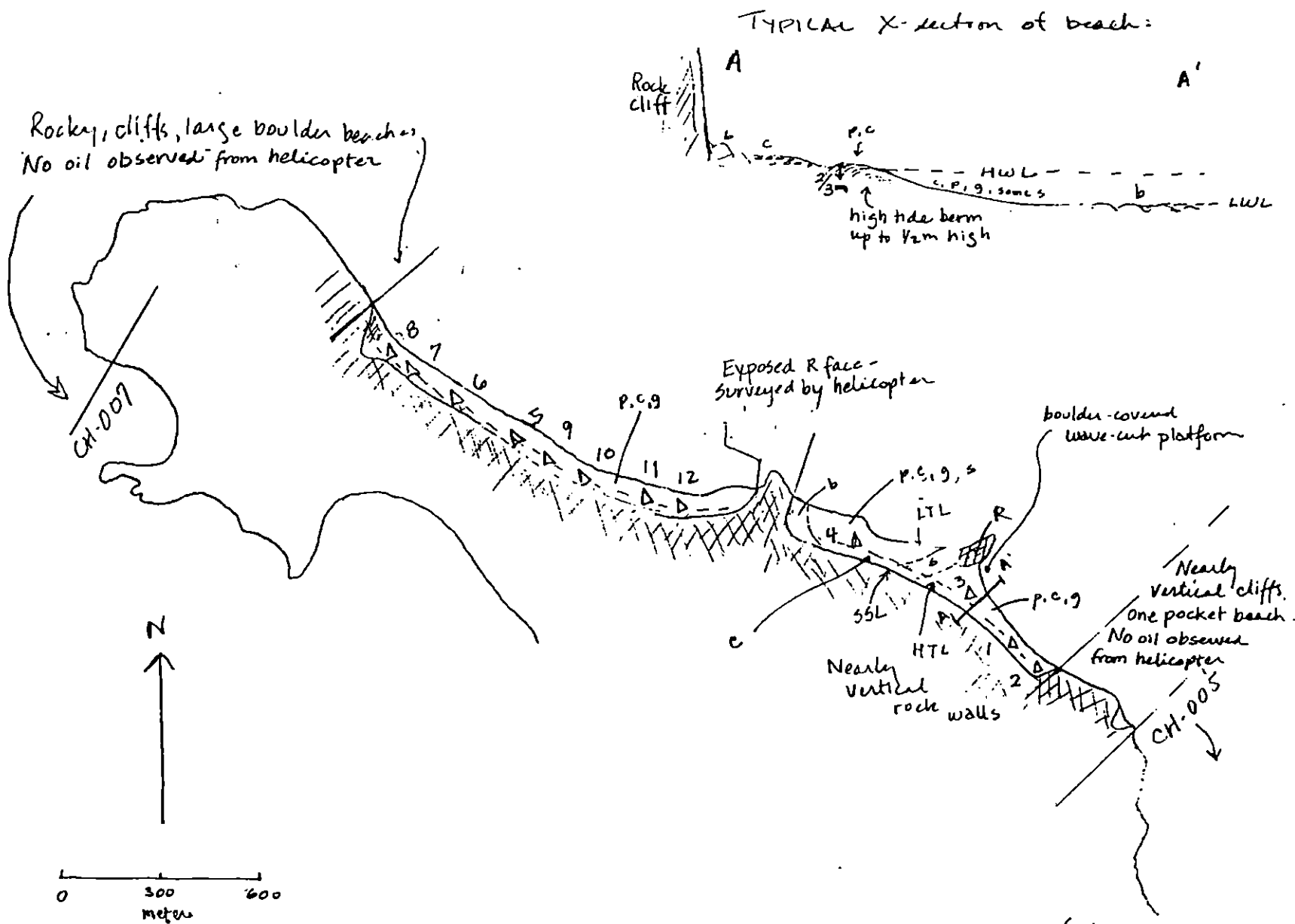
CHECKLIST

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

LEGEND

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

SKETCH MAP



Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 0 MS 0 PT 0 TB 0 FL 0 NO 5086

REVISION: 03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/2/90

Segment ST / US-006 Subdivision A Date (mo / day / yr) 4/25/90

Time (24 hr) 6:50 Biologist DANIEL RAIDER

(A) Substrate type and % of segments:
(1) Bedrock 5 (2) Boulder 5 (3) Cobble 30 (4) Pebble 60 (5) Sand 0 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 5 Moderate 15 Low 80

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

Photographs: 4
Roll No. 4

Frames 13 + 14

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

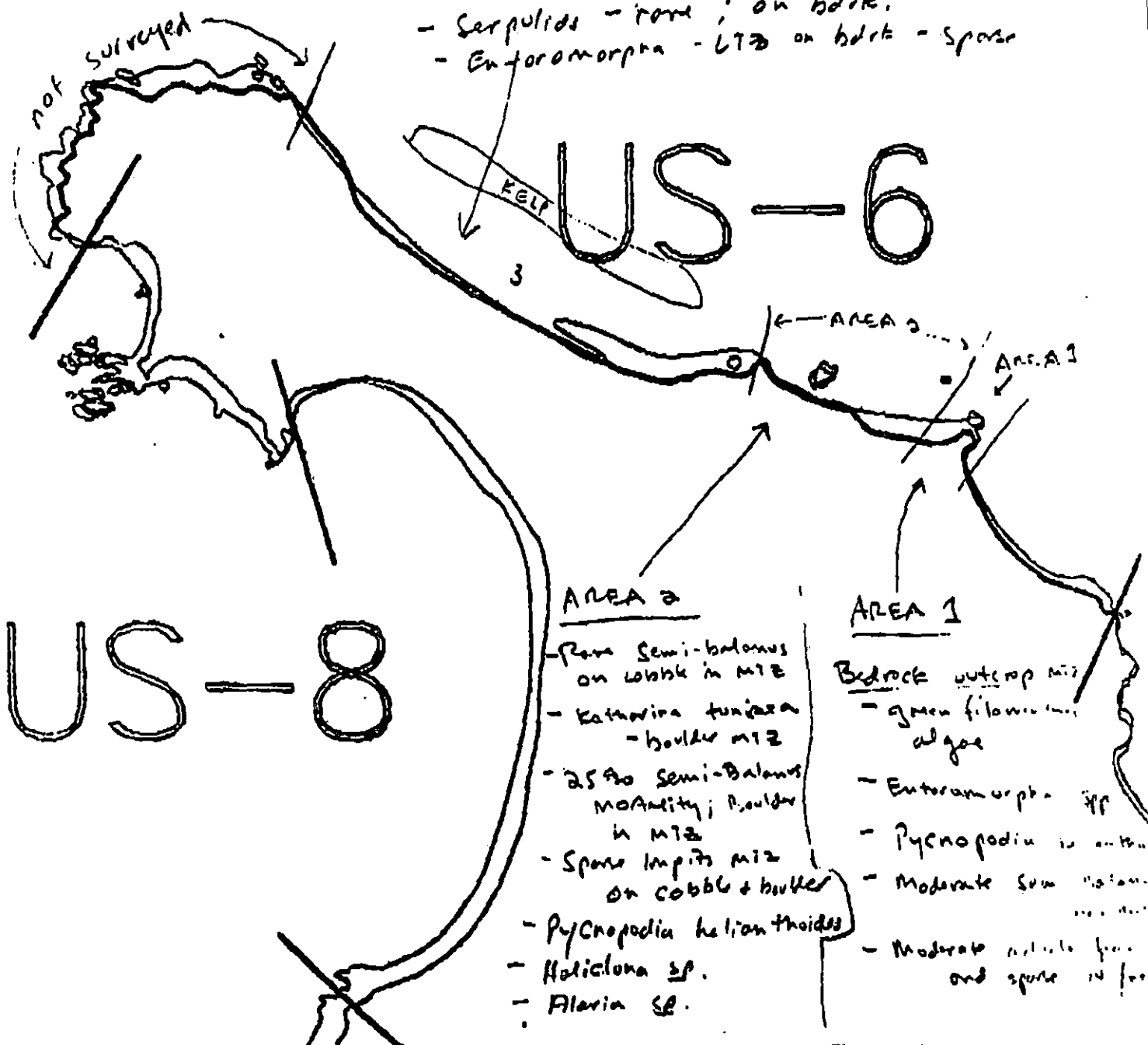
Chlorophthalmus sp. (Pelagic or Red-Necked) - 30 ±
Herring Gulls - 100 ±

Ecological Considerations:

None on DATA SHEET PROVIDED

Area A 3

- Sparse Impits
- Rare *Alorina Sittana* Bdrk in miz
- Serpulids - rare ; on bdrk.
- *Entomomorpha* - 67% on bdrk - sparse



Area 2

- Rare Semi-balanus on lobble in miz
- *Katharina tunicata* - boulder miz
- 25% Semi-Balanus mortality; Boulder in miz
- Sparse Impits miz on cobble & boulder
- *Pycnopodia helianthoides*
- *Haliclona* sp.
- *Flavia* sp.

Area 1

- Bedrock outcrop miz
- green filamentous algae
 - *Entomomorpha* spp
 - *Pycnopodia* in miz
 - Moderate *Semibalanus*
 - Moderate *Heliclona* and sparse in miz

XXXX Wide

US-6.

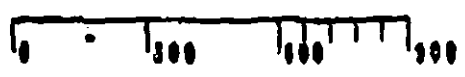
/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

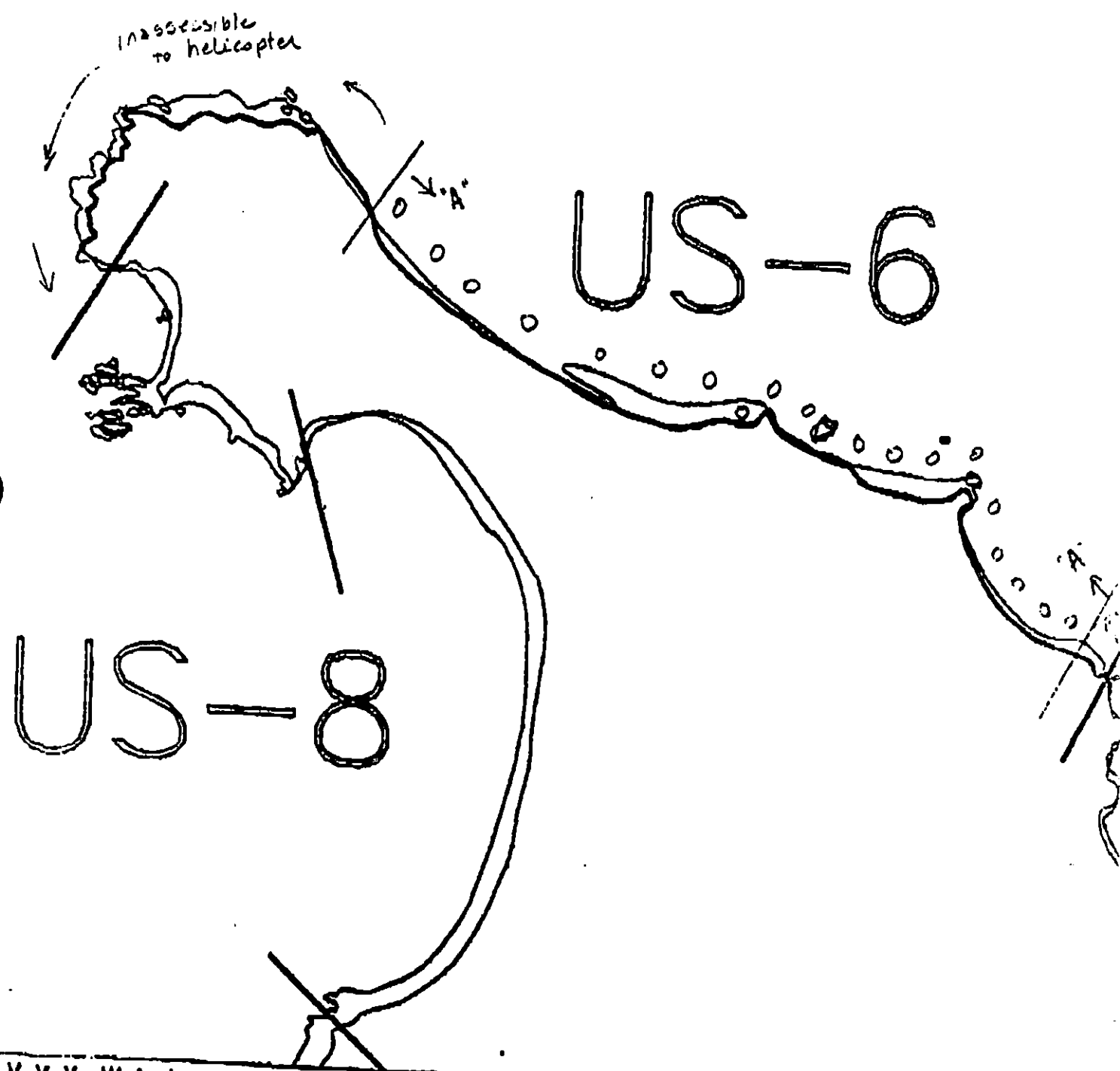
Approx. Segment Length: 4755m



Map Key: KEN-US-60

Name: _____

Date: _____



XXXX Wide

/// Medium

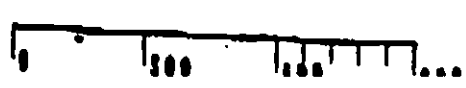
--- Narrow

TTTT Very Light

0000 No

US-6.

Approx. Segment Length: 4755m



Map Key: KEN-US-6c

Name: N. BIAURK

Date: 4/25/90

SHORELINE EVALUATION

SEGMENT ST/ US-06 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
USFWS property.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: *David M. Mahan* DATE: 5/11/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 2921 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/11/90

ADEC Art Weikert Art Weikert

EXXON ANDY TEN Deal

NOAA Joseph Talbott JCT

USCG D.D. Rome DD Rome

FOSC: *my L* DATE: 5-15-90

OG 1000

SEGMENT ST/ US-006

SUBDIVISION A

DATE 4 1 25 90

CHECKLIST

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

LEGEND

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

Continuous Distribution
- CT/B

Broken Distribution
- CT/P

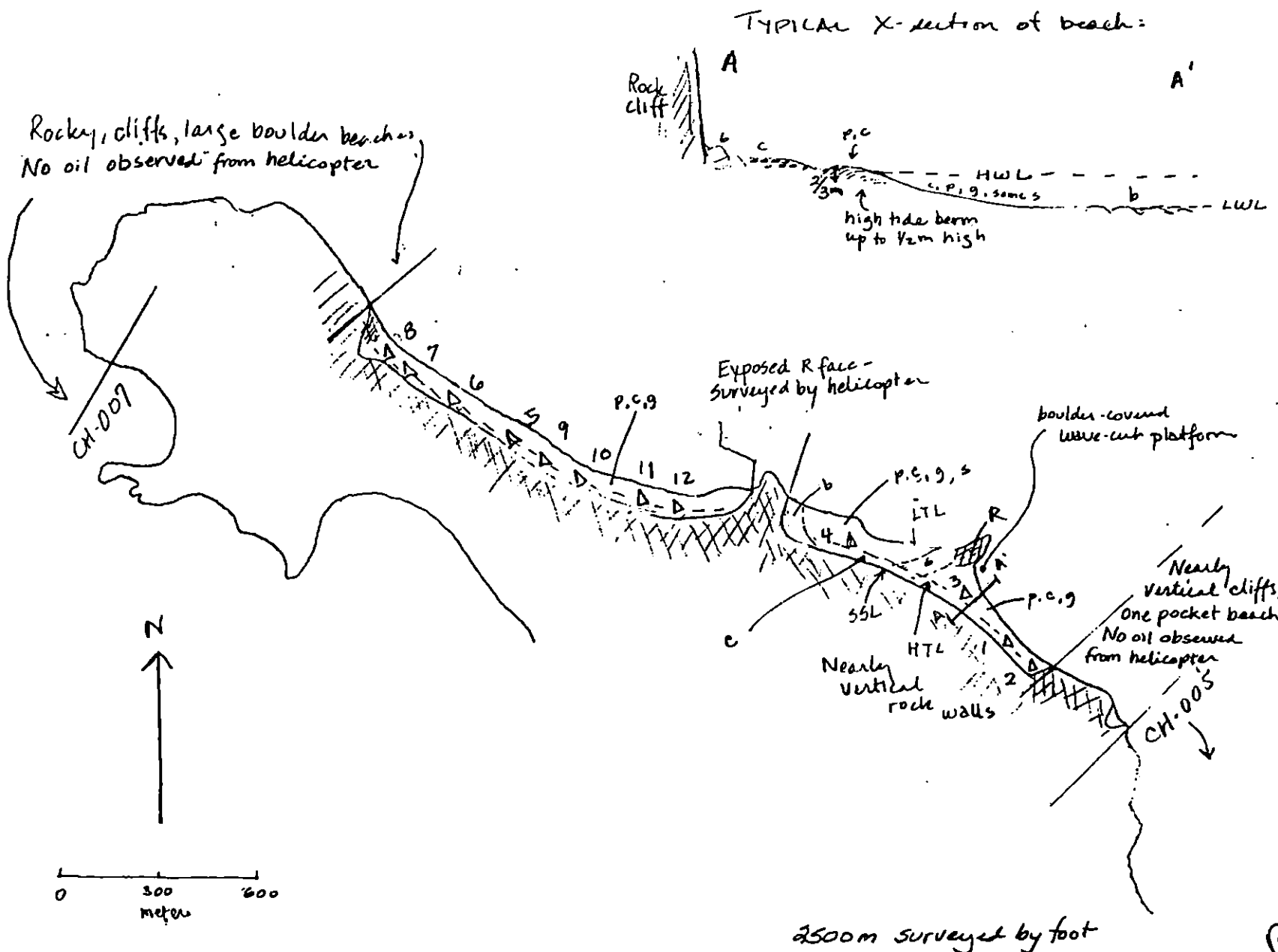
Patchy Distribution
- CT/S

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

0 300 600
meters

Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 0 MS 0 PT 0 TB 0 FL 0 NO 5086

SKETCH MAP



Area A 3

- Sparse Impits
- Rare *Horrea Sittara* Bdrk in miz
- Serpulids - rare ; on bdrk.
- *Eutoromorpha* - 67% on bdrk - sparse



US-6

US-8

AREA 2

- Rare Semi-balanus on cobble in miz
- *Katharina tunicata* - boulder miz
- 25% Semi-Balanus mortality; Boulder in miz
- Sparse Impits miz on cobble & boulder
- *Pycnopodia helianthoides*
- *Haliclona* sp.
- *Alaria* sp.

AREA 1

- Bedrock outcrop miz
- green filamentous algae
- *Eutoromorpha* spp
- *Pycnopodia helianthoides*
- Moderate Semi-balanus
- Moderate *Haliclona* sp. and sparse *Alaria* sp.

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

US-6.

Approx. Segment Length: 4755m

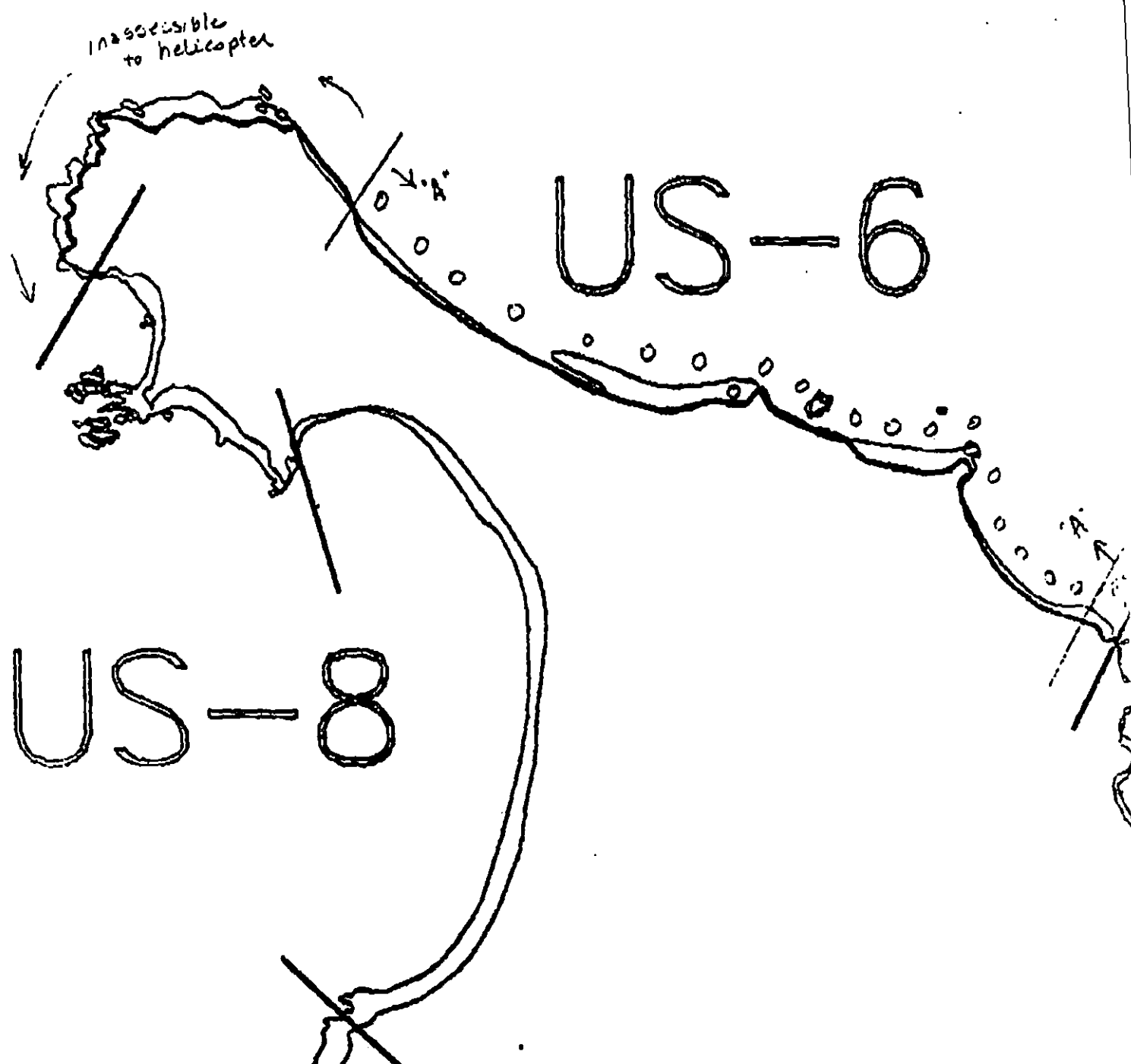


Map Key: KEN-US-60

Name: _____

Date: _____

Date Entered: _____



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

US-6.

Approx. Segment Length: 4755m

Map Key: KEN-US-6a
Name: N. BLANK
Date: 4/25/90

REGION: KENAI

SEGMENT: ST/US-07

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ US-07 SUBDIVISION A (1 OF 1) DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
30,3Q Harbor seal and sea lion molting (8/15 to 9/15)

USFWS property

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 30 m: Narrow 0 m: V.Light 70 m: No Oil 724 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of mousse
where indicated on sketch and 2) bioremediation of area of surface
stain. Work should be conducted between 7/1 and 8/15 based on pinniped
constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

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

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

- 1D Esther Hatchery release (4/15 to 6/15)
 1E Main Bay Hatchery release (4/20 to 6/15)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Ramots 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 unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235

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

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

- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206

- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination

- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7H Deer harvesting (8/15 to 2/28)
 Invertebrate harvesting

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 45-007 SUBDIVISION: A DATE 04/26/90

SCG NOAA

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

COMMENTS

Manual pick-up of mouse sediment mat and mouse patties.

Another excellent example of oil having accumulated in the lee of a protruding bedrock high ("tombolo" effect).

ADEC

NAME Russell Kunze SIGNATURE Russell Kunze☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

On the point at the center of the subdivision there was a 4M x 7M mouse sediment mat. There was mouse potted in the cracks of the bedrock on this point.

Recommended treatment: Manual pick up of the mouse sediment mat and scattered mouse patties. Manual pick up of the mouse in the cracks of the bedrock.

LAND MANAGER

NAME Gerald M. Nugent SIGNATURE Gerald M. Nugent (USFWS)☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Recommend manual removal of mouse in conjunction with other pick-up activities on the Barrenos. Actions should take place by or about May 1, 1990. A Service monitor should be present during any activities on the Barrenos.

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

OG N. BIGGAR USCG MILES HAYES SEGMENT ST/ US-007
 BIO D. RAIDER LAND REP BERRY NUGENT (FWS) SUBDIVISION A (1 OF 1)
 EXXON John DEAN ADEC RUSSELL KUNIOE TIME 12:00 to 13:00
 TEAM NO. 17 TIDE LEVEL +7 to +8 DATE 4/24/90
 EST. SUBDIVISION LENGTH: 1440 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 15 % B 5 % C 10 % P 50 % G - % S 20 % M - % V - %
 SLOPE: Long 100 % Hang - % Vert - % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W - m M 140 m N - m VL 50 m NO 1250 m

SURFACE OIL

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

PAVEMENT 'H F S - sq. m by - cmPATTIES / TARBALLS ? 10 ? BAGSNEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE -#BAGS -

Photographs:

Roll No. 4Frames 10-12

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS	
		OP	OR	OL	OF	NO		UO	UC	SB/ BP	DB/ BP	CL/ PL	DR/ PL	LR/ LR	SU	U	M	U								
1	20					X	-		X										X							P, C, G
2	62					X	-		X										X							S, P, U
3	103					X	-		X									X								S, C, P
4	20					X	-		X										X							C, P, S
							-																			
							-																			

COMMENTS

Evidence of oil limited to vicinity of rock outcrop in center of segment. On the rock, oil spatter and drip line is quite worn by wave action. Pooled mousse can be found in small crevices and pockets on surface of rock outcrop. Mousse pavement occurs on lee side of rock outcrop. Granite bedrock, resulting in granite sand beach with pebbles and cobbles. Oil is in MTE to UTE. No sheen observed. Mousse pavement has moderately tough DBL outer surface, soft inside, DBL to LBR.

REVIEWED BAT DATE 1 May 90

DATE 4 / 24 / 90

CHECKLIST

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

LEGEND

- 1 ▲
P11 - No Subsurface Oil
- 2 ▲
P11 - Subsurface Oil

CT/C
Continuous Distribution

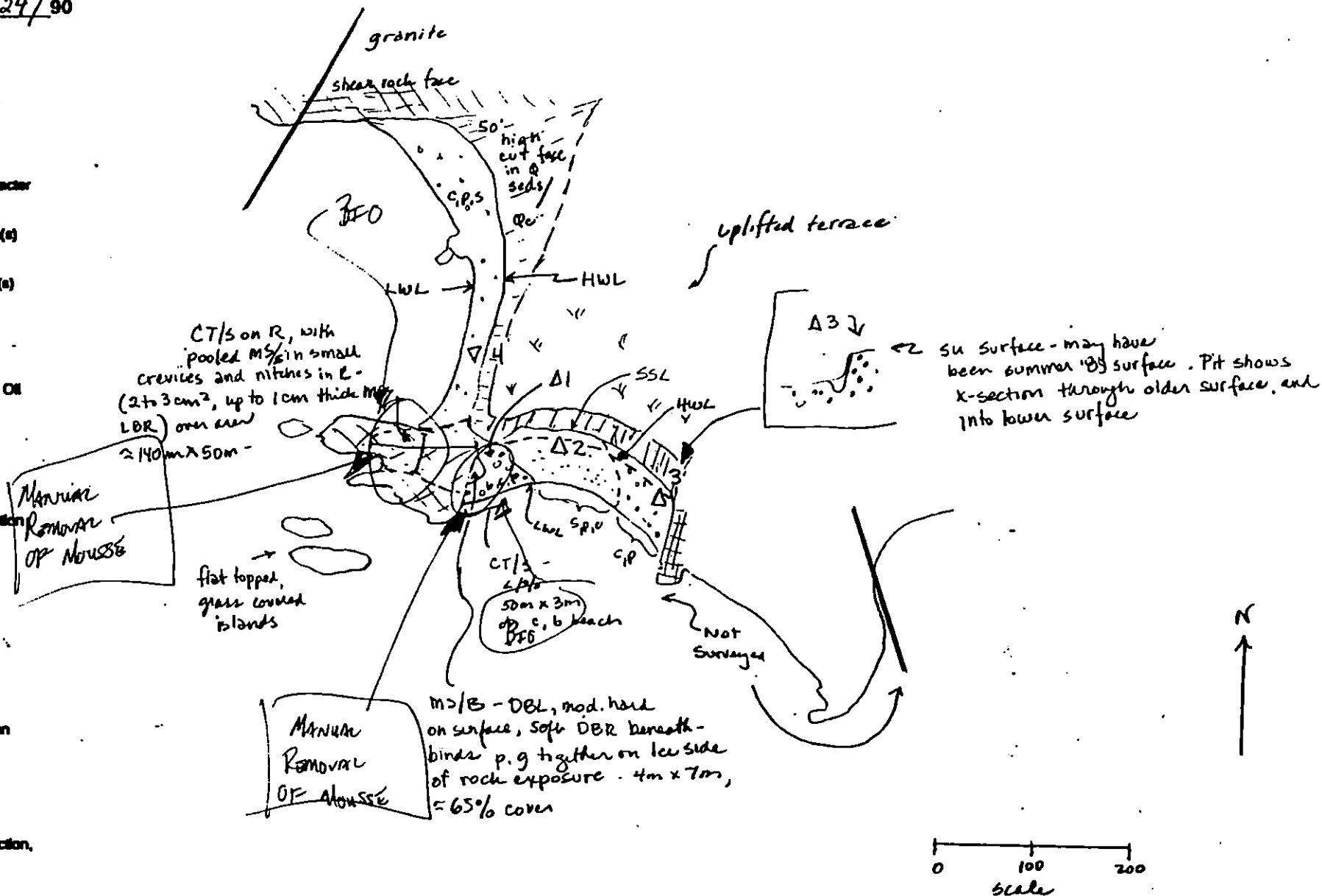
CT/D
Broken Distribution

CT/P
Patchy Distribution

CT/5
Spliced Distribution

eee
Oiled Vegetation

1  **Photo location, direction, and number**



844² 62.5

Oil Character Length (m): AP 0 PO 0 CV 0 CT 190 ST 0 MS 147 PT 0 TB 0 FL 0 NO 1243

REVIEWS 04-27-24-25

SHORELINE ECOLOGICAL SUMMARY

(6)

Segment ST / US-007 Subdivision A Date (mo / day / yr) 4 / 24 / 90Time (24 hr) 12:00 Biologist DANIEL RAIDER(A) Substrate type and % of segments:
(1) Bedrock 15 (2) Boulder 5 (3) Cobble 10 (4) Pebble 5 (5) Sand 4 (6) Silt 20(B) Overall % cover of biota (% of segment): Dense 3 Moderate 2 Low 95

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

Photographs:
Roll No. 4Frames 10 - 12

BARNACLES

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

(NOT PRESENT)

MYTILUS

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

(NOT PRESENT)

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

(see "Wildlife Sightings" sheet)

Small Bedrock area with moderately dense vegetation and fauna population; it is

Ecological Considerations:

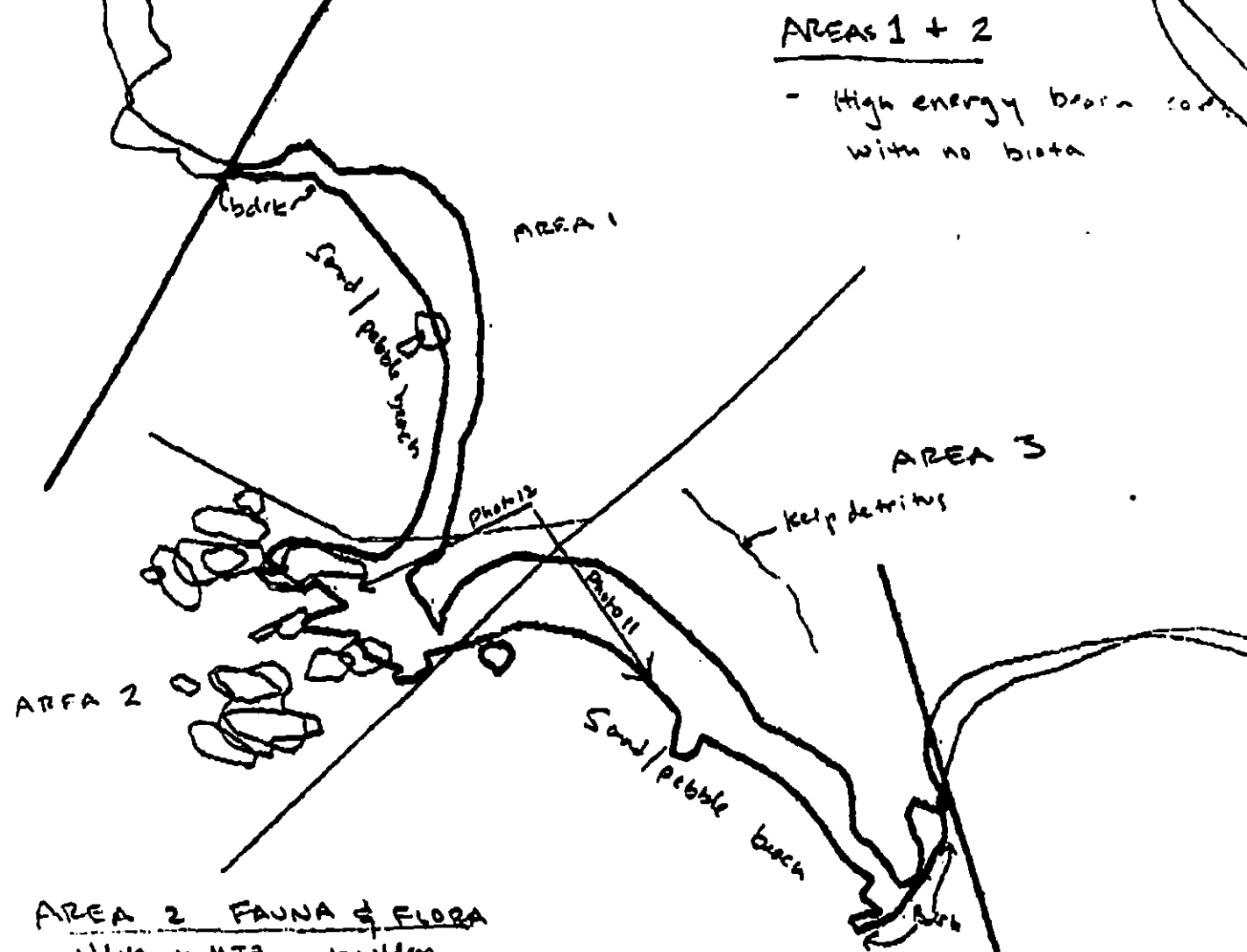
area is sensitive and impacts to it should be minimized (e.g. traffic, etc.)

NY; 30 Q

Wildlife sightings for US-007 27 April 1990

<u>Name</u>	<u>Amount</u>
1) Glaucous-winged Gull	10 ±
2) Mallards	9 (1 female)
3) Cormorants	9
4) Common Raven	1
5) Grebe	1 (Red Necked ?)
6) Black-legged Kittiwakes	2000-3000; at rookery while leaving the Barren Islands
7) 2 Oystercatchers	
8) 1 Bald Eagle	

St. P. B. 12-13
P. 12-13



AREAS 1 + 2

- High energy beach core
with no biota

AREA 2 FAUNA & FLORA

- UVA in MTE on boulders

Kelp outcrop extend from MTE to LTZ

Moderate Fucus on bdrk in LTZ

Coccolina - dense patches on bdrk.

Low Littorina on bdrk in LTZ (pockets)

Spore Littorina in MTE and LTZ; Pockets of moderate in MTE

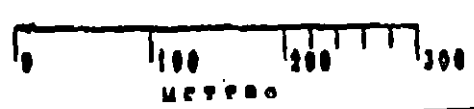
Inductaria muricata - dense in pools

Sea lemon

Sea anemones → Metridium senile, Anthopleura artemesia, Stomphia coccinea, Epizoanthus celticus

US-7

Approx. Segment Length: 1525m



Map Key: KEN-US-7

Name: _____

Date: _____

Data Entered: _____

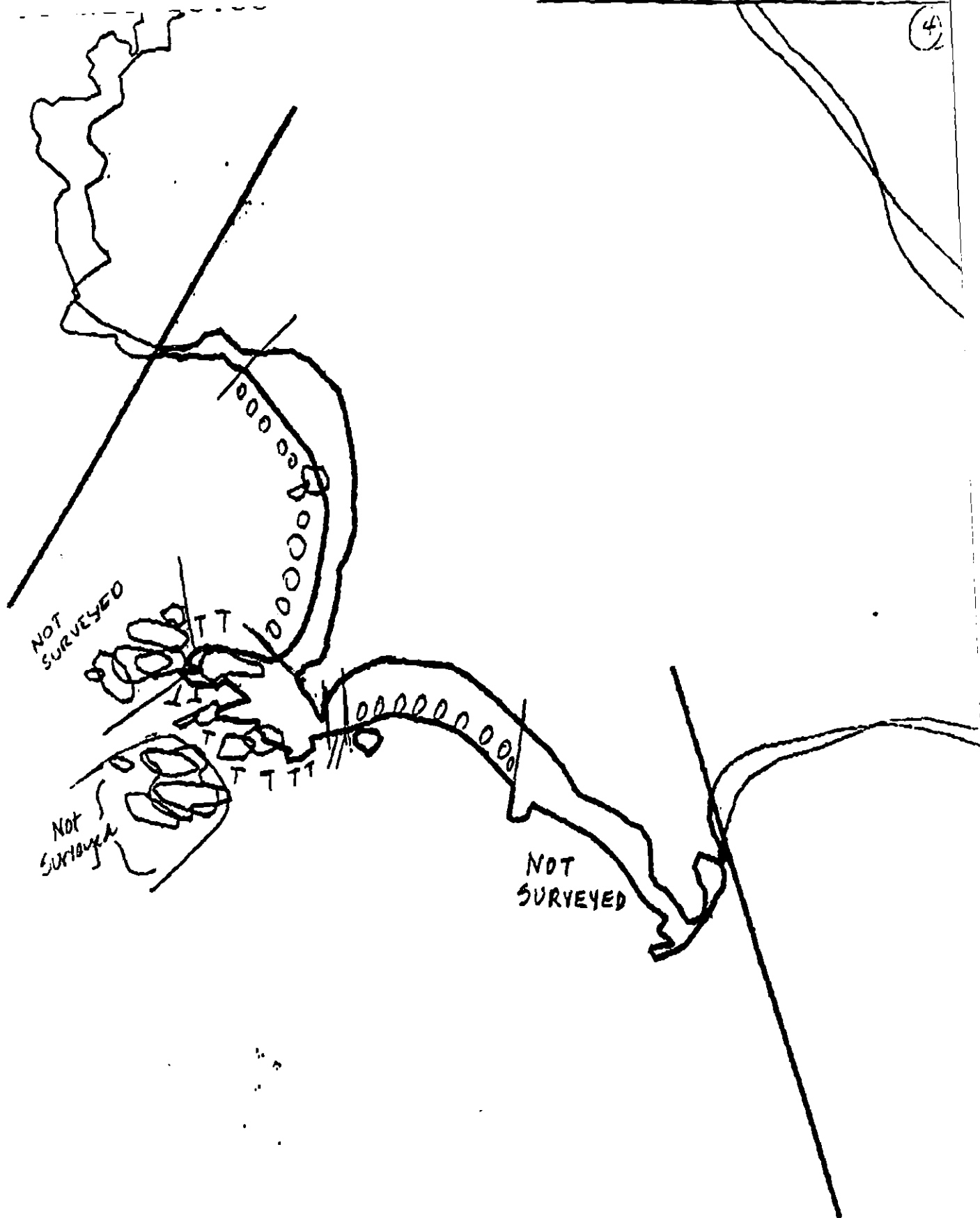
XXXX Wide

// Medium

--- Narrow

TTTT Very Light

0000 No Oil



XXXX Wide

US-7

Map Key: KEN-US-7

/// Medium

--- Narrow

Approx. Segment Length: 1525m

Name: N. Buzan

TTTT Very Light

OOOO No Oil



Date: 4-24

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ US-07 SUBDIVISION A (1 OF 1) DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

USFWS property

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Chuck 3/1/90 DATE: 5/14/90

OILING CATEGORIZATION:

Wide 0 m: Medium 30 m: Narrow 0 m: V.Light 70 m: No Oil 724 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of mousse
where indicated on sketch and 2) bioremediation of area of surface
stain. Work should be conducted between 7/1 and 8/15 based on pinniped
constraints.

SPOT WASH IF REQ'D IN AREAS OF MOUSSE REMOVAL

TAG COMMENTS: NO BIO OF STAIN FOLLOWING REMOVAL OF
MOUSSE APPLY CUSTOMER IF REQ'D.

TAG APPROVAL DATE: 5/12/90
ADEC Let Wenzel
EXXON Ann Galt
NOAA Gary Petros
USCG D.D. Rome

FOSC: W L DATE: 5-18-90
Monitor assess need for bioremediation
+ apply as necessary.

OG N. BIGGARSEGMENT US-007SUBDIVISION ADATE 4/24/90

CHECKLIST

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

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

CT/C
Continuous Distribution

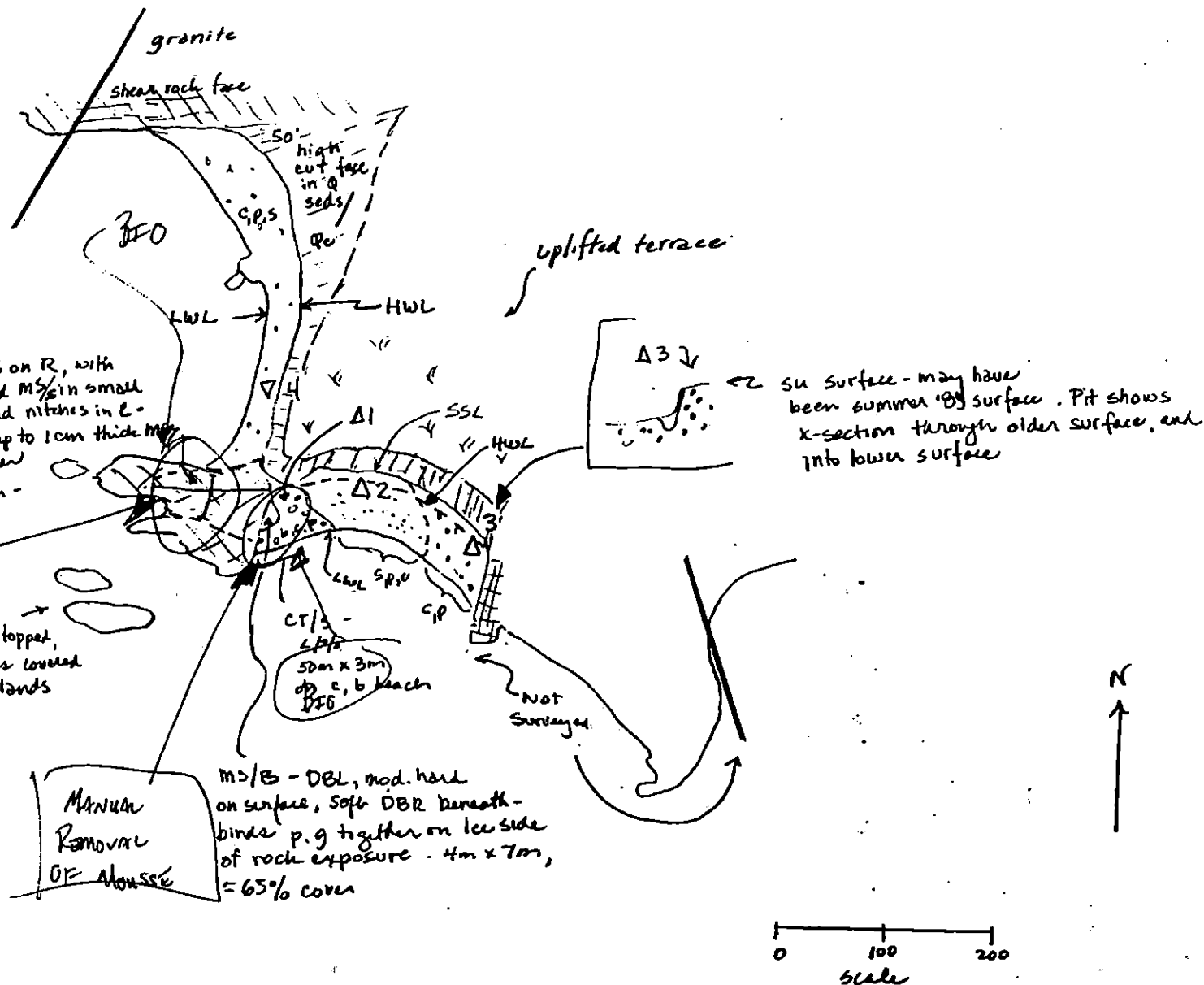
CT/B
Broken Distribution

CT/P
Patchy Distribution

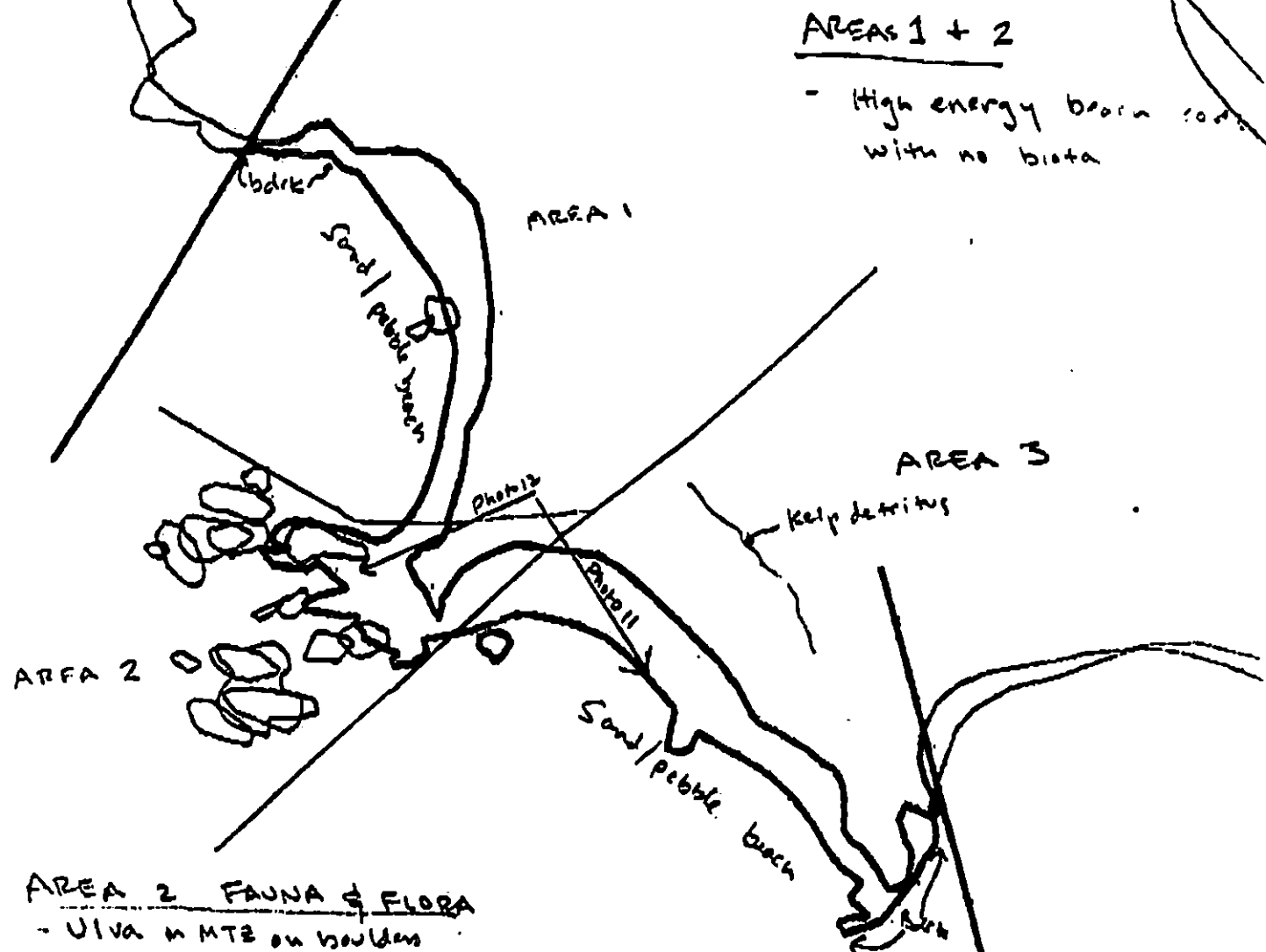
CT/S
Splashed Distribution

eee
Oiled Vegetation

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



Oil Character Length (m): AP 0 PO 0 CV 0 CT 190 ST 0 MS 147 PT 0 TB 0 FL 0 NO 1243



Vertical outcrop extend from MTE to LTE

Moderate Fucus on bdrk in LTE

Corallina - dense patches on bdrk.

Dense Littorina on bdrk in LTE (pockets)

Sparse Littorina in MTE and LTE; pockets of moderate in MTE

Inductaria muricata - dense in pools

Sea lemon

Sea anemones

Metridium senile

Anthopleura artemesia

Stomphia sacchara, Epizoanthus setulosus

XXXX Wide

/// Medium

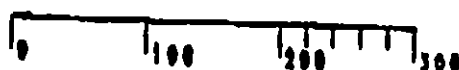
--- Narrow

TTTT Very Light

OOOO No

US-7

Approx. Segment Length: 1525m

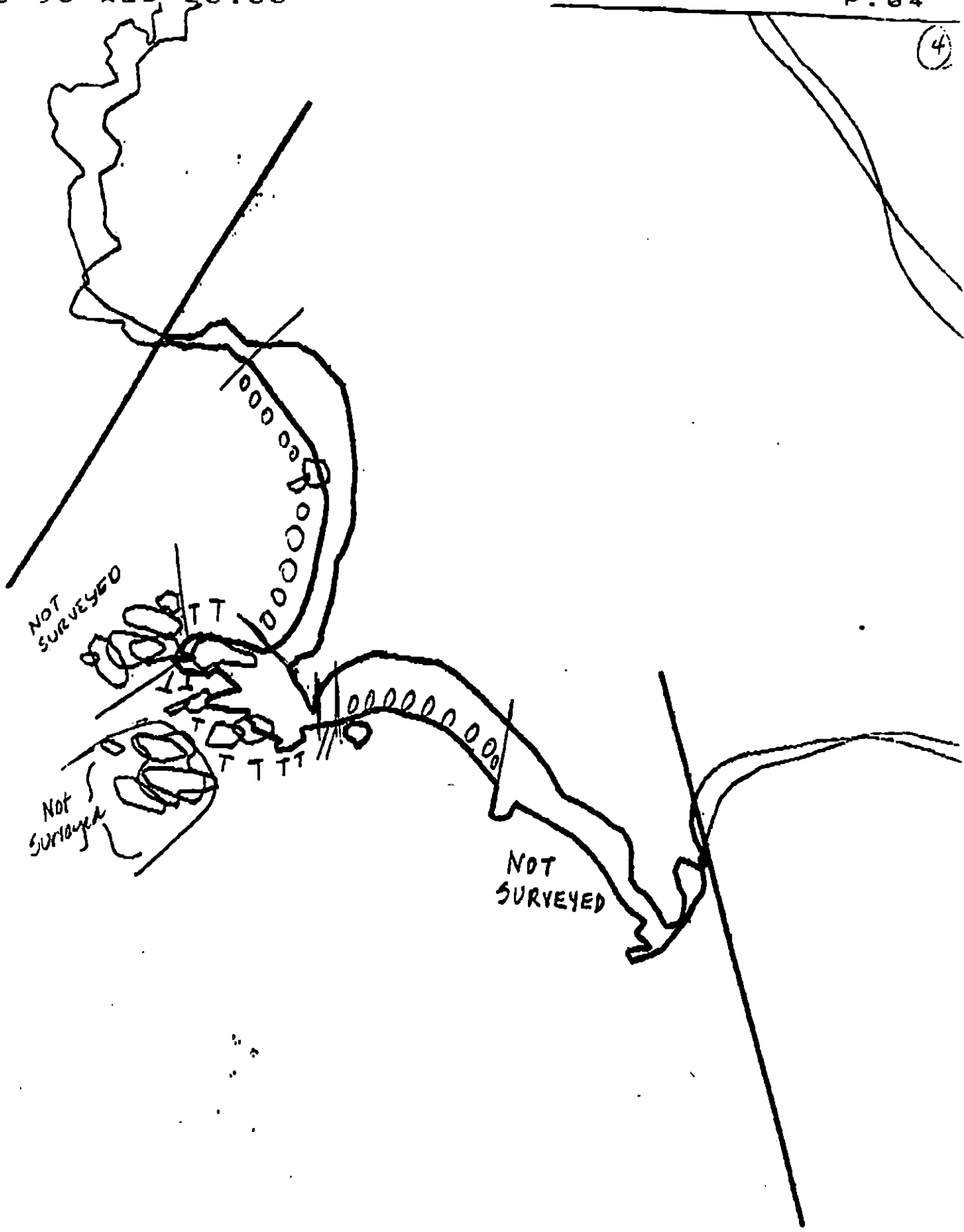


Map Key: KEN-US-7

Name: _____

Date: _____

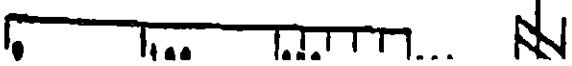
(4)



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

US-7

Approx. Segment Length: 1525m



Map Key: KEN-US-7

Name: N. Biggar

Date: 4-24

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

ADEC

NAME S. Ferguson SIGNATURE _____

☒ NTR ☐ TREATMENT RECOMMENDED
 NO TREATMENT RECOMMENDED AT US-7A. BEACH + WAECUT BEDROCK
 PLATFORMS HAD TRACE MS/SR/CT/ST → SEE SKETCH MAP.

EXXON

NAME G. Stiles SIGNATURE George P. Stiles 5/9/91

☒ NTR No appreciable oil was located therefore no
 treatment is recommended.

LANDMANAGER

NAME J. Handister OF USFWS SIGNATURE J. P. Handister 5/9/91

☒ NTR confer with other team members. No treatment warranted.

USCG/NOAA

NAME Chief Jensen / R. Hoff SIGNATURE Robert D. Jensen Rebecca Hoff

☒ NTR There is no longer any detectable oil present in
 the water, including S. G. L. areas, in places where it
 is likely to reach the water again. Minor traces
 of oil remaining represent no likely source of contamination for
 biological resources.

 Bedrock
 Photo sites

Sketch Map (06)
US-7-A
D. FITZGERALD
8 MAY 1991
1315-1345

Gulf of ALASKA

*Promontory highly exposed
to wave action

* SITE #1 IN ASAP
19 AUGUST 1991
SURVEY

A.

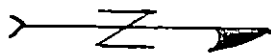
MS-SOR
CT-ST
20 by 3m, $\ll 1\%$
IN CRACKS OF
bedrock

B.

MS (highly weathered)
CT/ST
1 by 10m, $\ll 1\%$
ON BACKSIDE OF
BEDROCK PROMONTORY
ON VERTICAL FACE

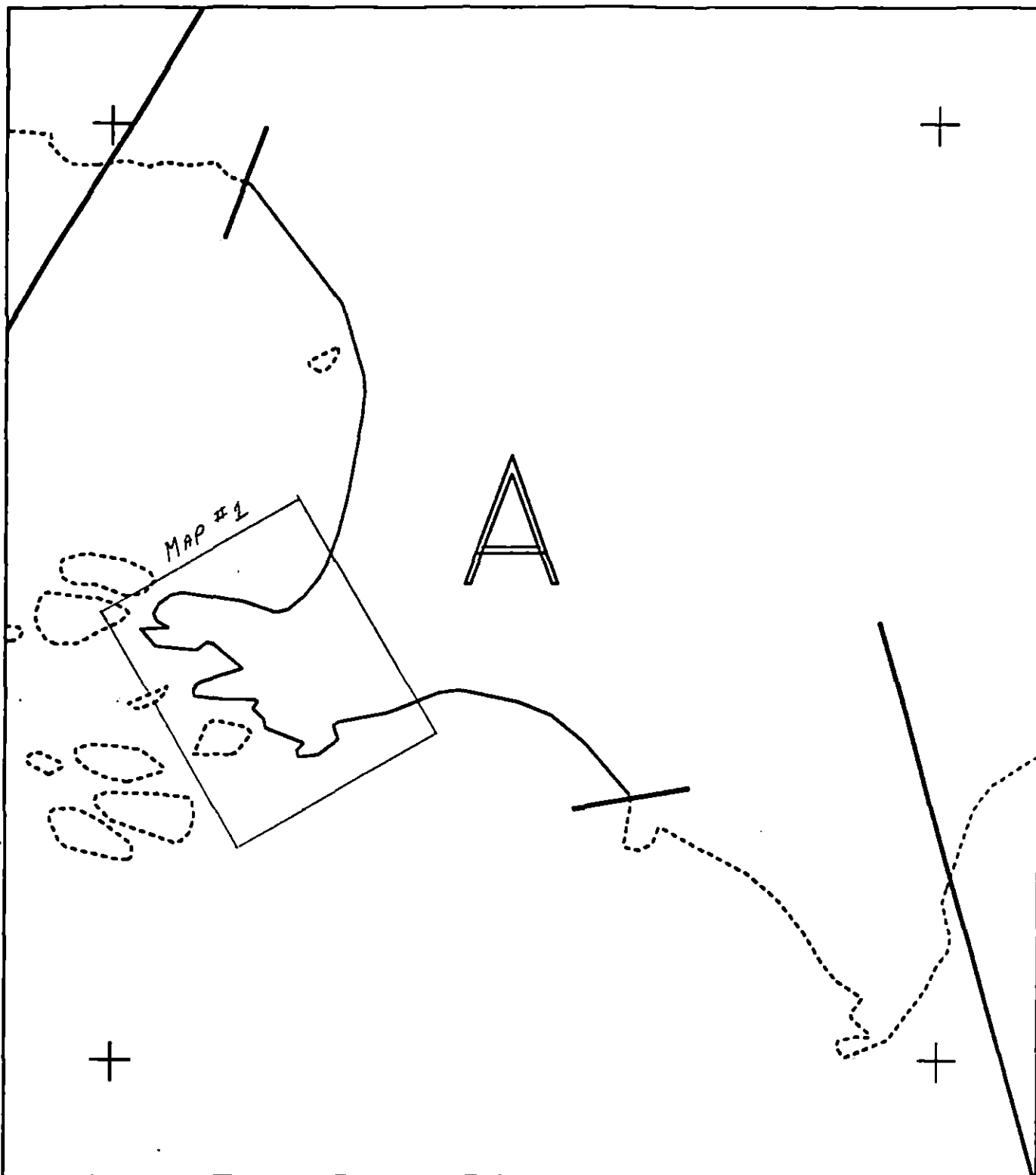
Bedrock
+
Boulders

0 20
METERS



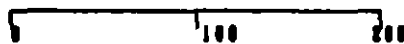
NO REMAINS OF
ASAP REPORTED
OIL (MS-SOR/P)
4 by 7m area

reviewed 5/11/91 K6
ES reviewed 5/12



US007 A

METERS



AK State Plane Zone 4
80000700

Subdivision Field Map

Map Key: KENUS007Aa

Name: D. Fitzgerald

Date: 8 May 1991

ES reviewed 5/12

* Bedrock
* Photo sites

Photo Locations
Maypap 6-09 # 1-4

Sketch Map 106
US-7-A
D. FITZGERALD
8 MAY 1991
1315-1345

Gulf of ALASKA

* Promontory highly exposed
to wave action

* SITE #1 IN ASAP
19 AUGUST 1991
SURVEY

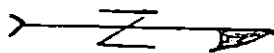
A. MS-SOR
CT-ST
20 by 3m, < 1%
IN CRACKS of
bedrock

B. MS (highly weathered)
CT/ST
1 by 10m, < 1%
ON BACKSIDE of
BEDROCK PROMONTORY
ON vertical face

Bedrock
+
Boulders

NO REMAINS of
ASAP reported
oil (MS-SOR/P)
4 by 7m area

0 20
METERS



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 Helo

DATE May 8 1991

SEGMENT # US-7

TIDAL HEIGHT(Range) 8-7.5 ft (13:15-3:45)

SUBDIVISION A

BIOLOGIST H. Davis

SEA STATE 2 ft

WIND SPEED/DIRECTION 5 mph NW

PHOTOGRAPHS: ROLL # 6-09

FRAME # 1-4

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

B. Very small amounts of oil in the supratidal area. In places where the stain had hit verucaria the was a "negative" left behind that was being colonized by diatoms and green algae. Below this there was a moderate barnacle-littorine-limpet band above Fucus, Endocladia, mussel patches on boulders.

A. The oil extended from the UITZ down into the MTTZ. UITZ had pools with sculpin, pagrus, littorina, filamentous greens. On rock surfaces barnacles and littorines were moderately dense. The littorines were laying eggs. In the MTTZ dominate algae were Fucus, Odonthalia, Rhodomenia, Petroselin, and Corallines. There were Balanus, limpets (Colesellidia, Lottia), Tonicella, littorines, Anthopleura distans, Epiactis and Katharina. This population along this channel was moderately dense but rich in diversity.

Common Merganser

Red-Necked Phalarope (8) Kittiwakes (>10) New Gulls (5) Glaucous Winged Gull (>15)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	* TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1 adult 1 immature	Sculpins 2 sp.
Seabirds			
Waterfowl ^{Common Merganser}	1	1 ♀	
Gulls/Kittiwakes	3	> 30 ^{Kittiwakes New Glaucous wing}	
Shorebirds ^{Phalarope}	1	8	
Corvids			
Other Birds			

* These may be the same birds seen on US-5A/B

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters	0	0	
Pinnipeds (specify)	0		
Whales (specify)	0		

Shoreline subdivision map showing important biological features attached.

 Bedrock
 Photo site

Bio Map
Heather Davis

Sketch map ~~(map)~~
 US-7-A
~~D. F. G. G. G. G. G.~~
 8 MAY 1991
 1315-1345

Gulf of ALASKA

*Promontory highly exposed to wave action

A. The oil in the MITZ was near small pools with Littorina, Pagurus, Sculpins. Littorina were laying eggs under boulders. There was some "shortening" on the A. verucaria. Very small traces of oil extended down through the MITZ into the MITZ. This channel had a moderately dense rocky intertidal community with a lot of diversity. Any clean up in this area would be more disruptive than productive.

MS-50R
 CT-5T
 20 by 3m, < 1%
 IN CRACKS OF
 bedrock

Nereocystis

* SITE #1 IN ASAP
 19 AUGUST 1991
 SURVEY

B. MS (highly weathered)
 CT/5T
 1 by 10m, < 1%
 ON BACKSIDE OF
 Bedrock promontory
 ON vertical face

B. Verucaria near oil. Some of the stain had worn off and showed a negative stain in the verucaria that held opportunistic green algae. Below the oil was Porphyra littorina, barnacles and some Fucus in the MITZ. The MITZ had a moderate cover of Fucus Odonthalia and Corallines.

Bedrock + Boulders

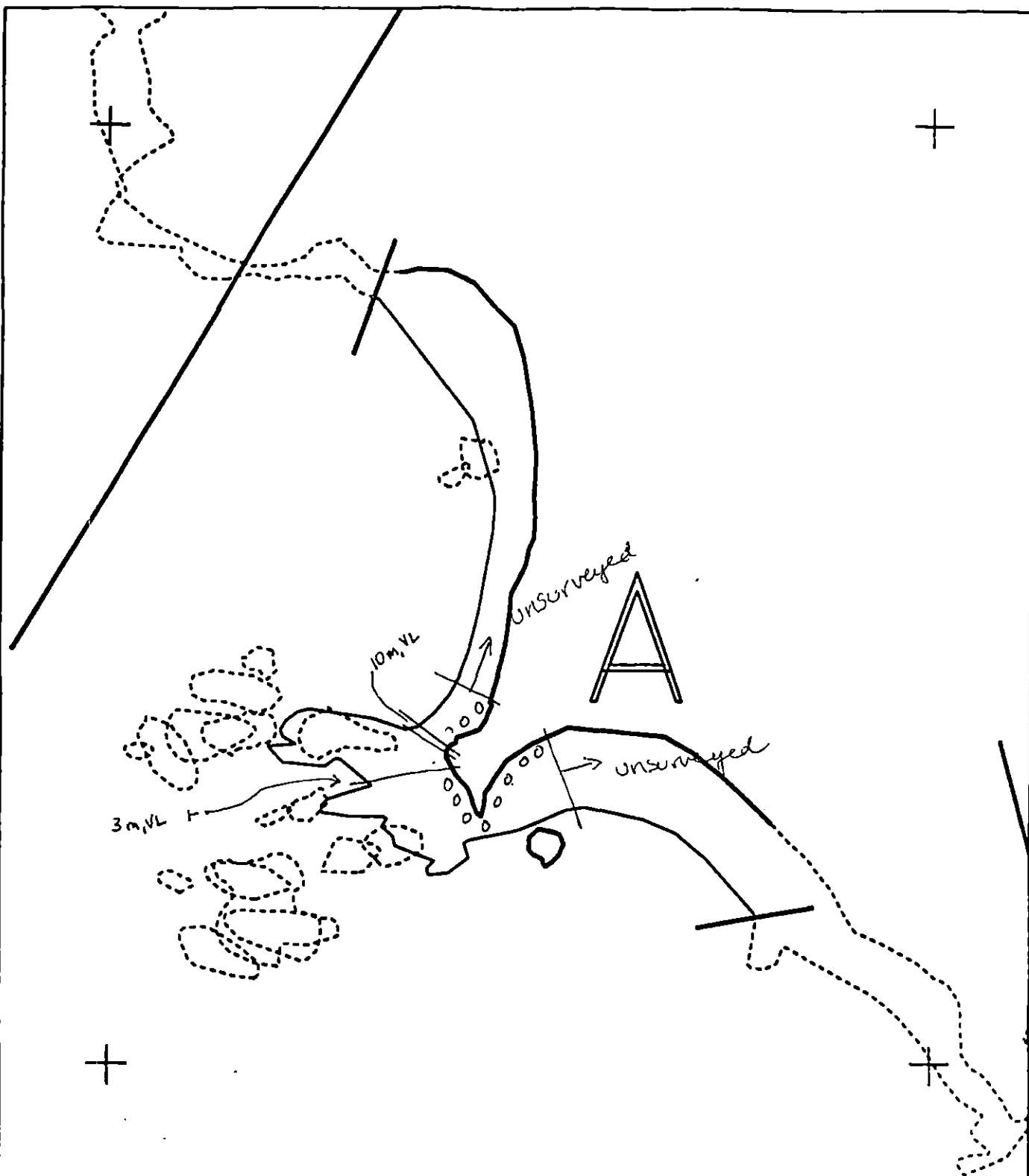
Nereocystis Beds

0 20
 METERS

→ Z →

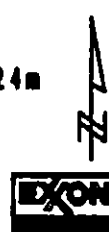
NO REMAINS OF
 ASAP reported
 Oil (MS-50R/P)
 4 by 7m area

Filamentous green
 algae and Littorina
 Very few limpets.



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

US007 A
 ADEC Subsegment Length: 824m
 METERS
 0 100 200
 AK State Plane Zone 4
 800070



Subdivision Field Map
 Map Key: KENUS007A
 Name: D. Fitzgerald
 Date: 8 MAY 1991
 Date Entered:

revised 5/11/91 KG
 25 Revised 5/12

1991 MAYSAP EVALUATION

SEGMENT: US 007 SUB: A REGION: KEN SURVEY DATE: 5/8/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 5/15 - 9/1

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

<u>RECOMMENDATIONS:</u>	<u>INITIAL</u>	<u>TAG</u>	<u>FOSC</u>
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: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____ FOSC APPROVAL DATE: _____

ADEC _____ FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

ADEC

NAME S. Ferguson SIGNATURE _____

☒ NTR ☐ TREATMENT RECOMMENDED

NO TREATMENT RECOMMENDED AT US-7A. BEACH + WAVECUT BEDROCK PLATFORMS HAD TRACE MS/SOR /CT/ST → SEE SKETCH MAP.

EXXON

NAME G. Stiles SIGNATURE George P. Stiles 5/9/91

☒ NTR

No appreciable oil was located therefore no treatment is recommended.

LANDMANAGER

NAME J. Hardister OF USFWS SIGNATURE J. P. Hardister 5/9/91

☒ NTR

conducted with other team members. No treatment warranted.

USCG/NOAA

NAME Chief Jensen / R. Hoff SIGNATURE Robert J. Hoff

☒ NTR

There is no longer any detectable oil present in the water, including S. Grader in places where it is likely to reach the water again. Minor traces of oil remaining represent no likely source of contamination to biological resources.

SEGMENT US-7

LANDMANAGER J. Handister for USFWS

SUBDIVISION 19

USCG/NOAA Chief Jensen / R. Hoff

DATE 8 May 191

ME 13 : 15 to 13 : 45

TIDE LEVEL 8 ft. to 7.6 ft.

ENERGY LEVEL: ☒ H ☐ M ☐ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 150 m

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

EST. OIL CATEGORY LENGTH: W _____ m M _____ m N _____ m VL 13 m NO 137 m US 674 m

[illegible]

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 6 - 09 FRAMES 1-4

[illegible]

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

OG COMMENTS: This site within Segment US-7 consists of an irregular, topographic - jagged, bedrock headland connected to the mainland by a boulder/cobble beach. The oiling of this area is very minor ($\ll 1\%$) consisting of 1-8 cm² patches of high, wetland mousse, sor. CT, and stains concentrated in the cracks of bedrock in semi-shaded areas. The ASAP survey of this region reported finding remains of a 15-50x10 4 by 7m area that had been identified in the 24 April 1990 SSAT survey. The well rounded boulders at this site would appear to indicate that the rest of the oil was abraded away during the 1990/1991 winter storm, as no trace of this oil could be found along the southwest boulder beach.

revised 5/11/91 VC
 & reviewed 5/12

x x Bedrock
→ Photo sites

Sketch Map (06)

US-7-1A

D. FITZGERALD

8 MAY 1991

1315-345

Gulf of ALASKA

* Promontory highly exposed
to wave action

* SITE #1 EN ACAP
19 AUGUST 1991
SURVEY

A. MS-SOR
CT-ST
20 by 3m, < 1%
IN CRACKS of
bedrock

B. MS (highly weathered)
CT/ST
1 by 10m, < 1%
ON BACKSIDE of
Bedrock promontory
ON vertical face

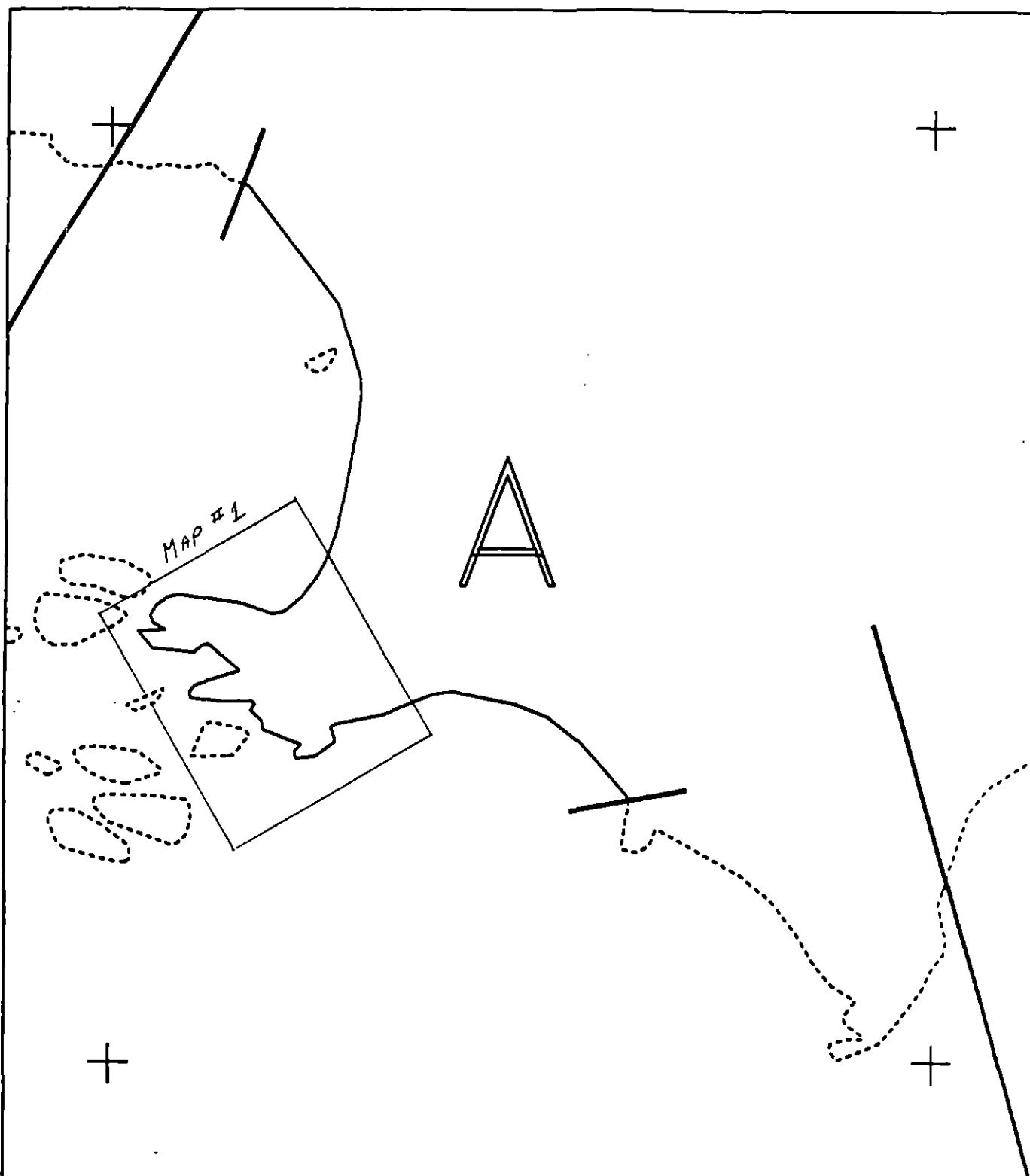
Bedrock
+
Boulders

NO REMAINS of
ASAP reported
oil (MS-SOR/P)
4 by 7m area

0 20
METERS

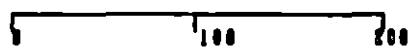
→ Z →

revised 5/11/91
EG revised 5/12



US007 A

METERS



AK State Plane Zone 4
NAD83

Subdivision Field Map

Map Key: KENUS007Aa

Name: D. FITZGERALD

Date: 8 MAY 1991

Reviewed 5/12

Bedrock
Photo sites

Photo locations
Maypap 6-09 # 1-4

Sketch Map 106
US-7-A
D. FITZGERALD
8 MAY 1991
1315 - 1345

Gulf of ALASKA

*Promontory highly exposed
to wave action

* SITE #1 IN ASAP
19 AUGUST 1991
SURVEY

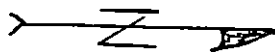
A. MS-SOR
CT-ST
20 by 3m, < 1%
IN CRACKS of
bedrock

B. MS (highly weathered)
CT/ST
1 by 10m, < 1%
ON BACKSIDE of
Bedrock promontory
ON vertical face

Bedrock
+
Boulders

NO REMAINS of
ASAP reported
oil (MS-SOR/P)
4 by 7m area

0 20
METERS



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 Helo

DATE May 8 1991

SEGMENT # US-7

TIDAL HEIGHT(Range) 8-7.5 ft (13:15-3:45)

SUBDIVISION A

BIOLOGIST H. Davis

SEA STATE 2 ft

WIND SPEED/DIRECTION 5 mph NW

PHOTOGRAPHS: ROLL # 6-09

FRAME # 1-4

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

B. Very small amounts of oil in the supratidal area. In places where the stain had hit verucaria the was a "negative" left behind that was being colonized by diatoms and green algae. Below this there was a moderate barnacle-littered limpet band above Fucus Endocladia mussel patches on boulders.

A. The oil extended from the UTTZ down into the MTTZ. UTTZ had pools with Sculpin, pagurus, Littorina, filamentous greens. On rock surfaces barnacles and Littorina were moderately dense. The Littorina were laying eggs. In the MTTZ dominant algae were Fucus, Odonthalia, Rhodomela, Petroselinus and Corallines. There were Balanus, limpets (Colesella sp., Lottia), Tonicella, Littorina, Anthopleura, asterias, Epiactis and Katharina. This population along this channel was moderately dense but rich in diversity.

Common Merganser

Red-Necked Phalarope (8) Kittiwakes (>10) Mew Gulls (5) Glaucous Winged Gull (>15)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

OF SPECIES

* TOTAL BIRDS

FISH OBSERVED SPECIES PRESENT

BIRDS	# OF SPECIES	* TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1 adult 1 immature	Sculpin 2 sp.
Seabirds			
Waterfowl ^{Common Merganser}	1	1 ♀	
Gulls/Kittiwakes	3	> 30 ^{Kittiwakes Mew, Glaucous wing}	
Shorebirds ^{Phalarope}	1	8	
Corvids			
Other Birds			

* These may be the same birds seen on US-5A/B

LAND MAMMALS

MARINE MAMMALS

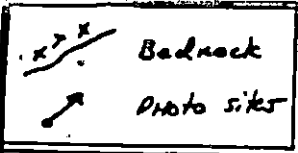
OBSERVED

SPECIES

OBSERVED

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters	0	0	
Pinnipeds (specify)	0		
Whales (specify)	0		

shoreline subdivision map showing important biological features attached.



Bio Map
Heather Davis

Sketch map
US-7-A
~~D. F. L. L. L. L. L.~~
8 MAY 1991
1315 - 1345

Gulf of ALASKA

*Promontory highly exposed
to wave action

A. The oil in the MITZ was near. Small pools with Littorina, Pagurus, Sculpins. Littorina were laying eggs under boulders. There was some "shortening" on the A. verrucaria. Very small traces of oil extended down through the MITZ into the MITZ. This channel had a moderately dense rocky intertidal community with a lot of diversity. Any clean up in this area would be more disruptive than productive.

MS-SOR
CT-ST
20 by 3m, < 1%
IN CRACKS of
bedrock

Bedrock
+
Boulders

B. MS (highly weathered)
CT/ST
1 by 10m, < 1%
ON BACKSIDE of
Bedrock Promontory
ON vertical face

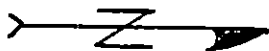
13. Verrucaria near oil. Some of the stain had been wiped and showed a negative stain in the verrucaria that is a opportunistic green algae. Below the oil was a profusion of Littorina, barnacles and some Fucus in the MITZ. The MITZ had a moderate cover of Fucus Odonthalia and Corallina.

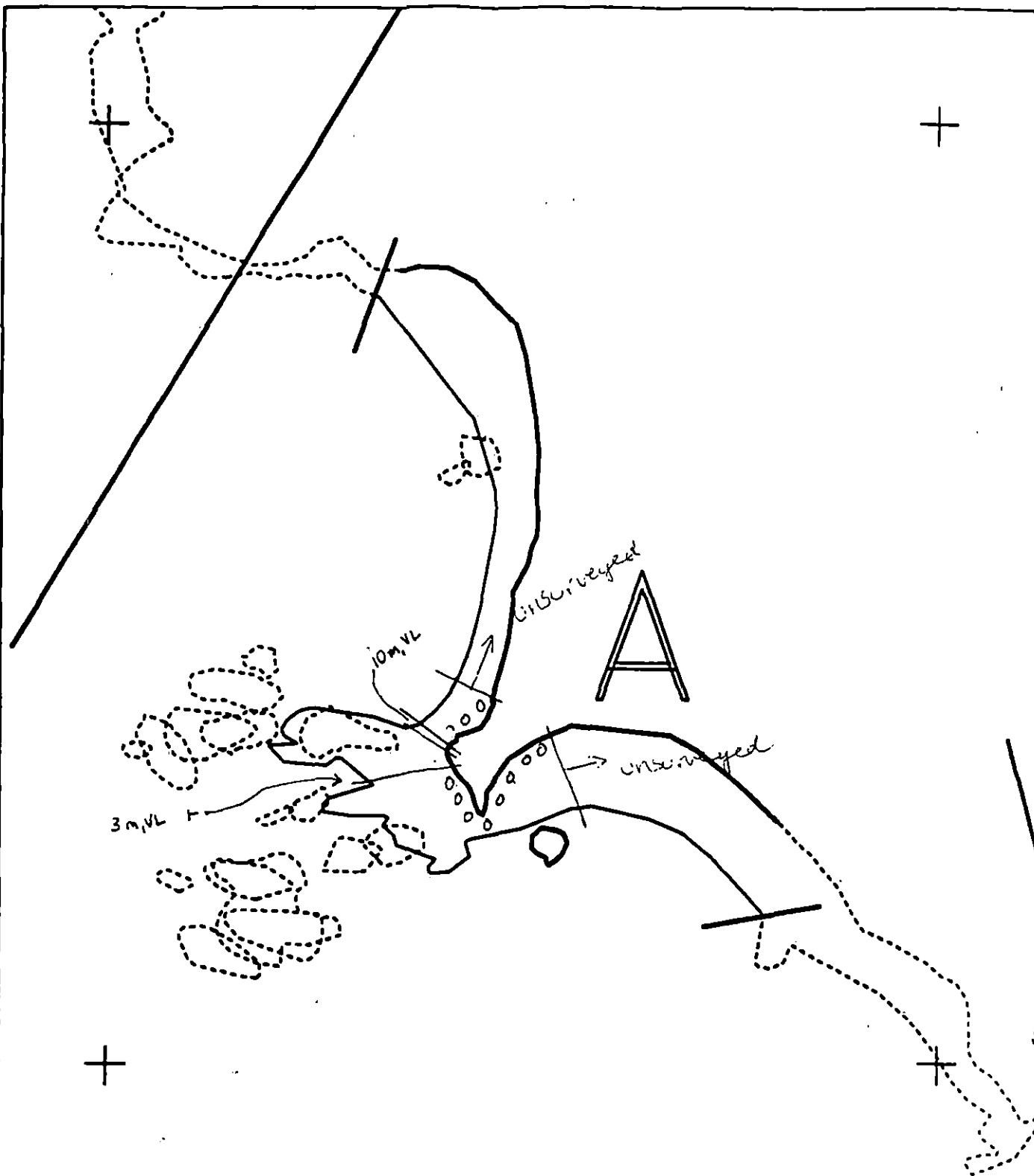
NO REMAINS of
ASAP reported
oil (MS-SOR/P)
4 by 7m area

Filamentous green
algae and Littorina
Very few limpets.

Nereocystis
Beds

0 20
METERS





XXXX	Wide	US007 A ADEC Subsegment Length: 824m METERS AK State Plane Zone 4 4800070	 EXON Date: <u>8 MAY 1991</u> Date Entered:	
////	Medium			Subdivision Field Map
----	Narrow			Map Key: KENUS007A
TTTT	Very Light			Name: <u>D. Fitzgerald</u>
0000	No Oil			

revised 5/11/91 KC
 25 Revised 5/12

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT US-7 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup	WORK 7/1 - 8/14
Bioremediation	WORK 7/1 - 7/31
Spot Washing	WORK 7/1 - 8/14

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,O,P,Q

Harbor Seal & Sea Lion
Pupping and Molting

Closed to bioremediation prior to 7/1 and after 7/31. Closed to manual pickup and spot washing prior to 7/1 and after 8/14.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

[Signature]

Date

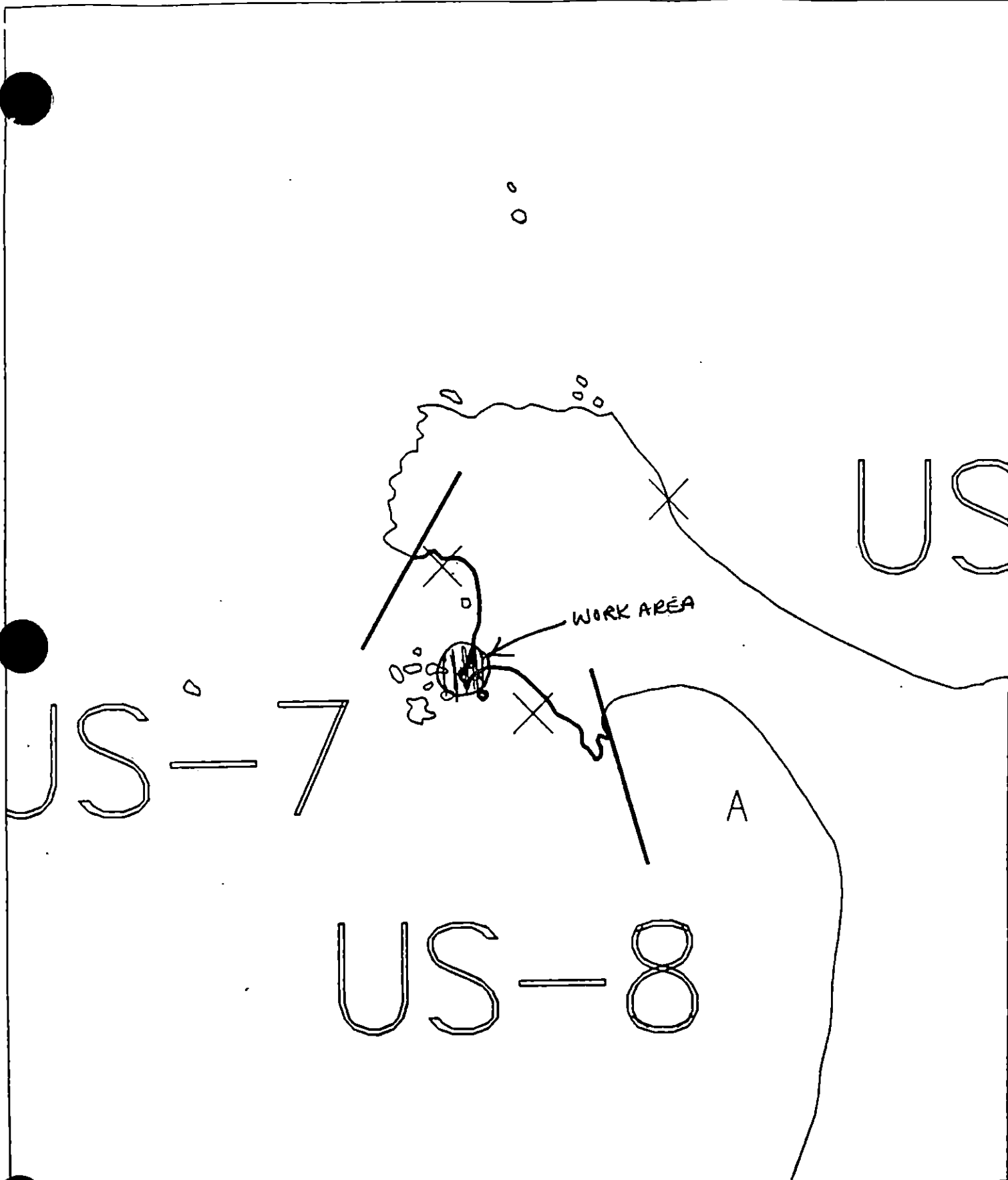
6/13/90

Prepared by

[Signature]

Date

6/12/90



Exxon Company, USA
Map Key: KEN-US-7
1 10 100



ECOLOGY MAP
SEGMENT US-7
SUBDIVISION A (1 of 1)
METERS
0 100 200

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

1 inch = 1308 feet

SHORELINE EVALUATION

SEGMENT ST/ US-07 SUBDIVISION A (1 OF 1) DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
30,3Q Harbor seal and sea lion molting (8/15 to 9/15)

USFWS property

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Chuck Z. Hume DATE: 5/14/90

OILING CATEGORIZATION:

Wide 0 m: Medium 30 m: Narrow 0 m: V.Light 70 m: No Oil 724 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of mousse where indicated on sketch and 2) bioremediation of area of surface stain. Work should be conducted between 7/1 and 8/15 based on pinniped constraints.

SPOT WASH IF REQ'D IN AREAS OF MOUSSE REMOVAL

TAG COMMENTS: NO BIO OF STAIN FOLLOWING REMOVAL OF MOUSSE APPLY CUSTOMER IF REQ'D

TAG APPROVAL DATE: 5/12/90

ADEC Art Wouke
EXXON Art Wouke
NOAA Gary Petros
USCG D.D. Rome

FOSC: W L DATE: 5-18-90

Monitor areas need for bioremediation + apply as necessary.

REGION: KENAI

SEGMENT: ST/US-008

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ US-008 SUBDIVISION A (1 OF 1) DATE 4/10/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Seal and sea lion pupping (5/15 to 7/1)-in adjacent segment

3O,3Q Seal and sea lion molting (8/15 to 9/15)-in adjacent segment

5T Active eagle nest (3/1 to 9/1)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid disturbance/damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time.

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 89 m: Narrow 140 m: V.Light 1149 m: No Oil 1176 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 15 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of mousse and oiled debris. Bioremediation is recommend for areas with oil cover and subsurface oil as indicated on sketch. Work only with USFWS permission concerning eagle constraints.

TAG COMMENTS:

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

SEGMENT ST / US-05 SUBDIVISION: US-84 DATE 4-10-92SCG
NAME D.D. Haver Jr, GMA, USCGR SIGNATURE D.D. Haver Jr☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

See OG notes for proper observations.

ADEC
NAME Francine J. Bear's SIGNATURE Francine J. Bear's☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Traveled entire length of segment, approximately 1.2 mi. long. Observed area of R/O/C having CT, CV, ST/OP distribution. Some mousse trapped in crevices. bedrock & under cobbles is present, & could be removed manually with trowels. The sand faded out to the north, but a surface/subsurface band of oiled sediments exists in the storm berm. Surface oiled sediments are collectable. There's also oil debris & drift. Mousse mixed w/vegetation & other debris is present in the drift & often concentrated on the backside of the berm. Much of this is collectable w/trow & should be removed. Only VL oil is present on the surface in the near

LAND MANAGER

NAME JOHN HARDISTER SIGNATURE John P. Hardister
CONT'D ON P. 2
USFWS☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Sufficient oiled materials exist to warrant removal by mechanical means, especially along the storm berm, but also in the drift berm area.

US-08A comment sheet (cont.)

ADEC

portion of the segment, in the form of small MS wads + stains on drift. Collectable oil is minimal but clean-up crew should definitely sweep
UITB / storm berm to insure thoroughness in the effort. A number of pits were dug up here in the North section of US08, & no subsurface oil was observed. Throughout the segment is scattered, piled debris that should be removed.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Acton USCG Haven SEGMENT ST/ 113-8
 BIO Davis LAND REP USFWS Harding SUBDIVISION US-8A
 EXXON Avery ADEC Bennis TIME 8:50 to 10:55
 TEAM NO.: 20 TIDE LEVEL: -1 to +2 DATE 4 / 10 / 90
 EST. SUBDIVISION LENGTH: 2583 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 PLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 10 % B 10 % C 35 % P 15 % G 15 % S 15 % M 10 % V 10 %
 SLOPE: Lang 90 % Hang 10 % Vert 0 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 90 m N 155 m VL 1200 m NO 1138 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	IC	IB	IP	IS	SBL BR	DBL RW	GY SL	DBR TL	LBR		SU	UI	M	U
ASPHALT PAVEMENT														
POOLED														
COVER			✓	✓		✓					✓	✓		
COAT			✓	✓		✓					✓	✓		
STAIN			✓	✓		✓					✓	✓		
MOUSSE			✓					✓				✓		
PATTIES														
TARBALLS														
FILM														
NO OIL													✓	✓

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

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

DEBRIS COLLECTED
☐ YES ☒ NOTYPE —#BAGS 0

Photographs:

Roll No. ST 30-41, ST-20-5Frames 25 - 37, 1 - 8

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SBL BR	DBL RW	GY SL	DBR TL	LBR		SU	UI	M	U		
1	30					✓	•										✓				CPG
2	30					✓	•									✓					CPG
3	30					✓	•									✓					CPG
4	30					✓	•									✓					CPG
5	30					✓	•									✓					CPG
6	30		✓		✓		0-15		✓		✓		✓			✓					PGS

COMMENTS 3m x 175m band of oil impact located approx 250m south of creek. Band at base of S3 berm, is 50m medium and 125m narrow, w/ areas of buried mousse OR up to 15cm deep. Extensive cobble accumulations/berms make assessment of buried oil difficult on this type of high energy beach. Area at south end of segment has oil impact on the rock cliff and on/in the boulder/rubble on the rock platform. Pits could not be dug in this area. The very light oiling (1100m) between these 2 areas consisted of predominantly splash on driftwood and cobbles (very occasional)

SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 02/22/90

SEGMENT ST/ US SUBDIVISION _____

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-GM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS		
		OP	OR	OL	OF	NO		VO	UC	SP	BR	FR	ST	BL	DR	TL	SU	U	M			L	
7	30		✓				0 - 15		✓					✓			✓						P63
8	30				✓		0 - 5		✓					✓			✓						P63
9	30					✓	.									✓							P6
10	30					✓	.										✓						P6
11	30					✓	.										✓						P6
12	30					✓	.										✓						P6
							.																
							.																
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							.																

COMMENTS

REVIEWED BAT DATE 12 Aug 90

OG Acety

SEGMENT ST/VS-8

SUBDIVISION VS-8A

DATE 4 / 10 90

CHECKLIST

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

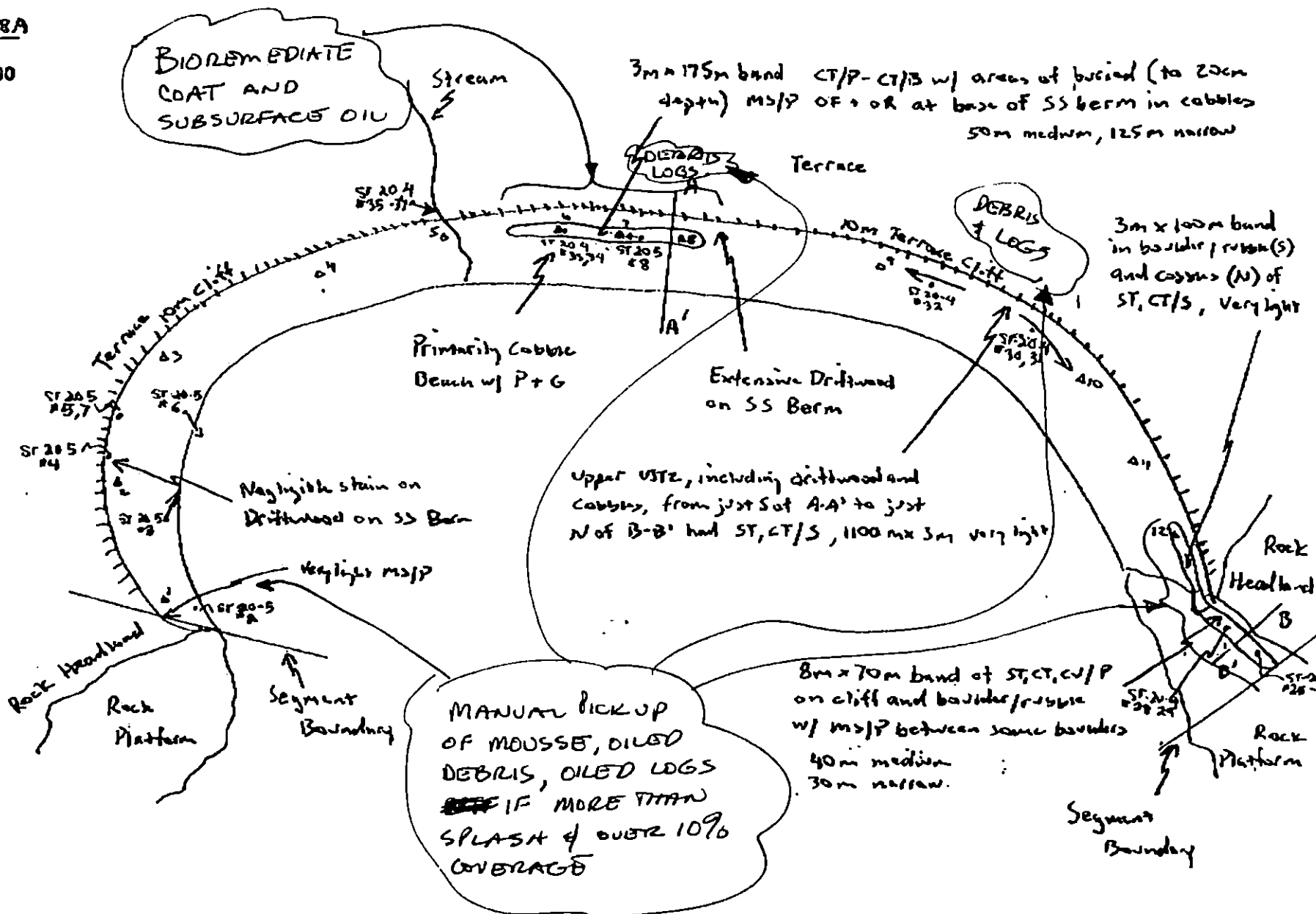
LEGEND

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

SKETCH MAP

$\leftarrow$ N

Approx Scale 1cm = 75m



Oil Character Length (m): AP 90 PO 90 CV 90 CT 100 ST 100 MS 90 PT 90 TB 90 FL 90 NO 1138

REVISION: 03/24/90

OG Acadia

SKETCH MAP

SEGMENT ST/ US-8

SUBDIVISION US-8A

DATE 4/10/90

CHECKLIST

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

LEGEND

1 Δ

Pt - No Subsurface Oil

2 Δ

Pt - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

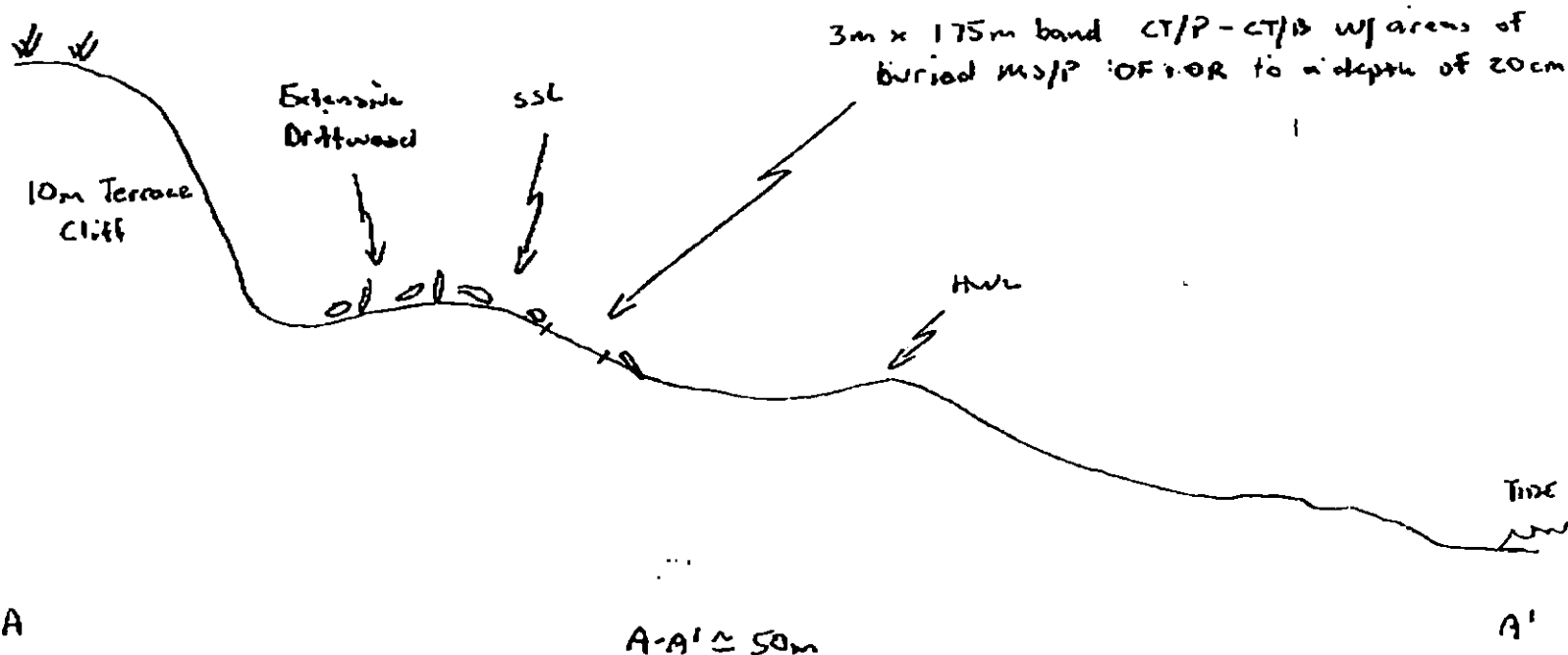
CT/S

Splashed Distribution

Oiled Vegetation

1 →

Photo location, direction,
and number



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

REVISION: 03/24/90

APR-10-1990

18:55 FROM

EXXON KODIAK

TO

15643771

P.05

OG Act

SKETCH MAP

SEGMENT ST/ V5-8

SUBDIVISION V5- 8A

DATE 4 / 10 90

CHECKLIST

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

LEGEND

1 Δ

Pli - No Subsurface Oil

2 ▲

Pli - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

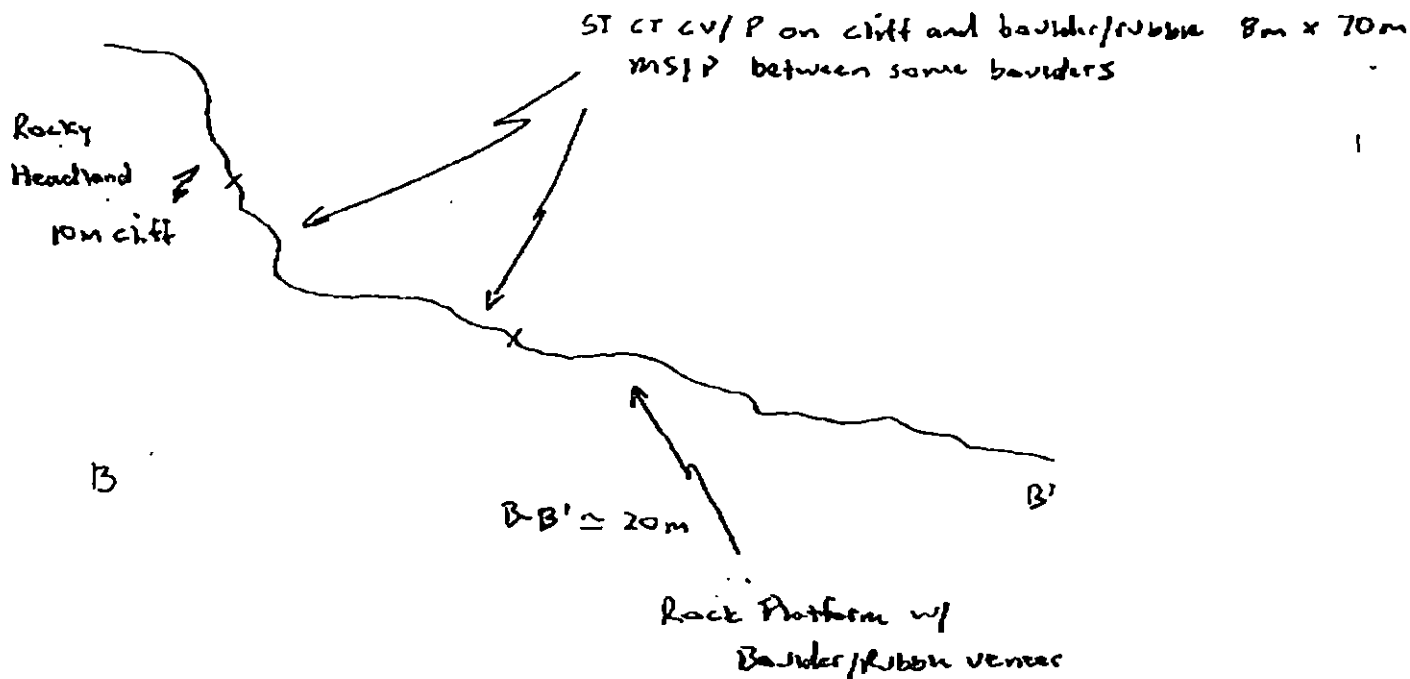
CT/S

Splashed Distribution

Oiled Vegetation

1 ➡➡

Photo location, direction,
and number



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

REVISION: 02/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / US-08 Subdivision US-08A Date (mo / day / yr) 4 / 10 / 90Time (24 hr) 09:00 Biologist H. Davis

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

Photographs:
Roll No. ST-20-41 / ST-20-5Frames 25-38, 1-8

BARNACLES

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

NOT PRESENT
4, 5, 6

MYTILUS

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

NOT PRESENT
4, 5, 6

GASTROPODS

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

NOT PRESENT
4, 5, 6

FUCUS

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

NOT PRESENT
4, 5, 6

Wildlife Observations/ General Comments: 3 Eagles, 2 cormorant leaved ducks, 12 Herring Gulls, 2 Osprey catches. Glassy-winged Teal. The majority of US-08 was grass/pebbles beach but at each end there were rocky areas with abundant plants, animals. Littorines and limpets were numerous in the upper intertidal. Fucus was very patchy throughout the intertidal. Very few amphipods were observed in all of the groups of 10-30 shells could be found as crevices. Barnacles showed about 10%-30% mortality throughout the intertidal (independent of size).

Ecological Considerations: Sea lion haul out for pupping around May 15, Murres, Cormorants and Gulls nest in the area. Eagles feed and nest on the island. The stream on US-08 may be anadromous.

US-8A

LEN
↓ 141A

XXXX Wide

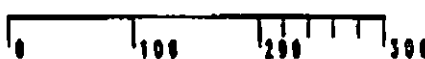
//// Medium

--- Narrow

TTTT Very Light

US-8

ADEC Segment Length: 2554m



US-8A

Map Key: KEN-141b

Name: Acton

Date: 4-10-90

Date Entered:

↑
KEN
1418

US-8A

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

US-8

ADEC Segment Length: 2554m

0 100 200 300

US-8A

US-8A

Map Key: KEN-141a

Name: Acton

Date: 4-10-90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT US-8 SUBDIVISION A (1 of 1)

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

*Contact Alaska Maritime NWR @ 235-8548 For Permission

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,O,P,Q Harbor Seal & Sea Lion

Pupping and Molting

Closed to manual pickup and bioremediation prior to 7/1 and after 8/15.

5T Bald Eagle Nest

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

OTHER ECOLOGICAL CONSIDERATIONS

Restrict all activity to essential minimum, especially air traffic. Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. Restrict air traffic and all disturbance to essential minimum. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from nests. Avoid any unnecessary disturbance or damage to uncolled biota and substrate.

FOSC

Date

6-12-90

Prepared by

Date

6/11/90



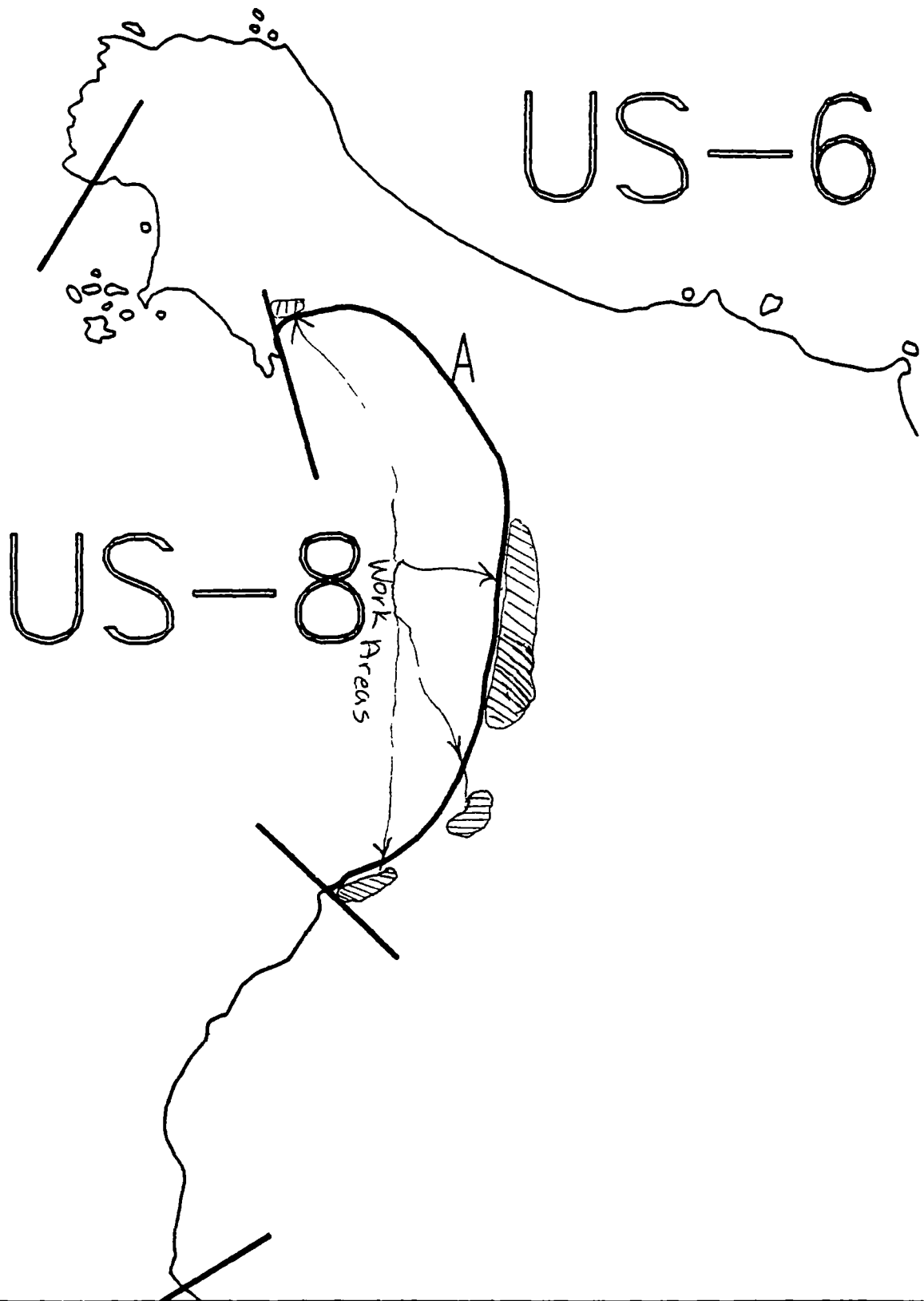
Exxon Company, USA

SEGMENT US-8
SUBDIVISION A (1 of 1)

UTERB



Eagle Nest



Exxon Company, USA



ECOLOGY MAP
SEGMENT US-8
SUBDIVISION A (1 of 1)
METERS



Seabird Colony



Eagle Nest

WORK PLAN ADDENDUM

Segment US-008

Subdivision A

Dated 5/16/90

MODIFICATION

1. REASON FOR MODIFICATION

- Admirals requirement.
- Landowner recommendation.

2. ADJUSTMENT TO WORK PLAN

- No Customblen or Inipol at this site.
- Access after May 1 permitted with special instructions from the Refuge Manager of the Alaska Maritime National Wildlife Refuge.

SHPO APPROVAL NEEDED YES _____
NO X

SHPO SIGNATURE _____

TAG APPROVAL DATE 5/18/90.
 ADEC Art Weiner Art Weiner
 TXN Amy Gm Deal
 AA Gary Petrac Amy Petrac
 SSCG C. A. Deiters C. A. Deiters

FOSC

DATE 5-18-90

SHORELINE EVALUATION

SEGMENT ST/ US-008 SUBDIVISION A (1 OF 1) DATE 4/10/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Seal and sea lion pupping (5/15 to 7/1)-in adjacent segment
3O,3Q Seal and sea lion molting (8/15 to 9/15)-in adjacent segment
5T Active eagle nest (3/1 to 9/1)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid disturbance/damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time.

SHPO SIGNATURE: [Signature]

DATE: 4/18/90

OILING CATEGORIZATION:

Wide 0 m: Medium 89 m: Narrow 140 m: V.Light 1149 m: No Oil 1176 m
Subsurface Oil Observed: Yes X No Maximum Depth 15 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of mousse and oiled debris. Bioremediation is recommend for areas with oil cover and subsurface oil as indicated on sketch. Work only with USFWS permission concerning eagle constraints.

SEE WORK PLAN ADDENDUM DATED
5/16/90 AND CONSTRAINT ADDENDUM
DATED 06/11/90. REX C.

TAG COMMENTS:

TAG APPROVAL DATE: 4/18/90

ADEC JOHN BAUER

EXXON AMY TATE

NOAA Burt Weiratt

USCG G.A. HENDER

FOSC: [Signature]

DATE: 4-22-90

Coordinate bioremediation application with
U.S. F+WL. Use least intrusive methods
as practical to effect clean-up.

SHORELINE EVALUATION

SEGMENT ST/ US-008 SUBDIVISION A (1 OF 1) DATE 4/10/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Seal and sea lion pupping (5/15 to 7/1)-in adjacent segment

3O,3Q Seal and sea lion molting (8/15 to 9/15)-in adjacent segment

5T Active eagle nest (3/1 to 9/1)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid disturbance/damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time.

SHPO SIGNATURE: Charles J. Hines DATE: 4/18/90

OILING CATEGORIZATION:

Wide 0 m: Medium 89 m: Narrow 140 m: V.Light 1149 m: No Oil 1176 m
Subsurface Oil Observed: Yes X No Maximum Depth 15 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of mousse and oiled debris. Bioremediation is recommend for areas with oil cover and subsurface oil as indicated on sketch. Work only with USFWS permission concerning eagle constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/18/90

ADEC JOHN BAUER John Bauer

EXXON ANDY TATE Andy Tate

NOAA Burt Wescott Burt Wescott

USCG G.A. REITER G.A. Reiter

FOSC: DATE: 4-22-90

Coordinate bioremediation application with U.S. F&WL. Use least intrusive methods as practical to effect clean-up.

OG Acton

SEGMENT ST/ V3-8

SUBDIVISION V3-8A

DATE 4 / 10 90

CHECKLIST

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

LEGEND

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

Continuous Distribution
- CT/B

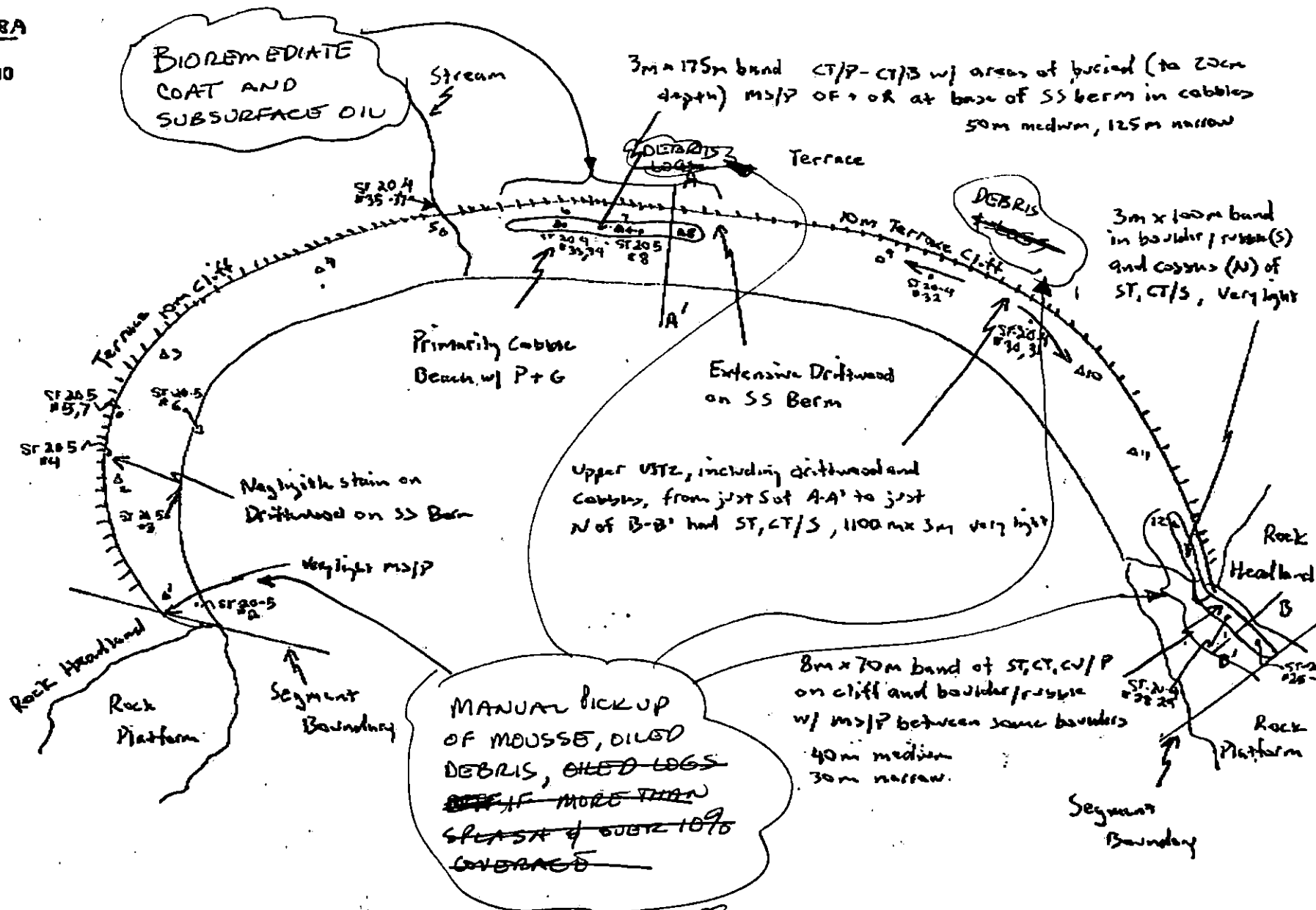
Broken Distribution
- CT/P

Patchy Distribution
- CT/S

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

SKETCH MAP

← N
Approx Scale 1cm = 75m



OG Ac3

SEGMENT ST/ VS-8

SUBDIVISION VS-8A

DATE 4/10/90

CHECKLIST

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

LEGEND

1 Δ

PI - No Subsurface Oil

2 Δ

PI - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

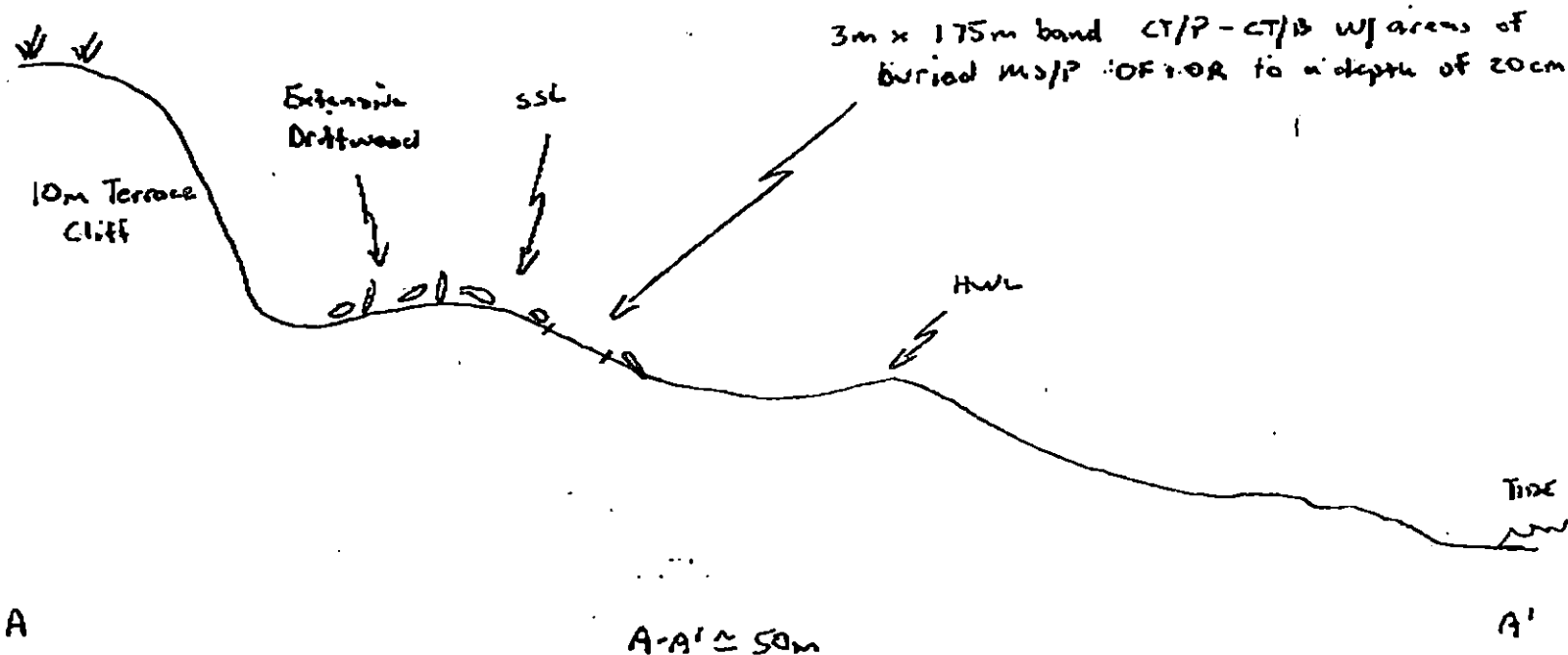
Splashed Distribution

Oiled Vegetation

1 $\Rightarrow$

Photo location, direction,
and number

SKETCH MAP



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

REVISION: 03/04/90

APR-10-1990 18:55 FROM EXXON KODIAK

TO

15643771

P.05

OG Ac

SEGMENT ST/ V5-8

SUBDIVISION V5-8A

DATE 4 / 10 90

CHECKLIST

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

LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

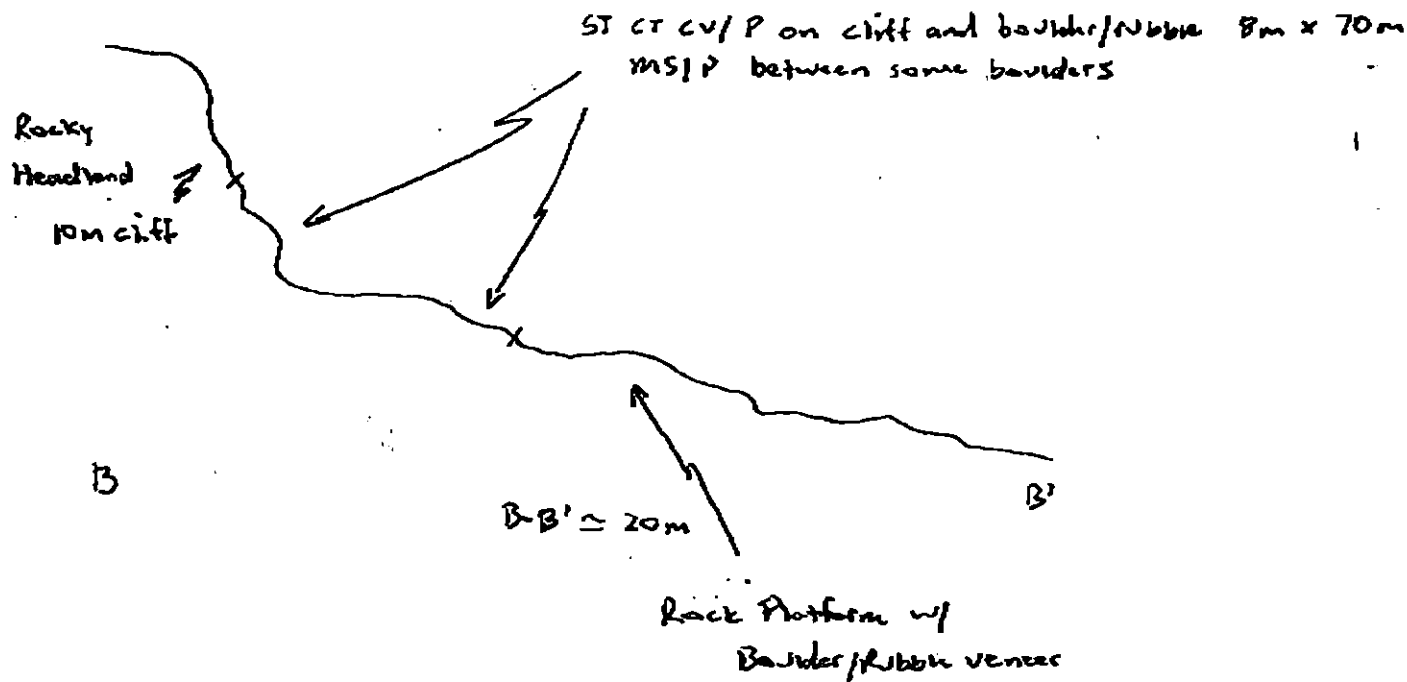
Splashed Distribution

Oiled Vegetation

1 $\Rightarrow$

Photo location, direction,
and number

SKETCH MAP



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

REVISION 022010

APR-10-1990 18:55 FROM EXXON KODIAK

TO

15643771

P.06

US-8A

LEN
↓ 141A

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

US-8

ADEC Segment Length: 2554m

US-8A

Map Key: KEN-141b

Name: ActonDate: 4-10-90

↑
KEN
1418

US-8A

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

US-8

ADEC Segment Length: 2554m

0 100 200 300

US-8A

Map Key: KEN-141a

Name: Acton

Date: 4-10-90

NOT RECORDED

WORK PLAN ADDENDUM

Segment US-008

Subdivision A

Dated 5/16/90

MODIFICATION

1. REASON FOR MODIFICATION

- Admirals requirement.
- Landowner recommendation.

2. ADJUSTMENT TO WORK PLAN

- No Customblen or Inipol at this site.
- Access after May 1 permitted with special instructions from the Refuge Manager of the Alaska Maritime National Wildlife Refuge.

SHPO APPROVAL NEEDED YES _____
NO X

SHPO SIGNATURE _____

TAG APPROVAL DATE 5/18/90.

LADEC ART WEINER Art Weiner

EXXON Ampy GA Real

NOAA Gary Petrac Amy Shaw

USCG G.A. DEITEL G.A. Deitel

FOSC

DATE 5-18-90

WORK PLAN ADDENDUM

Segment US-8

Subdivision A

Dated JUNE 27, 1990

MODIFICATION

1. REASON FOR MODIFICATION

- REQUEST BY USF+W FOR BERM RELOCATION
- FOBC REQUEST.

2. ADJUSTMENT TO WORK PLAN

ADD BERM RELOCATION TO WORK PLAN AS INDICATED ON SKETCH FOLLOWING ACCEPTANCE OF THE TRIAL ON US 5 B BY USF+W.
TIMING TO BE SPECIFIED BY USF+W.

SHPO APPROVAL NEEDED YES ☒ NO ☐

SHPO SIGNATURE Charles Z. Adams 6/29/90
Original Inspection constraint applies. Add storm berm inspection to work order.

TAG APPROVAL DATE JUNE 27 1990

ADEC Ray Moncrie R. Moncrie

EXXON AMY TEAL Deal

NOAA Joseph Tulkott J. Tulkott

USCG G.A. REITER G.A. Reiter

FOBC [Signature] DATE 6/30/90

1991 MAYSAP EVALUATION

SEGMENT: US 008 SUB: A REGION: KEN SURVEY DATE: 5/8/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 5/15 - 9/1

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Rachel Ann Owen

Date: 5/22/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

N

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 22 1991

FOSC APPROVAL DATE: 6/1/91

ADEC

FOSC

EXXON

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

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

ADEC

NAME S. Ferguson

SIGNATURE

[Signature]

☒ NTR ☐ TREATMENT RECOMMENDED

SUBDIVISION US-8A CONSISTS OF AN EXPOSED HIGH ENERGY SHORELINE. THE 2M X 150M BAND OF SOR OBSERVED PREVIOUSLY WASN'T OBSERVED ON THIS SURVEY. DUE TO THE INCREASE IN THE STORM RIDGE AND THE STRATA AND DEBRIS PILED IN SUPRA FEEL THAT IT WOULD WARRANT ANOTHER LOOK IN JULY (AFTER THE DECREASE IN THIS BUILD UP) TO SEE THAT INDEED THE SUBSURFACE OILED LENS NO LONGER EXISTS. THIS WERE DUE TO FORM TO FULLY UNDERSTAND WHETHER OIL IS STILL PRESENT OR NOT → WOULD HAVE NEEDED A BACK HOG → BUT JULY PITS MANUALLY WITH DG.

EXXON

NAME G. Stiles

SIGNATURE

[Signature]

5/9/91

☒ NTR

No appreciable oil found therefore no treatment is recommended.

LANDMANAGER

NAME J. HARDISTER

OF

L. SFUS

SIGNATURE

[Signature]

☒ NTR

No appreciable amount of oil located. Treatment not warranted.

USCG/NOAA

NAME Chief JENSEN, R. Hoff

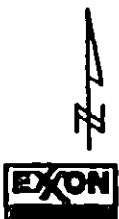
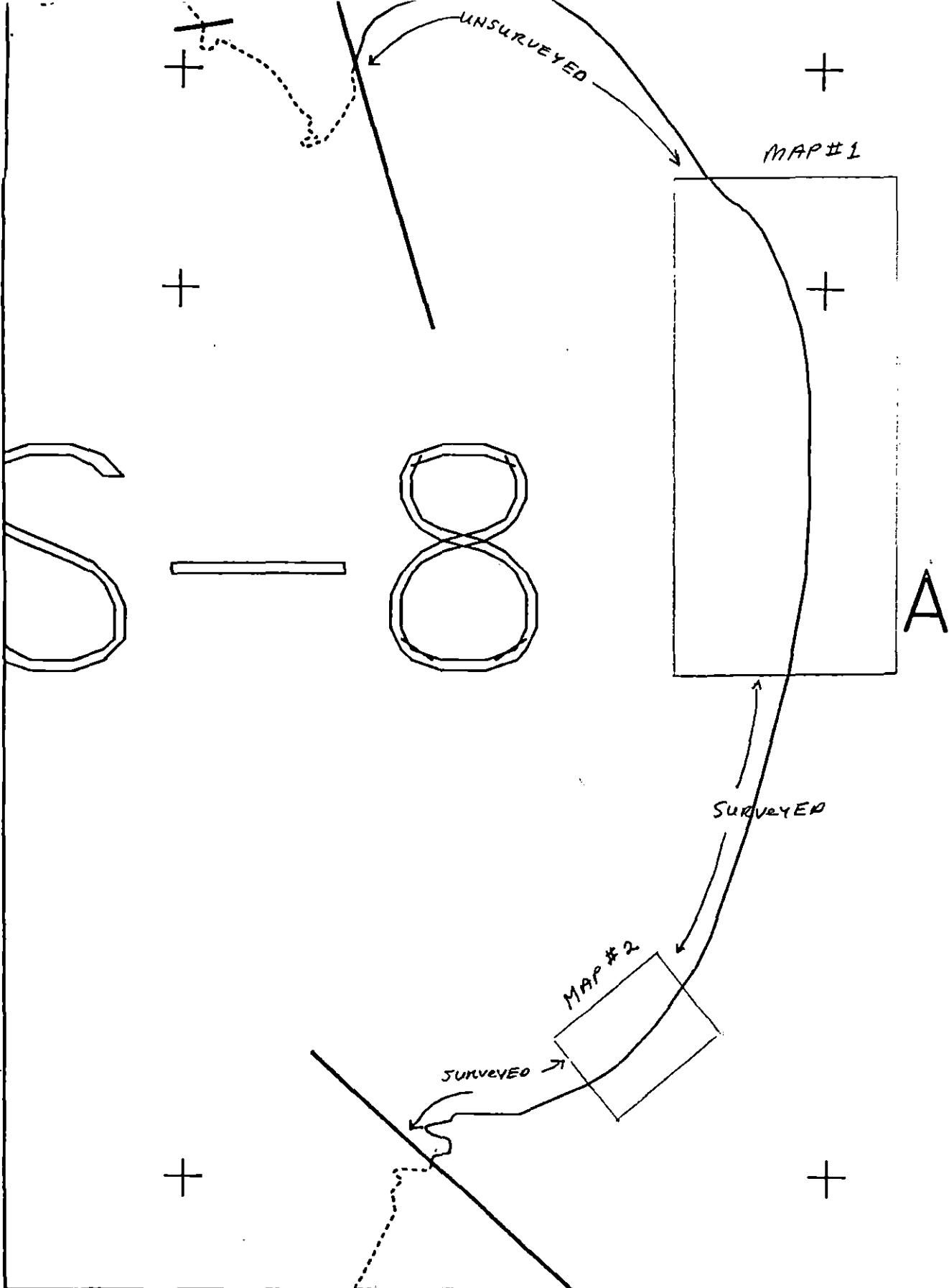
SIGNATURE

[Signature]

☒ NTR

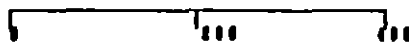
Further removal operations would cause more environmental harm than the very small amount of oil to be removed.

EX reviewed 5/11



US008 A

METERS



AK State Plane Zone 4
6000000

Subdivision Field Map

Map Key: KENUS000Aa

Name: D. FITZGERALD

Date: 8 MAY 1991

LOGS
 " " " GRASSY
 ↗ PHOTO SITES

SKETCH MAP #1 (OG)
 US-8-A
 D. Fitzgerald
 8 MAY 1991
 1400-1505

A. ST/CT
 TB
 2 by 25 m, < 190
 ON INDIVIDUAL COBBLES
 AROUND 10g5

INTERMITTENT / WATER FALL
STREAM



ALLUVIAL FAN

Pebble Beach

Cobbles / Pebbles

GLACIAL CLIFF

Peb. Granules
 Sand / Cob.

Cobbles

MHW

MLW

MLW

SOD
 BLOCKS

GLACIAL SEDIMENT CLIFF

OUTWASH

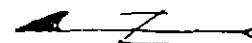
TILL

SMALL
 EPHEMERAL
 STREAM

MAJOR GRAVEL
 STORM RIDGE
 WITH CUSPS

SECONDARY RIDGE DEVEL

0 100
 METERS

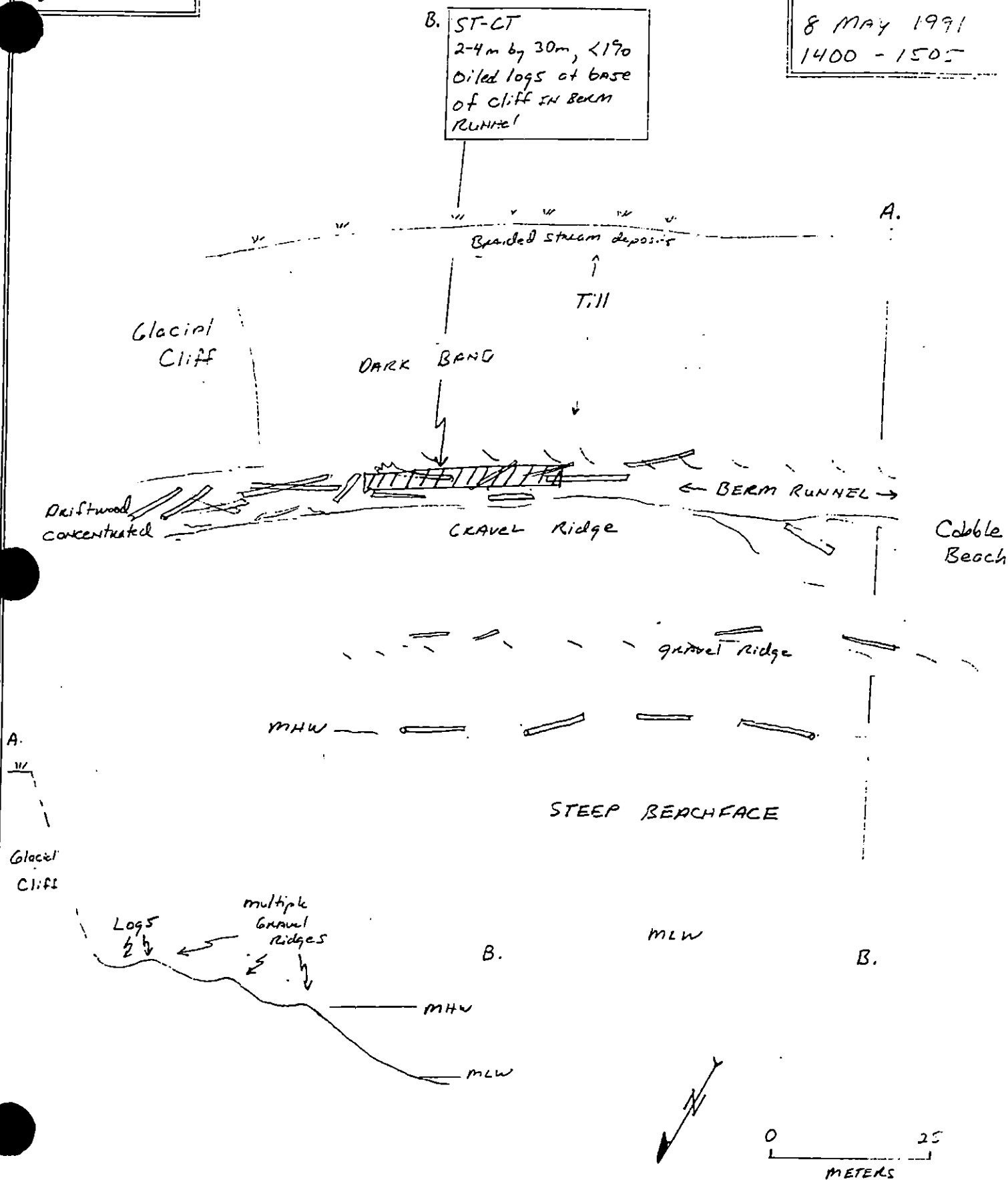


450000000 5/11

revised 5/11/91 KC

W V grassy
 Logs
 Photo Sites

SKETCH MAP #2 '06
 US-8-A
 D. FITZGERALD
 8 MAY 1991
 1400 - 1505



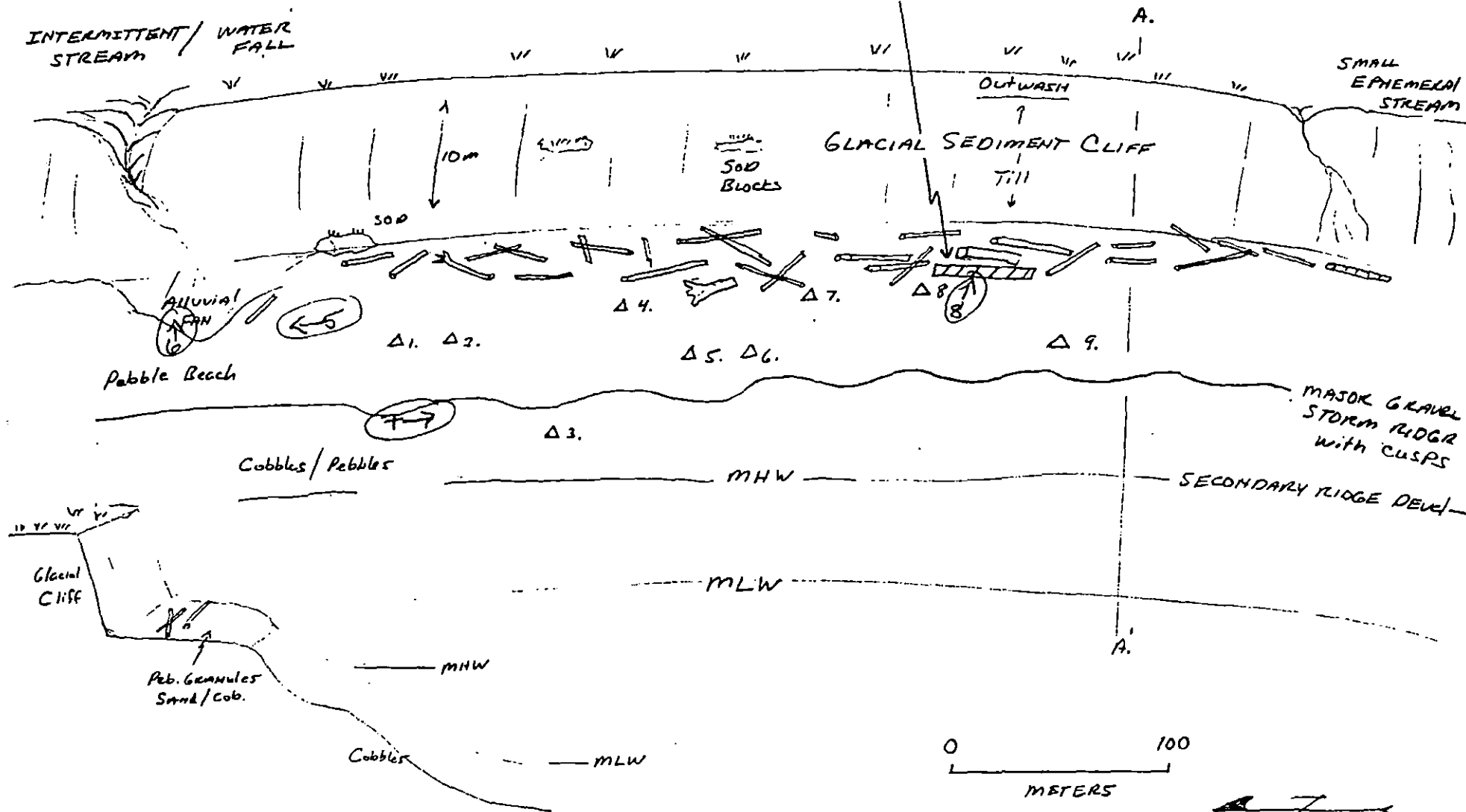
reviewed 5/11/91 KG
 ET modified 5/11

LOGS
 III III GRASSY
 ↗ PHOTO SITES

Photo locations
 Mapap 6-09 # 5-8

SKETCH MAP #1 (OG)
 US-8-A
 D. FITZGERALD
 8 MAY 1991
 1400 - 1505

A. ST/CT
 TB
 2 by 25m, < 190
 ON INDIVIDUAL COBBLES
 AROUND 10g5



HAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 Help

DATE May 8 1991

SEGMENT # 45-8

TIDAL HEIGHT (Range) 7 ft - 5 ft (14:00 - 15:15)

SUBDIVISION A

BIOLOGIST H. Davis

SEA STATE 2 ft

WIND SPEED/DIRECTION 5 mph 1/6 gusts N

PHOTOGRAPHS: ROLL # 6-09

FRAME # 5-8

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

A+B. No biota in the oiled area. Below the oiled area in the UETZ + SETZ
There was a dense population of detritus feeders. *Orchestoidea*, *Hyas*, *Caprellidae*,
an unknown copepod and small whitish annelids.

Cormorant sp. (> 6) Northern Harrier (1) Mallard pair (2) Greater Scaup (6)
Same palmated plover (1) Western Sand piper (2) Red Necked Phalarope (3)
Glaucous-winged, Mew Gulls, Kittiwakes (> 30) Fox sparrows (3) American pipit (1)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1 *	1	Sculpins
Seabirds <i>cormorants</i> sp.	1	> 6	
Waterfowl	2	8	
Gulls/Kittiwakes	3	> 30 <i>Mew, Kittiwakes</i> <i>Glaucous-winged</i>	
Shorebirds	3	6	
Corvids			
Other Birds	3	6	

* Same bird as seen on 45-7

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters	0	River otter Tracks	2 pair?
Pinnipeds (specify)	0		
Whales (specify)	0		

Shoreline subdivision map showing important biological features attached.

INTERMITTENT / WATER FALL STREAM

GLACIAL SEDIMENT CLIFF

GLACIAL CLIFF

Pebble Beach

Cobbles / Pebbles

MHW

MLW

Nereocystis beds off shore

0 100 METERS

No visible Biota. Intertidal life is mostly detritus consumers. Orchestoidea, isopods and worms below the surface in the NTZ + SITZ

SECONDARY RIDGE DEVELOPMENT

MAJOR GRAVEL STORM RIDGE WITH CUSPS

GLACIAL CLIFF

Peb. Granules Sand / Cob.

GLACIAL SEDIMENT CLIFF

OUTWASH

TILL

500 Blocks

10m

500

Δ 1. Δ 2. Δ 3. Δ 4. Δ 5. Δ 6. Δ 7. Δ 8. Δ 9.

ALLUVIAL FAN

ocean Tracks

SMALL EPHEMERAL STREAM

Bio Map(2)

W V Gassy

 4095

Photo Sites

SKETCH MAP #2 (~~36~~)

US-8-A

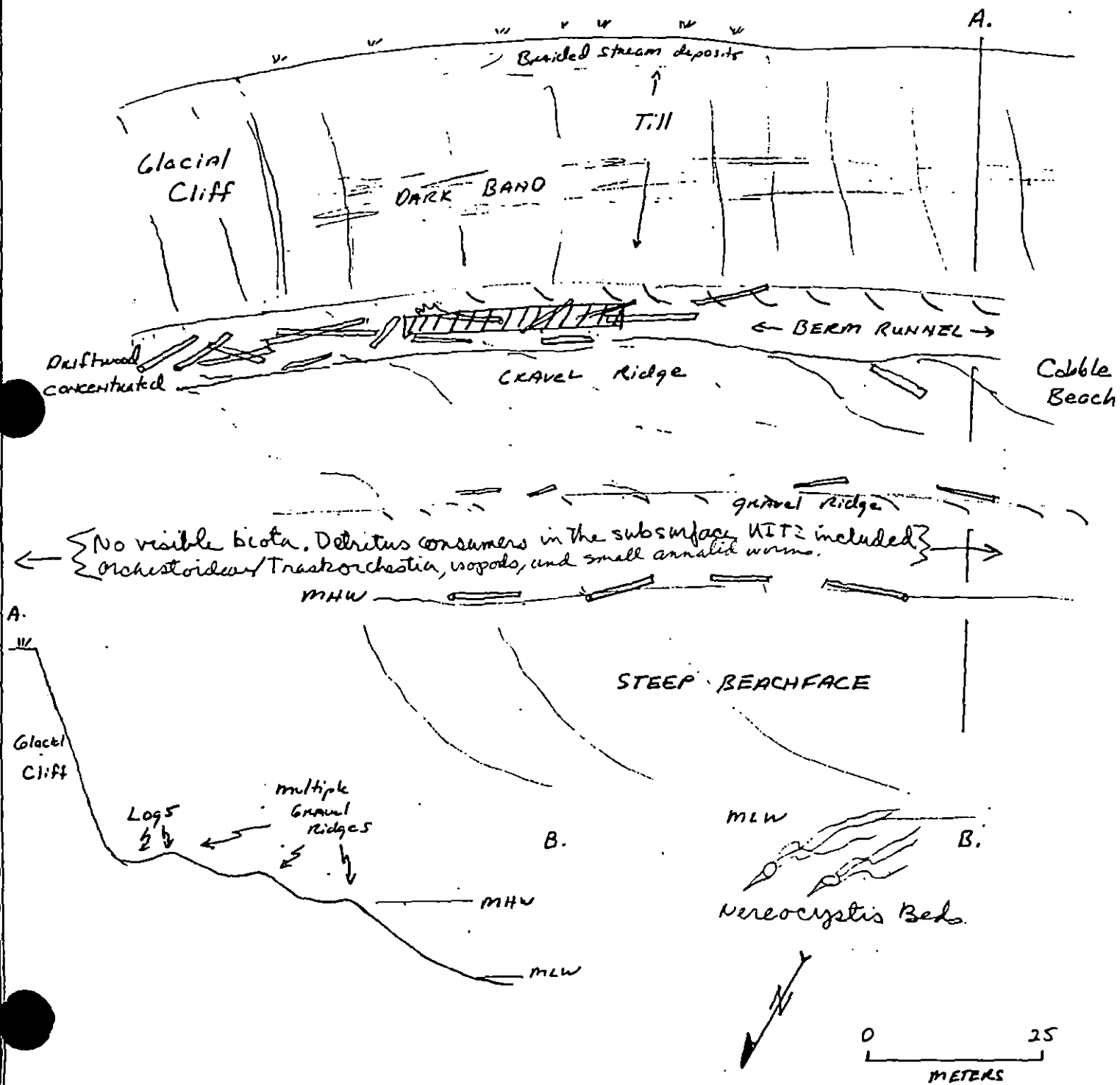
~~SECRET~~

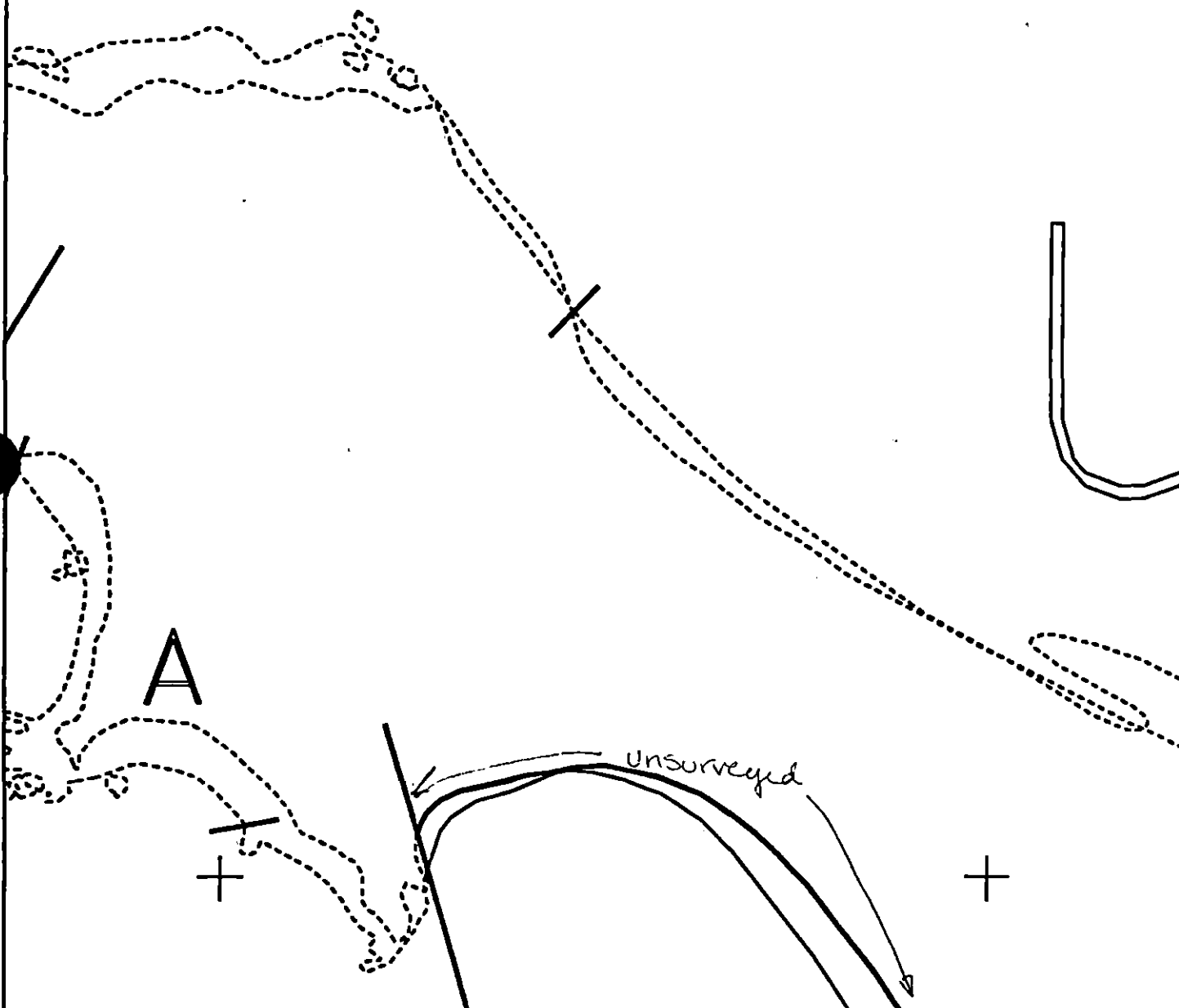
8 May 1991

1400 - 1505

Bio - N. Davis

B. ST-CT
2-4 m by 30m, $\angle 170$
Oiled logs at base
of cliff in beam
RUNNEL





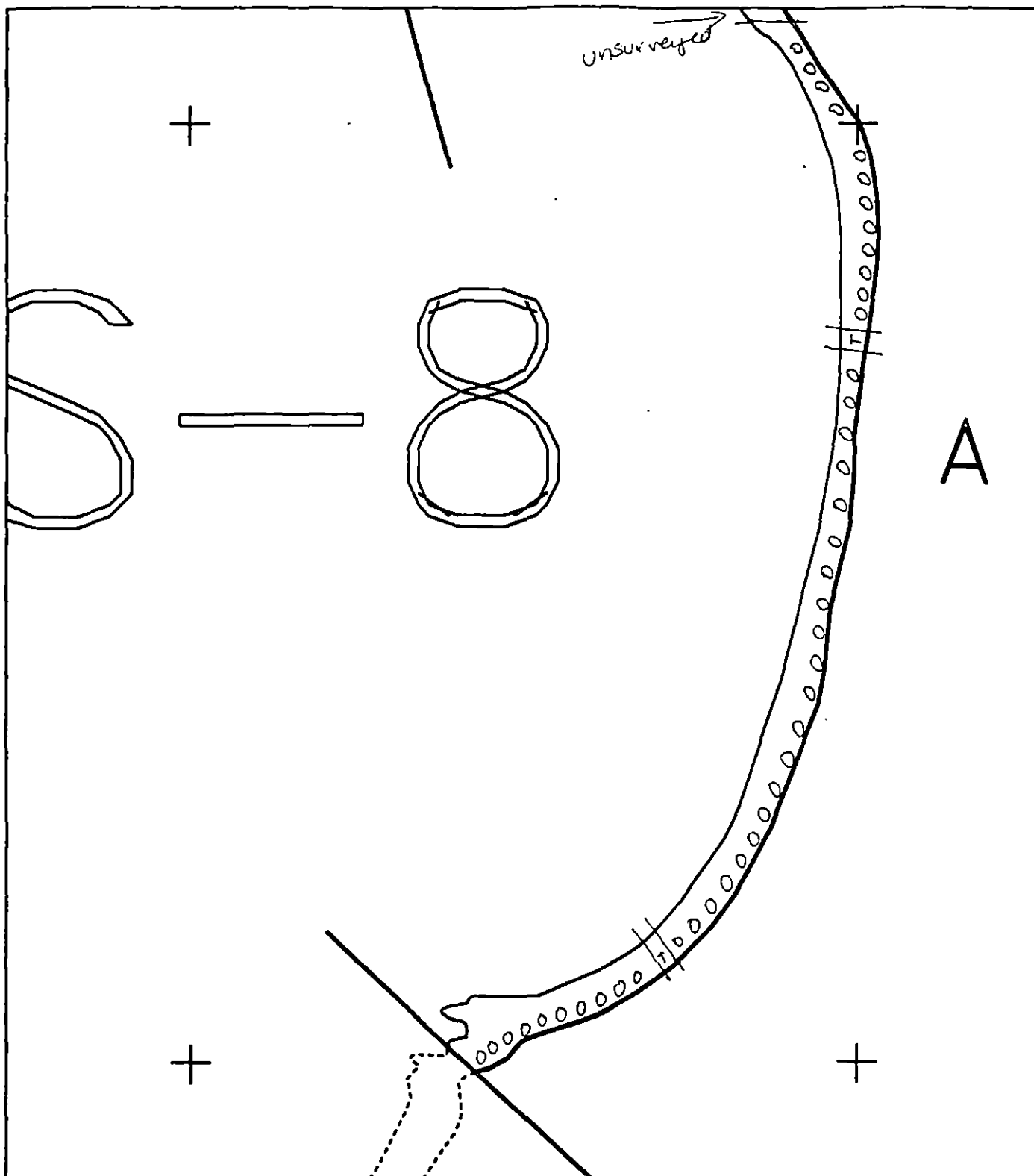
XXXX Wide
 //// Medium
 --- Narrow
 TTTT Very Light
 0000 No Oil

US008 A
 ADEC Subsegment Length: 2554m
 METERS

0 200 400
 AK State Plane Zone 4
 us008ab



Subdivision Field Map
 Map Key: KENUS008Ab
 Name: D. Fitzgerald
 Date: 8 May 1991
 Data Entered:



revised 5/11/91 KLG
 ZS reviewed 5/11

1991 MAYSAP EVALUATION

SEGMENT: US 008 SUB: A REGION: KEN SURVEY DATE: 5/8/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 5/15 - 9/1

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC

FOSC

EXXON

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

ADEC

NAME S. Ferguson

SIGNATURE [Signature]

☒ NTR ☐ TREATMENT RECOMMENDED

SUBDIVISION US-8A CONSISTS OF AN EXPOSED HIGH ENERGY SHORELINE. THE 2M X 150M BAND OF SOR OBSERVED PREVIOUSLY WASN'T OBSERVED ON THIS SURVEY. DUE TO THE INCREASE IN THE STORM RIDGE AND THE STRATA AND DEBRIS PILED IN SUPRA FEEL THAT IT WOULD WARRANT ANOTHER LOOK IN JULY (AFTER THE DECREASE IN THIS BUILD UP) TO SEE THAT INDEED THE SUBSURFACE OILED LENS NO LONGER EXISTS. PTS WERE DUE TO FORM TO FULLY UNDERSTAND WHETHER OIL IS STILL PRESENT OR NOT -> WOULD HAVE NEEDED A BACK HOE -> BUT JULY PITS MANUALLY WITH DG.

EXXON

NAME G. Stiles

SIGNATURE [Signature] 5/9/91

☒ NTR

No appreciable oil found therefore no treatment is recommended.

LANDMANAGER

NAME J. HARDISTER

OF L. SFUUS

SIGNATURE [Signature] 5/1/91

☒ NTR

No appreciable amount of oil located. Treatment not recommended.

USCG/NOAA

NAME Chief JENSEN, R. Hoff

SIGNATURE [Signature] Rebecca J. Hoff

☒ NTR

Further removal operations would cause environmental harm. The very small amount of oil to be removed.

SEGMENT US-8

SUBDIVISION

DATE 8 / Mar / 191

ENERGY LEVEL: ☒ H ☐ M ☐ L

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

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

EST. OIL CATEGORY LENGTH: W m M m N m VL 55 m NO 1745 m US 754 m

[illegible]

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 6 - 09 FRAMES 5-7

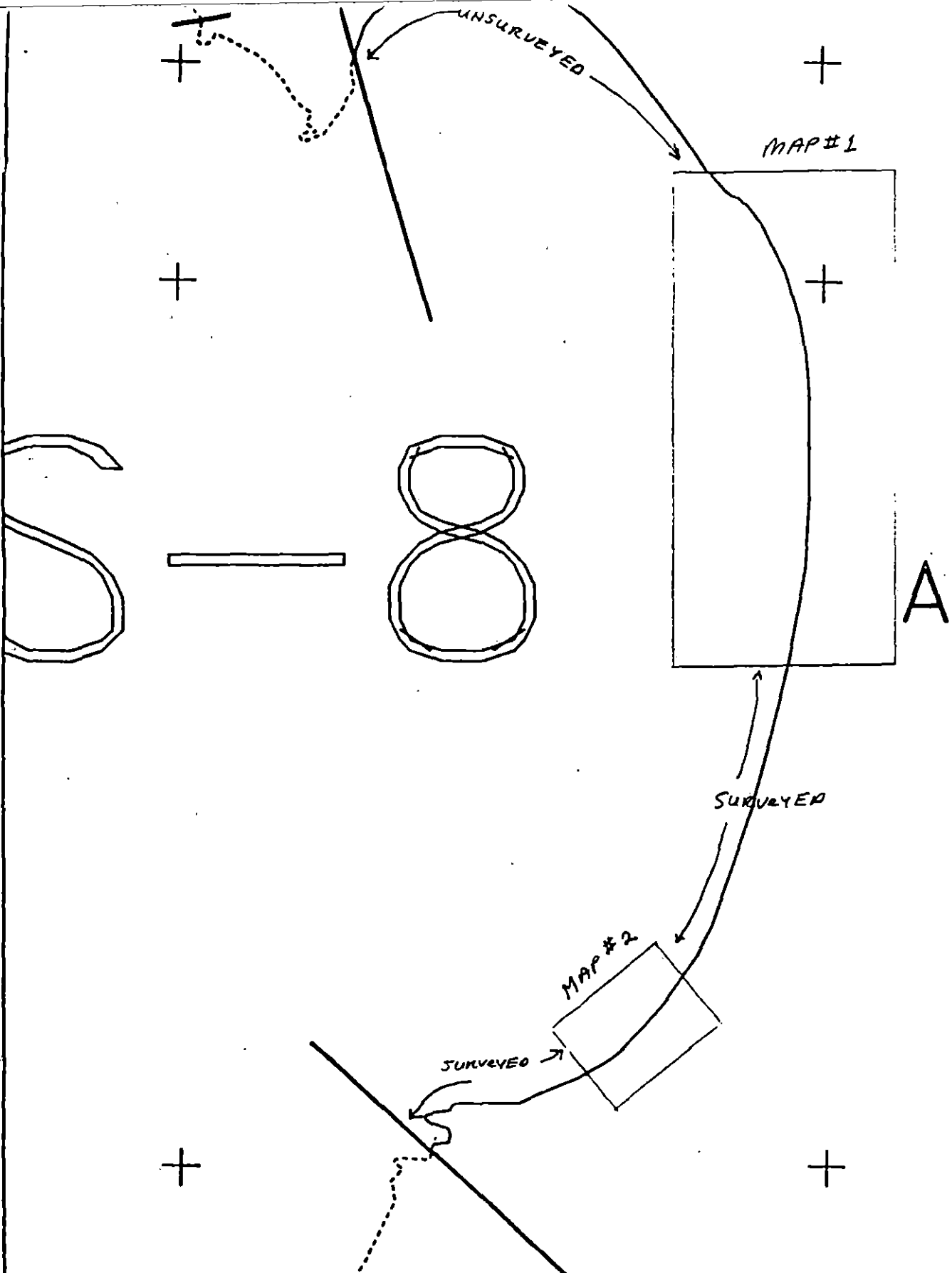
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	50							X	-				X				C-P	
2	59							X	-				X				P-G-S-C	
3	55							X	-					X			C-P-G-S	
4	45							X	-				X				C-P-S-G	
5	68							X	-				X				P-G-S-G	
6	70							X	-				X				C-P-S-C	
7	60							X	-				X				C-P-S-C	
8	50							X	-				X				P-S-G-C	
9	60							X	-				X				P-C-G	

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

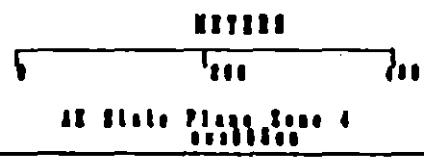
OG COMMENTS: This is a 2km long pebble/cobble beach backed by a glacial cliff and situated between two bedrock headlands. Sediment coarsens toward the headlands. The beach is highly exposed and multiple storm ridges exist along its length. A large number of logs cover the upper beach adjacent to the cliff. Previous surveys of this beach indicate two major diking sites: 1) 2m by 150m band of SOR in the SUTZ at middle of beach, and 2. oiled logs at the southern end of beach. Nine pits scattered along a 400m length of beach for 1m and the SOR deposit. Only a trace of TP and CT/ST cobbles were found along a 25m interval on the beach. With the exposure of this beach, it is quite possible that winter storms reworked the upper beach and the SOR was abraded and dispersed. The oiled log deposit has been reduced to 30m long, down from 100m in August 1991. revised 5/11/91 KG

revised 5/11/91 KG

Reviewed 5/11



US008 A



Subdivision Field Map
Map Key: KENUS008A
Name: D. FITZGERALD
Date: 8 MAR 1990

LOGS
 " " " " Gnarly
 ↗ Photo Sites

SKETCH MAP #1 (OG)
 US-8-A
 D. Fitzgerald
 8 MAY 1991
 1400 - 1505

A. ST/CT
 TB
 2 by 25m, < 190
 ON individual cobbles
 Around 1095

INTERMITTENT / WATER FALL
 STREAM

SMALL
 EPHEMERAL
 STREAM

GLACIAL SEDIMENT CLIFF

SOD
 Blocks

OUTWASH

Till

ALLUVIAL
 FAN

Pebble Beach

Δ 1. Δ 2.

Δ 5. Δ 6.

Δ 9.

Δ 3.

Cobbles / Pebbles

MHW

MAJOR GRAVEL
 STORM RIDGE
 WITH CUSPS

SECONDARY RIDGE DEW

MLW

GLACIAL
 CLIFF

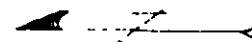
Peb Granules
 Sand/Cob.

MHW

Cobbles

MLW

0 100
 METERS



revised sketch 11/91

W 41 grassy

Logs

Photo Sites

SKETCH MAP #2 '06

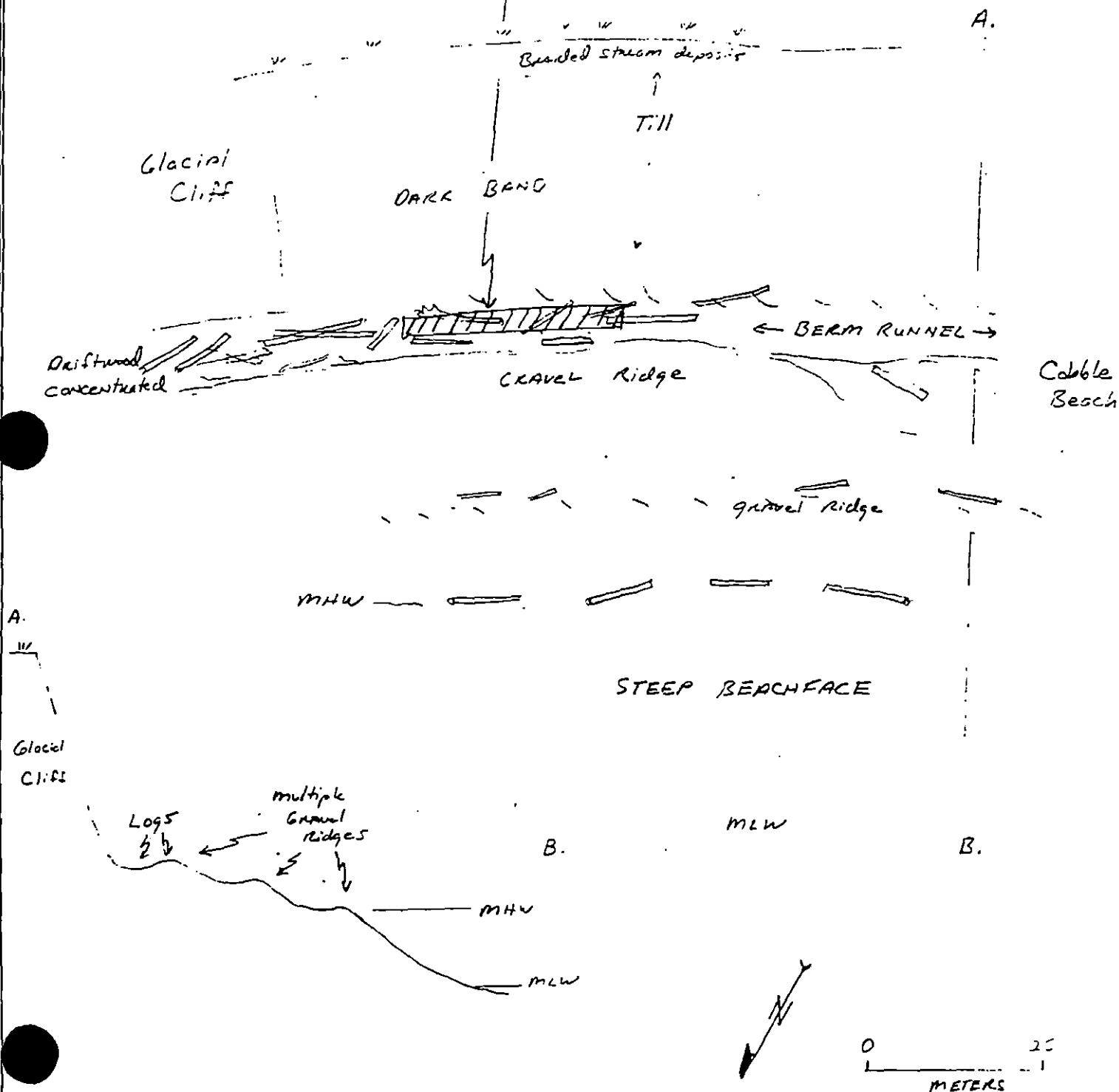
US-8-A

D. F. Fitzgerald

8 MAY 1931

1400 - 1505

B. ST-CT
2-4 m by 30 m, <190
Dried logs at base
of cliff in BERM
RUNNEL



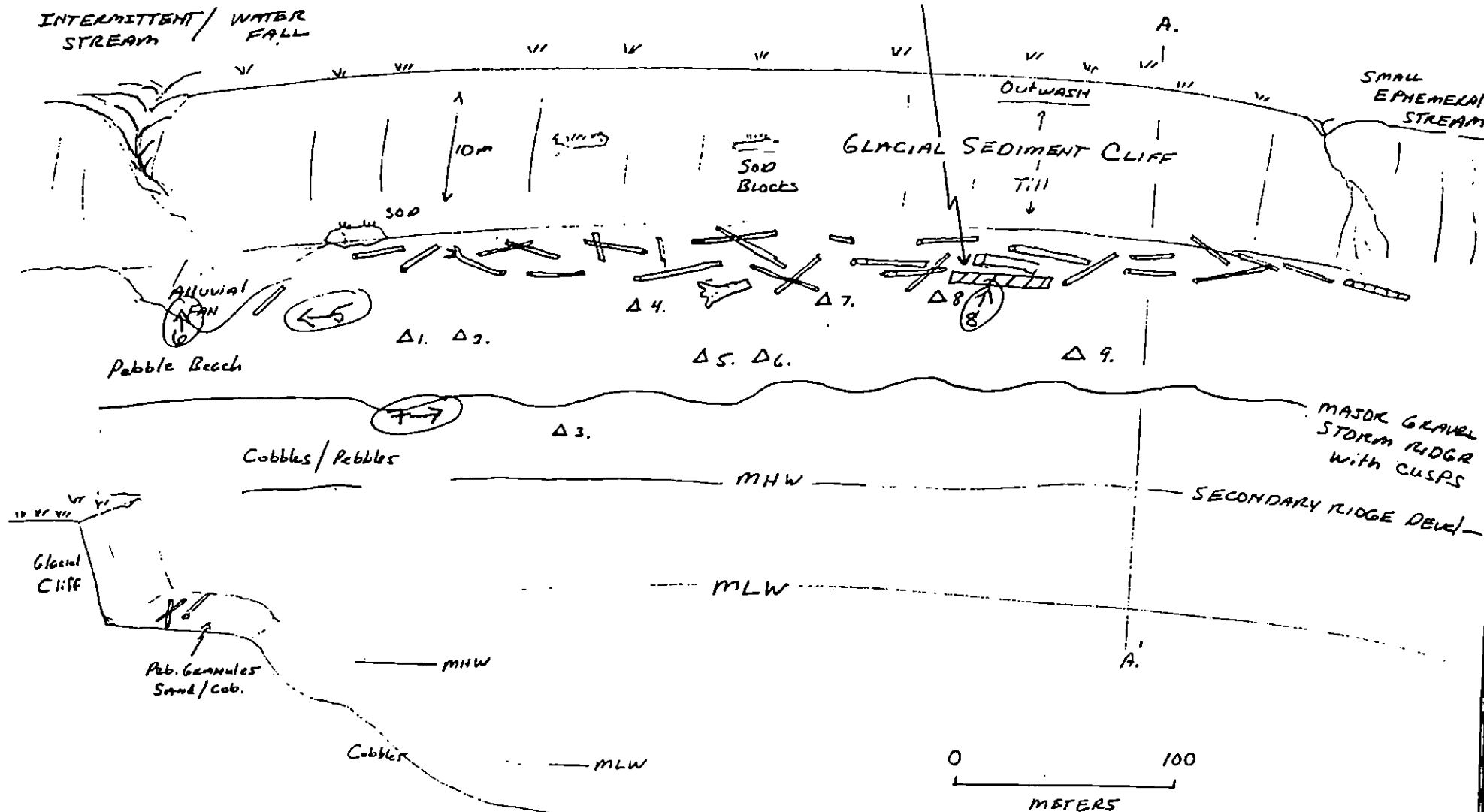
revised sketch
ST-CT 5/11

LOGS
 " " GRASSY
 ↗ PHOTO SITES

Photo Locations
 Mapap 6-09 # 5-8

SKETCH MAP #1 (OG)
 US-8-A
 D. FITZGERALD
 8 MAY 1991
 1400-1505

A. ST/CT
 TB
 2 by 25 m, < 190
 ON INDIVIDUAL COBBLES
 AROUND 1095



KAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 Helo

DATE May 8 1991

SEGMENT # 45-8

TIDAL HEIGHT(Range) 7ft-5ft (14:00-15:15)

SUBDIVISION A

BIOLOGIST H. Davis

SEA STATE 2 ft

WIND SPEED/DIRECTION 5 mph 46 knots N

PHOTOGRAPHS: ROLL # 6-09

FRAME # 5-8

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

A+B. No birds in the oiled area. Below the oiled area in the UETZ + SE TZ
There was a dense population of detritus feeders. *Orchestoidea*, *Trachocaris*
in unknown wood and small whitish annelids.

Cormorant sp. (> 6) Northern Harrier (1) Mallard pair (2) Greater Scaup (6)
same palmated plover (1) Western Sand piper (2) Red Necked Phalarope (3)
Glaucous-winged, Mew Gulls, Kittiwakes (> 30) Fox Sparrows (3) American pipit (1)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1 *	1	Sculpins
Seabirds <i>cormorants</i> sp.	1	> 6	
Waterfowl	2	8	
Gulls/kittiwakes	3	> 30 <i>New, Kittiwake</i> <i>Glaucous-winged</i>	
Shorebirds	3	6	
Corvids			
Other Birds	3	6	

* Same bird as seen on 45-7

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters	0	River otter Tracks	2 pair?
Pinnipeds (specify)	0		
Whales (specify)	0		

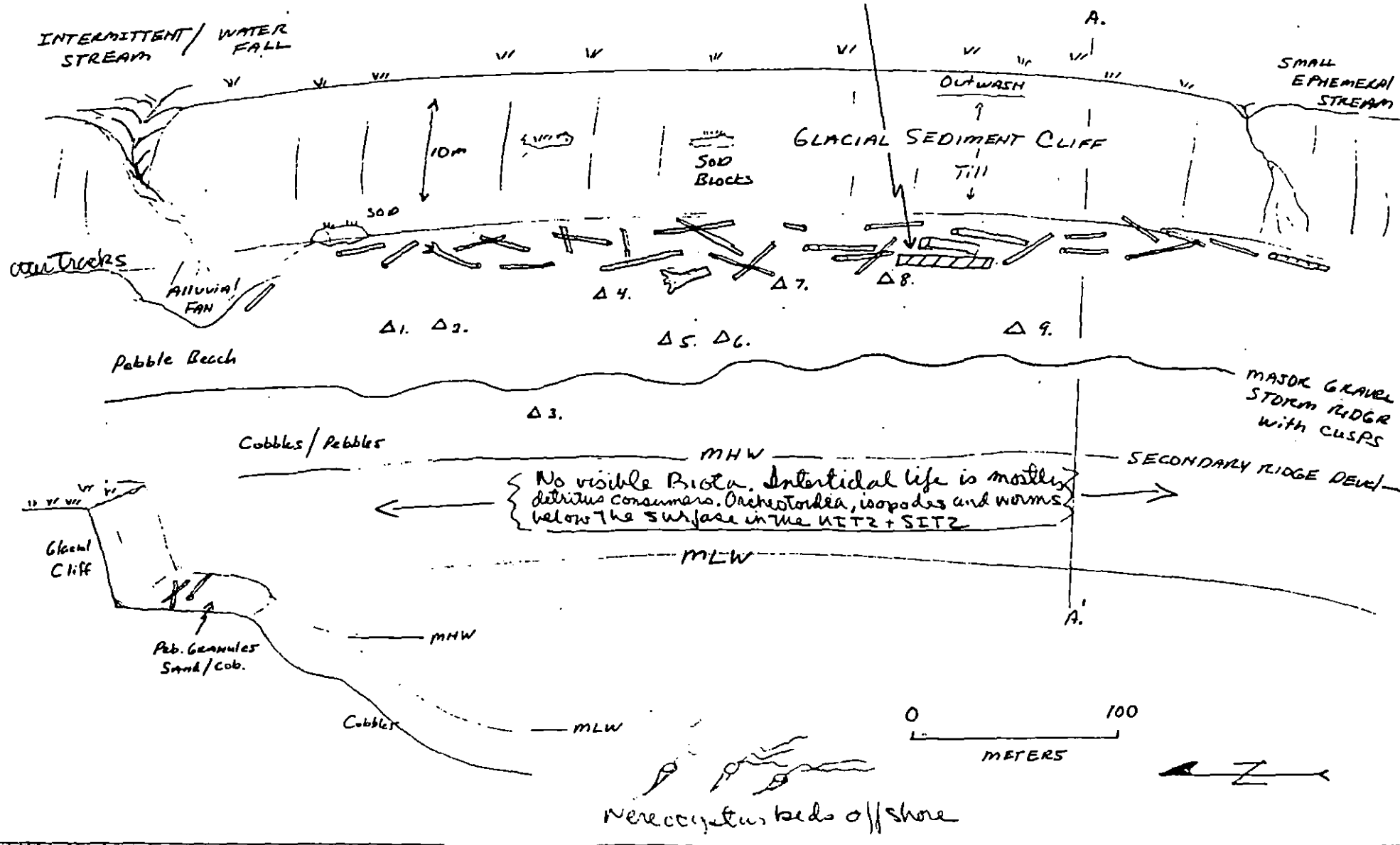
Shoreline subdivision map showing important biological features attached.

GRASSY
 PHOTO SITES

Bio Map (1)
 BIO-W. Dains

SKETCH #1 (1/2)
 US-8-A
~~GLACIAL SEDIMENT CLIFF~~
 8 MAY 1991
 1400 - 1505

A. ST/CT
 TB
 2 by 25 m, < 190
 ON INDIVIDUAL COBBLES
 AROUND 10%



Bio Map(2)

W V grassy

Logs

Auto Sikes

SKETCH MAP #2

US-8-A

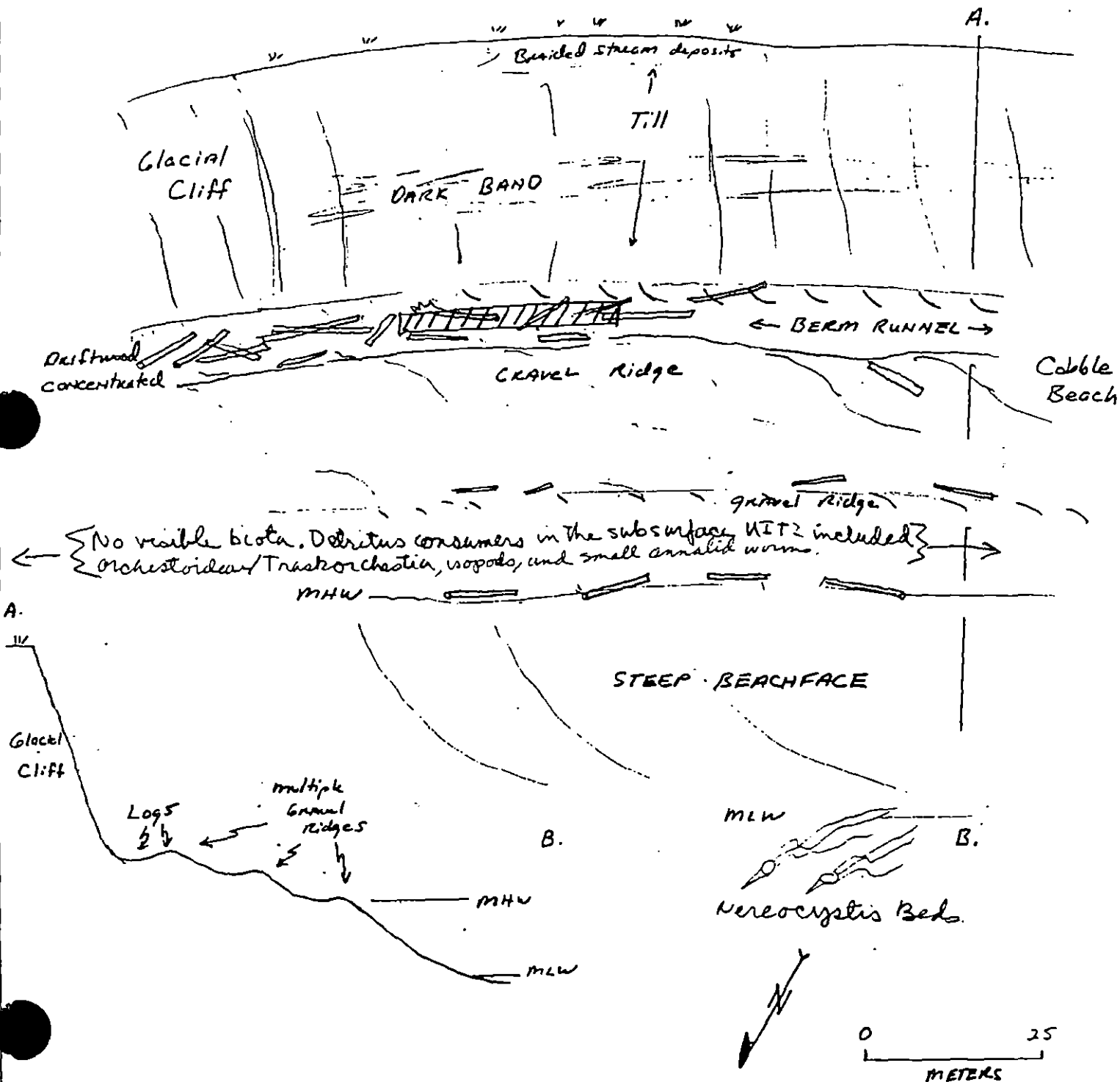
~~ST-CT~~

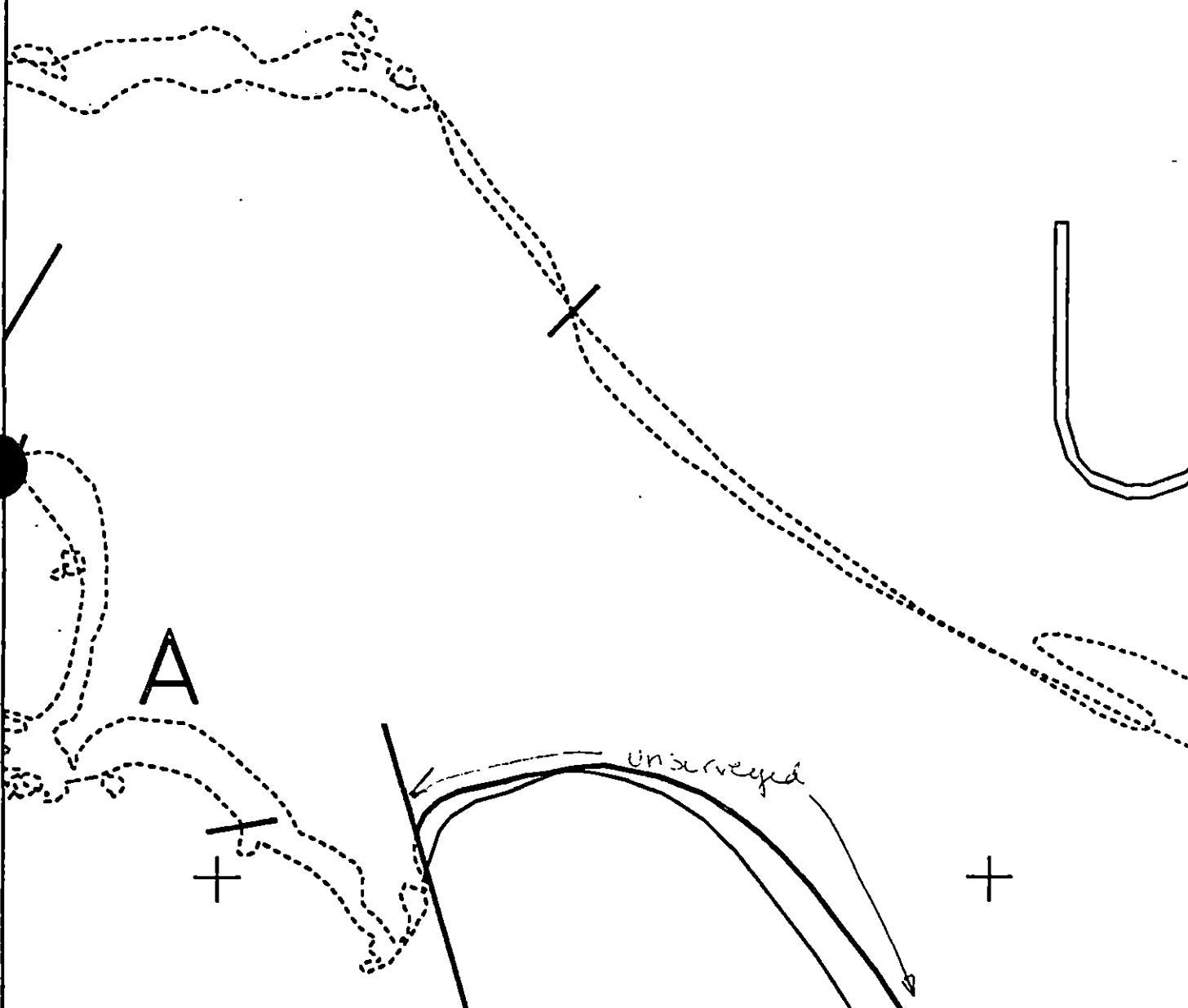
8 May 1991

1400 - 1505

Bio - W. Davis

B. ST-CT
2-4 m by 30m, <170
Oiled logs at base
of cliff in berm
runnel





XXXX
 ////

 TTTT
 0000

Wide
 Medium
 Narrow
 Very Light
 No Oil

US008 A

ADEC Subsegment Length: 2554m

METERS

5 200 400

AK State Plane Zone 4
 800000b



Subdivision Field Map

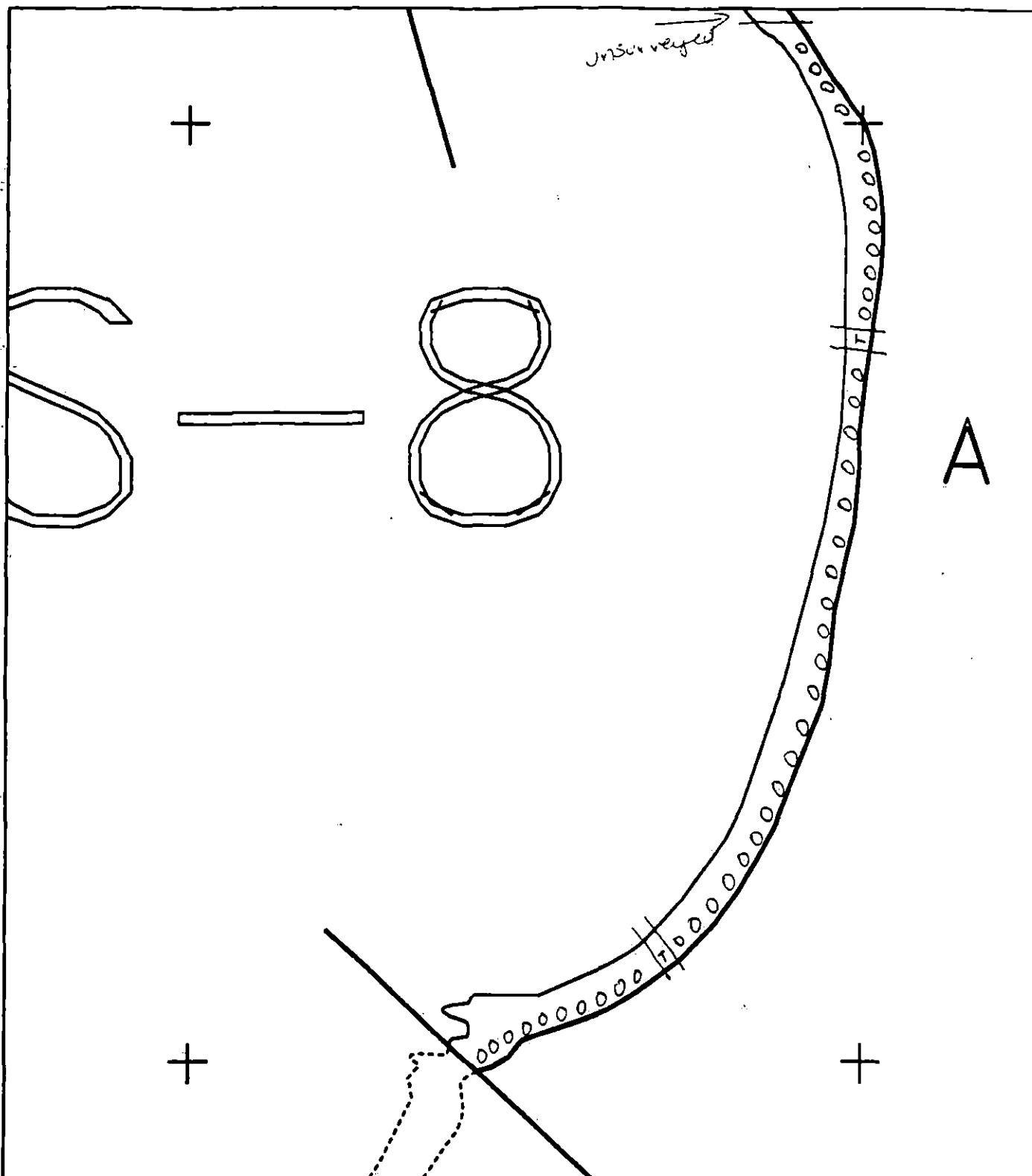
Map Key: KENUS008Ab

Name: D. Fitzgerald

Date: 8 May 1991

Data Entered:

ES revised 5/11



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

US008 A
 ADEC Subsegment Length: 2554m
 METERS
 0 200 400
 AK State Plane Zone 6
 4800000



Subdivision Field Map
 Map Key: KENUS008Aa
 Name: D. FITZGERALD
 Date: 8 MAY 1993
 Date Entered:

revised 5/11/91
 25 reviewed 5/11

REGION: KENAI

SEGMENT: ST/US-09

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ US-09 SUBDIVISION A (1 OF 1) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
USFWS Property

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 38 m: V.Light 159 m: No Oil 1317 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 13 cm

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

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

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A** Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 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 unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 30, 3Q** Harbor seal and sea lion pupping (5/15 to 7/1)
 Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R** Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S** Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T** All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U** Recreation: Tent sites (6/1 to 9/15)
6V Anchorages (6/1 to 9/15)
6W Forest Service cabins (6/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination
- 7Z** Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH Finfish harvesting
7H Deer harvesting (8/15 to 2/28)
7J Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ US-009 SUBDIVISION: A DATE 4/26/98

JSCG NOAA

NAME Wiles D. Hayes SIGNATURE Wiles D. Hayes☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

an exposed, high-energy area of wave-cut rock platform
between two high-energy gravel beaches (US-5 & US-10).

Manual pickup of scattered mussels recommended for the
two ends of the area.

Rock mussels in central area should be left undisturbed.

ADEC

NAME Russell Kuribe SIGNATURE Russell Kuribe☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Within the first 50 m of US-9 there was a splashy distribution
of mussels in the cracks of the bedrock. The oiling is a continuation
of the oiling at the end of segment US-8. Within 100 m of US-10 there was
a splashy distribution of mussels in the bedrock and a broken area of soft asphalt.
Recommended treatment: Manual removal of the mussels and asphalt
at the two ends of the segment. These areas can easily be accessed from
the adjoining segments and the work can be accomplished in conjunction
with the work on US-8 and US-10. No other treatment is recommended.

LAND MANAGER

NAME Gerald M. Nugent SIGNATURE Gerald M. Nugent (USFWS)☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

See OG Map - Manual removal of mussels/patients
should be accomplished in conjunction with any
clean-up activities conducted on segments 8 and 10.
Activities over the remainder of the segment would
be dangerous because of the topography and impracticable.

SHORELINE OILING SUMMARY

REVISION NO 06/12/90

OG N. BIGGAR USCG MILES HINTS (NOAA) SEGMENT ST/ 45-009
 RIO PAUL BAIDEN LAND REP FERRY N. H. F. W. SUBDIVISION 1 (1 OF 1)
 EXXON JOHN DEAN ADEC RUSSELL RUMBLE TIME 9:00 to 11:30
 TEAM NO. 17 TIDE LEVEL -1.5' to 6' DATE 4/24/90
 EST SUBDIVISION LENGTH: 1650 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 30 % B 50 % C 10 % P — % G — % S — % M — % V — %
 SLOPE Long 100 % Hang — % Vert — % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W — m M — m N 27 m VL 290 m NO 1331 m
300

SURFACE OIL

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

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris	X		

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE 1 pump prim#BAGS 41

Photographs:

Roll No. 4Frames 6-9

SUBSURFACE OIL

PIT NO	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE-SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	SU	U	M	U				
1	15		X				10-13		X				X		X					N		P.g.
2	25					X			X						X						22	P.g.c
3	20					X			X						X							P.g
4	34					X			X						X							S, P.g
5	33					X			X						X							P.g
6	25					X			X						X							P.g

COMMENTS 1 - between B1(42 diameter) - subsurface NS on p-g asphalt under b-armor beach

Where observed, oil was concentrated in UTE, except for a slight amount of sheen observed on L2. Pit 7 detected no oil in close proximity to sheen - and sheen was about 30 m down beach from any oil spatter or patches. Pretty high exposure beach - lots of boulders. Mousse found in small notches and crevices on top surfaces of boulders. Followed from under of g.p. debris boulders. Deep line spatter observed on R face of N end of segment; on S end, deep lines all around.

REVIEWED BAT DATE 29 Apr 90

SEGMENT ST/ 45-009 SUBDIVISION A (1 OF 1)

COMMENTS

REVIEWED BAT DATE 29 Apr 90

06. 11. 2000

SEGMENT 2.000

SUBDIVISION

DATE 1 124 90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Sep/Sub Entry
- ☒ Off Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HMA/LMA
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pit Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

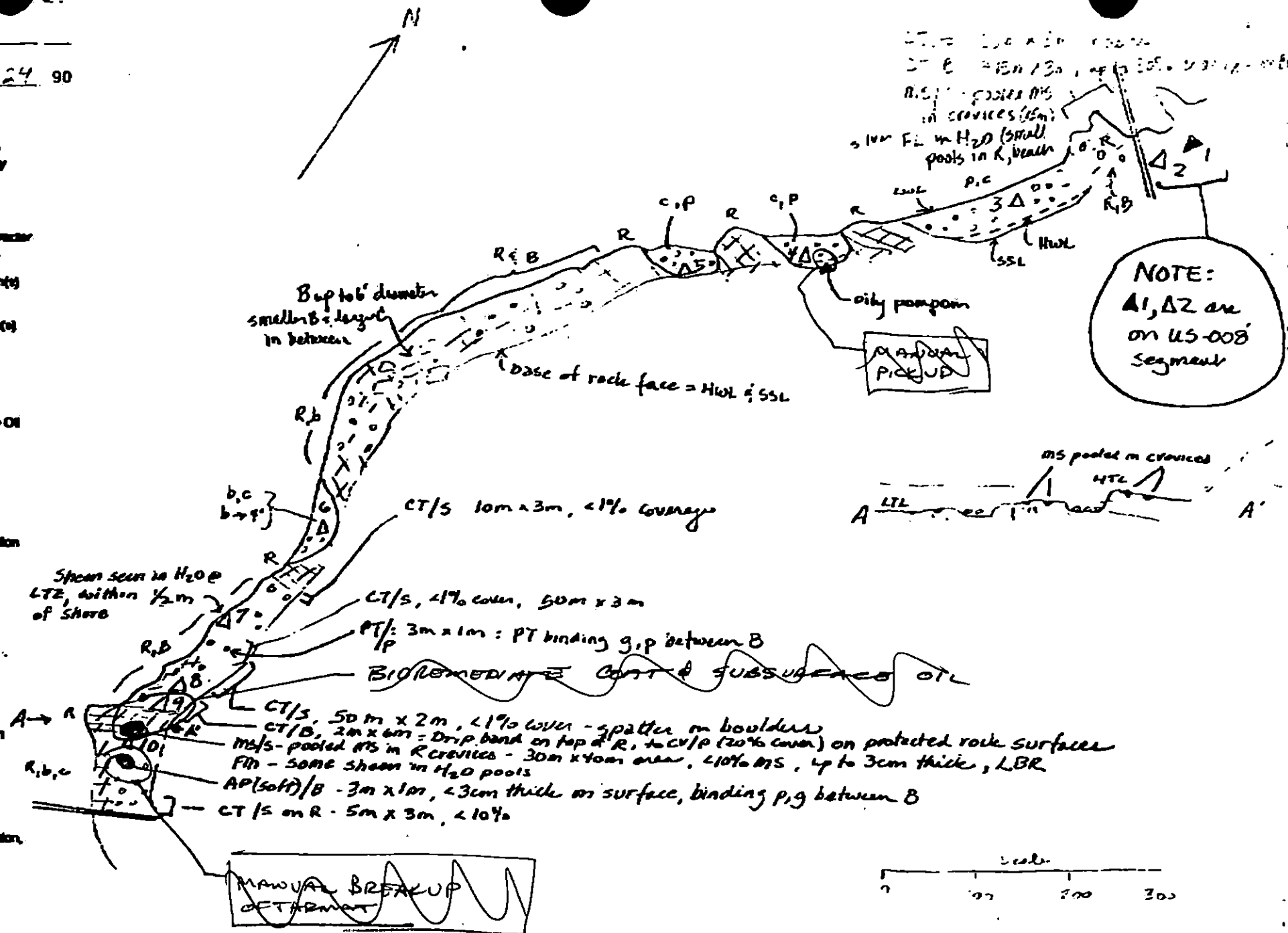
CT/P
Patchy Distribution

CT/S
Spashed Distribution

lll
No Vegetation

1 ●
Photo location, direction,
and number

ETCH MAP



SHORELINE ECOLOGICAL SUMMARY

REVISION 03/20/90 (19)

Segment ST / U5009 Subdivision A Date (mo / day / yr) 4/27/90Time: (24 hr) 8:30 Biologist DANIEL RAIDER

(A) Substrate type and % of segments:

(1) Bedrock 30 (2) Boulder 50 (3) Cobble 10 (4) Pebble 0 (5) Sand 0 (6) Silt 1(B) Overall % cover of biota (% of segment): Dense 30 Moderate 20 Low 50
↳ to none

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

Photographs:

Roll No. 4Frames 6-9

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

see attached sheet for "wildlife sightings"

This remote beach has a very thick blanket of vegetation (kelp) in the LTR area with many animals. This is a very sensitive habitat.

Ecological Considerations:

None on DATA SHEET

(23)

Wildlife sightings for US009

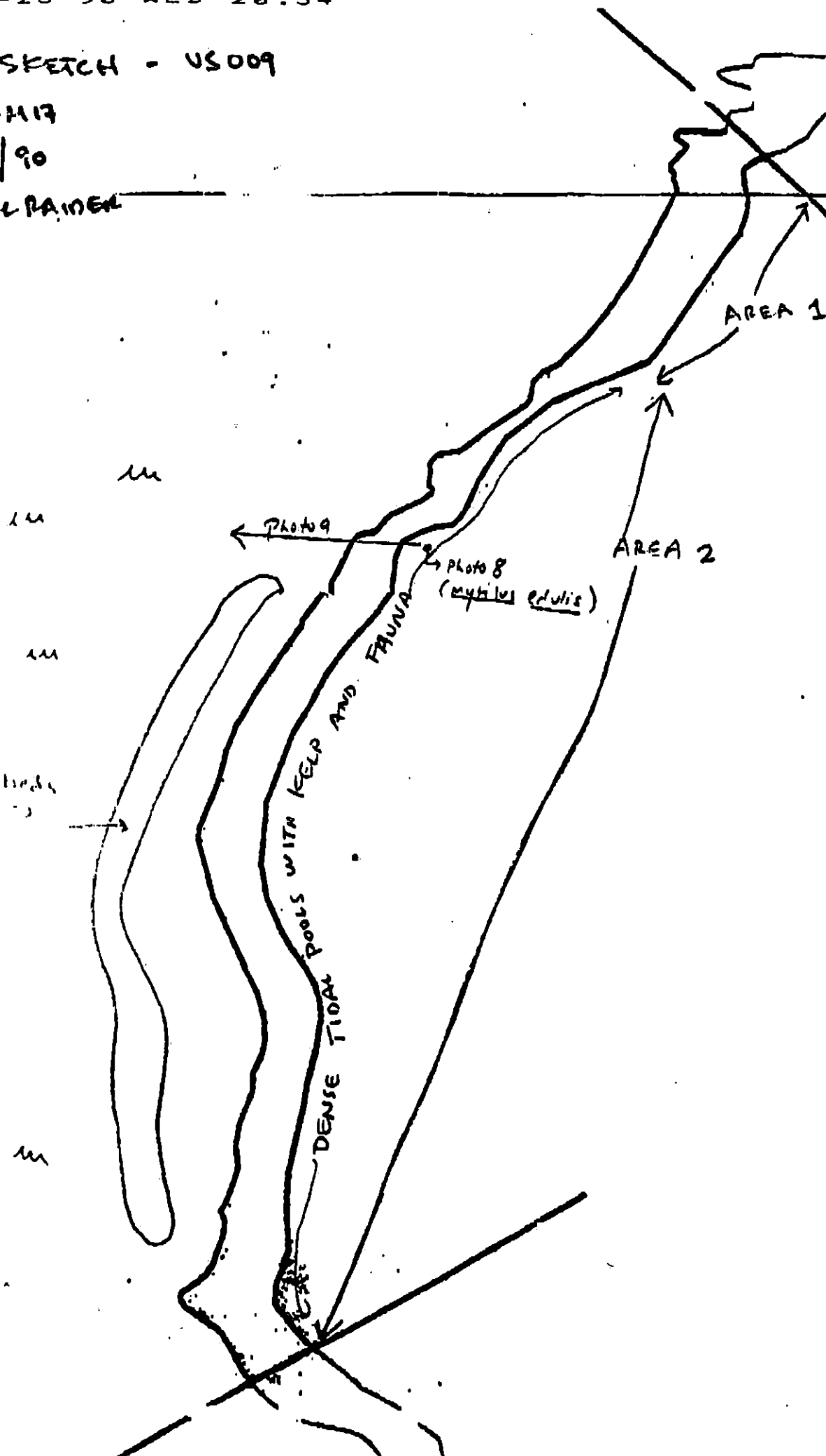
	<u>Name</u>	<u>Amount</u>	<u>Comments</u>
1)	Cormorant sp	10	(Palagiz ?)
2)	Glaucous-Winged Gull	17	
3)	Mallard	2	offshore
4)	Harlequin Duck	8	
5)	Raven (common)	1	
6)	Black Oyster Catchers	4	
7)	Song Sparrow	6	
8)	Grebe (sp?)	1	Red-Necked (?)
9)	Bald Eagle	1	immature - 2 w/ly
10)	Sea lions	6	off-shore

BIO SKETCH - US009

TEAM 17

4/90

DANIEL RAINER





XXXX Wide

US-9

Map Key: KEN-US-9b

/// Medium

Name: N. BIGLER

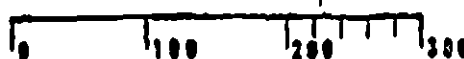
--- Narrow

Approx. Segment Length: 1586m

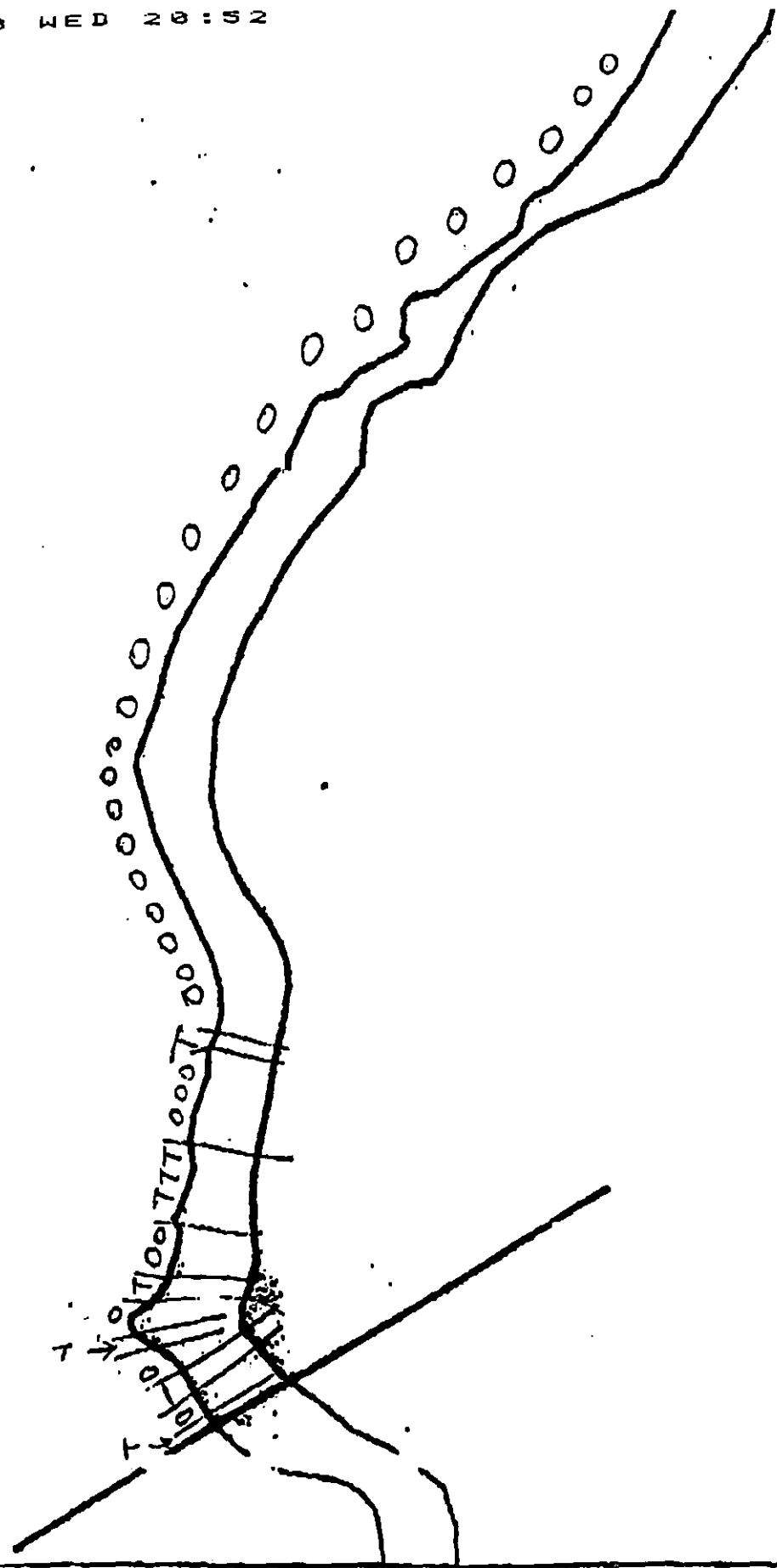
Date: 4/24/90

TTTT Very Light

OOOO No



(16)



XXXX Wide

// Medium

--- Narrow

TTTT Very Light

US-9

Approx. Segment Length: 1386m

Map Key: KEN-US-9a

Name: N. BIGNAR

Date: 4/24/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT US-9 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

No ecological time constraints.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 6/04/90
ADEC Roy Monas
EXXON AMY TGA
NOAA Joseph J. Lelagis
USCG John A. Seiter

FOSC [Signature] DATE 6/5/90

Prepared By: Andrew Meyer

Date 6/2/90

US-8

US-9

US-10

Work area

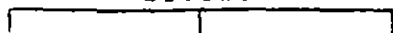
Work area



Exxon Company, USA
Map Key: KEN-US-9



ECOLOGY MAP
SEGMENT US-9
SUBDIVISION A (1 of 1)
METERS



Seabird Colony



Eagle Nest

1:25,000 - 1330 feet

SHORELINE EVALUATION

SEGMENT ST/ US-09 SUBDIVISION A (1 OF 1) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
USFWS Property

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

SHPO SIGNATURE: J. David McMahon

DATE: 5/10/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 38 m: V.Light 159 m: No Oil 1317 m
Subsurface Oil Observed: Yes X No Maximum Depth 13 cm

RECOMMENDATIONS:

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

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

COMMENTS: See Addendum dated 6/2/90 JPP

TAG COMMENTS: MANUAL PICKUP OF DEBRIS + ASPHALT AND BIOREMEDIATE
AS INDICATED ON SKETCH.

TAG APPROVAL DATE: 5/8/90

ADEC Aet Werner
EXXON Amy Ten
NOAA Gary Petros
USCG G.A. REITER

FOSC: ML

DATE: 5-15-90

Bioremediation not authorized. USF+WL
Rep to be on site.

SHORELINE EVALUATION

SEGMENT ST/ US-09 SUBDIVISION A (1 OF 1) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
USFWS Property

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

SHPO SIGNATURE: J. David McMahon DATE: 5/10/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 38 m: V.Light 159 m: No Oil 1317 m
Subsurface Oil Observed: Yes X No Maximum Depth 13 cm

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS: MANUAL PICKUP OF DEBRIS + ASPHALT AND BIOREMEDIATION
AS INDICATED ON SKETCH.

TAG APPROVAL DATE: 5/8/90

ADEC Aet Weirson J. L. Lewis

EXXON Andy Ten Beet

NOAA Gary Petree Andy Petree

USCG GA. REITER C. D. Foster

FOSC: My L DATE: 5-15-90

Bioremediation not authorized. USF+WL
Rep to be on site.

CHECKLIST

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

LEGEND

1 Δ
PH - No Subsurface Oil

2 Δ
PH - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

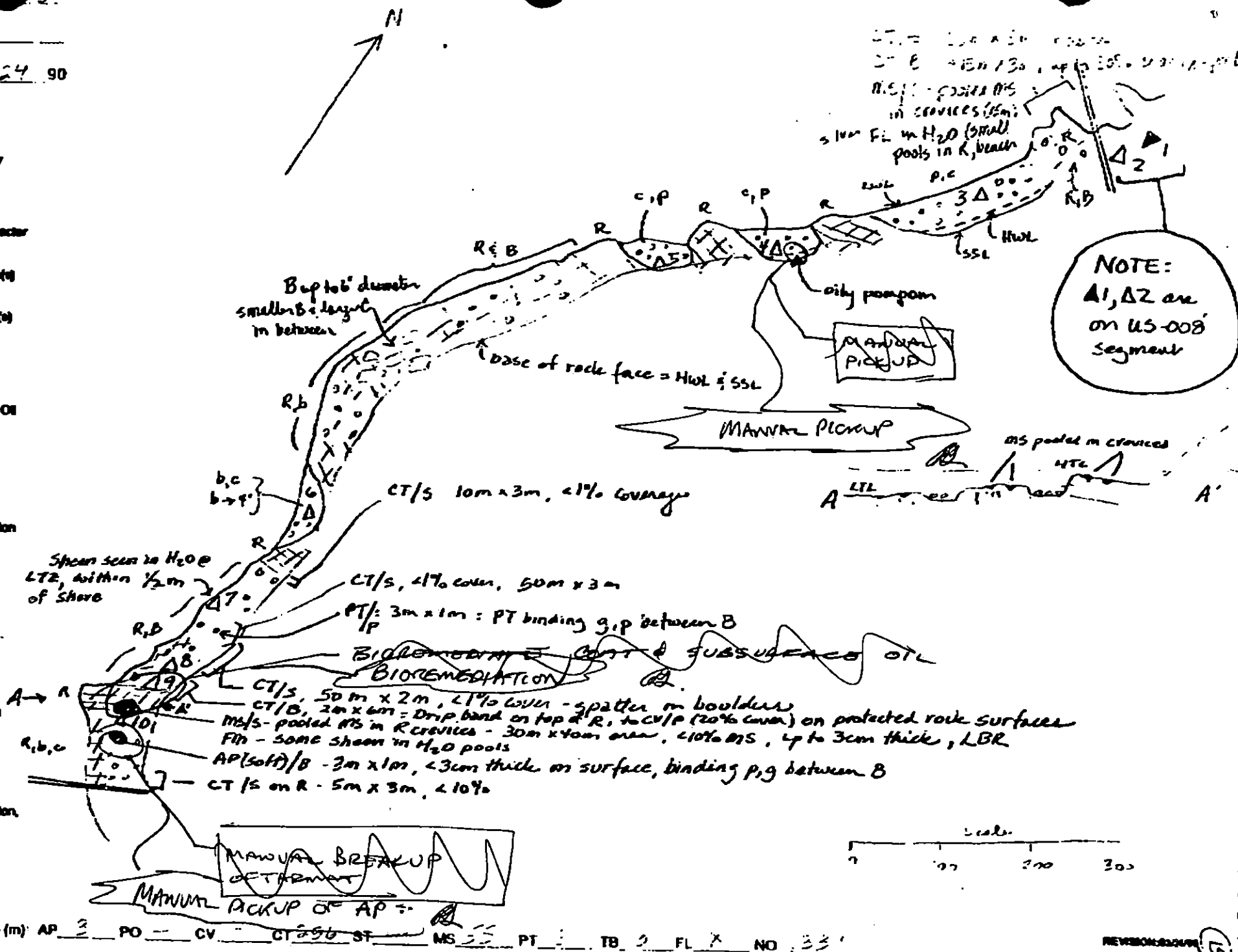
CT/P
Patched Distribution

CT/S
Splashed Distribution

Oil Vegetation

1 ●
Photo location, direction, and number

ETCH MAP

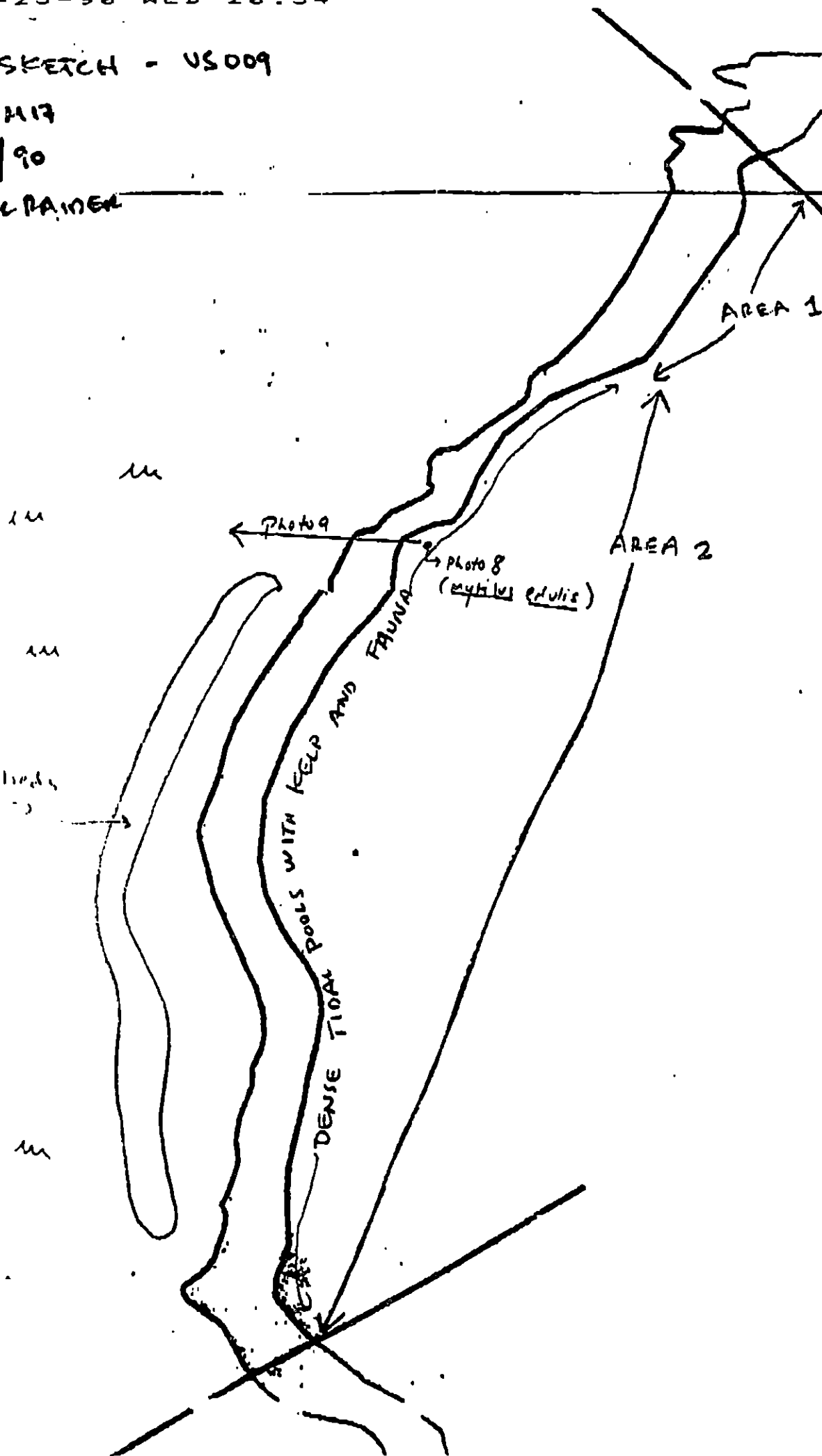


BIO SKETCH - US009

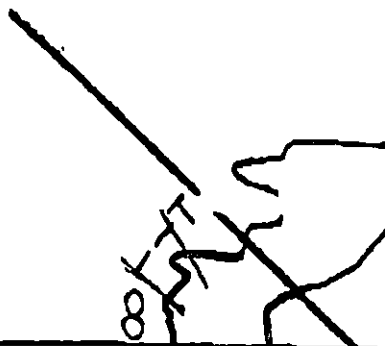
TEAM 17

124/90

DANIEL RAINER



(17)



XXXX Wide

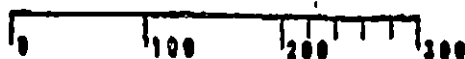
US-9

/// Medium

--- Narrow Approx. Segment Length: 1586m

TTTT Very Light

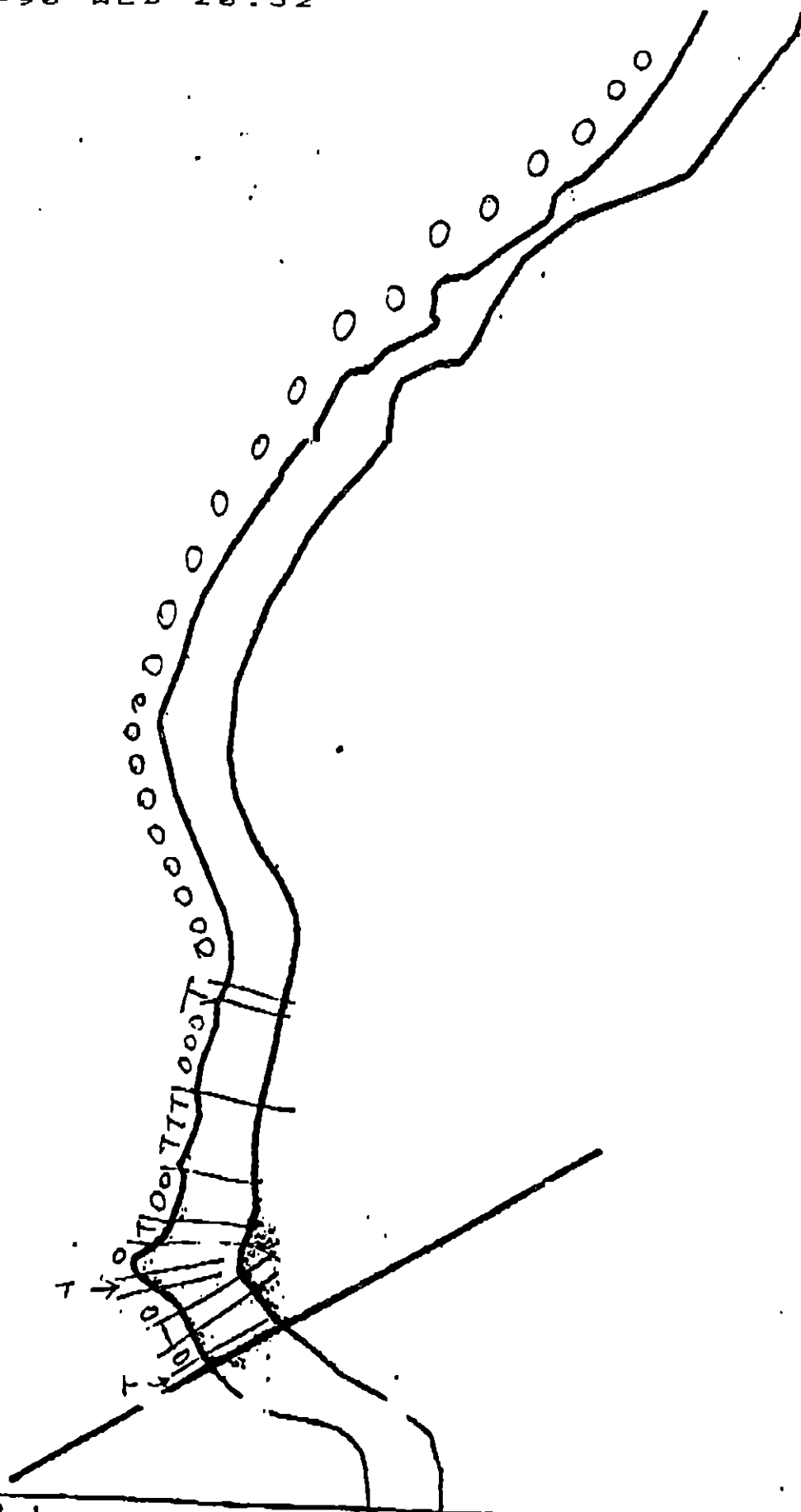
0000 No Oil



Map Key: KEN-US-9b

Name: N. BIGGER

Date: 4/24/90



XX Wide

/// Medium

--- Narrow

TTTT Very Light

OOOO

US-9

Approx. Segment Length: 1586m



Map Key: KEN-US-9a

Name: N. BIGGAR

Date: 7/24/90

1991 MAYSAP EVALUATION

SEGMENT: US 009 SUB: A REGION: KEN SURVEY DATE: 5/8/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 5/15 - 9/1

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Rachel Doe Doe Date: 5/22/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

N

2

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Custombien

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 22, 1991

FOSC APPROVAL DATE: 6/1/91

ADEC

EXXON

USCG

NOAA

FOSC

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

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

ADEC

NAME S FERGUSON SIGNATURE _____

☒ NTR ☐ TREATMENT RECOMMENDED

NO TREATMENT RECOMMENDED AT US-9A. THIS AREA CONSISTED OF VERTICAL AND HORIZONTAL BEDROCK WITH WAVE CUT PLATFORMS THAT HAD TRACE MS/LT/ST. ON THE BEDROCK A 2x30m BAND OF ^{WAVE} P-CT/ST WAS OBSERVED. THIS IS A HIGHLY ENERGISED BEACH DUE TO EXPOSURE AND LOCATION.

EXXON

NAME G. Stiles

SIGNATURE George B. Stiles 5/9/91

☒ NTR

There was no appreciable oil located therefore I recommend no treatment.

LANDMANAGER

NAME J. HARDISTER

OF USFWS

SIGNATURE J. P. Hardister 5/9/91

☒ NTR no removable oil located.

USCG/NOAA

NAME Chief JENSEN / R. Hoff

SIGNATURE Rebecca Hoff

☒ NTR

There is no longer any detectable oil present on the water, adjoining shorelines, or places where it is likely to reach the water again. Concur with other comments, negligible amounts of oil require no further treatment.

9

MAP #1

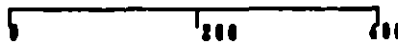
A

1



US009 A

METERS



AK State Plane Zone 4
NAD83

Subdivision Field Map

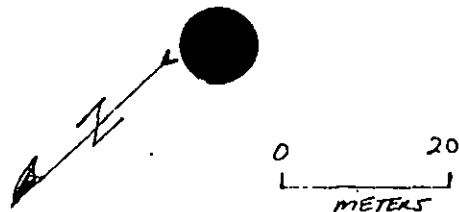
Map Key: KENUS009A

Name: D. Fitzgerald

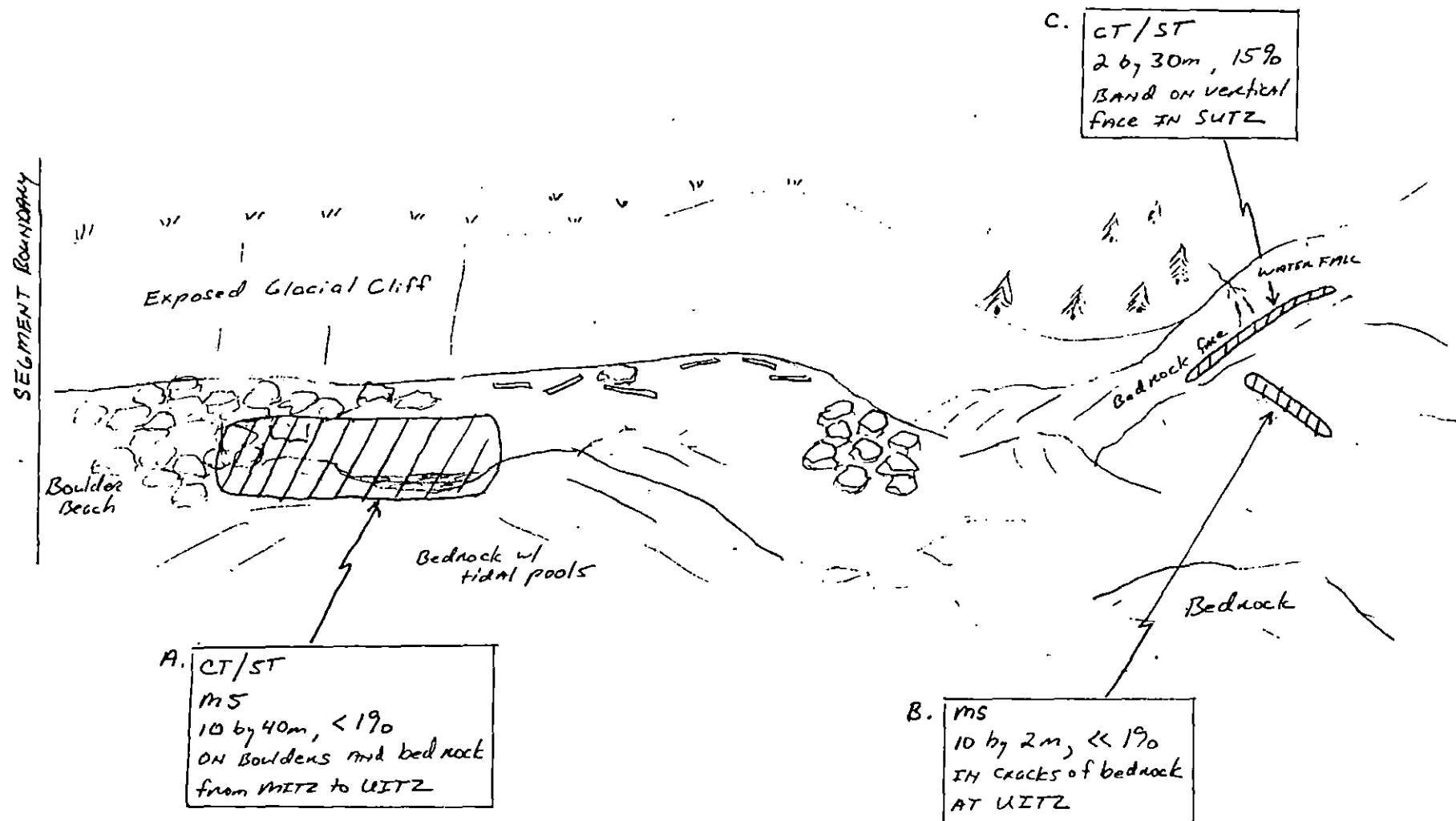
Date: 8 MAY 1991

SE reviewed 5/11

- LOGS
- GRASSY
- EVERGREEN TREES
- PHOTO SITES



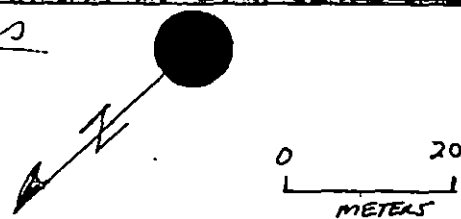
SKETCH MAP #1 (OG)
 US-9-A
 D. FITZGERALD
 8 MAY 1991
 1505 - 1600



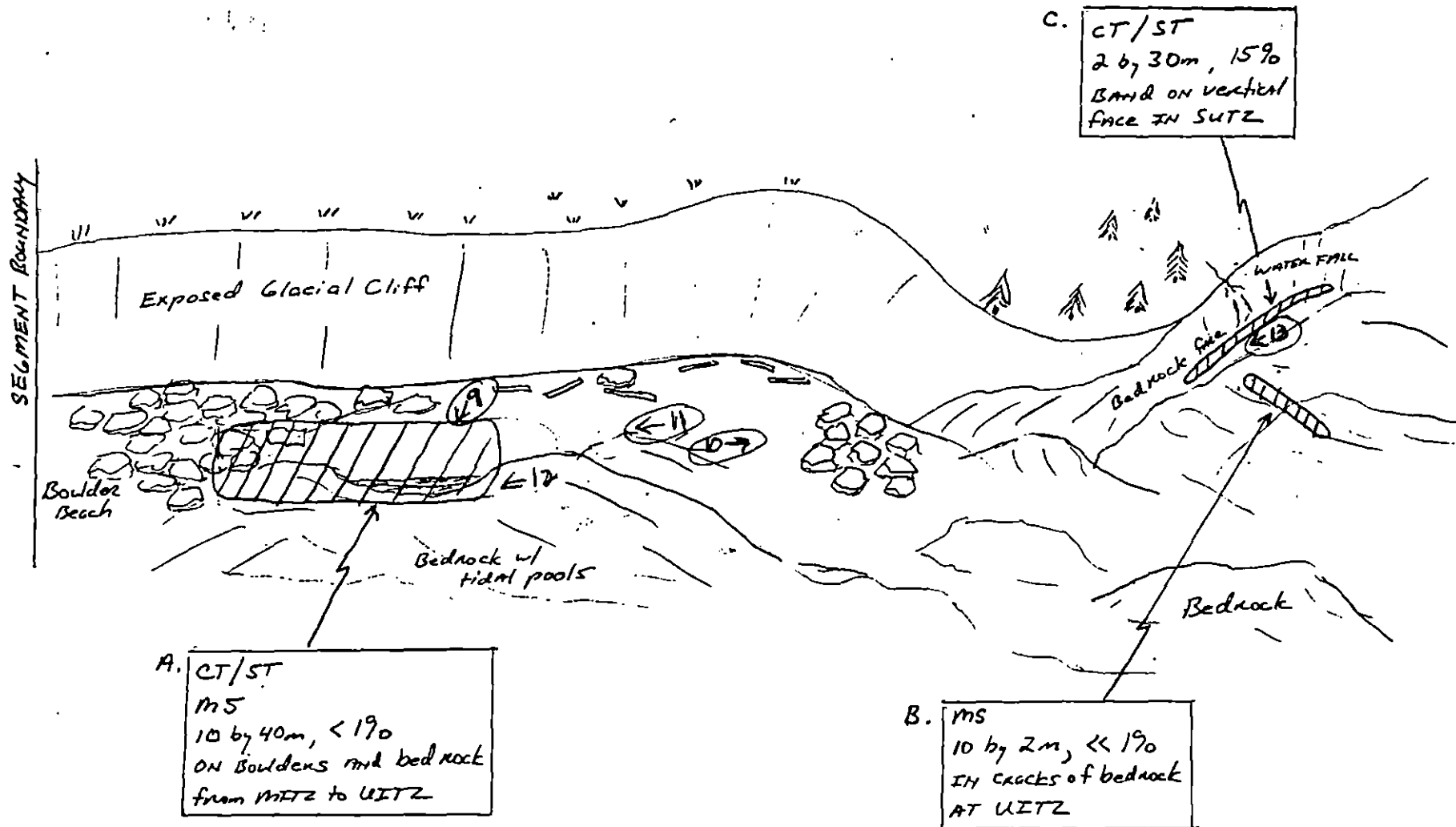
reviewed 5/11/91 KG
 S. reviewed 5/11

- LOGS
- ✓✓ grassy
- ⌘ Evergreen Trees
- ↗ Photo Sites

Photo locations
Mapap 6-09
9-13



ST. MAP #1 (06)
US-9-A
D. FITZGERALD
8 MAY 1991
1505-1600



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 Helo

DATE May 8 1991

SEGMENT # US-9

TIDAL HEIGHT(Range)

SUBDIVISION A

BIOLOGIST H. Davis

SEA STATE 1-2

WIND SPEED/DIRECTION 5-10 mph W/Cuots N

PHOTOGRAPHS: ROLL # 6-09

FRAME # 9-13

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

A. CT/ST is present near barnacles, limpets, porphyra, Fucus, and small mussels in the HTZ. In the MITZ Petroselinus, Fucus, Endocladia, Terebratulina, Metridium, Epiactis, Pagurus, Littorina, Corallina, Murex, and Sculpins are the most common species present at site "A"

Some areas of stain have worn off and show the "negative" seen often in areas of verrucaria. All the organisms are healthy and many are reproductive (Epiactis, Littorina, Endocladia and Fucus)

B. Small pools with Sculpins, Corallina, Terebratulina, Anthopleura, Littorina, Epiactis were scattered through site B. Endocladia, Fucus, and porphyra were sparse on the rocks. Biotin in this area was sparse, but became richer down below the MITZ

C. Verrucaria on the rock surface with some filamentous greens near the water fall and in shadows left by stain that had eroded away.

The amount of oil was so small that any attempts to clean the rocks would be much more disruptive to the organisms than productive.

Cormorant sp(1) Harlequin ♀(1) Northern Harrier(1)

Glaucous Winged Gull (75+) Herring Gulls (20+) Kittiwakes (10+) Red Necked Phalaropes (8)

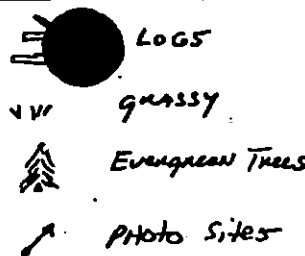
WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			Sculpins 2 species
Seabirds	1	1	
Waterfowl	1	1 ♀	
Gulls/Kittiwakes	3	> 100	
Shorebirds	1	8	
Corvids			
Other Birds	1	1	

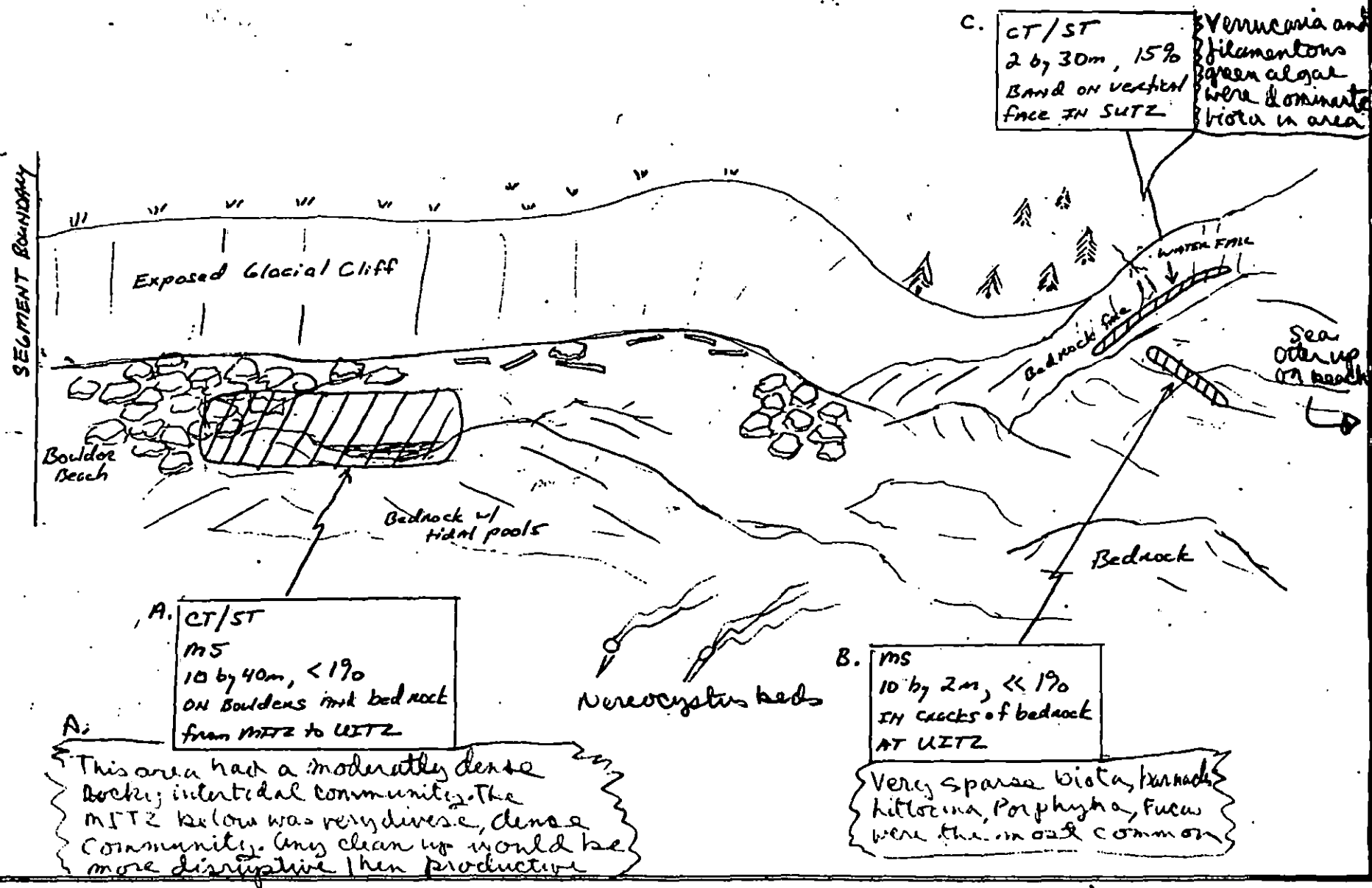
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	1	3	
Pinnipeds (specify)	0		
Whales (specify)	0		

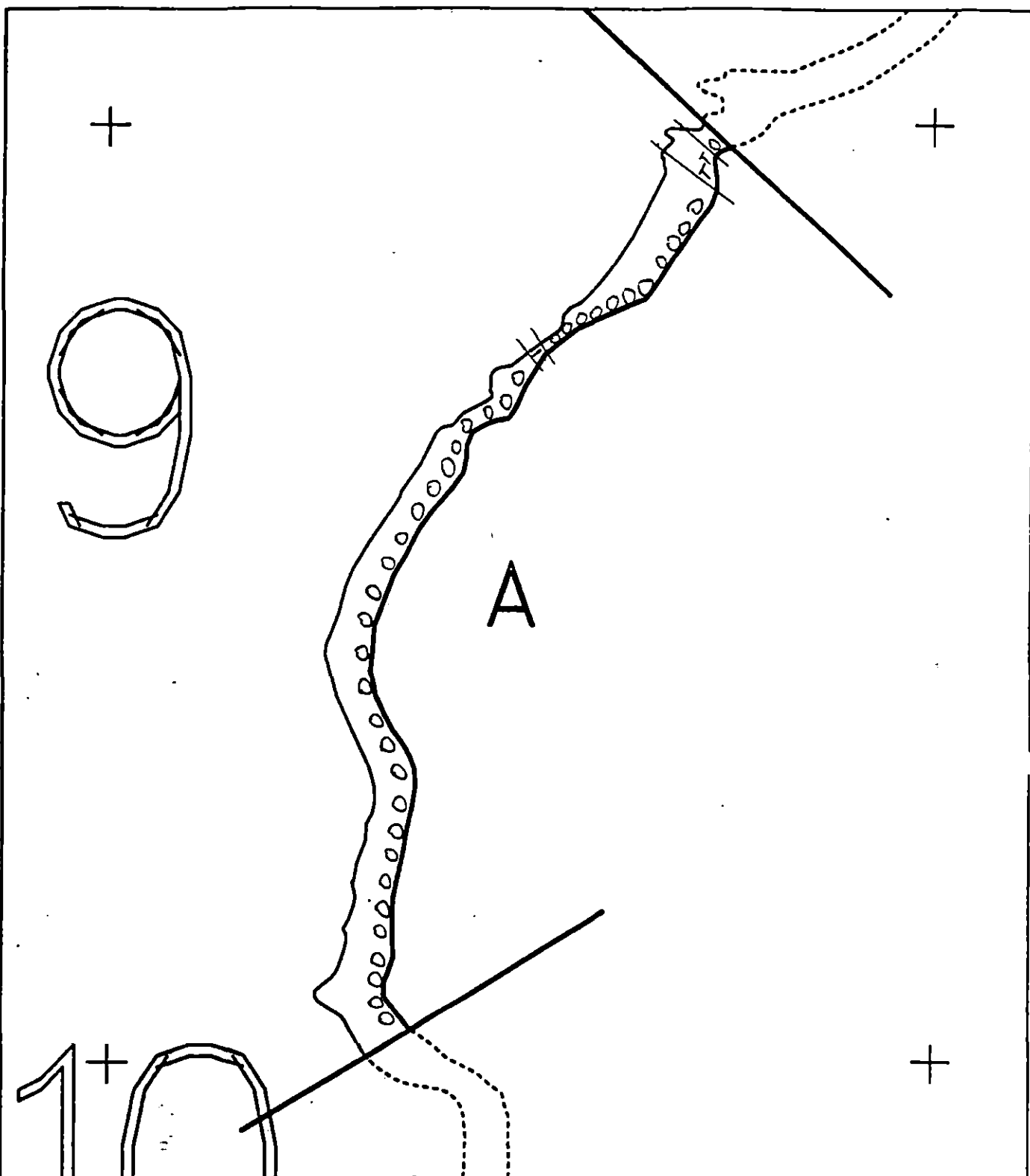
Shoreline subdivision map showing important biological features attached.



Bio Map
Heather Davis - Bio

SK MAP #1 (100)
US-9-A
~~Site 1~~
8 May 1991
1505 - 1600





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

US009 A
 ADEC Subsegment Length: 1513m
 METERS
 0 200 400
 AK State Plane Zone 4
 480000



Subdivision Field Map
 Map Key: KENUS009A
 Name: D. Fitzgerald
 Date: 8 MAY 1991
 Date Entered:

reviewed 5/11/91 icg
 26 reviewed 5/11

1991 MAYSAP EVALUATION

SEGMENT: US 009 SUB: A REGION: KEN SURVEY DATE: 5/8/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 5/15 - 9/1

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

ADEC

NAME S FERGUSON

SIGNATURE _____

☒ NTR ☐ TREATMENT RECOMMENDED

NO TREATMENT RECOMMENDED AT US-9A. THIS AREA CONSISTED OF VERTICAL AND HORIZONTAL BEDROCK WITH WAVE CUT PLATFORMS THAT HAD TRACE MS/CT/ST. ON THE BEDROCK A 2x30m BAND OF ^{WAVE} P-CT/ST WAS OBSERVED. THIS IS A HIGHLY ENERGISED BEACH DUE TO EXPOSURE AND LOCATION.

EXXON

NAME G. Stiles

SIGNATURE _____

☒ NTR

There was no appreciable oil located therefore I recommend no treatment.

LANDMANAGER

NAME J. HARDISTER

OF USFWS

SIGNATURE _____

☒ NTR no removable oil located.

USCG/NOAA

NAME Chief JENSEN R. Hoff

SIGNATURE _____

☒ NTR

There is no longer any detectable oil present in the water, adjoining shorelines, or places where it is likely to reach the water again. Concur with other comments, negligible amounts of oil require no further treatment.

SEGMENT 45-9

ADEC S. FERGUSON

LANDMANAGER J. HANOLSTER for USFWS

SUBDIVISION A

EXXON 6. Stiles

USCG/NOAA Chief JENSEN / R. Hoff

DATE 8 / MAY / 91

TIME 15:05 to 16:00

TIDE LEVEL 60 ft. to 4.5 ft.

ENERGY LEVEL: ☒ H ☐ M ☐ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 1513 m

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

EST. OIL CATEGORY LENGTH: W — m M — m N 30 m VL 42 m NO 1441 m US 0 m

[illegible]

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

PHOTO ROLL # MAYSAP- 6-09 - FRAMES 9-13

FRAMES 9-13

[illegible]

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

OG COMMENTS: We walked the entire segment which consisted of a narrow Boulder-bedrock "beach." Oil was found at two locations: 1) at the very northern end (10x40m Area) consisting of trace MS-CT-ST on boulders and bedrock, including the floors of some tidal pools. 2) a region 250m to the south consisting of very trace amounts of MS in bedrock cracks and crevices. Landward of this site a 2 by 30m band of CT/ST occurs on the bedrock face. The rest of the segment had no observable oil.

reviewed 5/11/91 KLG

Reviewed 5/15 CO

+

+

MAP #1

9

A

1

+

+

US009 A

Subdivision Field Map

Map Key: KENUS000A

Name: D. FITZGERALD

Date: 8 MAY 1991

METERS

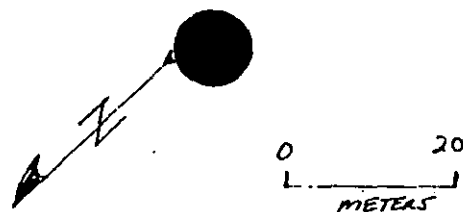
0 200 400

AK State Plane Zone 4
NAD83



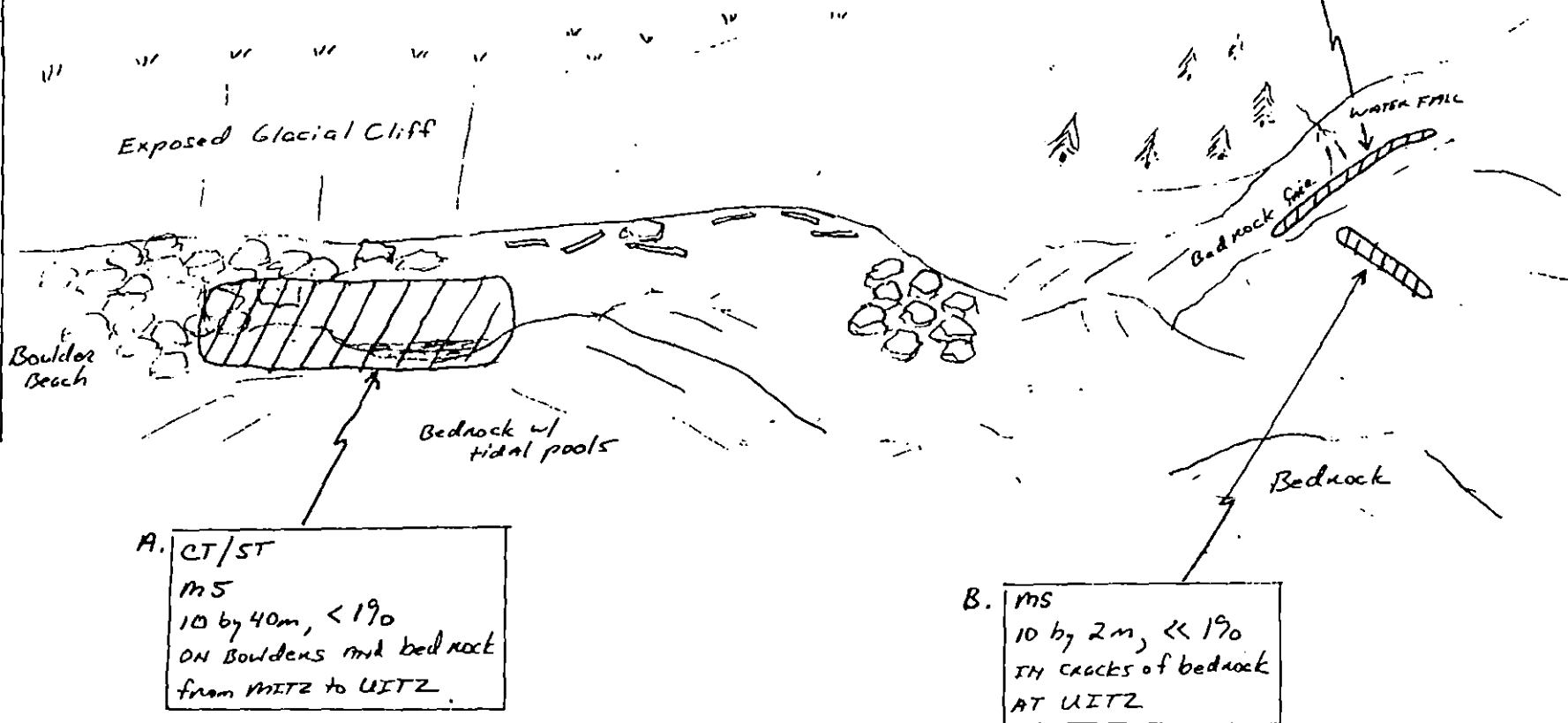
SS returned 5/11

- LOGS
- grassy
- Evergreen Trees
- Photo Sites



SK MAP #1 (06)
 US-9-A
 D. FITZGERALD
 8 MAY 1991
 1505 - 1600

SEGMENT BOUNDARY



revised 5/11/91
 S/G 5/11

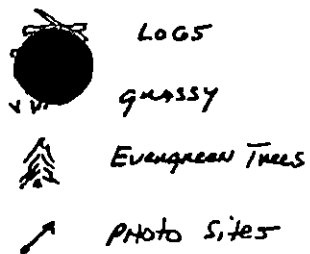
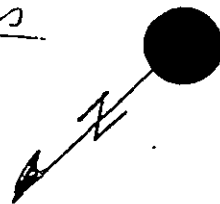
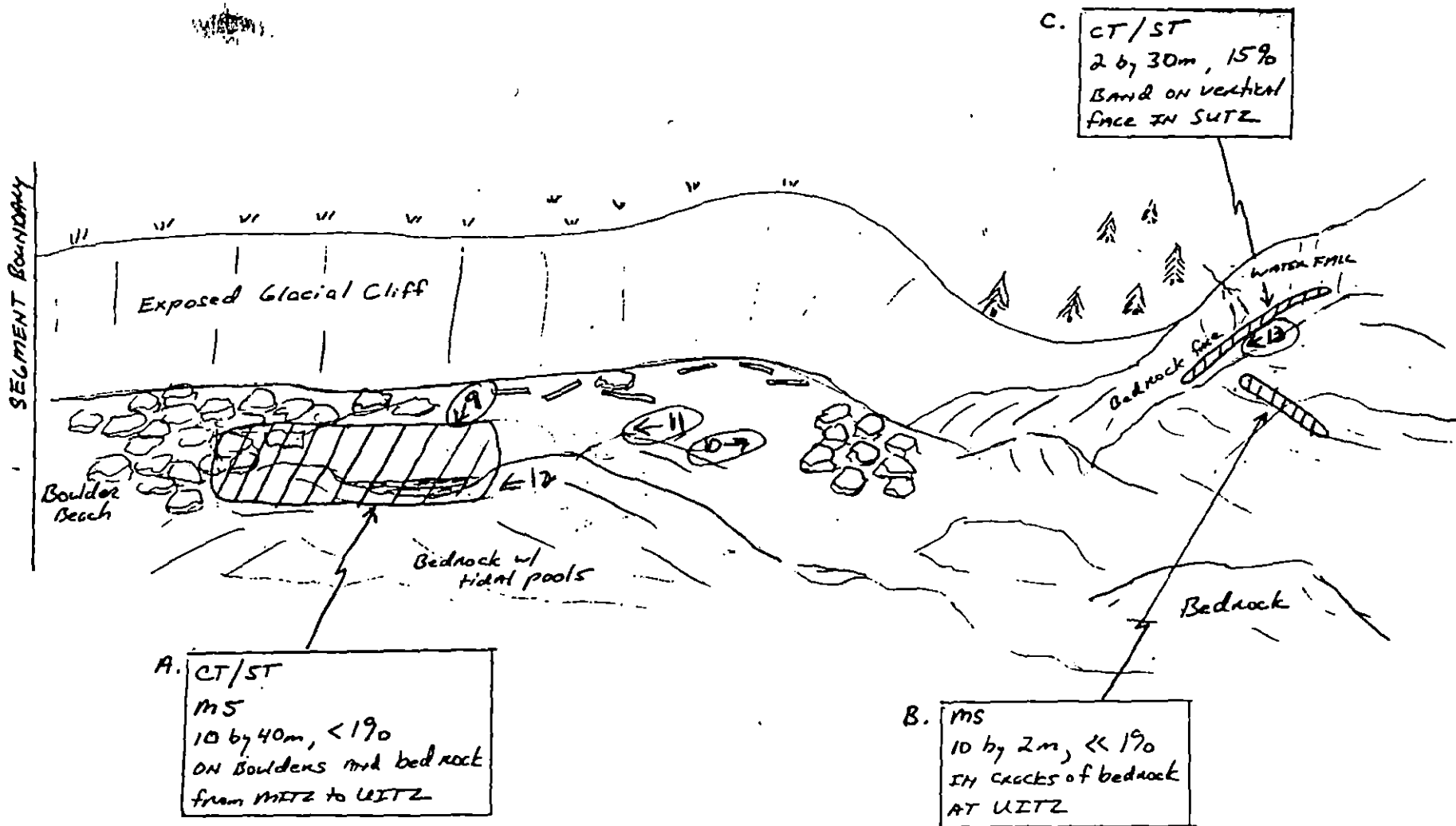


Photo Locations
Mapap 6-09
9-13



0 20
METERS

Sheet MAP #1 (0
US-9-A
D. FITZGERALD
8 MAY 1991
1505-1600



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 Helo

DATE May 8 1991

SEGMENT # US-9

TIDAL HEIGHT (Range)

SUBDIVISION #

BIOLOGIST H. Davis

SEA STATE 1-2

WIND SPEED/DIRECTION 5-10 mph W/Gusts N

PHOTOGRAPHS: ROLL # 6-09

FRAME # 9-13

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

A. CT/ST is present near barnacles limpets, porphyra, Fucus, and small mussels in the HTZ. In the MITZ Petroselinus, Fucus, Endocladia, Tenacella, Metridium, Epiactis, Paganus, Littorina, Corallina, Mucilg, and Sculpins are the most common species present at site "A". Some areas of stain have worn off and show the "negative" seen often in areas of verrucaria. All the organisms are healthy and many are reproductive (Epiactis, Littorina, Endocladia and Fucus).

B. Small pools with Sculpins Corallina, Tenacella, Anthopleura intermedia, Littorina, Epiactis were scattered through site B. Endocladia, Fucus, and porphyra were sparse on the rocks. Biota in this area was sparse, but became richer down below the MITZ.

C. Verrucaria on the rock surface with some filamentous greens near the water fall and in shadows left by stain that had eroded away.

The amount of oil was so small that any attempts to clean the rocks would be much more disruptive to the organisms than productive.

Cormorant sp(1) Harlequin (1) Northern Harrier (1)

Glaucous Winged Gull (75+) Herring Gulls (20+) Kittiwakes (10+) Red Necked Phalaropes (8)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			Sculpins 2 species
Seabirds	1	1	
Waterfowl	1	1 ♀	
Gulls/Kittiwakes	3	> 100	
Shorebirds	1	8	
Corvids			
Other Birds	1	1	

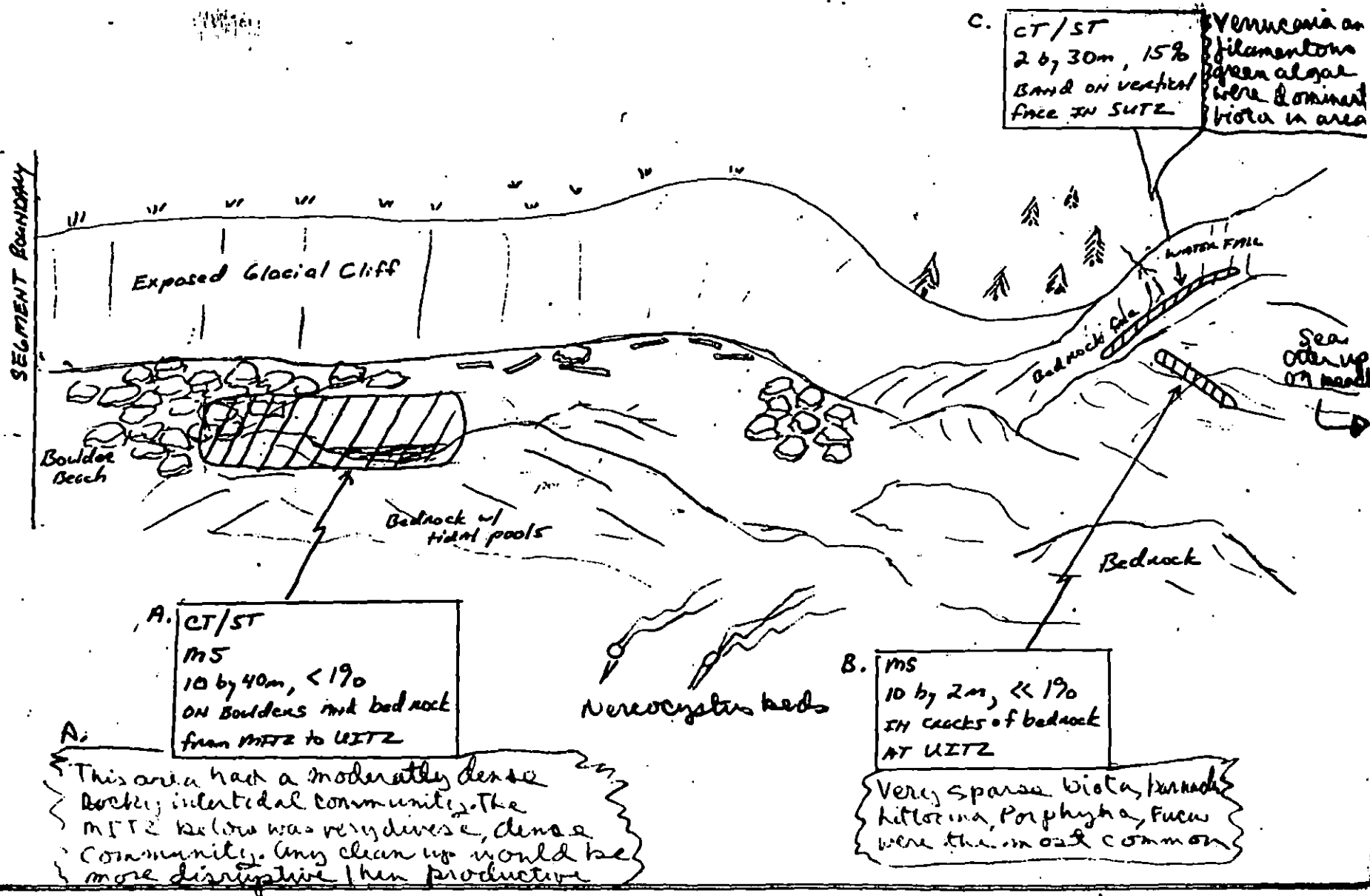
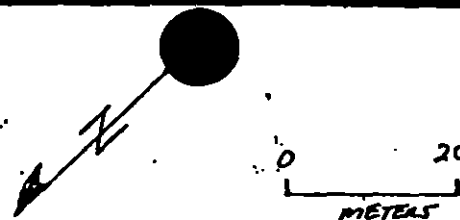
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	1	3	
Pinnipeds (specify)	0		
Whales (specify)	0		

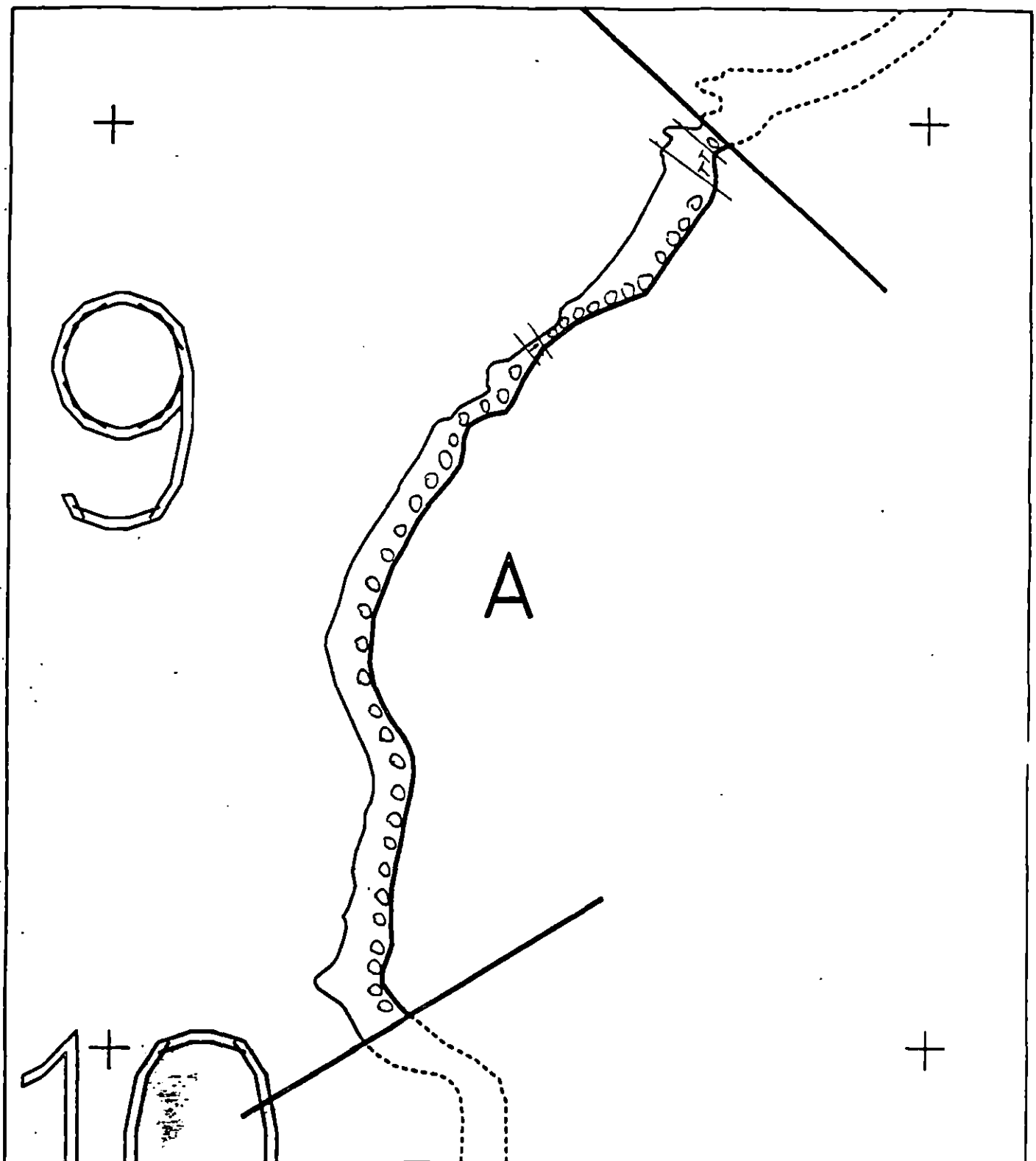
Shoreline subdivision map showing important biological features attached.

-  LOGS
 grassy
 Evergreen Trees
 Photo Sites

Bio Map
Heather Davis - Bio

ST MAP #16
 US-9-A
~~8 May 1991~~
 8 May 1991
 1505 - 1600





XXXX	Wide	US009 A ADEC Subsegment Length: 1513m METERS 0 200 400 AK State Plane Zone 4 NAD83	Subdivision Field Map Map Key: KENUS000A Name: <u>D. Fitzgerald</u> Date: <u>8 May 1991</u> Date Entered:
////	Medium		
----	Narrow		
TTTT	Very Light		
0000	No Oil		

reviewed 5/11/91 KCS
 SE reviewed 5/11

REGION: KENAI

SEGMENT: ST/US-10

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ US-10 SUBDIVISION A (1 OF 1) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

No special constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 84 m: Narrow 118 m: V.Light 492 m: No Oil 511 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 40 +cm

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of surface mousse and oiled trash/debris. Bioremediation is recommended for areas with surface oil coat and cover and for subsurface oiling. No ecological timing constraints are indicated.

TAG COMMENTS:

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / US-10 SUBDIVISION: US-10A DATE 4-9-90

USCG

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

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

ADEC

NAME Francis J. Bennis SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

observable band of oil spans 600 meters in the UITE. Within this are areas of surface oil such as mousse saturated sediments, MS patches, & CT/C sediments which indicate presence of subsurface oil. Although not continuous, this oil band is expansive. One can speculate, based on September observations & the obvious redistribution of sediments in this beach, that there is more subsurface oil than that revealed by our pits dig today.

It seems that winter provided a means for abrasive action serving to remove
cont'd on page 2

LAND MANAGER

NAME JOHN HARDISTER SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

USFWS

subsurface oil of particular concern. Consideration for cleanup is warranted.

US-10A

Comment sheet

Page 2

ADEC

some CT/CV of the cobbles & coarse gravels. Some of the sub surface oil has now been exposed by the same wave energy, it is eroding onto the flanks of the berm. There is definitely collectable oil saturate sediments now on the surface. Manual removal is recommended to no, as some very mossy C/G are present down to 15 cm from surface as shown by pit #3. Also present is some oiled debris & drift. Debris should be removed, but most of the oiled driftwood has only VL stain & wouldn't be my priority for a manual clean-up effort.

Subsurface oil here remains a problem & could contribute to staining as warm temperatures ensue this summer, however large scale, heavy equipment - excavation may not be justified here.

This ADEC rep does not believe the application of Inipal here is appropriate or that it would serve any great benefit. Some bioremediation took place in Aug, & the oil still looked bad in Sept. Now, at least the surface looks better after the winter.

There is, however, oil that can be collected MANUALLY, and should be.

SHORELINE OILING SUMMARY

REVISION NO. 03-22-90

OG Acton USCG Haven SEGMENT ST/ US-10
 BIO Davis LAND REP USFWS Hardister SUBDIVISION US-10A
 EXXON Avery ADEC Bennis TIME 8:50 10:10:45
 TEAM NO.: 20 TIDE LEVEL: -1 10 +2 DATE 4 / 9 / 90
 EST. SUBDIVISION LENGTH: 1081 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 10 % B 15 % C 40 % P 15 % G 15 % S 5 % M 0 % V 0 %
 SLOPE: Long 90 % Hang 10 % Vert % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 135 m N 165 m VL 300 m NO 481 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	IC	IB	IP	IS	SBL BR	DBL RW	GY SL	DBR TL	LBR		SU	UI	M	U
ASPHALT PAVEMENT														
POOLED														
COVER		✓	✓	✓		✓					✓	✓		
COAT		✓	✓	✓		✓					✓	✓		
STAIN		✓	✓	✓		✓					✓	✓		
MOUSSE		✓	✓					✓			✓			
PATTIES														
TARBALLS														
FILM														
NO OIL													✓	✓

PAVEMENT: H F S 6 sq. m by cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? ☒ NO BR RW SL TL

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

DEBRIS COLLECTED
☐ YES ☒ NOTYPE #BAGS 0

Photographs:

Roll No. 20-4 20-3Frames 1-24 35-37

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SBL BR	DBL RW	GY SL	DBR TL	LBR		SU	UI	M	U		
1	40		✓				0 - 20						✓			✓					PG
					✓		20 - 40	✓					✓			✓					PGS
2	15				✓		0 - 15		✓				✓			✓					PG
3	15		✓				0 - 15	✓					✓			✓					P
4	25					✓	-									✓					C
5	30		✓				0 - 30	✓					✓			✓					PG

COMMENTS Oil band in upper VITZ near/at base of SSL berm. For most of band length (600m) there is surface evidence of oil in the band. It appears that redistribution of beach material has covered much of the impacted band, making it difficult to assess w/ a shovel. In some portions of the oiled band, the mousse present forms an aggregate conglomerate which appears to resist erosion to a greater degree than the natural beach material. This oil conglomerate is exposed in places. The area of VITZ near the southernmost creek is a thick cobbles deposit and no oil was observed in the pit dug, however the oil may be buried by 1-2m of cobbles. The 600m band of impact has several exposed or

REVIEWED Bare DATE 12 Apr 90

SEGMENT ST/ US-10 SUBDIVISION US-10A

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	BR	DR	GR	OR	BL	BR	LR	LO	SU	VI	M	U		
6	30		✓				5 - 10		✓						✓			✓					PG
7	30					✓	.											✓					CP
8	30					✓	.											✓					CP
9	30					✓	.											✓					CP
10	30					✓	.											✓					CP
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COMMENTS

nearby exposed areas of more heavily impacted areas that were assessed. Due to the volume of cobbles that have been redistributed since the oil impacted the shoreline, assessment w/ shovel is difficult/impossible w/ a shovel.

REVIEWED BAT DATE 12 Dec 90

OG Act

SEGMENT ST/VS-10

SUBDIVISION VS-10A

DATE 4 / 9 90

CHECKLIST

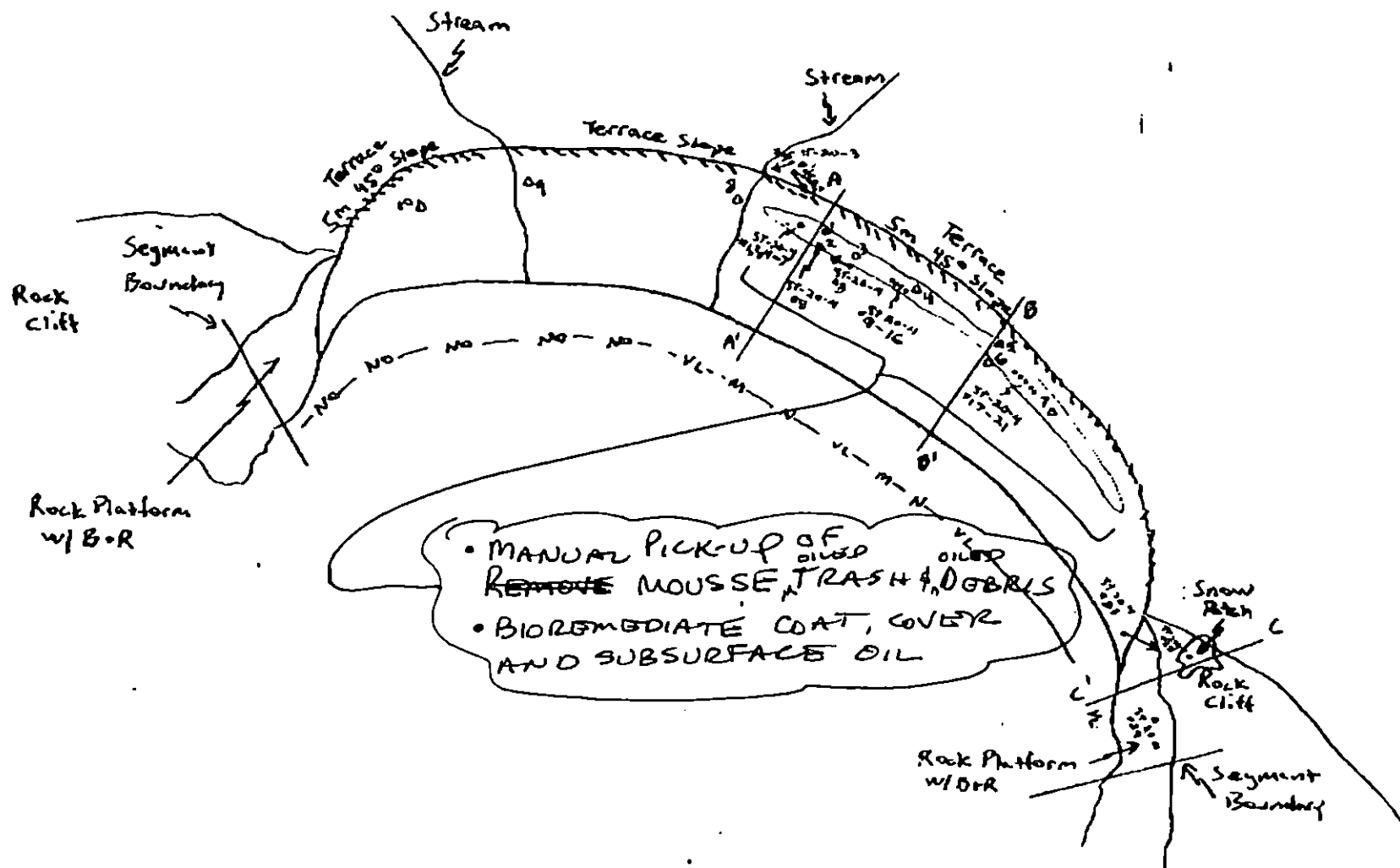
- ☐ M Area
- ☐ Approx. Scale
- ☐ Seg/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HMTLAWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

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

SKETCH MAP

← N
Approx Scale
1cm = 75m



Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 600 MS 300 PT 0 TB 0 FL 0 NO 48

REVISION 2/24/90

OG Ac

SEGMENT ST/ U-10

SUBDIVISION U-10A

DATE 4/9/90

CHECKLIST

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

LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

[CT/P]

Patchy Distribution

[CT/S]

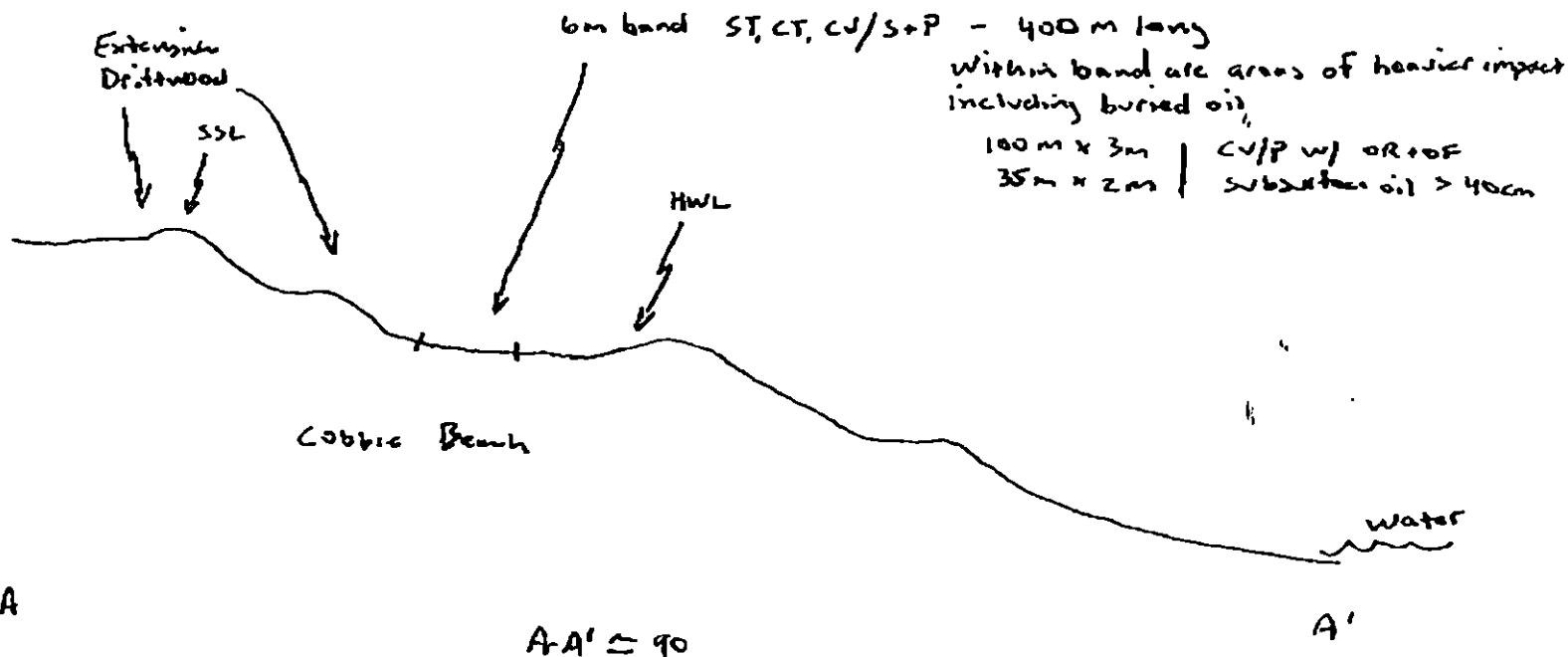
Splashed Distribution

Oiled Vegetation

1 $\Rightarrow$

Photo location, direction,
and number

SKETCH MAP



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

REVISION: 00/00/00

OG Acte

SEGMENT ST/ U2-10

SUBDIVISION U2-10A

DATE 4 / 9 90

CHECKLIST

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

LEGEND

¹ Δ

Pk - No Subsurface Oil

² Δ

Pk - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

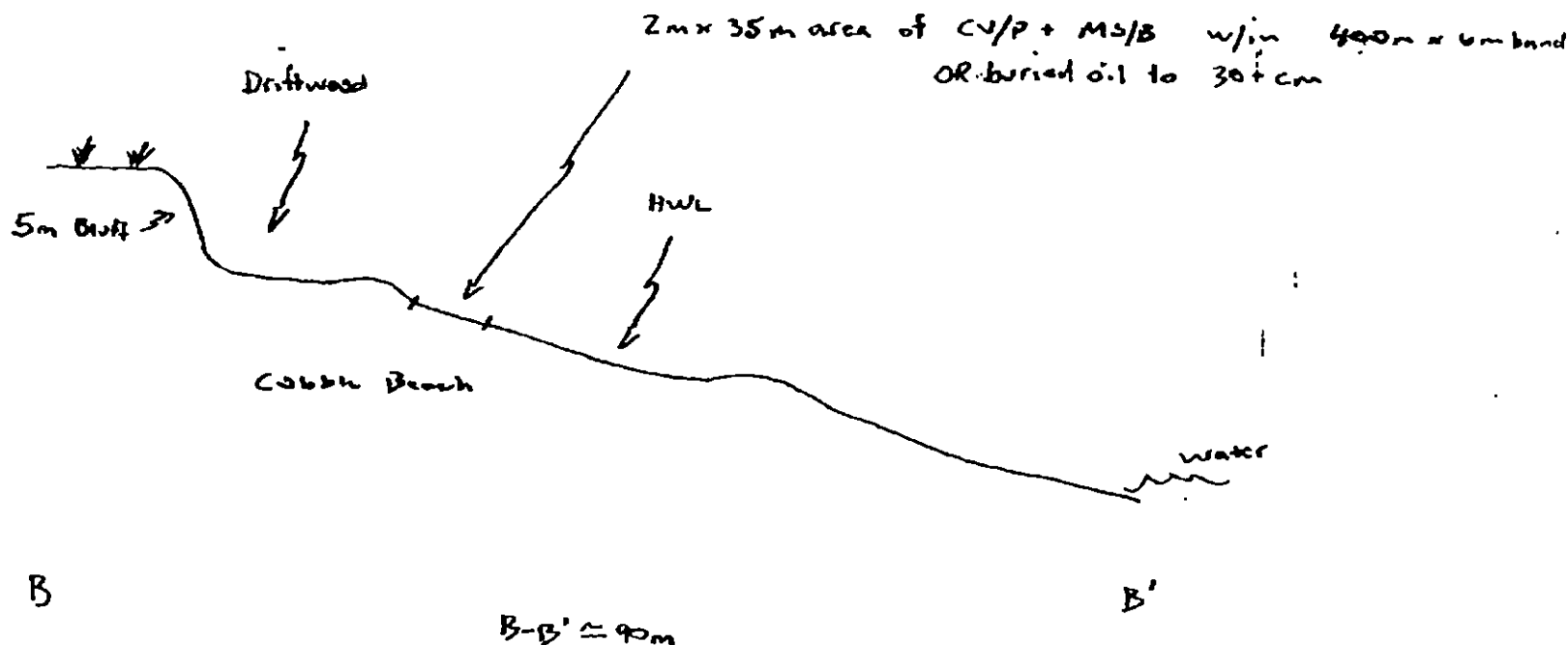
Splashed Distribution

Oiled Vegetation

¹ ➡

Photo location, direction,
and number

SKETCH MAP



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

REV 130128/04/00

OG Ac

SKETCH MAP

SEGMENT ST/ U3-10

SUBDIVISION U3-10A

DATE 4/9/90

CHECKLIST

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

LEGEND

1 Δ

PI - No Subsurface Oil

2 Δ

PI - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

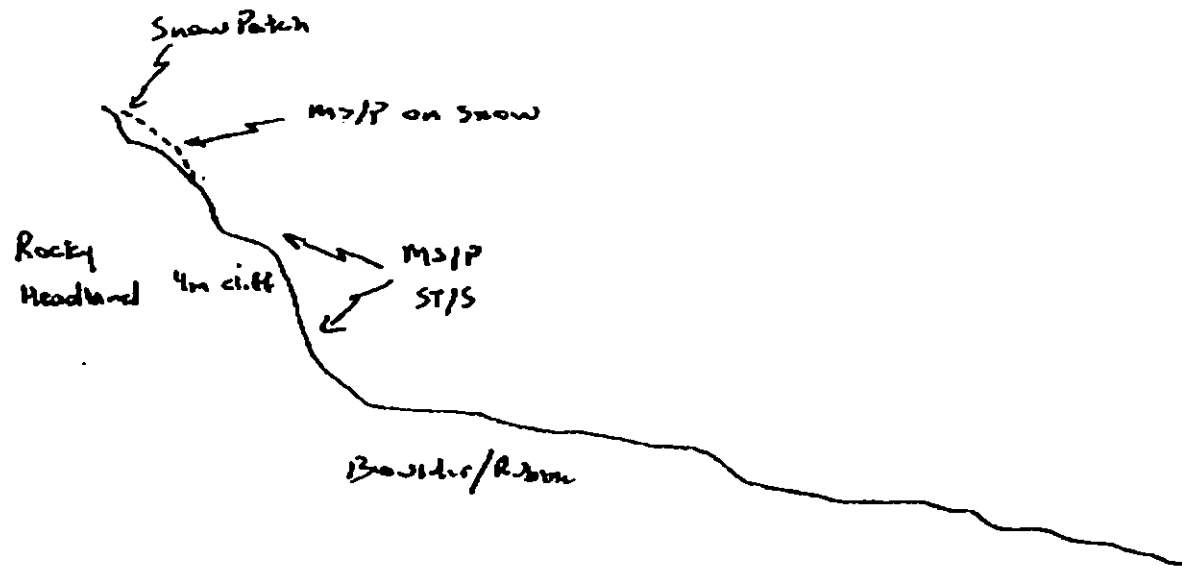
CT/S

Scattered Distribution

Oil Vegetation

1 $\Rightarrow$

Photo location, direction,
and number



C-C' $\approx$ 30m

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

REVISIONS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/ US-10 Subdivision US-10A Date (mo / day / yr) 4/9/90

Time (24 hr) 08:30 Biologist H. Davis

(A) Substrate type and % of segments:
(1) Bedrock 10 (2) Boulder 15 (3) Cobble 40 (4) Pebble 30 (5) Sand 5 (6) Silt -

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

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

Photographs:

Roll No. ST-20-3, ST-20-4

Frames 35-37, 1-24

BARNACLES

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

NOT PRESENT

4, 5, 6

MYTILUS

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

NOT PRESENT

4, 5, 6

GASTROPODS

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

NOT PRESENT

4, 5, 6

FUCUS

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

NOT PRESENT

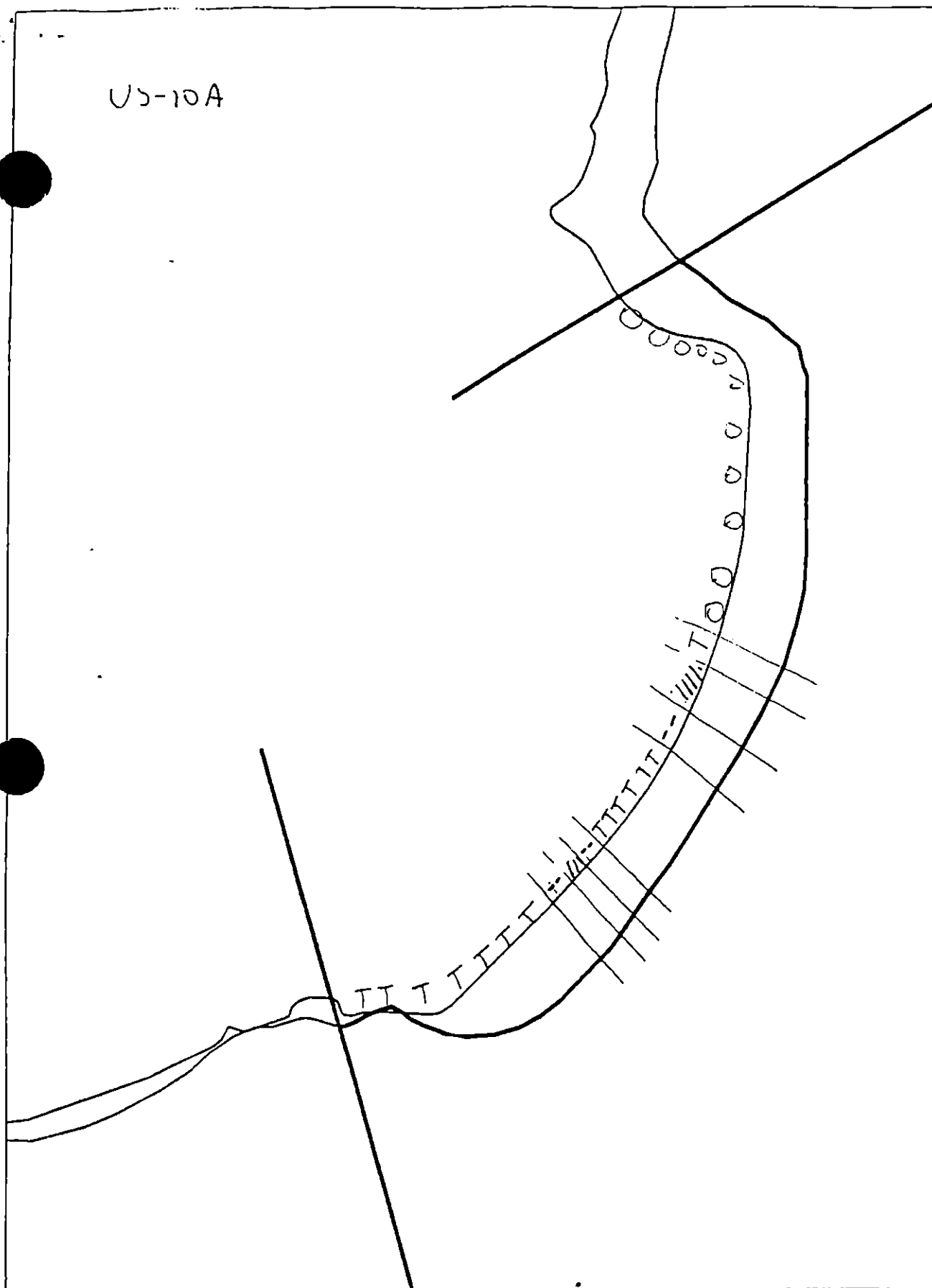
4, 5, 6

Wildlife Observations/ General Comments: The central area of US-10A was a beach with large winter storm burms built up. The stream coming out don't look anachronous but I could not find any definite information. Most of the marine life was concentrated at the rocky points at either end of the beach. Each rocky point had a community typical of disturbed rocky intertidal areas. There was patchy distribution of organisms & areas where rocks had been turned or hit during winter storms. There was an extensive

Ecological Considerations: Wherever the beach point. Plants and animals in the rocky areas were lower than the oil splatters excepting the Littorineas Nolegunduch.

See lions will be hauling out to have pups and later for molting. There are bird rookeries in the area but I couldn't get definite answers about which ones (Puffins + Murres most likely) .. The streams in the area do not look anachronous.

US-10A



XXXX Wide

//// Medium

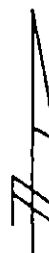
---- Narrow

TTTT Very Light

0000 No Oil

US-10

ADEC Segment Length: 1205m



US-10A

Map Key: KEN-133

Name: Acton

Date: 4-9-90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT US-10 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

No ecological time constraints identified.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG ADDENDUM DATE 5/21/90
ADEC Art Weiner
EXXON Andy Tan
NOAA Joseph T. Hall
USCG Mr. J. Hall

FOSC

DATE 5-21-90

Prepared by: Andru Meyer

Date: 5/20/90

US-9

US-10

A

TREATMENT
AREA

US-13



ECOLOGY MAP
SEGMENT US-10

SUBDIVISION A (1 of 1)



Seabird Colony



Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ US-10 SUBDIVISION A (1 OF 1) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
No special constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Hume DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 84 m: Narrow 118 m: V.Light 492 m: No Oil 511 m
Subsurface Oil Observed: Yes X No Maximum Depth 40 +cm

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of surface mousse and oiled trash/debris. Bioremediation is recommended for areas with surface oil coat and cover and for subsurface oiling. No ecological timing constraints are indicated.

SEE APPENDUM DATED 5-20-90
C.DASH

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90.

ADEC ART WEINER Art Weiner

EXXON AMY TER Amy Ter

NOAA Bruce Wescott Bruce Wescott

USCG G.A. HEITER G.A. Heiter

FOSC:

DATE: 4-27-90

Comments of NFWS noted - however, we also noted that the information provided to us was reliable.

SHORELINE EVALUATION

SEGMENT ST/ US-10 SUBDIVISION A (1 OF 1) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
No special constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: Recommend manual pick up of surface mousse and oiled trash/debris. Bioremediation is recommended for areas with surface oil coat and cover and for subsurface oiling. No ecological timing constraints are indicated.

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/90.
ADEC ART WEINER Art Weiner
EXXON ANDY TERN Andy Tern
NOAA Burt Wescott Burt Wescott
USCG G.A. REITER G.A. Reiter

FOSC: DATE: 4-27-90

Comments of NFWS noted - however, we shall attempt least intrusive method to resolve oiled problem on this shoreline vice proceeding directly to excavation - let's see what TAG's recommendation

OG As

SEGMENT ST/ US-10

SUBDIVISION US-10A

DATE 4/9/90

CHECKLIST

- ☐ M Area
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Det.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HW/LWL
- ☐ SST
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

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

Continuous Distribution
- CT/B

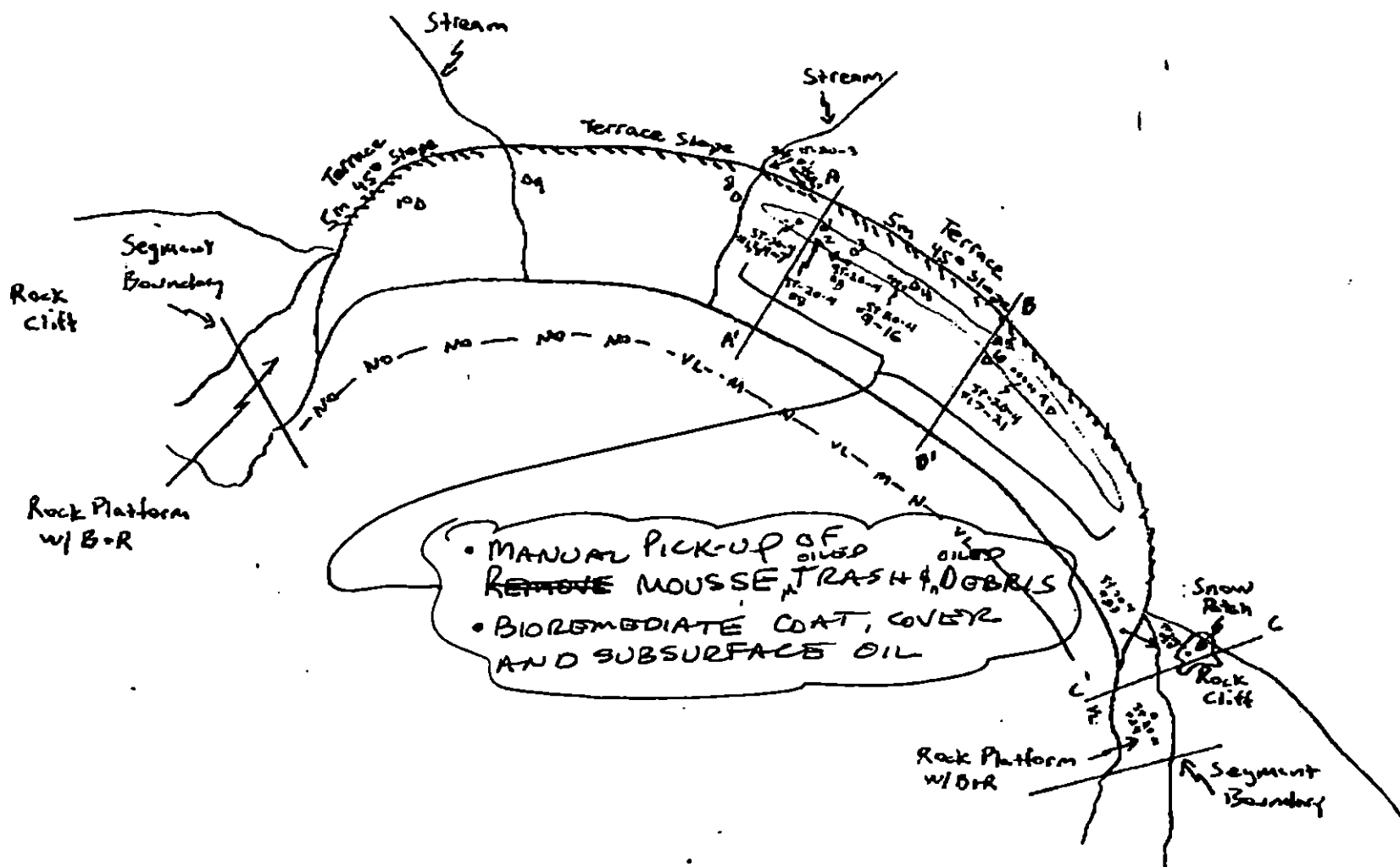
Broken Distribution
- CT/P

Patchy Distribution
- CT/S

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

SKETCH MAP

← N
Approx Scale
1cm = 75m



Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 600 MS 300 PT 0 TB 0 FL 0 NO 48

REVISIONS

OG A

SEGMENT ST/ U7-10

SUBDIVISION U7-10A

DATE 4/9/80

CHECKLIST

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

LEGEND

1 Δ

Pl - No Subsurface Oil

2 Δ

Plt - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

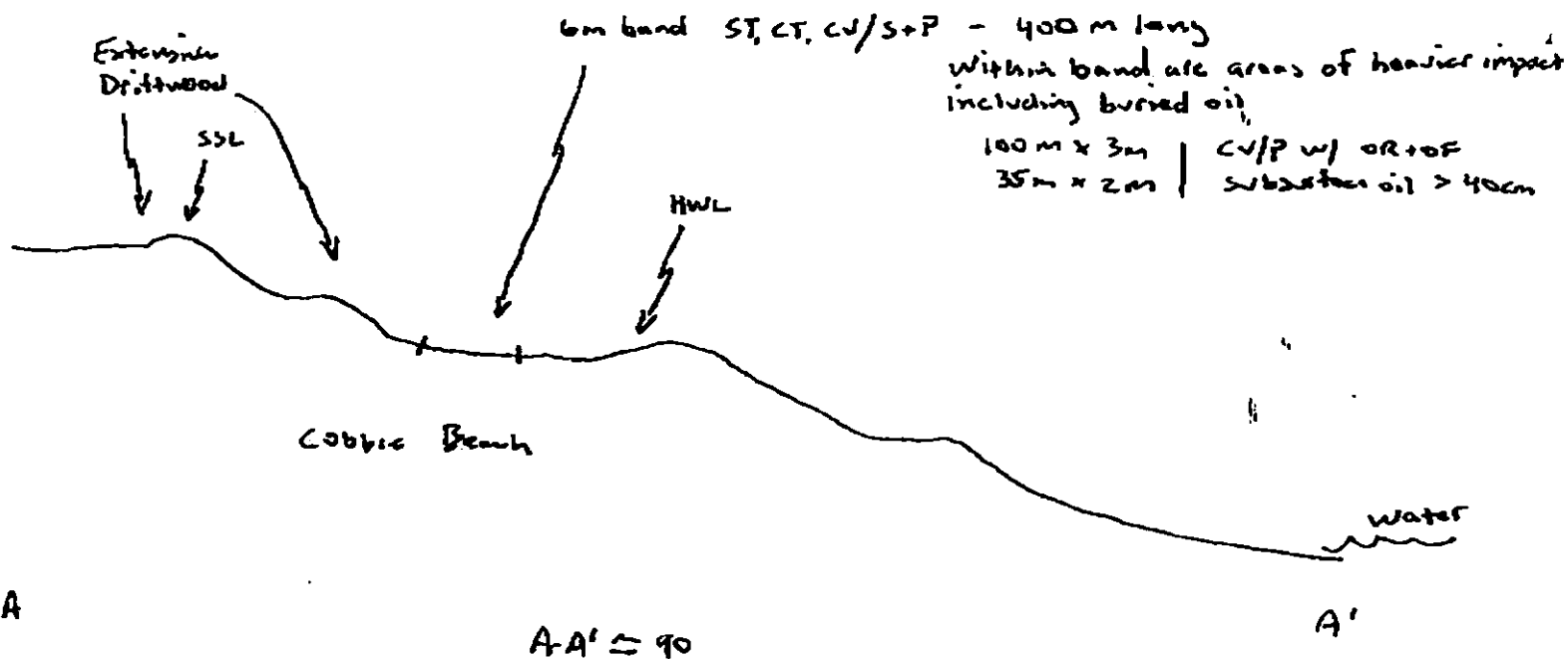
Splashed Distribution

Oiled Vegetation

1 $\Rightarrow$

Photo location, direction,
and number

SKETCH MAP



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

REVISIONS

OG A

SEGMENT ST/ U3-10

SUBDIVISION U3-10A

DATE 4 / 9 90

CHECKLIST

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

LEGEND

1 Δ

PT - No Subsurface Oil

2 Δ

PT - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

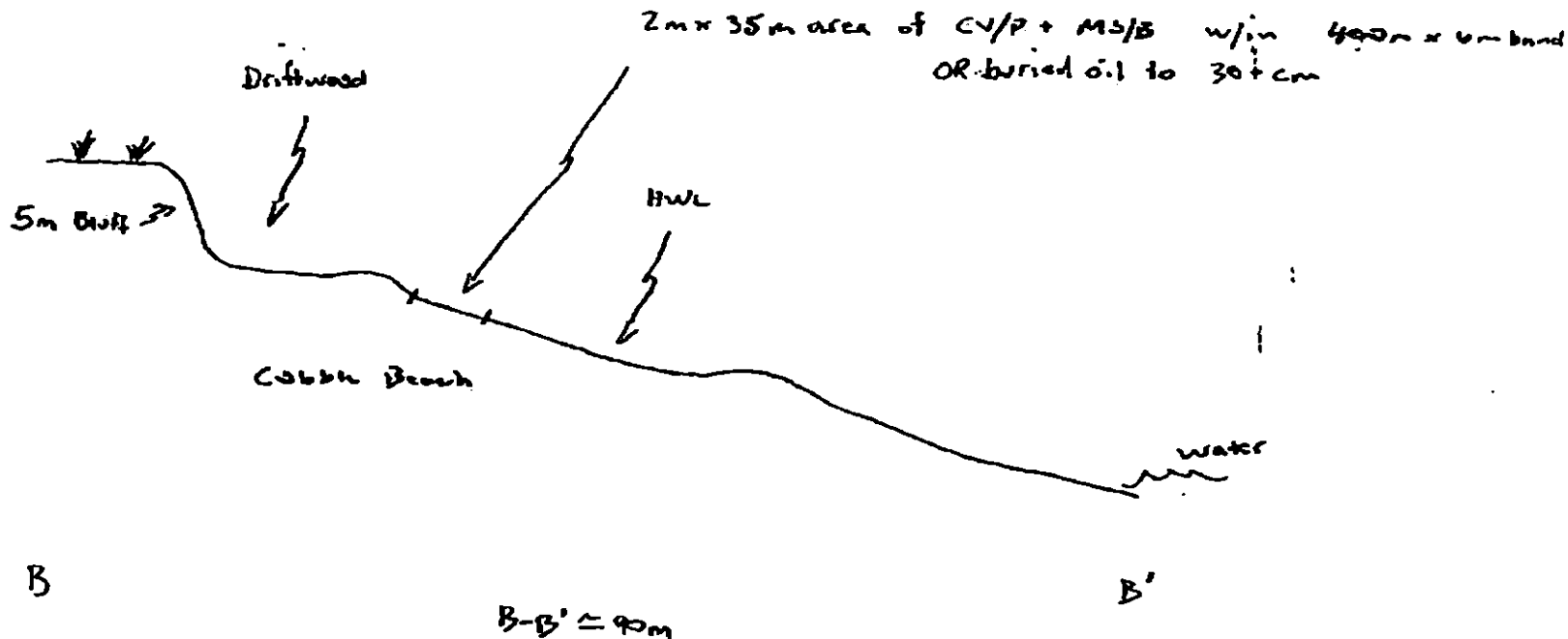
Splashed Distribution

Oil Vegetation

1 $\Rightarrow$

Photo location, direction, and number

SKETCH MAP



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

RECEIVED 10/10/90

OG A

SEGMENT ST/ US-10

SUBDIVISION US-10A

DATE 4/9/90

CHECKLIST

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

LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

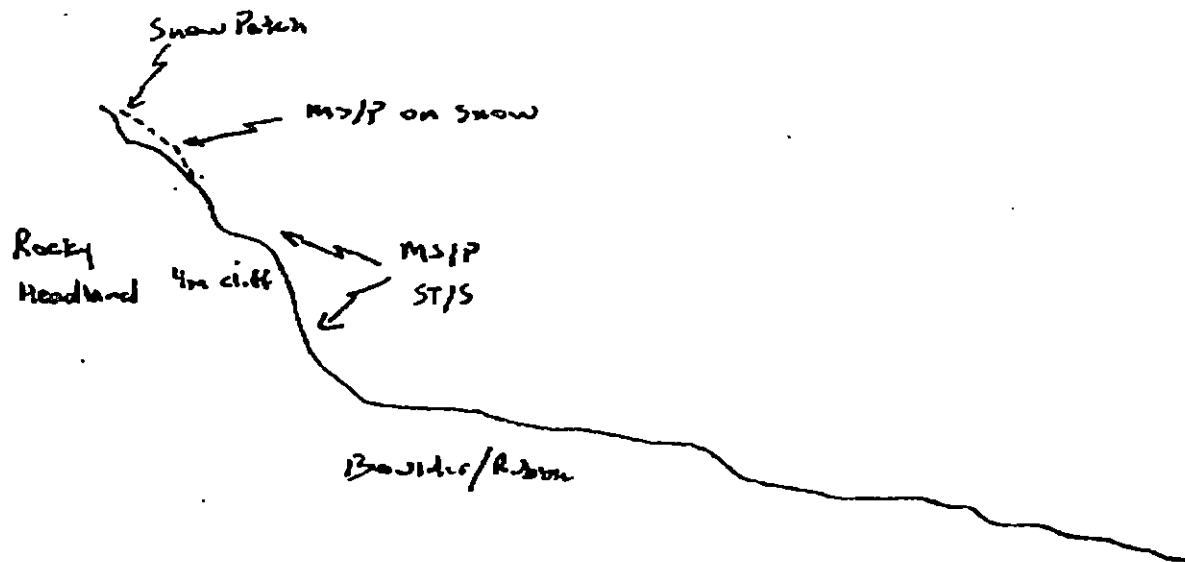
Splashed Distribution

Oil Vegetation

1 $\Rightarrow$

Photo location, direction,
and number

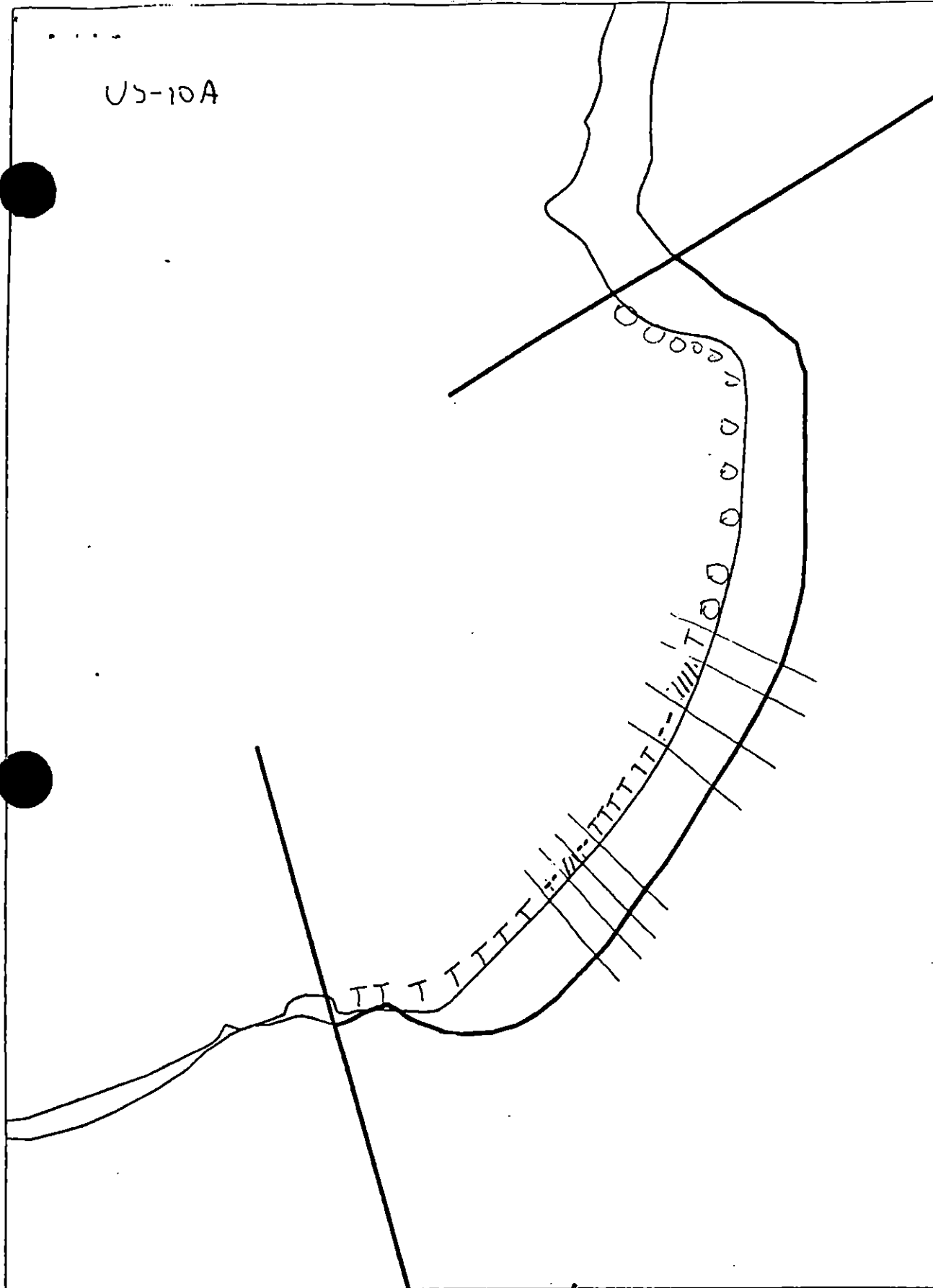
SWITCH MAP



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

REVISION: 00000000

US-10A



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

US-10

ADEC Segment Length: 1205m



US-10A

Map Key: KEN-133

Name: Acton

Date: 4-9-90

Data Entered:

WORK PLAN ADDENDUM

Segment US-10

Subdivision A

Dated 6/27/90

MODIFICATION

1. REASON FOR MODIFICATION

- REQUEST BY USF+W TO ADD STORM BERM RELOCATION
- REQUEST BY FOSC.

2. ADJUSTMENT TO WORK PLAN

ADD BERM RELOCATION TO WORK PLAN AS INDICATED ON ATTACHED SKETCH, FOLLOWING ACCEPTANCE OF THE TRIAL ON US 3 BY USF+W.

TIMING TO BE SPECIFIED BY USF+W.

SHPO APPROVAL NEEDED YES X
NO _____

SHPO SIGNATURE Charles E. Himes 6/28/90
Area of storm berm relocation must be inspected by an Exxon archaeologist.

TAG APPROVAL DATE 6/27/90

ADEC Ray Morris, K. Monds

EXXON ANDY TEAL Real

NOAA Joseph Talbot Stevens

USCG G.A. REITER G.A. Reiter

FOSC [Signature] DATE 6/30/90

OG Acton

SEGMENT ST/ US-10

SUBDIVISION US-10A

DATE 4 / 9 90

CHECKLIST

- ☐ M Area
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dkt.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HW/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PR Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

PT - No Subsurface Oil

2 Δ

PT - Subsurface Oil

CT/C

Continuous Distribution

CT/D

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

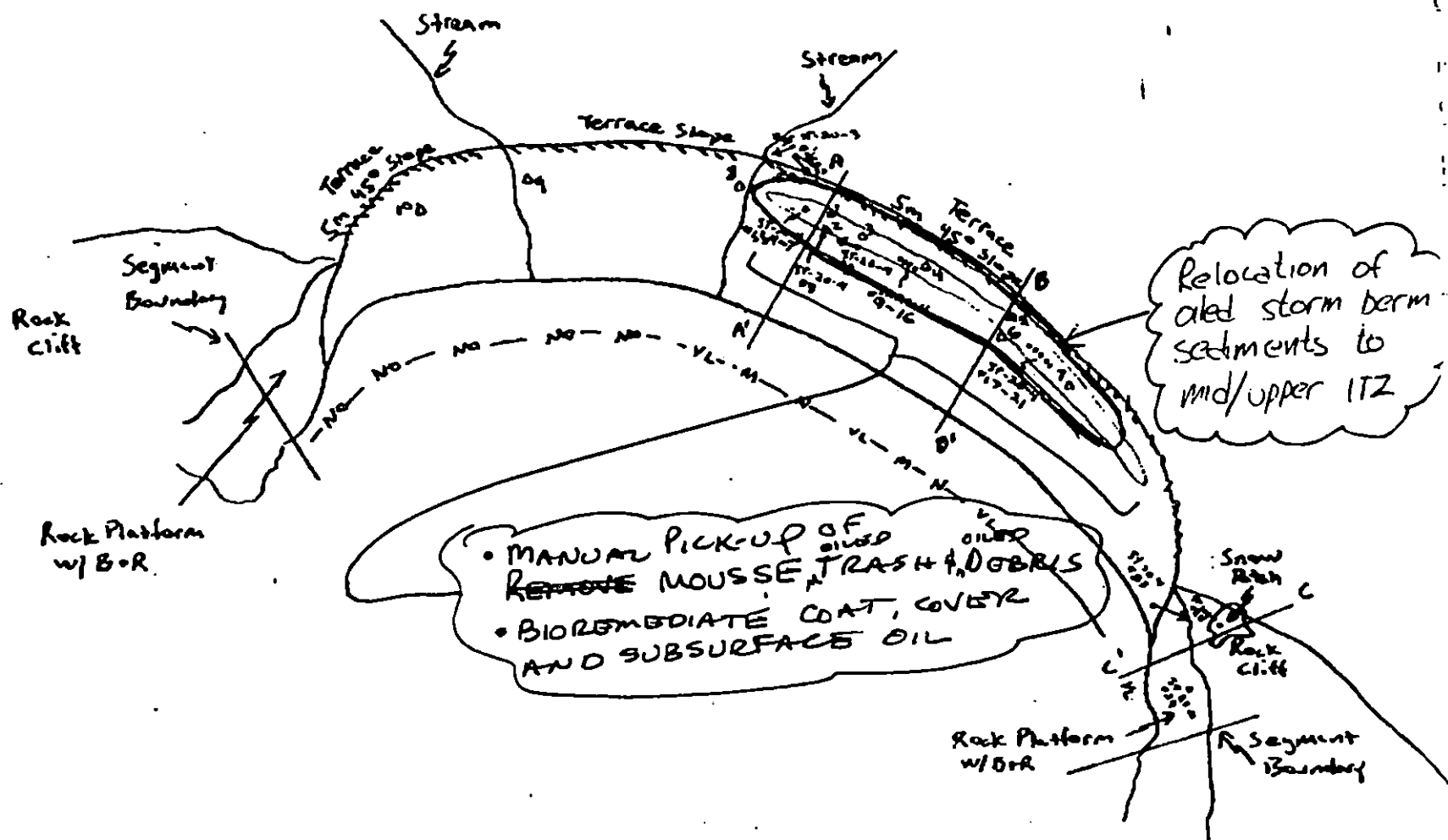
1 $\Rightarrow$

Photo location, direction,
and number

SKETCH MAP

← N

Approx Scale
1cm = 75m



1991 MAYSAP EVALUATION

SEGMENT: US 010 SUB: A REGION: KEN SURVEY DATE: 5/9/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 5/15 - 9/1

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Lucy Ann Darr Date: 5/22/91

RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>N</u>	<u>N</u>	<u>N</u>
Manual Pickup (Check as Req.)	<u> </u>	<u> </u>	<u> </u>
Spot Washing	<u> </u>	<u> </u>	<u> </u>
Bio-Customblen Only	<u> </u>	<u> </u>	<u> </u>
Bio-Inipol/Customblen	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 22 1991

FOSC APPROVAL DATE: 6/1/91

ADEC [Signature]

FOSC [Signature]

EXXON [Signature]

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

USCG 2. J. Murphy-T

NOAA [Signature]

✓

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

PAGE 1 OF 2

DATE 9 / May / 91

ENERGY LEVEL: ☒ H ☐ M ☐ L

EST. OIL CATEGORY LENGTH: W m M m N m VL 19 m NO 371 m US 815 m

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 6 - 10 FRAMES 1-6

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

CONTINUED ON NEXT PAGE revised 5/13/91 RG
SC : 1512

ADEC

NAME S. FLAGGSON SIGNATURE [Signature] 5/10/91

☒ NTR ☐ TREATMENT RECOMMENDED

NO TREATMENT RECOMMENDED AT US-10A. BERM RELOCATION WAS USED ON THIS BEACH IN FALL (Sept.) 1990, THE SUCCESS OF THE BERM RELOCATION IS QUESTIONABLE. A BETTER NETWORK OF PITS USING A GRID SYSTEM MOVING VERTICALLY AND HORIZONTALLY ACROSS AREA DOCUMENTED AS OILED, ^{WOULD BE NEEDED} BEFORE DETERMINING THIS (SUCCESS) FACTOR.

EXXON

NAME G. Stiles SIGNATURE [Signature] 5/10/91

☒ NTR

Very little amount of oil was found mixed in with sediment.

LANDMANAGER

NAME J. HANFSTER OF USFWS SIGNATURE [Signature] 5/10/91

☒ NTR

Exposure of subsurface sediments indicated insufficient amount of oily material to warrant further treatment.

USCG/NOAA

NAME Chief Jensen / R. Hoff SIGNATURE [Signature] Rebecca Hoff

☒ NTR

There is no longer any detectable oil present on the water, adjoining shorelines, or places where it is likely to reach the water again.
Berm relocation was successful at this site since only very small amounts of oil were found. Natural weathering should complete removal of the traces remaining.

SEGMENT 45-10

SUBDIVISION A

DATE 9 May 191

D. Fitzgerald

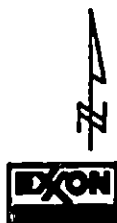
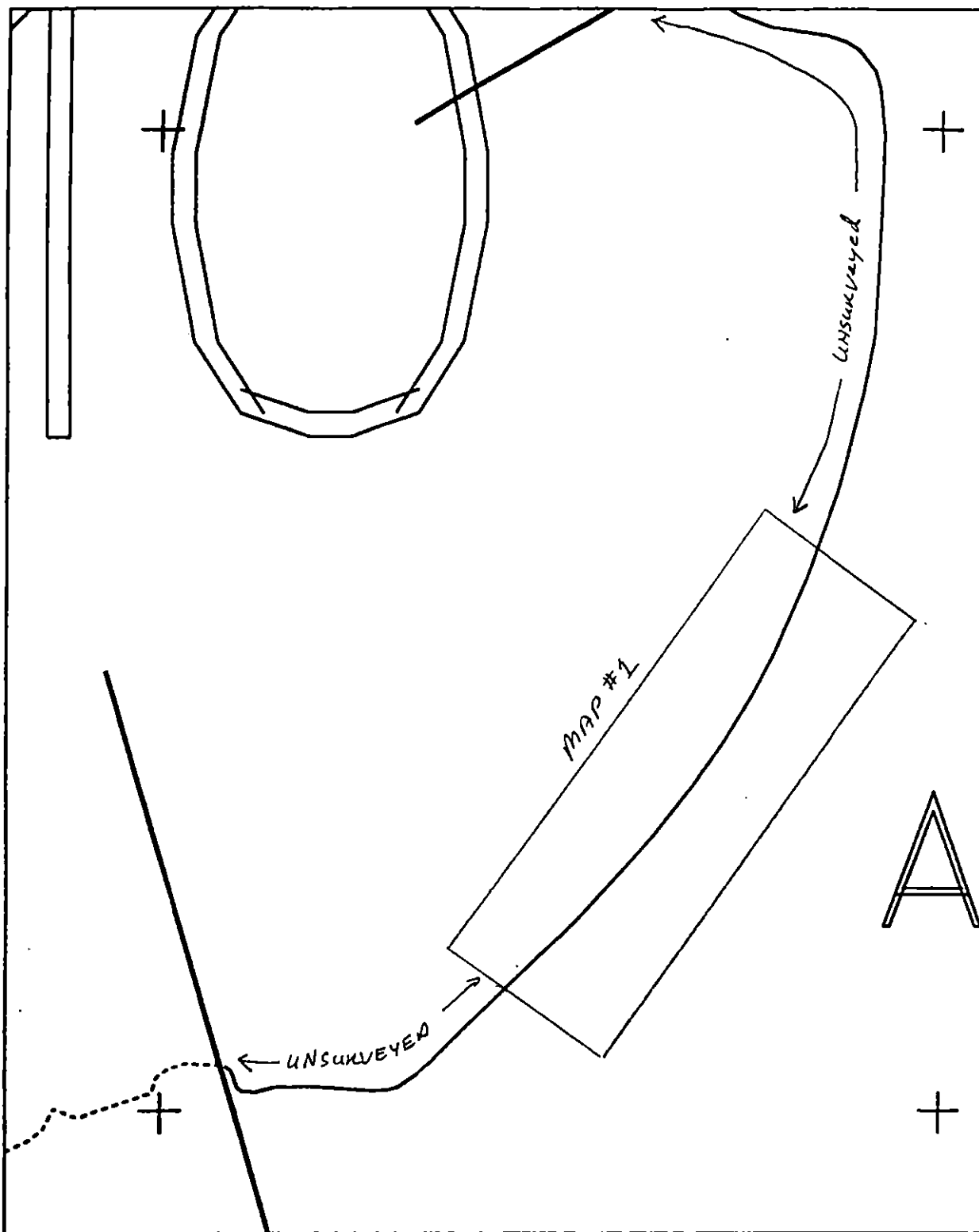
[illegible]

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

OG COMMENTS:

ON THIS BEACH CONSISTS OF INDIVIDUAL, OILED COBBLES AND PEBBLES (AND PERHAPS SOME SOR WITH SAND AND GRANULES) THAT WERE MIXED INTO THE LOWER SEDIMENTS DURING THE BULL-DOZING OPERATION. THE DYNAMICS AND NATURAL SEDIMENT TURNOVER OF THIS BEACH WAS EVIDENCED BY THE 1-1.2m HIGH GRAVEL SLIPFACE THAT WAS MIGRATING ONSHORE AT THE SOUTHWEST END OF THE BEACH.

reviewed 5/13/91 KC
E6 reviewed 5/13



US010 A

METERS



AK State Plane Zone 4
NAD83

Subdivision Field Map

Map Key: KENUS010Aa

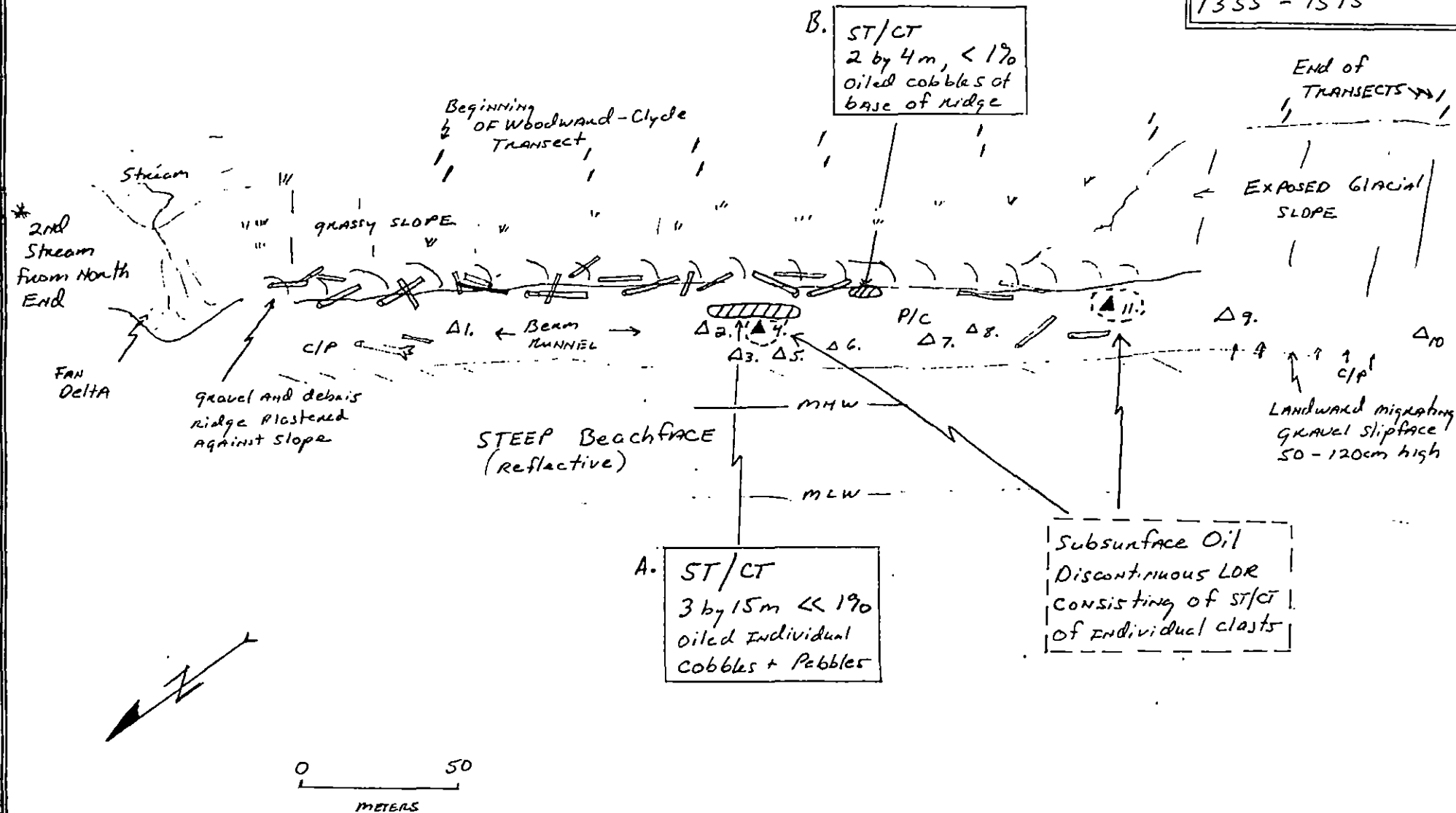
Name: D. Fitzgerald

Date: 9 MAY 1991

25 reviewed 5/13

// Station for transect
 station
 // Grassy
 // PHOTO SITES

Sketch Map (OG)
 US-1
 D. Fitzgerald
 9 MAY 1991
 1355 - 1515

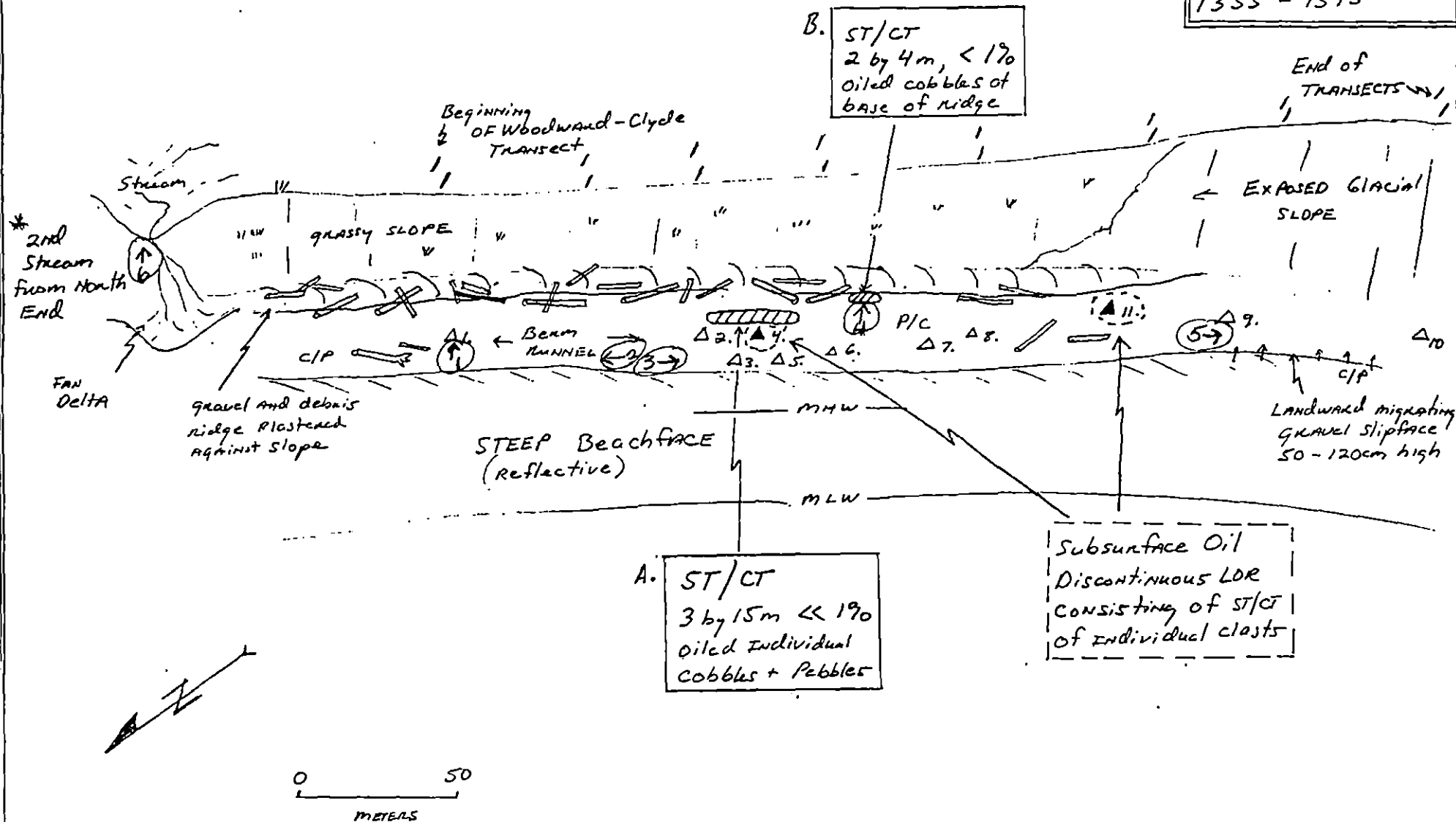


Revised 5/15/91

Stakes for transect location
 GRA
 PHOTO SITES

Photo locations
 Map 6-10 #1-b

Sketch map (OG)
 US-10
 D. Fitzgerald
 9 MAY 1991
 1355 - 1515



HAYSAP BIOLOGICAL SUMMARY FORM

TEAM #6 Helo

DATE May 9 1991

SEGMENT # US-10

TIDAL HEIGHT (Range) 10ft-8ft (14:00-14:55)

SUBDIVISION A

BIOLOGIST H. Davis

SEA STATE (5ft in US-10 bay) 20ft open ocean

WIND SPEED/DIRECTION 10mph W/40mph Gusts S

PHOTOGRAPHS: ROLL # 6-09

FRAME # 1-6

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

A. + B. There was no biota observed near either site A or B. Below the oiled areas was a strip of detritus (mostly *Nereocystis* and (aminaria) kelp flies, isopods, and *Enchytraeids* (small white annelid worms) were active in the wrack and down into the gravel. No harpacticoids were visible.

US-10 is a high energy beach of cobbles and pebbles. There is enough sediment movement to keep the biota in the intertidal area restricted to detritus feeders that can burrow into the substrate for protection. At the point to the west of US-10 are rocks with about 25-30 sea lions hauled out.

Harlequin (4) Red Neck Phalarope (3)

Short-eared owl (1), Glaucous winged (5) Kittiwake (6) Sandpipers (3)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	2	1 adult 1 immature	0
Seabirds			
Waterfowl	1	4	
Gulls/Kittiwakes	2	11	
Shorebirds	2	6	
Corvids			
Other Birds Short-eared owl	1	1	

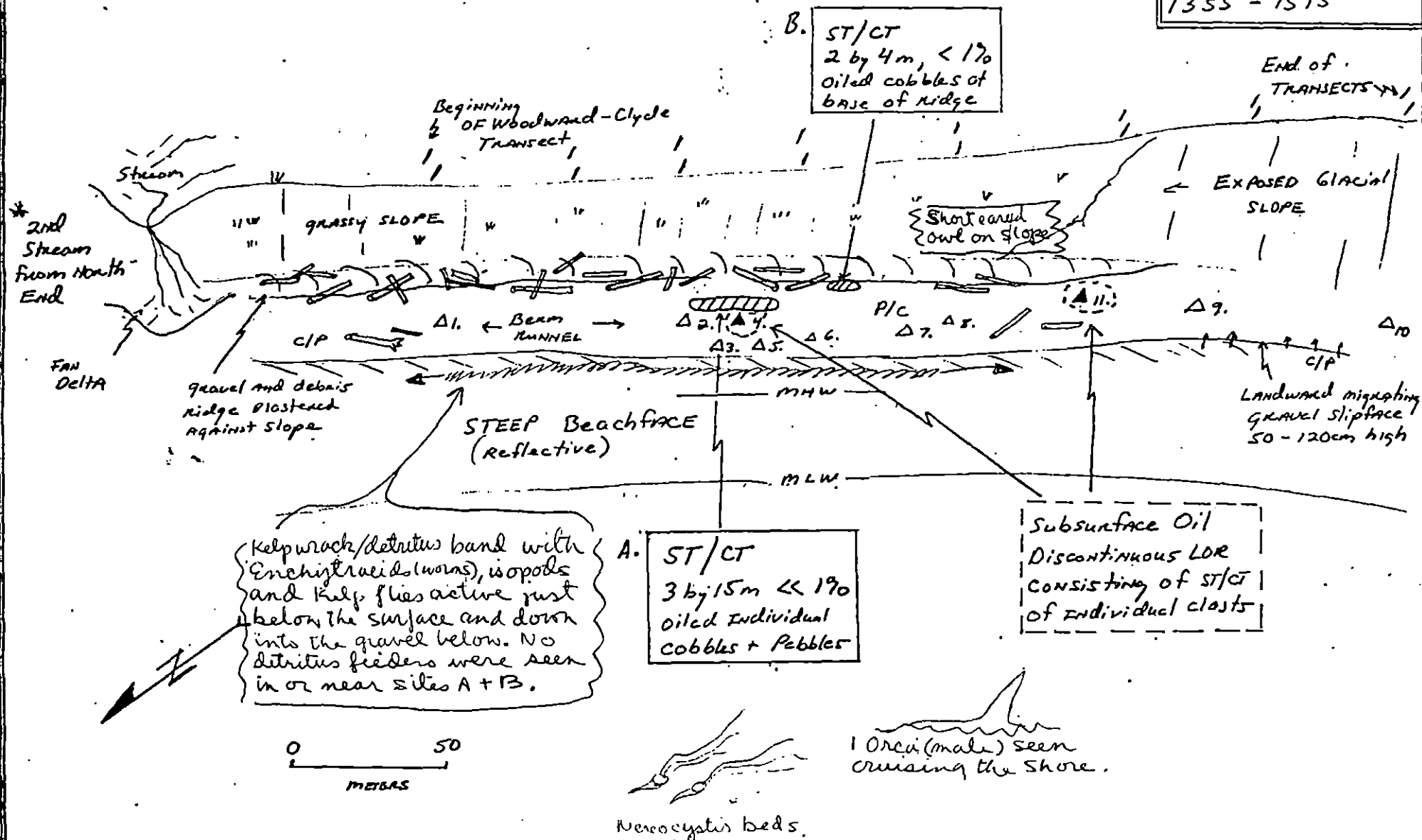
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	0	0	
Pinnipeds (specify)			
Steller's Sea Lion	> 30*		
Whales (specify)			
Orcinus orca	1 ♂		

* These are 2.5 miles out from US-10A on the western tip of Ushagat Island.
Shoreline subdivision map showing important biological features attached.

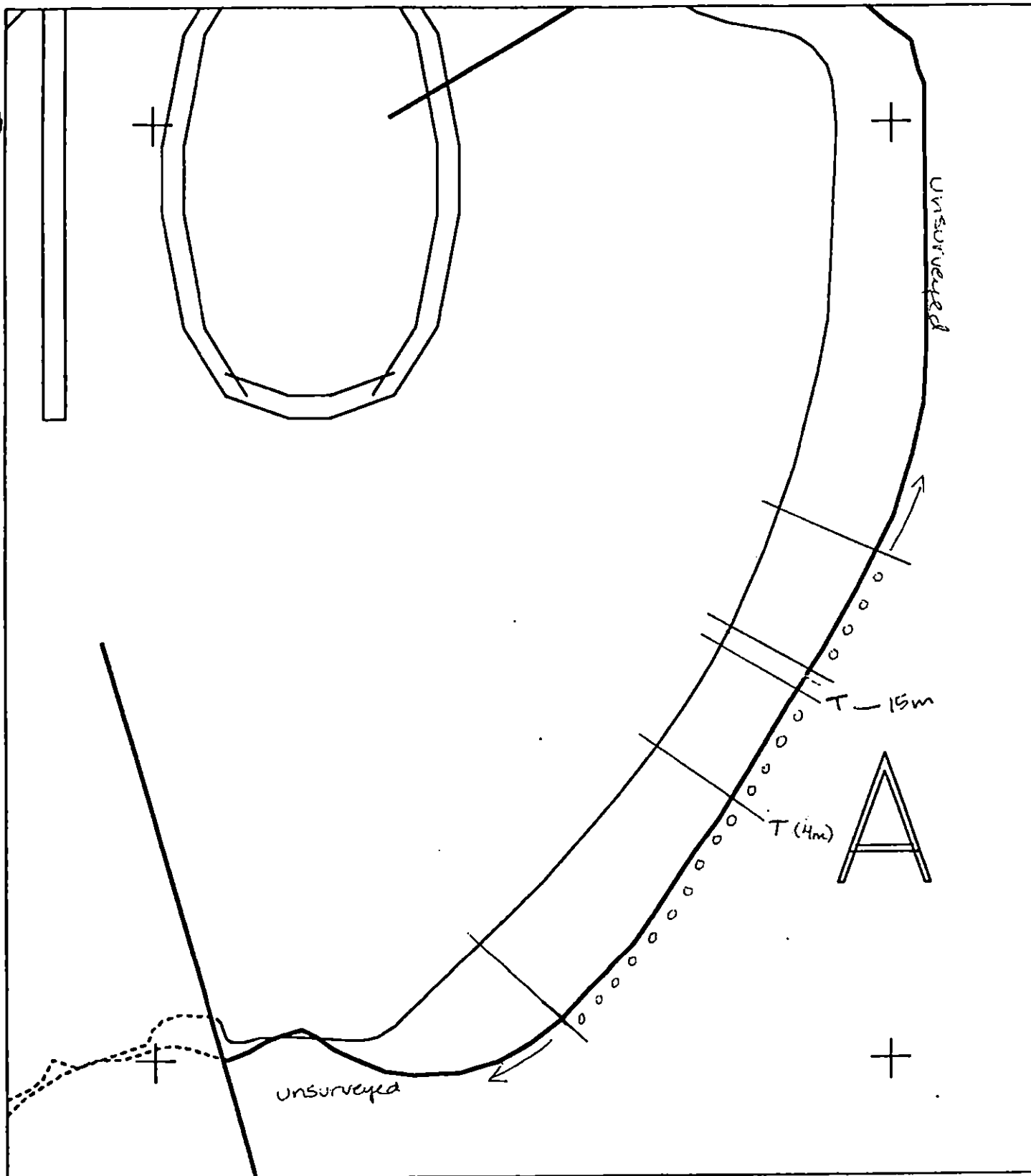
1/ Station for transect location
 II/ Grassy
 3/ PHOTO SITES

BioMap
 H. Davis

Sketch Map (OG)
 US-1A
 D. Fitzgerald
 9 MAY 1991
 1355 - 1515



* white enchytraeids (worms)



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

US010 A

ADEC Subsegment Length: 1205m

METERS

5 100 200
 AK State Plane Zone 4
 830810aa



Subdivision Field Map

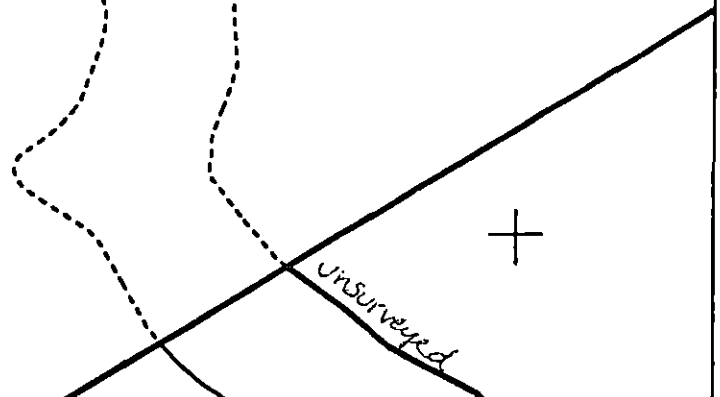
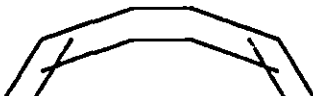
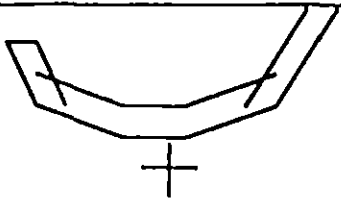
Map Key: KENUS010Aa

Name: D. Fitzgerald

Date: 9 May 91

Date Entered:

revised 5/13/91 RG
 E6 reviewed 5/13



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

US010 A
ADEC Subsegment Length: 1205m
METERS
AK State Plane Zone 4
us010ab

Subdivision Field Map
Map Key: KENUS010Ab
Name: D. Fitzgerald
Date: 9 May 1991
Data Entered:



revised 5/13/91 KG
ES revised 5/13

1991 MAYSAP EVALUATION

SEGMENT: US 010 SUB: A REGION: KEN SURVEY DATE: 5/9/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 5/15 - 9/1

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC

FOSC

EXXON

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

ADEC

NAME S. FERGESON

SIGNATURE

[Signature] 5/10/91

☒ NTR ☐ TREATMENT RECOMMENDED

NO TREATMENT RECOMMENDED AT US-10A. BERM RELOCATION WAS USED ON THIS BERM IN FALL (Sept.) 1990. THE SUCCESS OF THE BERM RELOCATION IS QUESTIONABLE. A BETTER NETWORK OF PITS USING A GRID SYSTEM MOVING VERTICALLY AND HORIZONTALLY ^{WOULD BE NEEDED} ACROSS AREA DOCUMENTED AS OILED, BEFORE DETERMINING THIS (SUCCESS) FACTOR.

EXXON

NAME G. Stiles

SIGNATURE

[Signature] 5/10/91

☒ NTR

Very little amount of oil was found mixed in with sediment.

LANDMANAGER

NAME J. HANDESTER

OF USFWS

SIGNATURE

[Signature] 5/10/91

☒ NTR

Exposure of subsurface sediments indicated insufficient amount of oily material to warrant further treatment.

USCG/NOAA

NAME Chief Jensen / R. Hoff

SIGNATURE

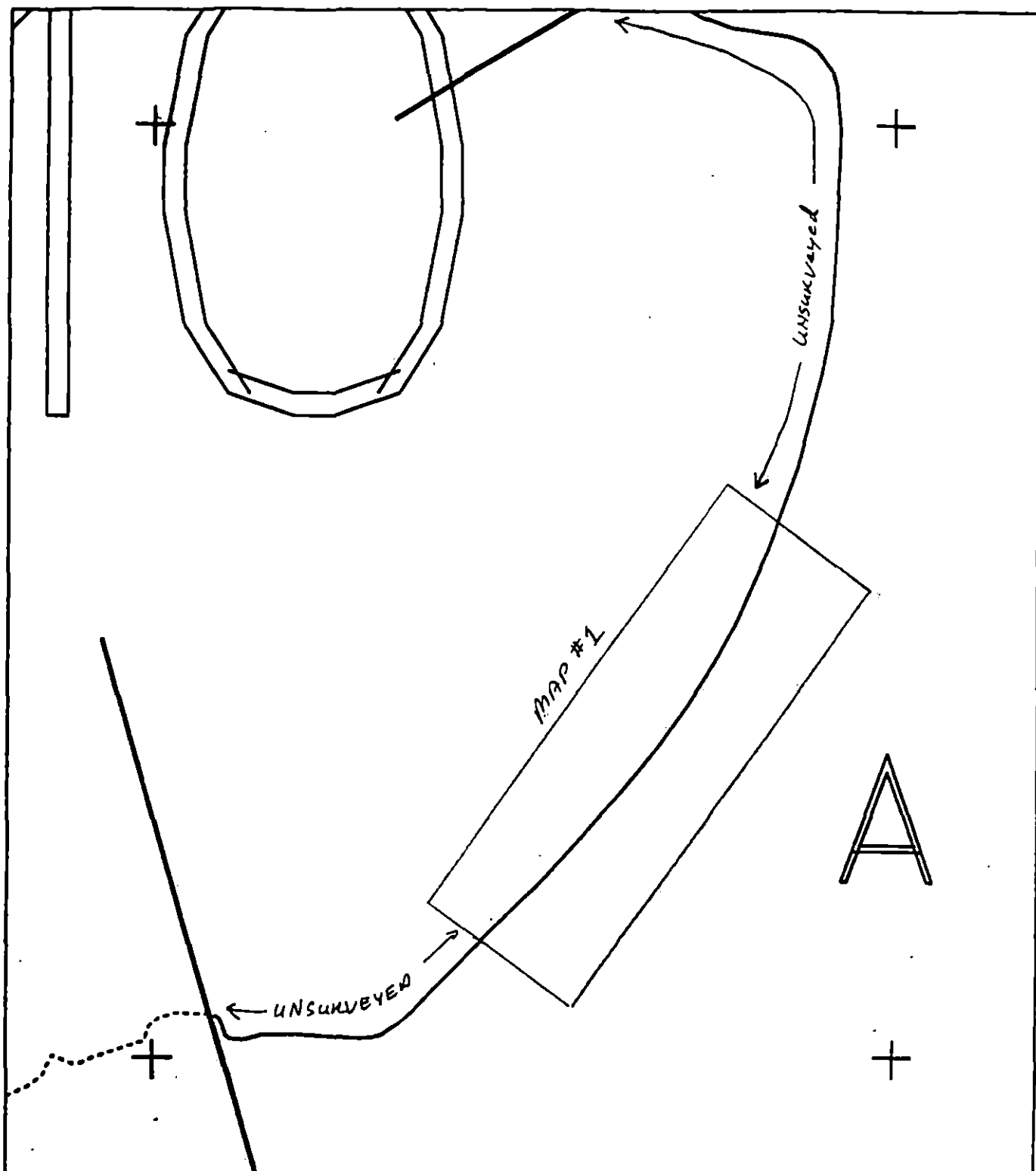
[Signature] Rebecca Hoff

☒ NTR

There is no longer any detectable oil present on the water, adjoining shorelines, or places where it is likely to reach the water again.

Berm relocation was successful at this site since only very small amounts of oil were found. Natural weathering should complete removal of the traces remaining.

CONTINUED ON NEXT PAGE



US010 A

METERS



AK State Plane Zone 4
60001000

Subdivision Field Map

Map Key: KENUS010Aa

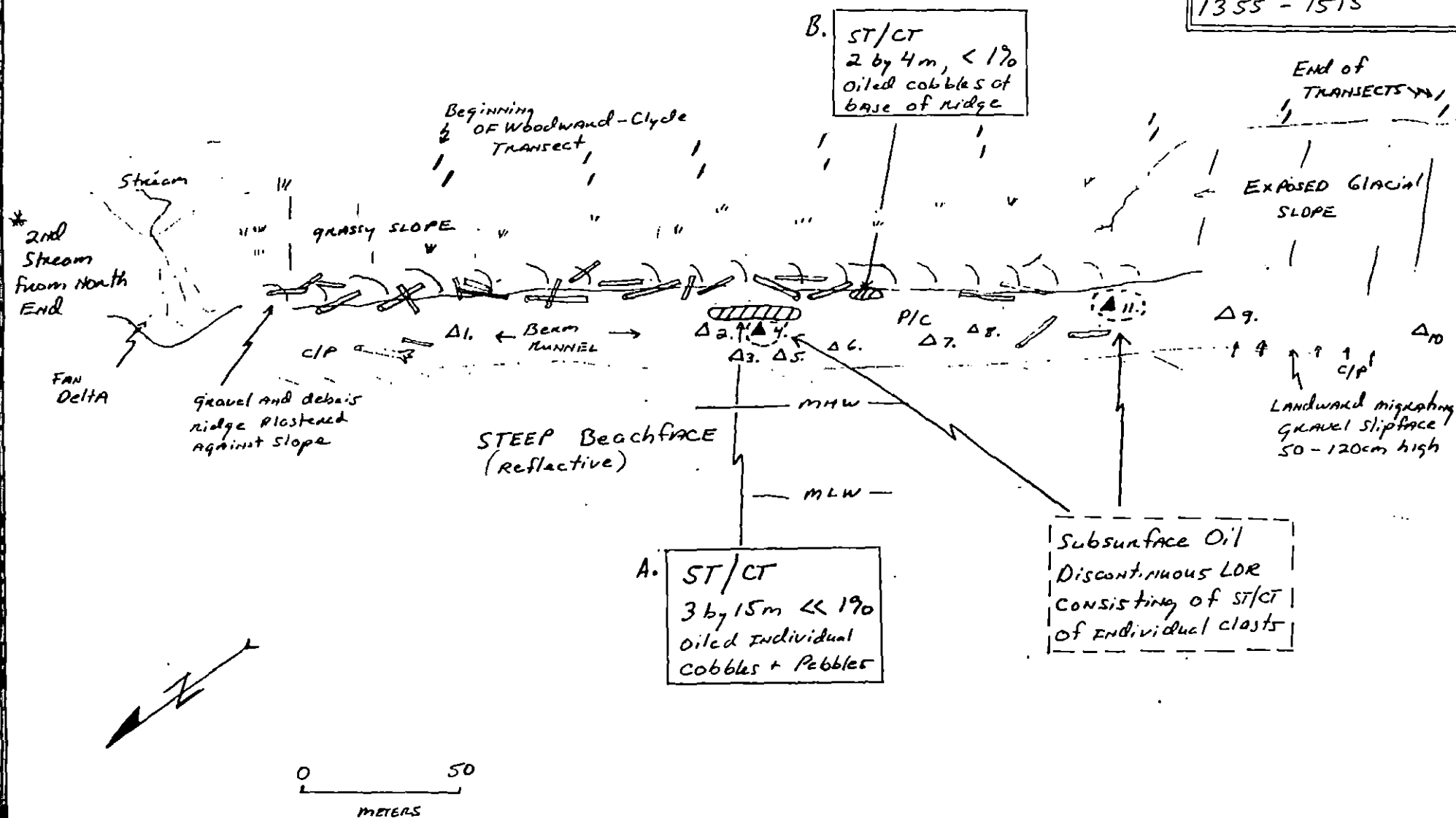
Name: D. FitzGerald

Date: 9 May 1991

Reviewed 5/12

// ST/CT for transect
 location
 // GRASSY
 // PHOTO SITES

Sketch MAP (OG)
 US-10-A
 D. Fitzgerald
 9 MAY 1991
 1355 - 1515

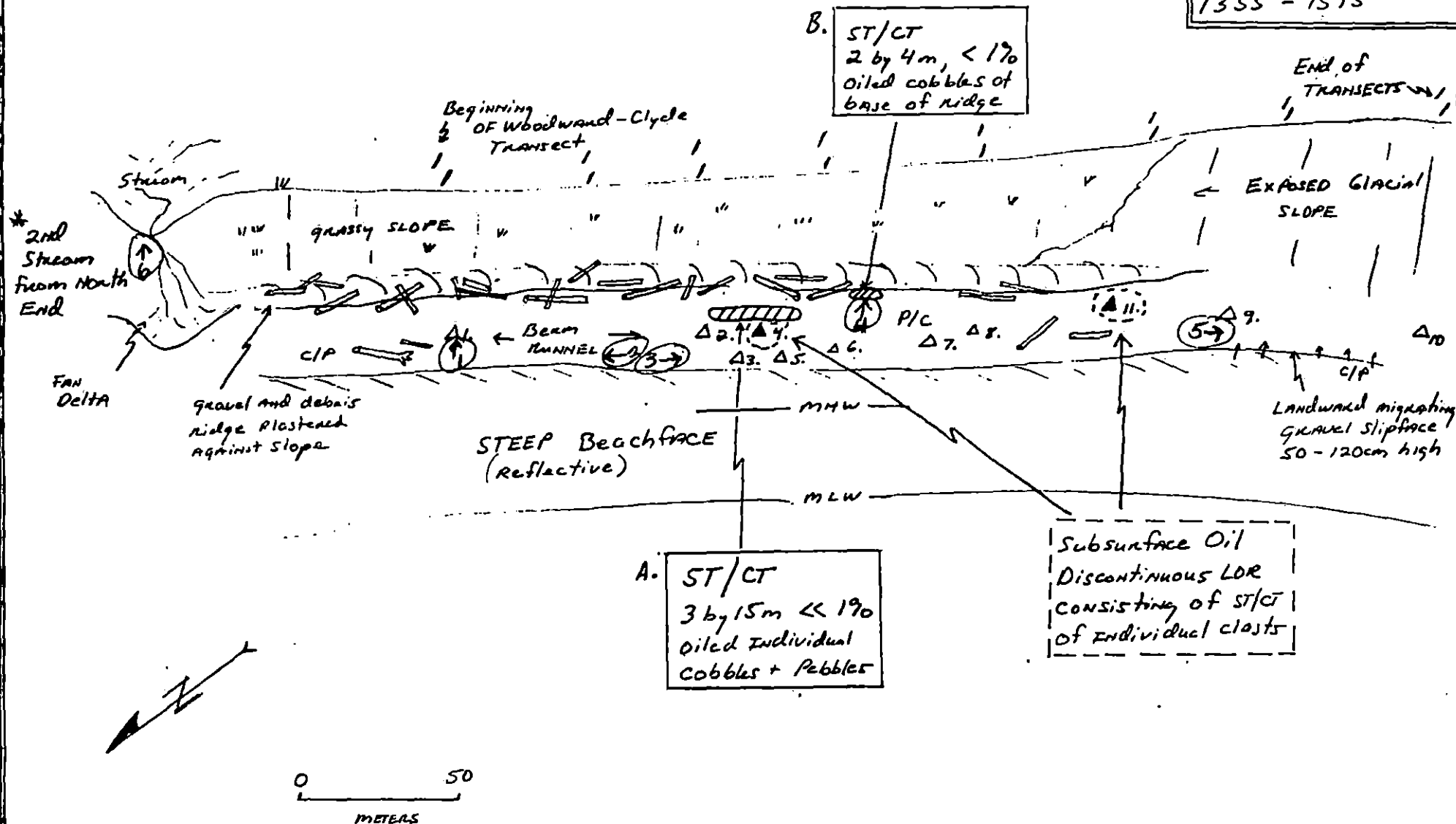


REMOVED 5/13/91
 REMOVED 5/13

Stakes for transect
LOCATION
G
PHOTO SITES

Photo locations
Maypap 6-10 #1-6

Sketch Map (OG)
US-10-A
D. Fitzgerald
9 MAY 1991
1355 - 1515



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #6 Helo

DATE May 9 1991

SEGMENT # US-10

TIDAL HEIGHT(Range) 10ft-8ft (14:00-14:55)

SUBDIVISION A

BIOLOGIST H. Davis

SEA STATE (5ft in US-10 bay) 20ft open ocean

WIND SPEED/DIRECTION 10mph W/40mph Gust S

PHOTOGRAPHS: ROLL # 6-09

FRAME # 1-6

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

A+B. There was no biota observed near either site A or B. Below the oiled areas was a strip of detritus (mostly Nereocystis and Laminaria) Kelp flies, isopods, and Enchytraeids (small white annelid worms) were active in the wrack and down into the gravel. No harpacticoids were visible.

US-10 is a high energy beach of cobbles and pebbles. There is enough sediment movement to keep the biota in the intertidal area restricted to detritus feeders that can burrow into the substrate for protection. At the point to the west of US-10 are rocks with about 25-30 sea lions hauled out.

Northern (4) Red Neck Phalarope (3)

Short-eared Owl (1), Glaucous winged (5) Kittiwake (6) Sandpipers (3)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

FISH OBSERVED
SPECIES PRESENT

BIRDS

OF SPECIES

TOTAL BIRDS

Eagles	2	1 adult 1 immature	0
Seabirds			
Waterfowl	1	4	
Gulls/Kittiwakes	2	11	
Shorebirds	2	6	
Corvids			
Other Birds Short-eared owl	1	1	

LAND MAMMALS

MARINE MAMMALS

OBSERVED

SPECIES

OBSERVED

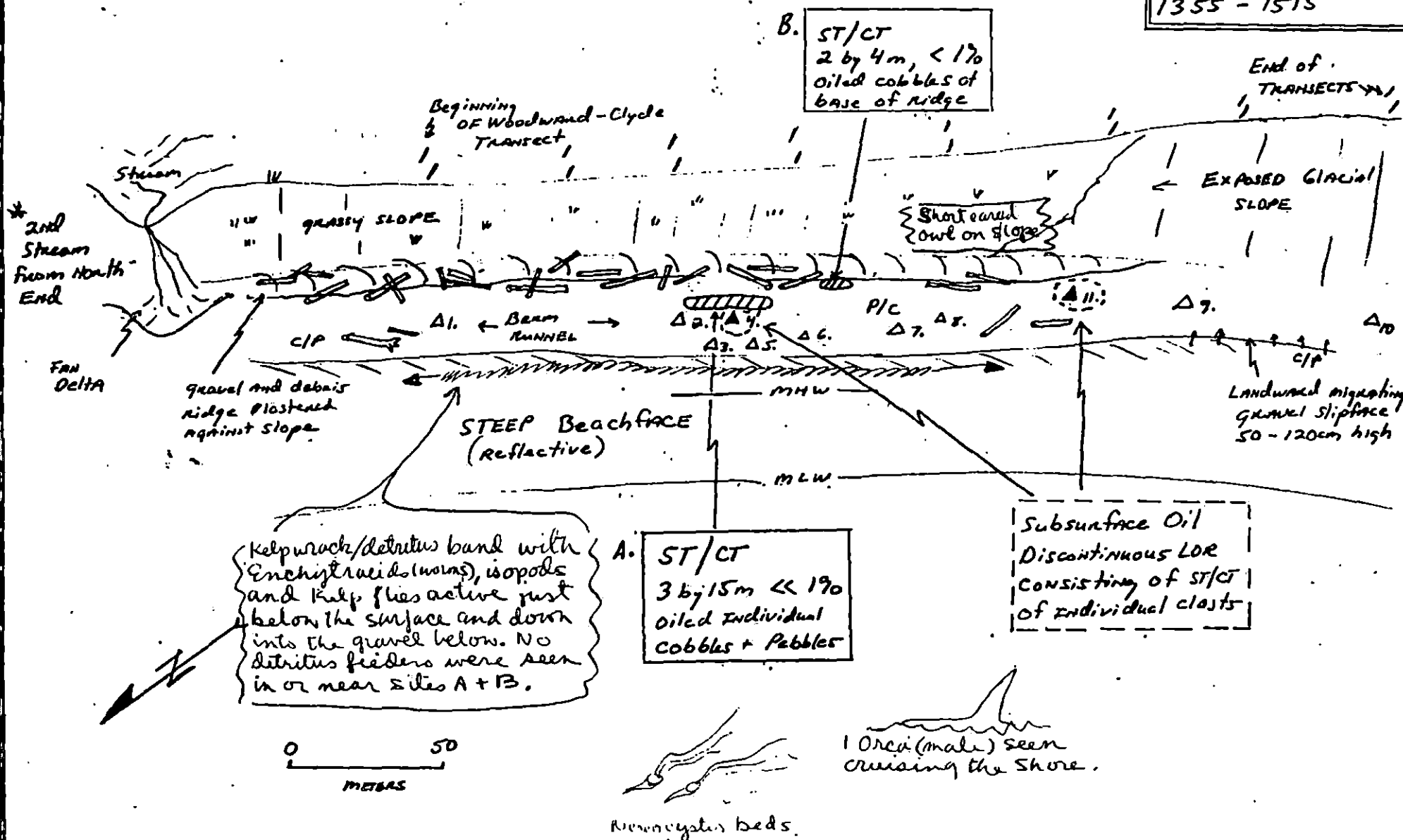
Sea Otters	0	0	
Pinnipeds (specify)			
Steller's Sea Lion	>30*		
Whales (specify)			
Orcinus orca	10*		

* These are 2.5 miles out from US-10A on the western tip of Ushagat Island. Shoreline subdivision map showing important biological features attached.

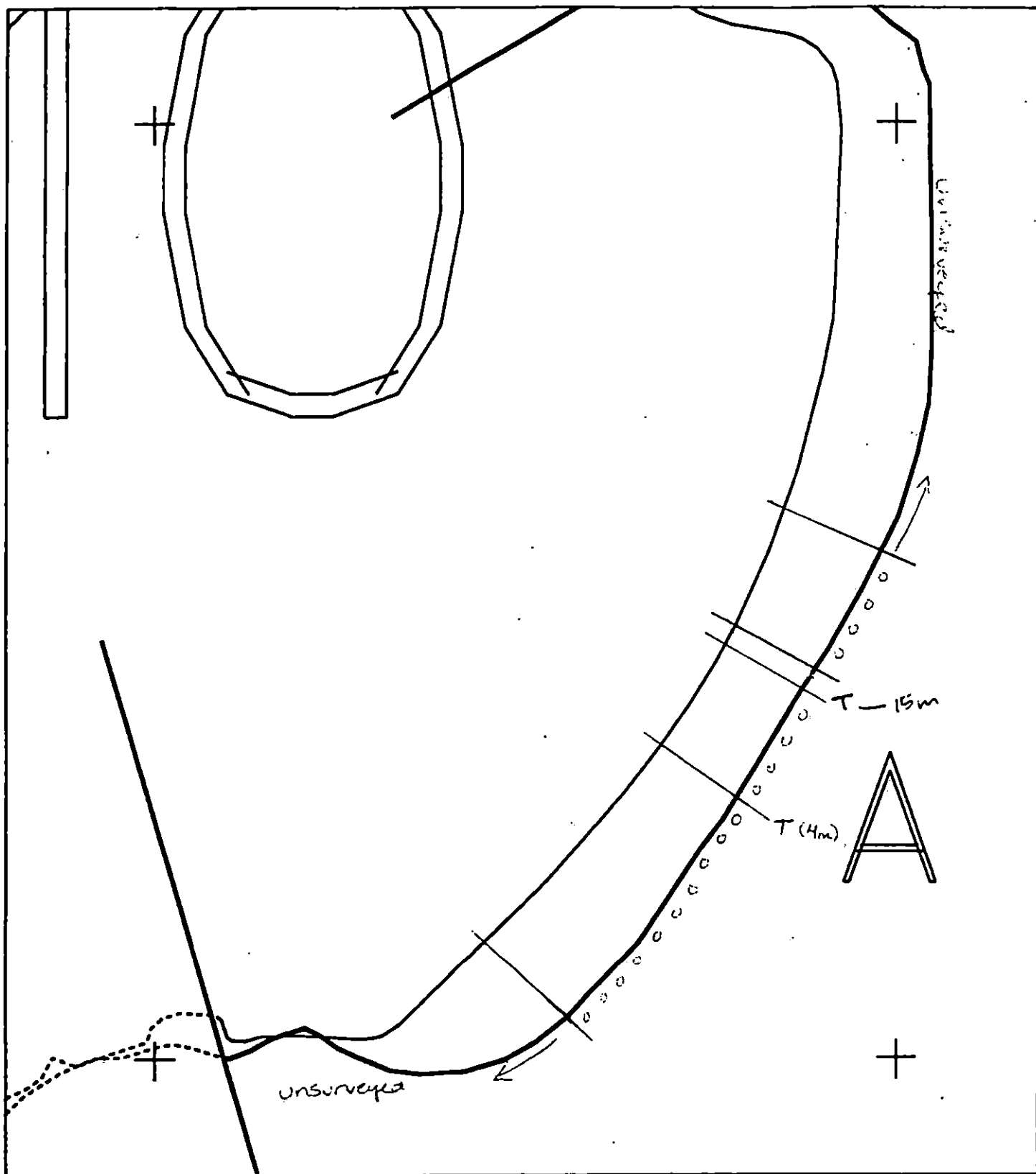
/ / sites for transect location
 // GRASSY
 / PHOTO SITES

BioMap
 H. Davis

Sketch MAP (OG)
 US-10-A
 D. Fitzgerald
 9 MAY 1991
 1355 - 1515



* white enchytraeids (worms)



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

US010 A
 ADEC Subsegment Length: 1205m
 METERS

0 100 200
 AK State Plane Zone 4
 5001000



Subdivision Field Map

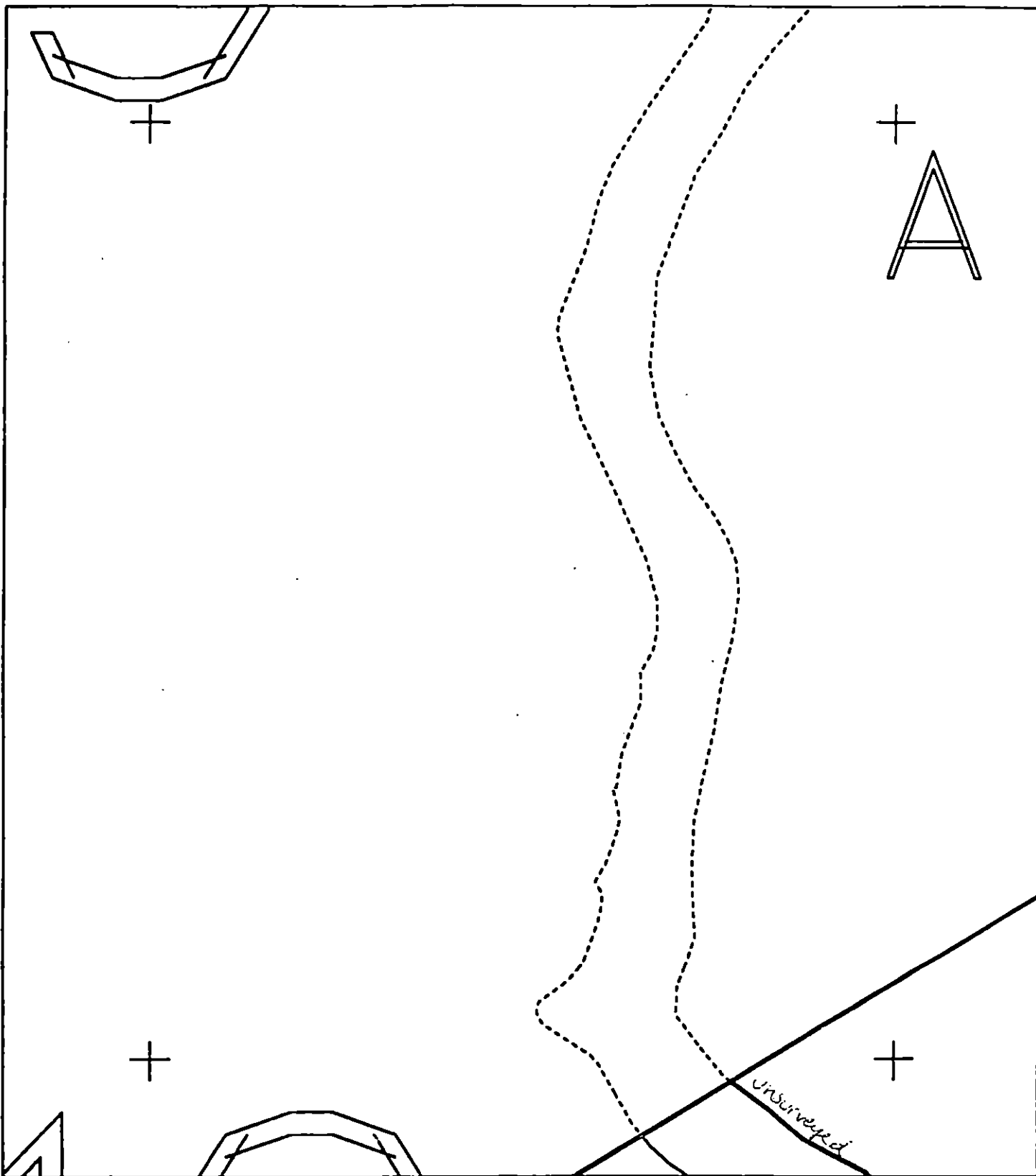
Map Key: KENUS010Aa

Name: D. Fitzgerald

Date: 9 May 91

Date Entered:

revised 5/13/91
 E6 reviewed 5/13



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

US010 A

ADEC Subsegment Length: 1205m

METERS

0 100 200

AK State Plane Zone 4
 800010ab



Subdivision Field Map

Map Key: KENUS010Ab

Name: D Fitzgerald

Date: 9 May 1981

Date Entered:

revised 5/13/81
 & revised 5/13

REGION: KENAI

SEGMENT: ST/US-11

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ US-11 SUBDIVISION A (1 OF 1) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
USFWS property.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 114 m: No Oil 729 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/15)
 1E Main Bay Hatchery release (4/20 to 6/15)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- Harbor seal and sea lion pupping (5/15 to 7/1)
 Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31).
 Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7H Finfish harvesting
 7I Deer harvesting (8/15 to 2/26)
 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

SEGMENT ST/ US-011 SUBDIVISION: A DATE 27 April 1992**USCG**NAME Miles D. Hughes SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

*Very high energy area.
No treatment required.*

ADECNAME Russell Kenabe SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Oil was present on splatter of coat on the boulders and low boulders.

LAND MANAGERNAME Gerald M Nugent SIGNATURE [Signature]~~☐ NO TREATMENT RECOMMENDED~~~~☐ TREATMENT SUGGESTED~~

COMMENTS

No treatment is practicable or recommended.

SHORELINE OILING SUMMARY

REVISION NO. 0413.90

OG N. BIGGAR USCG (NOAA) MILES HAVER SEGMENT ST/ U5-011
 BIO D. RAIDER LAND REP JERRY NUGENT (FNU) SUBDIVISION A (1 OF 1)
 EXXON JOHN DEAN ADEC RUSSELL KUNIBE TIME 9:45 to 10:50
 TEAM NO. 17 TIDE LEVEL -4 to -2 DATE 4/26/90
 EST. SUBDIVISION LENGTH: 342 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 20 % B 65 % C 15 % P — % G — % S — % M — % V — %
 SLOPE: Lang 90 % Hang 0 % Vert 10 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 136 m NO 706 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	/C	/B	/P	/S	SBL BR	DBL BW	GY SL	DBR TL	LR	SU	U	M	L	
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT		0	Y	X		Y	X			Y	X			
STAIN														
MOUSSE														
PATTIES														
TARBALLS														
FILM														
NO OIL											X	X	X	

PAVEMENT H F S — sq. m by — cm

PATTIES / TARBALLS — BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒

TYPE —

#BAGS —

Photographs:

Roll No. 4Frames 15+16

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A	N	A	SHEEN (Y/N)	▽	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SBL	DBL	GY	SL	DBR	TL	LR	SU	U	M	L							
1	44					X	.		X							X											E, G, P
2	54					X	.		X							X											G, P, C
3	70					X	.		X								X										P, G, C
↑							.																				
		PIT Δ3 APPEARS TO BE IN U5-012 !																									

COMMENTS ^{Pit} Δ1 is sharp resurgent into beach - oil spatter on walls on either side; 1 short band on wall near pit
 Beach has been eroded to about 1 ft lower than deep line

Beach is high energy, well exposed.

at low tide, boulder-covered wave cut platform exposed

Oil is present as a very light spatter on boulders and rock face -

Heaviest concentration is a drip line on protected vertical rock face near
 E end of segment

REVIEWED BAI DATE 1 May 90

06

SEGMENT STI US-11

SUBDIVISION A

DATE 7 125 90

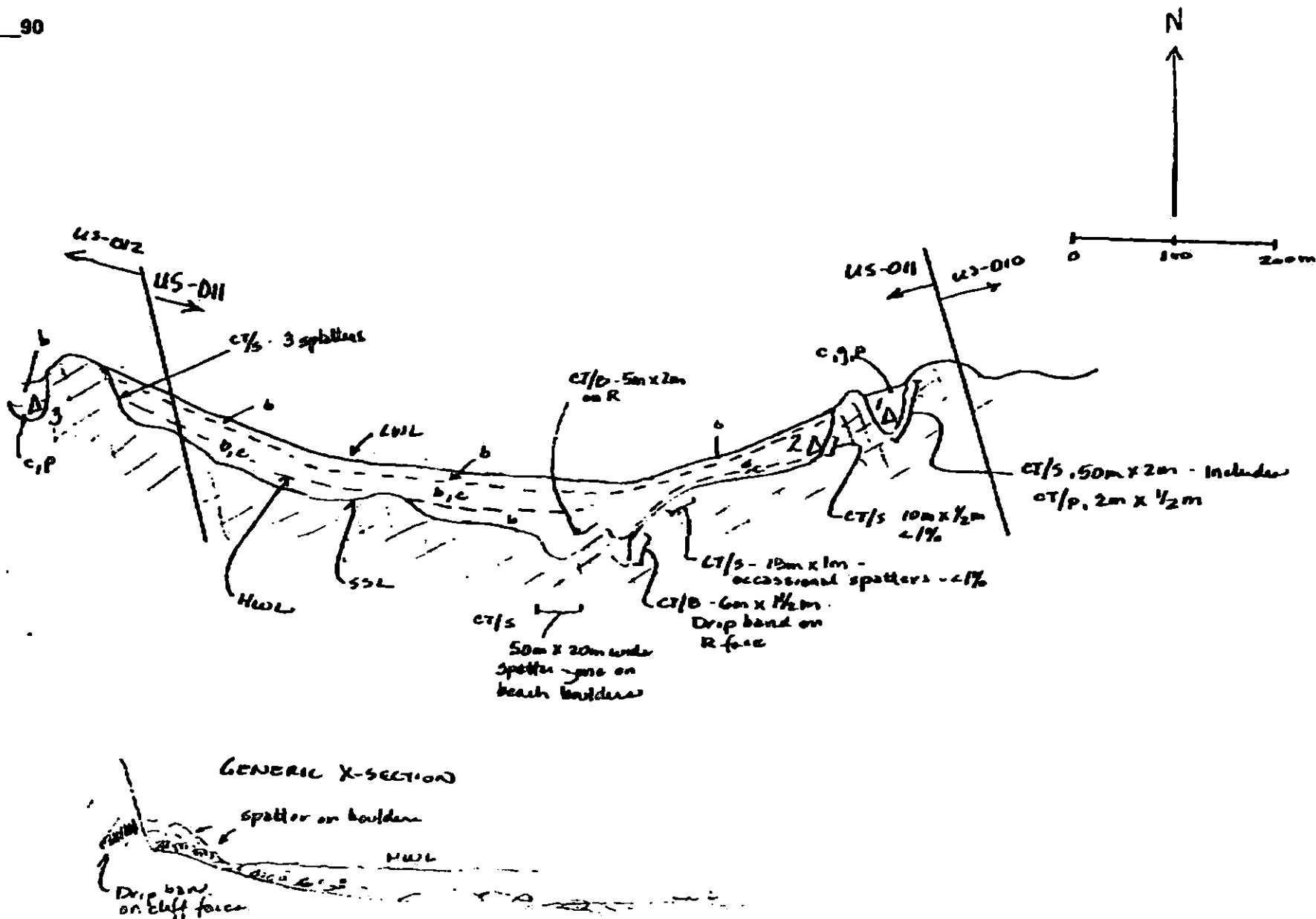
CHECKLIST

- ☒ N Area
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☒ Obs Dist
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HWA/LWL
- ☒ SS1
- ☒ Profile Location(s)
- ☒ Photo Location(s)
- ☒ Photo Location(s)

LEGEND

- 1 Δ
Fl - No Substrate Oil
- 2 Δ
Fl - Substrate Oil
- $\square$ CT/C
Continuous Distribution
- $\square$ CT/B
Broken Distribution
- $\square$ CT/P
Patchy Distribution
- $\square$ CT/S
Splashed Distribution
- $\lll$
Clad Vegetation
- 1 $\odot$
Photo location, direction, and number

SKETCH MAP



Oil Character Length (m) AP — PO — CV — CT 3 — ST — MS — PT — TB — FL — NO 75

SHORELINE ECOLOGICAL SUMMARY

Segment ST / US-011 Subdivision A Date (mo / day / yr) _____

Time (24 hr) 9:45 Biologist DANIEL PAIDER

(A) Substrate type and % of segments:
(1) Bedrock 20 (2) Boulder 65 (3) Cobble 15 (4) Pebble 0 (5) Sand 0

(B) Overall % cover of biota (% of segment): Dense 40 Moderate 10 Low 15
↳ to none

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

Photographs: _____
Roll No. 4

Frames 15 + 16

BARNACLES

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

NOT PR.

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

SEE ATTACHED SHEET FOR WILDLIFE SITINGS

Ecological Considerations:

NONE ON DATA BASE HANDOUT

(16)

Wildlife observations - VS-011 A 4/25/90

<u>Name</u>	<u>Amount</u>	<u>Comments</u>
1) Glaucous - Winged Gull	2	
2) Bald Eagle	1	Pelagic / feed; nest
3) Cormorant sp.	1	

Note: Low numbers of birds possibly attributed to high winds

BIO Comments for VS-011
 Term 17, Daniel Raider
 25 April 1990

1 of 2

This segment has a very extensive and dense amount of vegetation running its entire length throughout the M12 and L12. This mat (extremely thick & dense) is composed mostly of brown algae. Areas have been designated on map and will be described here.

Area 1

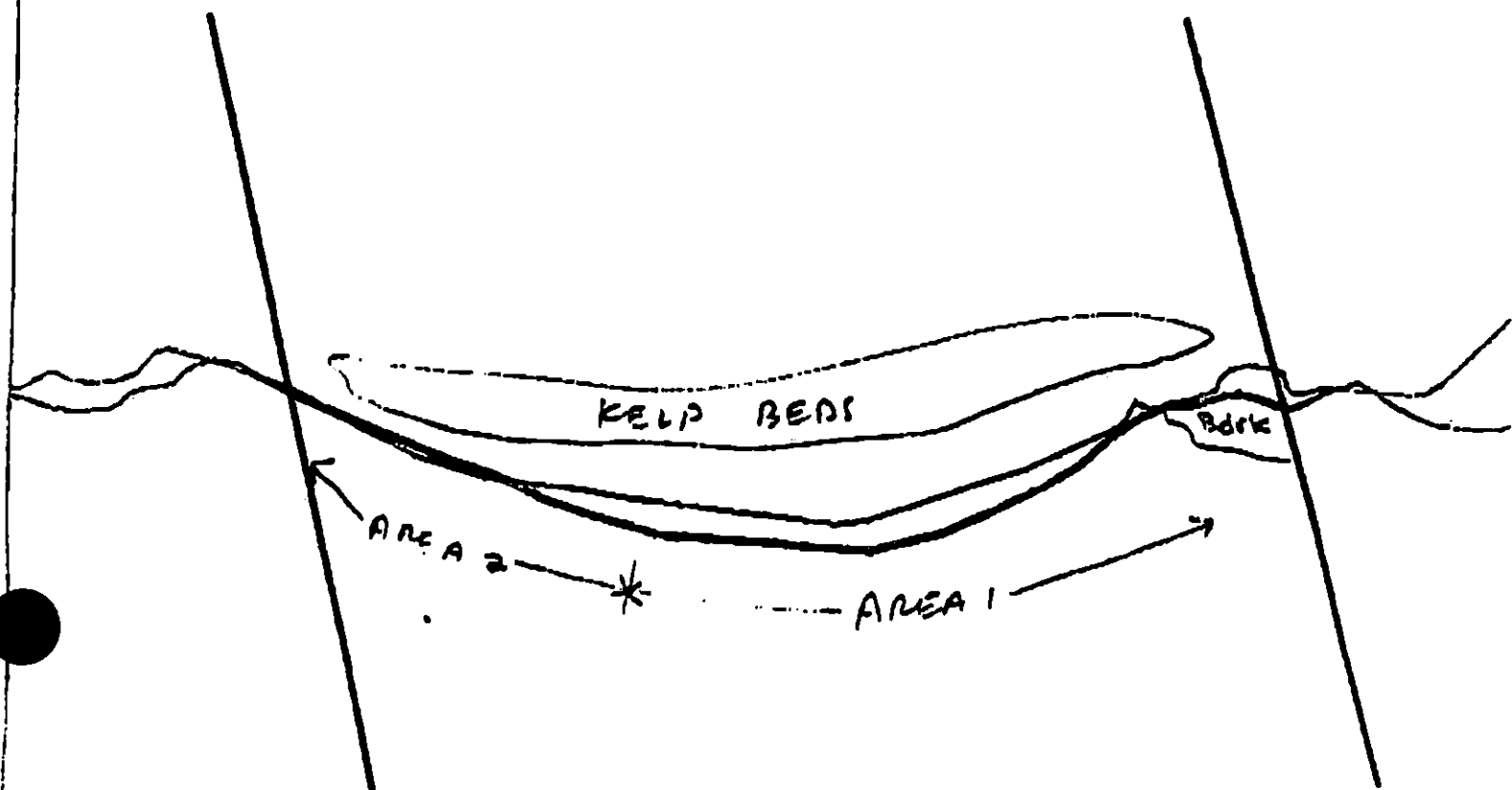
- Dense *Laminaria* spp. all along the shore in the L12 and M12
- Bedrock in L12 w/ dense *Semi Balanus* (*Carissus*)
- Katharina tunicata - many
- *Fucus* - sparse on boulder in M12
- *Enteromorpha*
 - *Alaria* *Andersonii*
 - *Pyropodia* *helianthoides* (3 sites)
 - Red filamentous; Brown filamentous
 - Bryozoans - M12
 - Moderate barnacles in M12 on dry rocks - boulders

Area 2 (greater density)

- Profuse amounts of *Nucella* *lanceolata* in clusters (ex. of on one boulder found)
- Sparse limpets on boulders in M12
- Moderate *Littorina* *sittkora* in M12

- small pockets of dense new fucus in M72 on boulders
 - many anemones, Anthrenopleura spp. in M72 on boulders
 - Sculpins - Saddleback and Fluffy (?)
 - Area 2 has a greater diversity in both fauna and flora as it has several fresh snow-melt creeks flowing into it
-

BIO SKETCH



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

US-11A

Approx. Segment Length: 842m

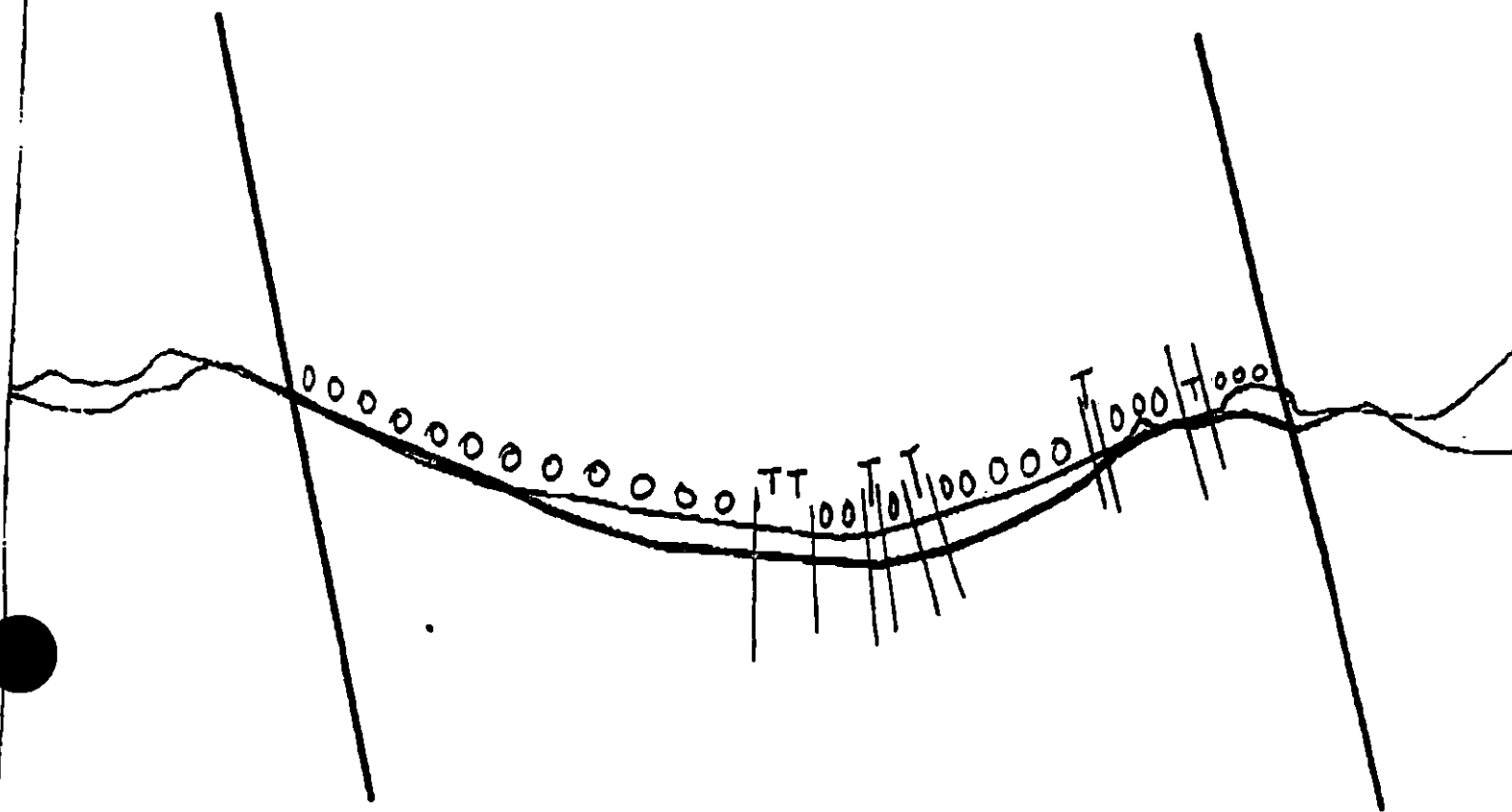


Map Key: KEN-US-11

Name: _____

Date: _____

Date Entered: _____



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

US-11

Approx. Segment Length: 842m



Map Key: KEN-US-11

Name: N. BIGWAK

Date: 4/25/90

Date Entered:

OC

SEGMENT ST/ US-IISUBDIVISION ADATE 7 125 90

CHECKLIST

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

LEGEND

1 Δ

FI - No Subsurface Oil

2 Δ

FI - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

lll

Oiled Vegetation

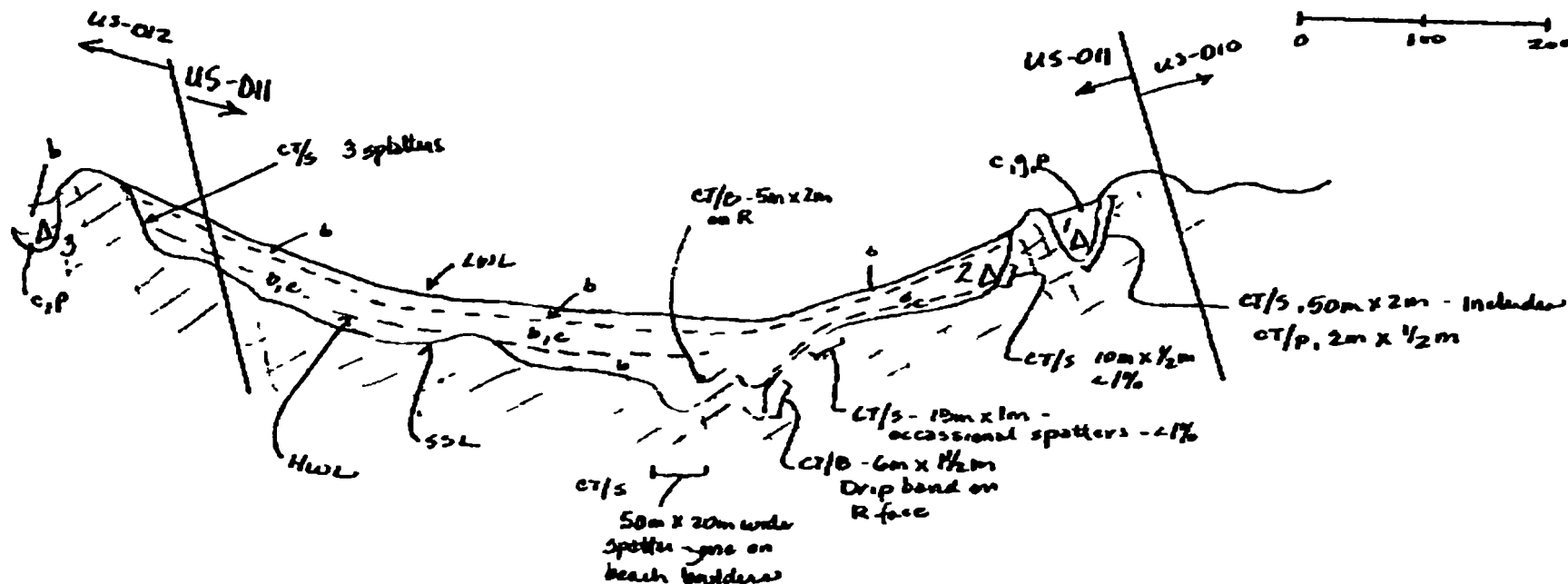
1 $\Rightarrow$

Photo location, direction, and number

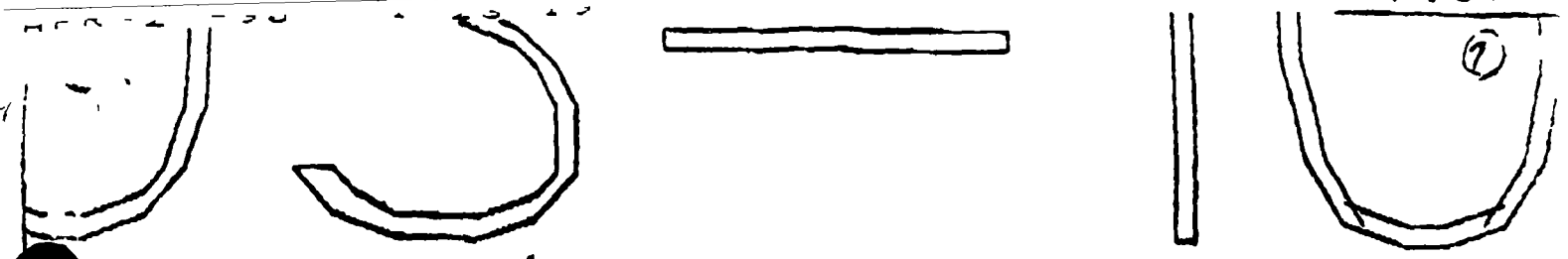
SKETCH MAP

N

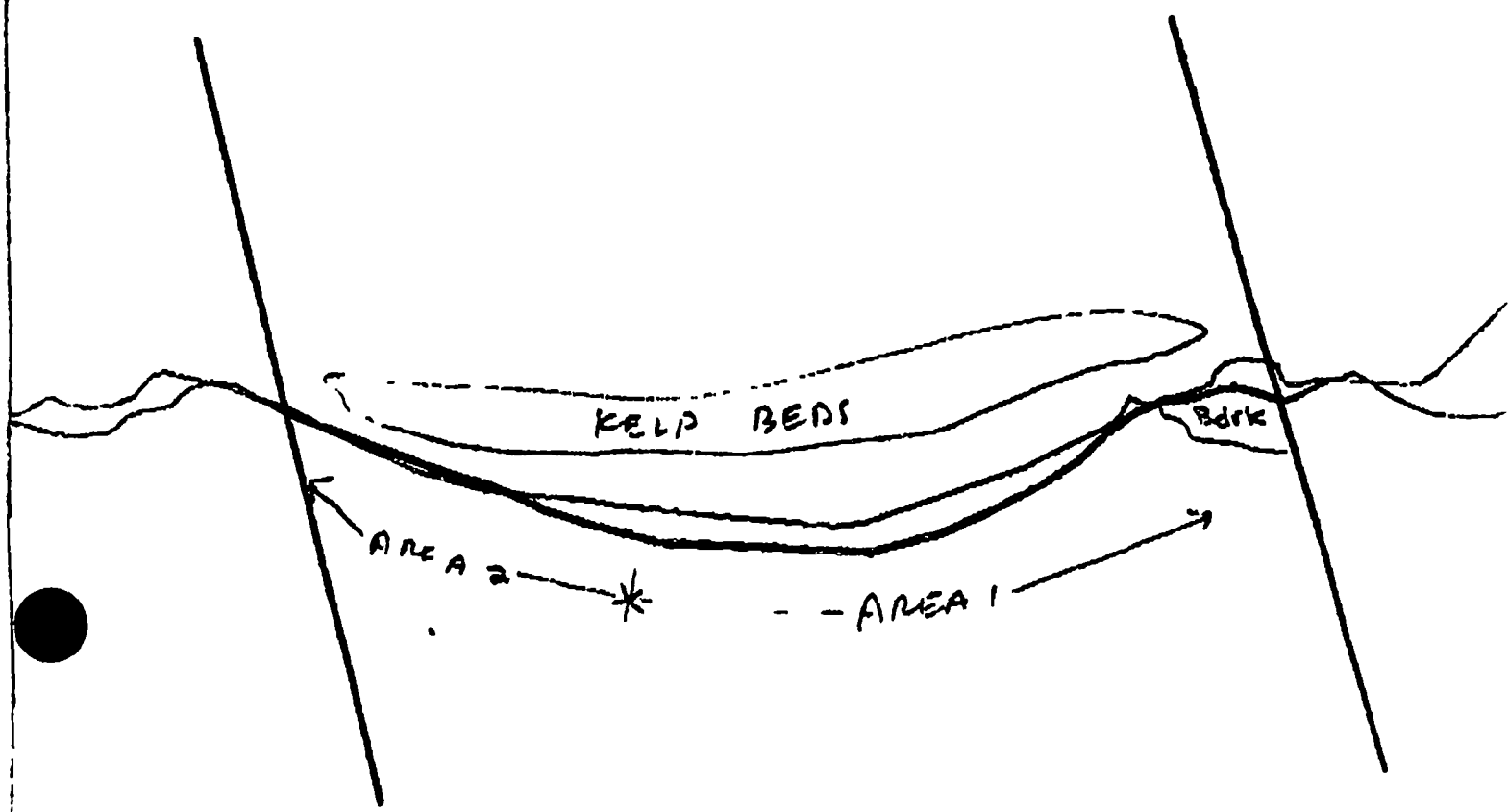
0 100 200m

Oil Character Length (m) AP PO CV CT 3 ST MS PT TR FI NO

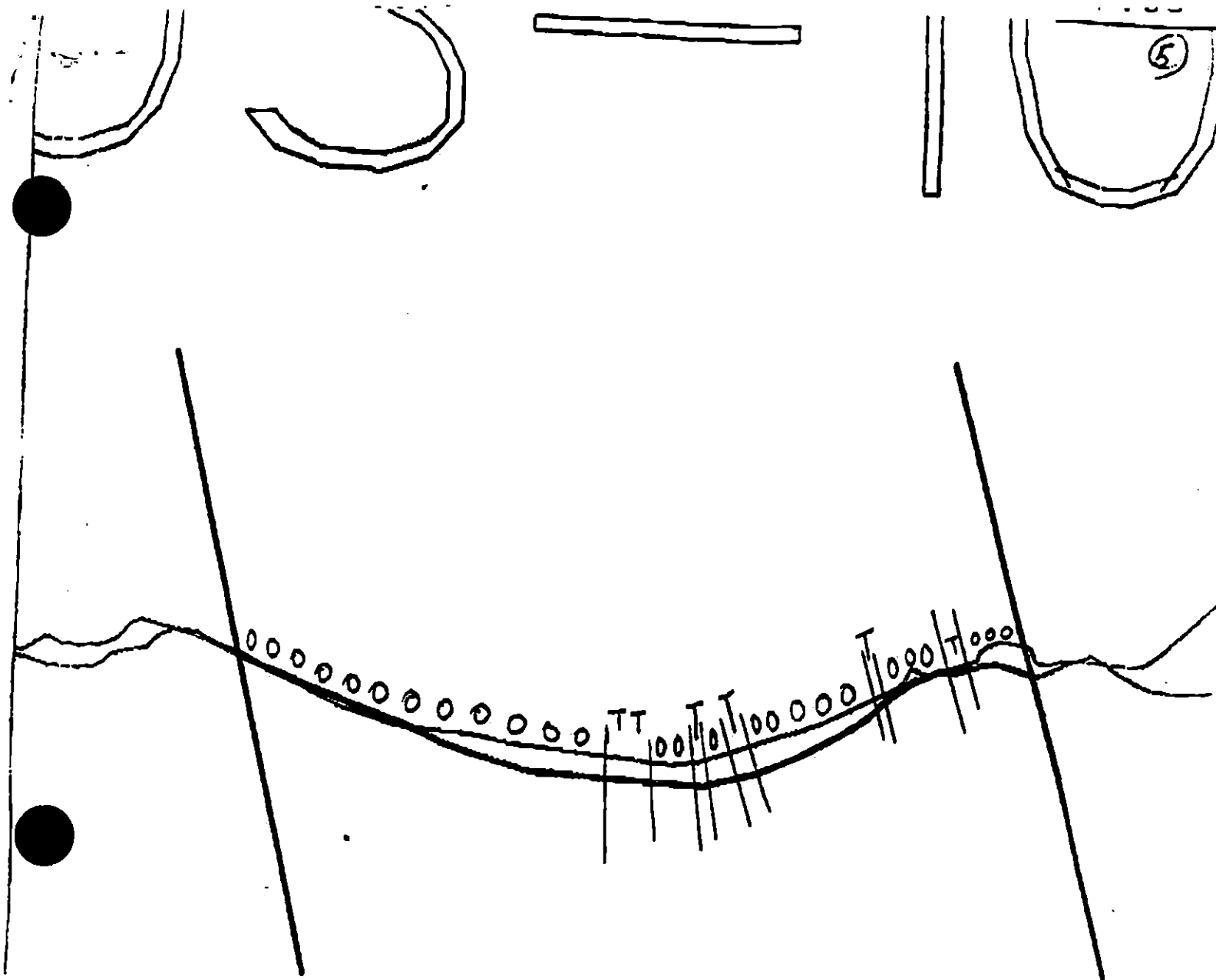
REV 0001-02/2000



BIO SKETCH



XXXX Wide	US-11A		Map Key: KEN-US-11
/// Medium	Approx. Segment Length: 842m		Name: _____
--- Narrow			Date: _____
TTTT Very Light			
0000 No Oil			



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

US-11

Approx. Segment Length: 842m



Map Key: KEN-US-11

Name: N. BIGGAR

Date: 4/23/90

Area: 842m

KEN

Work Window(s) RESTRICTED 5/15 - 9/1

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

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

SHPO Signature: Rebel Dan Dore Date: 5/22/21

<u>RECOMMENDATIONS:</u>	<u>INITIAL</u>	<u>TAG</u>	<u>FOSC</u>
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 _____	_____	_____	_____

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: MAY 22 1991 FOSC APPROVAL DATE: 6/1/91

ADEC *[Signature]* FOSC *[Signature]*

EXXON E. E. PAGE, CDR, USCG

USCG L. M. Murphy CT

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 6-Helo SEGMENT US-11 SUBDIVISION A DATE 11 May 1991

ADEC

NAME S. Ferguson

SIGNATURE [Signature]

☒ NTR ☐ TREATMENT RECOMMENDED

NO TREATMENT RECOMMENDED AT US-11A. VERTICAL BEDROCK IN TWO LOCATIONS HAD TRACE AMOUNT OF STAIN. IN BOTH LOCATIONS THE LENGTH OF THE OILING WAS LESS THAN 1/2 METER.

EXXON

NAME Alex Coulter

SIGNATURE [Signature]

☒ NTR THE STAIN FOUND REQUIRED SOME SEARCHING. SUBDIVISION IS CLEAN AND REQUIRES NO FURTHER EVALUATION OR CONSIDERATION FOR TREATMENT.

LANDMANAGER

NAME M. Blendon

OF USFWS

SIGNATURE [Signature]

☒ NTR

Looks good - let's leave it alone.

USCG/NOAA

NAME Chief Jensen / G. Shigenaka

SIGNATURE [Signature]

☒ NTR There is no longer any detectable oil present on the water adjoining shorelines, or places where it is likely to reach the water again.

SEGMENT IS A BROAD PEBBLE/GRAVULE BEACH TO THE EAST BECOMING INTERSPERSED WITH BOULDERS TO THE WEST, BOUND BY ROCKY HEADLANDS AT EITHER END. ALTHOUGH ADEL REP FERGUSON REPORTED OIL ON ROCK FACES IN 1990, NO OIL WAS OBSERVED IN THIS SEGMENT DURING OUR SURVEY.

revised 5/14/91 KG
REVISED CD 4 MAY

xxx bedrock slope

↗ photo sites

v v v grassy upland

Sketch MAP (06)

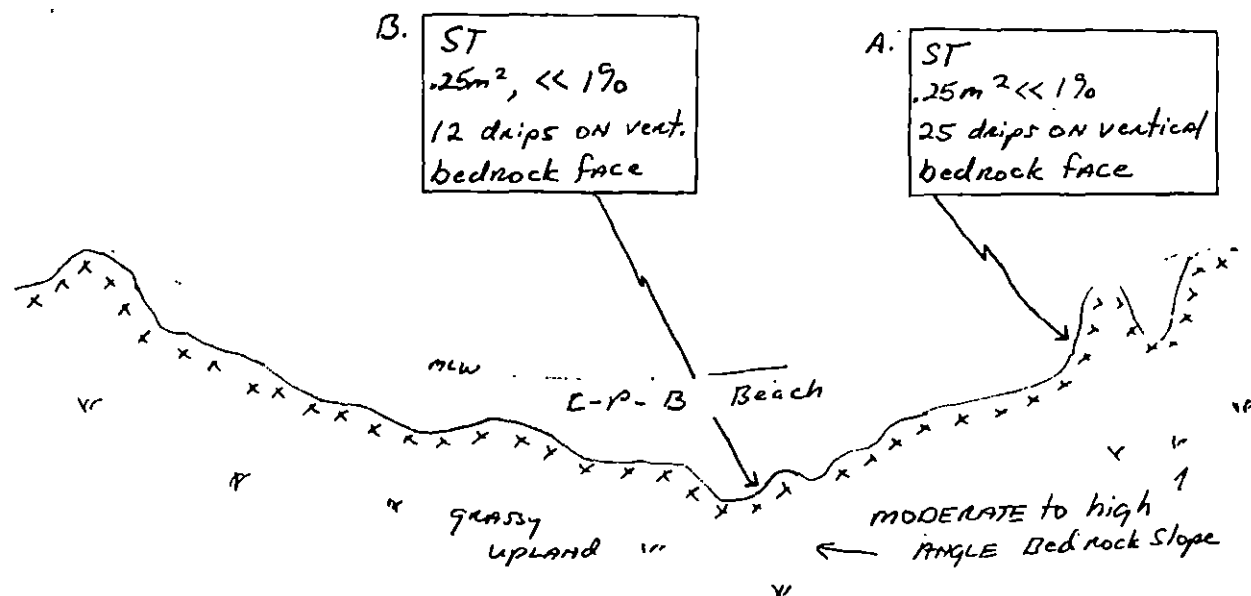
US-11-A

D. FITZGERALD

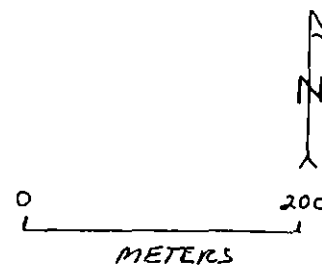
11 MAY 1991

6:40 - 7:20

revised 5/14/91 KCG



REVIEWED CD 14 MAY



xxx Bedrock Slope

↗ Photo sites

www grassy upland

Photo sites for US-11A
FRAMES 1 & 2,
ROLL 6-11

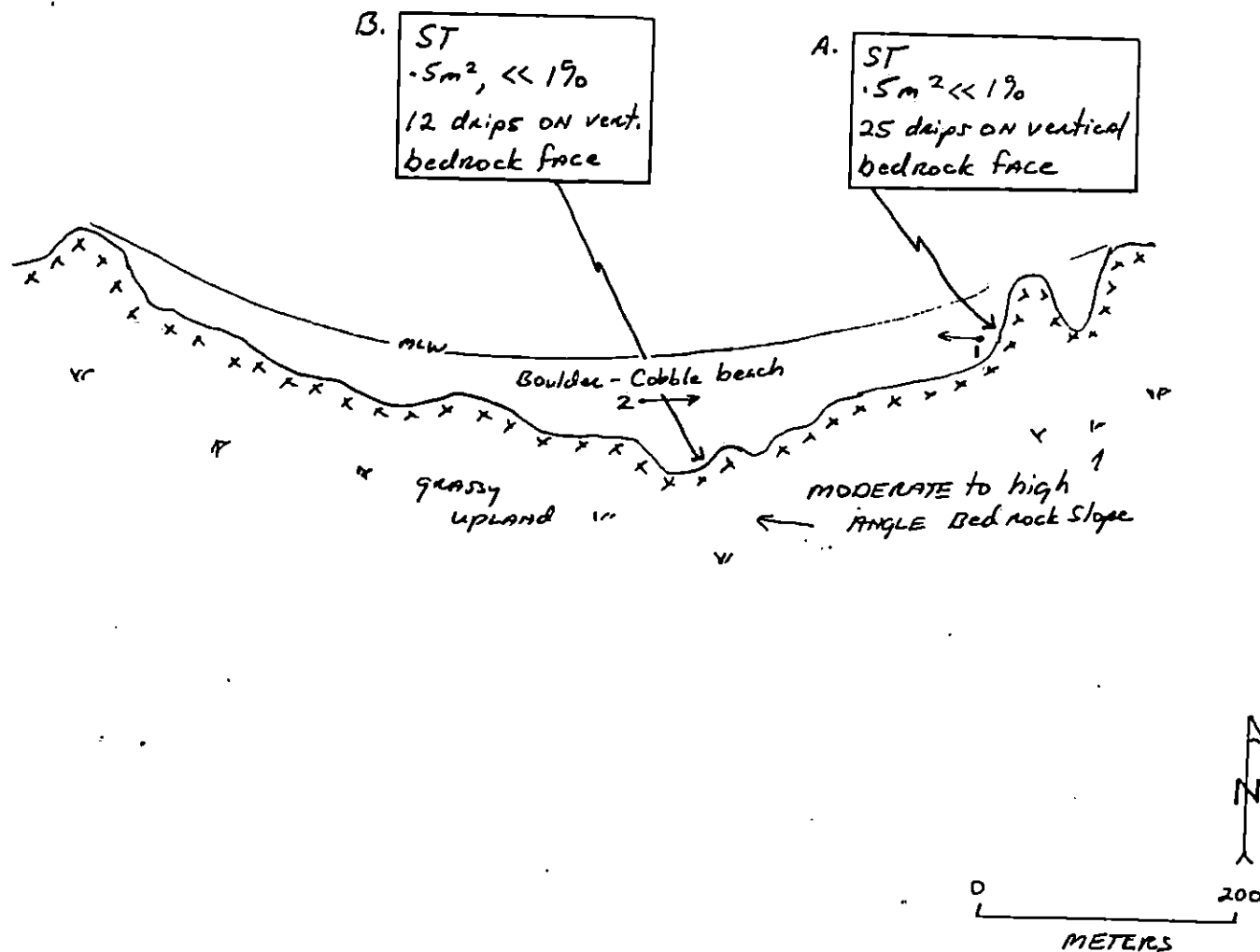
Sketch map (06)

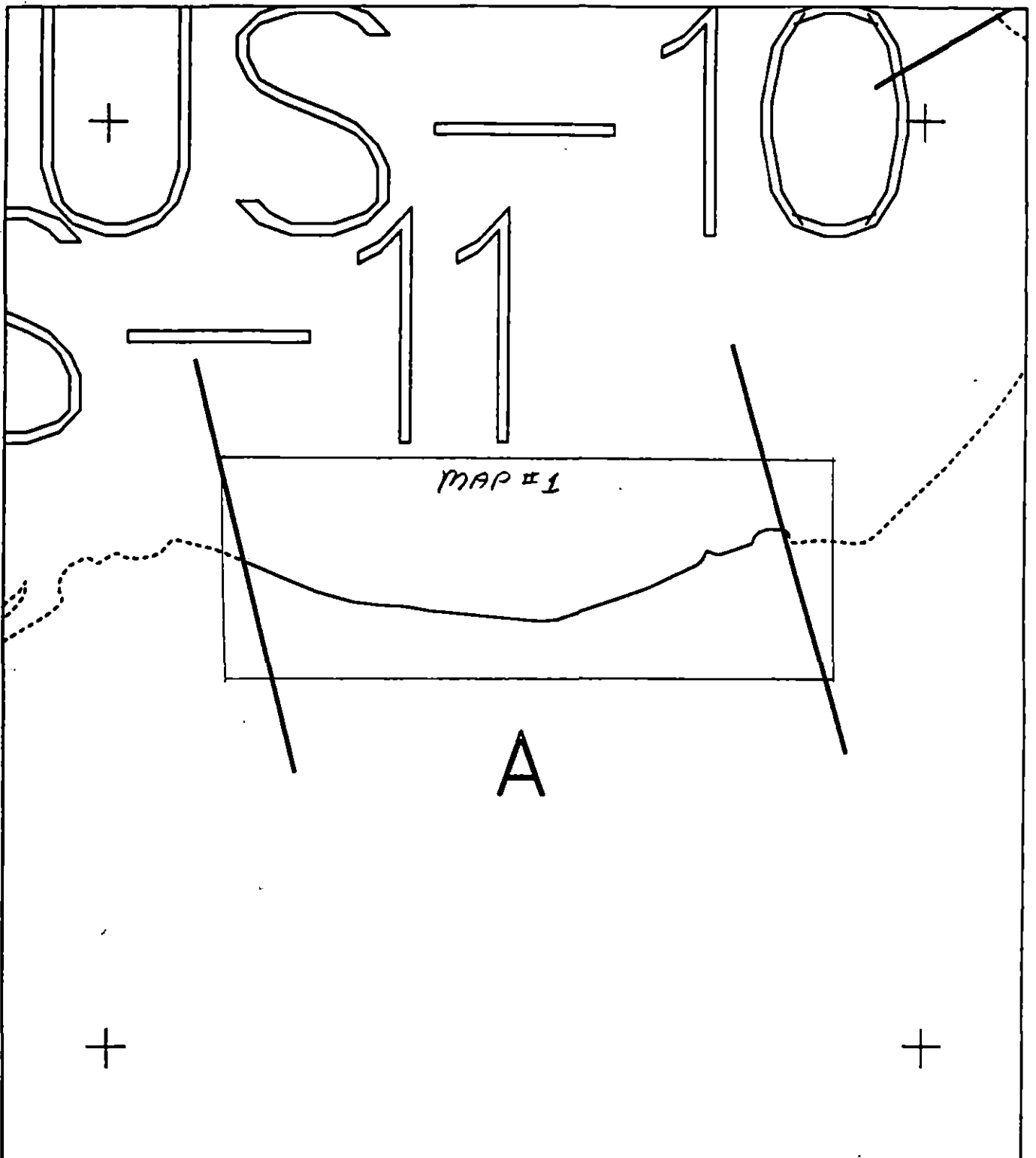
US-11-A

D. Fitzgerald

11 May 1991

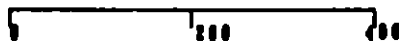
6:40 - 7:20





US011 A

METERS



AK State Plane Zone 4
NAD83

Subdivision Field Map

Map Key: KENUS011A

Name: D. FITZGERALD

Date: 11 MAY 1991

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 Helo

DATE May 11, 1991

SEGMENT # US-11

TIDAL HEIGHT (Range) 1 ft - 6 ft (6.45 - 7.25)

SUBDIVISION A

BIOLOGIST H. Davis

SEA STATE 1 ft

WIND SPEED/DIRECTION 1-2 mph W

PHOTOGRAPHS: ROLL # 6-11

FRAME # 1, 2

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

- A. Verrucaria (Black lichen) is in proximity to the oil, along with filamentous greens and diatoms (Especially where rivulets of water come down). Lower down the slope (5-10 meters) is a line of kelp drift with amphipods, kelp flies and annelids active within it. Below this area Fucus patches and filamentous greens are the dominant algae. Littorina are moderately dense. (Egg laying occurring). On large rocks + rock faces Barnacles are sparse.
- B. The Oil drips are on a vertical bedrock face with Verrucaria, filamentous greens, and diatoms. The drift line is made up of Ptilota, Gigartina, Pteroglossa, and Neorystus. Kelp flies and amphipods are in the drift. Lower down is a cobble- boulder field with filamentous greens and Littorina. (Some limpets on the under side of rocks) at the M-LW patches of Fucus and Rhodomenia begin. Barnacles are sparse through out this area.

At either end the surveyed area are rocky promontories with much denser cover. Any cleanup in this area would be more disruptive than productive.

Red necked Phalaropes (4)

Cormorant sp (1) Glaucous winged gull (2) Oystercatchers (2) Western sand plover (4)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	0		
Seabirds ^{cormorant}	1	1	
Waterfowl	0		
Gulls/kittiwakes	1	2 (Glaucous winged)	
Shorebirds	3	10	
Corvids	0		
Other Birds	0		

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	0	0	
Pinnipeds (specify)			
Stellar's Sea Lions	3		
Whales (specify)	0		

Shoreline subdivision map showing important biological features attached.

xxx Bedrock Slope

↗ Photo sites

vvv grassy upland

Bio Map
H. Davis

Sketch MAP (06)

US-11-A

D. Fitzgerald

11 May 1991

6:40 - 7:20

Nereocystus Beds.

B.*

The bedrock face had verruca, filamentous greens and diatoms around the drips. 5-10 meters in front of the face was the drift line containing amphipods, and kelp flies. B. The boulder-cobble beach had a cover of filamentous greens that gave way to some fucus that gave way to some fucus and endreladia spits. Littorina was common and laying eggs. Barnacles were sparse.

ST
5m², << 1%
12 drips ON vert.
bedrock face

A.

ST
5m² << 1%
25 drips ON vertical
bedrock face

A.*

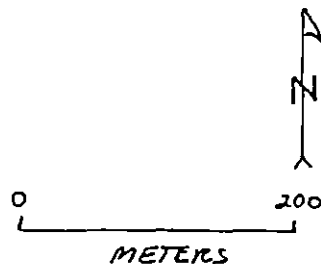
Verrucaria, filamentous greens and diatoms are also on the rock face. Algal drift with amphipods and kelp flies. Lower down on the bedrock are barnacles, fucus and littorina. (littorina are laying eggs and fucus has conceptacles) This section is low density area for biota.

Steller's Sea Lions caused the Beach and haul out on the western tip of this island

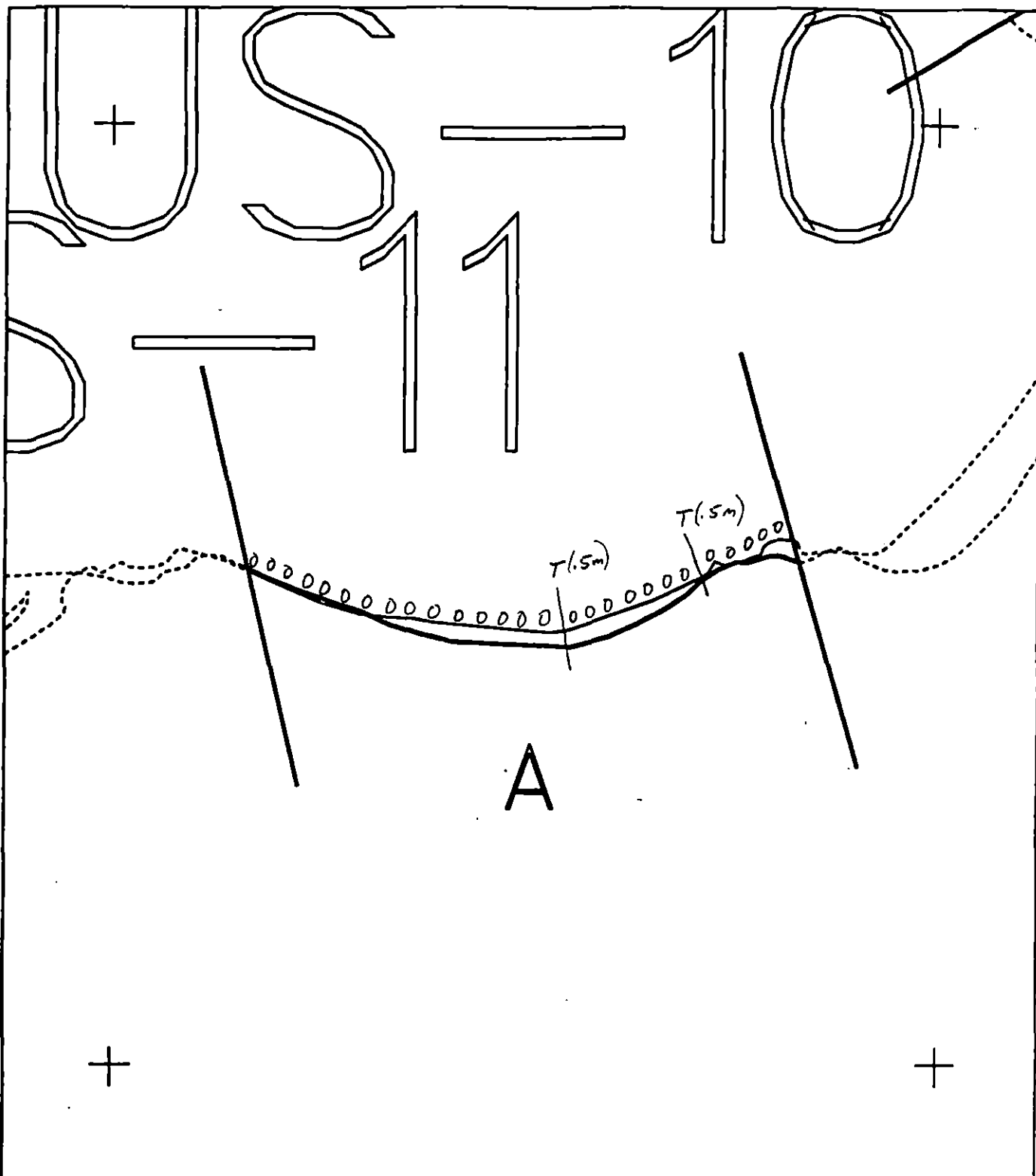
Boulder - Cobble beach

grassy upland

MODERATE to high
ANGLE Bedrock Slope



* The algal drift is such that any clean area would be more disruptive than productive.



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

US011 A
 ADEC Subsegment Length: 843m
 METERS
 0 200 400
 AK State Plane Zone 4
 NAD83



Subdivision Field Map
 Map Key: KENUS011A
 Memo: D. Fitzgerald
 Date: 11 May 1991
 Date Entered:

reviewed 5/14/91 K6
 REVIEWED CB 1A MAY

REGION: KENAI

SEGMENT: ST/US-12

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ US-12 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)

USFWS Property

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 992 m: No Oil 1306 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of mousse and oiled debris, 2) bioremediation of area shown on attached sketch map. Work should be conducted between 7/1 and 8/15 based on pinniped constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/15)
1E Main Bay Hatchery release (4/20 to 6/15)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I G/L net area (6/7 to 6/31)
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
- Harbor seal and sea lion pupping (5/15 to 7/1)
Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31).
Contact ADF&G and USFWS prior to treatment for confirmation.
AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (5/1 to 9/15)
6V Anchorages (5/1 to 9/15)
6W Forest Service cabins (5/1 to 9/15)
6X Lodge (5/1 to 9/15)
6Y Special use destination
- 7Z Substance area: Salmon harvesting (5/1 to 9/30)
7HH Finfish harvesting
7I Deer harvesting (5/15 to 2/28)
7JJ Invertebrate harvesting
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ US-012 SUBDIVISION: A DATE 27 April 1978

USCG NOAA

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

COMMENTS

This is a spectacular crenulate bay type of beach, shaped by waves approaching (dominately) from the east. Two major cusped bays were present on the day of our survey. There was no subsurface oil.

Manual pick-up is recommended for tar patties, tar balls and oiled debris.

ADEC

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

COMMENTS

Manual pick up of oiled trash and debris and tar balls and patties ... in conjunction with other Barren Island Clean up activities

LAND MANAGER

NAME Gerald M. Nugent SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Manual pick-up of oiled trash/debris and tar-balls recommended in conjunction with other cleanup activities on the Barrens.

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

OG N. BIGGAR ^{NOAA} USED MILES HAYES SEGMENT ST/ U3-012
 BIO D. RAIDER LAND REP JERRY NOGENT (F.W.) SUBDIVISION A (1 OF 1)
 EXXON JOHN DEAN ADEC RUSSELL KUNDE TIME 11:15 to 13:30
 TEAM NO. 17 TIDE LEVEL -1 to 8 DATE 4/25/90
 EST. SUBDIVISION LENGTH: 2200 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 2 % B 4 % C 20 % P 25 % G 44 % S 5 % M — % V — %
 SLOPE: Long 94 % Hang 6 % Vert — % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W — m M — m N — m VL 772 m NO 1514 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	/C	/B	/P	/S	DEL LW	DEL FW	GL	DEL TL	DEL LR	SU	U	M	L	
ASPHALT PAVEMENT														
POOLED														
COVER			X			X					X			
COAT		X	X	O		X % O					X % O			
STAIN														
MOUSSE				X				X		X	X			
PATTIES	X		Y	O		X Y					X Y			
TARBALLS				X		X					X			
FILM														
NO OIL												X	X	

PAVEMENT H F S — sq. m by — cmPATTIES / TARBALLS 2 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

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

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE —#BAGS —

Photographs:

Roll No. 4Frames 20-23

- oiled buoy
- absorbent boom piece
- oiled plastic
- oiled logs

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM- IN)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS	
		OP	OR	OL	OF	NO		UO	UC	SP BP	DL RW	GL SL	DR TL	LR	SU	U	M	L								
1	62					X	.		X								X									g, small p
2	37					X	.		X								X									g.p
3	69					X	.		X							X										g.p
4	65					X	.		X							X										g
5	69					X	.		X								X									p.g
6	68					X	.		X								X									g.p. in dish

COMMENTS - The oil present on the beach consists of:

- (1) granules and small pebble-covered tar balls and tar patties that occur in area A in sketch. They have the appearance of rounded pebbles and rather easily transported by wave action - seen in upper tidal / surge tidal zone
- (2) flat, larger tar patties, up to 20 cm x 30 cm were seen @ B. The tar serves as a binder for pebbles and granules
- (3) OT on boulder faces and on larger (20 cm) splatter on tops of boulders - OT is coated with sand - area "C"

REVIEWED BAT DATE 1 MAY 90

OG 316642

SEGMENT ST/ US-00012

SUBDIVISION A (1041)

DATE 4/25/90

SKETCH MAP

CHECKLIST

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

LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

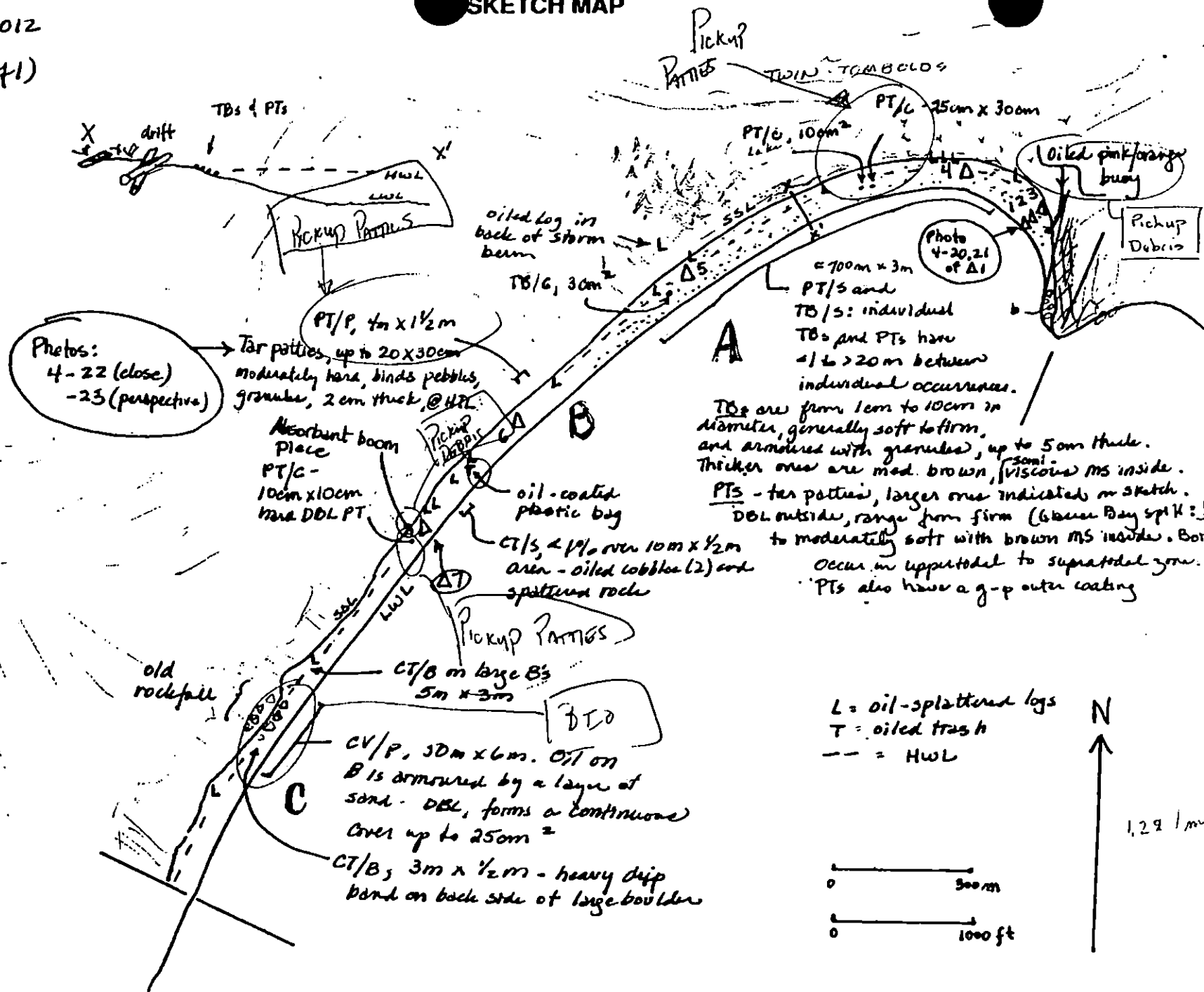
CT/S

Splashed Distribution

Oil Vegetation

1 →

Photo location, direction, and number



Oil Character Length (m): AP - PO - CV 50 CT 18 ST - MS - PT 354 TB 350 FL - NO 1428

REVISION 03/24/90

SHORELINE ECOLOGICAL SUMMARY

M. 10000 0177 3

Segment ST / U1-012 Subdivision A Date (mo / day / yr) 4 / 25 / 90Time (24 hr) 11:15 Biologist DANIEL TRAINER(A) Substrate type and % of segments:
(1) Bedrock 2 (2) Boulder 4 (3) Cobble 20 (4) Pebble 69 (5) Sand 5 (6) Silt(B) Overall % cover of biota (% of segment): Dense 1 Moderate 1 Low 98

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

Photographs:

Roll No. 4Frames 20-23

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments: See "wildlife observations" sheet attached.

- 2 (two) Seabirds swimming along coast; appeared to be looking for a haul-out location; One female & One male, I believe.

Other tracks on beach in storm berm area and along high tide berm.

Ecological Considerations:

S.N.P. 0, Q

Bio Comments US-012A
 Team 17 Daniel Raider
 4/25/90

This segment resembles many of the crest beaches that are typical of this island. Area 1, as indicated on the Bio-sketch, a bedrock outcrop, hosts the majority of bota (or dense populations). Area 2, also on the map, is void of major vegetation and/or fauna, the high energy nature of the beach and excessive transportation of substrate does not allow for colonization of the LTZ, MTZ or UTZ.

Description of Area I

- Dense adult Fucus on boulders in MTZ
- Moderate Barnacles on bedrock in LTZ
- Sparse Barnacles (Semi-balanus cariosus + Balanus on bdrk + boulders in MTZ, recruits glandula
- Profuse black lichen on boulders in UTZ
- Moderate → Dense Littorina on boulders in MTZ; over 50% from this year
- Sparse Limpets in UTZ
- Rare mytilus on bdrk in MTZ

NOTE:

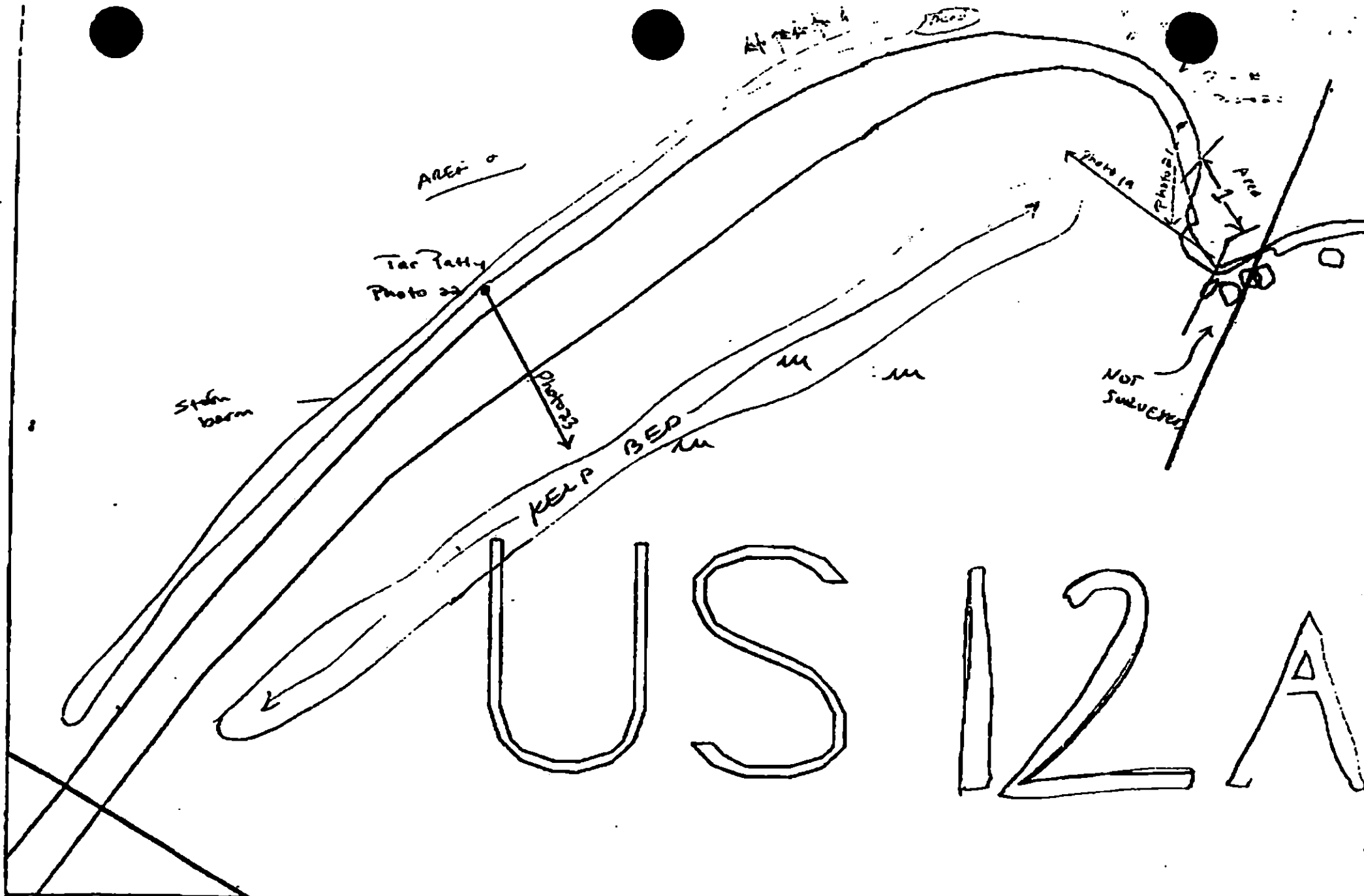
Those data presented on the Bio Shoreline Ecological Summary do not reflect only this one area and are averaged out for the entire segment. This should be taken into consideration when reviewing material

WILDLIFE OBSERVATIONS - US - 12

	<u>Name</u>	<u>amount</u>	<u>Comments</u>
1)	Black - legged Kittiwake	93	on pond
2)	Song Sparrow	3	
3)	Glaucous - Winged Gull	9	
4)	Tough legged Hawk	1	
5)	Common Tern	2	
6)	Sea Lions	2	along shoreline
7)	Otter (River?)	?2	Tracks along beach

Note:

Note the large number of Kittiwakes on the pond that may represent a seabird colony.



US 12A

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

US-12

Approx. Segment Length: 1143m



Map Key: KEN-US-12a

Name: _____

Date: _____

Date Entered: _____

XXXX Wide

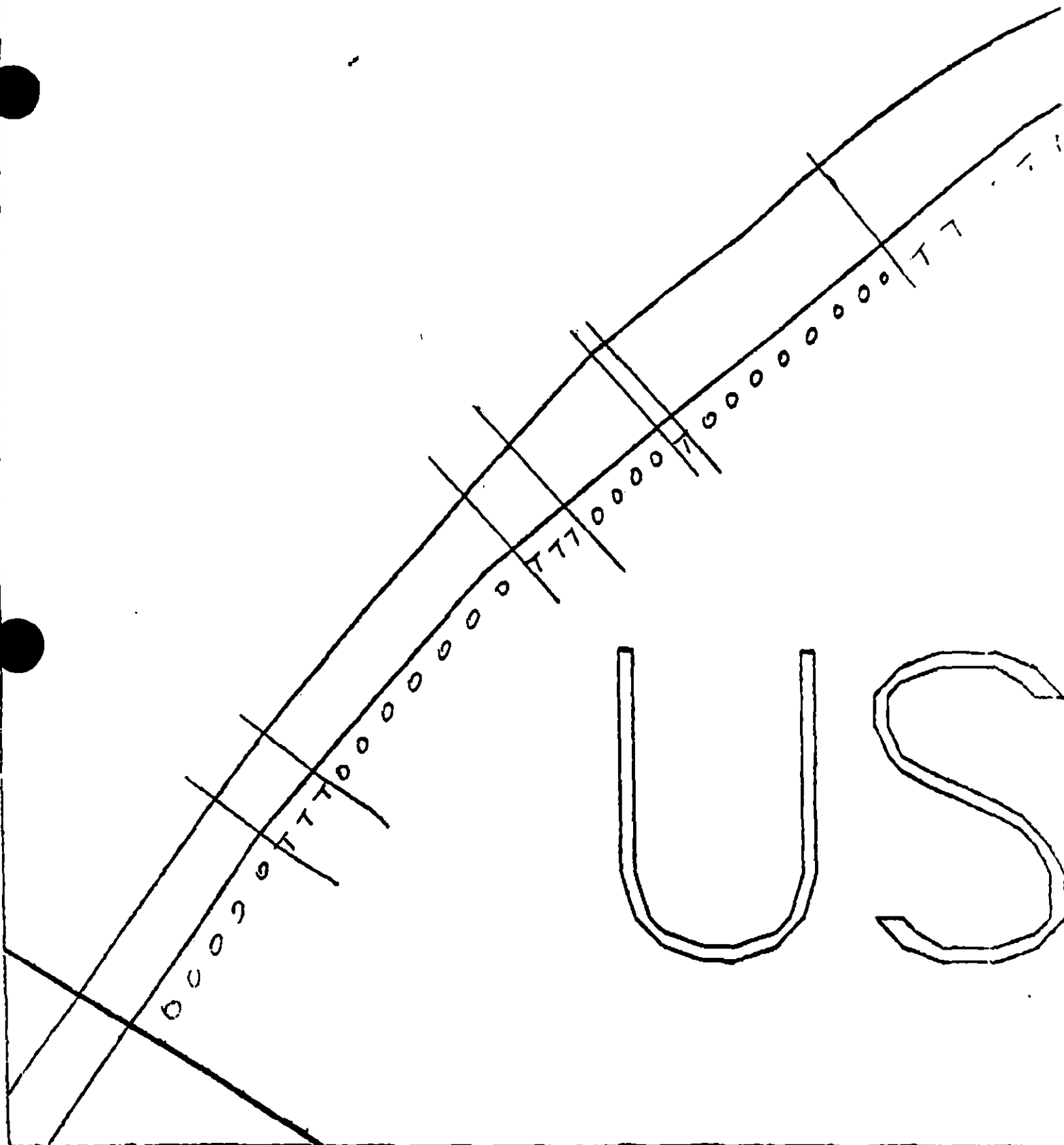
//// Medium

---- Narrow

TTTT Very Light

US-12 (C)

Approx. Segment Length



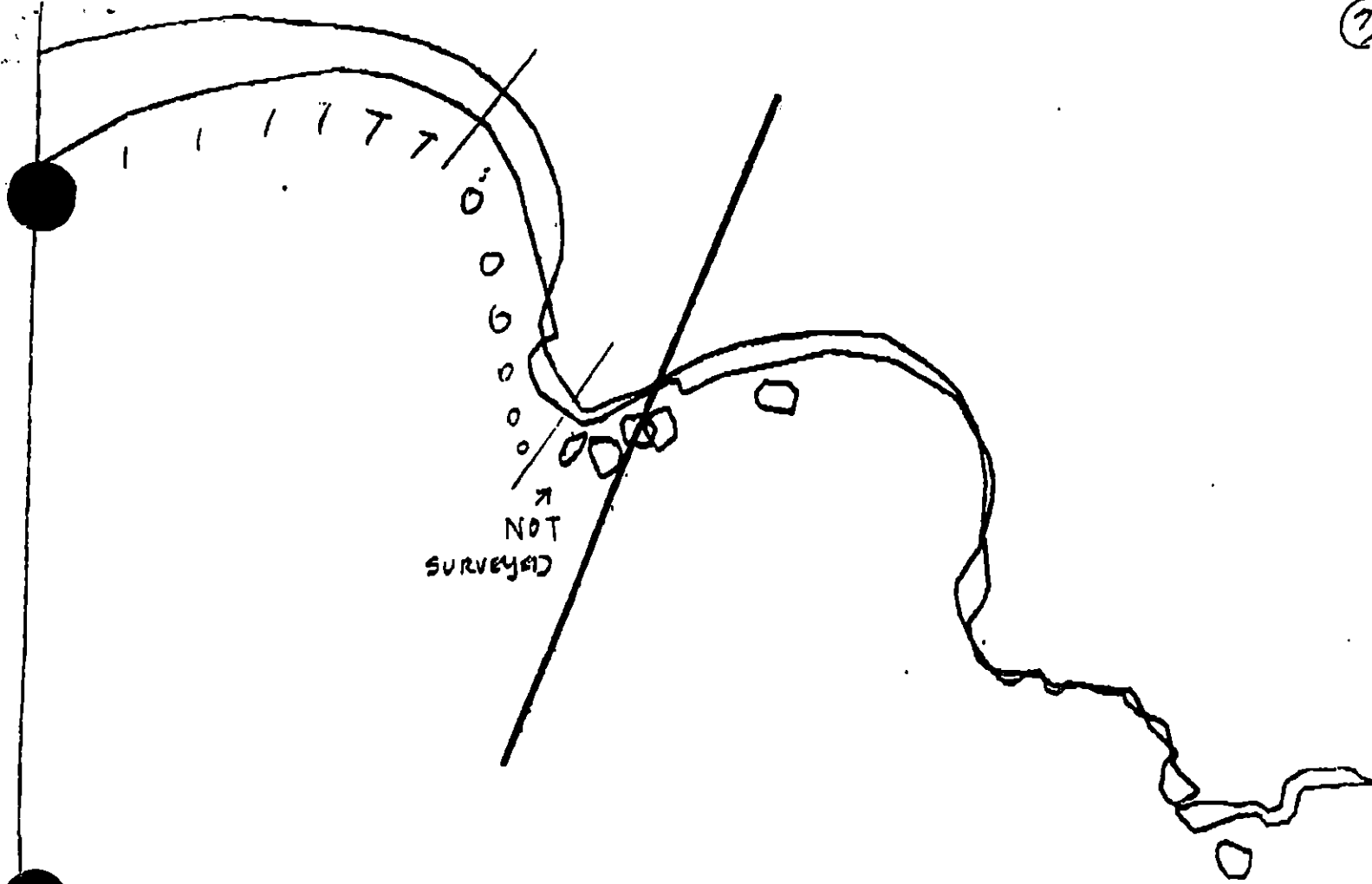
XXXX Wide
//// Medium
--- Narrow
TTTT Very Light
OOOO No Oil

US-12

Approx. Segment Length: 1143m



Map Key: KEN-US-12a
Name: N. Bign...
Date: 4/26/90
Data Entered:



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

US-12

Approx. Segment Length: 1143m



Map Key: KEN-US-12b

Name: N. B. G. R.

Date: 4/26/90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT US-12 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	WORK 7/2 TO 8/14

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,O,P,Q

Harbor Seal & Sea Lion
Pupping and Molting

Closed to manual pickup prior to 7/2 and
after 8/14.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE

ADEC

EXXON

NOAA

USCG

Prepared By:

FOSC

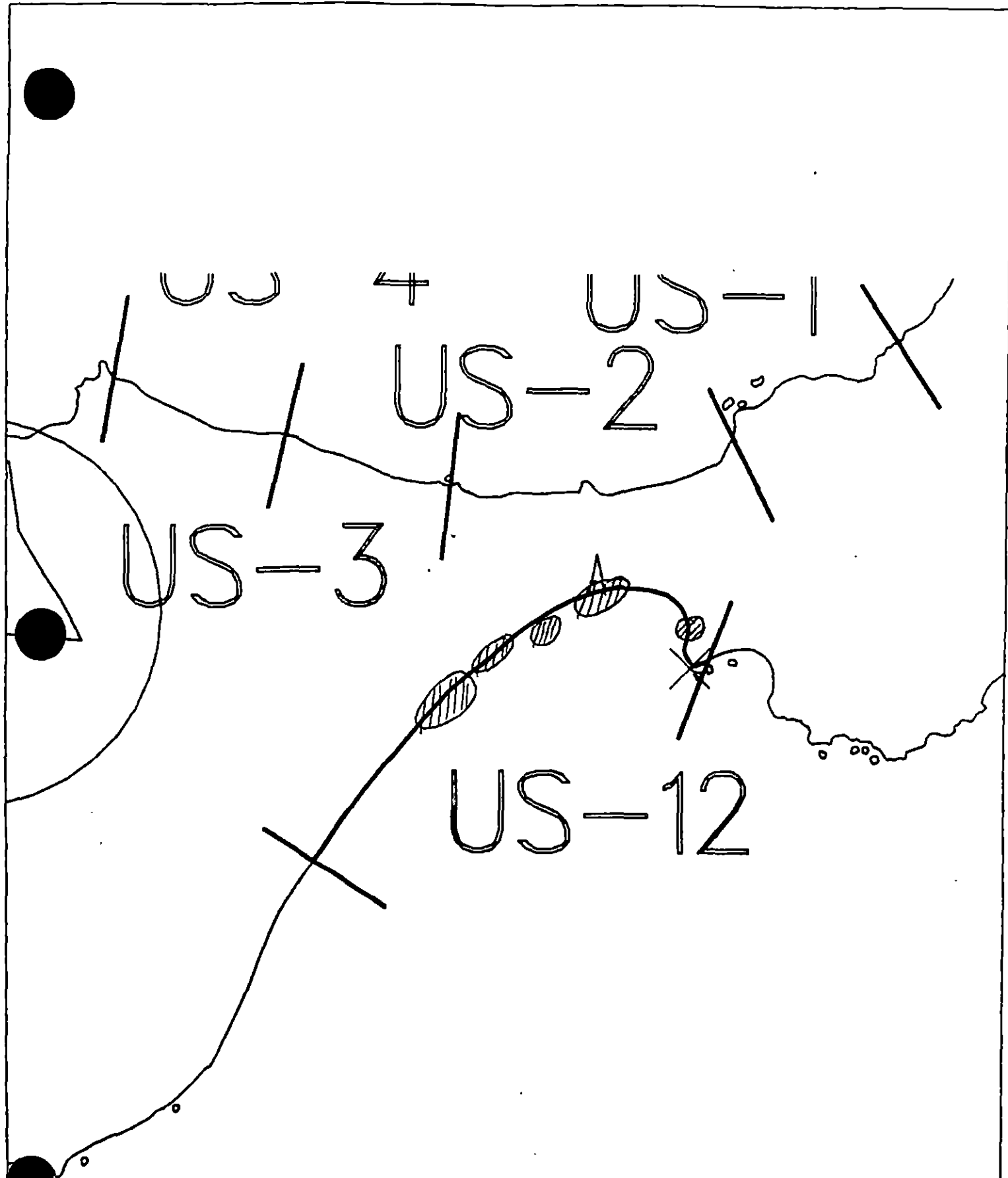
DATE

Date

6/04/90
Ray Morris
Amy Seal
Joseph T. Tully
G.A. Foster

6/5/90
J. Zimbalist

6/2/90



Exxon Company, USA



ECOLOGY MAP ^{6/2/90}
SEGMENT US-12
SUBDIVISION A (1 of 1)
METERS

★	Seabird Colony
▲	Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ US-12 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)

USFWS Property

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINT: Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time.

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

SHPO SIGNATURE: *Paul 3 Hume* DATE: 5/14/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 992 m: No Oil 1306 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of mousse and oiled debris, 2) ~~bioremediation of area shown on attached sketch map.~~ Work should be conducted between 7/1 and 8/15 based on pinniped constraints. *See Addendum dated 6/2/90*

TAG COMMENTS:

TAG APPROVAL DATE: 5/13/90
ADEC ART WEAVER
EXXON Amoy Tate
NOAA Gary Petros
USCG D. D. ROME

FOSC: ML DATE: 5-15-90
Monitor access logs during work at site.

SHORELINE EVALUATION

SEGMENT ST/ US-12 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
USFWS Property

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINT: Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time.

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

SHPO SIGNATURE: *Paul E. Hume* DATE: 5/14/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 992 m: No Oil 1306 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of mousse
and oiled debris, 2) ~~bioremediation of area shown on attached sketch~~
map. Work should be conducted between 7/1 and 8/15 based on pinniped
constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 5/12/90
ADEC *Art Weiner*
EXXON *Amy Teal*
NOAA *Gary Patman*
USCG *D. D. Rome*

FOSC: *My L* DATE: 5-18-90
Monitor access logs during work at site.

OG N 6647

SEGMENT ST/ US-00012

SUBDIVISION A (1 of 1)

DATE 4/25/90

CHECKLIST

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

LEGEND

1 Δ

P1 - No Subsurface Oil

2 Δ

P11 - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patched Distribution

CT/S

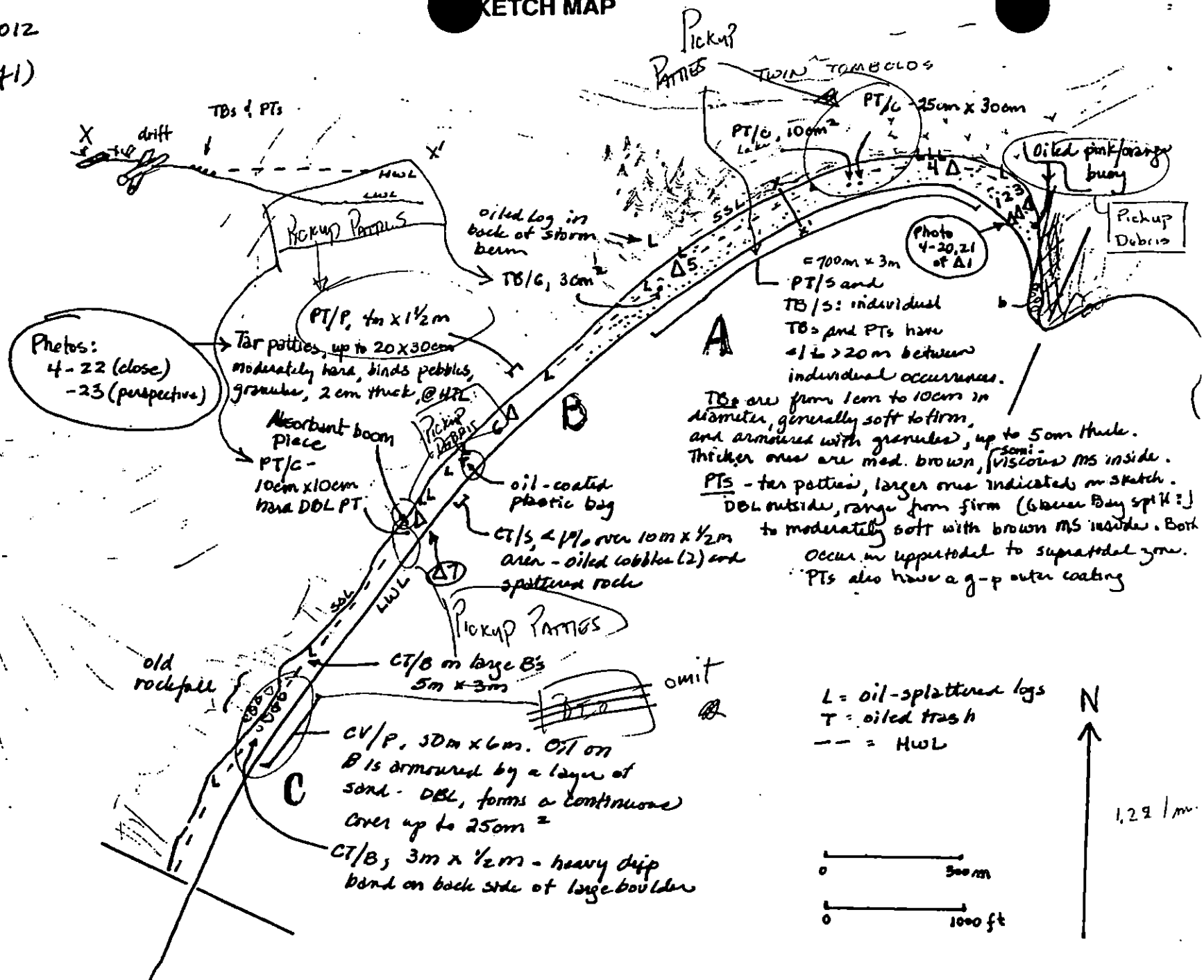
Splashed Distribution

Oil Vegetation

1 →

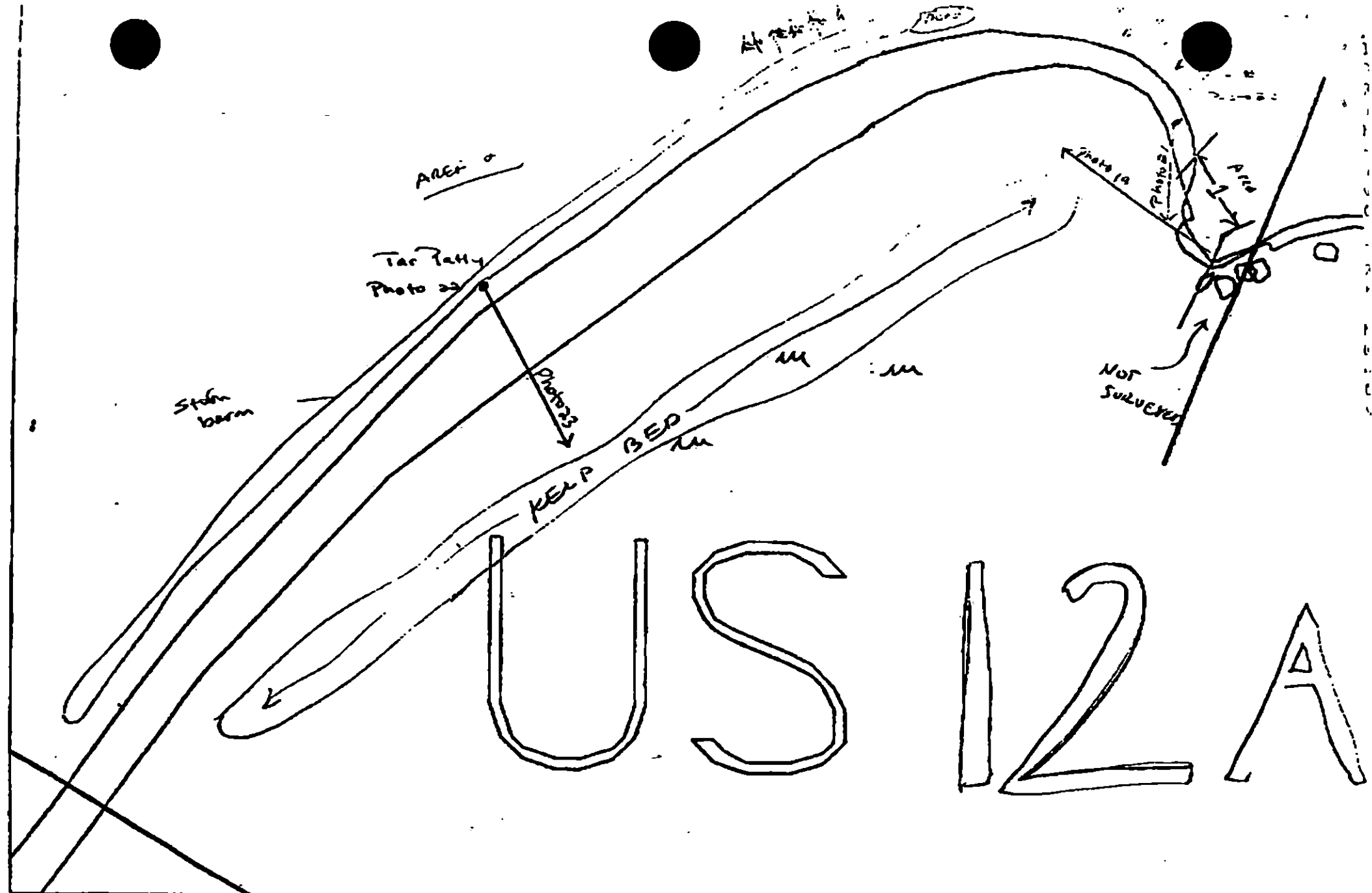
Photo location, direction, and number

SKETCH MAP



Oil Character Length (m): AP — PO — CV 50 CT/B ST — MS — PT 354 TB 350 FL — NO 1428

REVISION 03/24/90



XXXX Wide

//// Medium

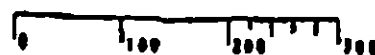
---- Narrow

TTTT Very Light

0000 No Oil

US-12

Approx. Segment Length: 1143m



Map Key: KEN-US-12a

Name: _____

Date: _____

Scale: 1:100,000

XXXX Wide

//// Medium

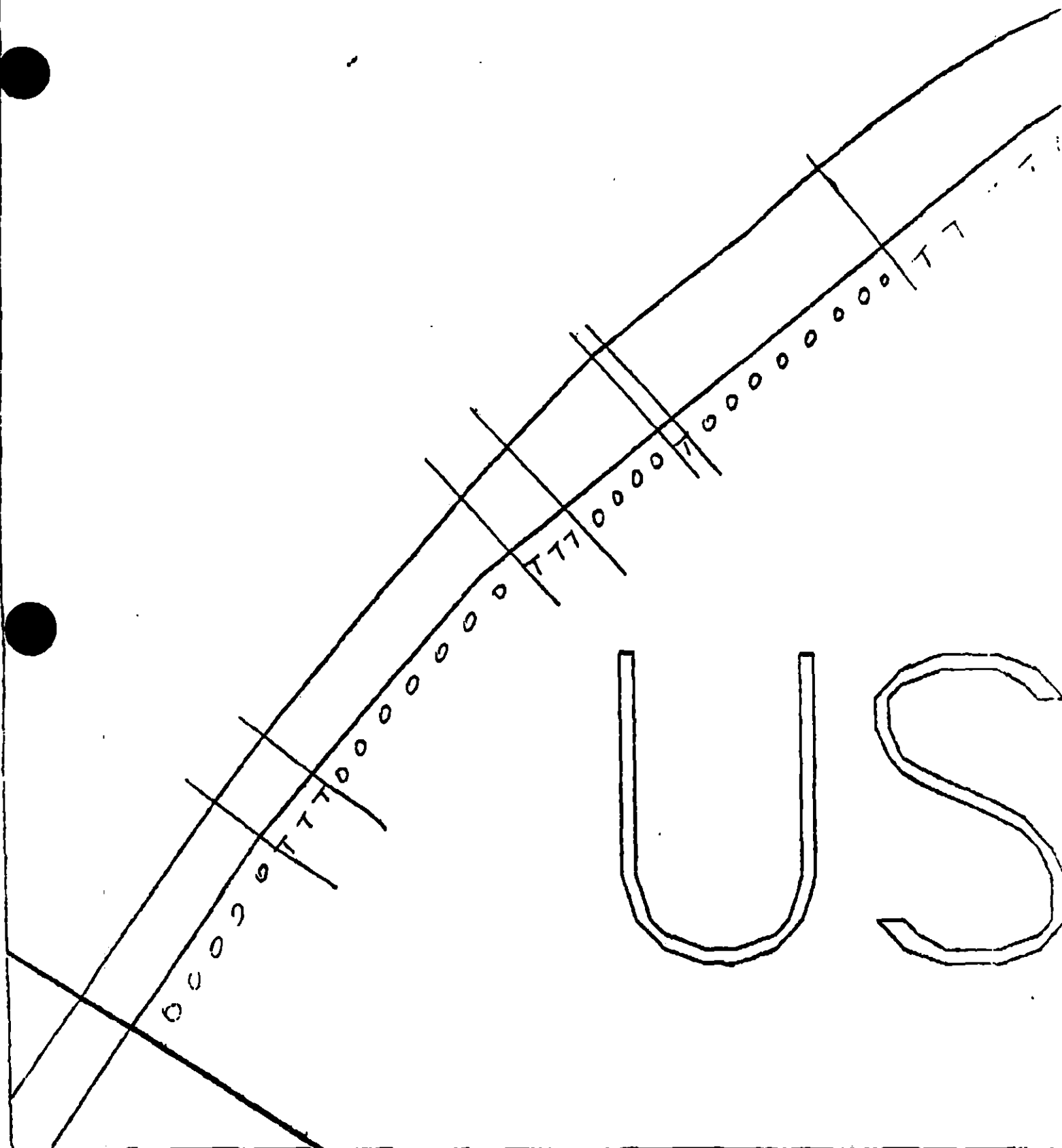
---- Narrow

TTTT Very Light

US-12 (C)

Approx. Segment Length: 1143m

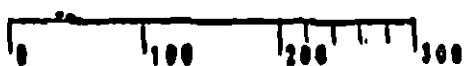




XXXX Wide
/// Medium
--- Narrow
TTTT Very Light
OOOO Very Light

US-12

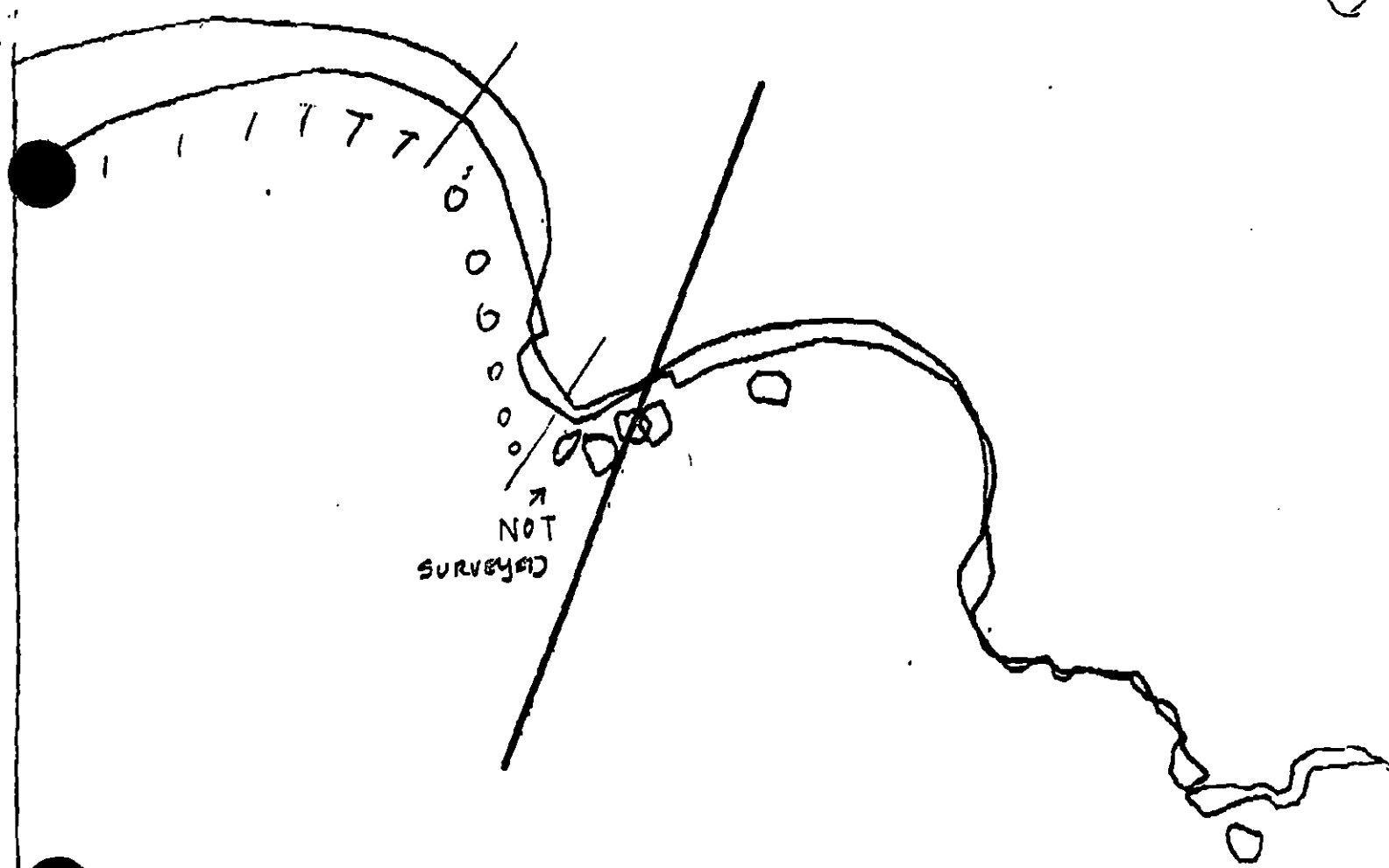
Approx. Segment Length: 1143m



Map Key: KEN-US-12a

Name: N. Bignard

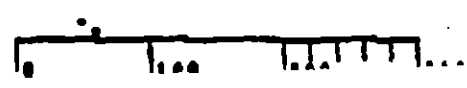
Date: 4/26/90



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

US-12

Approx. Segment Length: 1143m



Map Key: KEN-US-12b
Name: N. B. L. R.
Date: 4/26/90

1991 MAYSAP EVALUATION

SEGMENT: US 012 SUB: A REGION: KEN PWS SURVEY DATE: 5/11/91ENVIRONMENTAL SENSITIVITIES:Work Window(s) RESTRICTED 5/15 - 9/1Ecological/Constraints (see page two for details) Seabird colonyARCHAEOLOGICAL CONSTRAINTS:If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.SHPO Signature: Rachel Ann Ode Date: 5/12/91RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N✓N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 22 1991FOSC APPROVAL DATE: 6/1/91

ADEC

FOSC

EXXON

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

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

WATSON FIELD SHORELINE COMMENT SHEET

TEAM NO. 6-Helo SEGMENT US-12 SUBDIVISION A DATE 11 May 91

ADEC

NAME S. Ferguson

SIGNATURE

[Signature]

☒ NTR ☐ TREATMENT RECOMMENDED

NO TREATMENT RECOMMENDED AT US-12A. NO OILING WAS OBSERVED ON OR WITHIN THE STRIP. OILING → TRACE-STAIN WAS OBSERVED ON A PIECE OF DRIFT SITUATED ALONG THE DRIFT-VEGETATION AREA (HIGH WATER LINE).

EXXON

NAME R. Coulter

SIGNATURE

[Signature]

☒ NTR

CLEAN!

LANDMANAGER

NAME M. Blenden

OF USFWS

SIGNATURE

[Signature]

☒ NTR

Let's leave it alone - nothing there to worry about.

USCG/NOAA

NAME Jensen / G. Shigenaka

SIGNATURE

[Signature] / *[Signature]*

☒ NTR *There is no longer any detectable oil present on the water, adjoining shorelines, or places where it is likely to reach the water again.*

SEGMENT IS A BROAD EXPOSED PEBBLE-GRAVIEL-SAND BEACH WITH PLENTIFUL DRIFTWOOD LOGS IN THE SUPRATIDAL. THE ONLY OILING I OBSERVED IN THE SEGMENT WAS A NEGLIGIBLE PATCH OF COAT ON A SMALL DRIFTWOOD LOG LOCATED IN AN AREA OF THE UPPER INTERTIDAL/LOWER SUPRA, LIKELY TO BE CARRIED OUT WRING NEXT HIGH TIDE SERIES. OTHERWISE, NO OILING OBSERVED.

PAGE 1 OF 1

SEGMENT US-12

SUBDIVISION A

DATE 11 / May / 91

ENERGY LEVEL: ☒ H ☐ M ☐ L

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

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

EST. OIL CATEGORY LENGTH: W - m M - m N - m VL - m NO 500 m US 1303 m

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

SLOPE: V = VERTICAL: H = HIGH ANGLE: M = MEDIUM ANGLE: L = LOW ANGLE

PHOTO ROLL # MAYSAP- 6 - 11 FRAMES 3-5

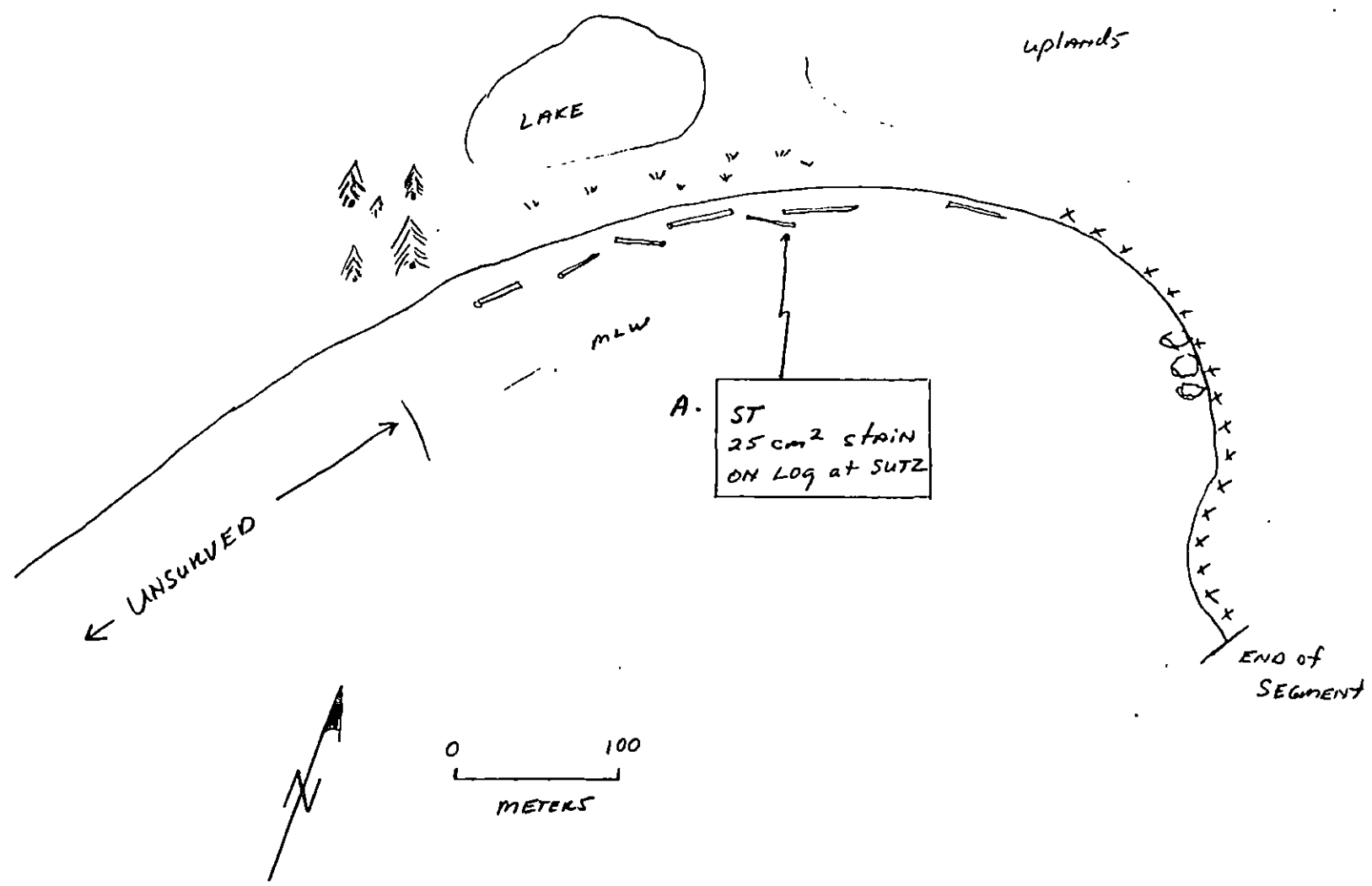
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS: We surveyed the Northwestern 500m of the beach and the only oil found was a stained piece of driftwood. Due to the lack of oil, ASAF survey which reported no significant oil along the entire segment, and the high exposure of this beach, it was decided by the Maysap Team that we would not survey the remainder of the segment.

revised 5/14/91 KCG
REVIEWED CD 14 MAY

-  TREES
-  GRASSY AREA
-  LOGS
-  PHOTO SITES

Sketch MAP(06)
 US-12-A
 D. FITZGERALD
 11 MAY 1991
 750 - 820

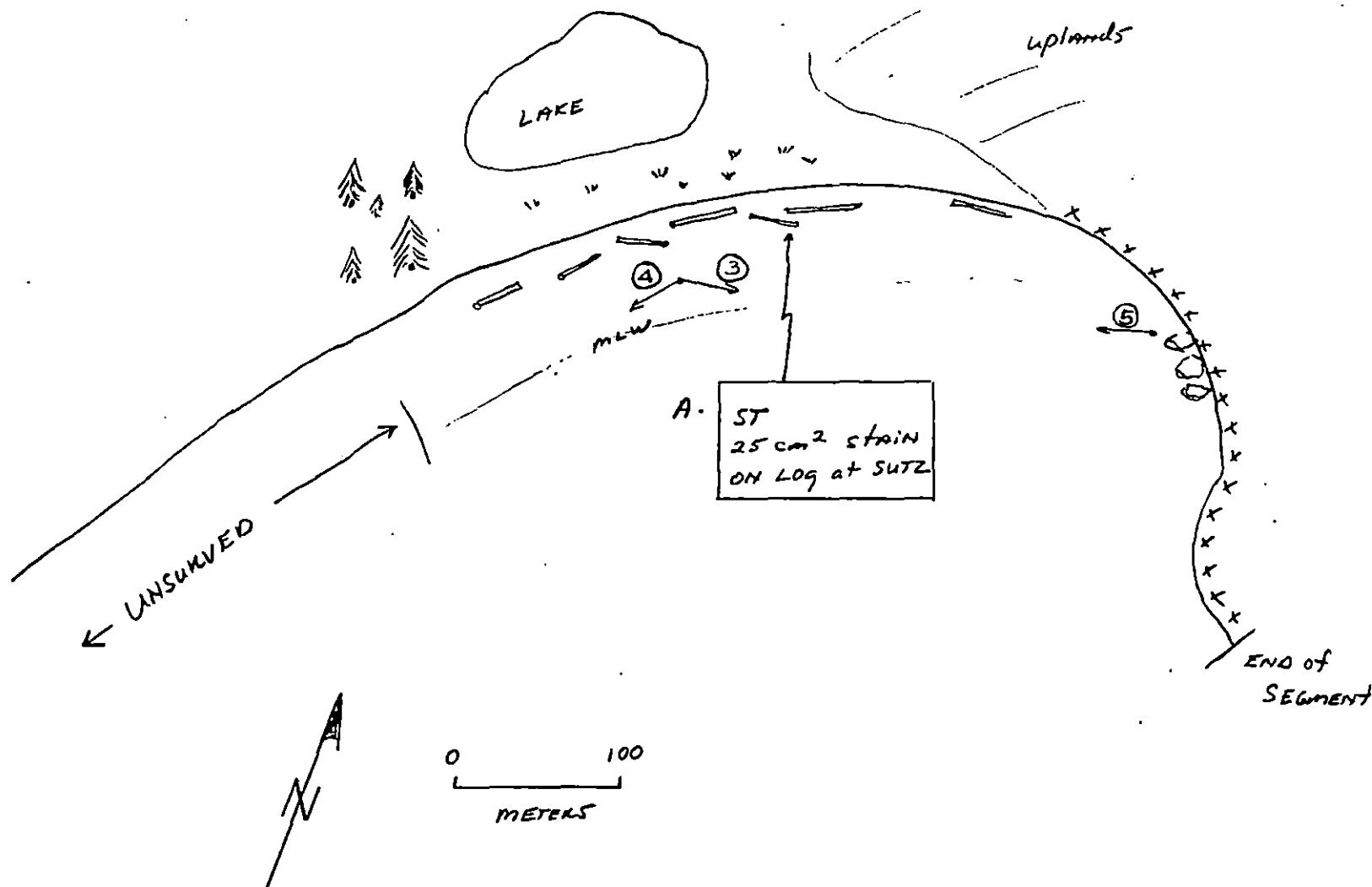


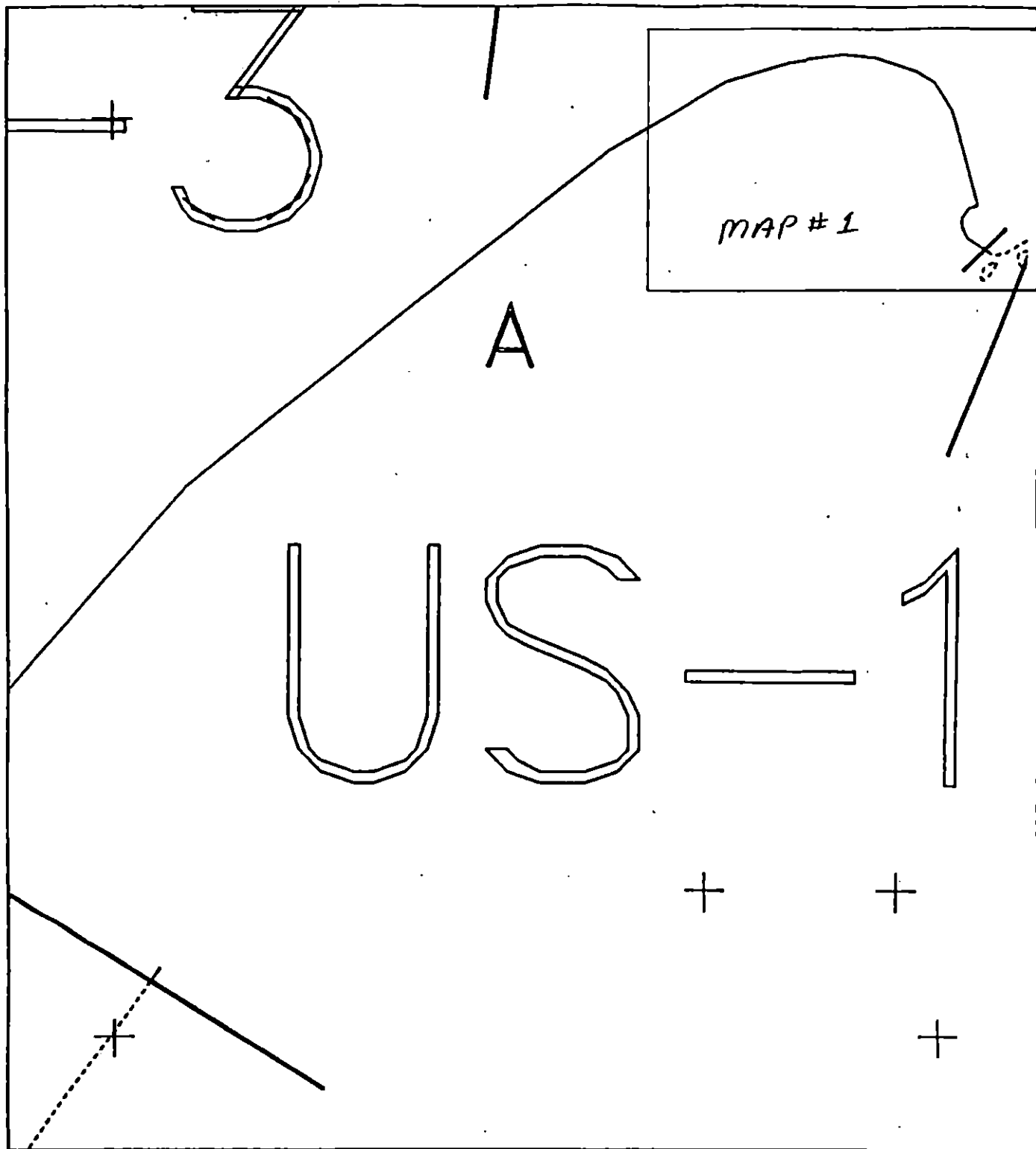
reviewed 5/14/91 KLG
 REVIEWED 4/14/91

● GREENS
" " GRASSY AREA
— LOGS
↗ PHOTO SITES

Photo sites - US-12A
FRAMES 3 THRU 5,
ROLL 6-11

Sketch MAP (06)
US-12A
D. FITZGERALD
11 MAY 1991
750 - 820





US012 A

METERS



AT State Plane Zone 4
NAD83/2011

Subdivision Field Map

Map Key: KRNUS012Aa

Name: D. Fitzgerald

Date: 11 May 1991

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 Helo

DATE May 11 1991

SEGMENT # US-12

TIDAL HEIGHT(Range) 1ft - 2ft (07:50-08:25)

SUBDIVISION A

BIOLOGIST H. Davis

SEA STATE 1-2 ft

WIND SPEED/DIRECTION 5 mph S-SE

PHOTOGRAPHS: ROLL # 6-11

FRAME # 3-5

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

A. The stain was on a drift log in the supratidal, at the edge of the beach grass. The nearest intertidal water was in the drift. Algae included *Verucystus*, *Halosaccion*, *Fucus* and other red algae. Animals found in the drift included a compound tunicate and the shells of *Calliotoma ligatum*, *Marispira papillosa*, *Fusitella oregonensis*, *Clinocardium*, *Cominella*, *Amphissa* and *Notommatia*. There is a rocky intertidal area 200 meters to the east along the beach. Littorina, *Balanus*, *Fucus* and some limpets are moderately dense along the rock face. The immature eagle was perched on a log in the drift zone.

immature eagle (1) Glaucous winged Gull (5)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1 immature	0
Seabirds	0		
Waterfowl	0		
Gulls/kittiwakes	1	5	
Shorebirds	0		
Corvids	0		
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	0	0	
Pinnipeds (specify)	0		
Whales (specify)	0		

Shoreline subdivision map showing important biological features attached.

Dr. H. Davis

LGREENS

W. W. GRASSY AREA

LOGS

PHOTO SITES

Bio Map
H. Davis

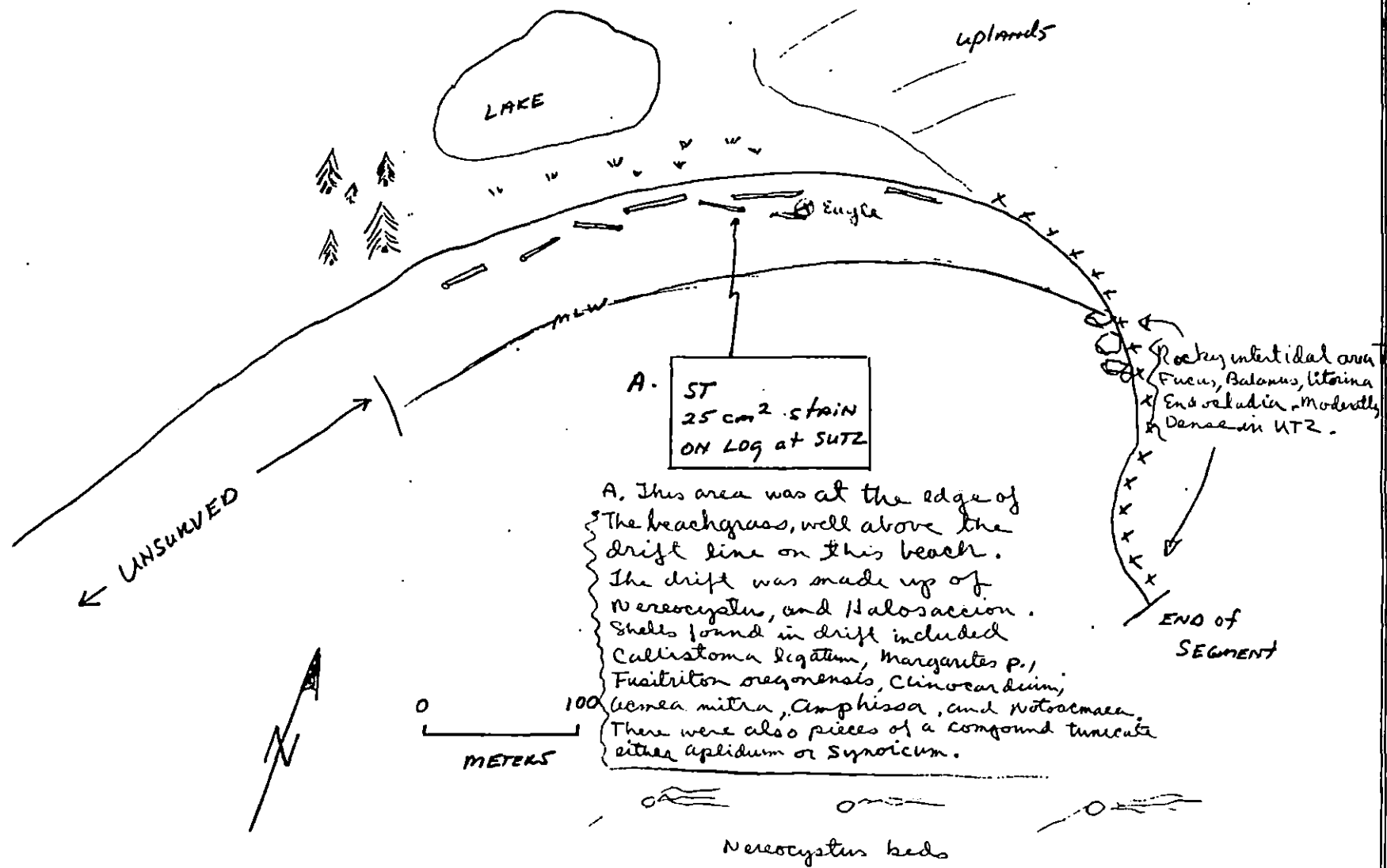
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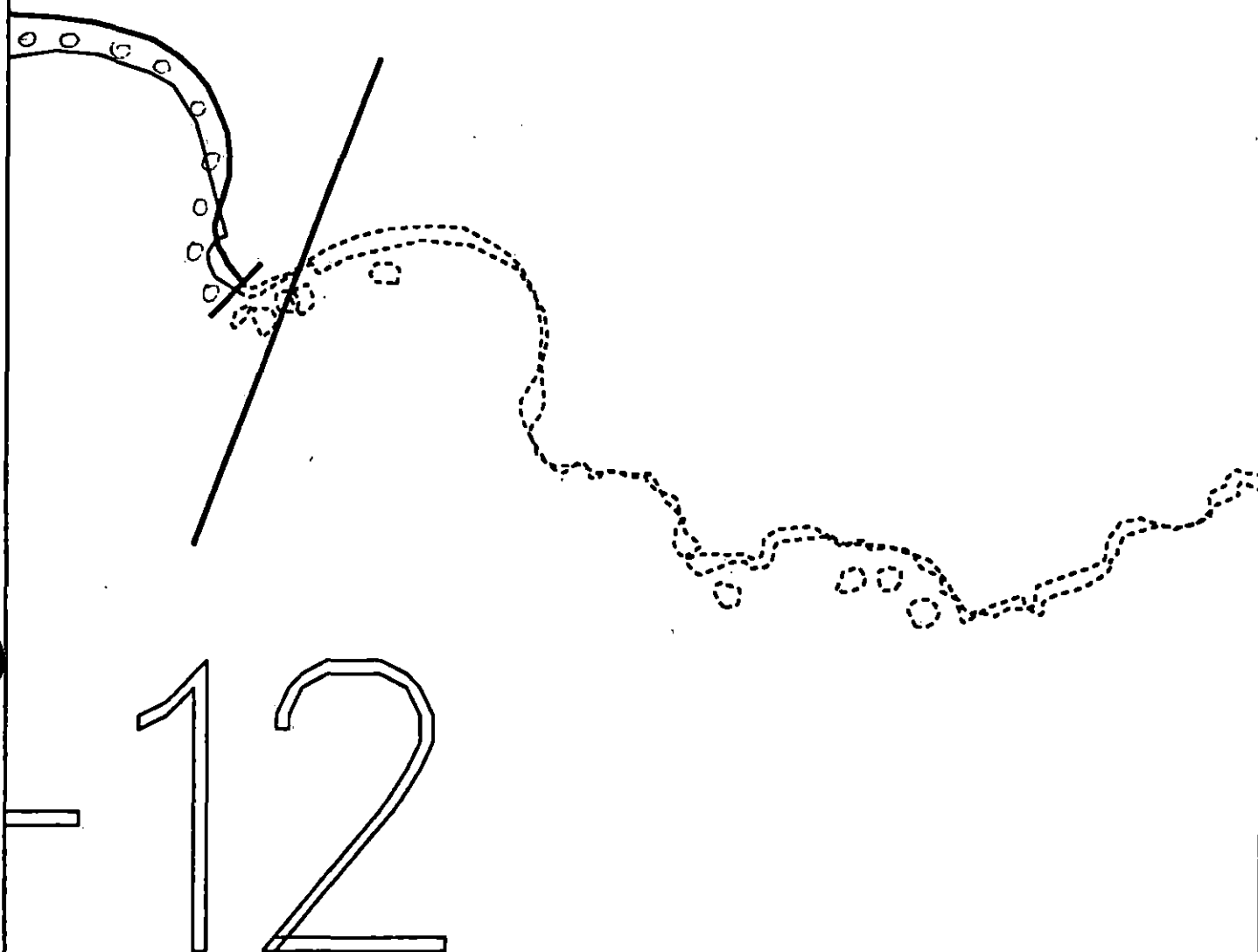
US-12-77

D. FITZGERALD

11 MAY 1991

750 - 820





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

US012 A

ADEC Subsegment Length: 2298m

METERS

0 200 400
 AK State Plane Zone 4
 us012ab



Subdivision Field Map

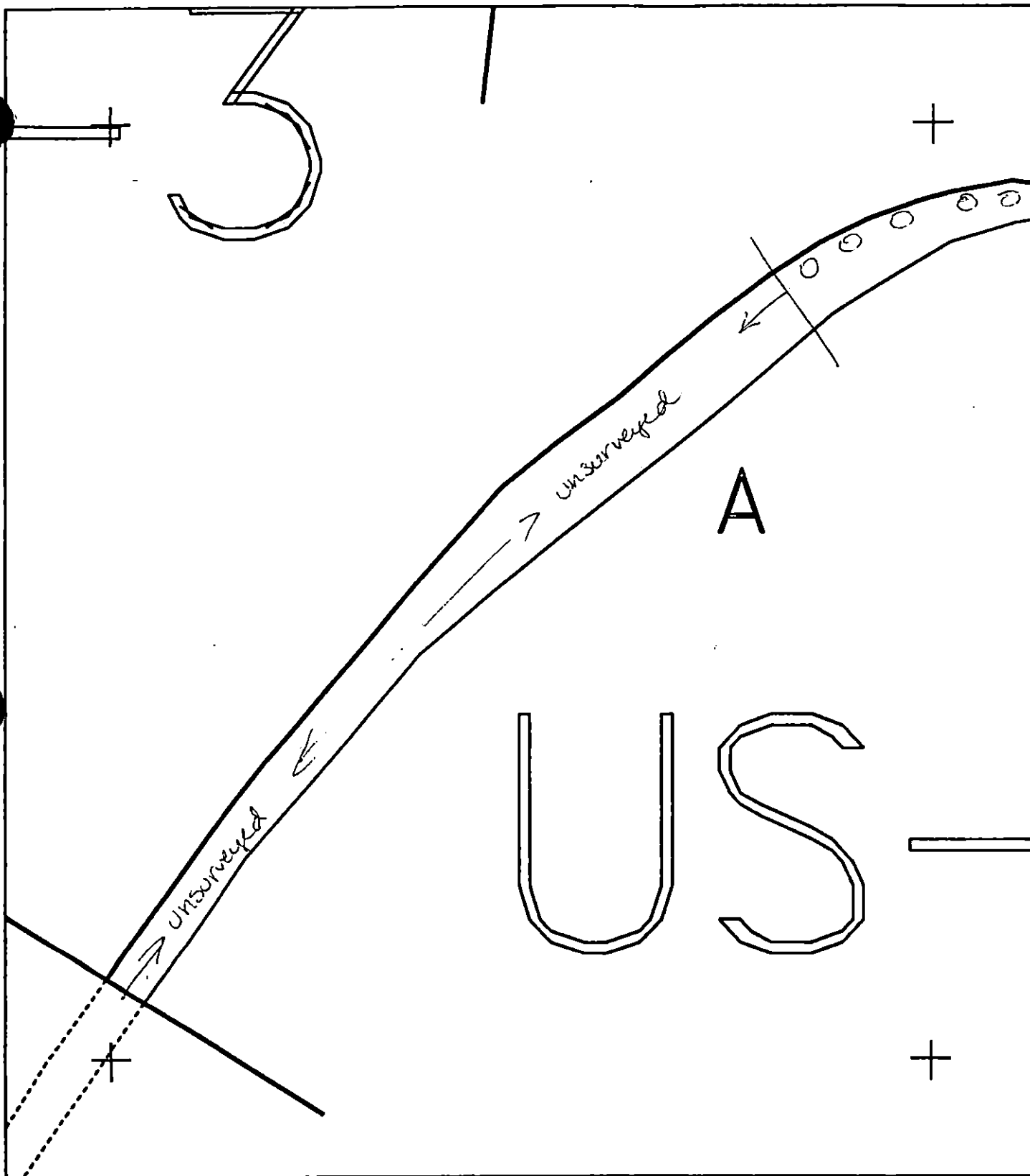
Map Key: KENUS012Ab

Name: D. Fitzgerald

Date: 11 May 1991

Date Entered:

revised 5/14/91 KCG
 REVIEWED CBY 14 MAY



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

US012 A
 ADEC Subsegment Length: 2298m
 METERS

0 200 400
 AK State Plane Zone 4
 22981200



Subdivision Field Map
 Map Key: KENUS012Aa
 Name: D. Fitzgerald
 Date: 11 May 1991
 Date Entered:

revised 5/14/91 KG
 REVIEWED CB 14 MAY

REGION: KENAI

SEGMENT: ST/WA-01

SUBDIVISIONS: A (1 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ WA-01 SUBDIVISION A (1 OF 2) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 28 m: Medium 15 m: Narrow 0 m: V.Light 136 m: No Oil 159 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) absorbents use and manual pickup of mousse, pooled oil, and oiled debris (logs and trash), 2) followed by bioremediation in areas indicated on sketch map. Work should be conducted before 5/1 otherwise no treatment unless permitted by USFWS regarding seabird colony.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Morison 287-2324
- Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/15)
1E Main Bay Hatchery release (4/20 to 6/15)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I Gill net area (8/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (8/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3 Harbor seal and sea lion pupping (5/15 to 7/1)
3C Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Roth 287-2208
- 5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (8/1 to 9/15)
6V Anchorages (8/1 to 9/15)
6W Forest Service cabins (8/1 to 9/15)
6X Lodge (8/1 to 9/15)
6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7H Finfish harvesting
7I Deer harvesting (8/15 to 2/28)
7J Invertebrate harvesting
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 287-2359

(6)

SEGMENT ST1 WA-001 SUBDIVISION: A DATE 4/26/98

USCG V00A

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

COMMENTS

I concur with OG and MID comments. Large rocks created classic "bunko" effect that allowed oil to accumulate in its lee.

Manual pickup of mousse & mousse-saturated sediments is recommended.

ADEC

NAME Russell Kunibe SIGNATURE Russell Kunibe☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

The area of significant oiling was located behind a high ledge in the UITZ. It consisted of predominantly coral and cover over the bedrock and boulders. In this area there was a heavy distribution of pooled mousse and mousse saturated sediments. There was also a small amount of oily trash in this subdivision.

Recommended treatment: The amount of recoverable oil in this subdivision is small (10-30 bags). I would recommend manual pick up of the mousse, mousse-saturated sediments, and oily trash which work crews are at the Bayview Is. This would remove the possible source of oil and floating mousse which could be detrimental to the sensitive population.

LAND MANAGER

NAME Gerald M Nugent SIGNATURE Gerald M Nugent (USFWS)☒ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Recommend manual pick-up of mousse in conjunction with pick-up on other segments of Barrier Islands. Action should occur as close to May 1, 1990, as possible.

Suggest that pom-pom "soakers" be anchored to the beach or to rocks in the UITZ. Allow them to be swirled in the surf and possibly catch mousse as it is lifted. May minimize sheen - a major consideration in this area of high seabird concentrations.

SHORELINE OILING SUMMARY

REVISION 04 13 20

OG GLENN HEYMAN ^{NOAA} USCG MILES HAYES SEGMENT ST/ WA-1
 BIO DAN RAIDER USARL REP JERRY ALBERT SUBDIVISION A (1 OF 2)
 EXXON JOHN DEAN ADEC RUSSEL KUNIRE TIME 18:30 to 19:30
 TEAM NO. 17 TIDE LEVEL +1 to 0 DATE 4/22/90
 EST SUBDIVISION LENGTH: 265 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 65 % B 10 % C 5 % P 20 % G 0 % S 0 % M 0 % V 0
 SLOPE: Lang 25 % Hang 25 % Vert 50 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 25 m M 30 m N 0 m VL 10 m NO 120 m

SURFACE OIL

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

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

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

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE 0#BAGS 0

Photographs:

Roll No. 3Frames 32+33

SUBSURFACE OIL

PIT NO	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A	N	A	SHEEN (Y/N)	▽	SURFACE SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	6	7	8	SU	U	M	U						
1	44					X	.		X									X							N		PL/C-G-P
2	44					X	.		X									X							N		PG/G-P
							.																				
							.																				
							.																				
							.																				

COMMENTS WA-1A is located at the southern end of the segment and consists of rocky headlands with 2 small pebble-cobble boulder pocket beaches. The most prominent features are low relief bedrock plat forms which become exposed at low and mid tides. Higher relief bedrock masses are located

REVIEWED JW DATE 4/27/90

SHORELINE OILING SUMMARY (PAGE 2)

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

SUBSURFACE OIL (CONTINUED)

[illegible]

COMMENTS

on the north end of the subdivision. The mass furthest to the north shelters a lower bedrock area with CT-CV-PO which combines to form an /B distribution approximately 25X11 m. Individual distributions within the area are CT/B, CV/P, and PO/P to /S. This is surrounded by a /P to /S distribution approximately 15 X 55 m. Some logs in the storm berm area have CT generally as splashes.

Note: Due to the large variation in subdivision length w/ tide level, the subdivisions for oil category lengths were estimated "as the crow flies."

REVIEWED YW DATE 4/27/20

REVIEWED Yw DATE 4/27/90

SEGMENT WA-001

SUBDIVISION A

DATE 4/23/80

CHECKLIST

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

LEGEND

1 Δ
PIL - No Subsurface Oil

2 Δ
PIL - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oil Vegetation

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

SKETCH MAP

Boulders

MANUAL PICK UP
OF MOUSSE & POOLED OIL
COLLECTED BY BIODIVERSITY

Lower bedrock

Splat form in M &
UITZ

Higher relief
bedrock masses

Rb sheer noted
on small tidal
pool in rock

WA-1-A

CT-CV-PO/B
~25X11m
Splatters on
logs in backshore

CT/S on boulders
as drips and fine
splatter

CT/P + MS-PO/S

25X11m area has 1/3
oil distribution (>50% coverage)
Individual characters are
CT/B, CV/P, and PO/P to 1/5.

0 25
Meters

Steep Scarp

A logs
Trapped
Higher
relief
Back
Main A'

Character Length (m). AP 5 PO 5 CV 1/5 CT 1/25 ST — MS — PT — TB — FL — NO 120

SHORELINE ECOLOGICAL SUMMARY

NEW YORK, 02107

Segment ST / WA-001 Subdivision A Date (mo / day / yr) 4 / 22 / 98
 Time (24 hr) 18:30 Biologist DANIEL RAIDER

- (A) Substrate type and % of segments:
 (1) Bedrock 65 (2) Boulder 10 (3) Cobble 5 (4) Pebble 20 (5) Sand 0 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 30 Moderate 25 Low 45 to none
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
 Roll No. 3

Frames 30 + 33

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

- SEE ATTACHED SHEET FOR WILDLIFE / SPECIES LIST
 small tidal pools in southern portion of Subdivision, sensitive area

Ecological Considerations:

No ECOLOGICAL CONSTRAINTS ACCORDING TO DATA BASE.

Consideration should be taken for the sensitive southern tidal pools and the nutrient rich mussel beds and tidal pools in the northern portion of the Subdivision. Minimized foot traffic and avoid spraying with remediation techniques, these separately or a combination may cause more damage than is claimed here.

(10)

BIRDS SITED FOR WA-001 A + B 22/23 APRIL 199

	<u>NAME</u>	<u>AMOUNT</u>	<u>COMMENT</u>
1)	SONG SPARROW	15	
2)	VARIED THRUSH	3	
3)	BLACK OYSTER CATCHER	4	Singing intermittently
4)	GLAUCOUS-WINGED GULL	10±	
5)	COMORANT <u>Sp.</u>	2	Palegic or Redfaced
6)	BALD EAGLE	1	

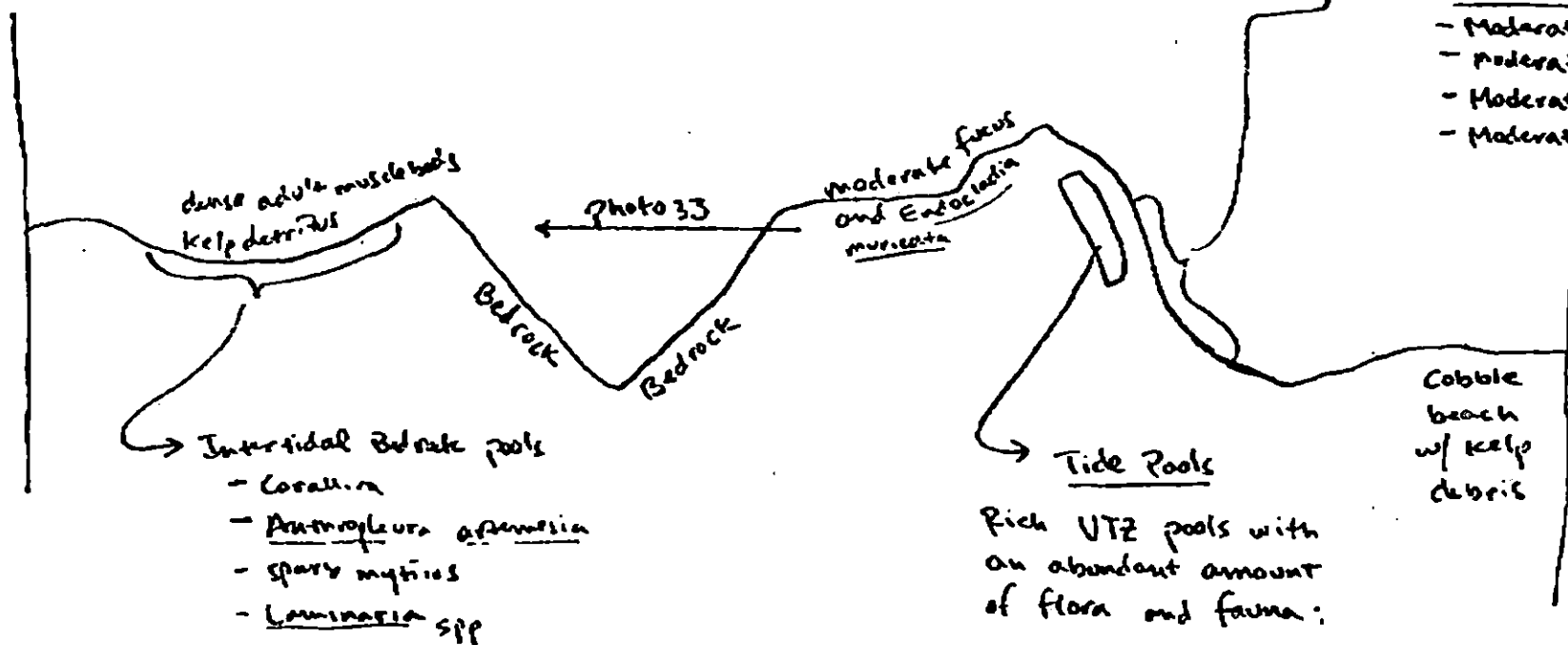
NA-051A

TEAM 17

BIO-SKETCH

22 APRIL 1990

0 50 meters





WA-1

ADEC Segment Length: 1312m

Map Key: KEN-143

Name : _____

Date: _____



REGION: KENAI

SEGMENT: ST/WA-01

SUBDIVISIONS: B (2 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ WA-01 SUBDIVISION B (2 OF 2) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 286 m: No Oil 623 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inpol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inpol 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 Inpol 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 Inpol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unrolled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inpol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 30, 31 Harbor seal and sea lion pupping (5/15 to 7/1)
Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inpol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (6/1 to 9/15)
6V Anchorages (6/1 to 9/15)
6W Forest Service cabins (6/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination
- 7Z Substrance area: Salmon harvesting (5/1 to 9/30)
7H-1 Finfish harvesting
7H Deer harvesting (8/15 to 2/28)
7H 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 Inpol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

(18)

SEGMENT ST WA-001 SUBDIVISION: B DATE 4/26/90

USCG NOAA

NAME Miles D. Hayes SIGNATURE Miles D. Hayes☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Shore mostly erosion throughout. No major oil accumulations at all. Oiled debris should be removed.

* Even storm berms have eroded scarps.

ADEC

NAME Russell Kuake SIGNATURE Russell Kuake☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

The oiling in this subdivision consisted of only a sparsely distribution of coat on the bedrock and some oily trash.

Recommended treatment: Manual pick up of the oily trash while work crews are at the Barren Is.

LAND MANAGER

NAME Gerald M. Nugent SIGNATURE Gerald M. Nugent (USFWS)☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Manual pick-up of oiled debris in conjunction with other similar pick-up on Barren Island segments. Pick-up recommended as close to May 1, 1990, as possible. A Service monitor should be present during any operations on the Barrens.

SHORELINE OILING SUMMARY

REVISION NO 3413 X

OG L. LEAN HEYMAN NOAA USCG MILES HAYES SEGMENT ST/ WA-001
 BIO DAVID RADER USEPA LAND REP JERRY NUGENT SUBDIVISION B (2 OF 2)
 EXXON JOHN DEAN ADEC RUSSEL KUNZE TIME 19:30 020:30
 TEAM NO. 17 TIDE LEVEL 0 to +4 DATE 4/22/90 0930R-1030
 EST. SUBDIVISION LENGTH: 730 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 20 % B 5 % C 10 % P 60 % G 4 % S 1 % M 0 % V 0
 SLOPE: Long 80 % Hang 10 % Vert 10 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 300 m NO 630 m

SURFACE OIL

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

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

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

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE 0#BAGS 0

Photographs:

Roll No. NOALET AFENFrames,

SUBSURFACE OIL

PIT NO	PIT DEPTH (m)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR							PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UG	30	35	40	45	50	55	60	SU	U	M	U				
1	40					X	-		X								X				N	-	-	P/GP/G
2	49					X	-		X								X				N	N	48	GP/GP
3	43					X	-		X								X				N	-	-	S/SGCP
4	33					X	-		X								X				N	-	-	P/P
5	42					X	-		X								X				N	-	-	P/P
6	43					X	-		X								X				N	-	-	G-P/P

COMMENTS

WA-001-B consists of pebble beaches w/ cobble berms.

Bedrock and large boulders separate the shoreline into small bays. Oiling occurs only to south as fine splashes on bedrock outliers, boulders, and occasional logs.

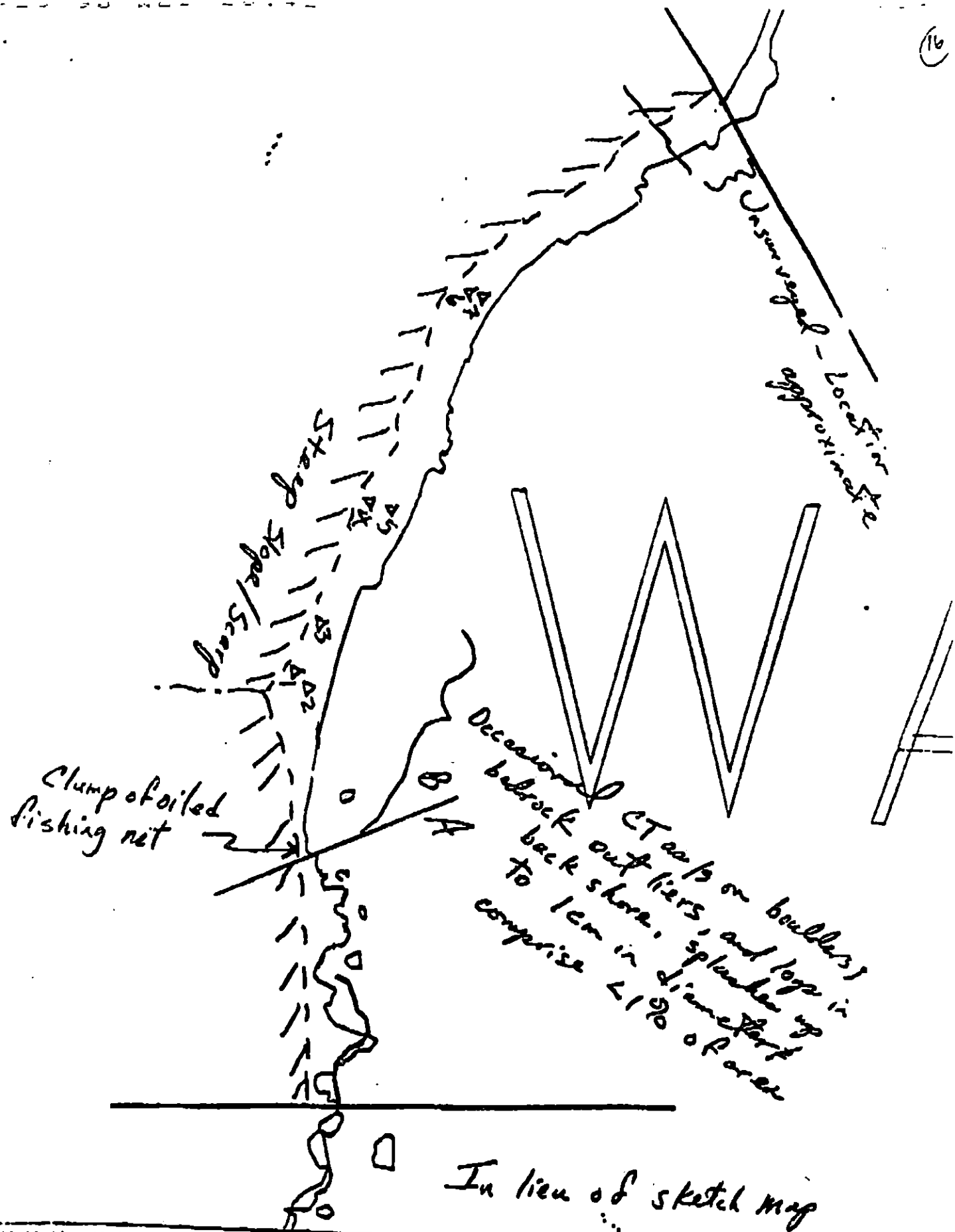
REVIEWED YWDATE 4/27/90

SUBSURFACE OIL (CONTINUED)

[illegible]

COMMENTS

REVIEWED 7W DATE 4/27/90



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

WA-1B

ADEC Segment Length: 1312m

Map Key: KEN-143

Name: G. Heyman

Date: 11-24-91

SHORELINE ECOLOGICAL SUMMARY

(14)

Segment ST / WA-001 Subdivision B Date (mo / day / yr) 4/22/92Time (24 hr) 19:30 Biologist DANIEL PAIDER

- (A) Substrate type and % of segments:
 (1) Bedrock 20 (2) Boulder 5 (3) Cobble 10 (4) Pebble 64 (5) Sand 1 (6) Silt 1
- (B) Overall % cover of biota (% of segment): Dense 10 Moderate 10 Low 80
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

 ↳ to none
 Photographs:
 Roll No. 3
Frames 32 + 33

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

see attached wildlife sightings list

see above tide pools in southern part of subdivision; this area has isolated patches of dense fucus which should be avoided by foot traffic

Ecological Considerations:

NONE IN DATA LISTINGS

BIRDS SITED FOR WA-001 A + B 2²/21 APRIL 19

	NAME	AMOUNT	COMMENT
1)	SONG SPARROW	15	
2)	VARNED THRUSH	3	
3)	BLACK OYSTER CATCHER	4	Singing intermittently
4)	GLAUCOUS-WINGED GULL	10±	
5)	COMORANT SP.	2	Pale or Redfaced
6)	BALD EAGLE	1	

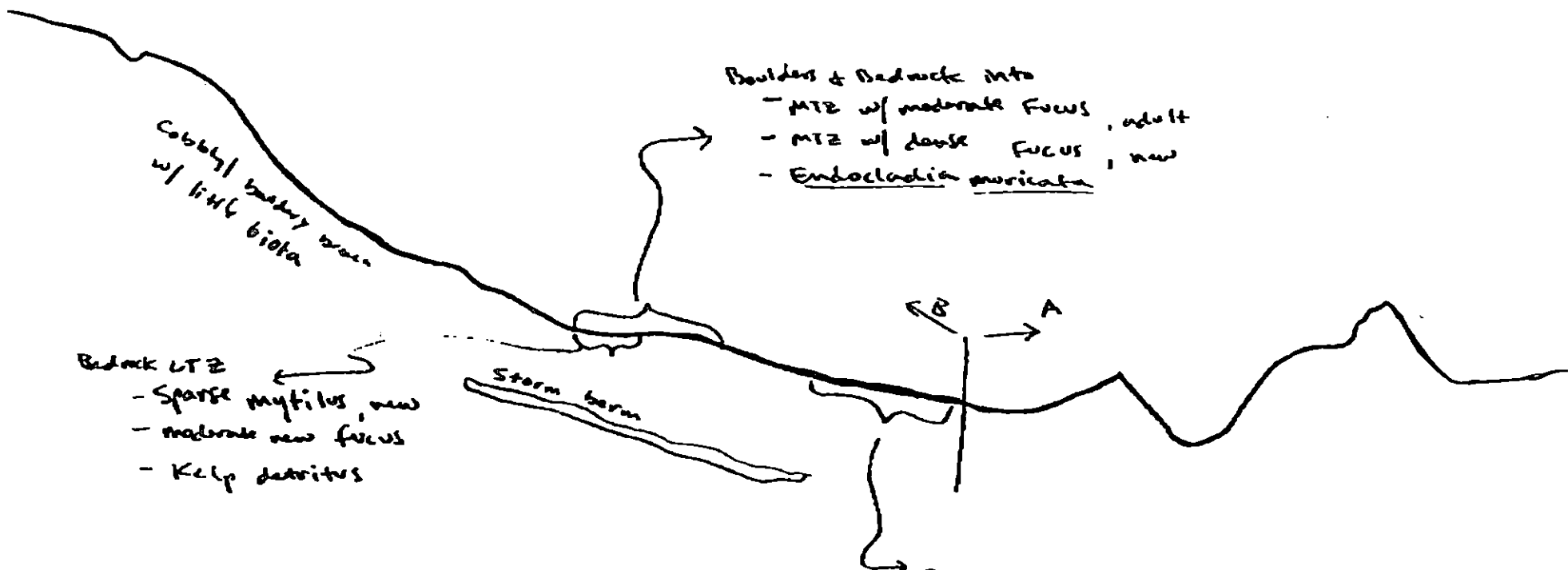
3-10-87

NA-2

TRANS

22 APRIL 1990

DANIEL ZAJAC



Boulders & Bedrock into

- MTZ w/ moderate Fucus, adult
- MTZ w/ dense Fucus, new
- Endocladia muricata

Bedrock LTZ

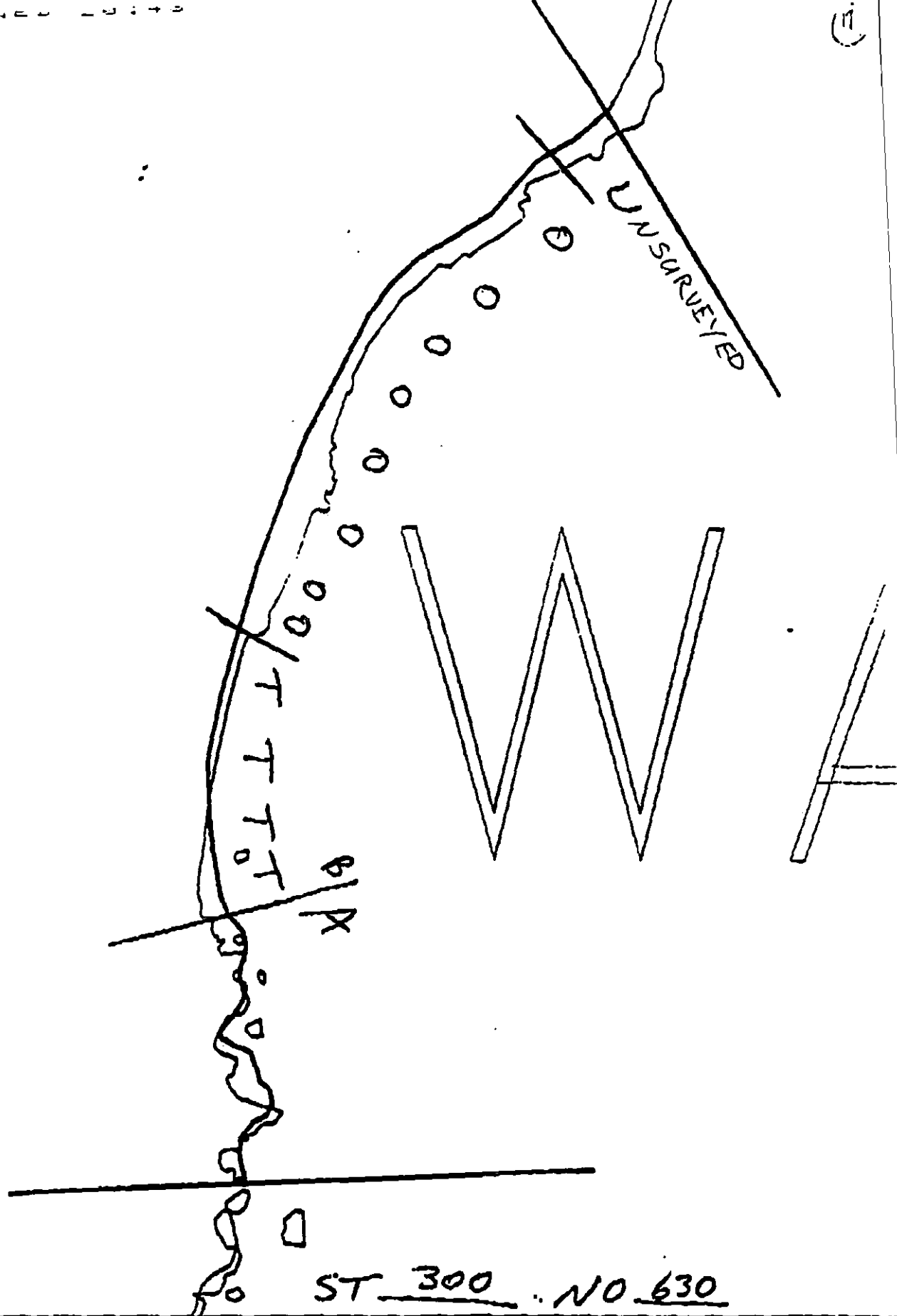
- Sparse Mytilus, new
- moderate new fucus
- Kelp detritus

Storm berm

Bedrock table in LTZ

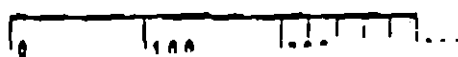
- Rhodospira Palmata
- Halosarcia glandiformis
- Laminaria Andersoni
- Enteromorpha compressa
- Lithothamnium sp.
- Red algal mats
- Silva sp.
- Endocladia muricata

- Littorina - mussels
- Limpets



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

ADEC Segment Length: 1312m



Map Key: KEN-143

Name: G Heyman

Date: 4-23-70

SHORELINE EVALUATION

SEGMENT ST/ WA-01 SUBDIVISION A (1 OF 2) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 28 m: Medium 15 m: Narrow 0 m: V.Light 136 m: No Oil 159 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) absorbents use and manual pickup of mousse, pooled oil, and oiled debris (logs and trash), 2) followed by bioremediation in areas indicated on sketch map. Work should be conducted before 5/1 otherwise no treatment unless permitted by USFWS regarding seabird colony.

TAG COMMENTS: Monitors to assess logs.

TAG APPROVAL DATE: May 5 1990
ADEC Art Weiner Art Weiner
EXXON Mark N. Silber Mark N. Silber FOSC: [Signature] DATE: 5-9-90
NOAA Gary Petrac
USCG G.A. Reiter G.A. Reiter
NO bioremediation!

SEGMENT WA-001

SUBDIVISION A

DATE 4/23/90

CHECKLIST

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

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

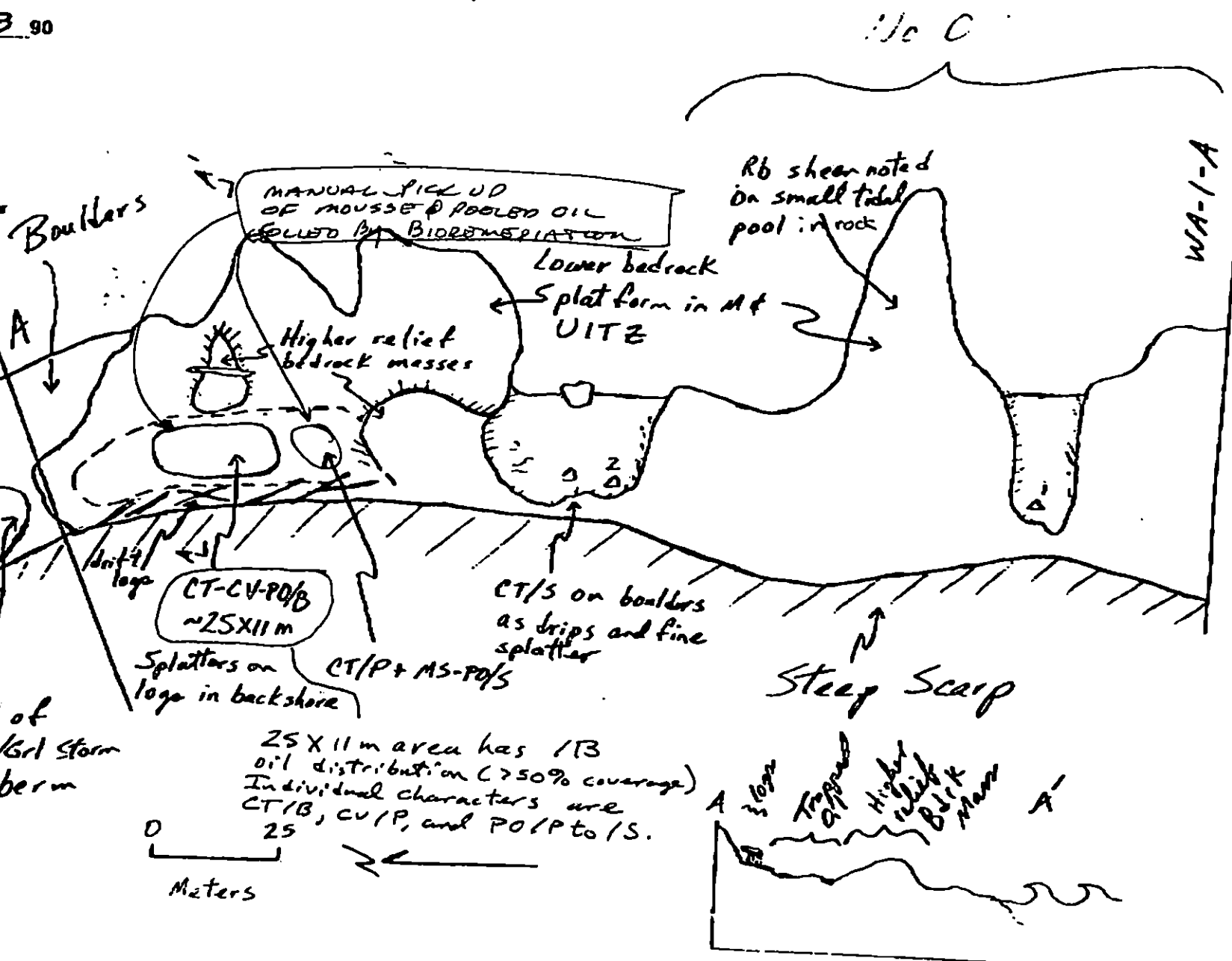
CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oil Vegetation

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

SKETCH MAP



Oil Character Length (m). AP — PO 5 CV 15 CT 25 ST — MS — PT — TB — FL — NO 120

NA-351A

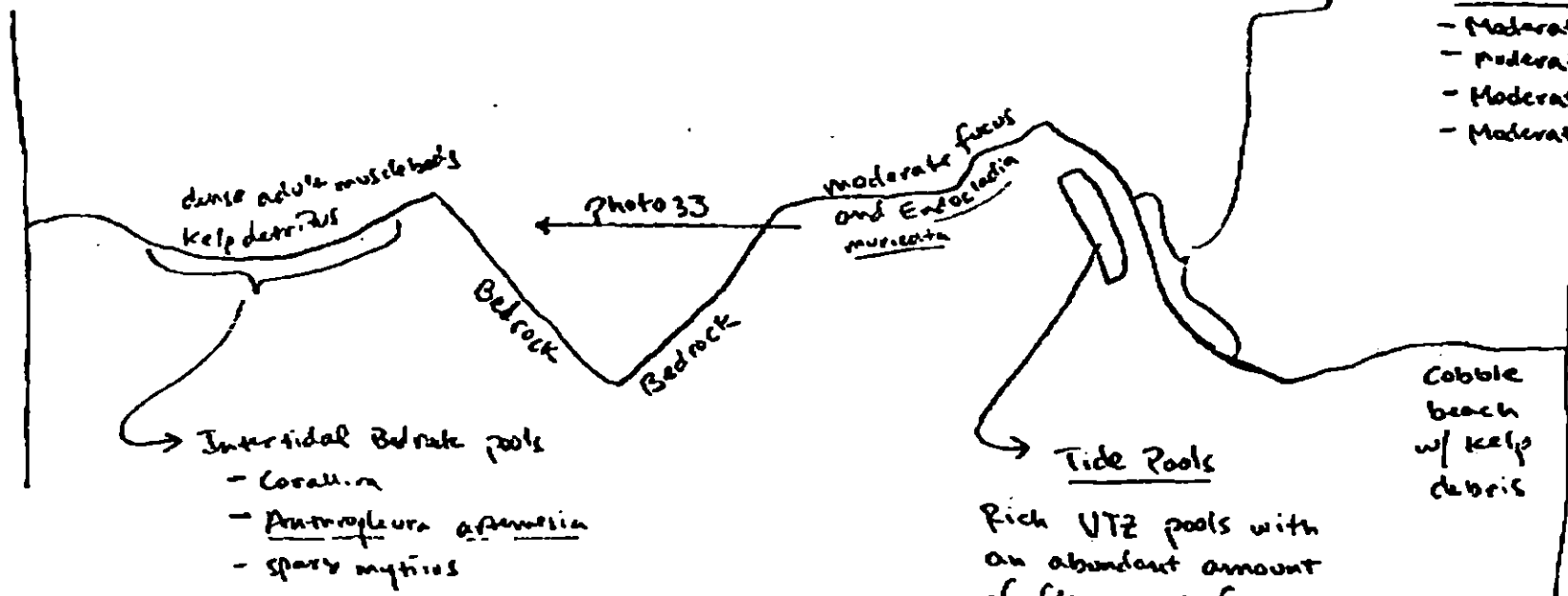
TEAM 17

BIO-SKETCH

22 APRIL 1990

2

0 50 meters



Rock face from
MTZ to VTZ

- Moderate adult barnac
- Moderate adult limpit
- Moderate adult Mytilu
- Moderate adult Littorin

Intertidal Bedrock pools

- Corallina
- Anthopleura artemesia
- spars mytilus
- Laminaria spp

Tide Pools

Rich VTZ pools with
an abundant amount
of flora and fauna:

- Katharina tunicata
- Corallina
- limpits
- Tonicella insignis (chiton)
- Anthopleura artemesia
- Stomoxys caesia
- Stylocystis - (porphyra, mar)
- Sigambra - mar...



SHORELINE EVALUATION

SEGMENT ST/ WA-01 SUBDIVISION B (2 OF 2) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: *Charles E. Brown* DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 286 m: No Oil 623 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

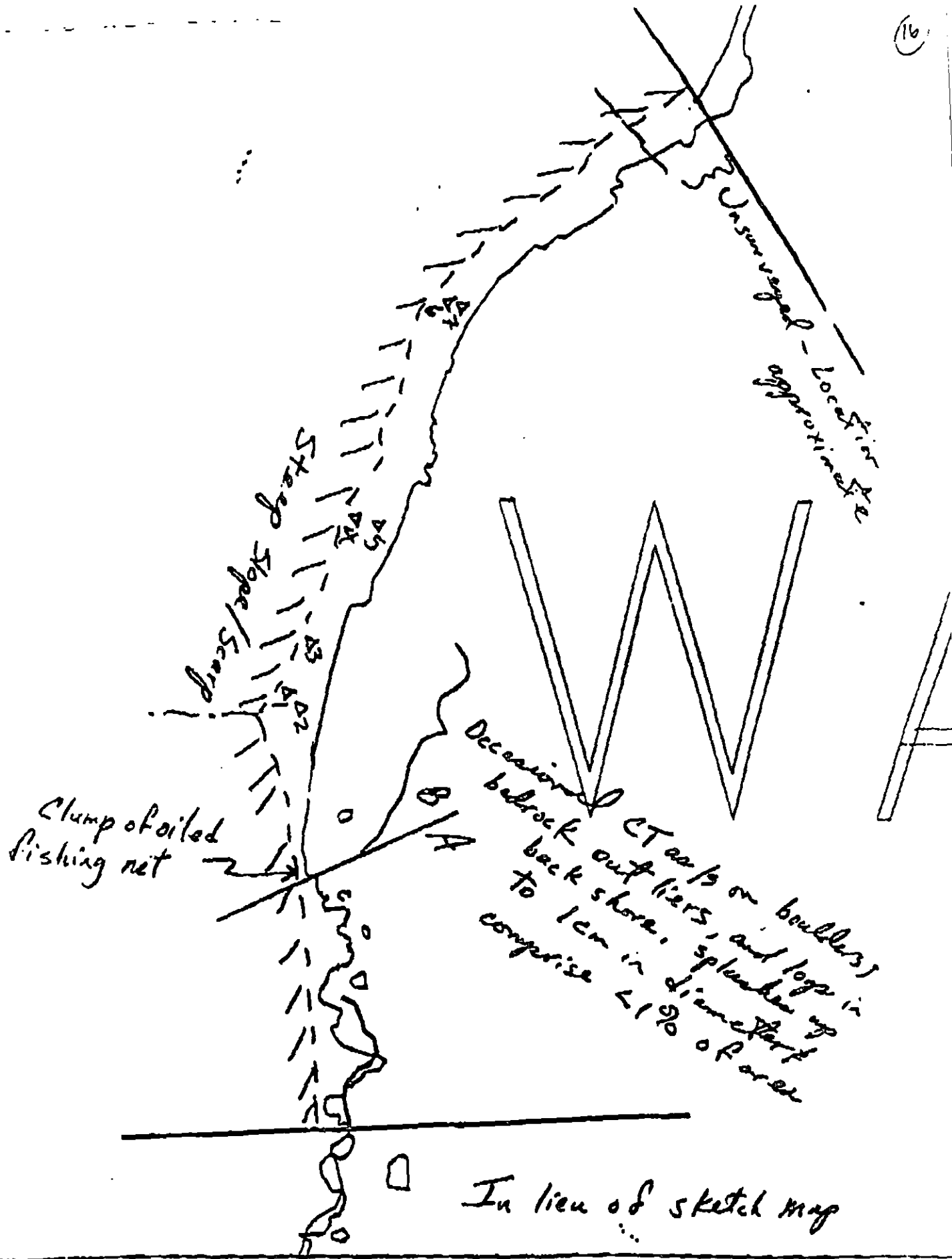
☒ No Treatment Recommended	☐ Snare/Absorbent Booms
☐ Treatment Recommended	☐ Oil Snares (pom poms)
☐ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☐ Bioremediation	☐ Spot Washing: <u> </u> Wands
☐ Tarmat Removal	☐ Beach Cleaner
	☐ Other (see comments)

COMMENTS:

TAG COMMENTS: Monitors to assess pickup of oiled fishing net.

TAG APPROVAL DATE: May 5 1990
ADEC *Art W. [unclear]* *Art W. [unclear]*
EXXON *Mark N. [unclear]* *Mark N. [unclear]* FOSC: *[signature]* DATE: 5-9-90
NOAA *Gary Petrage* *Gary Petrage*
USCG *G.A. [unclear]* *G.A. [unclear]*

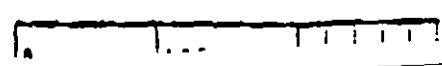
Pickup + Remove net



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

WA-1B

ADEC Segment Length: 1312m



Map Key: KEN-14
Name: G. Heyman
Date: 4-24-90

S. L. C. T. T.

NA - 12

FAN 12

22 APRIL 1990

DANIEL LAUREZ



Boulders & Bedrock mts

- MTZ w/ moderate Fucus, adult
- MTZ w/ dense Fucus, new
- Endocladia muricata

Cobbly/ boulder zone
w/ little biota

Bedrock LTZ

- Sparse mytilus, new
- moderate new fucus
- Kelp detritus

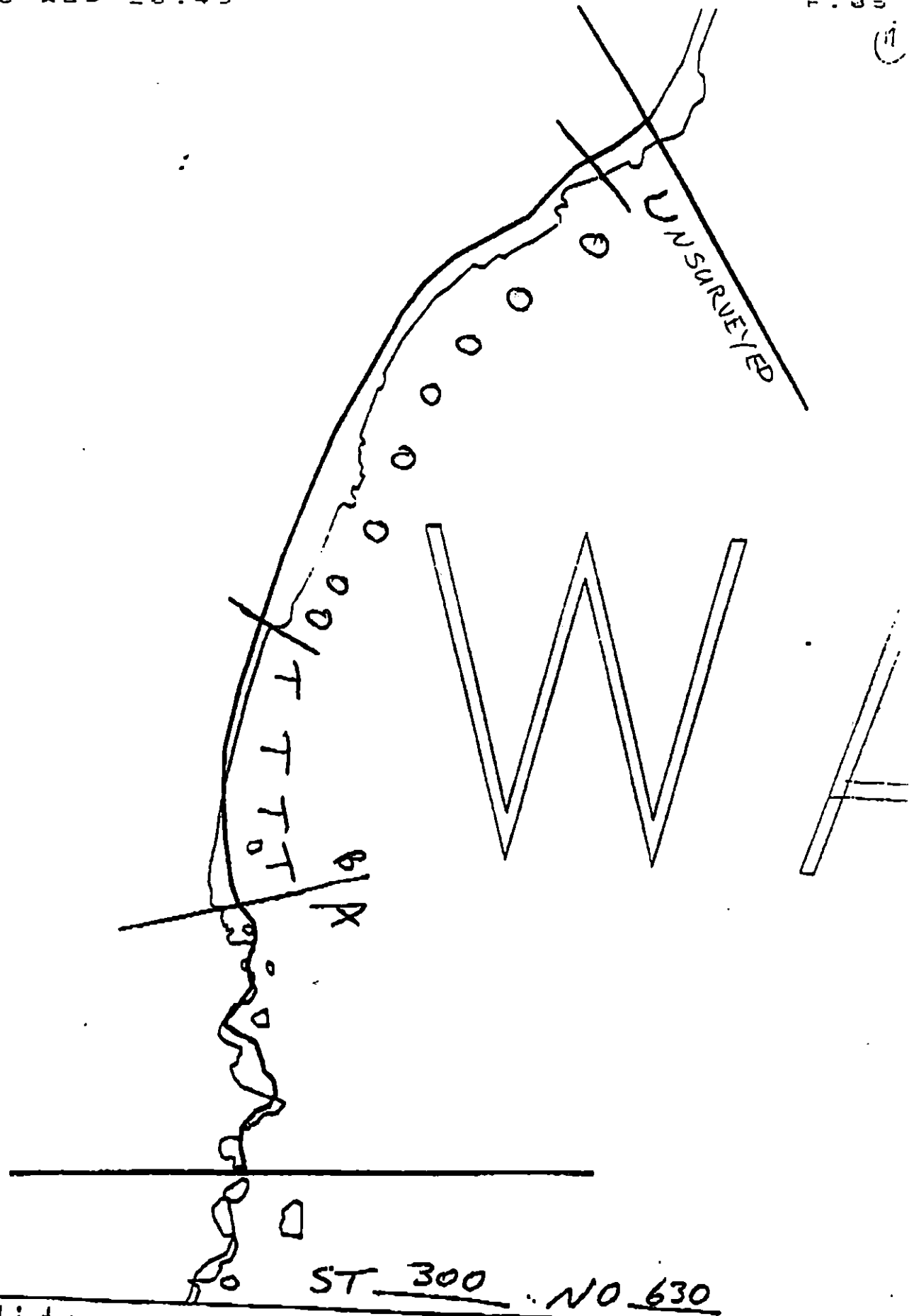
Storm berm

← B → A

Bedrock table in LTZ

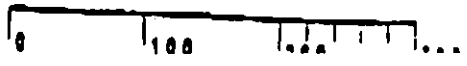
- Rhodospira Palmata
- Halosarcia glandiforme
- Laminaria Andersoni
- Enteromorpha compressa
- Codium bursa sp
- Red ...
- ... sp
- ...

- Littorina - ...
- Limpets



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

ADEC Segment Length: 1312m



Map Key: KEN-143
 Name: G Heyman
 Date: 4-23-70

1991 MAYSAP EVALUATION

SEGMENT: WA 001 SUB: A REGION: KEN SURVEY DATE: 5/7/91ENVIRONMENTAL SENSITIVITIES:Work Window(s) RESTRICTED 5/15 - 9/15Ecological/Constraints (see page two for details) Seabird colony, Pinniped hauloutARCHAEOLOGICAL CONSTRAINTS:If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.SHPO Signature: Rachel Jean Dren Date: 5/22/91RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>N</u>	<u>N</u>	<u>N</u>
Manual Pickup (Check as Req.)	<u> </u>	<u> </u>	<u> </u>
Spot Washing	<u> </u>	<u> </u>	<u> </u>
Bio-Customblen Only	<u> </u>	<u> </u>	<u> </u>
Bio-Inipol/Customblen	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>

COMMENTS:INITIAL: TAG: FOSC: TAG APPROVAL DATE: MAY 22 1991FOSC APPROVAL DATE: 6/1/91ADEC [Signature]FOSC [Signature]EXXON [Signature]E. E. PAGE, CDR, USCG
CHIEF OF STAFF, FOSCUSCG [Signature]NOAA [Signature]

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

Pinniped Haulout: Access restricted from 5/15 to 6/30 and 8/15 to 9/15 unless approved by NMFS. Maintain 1000' vertical and 1/2 mile (3 mile for sea lions at all times) horizontal buffer.

ADEC

NAME S. FERGUSON SIGNATURE _____

☒ NTR ☐ TREATMENT RECOMMENDED
NO TREATMENT RECOMMENDED AT WA-1A. NO OIL OBSERVED BY SURVEY TEAM.

EXXON

NAME G. STILES SIGNATURE George G. Stiles 5/8/91

☒ NTR No trace of oil was found therefore no treatment is recommended.

LANDMANAGER

NAME J. HARDISTER OF USFWS SIGNATURE J. F. Hardister 5/8/91

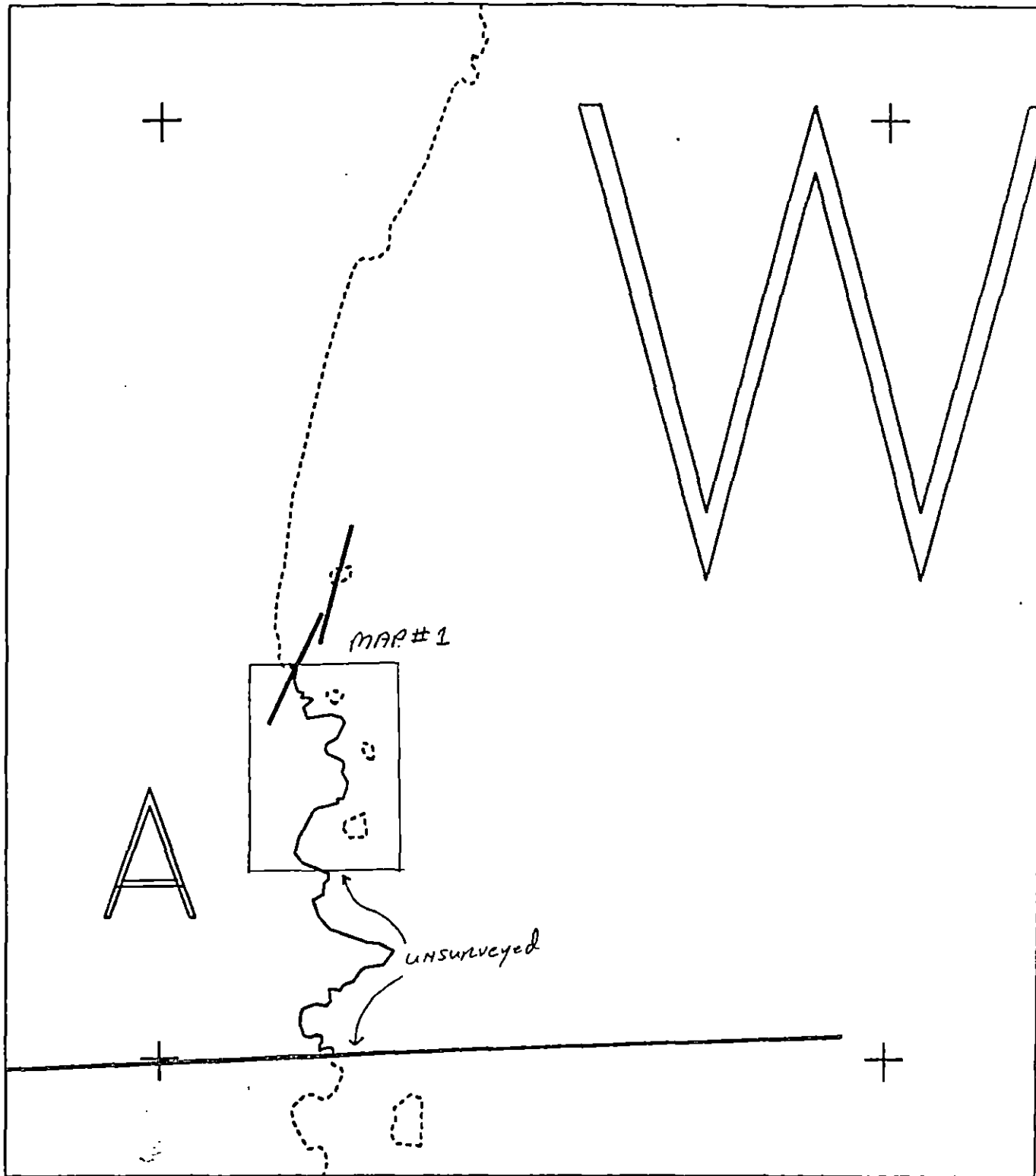
☒ NTR No oil located.

USCG/NOAA

NAME CWO SPURR / R. Hoff SIGNATURE R. P. Spurr / Rebecca Hoff

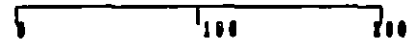
☒ NTR No oiling found, no treatment required.

reviewed 5/10/91 KG
E. reviewed, May 10



WA001 A

METERS



AK State Plane Zone 4
NAD83

Subdivision Field Map

Map Key: KENV001Aa

Name: _____

Date: _____

- xxx Bedrock
- ↗ Photos
- ▲ Emergents

SKETCH MAP (06)
WA-1-A
D. FITZGERALD
7 MAY 1991
1300 - 1345

* NO OBSERVED OIL

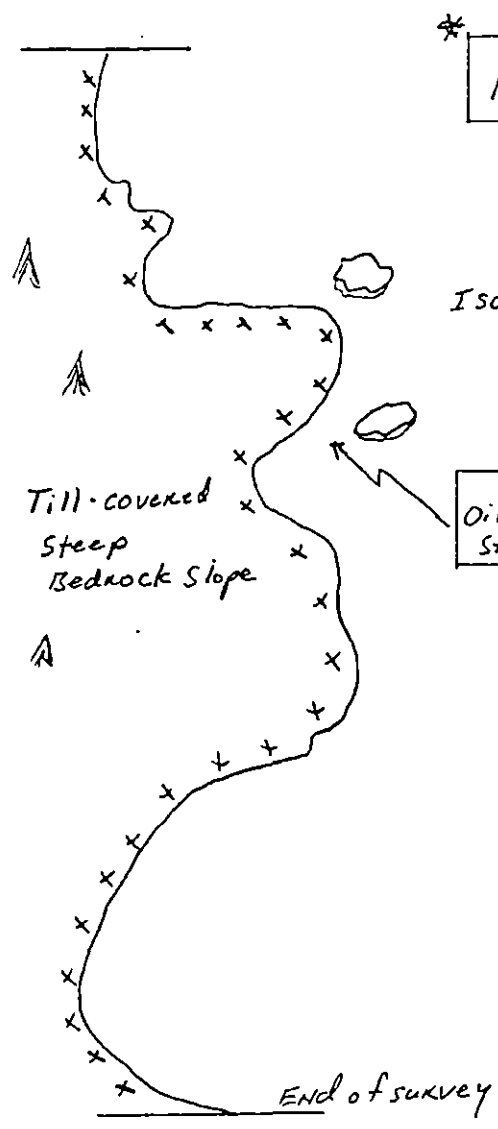
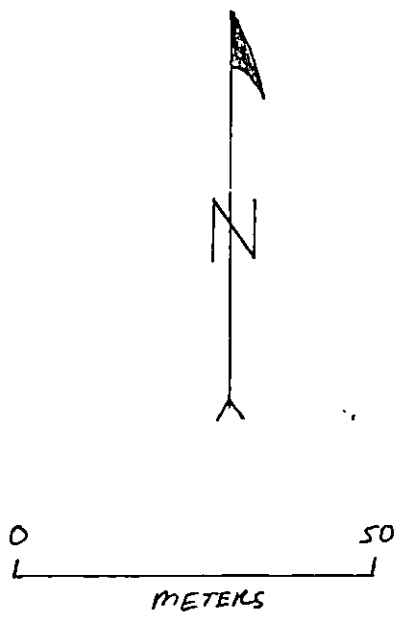
ISOLATED
TO CONTINUOUS
BEDROCK OUTCROPS

Oiled piece of
Styrofoam P.U.

Till-covered
steep
Bedrock Slope

GULF OF ALASKA

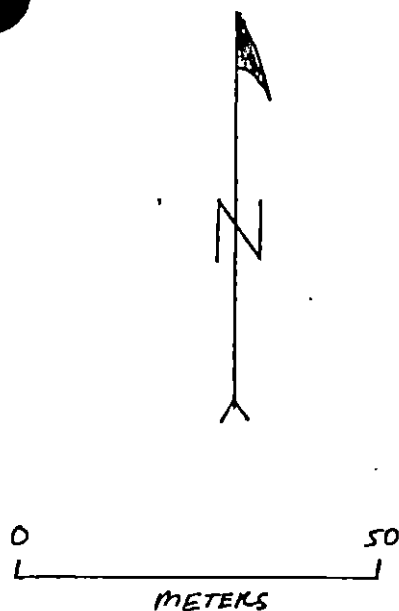
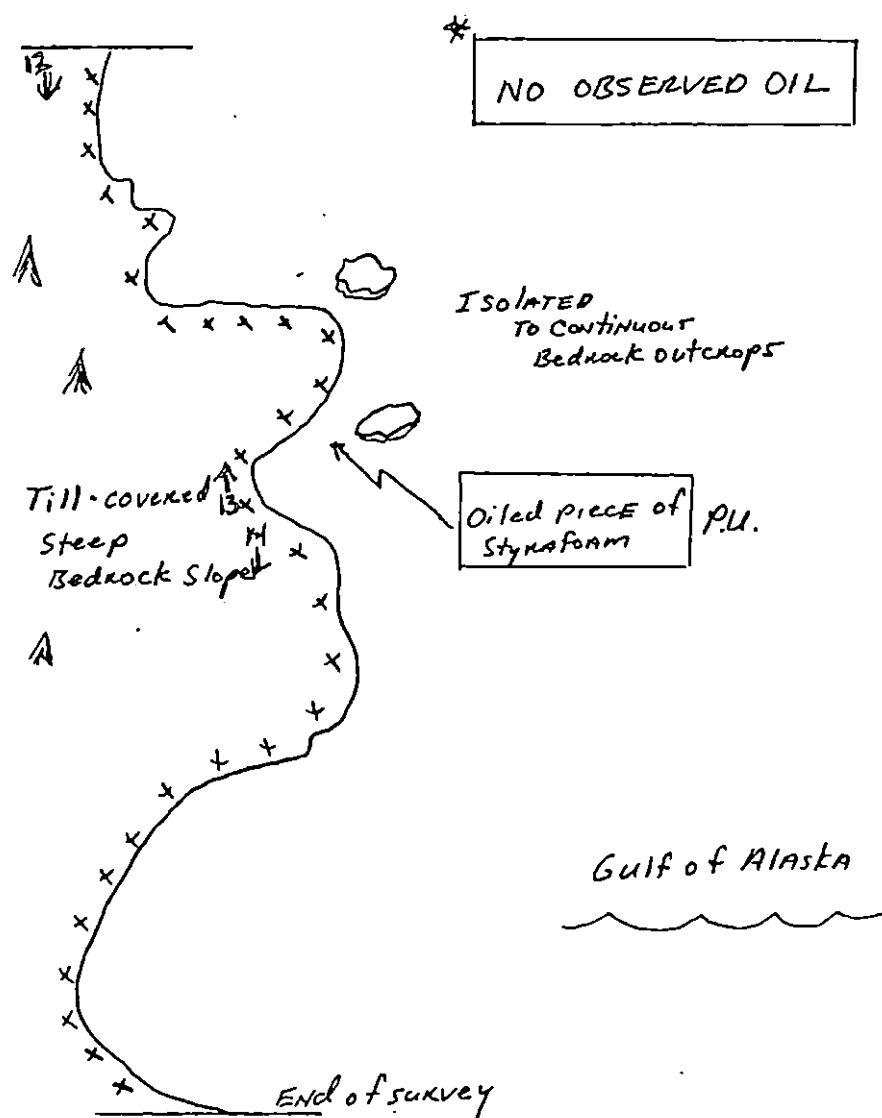
END of survey



	Bedrock
	Photos
	Emergents

Mapap 6-08 # 12-14

SKETCH MAP (06)
WA-1-A
D. FITZGERALD
7 MAY 1991
1300 - 1345



Reviewed 5/10/91 KG
ET reviewed, 5/10

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 Helo

DATE May 7, 1991

SEGMENT # WA-01

TIDAL HEIGHT (Range) 6 ft - 5 ft (13:15-13:40)

SUBDIVISION A

BIOLOGIST H. Davis

SEA STATE 4-5 ft Choppy

WIND SPEED/DIRECTION 5 with gusts of 10 MPH N

PHOTOGRAPHS: ROLL # 6-08

FRAME # 12-14

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

No oil observed.

Very little biota. The beach is mostly coarse sand with a few exposed bedrock hummocks in the MITZ. The MITZ + SHITZ had a bed rock shelf and boulders with no biota. This is a high energy beach with a lot of sand/sediment scouring.

Some boulders in the MITZ/SHITZ had sparse patches of Fucus, Retioida Endocladia and Gigartina. A few limpets were present. NO Barnacles or mussels were found.

Nereocystis beds off shore.

Dystercatchers (4) Cormorant sp (20-25) Glaucous winged gulls (30-40) Hermit Thrushes (3)

WILDLIFE OBSERVATIONS

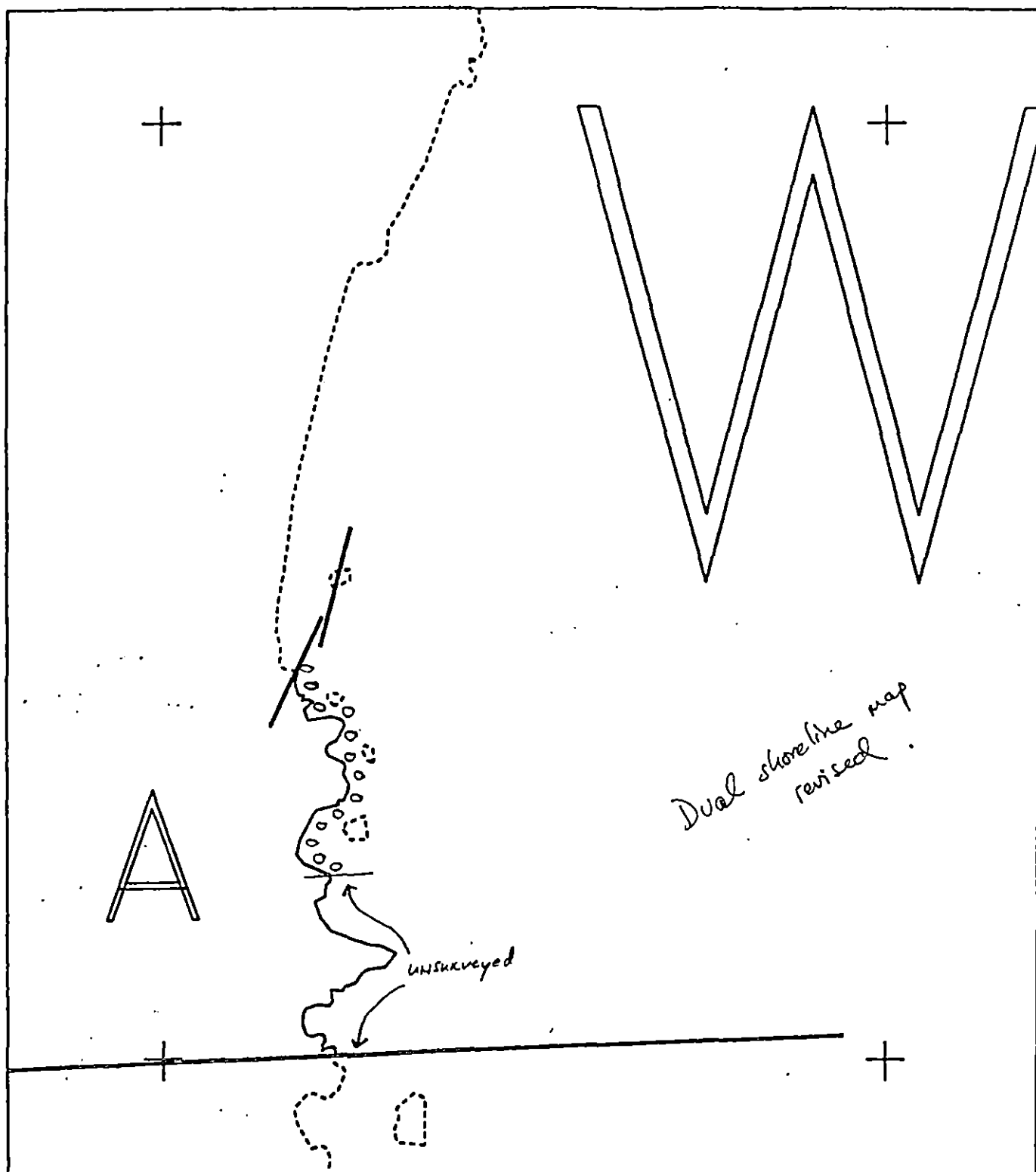
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2 adult 1 immature	0
Seabirds	1	20-25	
Waterfowl			
Gulls/Kittiwakes	1	30-40 Glaucous winged	
Shorebirds	1	4	
Corvids			
Other Birds	1	3	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	0	0	
Pinnipeds (specify)	0		
Whales (specify)	0		

Shoreline subdivision map showing important biological features attached.

Printed at 10:00 AM



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

WA001 A

METERS

100 200

AK State Plane Zone 4
 5000100

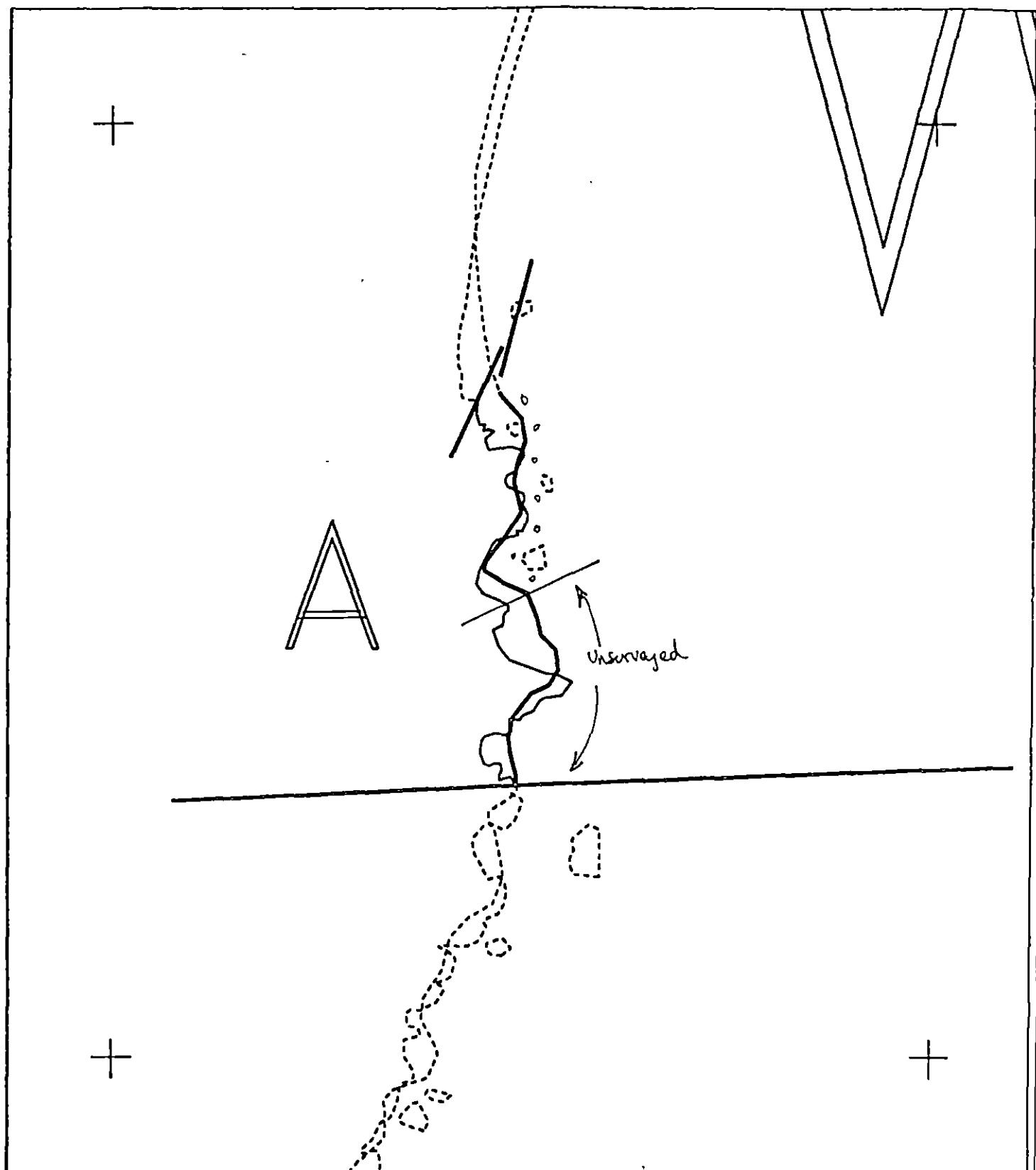
Subdivision Field Map

Map Key: KENVA001Aa

Name: D. Fitzgerald

Date: 7 May 1991

reviewed 5/10/91 KG
 ES revised 5/10



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

WA001 A
 ADEC Subsegment Length: 338m
 METERS
 0 100 200
 AK State Plane Zone 4
 440010



Subdivision Field Map
 Map Key: KENWA001A
 Name: D. Fitzgerald
 Date: 7 May 1991
 Data Entered:

Revised, 25 May 1991

1991 MAYSAP EVALUATION

SEGMENT: WA 001 **SUB:** A **REGION:** KEN **SURVEY DATE:** 5/7/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 5/15 - 9/15

Ecological/Constraints (see page two for details) Seabird colony, Pinniped haulout

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ **Date:** _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other _____

Other _____

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

Pinniped Haulout: Access restricted from 5/15 to 6/30 and 8/15 to 9/15 unless approved by NMFS. Maintain 1000' vertical and 1/2 mile (3 mile for sea lions at all times) horizontal buffer.

TEAM NO. 6-Heb SEGMENT WA-1 SUBDIVISION A DATE 7 May 1991

ADEC

NAME S. Ferguson SIGNATURE _____

☒ NTR

☐ TREATMENT RECOMMENDED

NO TREATMENT RECOMMENDED AT WA-1A. NO OIL OBSERVED BY SURVEY TEAM.

EXXON

NAME G. STILES SIGNATURE _____

☒ NTR

no trace of oil was found therefore
no treatment is recommended.

LANDMANAGER

NAME J. HARDISTER OF USFWS

SIGNATURE _____

☒ NTR

no oil located.

USCG/NOAA

NAME CWO SPURR / R. Hoff

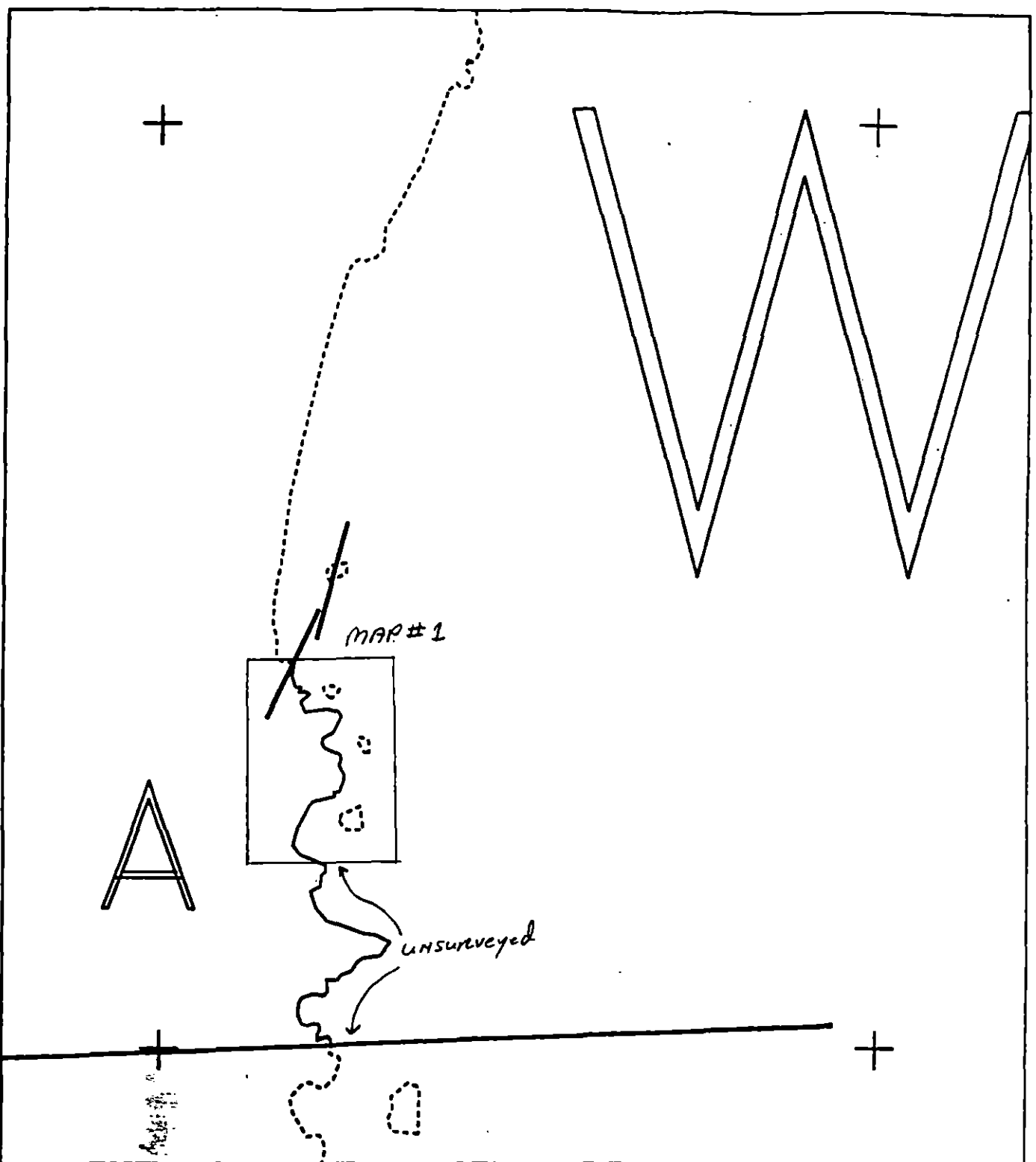
SIGNATURE _____

R. P. Spurr / Rebecca Hoff

☒ NTR

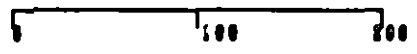
No oiling found, no treatment required.

reviewed 5/10/81
E. revised, May 10



WA001 A

METERS



AK State Plane Zone 4
NAD83

Subdivision Field Map

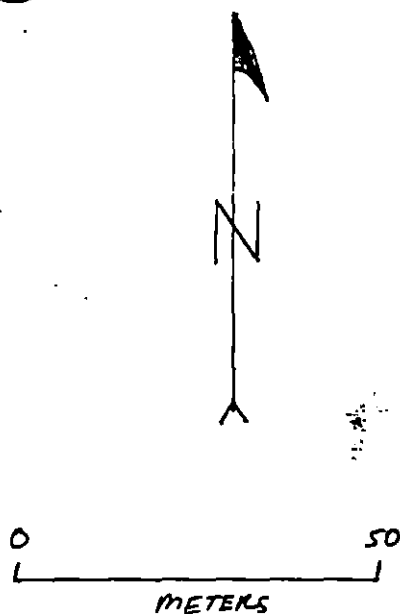
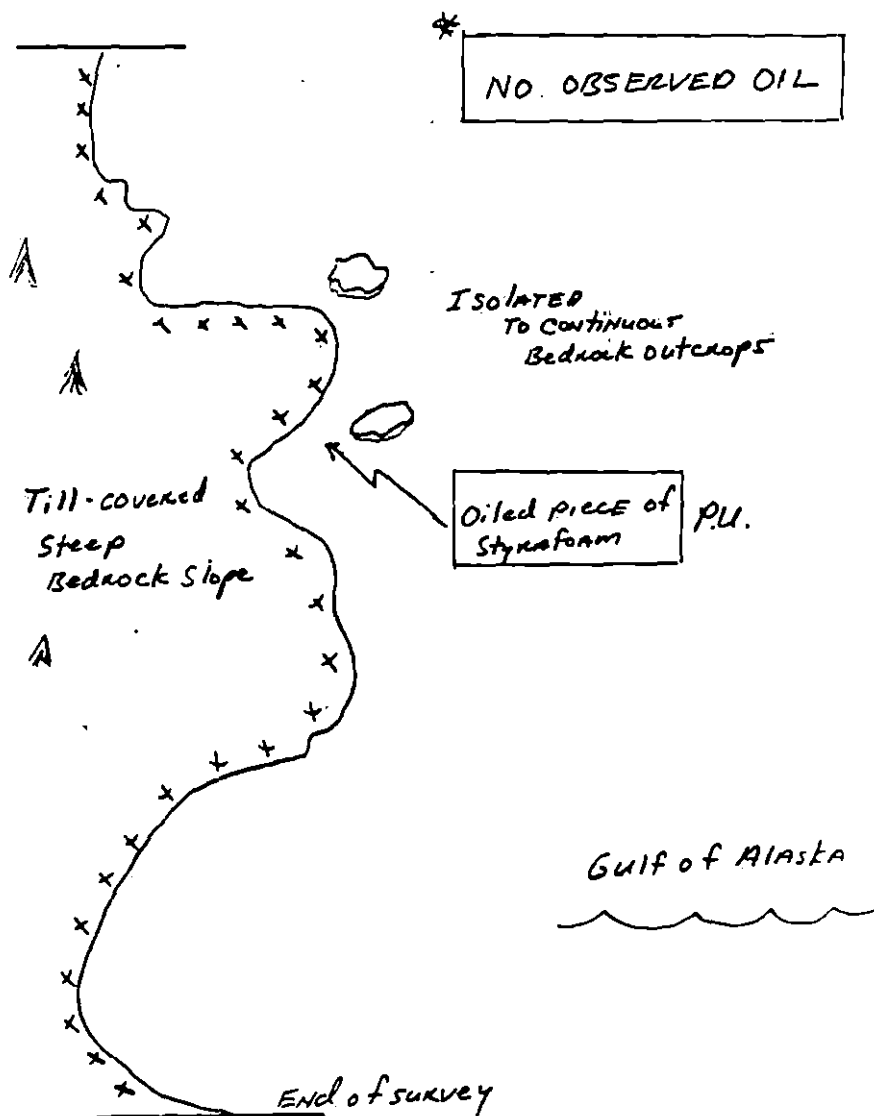
Map Key: KENVA001Aa

Name: _____

Date: _____

Bedrock
Photos
Evergreens

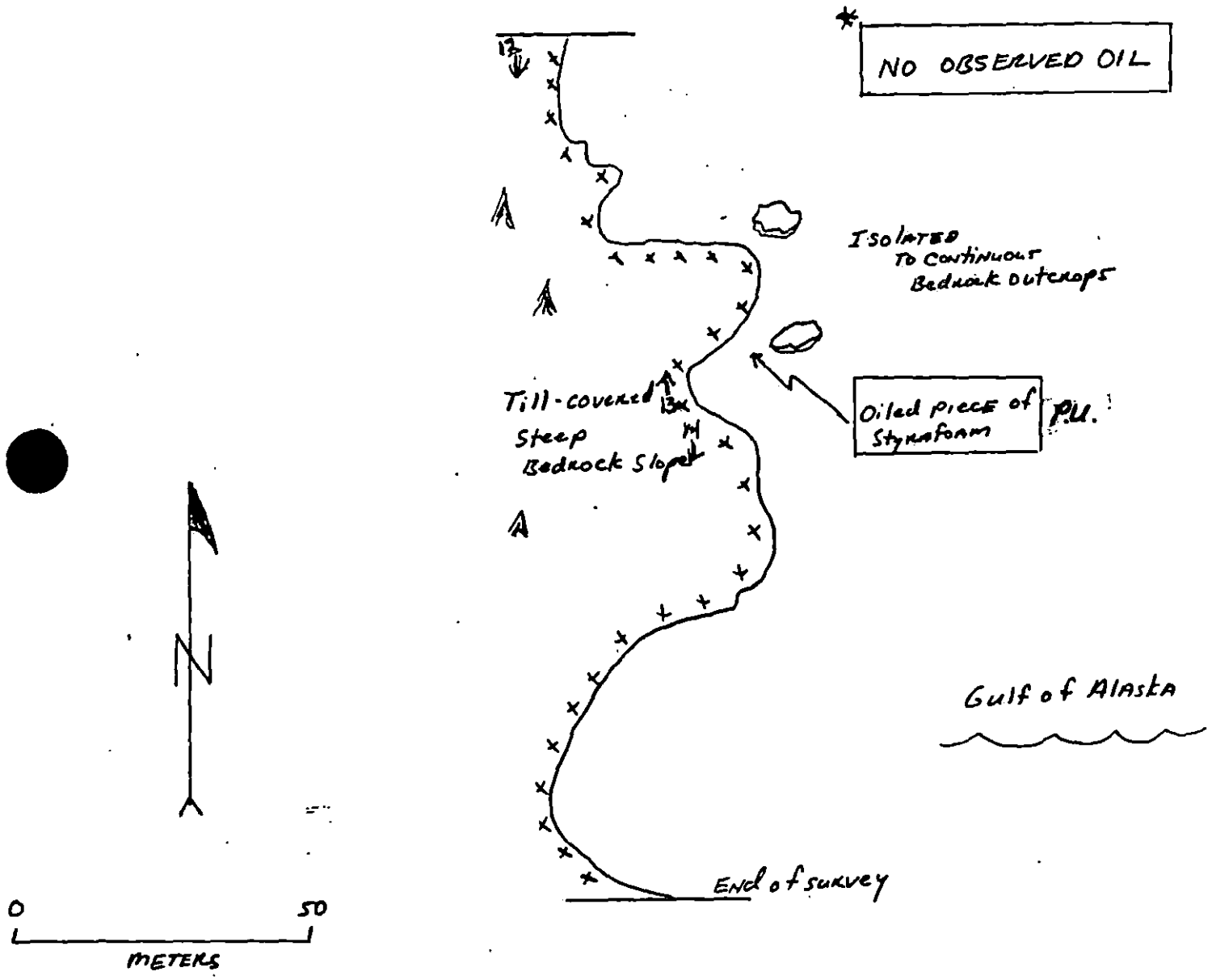
SKETCH MAP (06)
WA-1-A
D. Fitzgerald
7 MAY 1991
1300 - 1345



1700 locations
Maypap 6-08 #12-14

- xxx Bedrock
- / Photos
- A Emergence

SKETCH MAP (06)
WA-1-A
D. FITZGERALD
7 MAY 1991
1300 - 1345



Reviewed 5/10/91 KC
ET reviewed 5/10

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 Helo

DATE May 7, 1991

SEGMENT # WA-01

TIDAL HEIGHT (Range) 6 ft - 5 ft (1315-1345)

SUBDIVISION A

BIOLOGIST H. Davis

SEA STATE 4-5 ft Choppy

WIND SPEED/DIRECTION 5 kts gusts of 10 mph NE

PHOTOGRAPHS: ROLL # 6-08

FRAME # 12-14

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

No oil observed.

Very little biota. The beach is mostly coarse sand with a few exposed bedrock hummocks in the MITZ. The MITZ + SMTZ had a bed rock shelf and boulders with no biota. This is a high energy beach with a lot of sand/sediment scouring. Some boulders in the MITZ/LITZ had sparse patches of Fucus, Reticularia, Endocladia and Gigartina. A few limpets were present. NO Barnacles or mussels were found.

Nereocystis beds off shore.

Duckcatchers (4) Cormorant sp (20-25) Glaucous winged gulls (30-40) Hermit Thrushes (3)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

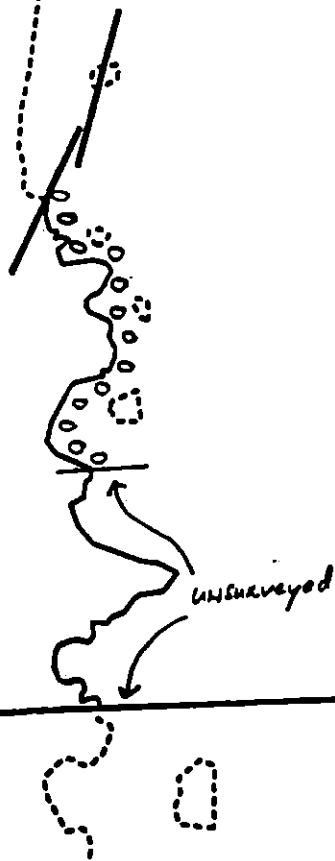
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2 adult 1 immature	0
Seabirds	1	20-25	
Waterfowl			
Gulls/Kittiwakes	1	30-40 Glaucous winged	
Shorebirds	1	4	
Corvids			
Other Birds	1	3	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	0	0	
Pinnipeds (specify)	0		
Whales (specify)	0		

Shoreline subdivision map showing important biological features attached.

Rec'd 5/14/91

A



Dual shoreline map
revised

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

WA001 A

METERS

100 200

AS State Plane Zone 4
 NAD83

Subdivision Field Map

Map Key: KENYA001Aa

Name: D. Fitzgerald

Date: 7 May 1991

reviewed 5/10/91 KC
 ES revised 5/10



Unsurveyed

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

WA001 A

ADEC Subsegment Length: 338m

METERS

0 100 200
AK State Plane Zone 4
NAD83



Subdivision Field Map

Map Key: KENWA001A

Name: D. Fitzgerald

Date: 7 May 1991

Date Entered:

Revised 27 May 10

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT WA-1 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup and Absorbents

OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5R Seabird Colony

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

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

[Signature]

Date

6/3/90

Prepared by

[Signature]

Date

6/12/90

SHORELINE EVALUATION

SEGMENT ST/ WA-01 SUBDIVISION A (1 OF 2) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 28 m: Medium 15 m: Narrow 0 m: V.Light 136 m: No Oil 159 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) absorbents use and manual pickup of mousse, pooled oil, and oiled debris (logs and trash), 2) followed by bioremediation in areas indicated on sketch map. Work should be conducted before 5/1 otherwise no treatment unless permitted by USFWS regarding seabird colony. SEE CONSTRAINTS ADDENDUM dated 6/12/90/PO

TAG COMMENTS: Monitors to assess logs.

TAG APPROVAL DATE: May 5 1990

ADEC Art Weiner Art Weiner
EXXON Mark N. Silber Mark N. Silber FOSC: [Signature] DATE: 5-9-90
NOAA Gary Petrac Gary Petrac
USCG G.A. Dieter G.A. Dieter

NO bioremediation!

REGION: KENAI

SEGMENT: ST/WA-02

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ WA-02 SUBDIVISION A (1 OF 1) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 603 m: No Oil 0 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommend manual removal of oiled debris. Work should be
conducted after 6/1 with permission of USFWS due to eagle nest con-
straint.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / WA - 2 SUBDIVISION: A DATE 4-9-9000A
USCG
NAMEJohn Naughton SIGNATURE John J. Naughton☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Some mounds observed in cracks and fissures on east end of cove. Oiled debris - travel webbing, pom-pom, logs also observed. However, high energy beach and area should be allowed to clean naturally. Also will be important sea bird nesting area during summer months.

ADEC

NAME

Scott Shelton

SIGNATURE

Scott Shelton☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

WA-2 Sub. A (611 meters segment)
Length TEAM walked entire segment.

Splashes and stains observed on cobble and drift upper tidal Boulders. (Possible Manual Haul up)
80 x 4 meter zone of mounds in crevices, staining on bed rock ledges and boulders in the upper tidal areas.
VL impact extends along in the upper to mid tidal levels. Up to 30cm no sub-surface observed.

High energy beach access very limited / High surf location
High seas Gill Net observed.

LAND MANAGER

NAME

LINDA HAGEN

SIGNATURE

Linda M. Hagen USFWS☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Banner Islands are an important area for sea birds. As much clean up as possible is recommended. Nesting activities should be noted prior to scheduling any activity so that there is no conflict with wildlife needs.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Portland NOAA USCG Naughton SEGMENT ST/ W-2
 BIO Spight LAND REP Hayes SUBDIVISION A
 EXXON Dyers ADEC Shelton TIME 9:27 to 11:02
 TEAM NO.: 19 TIDE LEVEL: -0.5 ft to -1.5 ft DATE 4/9/90
 EST. SUBDIVISION LENGTH: 6.1 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 0 % B 0 % C 30 % P 70 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 435 m NO 0 m
 611

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	IC	IS	IP	IR	SL	OR	OL	OP	OB	TL	SU	U	M	L
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT														
STAIN				X		X					X	X		
MOUSSE				X										
PATTIES														
TARBALLS														
FILM														
NO OIL													X	X

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

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

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

DEBRIS COLLECTED ☒ YES ☐ NO

TYPE NETS

#BAGS 10

Photographs:

Roll No. ST/19-7

Frames 5-16

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CL)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SL	OR	OL	OP	OB	TL	SU	U	M	L		
1	30					X	-									X					Gravel
2	30					X	-										X				Gravel
3	30					X	-											X			Gravel
4	30					X	-									X					Gravel
5	30					X	-										X				Gravel
6	30					X	-											X			Gravel

COMMENTS

- stain observed on log and debris
- 90m x 4m zone of marine oil coat

OG. Perched

SEGMENT WA-2

SUBDIVISION A

DATE 4 / 9 / 90

CHECKLIST

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

LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

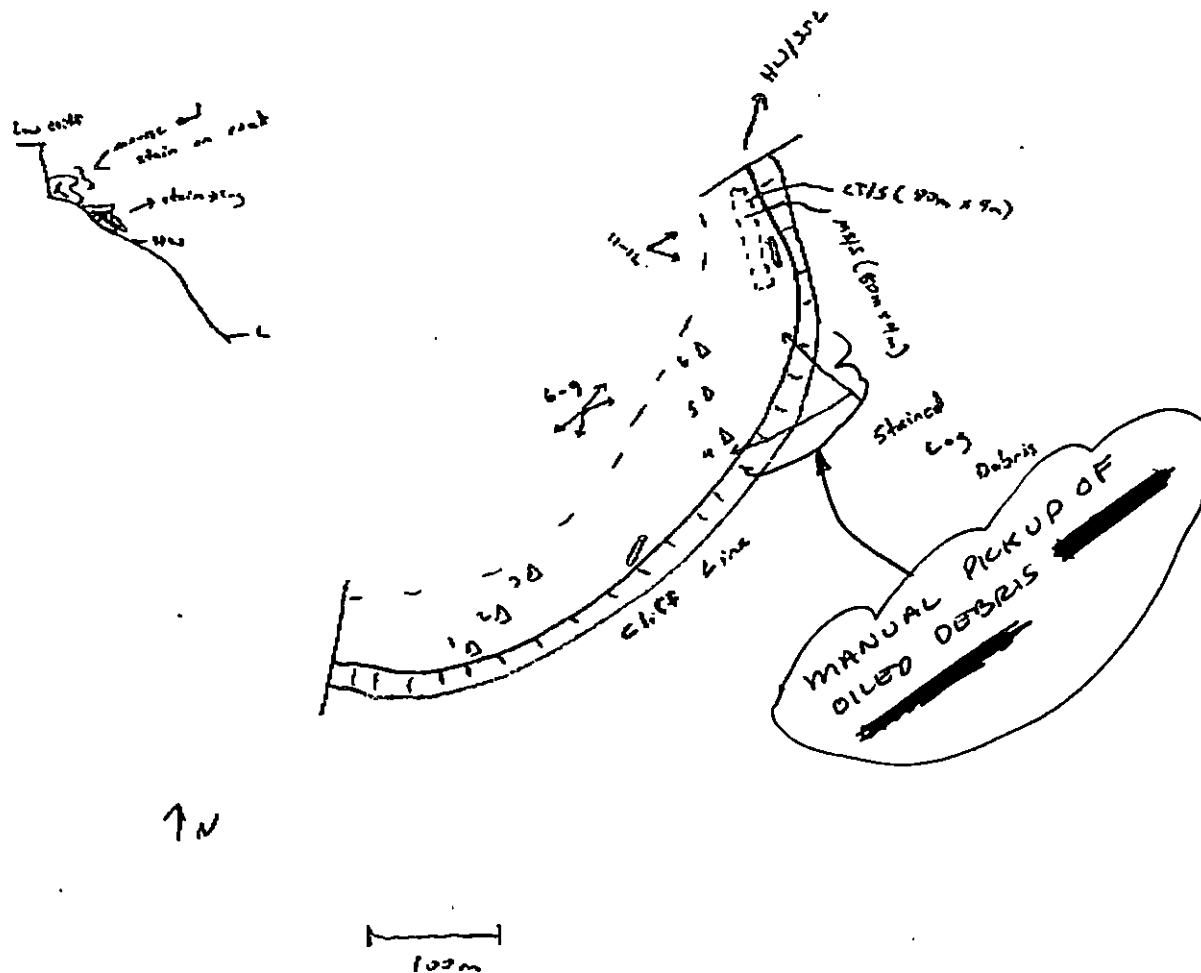
Splashed Distribution

Oiled Vegetation

1 $\rightarrow$

Photo location, direction,
and number

ETCH MAP



Oil Character Length (m): AP 0 PO 0 CV 0 CT 611 ST 611 MS 80 PT 0 TB 0 FL 0 NO 0

REVISION: 03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 0

Segment ST / WA-2 Subdivision A Date (mo / day / yr) 4/9/90

Time (24 hr) 9:23 Biologist SPAGHT

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

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

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

Photographs:
Roll No. _____

Frames _____

BARNACLES

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

NOT PRESE

MYTILUS

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

NOT PRESE

GASTROPODS

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

NOT PRESE

FUCUS

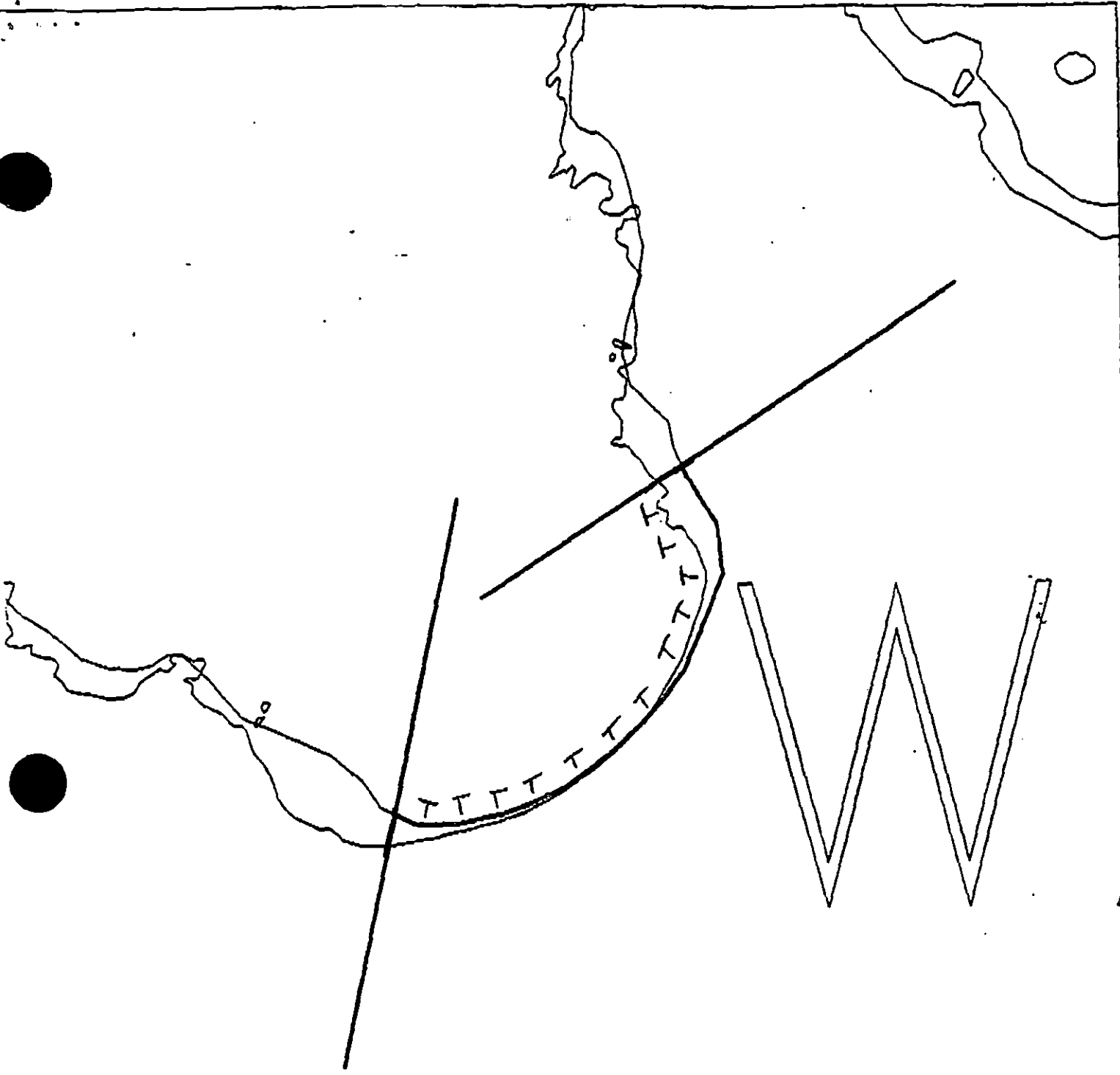
Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESE

Wildlife Observations/ General Comments:

Ecological Considerations:

Sand/gravel beach
Outcrop / boulders at ends w/ red algae lower, normal barnacle /
Fucus / mussel higher
Fair kelp population offshore



XXXX Wide

/// Medium

-- Narrow

TTTT Very Light

0000 No Oil

WA-2

ADEC Segment Length: 603m



Map Key: KEN-174

Name: Penland

Date: 4-9-95

Data Entered:



SHORELINE EVALUATION

SEGMENT ST/ WA-02 SUBDIVISION A (1 OF 1) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles Hoffman DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 603 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommend manual removal of oiled debris. Work should be
conducted after 6/1 with permission of USFWS due to eagle nest con-
straint.

TAG COMMENTS:

TAG APPROVAL DATE: 4/20/90

ADEC ART WEINER

EXXON ANDY TGAZ

NOAA BILL WARRICK

USCG KENNETH KEANE

FOSC:

DATE: 4-26-90

Pick up mousse where accessibility
and safety permit.

OG Pe

SEGMENT ST/ WA - 2

SUBDIVISION A

DATE 4 / 9 / 90

CHECKLIST

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

LEGEND

1 Δ

PR - No Subsurface Oil

2 Δ

PR - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

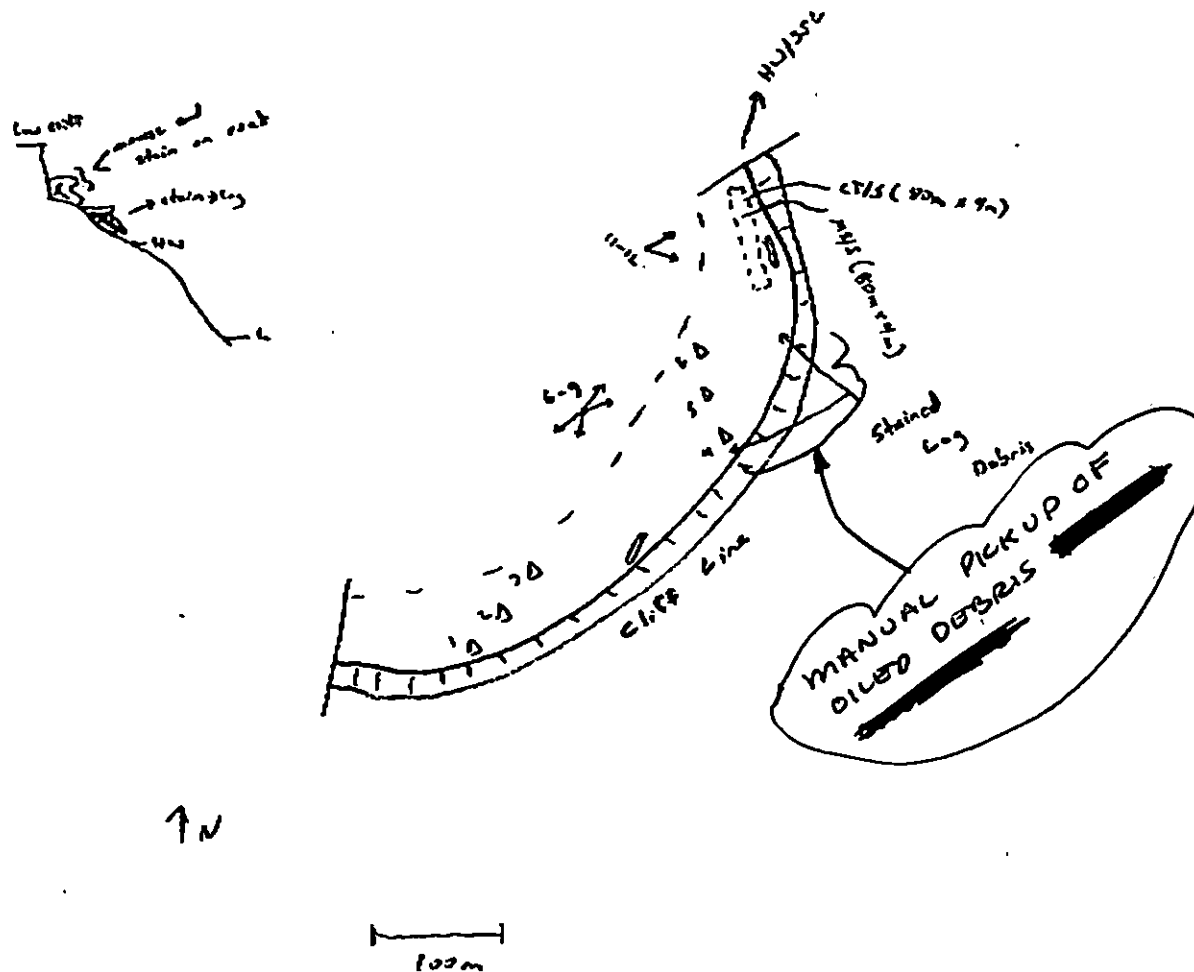
Spotted Distribution

Oiled Vegetation

1 $\Rightarrow$

Photo location, direction,
and number

ETCH MAP



Oil Character Length (m): AP 0 PO 0 CV 0 CT 611 ST 611 MS 80 PT 0 TB 0 FL 0 NO 0

REVISION: 02/04/90



XXXX Wide

/// Medium

-- Narrow

TTTT Very Light

0000 No Oil

WA-2

ADEC Segment Length: 603m



Map Key: KEN-174

Name: Perland

Date: 4-9-90

Data Entered:

1991 MAYSAP EVALUATION

SEGMENT: WA 002 SUB: A REGION: KEN SURVEY DATE: 5/7/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 5/15 - 9/1

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

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: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____ FOSC APPROVAL DATE: _____

ADEC _____ FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

ADEC

NAME S. FERGUSON

SIGNATURE

[Signature]

☐ NTR ☒ TREATMENT RECOMMENDED

SEE ATTACHED SHEET

EXXON

NAME G. STILES

SIGNATURE

[Signature] 5/8/91

☒ NTR The subsurface oil is buried 20 to 70 cm with fine sand. The 3 to 5 cm bar was producing no shear. Work if performed could be done from Zodiac type boats only on good calm weather days.

LANDMANAGER

NAME J. HARDESTER

OF USFWS

SIGNATURE

[Signature] 5/8/91

☐ NTR Recommend removal of oily sediment subsurface material by mechanical means if other oil removal operations are to occur in the Barrier Islands. Plugging and capping by aircraft float should be conducted with precautions exercised to prevent adverse impacts to nesting colonies of seabirds and/or perched on and adjacent to nearby islands.

USCG/NOAA

NAME CWO SPURGEON / R. HOFF

SIGNATURE

[Signature] / *[Signature]*

☐ NTR

The small layer of subsurface oil does not appear to represent a source of contamination to biological resources in the area. Since this is a high energy beach, the remaining oil will continue to weather naturally. If removal of this sub-surface oil is decided it needs to be done by mechanical means.

CONTAMINANT SHEET

WA-2A (ADEC) S. FERGUSON

S. Ferguson

☐ NTR ☒ TREATMENT RECOMMENDED

WEST AMATULI IS A REMOTE LOCATION AND WA-2A IS LOCATED ON THE NORTH END OF THE ISLAND. WA-2A IS EASILY ACCESSIBLE ON THE NORTH END OF THE BEACH AREA. SUBSURFACE OIL IS LOCATED ON THE NORTH END OF THE BEACH AREA - 5 METERS WIDE ON THE NORTH END NARROWING TO 2 METERS ON SOUTH IN A CONTINUOUS BAND 30 METERS IN LENGTH - THICKNESS OF OIL VARIED BETWEEN 3cm AND 7cm. OIL CHARACTER HAD A MEAN "MOR" RATING, SURVEY WAS DONE AT A TEMP. OF 45°. IT IS SUSPECTED THAT WITH WARMER TEMPERATURES "MOR" COULD MOVE UPWARD AND HAVE A "HOR" RATING. STRATA IN PITS WAS 90% GRAVEL + SAND WITH THE TOP COUPLE OF CM. NEAR THE SURFACE CONSISTING OF PEBBLES. RECOMMEND MANUAL REMOVAL OF SUBSURFACE OIL (BOAT COULD EXPLODE REMOVAL IN FOLD). DO NOT RECOMMEND TILLING.

TREATMENT RECOMMENDED WITH STIPULATIONS

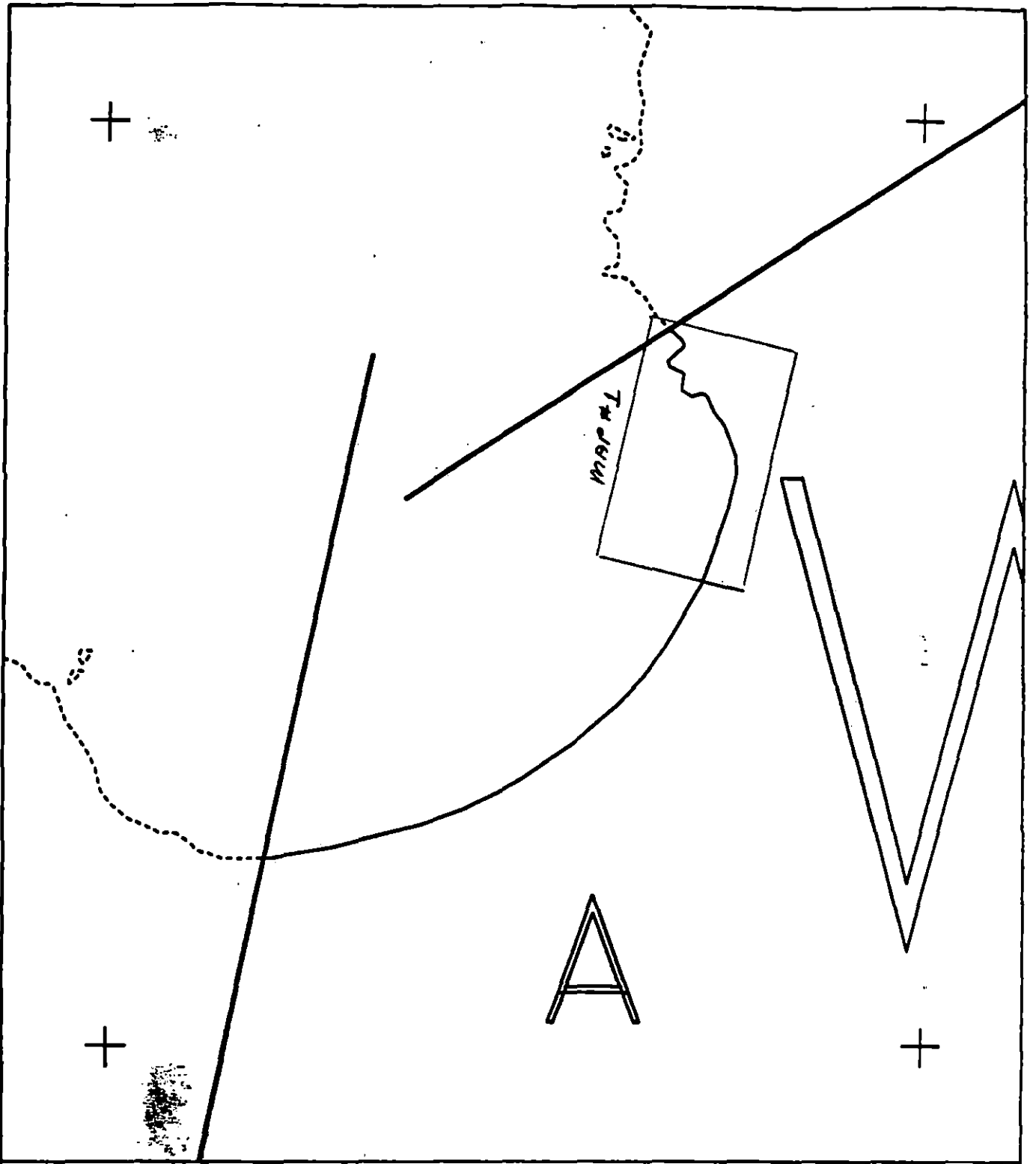
IF THERE IS A CLEAN-UP BOAT DISPATCHED FROM SEASIDE CLEAN AREAS IN KODIAK OR IF THERE IS WORK TO BE DONE AT SEGMENTS NOT YET SURVEYED ON THE BEACH I WOULD STRONGLY RECOMMEND REMOVAL THIS OIL. ON THE OTHER HAND DO NOT FEEL THAT SENDING A CLEAN-UP CREW TO ADDRESS THIS OILING INDIVIDUALLY WOULD BE COST EFFECTIVE. I WOULD THEN SUGGEST OBSERVATION (MONITORING) RATHER THAN REMOVAL.

[illegible]

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

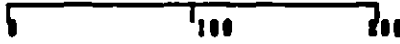
OG COMMENTS:

reviewed 5/10
 EX reviewed 5/10



WA002 A

METERS



AK State Planning Zone 4
sub0020

Subdivision Field Map

Map Key: KENV0002A

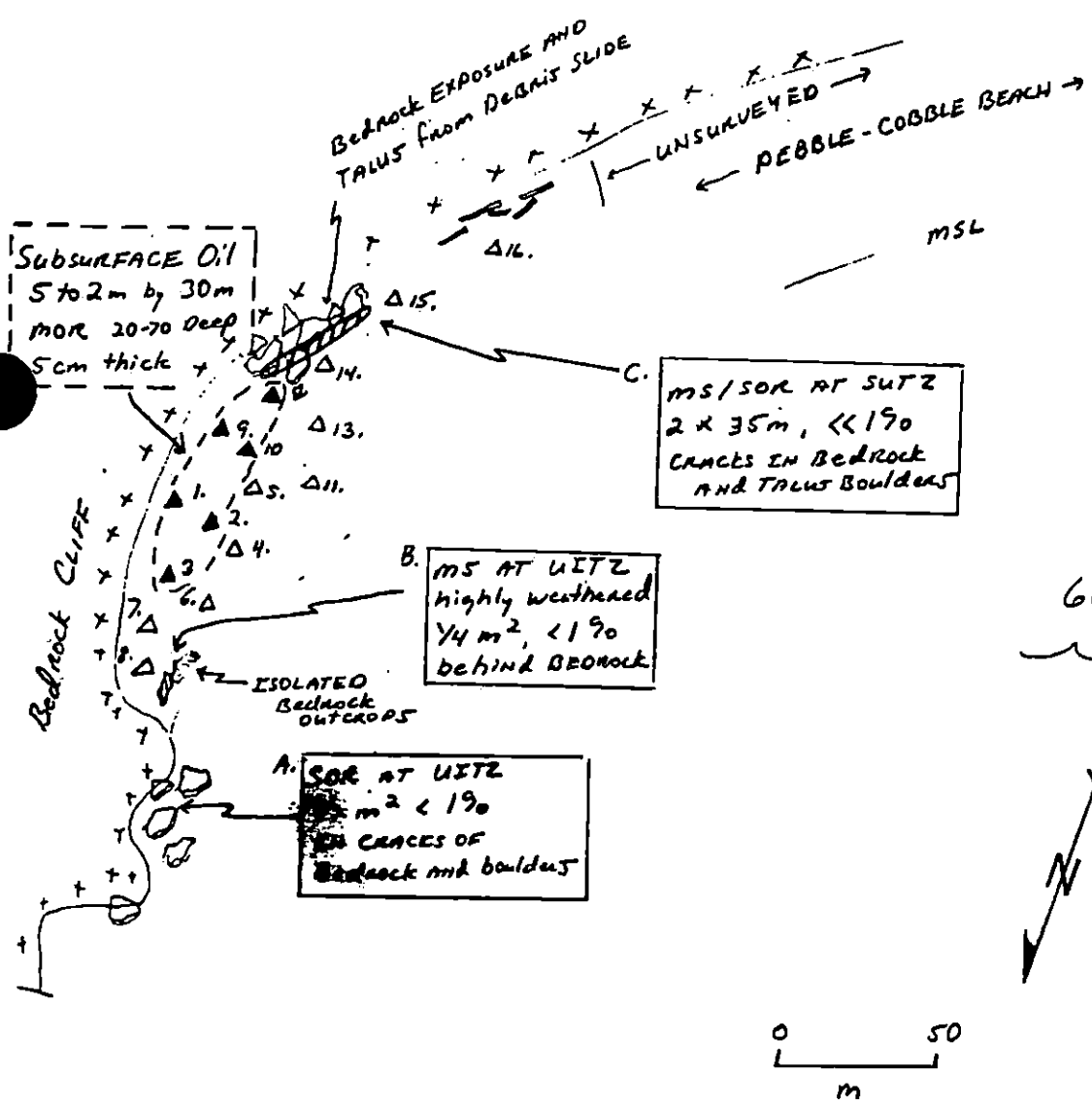
Name: D. Fitzgerald

Date: 7 May 1991

ES reviewed, May 10

- +++ Bedrock
- LOGS
- PHOTOS

Sketch MAP (06)
 WA-2-A
 O. FITZGERALD
 7 MAY 1991
 1405 - 1510

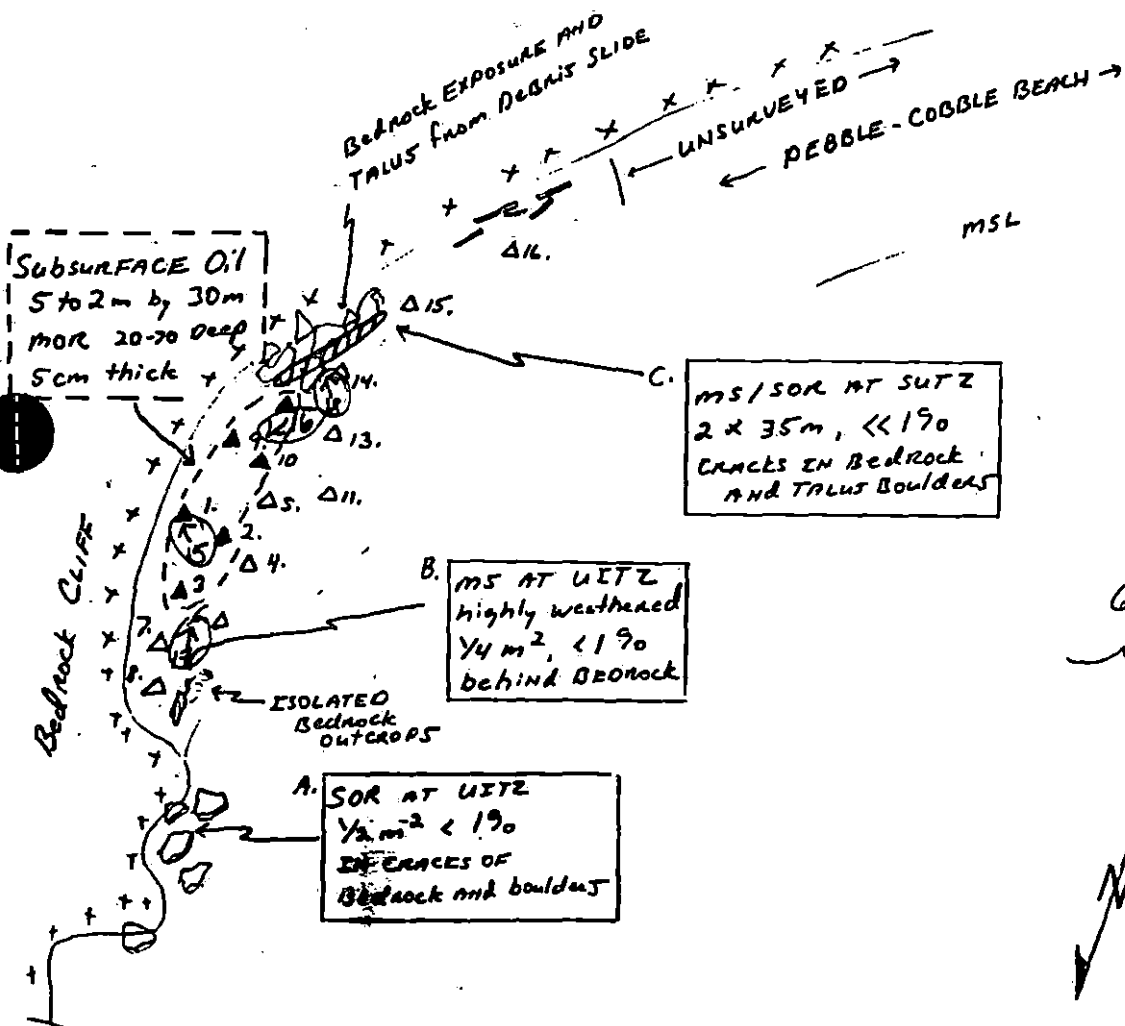


reviewed 5/1/91
 25 revised 5/10

 Bedrock
 LOGS
 PHOTOS

PHOTO LOCATIONS
 Mapap 6-08
 # 15-18

SKETCH MAP (06)
 WA-2-A
 O. FITZGERALD
 7 MAY 1991
 1405 - 1510



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 Helo

DATE May 7 1991

SEGMENT # WA-02

TIDAL HEIGHT (Range) 5 ft - 4.5 ft (14⁰⁰ - 15⁰⁰)

SUBDIVISION A

BIOLOGIST H. Davis

SEA STATE 2-5 ft choppy

WIND SPEED/DIRECTION 6-7 mph NE

PHOTOGRAPHS: ROLL # 6-08

FRAME # 15-18

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

A. This oil is in the only area surveyed with biota. The bedrock and boulders here have a fairly dense cover of intertidal organisms. The MITZ where the oil occurs has patchy Fucus (with sporadic stipes and conceptacles on older plants) Mytilus, and moderately dense Littorina. The barnacles in the MITZ were empty shells about 20% of the time and Nucella was present. The MITZ was densely covered on the surface of the boulder and on prominent bedrock. Common algae were Fucus, endocladia, Gigartina sp. Gracilaria, Halosaccion, and Corallinaceae. Animals present Mytilus, Balanus, limpets (Collisella, Lottia) Epiacis, Pagurus, Sculpins and eels. The amount of oil present is so small that any removal efforts would be more deleterious than allowing the oil to stay.

B.C. No biota present near the oil. If any clean up is planned here care should be taken to not disturb the rocky intertidal community at A (both end of the beach).

WA-2 is on an island with bird colonies and near by pinniped haulouts care should be taken when approaching.

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2 adults	Sculpins (4)
Seabirds common sp.	1 possibly 2	20	Blemies (1) eels (2)
Waterfowl			
Gulls/Kittiwakes	2	10 Glaucous winged 5 Kittiwakes	
Shorebirds			
Corvids			
Other Birds Fox Sparrows	1	2	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	0	0	
Pinnipeds (specify)	0		
Whales (specify)	0		

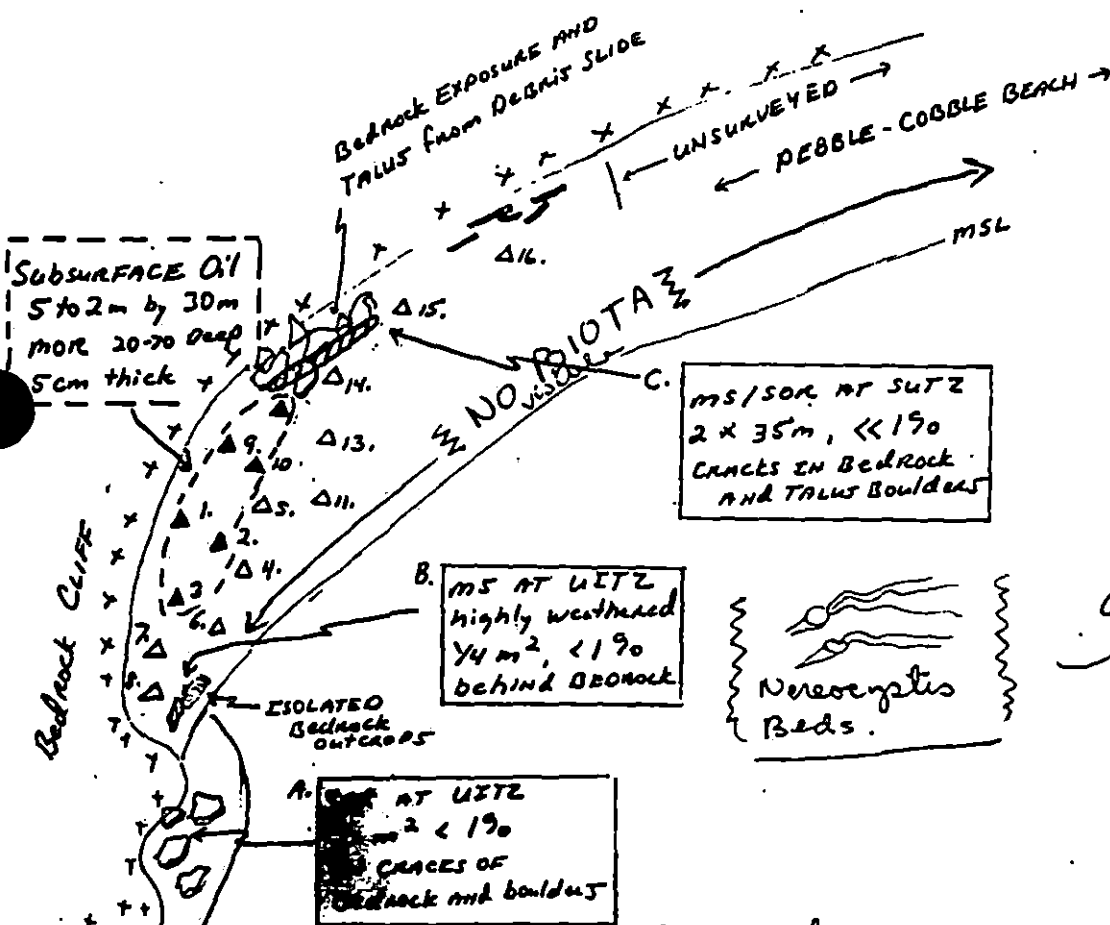
Shoreline subdivision map showing important biological features attached.

Printed edition

Bedrock
 LOGS
 PHOTOS

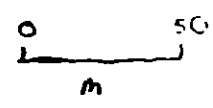
Bio Map
Heather Davis

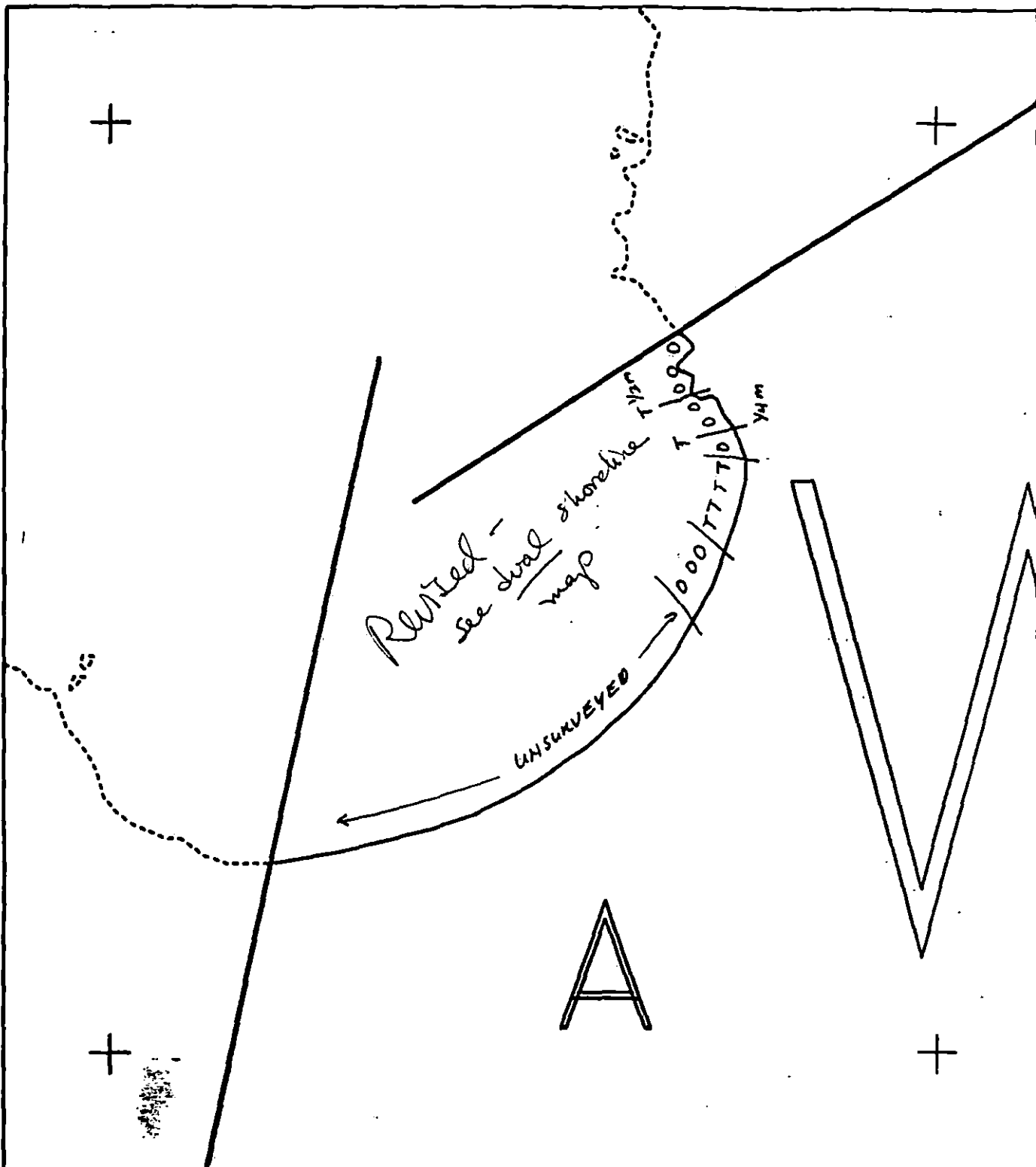
Sketch MAP (06)
 WA-2-A
 D. FITZGERALD
 7 MAY 1991
 1405 - 1510



This area has a moderately dense rocky intertidal community. *Mytilus*, *Fucus*, *Barnacles*, *Littorina*, *Porphyra* and *Filamentous green algae* surround the oiled spots. The MITZ is a rich, moderately dense community. LITZ of *Bladed Reds* and *hennarian algae* was mostly under water.

Nereocystis
Beds.

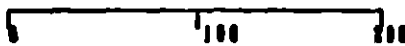




XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

WA002 A

METERS



AK State Planning Zone 4
 200000

Subdivision Field Map

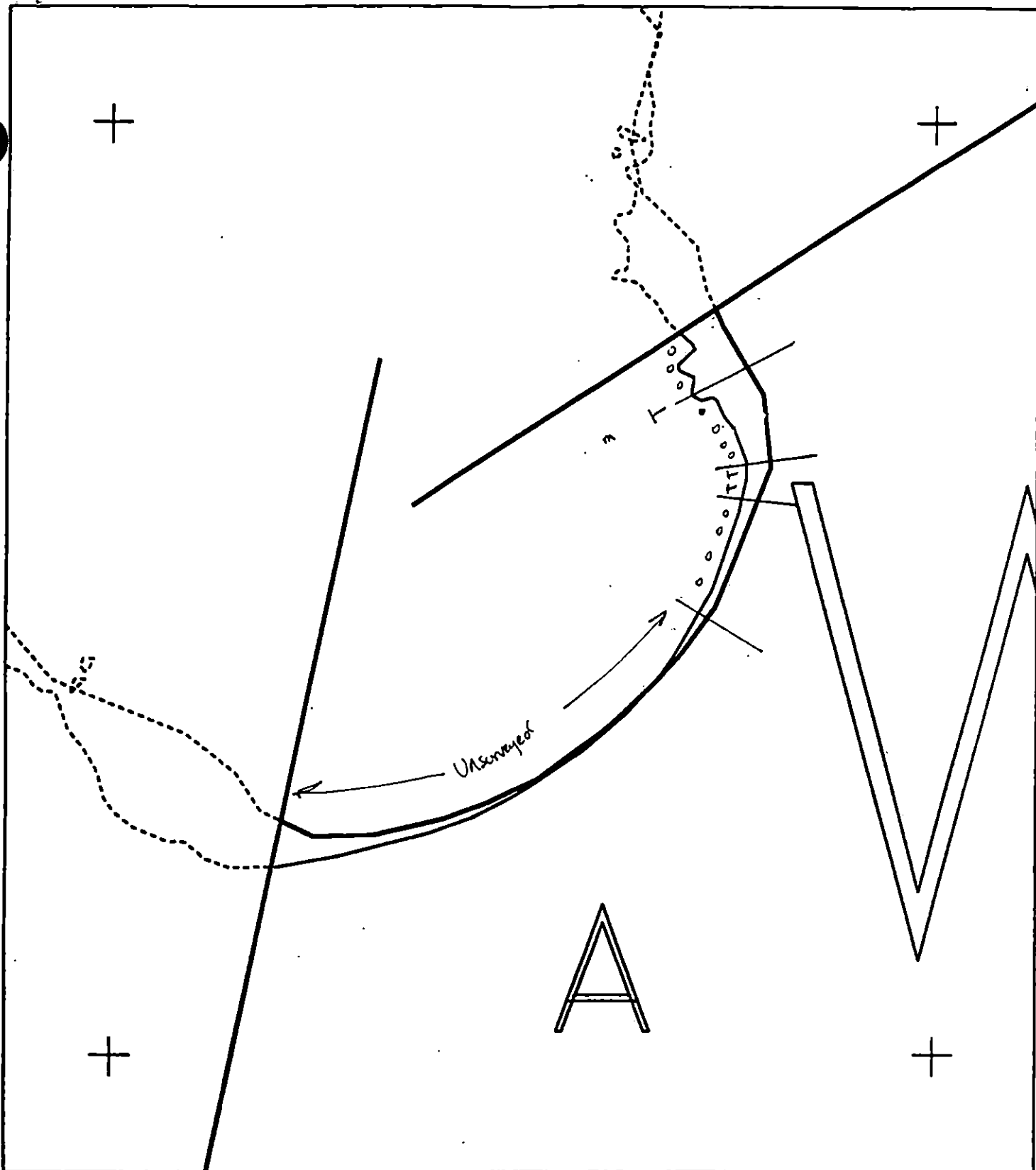
Map Key: KENV002A

Name: D. Fitzgerald

Date: 7 May 1991

revised 5/10/91

Revised 25



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

WA002 A
 ADEC Subsegment Length: 603m
 METERS

0 100 200
 AK State Plane Zone 4
 NAD83



Subdivision Field Map

Map Key: KENWA002A

Name: D. Fitzgerald

Date: 7 May 1991

Date Entered:

Revised 26 May 10

1991 MAYSAP EVALUATION

SEGMENT: WA 002 SUB: A REGION: KEN SURVEY DATE: 5/7/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 5/15 - 9/1

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Rachel Jan Owen Date: 5/22/91

RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>N</u>	<u>N</u>	<u>N</u>
Manual Pickup (Check as Req.)	<u> </u>	<u> </u>	<u> </u>
Spot Washing	<u> </u>	<u> </u>	<u> </u>
Bio-Customblen Only	<u> </u>	<u> </u>	<u> </u>
Bio-Inipol/Customblen	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 22 1991

FOSC APPROVAL DATE: 6/1/91

ADEC [Signature]

FOSC [Signature]

EXXON [Signature]

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

USCG [Signature]

NOAA [Signature]

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

TEAM NO. 6-Helo SEGMENT WA-2 SUBDIVISION A DATE 7 / May / 91

ADEC

NAME S. FERGUSONSIGNATURE S. Ferguson☐ NTR ☒ TREATMENT RECOMMENDED

SEE ATTACHED SHEET

EXXON

NAME G. STILESSIGNATURE George P. Stiles 5/8/91

☒ NTR The subsurface oil is buried 20 to 70 cm with fine sand. The 3 to 5 cm bar was producing no sheen. Work if performed could be done from Zodiac type boats only on good calm weather days.

LANDMANAGER

NAME J. HANDESTEROF USFWSSIGNATURE J. P. Handester 5/8/91

☐ NTR Recommend removal of oily ~~subsurface~~ subsurface material by mechanical means if other oil removal operations are to occur in the Barrier Islands. Plugs and eggs by aircraft T-bats should be conducted with precautions exercised to prevent adverse impacts to nesting colonies of seabirds and/or perched on and adjacent to nearby islands.

USCG/NOAA

NAME CWO SPURR / R. HOFFSIGNATURE R. P. Spurr / Rebecca Hoff☐ NTR

The small layer of subsurface oil does not appear to represent a source of contamination to biological resources in the area. Since this is a high energy beach, the remaining oil will continue to weather naturally. If removal of this sub-surface oil is decided it needs to be done by mechanical means.

COMMENT SHEET

WA-2A (ADEC) S. FERGUSON

S. Ferguson☐ NTR ☒ TREATMENT RECOMMENDED

WEST AMATULI IS A REMOTE LOCATION AND WA-2A IS LOCATED ON THE NORTH END OF THE ISLAND. WA-2A IS EASILY ACCESSIBLE ON THE NORTH END OF THE BEACH AREA. SUBSURFACE OIL IS LOCATED ON THE NORTH END OF THE BEACH AREA — 5 METERS WIDE ON THE NORTH END NARROWING TO 2 METERS ON SOUTH IN A CONTINUOUS BAND 30 METERS IN LENGTH — THICKNESS OF OIL VARIED BETWEEN 3cm AND 7cm. OIL CHARACTER HAD A MEAN "MOR" RATING. SURVEY WAS DONE AT A TEMP. OF 45°. IT IS SUSPECTED THAT WITH WARMER TEMPERATURES "MOR" COULD MOVE UPTOWN AND AVE A "HOK" RATING. STRATA IN PITS WAS 90% GRANULE + SAND WITH THE TOP COUPLE OF CM. NEAR THE SURFACE CONSISTING OF PEBBLES. RECOMMEND MANUAL REMOVAL OF SUBSURFACE OIL (BOAT COULD EXPEDITE REMOVAL IF OLD). DO NOT RECOMMEND TILLING.

TREATMENT RECOMMENDED WITH STIPULATIONS

IF THERE IS A CLEAN-UP BOAT DISPATCHED FROM SEWARD TO CLEAN AREAS IN KODIAK OR IF THERE IS WORK TO BE DONE AT SEGMENTS NOT YET SURVEYED ON WEST AMATULI I WOULD STRONGLY RECOMMEND REMOVING THIS OIL. ON THE OTHER HAND DO NOT FEEL THAT SENDING A CLEAN-UP CREW TO ADDRESS THIS OILING INDIVIDUALLY WOULD BE COST EFFECTIVE. I WOULD THEN SUGGEST OBSERVATION (MONITORING) RATHER THAN REMOVAL.

EXXON 6. STILES

BIO H. Davis

LANDMANAGER J. HANDISTER for USFWS

USCG/NOAA CWO SARA / R. Hoff

SEGMENT WA-2

SUBDIVISION *A*

DATE 7 / May / 91

TIME 14 : 05 to 15 : 10

TIDE LEVEL 6 ft. to 4.2 ft.

ENERGY LEVEL: ☒ H ☐ M ☐ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: _____ m

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

EST. OIL CATEGORY LENGTH: W m M m N m VL 36 m NO m US m

[illegible]

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

SLOPE: V = VERTICAL: H = HIGH ANGLE: M = MEDIUM ANGLE: L = LOW ANGLE PHOTO ROLL # MAYSAP- 6 - 08 FRAMES 15 - 8

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		
1	80			X					70-75	Y			X				P-6-5	
2	80		X						20-25	Y			X				P-6-5	
3	50			X					26-30	Y			X				P-6-5	
4	55							X	-					X			P-6-5	
5	60							X	-				X				P-6-5	
6	70							X	-				X				P-6-5	
7	40							X	-					X			P-6-5	
8	60							X	-					X			P-6-5	
9	46			X					27-31	Y			X				P-6-5	

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

OG COMMENTS: This is a pebble-cobble beach between bedrock promontories. Previous surveys of this segment indicate that most of the oiling of this beach was found at the northern end of the beach in a 4 by 80m mousse layer in the SUTZ. It is apparent from the pits dug in this survey that some of this oil has been dispersed and some has been buried by 20 to 70 cm of granule sediment. The oil now occurs as MOR (2 to 5 cm thick) 30m in length and 5m wide in the northern end; decreasing to 2m to the south and thinning. Other oiling of this beach is very minor, < 1% occurring as ms/sol interstitially in bedrock and boulders.

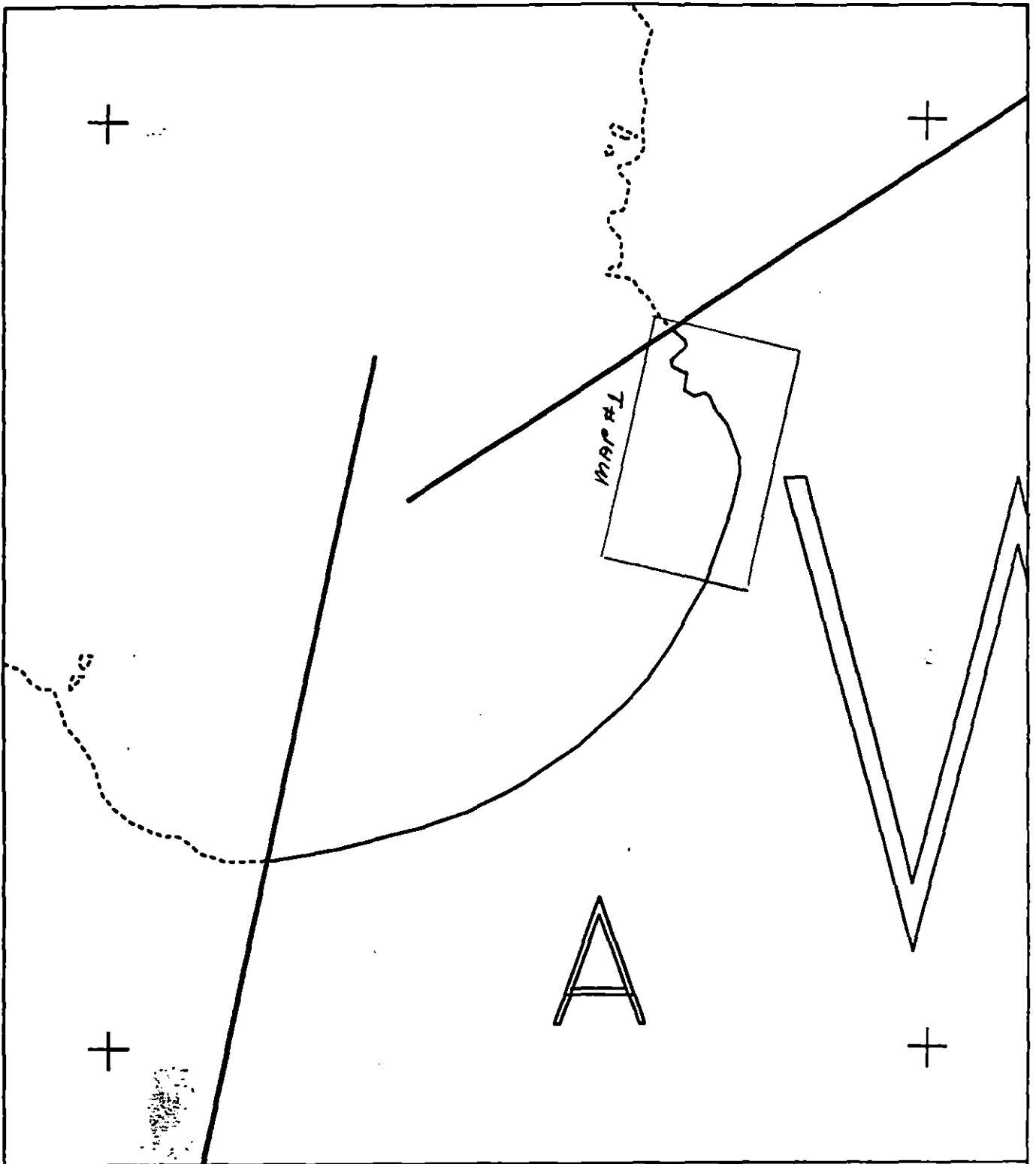
reviewed 5/10/91 KG
re revised 5/10

DATE 7 / May / 91

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

OG COMMENTS:

reviewed 5/10/91 VG
EK reviewed 5/10



WA002 A

METERS



AK State Plane Zone 4
NAD83

Subdivision Field Map

Map Key: KENVA002A

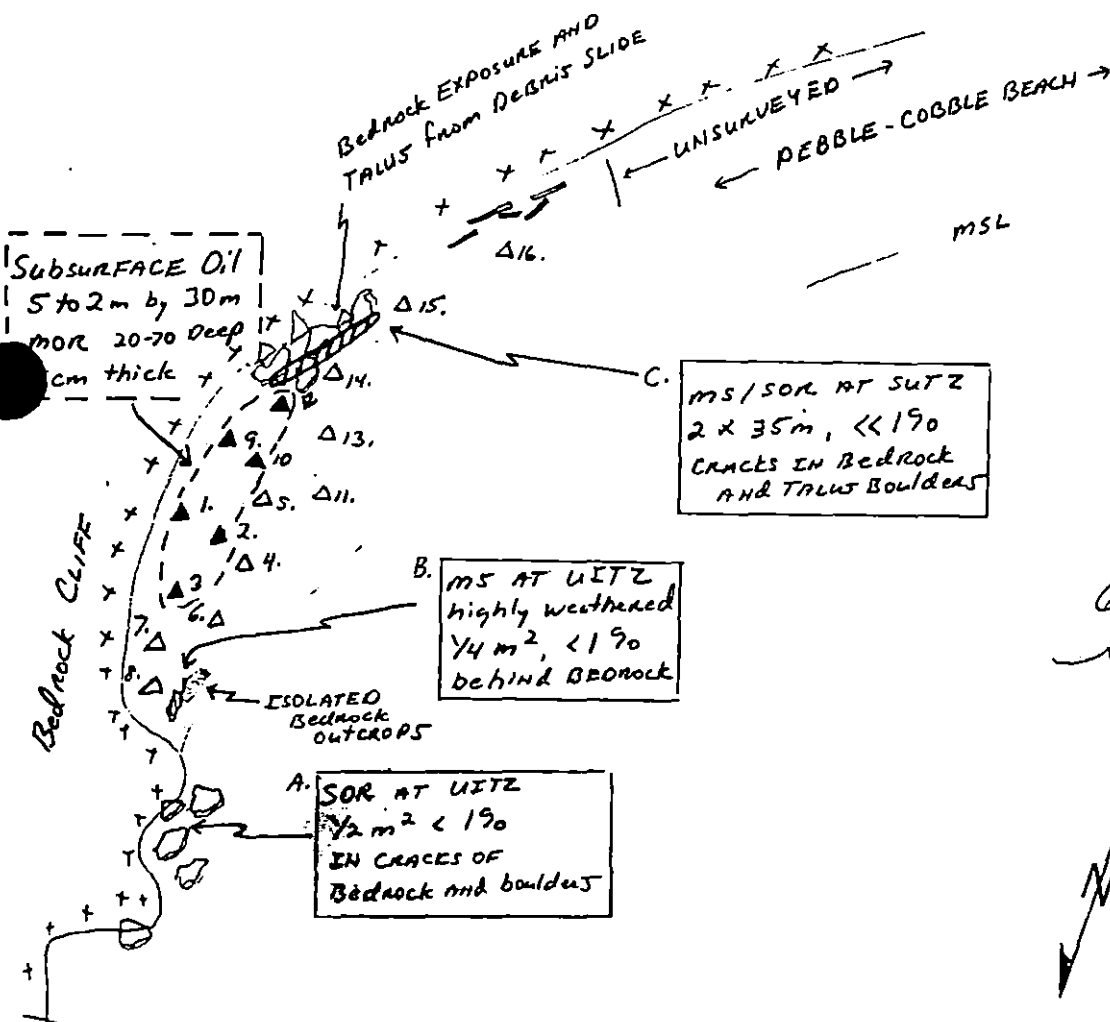
Name: D. Fitzgerald

Date: 7 May 1991

EG reviewed, May 10

 Bedrock
 LOGS
 PHOTOS

Sketch MAP (06)
 WA-2-A
 D. FITZGERALD
 7 MAY 1991
 1405 - 1510

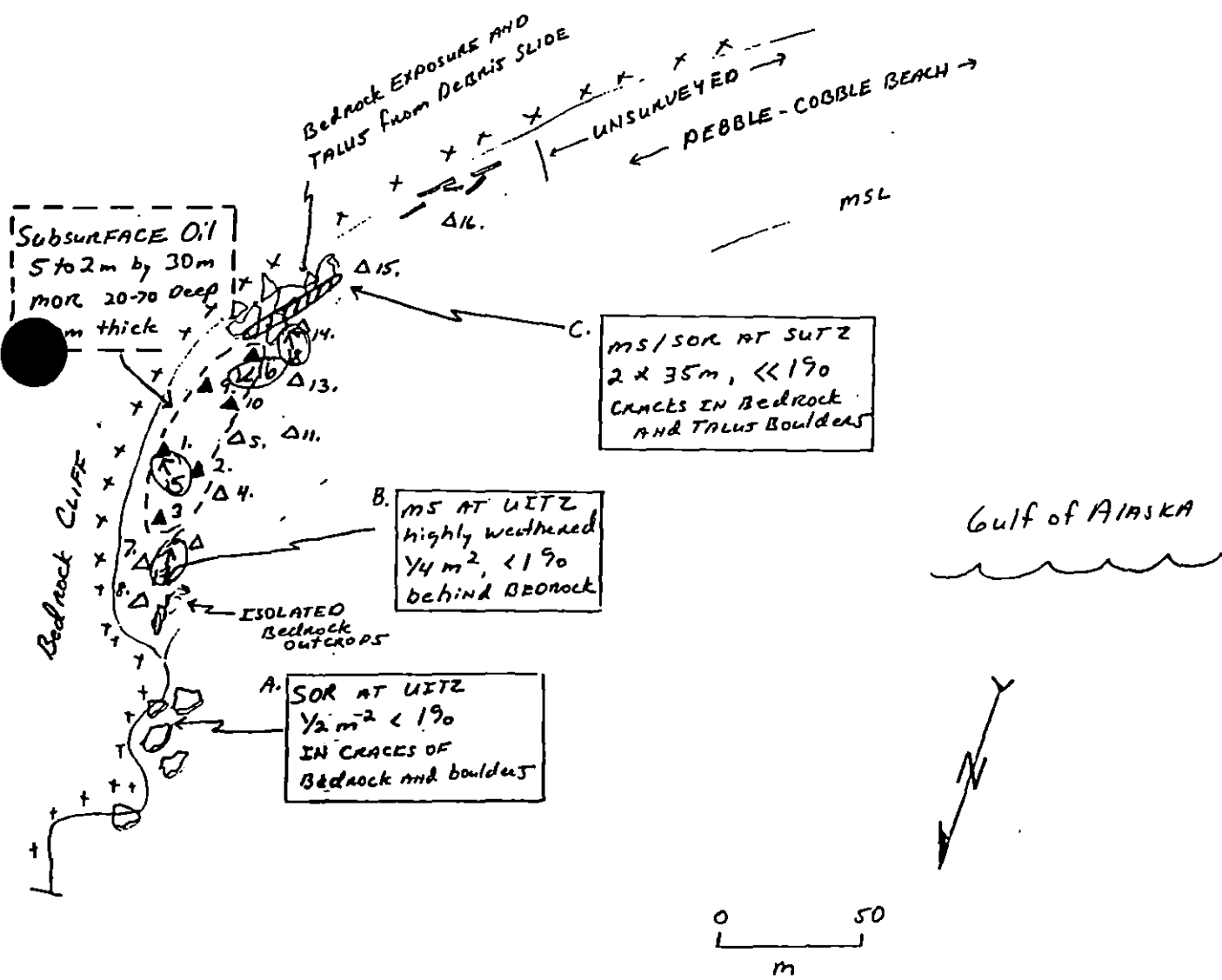


reviewed 5/10/91 KG
 ES revised 5/10

Bedrock
 LOGS
 PHOTOS

Photo locations
 Mapap 6-08
 # 15-18

Sketch MAP (06)
 WA-2-A
 D. FITZGERALD
 7 MAY 1991
 1405 - 1510



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 Helo

DATE May 7 1991

SEGMENT # WA-02

TIDAL HEIGHT(Range) 5ft - 4.5ft (14⁰⁰ - 15⁰⁰)

SUBDIVISION A

BIOLOGIST H. Davis

SEA STATE 2-5ft choppy

WIND SPEED/DIRECTION 6-7MPH NE

PHOTOGRAPHS: ROLL # 6-08

FRAME # 15-18

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

A. This oil is in the only area surveyed with biota. The bedrock and boulders here have a fairly dense cover of intertidal organisms. The LITZ where the oil occurs has patchy Fucus (with sporadic starting and conceptacles on older plants) Mytilus, and moderately dense Littorina. The barnacles in the LITZ were empty shells about 20% of the time and Nereis was present. The LITZ was densely covered on the surface of the boulder and on prominent bedrock. Common Algae were Fucus, endocladia, Gigartina, Gracilaria, Halosaccion, and Corallinaceae. Animals present Mytilus, Balanus, limpets (Collerella, Littorina), Epiactis, Pagurus, 8 sculpins and eels. The amount of oil present is so small that any removal efforts would be more deleterious than allowing the oil to stay.

B.C. No biota present near the oil. If any clean up is planned here care should be taken to not disturb the rocky intertidal community at A (North end of the beach)

WA-2 is on an island with bird colonies and near by pinniped haulouts care should be taken when approaching.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2 adults	Sculpins (4)
Seabirds <i>comorant sp.</i>	1 possibly 2	20	Blemies (1) eels (2)
Waterfowl			
Gulls/Kittiwakes	2	10 Glaucous winged 5 Kittiwakes	
Shorebirds			
Corvids			
Other Birds <i>Fox Sparrows</i>	1	2	

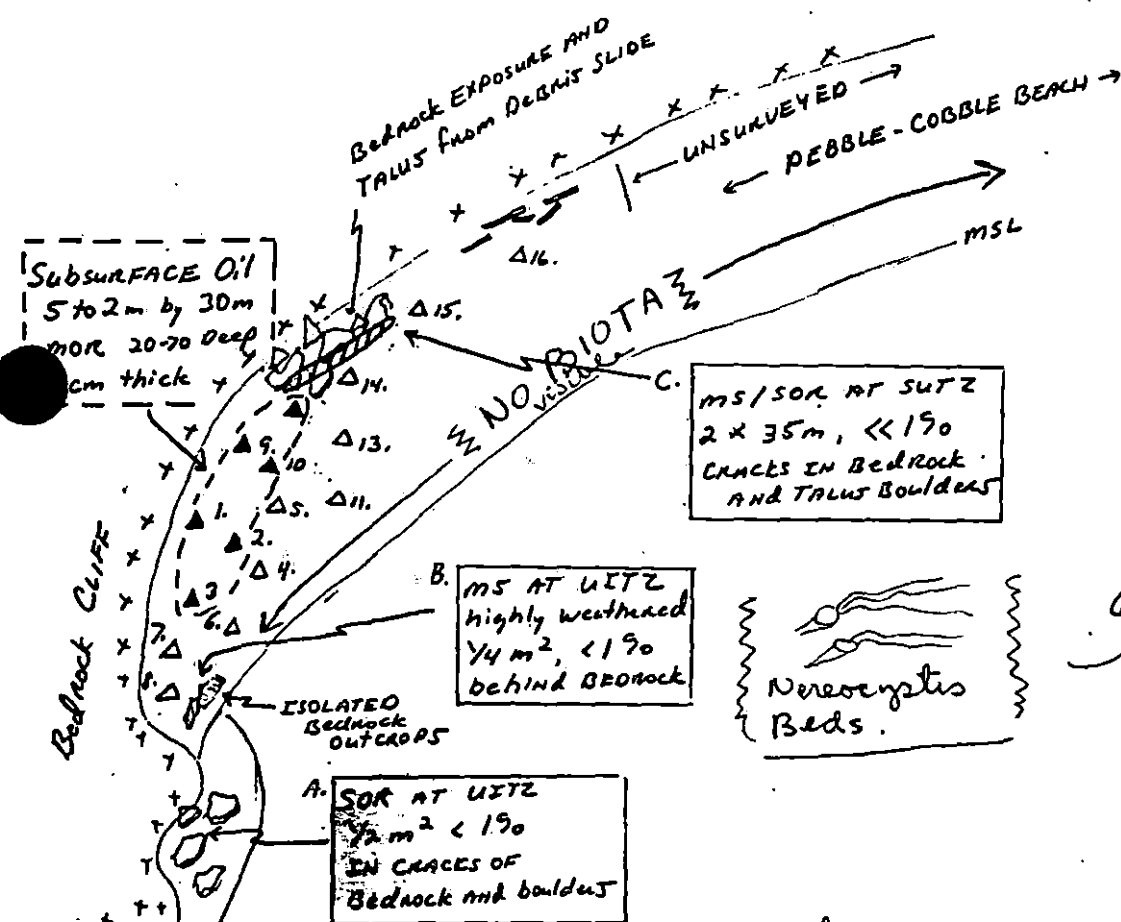
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	0	0	
Pinnipeds (specify)	0		
Whales (specify)	0		

Shoreline subdivision map showing important biological features attached.

*** Bedrock
 / LOGS
 ↗ PHOTOS

Bio Map
Heather Davis

Sketch MAP (OG)
 WA-2-A
 O. FITZGERALD
 7 MAY 1991
 1405 - 1510

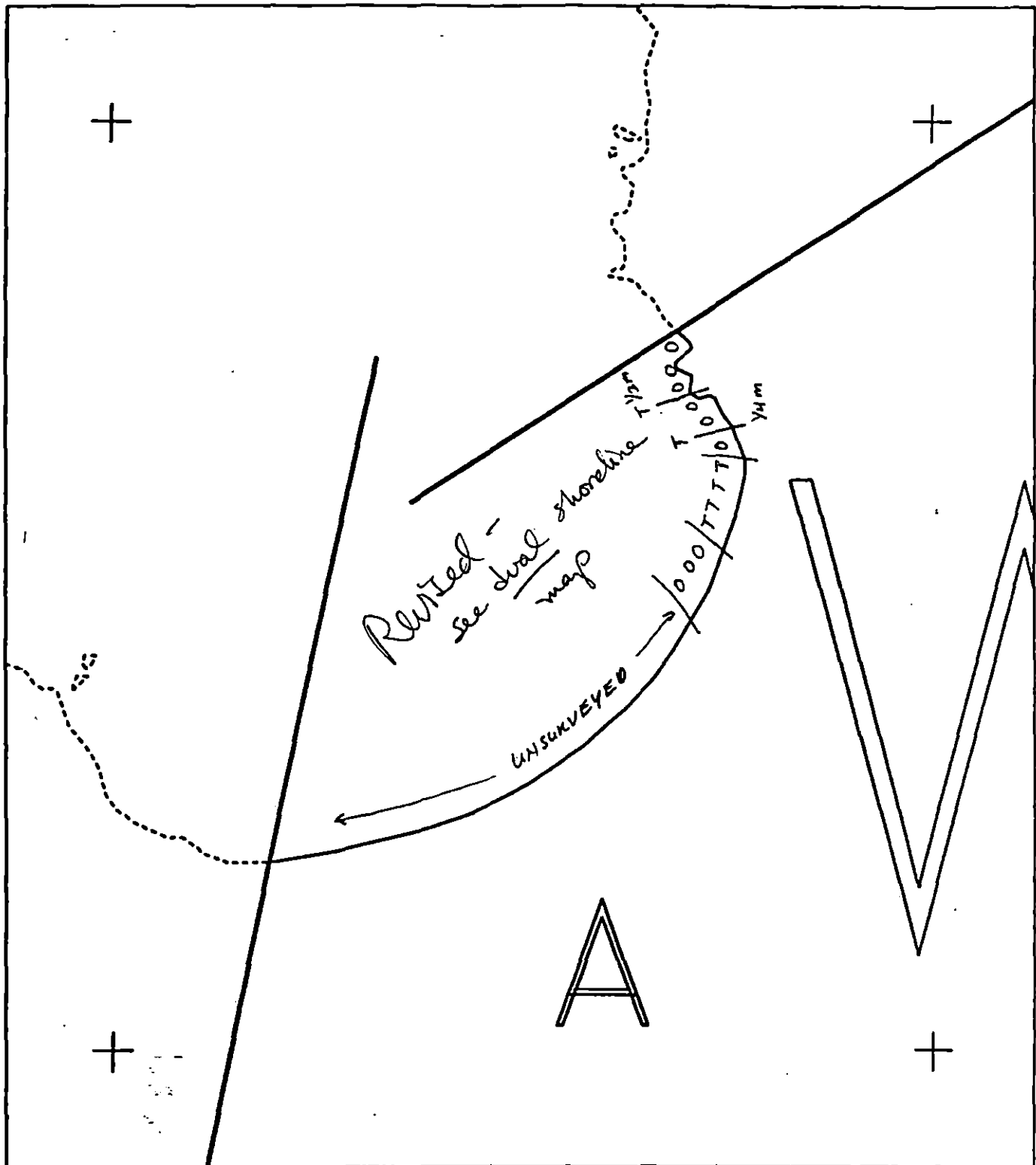


This area has a moderately dense rocky intertidal community. *Mytilus*, *Fucus*, *Barnacles*, *Littorina*, *Porphyra* and *Filamentous green algae* surround the oiled spots. The MITZ is a rich, moderately dense community. LITZ of *Bladed Reds* and *hammarian algae* was mostly under water.

Nereocystis Beds.

Gulf of ALASKA

0 50
m



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

WA002 A

METERS

0 100 200

AS State Plane Zone 4
 NAD83

Subdivision Field Map

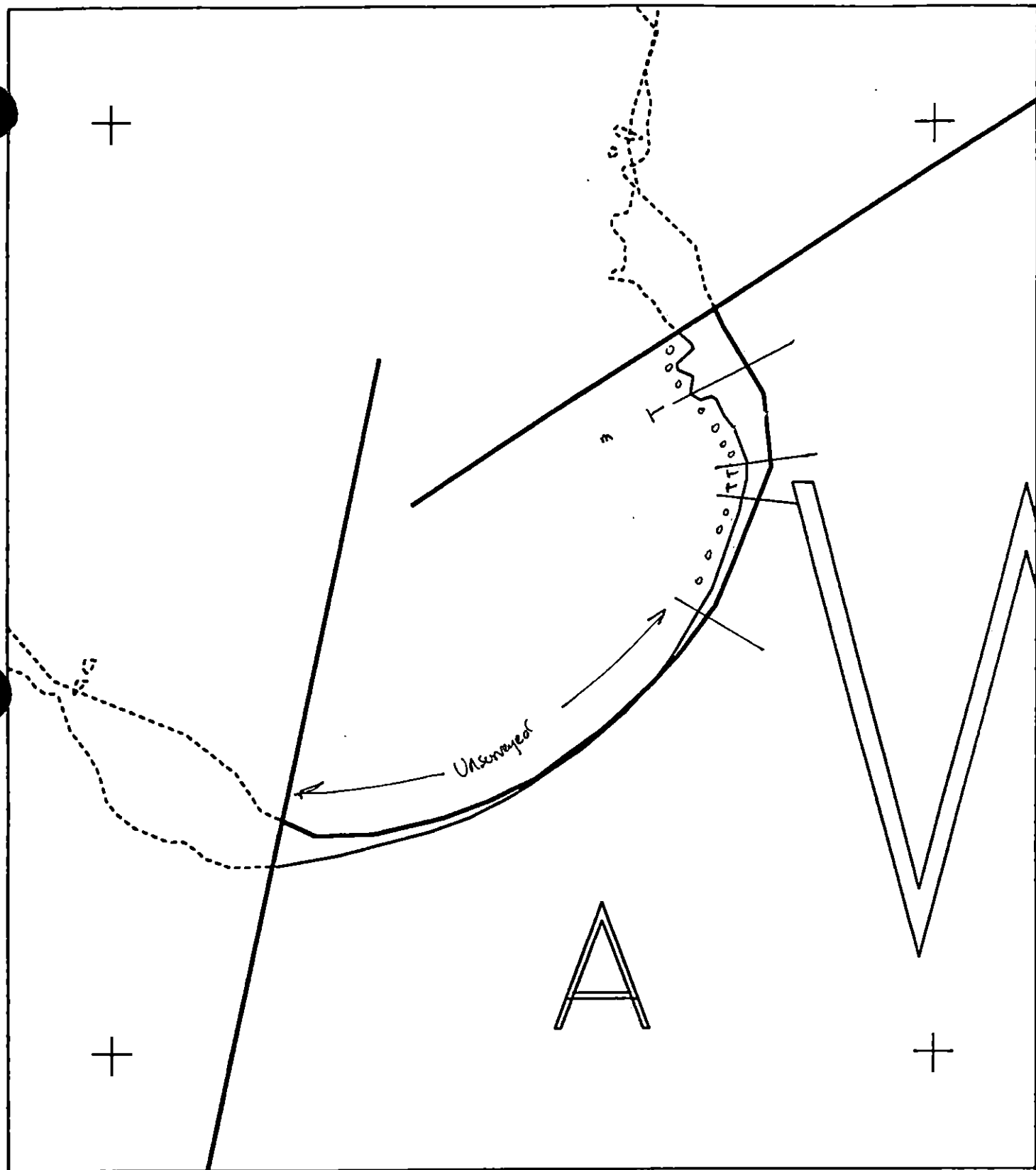
Map Key: KENVA002A

Name: D. Fitzgerald

Date: 7 May 1991

reviewed 5/10/91 KG

Revised ET



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

WA002 A

ADEC Subsegment Length: 603m
 METERS

AK State Plane Zone 4
 444002a



Subdivision Field Map

Map Key: KENWA002A

Name: D. Fitzgerald

Date: 7 May 1991

Date Entered:

Revised 25 May 10

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT WA-2 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup

OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

NO CONSTRAINT. USFWS 6/14/90 map indicates no active nest within 400m of Subdivision A work site.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

D. Zampieri

Date

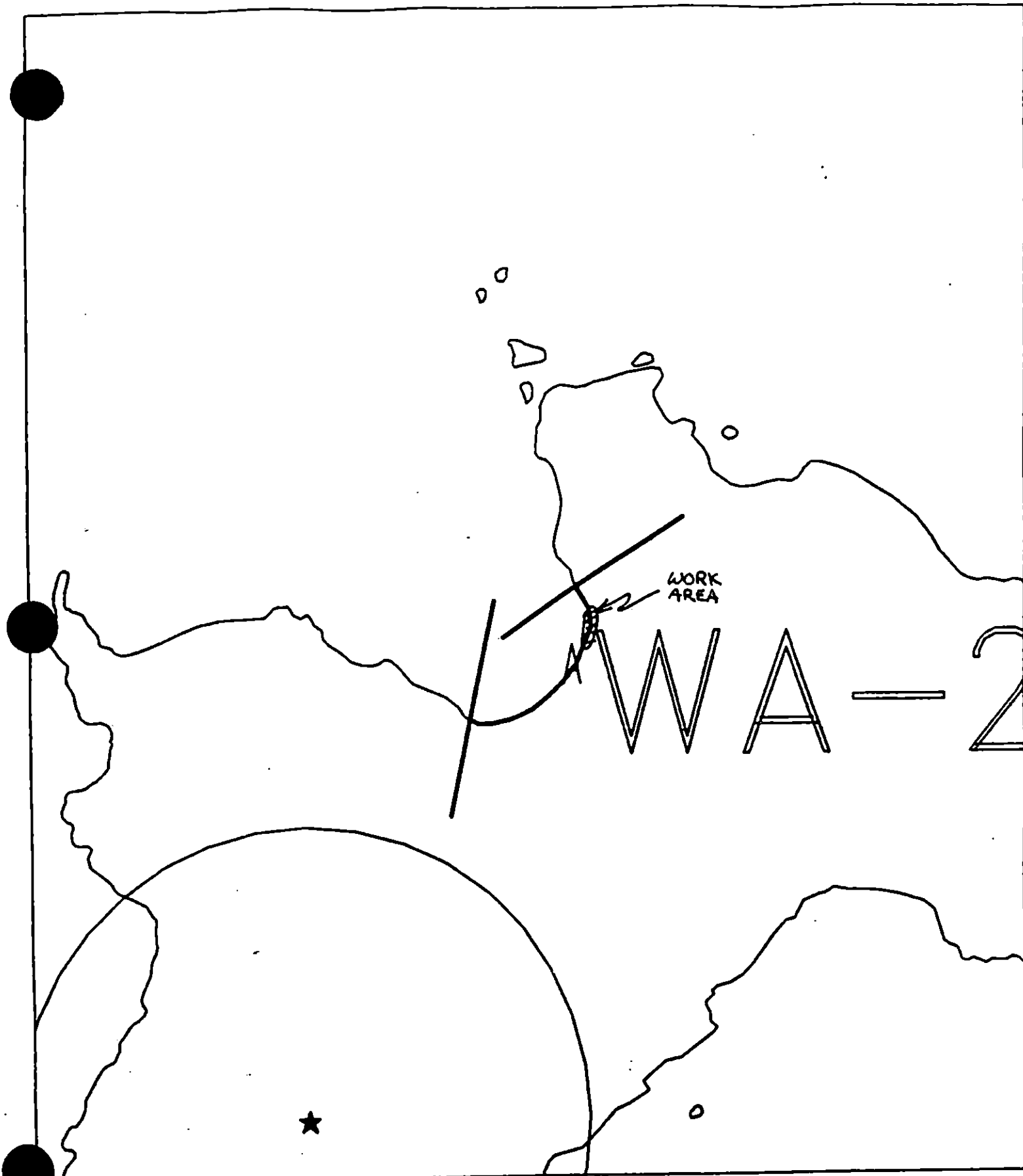
6/13/90

Prepared by

J. P. Phillips

Date

6/12/90



Exxon Company, USA



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

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

SHORELINE EVALUATION

SEGMENT ST/ WA-02 SUBDIVISION A (1 OF 1) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Homan

DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 603 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommend manual removal of oiled debris. Work should be
conducted after 6/1 with permission of USFWS due to eagle nest con-
straint.

SEE CONSTRAINT ADDENDUM dated 6/12/90

TAG COMMENTS:

TAG APPROVAL DATE: 4/20/90

ADEC ART WEINER
EXXON ANDY TGAZ
NOAA BILL WARRATT
USCG KENNETH KEANE

FOSC:

DATE: 4-26-90

Pick up mouse where accessibility
and safety permit.

REGION: KENAI

SEGMENT: ST/WB-01

SUBDIVISIONS: A (1 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ WB-01 SUBDIVISION A (1 OF 2) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 166 m: Narrow 286 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 27 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat removal, manual pick up of mousse, oiled debris (debris, vegetation), and oiled logs if >10% coverage and splash impact. Work should be conducted between 5/16 and 7/9 due to salmon stream constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS



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. Contact ADF&G Habitat Division prior to treatment for permits.

- 1C Salmon fry nursery area (4/31 to 7/31)
- 1D Esther Hatchery release (4/15 to 6/1)
- 1E Main Bay Hatchery release (4/20 to 5/10)
- 1F Sawmill Bay Hatchery release (4/15 to 6/1)
- 1G Cannery Creek Hatchery release (4/21 to 6/1)
- 1H Remote release site
- 1I Gill net area (6/7 to 8/31)
- 1J Purse seine area (7/20 to 9/30)
- 1K Purse seine hook-off (7/20 to 9/30)
- 1L Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

- 2M Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

- 5R Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.

- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.

- 5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

- 6U Recreation: Tent sites (6/1 to 9/15)
- 6V Anchorages (6/1 to 9/15)
- 6W Forest Service cabins (6/1 to 9/15)
- 6X Lodge (6/1 to 9/15)
- 6Y Special use destination

- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
- 7HH Finfish harvesting
- 7II Deer harvesting (8/15 to 2/28)
- 7JJ Invertebrate harvesting
For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ WB-1 SUBDIVISION: A DATE 4/8/90

JSCG
NAME R. Bryan Hirste SIGNATURE R. Bryan Hirste DCI

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

I agree with The findings of The Shoreline
Ciling Summary Sheet for WB-001 subdivision A

ADEC
NAME Russell Nunibe SIGNATURE Russell Nunibe

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

Please see attached 1 page

LAND MANAGER
NAME Patrick Dorn SIGNATURE Patrick Dorn

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

manuul pickup of exposed Asphalt and mouse patties
should help in further cleanup of this ~~beach~~ subdivision.
the pond in the back will need to be surveyed after the
monthly level drops to check for mouse patties. A method needs
to be come up with to remove any remaining subsurface oil in
this subdivision also

SEGMENT: WB-1

SUBDIVISION: A

DATE: 4/8/90

ADEC COMMENTS:

Russell Kunibe, EFOII ADEC

Signature _____

This subdivision consisted of a long tidal flat, a lagoon which feed an anadromous stream bordered on the north and south by rock faces. There was a band of oil stain and coat on the south shore rock face of the lagoon. A few mousse patties were found in the lagoon and a small area of asphalt was found on the bank of the lagoon. Because of the height of the water and the ice only the ocean side of the lagoon was looked at. On the north bank of the stream in the storm berm a buried lens of mousse saturated sediments was observed. In one place the lens appeared from the berm as a soft asphalt mat on the surface. In the MITZ and UITZ of the tidal flats there was a splashy distribution of asphalt patties. Along the south rock face of the tidal flats there was a patchy band of cover, coat and stain on the rock face. Additionally along the south shore there was a small bight which had a patchy band of asphalt between the cobbles.

Recommended treatment:

Manual pick up of the asphalt in the tidal flats and in the small bight on the south shore. Manual removal of the buried lens of oil in the storm berm. A complete survey of the lagoon picking up any oil encountered as it is found.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Randy Siegel USCG Bryan Kittle SEGMENT ST/ W3-1 (13-61) m
 BIO Mike Gucet LAND REP Pat Norman (grave) SUBDIVISION A (1 of 2)
 EXXON John Dean ADEC Russell Runberg TIME 08:20 10:10:30
 TEAM NO.: 17 TIDE LEVEL: 0.8 10:5.6 DATE 4/8/90
 EST. SUBDIVISION LENGTH: 4000 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S 10 N
 SURFACE SEDIMENTS: R 5 % B 15 % C 10 % P 30 % G 15 % S 10 % M 5 % V 0 %
 SLOPE: Long 25 % Hang 75 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W N/A m M 110 m N 250 m VL N/A m NO N/A m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	R	B	P	S	SPR BR	OR PM	GY SL	DR TL	LR	SU	U	M	U			
ASPHALT PAVEMENT		+	✓	X				X			X		X			
POOLED				X					X		X					
COVER																
COAT			X			X					X					
STAIN			X			X					X					
MOUSSE				X				X					X			
PATTIES			✓	X				X		X	X	✓				
TARBALLS			✓	X				X		X	X	✓				
FILM				✓			✓				✓					
NO OIL										✓						✓

PAVEMENT: H F S 20 sq. m by 2 cmPATTIES / TARBALLS 25 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TI

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

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. ST-17-5Frames 19-24, 27-29

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW		OIL / FILM COLOR								PIT ZONE	A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SPR BR	OR PM	GY SL	DR TL	LR	SU	U	M	U		
1	40					X	0-0	X								X				G, S
2	40					X	0-0	X								X				G, S
3	40					X	0-0	X								X				S
4	10					X	0-0	X								X				S
5	30		X				7-13	X					X		X					S, G
6	30		X				3-6	X					X		X					S, G

COMMENTS

This subdivision consists primarily of a large tidal ~~lagoon~~ ^{lagoon} with a stream flowing through it. The ~~lagoon~~ ^{lagoon} is covered primarily with pebbles, gravel, and sand. Various areas of oiling were observed in the lagoon, some of which occurred in the past. A layer of mousse was also observed near the stream channel, and was probably buried by sand and gravel stream deposits at some time in the past. No asphalt was observed but the bottom of some pooled water in the southern portion of the lagoon.

* Sheen on pooled water

REVISION 03/22/20

REVIEWED BAT DATE 12 Apr 90

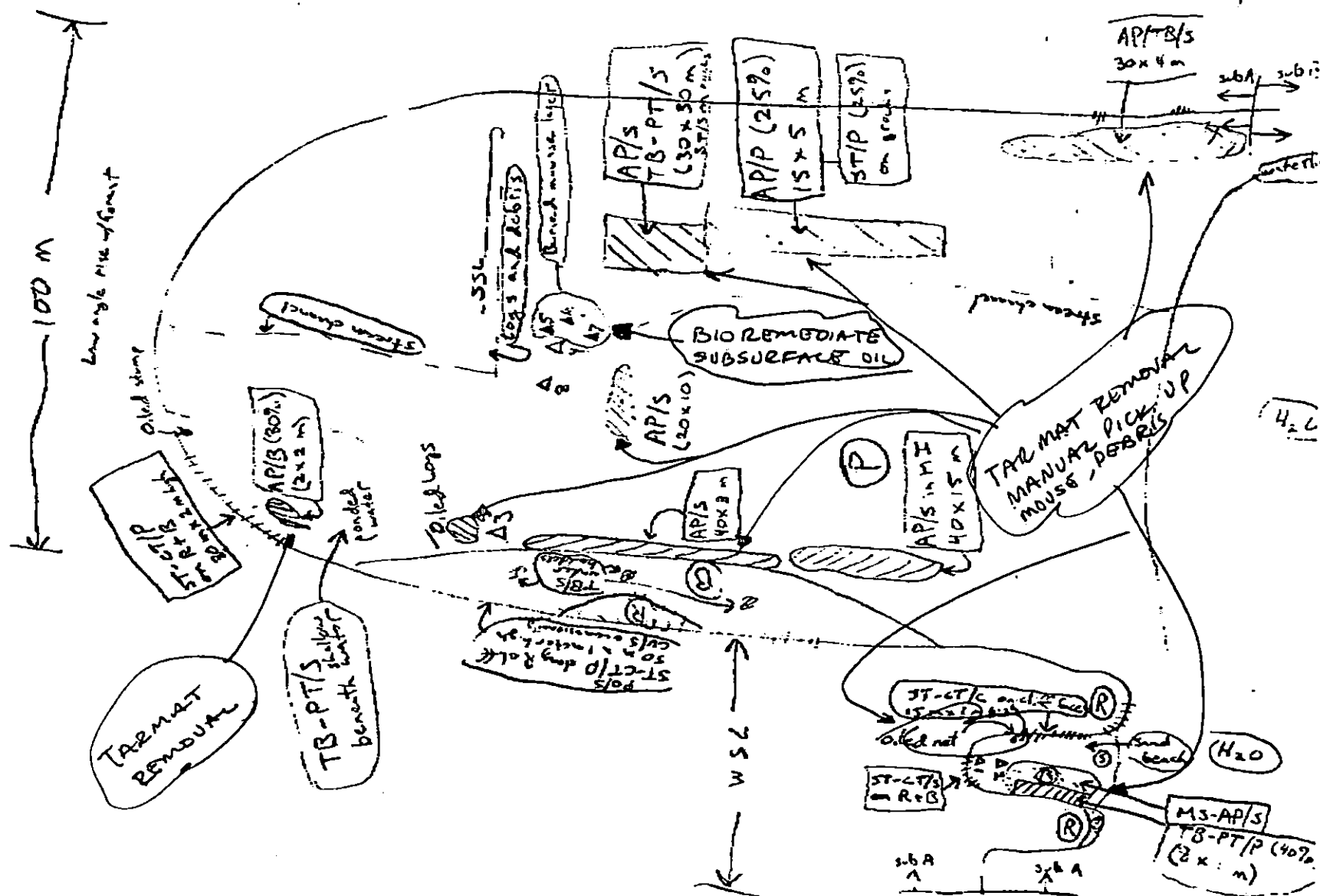
CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Sep/Sub Body
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HW/LWL
- ☐ SSI
- ☐ Profile Location(s)
- ☐ Photo(s)
- ☐ Photo Location(s)

LEGEND

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

SKETCH MAP



SHORELINE ECOLOGICAL SUMMARY

REVISION

Segment ST / WB 1 Subdivision A Date (mo / day / yr) 4 / 8 / 90

Time (24 hr) 0820-1015 Biologist M. H. Fawcett

(A) Substrate type and % of segments:
(1) Bedrock 15 (2) Boulder 15 (3) Cobble 10 (4) Pebble 30 (5) Sand 25 (6) Silt 5 (including ground)

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

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

Photographs:
Roll No. ST-17-5

Frames 19-24, +2

BARNACLES

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

NOT PRESE

MYTILUS

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

NOT PRESE

GASTROPODS

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

NOT PRESE

FUCUS

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

NOT PRESE

Wildlife Observations/ General Comments:

2 Eagles, mature, separate
1 belted Kingfisher

see attached sheets

Ecological Considerations:

1A
1B

WB 1 A

4/8/90

M.H. Fawcett

Wildlife Observations & Comments

The main feature of this subsection is the broad, gently sloping sand/gravel/cobble boulder delta around the mouth of the small stream draining a ponded area + drowned forest. The stream is quite small (typically 5-10 ft by 3-4 in deep) but was reportedly used by pink salmon last summer. No salmonid fry were seen, but a number of sticklebacks were observed in the pond. Cobbles and boulders along the ^{intertidal} sides near the mouth of the stream are densely populated with Fucus, barnacles, mussels, Littorines, limpets and whelks. Hermit crabs, fish (gunnels), worms, etc., are abundant beneath the rocks. Various species of algae including Ulva, Halosaccion, Cladophora?, Rhodomyxion, and Placodium are scattered among the Fucus in the MTZ and LTZ.

At the south end of the segment is a bedrock outcrop with dense covering of barnacles including large, old Balanus cariosus and smaller B. cariosus and B. glandula. On horizontal surfaces on the outcrop at the +5-6 ft level, many (up to 75%) of the smaller (4-8 mm) barnacles of both species are dead, whereas few are dead on vertical faces, and nearly all the large cariosus are alive. A few starfish (Pisaster) and large

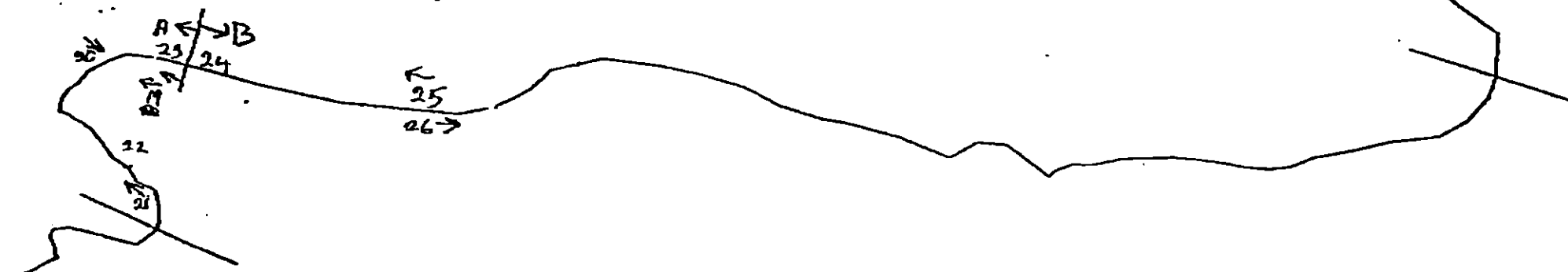
chitons (Katharina) occur in the LTZ or outcrop.

Toward the eastern end of the subsection on the north shore away from the stream mouth, plants and animals are much more sparse among the cobbles and boulders than at the head of the bay.

Photos: ST-17-5

Frames: 19-29

WB001

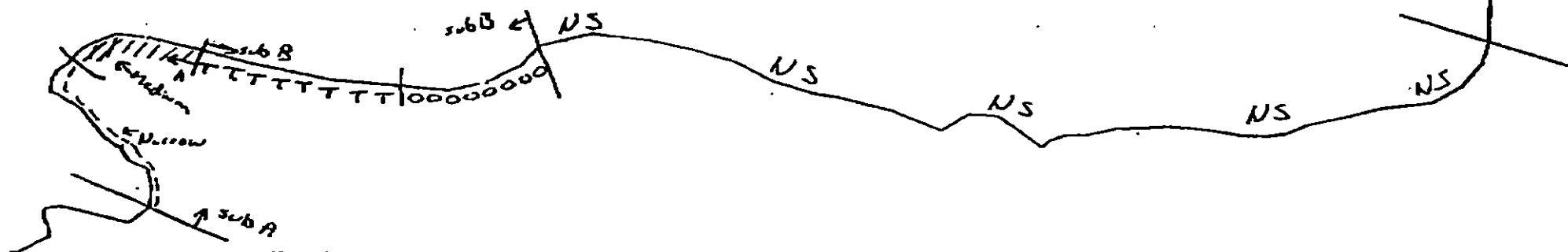


OILING	
H	Heavy
M	Moderate
L	Light
VL	Very Light
N	None
NS	Not Surveyed
Distance In Meters	

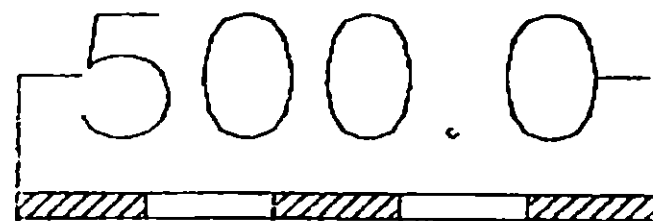
ST-29 area
"500"

500.0

WB001

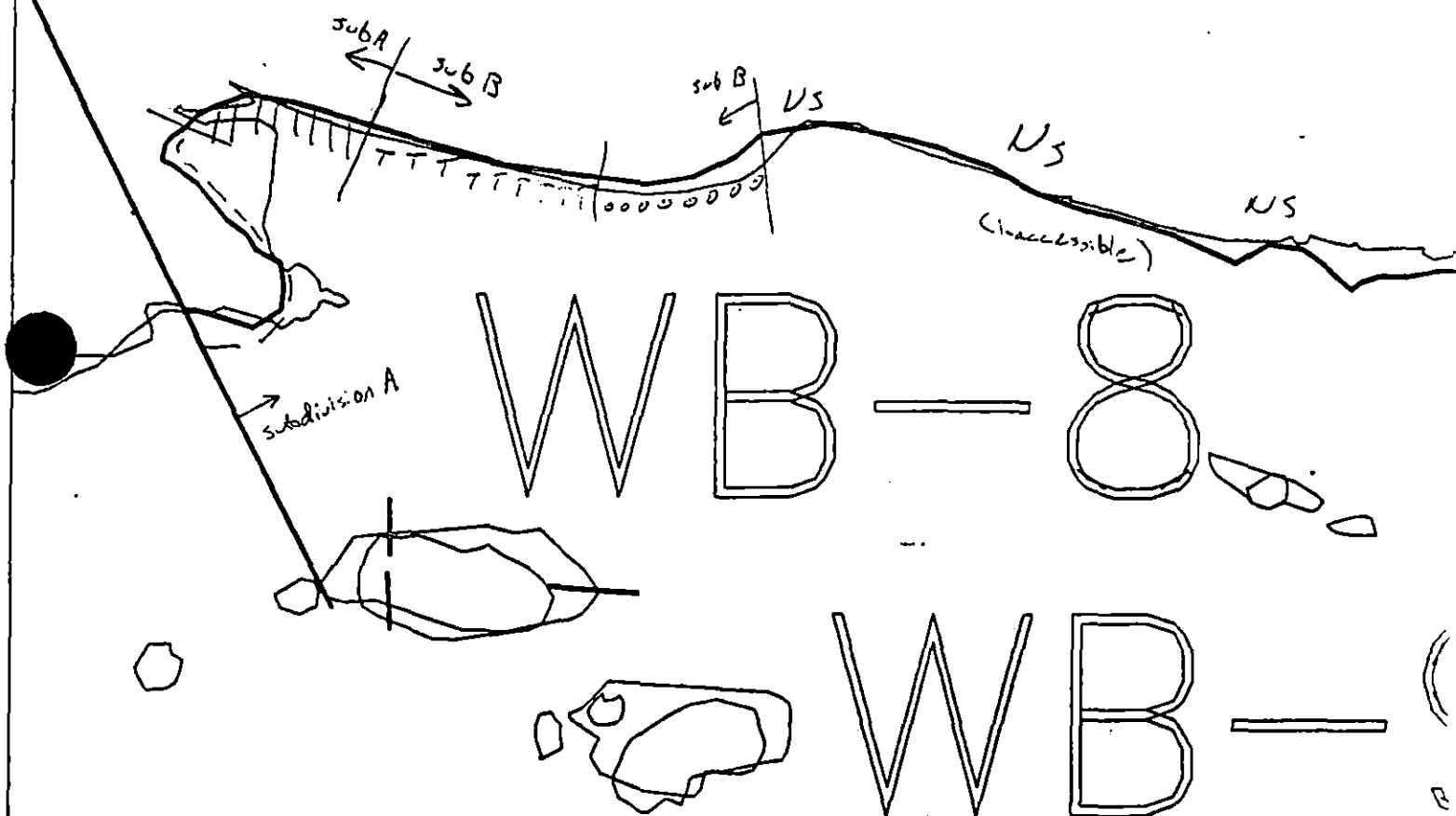


OILING	
H	Heavy
M	Moderate
L	Light
VL	Very Light
N	None
NS	Not Surveyed
Distance In Meters	



Route 1.2

WB-C



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

WB-1

EXXON Segment Length: 2116m

Scale 1" = 500'

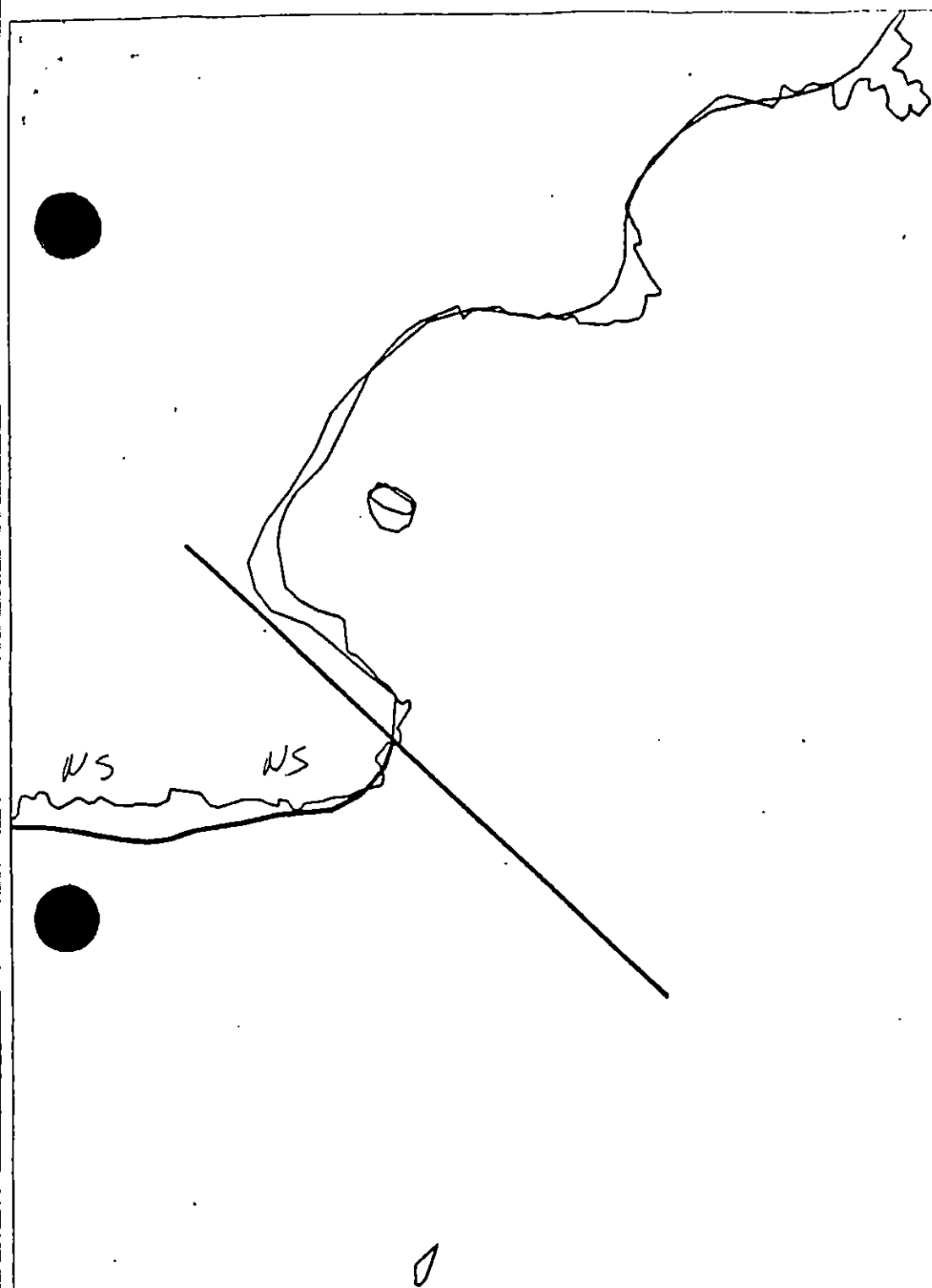


Map Key: PWS-WB-1a

Name: Edy Singh

Date: 4/3/90

Data Entered:



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

WB-1

EXXON Segment Length: 2116m

Scale 1" = 500'

0 100 200 300

METERS

Map Key: PWS-WB-1b

Name: Ruby L. L. L.

Date: 4/2/12

Data Entered:

REGION: KENAI

SEGMENT: ST/WB-01

SUBDIVISIONS: B (2 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ WB-01 SUBDIVISION B (2 OF 2) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 199 m: No Oil 146 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of oiled debris and trash. Work should be conducted between 5/16 and 7/9 due to salmon stream constraint.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST WB-1 SUBDIVISION: B DATE 4/8/90

USCG

NAME R. Bryan Hirtle SIGNATURE R. Bryan Hirtle☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Agree with Shoreline Oiling Summary
Sheet.

only Clean up is small amount of
Oily debris, left from clean up crew
last year

ADEC

NAME Russell Kuniibe SIGNATURE Russell Kuniibe☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Pick up pom-poms and oily rot. otherwise
treatment recommended.

LAND MANAGER

NAME Patrick Norman SIGNATURE Patrick Norman☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

pick up oiled debris in subdivision WB-1-B

SHORELINE OILING SUMMARY

RELVISION NO. 03-22-90

OG Randy Siegel USCG Bryan Kittle SEGMENT ST/ WR-1 (2 subd divisions)
 BIO Mike Fawcett LAND REP Pat Norman (PGV) SUBDIVISION B (2 of 2)
 EXXON John Dean ADEC Russell Knicker TIME 10:30 to 11:00
 TEAM NO.: 17 TIDE LEVEL: +5.6 to +6.2 DATE 4 / 8 / 90
 EST. SUBDIVISION LENGTH: 13.6450 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 40 % B 40 % C 10 % P 5 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Long 10 % Hang 40 % Vert 50 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W N/A m M N/A m N N/A m VL 320 m NO 130 m

SURFACE OIL

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

PAVEMENT: H (F) S 0 sq. m by 0 cmPATTIES / TARBALLS 1 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris			

DEBRIS COLLECTED

☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. ST-17-5Frames 25, 26, 27, 28, 29SUBSURFACE OIL *No pits dug*

PIT NO	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SP	BR	OR	OL	OF	NO	TL	LR	SU	U	M	L		
<u>D</u>							.																
							.																
							.																
							.																
							.																
							.																

COMMENTS This subdivision consists of a long stretch of south-facing shoreline. Much of the eastern portion of the subdivision contained hi-angle or vertical rock cliffs and was not accessible. Very light oiling (occasional stains and coats) were present along some of the western portion, and no oiling was observed in other portions.

CG Ra

SEGMENT ST-WB-1

SUBDIVISION B

DATE 4 / 8 90

CHECKLIST

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

LEGEND

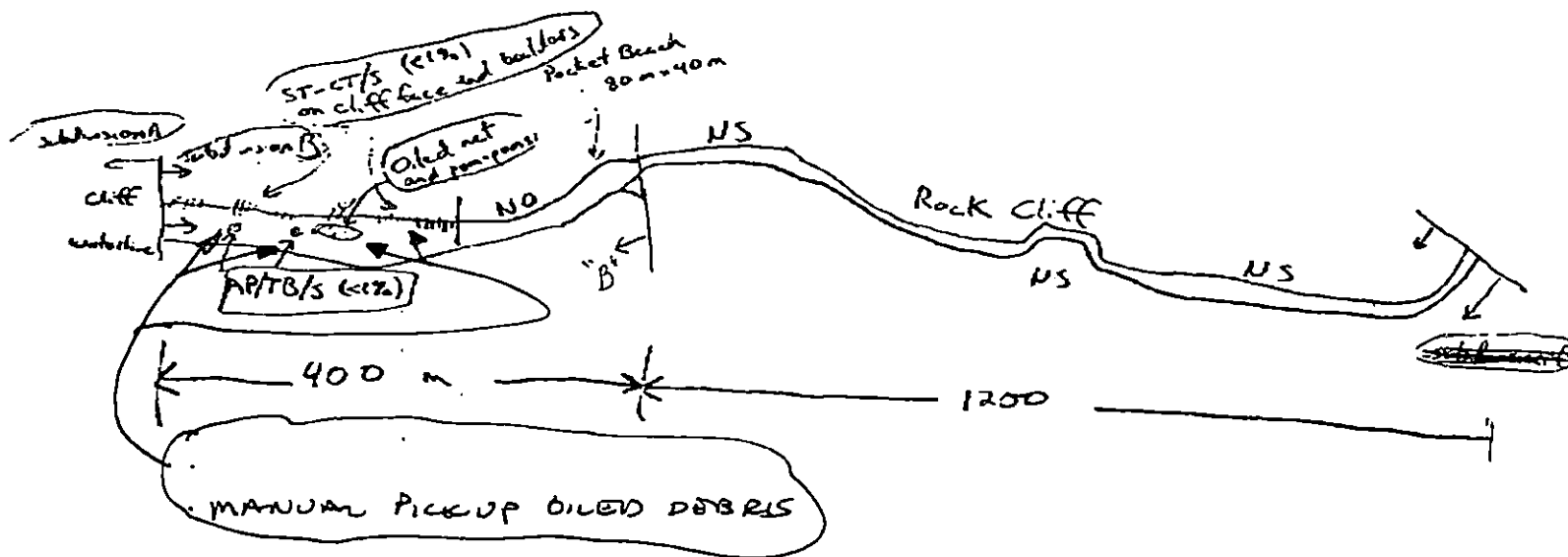
- 1 Δ
P# - No Subsurface Oil
- 2 Δ
P# - Subsurface Oil
- CT/C

Continuous Distribution
- CT/B

Broken Distribution
- CT/P

Patchy Distribution
- CT/S

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



Oil Character Length (m): AP N/A PO N/A CV N/A CT 320 ST 320 MS N/A PT N/A TB N/A FL N/A NO 30

REVISION: 03/21/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST WB1 Subdivision B Date (mo / day / yr) 4/8/90

Time (24 hr) 1015-1035 Biologist M. H. Fawcett

- (A) Substrate type and % of segments:
 (1) Bedrock 40 (2) Boulder 40 (3) Cobble 10 (4) Pebble 5 (5) Sand 5 (6) Silt 0
 (including gravel)
- (B) Overall % cover of biota (% of segment): Dense Moderate Low ✓
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (⊙)

Photographs:
 Roll No. ST-17-5

Frames 25-29

BARNACLES

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

MYTILUS

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

ASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

biota generally much less abundant than in subsection WB1A

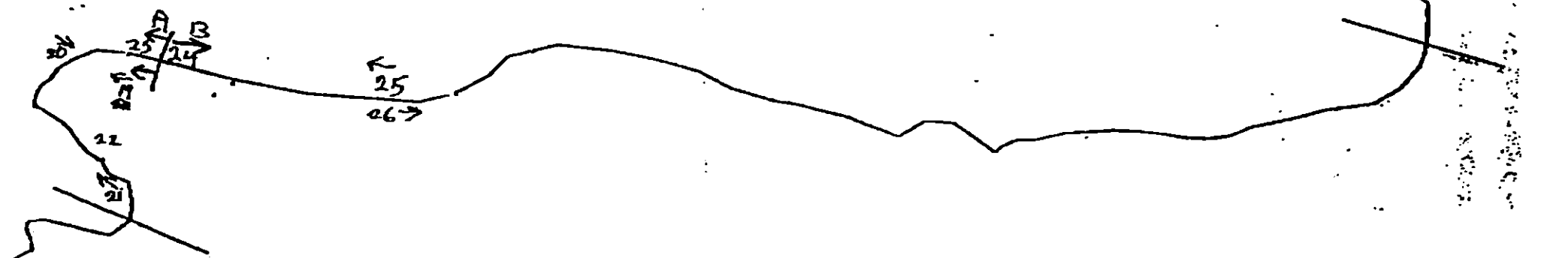
Ecological Considerations:

none

Photos: ST-17-5

Frames 19-29

WB001

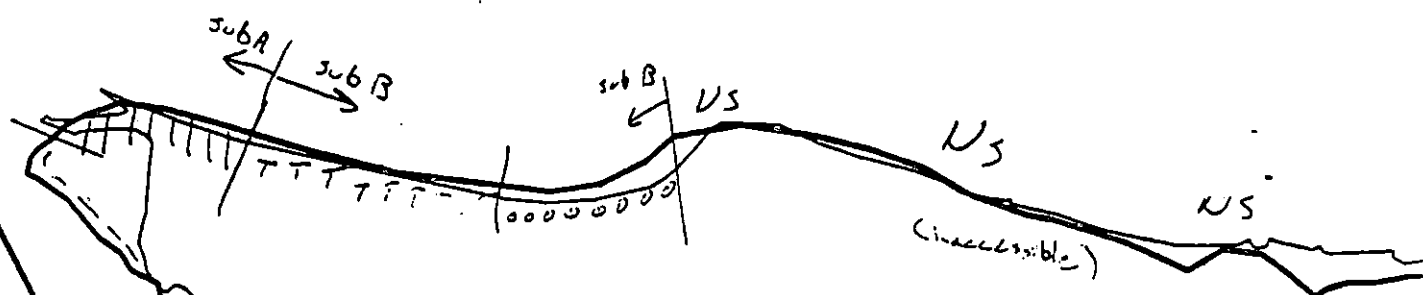


OILING	
H	Heavy
M	Moderate
L	Light
VL	Very Light
N	None
NS	Not Surveyed

27-29 (aerial)
500'

500.0

WB-C



subdivision A

WB-8

WB-

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

WB-1

EXXON Segment Length: 2116m

Scale 1" = 500'

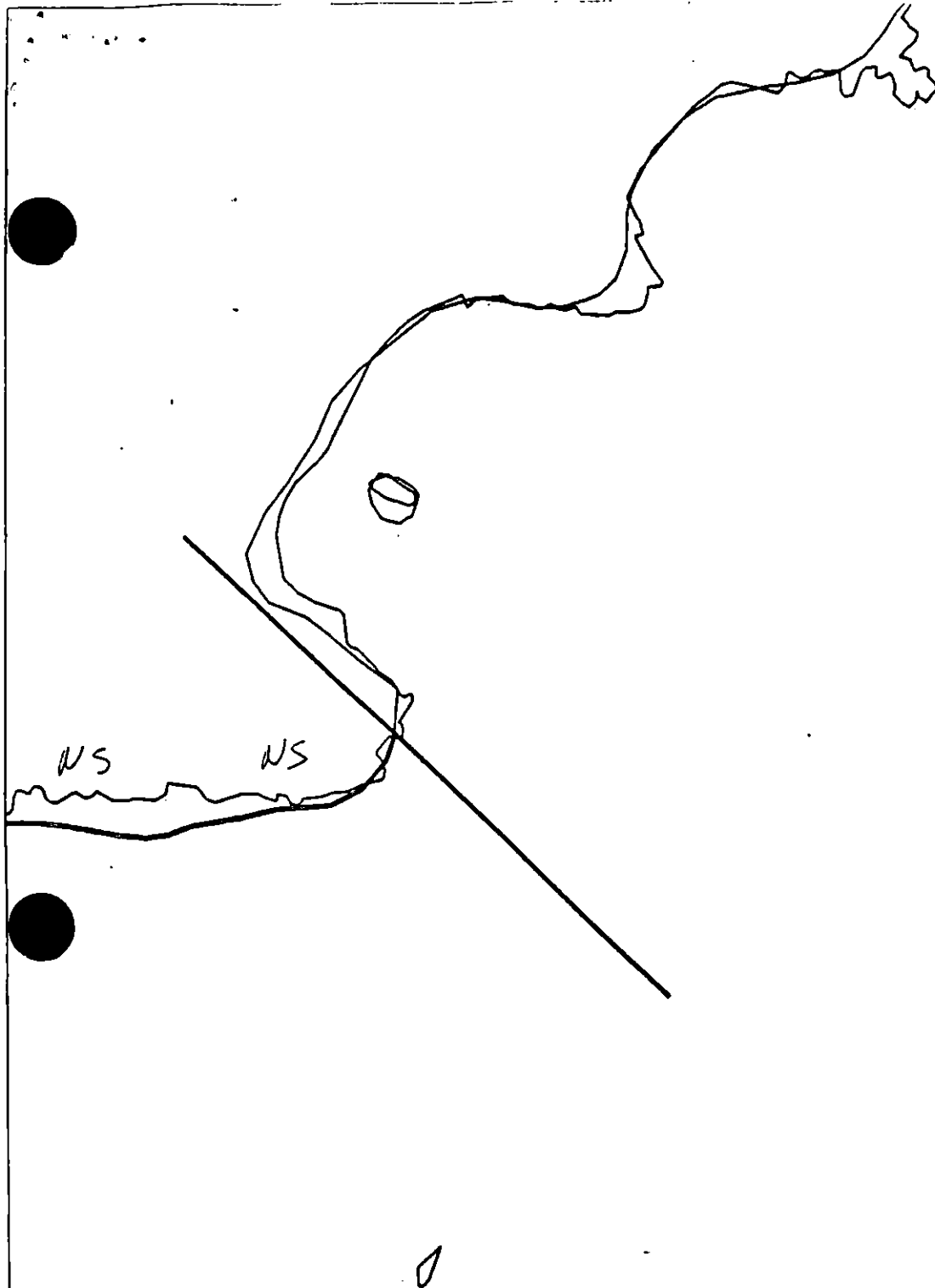


Map Key: PWS-WB-1a

Name: Edy Sirel

Date: 4/3/70

Data Entered:



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

WB-1

EXXON Segment Length: 2116m

Scale 1" = 500'



METERS



Map Key: PWS-WB-1b

Name: R. L. Seeger

Date: 11/2/82

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT WB-1 SUBDIVISION A (1 of 2)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation Over 100m From Stream Manual Tilling/Raking	OPEN
Bioremediation Less Than 100m From Stream Manual Tilling/Raking	WORK PRIOR TO 7/1 (ADF&G MONITOR REQ.)

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

- 1A,1B Salmon Stream** ADF&G catalogued anadromous stream (242-32-10155) is in Subdivision A. This subdivision is closed to bioremediation and manual raking/tilling less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation and manual tilling/raking are permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation and manual raking/tilling more than 100m from stream. No constraint to manual pickup and tarmat removal.
- 1J Purse Seine Area** No constraint to manual pickup and tarmat removal; closed to bioremediation and manual tilling/raking after 7/1.
- 5T Bald Eagle Nest** NO CONSTRAINT. USFWS bald eagle impact assessment completed on 5/19/90 by Mary Portner indicates no active nests within 400m of the work area.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or bank. No flushing of pollutants or sediment 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 and air traffic to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to uncollected biota and substrate.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NO. 242-32-10155)
FOR ADDITIONAL CONSTRAINT INFORMATION

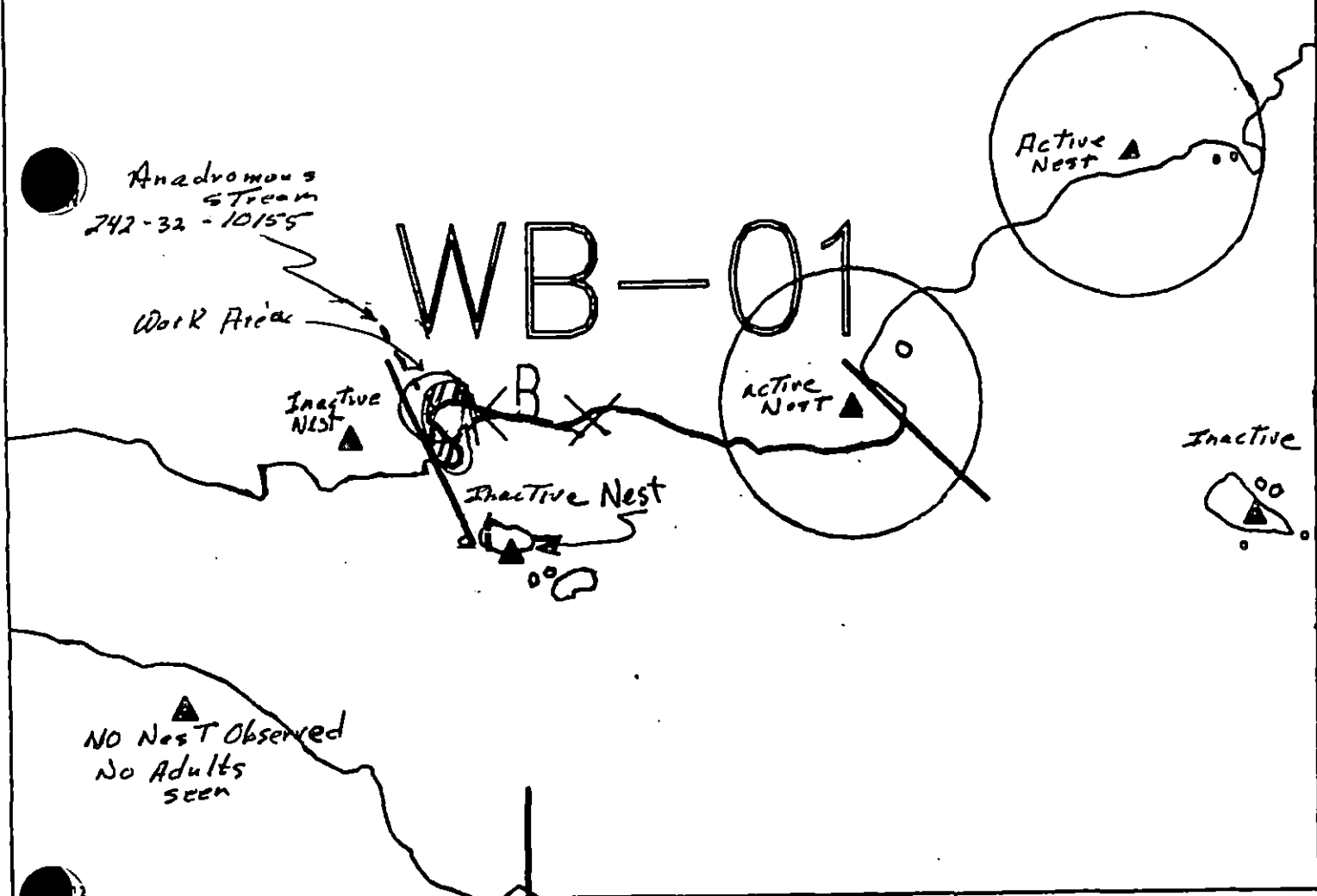
TAG APPROVAL DATE 5/29/90.
ADEC Art Wewen
EXXON Andy Tera
NOAA Baker
USCG G.A. Reiter

FOSC

Date

5/29/90

Incorporates information from
USFWS Bald Eagle survey 5/19/90.



Exxon Company, USA
NEW YORK, N.Y.



ECOLOGY MAP 5/28
SEGMENT WB-1
SUBDIVISION A (1 of 2)
METERS



Seabird Colony



Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ WB-01 SUBDIVISION B (2 OF 2) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles 3 Adams

DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 199 m: No Oil 146 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

 Bioremediation

X Tarmat: Breakup

X Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommend manual pick up of oiled debris and trash. Work
should be conducted between 5/16 and 7/9 due to salmon stream con-
straint. MANUAL PICKUP OF SMALL ASPHALT SPOT

SEE CONSTRAINT ADDENDUM

DATED 5-28-90 RSC

TAG COMMENTS:

TAG APPROVAL DATE: 4/20/90

ADEC ART WIGGINS

EXXON ANDY TATE

NOAA Burt Wescott

USCG KLARA THOMAS

FOSC:

DATE: 5-12-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT WB-1 SUBDIVISION B (2 of 2)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon stream	NO CONSTRAINT. ADF&G catalogued salmon stream (242-32-10150) is located in Subdivision A more than 100m from recommended treatment area.
1J	Purse Seine Area	No constraint to manual pickup or tarmat removal.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS bald eagle impact assessment completed on 5/19/90 by Mary Portner indicates no active nests within 400m of the work area.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to unrolled blots and substrate.

TAG ADDENDUM DATE

ADEC

EXXON

NOAA

USCG

5/29/90
Art Weiner Art Weiner
Amy Teal Amy Teal
Bjornson Bjornson
G.A. Reiter G.A. Reiter

FOSC

DATE

5/29/90

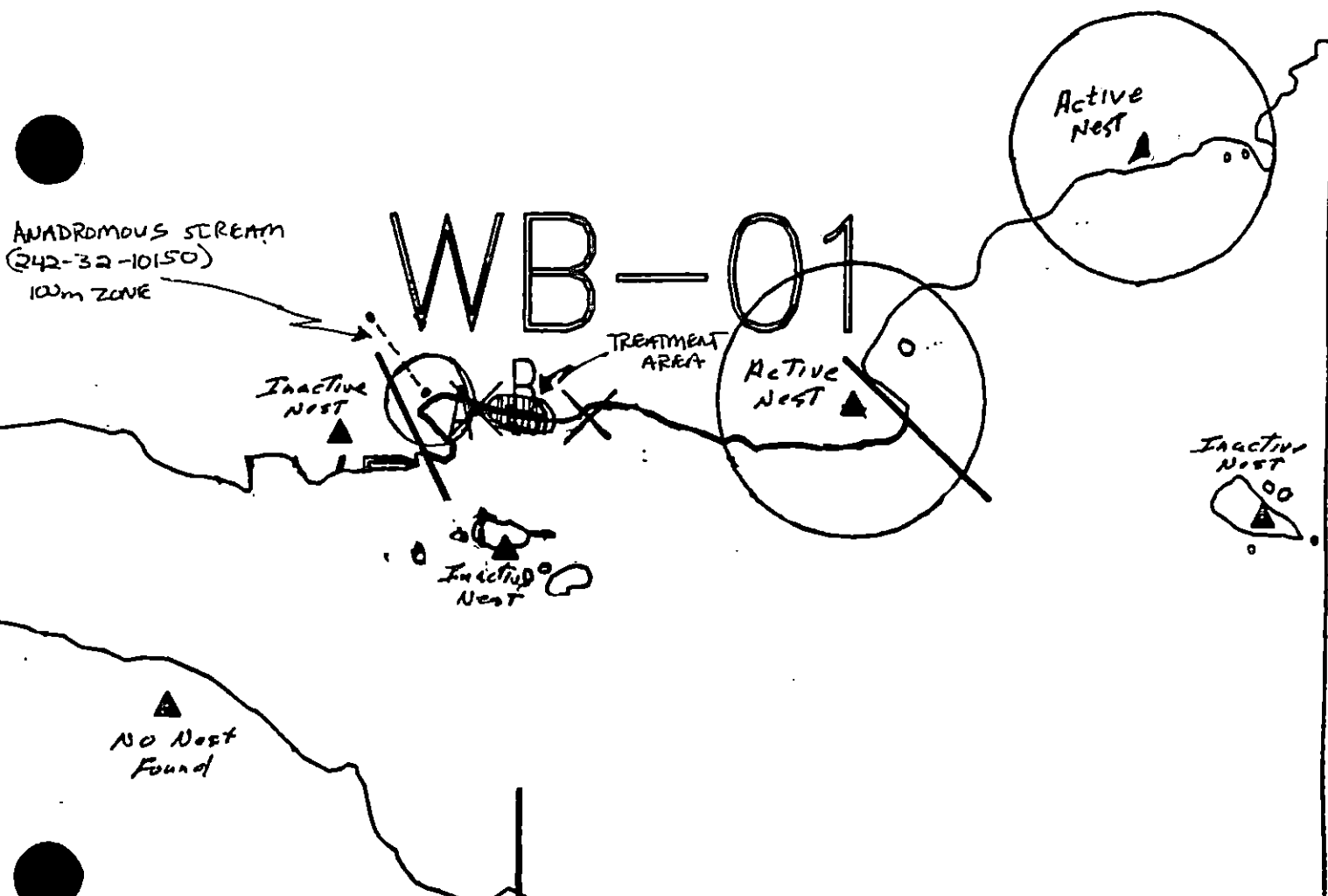
Prepared by:

Anders May REX C.

Date:

5/28/90

Incorporates information from
USFWS Eagle Survey 5/19/90



Exxon Company, USA

ECOLOGY MAP (5/28)
SEGMENT WB-1

SUBDIVISION B (2 of 2)



Seabird Colony



Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ WB-01 SUBDIVISION A (1 OF 2) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Hume DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 166 m: Narrow 286 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 27 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat removal, manual pick up of mousse, oiled debris (debris, vegetation), and oiled logs if >10% coverage and splash impact. Work should be conducted between 5/16 and 7/9 due to salmon stream constraints.
MANUAL TILL/RAKE IN AREA OF PITS 5, 6 + 7
PRIOR TO BID.

TAG COMMENTS:

TAG APPROVAL DATE: 4/20/90
ADEC Art Weinstock
EXXON Art TSC
NOAA Burt Wernoff
USCG Kenneth Keane

FOSC: WJL DATE: 5-12-90

REVISION 23/2479

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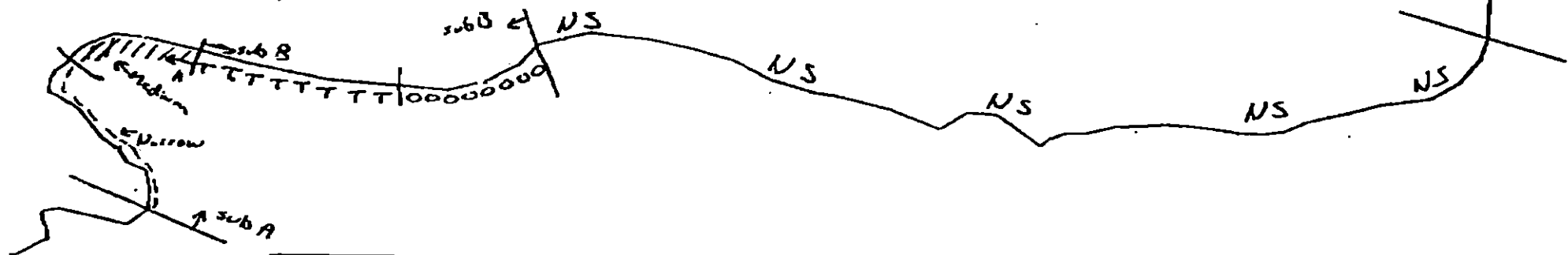
A hand-drawn map of a coastline. The coastline is a wavy line. On the left side, there is a small inlet. A line segment labeled 'A' with an arrow pointing left and 'B' with an arrow pointing right is drawn across the inlet. Below this, the number '23' is written. Further down the inlet, the number '22' is written. To the right of the inlet, the number '24' is written. Further along the coastline to the right, the number '25' is written with an arrow pointing left, and '26' is written with an arrow pointing right. The coastline continues to the right, ending in a small bay. A line segment is drawn across the bay.

1

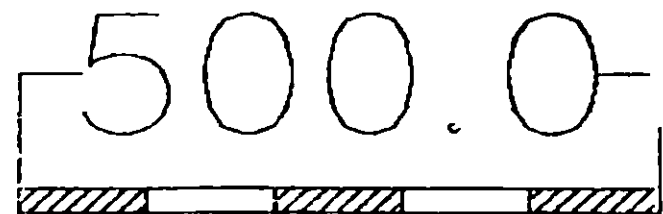
5-29, 1970

500.0

WB001

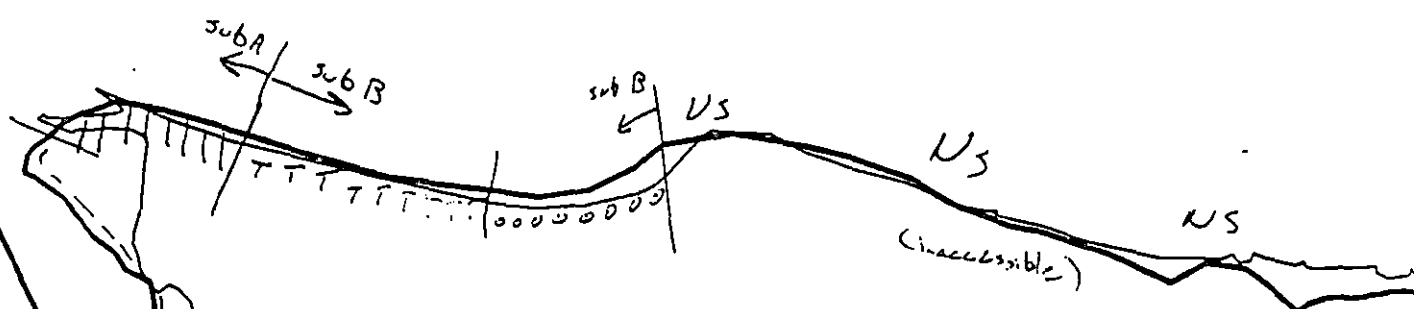


OILING	
H	Heavy
M	Moderate
L	Light
VL	Very Light
N	None
NS	Not Surveyed
Distance In Meters	



Scale 1:2

WB-C



WB-8

WB-

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

WB-1

EXXON Segment Length: 2116m

Scale 1" = 500'

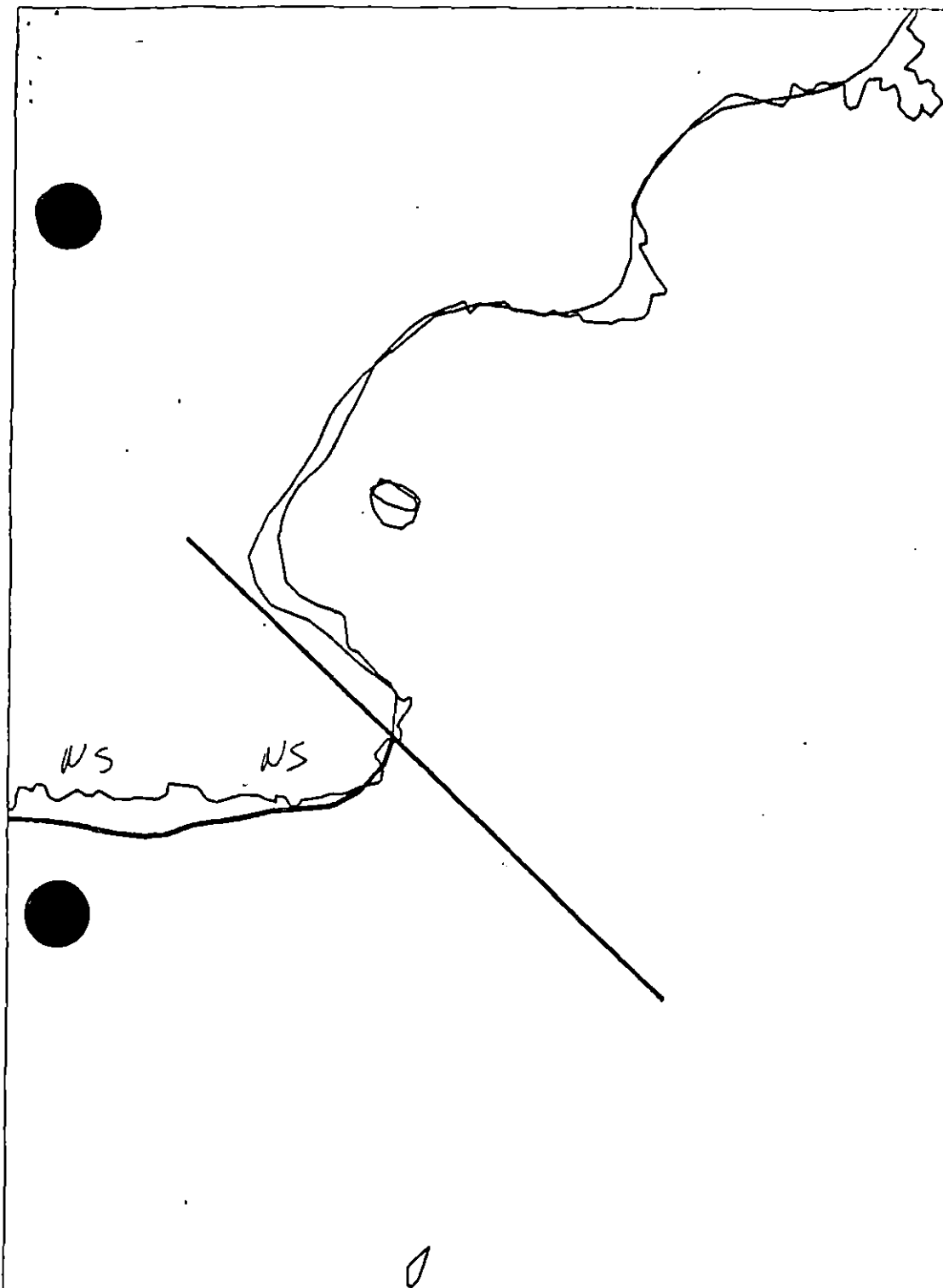


Map Key: PWS-WB-1a

Name: Andy Smith

Date: 4/3/90

Data Entered:



XXXX Wide

/// Medium

--- Narrow

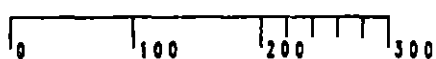
TTTT Very Light

0000 No Oil

WB-1

EXXON Segment Length: 2116m

Scale 1" = 500'



METERS



Map Key: PWS-WB-1b

Name: Bob Siegel

Date: 4/8/00

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ WB-01 SUBDIVISION B (2 OF 2) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles J. H. [Signature]

DATE: 4/26/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 199 m: No Oil 146 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

 Bioremediation

X Tarmat: Breakup

X Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommend manual pick up of oiled debris and trash. Work should be conducted between 5/16 and 7/9 due to salmon stream constraint. MANUAL PICKUP OF SMALL ASPHALT SPOT.

TAG COMMENTS:

TAG APPROVAL DATE: 4/20/90

ADEC Art Weisitz [Signature]

EXXON ANDY TEAL [Signature]

NOAA Burl Wescott [Signature]

USCG KENNETH KEANE [Signature]

FOSC: [Signature]

DATE: 5-12-90

06 Ran

SEGMENT ST-08-1

SUBDIVISION 3

DATE 4 / 8 90

CHECKLIST

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

LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

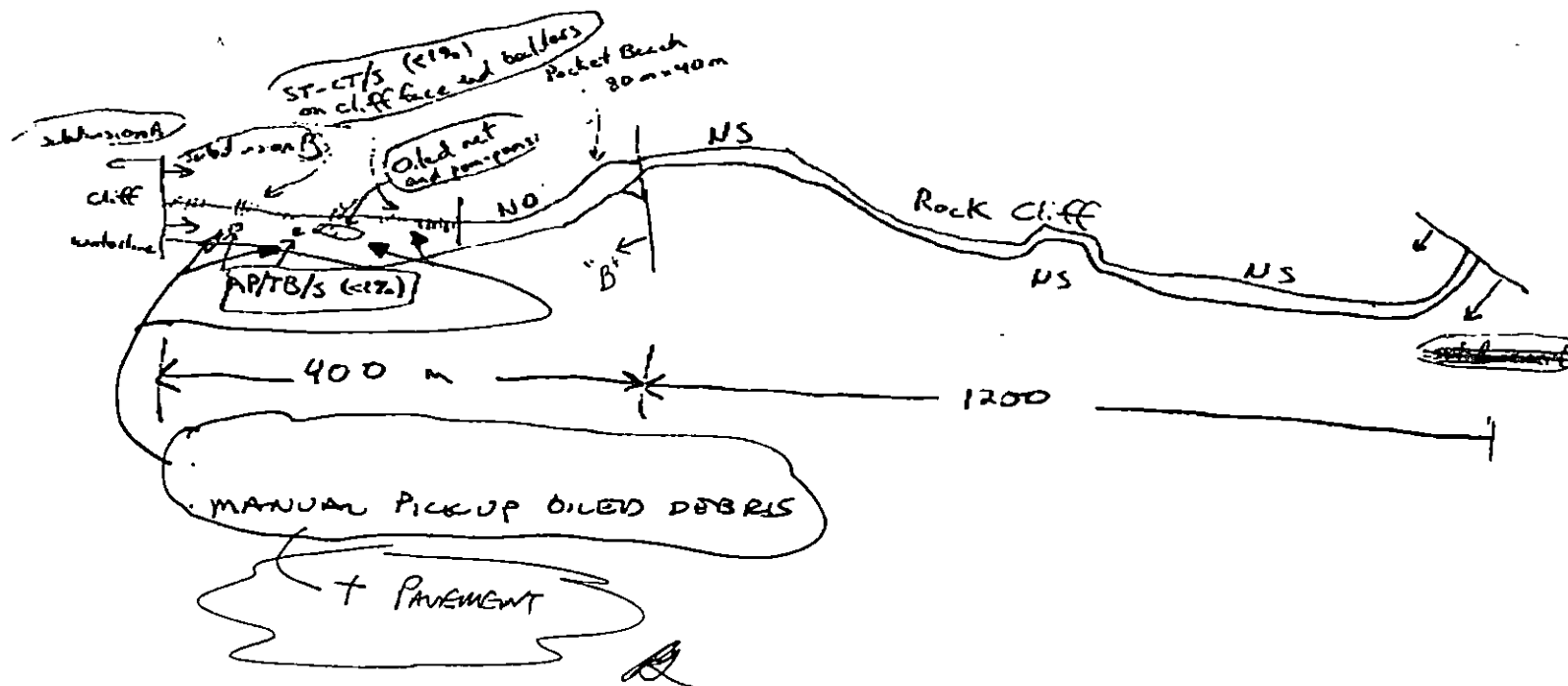
Splashed Distribution

Oiled Vegetation

1 $\bullet \rightarrow$

Photo location, direction, and number

ETCH MAP



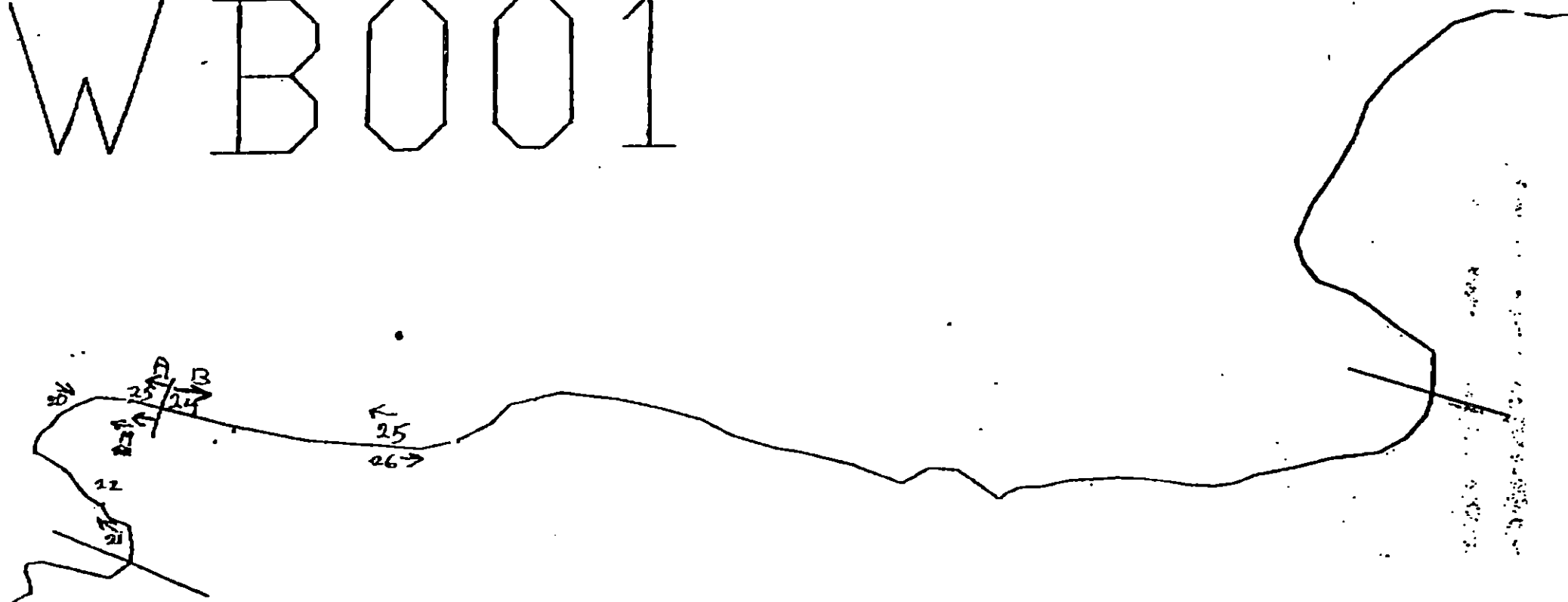
Oil Character Length (m): AP 2.5 PO 4.5 CV 0.5 CT 320 ST 220 MS 1.5 PT 1.5 TB 1.5 FL 1.5 NO 30

REVISION: 8/2/90

Photos: ST-17-5

Frames 19-29

WB001

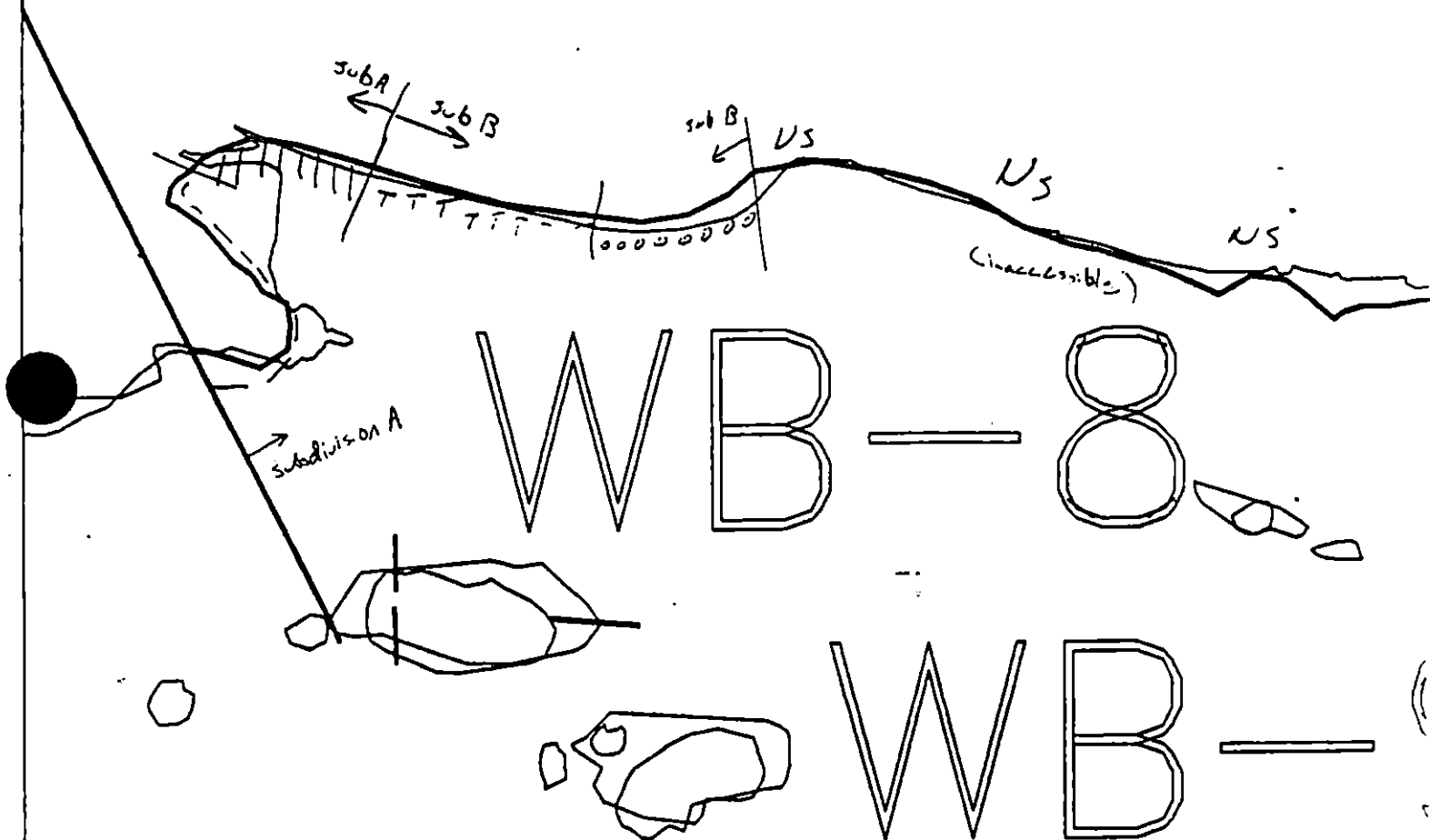


OILING	
H	Heavy
M	Moderate
L	Light
VL	Very Light
N	None
NS	Not Surveyed

27-29 (aerial)
500'

500.0

WB-C



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

WB-1

EXXON Segment Length: 2116m

Scale 1" = 500'

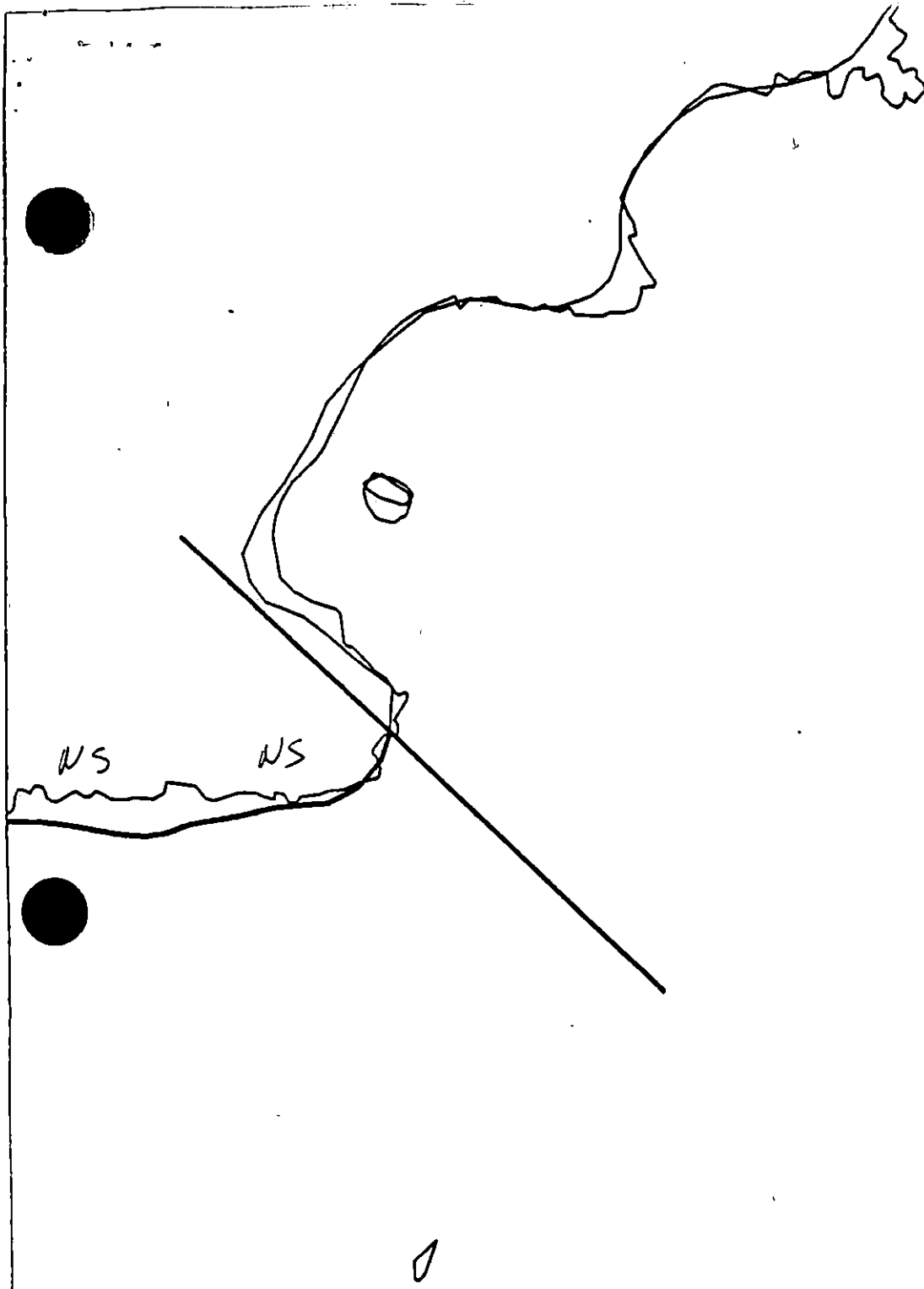


Map Key: PWS-WB-1a

Name: Edy Linsell

Date: 4/3/70

Data Entered:



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

WB-1

EXXON Segment Length: 2116m

Scale 1" = 500'



Map Key: PWS-WB-1b

Name: Bob Lacey?

Date: 4/2/02

Data Entered:

1991 MAYSAP EVALUATION

SEGMENT: WB 001 SUB: A REGION: KEN SURVEY DATE: 5/15/91

ENVIRONMENTAL SENSITIVITIES:

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

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

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC

FOSC

EXXON

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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 Lee Glenn A.O.F. & GNAME Doug Hill

SIGNATURE

Lee Glenn☐ NTR☒ Treatment Recommended

A thick layer of brown mousse mixed with organic debris is submerged on the southeast side of the lagoon and is about 6m wide by 9m long. This oil should be removed from the lagoon which is habitat for migrating pink salmon. Other sea oil is submerged and creates a sheen on the surface when wind through it, however the character of this oil/debris mixture would be difficult to recover.

I concur with comments made by NAPA on oil located in the tide flats, along border on the north beach fringe and the south face area.

EXXON

NAME Rex Coulter

SIGNATURE

Rex R. Coulter☒ NTR

LOCATION E IS MAIN AREA OF CONCERN IN THIS SUBDIVISION. INTRUSION INTO THE AREA (LOC. E) TO RECOVER THE SOR INCORPORATED INTO THE DECAYING ORGANIC MATTER WOULD PROVIDE NO MAJOR BENEFIT. RECOVERY IN THE LAGOON AREA WOULD BE DIFFICULT AND SHOULD NOT POSE ANY THREAT TO THE ENVIRONMENT. DISSAPATION AND DEGRADATION SHOULD BE LEFT TO NATURAL PROCESSES. THE HEALTHY AND ABUNDANT BIOTA AT THIS SUBDIVISION IS QUITE IMPRESSIVE.

ANDMANAGER

NAME Seraphim Megrinick of Port Graham

SIGNATURE

Seraphim Megrinick☐ NTR

☒ Treatment Recommended ON BACK OF BLACK LAGOON Manual Pick up stains on BANKS and sor patches on the one side 6x6 meters

Around The corner in the Cove 1x4 Band Vertical Face 2x3 meters sor OUT BY THE ENTRANCE

USCG/NOAA

NAME Chief Jensen / Gary Shigenaka

SIGNATURE

Robert Jensen Gary Shigenaka☐ (NTR)

I would recommend "NTR" on this segment. It should be noted that there is some sor (2x6m x 3cm thick) at the end of the lagoon. This can be found about one meter under the water. Lee Glenn ADEC was concerned about it. It is accessible with workers wearing hip boots & looks to be 3 hours work. However, I would guess that due to the degraded condition of this sor it probably would not be a significant threat to the environment.

SURVEYED PORTION OF THE SEGMENT WAS A BROAD, LOW-SLOPING COBBLE BEACH WITH STEEP ROCK FACES COMPRISING NORTHEAST & SOUTH PERIMETERS, AND DEAD TREES BORDERING TO THE NORTHWEST. A STREAM BISECTED THE BEACH, AND THIS STREAM FLOWED FROM A TIDALLY-INFLUENCED LAGOON TO THE WEST. A LARGE MUSSEL BED COVERED MUCH OF THE MID- TO LOWER INTERTIDAL PORTION OF THE BEACH, AND THE MYTILUS WERE IN THE FEEBLE SUBSTRATE. LITTORINA SITANA WERE ALSO ABUNDANT IN ROCKIER SUBSTRATE AROUND THE PERIMETER. STAIN AND COAT WERE OBSERVED ON THE ROCK FACES TO THE SOUTH OF THE TIDAL FLAT. AT THE SOUTHEAST END OF THE SURVEYED PORTION, SOR WAS FOUND IN AND REMOVED FROM ANGULAR BOULDER COBBLE SUBSTRATE IN THE U12. AN ISOLATED PATCH OF SOR WAS RECOVERED FROM SIMILAR SUBSTRATE ON THE NORTH SIDE OF THE BEACH. ON THE BEACH OR TIDAL FLAT ITSELF, COHESIVE LUMPS OF SOR WERE FOUND AT ISOLATED LOCATIONS IN THE MID TO UPPER I12 - THESE WERE ALSO RECOVERED. A LARGER BAND OF SOR WAS DISCOVERED ON THE NORTHWEST SIDE OF THE STREAM IN THE U12, AND TO THE EXTENT POSSIBLE WAS RECOVERED. THE LAGOON, ABOVE THE BEACH AT A SEEMINGLY SUPRA-INTERTIDAL LEVEL, HAD OBVIOUSLY BEEN OILED (COAT, BATHTUB RING STILL VISIBLE ON SOUTH WALL BORDERING LAGOON) BUT NO OTHER OILING WAS EASILY ACCESSIBLE. ADF & G REPS HILL AND GLENN DID VENTURE TO THE SOUTHWEST CORNER OF THE LAGOON, AND FOUND RELATIVELY LARGER AMOUNTS OF SOR IN A VEGETATIVE MATRIX, I.E. SPRUCE NEEDLES.

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 1

TEAM NO. 6-Helo

OG D. Fitzgerald

BIO T. Schröder

SEGMENT WB-01

ADEC Loc GLEN & ADFG

LANDMANAGER S. McGRADICK for GRAHAM

SUBDIVISION A

EXXON R. Coulter

USCG/NOAA Chief JENSEN / G. SHIGENAKA

DATE 15 May 191

TIME 9:25 to 10:40

TIDE LEVEL -3.0 ft. to 1.5 ft.

ENERGY LEVEL: ☐ H ☐ M ☒ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: _____ m

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

EST. OIL CATEGORY LENGTH: W m M m N m VJ 22 m NO m US m

[illegible]

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

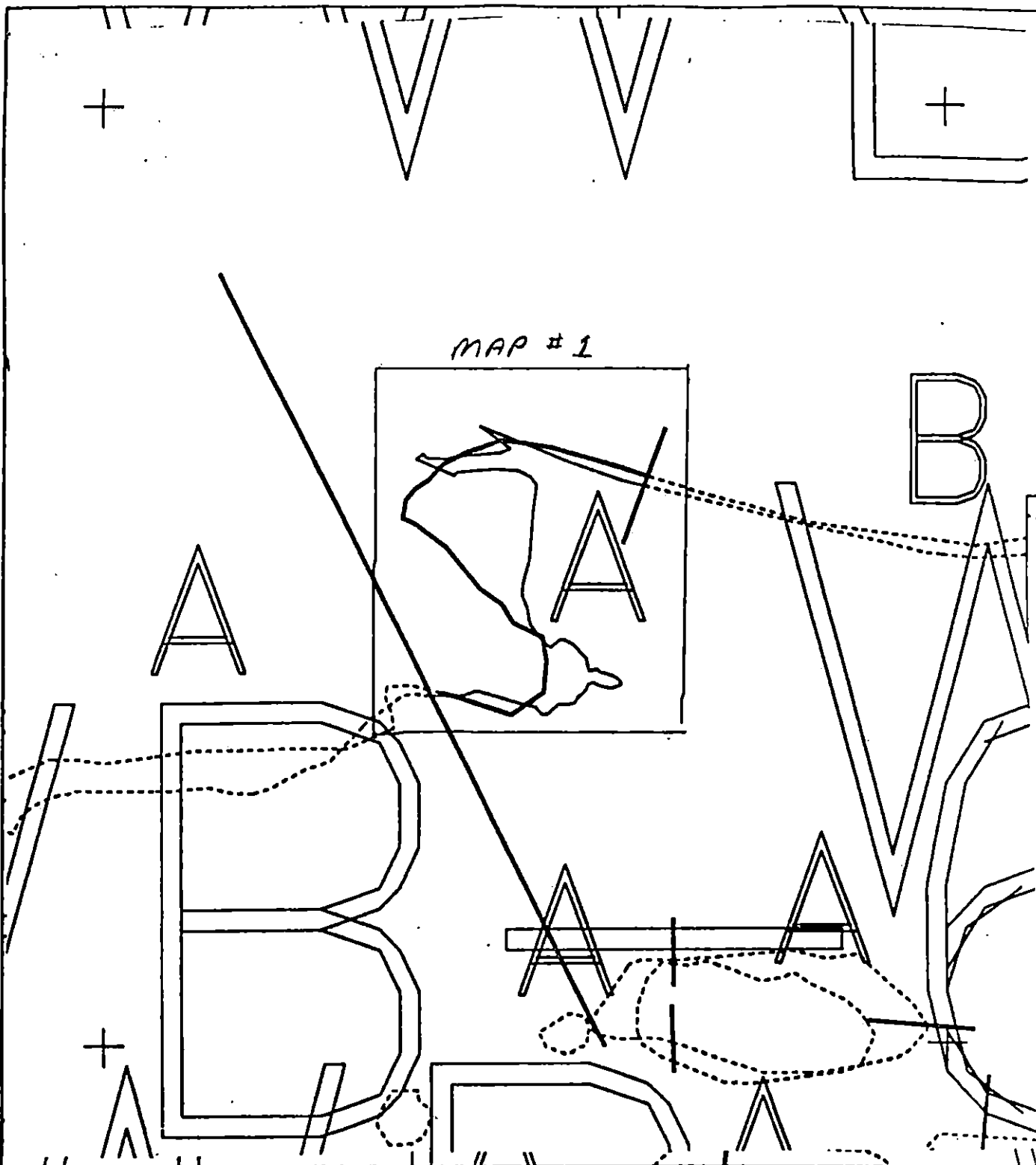
PHOTO ROLL # MAYSAP- 6 - 15 FRAMES 12-18

[illegible]

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

OG COMMENTS: This segment is located along the north shore of Windy Bay in a small embayment with ANAD. STREAM # 242-32-10155. The embayment contains a small lagoon behind a beech and drowned forest complex. Most of the embayment is intertidal consisting of boulders + cobbles with granules and sand. The oiling is found in three major areas: 1) in a small pocket beach at the southwest end of the segment consisting of CT-ST and SDK in a boulder region, 2) within the intertidal portion of the embayment where small SC areas are found, and 3) in the lagoon where SOR occurs a meter below the water surface. VECO workers collected all observed and accessible oiled sediment, totalling 1/4 bag.

reviewed 5.17.91



MAP #1

A

A

B

+

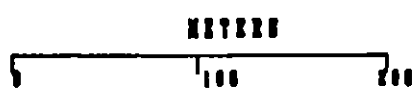
WB001 A

Subdivision Field Map

Map Key: KBNV001Aa

Name: D. Fitzgerald

Date: 15 MAY 1991



AS State Plane Zone 4
NAD83

reviewed 5.17.91 gy
25 reviewed 5/17

- EVERGREENS
- DEAD TREES
- W/ GRASSY AREA
- LOGS
- ROCK SLOPE-FACE
- PHOTOS

ANAO. STREAM
242-32-10155

Sketch MAP (06
WB-01-A
D. FITZGERALD
15 MAY 1991
9:25 - 10:40

KENAI
PENINSULA

E. SOR
6 by 6m, 90 Unknown
mixed with spruce
Needle under water

LAGOON

LOG PILE

rock cliff
slope

BEGIN SEGMENT
WB-01-B

D. SOR
4 by 8m < 190
I/U around
Boulder + Cobbles

B. SOR
1m² < 190
E/U cobbles

Boulder - Cobble - Pebble -
Granule - Sand Beach

C. SOR
1 by 2m < 190
1m² < 190
around C + B

BEGIN
SEGMENT
WB-02-A

P.U. * VECO WORKERS REMOVED
ALL SEEN AND ACCESSIBLE
OILED SEDIMENTS. LAGOON
SOR WAS NOT COLLECTED DUE
TO THE NECESSITY OF CHEST
WADERS TO REACH THE UNDER-
WATER OILED ORGANIC MATERIAL.

A1. CT/ST
1 by 4m, < 190
ON VERTICAL FACE
2. SOR
2 by 3m
I/U IN Boulder
region

WINDY
BAY

0 25
METERS

reviewed 5.17.9
ES reviewed 5.2

- EVERGREENS
- DEAD TREES
- w/ GRASSY AREA
- LOGS
- ROCK SLOPE - FACE
- PHOTOS

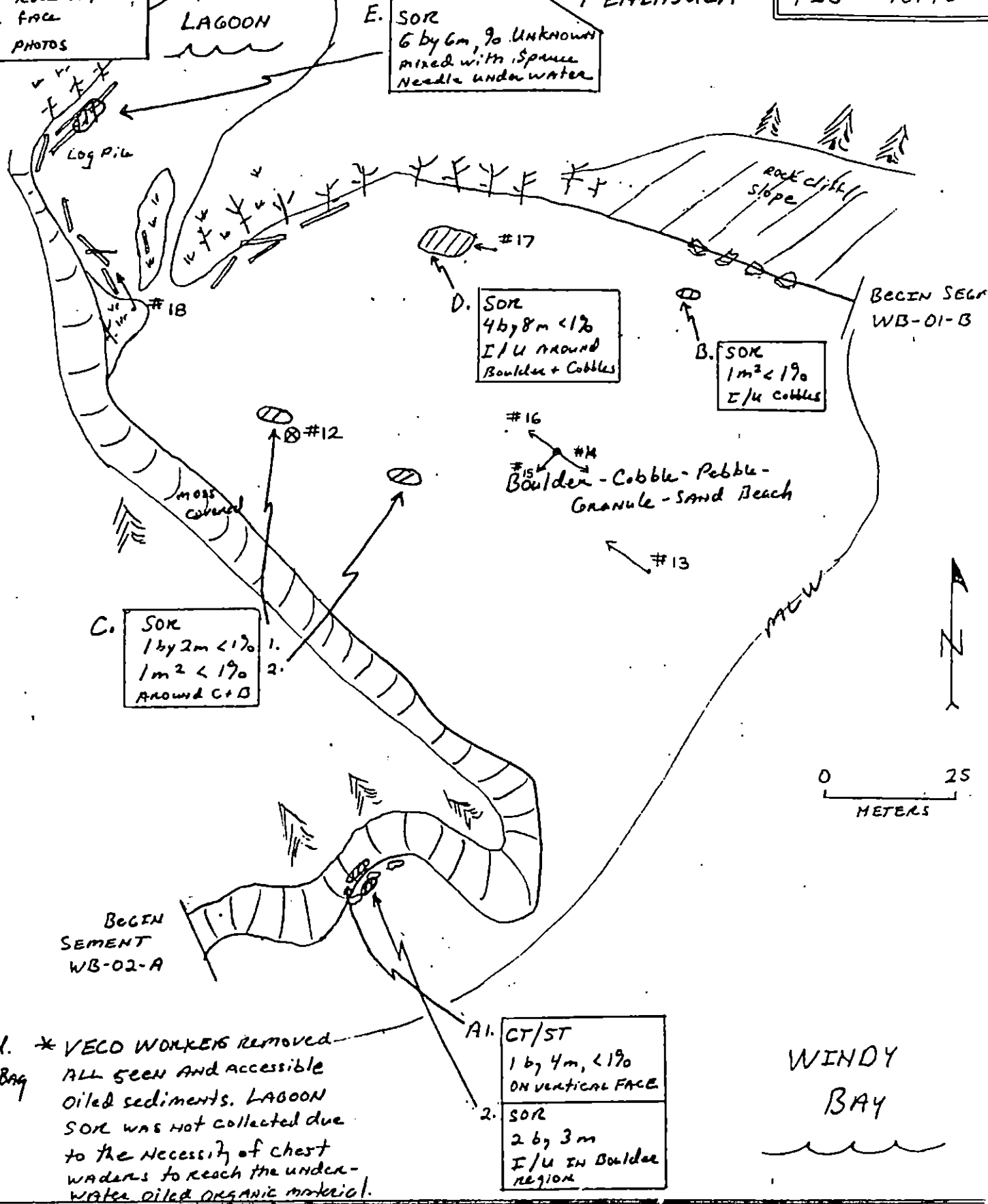
ANAD. STREAM
242-32-10155

PHOTO SITES, WB-1A
ROLL 6-15, FRAMES 12-18

Sketch MAP (01)
WB-01-A
D. FITZGERALD
15 MAY 1991
9:25 - 10:40

KENAI
PENINSULA

E. SOR
6 by 6m, 90 Unknown
mixed with Spruce
Needle underwater



NAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6

DATE 5/15/91

SEGMENT # WB-001

TIDAL HEIGHT (Range) -3.0 to 0 ft

SUBDIVISION A

BIOLOGIST T.R. Schroeder

SEA STATE light chop

WIND SPEED/DIRECTION S.W. = 5-10 mph

PHOTOGRAPHS: ROLL #

FRAME #

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

(A) = Rock outcropping on the southern side of this beach segment containing a thriving community of littorine snails, barnacles and various types of algae. Very few types of seaweeds, red/brown algae, kelp, etc. and fleshy community covered the rocks. Sand fleas, hermit crabs and limpets were on or under every rock in the LITZ. A small patch of eel grass extended across the LITZ. SOR & CBT oil did not effect these organisms.

(B+D) = Again a thick fleshy help bed was located on the northern shoreline from a rock outcropping and extending easterly along the MITZ to the LITZ. Littorine snails and barnacles were very numerous.

The LITZ on this beach is exposed to strong surf action and the smaller gravel substrate is unstable and susceptible to few organisms. Rock mussel regrowth was occurring in the lower portion of the LITZ. In the LITZ and MITZ, some restoration work is planned for this beach. This stream has always been a non-estuary as far as salmon production is concerned. The stream leaving the lagoon is basically self-sustaining. The summer during most years. It has never been protected from commercial fishing activities and it is questionable whether fish returning to this system spawn successfully and produce their own progeny. Intertidal community does not appear to be effected by these observations.

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

large numbers of feeding shore birds. Remaining oil does not appear to be effecting these observations.

OF SPECIES

TOTAL BIRDS

FISH OBSERVED SPECIES PRESENT

Eagles	1 (adult)	1	1 sculpin
Seabirds			1 snailfish
Waterfowl	1 widgeon	2	
Gulls/kittiwakes	1 gull	8	
Shorebirds	1 sandpiper	50	
Corvids			
Other Birds			

LAND MAMMALS

MARINE MAMMALS

OBSERVED

SPECIES

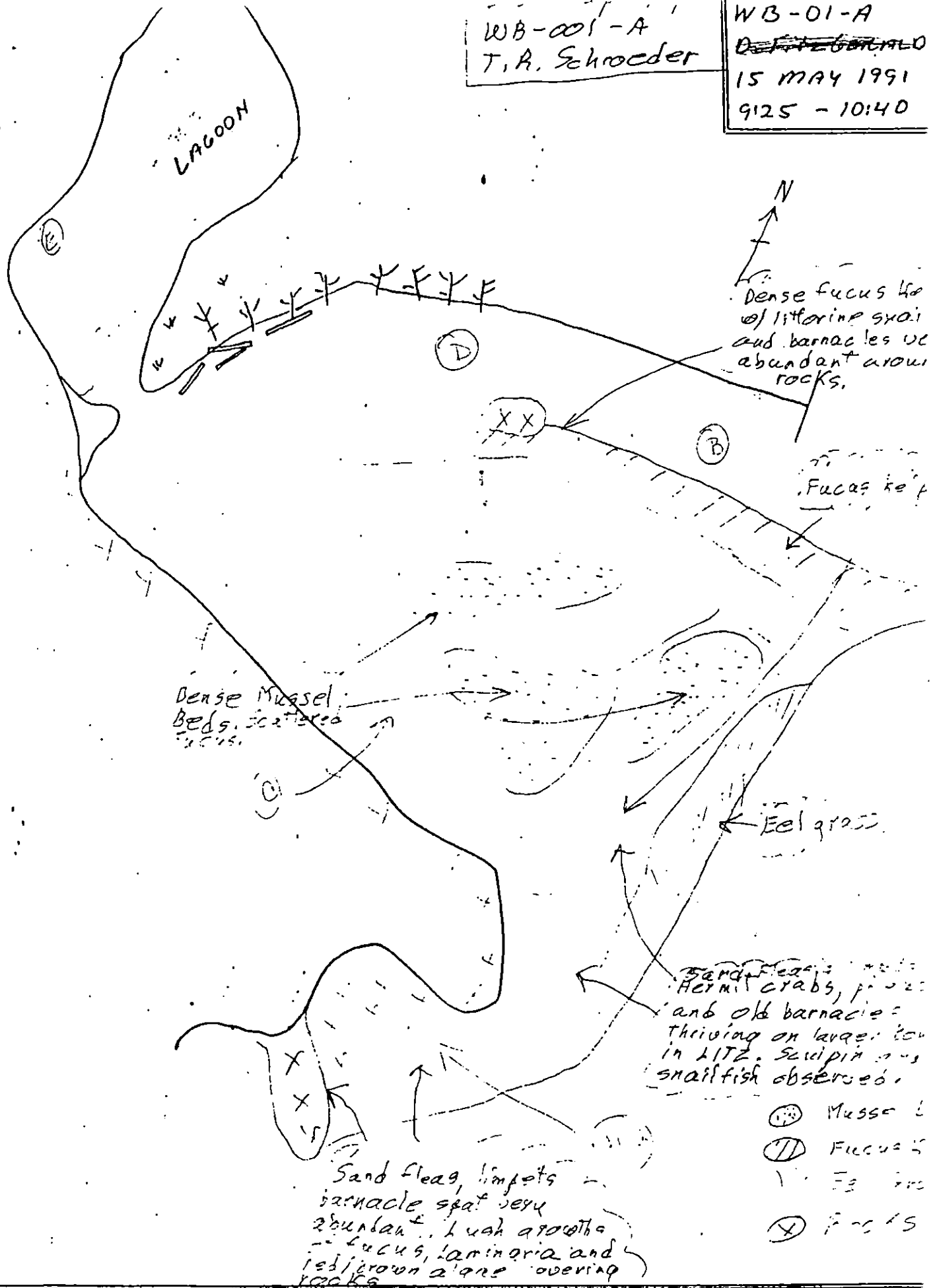
OBSERVED

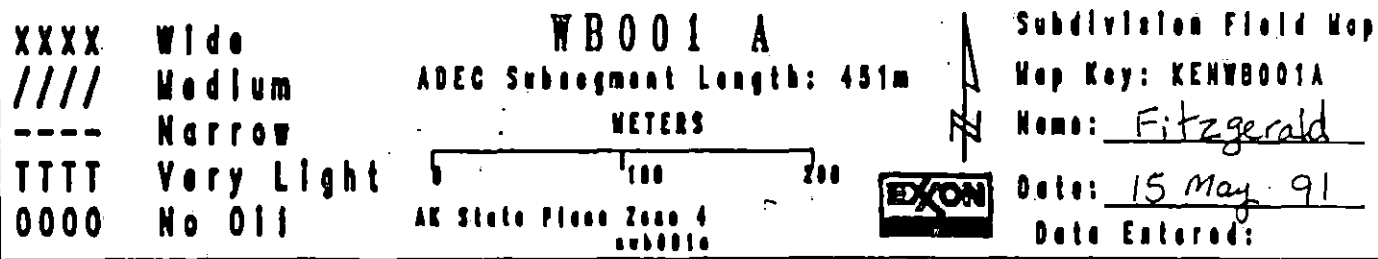
Sea Otters			
Pinnipeds (specify)			
Cetaceans (specify)			

Shoreline subdivision map showing important biological features attached.

WB-001-A
T. R. Schroeder

WB-01-A
~~DECLASSIFIED~~
15 MAY 1991
9125 - 10:40





ΣΣ revised 5/17

1991 MAYSAP EVALUATION

SEGMENT: WB 001 SUB: B REGION: KEN SURVEY DATE: 5/27/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest,
Fish harvest area

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____ FOSC APPROVAL DATE: _____

ADEC _____ FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

MATSAF FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT WB-001 SUBDIVISION B DATE 5/27/91

ADEC

NAME Steve Ferguson SIGNATURE _____

☒ NTR ☐ TREATMENT RECOMMENDED

I ONLY OBSERVED A SMALL AMOUNT OF ST/CT ON A
COUPLE OF BOULDERS.

EXXON

NAME George P. Stiles SIGNATURE George P. Stiles 5/27/91

☒ NTR No oil found other than a small
trace of CT+5.

LANDMANAGER

NAME Pat Norman OF Port Berban SIGNATURE Pat Norman

☒ NTR no oil found by myself.

USCG/NOAA

NAME [Signature] SIGNATURE [Signature]

☒ NTR very little oil found.

[Signature]

sketch MAP.

WB-001-B

Jeann Marie Samples

MAY 26 / 91

0951 - 1004

Legend

[hatched] Bedrock bluff

[wavy line] Boulder fringe

[dots] c/o over pl/gn

BIO MAP

ROTH

Well sorted
cobble veneer
over pl/gn.

Fringe of boulders
next to the bedrock
bluffs.

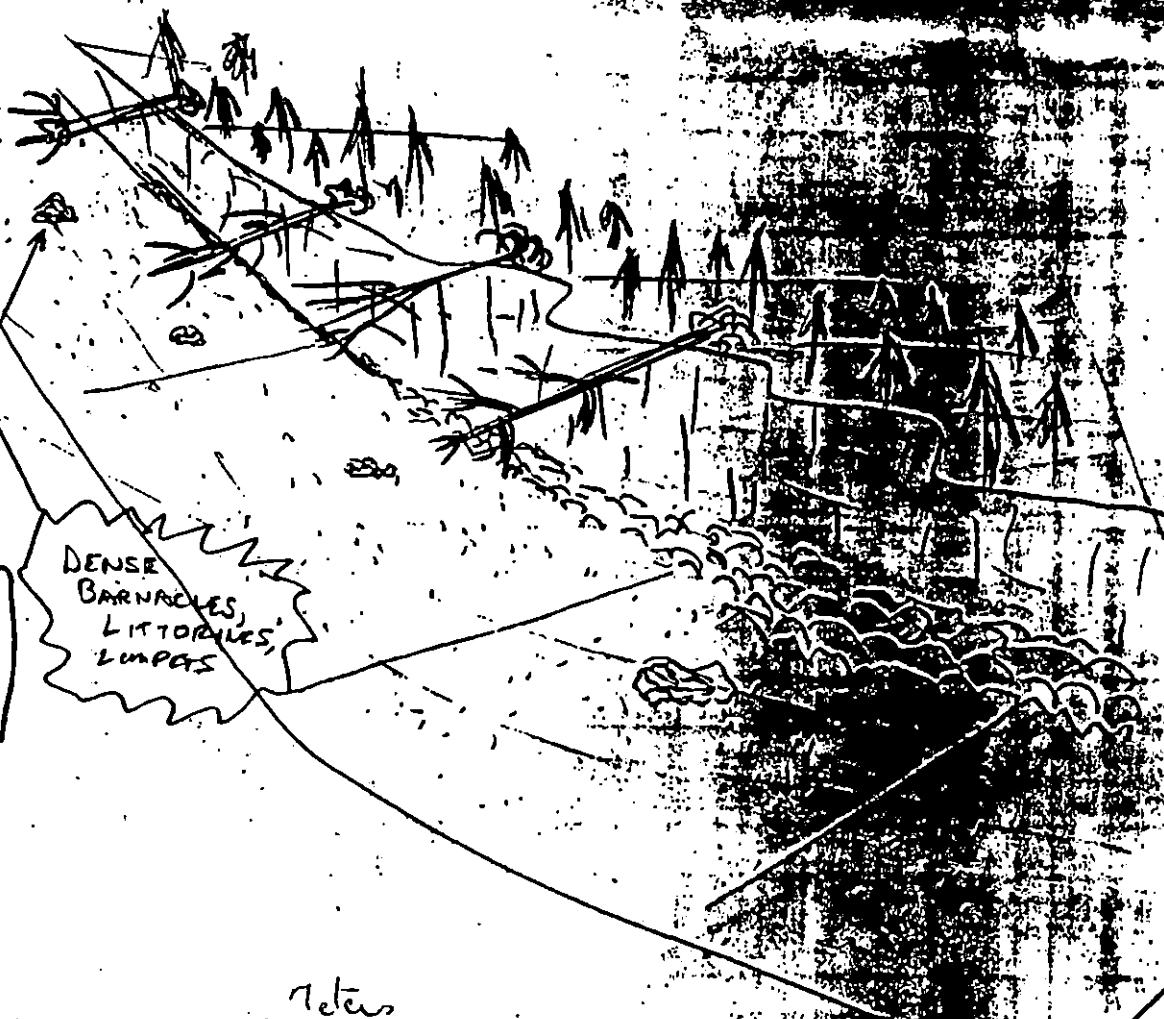
A1

St. 20m dia
an intertidal
boulder.

DENSE
BARNACLES,
LITTORINIDS,
LIMPETS

7m
0 20 40

Revised MS 5/1/91



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 26 MAY '91
 SEGMENT # WB001 TIDAL HEIGHT(Range) +3.5 TO
 SUBDIVISION B BIOLOGIST Jim Kotia
 SEA STATE FLAT WIND SPEED/DIRECTION —
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

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

A1 - BOULDER w/ DENSE BARNACLES, LITTORINES, LIMPETS.

GENERAL COMMENTS: A FAIRLY EXPOSED COBBLE/BOULDER BEACH
 WITH ABUNDANT LITTORINES, LIMPETS. MUSSELS OCCUR IN SMALL
 PATCHES. BARNACLES (INCL. SPAT) MODERATELY ABUNDANT, BECOMING
 MORE DENSE TOWARD W. END OF BEACH. LITTORINE EGG MASSES
 FOUND UNDER COBBLES IN MITE, WHERE BEACH HOPPERS AND NEREID
 WORMS WERE ALSO FOUND. A HEALTHY INTERTIDAL COMMUNITY.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/Kittiwakes			
Shorebirds			
Corvids			
Other Birds			

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters			
Pinnipeds(specify)			
_____les(specify)			
_____les(specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed MRS 5/31/91

Sketch Map.

WB-001-B

Jean Marie Smpels

MAY 26 / 91

0951 - 1004

Legend

[T] Bedrock bluffs

[~] Boulder fringe

[.] cb over pl/gn

Well sorted
cobbles veneer
over pl/gn.
Fringe of boulders
next to the bedrock
bluffs.

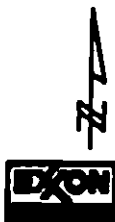
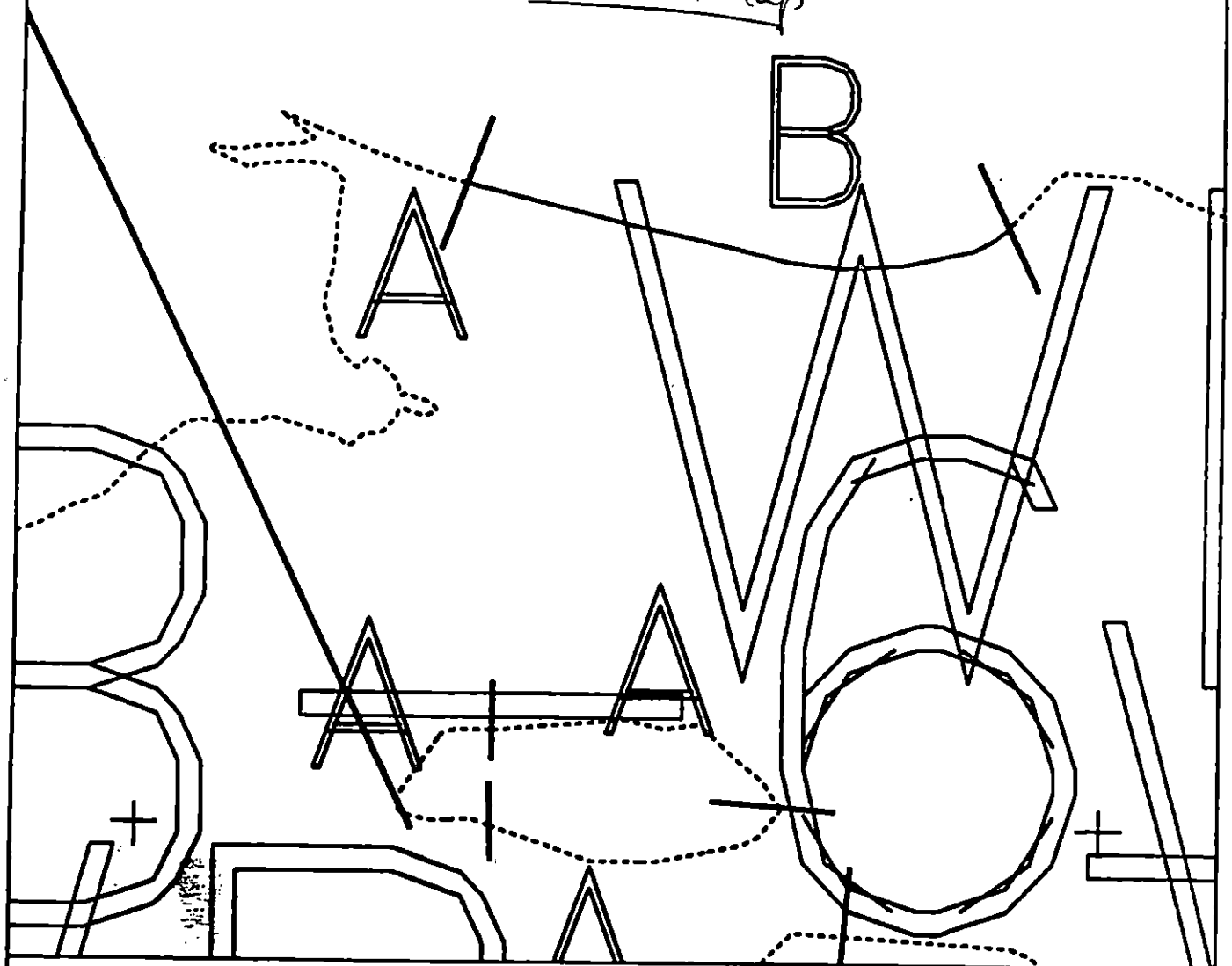
A1

st, zoomelia
on intertidal
boulder.

Meters
0 20 40

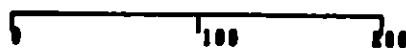
REVIEWED: MC 5/31/91
reviewed 5:30 9/8

Location Map



WB001 B

METERS



AK State Plane Zone 4
NAD83

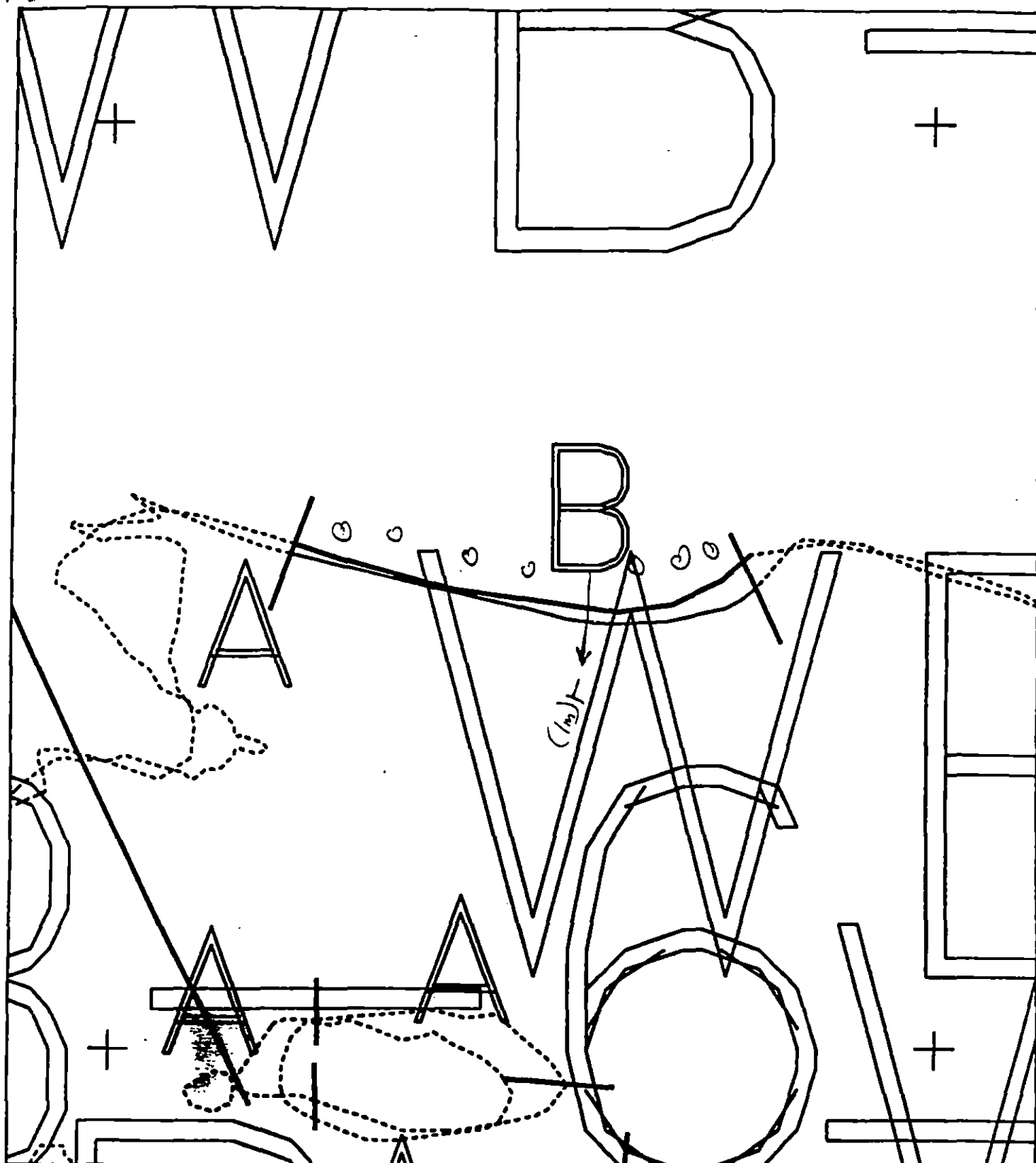
Subdivision Field Map

Map Key: KENVB001B

Name: JM Semple

Date: MAY 26/91

Reviewed 5:30 9/91



Revised 5.309y

1991 MAYSAP EVALUATION

SEGMENT: WB 001 **SUB:** B **REGION:** KEN **SURVEY DATE:** 5/27/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest,
Fish harvest area

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ **Date:** _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.) _____

Spot Washing _____

Bio-Customblen Only _____

Bio-Inipol/Customblen _____

Other _____

Other _____

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____ **FOSC APPROVAL DATE:** _____

ADEC _____ **FOSC** _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

MAYSAF FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT WB-001 SUBDIVISION B DATE 5/27/91

ADEC

NAME Steve Ferguson SIGNATURE _____☒ NTR ☐ TREATMENT RECOMMENDED

I ONLY OBSERVED A SMALL AMOUNT OF ST/CT ON A
COUPLE OF BOULDERS.

EXXON

NAME George P. Stiles SIGNATURE George P. Stiles 5/27/91☒ NTR

no oil found other than a small
trace of CT+5.

LANDMANAGER

NAME Pat Norman OF Port Arthur SIGNATURE Pat Norman☒ NTR

no oil found by myself.

USCG/NOAA

NAME [Signature] SIGNATURE [Signature]☒ NTR

very little oil found.

[Signature]

Reviewed: MC 5/31/91
Reviewed 5.30 97

og. sketd map.

WB-001-B

Jean Marie Smpels

MAY 26 / 91

0951 - 1004

Legend

[---] Bedrock bluffs

[---] Boulder fringe

[---] c/o over pb/gr

BIOMAP

ROTH

Well sorted
cobble veneer
over pb/gr.

Fringe of boulders
next to the bedrock
bluffs.

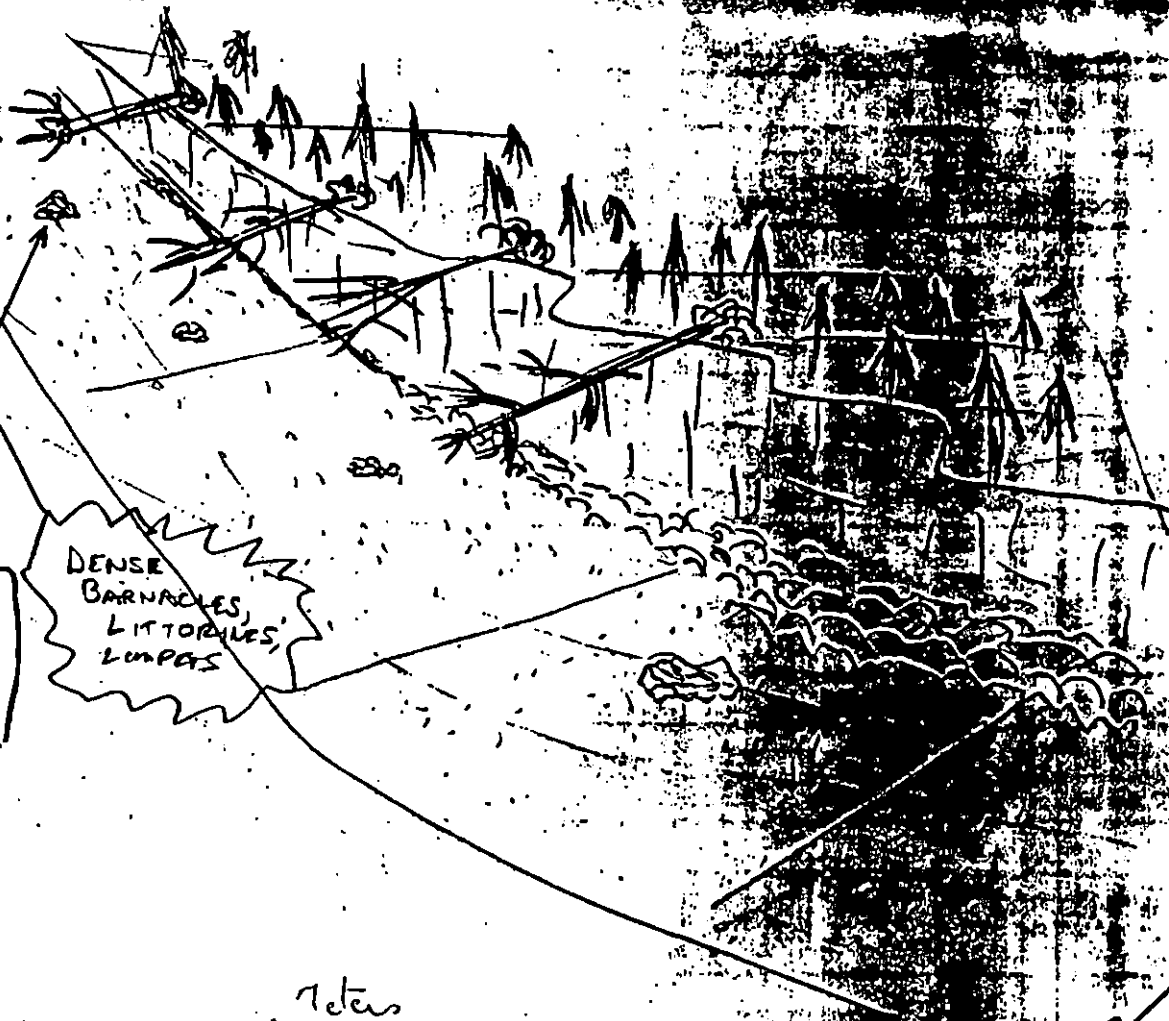
A1

St, 20 cm dba
on intertidal
boulder

DENSE
BARNACLES,
LITTORINIDS,
LIMPES

1 meter
0 20 40

Revised MB 5/10/94



KAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 26 MAY '91
 SEGMENT # WB001 TIDAL HEIGHT(Range) +3.5 TO
 SUBDIVISION B BIOLOGIST Jim Kotik
 SEA STATE FLAT WIND SPEED/DIRECTION —
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

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

A1 - BOULDER w/ DENSE BARNACLES, LITTORINES, LIMPETS.

GENERAL COMMENTS: A FAIRLY EXPOSED COBBLE/BOULDER BEACH
WITH ABUNDANT LITTORINES, LIMPETS. MUSSELS OCCUR IN SMALL
PATCHES. BARNACLES (INCL. SPAT) MODERATELY ABUNDANT, BECOMING
MORE DENSE TOWARD W. END OF BEACH. LITTORINE EGG MASSES
FOUND UNDER COBBLES IN MITE, WHERE BEACH HOPPERS AND NEREID
WORMS WERE ALSO FOUND. A HEALTHY INTERTIDAL COMMUNITY.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds(specify)			
_____les(specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed MRS 5/31/91

Sketch Map.

WB-001-B

Jean Marie Smpels

MAY 96 / 91

0951 - 1004

Legend

[---] Bedrock bluff

[---] Boulder fringe

[---] cb over pb/gn

Well sorted
cobbles veneer
over pb/gn.

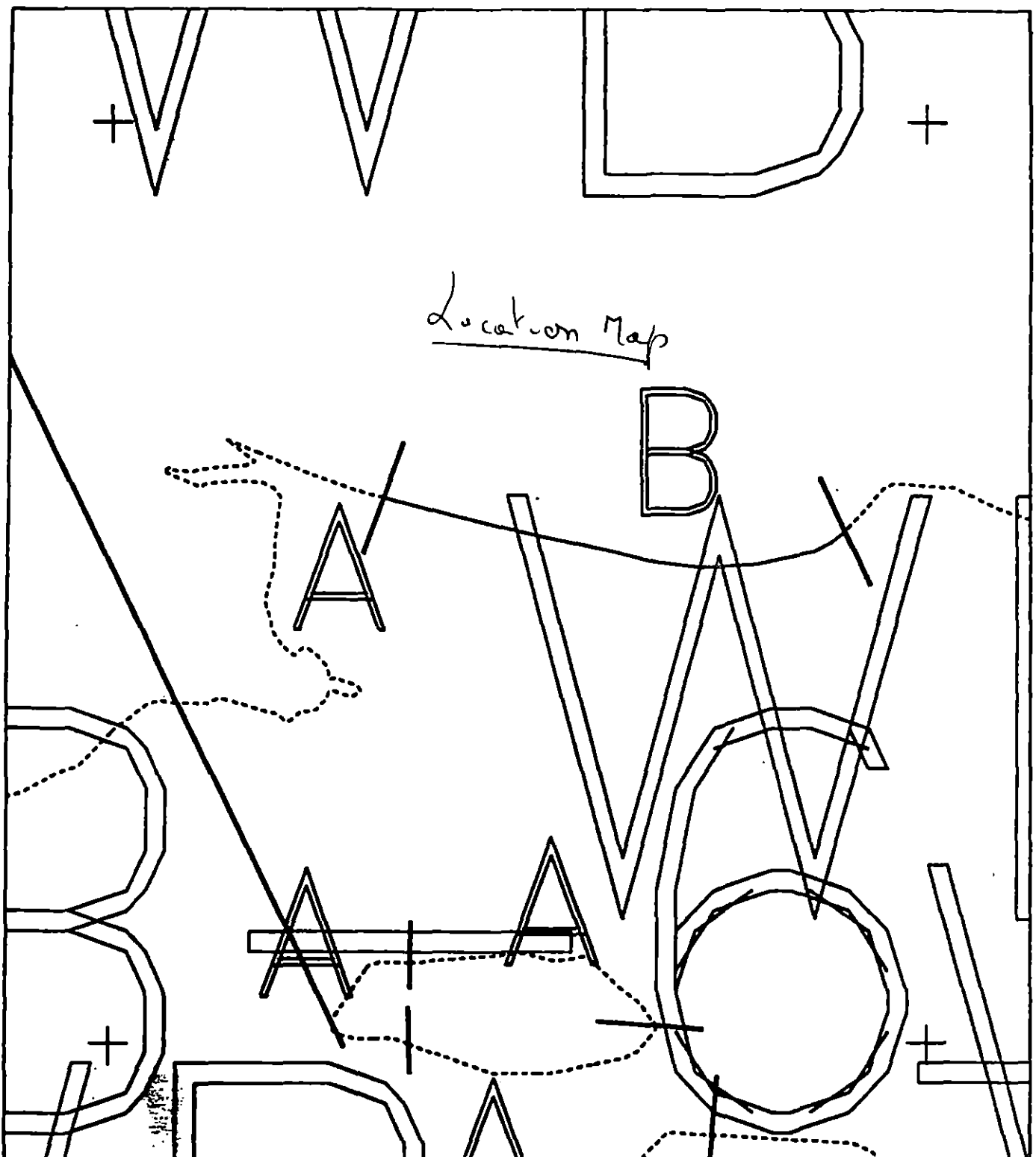
Fringe of boulders
next to the bedrock
bluffs.

A1

st, zoomelia
on intertidal
boulder.

17 cm
0 20 40

REVIEWED: MC 5/31/91
reviewed 5:30 PM



Location Map



WB001 B

METERS

0 100 200

AK State Plane Zone 4
subdiv 100

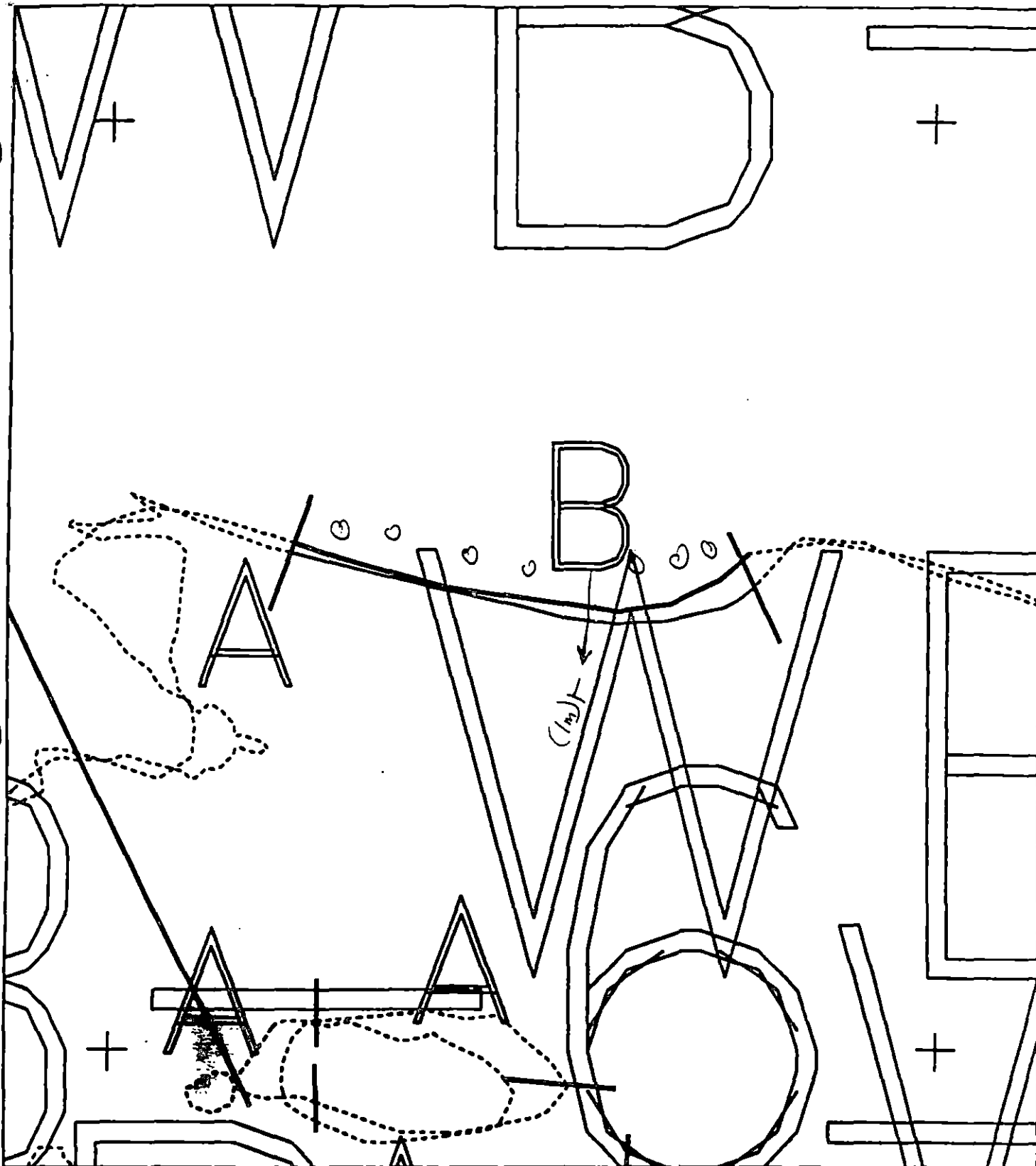
Subdivision Field Map

Map Key: KENVB001Ba

Name: JM Semple

Date: MAY 26/91

Reviewed 5:30 9y



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

WB001 B
 ADEC Subsegment Length: 345m
 METERS
 0 100 200
 AK State Plane Zone 4
 sub001b



Subdivision Field Map
 Map Key: KENWB001B
 Name: J. M. Sempich
 Date: MAY 26 / 91
 Date Entered:

Revised: MC 5/31/91
 revised 5:30 PM

1991 MAYSAP EVALUATION

SEGMENT: WB 001 SUB: A REGION: KEN SURVEY DATE: 5/15/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest,
Fish harvest area, Anadromous stream

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Rachel Jan One Date: 5/24/91

RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>N</u>	<u>N</u>	<u>N</u>
Manual Pickup (Check as Req.)	<u> </u>	<u> </u>	<u> </u>
Spot Washing	<u> </u>	<u> </u>	<u> </u>
Bio-Customblen Only	<u> </u>	<u> </u>	<u> </u>
Bio-Inipol/Customblen	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 24 1991 FOSC APPROVAL DATE: 6/1/91

ADEC [Signature] FOSC E. E. PAGE, CDR, USCG

EXXON [Signature] CHIEF OF STAFF, POSA

USCG [Signature]

NOAA [Signature]

→ The State will further consider the need for treatment.

11

**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.

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 Lee Glenn A.O.F. & GNAME Doug Hill

SIGNATURE

Lee Glenn☐ NTR☒ Treatment Recommended

A Thick layer of brown mousse mixed with organic debris is submerged on the southeast side of the lagoon and is about 6m wide by 9m long. This oil should be removed from the lagoon which is habitat for migrating pink salmon. Other scum oil is submerged and creates a sheen on the surface when wading through it, however the character of this oil/debris mixture would be difficult to recover.

I concur with comments made by NOAA on oil located in the tide flats, along border on the north beach fringe and the south rock face area.

EXXON

NAME Rex Coulter

SIGNATURE

Rex Coulter☒ NTR

LOCATION E IS MAIN AREA OF CONCERN IN THIS SUBDIVISION. INTRUSION INTO THE AREA (LOG. E) TO RECOVER THE SOR INCORPORATED INTO THE DECAYING ORGANIC MATTER WOULD PROVIDE NO MAJOR BENEFIT. RECOVERY IN THE LAGOON AREA WOULD BE DIFFICULT AND SHOULD NOT POSE ANY THREAT TO THE ENVIRONMENT. DISSIPATION AND DEGRADATION SHOULD BE LEFT TO NATURAL PROCESSES. THE HEALTHY AND ABUNDANT BIOTA AT THIS SUBDIVISION IS QUITE IMPRESSIVE.

HANDMANAGER

NAME Seraphim Megarick OF Port Graham

SIGNATURE

Seraphim Megarick☐ NTR

☒ Treatment Recommended ON BACK OF Black Lagoon Manual Pickup STAINS ON BANKS and SOR patches on the one bank 6x6 meters

Around The Corner in the Cove 1x4 BANK Vertical Face 2x3 SOR OUT BY THE ENTRANCE

USCG/NOAA

NAME Chief Jensen / Gary Shigenaka

SIGNATURE

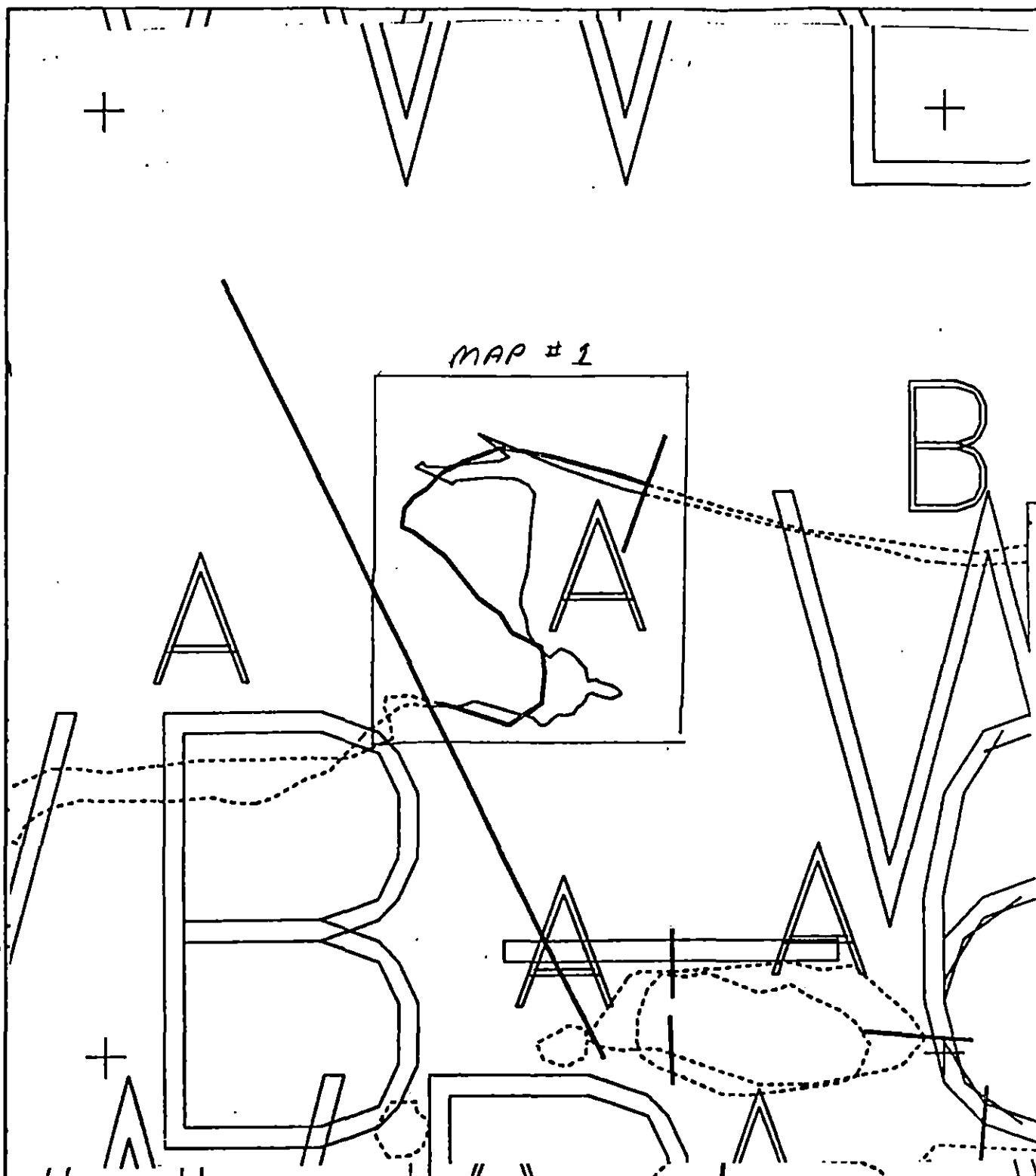
Chief Jensen

☐ ☒ I would recommend "NTR" on this segment. It should be noted that there is some SOR (2x6m x 3cm thick) at the end of the lagoon. This can be found about one meter under the water. Lee Glenn ADEC was concerned about it. It is accessible with workers wearing hip boots & looks to be 3 hours work. However, I would guess that due to the degraded condition of this SOR it probably would not be a significant threat to the environment.

SURVEYED PORTION OF THE SEGMENT WAS A BROAD, LOW-SLOPING COBBLE BEACH WITH STEEP ROCK FACES COMPRISING NORTHEAST & SOUTH PERIMETERS, AND DEAD TREES BORDERING TO THE NORTHWEST. A STREAM BISECTED THE BEACH, AND THIS STREAM FLOWED FROM A TIDALLY-INFLUENCED LAGOON TO THE WEST. A LARGE MUSSEL BED COVERED MUCH OF THE MID- TO LOWER INTERTIDAL PORTION OF THE BEACH, AND THE MYTILUS WERE IN THE PEBBLE SUBSTRATE. LITTORINA SITANA WERE ALSO ABUNDANT IN ROCKIER SUBSTRATE AROUND THE PERIMETER. STAIN AND COAT WERE OBSERVED ON THE ROCK FACES TO THE SOUTH OF THE TIDAL FLAT, AT THE SOUTHEAST END OF THE SURVEYED PORTION. SOR WAS FOUND IN AND REMOVED FROM ANGULAR BOULDER COBBLE SUBSTRATE IN THE U12. AN ISOLATED PATCH OF SOR WAS RECOVERED FROM SIMILAR SUBSTRATE ON THE NORTH SIDE OF THE BEACH, ON THE BEACH OR TIDAL FLAT ITSELF. COHESIVE LUMPS OF SOR WERE FOUND AT ISOLATED LOCATIONS IN THE MID TO UPPER I12—THESE WERE ALSO RECOVERED. A LARGER BAND OF SOR WAS DISCOVERED ON THE NORTHWEST SIDE OF THE STREAM IN THE U12, AND TO THE EXTENT POSSIBLE WAS RECOVERED. THE LAGOON, ABOVE THE BEACH AT A SEEMINGLY SUPRA INTERTIDAL LEVEL, HAD OBVIOUSLY BEEN OILED (COAT, BATHTUB RING STILL VISIBLE ON SOUTH WALL BORDERING LAGOON) BUT NO OTHER OILING WAS EASILY ACCESSIBLE. ADEC REPS HILL AND GLENN DID VENTURE TO THE SOUTHWEST CORNER OF THE LAGOON (IN HIP WAD) AND FOUND RELATIVELY LARGER AMOUNTS OF SOR IN A VEGETATIVE MATRIX, I.E. SPRUCE NEEDLES.

PAGE 1 OF 1

reviewed 5.17.91 *df*
5/5/91 5/7/91



MAP #1

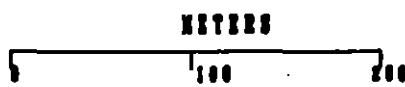
WB001 A

Subdivision Field Map

Map Key: XENWB001Aa

Name: D. Fitzgerald

Date: 15 MAY 1991



AK State Plane Zone 4
substation

reviewed 5.17.91 g
26 reviewed 5/17

- EVERGREENS
- DEAD TREES
- W/ GRASSY AREA
- LOGS
- ROCK SLOPE-FACE
- PHOTOS

ANAD. STREAM
242-32-10155

Sketch MAP (OG)
WB-01-A
D. FITZGERALD
15 MAY 1991
9:25 - 10:40

KENAI
PENINSULA

E. SOR
6 by 6m, 90 UNKNOWN
mixed with spruce
Needle under water

D. SOR
4 by 8m < 1%
I/U AROUND
Boulder + Cobbles

B. SOR
1m² < 1%
I/U COBBLES

C. SOR
1 by 2m < 1%
1m² < 1%
AROUND C + B

Boulder - Cobble - Pebble -
Granule - Sand Beach

BEGIN
SEGMENT
WB-02-A

R.U. * VECO WORKERS REMOVED
Y4 BAG ALL SEEN AND ACCESSIBLE
OILED SEDIMENTS. LAGOON
SOR WAS NOT COLLECTED DUE
TO THE NECESSITY OF CHEST
WADERS TO REACH THE UNDER-
WATER OILED ORGANIC MATERIAL.

A1. CT/ST
1 by 4m, < 1%
ON VERTICAL FACE
2. SOR
2 by 3m
I/U IN Boulder
region

WINDY
BAY

0 25
METERS

reviewed 5.17.91
ES reviewed 5/17

- EVERGREENS
- DEAD TREES
- W/ GRASSY AREA
- LOGS
- Rock slope - face
- PHOTOS

ANAD. STREAM
242-32-10155

PHOTO SITES, WB-1A
ROLL 6-15, FRAMES 12-18

KENAI
PENINSULA

Sketch MAP (OG)

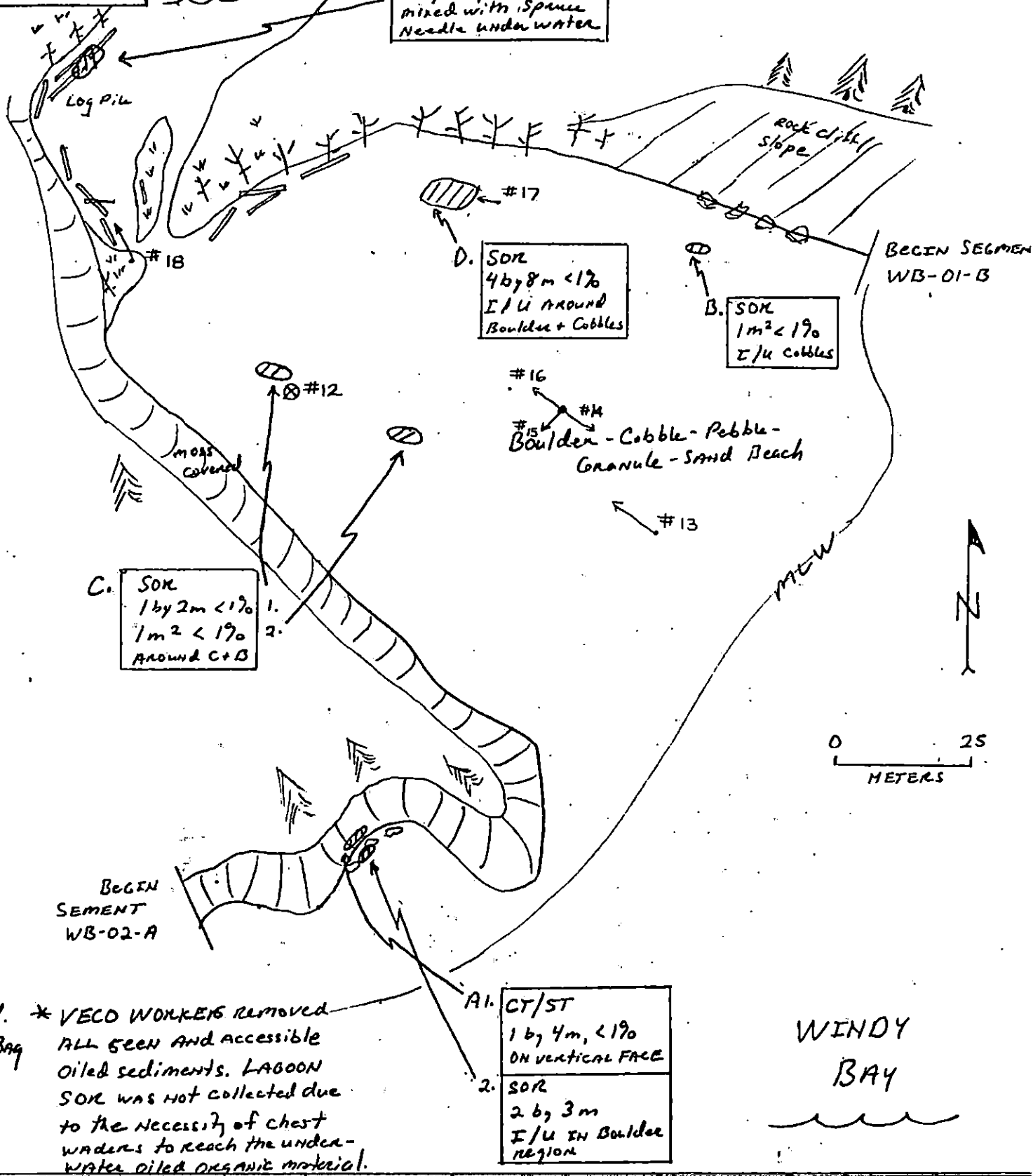
WB-01-A

D. FITZGERALD

15 MAY 1991

9:25 - 10:40

E. SOR
6 by 6m, 90% Unknown
mixed with spruce
Needle under water



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6

DATE 5/15/91

SEGMENT # WB-001

TIDAL HEIGHT(Range) -3.0 to 0 ft

SUBDIVISION A

BIOLOGIST T.R. Schroeder

SEA STATE light chop

WIND SPEED/DIRECTION S.W. = 5-10 mph

PHOTOGRAPHS: ROLL #

FRAME #

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

(A) = Rock outcropping on the southern side of this beach segment containing a thriving community of littorine snails, barnacles and various types of algae. Several types of seaweeds, red/brown algae, laminaria and fleshy brown algae, cover the beach. Sand fleas, hermit crabs and limpets were on or under every rock in the LITZ. A small patch of eel grass extended across the LITZ. SOR & CHT oil was not affecting these organisms.

(B+D) = Again a thick fleshy kelp bed, now located on the northern shoreline from a rock outcropping and extending easterly along the MITZ to the LITZ. Littorine snails and barnacles were very numerous.

The UITZ on this beach is exposed to strong surf action and the smaller gravel substrate is unstable and supports few organisms. Hard mussel regions were occurring in the lower portion of the UITZ. The UITZ and surrounding areas are in some portion of the beach. This stream has always been a non-estuary as far as salmon production is concerned. The stream leaving the lagoon is basically self-surfacing in the summer during melt years. It has never been protected from commercial fishing activities and it is questionable whether fish returning to this system spawn successfully and produce their own progeny. Intertidal communities are lush and thriving and supporting large numbers of feeding shore birds. Remaining oil does not appear to be affecting these organisms.

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS # OF SPECIES TOTAL BIRDS SPECIES PRESENT

Eagles	1 (half-adult)	1	1 sculpin
Seabirds			1 snailfish
Waterfowl	1 wilgeon	2	
Gulls/kittiwakes	1 gull	8	
Shorebirds	1 sandpiper	50	
Corvids			
Other Birds			

MARINE MAMMALS

OBSERVED

LAND MAMMALS

SPECIES

OBSERVED

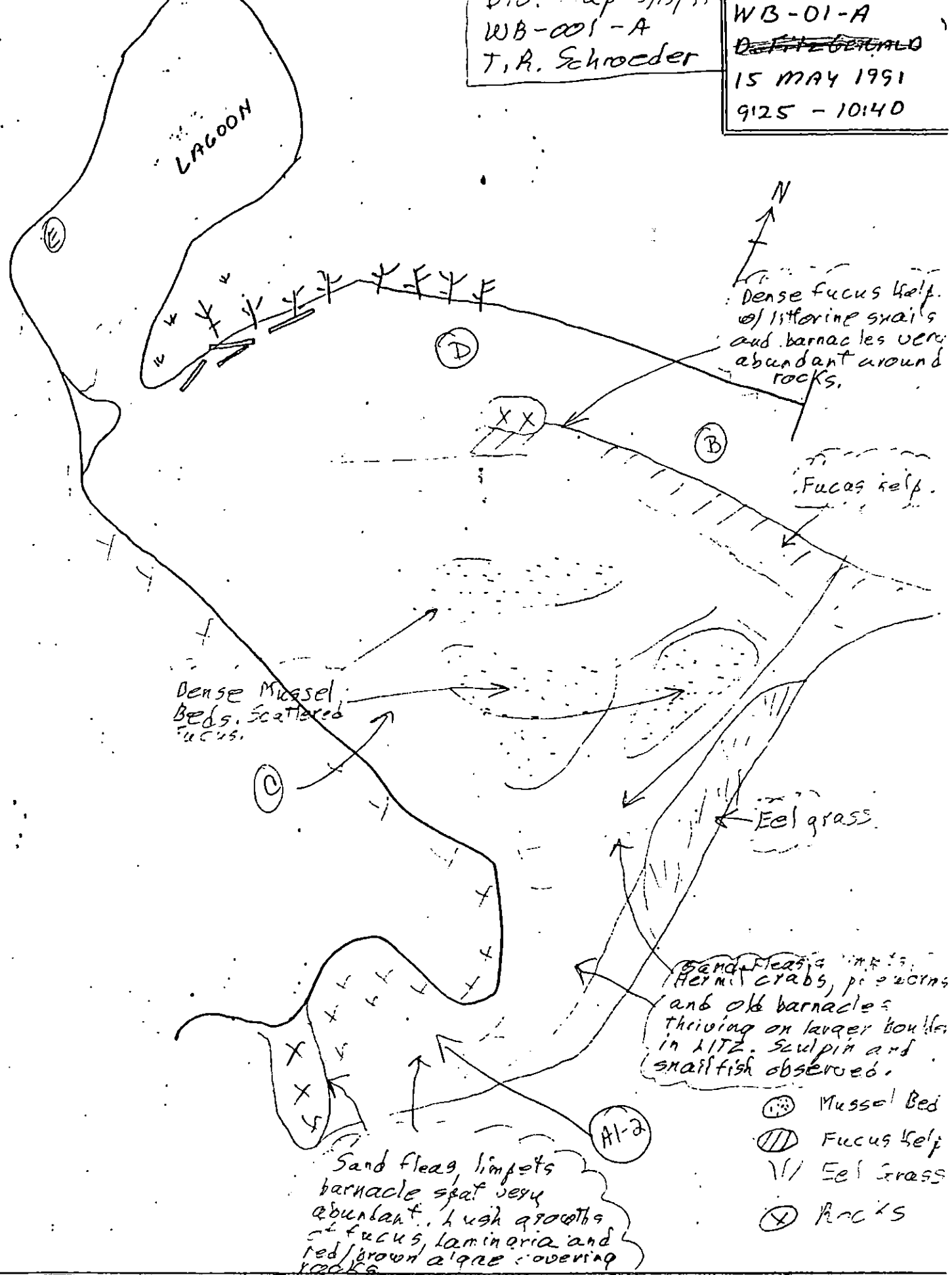
Sea Otters			
Pinnipeds(specify)			
Carnivores(specify)			

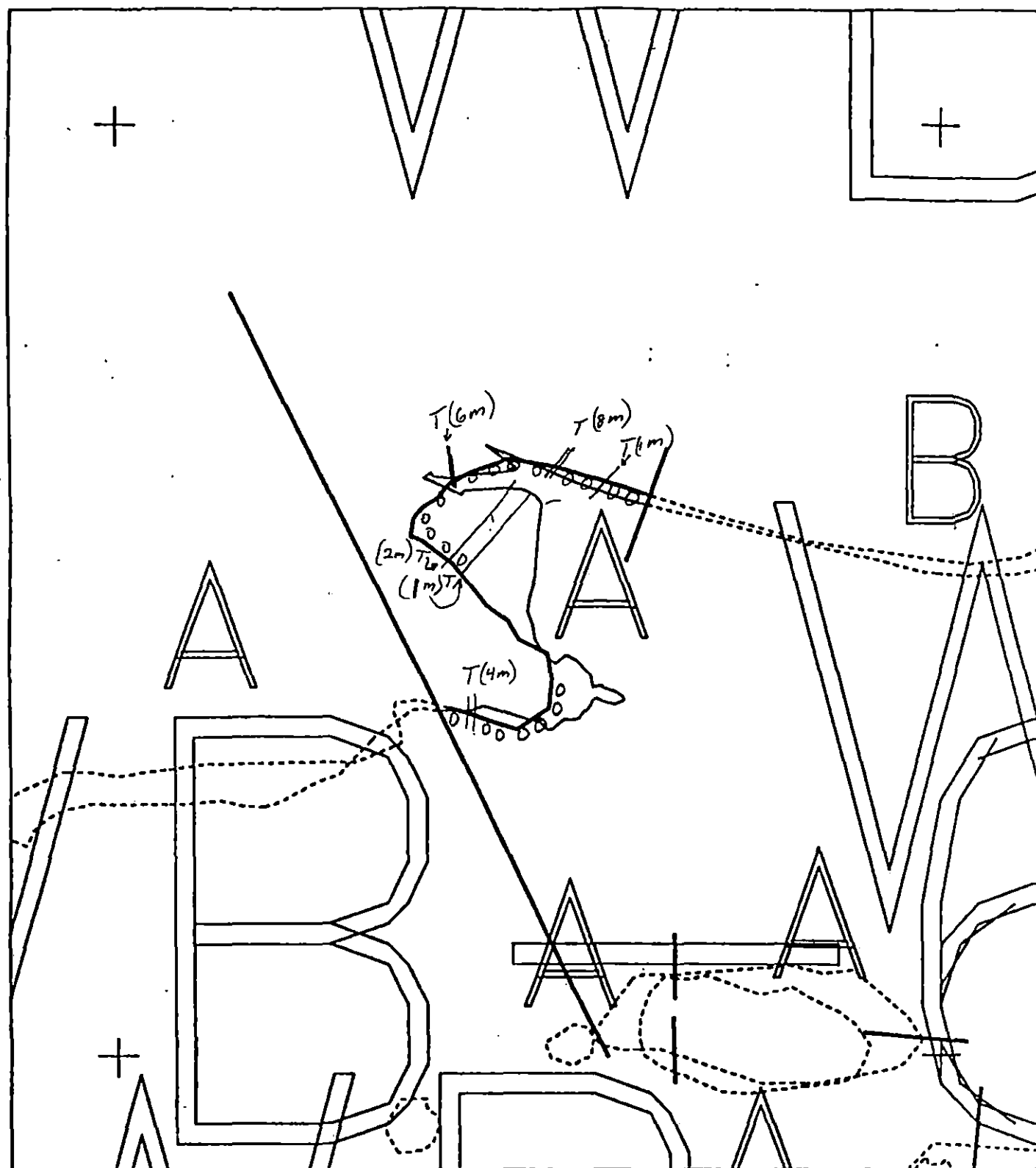
Shoreline subdivision map showing important biological features attached.

2.0000 station 000

WB-001-A
T. R. Schroeder

WB-01-A
~~De F. F. G. G. G. G.~~
15 MAY 1991
9:25 - 10:40





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

WB001 A

ADEC Subsegment Length: 451m
 METERS

AK State Plane Zone 4
 sub001a



Subdivision Field Map
 Map Key: KENWB001A
 Name: Fitzgerald
 Date: 15 May 91
 Date Entered:

revised 5.17.91
 ES revised 5/17

1991 MAYSAP EVALUATION

SEGMENT: WB 001 SUB: B REGION: KEN SURVEY DATE: 5/27/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest,
Fish harvest area

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: [Signature] Date: 6/8/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

N

4

Manual Pickup (Check as Req.)

Spot Washing

Bio-Custombilen Only

Bio-Inipol/Custombien

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL, DATE: JUNE 7 1991

FOSC APPROVAL DATE:

ADEC

FOSC

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

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

MAYSAP FIELD SHORELINE COMMENT SHEET

56

TEAM NO. 4 SEGMENT WB-001 SUBDIVISION B DATE 5/27/91

ADEC

NAME Steve Ferguson SIGNATURE _____

☒ NTR ☐ TREATMENT RECOMMENDED

I ONLY OBSERVED A SMALL AMOUNT OF ST/CT ON A COUPLE OF BOULDERS.

EXXON

NAME George P. Stiles SIGNATURE George P. Stiles 5/29/91

☒ NTR No oil found other than a small trace of CT+5.

LANDMANAGER

NAME Pat Norman OF Port Berham SIGNATURE Pat Norman

☒ NTR no oil found by my self.

USCG/NOAA

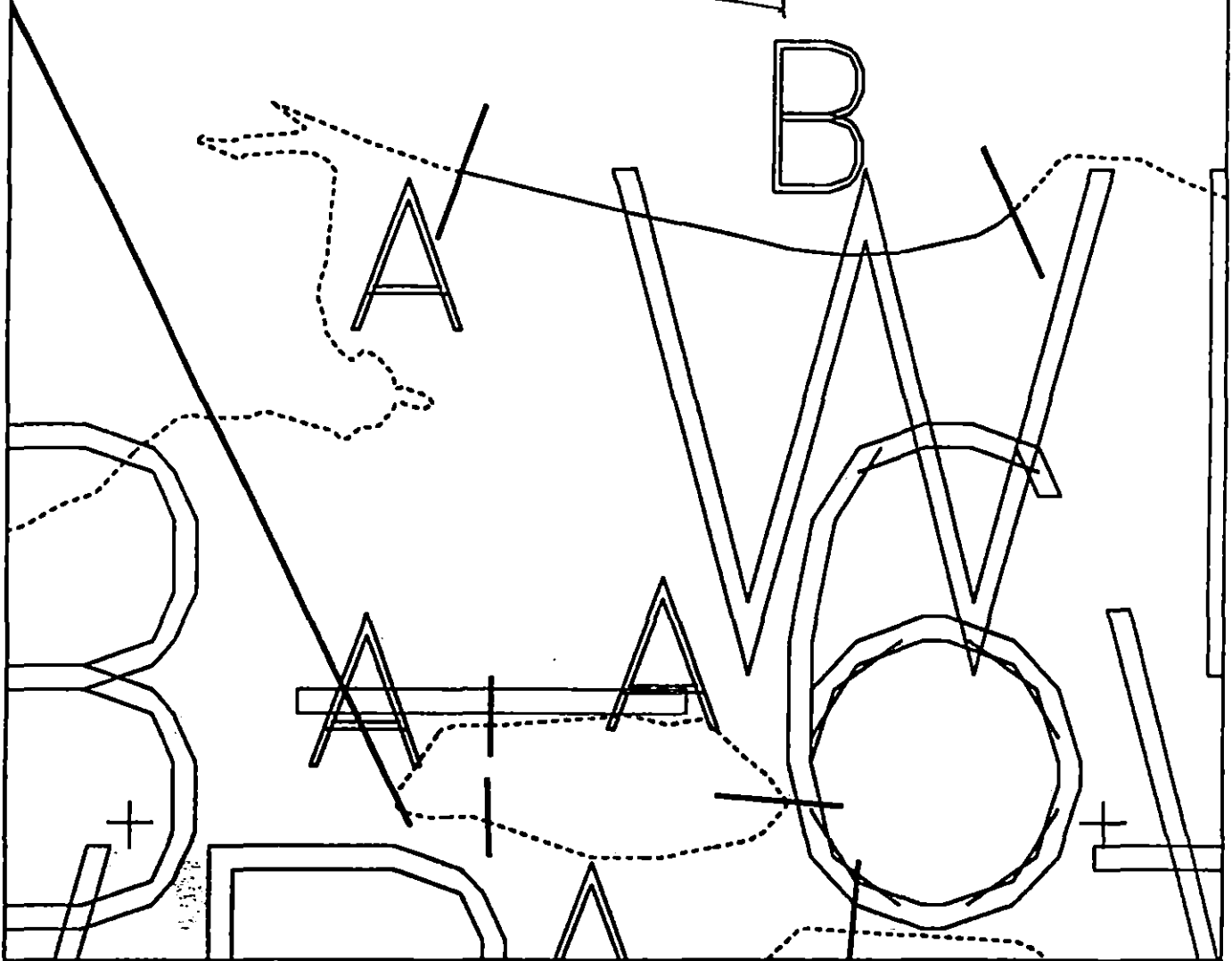
NAME Mr. [illegible] SIGNATURE [illegible]

☒ NTR very little oil found.

Donald M. [illegible]

Reviewed 5.30 9y

Location Map



WB001 B

METERS

0 100 200

AK State Planning Zone 4
suburban

Subdivision Field Map

Map Key: KENVB001Ba

Name: JM Semple

Date: MAY 26/91

Reviewed 5:30 pm

Og sketch MAP.

WB-001-B

Jean Marie Smpels

MAY 26 / 91

0951 - 1004

Legend

[T] Bedrock bluffs

[~] Boulder fringe

[.] ch over pl/gn

Well sorted
cobbles veneer
over pl/gn.

Fringe of boulders
next to the bedrock
bluffs.

A1

St, zoomdia
on intertidal
boulder.

Metres
0 20 40

REVIEWED: MC 5/31/91
reviewed 5:30 9/8

MAVSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 26 MAY '91
 SEGMENT # WB001 TIDAL HEIGHT(Range) +3.5 TO
 SUBDIVISION B BIOLOGIST Jim Rott
 SEA STATE FLAT WIND SPEED/DIRECTION —
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

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

A1 - BOULDER W/ DENSE BARNACLES, LITTORINES, LIMPETS.

GENERAL COMMENTS: A FAIRLY EXPOSED COBBLE/BOULDER BEACH
WITH ABUNDANT LITTORINES, LIMPETS. MUSSELS OCCUR IN SMALL
PATCHES. BARNACLES (INCL. SPAT) MODERATELY ABUNDANT, BECOMING
MORE DENSE TOWARD W. END OF BEACH. LITTORINE EGG MASSES
FOUND UNDER COBBLES IN MTS, WHERE BEACH HOPPERS AND NEREID
WORMS WERE ALSO FOUND. A HEALTHY INTERTIDAL COMMUNITY.

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds(specify)			
_____les(specify)			
_____les(specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed MB 5/31/91

Og. sketched map.

WB-001-B

Jean Marie Seeps

MAY 26 / 91

0951 - 1004

Legend

[TF] Bedrock bluffs

[LW] Boulder fringe

[C] cb over pl/gr

BioMAP

ROTH

Well sorted
cobble veneer
over pl/gr.

Fringe of boulders
next to the bedrock
bluffs.

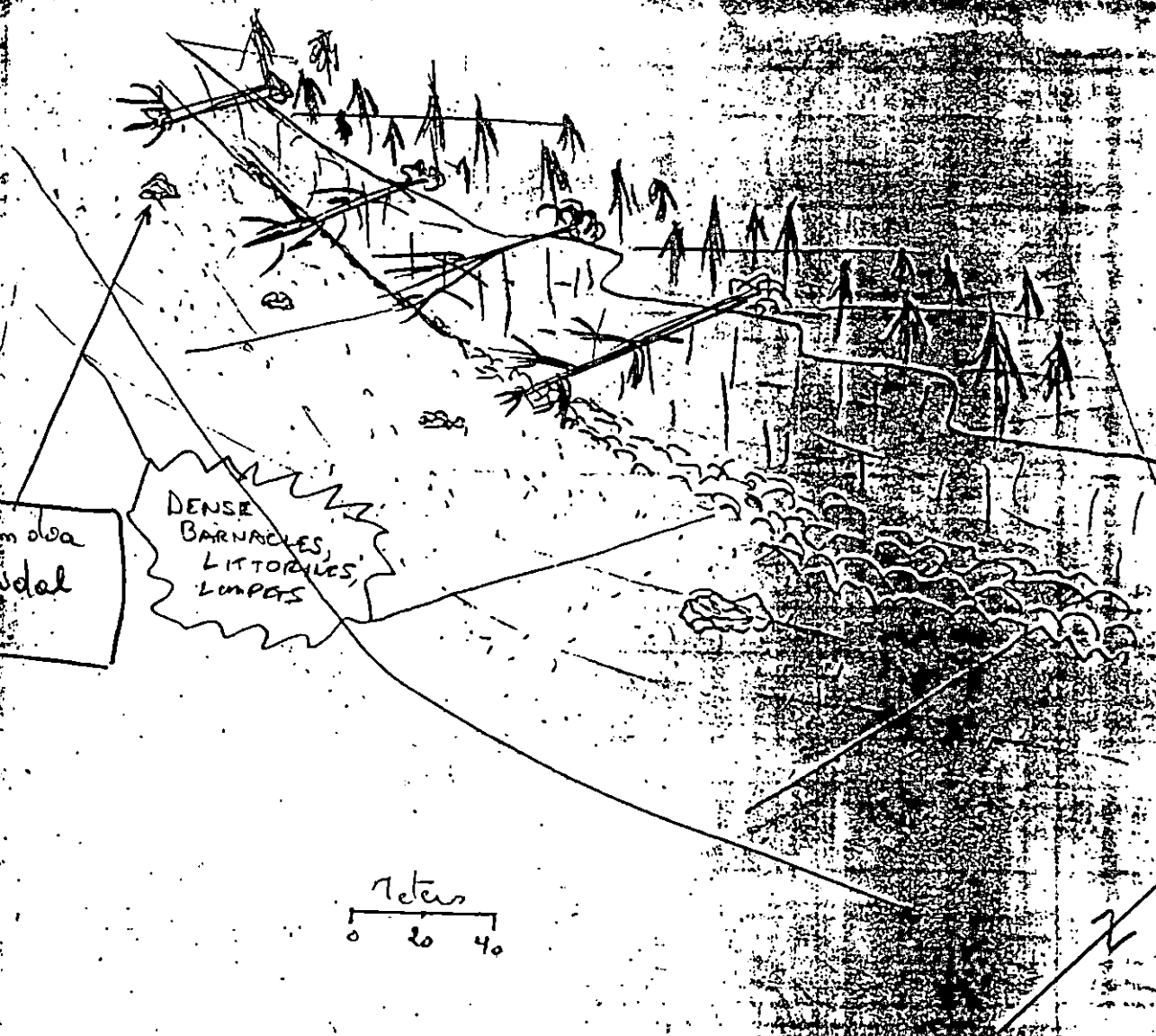
A1

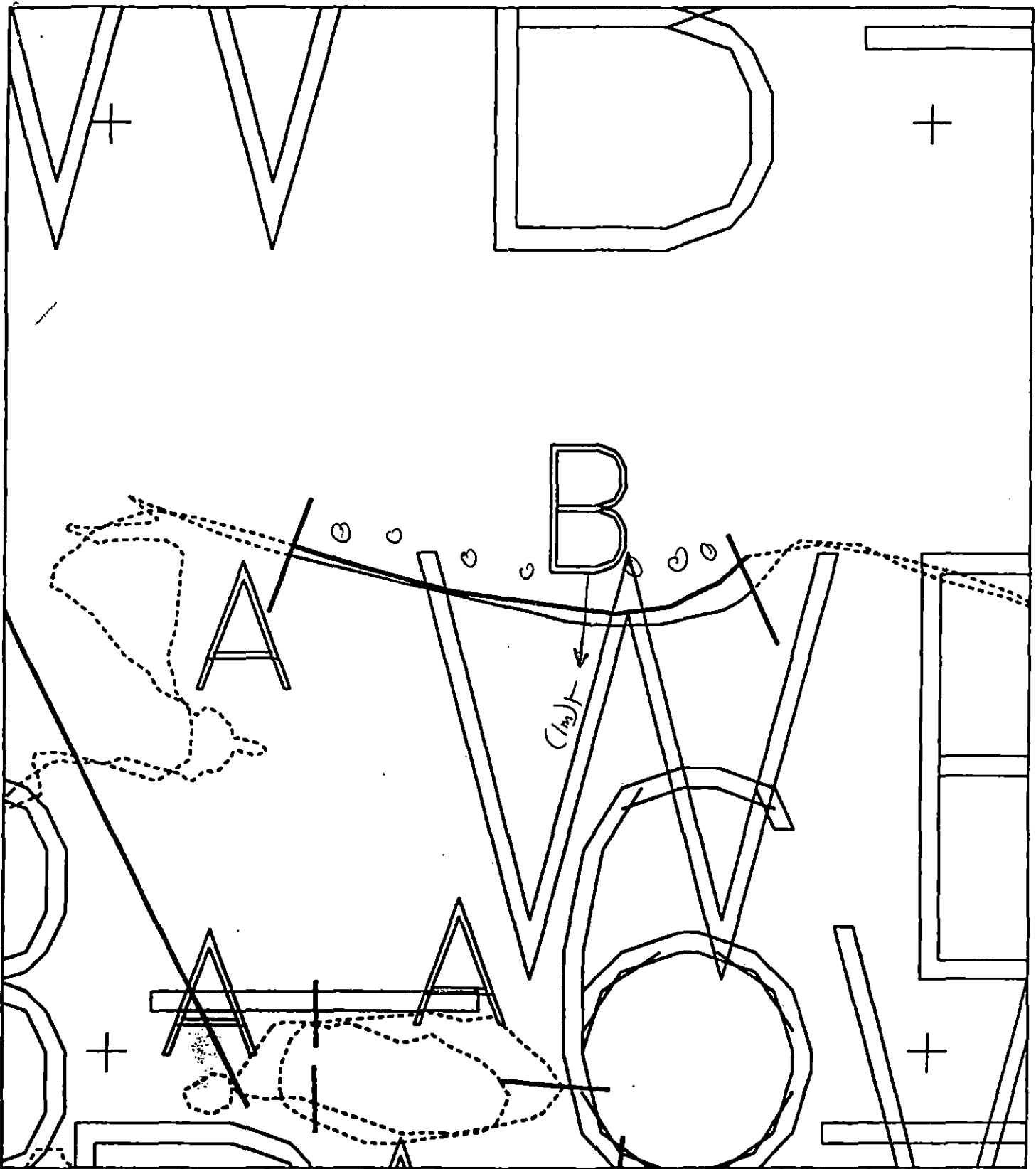
St. 20 cm dia
on intertidal
boulders

DENSE
BARNACLES
LITTORINIDS
LUMPS

7 meters
0 20 40

Revised MB 5/18/91





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

WB001 B
 ADEC Subsegment Length: 345m
 METERS
 0 100 200
 AK State Plane Zone 4
 sub001b



Subdivision Field Map
 Map Key: KENWB001B
 Name: J. M. Sempich
 Date: MAY 26 / 91
 Date Entered:

REVISOR: MC 5/31/91
 revised 5:30 PM

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ WB-001 STREAM NO: 242-32-10155 DATE 4/29/90

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)
1J Purse seine area (7/1 to 8/31)
5T All bald eagle nests (3/1 to 6/1)
Active eagle nests (3/1 to 9/1) - one additional eagle nest located within adjacent segment WB-02

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Subject stream is located within subdivision A (1 of 2). No additional ecological constraints.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Rachel Jean Wain DATE: 5/22/90

Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommend manual removal of pavement, mousse and patties in the UITZ and MITZ. Work from 6/2 to 7/1 with approval of USFWS regarding eagle nests.

TAG COMMENTS: BIOREMEDIATION (CUSTOMER) AS REQUIRED FOLLOWING TARMAT REMOVAL.

SPOT WASH AS REQUIRED TO REMOVE POOLED OIL FROM CRACKS IN ROCK FACE AS INDICATED ON SKETCH.

TAG APPROVAL DATE: 5/18/90

ADEC ART WEINER Dan Weiner

EXXON ANDY TEAL Andy Teal

NOAA GARY POLINE Gary Poline

USCG G.A. REITER G.A. Reiter

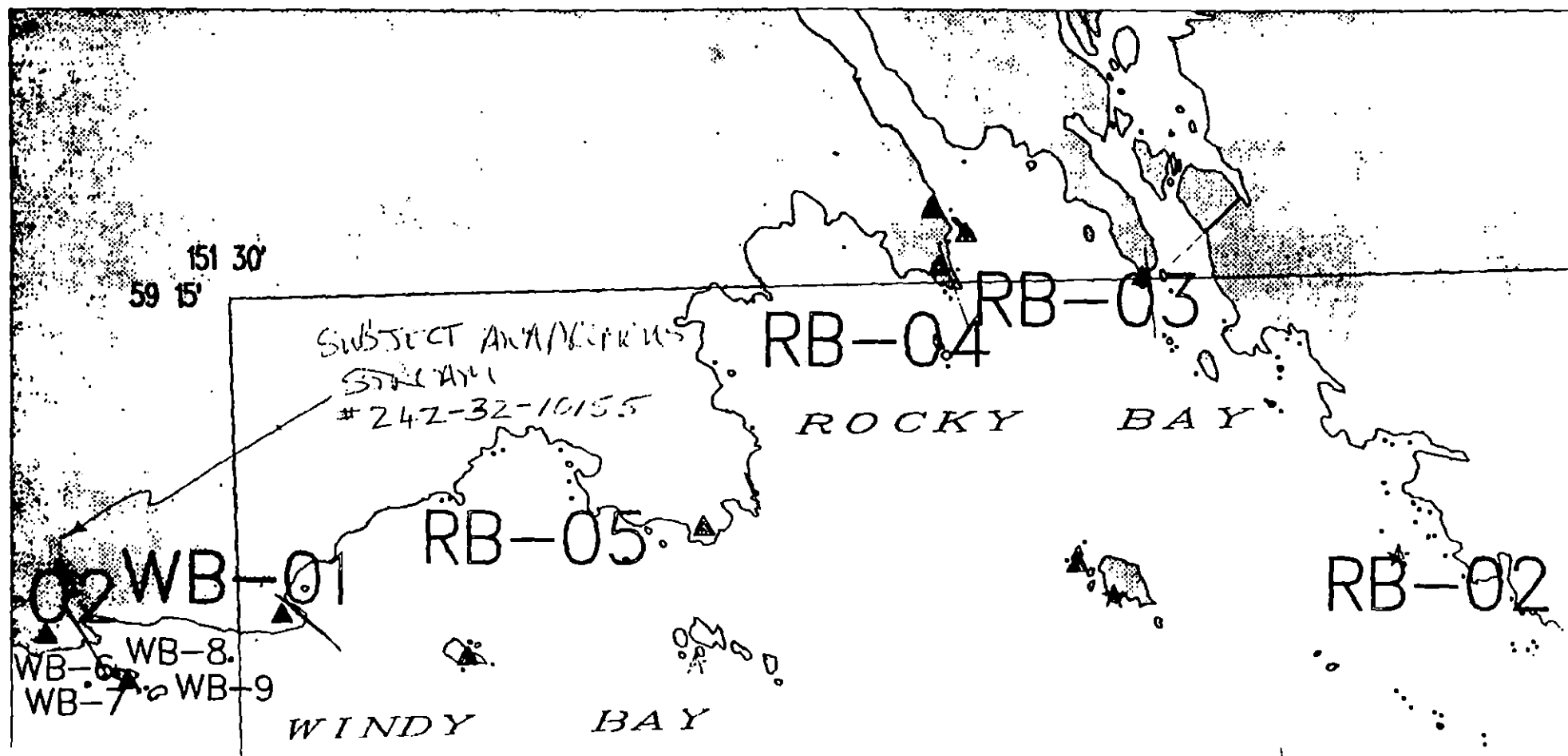
FOSC: W L DATE: 6-June 90

57 1 9A 11
174

WIK-1

SUBMISSION # A
SUBJECT (SECRET)

SE EAGLE NESTS



ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 242-32-10155

SEGMENT WB-1 SUBDIVISION A

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Spot Washing	OPEN
Bioremediation More Than 100m From Stream	OPEN
Bioremediation Less Than 100m From Stream	WORK PRIOR TO 7/1 (ADF&G MONITOR REQ.)

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

- 1A,1B Salmon Stream** ADF&G catalogued anadromous stream (242-32-10155) is in Subdivision A. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation and are permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream. No constraint to manual pickup, tarmat removal or spot washing.
- 1J Purse Seine Area** No constraint to manual pickup and tarmat removal. Closed to bioremediation and spot washing after 7/1.
- 5T Bald Eagle Nest** NO CONSTRAINT. USFWS bald eagle impact assessment completed on 5/19/90 by Mary Portner indicates no active nests within 400m of the work area.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/1. No disturbance to stream bed or bank. No flushing of pollutants or sediment into stream drainage; do not allow inipol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM WB-1A
FOR ADDITIONAL CONSTRAINT INFORMATION.

TAG APPROVAL DATE 5/29/90
ADEC ART WEINER
EXXON ANDY TATE
NOAA DAVID R. BROWN
USCG G.A. BREITEN

FOSC

[Signature]

DATE

5/29/90

Incorporates information from
USFWS Bald Eagle survey 5/19/90.

Anadromous
& Tidal
242-32-10155

Work Area

WB-01

Inactive
Nest

Inactive Nest

Active
Nest

Active
Nest

Inactive
Nest

NO Nest Observed
No Adults
seen



Exxon Company, USA
Map Key: KET-WB-1



ECOLOGY MAP 5/28
SEGMENT WB-1
SUBDIVISION A (1 of 2)
METERS
1 inch = 1694 feet

★ Seabird Colony
▲ Eagle Nest

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ WB-001 STREAM NO: 242-32-10155 DATE 4/29/90

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)
1J Purse seine area (7/1 to 8/31)
5T All bald eagle nests (3/1 to 6/1)
Active eagle nests (3/1 to 9/1) - one additional eagle nest located within adjacent segment WB-02

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Subject stream is located within subdivision A (1 of 2). No additional ecological constraints.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Rechel Jean (Jen) DATE: 5/22/90

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommend manual removal of pavement, mousse and patties in the UITZ and MITZ. Work from 6/2 to 7/1 with approval of USFWS regarding eagle nests.

SEE CONSTRAINT ADDENDUM
DATED 5/28/90 Rex C.

TAG COMMENTS: BORRANGATE (CUSTOMER) AS REQUIRED FOLLOWING
TARMAAT REMOVAL

SPOT WASH AS REQUIRED TO REMOVE POOLED OIL FROM
CRACKS IN ROCK FARE AS INDICATED ON SKETCH

TAG APPROVAL DATE: 5/15/90

ADEC ART WEINER

EXXON ANDY TGA

NOAA GARY PETERSON

USCG G.A. DEITER

FOSC: DATE:

NOTE: NOT FOSC
APPROVED 5/28/90 mm

ANADROMOUS FISH STREAM ASSESSMENT

REGION: KENAI

SEGMENT: WB-001

SUBDIVISION: A

STREAM NO: 242-32-10155

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ WB-001 STREAM NO: 242-32-10155 DATE 4/29/90

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)
- 1J Purse seine area (7/1 to 8/31)
- 5T All bald eagle nests (3/1 to 6/1)
- Active eagle nests (3/1 to 9/1) - one additional eagle nest located within adjacent segment WB-02

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Subject stream is located within subdivision A (1 of 2). No additional ecological constraints.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommend manual removal of pavement, mousse and patties in the UITZ and MITZ. Work from 6/2 to 7/1 with approval of USFWS regarding eagle nests.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 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 unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 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 267-2206
- ✓ 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7H Deer harvesting (8/15 to 2/28)
 7J Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / WB-1 SUBDIVISION: ^{ASG} 242-32-10155 DATE 29 APR 90

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

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Type A manual pickup.

ADEC A.O.F.B.G.
NAME Lee Glenn SIGNATURE Lee Glenn

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Type A manual removal -
Remove oil from rock face wall on south side of intertidal lagoon. Clean oil from the bottom of the lagoon (under floating debris) including some floating oily organic material, located just beyond this rock wall.

Remove tar mats in the intertidal zone.

Contact Lee Glenn prior to the start of this work so that an A.O.F.B.G. assessment can be placed on site.

The attached A.O.F.B.G. assessment completed on 4.16.90 has not changed since 4.29.90.

LAND MANAGER
NAME 4-29-90 Andersen SIGNATURE Andersen

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

SHORELINE OILING SUMMARY (ANAO)

REV 2-88-10-01

OG CAL LARSON USCG DREHER, CWE SEGMENT ST/ UB-01
 BIO KEN CRITCHLOW LAND REP STREAM 242-32-101551 OF 1
 EXXON DARL H YOE ADFG LEE GLENN TIME 4:00 TO 4:45
 TEAM NO. 14 TIDE LEVEL +6 FT. DATE 4/29/90
 EST. SUBDIVISION LENGTH: 120 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 100 % B 0 % C 20 % P 10 % G 10 % S 40 % M 10 % V 0
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 120 m N 0 m VL 0 m NO 0

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	A	B	C	D	1	2	3	4	5	SW	U	M	L
ASPHALT PAVEMENT	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓
POOLED			✓		✓					✓	✓		
COVER	✓				✓					✓	✓		
COAT													
STAIN	✓				✓					✓	✓		
MOUSSE		✓	✓					✓		✓	✓		
PATTIES		✓	✓		✓					✓	✓		
TARBALLS													
FILM				✓		✓				✓			
NO OIL													✓

PAVEMENT (H) F S 25 sq. m by 3PATTIES / TARBALLS 40 BAG

NEAR SHORE SHEEN? NO BR RW (SD) TL

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

Did you COLLECT DEBRIS
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. _____

Frames _____

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE SUBSURFACE SEDIMENT
		OF	OR	OL	OF	NO		UD	UC	1	2	3	4	5	SW	U	M	L				
1	25					✓	.								✓							SD CR-5DCR
							.															
							.															
							.															
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							.															
							.															

COMMENTS IN BACK INTERTIDAL COAST CARD REP. OBSERVED POOLED OIL IN CRACKS/INTERSTICES - UNABLE TO DETERMINE EXTENT OF OILING. SOME SHEENING OBSERVED IN BACK INTERTIDAL LAGUN.

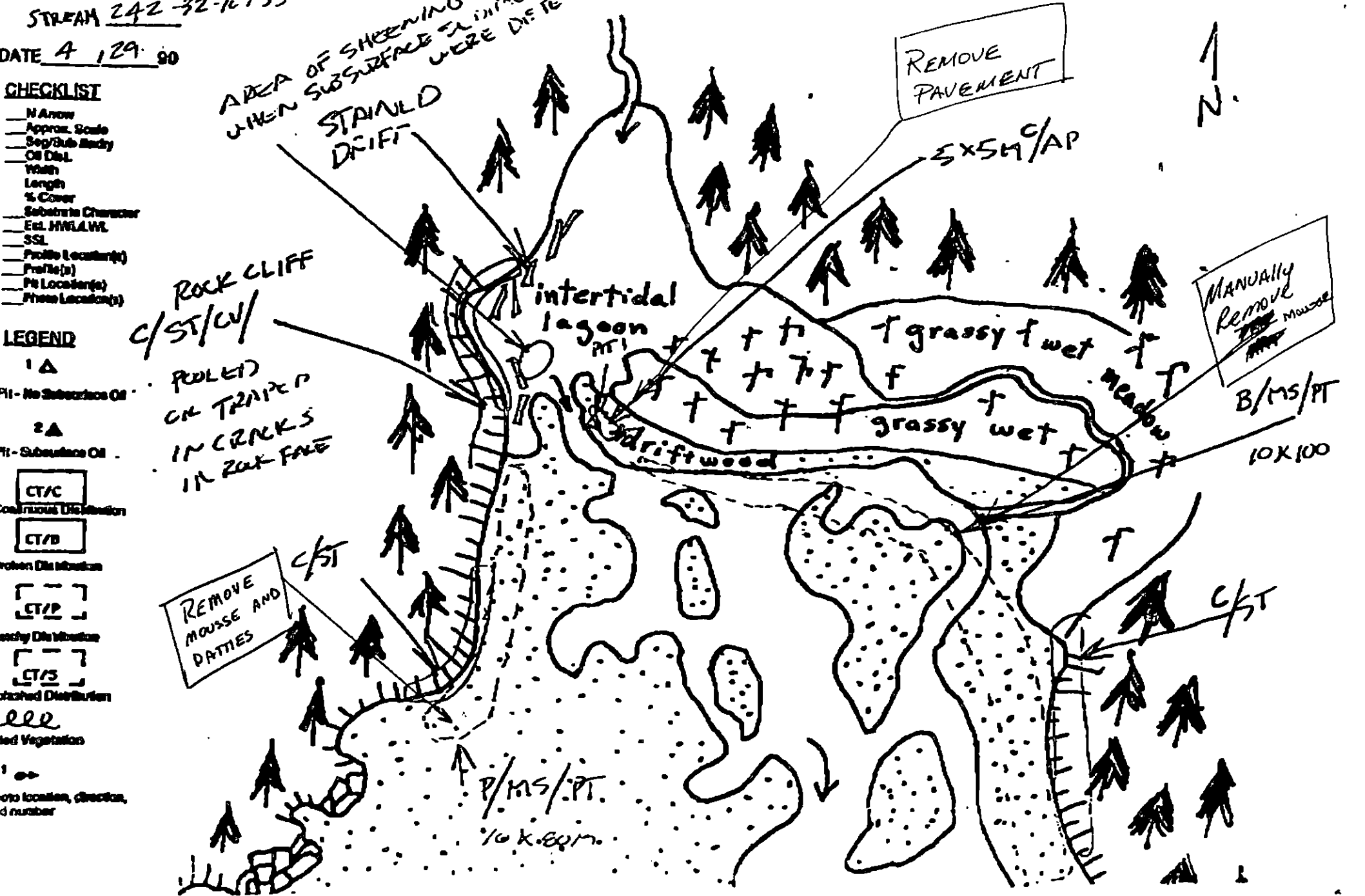
REVIEWED _____ DATE _____

CHECKLIST

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

LEGEND

- 1 Δ
- FI - No Subsurface Oil
- 2 Δ
- FI - Subsurface Oil
- CT/C
- Continuous Distribution
- CT/D
- broken Distribution
- CT/P
- scaly Distribution
- CT/S
- stashed Distribution
- lee
- led Vegetation
- 1 ●
- oto location, direction, d number



9/10

Seg ID: WB-001 Subdiv: No ASC #
Survey Date: 4/29/90
Comments by: Ken Critchlow

This high energy site was apparently oiled during a very high tide and/or storm that resulted in deposition of oil in the lagoon above the beach storm berm. The stream discharges across a broad area of beach below the storm berm. In this region a narrow band of mousse/patties was observed in the MIZ along both shores. Oil stain was also noted in the same locations. The storm berm adjacent to the right (east) bank was partially covered by asphalt pavement. The lower half of the lagoon on the west side was characterized by pooled oil trapped in cracks, stain and cover. Within the lagoon, disturbed sediments produced sheen; logs were stained.

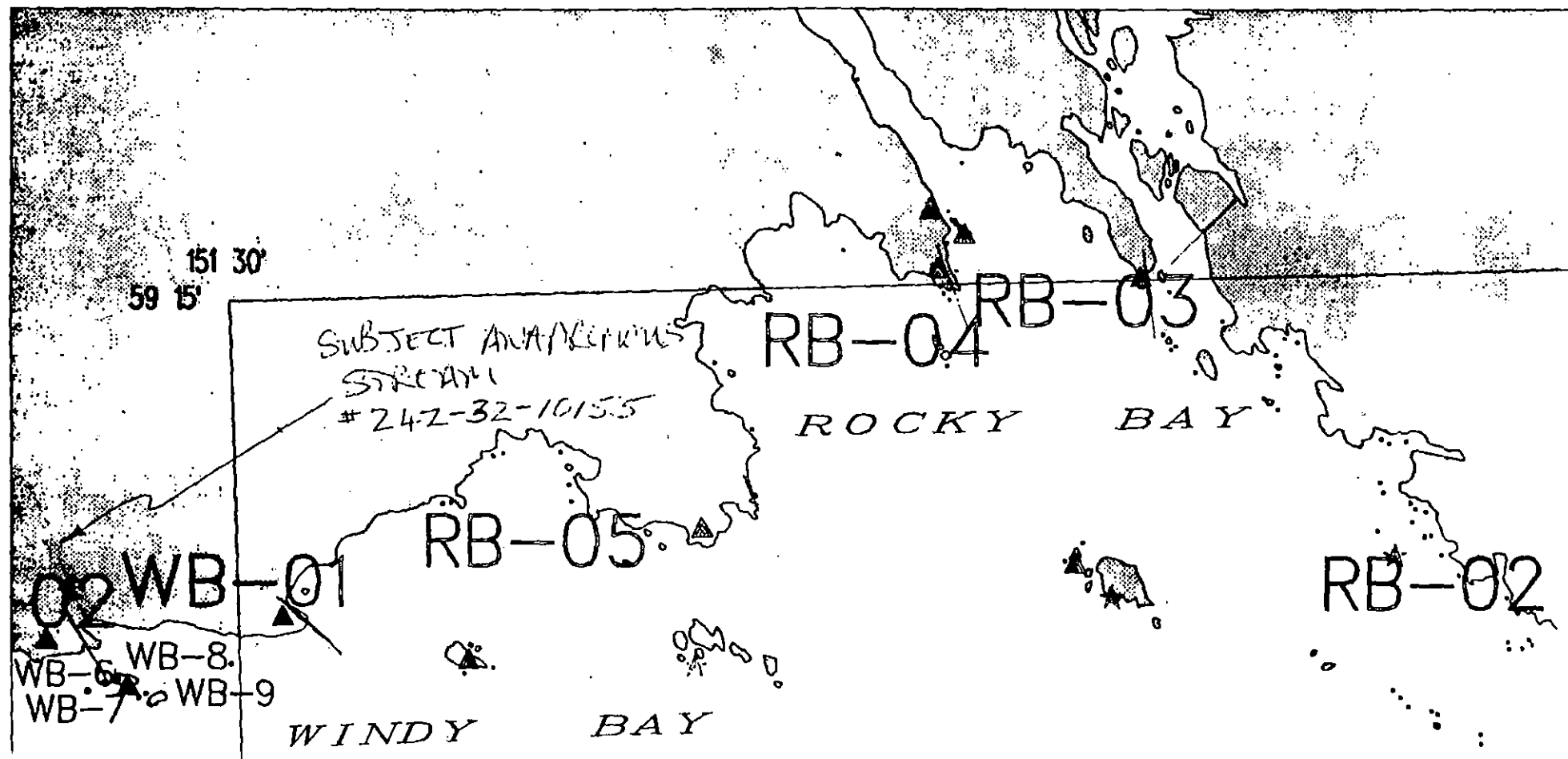
I recommend that mousse/patties along the shores below the storm berm be removed by shovel. The asphalt pavement in the storm berm can also be removed by shovel; a pit in this location didn't indicate subsurface oil. Sediments that produce sheen in the lagoon should be removed by shovel. Pooled oil in rock cracks may be removed using trowels and subsequently

5T-1 1A 1B
1T+

WB-1

(SUBDIVISION # A 1175
SUBJECT STREAM)

SE EAGLE NESTS



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