

OIL SPILL PUBLIC INFO. CENTER



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1991
v.10

[Shoreline evaluations, 1991].

Kenai WB-07 to YP-02

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REGION: KENAI

SEGMENT: ST/WB-07

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ WB-07 SUBDIVISION A (1 OF 1) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5S Shorebird/Waterfowl concentration (4/25 to 5/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 13 m: Medium 116 m: Narrow 0 m: V.Light 27 m: No Oil 14 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 tarmat removal, manual pick up of pooled oil and
mousse and bioremediation of oil cover, coat and pooled oil areas (see
attached sketch map for locations). Work should be conducted after
5/15 due to shorebird/waterfowl constraint.

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 unholed 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 1 WB-7 SUBDIVISION: A DATE 4/2/90

USCG NAME R. Bryan Hirtle SIGNATURE R. Bryan Hirtle DCI

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

agree with Shoreline Oiling Summary
sheet

ADEC NAME Russell Kunibe SIGNATURE Russell Kunibe

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

There were bands of asphalt and mastic between the
boulders. The surface of the rocks in these areas had a sticky
black coat.

LAND MANAGER

NAME Patrick Norman SIGNATURE Patrick Norman

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Some manual pickup in this area will get some oil out. But
warm water flushing of the rock surfaces will improve the appearance
of the area and collect more of the oil at the same time.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Randy Siegel USCG Bryan Hirtle SEGMENT ST/ A WB-7 (1 sub. division)
 BIO Mike Fawcett LAND REP Pat Harmon SUBDIVISION A (1st of 1)
 OXON John Dean ADEC Russell TIME 17:10 to 17:40
 TEAM NO.: 17 TIDE LEVEL: +3.5 to +1.4 DATE 4/7/90
 EST. SUBDIVISION LENGTH: 123 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 30 % B 50 % C 10 % P 5 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Long 10 % Hang 50 % Vert 10 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 10 m M 30 m N NA m VL 25 m NO 8 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	B	P	S	SP	BR	BL	OW	SL	OR	TL	LR	SU	UI	M	U
ASPHALT PAVEMENT		X		✓							X			X	✓	
POOLED			X									X		X		
COVER		X	✓			X								X		
COAT		X	✓			X								X		
STAIN		X	✓			X								X		
MOUSSE		X												X		
PATTIES				X		X								X		
TARBALLS				X		X								X		
FILM																
NO OIL													✓			✓

PAVEMENT: H (E) S 400 sq. m by 3 cmPATTIES / TARBALLS 100 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE —#BAGS 0Photographs: (None)Roll No. ST-17-5Frames 99, 10, 16, 17, 18SUBSURFACE OIL No pits dug due to the presence of large boulders

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	BL	OW	SL	OR	TL	LR	SU	UI	M	U		
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COMMENTS

This segment contains only 1 subdivision. It consists of a south-facing shoreline largely covered with boulders. Boulders are very large. Steep cliffs overlie beach. An 80-meter long band of asphalt occurred across the UI of the beach, and ranged in width from 4-6 meters. Several areas of lesser oiling were observed. The size of the boulders prevented digging pits, and largely concealed much of the asphalt.

SEGMENT S 3-7SUBDIVISION 1DATE 4/1/90

CHECKLIST

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

LEGEND

1 Δ

P1 - No Subsurface Oil

2 Δ

P1 - 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

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SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / WB 7 Subdivision A Date (mo / day / yr) 4 / 7 / 90Time (24 hr) 1735-1800 Biologist M. H. Faulcett

- (A) Substrate type and % of segments:
 (1) Bedrock 30 (2) Boulder 50 (3) Cobble 10 (4) Pebble 5 (5) Sand 5 (6) Silt 0
 (incl. 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 (3)

Photographs:
Roll No. ST-17-5Frames 6, 9, 10, 16-18

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:

Dense large Balanus cariosus in LTZ, ^{dense} Chthamalus spat throughout MTZ & UTZ.
 10-40 limpets and limpets abundant in LTZ.

2 Oystercatchers

Ecological Considerations:

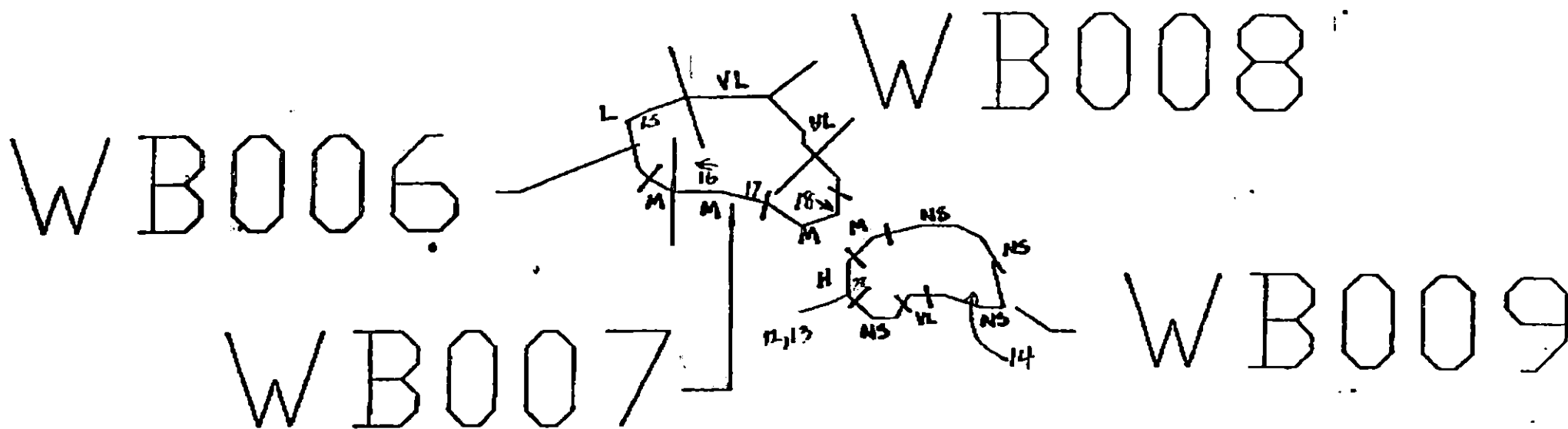
SS Bird concentration area

Photos: 57-17-5

~~Frames 6, 9, 10, 16, 17, 18~~

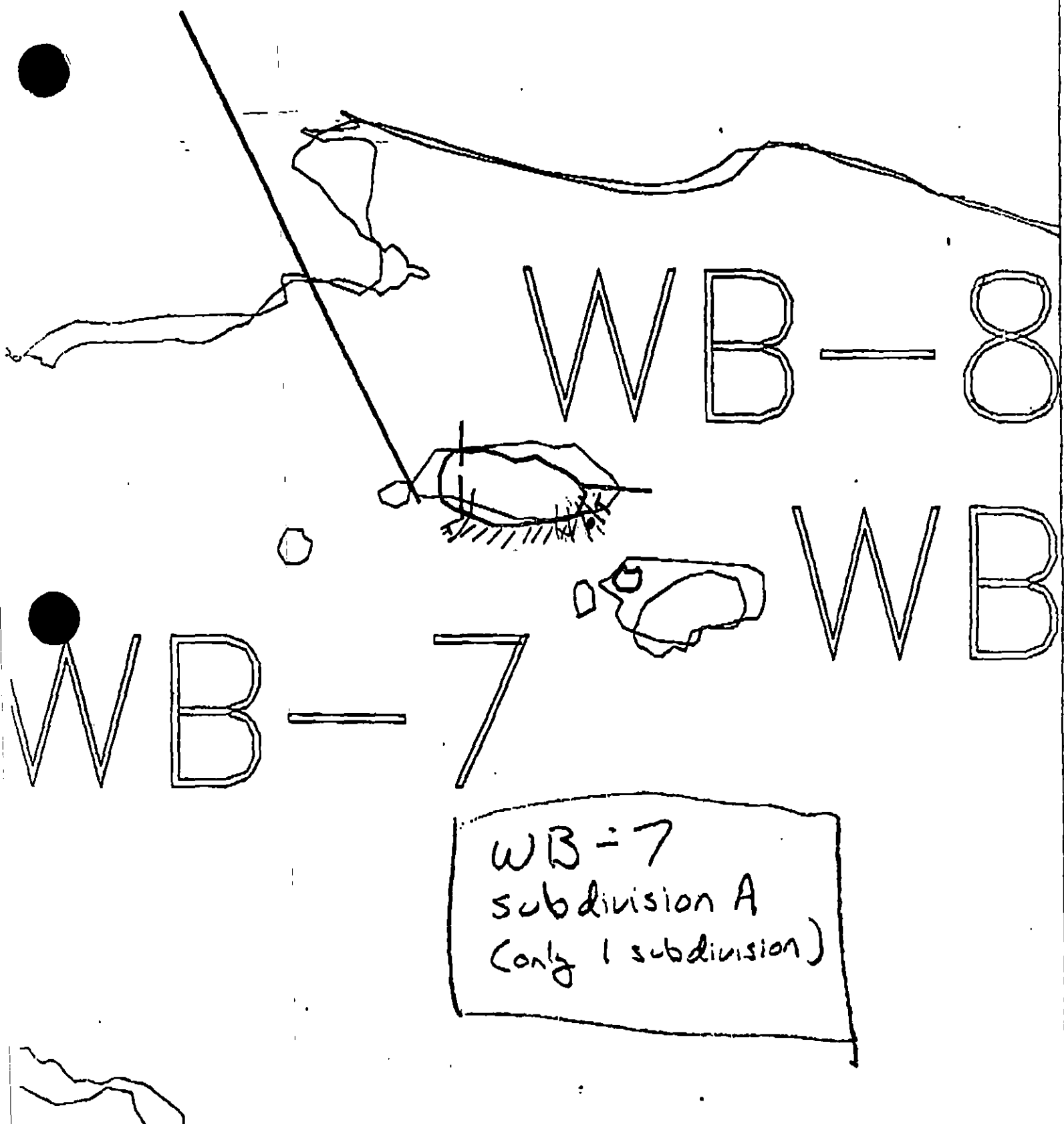
~~4/16/58~~
Frames 6, 9, 10, 16, 17, 18

U.S. AIR FORCE
1958
SC 21:48



OILING	
■	Heavy
■	Moderate
■	Light
■	Very Light
■	None
■	Not Surveyed
Distance in Meters	
6 Sep/Oct 1958 Survey	

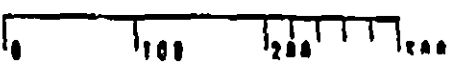
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XXXX Wide
/// Medium
--- Narrow
TTTT Very Light
OOOO " " " "

WB-X7

ADEC Segment Length: 513m



Map Key: KEN-149
Name: Randy Seay
Date: 4/7/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT WB-7 SUBDIVISION A (1 of 1)

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

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1J	Purse Seine Area	No constraint to manual pickup and tarmat removal; closed to bioremediation after 7/1.
5S	Shorebird/Waterfowl Concentration	No constraint to manual pickup, tarmat removal and bioremediation after 5/15.
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

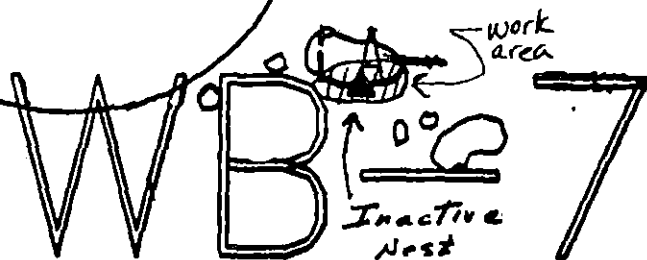
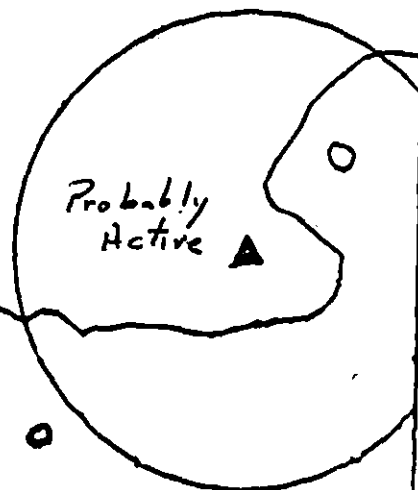
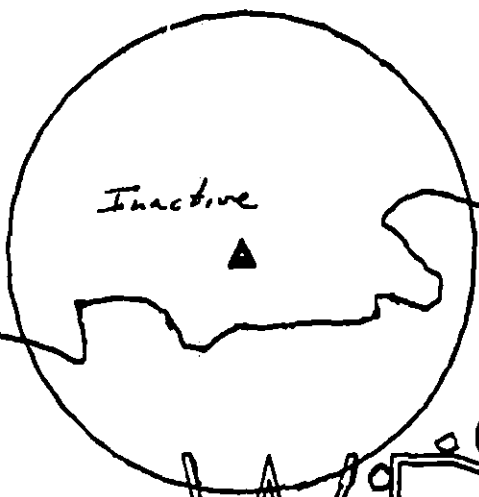
Restrict boat and air traffic to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

TAG APPROVAL DATE 5/24/90
ADEC ART WEINER
EXXON ANDY GAZ
NOAA R. W. Scott
USCG M. J. Hall

FOSC [Signature] DATE 5-24-90

Prepared By: Andru May RAC

Date 5/22/90



Exxon Company, USA
M. V. 100-100-7

ECOLOGY MAP
SEGMENT WB-7
SUBDIVISION A (1-1-1-1)
METERS

★ Seabird Colony
▲ Eagle Nest

SHORELINE EVALUATION

SEGMENT S# / WB-07 SUBDIVISION A (1 OF 1) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5S Shorebird/Waterfowl concentration (4/25 to 5/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles J. Holmes DATE: 4/20/90

OILING CATEGORIZATION:

Wide 13 m: Medium 116 m: Narrow 0 m: V.Light 27 m: No Oil 14 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u>X</u> Tarmat: <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 pooled oil and
mousse and bioremediation of oil cover, coat and pooled oil areas (see
attached sketch map for locations). Work should be conducted after
5/15 due to shorebird/waterfowl constraint.

SEE CONSTRAINT ADDENDUM
DATED 5/24/90 RYC.

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/90.
ADEC ART WEINER Art Weiner
EXXON ANDY TOL Andy Tol
NOAA BILL WISSELL Bill WisSELL
USCG KENNETH KEANE Kenneth Keane

FOSC: MYL DATE: 5-12-90

SHORELINE EVALUATION

SEGMENT ST/ WB-07 SUBDIVISION A (1 OF 1) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5S Shorebird/Waterfowl concentration (4/25 to 5/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles J. Hines

DATE: 4/20/90

OILING CATEGORIZATION:

Wide 13 m: Medium 116 m: Narrow 0 m: V.Light 27 m: No Oil 14 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u>X</u> Tarmat: <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 pooled oil and
mousse and bioremediation of oil cover, coat and pooled oil areas (see
attached sketch map for locations). Work should be conducted after
5/15 due to shorebird/waterfowl constraint.

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/90

ADEC ART WEINER Art Weiner
EXXON ANDY COLE Andy Cole
NOAA BILL WESCOTT Bill Wescott
USCG KENNETH KEANE Kenneth Keane

FOSC: ML

DATE: 5-12-90

SEGMENT 3-7

SUBDIVISION

DATE 11-90

CHECKLIST

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

LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patched Distribution

CT/S

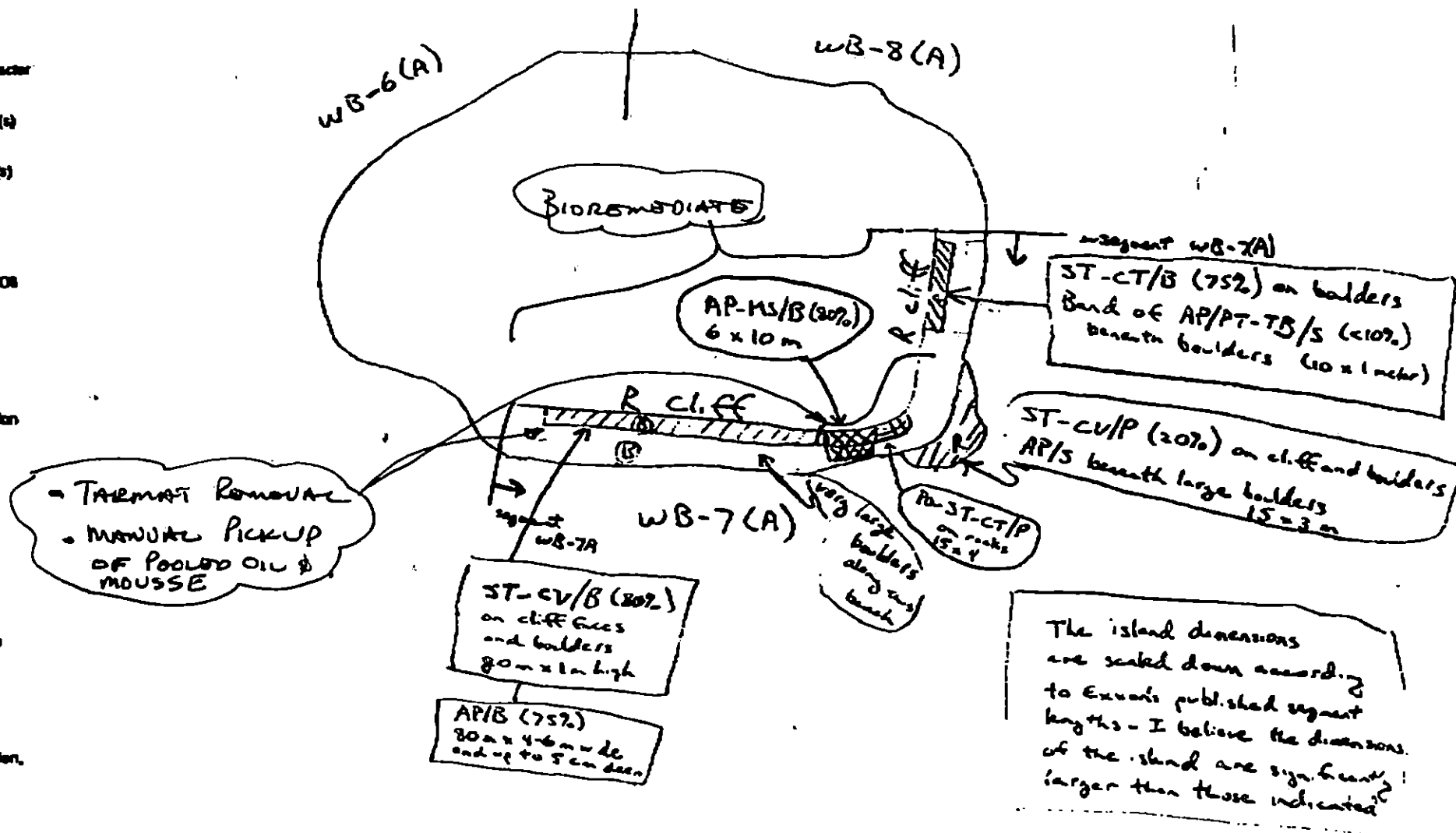
Splashed Distribution

Oil on Vegetation

1 ●→

Photo location, direction, and number

SKETCH MAP



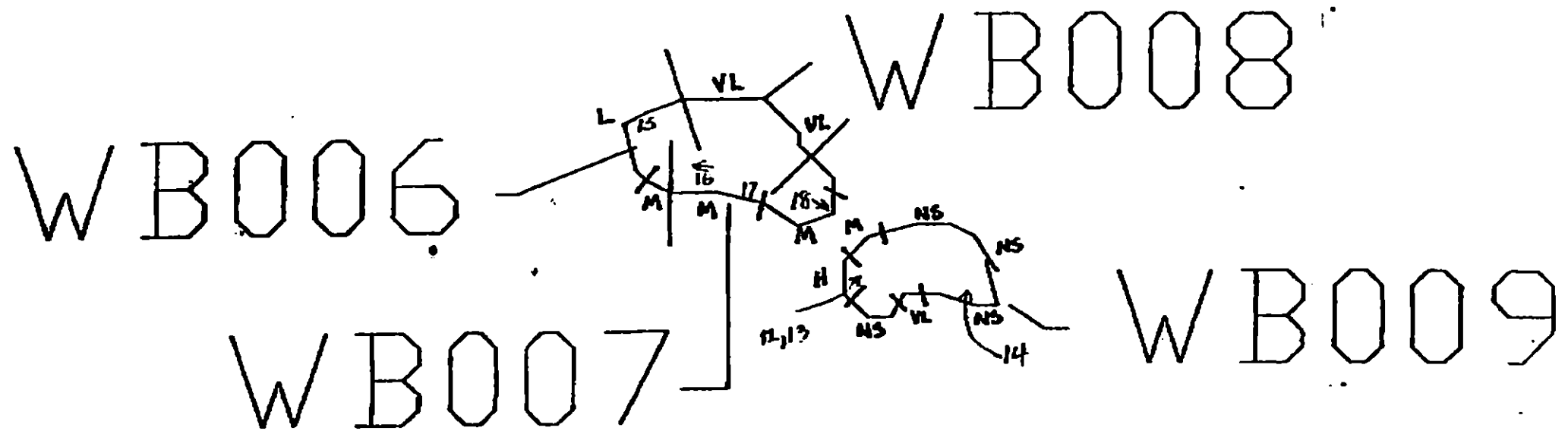
Character Length (m): AP 105 PO N/A CV 95 CT 105 ST 105 MS N/A PT 10 TB 10 FL N/A NO 8

REVISION 02/04/90

Pictos: 57-17-5

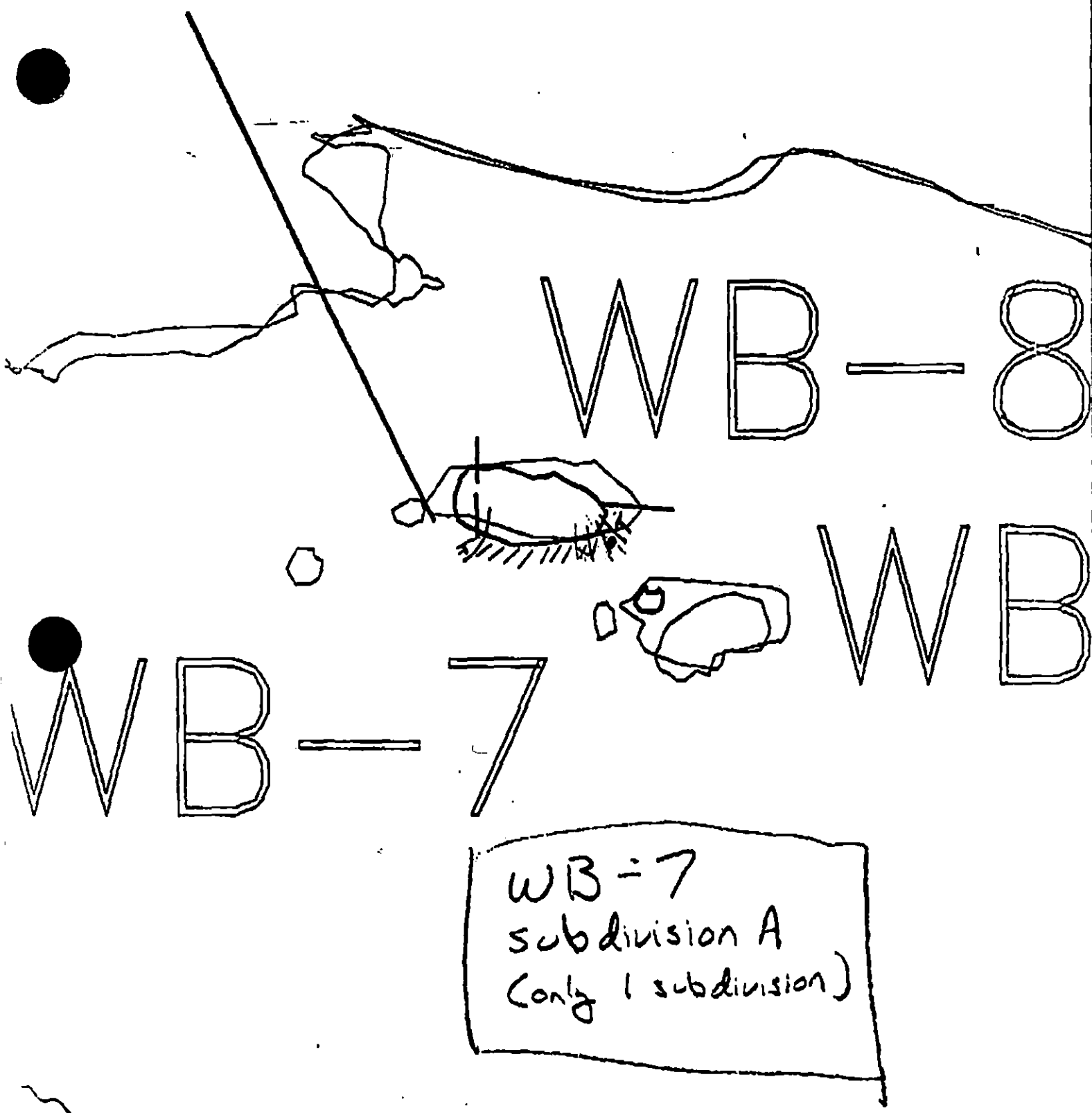
~~Frames 6, 9, 10, 12, 18~~

Frames 6, 9, 10, 16, 17, 18



OILING	
■	Heavy
■	Moderate
■	Light
■	Very Light
■	None
■	Not Surveyed
Distance in Meters	
C Sep/Oct 1989 Survey	

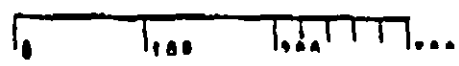
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XXXX Wide
// Medium
--- Narrow
TTTT Very Light

WB-X7

ADEC Segment Length: 513m



Map Key: KEN-149
Name: Randy Beal
Date: 4/7/90

1991 MAYSAP EVALUATION

SEGMENT: WB 007 SUB: A 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.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT WB-007 SUBDIVISION A DATE 5/27/91

ADEC

NAME Steve Ferguson

SIGNATURE

Steve Ferguson☒ NTR ☐ TREATMENT RECOMMENDED

THE AP/MSOR IS DEPOSITED AT THE BASE OF THE VERTICAL BEDROCK IN THE CRACKS AND SEAMS OF BOULDERS AND COBBLES. THERE ARE A NUMBER OF OPEN AREAS $< \frac{1}{2} m^2$ WHERE THE AP/MSOR ALSO IS DEPOSITED. THESE OPEN AREAS WOULD MAKE UP $< 4\%$ OF THE OVERALL $< 10\%$ AP/MSOR AREA.

EXXON

NAME George P. Stiles

SIGNATURE

George P. Stiles 5/27/91

☒ NTR Very low percentage of oil left in the bedrock crack and around the protected edges of the larger boulders. Very little remaining oil would be recovered with trowels.

LANDMANAGER

NAME Pat NormanOF Pat Graham

SIGNATURE

Pat Norman 5-27-91

☐ NTR Recommend manual pick up of AP/MSOR, It has become exposed and accessible. The BIO applications had little to no effect on the oil that is left here. The remaining exposed oil can be removed with trowels, shovels. This is a subsistence survey site

USCG/NOAA

NAME John McDonald

SIGNATURE

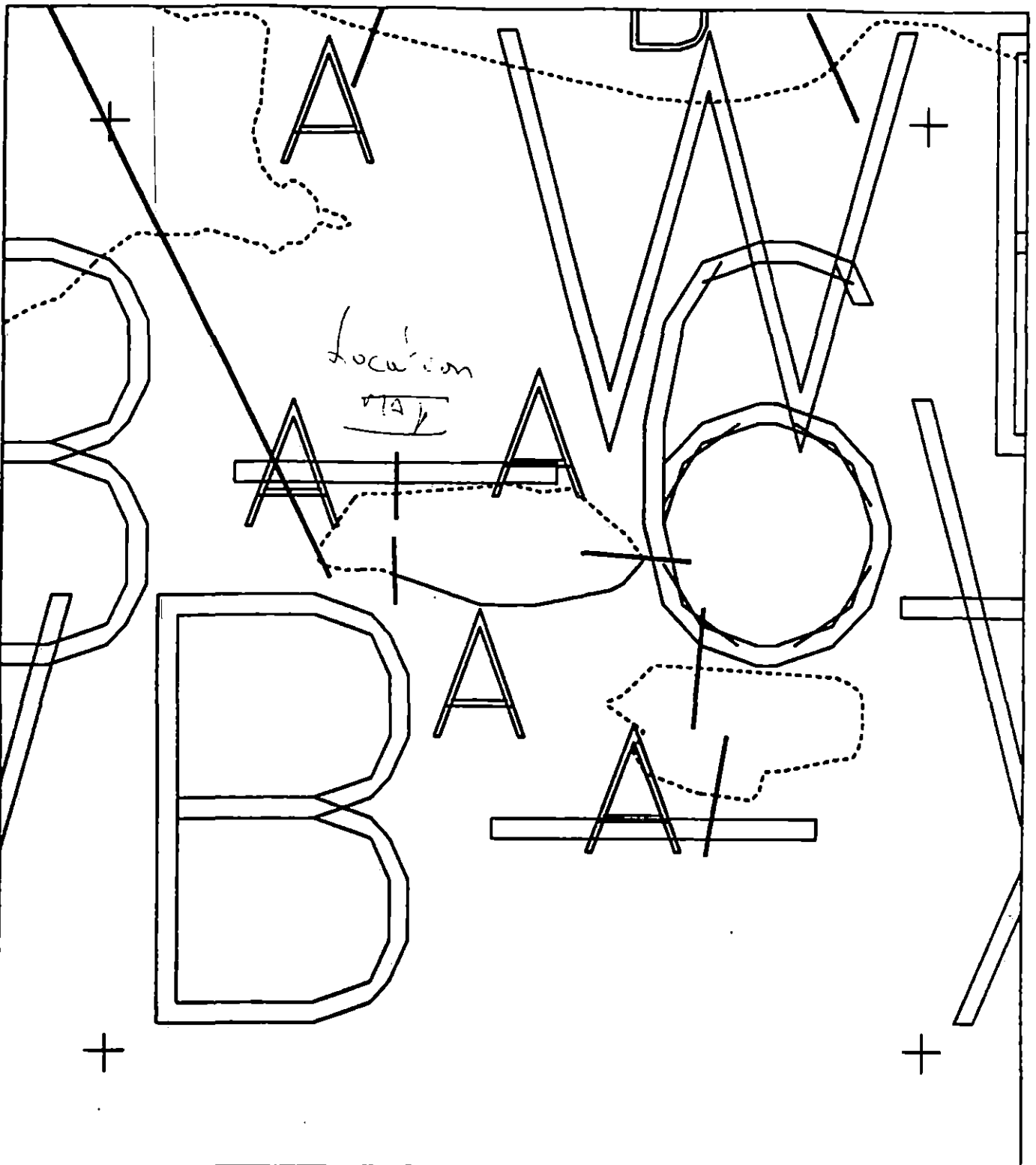
John McDonald

☒ NTR This island segment had a lot of shear bedrock with mod to large boulders containing some weathered material and AP. Clean up measures would be excessively costly in view of their insignificant contribution to mercury, a threat to public health welfare or environment

This site is part of NOAA's subsistence study project.

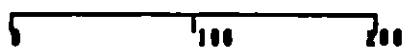
Donald McDonald

reviewed 5:30 a
Reviewed: MC
5/31/91



WB007 A

METERS



AK State Plane Zone 4
sub007a

Subdivision Field Map

Map Key: KENVB007A

Name: Jim Sempich

Date: May 26 / 91

Sketch Map

WB-007-A

JM Semprich

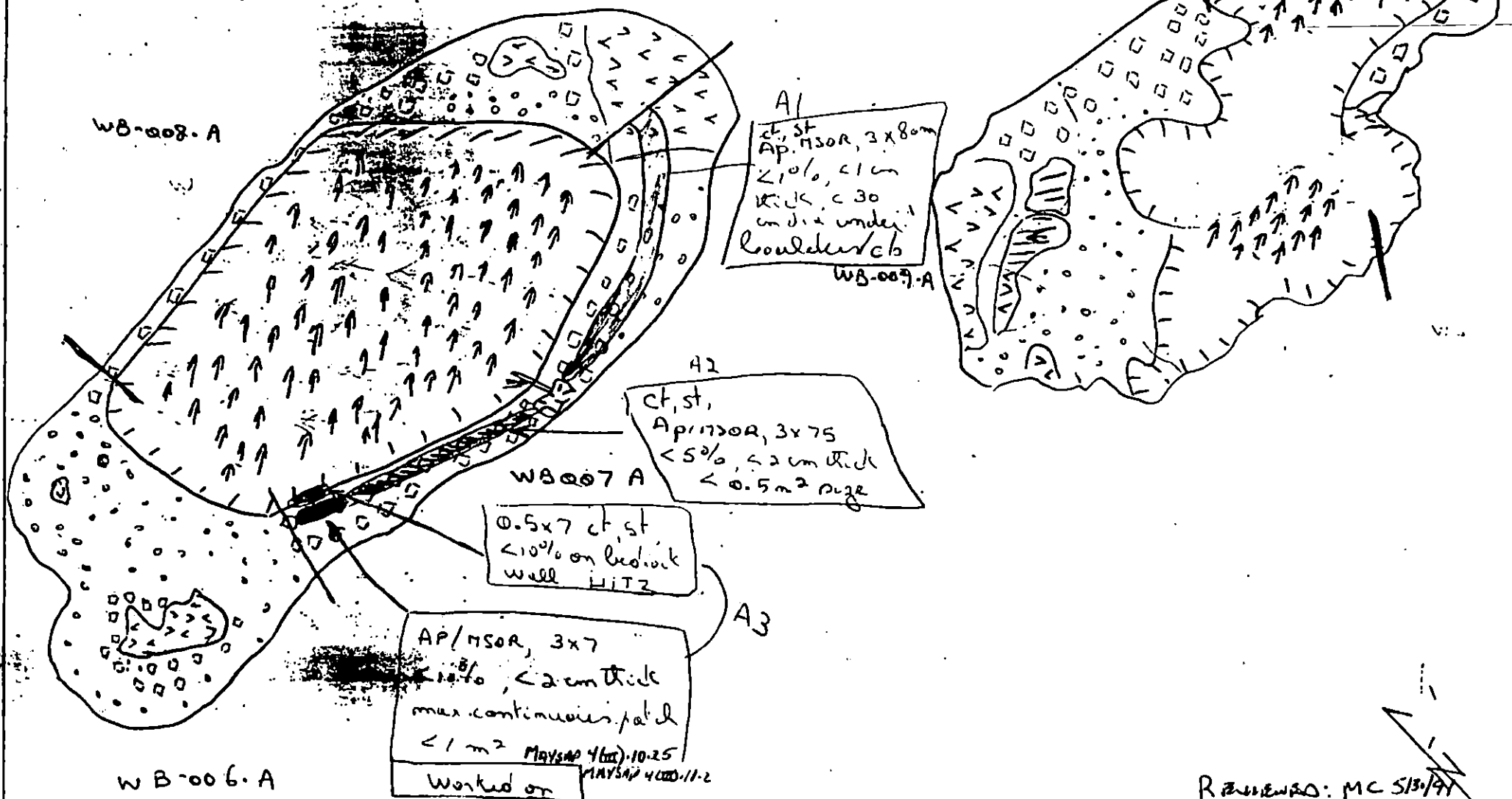
MAY 26/91

0910 - 0935

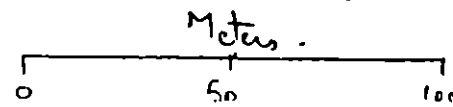
Legend

-  Bedrock cliffs/bluffs
-  Intertidal Outcrops/
Bedrock ramp
-  Boulder/cobble

 Pebble/cobble



Reviewed: MC 5/31/91
Reviewed 5:30 9/1



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 26 MAY '91
 SEGMENT # WBO07 TIDAL HEIGHT(Range) +1.0 TO 2.0
 SUBDIVISION A BIOLOGIST Jim ROTH
 SEA STATE FLAT WIND SPEED/DIRECTION
 PHOTOGRAPHS: ROLL # FRAME #

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

A1 - BOULDERS IN HITE W/ SPARSE BARNACLES, LITTORINES.
 A2 - BEDROCK, BOULDERS W/ SPARSE BARNACLES, LITTORINES.
 A3 - BOULDERS IN MITE/HITE W/ MUSSELS, BARNACLES, LITTORINES,
 LIMPETS.

GENERAL COMMENTS: THIS SUBDIVISION HAS A HEALTHY AND
 THRIVING INTERTIDAL BIOTA, WITH DENSE FUCUS GROWING IN
 THE MIDDLE ZONE, WHICH ALSO HAS DENSE BARNACLES,
 MUSSELS, LITTORINES (2 spp.), LIMPETS, AND DOGWINKLES (NUCELLA).
 OIL FOUND HERE MOSTLY OCCURS IN ZONES ABOVE THE
 TYPICAL INTERTIDAL BIOTA.

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)			
ales (specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/31/91

WY 5.1W U (ap)

Legend

B-007-A

DM Semper

MAY 26/91

0910 - 0935



Rediok cliffs/bluffs



Intertidal Outcrops/
Rediok ramp



Boulder/cobble



Pebble/cobble

BIO MAP
ROTH

WB-008-A

W

SPARSE
BARNACLES,
LITTORINES

A1

ct, st
Ap/msor, 3x8m
<10%, <1 cm
thick <30
cm dia under
boulder/cb

WB-009-A

SPARSE
BARNACLES,
LITTORINES

A2

ct, st,
Ap/msor, 3x75
<5%, <2 cm thick
<0.5 m² size

WB007 A

0.5x7 ct, st
<10% on bediok
wall HITZ

AP/msor, 3x7
<2 cm thick
max continuous patch
<1 m² May 26 4600-10-25
Worked on

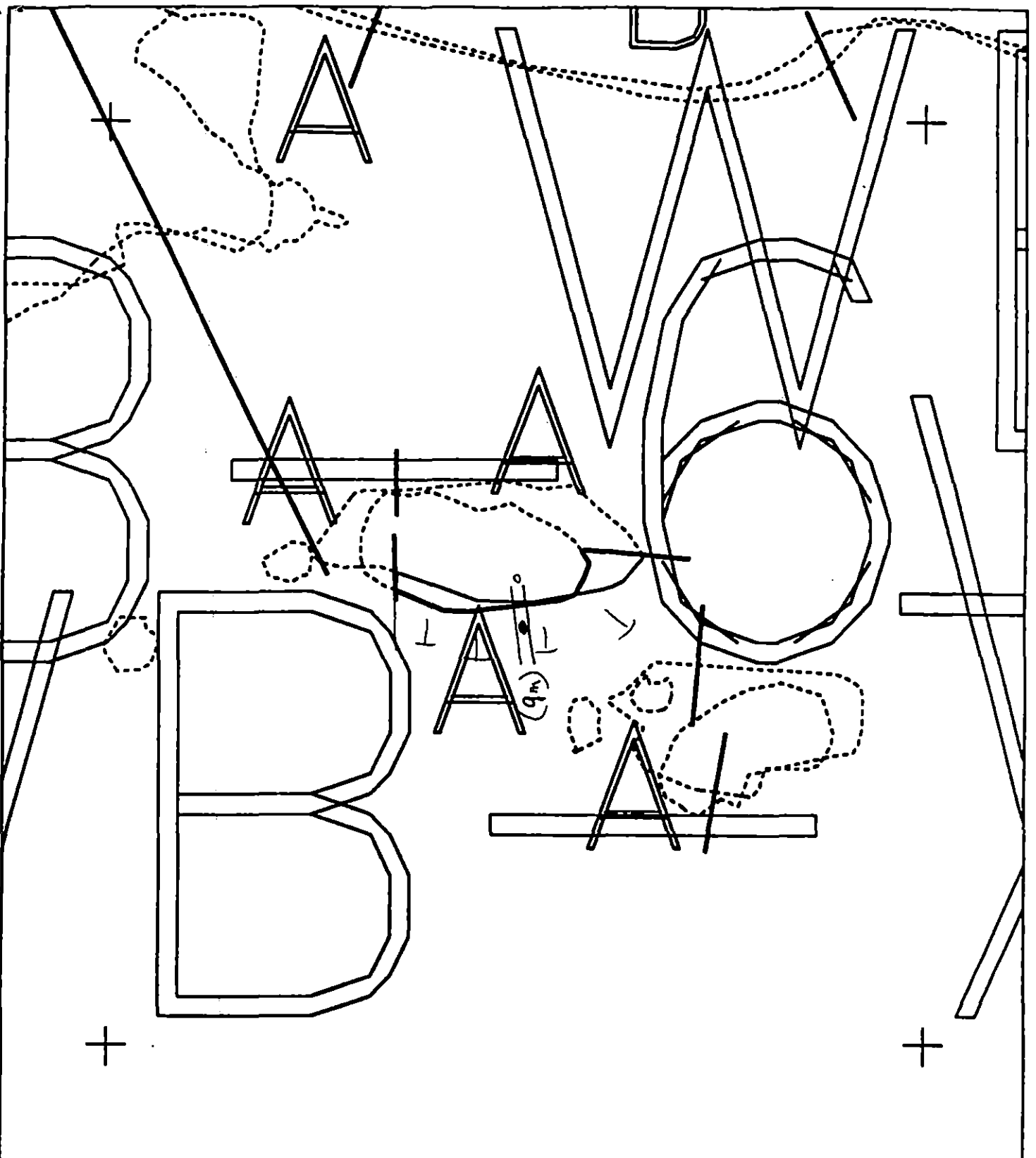
A3

MUSSEL,
BARNACLES,
LITTORINES,
LIMETS

WB-006-A

Meters

Revised 11/5



XXXX	Wide	WB007 A ADEC Subsegment Length: 171m METERS AZ State Plane Zone 4 sub007a	 	Subdivision Field Map
////	Medium			Map Key: KENWB007A
----	Narrow			Name: <u>for Sample</u>
TTTT	Very Light			Date: <u>MAY 21/91</u>
0000	No Oil			Date Entered:

Reviewed: MC 5/31/91
 Revised: 6-30-91

1991 MAYSAP EVALUATION

SEGMENT: WB 007 SUB: A 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: Timothy A Smith Date: 6/07/91

RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>N</u>	<u>N</u>	<u>N</u>
Manual Pickup (Check as Req.)	<u> </u>	<u> </u>	<u> </u>
Spot Washing	<u> </u>	<u> </u>	<u> </u>
Bio-Customblen Only	<u> </u>	<u> </u>	<u> </u>
Bio-Inipol/Customblen	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: JUNE 7 1991 FOSC APPROVAL DATE: 6/14/91

ADEC John Bane FOSC E. E. PAGE

EXXON Real CHIEF OF STAFF, FOSC

USCG Ed Mado

NOAA James

**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

5-1

TEAM NO. 4 SEGMENT WB-007 SUBDIVISION A DATE 5/27/91

ADEC

NAME

Steve Ferguson

SIGNATURE

Steve Ferguson☒ NTR☐ TREATMENT RECOMMENDED

THE AP/MSOR IS DEPOSITED AT THE BASE OF THE VERTICAL BEDROCK IN THE CRACKS AND SEAMS OF BOULDERS AND COBBLES.

THERE ARE A NUMBER OF OPEN AREAS $< \frac{1}{2} m^2$ WHERE THE AP/MSOR ALSO IS DEPOSITED. THESE OPEN AREAS WOULD MAKE UP $< 4\%$ OF THE OVERALL $< 10\%$ AP/MSOR AREA.

EXXON

NAME

George P. Stiles

SIGNATURE

George P. Stiles 5/27/91☒ NTR

Very low percentage of oil left in the bedrock crack and around the protected edges of the larger boulders. Very little remaining oil would be recovered with trowels.

LANDMANAGER

NAME

Pat NormanOF Pat Graham

SIGNATURE

Pat Norman

5-27-91

☐ NTR

Recommend manual pick up of AP/MSOR, if it has become exposed and accessible. The bio applications had little to no effect on the oil that is left here. The remaining exposed oil can be removed with trowels, shovels. This is a subsistence survey site.

USCG/NOAA

NAME

McMahon/McDonald

SIGNATURE

McMahon/McDonald☒ NTR

This island segment had a lot of shear bedrock with mod. to large boulders containing some weathered material and AP. Clean up measures would be excessively costly in view of their insignificant contribution to minimizing a threat to public health, welfare or environment.

This site is part of NOAA's subsistence study project.

Donald McDonald

OG 17 Sample
ADEC S. Ferguson
EXXON Q. Stiles

BIO J. Roth
LANDMANAGER P. Nelson for Port Graham
USCG/NOAA J. Nelson / D. McDonald

SUBDIVISION A

DATE MAY 1 26 / 91

TIME 09:10 to 09:35

TIDE LEVEL 1 ft. to 2 ft.

ENERGY LEVEL: ☐ H ☒ M ☒ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 171 m

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

EST. OIL CATEGORY LENGTH: W 1m M 1m N 1m VL 162m NO 9m US 1m

[illegible]

DISTRIBUTION: C = 91-100%; B = 81-90%; P = 11-50%; S = 1-10%; T = <1%

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

PHOTO ROLL # MAY6AP-

$$\frac{4(\text{IV})}{4(\text{V})} = \frac{10}{11}$$

FRAMES 2

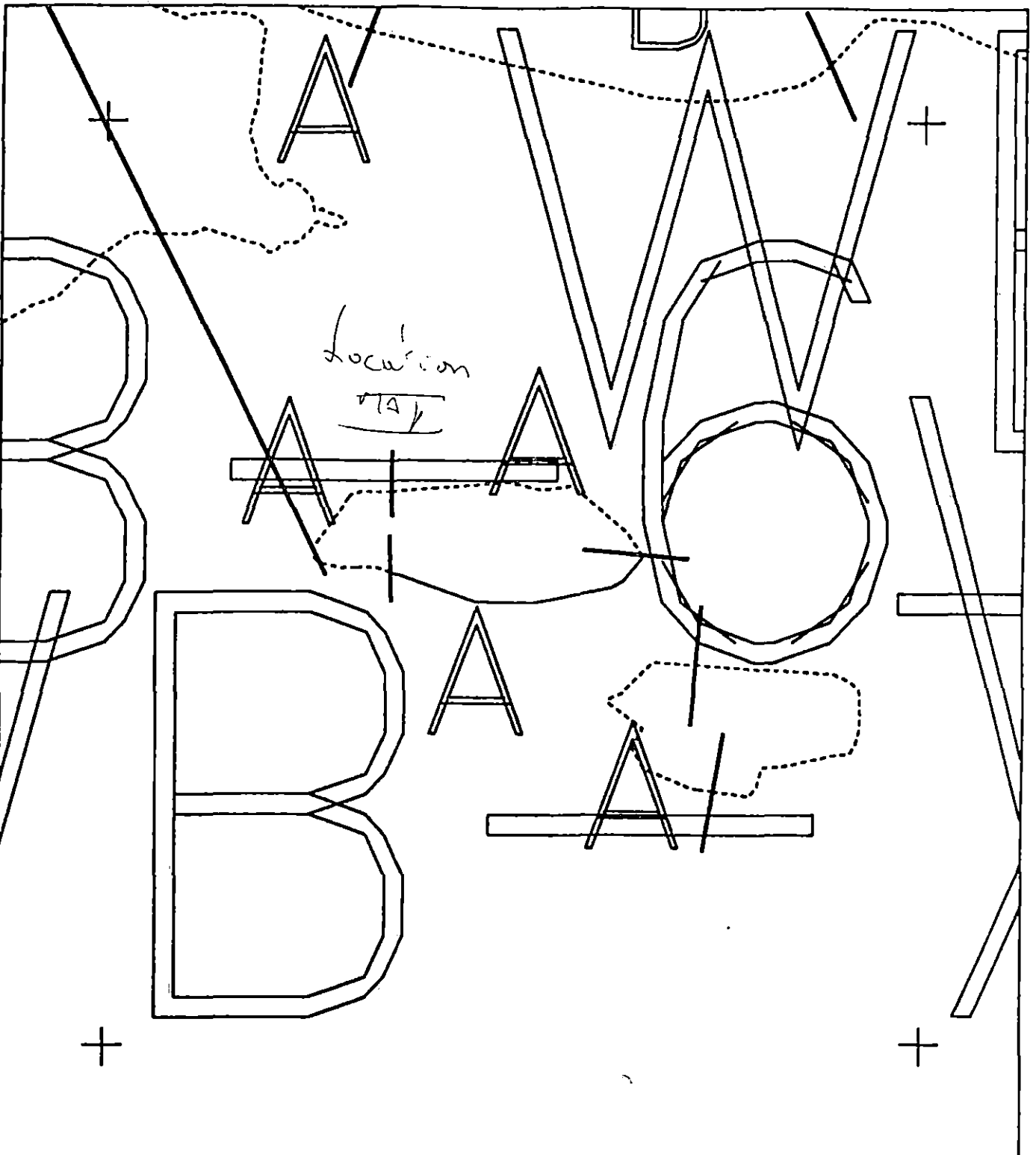
[illegible]

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

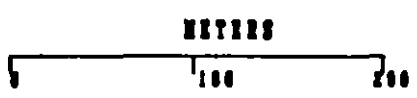
OG COMMENTS:

OG COMMENTS: Southern coast of largest of the two islands in Wundy Bay segments consists of low cut steep bedrock bluffs and a talus of large angular boulders and some cobbles. Oiling occurs on ct, and st on the bedrock bgl tide line and on boulders. A band of Ap/psic extends along this segment but the quantities of oil decrease progressively towards the east, and more rapidly past the large intertidal boulder/dead tree located in the center of this segment.

Reviewed 5-30/91
Reviewed: MC
5/31/91



WB007 A



AK State Plane Zone 4
sub0070

Subdivision Field Map

Map Key: KENVB007A

Name: J. A. Sempels

Date: May 26 / 91

09 Sketch Map

Legend

WB-007-A

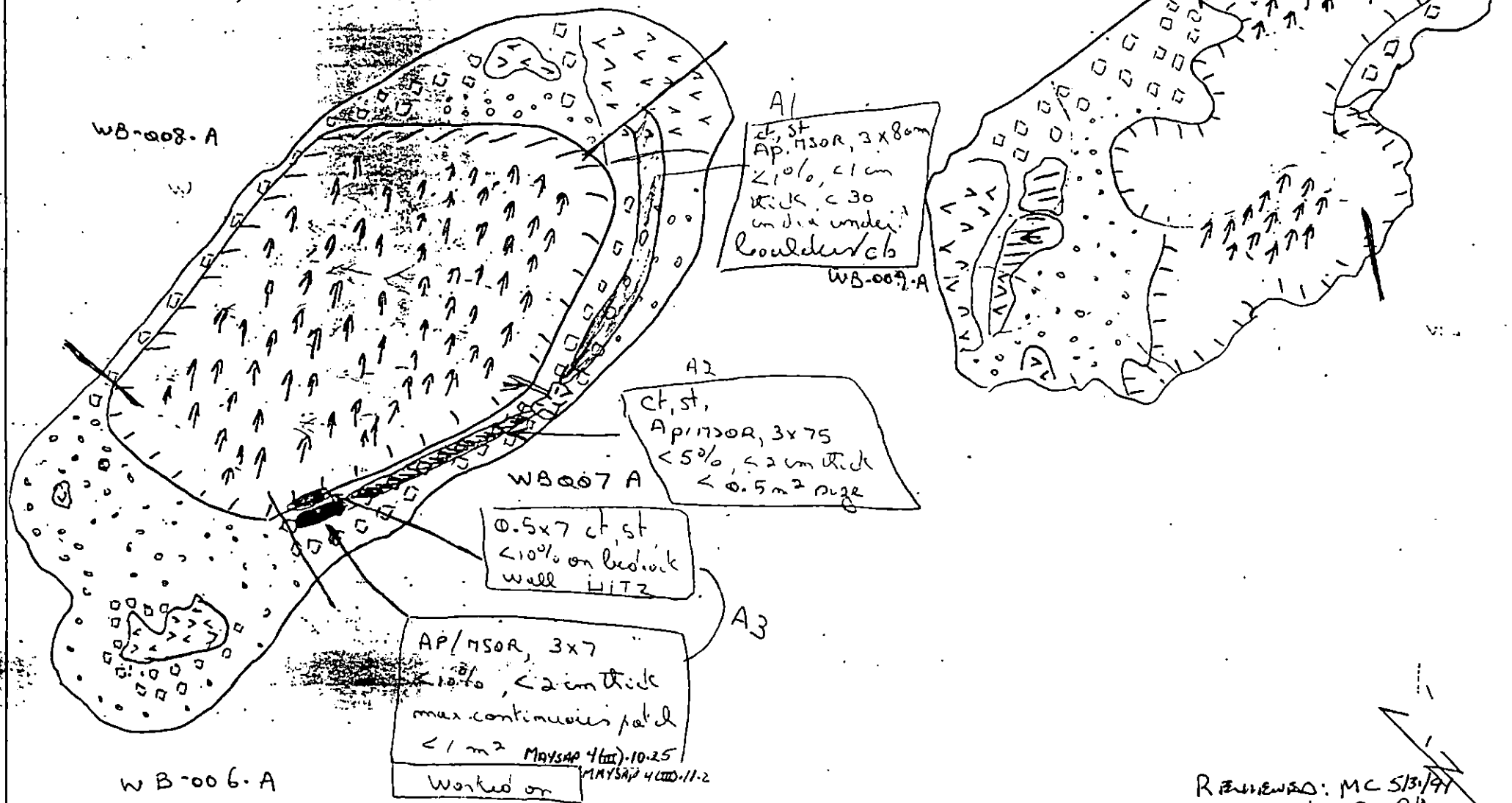
JM Semple

MAY 26/91

0910 - 0935

-  Bedrock cliffs/bluffs
-  Intertidal Outcrops/
Bedrock ramp
-  Boulder/cobble

 Rubble/cobble



Reviewed: MC 5/3/91
reviewed 5:30 9/9

Meters

0 50 100

HAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 26 MAY '91
 SEGMENT # WB007 TIDAL HEIGHT(Range) + 1.0 TO 2.0
 SUBDIVISION A BIOLOGIST Jim ROTH
 SEA STATE FLAT WIND SPEED/DIRECTION
 PHOTOGRAPHS: ROLL # FRAME #

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

A1 - BOULDERS IN HITZ W/ SPARSE BARNACLES, LITTORINES.
 A2 - BEDROCK, BOULDERS W/ SPARSE BARNACLES, LITTORINES.
 A3 - BOULDERS IN MITZ/HITZ W/ MUSSELS, BARNACLES, LITTORINES, LIMPETS.

GENERAL COMMENTS: THIS SUBDIVISION HAS A HEALTHY AND THRIVING INTERTIDAL BIOTA, WITH DENSE FUCUS GROWING IN THE MIDDLE ZONE, WHICH ALSO HAS DENSE BARNACLES, MUSSELS, LITTORINES (2 spp.), LIMPETS, AND DOGWINKLES (NUCELLA). OIL FOUND HERE MOSTLY OCCURS IN ZONES ABOVE THE TYPICAL INTERTIDAL BIOTA.

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 M.B. 5/31/91

0910 - 0935

Legend

B-007-A

JM Semyels

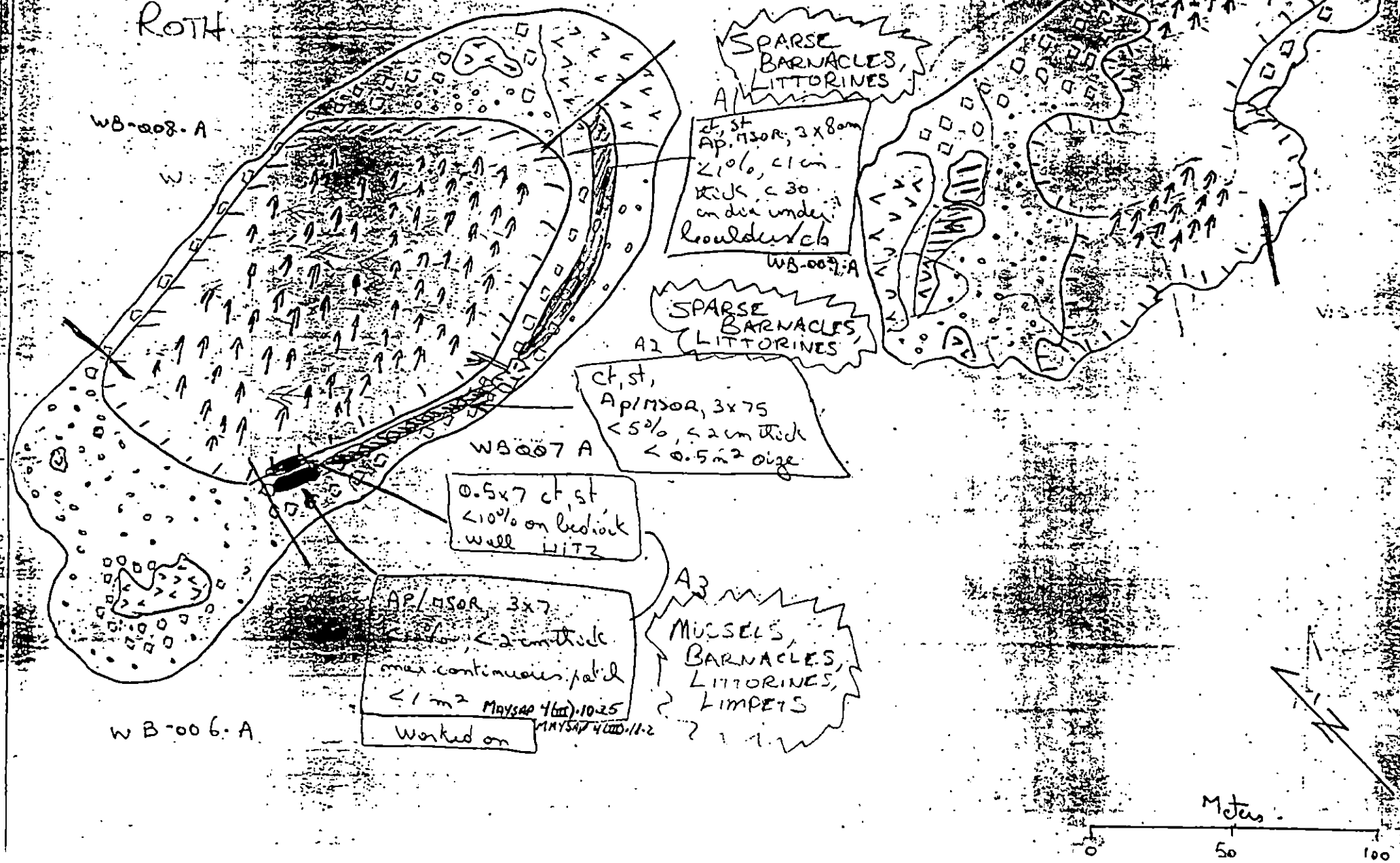
MAY 26/91

0910 - 0935

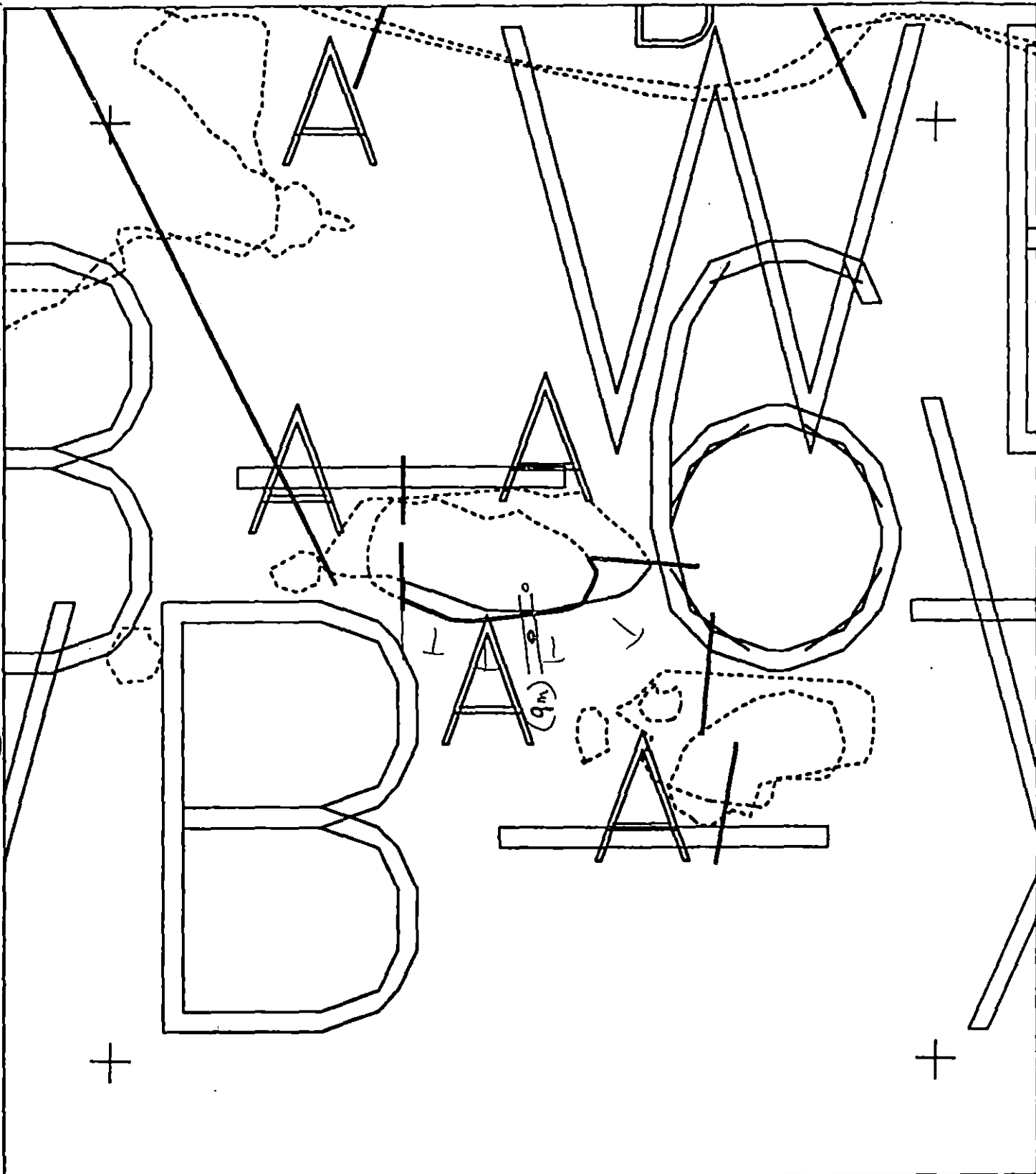
- Bedrock cliffs/bluffs
- Intertidal Outcrops/Bedrock ramp
- Boulder/cobble

Pebble/cobble

Bio Map
ROTH



Revised 5/11/11



XXXX
 ////

 TTTT
 0000

Wide
 Medium
 Narrow
 Very Light
 No Oil

WB007 A

ADEC Subsegment Length: 171m

METERS

0 100 200

AK State Plane Zone 4
 sub007a



Subdivision Field Map

Map Key: KENWB007A

Name: for Sample

Date: MAY 26/91

Date Entered:

Reviewed: MC 5/31/91
 Revised 6-30-91

REGION: KENAI

SEGMENT: ST/WB-08

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ WB-08 SUBDIVISION A (1 OF 1) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5S Shorebird/Waterfowl concentration (4/1 to 5/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 23 m: No Oil 127 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 tarmat removal and manual pick up of mousse. Work should be conducted after 5/15 based on above bird constraints.

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 unholed 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-8 SUBDIVISION: A. DATE 4/7/90

USCG

NAME B. Bryan Hirtle SIGNATURE B. Bryan Hirtle DCI

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

I agree with the finding of the
Shoreline Diking Summary sheet

ADEC

NAME Russell Kumbie SIGNATURE Russell Kumbie

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

~~there was~~ Only a small 1m x 3m area of asphalt and mousse
was found between the boulders and cobbles

LAND MANAGER

NAME Patrick Norman SIGNATURE Patrick Norman

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

SHORELINE OILING SUMMARY

REVISION NO. 0022 10

OG Pr. dy Siegel USCG Bryan Hirtle SEGMENT ST/ WB-8
 BIO Mike Gussett LAND REP Pt Norman SUBDIVISION A
 EXXON John Dean ADEC Russell Knabe TIME 12:40 10 18:00
 TEAM NO. 17 TIDE LEVEL: +1.4 to +0.9 DATE 4 / 7 / 90
 ST. SUBDIVISION LENGTH: 127 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SE to NW
 SURFACE SEDIMENTS: R 40 % B 50 % C 5 % P 3 % G 2 % S 0 % M 0 % V 0 %
 SLOPE: Long 10 % Hang 90 % Vert 10 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W N/A m M N/A m N N/A m VL 10 m NO 117 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	IC	IS	IP	IS	50L BR	50L RW	50L GY	50L BL	50L TL	50L LB	SU	UI	ME	U		
ASPHALT			X									X				
PAVEMENT																
POOLED																
COVER																
COAT				X		X						X				
STAIN				X		X						X				
MOUSSE			X						X			X				
PATTIES			X						X			X				
TARBALLS			X						X			X				
FILM																
NO OIL											X		X	X		

PAVEMENT: H (F) S 1 sq. m by 2 cm cmPATTIES / TARBALLS 1 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE -#BAGS 0Photographs: ↑ [None]Roll No. 3T-17-5Frames 6, 9, 10SUBSURFACE OIL No pits dug due to presence of large boulders.

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		UD	UC	50L BR	50L RW	50L GY	50L BL	50L TL	50L LB	SU	UI	ME	U	
1							.													
							.													
							.													
							.													
							.													
							.													
							.													

COMMENTS

This segment consists of north-facing beach on an island. The beach is quite rugged and ~~contains~~ contains primarily bedrock outcrops and large boulders. Steep cliffs lie above the beach. No oiling was observed over most of this segment. No pits were dug due to ~~the~~ omnipresent large boulders on beach. Only 1 subdivision in this segment.

REVISION: 02/24/00

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03-22-90

Segment ST-1 WB 8 Subdivision A Date (mo / day / yr) 4/7/90
 Time (24 hr) 1800-1825 Biologist M. H. Fawcett

- (A) Substrate type and % of segments:
 (1) Bedrock 40 (2) Boulder 50 (3) Cobble 5 (4) Pebble 3 (5) Sand 2 (6) Silt 0
 (incl. 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 (3)

Photographs:

Roll No. ST-17-5Frames 6, 9, 10

BARNACLES

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

MYTILUS

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

GASTROPODS

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:

Algae generally more dense and diverse on this side than on other side of island

MT2 (*Evasterias trocheli*)

Ecological Considerations:

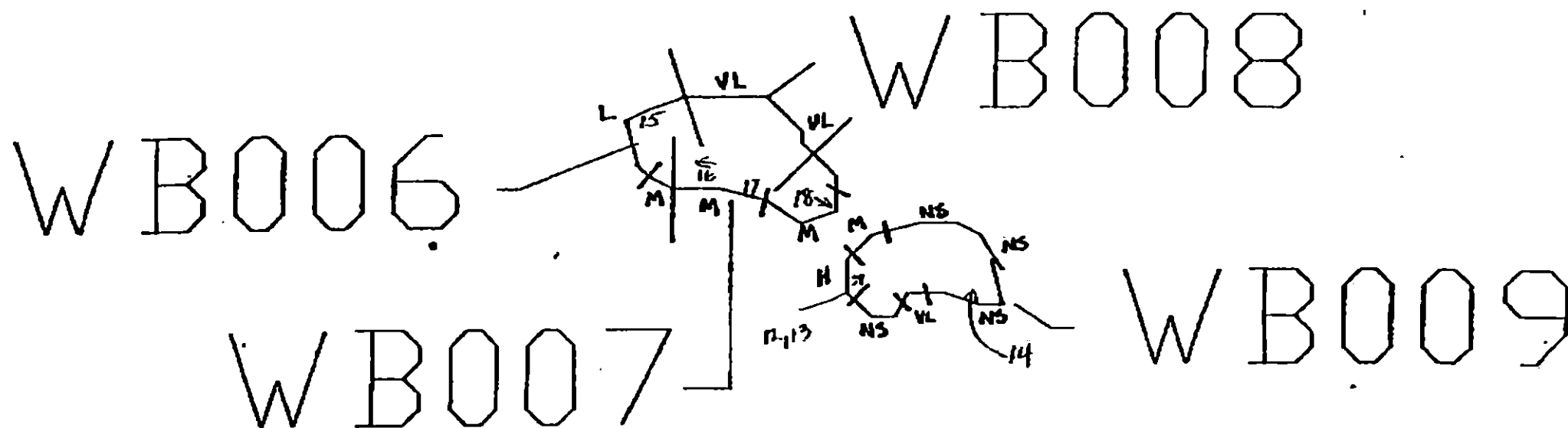
bird concentration area

APR 10 1990 SUN 21:51

Photo: 51-17-5

frames: 6, 9, 10, ~~11~~

4/7/90



↑ ↑ ↑
6, 9, 10 (aerial)
1000'

500.0

OILING

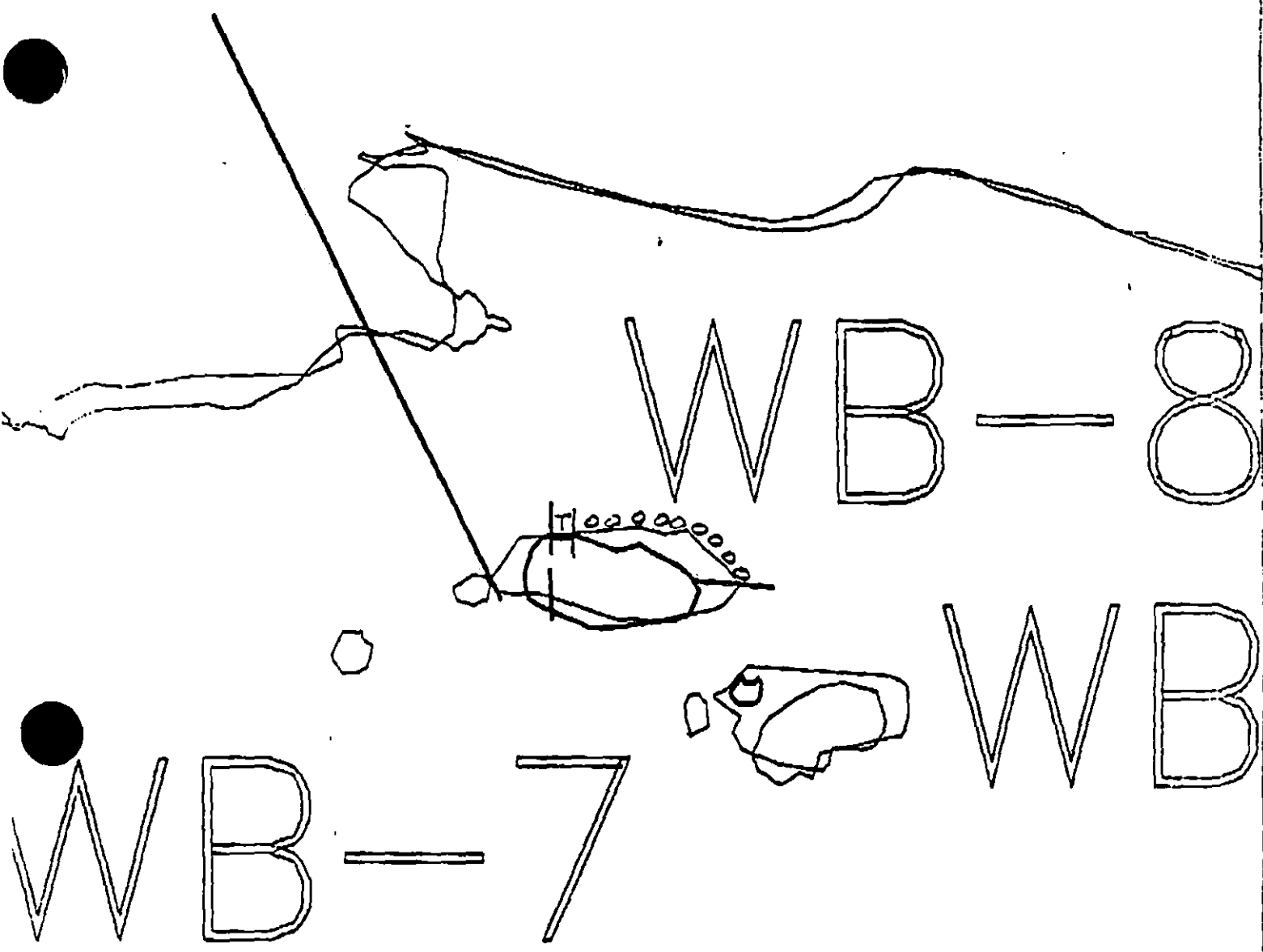
- Heavy
- Moderate
- Light
- Very Light
- None
- Not Surveyed

H

Distance In Meters

1 Sep/Oct 1989 Survey

IPR- 0-90 SUN 21:51



WB-8
subdivision A
(only 1 subdivision)

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

WB-8

ADEC Segment Length: 513m



Map Key: KEN-149
Name: Randy Langel
Date: 4/2/90
Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT WB-8 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

1J	Purse Seine Area	No constraint to manual pickup and tarmat removal.
5S	Shorebird/Waterfowl Concentration	No constraint to manual pickup and tarmat removal after 5/15.
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 biota and substrate.

TAG APPROVAL DATE

ADEC Art Weimer
EXXON Andy Tamm
NOAA Balescott
USCG M.J. Hall

FOSC

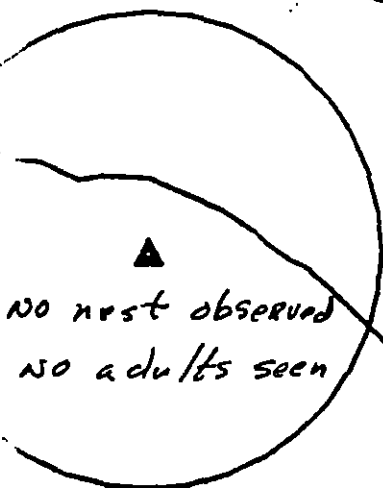
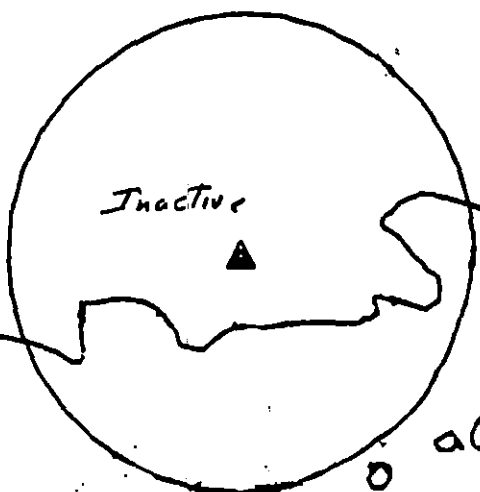
DATE 5-24-90

Prepared By:

Andrew Meyer R.C.

Date

5/22/90



SHORELINE EVALUATION

SEGMENT ST/ WB-08 SUBDIVISION A (1 OF 1) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5S Shorebird/Waterfowl concentration (4/1 to 5/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Phadon E. Adams

DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 23 m: No Oil 127 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>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 and manual pick up of mousse. Work should be conducted after 5/15 based on above bird constraints.

SEE CONSTRAINT ADDENDUM
DATED 5/22/90 Rex C.

TAG COMMENTS:

TAG APPROVAL DATE: 4/18/90

ADEC John Bauer
EXXON Andy Galt
NOAA Bruce Wescott
USCG Kenneth Keane

FOSC:

DATE: 5-8-90

SHORELINE EVALUATION

SEGMENT ST/ WB-08 SUBDIVISION A (1 OF 1) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5S Shorebird/Waterfowl concentration (4/1 to 5/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: *Charles E. F. [Signature]* DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 23 m: No Oil 127 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>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 and manual pick up of mousse. Work should be conducted after 5/15 based on above bird constraints.

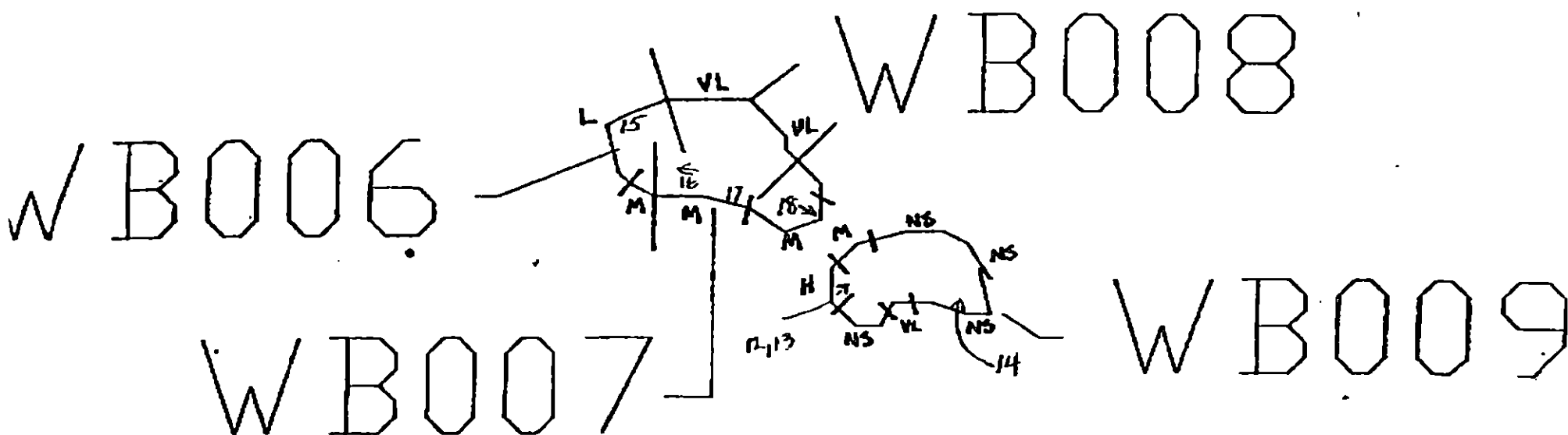
TAG COMMENTS:

TAG APPROVAL DATE: 4/18/90
ADEC *John Bauer*
EXXON *Andy [Signature]* FOSC: *[Signature]* DATE: 5-8-90
NOAA *Burt Wescott*
USCG *Kenneth Keane*

Photo: 51-17-5

frames: 6, 9, 10, ~~11~~

4/7/90



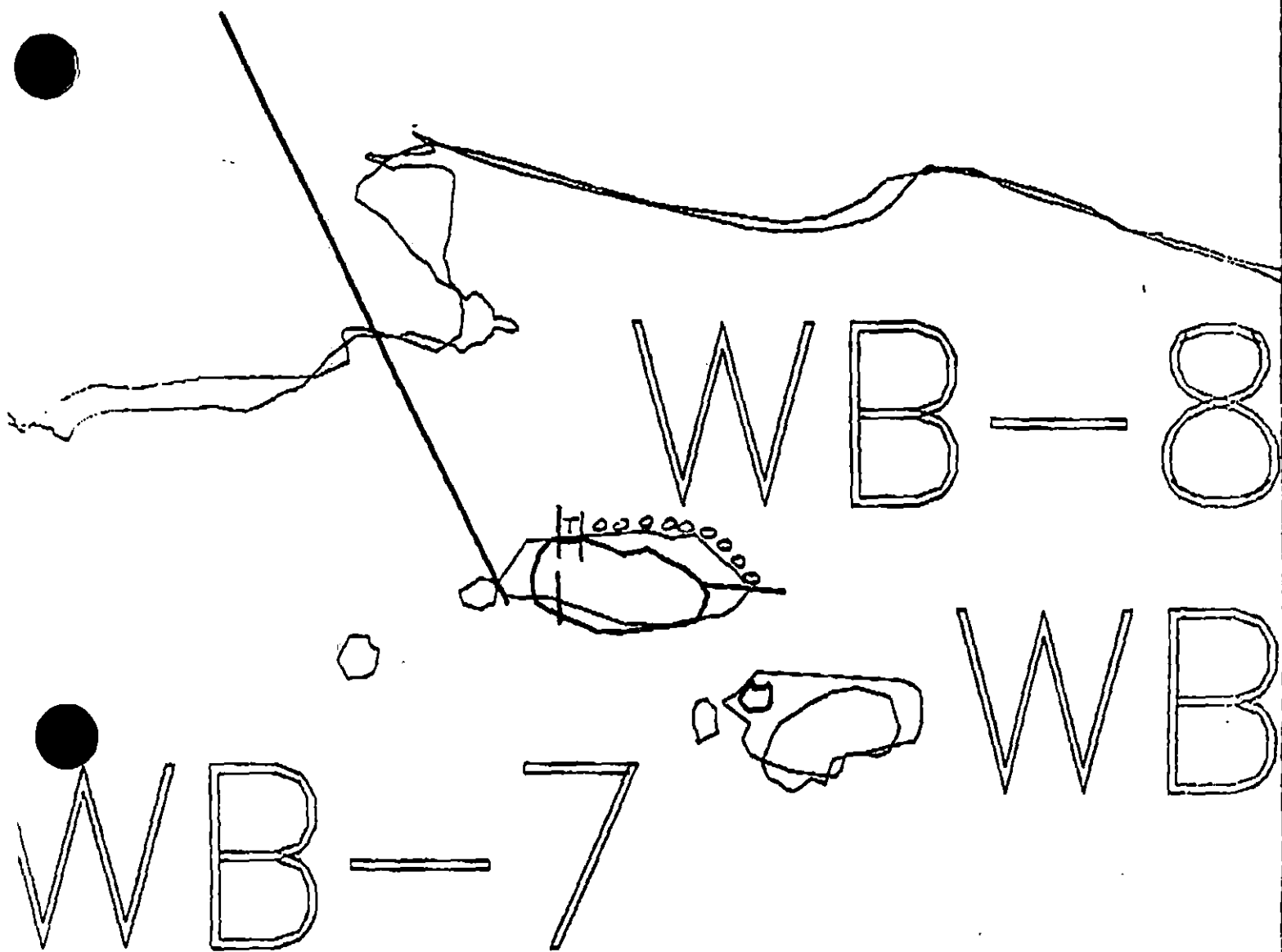
↑ ↑ ↑
6, 9, 10 (aerial)
1000'

500.0

OILING
Heavy
Moderate
Light
Very Light
None
Not Surveyed

Scale in Meters

1/000 1000 Survey

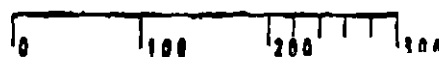


WB-8
subdivision A
(only 1 subdivision)

XXXX Wide
// Medium
--- Narrow

ADEC Segment Length: 513m

TTTT Very Light



Map Key: KEN-149

Name: Randy Lenz

Date: 4/7/90



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

55

TEAM NO. 4 SEGMENT WB-008 SUBDIVISION A DATE 5/27/91

ADEC

NAME Steve Ferguson SIGNATURE [Signature]☒ NTR ☐ TREATMENT RECOMMENDED

A TRACE OILING OF STAINS AND COATS WERE FOUND ON VERTICAL BED ROCK AND BOULDERS. NO TREATMENT RECOMMENDED.

EXXON

NAME George P. Stiles SIGNATURE George P. Stiles 5/27/91☒ NTR No Appreciable oil located.

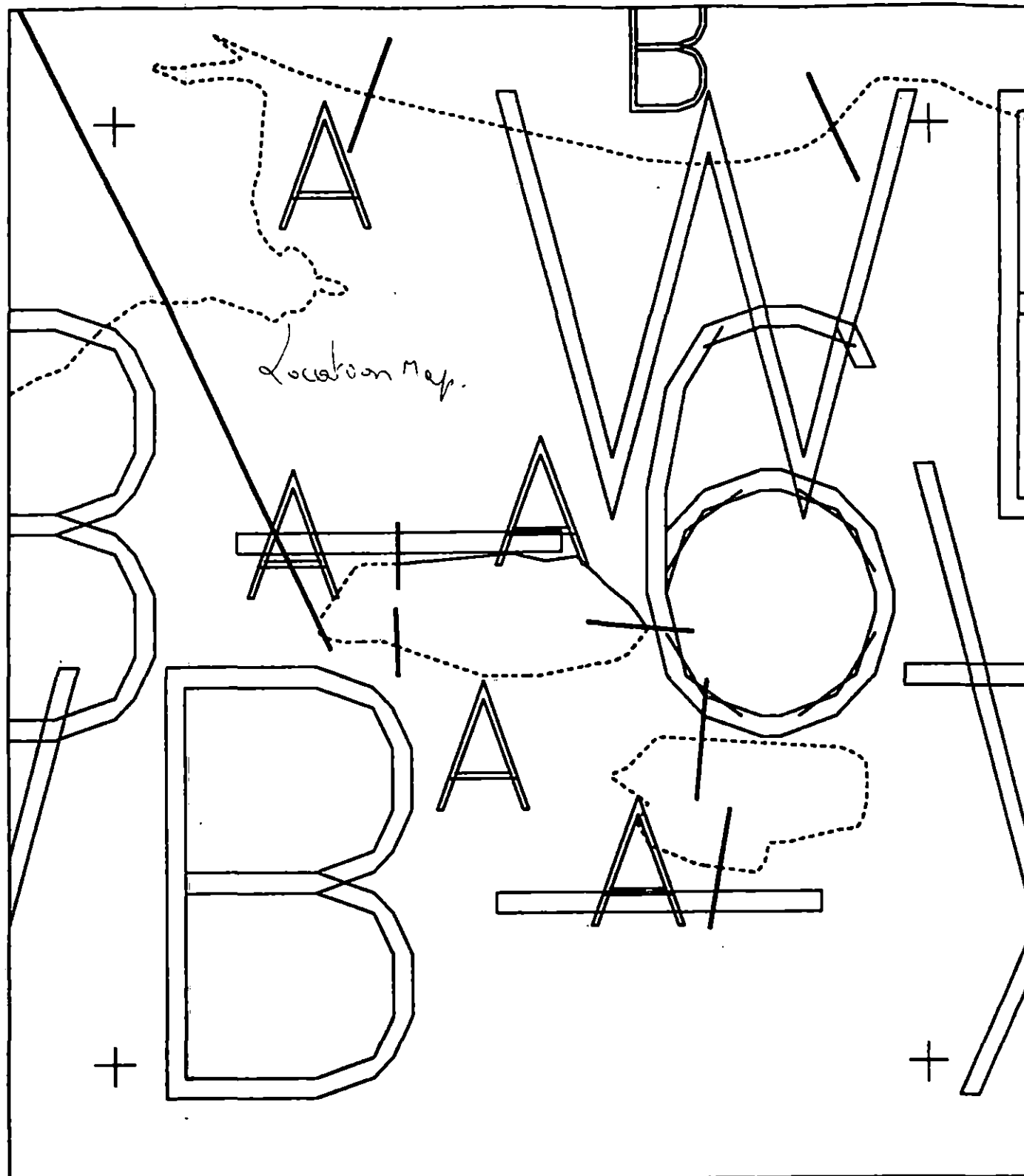
LANDMANAGER

NAME P. T. Norman OF Port Graham SIGNATURE Pat Norman 5-27-91☒ NTR

USCG/NOAA

NAME Mr. Mahon / McDermott SIGNATURE [Signature]☒ NTR very little oil found.[Signature]

Reviewed 5:30 PM



WB008 A

METERS



AK State Plane Zone 4
subzone

Subdivision Field Map

Map Key: EBNV0008A

Name: J. S. Semples

Date: May 26/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 26 MAY '91
 SEGMENT # WB008 TIDAL HEIGHT(Range) +2.0 - +3.0
 SUBDIVISION A BIOLOGIST Jim Roth
 SEA STATE FLAT WIND SPEED/DIRECTION
 PHOTOGRAPHS: ROLL # FRAME #

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

A1 - INFREQUENT OIL COAT + STAIN OCCURS IN HIGH
 INTERTIDAL ABOVE MOST BIOTA

GENERAL COMMENTS: THIS SUBDIVISION HAS A HEALTHY
 INTERTIDAL BIOTA, WHICH REFLECTS ITS SOMEWHAT
 SHELTERED LOCATION. THE MIDDLE ZONE HAS DENSE
 FUCUS ON BOULDERS AND COBBLES ALONG THE NORTH SHORE.
 ALSO FOUND HERE ARE BARNACLES, LITTORINES, LIMPETS,
 AND SMALL MUSSELS WHICH ARE VERY DENSE IN PLACES.
 FUCUS IS MORE DENSE TOWARD THE WEST END OF THE
 SUBDIVISION.

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)			
Elles(specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed MB 5/20/91

WB-008-A

JM Semysch

MAY 26/91

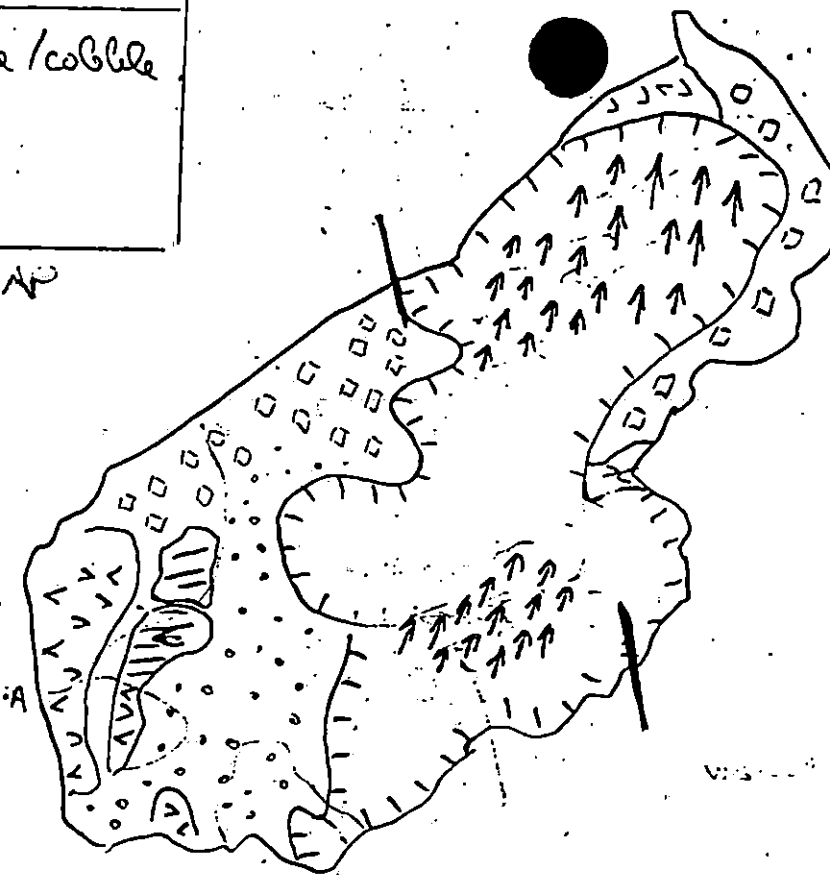
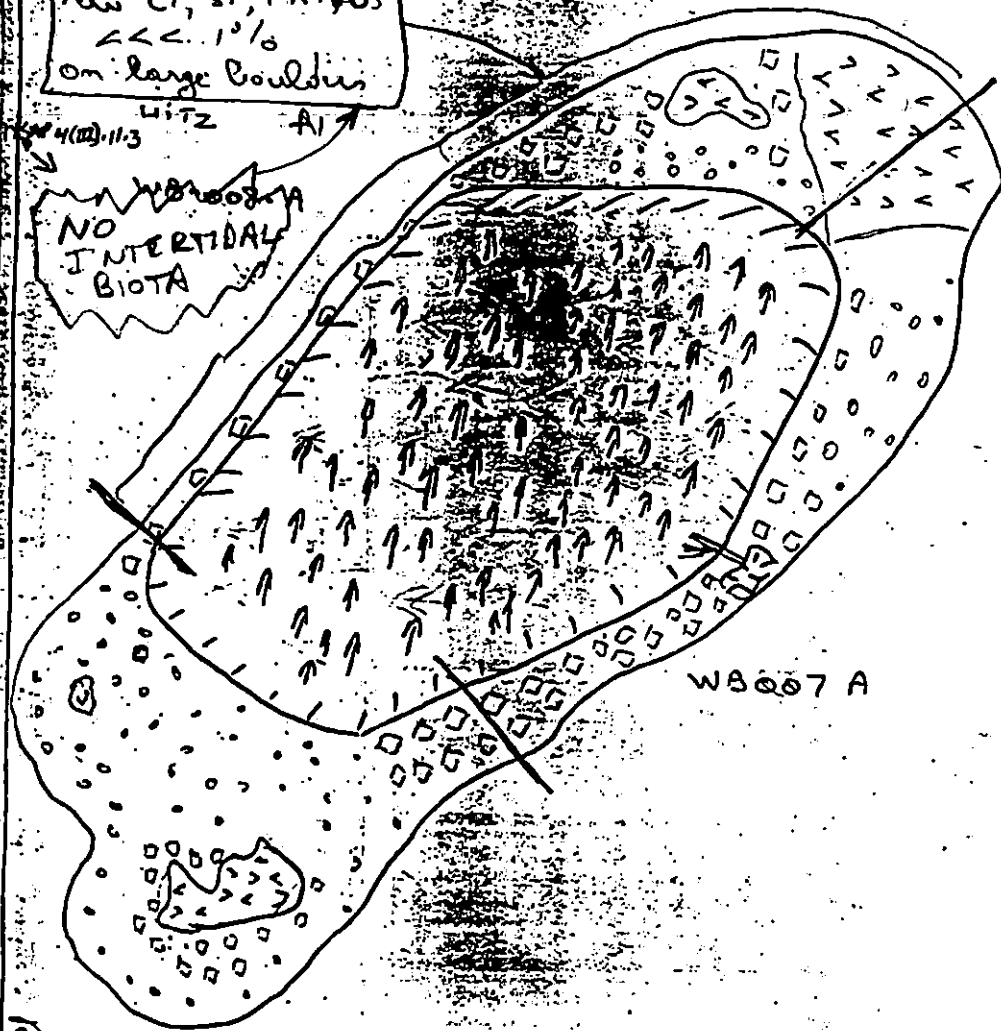
0935 - 0943

- Red rock cliffs/bluffs
- Intertidal Outcrops/Red rock ramp
- Boulder/cobble

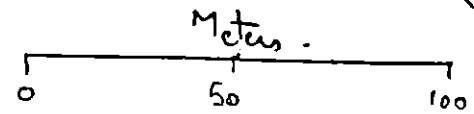
Red rock/cobble

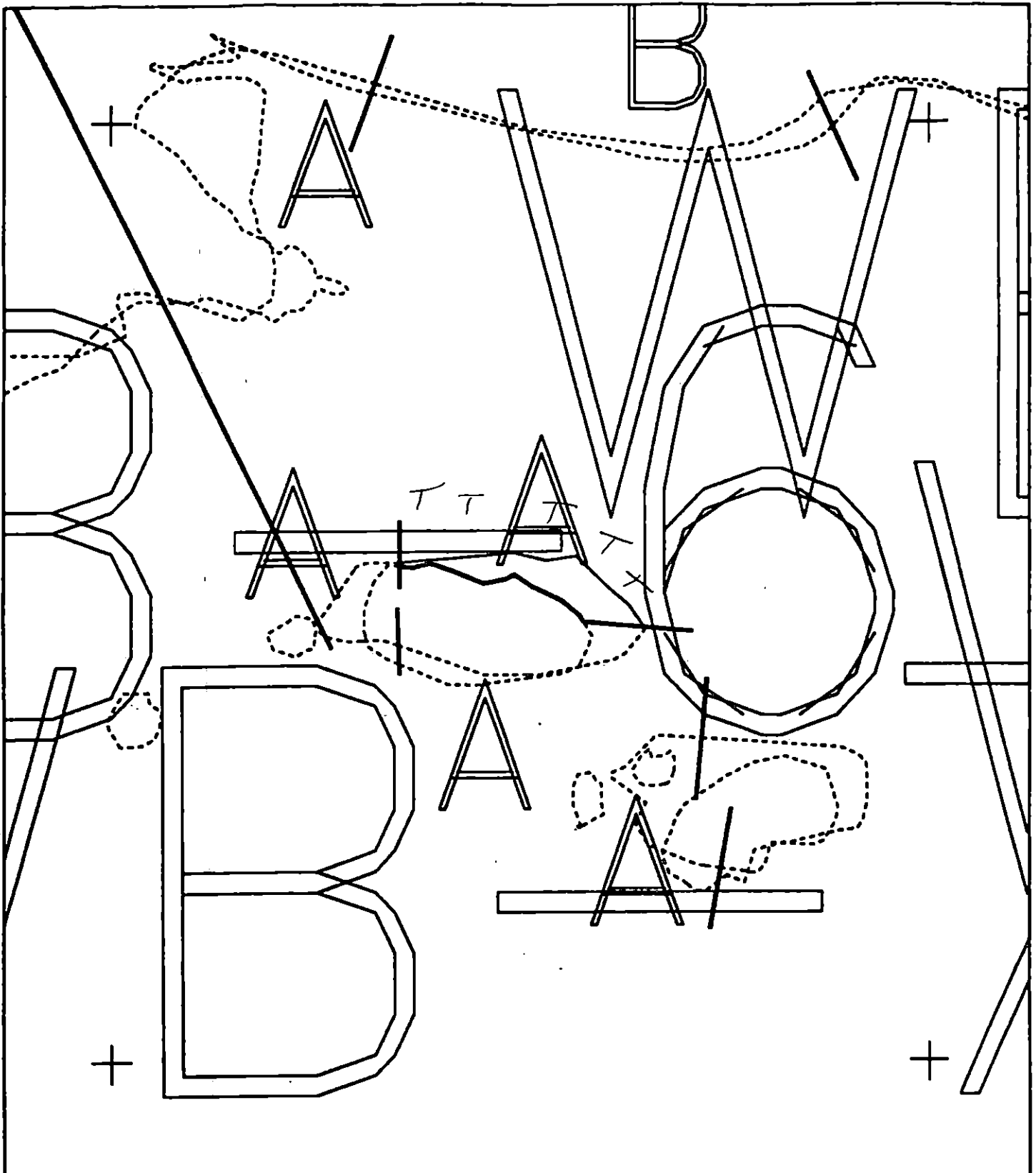
Thin CT, st, 1x150
on large boulders

Red rock
Ramp



Reviews MS
5/31/91





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

WB008 A
 ADEC Subsegment Length: 150m
 METERS

0 100 200
 AK State Plane Zone 4
 4850000



Subdivision Field Map
 Map Key: KENWB008A
 Name: for Samples
 Date: May 26/91
 Date Entered:

Reviewed: 5/31/91 MC
 Reviewed 5:30 98

1991 MAYSAP EVALUATION

SEGMENT: WB 008 SUB: A 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.

MAYSAP FIELD SHORELINE COMMENT SHEET

55

TEAM NO. 4 SEGMENT WB-008 SUBDIVISION A DATE 5/27/91

ADEC

NAME Steve Ferguson SIGNATURE Steve Ferguson☒ NTR ☐ TREATMENT RECOMMENDED

A TRACE OILING OF STAINS AND COATS WERE FOUND ON VERTICAL BED ROCK AND BOULDERS. NO TREATMENT RECOMMENDED.

EXXON

NAME George P. Stiles SIGNATURE George P. Stiles 5/27/91☒ NTR No Appreciable oil located.

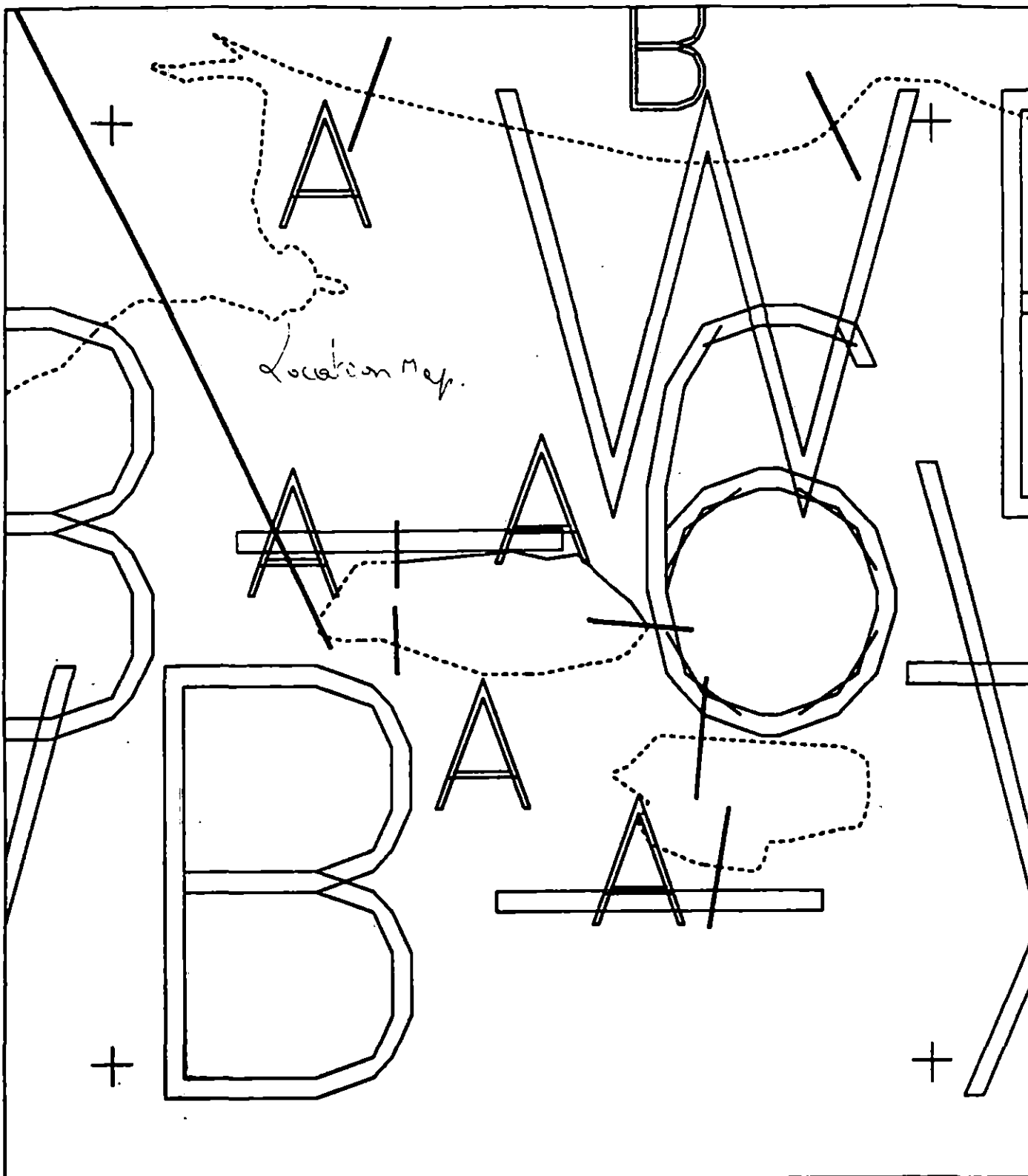
LANDMANAGER

NAME Pat Norman OF Port Graham SIGNATURE Pat Norman 5-27-91☒ NTR

USCG/NOAA

NAME John McDaniel SIGNATURE John McDaniel☒ NTR very little oil found.Donald W. Smith

Reviewed: 5.30 qy



WB008 A

METERS

0 100 200

AS State Plans, Zone 4
sub008a

Subdivision Field Map

Map Key: KKNVD008A

Name: J. M. Simpson

Date: May 26/91

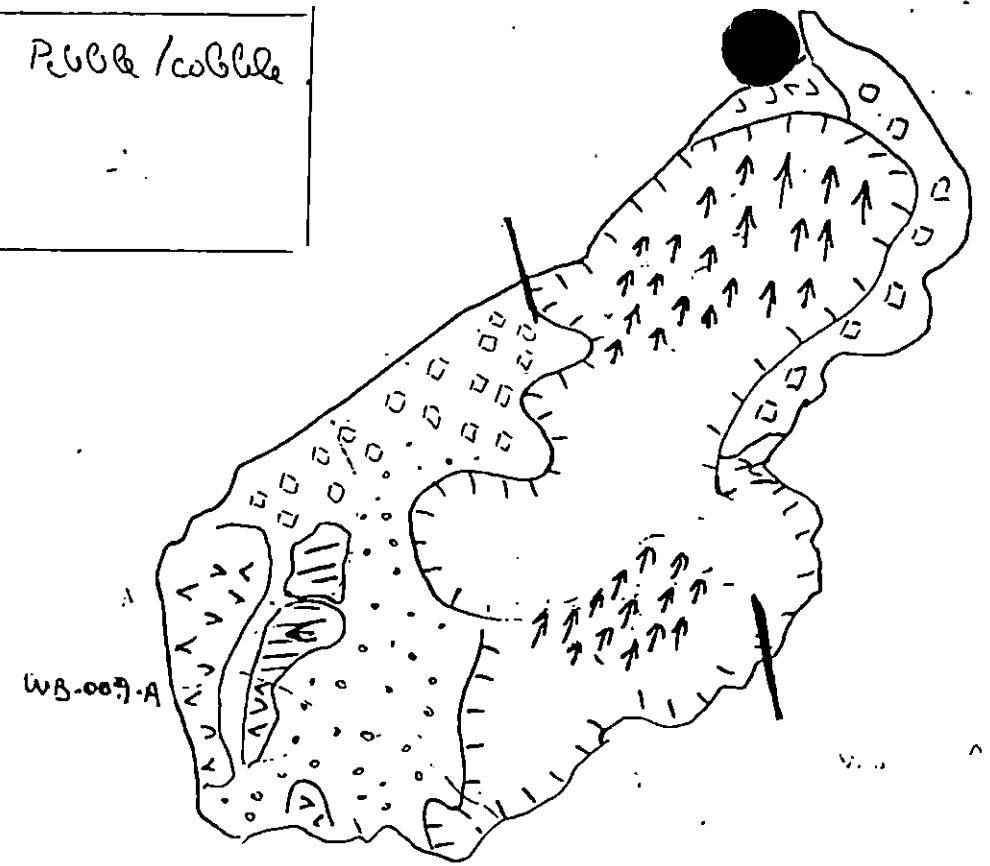
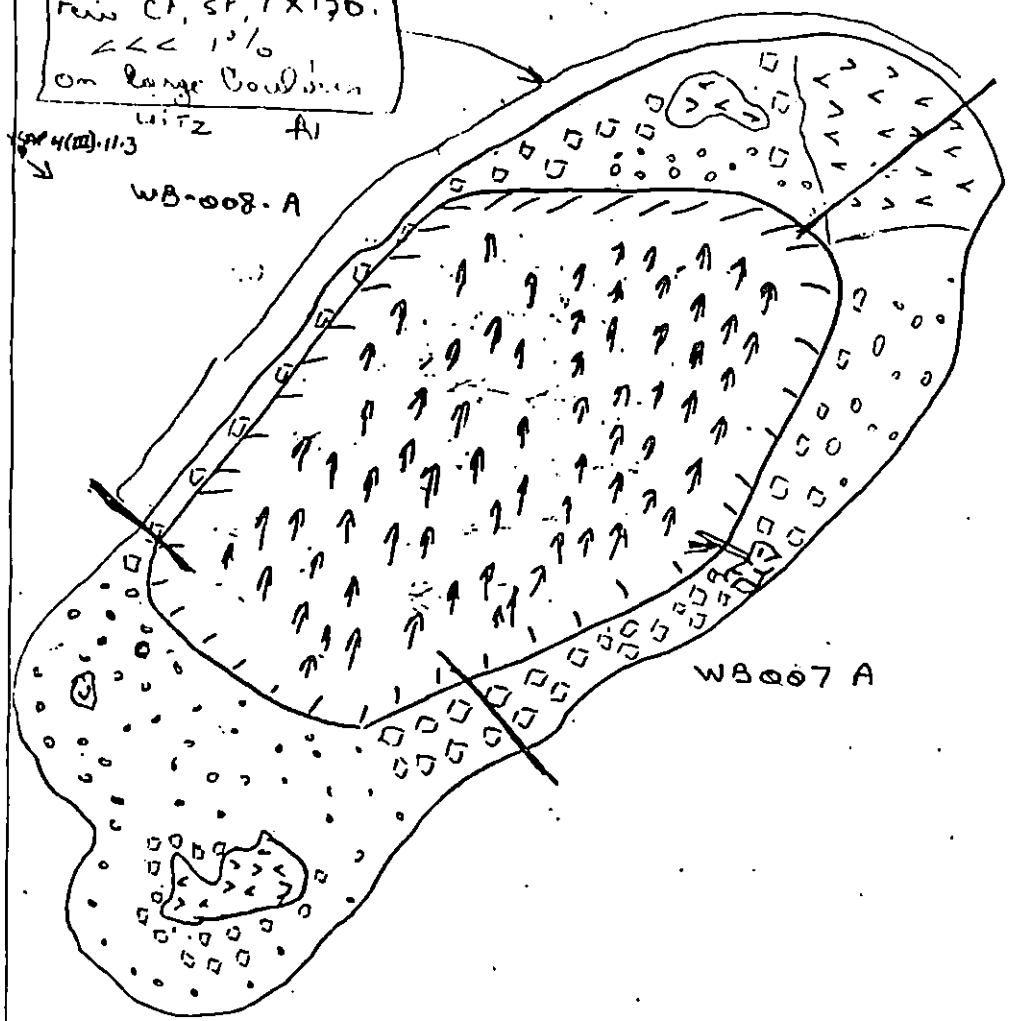
map

legend

WB-008-A
J.M. Samples
MAY 26/91
0935 - 0943

-  Bedrock cliffs/bluffs
-  Intertidal Outcrops/
bedrock ramp
-  Boulder/cobble
-  Pebble/cobble

Fine Ct, st, 1x150.
222 1/2
on large boulders



WB-006-A

WB-009-A

WB-007-A

Reviewed: MC 5/15/91
reviewed 5.30 98
Meters.
0 50 100

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 26 MAY '91
 SEGMENT # WB008 TIDAL HEIGHT(Range) +2.0 - +3.0
 SUBDIVISION A BIOLOGIST Jim ROTH
 SEA STATE Flat WIND SPEED/DIRECTION
 PHOTOGRAPHS: ROLL # FRAME #

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

A1 - INFREQUENT OIL COAT + STAIN OCCURS IN HIGH
 INTERTIDAL ABOVE MOST BIOTA

GENERAL COMMENTS: THIS SUBDIVISION HAS A HEALTHY
 INTERTIDAL BIOTA, WHICH REFLECTS ITS SOMEWHAT
 SHELTERED LOCATION. THE MIDDLE ZONE HAS DENSE
 FUCUS ON BOULDERS AND COBBLES ALONG THE NORTH SHORE.
 ALSO FOUND HERE ARE BARNACLES, LITTORINES, LIMPETS,
 AND SMALL MUSSELS WHICH ARE VERY DENSE IN PLACES.
 FUCUS IS MORE DENSE TOWARD THE WEST END OF THE
 SUBDIVISION.

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 MB 5/20/91

WB-008-A
 24 Samples

MAY 26/91

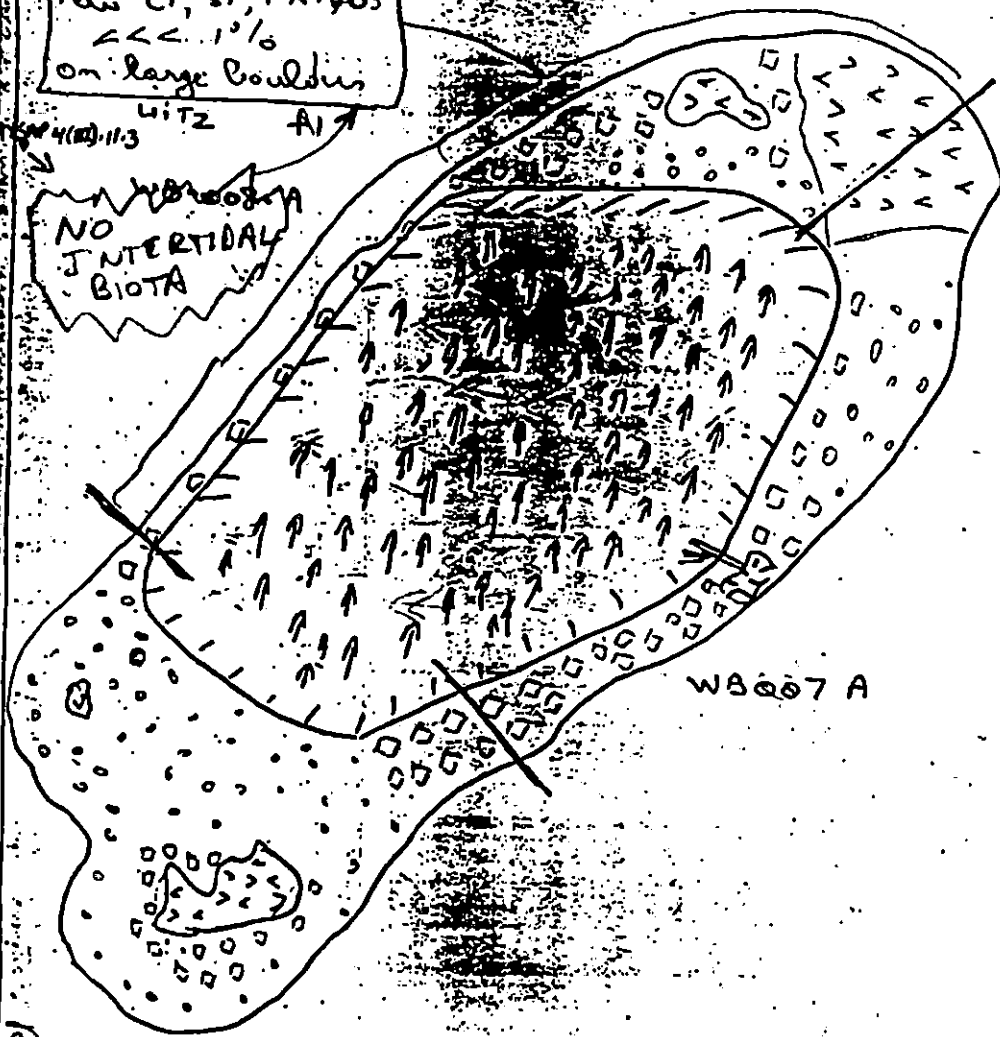
09.35 - 09.43

-  rock cliffs/bluffs
-  intertidal Outcrops/
-  rock ramp
-  Pebble/cobble
-  Boulder/cobble

Five CT, st, 1x150
 <<< 10%
 on large boulders

WITZ A1

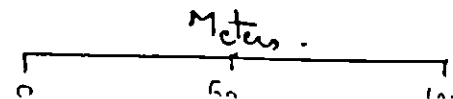
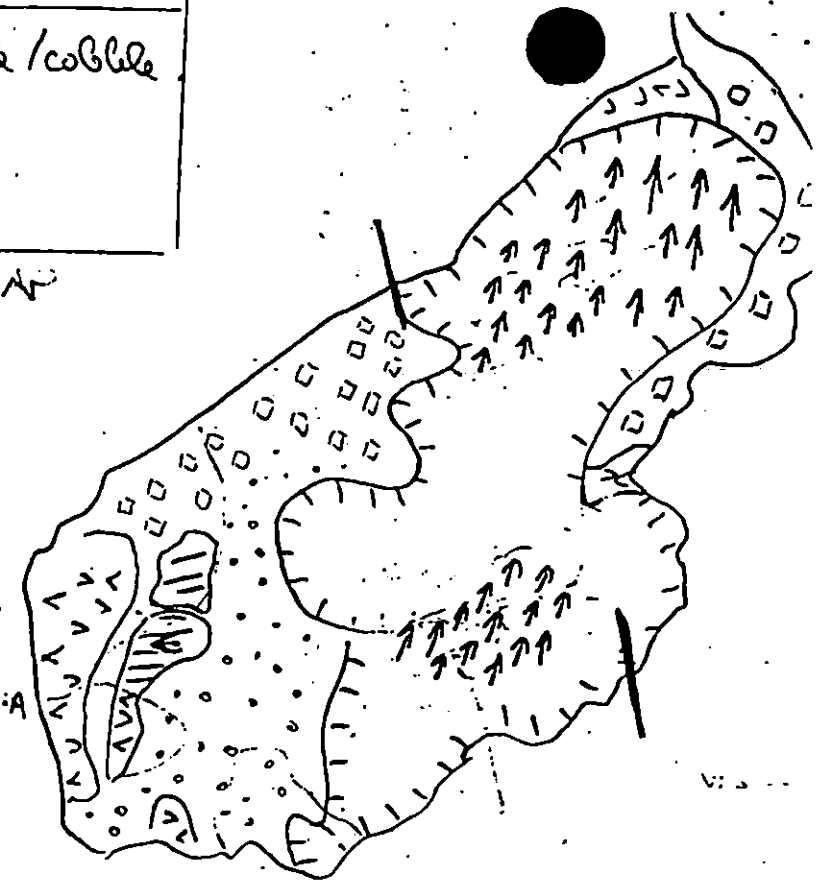
NO
 INTERTIDAL
 BIOTA



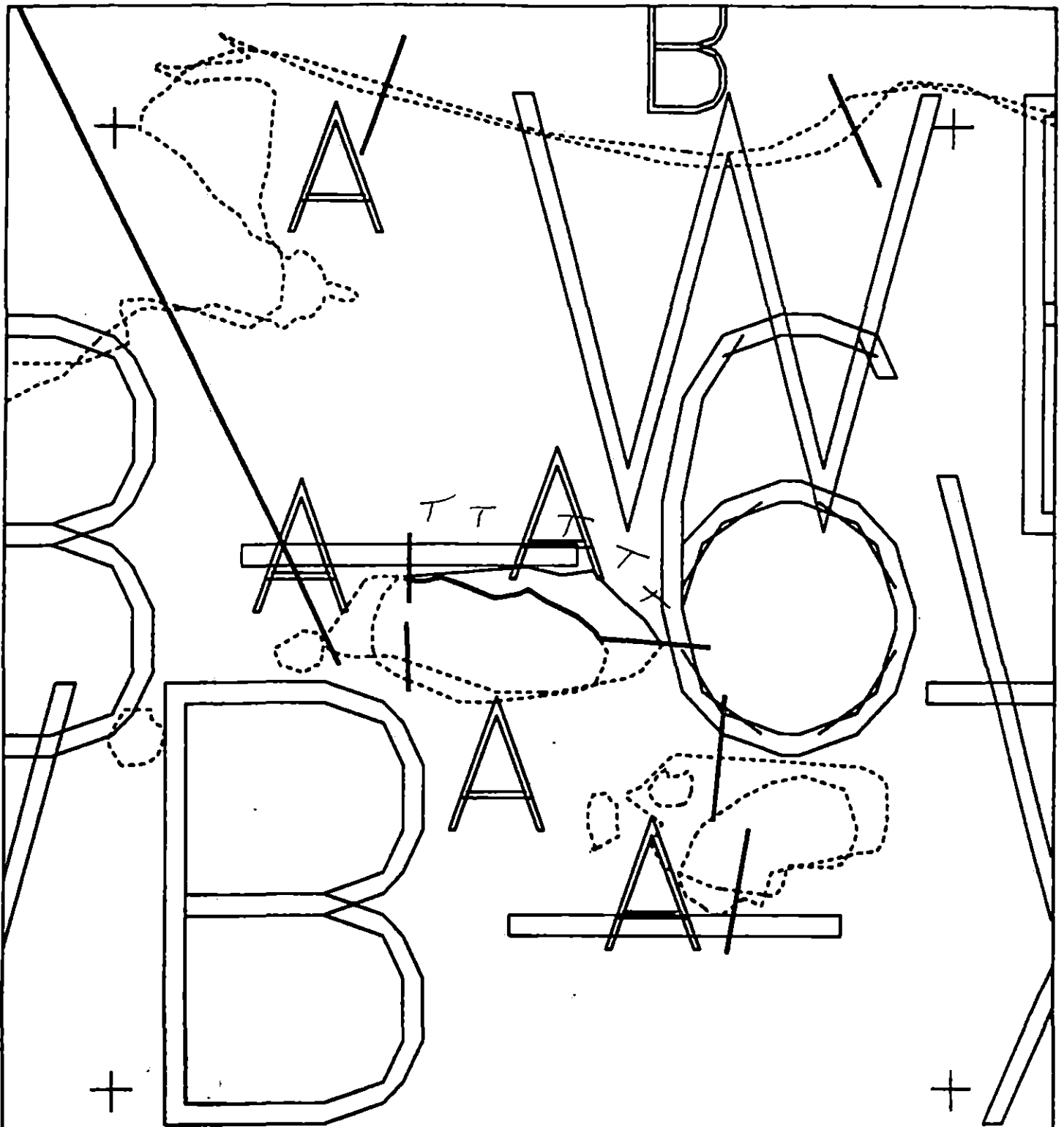
WB-006-A

A. MAP
 (cont.)

WB-009-A



Reviews MS
 5/31/91



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

WB008 A
 ADEC Subsegment Length: 150m
 METERS
 0 100 200
 AK State Plane Zone 4
 sub008a



Subdivision Field Map
 Map Key: KENWB008A
 Name: for Sample
 Date: May 26/91
 Date Entered:

Reviewed: 5/31/91 MC
 Reviewed 5-30 94

REGION: KENAI

SEGMENT: ST/WB-09

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ WB-09 SUBDIVISION A (1 OF 1) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5S Shorebird/Waterfowl concentration (4/1 to 5/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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 116m: Medium 9 m: Narrow 0 m: V.Light 137 m: No Oil 22 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: The recommended treatment includes, 1) tarmat removal, 2) manual pick up of mousse, patties, oiled debris and vegetation, and 3) bioremediation of subsurface oil in UITZ (see attached sketch map).
Work should be conducted after 5/15 based on above bird constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ WB-9 SUBDIVISION: A DATE 4/7/90

USCG NAME R. Bryan Hirt SIGNATURE R. Bryan Hirt DCI

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

Agree with the Shoreline Oiling Summary Sheet For WB-009 - Subdivision A

ADEC NAME Russell Kumber SIGNATURE Russell Kumber

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS The main band of oiling on this area is an area 20m x 25m. The oiling was produced by a soft asphalt and mousse saturated sediments around and under the rubble. The beach found 5 m. The oiling extended to the M12 and was found among some of the rubble. Additionally there were some smaller areas that had asphalt between the cobbles and boulders.

Recommended treatment:

Manual pick up and breakage of the asphalt and mousse saturated sediments. Spar boom if oiling develops during treatment. Alternatively washing may be more appropriate in the larger oiled area. Bioremediation is recommended as a follow up treatment.

LAND MANAGER

NAME Patrick Norman SIGNATURE Patrick Norman

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

Manual pick up of Asphalt and mousse concentrations should be done on WB-9-A. This will take a lot of man hours to do based on the work we did last year on this Island. Washing with heated water would do more for the appearance, and also remove more of the oil I feel.

SHORELINE OILING SUMMARY

REVISION NO. 0322 90

OG. Buddy Siegel USCG Bryan Hirtle SEGMENT ST/ WB-9 (1 subdivision)
 BIO M. K. Fawcett LAND REP Pat Norman (RAG) SUBDIVISION A (1 of 1)
 EXXON John Deere ADEC Russell Kurbie TIME 15:30 10:16:30
 TEAM NO.: 17 TIDE LEVEL: +6.2 10 +4.0 DATE 4/7/90
 ST. SUBDIVISION LENGTH: 639 m 239 ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: Island - Counter-clockwise
 SURFACE SEDIMENTS: R 60 % B 30 % C 5 % P 5 % G 5 % S 5 % M 0 % V 0 %
 SLOPE: Long 20 % Hang 60 % Vert 20 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 25 m M 4 m N 1740 m VL 60 m NO 50 m
NS 8400

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	C	B	P	S	SW	BR	GY	BL	TR	LR	SU	UI	M	L
ASPHALT PAVEMENT	X	+	✓	!							X	✓	✓	✓
POOLED														
COVER			X			X					X			
COAT			X			X					X			
STAIN			X			X					X			
MOUSSE		X		✓						X	X	✓		
PATTIES				X		X					X			
TARBALLS				X		X					X			
FILM				X			X				X	X	X	
NO OIL											X			

PAVEMENT: H (F) S 600 sq. m by 2 cmPATTIES / TARBALLS 100 BAGS

NEAR 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-17-5Frames 6, 9, 10, 12, 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	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO			SW	BR	GY	BL	TR	LR	SU	U	M	L		
1	25				X		5-10	X					X		X					G, C, G
2	25					X	0-0	X							X					G

COMMENTS

This segment contains only 1 subdivision. The segment is on island, much of which was inaccessible due to steep cliffs. A west-facing beach, covered largely in boulders and cobbles, contained a continuous asphalt mat (25 x 20 meters) at a distance of about 20 meters from the shore. The asphalt became patchy closer to the shore (MZ + LZ) and my representative smelt from the continuous mat above.

* Film on pooled water in B, LZ, MZ, UI

SEGMENT 2.1

SUBDIVISION A

DATE 1/1/90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bathy
- ☐ Oil Out
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/AWL
- ☐ SSL
- ☐ Profile 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

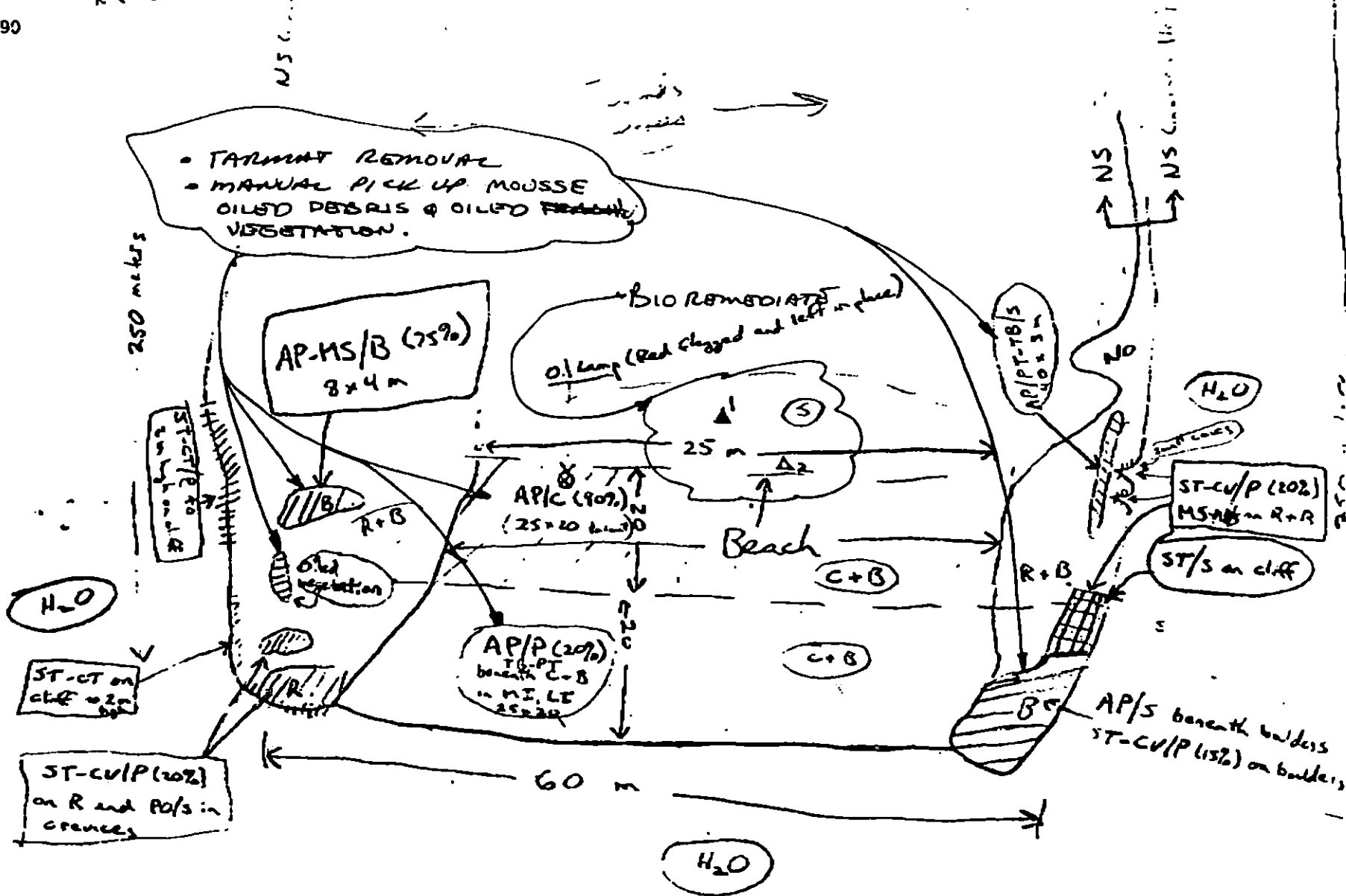
CT/P
Patchy Distribution

CT/S
Sporadic Distribution

Oiled Vegetation

1 →
Photo location, direction, and number

SKETCH MAP



Oil Character Length (m) AP 32 PO 5 CV 30 CT 30 ST 30 MS 6 PT 25 TB 25 FL LA NO 50

REVISION: 03/21/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03-22-90

Segment ST / WB 9 Subdivision A Date (mo / day / yr) 4 / 7 / 90Time (24 hr) 1540-1700 Biologist M. Fawcett

- (A) Substrate type and % of segments:
 (1) Bedrock 60 (2) Boulder 20 (3) Cobble 5 (4) Pebble 5 (5) Sand 10 (6) Silt 0
 (small 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 (3)

Photographs:
Roll No. ST-17-5Frames 6, 9-14

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:

1 eagle, many
 1 white-winged scoters see attached sheet

Ecological Considerations:

55 bird concentration area

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 unholed 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.

WB 9

M. H. Fawcett 4/7/90
Wildlife Observations & Comments

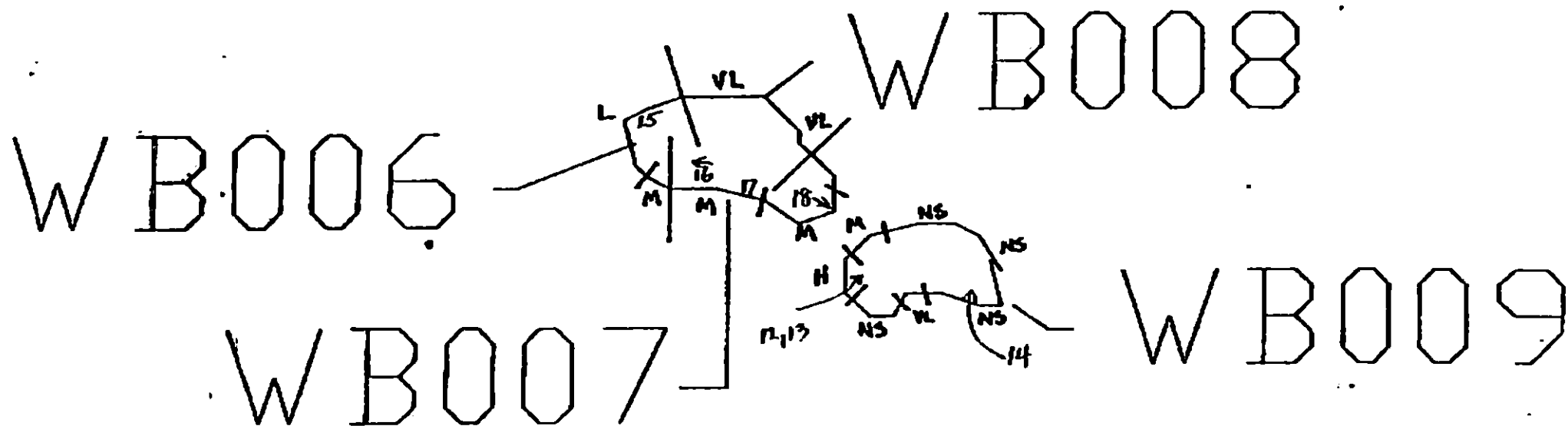
The boulder field on the west side of the island had considerable surface oil remaining in the middle and upper intertidal areas. Below the main oiled zone there is a dense bed of mussels and a well-developed community including Fucus, Littorina, Limpets (Notoacmaea scutum). Some sheen was seeping downshore into the mussel bed.

On the north east (exposed) side of the island and on around to the southwest side, the small brown acorn barnacle (Chthamalus stellatus) has recently settled in vast numbers blanketing the upper and middle shore levels from about +3 to +11 ft, mainly on vertical faces and large boulders. I also observed one small patch (~20 x 40 cm) of newly settled mussels on the NE side. There are dense beds of juvenile mussels (3-12 mm) as well, mainly on the north and east sides. Large anemones (Tealia), chitons Katharina and limpets (N. scutum) are common in the low intertidal zone on the north and east sides of the island.

Photos: ST-17-5

Frames: 6, 9, 10, 12-14

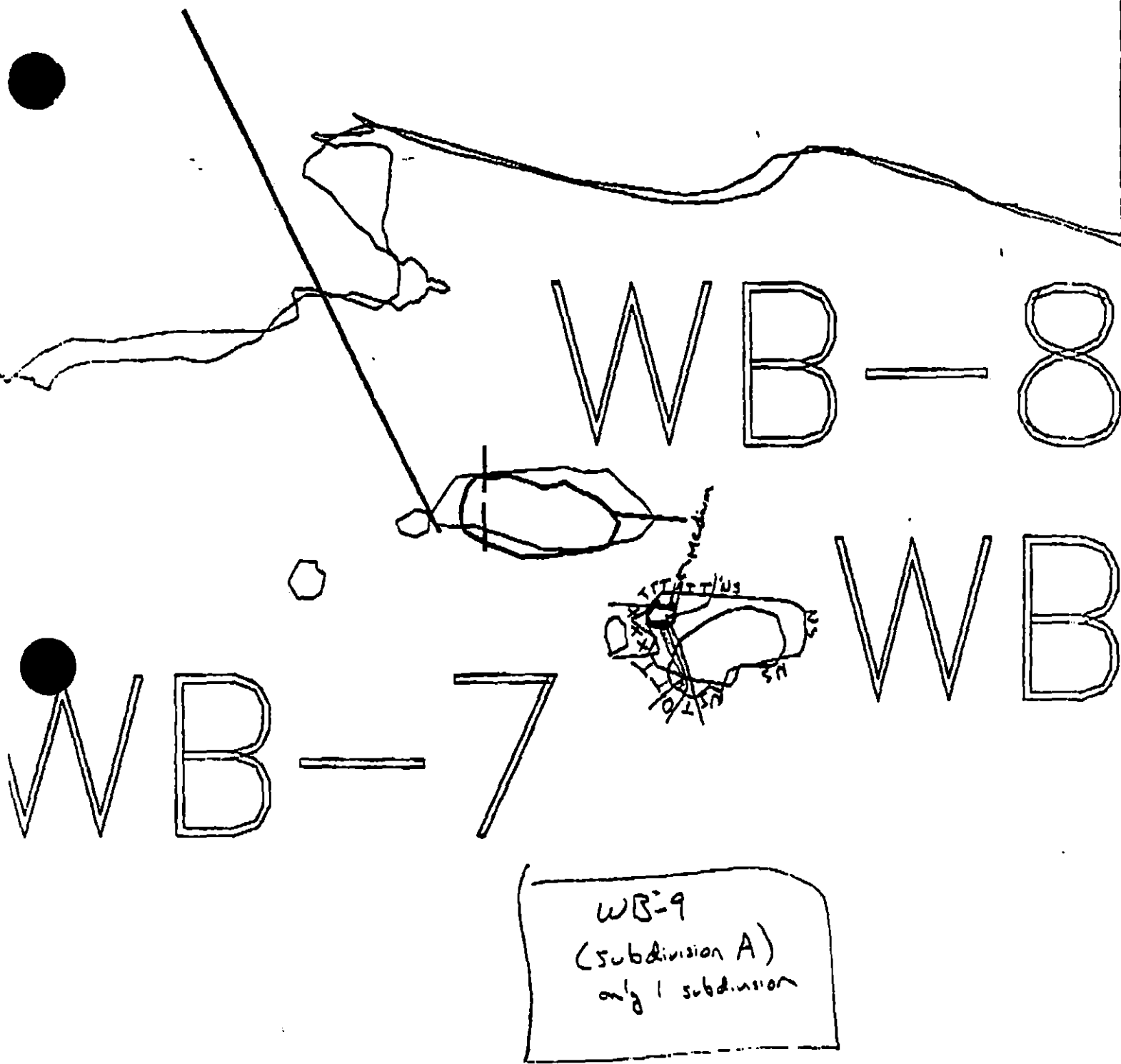
4/7/90



6, 9, 10 (aerial)
1000'

500.0

OILING	
H	Heavy
M	Moderate
L	Light
VL	Very Light
N	None
NS	Not Surveyed
Distance in Meters	



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

WB-~~9~~

ADEC Segment Length: 513m



Map Key: KEN-149
Name: Randy Leagal
Date: 4/2/90
Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ WB-09 SUBDIVISION A (1 OF 1) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5S Shorebird/Waterfowl concentration (4/1 to 5/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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: 4/18/90

OILING CATEGORIZATION:

Wide 116m: Medium 9 m: Narrow 0 m: V.Light 137 m: No Oil 22 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: The recommended treatment includes, 1) tarmat removal, 2) manual pick up of mousse, patties, oiled debris and vegetation, and 3) bioremediation of subsurface oil in UITZ (see attached sketch map). Work should be conducted after 5/15 based on above bird constraints.

TAG COMMENTS:

TAG APPROVAL DATE:

ADEC

EXXON

NOAA

USCG

FOSC:

DATE: 5-12-90

SEGMENT S

SUBDIVISION A

DATE 1/1/90

CHECKLIST

- ☐ H Area
- ☐ Approx. Scale
- ☐ Seg/Sub Bdry
- ☐ Oil Dist
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HMLAW
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Photo(s)
- ☐ Pht Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
PK - No Substrate Oil

2 Δ
PK - Substrate Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

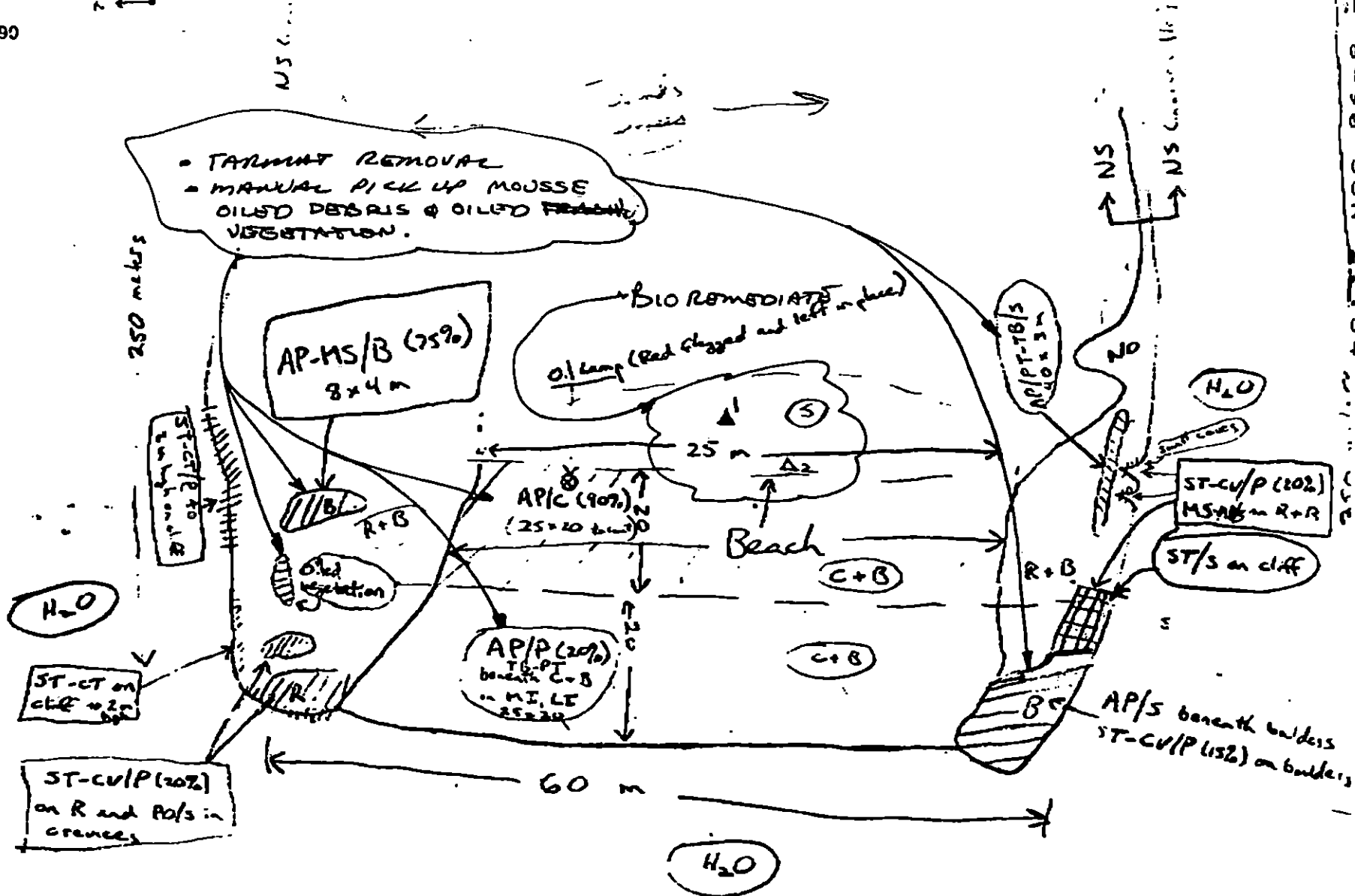
CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oil Vegetation

1 ●
Photo location, direction, and number

SKETCH MAP



Character Length (m) AP 32 PO 5 CV 30 CT 30 ST 20 MS 6 PT 25 TB 25 FL 1 A NO 50

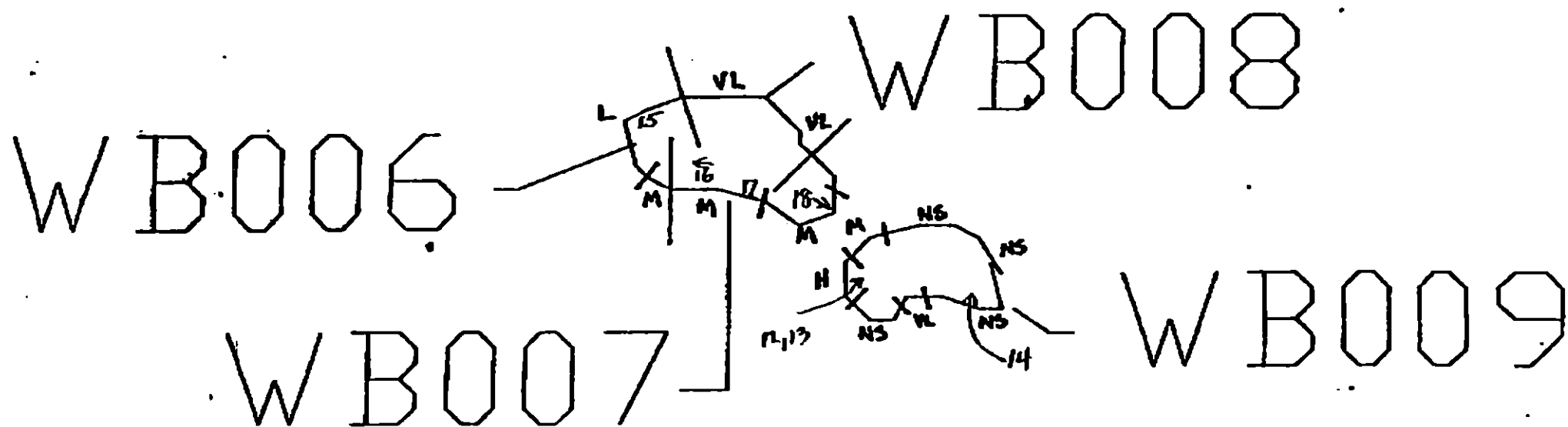
REVISION: 03/2000

7
N
0

Photos: ST-17-5

Frames: 6, 9, 10, 12-14

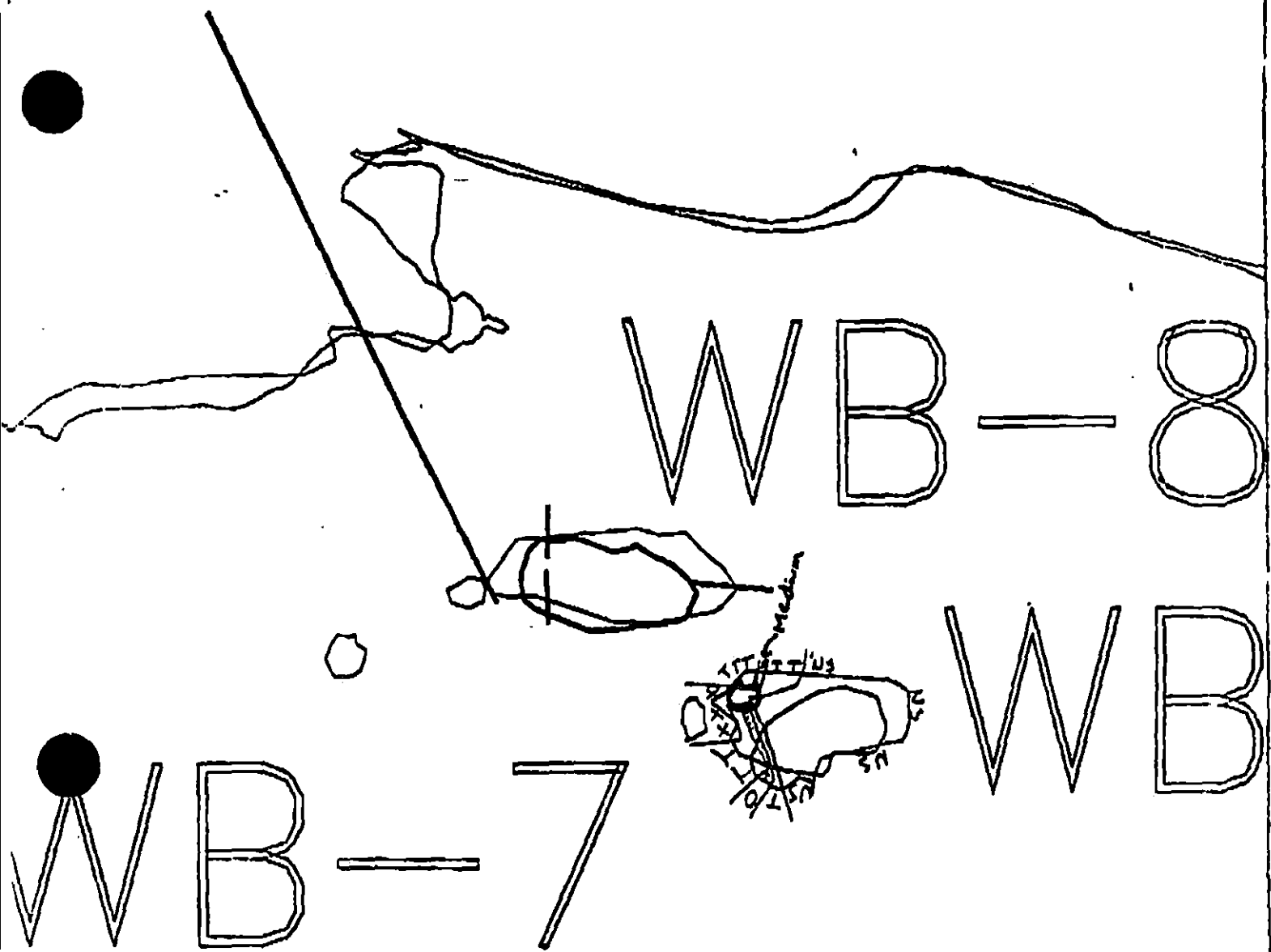
4/7/90



↑ ↑ ↑
6, 9, 10 (aerial)
1000'

500.0

OILING	
1	Heavy
1	Moderate
1	Light
1/2	Very Light
1	None
15	Not Surveyed
Distance in Meters	



WB-9
(subdivision A)
only 1 subdivision

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

ADEC Segment Length: 513m



Map Key: KEN-149
Name: Randy Lee, et al
Date: 4/2/90



ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT WB-9 SUBDIVISION A (1 of 1)

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

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1J	Purse Seine Area	No constraint to manual pickup and tarmat removal; closed to bioremediation after 7/1.
5S	Shorebird/Waterfowl Concentration	No constraint to manual pickup, tarmat removal and bioremediation after 5/15.
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.

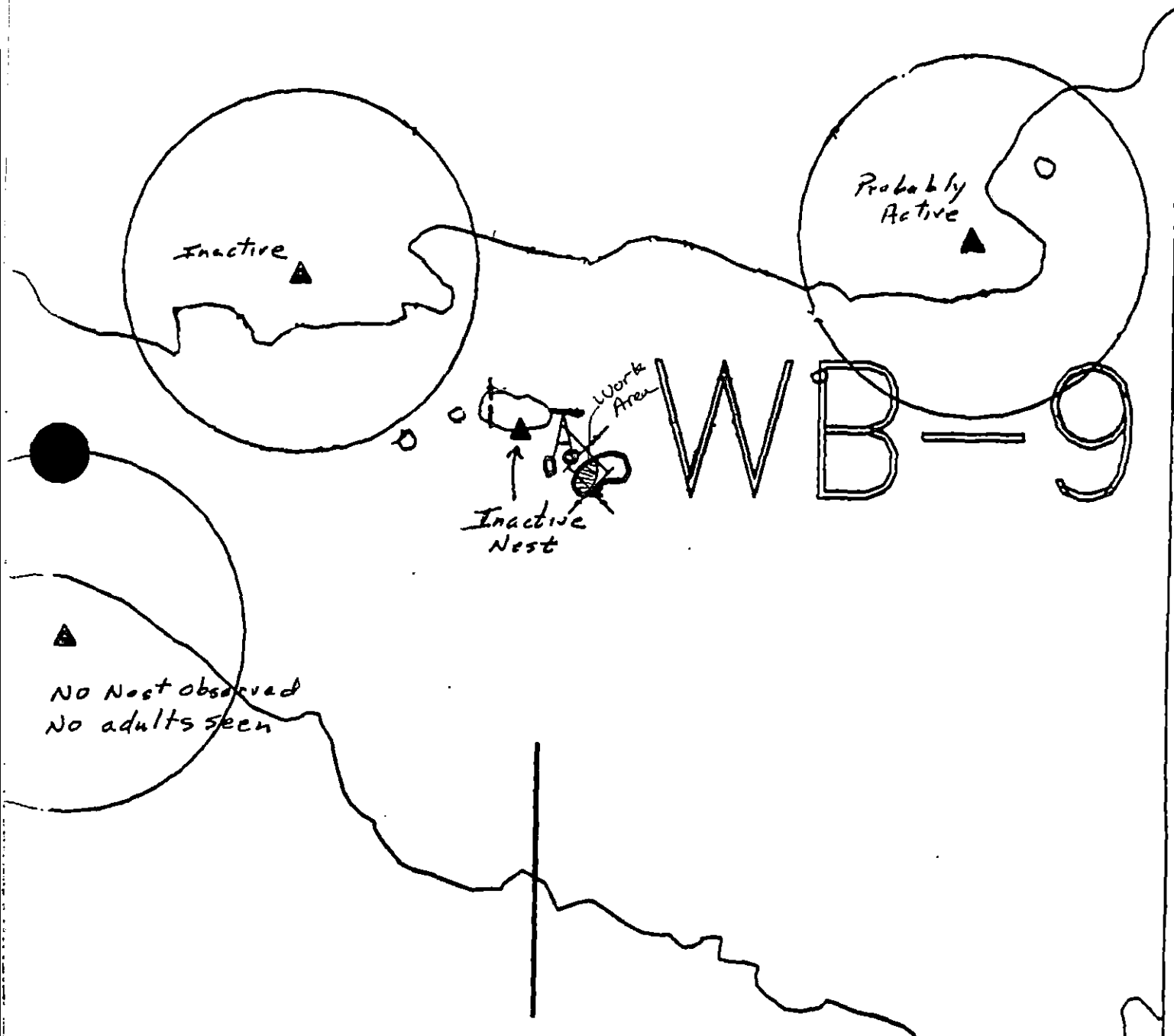
TAG APPROVAL DATE 5/24/90
ADEC ART WENGER
EXXON ANDY TATE
NOAA DWIGHT B. HARRIS
USCG W. J. HALL

FOSC W L

DATE 5-24-90

Prepared By: Andr Meyer DEXC

Date 5/23/90



Exxon Company, USA
Map Key: KEN-18-9



ECOLOGY MAP
SEGMENT WB-9
SUBDIVISION A (1-101-1-1)
METERS
0 100 200

★	Seabird Colony
▲	Eagle Nest

1 inch = 1120 feet

SHORELINE EVALUATION

SEGMENT ST/ WB-09 SUBDIVISION A (1 OF 1) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5S Shorebird/Waterfowl concentration (4/1 to 5/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Adman

DATE: 4/18/90

OILING CATEGORIZATION:

Wide 116m: Medium 9 m: Narrow 0 m: V.Light 137 m: No Oil 22 m
Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: The recommended treatment includes, 1) tarmat removal, 2) manual pick up of mousse, patties, oiled debris and vegetation, and 3) bioremediation of subsurface oil in UITZ (see attached sketch map).
Work should be conducted after 5/15 based on above bird constraints.

SEE CONSTRAINT ADDENDUM
DATED 5/23/90 RAC.

TAG COMMENTS:

TAG APPROVAL DATE: 4/18/90

ADEC JOHN BAUER

EXXON ANDY BOE

NOAA Burt Wescott

USCG G.A. Becker

FOSC: my L

DATE: 5-12-90

1991 MAYSAP EVALUATION

SEGMENT: WB 009 **SUB:** A **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.

MAYSAP FIELD SHORELINE COMMENT SHEET

52

TEAM NO. 4 SEGMENT WB-009 SUBDIVISION A DATE 5/27/91

ADEC

NAME

Steve Ferguson

SIGNATURE

[Signature]☐ NTR ☒ TREATMENT RECOMMENDED

THE SURVEY CONDUCTED AT WB-9A WAS COMPLETED IN 20 MINUTES. SITE A2 IS 10m(W) x 25m(L) AP/MSOR WITH < 5% OILINH. THIS OILED AREA IS LOCATED ON THE PROTECTED SIDE OF THE ISLAND AND WILL TAKE A VERY LONG TIME TO WEATHER AWAY NATURALLY IF IT DOES AT ALL. SITE A1 IS ALSO VERY WELL PROTECTED BY VERTICAL BEDROCK. SUGGEST MANUAL REMOVAL OF REMAINING AP/MSOR AT BOTH SITES.

EXXON

NAME

George P. Stiles

SIGNATURE

☐ NTRAP, & MSOR remain in areas A1 & A2.

LANDMANAGER

NAME

Pat Norman

OF

Pat Norman

SIGNATURE

Pat Norman5-27-91☐ NTR

exposed AP, & MSOR can be ~~be~~ removed manually
This will complete work on WB-9.

USCG/NOAA

NAME

James McNeill

SIGNATURE

[Signature]☒ NTR

Some AP found and picked up at site
by VECO about 50%

This site is site number WB-3 of NOAA's subsistence fisheries study project.

[Signature]

Revised 5/21/91 MC

On Sketch Map

Legend

-  Bedrock cliffs/bluffs
-  Intertidal Outcrops/Bedrock ramp
-  Boulder/cobble

 Cobble / pebbles

B-007.A

JM Semprich

MAY 26/91

0840 - 0900

WB-008.A

WB007A

WB-006.A

A1

ct, Ap, nSor,
6x8, 10% in
Litz depression
MAYSAF 4(III)-10-18-20
Worked on

MAYSAF 4(III)-10-12-17

WB-009.A

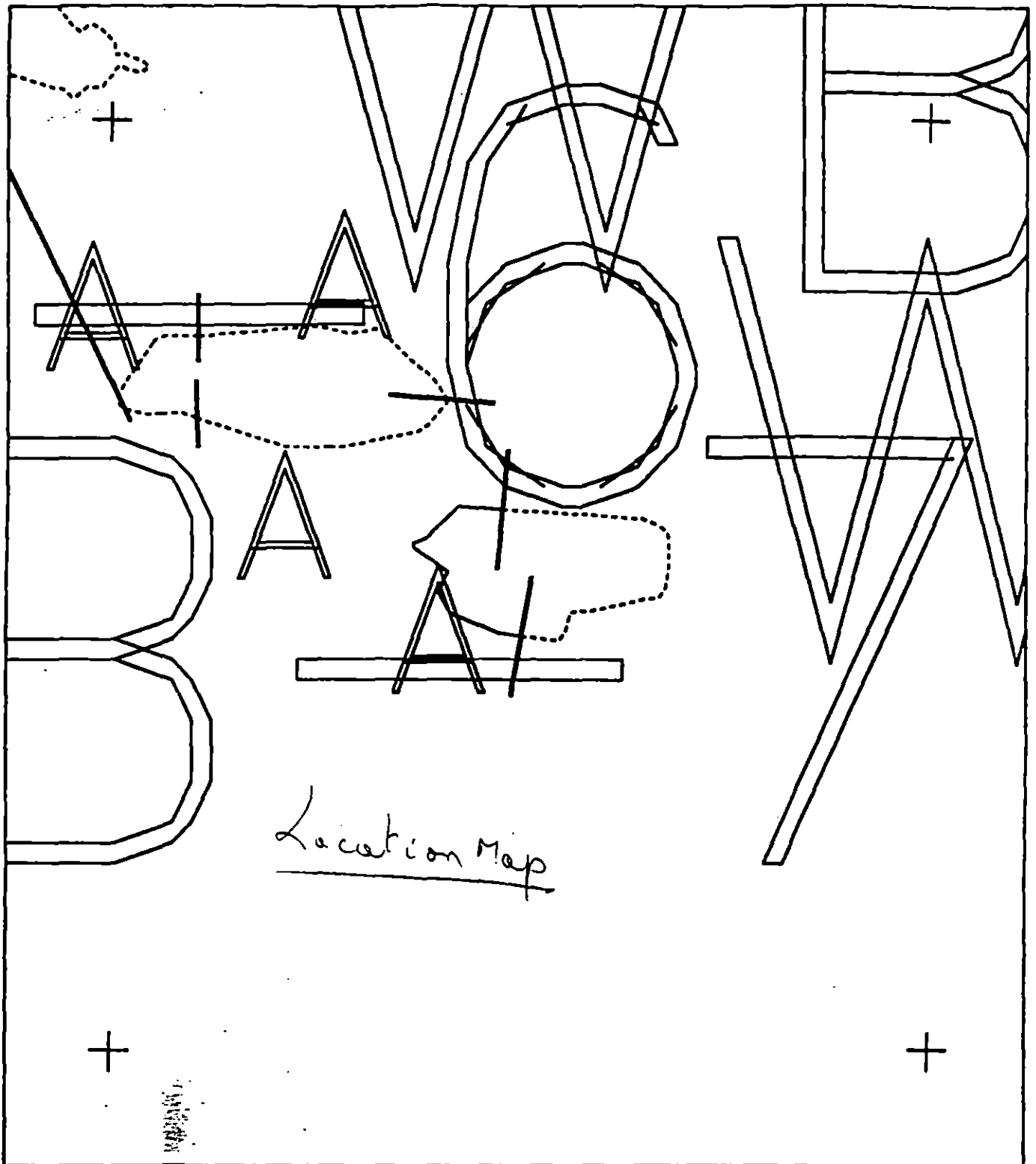
A2-

Ap / nSor, 10x25
<5%, <5 cm thick
max individual
patch size <1 m²
also ct and in bedrock
fractures on the east
side of patch.
MAYSAF 4(III)-10-21

REVISION: MC 5/5/91
revised 5/5/91 to

Meters

0 50 100

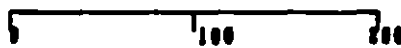


Location Map



WB009 A

METERS



AK State Plans, Zone 4
060000

Subdivision Field Map

Map Key: KENVB000A

Name: JM Sempels

Date: May 26/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 **DATE** 26 MAY '91
SEGMENT # WB-9 **TIDAL HEIGHT(Range)** +0.28 TO +0.9
SUBDIVISION A **BIOLOGIST** JIM ROTH
SEA STATE FLAT **WIND SPEED/DIRECTION**
PHOTOGRAPHS: ROLL # **FRAME #**

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

A1 - COBBLE BANK IN LOWER MITE JUST ABOVE DENSE FUCUS, W/
LOCALLY DENSE MUSSELS, LITTORINES INCL. JUVENILES, MODERATELY
DENSE BARNACLES.
A2 - COBBLE/PEBBLE BEACH W/ MOST OIL OCCURRING ABOVE THE
LEVEL OF INTERTIDAL BIOTA. AT THE WEST END OIL WAS FOUND
FARTHER DOWN, IN THE MITE, WHICH HAD LOCALLY DENSE SMALL
MUSSELS, DENSE LITTORINES, AND FAIRLY ABUNDANT LIMPETS.
GENERAL COMMENTS: THIS SMALL ISLAND HAS A HEALTHY + THRIVING
INTERTIDAL BIOTA, WITH EVIDENCE OF RECENT RECRUITMENT IN
MUSSELS, LITTORINES.

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	1	1	

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

Shoreline subdivision map showing important biological features attached.

Reviewed M/B 5/31/91

Sketch Map

Legend

-  Redrock cliffs/bluffs
-  Intertidal Outcrops/
Redrock ramp
-  Boulder/cobble

 Cobble/Pebbles

S.007.A

DM Symbols

MAY 26/91

0840 - 0900

BIO MAP
ROTH

WB-008.A

WB007A

WB-006.A

A1

ct, Ap, nSor,
6x8 <10% in
LITZ depression
MAYSA 4(20)-10-18-20
Worked on

MAYSA 4(20)-10-12-17

WB-009.A

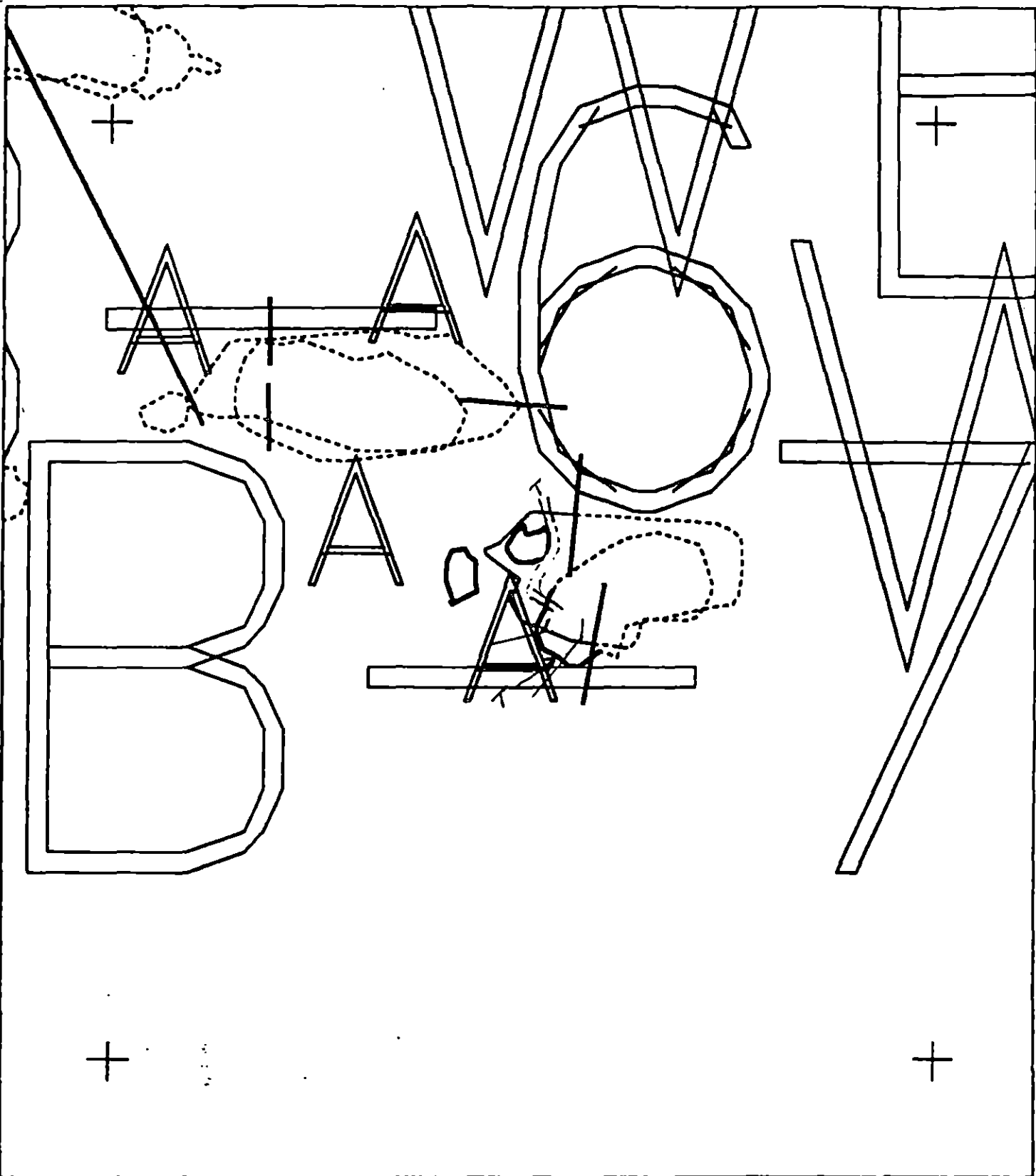
DENSE MUSSELS,
LITTORINES,
LIMPETS

A2-

Ap / 750g in 25
<5% <5%
max individual
patch size 5m
also ct and nSor
fractures on the east
side of patch
MAYSA 4(20)-10-10-20

MUSSELS,
BARNACLES,
LITTORINES

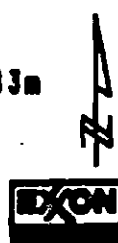
Meters



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

WB009 A
 ADEC Subsegment Length: 283m
 METERS

5 100 200
 AK State Plane Zone 4
 sub009a



Subdivision Field Map
 Map Key: KENWB009A
 Name: for Sample
 Date: May 26/91
 Date Entered:

Reviewed: MC 5/31/91
 Revised 5/30/91 KG

1991 MAYSAP EVALUATION

SEGMENT: WB 009 SUB: A 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:

Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time. PHONE 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.).

Timothy O. Smith for SHPS 6/07/91

RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>N</u>	<u>Y</u>	<u>Y</u>
Manual Pickup (Check as Req.)	<u> </u>	<u>X</u>	<u>Y</u>
Spot Washing	<u> </u>	<u> </u>	<u> </u>
Bio-Customblen Only	<u> </u>	<u> </u>	<u> </u>
Bio-Inipol/Customblen	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>

COMMENTS:

INITIAL:

TAG: MANUAL PICK UP OF EASILY ACCESSIBLE AP IN LOCATIONS A1 + A2

FOSC:

TAG APPROVAL DATE: JUNE 7 1991

FOSC APPROVAL DATE: 6/7/91

ADEC *John Bauer*

FOSC *[Signature]*

EXXON *[Signature]*

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

USCG *T.M. Murphy*

NOAA *[Signature]*

**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.

29 vms

MAYSAP FIELD SHORELINE COMMENT SHEET

52

TEAM NO. 4 SEGMENT WB-009 SUBDIVISION A DATE 5/27/91

ADEC

NAME Steve Ferguson

SIGNATURE [Signature]

☐ NTR ☒ TREATMENT RECOMMENDED

THE SURVEY CONDUCTED AT WB-9A WAS COMPLETED IN 20 MINUTES. SITE A2 IS 10m(W) x 25m(L) AP/MSOR WITH < 5% OILINH. THIS OILED AREA IS LOCATED ON THE PROTECTED SIDE OF THE ISLAND AND WILL TAKE A VERY LONG TIME TO WEATHER AWAY NATURALLY IF IT DOES AT ALL. SITE A1 IS ALSO VERY WELL PROTECTED BY VERTICAL BEDROCK. SUGGEST MANUAL REMOVAL OF REMAINING AP/MSOR AT BOTH SITES.

EXXON

NAME George R. Stiles

SIGNATURE _____

☐ NTR AP, + MSOR remain in areas A1 + A2.

LANDMANAGER

NAME Pat Norman

OF Port Graham

SIGNATURE Pat Norman

5-27-91

☐ NTR exposed AP, + MSOR can be removed manually. This will complete work on WB-9.

USCG/NOAA

NAME Mr. Michael McDonald

SIGNATURE [Signature]

☒ NTR Some AP found and picked up at site by VECO. About 50%

This site is site number WB-3 of NOAA's subsistence fisheries study project.

[Signature]

Revised 5/31/91 MC

Dg Skid Map

Legend

-  Bedrock cliffs/bluffs
-  Intertidal Outcrops/Bedrock ramp
-  Boulder/cobble

 Cobble/Pebble

WB-007.A

DM Semys

MAY 26/91

0840 0900

WB-008.A

WB007A

WB-006.A

A1

ct, Ap, nSor,
6x8, <10% in
Litz depression
MAYSA 4(III)-10-18-20

Worked on

MAYSA 4(III)-10-12-17

WB-009.A

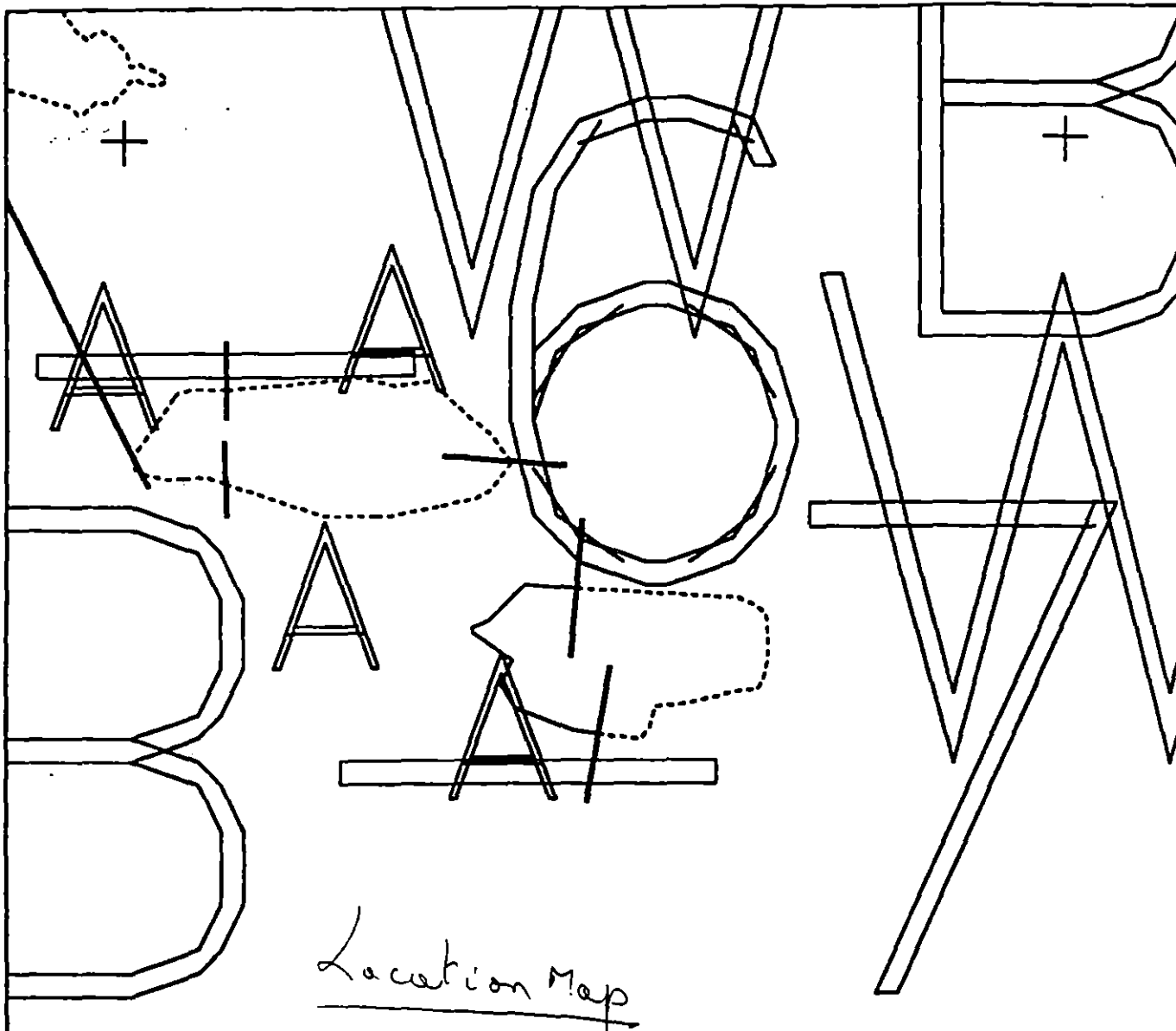
A2-

Ap/nSor, 10x25
<5%, <5cm thick
max individual
patch size <1m²
also ct and in bedrock
fractures on the east
side of patch.
MAYSA 4(III)-10-21

Meters

0 50 100

Revised: MC 5/3/91
revised 5/30/91 to



Location Map



WB009 A

METERS



AK State Plane Zone 4
NAD83

Subdivision Field Map

Map Key: KENVB009A

Name: JM Sempels

Date: May 26/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 26 MAY '91
 SEGMENT # WB-9 TIDAL HEIGHT(Range) +0.28 to +0.9
 SUBDIVISION A BIOLOGIST Jim Roth
 SEA STATE Flat WIND SPEED/DIRECTION
 PHOTOGRAPHS: ROLL # FRAME #

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

A1- COBBLE BANK IN LOWER HIZ JUST ABOVE DENSE FUCUS, W/
 LOCALLY DENSE MUSSELS, LITTORINES INCL. JUVENILES, MODERATELY
 DENSE BARNACLES.
 A2- COBBLE/PEBBLE BEACH W/ MOST OIL OCCURRING ABOVE THE
 LEVEL OF INTERTIDAL BIOTA. AT THE WEST END OIL WAS FOUND
 FARTHER DOWN, IN THE MITE, WHICH HAD LOCALLY DENSE SMALL
 MUSSELS, DENSE LITTORINES, AND FAIRLY ABUNDANT LIMPETS.
 GENERAL COMMENTS: THIS SMALL ISLAND HAS A HEALTHY + THRIVING
 INTERTIDAL BIOTA, WITH EVIDENCE OF RECENT RESEEDMENT IN
 MUSSELS, LITTORINES.

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			
Oystercatcher	1	1	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Manipeds(specify)			
Whales(specify)			

Shoreline subdivision map showing important biological features attached.

08 Sketch Map

Legend

-  Redrock cliffs/bluffs
-  Intertidal Outcrops/
Redrock ramp
-  Boulder/cobble

 Cobble/Pebbles

W5-007-A

14 Semys

MAY 26/91

0840 - 0900

BIO MAP
ROTH

WB-008-A

WB007A

WB-006-A

A1

ct, ap, n sor,
6x8 <10% in
Litz depression
MAYSAF 4(10)-10-18-20

Worked on

MAYSAF 4(10)-10-12-17

WB-009-A

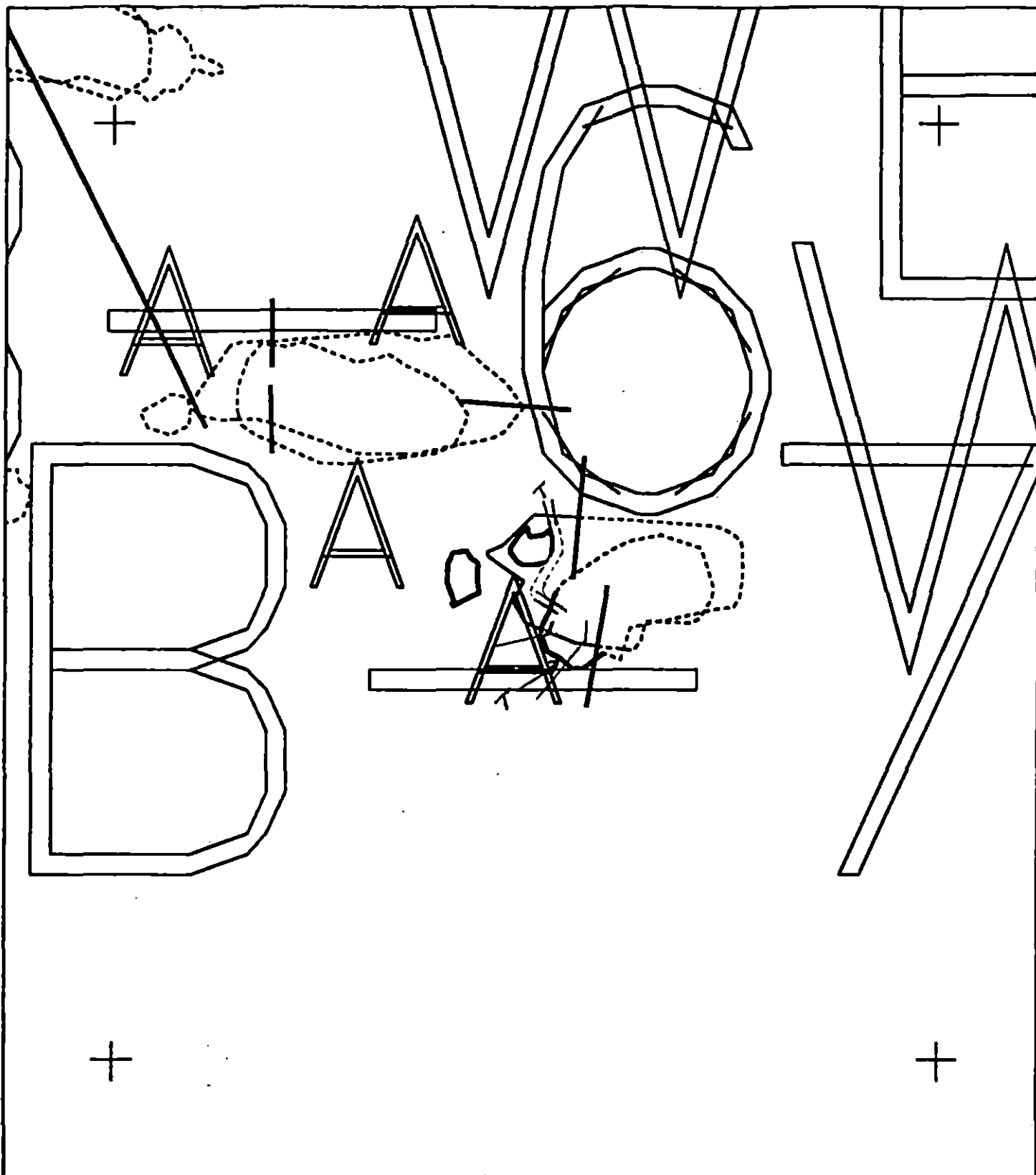
DENSE MUSSELS,
LITTORINES,
LIMPETS

A2-

Ap/750B
<5% <5m
max individual
patch size <5m
also ct and n
fractures on the east
side of patch

MAYSAF 4(10)-10-20-21

Meters



XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

WB009 A

ADEC Subsegment Length: 283m
METERS

AK State Plane Zone 4
sub0000



Subdivision Field Map

Map Key: KENWB009A

Name: J. J. Sengler

Date: May 26/91

Date Entered:

REVIEWED: MC 5/31/91
Cairns, Alaska, AK

REGION: KENAI

SEGMENT: ST/YB-01

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ YB-01 SUBDIVISION A (1 OF 1) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 232-22-10190 (Ps, 2/90)
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 (7/10 to 8/20)
2M Herring spawning (4/1 to 6/15)
4LL National Parks
6U Recreation: Tent sites (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

If 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 466 m: No Oil 2212 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
1B

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

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

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G John 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

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. 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

6V

6W

6X

6Y

Recreation:

Tent sites (6/1 to 9/15)

Anchorage (6/1 to 9/15)

Forest Service cabins (6/1 to 9/15)

Lodge (6/1 to 9/15)

Special use destination

7Z

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

7HH

Finfish harvesting

7II

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 / YB001 SUBDIVISION: A (ENTIRE SEGMENT) DATE 4/26/9

USCG
NAME

Jerry Scholtz

SIGNATURE

Jerry Scholtz

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC
NAME

Mike Ebel

SIGNATURE

Michael Ebel

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

YB-01-A: Very light oiling found here, the majority of which was found near the north end of segment along a pebbly beach. Outside of the few splashes of stain and coat elsewhere found in segments (very infrequent), the splashy bands that contained tarballs, patties and pooled (manose) type oil were either collected or broken up (where degraded enough). One lone tar patty was found 5m from a stream (possibly anadromous). No subsurface oil seen in any of the 12 test pits. No further impact recommended.

LAND MANAGER

NAME Mike Tetreau NPS

SIGNATURE

☒ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Good survey. The bayhead looks surprisingly clean compared to what was there last year. The few patties and tarballs we found we scattered/broke up. Other patties and tarballs may have been missed, but there is not enough to warrant any treatment.

SHORELINE OILING SUMMARY

REVISION NO. 0

OG Randy Siegel USCG Jerry Schultz SEGMENT ST/ YB-1
 BIO Lewis Sharnan LAND REP Mike Tetres (WPS) SUBDIVISION A (1 OF 1)
 EXXON Leonard Herbst ADEC Mike Ebel TIME 12:30 10/19/90
 TEAM NO. 12 TIDE LEVEL 6.05' @ 12:25' DATE 4/25/90
 EST. SUBDIVISION LENGTH: 2346 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 5 % C 5 % P 60 % G 10 % S 0 % M 0 % V 0
 SLOPE: Long 75 % Hang 25 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 310 m NO 2036

SURFACE OIL

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

PAVEMENT H F S 0 sq. m by 0PATTIES / TARBALLS 1 B:NEAR SHORE SHEEN? NO BR RW SL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐

Float / P:

TYPE chevron#BAGS 1Photographs: NoneRoll No: None

Frames: _____

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	SURF. SUBSURF SEDIMENT
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	SU	U	M	U			
1	31					X	0.0		X							X					P
2	25					X	0.0		X							X					P, G
3	25					X	0.0		X							X					P, G
4	32					X	0.0		X							X					P, G, S
5	30					X	0.0		X							X					P, G
6	32					X	0.0		X							X					P, G

COMMENTS

Segment consists of large bag surrounded by pebble beaches. Several meandering streams within segment. Very light oiling to no observed oiling throughout segment. Occasional coat-stain or tarball/patty. ~~All pits~~ No oil observed in pits.

REVIEWED YWDATE 4/27/90

110117

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 04.13.90

SEGMENT ST/ YB-1 SUBDIVISION A (2 OF 2)

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-FT)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SCREEN (Y/N)	▼	SURFACE SUBSURFACE SEDIMENT	
		OP	OR	OL	OF	NO		UD	UC	1/2" / 1"	1/4" / 1/2"	1/8" / 1/4"	1/16" / 1/8"	1/32" / 1/16"	1/64" / 1/32"	SU	U	M	U					
7	30					X	0-0		X							X						-	-	P, G
8	33					X	0-0		X							X						-	-	P, G
9	38					X	0-0		X							X						-	-	P, G
10	34					X	0-0		X							X						-	-	P, G
11	20					X	0-0		X							X						-	-	P, G
12	35					X	0-0		X							X						-	-	P, G
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COMMENTS

REVIEWED

F/W

DATE

49/63
4/27/80

A ←

↓ KEN 132

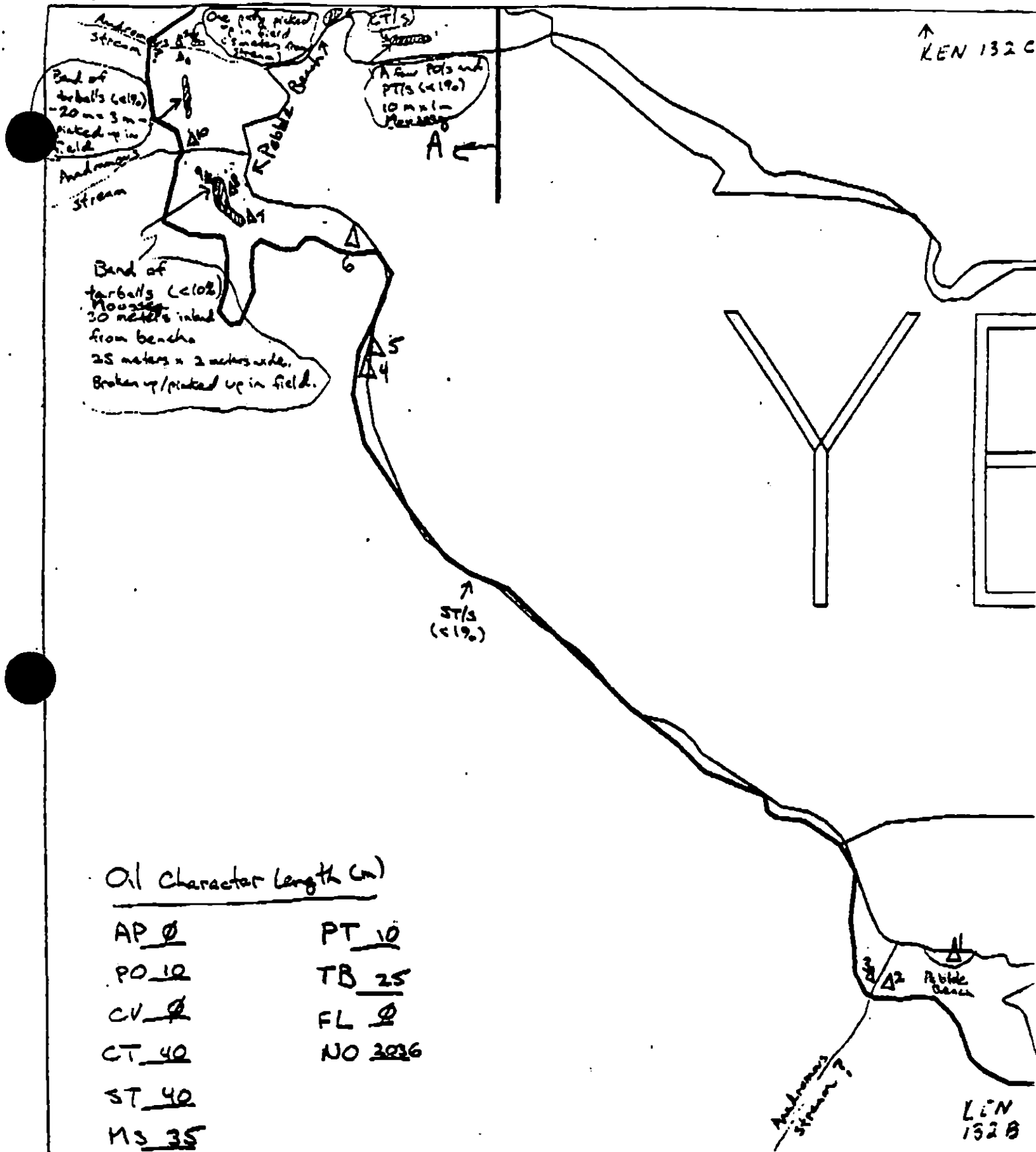
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
OOOO No Oil

YB-1

ADEC Segment Length: 2678m



Map Key: KEN-132c
Name: Ruby Diesel
Date: 4/25/90
Date Entered: 1/1



Oil Character Length (m)

AP <u>0</u>	PT <u>10</u>
PO <u>10</u>	TB <u>25</u>
CV <u>0</u>	FL <u>0</u>
CT <u>40</u>	NO <u>3036</u>
ST <u>40</u>	
MS <u>35</u>	

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

AAAA N. 0.1

YB-1

ADEC Segment Length: 2678m

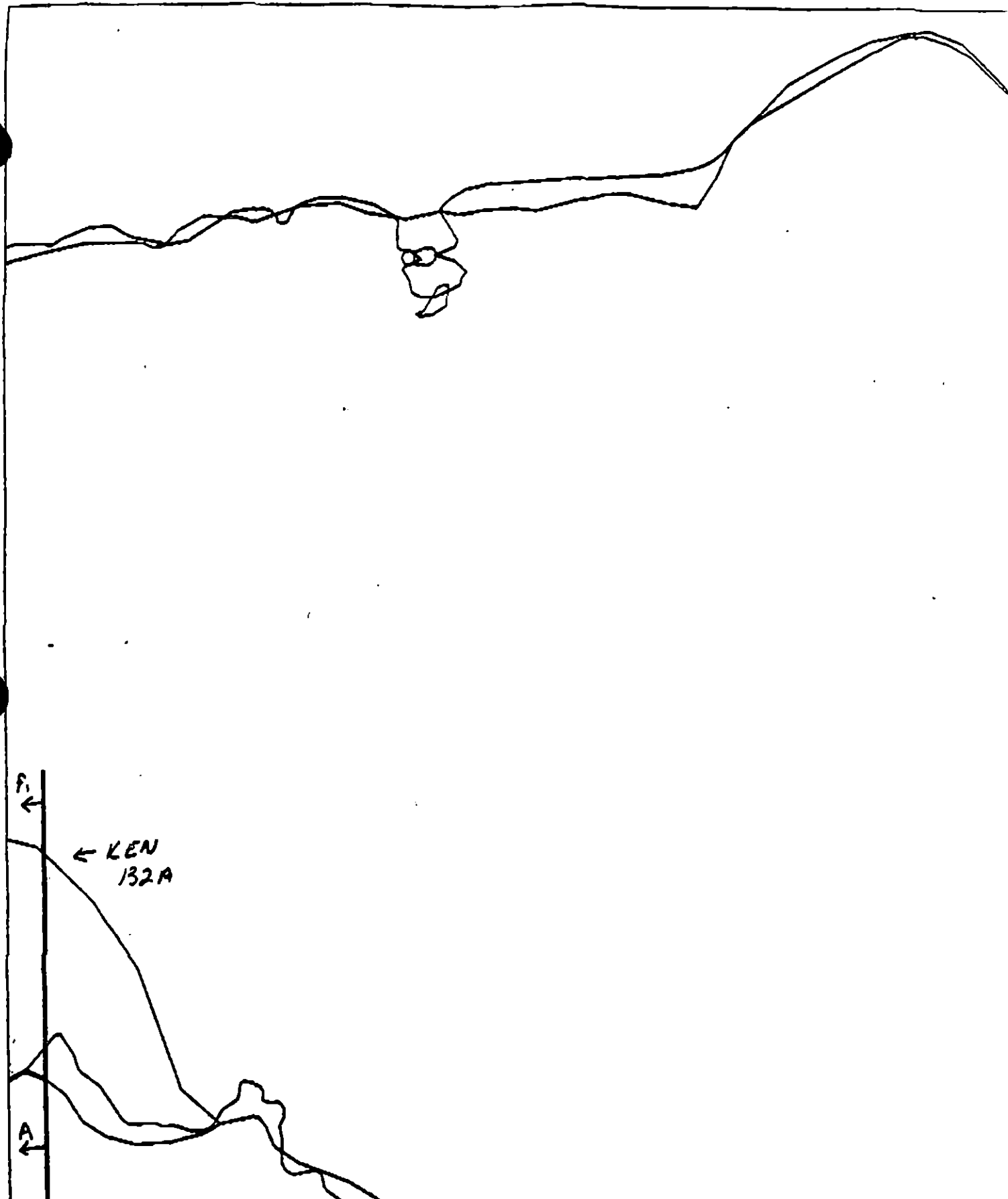
0 100 200 300

Map Key: KEN-1320

Name: Ruby Siegel

Date: 4/25/90

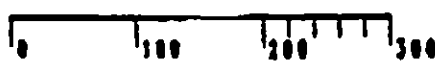
Data Entered:



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

YB-1

ADEC Segment Length: 2678m



Map Key: KEN-1526

Name: P. by Liegt

Date: 4/25/60

Data Entered: ,

SHORELINE ECOLOGICAL SUMMARY (Page 1 of 3)

REVISION: 00/02

Segment ST / YA-1 Subdivision A Date (mo / day / yr) 4/25/90

Time (24 hr) 1735-2000 Biologist SHARMAN

(A) Substrate type and % of segments: SUBDIV.
 (1) Bedrock 20 (2) Boulder 5 (3) Cobble 5 (4) Pebble 60 (5) Sand 10 (6) Silt

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

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

Photographs: Roll No.

Frames

BARNACLES

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

NOT PRESEN

MYTILUS

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

NOT PRESEN

GASTROPODS (ANCELA, LITTORIGA, LIMAETS)

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

NOT PRESEN

FUCUS

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

NOT PRESEN

Wildlife Observations/ General Comments: 20 pairs Barnier glandage, 10 pairs surf scoria, 5 pairs harlequin ducks, 5 pairs red-breasted nuthatches, 1 pair common nuthatches, for sparrows foraging in intertidal, 3 Steller's Jays front edge, varied thrushes in forest, river otter boat in supratidal step bedrock point. Intertidal fringe of dead trees evidences local subsidence in '64 earthquake. (Cont.)

Ecological Considerations:

We received no information regarding previously identified resource sensitivities for this segment. However, some information about the stream was gleaned from a recent NPS report by Alexander Milner. Please see attached map. As always, nearshore ecological communities are fairly sensitive to physical disturbance. This segment cannot benefit biotically from further human intrusion. 2/1/90

YB-1

Shoreline Ecological Summary (cont.)
(Page 2 of 3)

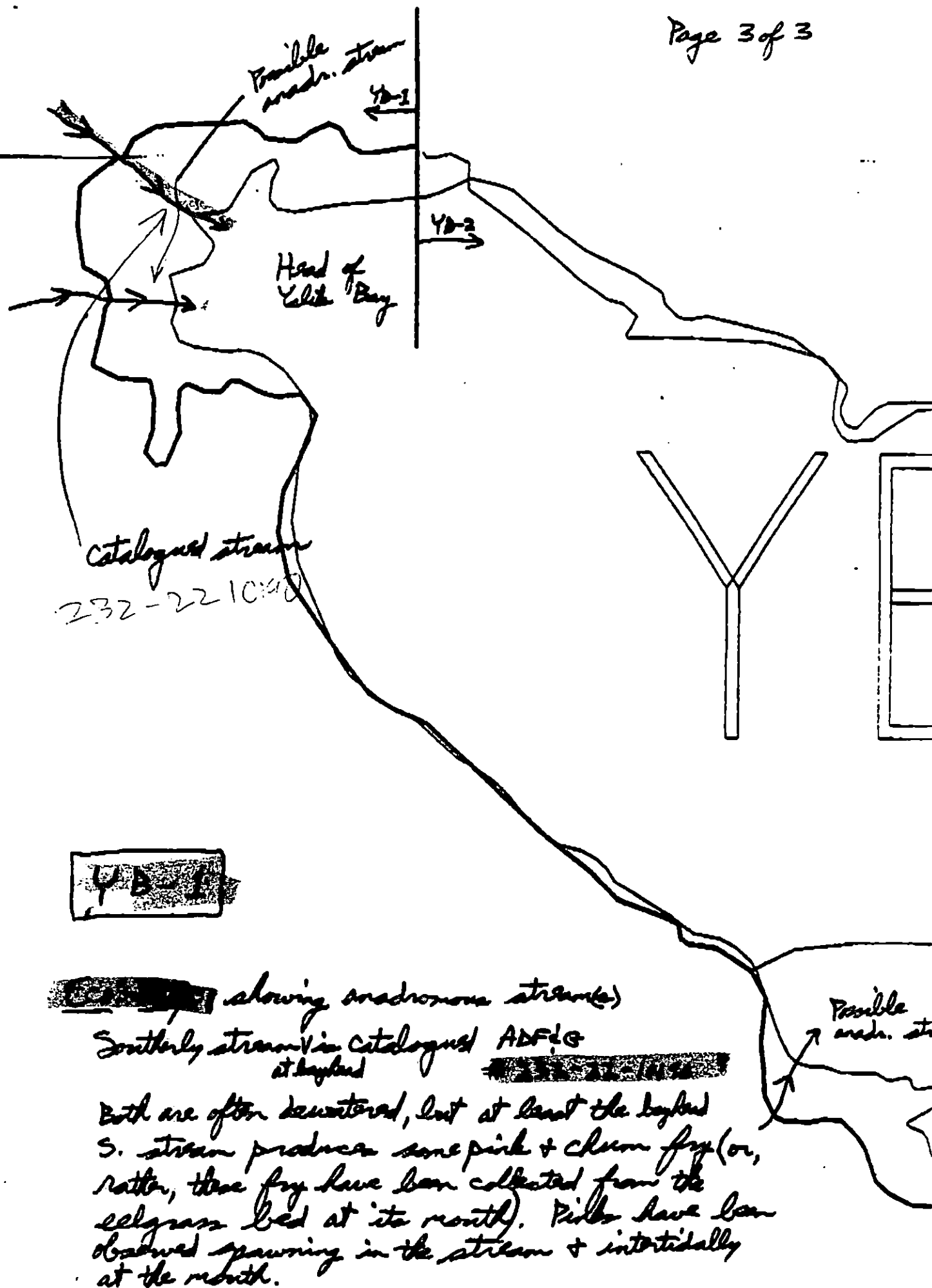
Shorman
4/23/90

General Comments (cont.) :

locally dense Fucus on bedrock cliffs, platforms, + giant boulders. Edgrees in bedrock tidepools. As in NC-1 the LTE of the bedrock/large boulder habitat is very rich and productive (please refer to this section of that segment summary). Although few actual barnacle spat are present, there are very abundant newly settled cyprid larvae, again as in NC-1. Where Fucus and rocks are established, there appears to be satisfactory recruitment. Similarly, littorines and limpets are recruiting well, especially on the more stable substrates (bedrock, giant boulders). There are Macoma shells (+ rare other bivalve spp.) on the cobble/pebble shingle beaches, and there is discontinuous rather sparse eelgrass just offshore in the shallow subtidal. The large layhead fine-grained beach appears to have (biologically) withstood last summer's intensive manual treatment quite well.

60/63

Page 3 of 3



~~Catalogus~~ showing anadromous stream(s)

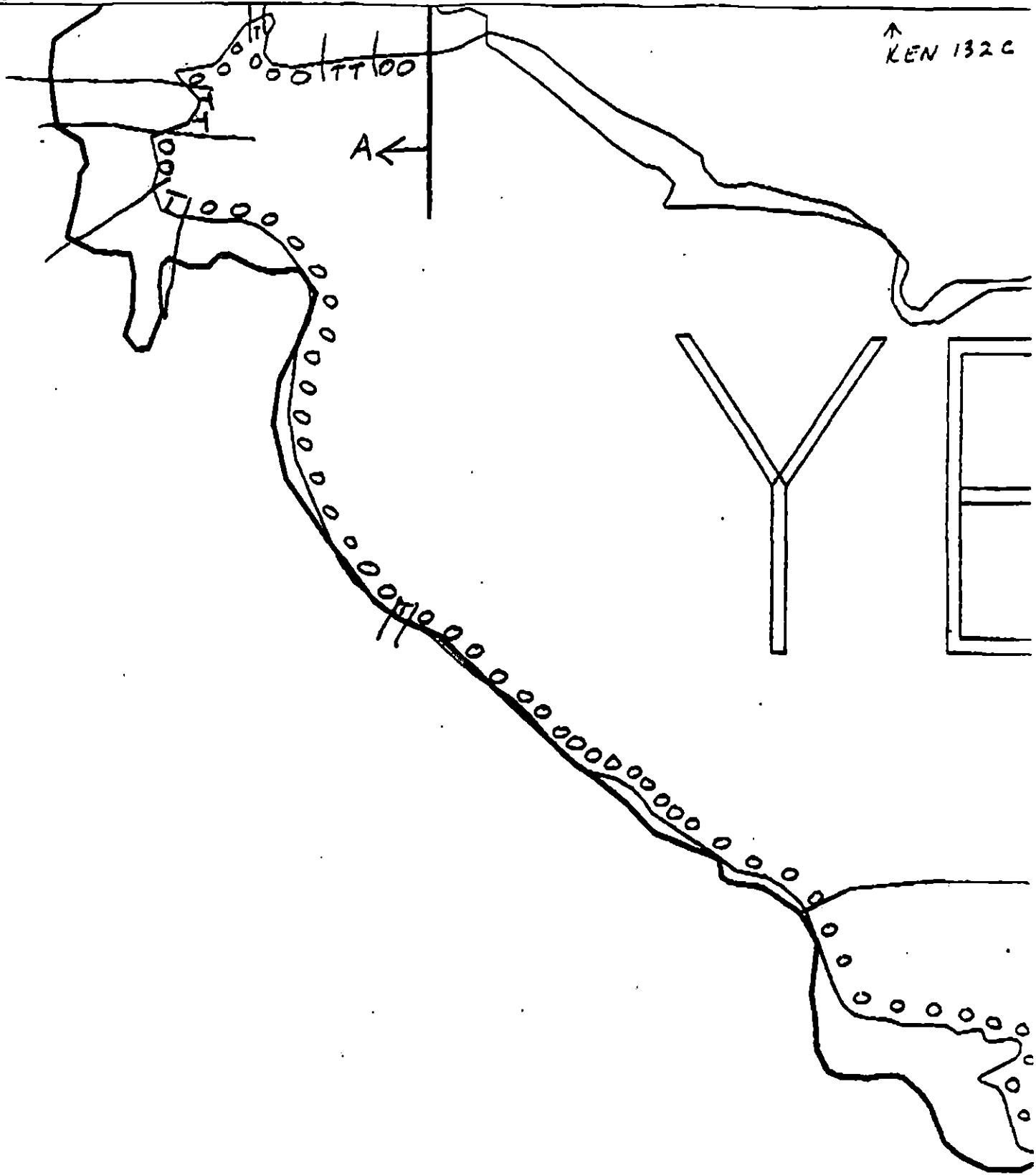
Southerly stream in Catalogus ADFLG
at bayhead

~~232-2210190~~

Both are often dewatered, but at least the bayhead S. stream produces some pink + cream fry (or, rather, these fry have been collected from the eelgrass bed at its mouth). Pinks have been observed spawning in the stream & intertidally at the mouth.

11/15

↑
KEN 132C

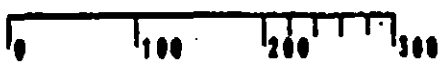


KEN
132B -
54/63

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

YB-1

ADEC Segment Length: 2678m



Map Key: KEN-132a
 Name: Ruby Siegel
 Date: 4/25/90
 Date Entered:

A ←



53/62
↓ KEN 132 A

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

YB-1

ADEC Segment Length: 2678m

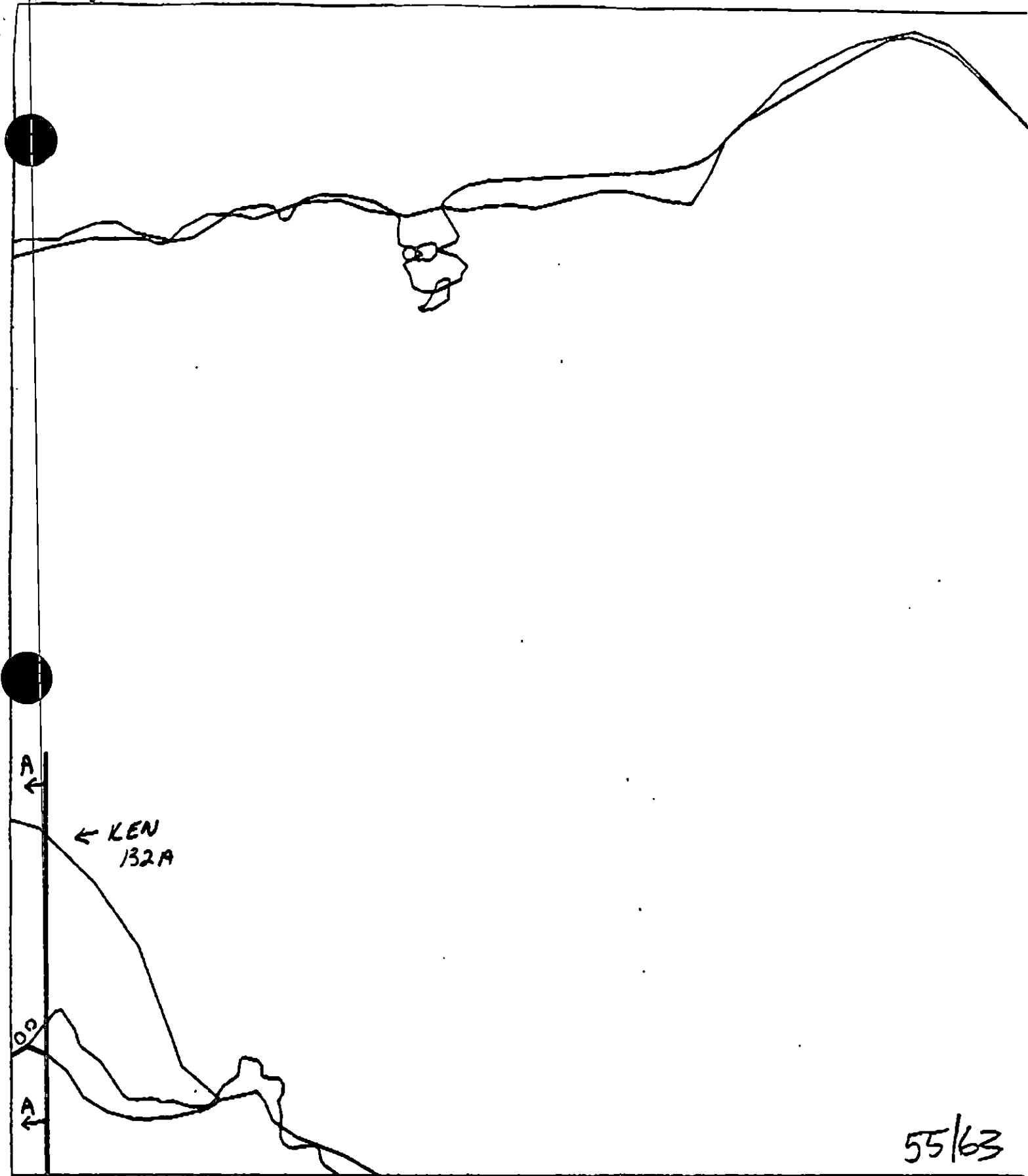


Map Key: KEN-132c

Name: Rudy Siegel

Date: 4/25/90

Data Entered:



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

YB-1

ADEC Segment Length: 2678m



Map Key: KEN-132b

Name: Ruby Siegel

Date: 4/25/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ YB-01 SUBDIVISION A (1 OF 1) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 232-22-10190 (Ps, 2/90)

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 (7/10 to 8/20)

2M Herring spawning (4/1 to 6/15)

4LL National Parks

6U Recreation: Tent sites (6/1 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature] DATE: 5/9/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 466 m: No Oil 2212 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: 5/8/90

ADEC Art Weimer [Signature]

EXXON Amy TGA [Signature]

NOAA Gary Petrac [Signature]

USCG G.A. Reiter [Signature]

FOSC: [Signature] DATE: 5-12-90

A ←

↓ KEN 132

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

YB-1

ADEC Segment Length: 2678m

0 100 200 300
METERS

Map Key: KEN-132c

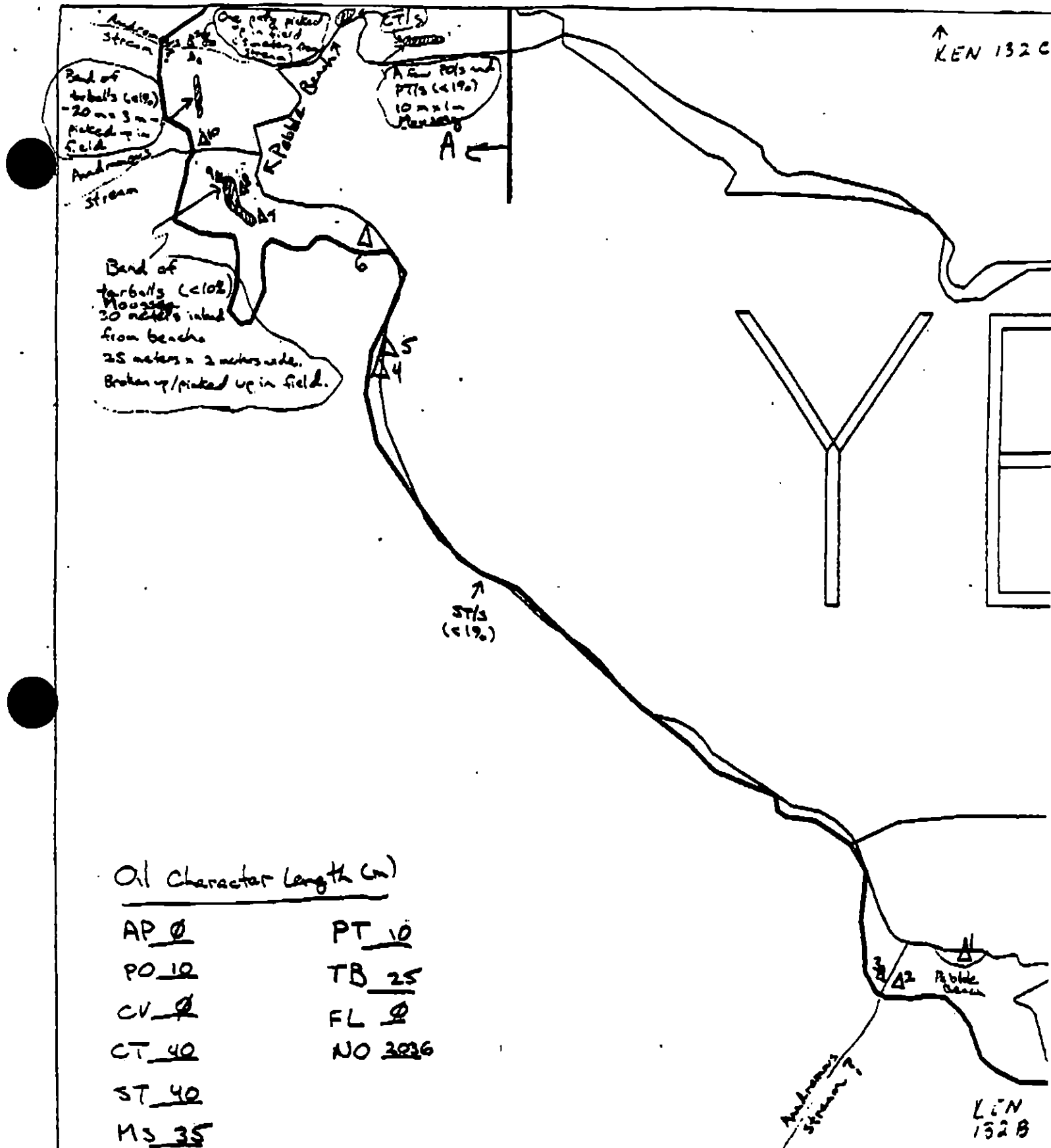
Name: Ruby Diesel

Date: 4/25/90

Date Entered:

50/63

↑ KEN 132 C



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

YB-1

ADEC Segment Length: 2678m

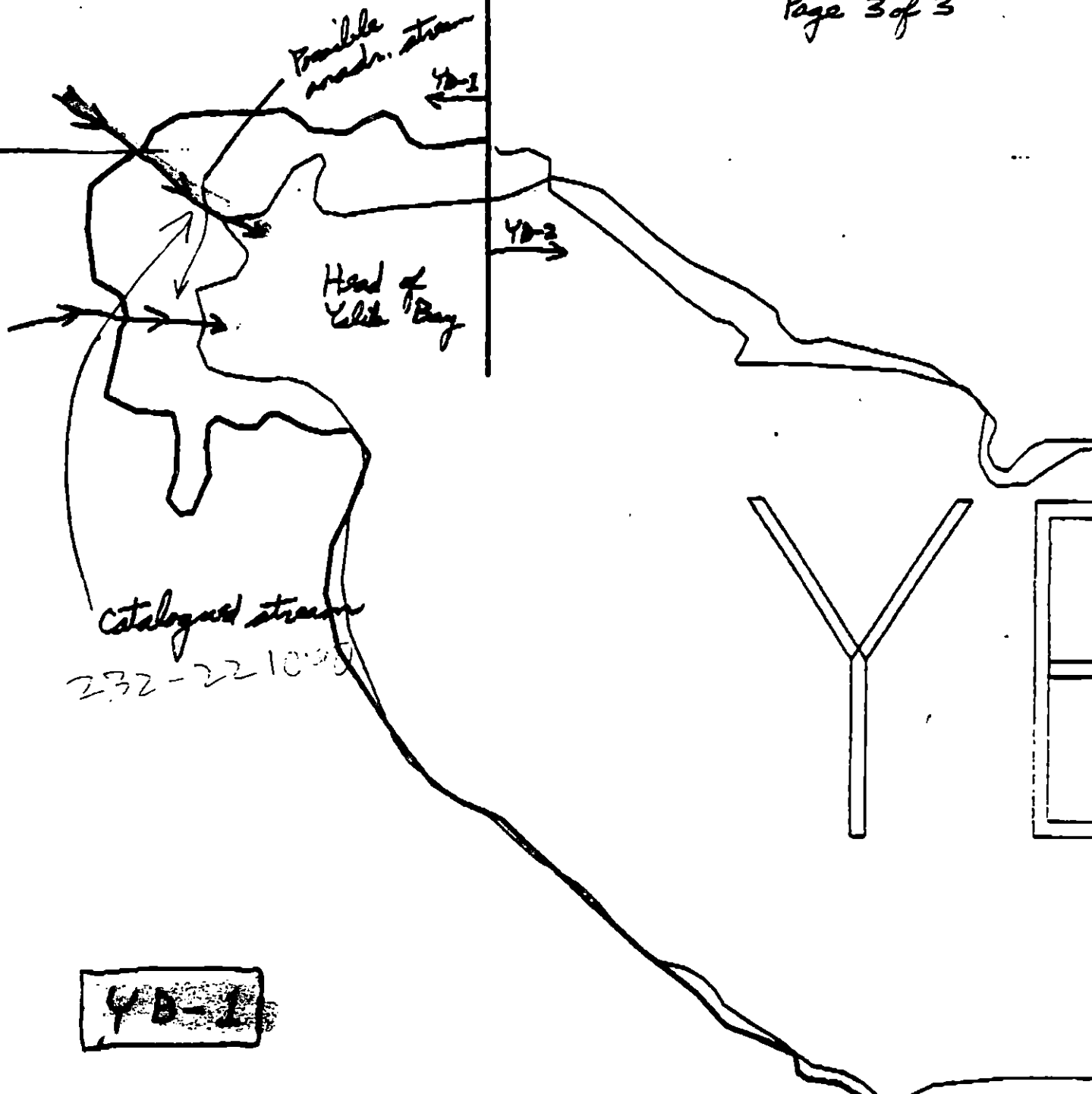


Map Key: KEN-132a

Name: Ruby Siegel

Date: 4/25/90

Date Entered: 5/1/92



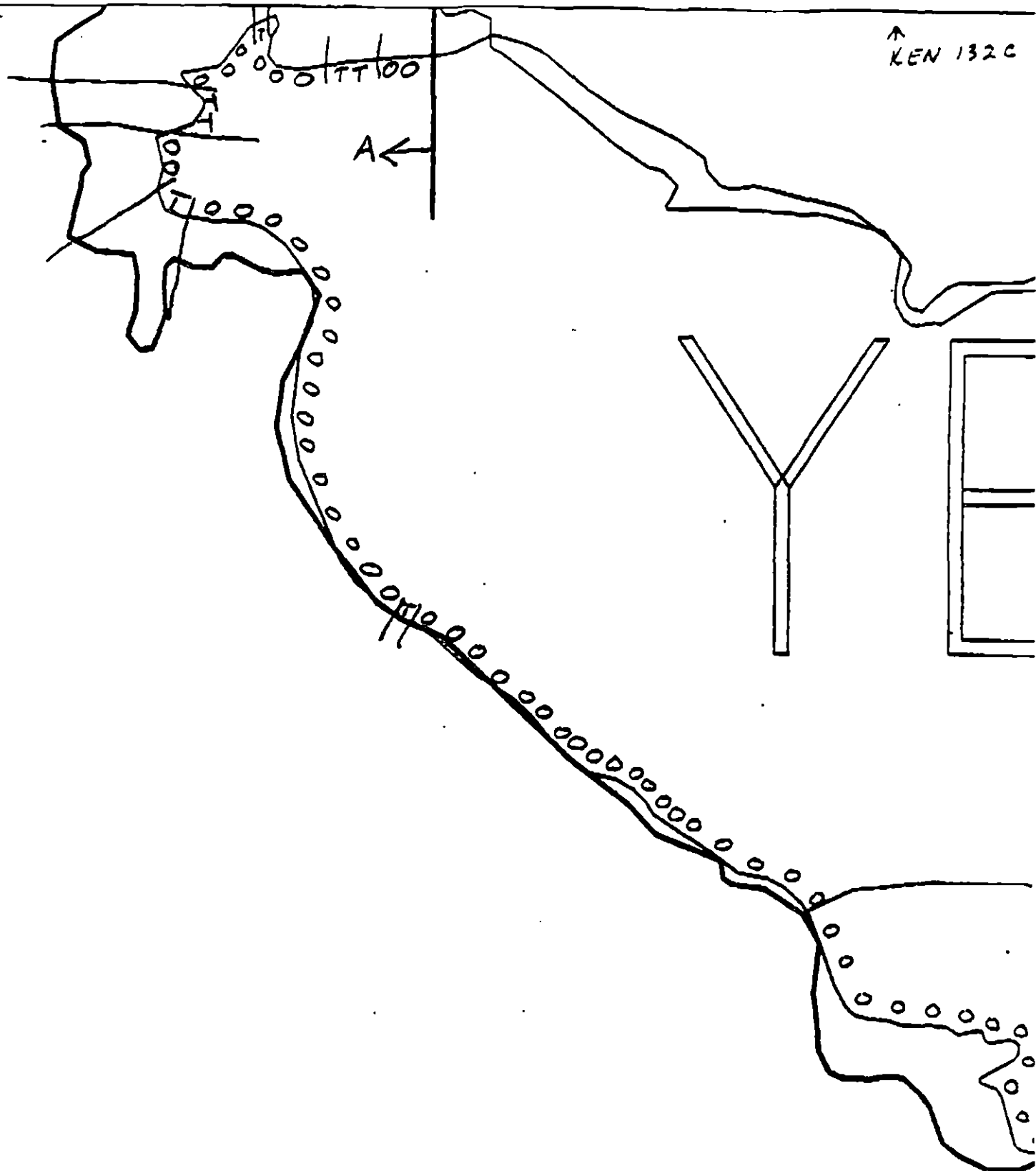
Catalogued stream showing anadromous stream(s)

Southerly stream in Catalogued ADF's
at bayhead

Both are often desiccated, but at least the bayhead S. stream produces some pink + clown fry (or, rather, these fry have been collected from the eelgrass bed at its mouth). Pinks have been observed spawning in the stream + intertidally at the mouth.

Possible anad. st.

↑
KEN 132C



KEN
132B -
54/63

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

YB-1

ADEC Segment Length: 2678m



Map Key: KEN-132a

Name: Ruby Singh

Date: 4/25/90

Date Entered:

A ←



53/62
↓ KEN 132 A

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

YB-1

ADEC Segment Length: 2678m

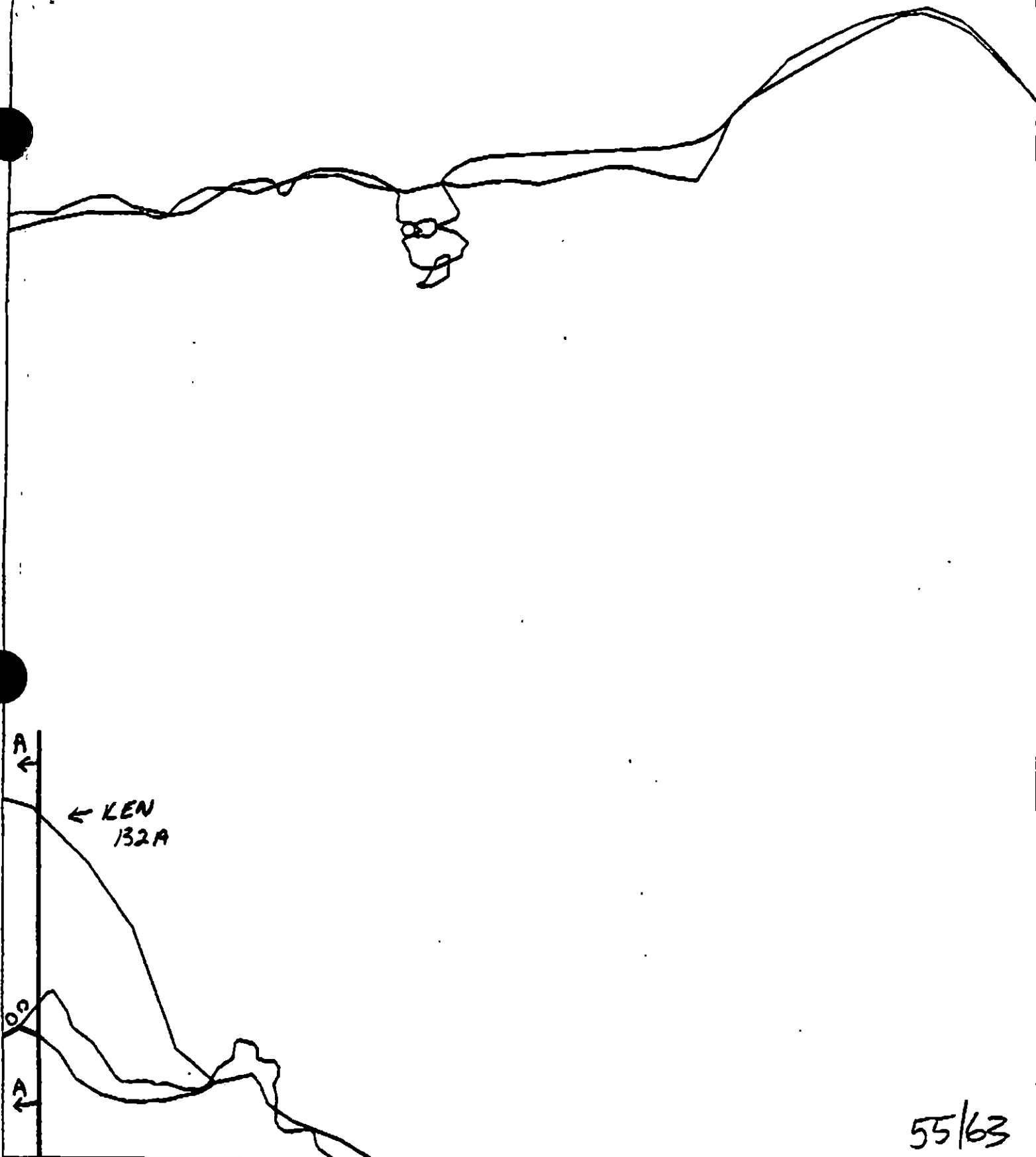


Map Key: KEN-132c

Name: Rudy Siegel

Date: 4/25/90

Data Entered:



REGION: KENAI

SEGMENT: ST/YB-02

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ YB-02 SUBDIVISION A (1 OF 1) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Uncatalogued and not seen in field scat

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 (7/10 to 8/20)

2M Herring spawning (4/1 to 6/15)

4LL National Parks

6U Recreation: Tent sites (6/1 to 8/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

If 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 47 m: No Oil 4715 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

✓1A
✓B

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

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

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G John 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 (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

✓P
3Q, 3Q

Harbor seal and sea lion pupping (5/15 to 7/1)

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

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Calkins 267-2403

5R

Seabird colony (5/1 to 9/1)

Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S

Shorebird/waterfowl concentration (4/1 to 5/15)

Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Roth 267-2206

5T

All Bald Eagle nests (3/1 to 6/1)

Active Bald Eagle nests (3/1 to 9/1)

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

✓6U

Recreation:

Tent sites (6/1 to 9/15)

6V

Anchorage (6/1 to 9/15)

6W

Forest Service cabins (8/1 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)

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 / YB002 SUBDIVISION: A (ENTIRE SEGMENT) DATE 4/26/9

USCG NAME Jerry Schultz SIGNATURE Jerry Schultz

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

ADEC NAME Mike Ebel SIGNATURE Michael Ebel

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

YB-02-A : Very light & inconsequential oil found here. This long segment composed mostly of bedrock cliffs was surveyed at the site listed for oiling. Mostly weathered away, broken, coat and associated splashes were found along a cliff and debris slope within a 10m h x 0.3m band. One area having very light surface pooling confined to an area $\approx 4m^2$ had been washed well having little remaining oil between rock interstices. No treatment necessary.

LAND MANAGER

NAME Mike Tetreau - NPS SIGNATURE Mike Tetreau

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Did a limited survey of This segment by boat due to The past history of no oiling over most of This segment. We checked The area where oil was noted previously very carefully and found small areas of coat and a little pooled oil. This oil is well-hidden and does not appear to be recoverable. Further

38/63

SHORELINE OILING SUMMARY

REVISION NO 04

OG Randy Siegel USCG Jerry Schultz SEGMENT ST/ YB-2
 BIO Lewis Sharman LAND REP Mike Tetlow (NPS) SUBDIVISION A (1 OF 1)
 EXXON Leonard Herbst ADEC Mike Ebel TIME 19:45 21:05
 TEAM NO. 12 TIDE LEVEL 1.75' to 1.75' DATE 4/25/90
 EST. SUBDIVISION LENGTH: 3960 ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: SW to NE
 SURFACE SEDIMENTS: R 70 % B 20 % C 8 % P 2 % G 0 % S 0 % M 0 % V 0
 SLOPE: Long 15 % Hang 60 % Ven 25 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH, W 0 m M 0 m N 0 m VL 75 m NO 3885

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	IC	OC	PC	SC	1	2	3	4	5	6	7	8	BU	U	M	U
ASPHALT PAVEMENT																
POOLED				X						X				X		
COVER																
COAT		X		✓						X				X		
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X	X	X	

PAVEMENT H F S 0 sq. m by 0PATTIES / TARBALLS 0 BAGNEAR SHORE SHEEN? (NO) BR RW SL T

OILED DEBRIS	AMOUNT			DID YOU COLLECT DEBRIS?
	SM	MD	LG	
Logs				YES ☐ NO ☒
Vegetation				
Trash				
Debris				

DID YOU COLLECT DEBRIS?

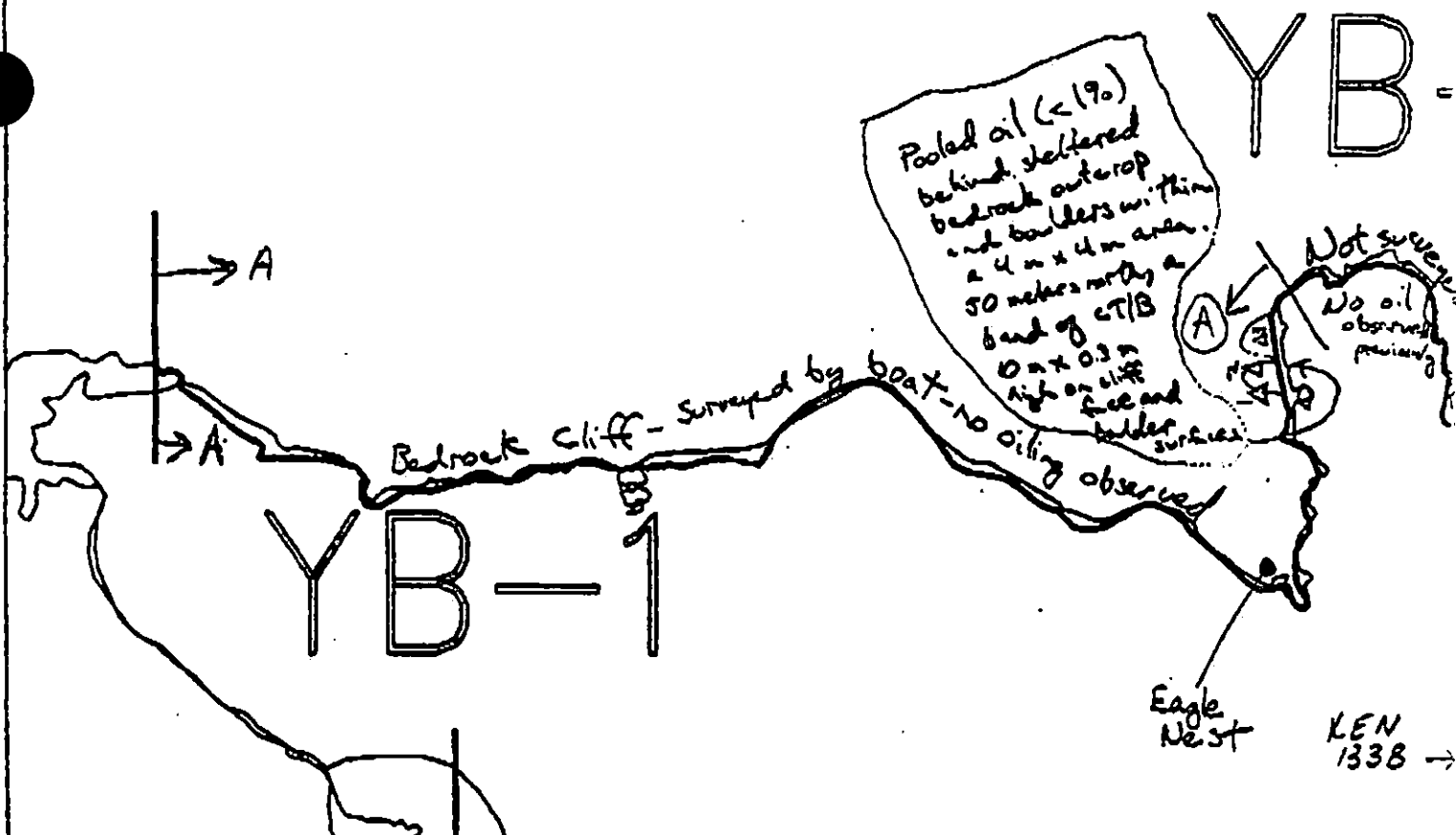
YES ☐ NO ☒TYPE 0#BAGS 0Photographs: NoneRoll No —Frames —

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR								PIT ZONE	A N A	SHEEN (Y/N)	SURF SUBSURF. SEDIMENT
		OP	OR	OL	OF	NO		UC	UC	1	2	3	4	5	6	7	8				
1	20					X	0.0		X									X		—	S
2	30					X	0.0		X									X		—	G
3	30					X	0.0		X									X		—	S
							.														
							.														
							.														

COMMENTS Most of segment consisted of horizontal or vertical bedrock cliffs. Segment length is about 7 miles - oiling previously reported along one short stretch of shoreline. Therefore, we surveyed most of segment by boat, until reaching the portion where oiling was reported previously. The remainder of the segment (where no oiling was observed previously) was not surveyed due to tidal window and history of no oiling.

REVIEWED JUL DATE 4/27/90



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

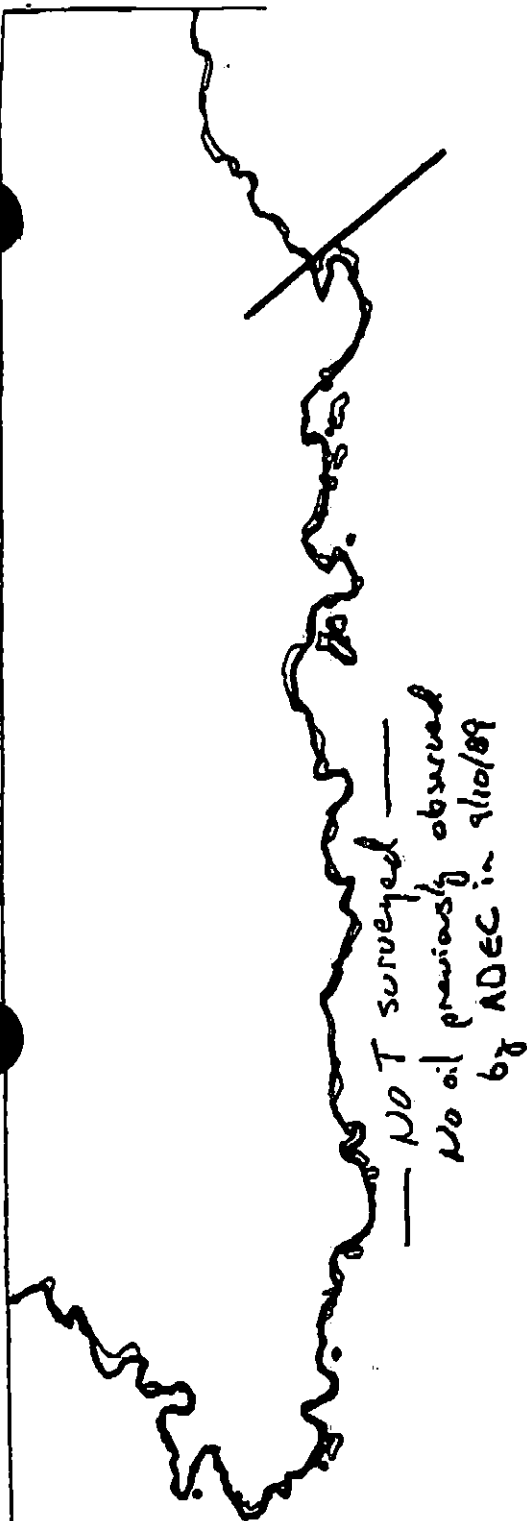
YB-2

ADEC Segment Length: 10792m

Map Key: KEN-133a

Name: RhydingDate: 4/26/90

[Handwritten signature]



← LEN
133A

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

YB-2

ADEC Segment Length: 10792m



Map Key: KEN-133b
Name: *[Handwritten signature]*
Date: *4/26/90*
Data Entered:

SHORELINE ECOLOGICAL SUMMARY (Page 2 of 3)

 Segment ST / YB-2 Subdivision A Date (mo / day / yr) 4/25/90

 Time (24 hr) 2000-2100 Biologist SHARMAN

- (A) Substrate type and % of segments: SUBDIV.
 (1) Bedrock 70 (2) Boulder 20 (3) Cobble 8 (4) Pebble 2 (5) Sand (6) Silt
- (B) Overall % cover of biota (% of segment): Dense Moderate X Low
SUBDIV.
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

 Photographs:
 Roll No.

 Frames

BARNACLES

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

MYTILUS

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

 GASTROPODS (ANCELLA, LITTORINA, LYMPAETES)

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: 15 pairs harlequin ducks, 1 pair common merganser, 1 adult eagle, 1 Steller's jay, 3 crows, 6 glaucous-winged gulls, 1 cormorant. This segment quite similar to NC-2 (reports this section in NC-1 segment report) intertidally. Pycnogonids common among large boulders, Pinnacles on bedrock walls. Bedrock LTR just like NC-2. Quite good MTD record (cont.)

Ecological Considerations: We received no information regarding previously identified resource sensitivities for this segment. We observed one presently inactive bald eagle nest (see attached eco. map). No apparent anadromous streams, pinniped haulouts etc. Sea caves and arches near eagle nest location may soon become cormorant nesting habitat. As in YB-1, pelagic areas are quite valuable and also fairly sensitive

YB-2 Shoreline Ecological Summary (cont.)
(Page 2 of 3)

Sherman
4/25/90

General Comments (cont.):

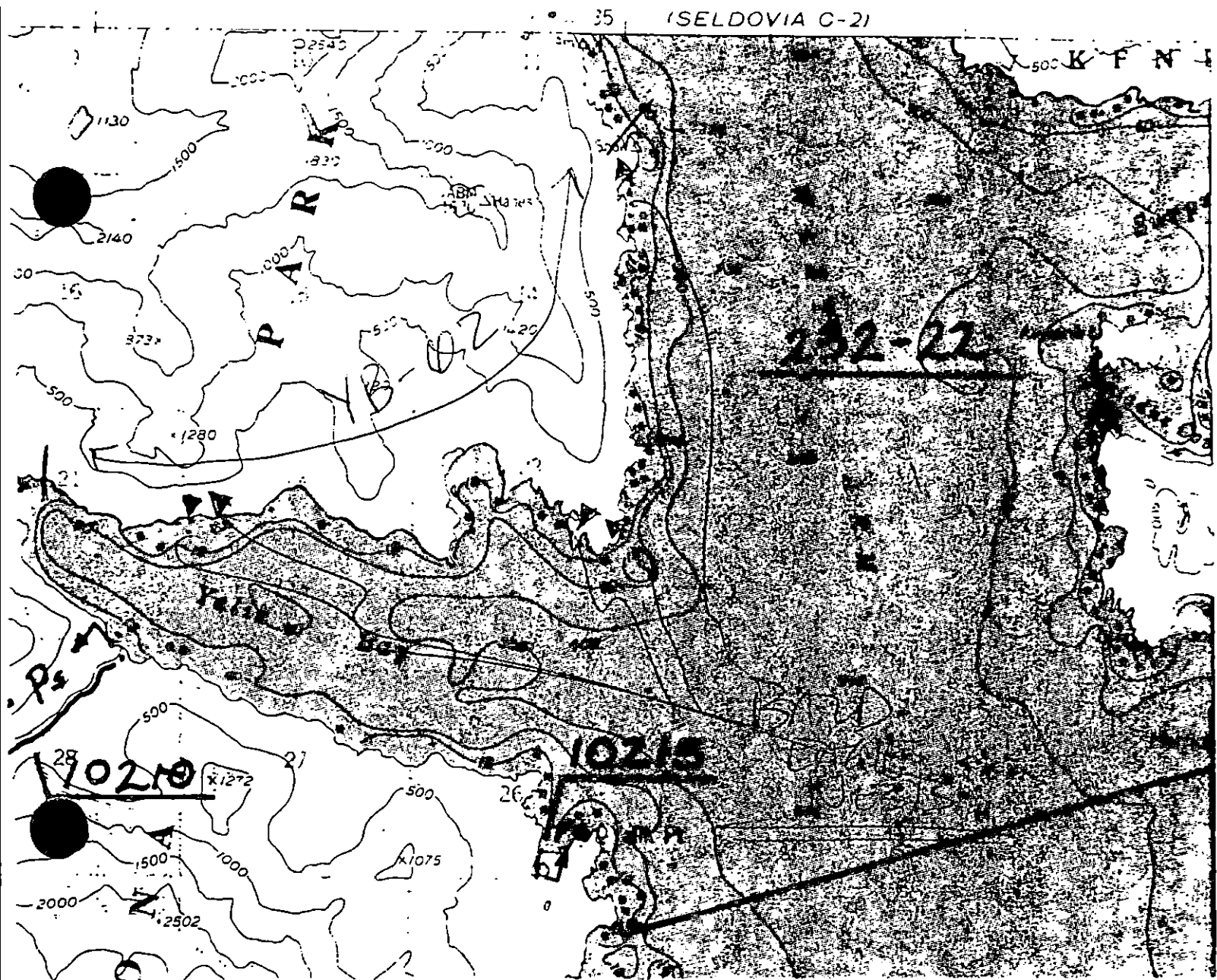
recruitment among established adults; this applies also to Fucus. Barnacle recruitment is presently still in the form of newly arrived cyprids - excellent spat development should follow shortly. Some sparse areas of eelgrass in shallow nearshore subtidal waters.

Ecological Considerations (cont.):

from further human remediation/entrainment.

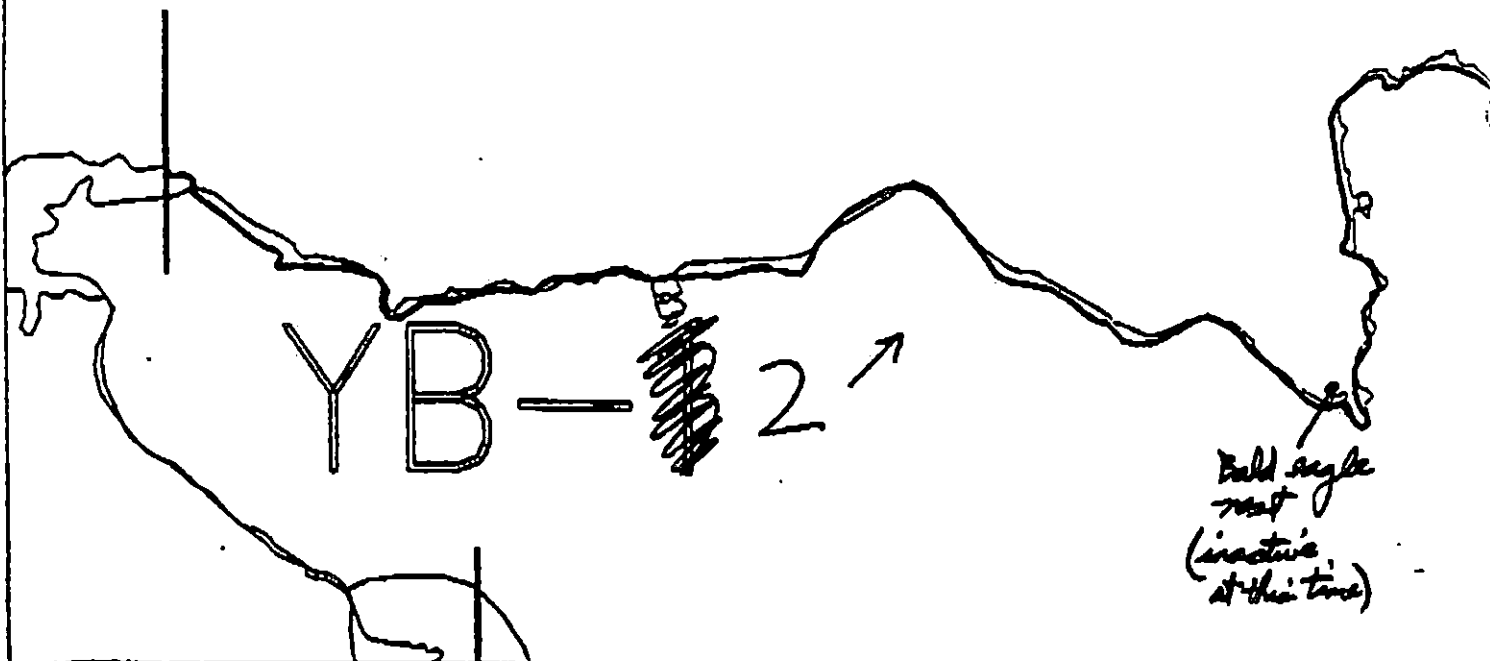
ECOLOGICAL MAP

1J+
2M+
4LL
6H



Eco. Map showing
 eagle nest, presently
 inactive.

YB



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Data

YB-2

(Page 3 of 3)

ADEC Segment Length: 10792m



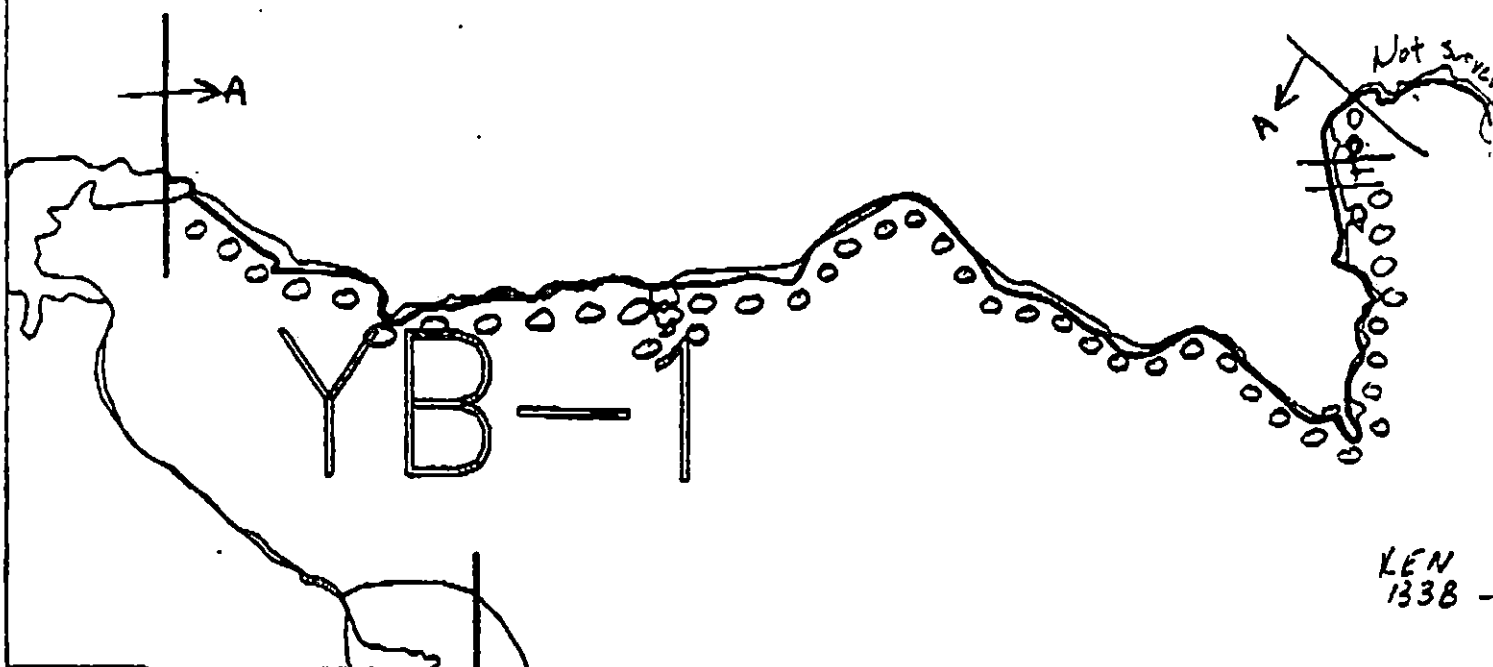
Map Key: KEN-1330

Name: _____

Date: _____

Scale Entered: _____

YB



KEN
133B -

XXXX Wide

//// Medium

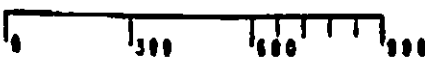
--- Narrow

TTTT Very Light

0000 No Data

YB-2

ADEC Segment Length: 10792m



Map Key: KEN-133a

Name: Bob Siegel

Date: 4/26/90

Notes: _____

bas



End of YB-2

Not Surveyed

← LEN 133A

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

YB-2

ADEC Segment Length: 10792m



Map Key: KEN-133b

Name: *Rh Liegt*

Date: *4/26/90*

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ YB-02 SUBDIVISION A (1 OF 1) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Uncatalogued and not seen in field scat

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 (7/10 to 8/20)

2M Herring spawning (4/1 to 6/15)

4LL National Parks

6U Recreation: Tent sites (6/1 to 8/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: *J. David McPherson* DATE: 5/8/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 47 m: No Oil 4715 m

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

X No Treatment Recommended

 Treatment Recommended

 Manual Pickup

 Bioremediation

 Tarmat Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/8/90

ADEC *ART WENIGER*

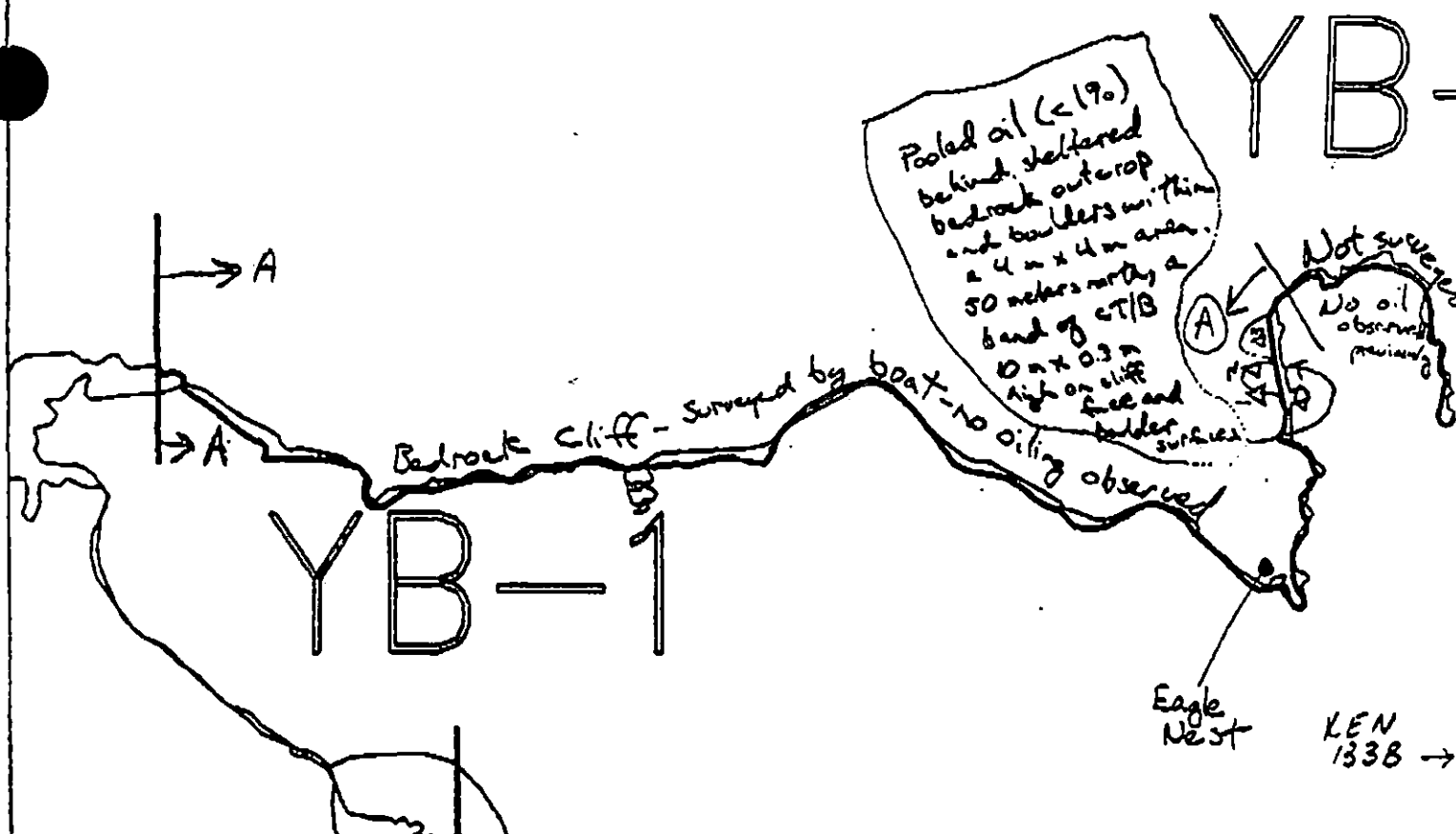
EXXON *AMITZEL*

NOAA *Gary Retzer*

USCG *G.A. REITER*

FOSC: *W L*

DATE: 5-12-90



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

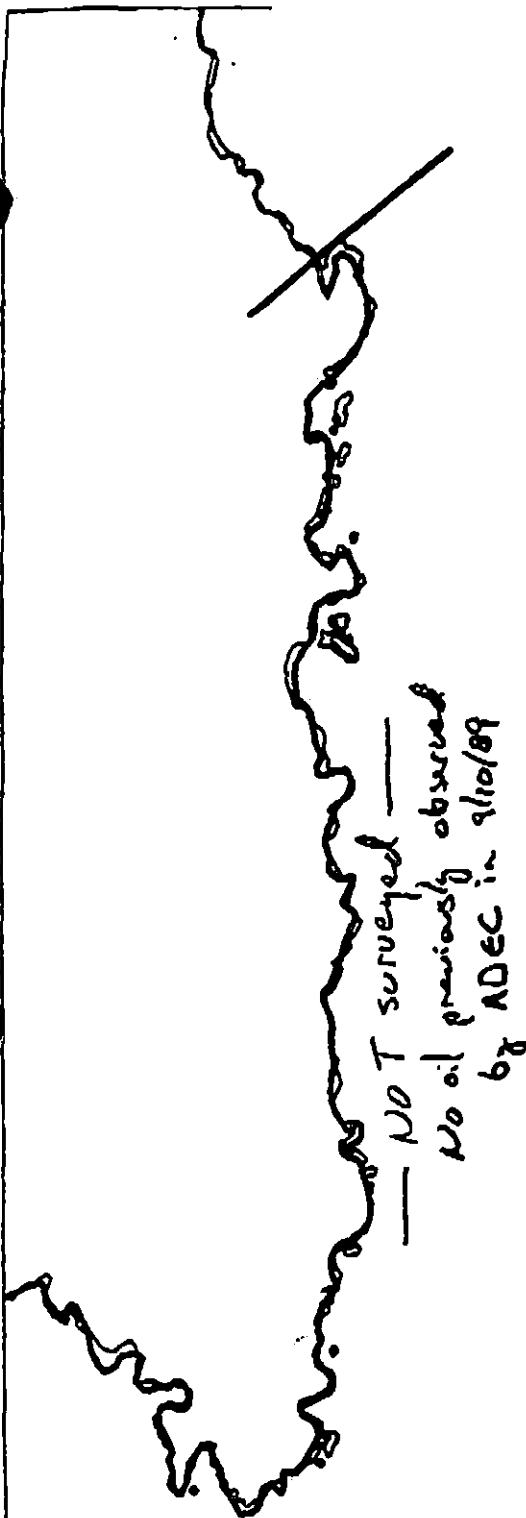
YB-2

ADEC Segment Length: 10792m

Map Key: KEN-133a

Name: Edy Diaz

Date: 4/26/90



← LEN
133A

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

YB-2

ADEC Segment Length: 10792m



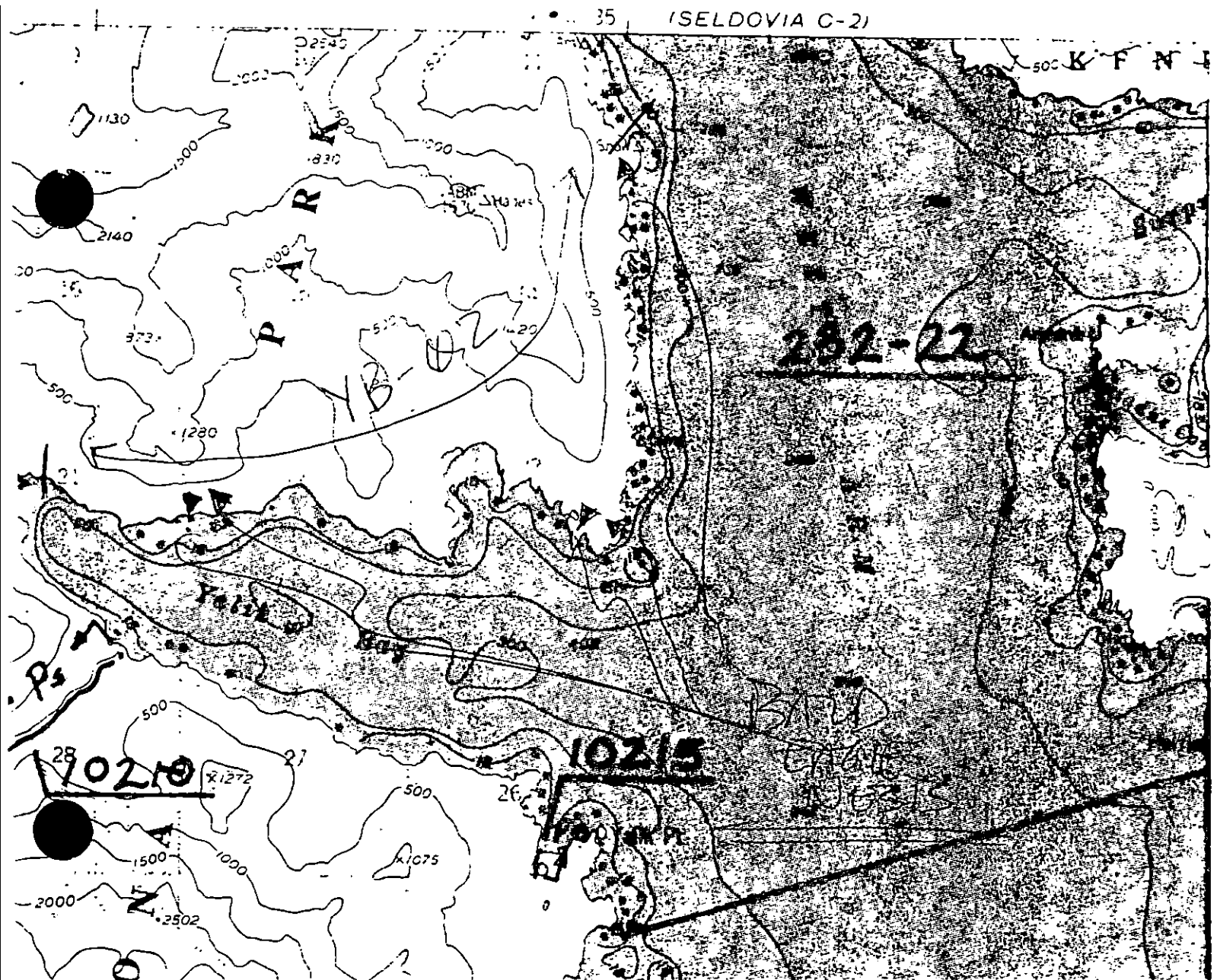
Map Key: KEN-133b

Name: Andy Siegel

Date: 4/26/90

Data Entered:

1 J
2 R
4 L
6 L



Eco. Map showing
eagle nest, presently
inactive.

YB



XXXX Wide

//// Medium

--- Narrow

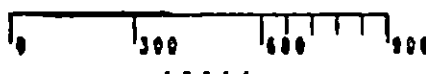
TTTT Very Light

0000 No Data

YB-2

(Page 3 of 3)

ADEC Segment Length: 10792m



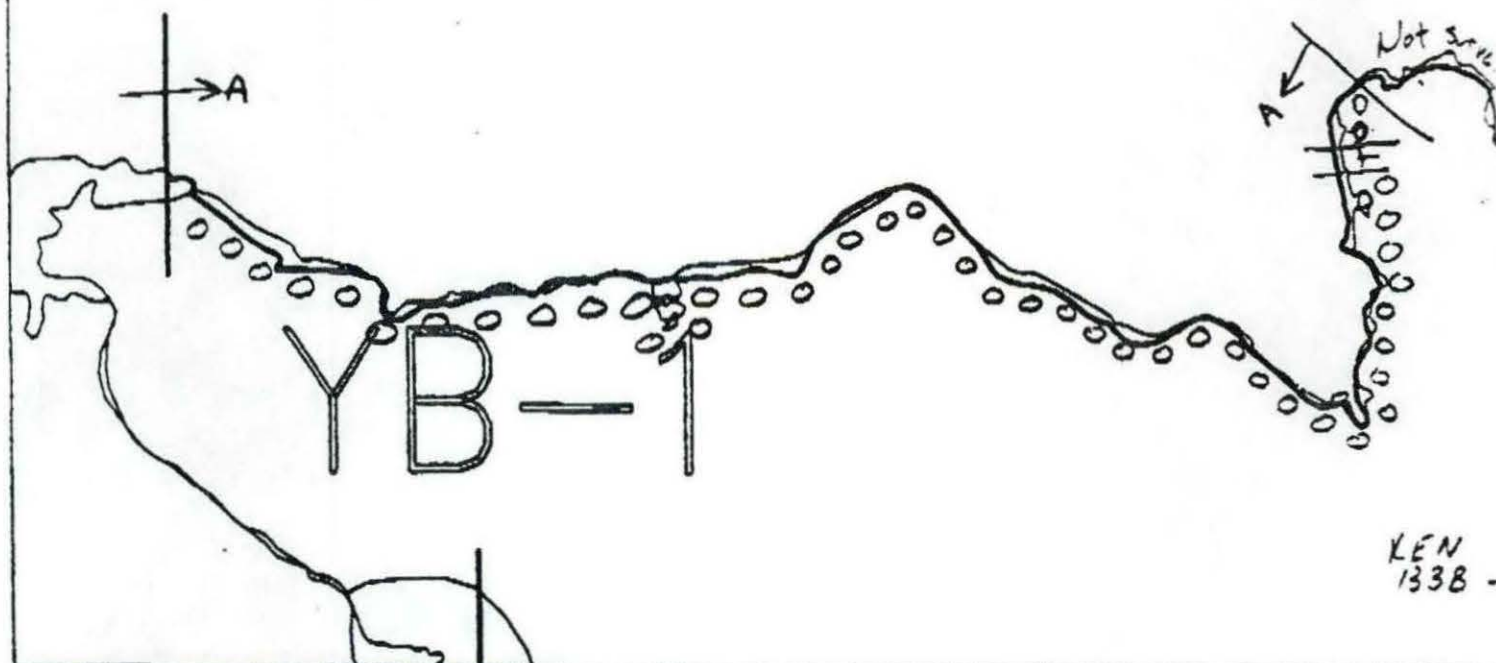
Map Key: KEN-1330

Name: _____

Date: _____

Scale Entered: _____

YB



KEN
1338 -

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

YB-2

ADEC Segment Length: 10792m



Map Key: KEN-1330

Name: *Edy Langel*

Date: *4/26/90*

Date Entered:

W. J. S.



End of YB-2

Not Surveyed

← LEN
133A

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

YB-2

ADEC Segment Length: 10792m



Map Key: KEN-133b
Name: R. J. S.
Date: 4/26/90
Data Entered: _____



REGION: KENAI

SEGMENT: ST/YB-05

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ YB-05 SUBDIVISION A (1 OF 1) 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 (7/10 to 8/20)

2M Herring spawning (4/1 to 6/15)

4LL National Parks

6U Recreation: Tent sites (6/1 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

If 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 7442 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

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)

Finfish harvesting

Deer harvesting (8/15 to 2/28)

Invertebrate harvesting

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

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / YB5 SUBDIVISION: A (ENTIRE SEGMENT) DATE 4/27/90

USCG NAME JERRY SCHULTZ SIGNATURE Jerry Schultz

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC NAME MIKE EBEL SIGNATURE Michael Ebel

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

YB-5-A: Most of area surveyed by boat; inspected areas indicating oil from the 1989 ADEC maps (none was found). No treatment necessary.

LAND MANAGER - NPS
NAME MIKE TETREAU SIGNATURE Mike Tetreau

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Good survey, no oil observed.

12/12

SHORELINE OILING SUMMARY Peter Zoller (CAC)

REVISION NO 04-138

OG Pandy Siegel USCG Jerry Schultz SEGMENT ST/ YB-5
 BIO Lewis Sherman LAND REP Mike Tetlow (UPS) SUBDIVISION A (LOF L)
 EXXON Leonard Herbst ADEC Mike Ebel TIME 07:00 08:30
 TEAM NO. 12 TIDE LEVEL 3.17' to -2' DATE 4 / 27 / 90
 EST. SUBDIVISION LENGTH: 7694 m ☒ Sun. ☐ Clouds ☐ Fog ☐ Rain ☐ Snow 42°
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: NW to SE
 SURFACE SEDIMENTS: R 75 % B 15 % C 5 % P 2 % G 2 % S 1 % M 0 % V 0 %
 SLOPE: Long 5 % Hang 90 % Vert 5 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 7694 m

SURFACE OIL

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

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE —#BAGS 0Photographs: — None —Roll No. — None —Frames —

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE SUBSURFACE SEDIMENTS
		OF	OR	OL	OF	NO		VO	VO	1	2	3	4	SU	U	M	U				
1	17					X	0-0	X							X				—	—	S
2	17					X	0-0	X							X				N	S	AG
3	25					X	0-0	X							X				—	—	S
4	20					X	0-0	X						X					—	—	G
5	35					X	0-0	X							X				—	—	S
6	33					X	0-0	X							X				—	—	S

COMMENTS

Long segment consisting of largely of hi-angle cliff faces and occasional pocket beaches. No oiling at all was observed in this segment. All pits were oiled. Most of segment surveyed from boat with occasional stops on beach.

2/12

REVIEWED YHDATE 4-29-90

REVISION 04:1300

SUBSURFACE OIL (CONTINUED)

[illegible]

COMMENTS

3/12

REVIEWED YH DATE 4-29-10

OG Kandy Siegel
 SEGMENT YB-5
 SUBDIVISION A
 DATE 4/27/90

SKETCH MAP

Approximate scale
 900 meters

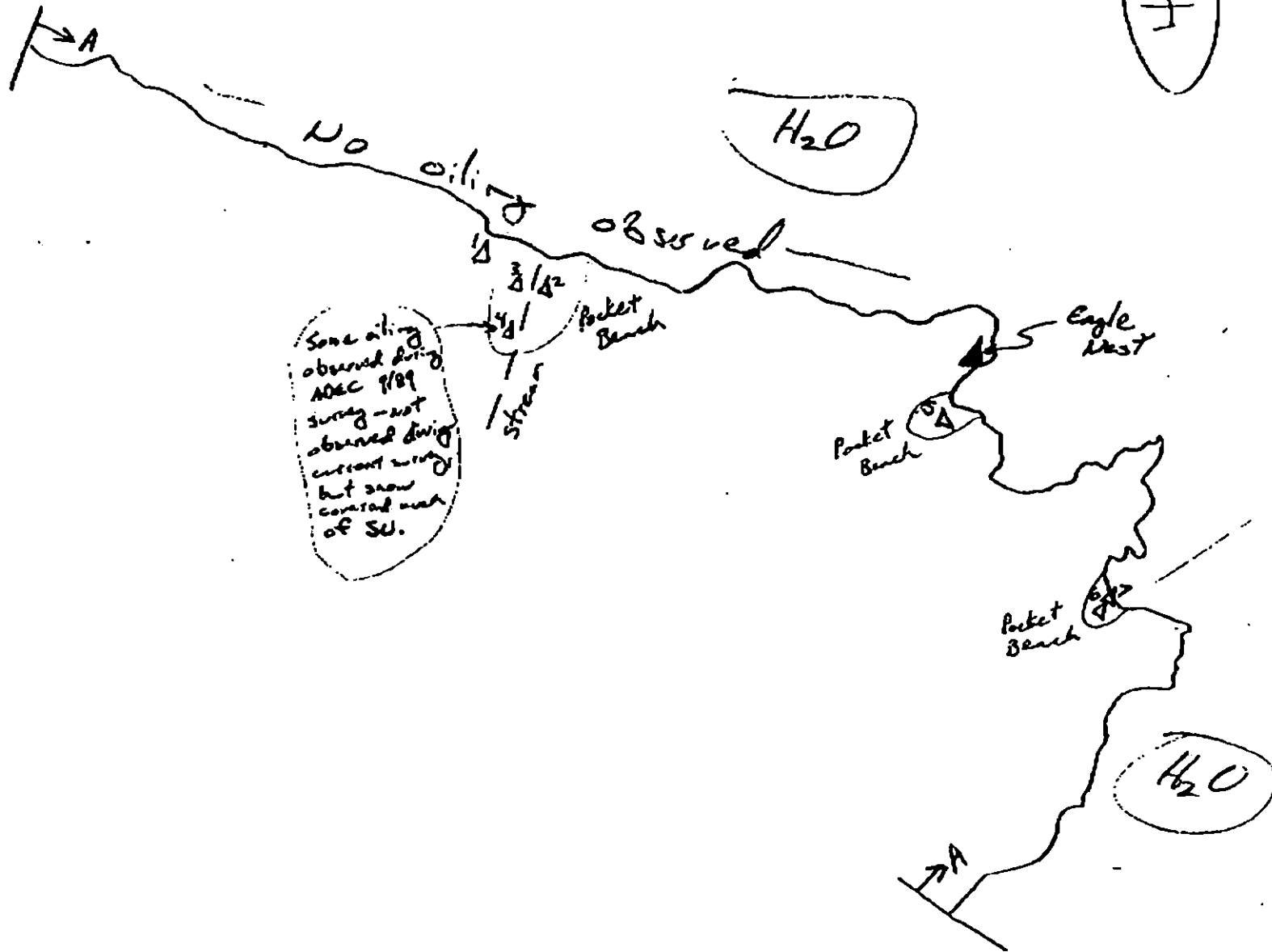
4/12

CHECKLIST

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

LEGEND

- 1 No Subsurface Oil
- 2 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 0 PO 0 CV 0 CT 0 ST 0 MS 0 PT 0 TB 0 FL 0 NO 7694

SHORELINE ECOLOGICAL SUMMARY (Page 1 of 3)

REVISION: 02/22/90

Segment ST / YB-5 Subdivision A Date (mo / day / yr) 4/27/90Time (24 hr) 0700-1845 Biologist SHARMAN(A) Substrate type and % of segments: SUBDIV.
(1) Bedrock 75 (2) Boulder 15 (3) Cobble 5 (4) Pebble 2 (5) Sand 3 (6) and gravel(B) Overall % cover of biota (% of segment): Dense SUBDIV. Moderate X 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. Frames

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	X
3	3	3	3	3	3	X	X	3	3	3	X
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS (ALICELLA, LITTORINA, LIMAEETA)

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

NOT PRESENT

Wildlife Observations/ General Comments: 40 pairs glaucous-winged gulls, 1 pair bottinaba, 1 murrelet, 3 cormorants, 1 mallard, 15 pairs harlequin ducks, 6 pairs pigeon guillemots, 3 pairs white-winged scoters, 4 pairs barrow's goldeneyes, 3 ravens, 10 crows, 3 hairy eagles, 5 pairs common mergansers, 4 stellate jays, 1 pair oystercatchers, 5 gulls on cliffs at S. end of segment; 1 sea lion, 1 sea otter; (cont.)

Ecological Considerations:

We received no information regarding previously identified resource sensitivities for this segment. See the attached geo. map for locations of a presently inactive eagle nest, and a stream identified on ADEC maps as anadromous (but no ADF & G #). I suspect that if the stream is indeed anadromous, it produces fish numbered in the 10's. Biologically, this area is clearly immensely diverse & productive. Also, it is shoaled. Further human intrusion cannot in any way benefit this area.

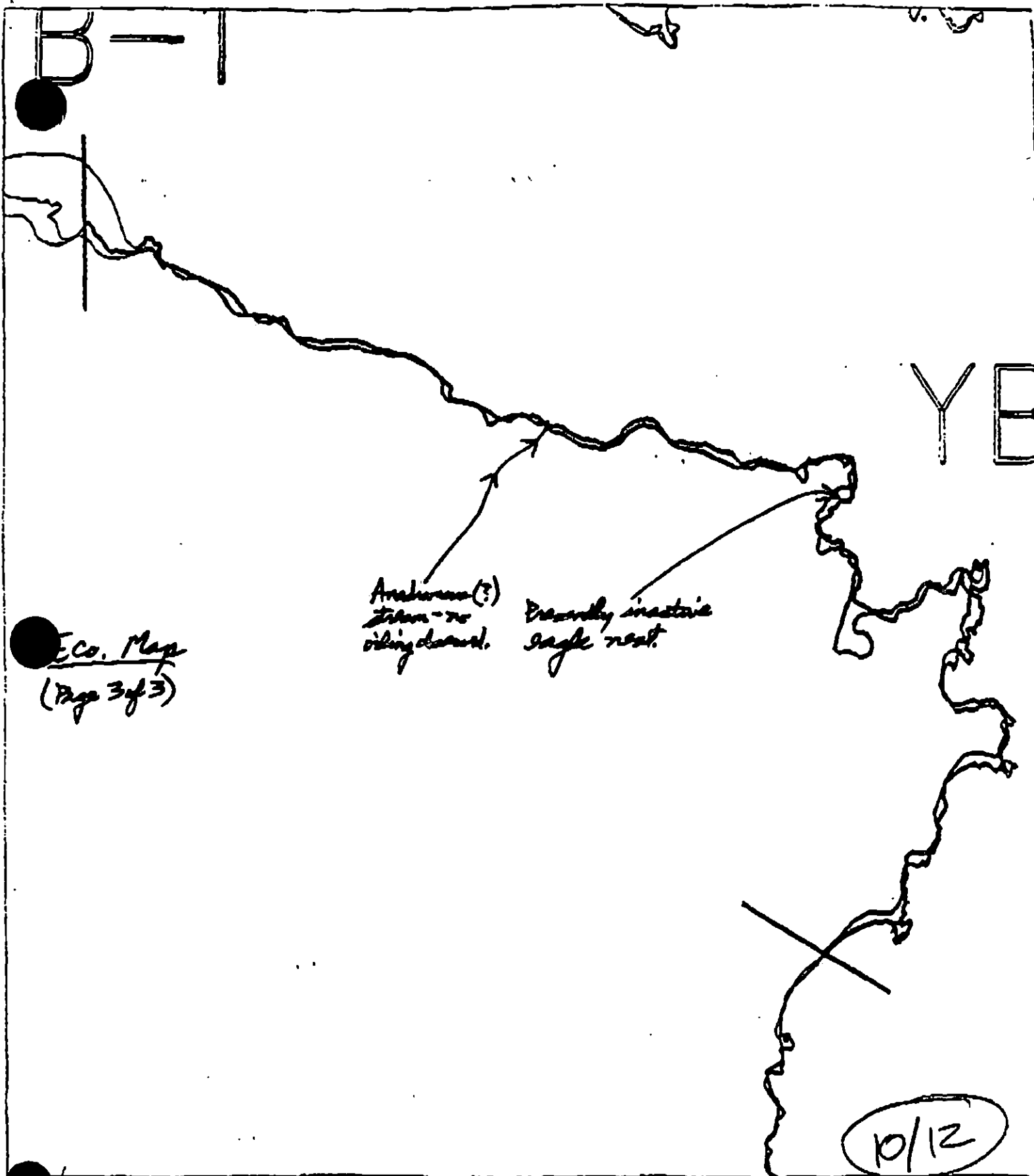
(8/12)

YB-5

Gordina Ecological Summary (cont.)
(Page 2 of 3)Shorman
4/27/90General Comments (cont.):

1 mink + 1 river otter in intertidal zone; abundant river otter tracks in UTE sand of pocket beaches, mouse tracks in UTE sand of one beach. Good stands of last year's *Nereocystis* off rocky points. Extremely productive and diverse subtidal zone. This area (as all areas along this coast) evidently subsided during the '64 earthquake (dead trees along beach fringe). The occasional black sand beaches are quite depauperate, as would be expected, but they are bounded by very richly colonized boulder/bedrock substrates. The great majority of this segment is composed of exceedingly productive bedrock/boulder intertidal communities. The biological data form gives entirely the wrong impression re. the abundance and diversity of the intertidal biota. The LTE in particular is certainly among the most diverse and productive in the world. A list of species is essentially an *exposée* (and a long one at that) - quick reference to this section in the summary for WC-1 may be helpful.

9/12



XXX Wide

//// Medium

--- Narrow

TTTT Very Light

YB-5

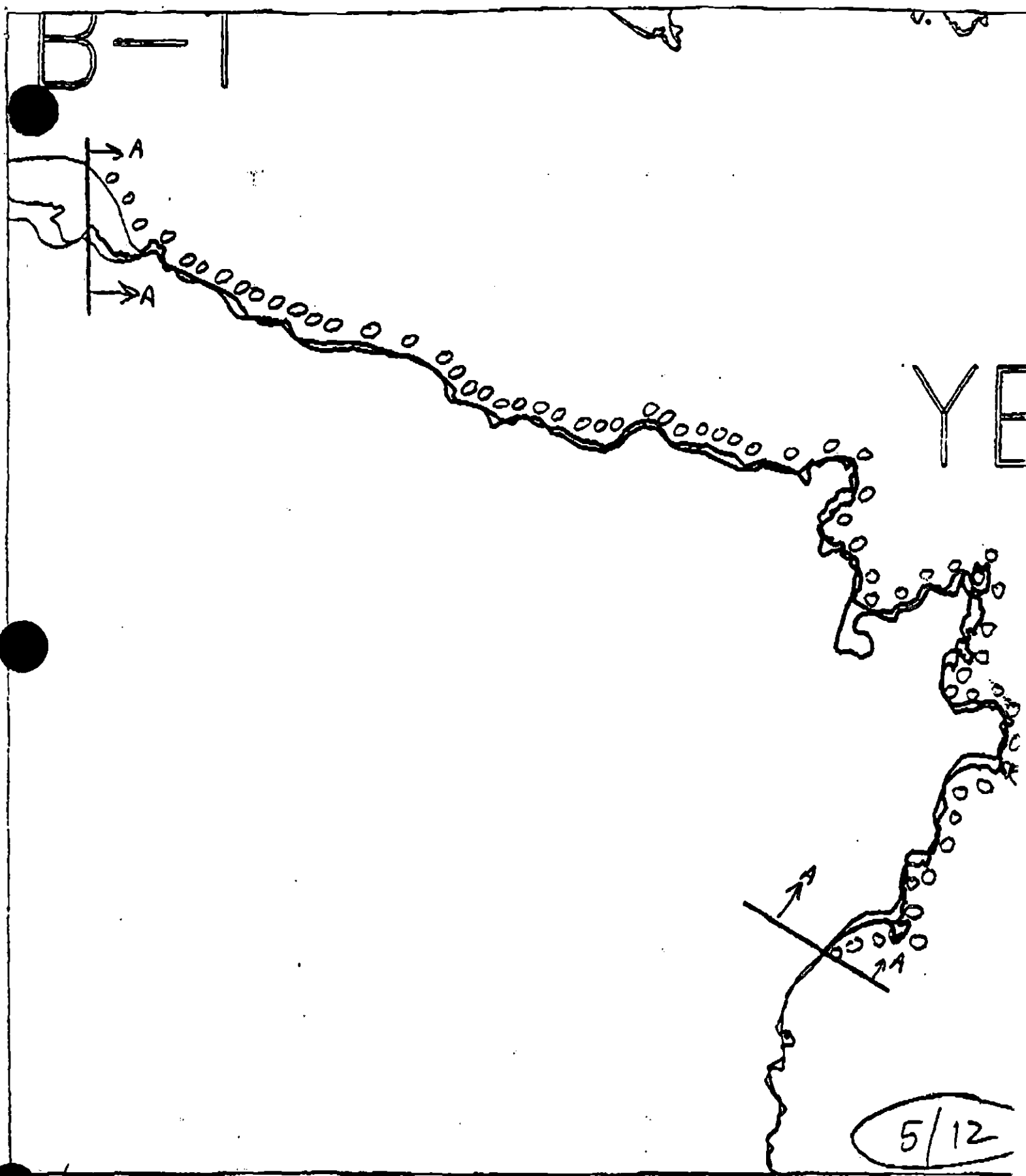
Approx. Segment Length: 7178m



Map Key: KEN-YB-5a

Name: _____

Date: _____



XXXX Wide

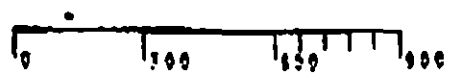
//// Medium

--- Narrow

TTTT Very Light

YB-5

Approx. Segment Length: 7178m



Map Key: KEN-YB-5a

Name: Lucy Smith

Date: 4/27/90

SHORELINE EVALUATION

SEGMENT ST/ YB-05 SUBDIVISION A (1 OF 1) 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 (7/10 to 8/20)
- 2M Herring spawning (4/1 to 6/15)
- 4LL National Parks
- 6U Recreation: Tent sites (6/1 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: J. David McManis DATE: 5/8/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 7442 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: 5/8/90

ADEC Art Weimer Art Weimer
EXXON Andy Teal Andy Teal
NOAA Gary Peters Gary Peters
USCG G. A. Peter G. A. Peter

FOSC: ML DATE: 5-12-90

OG Kandy Siegel
 SEGMENT SB-5
 SUBDIVISION A
 DATE 4/27/90

SKETCH MAP

Approximate scale
 900 meters

4/12/91

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HAP/LAL/PAH
- ☐ 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

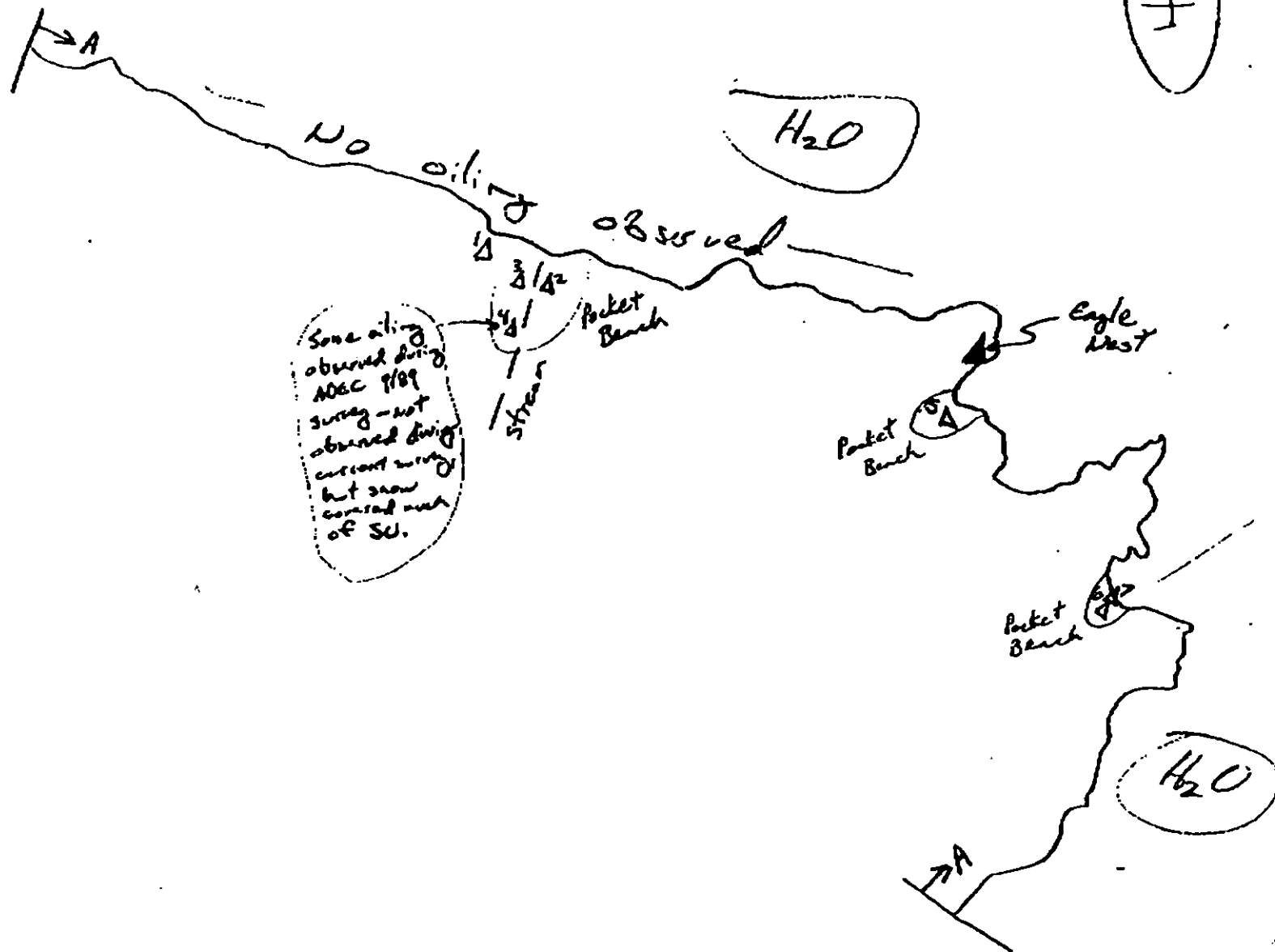
CT/B
 Broken Distribution

CT/P
 Patchy Distribution

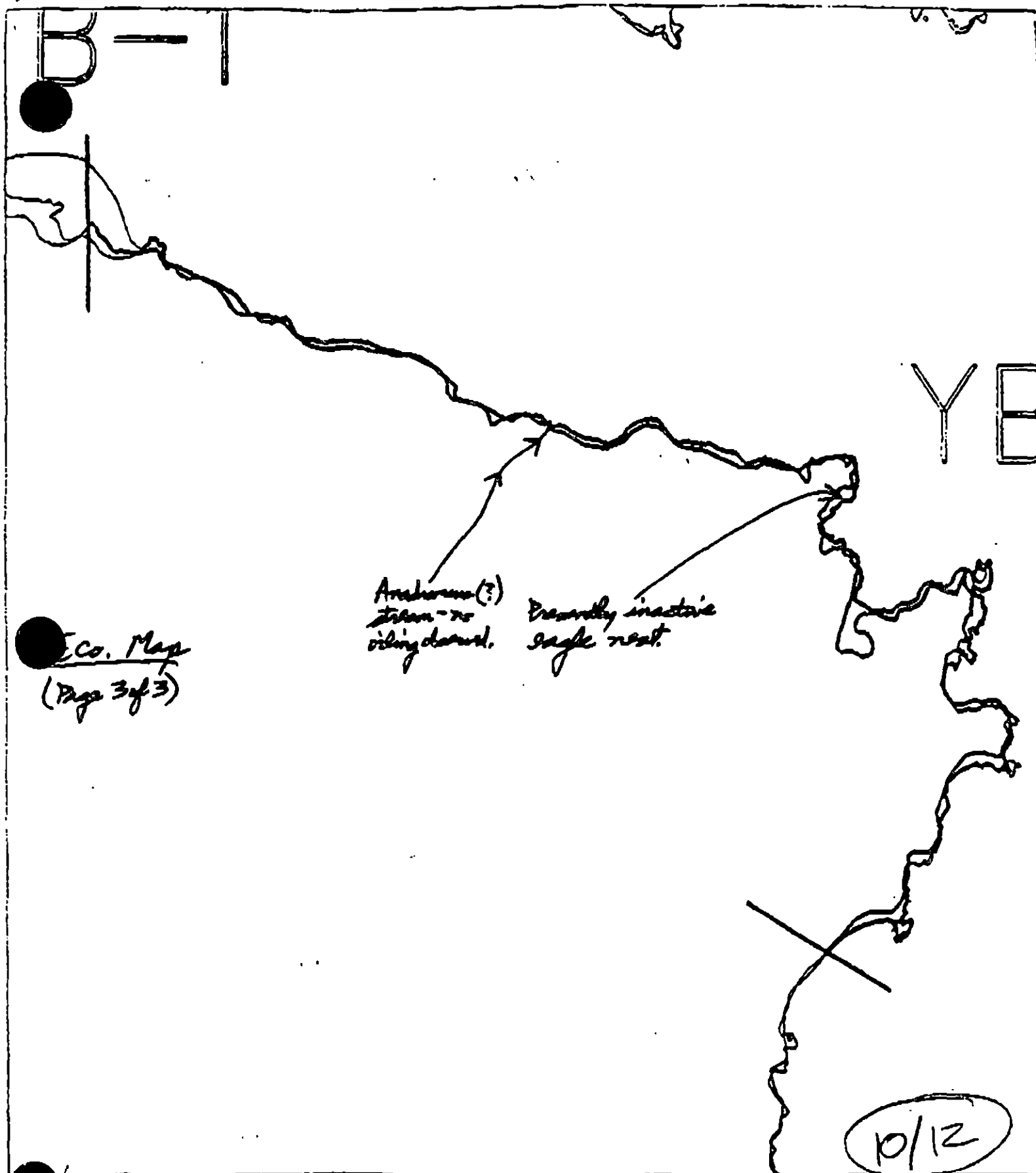
CT/S
 Splashed Distribution

eee.
 Oiled Vegetation

1 ●→
 Photo location, direction,
 and number



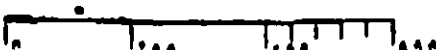
Oil Character Length (m): AP φ PO φ CV φ CT φ ST φ MS φ PT φ TB φ FL φ NO 7694



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

YB-5

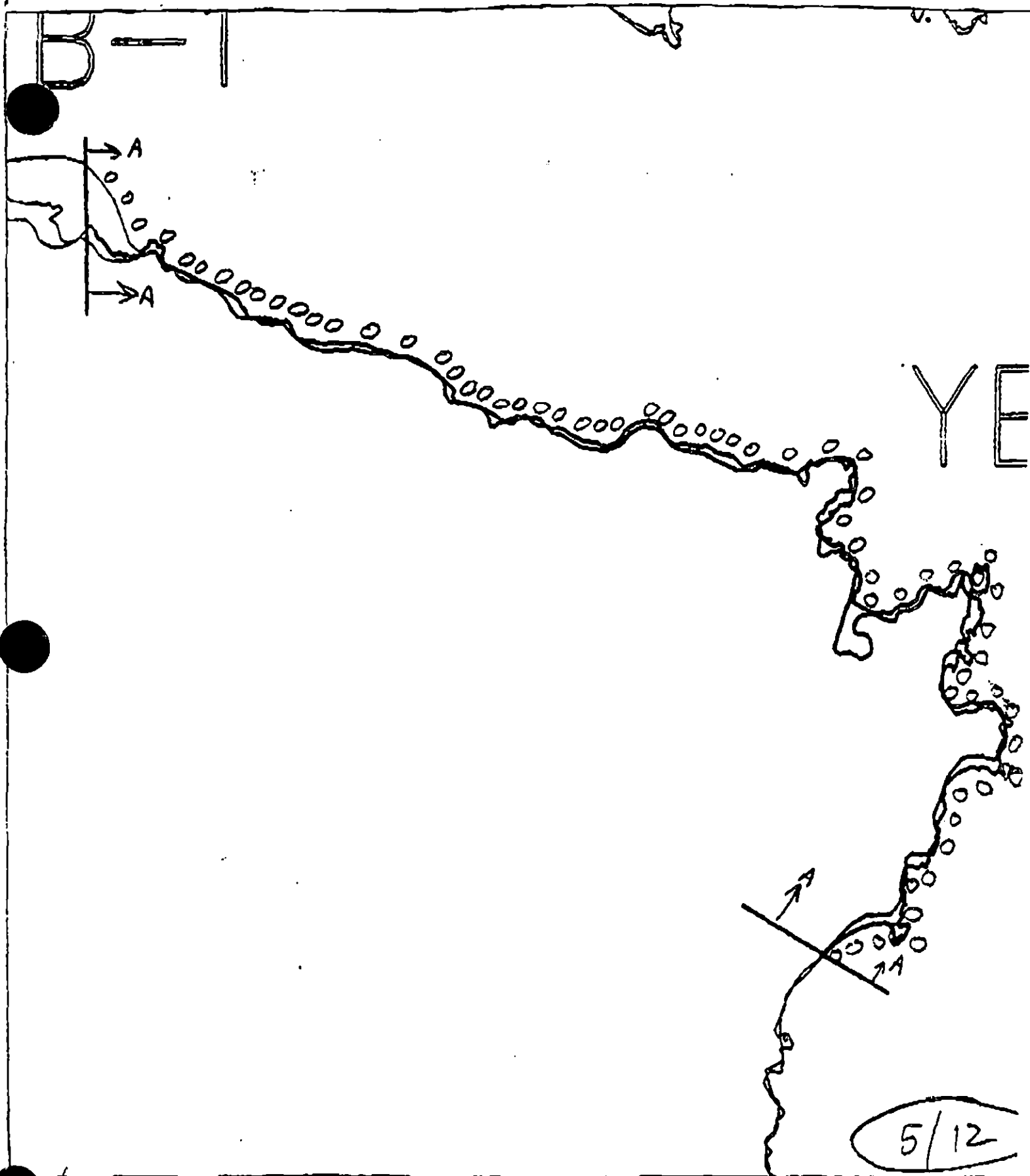
Approx. Segment Length: 7178m



Map Key: KEN-YB-5a

Name: _____

Date: _____



XXXX Wide

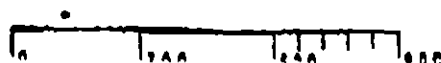
//// Medium

--- Narrow

TTTT Very Light

YB-5

Approx. Segment Length: 7178m



Map Key: KEN-YB-50

Name: Reddy Island

Date: 4/27/90

REGION: KENAI

SEGMENT: ST/YG-02

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ YG-02 SUBDIVISION A (1 OF 1) DATE 4/28/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4GG Alaska State Parks

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 147 m: Medium 470 m: Narrow 0 m: V.Light 568 m: No Oil 985 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 7 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of mousse
patties 2) removal of tarmat, 3) bioremediate areas shown on attached
sketch maps. No specific ecological time constraints identified.

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 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 (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
 7I 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

SEGMENT ST / Y6-002 SUBDIVISION: A DATE 4/25/74

USCG

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME Russell Kunkle SIGNATURE Russell Kunkle

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS The oiling in this segment was measured out and the sketched maps are accurate and clear. ~~Handwritten~~ The beach ^{has} low wave exposure and the ~~ribble~~ ^{pebbles} show only small evidence of movement.
recommended treatment: Manual pick up and removal of the asphalt mats. At $\frac{1}{2}$ ft³ per bag & this will create approximately 20,000 bags of waste. If a rock anchor is going to be used this year, this may be a site to consider for its use.

LAND MANAGER

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Comments not available at this time.
Will be faxed later

FIELD SHORELINE COMMENT SHEET

(3)

SEGMENT ST / YG-2 SUBDIVISION: _____ DATE 29 April 1990

CG NOAA
NAME Miles O. Hayes SIGNATURE W. O. Hayes

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

The asphalt pavement over 800m long was the largest accumulation that our team saw. Clean-up is necessary by one of three methods:
 1) Break up into smaller particles and allow wave reworking.
 2) Manual removal.
 3) Apply a new method of rock washing; whereby the rock sediment is returned to the beach.
 I favor number 3, pending outcome of ongoing net environmental benefit analyses being undertaken by NOAA, ADEC & EXXON.

ADEC
NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
MENTS

LAND MANAGER
NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / YG-002 SUBDIVISION: A DATE 4/29/90

USCG

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

LAND MANAGER

NAME SHARIE Methven-TONEY SIGNATURE Sharie Methven Toney

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Yalik Beach Segment YG-002 is within Kachemak Bay State Wilderness Park. The area ~~has~~ high wilderness values and wildlife values. The area is heavily used by commercial fisherman and pleasure boaters. We recommend manual cleanup of the asphalt oil and mouse patters in this segment. The Cercla Study Sign will need to be removed when the project is completed. The Exxon ASI stake will need removed when the project is completed.

SHORELINE OILING SUMMARY

REVISION NO. 04-13-90

(4)

OG N. BIGGAR USCG (NOAA) MILES HAYES SEGMENT ST/ Y9-002
 BIO D. RAIDER LAND REP SHERI METH-YAUNTONE SUBDIVISION A (1 OF 1)
 EXXON J. DEAN ADEC RUSSELL KUNIOE TIME 8:00 10/18/90
 TEAM NO. 17 TIDE LEVEL +3 to -3 to +7 DATE 4/28/90
 EST. SUBDIVISION LENGTH: 18.41 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: Middle to East Woods
 SURFACE SEDIMENTS: R 0 % B 5 % C 35 % P 30 % G 30 % S 0 % M 0 % V 0 %
 SLOPE: Lang 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 150 m M 450 m N — m VL 491 m NO 750 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	/C	/B	/P	/S	SBL	DEL	GY	DEL	DEL	DEL	SU	U	M	L
ASPHALT PAVEMENT	A	B	C	D		all					all	X		
POOLED														
COVER														
COAT				G		X					X			
STAIN														
MOUSSE														
PATTIES			Y	X		Y	X				X			
TARBALLS														
FILM														
NO OIL											X	X	X	

PAVEMENT H F 3800 sq. m by 7 cmPATTIES / TARBALLS 20,000 BAGS

(that's all)

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT			DID YOU COLLECT DEBRIS?
	SM	MD	LG	
Logs				YES ☐ . NO ☒
Vegetation				
Trash				
Debris				

DID YOU COLLECT DEBRIS?

YES ☐ . NO ☒TYPE ..#BAGS ..

Photographs:

Roll No. 5Frames 2 to 5

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE-SUBSURFACE SEDIMENTS		
		OP	OR	OL	OF	NO		VO	UC	SBL BR	DBL RW	GY SL	WBR TL	LOR	SU	U	M	L							
1	18		X				0-4		X					X			X					N			bc, g, s
2	20		X				0-7		X					X			X					N			" "
3	65					X	.		X								X					N			s, p, g
4	20					X	.		X							X						N			p, g
							.																		
							.																		

COMMENTS

The heaviest impacted area of this segment is covered by an asphaltic pavement - The largest area of pavement is about 35m (max) wide and 150m long. The remainder of continuous pavement is 1 to 3m wide (the "sidewalk"). The area of broken asphalt extends another 175m to the E, and to 400m to the west. Random chunks of asphalt and smaller patches can be found up to 1/2 the distance between the tidal and storm terraces, therefore the sketch maps shows a "general limit" of these occurrences. The asphalt is 5 to 10 cm thick. In the center of sketch map 3. REVIEWED BAT DATE 1 May 90

6

COMMENTS The asphalt is being broken and eroded away by wave action. The asphalt has a firm outer surface, but is a soft, DCM binder of granular material and cobbles underneath. It softens up in the sun and develops a brown, mossy character around cobbles. Locally there are patches of oil. Outside of the asphalt area, cobbles commonly exhibit CO or ST. No oiling was seen down the beach (toward the water) from the line of pavement.

The ADEC map shows an asphaltic pavement in the western 500 m of the
in front. We saw no surface evidence of this.

Th. beach is very broad and low angled, and subject to low to moderate waves, and is predominantly c. p. g. Boulders (up to 1 ft diameter) occur near the E. end.

The part of the segment along the stream bank on the E. end was not surveyed. In calculating the length of oil character (see sketch map), the length in P1 represents a generalization of random occurrences along the length of the bank.

REVIEWED BAF DATE 1 MAY 90

DATE 7/20/90

CHECKLIST

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

LEGEND

1 Δ

PR - No Submarine CR

2 ▲

PI - Subsurface Oil

CT/C

Continuous Distribution

CT/O

Broken Distribution

CT/P

Patchy Distribution

CT/3

Splashed Distribution

Oiled Vegetation

**Photo location, direction,
and number**

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

THE VISION OF JUNG

DATE 4 / 29 90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☐ Seg/Sub Entry
- ☒ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HAW/LWA
- ☒ SS1
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pk Location(s)
- ☐ Photo Location(s)

LEGEND

**FI1 - No Subsurface Oil**

2 ▲

PH1 - Subsurface Oil

CT/C

Continuous Distribution

CT/O

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Old Vegetation

**Photo location, direction,
and number**

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

REVISED 2/24/88

DATE 4 1 25 90

CHECKLIST

- ☒ N Arrows
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☒ Off Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☒ Est. HWA/VA
- ☐ SS1
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PR Location(s)
- ☐ Photo Location(s)

LEGEND

- FI - No Subsurface Oil**

- 2 ▲
FI - Subsurface Oil

CT/C
Continued Distribution

CT/B
Broken Distribution

CTP

Patchy Distribution

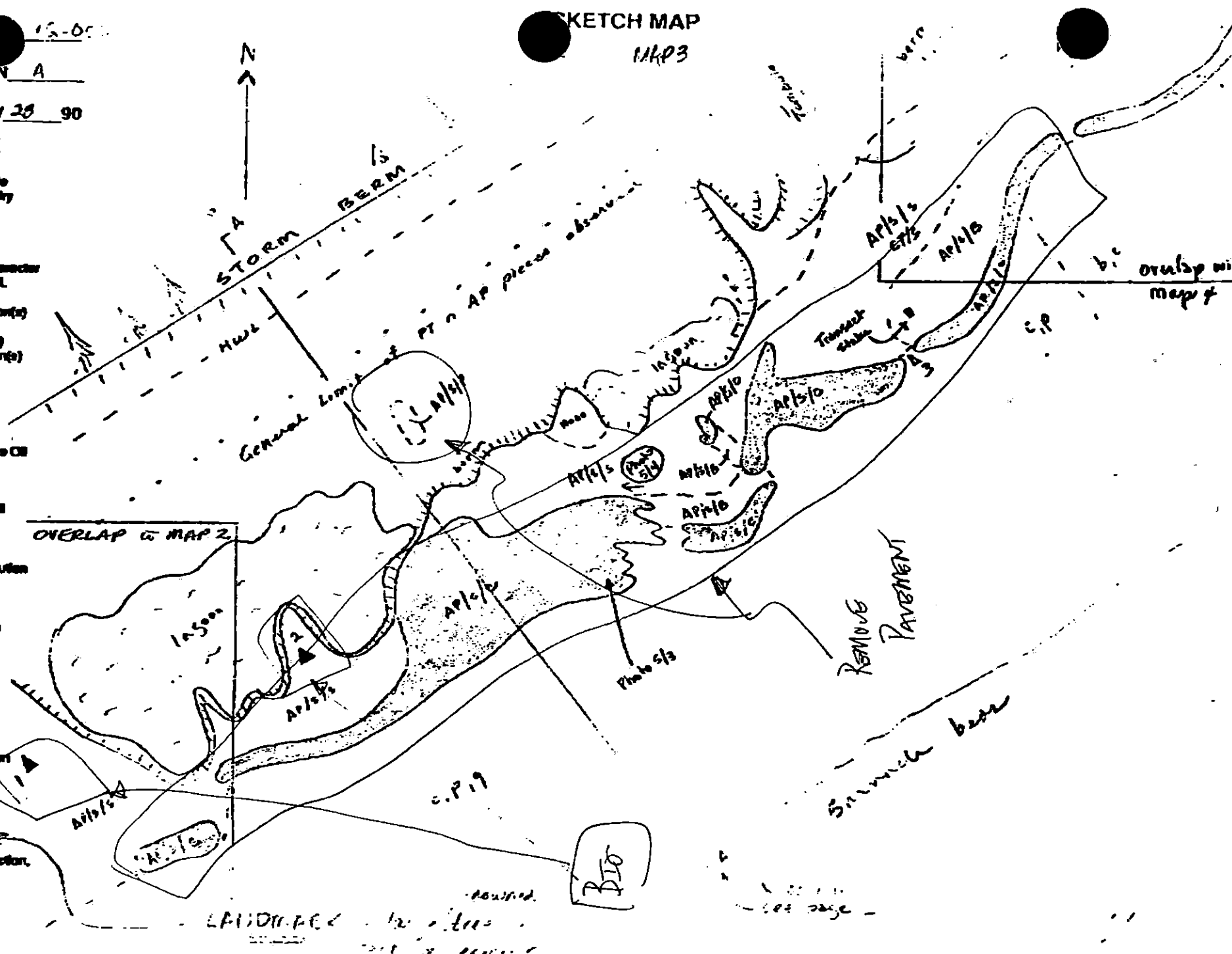
CT/S
Spliced Distribution

Old Vegetation

Photo location, direction,
and number

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

REVISION: 2014



00 11, BICKAR

SEGMENT Y6-002

SUBDIVISION A

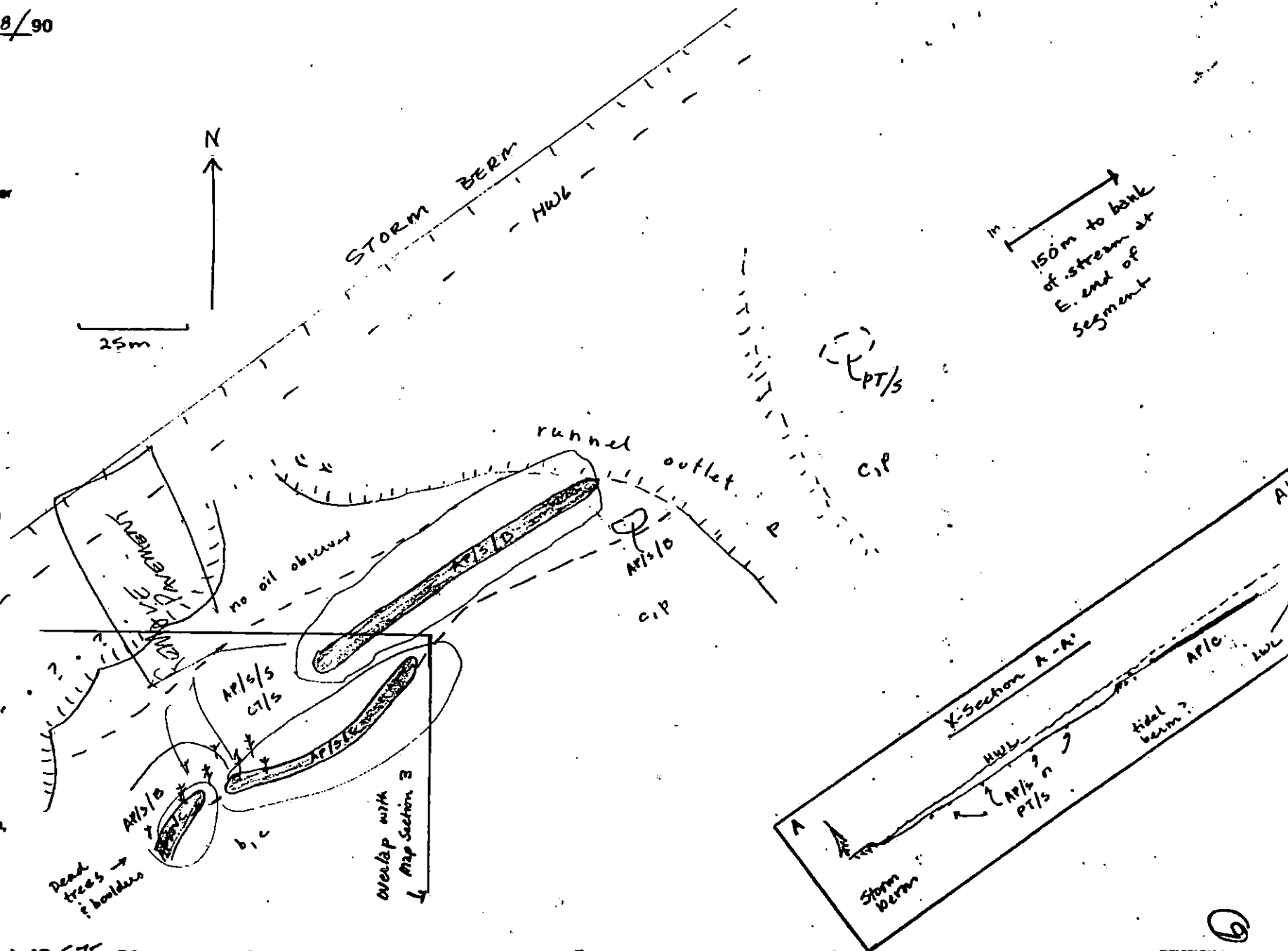
DATE 4/28/90

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
- ell.
Oiled Vegetation
- 1 $\rightarrow$
Photo location, direction, and number



52
4 20
10 20
150
1175

Oil Character Length (m): AP 575 PO - CV - CT - ST - MS PT 516 TB - FL - NO 750

REVISION: 02/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION 02/2/80

Segment ST / YG 002 Subdivision A Date (mo / day / yr) 4 / 28 / 90Time (24 hr) 8:00 Biologist DANIEL RAIDER(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 20 Moderate 10 Low 70
↳ 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. 5Frames 1-5

BARNACLES

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

NOT PRESENT

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	X	3	3	3	3	X
4	4	4	4	4	4	X	4	4	4	4	X
5	5	5	5	5	5	X	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

Harbor seal - 1

Dense *Mytilus edulis* bed and dense LTZ with algae

- Profuse shorebirds in list to be sent at a later date

Ecological Considerations:

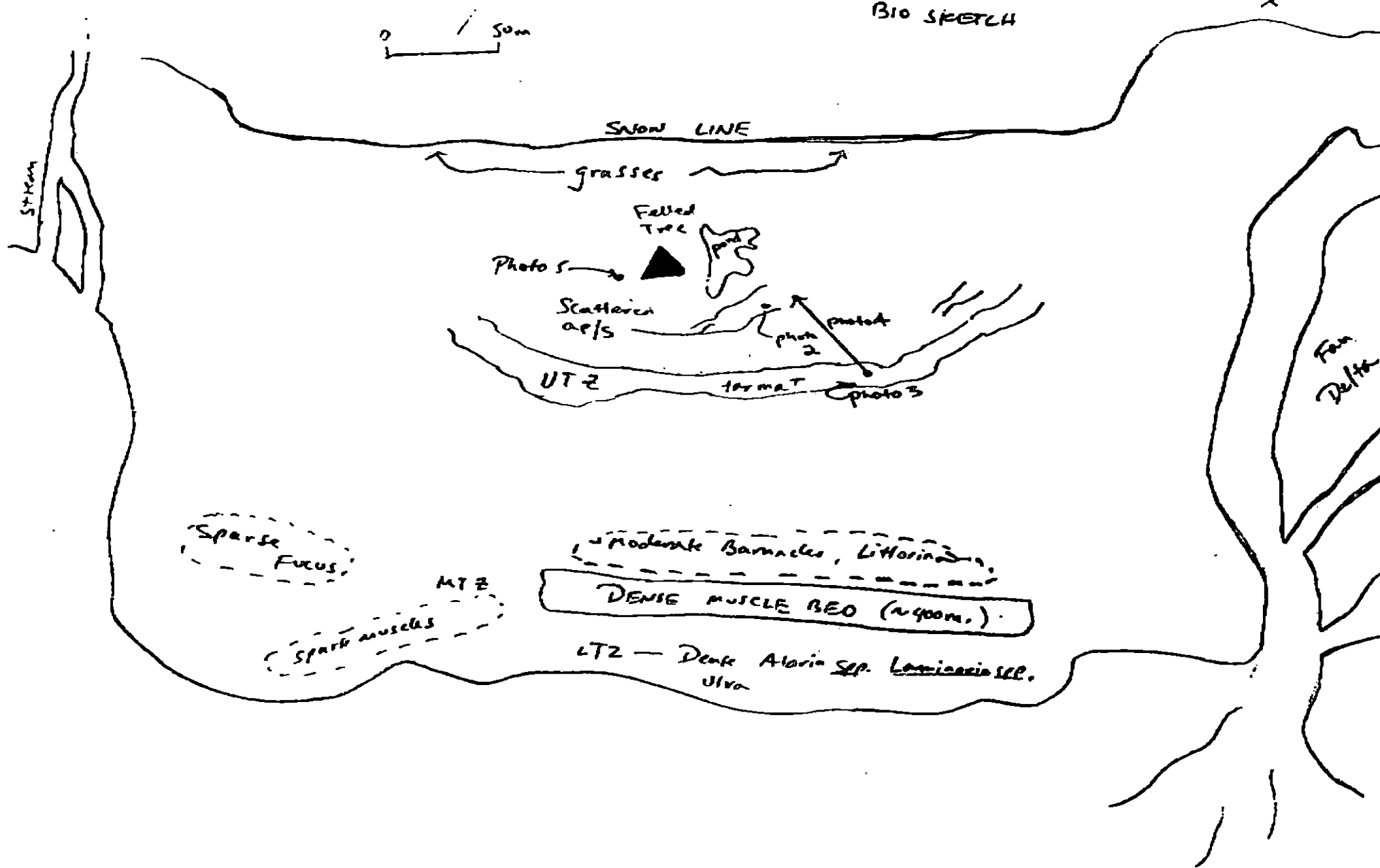
466

YG 002 A

TEAM 17 28 APRIL 1990

DANIEL RAIDER
Bio SKETCH

HP 3
X



YG 002 A

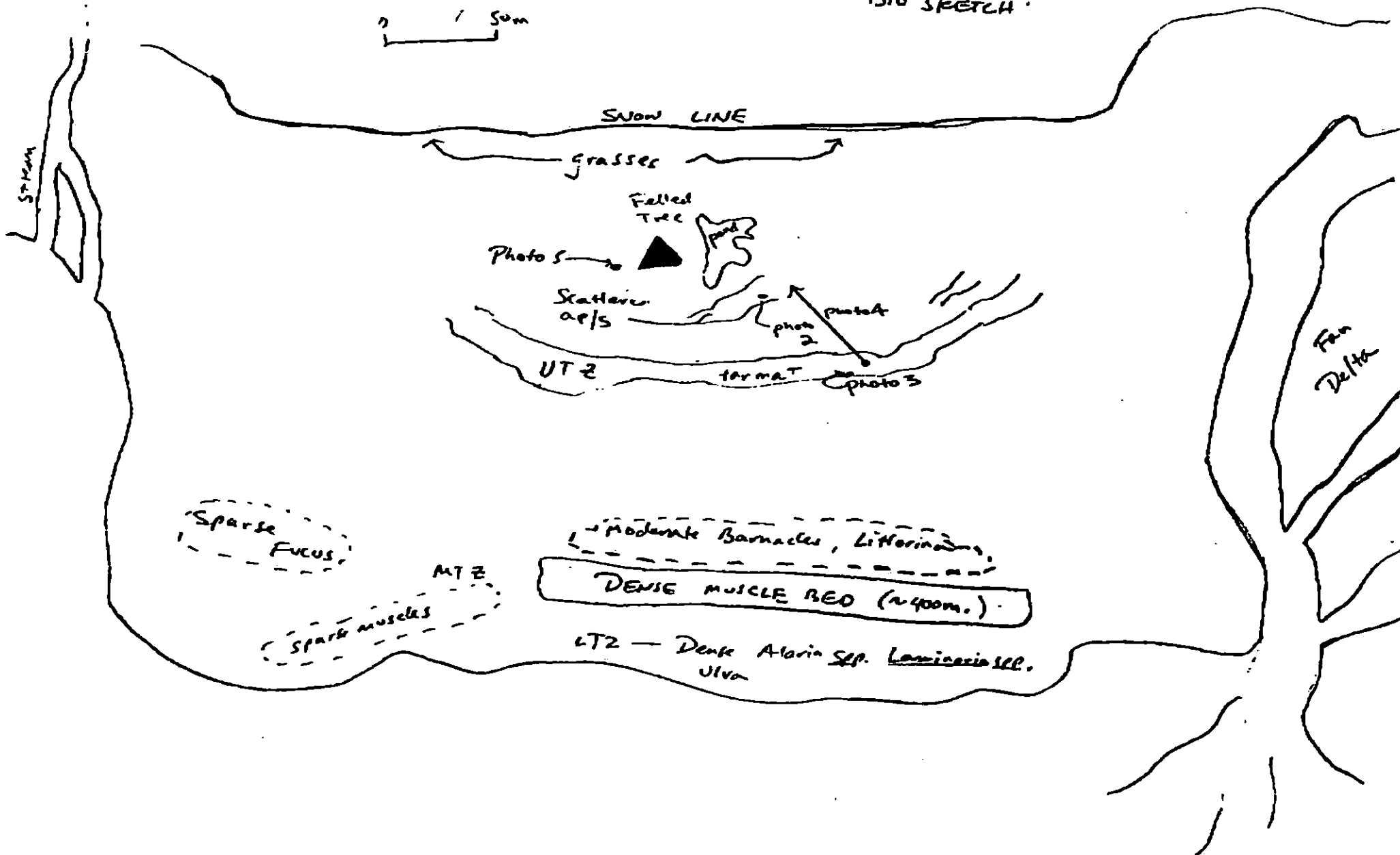
TEAM 17 28 APRIL 1990

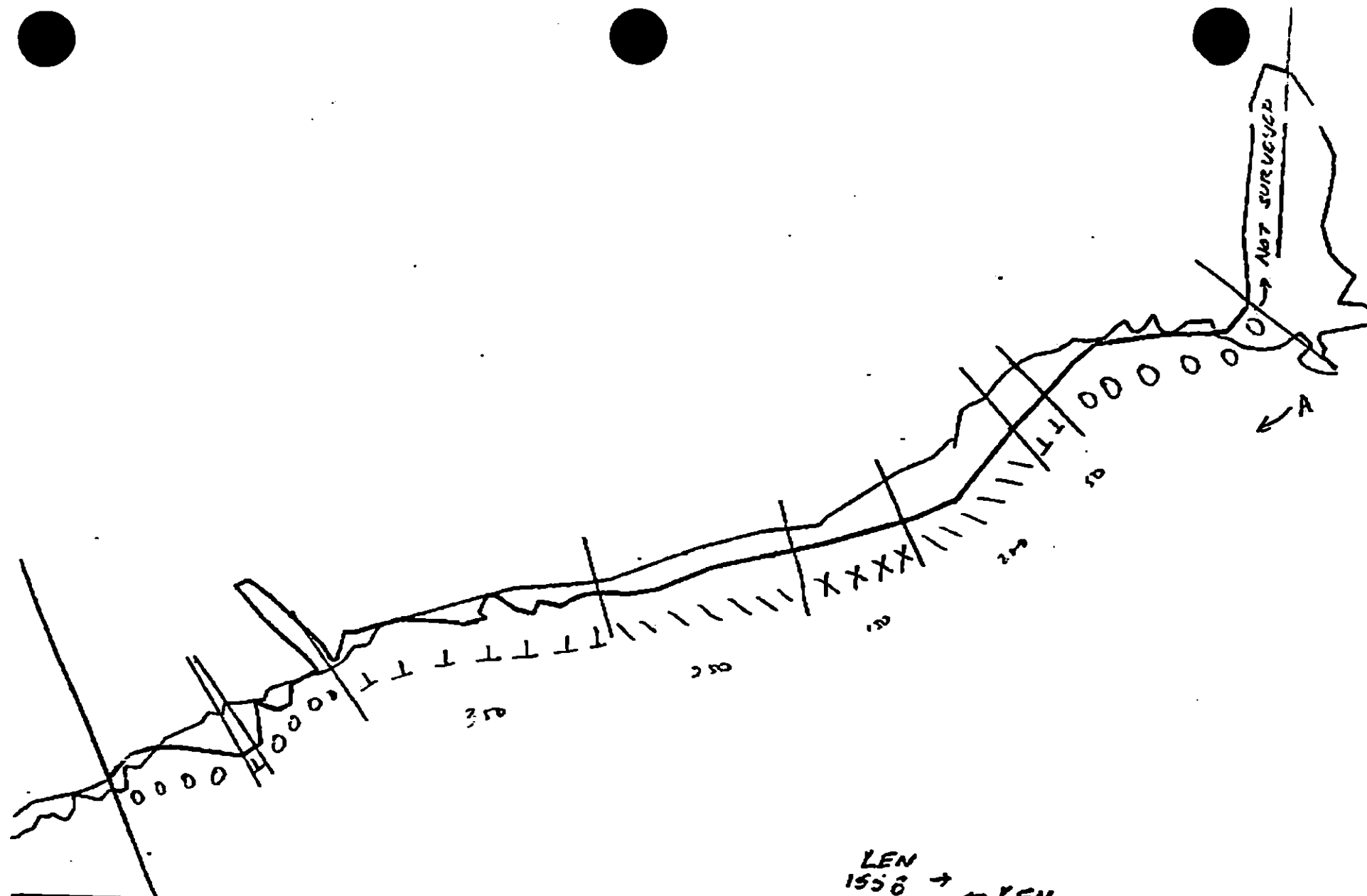
DANIEL RAIDER
Bio SKETCH

he's
X

2 1 50m

N





XXXX Wide
 //// Medium
 --- Narrow ADEC Segment Length: 2526m
 TTTT Very Light
 OOOO No Oil

YG-2

0 100 200 300
 METERS

Map Key: XEN-1556

Name: _____

Date: _____

Date Expired: _____

LEN 1556 → ← LEN 155A

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

Y1

0 100 200 300
 METERS

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT YG-2 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation Mechanical Removal	OPEN

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

No ecological time constraints.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 6/04/20
ADEC RAY MORRIS
EXXON ANDY TAYLOR
NOAA JOSEPH TULLOCH
USCG GILBERT

FOSC J. J. J.

DATE 6/5/20

Prepared By: Andie Meyer

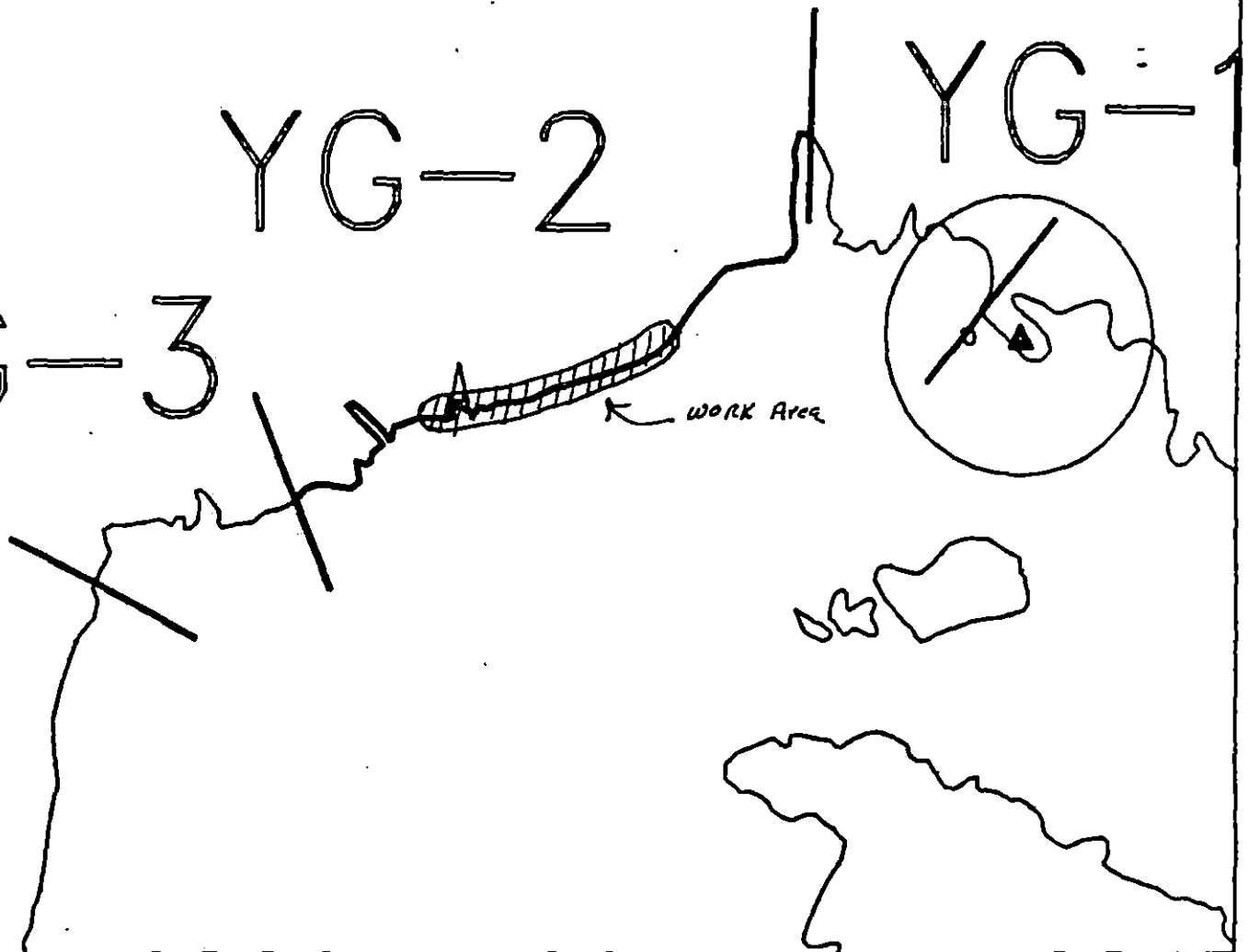
Date 6/3/20

41

YG-2

YG-1

YG-3



ECOLOGY MAP
SEGMENT YG-2

SUBDIVISION A (1 of 1)



Seabird Colony



Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ YG-02 SUBDIVISION A (1 OF 1) DATE 4/28/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4GG Alaska State Parks

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: Michael Antosquith DATE: 5/15/90

OILING CATEGORIZATION:

Wide 147 m: Medium 470 m: Narrow 0 m: V.Light 568 m: No Oil 985 m
Subsurface Oil Observed: Yes X No Maximum Depth 7 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 Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pickup of mousse patties 2) removal of tarmat, 3) bioremediate areas shown on attached sketch maps. No specific ecological time constraints identified.

See Addendum dated 6/3/90/JP

TAG COMMENTS: MECHANICAL REMOVAL OF ASPHALT PATCHES IS
RECOMMENDED

TAG APPROVAL DATE: 5/15/90

ADEC Art Wagner Art Wagner

EXXON Andy Teal Andy Teal

NOAA Joseph Talbot Joseph Talbot

USCG G.A. BELTER G.A. Belter

FOSC: ML DATE: 5-20-90

Notify State DNR 24 hrs in advance of work.

SHORELINE EVALUATION

SEGMENT ST/ YG-02 SUBDIVISION A (1 OF 1) DATE 4/28/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4GG Alaska State Parks

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Michael Antosowich DATE: 5/15/90

OILING CATEGORIZATION:

Wide 147 m: Medium 470 m: Narrow 0 m: V.Light 568 m: No Oil 985 m
Subsurface Oil Observed: Yes X No Maximum Depth 7 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 Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pickup of mousse patties 2) removal of tarmat, 3) bioremediate areas shown on attached sketch maps. No specific ecological time constraints identified.

TAG COMMENTS: MECHANICAL REMOVAL OF ASPHALT PATCHES IS
RECOMMENDED

TAG APPROVAL DATE: 5/15/90

ADEC ART WENGER Art Wenger

EXXON ANDY TEAL Andy Teal

NOAA Joseph Talbot Joseph Talbot

USCG G.A. REITER G.A. Reiter

FOSC: ML DATE: 5-20-90

Notify State DNR 24 Hrs in advance of work.

SEGMENT ST 1/6-002

SUBDIVISION A

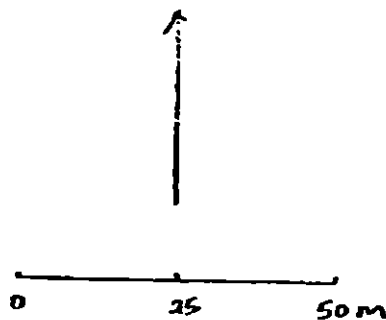
DATE 7/20/90

SKETCH MAP

1441

CHECKLIST

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



LEGEND

1 Δ
PI - No Subsurface Oil

2 Δ
PI - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Scattered Distribution

lll
Oiled Vegetation

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

200 m to
end of segment

PI - P/S
in 15m

PT/S
1m

AP/P
10x2m

AP/B
4x1m

AP/B/P
10m x 2m

P/S

C.P.S

Downed tree
with green
net

STORM
BERM

general
limits of
PI/S AP/S

overlap with
Map 2

REMOVE
PAVEMENT

REVISIONS

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

DATE 4 1 28 90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sab Entry
- ☒ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☒ Est. HW/LA/WL
- ☐ SST
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PR Location(s)
- ☐ Photo Location(s)

LEGEND

- F1 - No Subsurface Oil**

- 2 ▲
PI - Substantive Q

- CT/C
Continuous Distribution

- CT/B**
Broken Distribution

- CT/P
Purdy Distribution

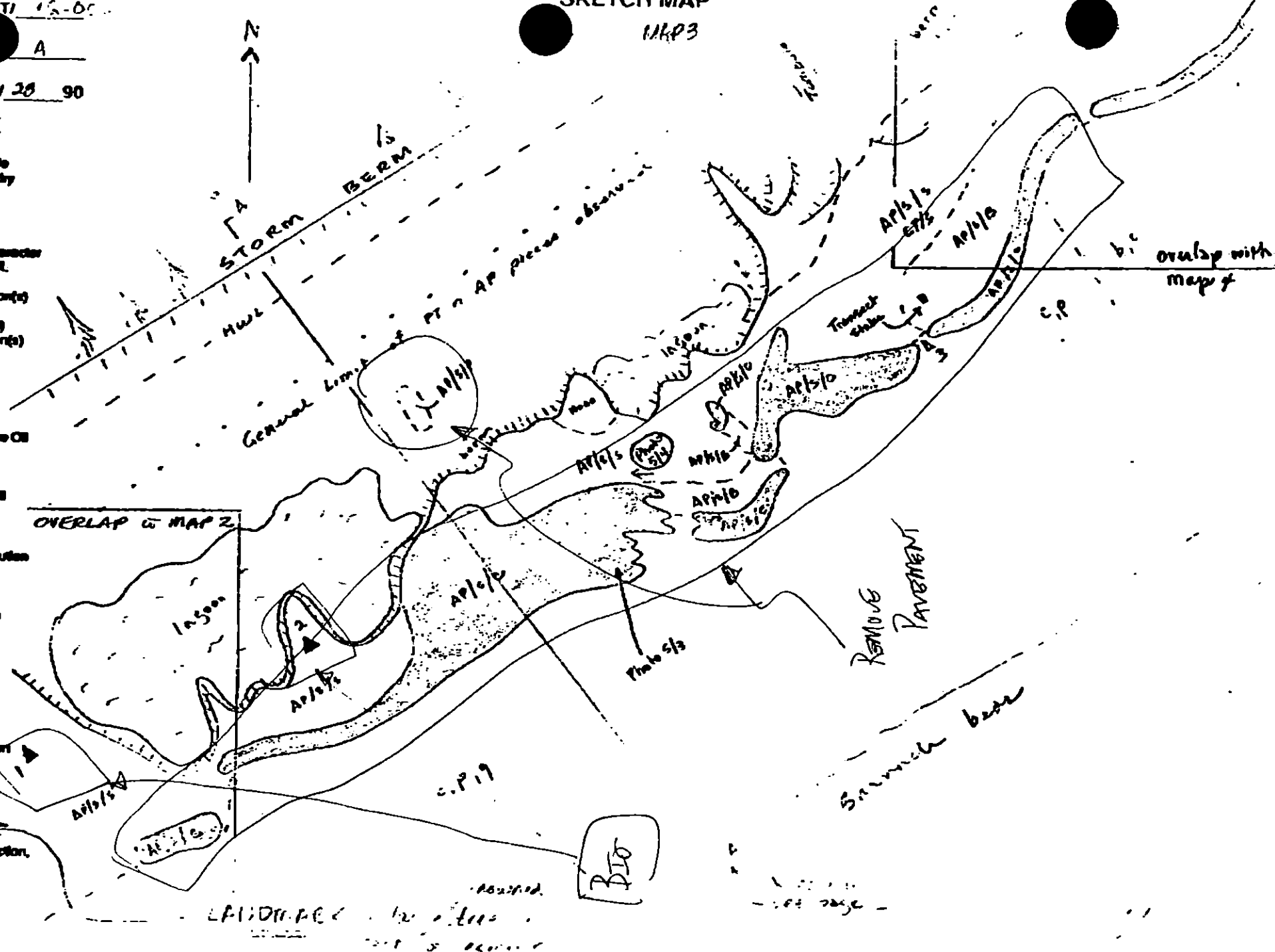
- CT/S**
Specialized Distributors

- Old Vegetation

- Photo location, direction,
and number

SKETCH MAP

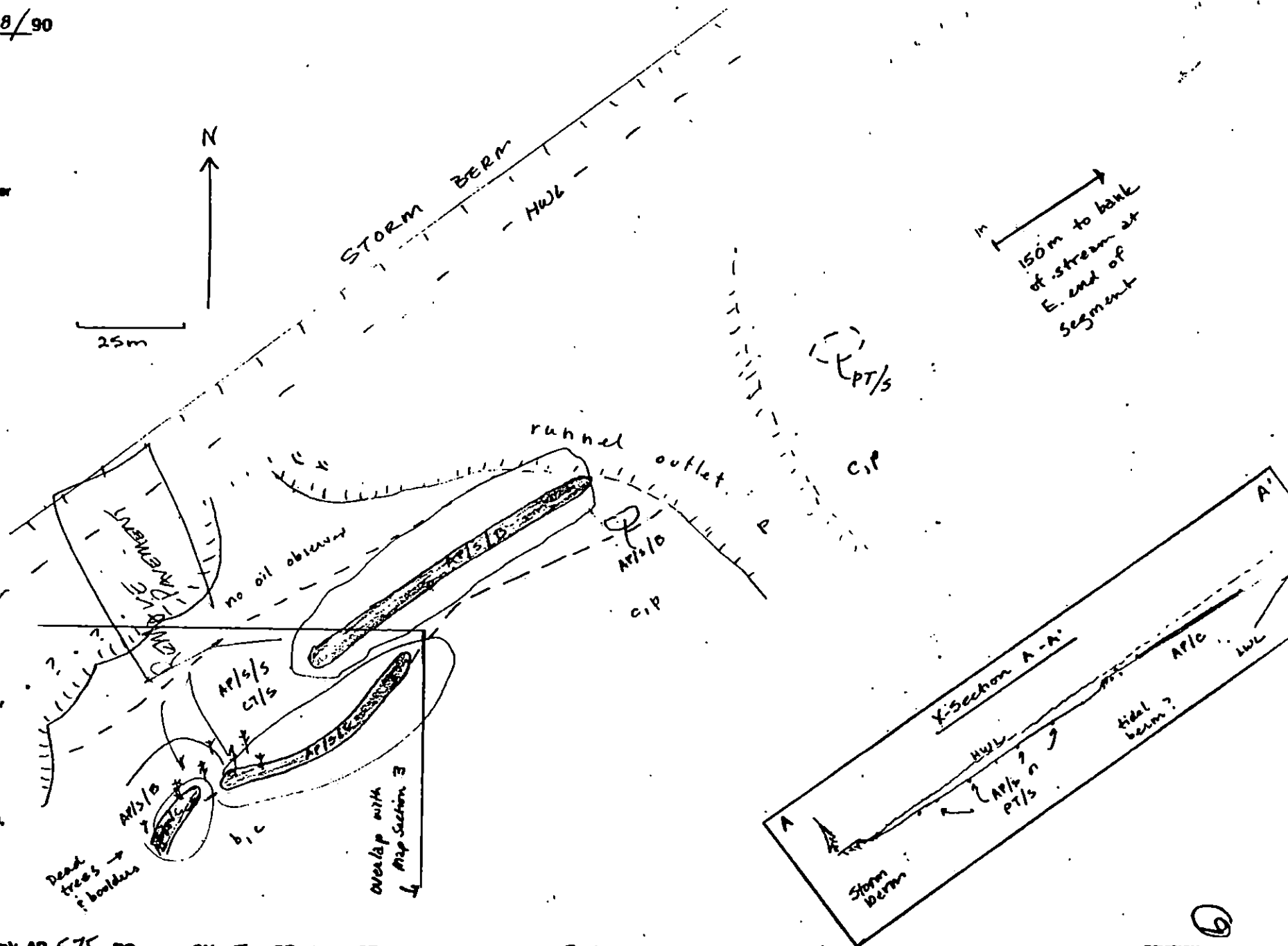
MKP3



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

REVISIONS:

REVISIONS/DATE

$$\begin{array}{r} 82 \\ 4 \overline{) 328} \\ \underline{32} \\ 0 \\ 0 \\ 0 \end{array}$$


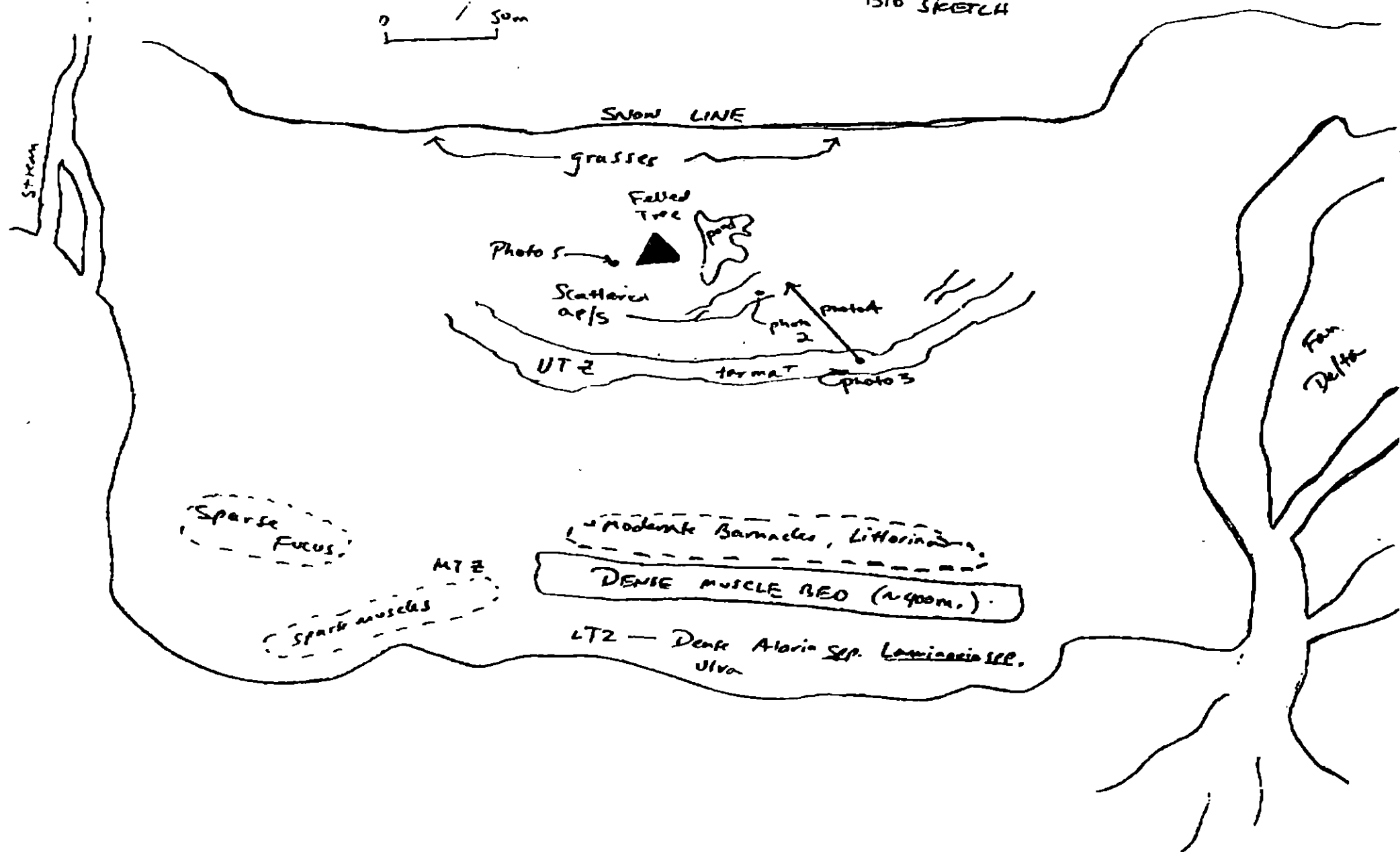
YG 002 A

TEAM 17 28 APRIL 1990

DANIEL RAIDER
Bio SKETCH

NE 3
X

0 1 50m



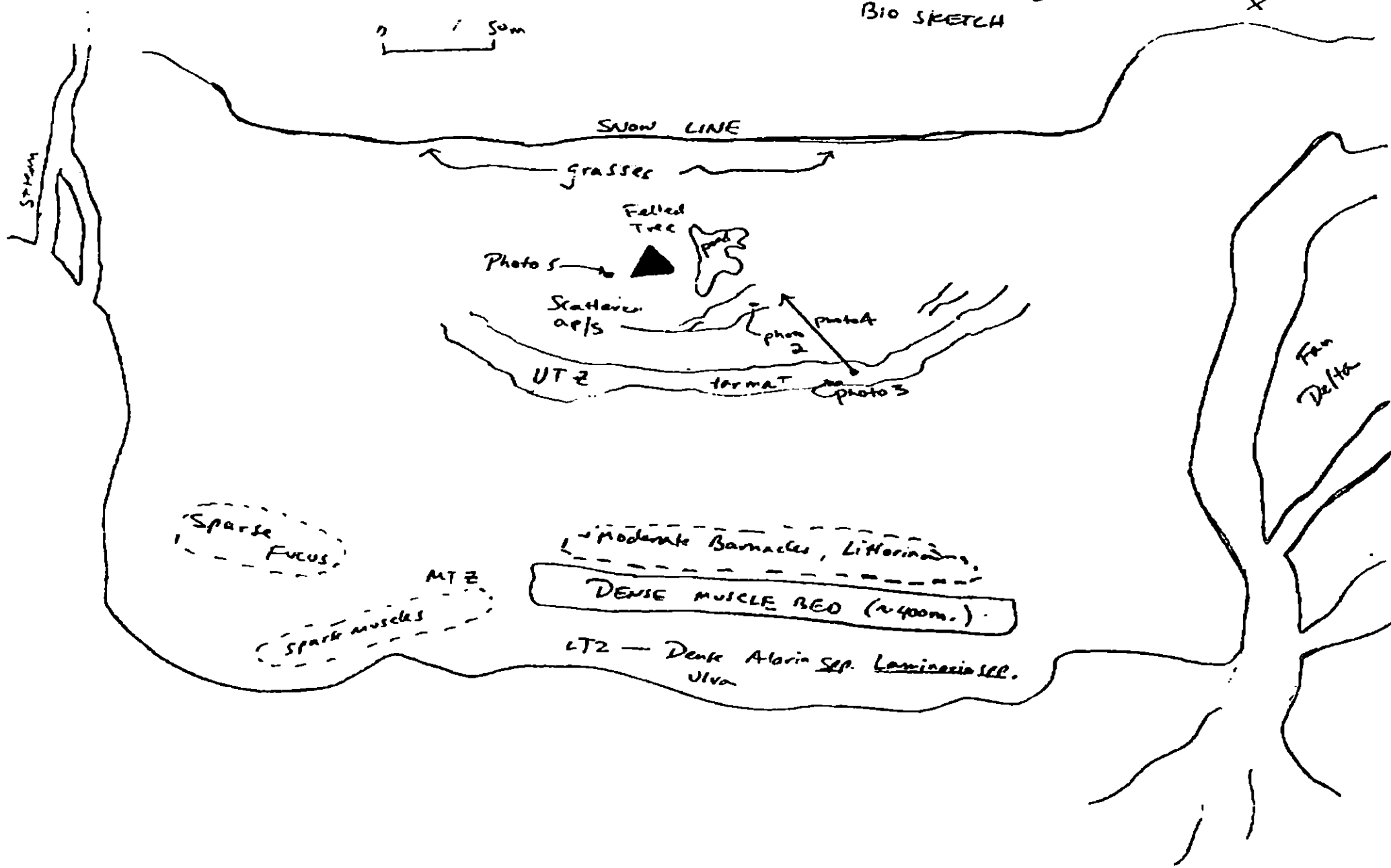
YG 002 A

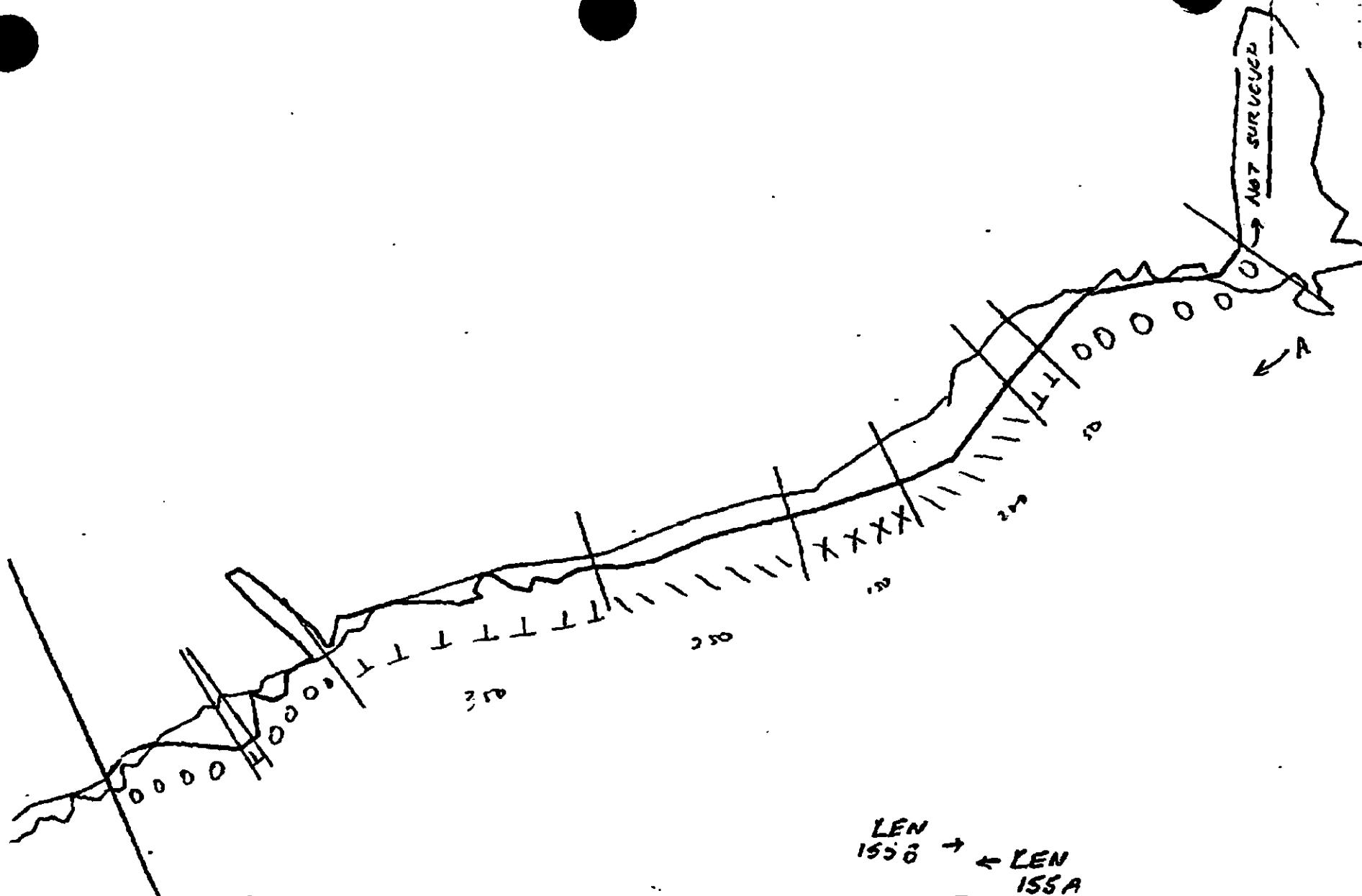
TEAM 17 28 APRIL 1990

DANIEL RAIDER
Bio SKETCH

he's
X

0 1 50m





XXXX Wide

//// Medium

---- Narrow ADEC Segment Length: 2526m

TTTT Very Light

OOOO No Oil

YG-2

0 100 200 300
METERS

Map Key: XEN-1550

Name: _____

Date: _____

Date Entered: _____

XXXX Wide

//// Medium

---- Narrow ADEC Segment

TTTT Very Light

OOOO No Oil

(2) Y1

(2) Y1

(2) Y1

(2) Y1

(2) Y1

1991 MAYSAP EVALUATION

SEGMENT: YG 002 **SUB:** A **REGION:** KEN **SURVEY DATE:** 5/17/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) NONE

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 _____

ADEC

NAME Clara S. Crosby SIGNATURE Clara S. Crosby

☐ NTR ☒ Treatment Recommended
Manual removal of AP - using Powerb's & Shovel.
Surface asphalt/tar is accessible & easily removed.
Survey crew attempted to recover AP throughout seg.
but the amt was too great large for time allotted. Areas
picked up were satisfactory - on SW end.

EXXON

NAME George P. Stiles SIGNATURE George P. Stiles 5/17/91

☐ NTR Very weathered AP was found on this long wide
branch segment with no subsurface oiling. The survey
crew picked up 41 bags from the western end of the
segment. Pickup was discontinued due to the
amount still remaining.

LANDMANAGER

NAME Jeff Johnson OF ADNR SIGNATURE [Signature]

☐ NTR ☒ TR!
Agree with comments of DEC + Exxon. Manual pickup would
be very beneficial. Segment is within Kachemak Bay State Park,
and removal would be effective at reducing visual impact.

USCG/NOAA

NAME McMahon/McDonald SIGNATURE [Signature]

☐ NTR Recommend manual treatment only from the point marked
by tree Going right on the OLI's map ~~marked~~ LEFT of the by tree
was picked up by VECO crew. There is AP mainly as
indicated by OLI.

[Signature]

PAGE 2 OF 16

Reviewed 5.21.94
Revised 5.22.94

SEGMENTS YG-001, YG-002 AND YG-003

YALIK GLACIER

MAY 17, 1991

YG-002

A3

AP. 10x120, <41%
Few patches ranging
from 10 cm to 3 m
continuous AP.

AP. 2x30, <41%
< 20 cm, P.U.
A few 1 m²

AP. 2x3, 6x6, 10x10
AP. 10x10, 5x5, 10x10

AP. 10x20, 4x4%
< 20 cm, P.U.

AP. 10x30, 4x4%
< 1 m dia

ANTILOCKING
Pavement
May 1991 - 4-5-10-11

AP. 1x100, <41%
< 1 m dia
P.U.

AP. 10x130, <41%
range from <10 cm
to 3 m² continuous
pavement, many
patches.

AP. 10x120, <41%
range from <10 cm
to about 1 m²
many small patches.

0 100
meters

Revised: AC 5/21/91
Reviewed 5-21-91

Segment
boundary

boundary

← YG-003

YG-001 →

segment

YG-002

YG-003

boundary

HIGH WATER LINE

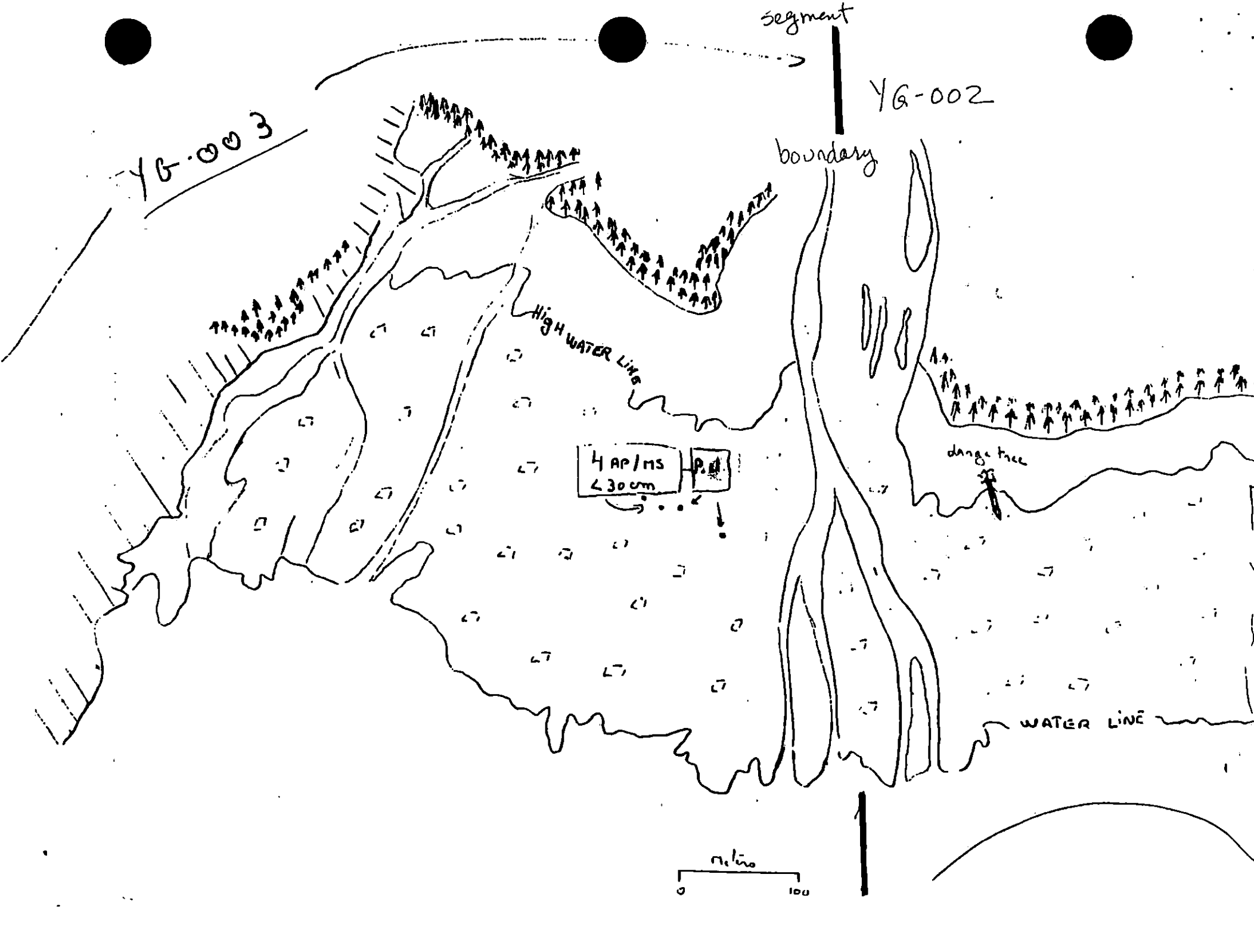
4 AP/MS
L 30 cm

P. 1

large tree

WATER LINE

0 100
m. line



YG-001

LEGEND



SNOW



WATER



AREA OF OCCURRENCE
OF OIL



BEDROCK CLIFFS



COBBLE / PEBBLE
SAND / BOULDER



PEBBLE / SAND



SAND / MUD

BRAIDED STREAM
ALLUVIAL FAN

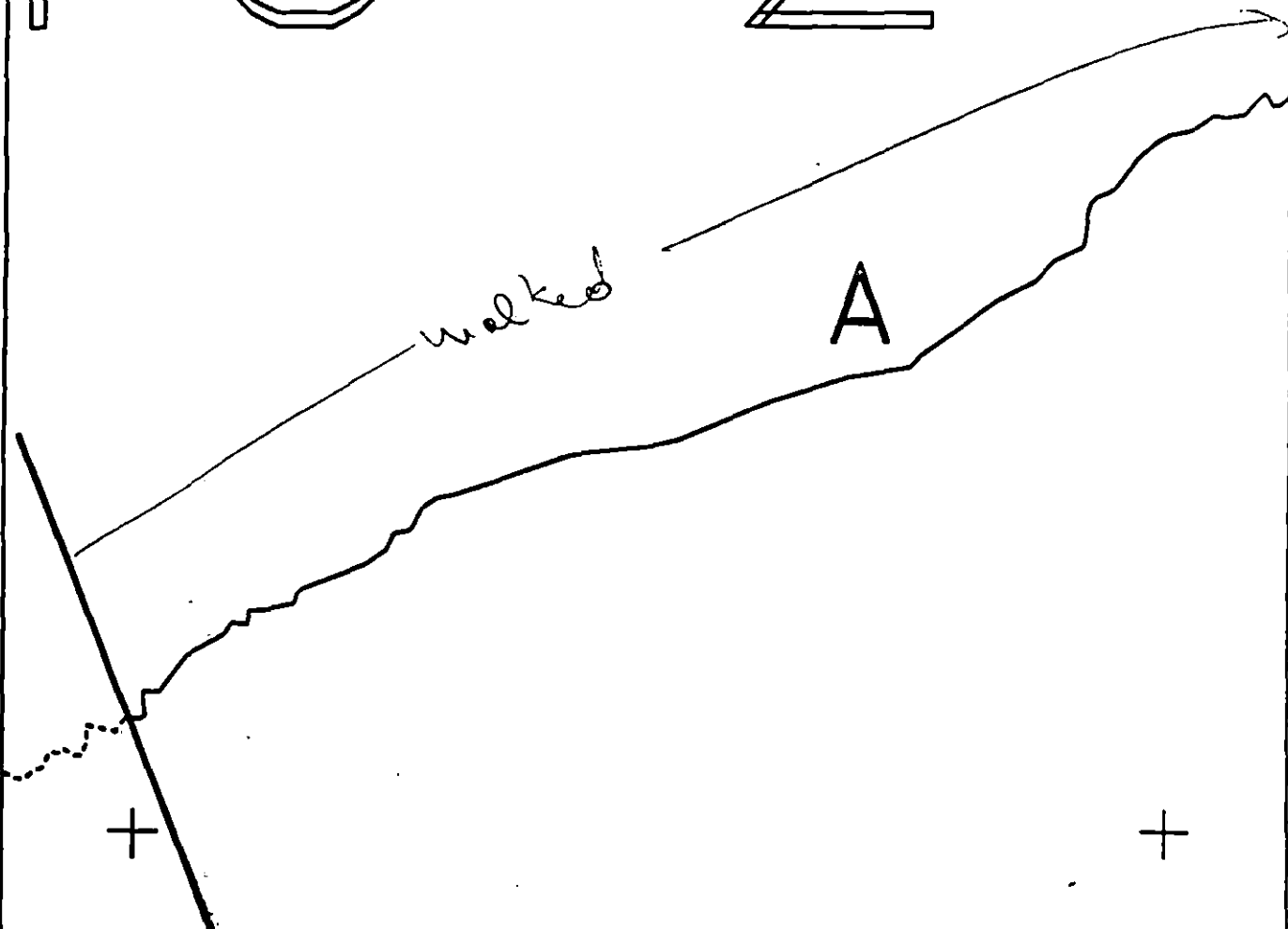
YG-001

YG-002

dy reviewed S.21

Location Map

YG-2



YG002 A

METERS



AK State Plane Zone 4
87900200

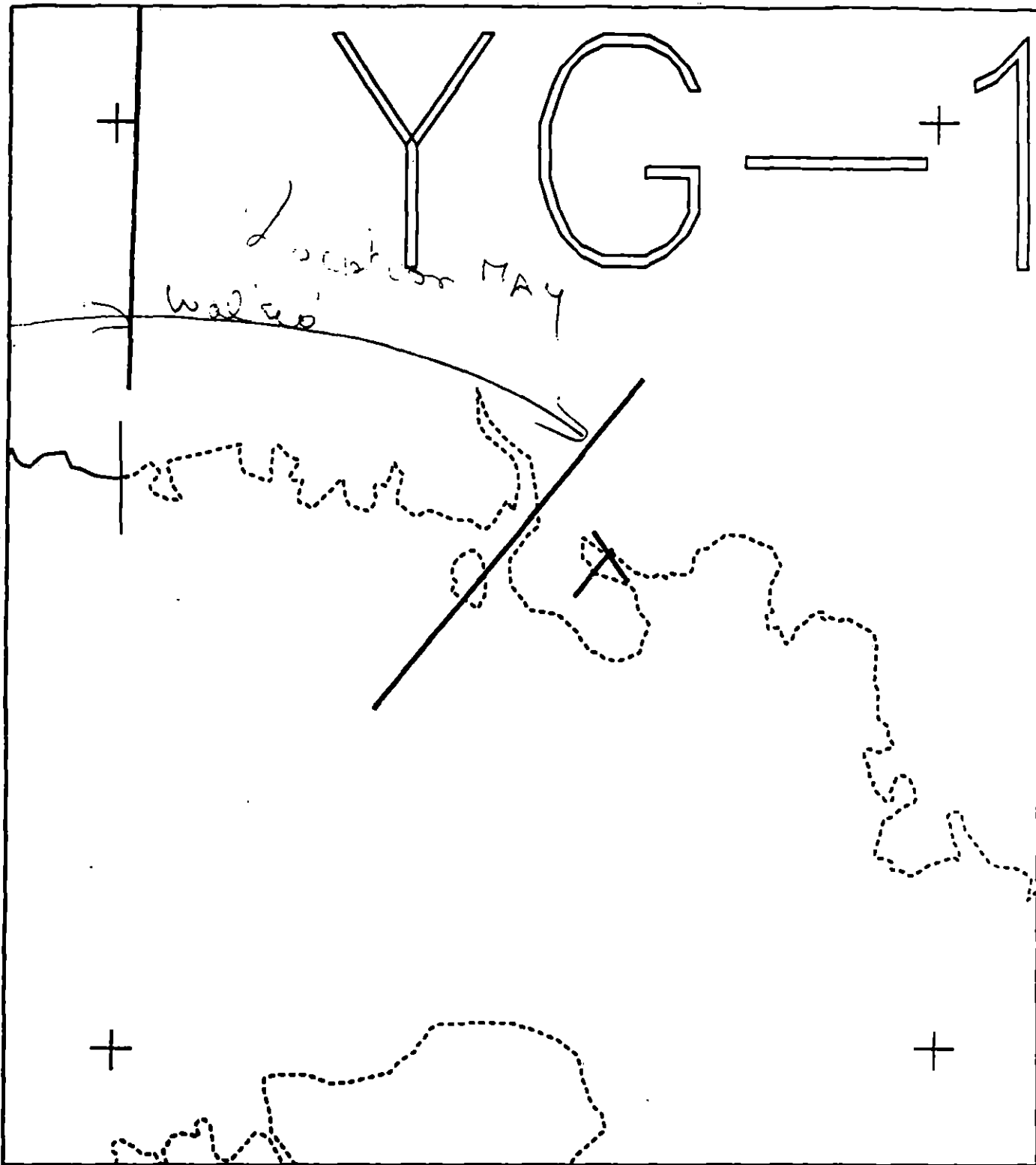
Subdivision Field Map

Map Key: KENY002Aa

Name: J. M. Temple

Date: MAY 17/91

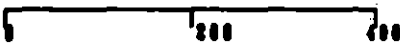
reviewed 5.21.94






YG002 A

METERS



0 100 200

AK State Plane Zone 4
89002ab

Subdivision Field Map.

Map Key: KENYG002Ab

Name: JM Sample

Date: May 17/02

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #	4	DATE/TIME	May 17, 1991 0730 - 1000
SEGMENT #	YG002	TIDAL HEIGHT (Range)	5.1 => -2.3
SUBDIVISION	A	BIOLOGIST	JIM BARRY
SEA STATE	Calm	WIND SPEED/DIRECTION	Calm, cloudy/rain

COMMENTS / OBSERVATIONS - OILED SUBDIVISIONS

Oiled Site Comments

A1 Oil at this region is confined to the upper intertidal zone where patches of asphalt or HSOR are present in the beach cobble and pebbles. In some areas, filamentous green algae, small patches of black lichen, littorine snails and oligochaete worms are the most common organisms at the location and are often on or very near the oiled sediments. A few mussels and barnacles also are found near the oiled (and unoiled) sediments, but are quite rare at this tidal level.

Oil (AP patches) found along the eastern portion of the segment often had little biota in the vicinity of the oil, other than filamentous green algae and a few littorine snails. The lack of littorine snails may be due to natural variation and patchiness of the beach fauna, or may have been related to the removal of the surface sediments during clean up activities last year. Littorine snails graze filamentous algae from the cobble, and under the present low densities, growth by green algae appear to have covered the cobble. These grazers are generally able to recover rapidly from such disturbances. Scattered individuals are now present in the cobble and should soon increase in numbers.

No other biota are found near (within 10 m) of the oiled sediments. Beach grass and eskimo grass are found in clumps to dense stands in the higher and supratidal zone. Lower on the beach, barnacles, Fucus, red and brown algae, and mussels are densely abundant in distinct patches (see zonation below). No oiled sediments were found in the vicinity of these assemblages.

(continued)

WILDLIFE OBSERVATIONS - Completed on all subdivisions

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	3	
Seabirds	3	7	
Waterfowl	10	640	
Gulls/Kittiwakes	2	7	
Shorebirds	6	130	
Corvids	1	1	
Other Birds	2	11	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	3	Black Bear	Tracks
Pinnipeds (specify)			
Sea Lion	1		
Harbor Seal	3		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed: MC 5/24/91

Reviewed M.B. 5/22/91

YG002 Biology Summary, continued

Manual removal of some (most?) AP was performed during the survey. Additional removal will not harm the biota at this beach, unless the low zone mussel and clam beds are disturbed. These beds are a considerable distance from the oiled site and should not interfere with potential cleanup.

General Features of YG002-A

This subdivision encompasses a long wide beach of cobble, pebble, and sand, with several small streams. The beach previously had extensive asphalt pavement, of which most have been removed.

The beach has fairly distinct vertical zonation, from the drift logs in the storm berm to the dense brown algal beds in the shallow subtidal zone. A characterization of this zonation is presented below.

The major biological features of the beach are 1) the upper zone beach grass and eskimo grass zone, located below the storm berm, 2) the rockweed zone located in the middle zone and often following the contour of several streams entering the beach from the upland, 3) the mussel and clam bed in the middle to low zone, and 4) the red and brown algal beds of the low to subtidal zones. Each zone may be of importance to upland species or migrating birds. Bears forage in the intertidal zone (black bear tracks were found) and river and sea otters (3 observed offshore) also forage in the mussels and clam beds. Migratory waterfowl and shorebirds utilize this beach heavily, as indicated by the nearly 800 birds from 25 species that were observed during this survey. One or more streams are anadromous streams.

Intertidal Zonation Pattern on YG002

Biota:	Tide Level	SupraTidal	Upper	Middle	Low	Subtidal
Oil (AP)			- - -			
Beach Drift Line		-+*+-				
Beach Grass (Elymus)		-+***+ + + - - -				
Eskimo Grass (Honckenya ?)		-+ +.-				
Black Lichen		-	-	-	-	
Bare Rock		- - - - -				
Filamentous Green Algae			-	-	-	+++ ++ ++ ++
Rockweed (Fucus)			-	-	++	++ ++ -
Mussels (Mytilus)				-	+++ + +*****+--	- -
Clams						++ **+ - -
Barnacles (Balanus)			-	-	++ + - -	+ *--++ ++ ++
Bladelike Red Algae					-	- -++**+--+++**
Green Algae (Ulva/other)					-	- -++ -+ *-- +
Upright Brown Algae (not Fucus)					- -	-++*****

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

Y6002-A Biological Summary, continued

Common Species on Y6002

A. Marine Plants

1. Diatoms, Blue Greens
2. Green Algae - Chlorophyta
Enteromorpha sp., Ulva sp., Urospora sp.
3. Brown Algae - Phaeophyta
Alaria marginata, Agarum fimbriatum, Costaria costata, Ectocarpus spp.,
Fucus distichus, Hildenbrandia sp., Laminaria groenlandica, L.
saccharina,
4. Red Algae - Rhodophyta
Endocladia muricata, Iridaea sp., Lithothamnion sp., Membranoptera
dimorpha, Odonthalia floccosa, Palmaria palmata, Petrocelis sp.,
Porphyra sp.
5. Higher Plants - Leymus mollis (beach rye grass), Eskimos Grass (Honckenya
sp.?)

II. Marine Animals

1. Sponges - Porifera
2. Anemones - Anthopleura artemesia, Epiactis ritteri
3. Hydroids - Sertulariidae, Aglaophenia sp., Abietinaria sp.
5. Flatworms - Platyhelminthes - Polyclads
6. Nemertean Worms - Ribbon Worms - Emplectonema gracile
8. Polychaete Worms
Glyceridae
Nepthyidae
Nereidae - Nereis spp.
Serpulidae - Serpula sp., Crucigera sp., Eudistylia polymorpha
Spirorbidae - Spirorbis sp.
9. Peanut worms - Sipunculids - Phascolosoma agassizii
10. Crustaceans
 - a. Amphipods - Orchestia sp.?
 - b. Barnacles - Balanus glandula, Chthamalus dalli, Semibalanus cariosus
 - c. Crabs - Acantholithodes hispidus, Haplogaster sp., Hemigrapsus
oregonensis, Paguridae (hermit crabs), Oregonia gracilis,
Pugettia sp.,
 - d. Isopods - Cirdana harfordi, Idotea wosnesenskii, Gnorimorsphaeroma
oregonensis
11. Mollusca
 - a. Chitons - Mopalia sp., M. mucosa, Katharina tunicata, Tonicella
lineata,
 - b. Snails - Gastropods
Amphissa columbiana, Fusitriton oregonensis, Lirularia sp.,
Littorina sitkana, L. keenae, Natica clausa, Nucella lamellosa, N.
lima, N. emarginata, Searlesia dira, Tachyrhynchus sp.
 - c. Limpets - Lottia digitalis, L. persona, Tectura fenestrata, T.
persona, T. scutum, Siphonaria thersites
 - e. Bivalves - Clinocardium sp., C. nuttalli, Hiatella arctica, Macoma
balthica, Macoma nasuta, Modiolus modiolus, Mya arenaria
(soft-shell clam), Mytilus californianus, M. edulis,
Pododesmus cepio, Prototheca staminea, Saxidomus giganteus,

YG002-A Biological Summary, continued

12. Echinoderms

- a. Brittle Stars - *Ophiolus aculeatus?*, *Ophiothrix spiculata?*,
Amphipholis?
- b. Sea stars - *Dermasterias imbricata*, *Evasterias truscheli*, *Leptasterias hexactis*, *Pycnopoda helianthoides*
- c. Sea Cucumbers - *Holothurians* - *Eupentacta* sp.
- d. Urchins - *Strongylocentrotus droebachiensis*

13. Bryozoans - *Membranipora* sp., *Microporina borealis*, *Phidolopora pacifica*, *Schizoporella* sp.

14. Ascidians - *Synocium?* sp., *Aplidium?*

15. Fishes

Cottidae

Stichaeidae - *Xiphister atropurpureus*, *X. mucosus*

III. Birds

Eagles - Bald Eagle (3)

Seabirds - Common Loon (1), Marbled Murrelet (2), Red-faced cormorant (4)

Waterfowl - Barrow's Goldeneye (5), Brandt (25), Bufflehead (10), Canada Goose (20), Common Merganser (10), Harlequin Duck (50), Mallard (20), Northern Shoveler (200), Green-winged Teal (100), Green-winged Teal (100)

Gulls/Kittiwakes - Glaucous-winged Gull (10), Black-legged Kittiwake (5),

Shorebirds - Greater Yellowlegs (4), Semi-palmated Plover (1), Short-billed Dowitcher (5), Least Sandpiper (20), Western Sandpiper (100)

Corvids - Raven (1)

Other Species - Peregrine Falcon (1), Tree Swallow (10)

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #	4	DATE/TIME	May 17, 1991 1000 - 1041
SEGMENT #	YG001	TIDAL HEIGHT (Range)	-2.3 => -2.7
SUBDIVISION	A	BIOLOGIST	JIM BARRY
SEA STATE	Calm	WIND SPEED/DIRECTION	Calm, cloudy/rain

COMMENTS / OBSERVATIONS - OILED SUBDIVISIONS

Oiled Site Comments

No oiled sediments were observed on this segment.

General Features of YG001

This segment includes the eastern end of a long wide beach of cobble, pebbles, and sand. An anadromous stream is located on the segment. The beach has fairly distinct vertical zonation, from the storm berm to the dense brown algal beds in the shallow subtidal zone. A characterization of this zonation is presented below.

The major biological features of the beach are 1) the upper zone beach grass and eskimo grass zone, located below the storm berm, 2) the rockweed zone located in the middle zone and often following the contour of several streams entering the beach from the upland, 3) the mussel and clam bed in the middle to low zone, 4) the red and brown algal beds of the low to subtidal zones, and 5) the anadromous stream. Each feature is of some importance to upland species or migrating birds. Bears forage in the intertidal zone (black bear tracks were found) and river and sea otters (3 observed offshore) also forage in the mussels and clam beds. Migratory waterfowl and shorebirds utilize this beach heavily, as indicated by the nearly 800 birds from 25 species that were observed during this survey. The biological importance of the anadromous stream is obvious.

(continued)

WILDLIFE OBSERVATIONS - YG001, YG002, YG003 Completed on all subdivisions

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2	
Seabirds	3	7	
Waterfowl	10	640	
Gulls/Kittiwakes	2	7	
Shorebirds	6	130	
Corvids	1	1	
Other Birds	2	11	
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	3	Black Bear	Tracks
Pinnipeds (specify)			
Sea Lion	1		
Harbor Seal	3		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

Dis. in M R 5/22/91

YG001 Biology Summary, continued

An eagle nest is located at the eastern end of this segment, on a small island/outcrop in the beach. One adult eagle flew from the nest as we approached to within 100m, landing on a nearby tree. Another adult approached from the upland and landed nearby. We left the area immediately.

Intertidal Zonation Pattern on YG001

Biota:	Tide Level	SupraTidal	Upper	Middle	Low	Subtidal
Beach Grass (Elymus)	-+***+ + + -- -					
Eskimo Grass (Honckenya ?)	-+ + - -					
Bare Rock	- - - - -					
Filamentous Green Algae		- - -	-++ ++ ++ ++			
Rockweed (Fucus)		- - + +	** * *	-		
Mussels (Mytilus)			-	---+ + +*****+-- - -		
Clams				-- ---+*****+--		
Barnacles (Balanus)		- - + + + -	- + *	---++ ++ ++		
Bladelike Red Algae				- - ---+***+---+***		
Green Algae (Ulva/other)				- - ---+ - + +*+ +		
Upright Brown Algae (not Fucus)				-- - -+*****		

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

100m - 200m
 200m - 400m
 400m - 600m
 600m - 800m

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #	4	DATE/TIME	May 17, 1991 0656 - 0730
SEGMENT #	YG003	TIDAL HEIGHT (Range)	+7.1 => +5.1
SUBDIVISION	A	BIOLOGIST	JIM BARRY
SEA STATE	Calm	WIND SPEED/DIRECTION	Calm, cloudy/rain

COMMENTS / OBSERVATIONS - OILED SUBDIVISIONS

Oil-Related Comments

A1 Very little oil was found along this subdivision. Small spots of HSOR were found and removed. Sparse littorine snails, black lichen, and a few barnacles were the only biota in the vicinity of the oil.

General Features of YG003

This subdivision is located at the western end of a long wide beach and includes a runoff stream. Small groups of salmonid fishes (ca 3 cm long) were scattered in the mouth of the stream. The beach is composed of cobble, pebble, and sand. The beach has fairly distinct zonation. Beach grass and drift are found in the very high zone and supratidal zone. The runoff stream has dense filamentous green and brown algae covering most rocks. Larger cobble in the middle zone has sparse to moderate cover of Fucus, with patchy, but occasionally dense, mussels and barnacles. Mussels form sparse beds in the middle zone with scattered clams in the sediment. Film-like green algae cover most of the cobble in the middle zone of the beach. Red and brown algae appear common in the low zone, but observations were limited by tidal height.

This beach, and the adjacent segments (YG001, YG002) appear to be important resources for bear, otters, and local and migrating birds. Many species of birds were observed on the segment. Otters were observed in the nearshore. Black bear tracks were present on the beach.

(continued)

WILDLIFE OBSERVATIONS - YG001, YG002, YG003 - Completed on all subdivisions

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	3	
Seabirds	3	7	
Waterfowl	10	640	
Gulls/Kittiwakes	2	7	
Shorebirds	6	130	
Corvids	1	1	
Other Birds	2	11	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	3	Black Bear	Tracks
Pinnipeds (specify)			
Sea Lion	1		
Harbor Seal	3		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

Review M.B. 5/22/91

SEGMENTS YG-001, YG-002 AND YG-003

LEGEND

SNOW

WATER

AREA OF OCCURRENCE OF OIL

BRANCHED CLIFFS

COBBLE/PEBBLE SAND/SHALE

PEBBLE/SAND

SAND/MUD

YALIK GLACIER

MAY 17, 1991

BLACK LICHEN,
SEA BARN, BERING
CRAB, SPARSE LITTORINIDS,
LIMPETS, PARASITES

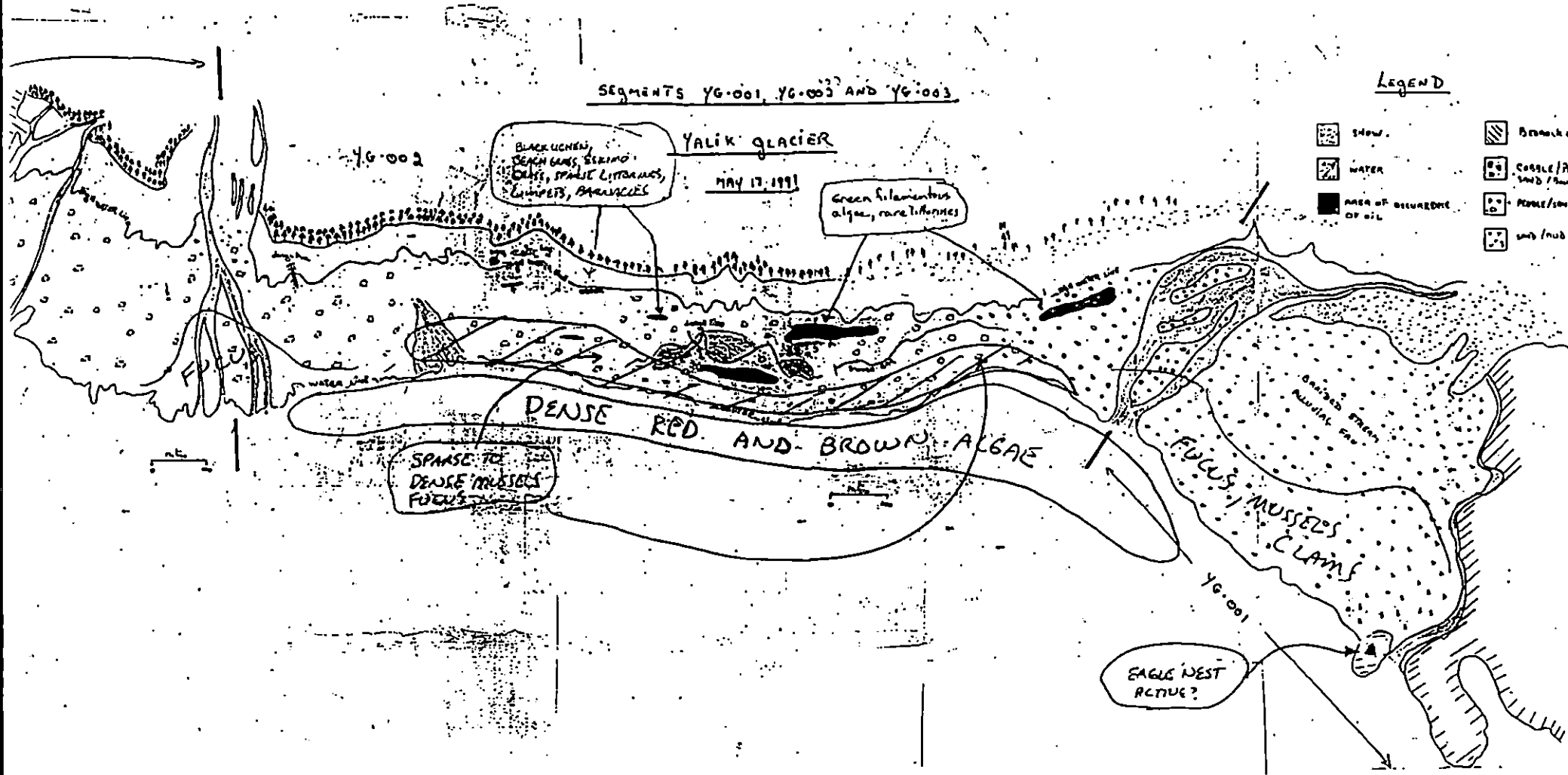
Green filamentous
algae, rare Littorinids

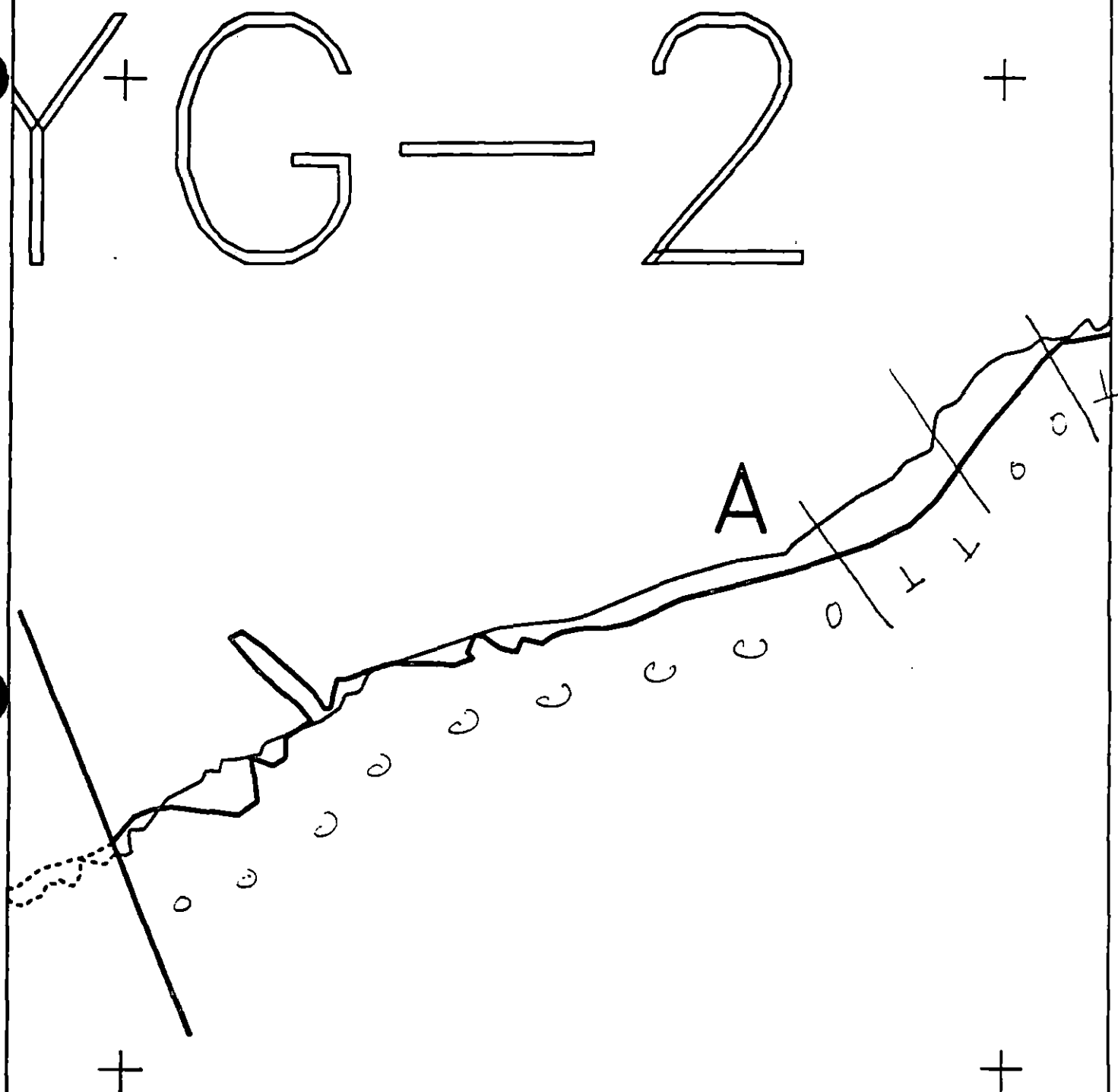
DENSE RED AND BROWN ALGAE

SPARSE TO
DENSE MUSSELS
FOUNDED

FUZZY MUSSELS
CLAMS

EAGLE NEST
ACTIVE?





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

YG002 A

ADEC Subsegment Length: 2170m

METERS

0 200 400

AK State Plane Zone 4
 17900200



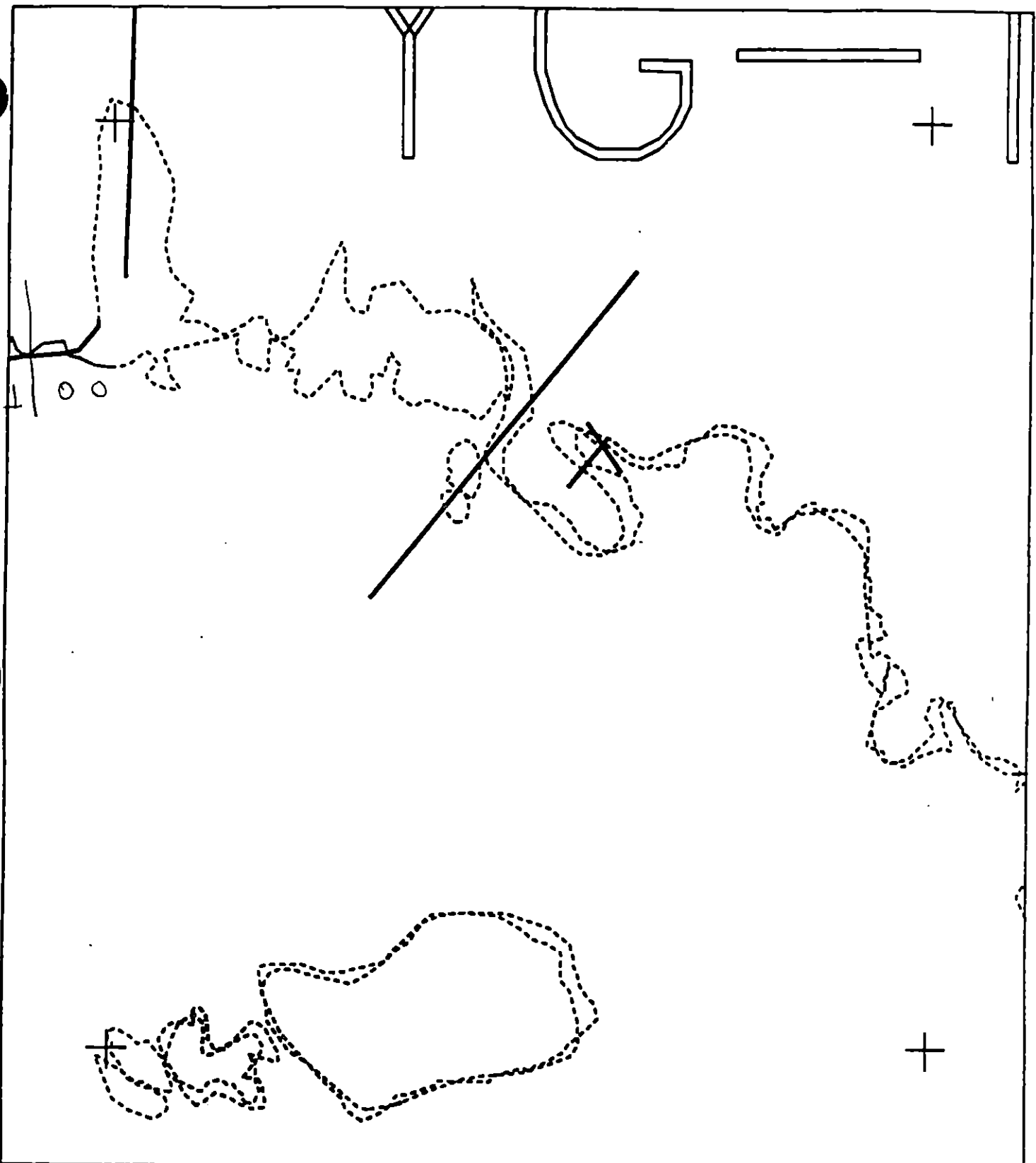
Subdivision Field Map

Map Key: KENY002Aa

Name: Jim EmeryDate: MAY 17/91

Data Entered:

Revised to: MC 5/22/91



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

YB002 A

ADEC Subsegment Length: 2170m

METERS

 AK State Plane Zone 4
 YB002ab

Subdivision Field Map

Map Key: KENYB002Ab

Name: *J. Semple*Date: *MAY 17 1991*

Date Entered:

REVIEWED: MC 5/22/91

1991 MAYSAP EVALUATION

SEGMENT: YG 002 SUB: A REGION: KEN SURVEY DATE: 5/17/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) NONE

ARCHAEOLOGICAL CONSTRAINTS:

1 Consultation and inspection with an Exxon archaeologist is required
1 prior to treatment. Specific on-site monitoring requirements will
 - be determined at that time. PHONE 564-3276; 564-3657; (Anchorage)
 or 229-1514 (24 hrs.) - YAS

Timothy P. Smith for SHPO 6/03/91

RECOMMENDATIONS:

	INITIAL	TAG	FOSC
TREATMENT REQUIRED (Y or N)	<u>N</u>	<u>Y</u>	<u>Y</u>
Manual Pickup (Check as Req.)	<u>_____</u>	<u>X</u>	<u>X</u>
Spot Washing	<u>_____</u>	<u>_____</u>	<u>_____</u>
Bio-Customblen Only	<u>_____</u>	<u>_____</u>	<u>_____</u>
Bio-Inipol/Customblen	<u>_____</u>	<u>_____</u>	<u>_____</u>
Other	<u>_____</u>	<u>_____</u>	<u>_____</u>
Other	<u>_____</u>	<u>_____</u>	<u>_____</u>

COMMENTS:

INITIAL: _____

TAG: MANUAL P/U OF AP AT LOCATIONS A1 + A3

FOSC: _____

TAG APPROVAL DATE: MAY 31 1991

FOSC APPROVAL DATE: 6/5/91

ADEC *John Bane*

FOSC *E. E. Page*

EXXON *Beal*

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

USCG *Ed Mall*

NOAA *Gary Phillips*

PAGE 2 OF 16

DATE MAY 17 / 191

EST. OIL CATEGORY LENGTH: W m M m N m VL 370 m NO 1800 m US m

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

revised 5.22.09

TEAM NO. L1 SEGMENT 46.009 SUBDIVISION A DATE May 17 /91

ADEC

NAME

Clara S. Crosby

SIGNATURE

Clara S. Crosby☐ NTRTreatment recommended

Manual removal of AP - using Promex's & Shovel.
Surface asphalt/tar is accessible & easily removed.
Survey crew attempted to recover AP throughout seg.
but the amt was too great for time allotted. Areas
picked up were satisfactory - on SW end.

EXXON

NAME

George P. Stiles

SIGNATURE

George P. Stiles 5/17/91☐ NTR

Very weathered AP was found on this long wide
beach segment with no subsurface oiling. The survey
crew picked up 41 bags from the western end of the
segment. Pickup was discontinued due to the
amount still remaining.

LANDMANAGER

NAME

Teff Johnson

OF

ADNR

SIGNATURE

[Signature]☐ NTR☒ TR!

Agree with comments of DEC + Exxon. Manual pickup would
be very beneficial. Segment is within Kachemak Bay State Park,
and removal would be effective at reducing visual impact.

USCG/NOAA

NAME

McMahon/McDonald

SIGNATURE

[Signature]☐ NTR

Recommend manual treatment only from the point marked
by tree. Going right on the O's map ~~marked~~ LEFT of the lg tree
was picked up by VECO crew. There is AP mainly as
indicated by O's.

[Signature]

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #	4	DATE/TIME	May 17, 1991 0656 - 0730
SEGMENT #	YG003	TIDAL HEIGHT (Range)	+7.1 => +5.1
SUBDIVISION	A	BIOLOGIST	JIM BARRY
SEA STATE	Calm	WIND SPEED/DIRECTION	Calm, cloudy/rain

COMMENTS / OBSERVATIONS - OILED SUBDIVISIONS

Oil-Related Comments

A1 Very little oil was found along this subdivision. Small spots of HSOR were found and removed. Sparse littorine snails, black lichen, and a few barnacles were the only biota in the vicinity of the oil.

General Features of YG003

This subdivision is located at the western end of a long wide beach and includes a runoff stream. Small groups of salmonid fishes (ca 3 cm long) were scattered in the mouth of the stream. The beach is composed of cobble, pebble, and sand. The beach has fairly distinct zonation. Beach grass and drift are found in the very high zone and supratidal zone. The runoff stream has dense filamentous green and brown algae covering most rocks. Larger cobble in the middle zone has sparse to moderate cover of Fucus, with patchy, but occasionally dense, mussels and barnacles. Mussels form sparse beds in the middle zone with scattered clams in the sediment. Film-like green algae cover most of the cobble in the middle zone of the beach. Red and brown algae appear common in the low zone, but observations were limited by tidal height.

This beach, and the adjacent segments (YG001, YG002) appear to be important resources for bear, otters, and local and migrating birds. Many species of birds were observed on the segment. Otters were observed in the nearshore. Black bear tracks were present on the beach.

(continued)

WILDLIFE OBSERVATIONS - YG001, YG002, YG003 - Completed on all subdivisions

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	3	
Seabirds	3	7	
Waterfowl	10	640	
Gulls/Kittiwakes	2	7	
Shorebirds	6	130	
Corvids	1	1	
Other Birds	2	11	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	3	Black Bear	Tracks
Pinnipeds (specify)			
Sea Lion	1		
Harbor Seal	3		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/22/91

YG001 Biology Summary, continued

An eagle nest is located at the eastern end of this segment, on a small island/outcrop in the beach. One adult eagle flew from the nest as we approached to within 100m, landing on a nearby tree. Another adult approached from the upland and landed nearby. We left the area immediately.

Intertidal Zonation Pattern on YG001

Biotas	Tide Level	SupraTidal	Upper	Middle	Low	Subtidal
Beach Grass (Elymus)		-+****+ + + -- -				
Eskimo Grass (Honckenya ?)		-+ + - -				
Bare Rock		- - - - -				
Filamentous Green Algae			- - -	-++ ++ ++ ++		
Rockweed (Fucus)			- - + +	** * *		
Mussels (Mytilus)				- --+ + +*****+-- - -		
Clams					-- ----++++*****+-	
Barnacles (Balanus)			- - + + + - - + *	-++ ++ ++		
Bladelike Red Algae					- - ----++*+--+++**	
Green Algae (Ulva/other)					- - --+- -+ +*-+ +	
Upright Brown Algae (not Fucus)					-- - -++++*****	

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

Molluscs -
 Annelids - Polychaeta
 Crustacea - Amphipoda
 Echinodermata - Echinoidea
 Chordata - Cephalopoda

YG003 Biological Summary, continued

Intertidal Zonation Pattern on YG003

Biota:	Tide Level	SupraTidal	Upper	Middle	Low	Subtidal
il (AP)						
Beach Drift Line		-+*+-	-			
Beach Grass (Elymus)		-+****+ + +	--			
Eskimo Grass (Honckenya ?)		-+ + -	-			
Black Lichen		-	-	-	-	
Bare Rock		-	-	-	-	-
Filamentous Green Algae			-	-	++ ++ ++ ++	
Rockweed (Fucus)			-	-	++ ++ ++	-
Mussels (Mytilus)				-	++ + +*****+--	-
Clams						++ ++ --
Barnacles (Balanus)			-	-	++ ++ ++	++ ++
Bladelike Red Algae					++ ++ ++	++ ++ ++
Green Algae (Ulva/other)					++ ++ ++	++ ++ ++
Upright Brown Algae (not Fucus)					++ ++ ++	++ ++ ++

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

Platyhelminths - Flatworms
 Annelids - Ribbon Worms
 Polychaete Worms
 Crustaceans
 Mollusks

Segment

SEGMENTS YG-001, YG-002 AND YG-003

YALIK GLACIER

MAY 17, 1991

YG-002

A3

AP, 10x120, <<1%
Few patches ranging
from 10 cm to 3 m
continuous AP.

AP, 2x30, <1%
< 30 um, P.U.
a few 1 m²

AP, 2x3, 60%, P.U.
AP, 2x12, 5%, P.U.

AP, 1x20, <1%
< 30 um dia
P.U.

AP, 1x30, <1%
< 1 um dia
P.U.

ANTICLOCKWISE
PANOANA
MAY 20-4-5-12-11

AP, 1x20, <1%
< 1 um dia
P.U.

AP, 10x120, <<1%
range from <10 cm
to 3 m² continuous
pavement, many
patches.

AP, 10x120, <<1%
range from <10 cm
to about 1 m²
many small patches.

0 100
meters

Revised: AC 5/21/91
revised 5-21-91

Segment
boundary

← YG-003

YG-001 →

boundary



segment

YG-002

YG-003

boundary

HIGH WATER LINE

4 AP/MS
L 30 cm

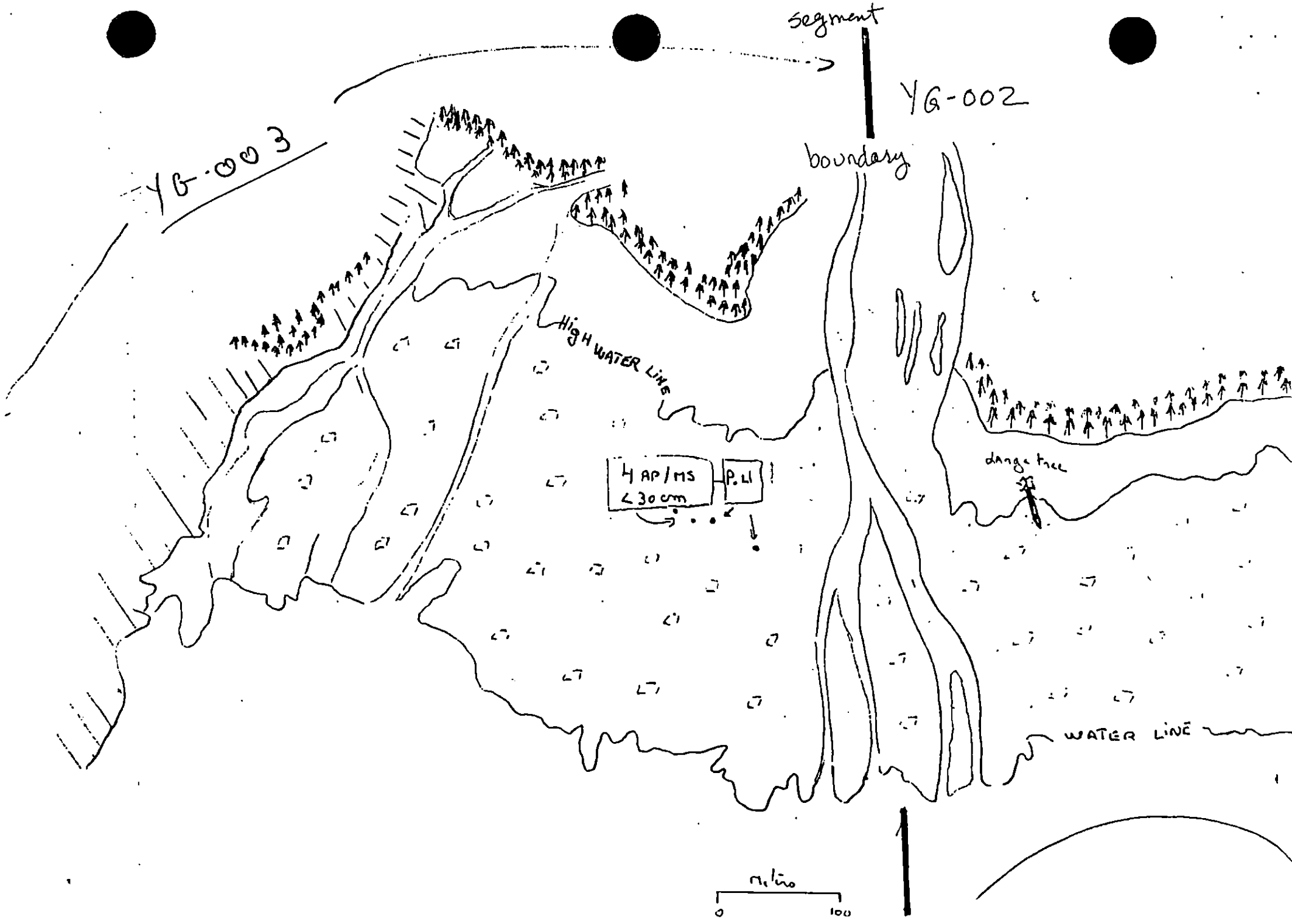
P. LI

dange tree

WATER LINE

miles

0 100



YG-001

LEGEND



SNOW



WATER



AREA OF OCCURRENCE
OF OIL



BEDROCK CLIFFS



COBBLE/PEBBLE
SAND/BOULDER



PEBBLE/SAND



SAND/MUD

BRAIDED STREAM
ALLUVIAL FAN

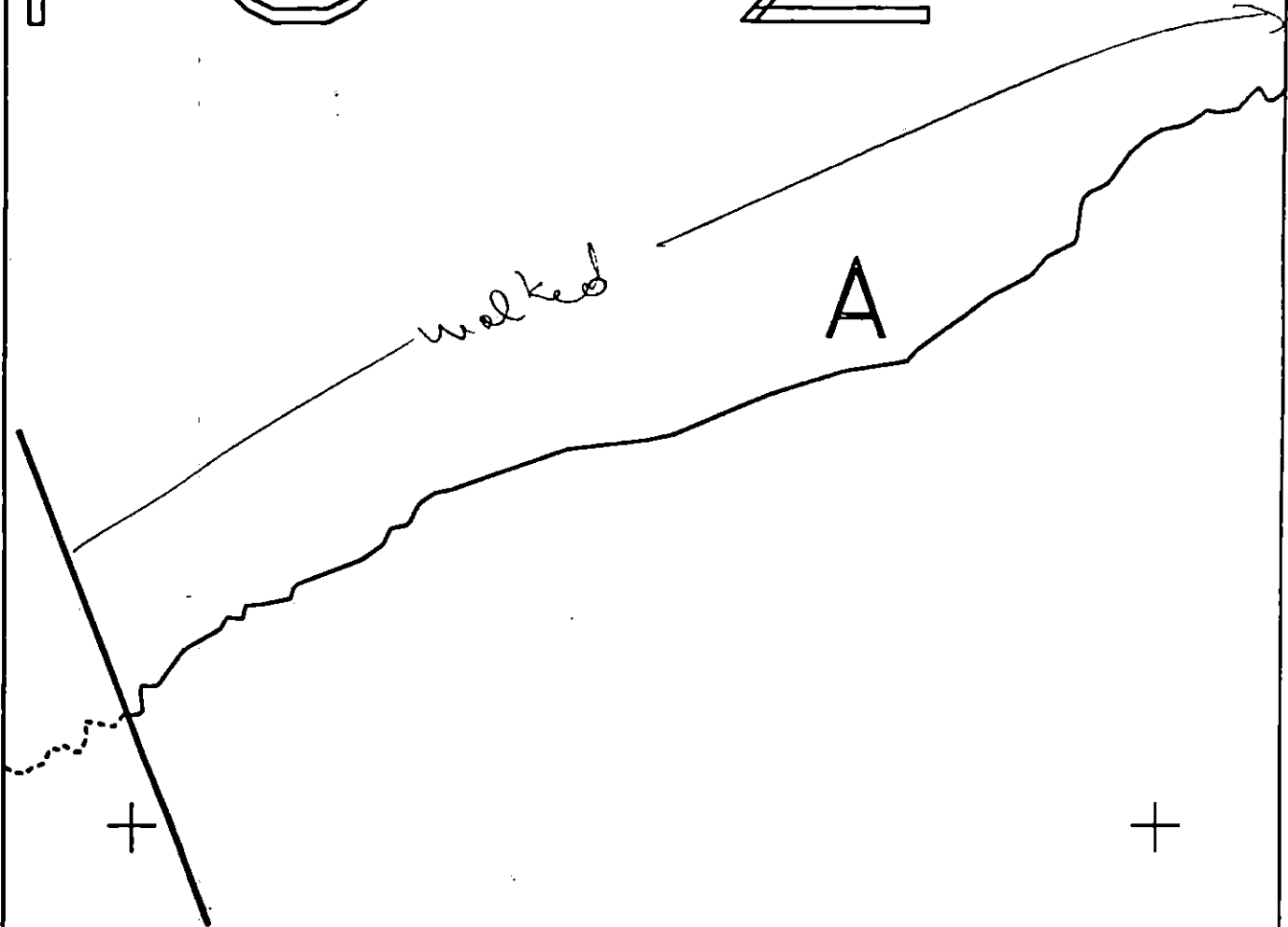
YG-001

YG-002

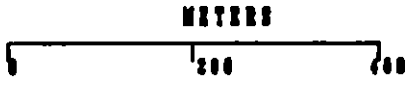
City reviewed S.21

Location Map

YG-2



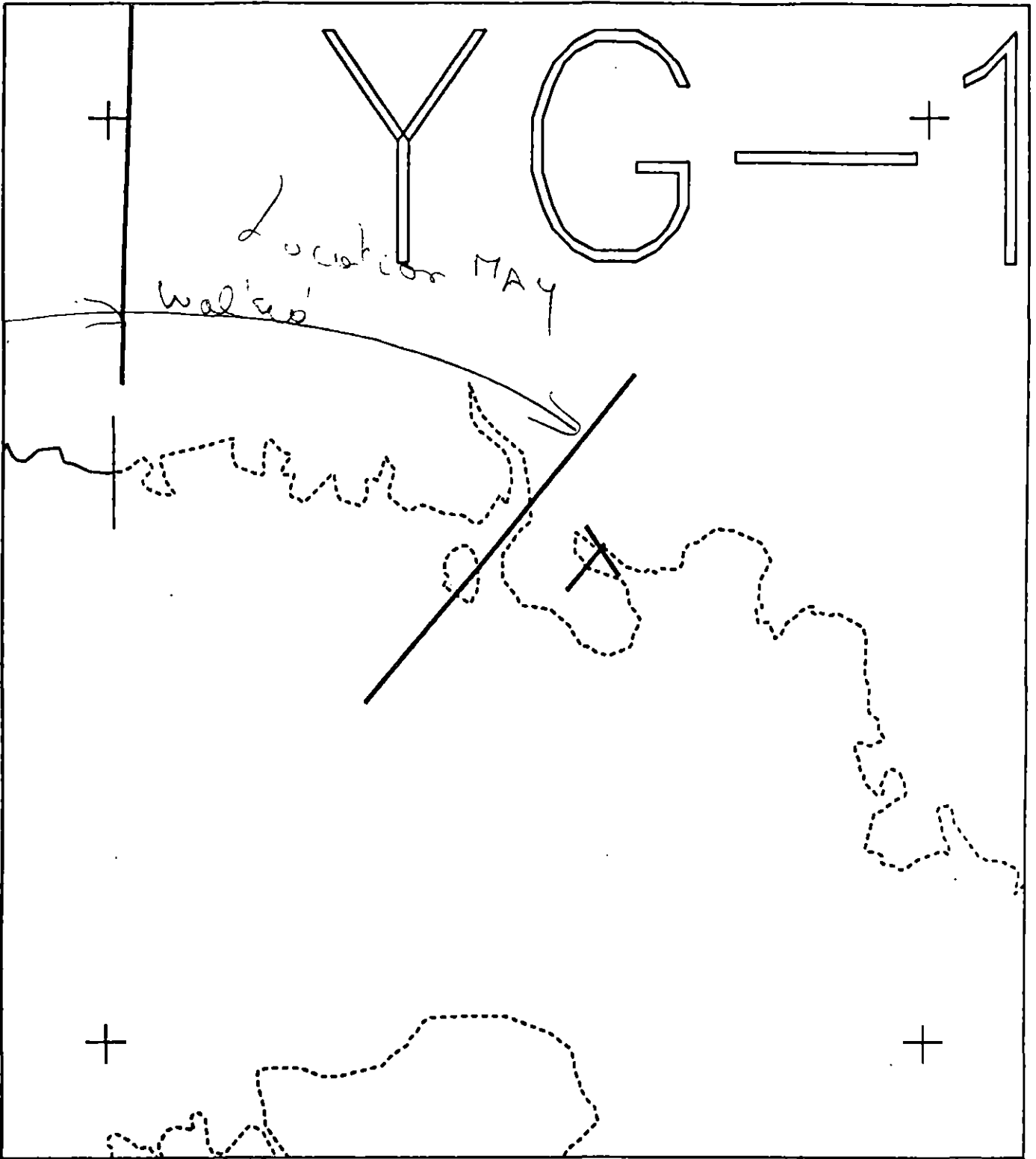
YG002 A



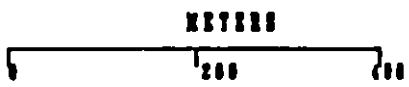
AG State Plane Zone 6
87900200

Subdivision Field Map
Map Key: KENY002Aa
Name: J. M. Sample
Date: MAY 17/91

reviewed 5.21.94



YG002 A



AK State Plane Zone 4
879002ab

Subdivision Field Map
Map Key: KENYG002Ab
Name: Jim Sample
Date: May 17/9

reviewed 5.21.94

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE/TIME May 17, 1991 0730 - 1000
SEGMENT # YG002 TIDAL HEIGHT (Range) 5.1 => -2.3
SUBDIVISION A BIOLOGIST JIM BARRY
SEA STATE Calm WIND SPEED/DIRECTION Calm, cloudy/rain

COMMENTS / OBSERVATIONS - OILED SUBDIVISIONS

Oiled Site Comments

A1 Oil at this region is confined to the upper intertidal zone where patches of asphalt or HSOR are present in the beach cobble and pebbles. In some areas, filamentous green algae, small patches of black lichen, littorine snails and oligochaete worms are the most common organisms at the location and are often on or very near the oiled sediments. A few mussels and barnacles also are found near the oiled (and unoiled) sediments, but are quite rare at this tidal level.

Oil (AP patches) found along the eastern portion of the segment often had little biota in the vicinity of the oil, other than filamentous green algae and a few littorine snails. The lack of littorine snails may be due to natural variation and patchiness of the beach fauna, or may have been related to the removal of the surface sediments during clean up activities last year. Littorine snails graze filamentous algae from the cobble, and under the present low densities, growth by green algae appear to have covered the cobble. These grazers are generally able to recover rapidly from such disturbances. Scattered individuals are now present in the cobble and should soon increase in numbers.

No other biota are found near (within 10 m) of the oiled sediments. Beach grass and eskimo grass are found in clumps to dense stands in the higher and supratidal zone. Lower on the beach, barnacles, Fucus, red and brown algae, and mussels are densely abundant in distinct patches (see zonation below). No oiled sediments were found in the vicinity of these assemblages.

(continued)

WILDLIFE OBSERVATIONS - Completed on all subdivisions

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	3	
Seabirds	3	7	
Waterfowl	10	640	
Gulls/Kittiwakes	2	7	
Shorebirds	6	130	
Corvids	1	1	
Other Birds	2	11	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	3	Black Bear	Tracks
Pinnipeds (specify)			
Sea Lion	1		
Harbor Seal	3		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

REVIEWED: M. 5/22/91
REVIEWED M.B. 5/22/91

YG002 Biology Summary, continued

Manual removal of some (most?) AP was performed during the survey. Additional removal will not harm the biota at this beach, unless the low zone mussel and clam beds are disturbed. These beds are a considerable distance from the oiled site and should not interfere with potential cleanup.

General Features of YG002-A

This subdivision encompasses a long wide beach of cobble, pebble, and sand, with several small streams. The beach previously had extensive asphalt pavement, of which most have been removed.

The beach has fairly distinct vertical zonation, from the drift logs in the storm berm to the dense brown algal beds in the shallow subtidal zone. A characterization of this zonation is presented below.

The major biological features of the beach are 1) the upper zone beach grass and eskimo grass zone, located below the storm berm, 2) the rockweed zone located in the middle zone and often following the contour of several streams entering the beach from the upland, 3) the mussel and clam bed in the middle to low zone, and 4) the red and brown algal beds of the low to subtidal zones. Each zone may be of importance to upland species or migrating birds. Bears forage in the intertidal zone (black bear tracks were found) and river and sea otters (3 observed offshore) also forage in the mussels and clam beds. Migratory waterfowl and shorebirds utilize this beach heavily, as indicated by the nearly 800 birds from 25 species that were observed during this survey. One or more streams are anadromous streams.

Intertidal Zonation Pattern on YG002

Biota:	Tide Level	SupraTidal	Upper	Middle	Low	Subtidal
Oil (AP)			- - -			
Beach Drift Line		-+*+-	-			
Beach Grass (Elymus)		-+****+	+ +	--	-	
Eskimo Grass (Honckenya ?)		-+ +	-			
Black Lichen		-	-	-	-	
Bare Rock		-	-	-	-	-
Filamentous Green Algae			-	-	-	+++ ++ ++ ++
Rockweed (Fucus)			-	-	++	*+ *+ *
Mussels (Mytilus)				-	---+ +	*****+-- - -
Clams						--- *** - -
Barnacles (Balanus)			-	-	++ +	- + *---++ ++ ++
Bladelike Red Algae					-	- - -++**+-+---**
Green Algae (Ulva/other)					-	- - -++- -+ *-- +
Upright Brown Algae (not Fucus)					-	- - -++*****

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

Reviewed M.B. 5/22/91

Y6002-A Biological Summary, continued

Common Species on Y6002

I. Marine Plants

1. Diatoms, Blue Greens
2. Green Algae - Chlorophyta
Enteromorpha sp., Ulva sp., Urospora sp.
3. Brown Algae - Phaeophyta
Alaria marginata, Agarum fimbriatum, Costaria costata, Ectocarpus spp.,
Fucus distichus, Hildenbrandia sp., Laminaria groenlandica, L.
saccharina,
4. Red Algae - Rhodophyta
Endocladia muricata, Iridaea sp., Lithothamnion sp., Membranoptera
dimorpha, Odonthalia floccosa, Palmaria palmata, Petrocelis sp.,
Porphyra sp.
5. Higher Plants - Leymus mollis (beach rye grass), Eskimos Grass (Honckenya
sp.?)

II. Marine Animals

1. Sponges - Porifera
2. Anemones - Anthopleura artemesia, Epiactis ritteri
3. Hydroids - Sertulariidae, Aglaophenia sp., Abietinaria sp.
5. Flatworms - Platyhelminthes - Polyclads
6. Nemertean Worms - Ribbon Worms - Emplectonema gracile
8. Polychaete Worms
Glyceridae
Nepthyidae
Nereidae - Nereis spp.
Serpulidae - Serpula sp., Crucigera sp., Eudistylia polymorpha
Spirorbidae - Spirorbis sp.
9. Peanut worms - Sipunculids - Phascolosoma agassizii
10. Crustaceans
 - a. Amphipods - Orchestia sp.?
 - b. Barnacles - Balanus glandula, Chthamalus dalli, Semibalanus cariosus
 - c. Crabs - Acantholithodes hispidus, Haplogaster sp., Hemigrapsus
oregonensis, Paguridae (hermit crabs), Oregonia gracilis,
Pugettia sp.,
 - d. Isopods - Cirdana harfordi, Idotea wosnesenskii, Gnorimorsphaeroma
oregonensis
11. Mollusca
 - a. Chitons - Mopalia sp., M. mucosa, Katharina tunicata, Tonicella
lineata,
 - b. Snails - Gastropods
Amphissa columbiana, Fusitriton oregonensis, Littoraria sp.,
Littorina sitkana, L. keenae, Natica clausa, Nucella lamellosa, N.
lima, N. emarginata, Searlesia dira, Tachyrhynchus sp.
 - c. Limpets - Lottia digitalis, L. persona, Tectura fenestrata, T.
persona, T. scutum, Siphonaria thersites
 - e. Bivalves - Clinocardium sp., C. nuttalli, Hiatella arctica, Macoma
balthica, Macoma nasuta, Modiolus modiolus, Mya arenaria
(soft-shell clam), Mytilus californianus, M. edulis,
Pododesmus cepio, Prototheca staminea, Saxidomus giganteus,

Reviewed M.B. 5/22/91

YG002-A Biological Summary, continued

12. Echinoderms
 - a. Brittle Stars - *Ophiolus aculeatus?*, *Ophiothrix spiculata?*,
Amphipholis?
 - b. Sea stars - *Dermasterias imbricata*, *Evasterias truscheli*, *Leptasterias*
hexactis, *Pycnopoda helianthoides*
 - c. Sea Cucumbers - *Holothurians* - *Eupentacta* sp.
 - d. Urchins - *Strongylocentrotus droebachiensis*
13. Bryozoans - *Membranipora* sp., *Microporina borealis*, *Phidolopora*
pacifica, *Schizoporella* sp.
14. Ascidians - *Synocium?* sp., *Aplidium?*
15. Fishes
 - Cottidae
 - Stichaeidae - *Xiphister atropurpureus*, *X. mucosus*

III. Birds

- Eagles - Bald Eagle (3)
- Seabirds - Common Loon (1), Marbled Murrelet (2), Red-faced
 cormorant (4)
- Waterfowl - Barrow's Goldeneye (5), Brandt (25), Bufflehead (10),
 Canada Goose (20), Common Merganser (10), Harlequin
 Duck (50), Mallard (20), Northern Shoveler (200,
 Green-winged Teal (100), Green-winged Teal (100)
- Gulls/Kittiwakes - Glaucous-winged Gull (10), Black-legged Kittiwake (5),
- Shorebirds - Greater Yellowlegs (4), Semi-palmated Plover (1),
 Short-billed Dowitcher (5), Least Sandpiper (20),
 Western Sandpiper (100)
- Corvids - Raven (1)
- Other Species - Peregrine Falcon (1), Tree Swallow (10)

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #	4	DATE/TIME	May 17, 1991 1000 - 1041
SEGMENT #	YG001	TIDAL HEIGHT (Range)	-2.3 => -2.7
SUBDIVISION	A	BIOLOGIST	JIM BARRY
SEA STATE	Calm	WIND SPEED/DIRECTION	Calm, cloudy/rain

COMMENTS / OBSERVATIONS - OILED SUBDIVISIONS

Oiled Site Comments

No oiled sediments were observed on this segment.

General Features of YG001

This segment includes the eastern end of a long wide beach of cobble, pebbles, and sand. An anadromous stream is located on the segment. The beach has fairly distinct vertical zonation, from the storm berm to the dense brown algal beds in the shallow subtidal zone. A characterization of this zonation is presented below.

The major biological features of the beach are 1) the upper zone beach grass and eskimo grass zone, located below the storm berm, 2) the rockweed zone located in the middle zone and often following the contour of several streams entering the beach from the upland, 3) the mussel and clam bed in the middle to low zone, 4) the red and brown algal beds of the low to subtidal zones, and 5) the anadromous stream. Each feature is of some importance to upland species or migrating birds. Bears forage in the intertidal zone (black bear tracks were found) and river and sea otters (3 observed offshore) also forage in the mussels and clam beds. Migratory waterfowl and shorebirds utilize this beach heavily, as indicated by the nearly 800 birds from 25 species that were observed during this survey. The biological importance of the anadromous stream is obvious.

(continued)

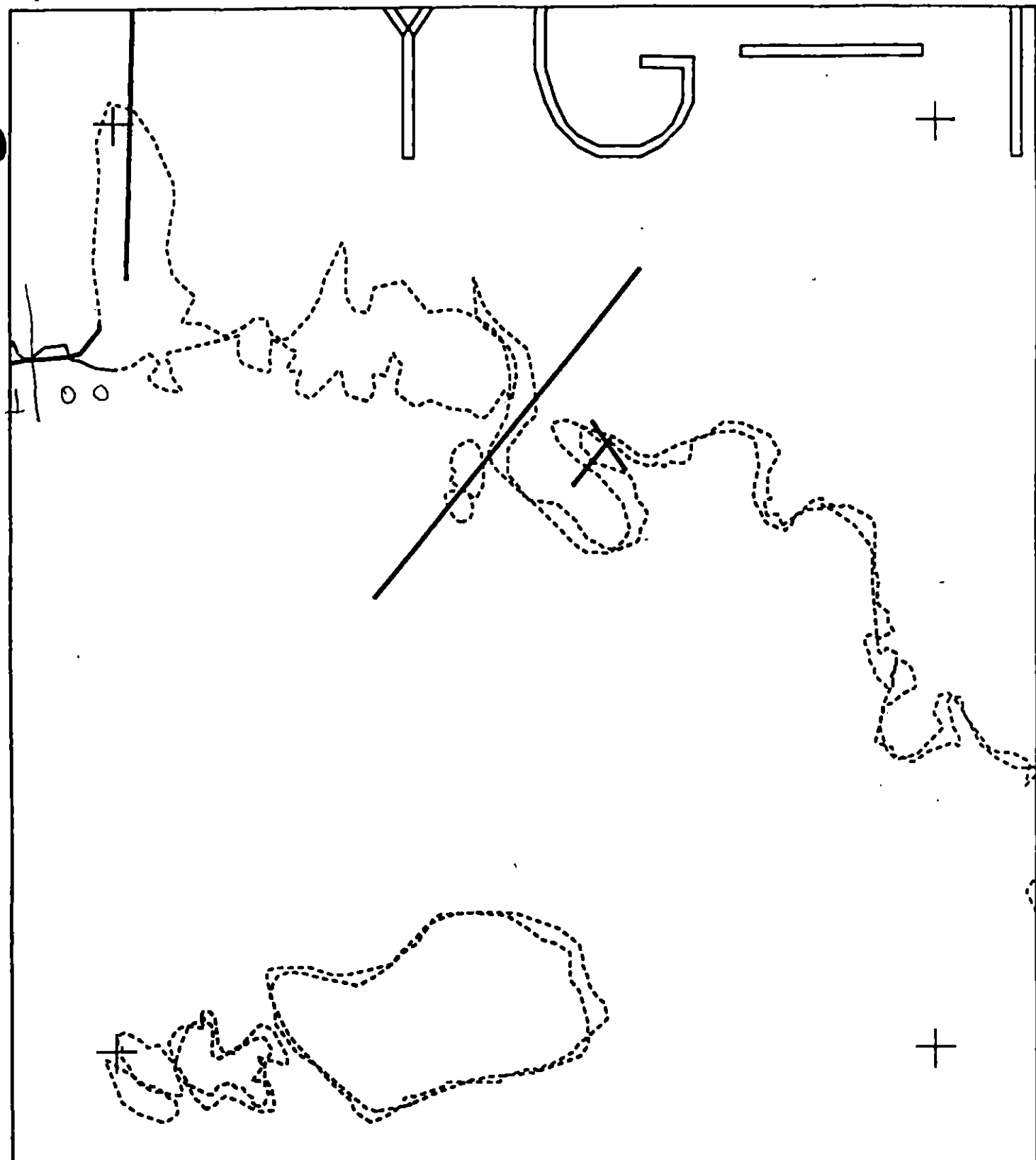
WILDLIFE OBSERVATIONS - YG001, YG002, YG003 Completed on all subdivisions

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2	
Seabirds	3	7	
Waterfowl	10	640	
Gulls/Kittiwakes	2	7	
Shorebirds	6	130	
Corvids	1	1	
Other Birds	2	11	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	3	Black Bear	Tracks
Pinnipeds (specify)			
Sea Lion	1		
Harbor Seal	3		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/22/91



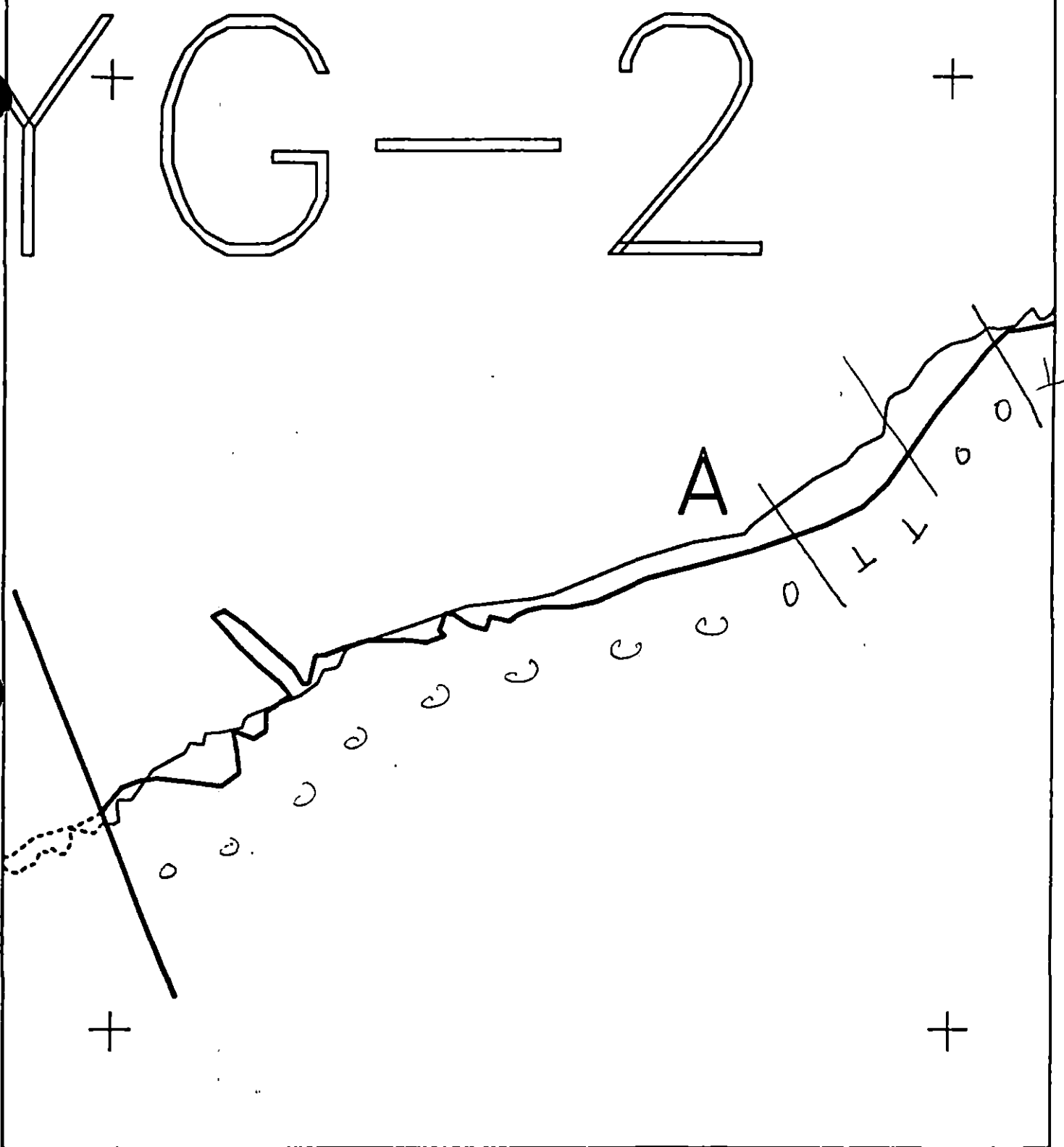
XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

YG002 A
 ADEC Subsegment Length: 2170m
 METERS
 0 200 400
 AK State Plane Zone 4
 87800206



Subdivision Field Map
 Map Key: KENYG002Ab
 Name: M. Semple
 Date: MAY 17/91
 Date Entered:

REVIEWED: MG 5/22/91



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

YG002 A
ADEC Subsegment Length: 2170m
METERS
0 200 400
AK State Plane Zone 4
ay902aa

Subdivision Field Map
Map Key: KENYG002Aa
Name: JM Sempie
Date: MAY 17/91
Date Entered:
EXON

Revised by: MC 5/22/91

ASAP TAG REVIEW SHEET

Segment: YG 02 Subd: A Site: 1

Date
PRE-Review 14 AUG 90

Priority For Addressing In 1990

 HIGH

 MEDIUM

 LOW

 NTR

X None

Treatment
Recommended:

NTR

Sporadic - BOR
- ASPHALT

MATRIX CALL FOR NTR

NOTE: - 40-50 BAGS OF WASTE?

Priority Site For Reassessment In 1991

YES X NO
CG

YES X NO
ADEC

YES X NO
EXXON

YES X NO
LAND MGR

TAB 15 AUG 90

NTR

ASAP

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT Y4-02 SUBDIVISION A DATED 8/1/90.MODIFICATION CLASS I ✓ CLASS II CLASS III

1. REASON FOR MODIFICATION

Scattered Asphalt Pavement, to approximately 6cm, Remains over an area approximately 200m x 500m. An estimated 40-60 bags of oiled sediments can be removed, and is on the surface. The asphalt is now readily available and can be removed as per the original TAG work order.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

A crew should manually remove soft asphalt along the entire length of the segment to complete treatment. This does not represent an adjustment to the existing TAG work order, but simply addresses remaining work to be done.

3. TIMING ISSUES

Work should be completed prior to Sept 15, 1990.

ADEC

John R. Reed

EXXON

Keith Miller

→ Reasses Spring 1991

USCG

AEC Vandenberg

I concur but would only schedule this work if a crew was in the area & could not work another segment.
(If field rep is on scene)

LAND MANAGER

[Signature]

Yaluk Glacier Beach
FIELD SHORELINE COMMENT SHEET

SEGMENT AS/YG02- SUBDIVISION: A SITE: 1 DATE 08/01/90

SCG

NAME AEC Vandepels SIGNATURE AEC Vandepels

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Some tar mats were found on eastern half of beach ranging in size up to 1x2 ft. These could be picked up. I recommend waiting for further work until after winter storms and reassess in 1991.

ADEC

NAME JOHN R. REED SIGNATURE John R. Reed

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: This is an area where extensive mechanical cleanup was done. After cleanup some scattered tar mats still remain. These tar mats are concentrated on east and west ends. Some surface R and CT also remain on cobble and pebbles. An estimated 40-50 bags could be removed this year. 1990.

LAND MANAGER

NAME David K. Kenagy SIGNATURE DKK ADNR

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: See attached.

EXXON

NAME Keith Miles SIGNATURE Keith Miles

☒ YES

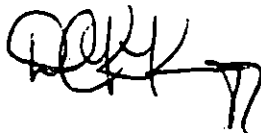
☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Mechanical methods on this segment appeared to be quite successful, though a few tar mats remain on the eastern end of the impacted area. I feel any further work in 1990 would not be environmentally advantageous.

- Land Manager Comments

- David Kenagy, ADNR



8/01/90

Reason: Observed tarballs remaining after effort with mechanical equipment ended. Tarballs vary in size from several centimeters to several meters in diameter, over an area approximately 20m x 55m. Though classified as largely VL by the O4, an estimated 40-60 bags of asphalt could be removed, and are on the surface. The remaining asphalt is oil sediment which Exxon was directed to remove as per the original 1990 work order; some work, obviously, remains to be done. In addition, a depression remains where a cobble "armor" layer was removed prior to mechanical work. Exxon agreed to smooth the area with a tined "scraper" prior to equipment demobilization. This was completed on the western portion of the work area. However, on the far eastern portion of the subdivision, beginning where small dead standing trees are located, a depression approximately 30m in length remains. The cobble armor layer is absent and a fine to coarse sand layer is exposed. ADNR would like the remaining tarballs to be removed to complete the original work order and the exposed fine sediments covered with cobble. This beach is within the Kachemak Bay State Wilderness Park. Mechanical equipment removed the majority of the tarball, but sufficient tarballs remain to warrant additional removal. An addendum for this subdivision (Class 1) would serve to complete work originally prescribed by the TA4. Even after additional work is done this summer, oiled sediments will no doubt remain. Therefore, this subdivision should be reassessed during the Spring 1991 survey.

ASAP SHORELINE OILING SUMMARY

TEAM NO. 4 EXXON Keith Miles SEGMENT AS. YG-02
 OG Rich Marty US CG AEC Vandepols SUBDIVISION A
 ADEC Randy Reed LAND REP Dave Kenagy TOTAL NO. SITES 1
 DATE 08/01/90 TIME 06:00 to 07:00 TIDE LEVEL +2.5' to +4.0'
 TOTAL EST LENGTH OF SHORELINE SURVEYED: 375 m
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☒ Fog ☒ Rain ☐ Snow
 CATEGORY LENGTH: W — m M — m N — m VL 375 m NO — m US 266 m

SURFACE OIL

SITE 1

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT				X	X	X		
S.O.R.				X	X	X		
POOLED								
COVER								
COAT				X	X	X		
STAIN				X	X	X		
MOUSSE								
PATTIES/T.B.								
FILM								
NO OIL					X			X
EST. SITE LENGTH					<u>375m</u>			

SITE 2

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

SITE 3

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

SURFACE OIL

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

Photographs:

Roll No. —

Frames None

COMMENTS Area is not a candidate for Subsurface oiling. The change at this site is remarkable. Cleaning was the most thorough seen by the OG to date. Some scattered, probably recoverable, patches of AP & SOR remain, but overall the oiling is very light.

DATE 11/28/90

CHECKLIST

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

LEGEND

1

PM - No Subsurface Oil

2 ▲

PH - Subsurface Oil

CT/C

Continuous Distribution

CT/D

Broken Distributions

CT/P

Patchy Distribution

CT/3

Splashed Distributors

eee.
Old Vegetation

Photo location, direction,
and number

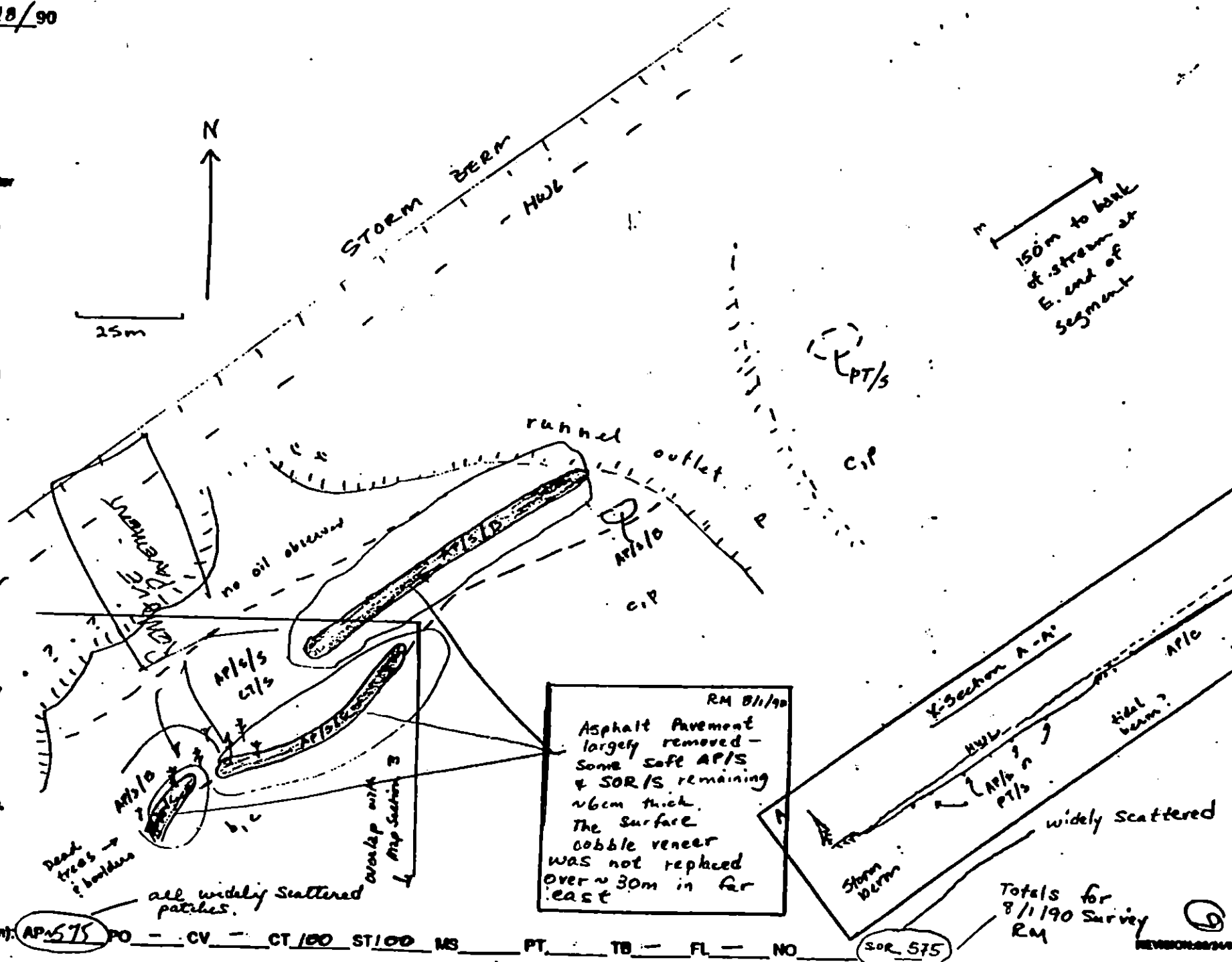
04.Character Length (m): AP-575 PO - CV - CT 100 ST 100 MS PT TB FL NO

SOR 575

Totals for
8/1/90 Survey
RM

REVISION: 2014

SKETCH MAP
MAP 4



DATE 4 1 25 90

CHECKLIST

- ✓ W Area
- ✓ Approx. Size
- ✓ Seq/Sub Entry
- ✓ OR (DL)
- Width
- Length
- % Cover
- Substrate Character
- ✓ Est. HUR/AUR
- SSL
- Profile Location(s)
- Profile(s)
- FW Location(s)
- Photo Location(s)

LEGEND

- FD-302 (Rev. 11-27-70)

- FI-Subsurface CM**

CASE

Commercial Distribution



Uniform Distribution

СТ/Р

Patchy Distribution

CTA

Splashed Discharge

Other Vegetation

**Photo location, direction,
and number**

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

References

SEGMENT ST/ 15.2.2

SUBDIVIS A

DATE 4/29/90

CHECKLIST

- ☒ 30 Areas
- ☒ Approx. Shape
- ☒ Size/Shape Ratio
- ☒ C/D Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HVL/LVL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Photo Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ

Fl - No Substrate On

2 Δ

Fl - Substrate On

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Spotted Distribution

Old Vegetation

Photo location, direction, and number

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

SKETCH MAP
MAP 2

25 50m

Overlap Map 1

Q. nelp

Q. nelp

Q. nelp

Q. nelp

BERM

General limit of PT AP piece

large downed tree

AP/IS

overlap with 1

Photo 5/5 of PT

PT RM
AP largely removed
Some AP/IS & SOL/IS
remaining. The cobble
veneer was carefully
reestablished following
work. AP & SOL appear
somewhat more
concentrated than on
the central beach

Remove
Remove

Remove
Remove
Remove

13.000

REVISION 102

CHECKLIST

- ☒ H Area
- ☒ Approx. Scale
- ☒ Seg/Sub Strategy
- ☒ CG Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HWA/LWL
- ☒ SSI
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pit Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ
PT - No Subsurface CG

2 Δ
PT - Subsurface CG

CT/C
Continuous Distribution

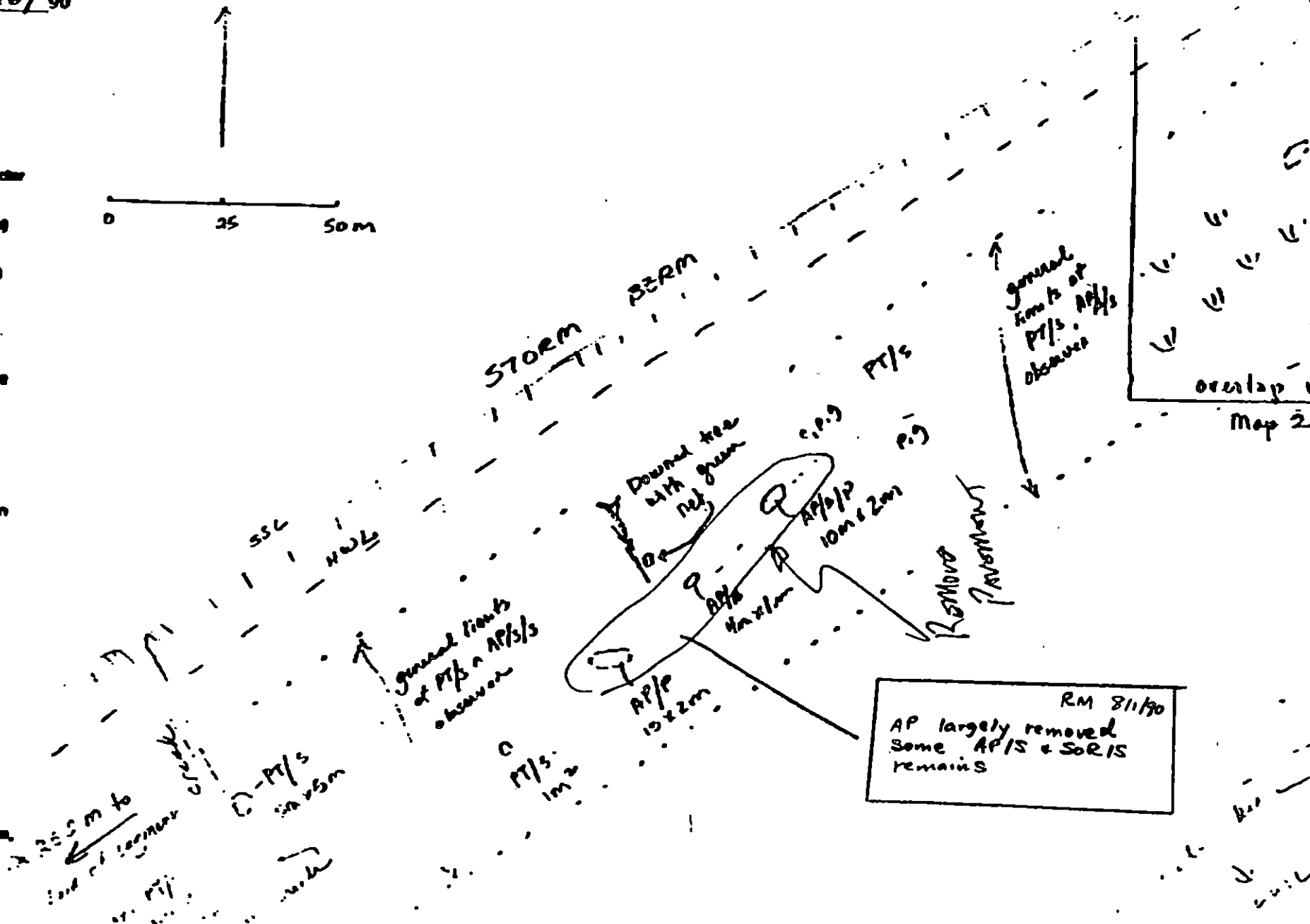
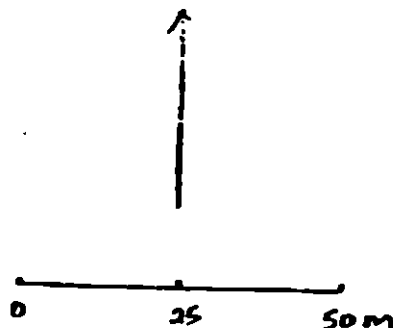
CT/B
Broken Distribution

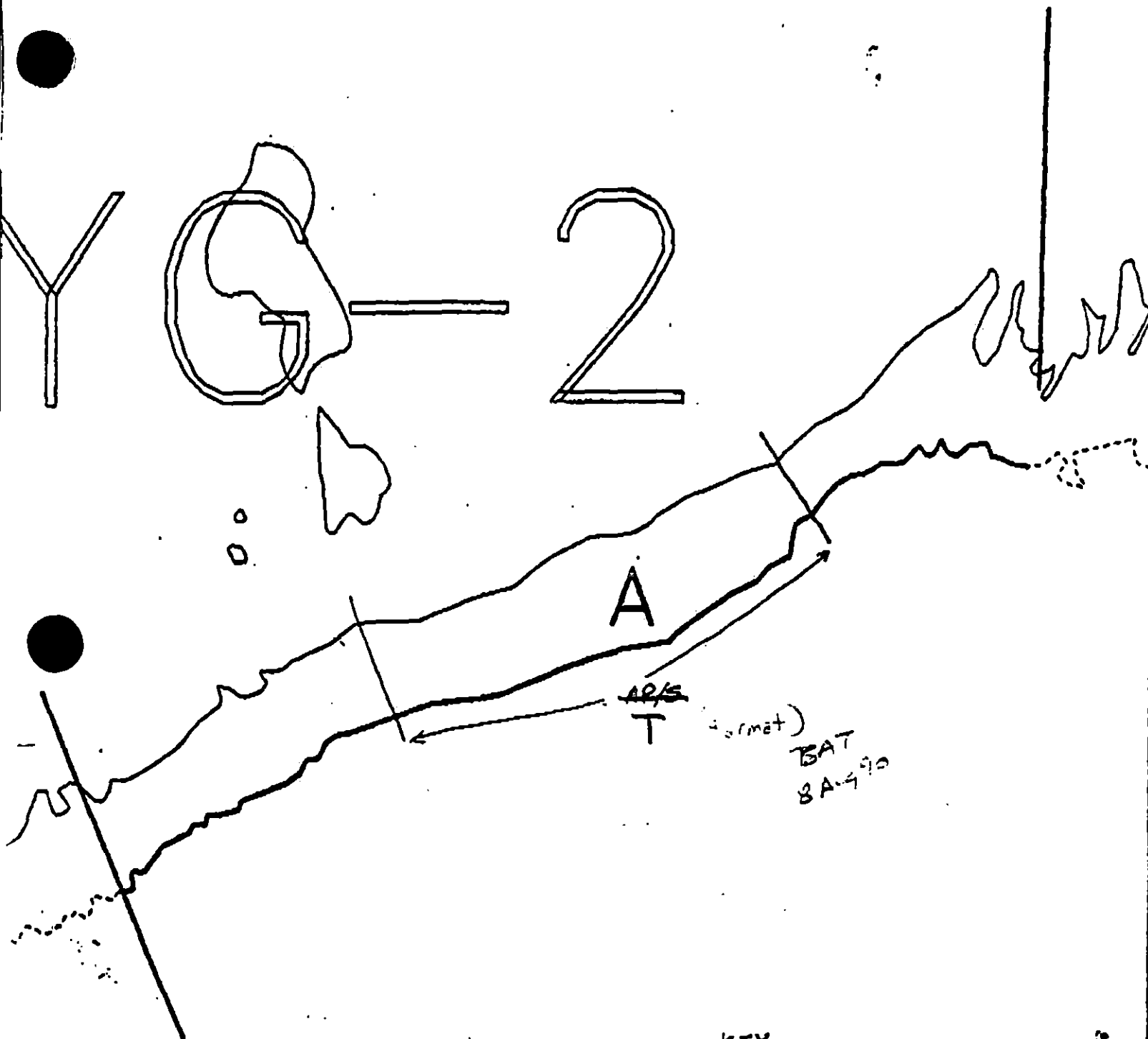
CT/P
Patchy Distribution

CT/S
Spashed Distribution

lll
Clad Vegetation

•
Photo location, direction, and number





KEY

AP/S - Asphalt pavement /
Scattered

SEGMENT YG-2A

ASAP SIGNIFICANT OILING
MAP

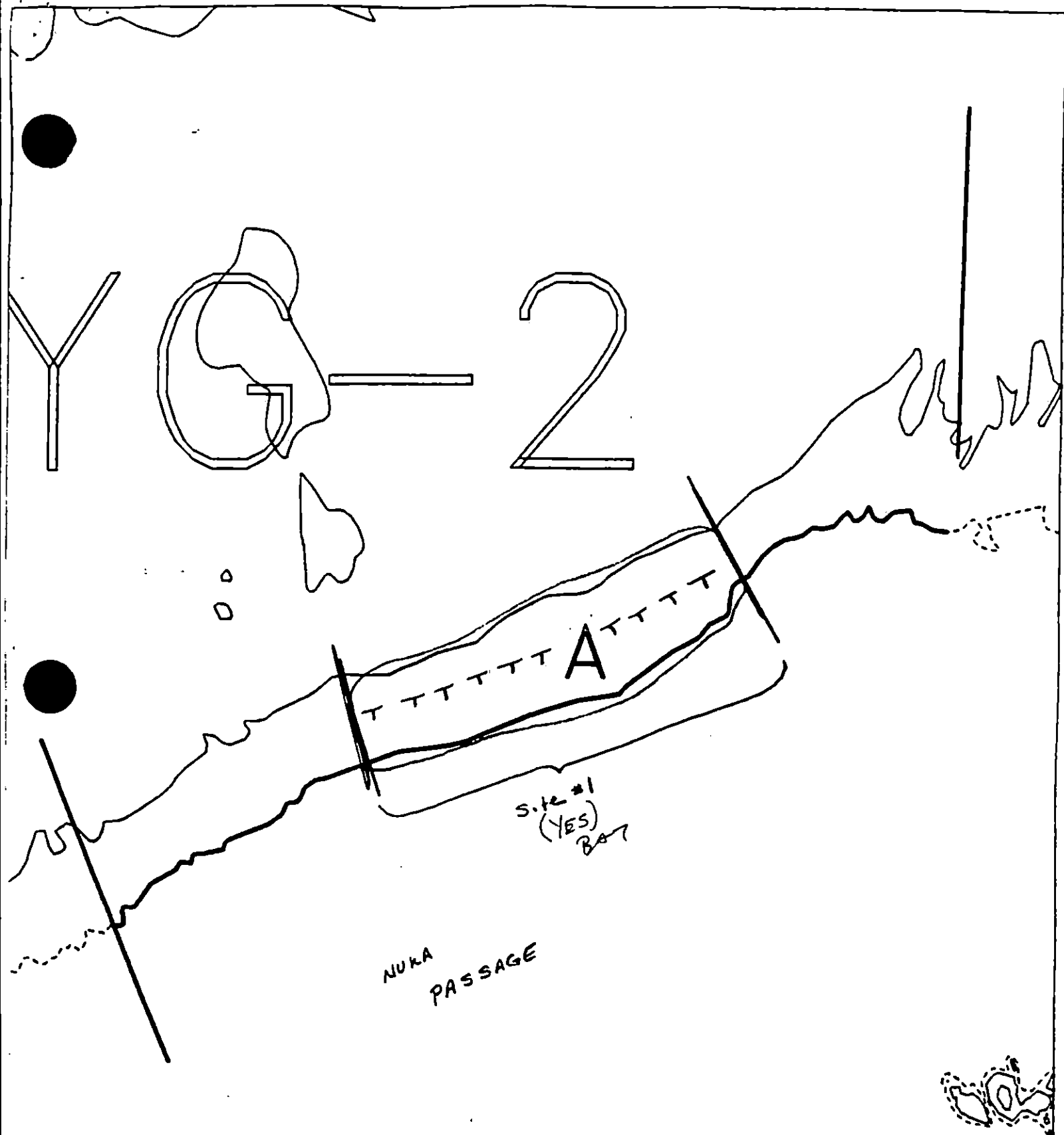
METERS

Segment Location Map

Map Key: KENYG-2

July 18, 1990





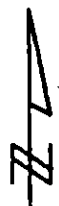
RM 00/01/90

SEGMENT YG-2

Segment Location Map

Map Key: KENYG-2

July 18, 1990



METERS



REGION: KENAI

SEGMENT: ST/YG-04

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ YG-04 SUBDIVISION A (1 OF 1) DATE 4/28/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4GG Alaska State Parks

5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 3618 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 (5/7 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 (5/11 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 Rothly 267-2206

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

6U Recreation: Tent sites (5/1 to 9/15)
 6V Anchorages (5/1 to 9/15)
 6W Forest Service cabins (5/1 to 9/15)
 6X Lodge (5/1 to 9/15)
 6Y Special use destination

7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 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 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / YG-4 SUBDIVISION: A DATE 4-28-90

NOAA
USGS

NAME STEPHEN STURM SIGNATURE [Signature]

NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

No oil was observed in this segment.

No treatment is recommended.

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley

NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

-No oil was observed on segment-

Do to the massive Asphalt/Pavement area on the Yalik Glacier segment, depending on types of clean-up deployed there monitoring of YG-4 may be necessary when operations start on YG-2.

LAND MANAGER

NAME J. David McMahon (ADNR) SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Segment YG-4A, within Kachemak State Wilderness Park, is characterized by narrow, relatively steep, cobble/boulder beaches separated by rocky headlands. Vertical rock faces ascend directly behind the beaches and evidence of avalanches is abundant. I noted kelp, a river otter, and abundant shellfish in some areas. One cave was examined at the north end of the segment. No oil was noted.

REVISION NO. 03/198

SHORELINE OILING SUMMARY

REVISION NO. 04-12-8

OG K. DEBUSSCHERE ^{NOAA} 1988 STEPHEN STURM SEGMENT ST/ V6-4
 BIO D. REED LAND REP J. David McMahon SUBDIVISION H (1 OF 1)
 EXXON T. DIAZ ADEC Wesley Ghermley TIME 7:45 to 9:25
 TEAM NO. 9 TIDE LEVEL 5 - 2 DATE 4/28/90
 EST. SUBDIVISION LENGTH: 3824 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 40 % C 30 % P 13 % G 1 % S 1 % M 0 % V 0
 SLOPE: Long 60 % Hang 30 % Vert 10 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 3824 m

SURFACE OIL

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

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE 0#BAGS 0

Photographs:

Roll No. NONEFrames NONE

SUBSURFACE OIL

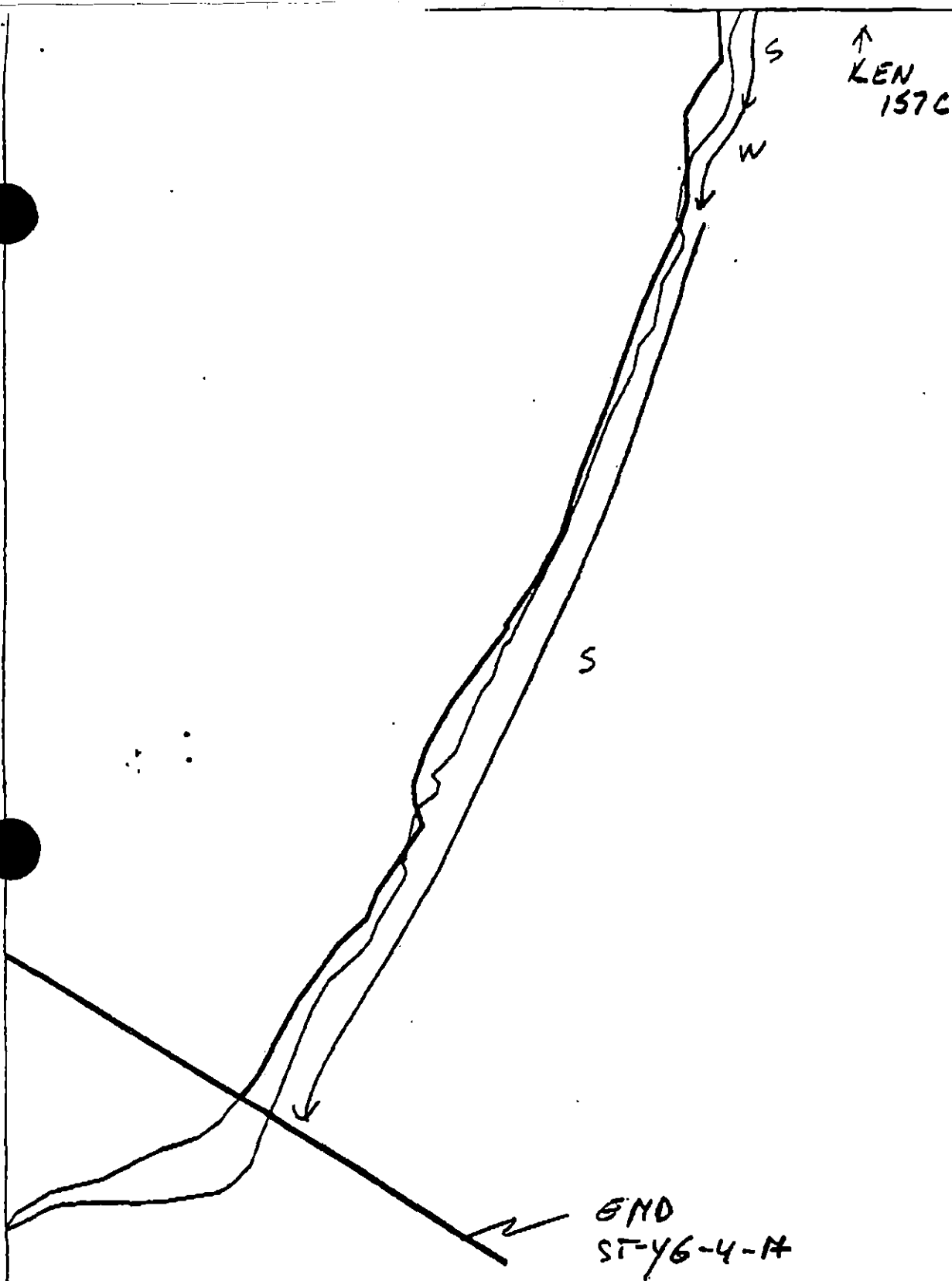
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR					PIT ZONE				AN A	SCREEN (mm)	▽	SURFACE - SUBSURFACE SEDIMENTS
		OF	OR	OL	OF	NO		VO	VO	1	2	3	4	5	SU	U	M	L				
1	25					X	.								X					H	-	P-S & C
2	20					X	.								X					H	-	P-C & S & C
3	30					X	.								X					H	-	P-P & S & C
4	40					X	.								X					M	-	P-P
							.															
							.															

COMMENTS

- THE SHORELINE IS DOMINATED BY SCREE-DEPOSITS (BOULDERS AND COBBLES) INTERSPERSED WITH SOME BEDROCK. WAVE EXPOSURE IS RELATIVELY LOW.
- NO OIL WAS OBSERVED THROUGHOUT THE SEGMENT

REVIEWED BA DATE 1 MAY 90

2/18



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

ST-YG-4-A

ADEC Segment Length: 3824 ~~3824~~ m

0 6/18 100 200 300
 METERS



Map Key: KEN-157c

Name: K. OEBUSSCHER

Date: 4/29/90

Data Entered:

↑
KEN
157E

PIT#4

W

S=SKIFF
W=WALK

S

KEN
↓ 157A

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ST-YG-4-H

ADEC Segment Length: 382Y ~~500~~m



Map Key: KEN-157c

Name: K. DEDUSCHER

Date: 4/28/10

Data Entered:

S = SKIPP
W = WALK

PIT #1

PIT #2

PIT #3

KEN
↓ 157C

KEN
→ 157F

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ST-YG-4-A

ADEC Segment Length: ^{382y}~~300m~~

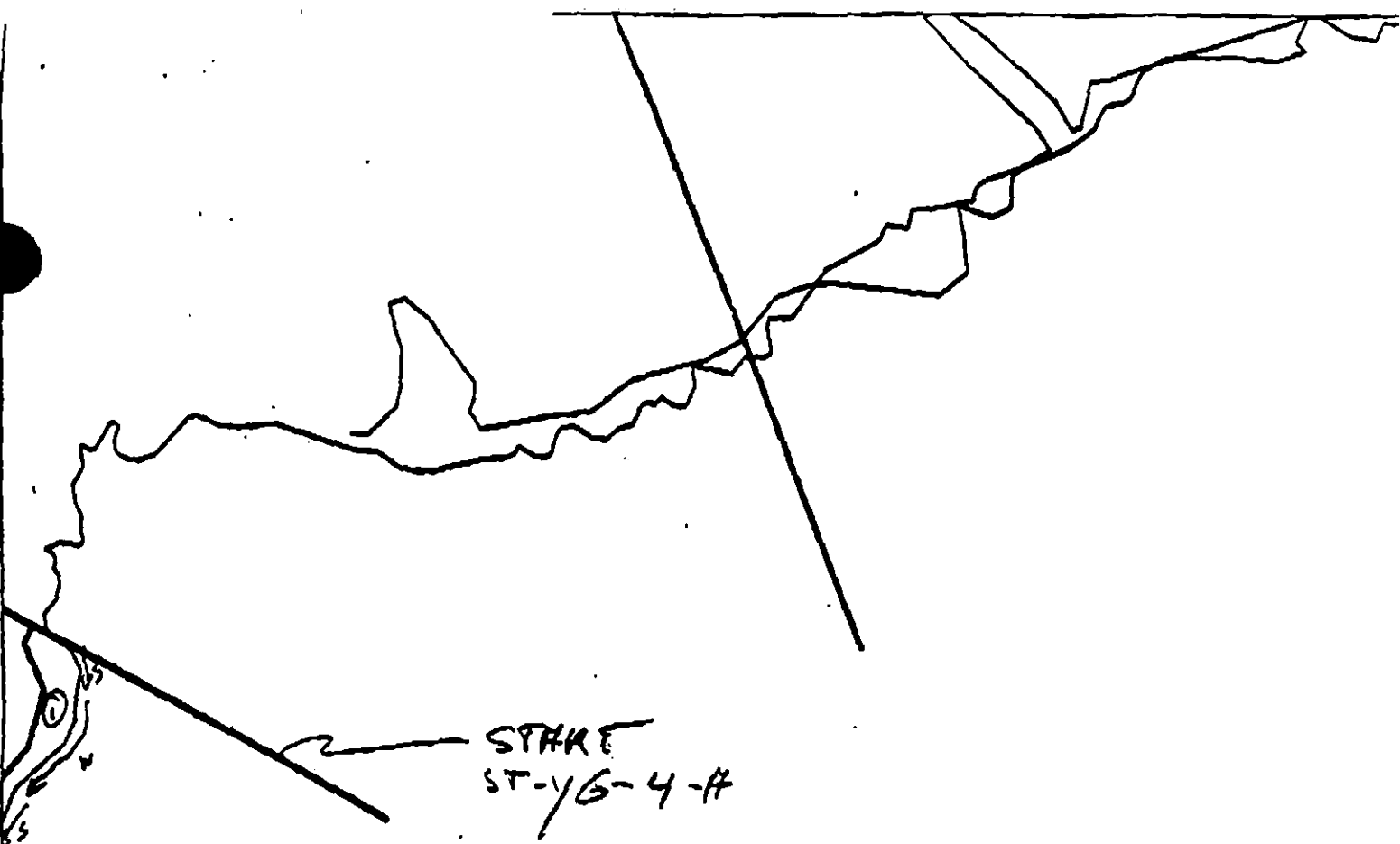
4/10 100 200 300
METERS

Map Key: KEN-1570

Name: K. DEBUSSCHERE

Date: 4/28/90

Data Entered:



W = WALK
S = SKIP

LEN
157E

XXXX Wide	ST-YG-4-A	Map Key: KEN-1571
/// Medium	ADEC Segment Length: 3824	Name: KDERUSSEGGOR
--- Narrow	3/18 100 200 300 METERS	Date: 4/22/90
TTTT Very Light		Date Entered:
0000 No Oil		

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/ YG-04 Subdivision A Date (mo / day / yr) 04/28/90

Time (24 hr) 0750 Biologist D. REED

- (A) Substrate type and % of segments:
 (1) Bedrock 15 (2) Boulder 40 (3) Cobble 30 (4) Pebble 13 (5) Sand 2 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 40 Moderate 30 Low 30
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)
- Photographs: _____
 Roll No. _____
 Frames NONE

BARNACLES

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

FUCUS

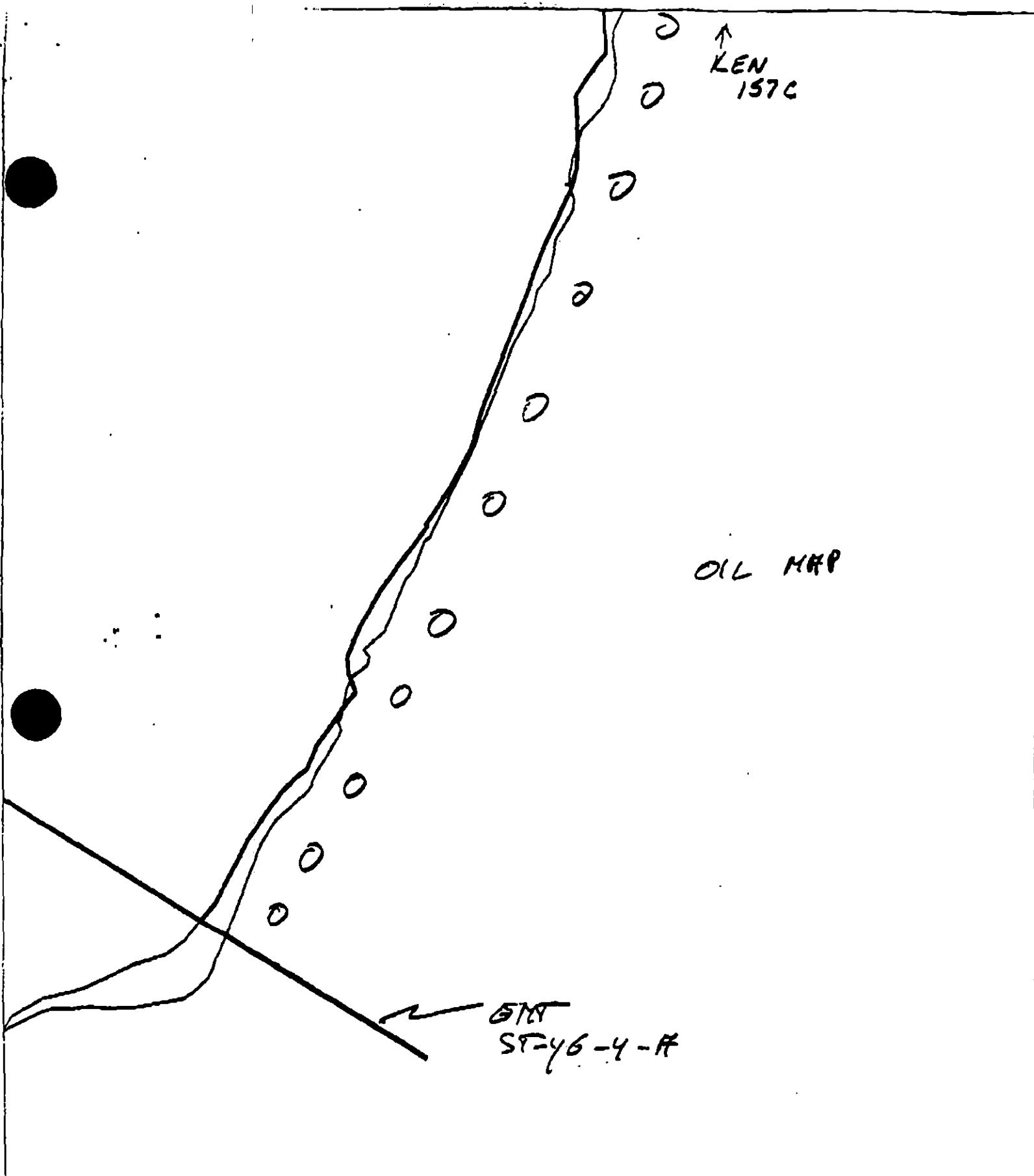
Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	X	2	2	2	X	2	2	2
3	3	3	3	3	3	3	X	X	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments: 1 BALD EAGLE, 1 IMMATURE BALD EAGLE, 2 MOUNTAIN GOATS, 2 STELLAR SEA LIONS, 1 HARBOR SEAL, 1 RIVER OTTER, 54 HARELQUIN DUCKS, 2 BLACK-LEGGED KITTOWAKES, 2 GLAUCOUS-WINGED GULLS.

Ecological Considerations: NO OIL OBSERVED

THIS SEGMENT IS A LOW WAVE EXPOSURE STRETCH OF SHORELINE WITH FEW NOTEWORTHY ECOLOGICAL CONSIDERATIONS. A BROKEN DISTRIBUTION OF RELATIVELY DENSE MUSSELS (~20-30 mm total length) WAS COMMON IN THE LOWER MID ZONE. THE LOW ZONE CONSISTED OF A DENSE ALGAL COVER OF BROWN (ALARIA, LAMINARIA, DESMARESTIA), RED (POLYSIPHONIA sp?, PLOCAMINUM sp?, CALLOPHYLLUS sp?, IRRIDOTEA sp?, HALOSACCION), AND GREEN (ULVA, CLADOPHTERA) algae. NO SEA OTTERS OR EVIDENCE OF SEA OTTER FORAGING WAS OBSERVED.



XXXX Wide

ST-YG-4-A

/// Medium

ADEC Segment Length: ~~100m~~ 3524

Map Key: KEN-157c

Name: H. D. B. J. S. S. C. C. F. 7-10

Date: 4/23/90

TTTT Very Light

0000 No Oil

14/18 100 200 300
METERS



Date Entered:

↑
KEN
157E

OIL MAP

KEN
↓ 157A

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ST-Y G-4-#

ADEC Segment Length: ~~382y~~ 382y

13/18 100 200 300
METERS

Map Key: KEN-157c

Name: K. DEBUSCHORF

Date: 4/28/00

Date Entered:

OIL MAP

KEN
↓ 157C

KEN
0 →
6157F

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ST-YG-4-A

ADEC Segment Length: ~~300m~~ 5824

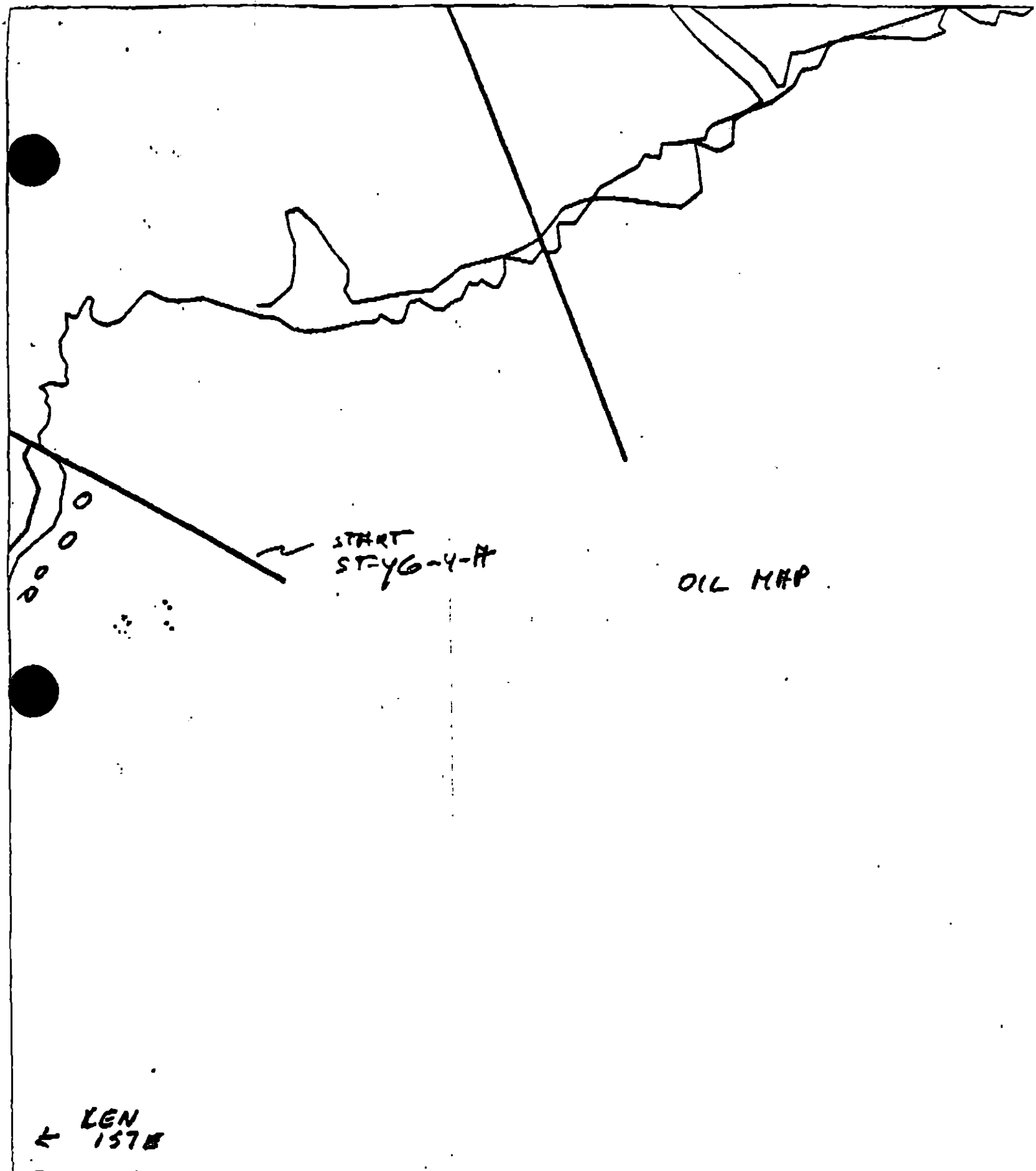
12/18 100 200 300
METERS

Map Key: KEN-157a

Name: K. DEBUSSCHE

Date: 4/25/90

Data Entered:



← LEN
157B

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ST-YG-4-A

ADEC Segment Length: ~~322y~~ 322y

0 100 200 300
4/18 METERS



Map Key: KEN-1571

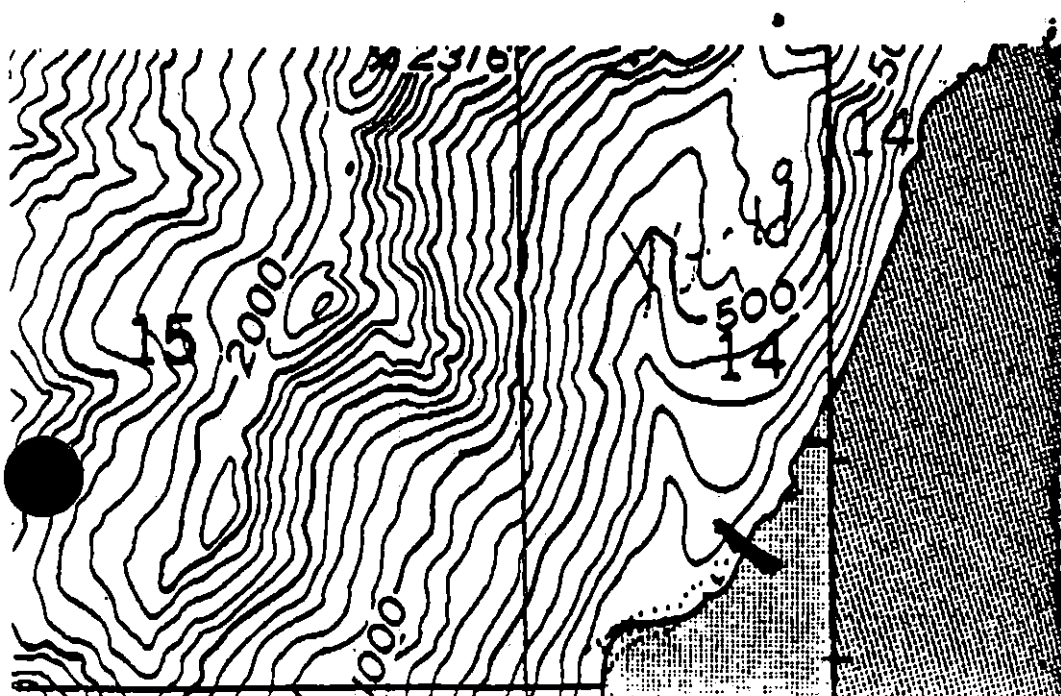
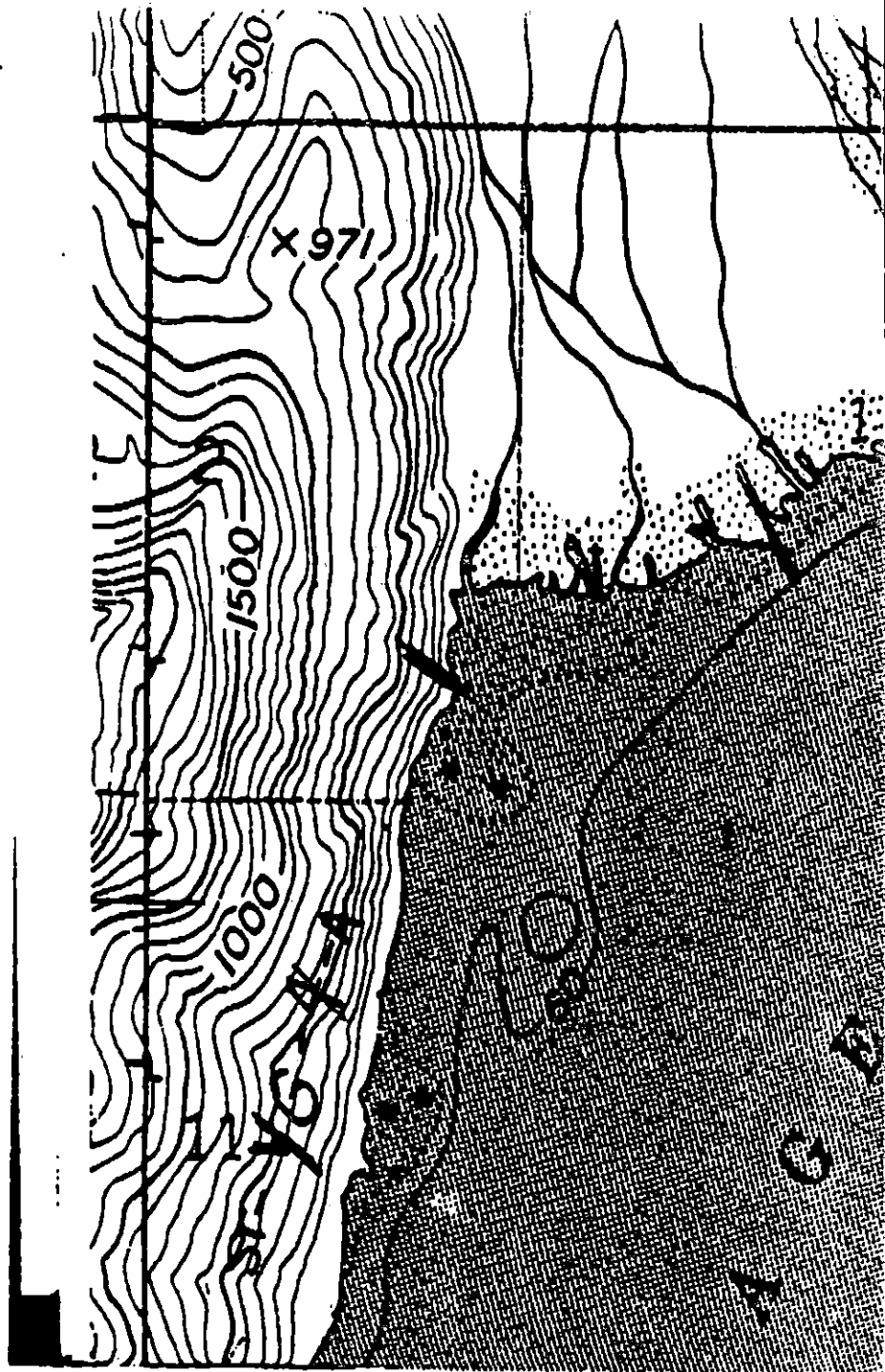
Name: K. DEBUSHCHENKO

Date: 4/28/90

Date Entered:

ST-Y64-A
(3824meters)

- Bedrock, cobble/boulder mostly high angle shoreline
- No oil was observed
- No Treatment Recommended by Exxon Representative.



11/18

SHORELINE EVALUATION

SEGMENT ST/ YG-04 SUBDIVISION A (1 OF 1) DATE 4/28/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4GG Alaska State Parks
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles Adams DATE: 5/14/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 3618 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

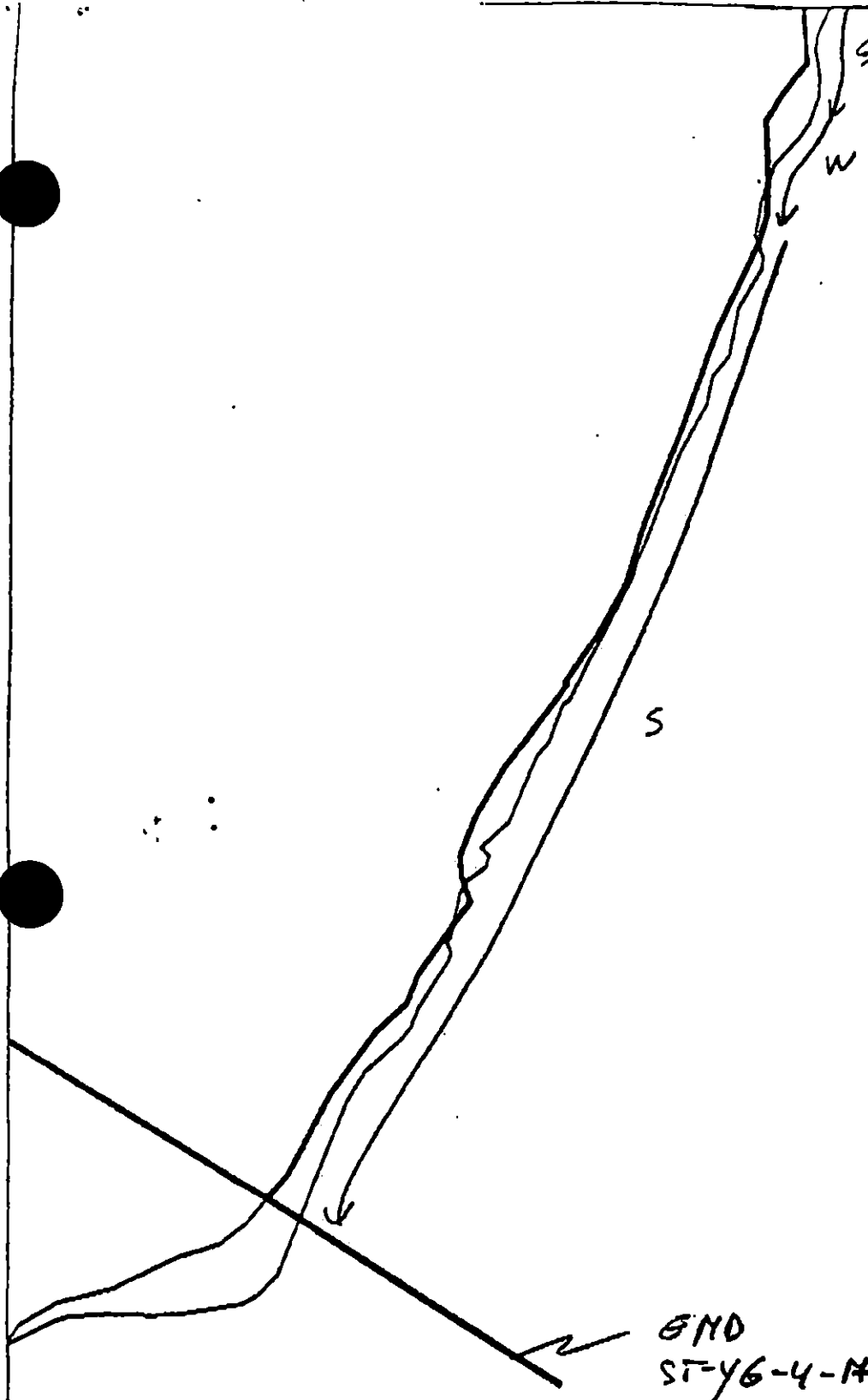
<u>X</u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u> </u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u> </u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u> </u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat Removal	<u> </u> Beach Cleaner
	<u>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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/12/90
ADEC ART WEINER Art Weiner
EXXON ANDY TEN Andy Ten
NOAA Gary Petrac Gary Petrac
USCG D.D. ROME D.D. Rome

FOSC: My L DATE: 5-15-90



↑
KEN
157C

S

END
ST-YG-4-A

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

ST-YG-4-A

ADEC Segment Length: 3824 ~~3000~~ m

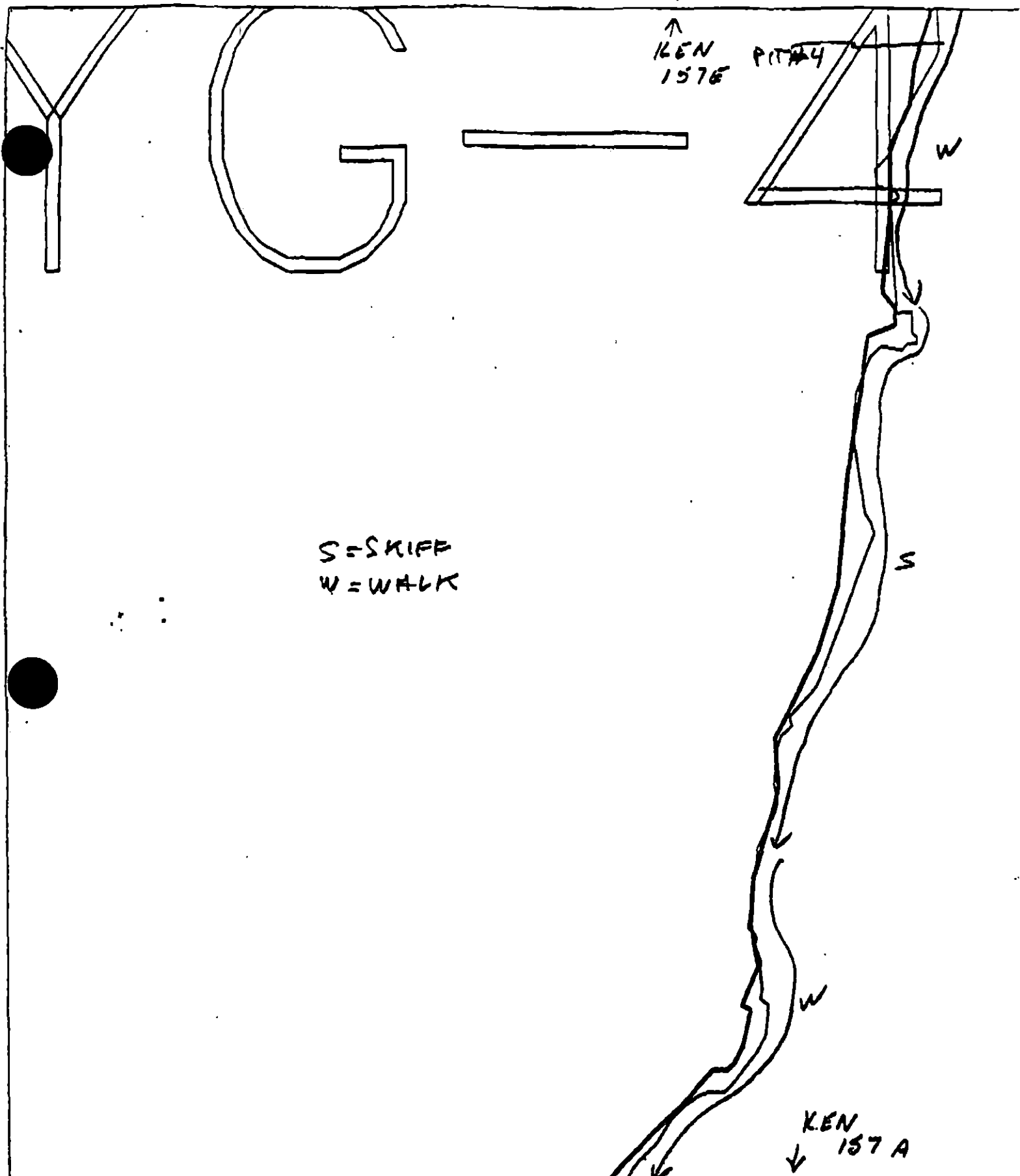


Map Key: KEN-157c

Name: K. DEBUSSCHE

Date: 4/29/90

Data Entered:



S=SKIFF
W=WALK

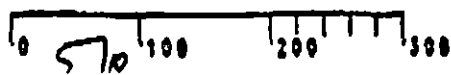
↑
KEN
157B

PIT#4

↓
KEN
157A

ST-YG-4-A

ADEC Segment Length: 382Y ~~382m~~



Map Key: KEN-157c

Name: K. DUBUSCHER

Date: 4/28/10

Data Entered:

YXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No

S=SKIP
W=WALK

PIT #1

PIT #2

PIT #3

KEN
↓ 157C

KEN
→ 157F

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No

ST-YG-4-F

ADEC Segment Length: 302y

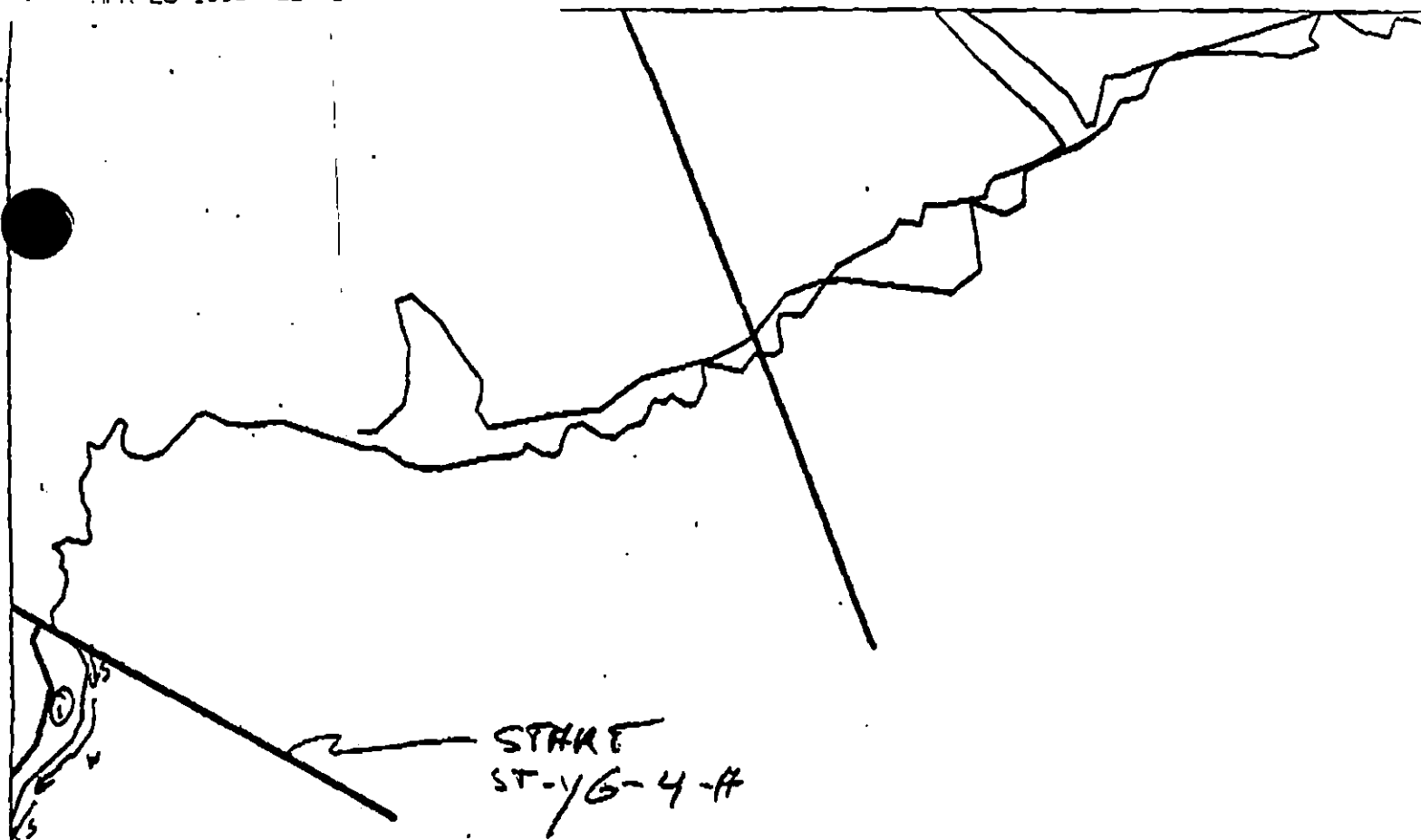
0 4/12 100 200 300

Map Key: KEN-1570

Name: K. DEBUSSCHERS

Date: 4/18/90

Data Entered:



W = WALK
S = SKIFF

LEN
← 157E

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

ST-YG-4-A

ADEC Segment Length: 382Y
~~344m~~

3/15 100 200 300

Map Key: KEN-1571
Name: ~~K. DERUSSCHOFFE~~
Date: 4/22/90

↑
KEN
157E

OIL MAP

KEN
157A
↓

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

ST-YG-4-A

ADEC Segment Length: 382y

0 12 1/2 100 200 300

Map Key: KEN-157c

Name: K. DEBUSCHER

Date: 4/28/80

Note Entered.

OIL MAP

KEN
↓ 157C

KEN
O →
6 157F

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ST-YG-4-A

ADEC Segment Length: 3824 ~~3000~~ m

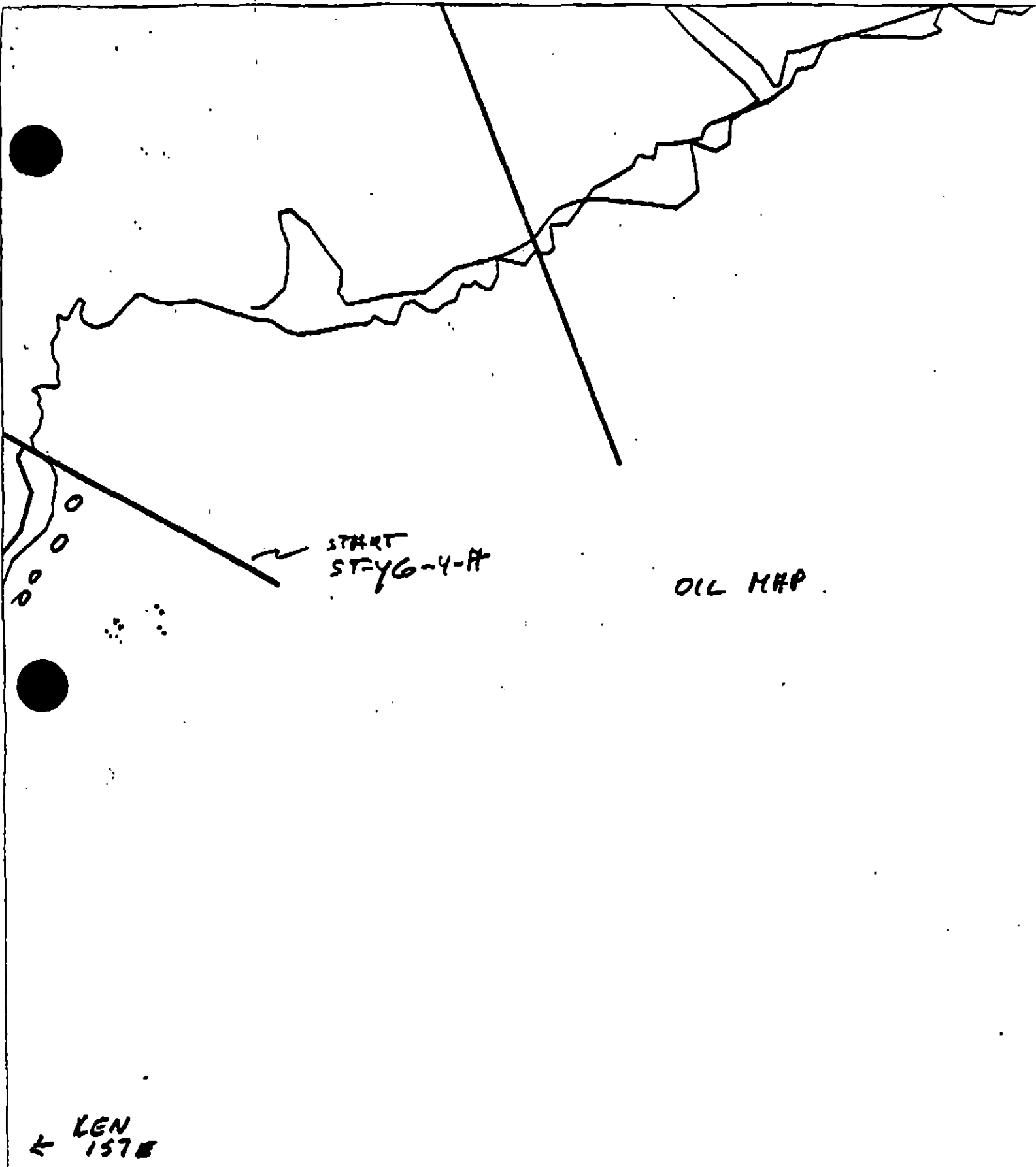
12/12 100 200 300

Map Key: KEN-1570

Name: K. DEBUSSCHE

Date: 4/23/90

Data Colored:



← LEN 157E

XXXX Wide

/// Medium

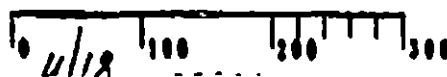
--- Narrow

TTTT Very Light

OOOO No Oil

ST-YG-4-A

ADEC Segment Length: 382y



Map Key: KEN-1571

Name: K. DEBUSCHER

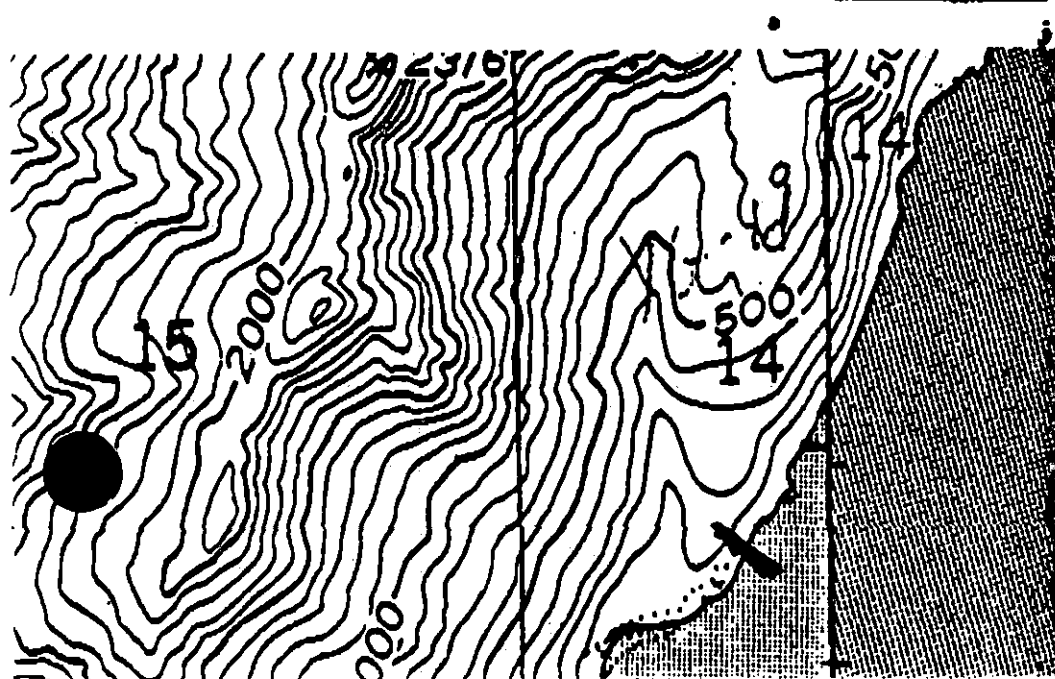
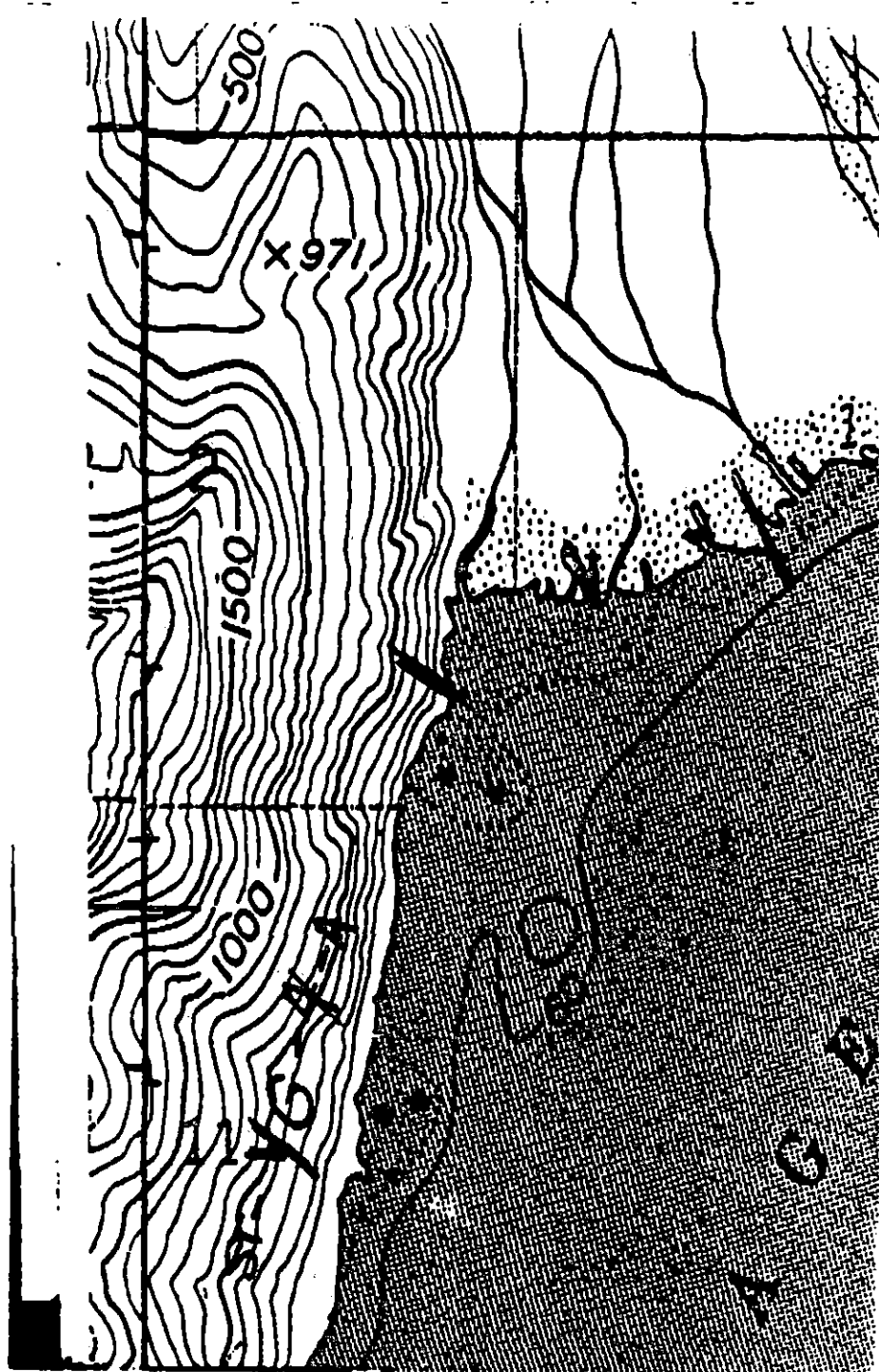
Date: 4/28/90

Data Entered:

ST-Y64-A
(3824meters)

Bedrock, cobble/boulder
mostly high angle shoreline

- No oil was observed
- No Treatment Recommended
by Exxon Representative.



1991 MAYSAP EVALUATION

SEGMENT: YG 004 **SUB:** A **REGION:** KEN **SURVEY DATE:** 5/17/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) NONE

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 _____

TEAM NO. 41 SEGMENT 7 g. 004 SUBDIVISION A DATE May 17 / 91

ADEC

NAME

Clara S. Crosby

SIGNATURE

Clara S. Crosby☒ NTR

Just oiling data indicated no oil observed
Spot check of this segment revealed no oil.

EXXON

NAME

George P. Stiles

SIGNATURE

George P. Stiles 5/20/91☒ NTR

Concur with ADEC.

LANDMANAGER

NAME

Jeffrey S. Johnson

OF

DNR

SIGNATURE

Jeffrey S. Johnson☒ NTR

No oil seen, concur with other comments.

USCG/NOAA

NAME

CWO2 J. McManis

SIGNATURE

For the Master☒ NTR

minimal signs of AP/TP - cleaned by
VECO crew.

NOAA/Donald A. MacDonald

Donald A. MacDonald

PAGE 2 OF 14

SEGMENT 76-004
SUBDIVISION A
DATE MAY 11 1991

ENERGY LEVEL: ☒ H ☒ M ☐ L

EST. OIL CATEGORY LENGTH: W_____m M_____m N_____m VL_____m NO 3618 m US_____m

DISTRIBUTION: C = 91-100%; B = 61-90%; P = 11-50%; S = 1-10%; T = <1%

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

PHOTO ROLL # MAYSAP-

FRAMES

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

OG COMMENTS: Long section of beach of mixed cb/pb/ld sediments in front of beach bluff. Subdivision was surveyed by foot where beach line and by geodetic where shoreline is made up of beach bluffs. No soil was found. No sketch map provided.

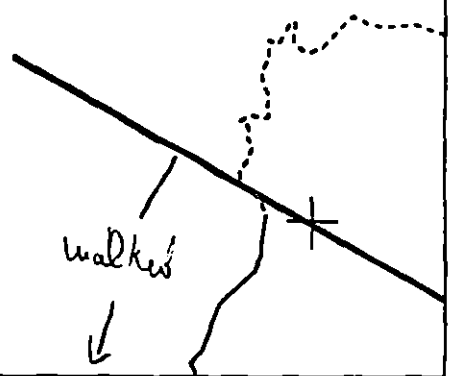
Reviewed: MC 5/21/91
Reviewed 5.21.91

+

+

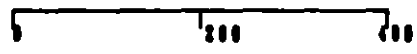
YG-

+



YG004 A

METERS



AK State Plane Zone 4
NAD83

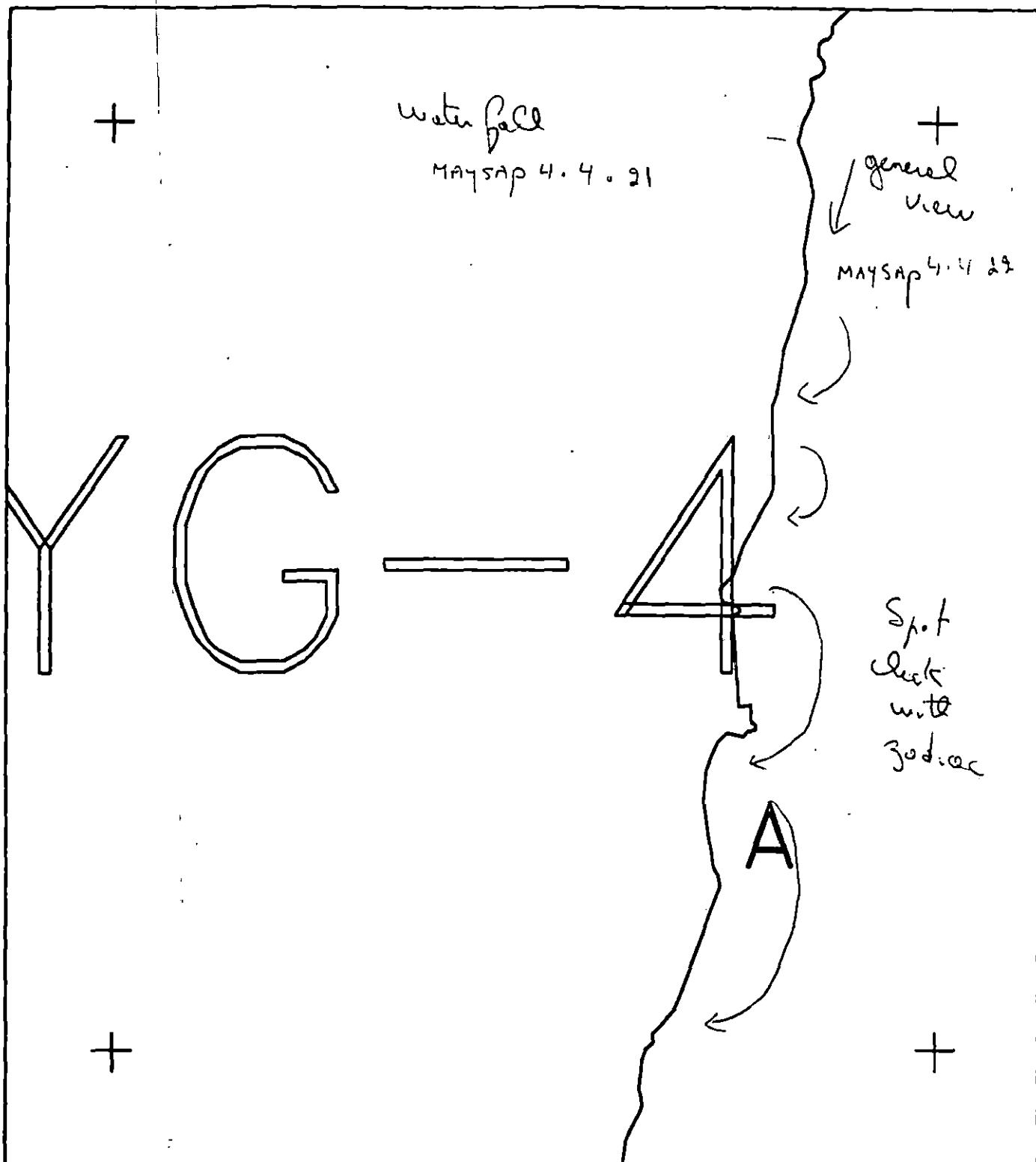
Subdivision Field Map

Map Key: KENY0004A

Name: Jay Semples

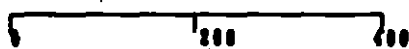
Date: MAY 17/91

Reviewed: MC 5/21/91
5.21 94



YG004 A

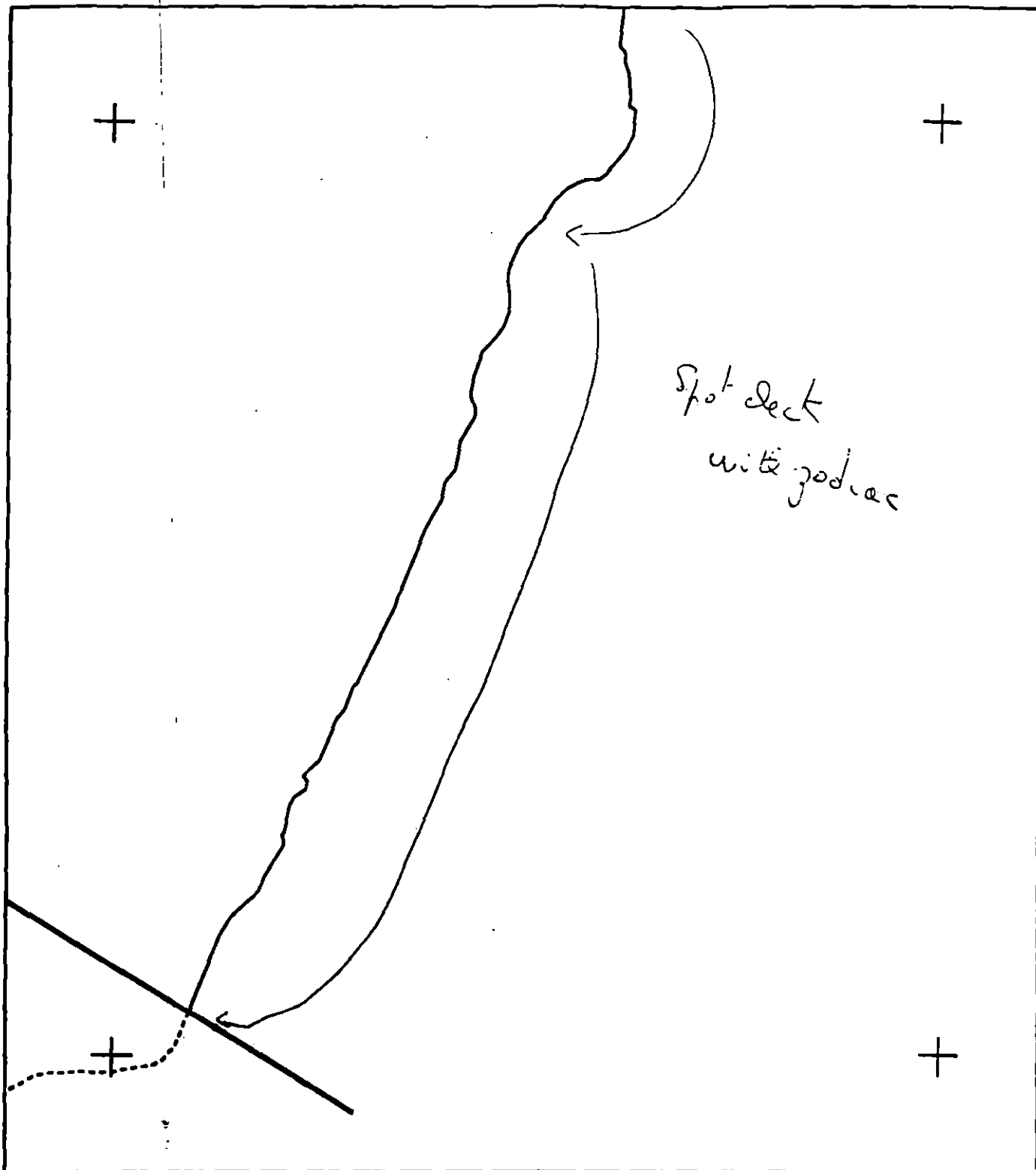
METERS

AK State Plane Zone 4
8700000

Subdivision Field Map

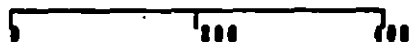
Map Key: KENY0004A

Name: for SemperDate: MAY 17/9.Reviewed: MC 5/21/91
5.21.94



YG004 A

METERS

AK State Plane Zone 4
NAD83

Subdivision Field Map

Map Key: KENYG004A

Name: for SampleDate: May 17/91Reviewed: MC 5/22/91
S.21 98

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #	4	DATE/TIME	May 17, 1991 1050 - 1130
SEGMENT #	YG004	TIDAL HEIGHT (Range)	-2.7 => -2.1
SUBDIVISION	A	BIOLOGIST	JIM BARRY
SEA STATE	Calm	WIND SPEED/DIRECTION	SE 5-15 kt., rain

COMMENTS / OBSERVATIONS - OILED SUBDIVISIONS

Oil Related Comments

No Oil was found on this subdivision.

General Characteristics of YG004-A

This subdivision is located along the northwestern boundary of Nuka Passage. It experiences low and occasional moderate waves. The shores comprise bedrock cliffs, boulder and cobble talus, and cobble and pebble/sand beaches. In general, the abundance of biota along the subdivision is very high, particularly in the low zone where red and brown algae form a very dense cover over the bottom. The invertebrate populations within the boulder and cobble talus of the low shore also are very diverse and abundant. Fucus and mussels are dense in the middle zone over several sections of the subdivision.

A black bear (approximately 2 years old) was observed foraging in the intertidal zone (eating red algae) at low tide. This individual appeared to be weak and thin.

Common Species on YG004-A

- A. Marine Plants
1. Diatoms, Blue Greens

(continued)

WILDLIFE OBSERVATIONS - Completed on all subdivisions

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	2	1 ea./male/female	
Seabirds	3	6	
Waterfowl	1	5	
Gulls/Kittiwakes	2	5	
Shorebirds	1	3	
Corvids			
Other Birds			
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters		Black Bear	1
Pinnipeds (specify)			
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/26/91

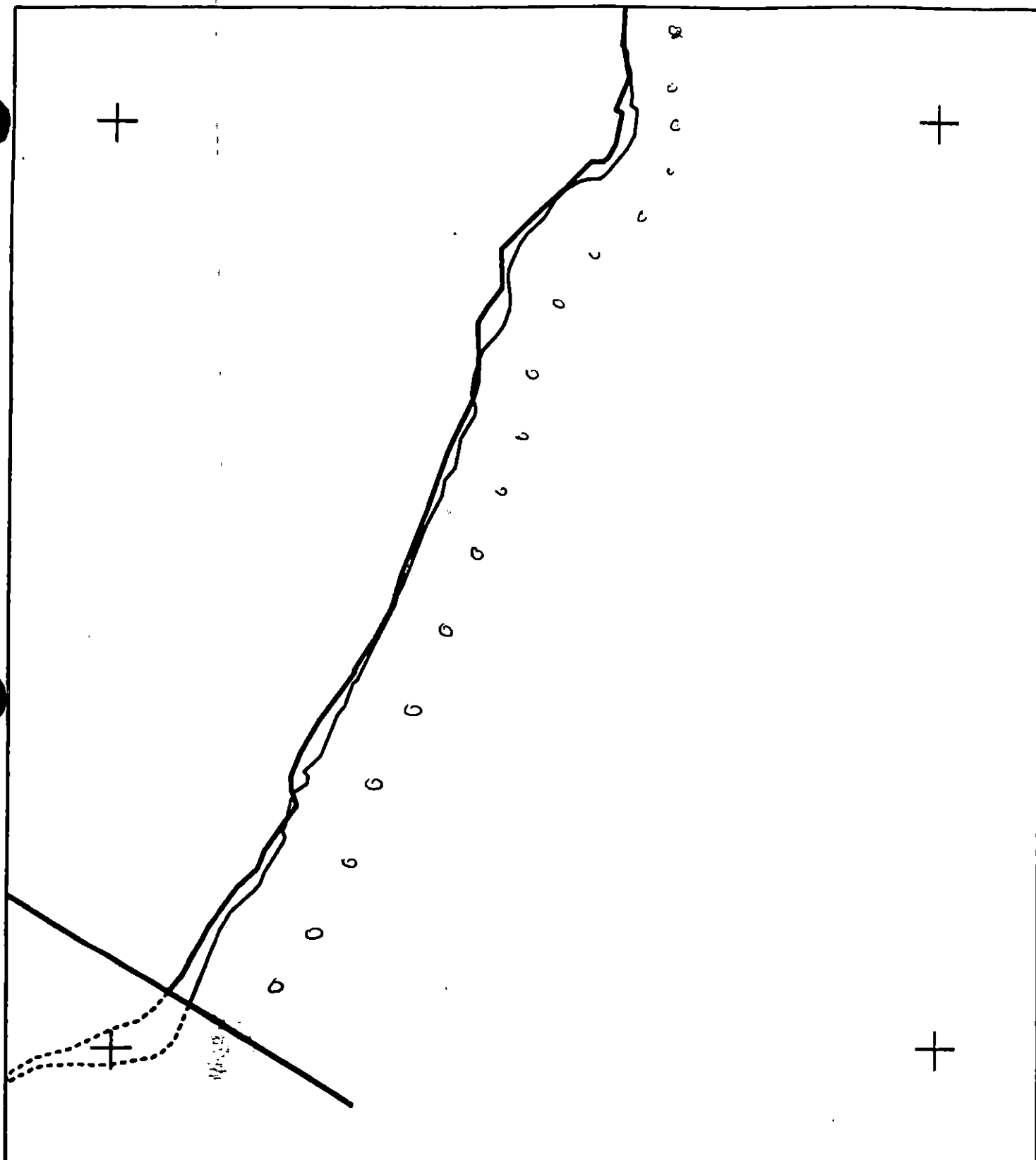
2. Green Algae - Chlorophyta
Acrosiphonia sp., Cladophora sp., Enteromorpha sp., Prasiola meridionalis, Ulva sp., Urospora sp.
3. Brown Algae - Phaeophyta
Alaria marginata, Agarum fimbriatum, Costaria costata, Ectocarpus spp., Fucus distichus, Hildenbrandia sp., Laminaria groenlandica, L. saccharina, Ralfsia sp., Syctosiphon lomentaria
4. Red Algae - Rhodophyta
Bossiella sp., Calliarthron sp., Corallina sp., Endocladia muricata,, Halosaccion glandiforme, Lithothamnion sp., Mastocarpus sp., Membranoptera dimorpha, Odonthalia floccosa, Palmaria palmata, Petrocelis sp., Porphyra sp., Ptilota filicina, Rhodomela larix
5. Higher Plants - Leymus mollis (beach rye grass)

II. Marine Animals

1. Sponges - Porifera - Halichondria panicea
2. Anemones - Anthopleura artemesia, Epiactis prolifera?, Metridium senile, Urticina crassicornis.
3. Hydroids - Sertulariidae, Aglaophenia sp., Abietinaria sp.
5. Flatworms - Platyhelminthes - Polyclads
6. Nemertean Worms - Ribbon Worms - Eimaleia gracile
8. Polychaete Worms
Glyceridae
Nepthyidae
Nereidae - Nereis spp.
Serpulidae - Serpula sp., Crucigera sp., Eudistylia polymorpha
Spirorbidae - Spirorbis sp.
9. Peanut worms - Sipunculids - Phascolosoma agassizii
10. Crustaceans
 - a. Amphipods - Orchestia sp.?, Traskorchestia traskiana
 - b. Barnacles - Balanus glandula, Chthamalus dalli, Semibalanus cariosus
 - c. Crabs - Haplogaster sp., Hemigrapsus oregonensis, Paguridae (hermit crabs), Pugettia sp.,
 - d. Isopods - Cirdana harfordi, Idotea wosnesenskii, Gnorimorsphaeroma oregonensis
11. Brachiopods (Lamp Shells) - Terebratalia transversa?
11. Mollusca
 - a. Chitons - Cryptochiton stelleri, Mopalia sp., M. mucosa, Katharina tunicata, Tonicella lineata,
 - b. Snails - Gastropods
Amphissa columbiana, Fusitriton oregonensis, Littoraria sp.,
Littorina sitkana, L. keenae, Nucella lamellosa, N. lima,
Searlesia dira, Tachyrhynchus sp., Margarites sp.
 - c. Limpets - Lottia digitalis, L. limatula, L. persona, Tectura fenestrata, T. persona, T. scutum, Siphonaria thersites
 - d. Nudibranches - Lamellidoris fusca, Onchidella borealis
 - e. Bivalves - Chlamys hastata, Hiatella arctica, Macoma nasuta, Modiolus modiolus, Mytilus edulis, Pododesmus cepio, Prototheca staminea
12. Echinoderms
 - a. Brittle Stars - Ophiolus aculeatus?, Ophiothrix spiculata?, Amphipholis?
 - b. Sea stars - Crossaster papposus, Dermasterias imbricata, Evasterias truscheli, Henricia leviuscula, Leptasterias hexactis, Orthasterias keohleri, Pisaster ochraceus, Pycnopoda helianthoides, Solaster dawsoni

- c. Sea Cucumbers - Holothurians - Eupentacta sp.,
- d. Urchins - Strongylocentrotus droebachiensis
- 13. Bryozoans - Membranipora sp., Microporina borealis, Phidolopora pacifica, Schizoporella sp.
- 14. Ascidians - Synecium? sp., Aplidium?, Cnemidocarpa finmarkiensis, Styela sp.
- 15. Fishes
 - Cottidae -
 - Stichaeidae - Xiphister atropurpureus, X. mucosus

III. Birds Bald Eagle (2), Common Murre (2), Red faced Cormorant (2), Marbled murrelet (2), Harlequin Ducks (5), Glaucous-winged Gull (3), Black-legged Kittiwake (2), Western Sandpiper (1)



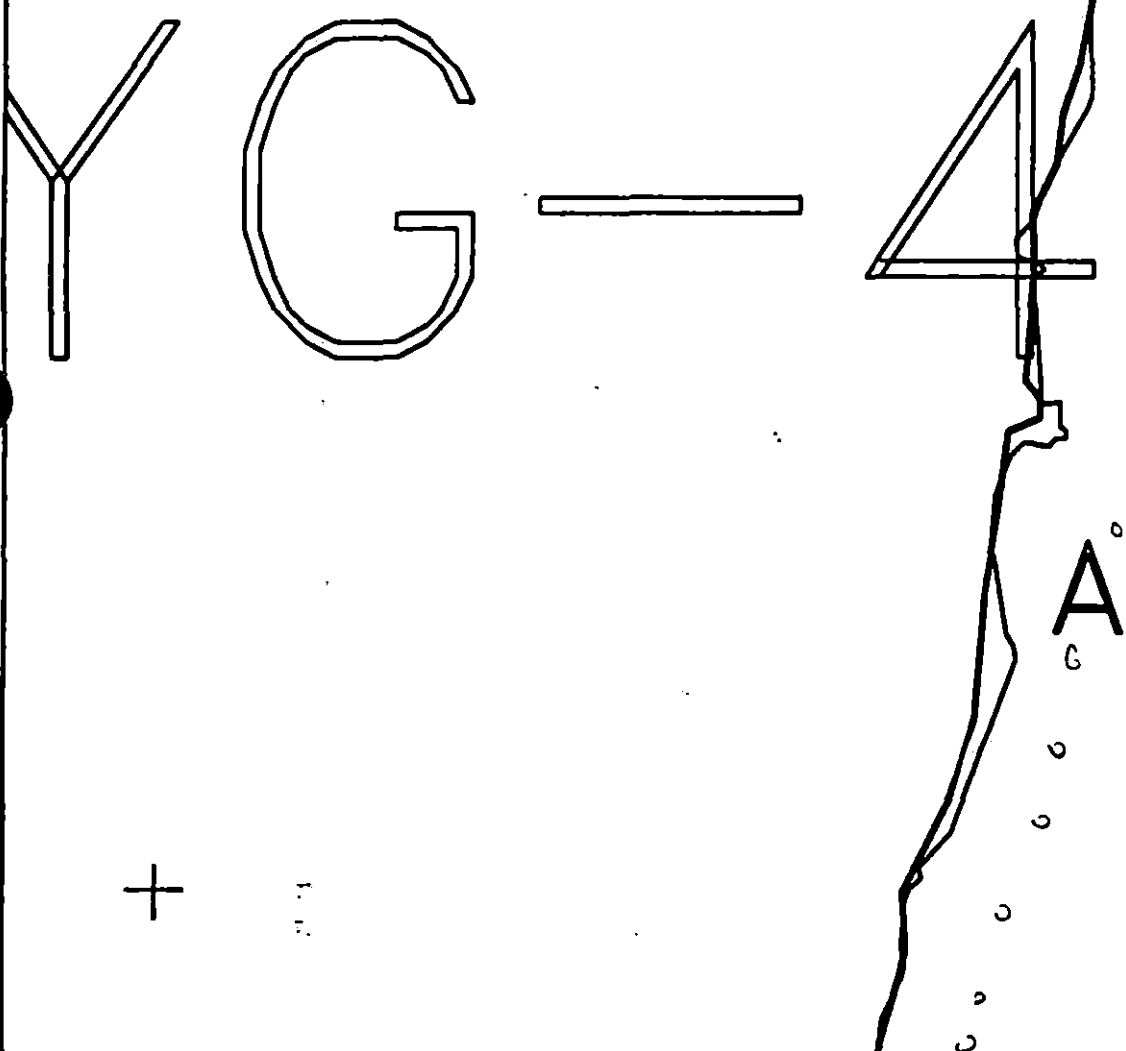
XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

YG004 A
 ADEC Subsegment Length: 3618m
 METERS
 0 200 400
 AK State Plane Zone 4
 4980000

Subdivision Field Map
 Map Key: KENYG004Aa
 Name: for Samples
 Date: MAY 17/91
 Date Entered:



Reviewed: MC 5/24/91
 reviewed 5.21.91



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

YG004 A
ADEC Subsegment Length: 3018m
METERS
AK State Plane Zone 4
ayg004as

Subdivision Field Map
Map Key: KENYG004Ac
Name: for Samples
Date: May 17/91
Date Entered:



REVIEWED: MC 5/22/91
Reviewed S.21 G.Y.

Y G -

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

YG004 A

ADEC Subsegment Length: 3618m

METERS

0 200 400

AK State Plane Zone 4
 YG004Ad



Subdivision Field Map

Map Key: KENYG004Ad

Name: J. M. Sample

Date: May 17/91

Date Entered:

Reviewed: MC 5/24/91
 reviewed 5.21.91

SEGMENT: YG 004 SUB: A REGION: KEN SURVEY DATE: 5/17/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) NONE

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Timothy O'Brien Date: 5/30/91

RECOMMENDATIONS:

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 29 1991

FOSC APPROVAL DATE:

ADEC

FOSC

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

EXXON

USCG

NOAA

TEAM NO. 41 SEGMENT 7g.004 SUBDIVISION A DATE MAY 17 1991

ADEC

NAME

Clara S. Crosby

SIGNATURE

Clara S. Crosby☒ NTR

Just oiling data indicated no oil observed
Spot check of this segment revealed no oil.

EXXON

NAME

George P. Stiles

SIGNATURE

George P. Stiles 5/20/91☒ NTR

Concur with ADEC.

LANDMANAGER

NAME

Jeffrey S. Johnson

OF

DNR

SIGNATURE

Jeffrey S. Johnson☒ NTR

No oil seen, concur with other comments.

USCG/NOAA

NAME

CWO2 J. McMAHON

SIGNATURE

J. Mc. Mahon☒ NTR

minimal signs of AP/IP - cleaned by
VECO crew.

NOAA/Donald A. McDonald

Donald A. McDonald

PAGE 4 OF 14

DATE MAY 11 / 91

EST. OIL CATEGORY LENGTH: W_____m M_____m N_____m VL_____m NO 3618 m US_____m

FRAMES

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

Reviewed: MC 5/14/91
Reviewed 5.21 Gy



YG-

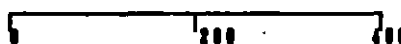


walked
↓



YG004 A

METERS



AK State Plane Zone 4
NAD83

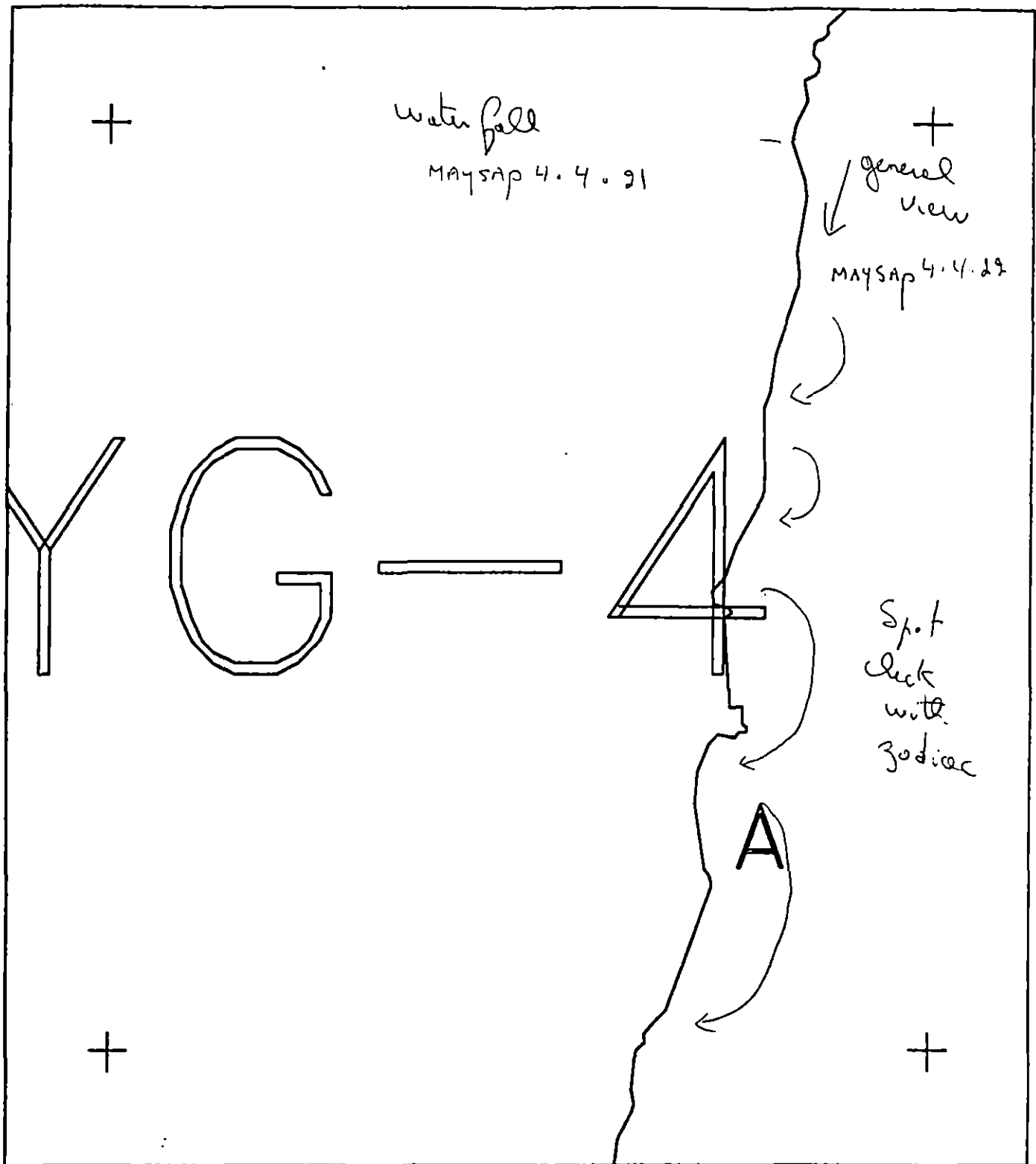
Subdivision Field Map

Map Key: KENYG004Ad

Name: Jay Samples

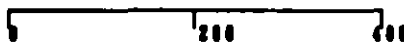
Date: MAY 17/91

Reviewed: MC 5/22/91
5.21 91



YG004 A

METERS



AK State Plane Zone 4
NAD83

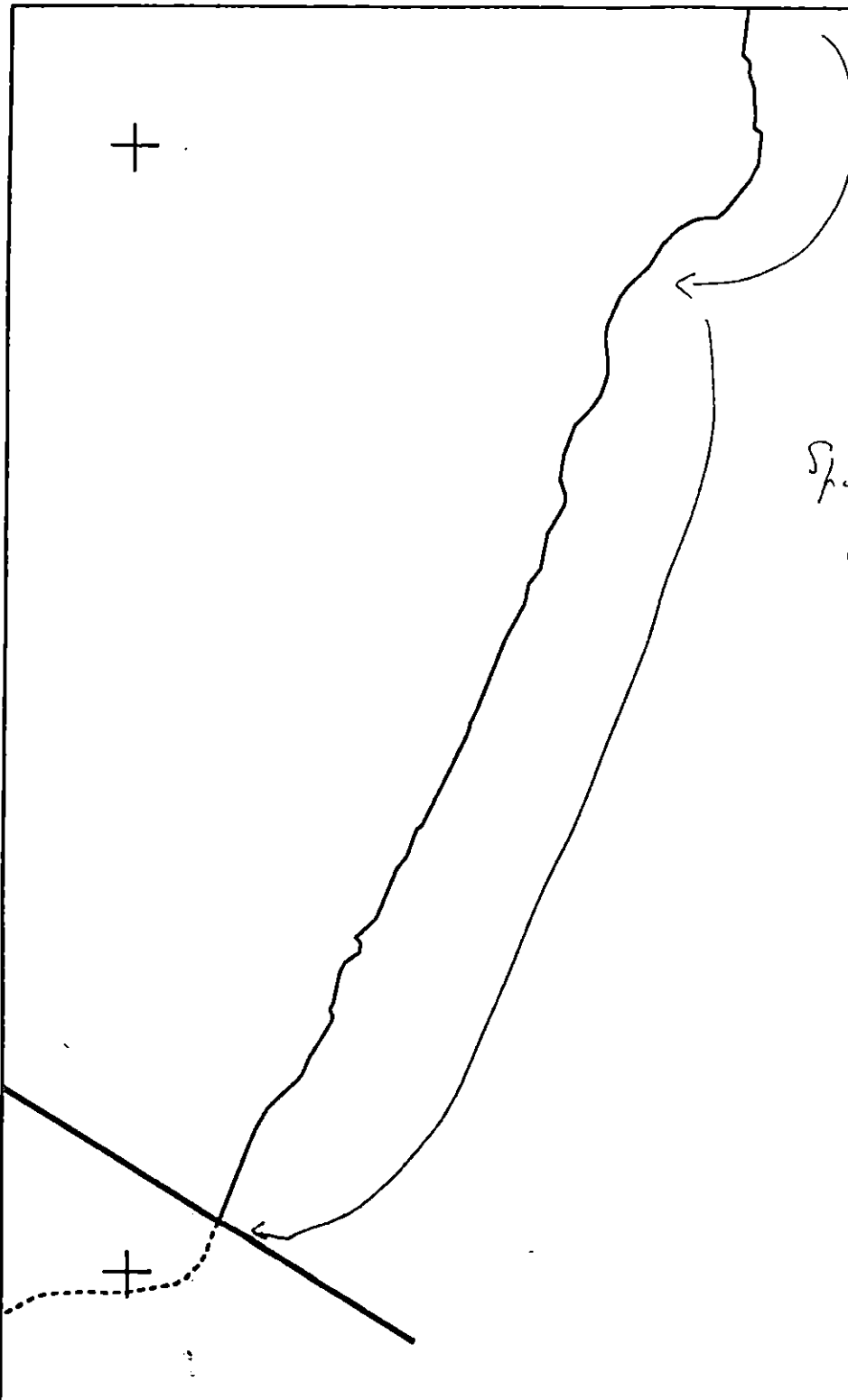
Subdivision Field Map

Map Key: KENY0004Ac

Name: for Sempin

Date: MAY 17/91

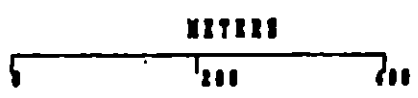
Reviewed: MC 5/22/91
5.21.94



Spot deck
with grades



YG004 A



AK State Plane Zone 4
NAD83

Subdivision Field Map
Map Key: KENYG004Aa
Name: for Samples
Date: MAY 17/91

REVIEWED: MC 5/22/91
S.21 98

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #	4	DATE/TIME	May 17, 1991 1050 - 1130
SEGMENT #	YG004	TIDAL HEIGHT (Range)	-2.7 => -2.1
SUBDIVISION	A	BIOLOGIST	JIM BARRY
SEA STATE	Calm	WIND SPEED/DIRECTION	SE 5-15 kt., rain

COMMENTS / OBSERVATIONS - OILED SUBDIVISIONS

Oil Related Comments

No Oil was found on this subdivision.

General Characteristics of YG004-A

This subdivision is located along the northwestern boundary of Nuka Passage. It experiences low and occasional moderate waves. The shores comprise bedrock cliffs, boulder and cobble talus, and cobble and pebble/sand beaches. In general, the abundance of biota along the subdivision is very high, particularly in the low zone where red and brown algae form a very dense cover over the bottom. The invertebrate populations within the boulder and cobble talus of the low shore also are very diverse and abundant. Fucus and mussels are dense in the middle zone over several sections of the subdivision.

A black bear (approximately 2 years old) was observed foraging in the intertidal zone (eating red algae) at low tide. This individual appeared to be weak and thin.

Common Species on YG004-A

- A. Marine Plants
1. Diatoms, Blue Greens

(continued)

WILDLIFE OBSERVATIONS - Completed on all subdivisions

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	2	1 ea./male/female	
Seabirds	3	6	
Waterfowl	1	5	
Gulls/Kittiwakes	2	5	
Shorebirds	1	3	
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters		Black Bear	1
Pinnipeds (specify)			
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/26/91

2. Green Algae - Chlorophyta
Acrosiphonia sp., Cladophora sp., Enteromorpha sp., Prasiola meridionalis, Ulva sp., Urospora sp.
3. Brown Algae - Phaeophyta
Alaria marginata, Agarum fimbriatum, Costaria costata, Ectocarpus spp., Fucus distichus, Hildenbrandia sp., Laminaria groenlandica, L. saccharina, Ralfsia sp., Syctosiphon lomentaria
4. Red Algae - Rhodophyta
Bossiella sp., Calliarthron sp., Corallina sp., Endocladia muricata,, Halosaccion glandiforme, Lithothamnion sp., Mastocarpus sp., Membranoptera dimorpha, Odonthalia floccosa, Palmaria palmata, Petrocelis sp., Porphyra sp., Ptilota filicina, Rhodomela larix
5. Higher Plants - Leymus mollis (beach rye grass)

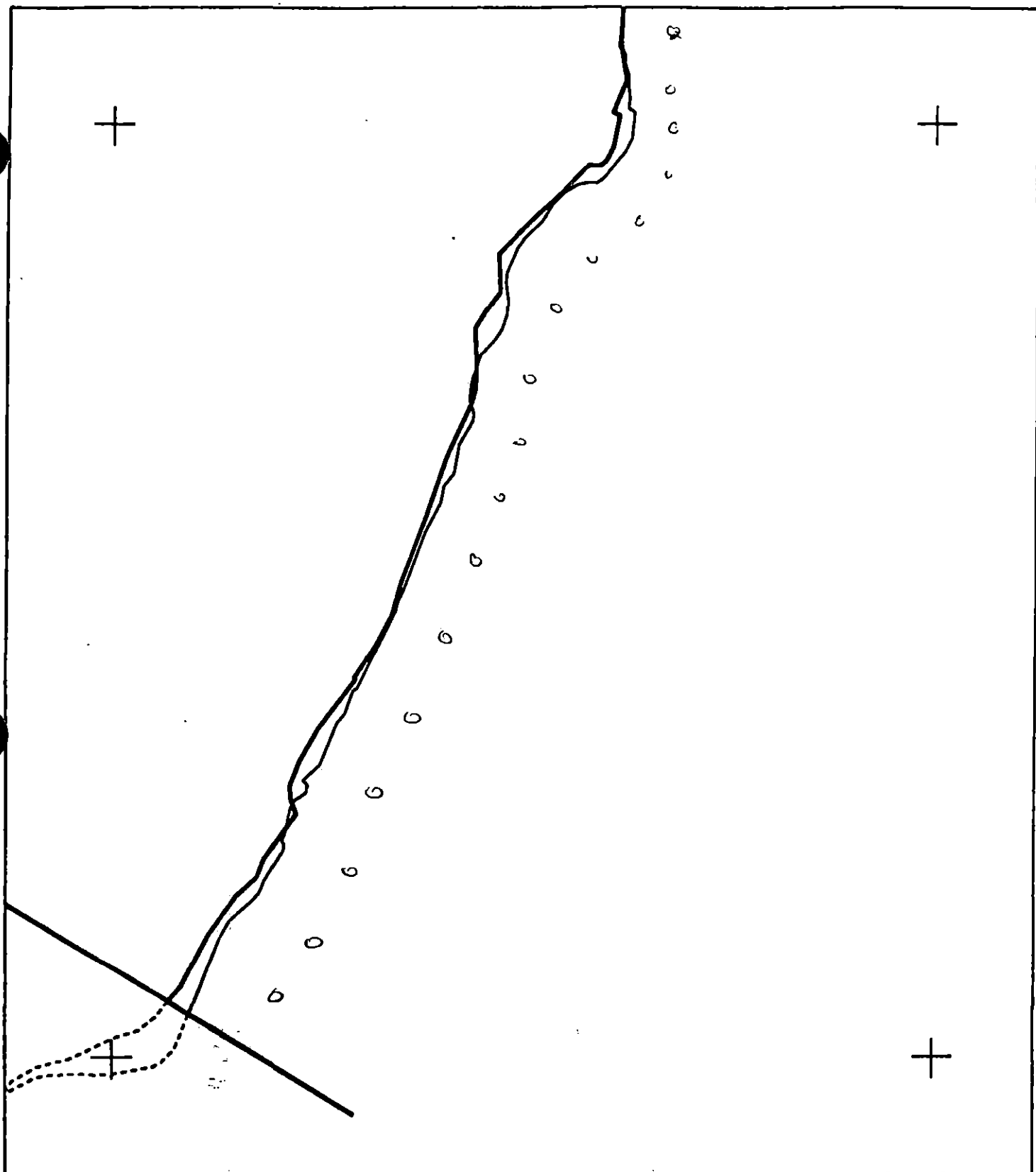
II. Marine Animals

1. Sponges - Porifera - Halichondria panicea
2. Anemones - Anthopleura artemesia, Epiactis prolifera?, Metridium senile, Urticina crassicornis.
3. Hydroids - Sertulariidae, Aglaophenia sp., Abietinaria sp.
5. Flatworms - Platyhelminthes - Polyclads
6. Nemertean Worms - Ribbon Worms - Emplectonema gracile
8. Polychaete Worms
Glyceridae
Nepthyidae
Nereidae - Nereis spp.
Serpulidae - Serpula sp., Crucigera sp., Eudistylia polymorpha
Spirorbidae - Spirorbis sp.
9. Peanut worms - Sipunculids - Phascolosoma agassizii
10. Crustaceans
 - a. Amphipods - Orchestia sp.?, Traskorchestia traskiana
 - b. Barnacles - Balanus glandula, Chthamalus dalli, Semibalanus cariosus
 - c. Crabs - Haplogaster sp., Hemigrapsus oregonensis, Paguridae (hermit crabs), Pugettia sp.,
 - d. Isopods - Cirdana harfordi, Idotea wosnesenskii, Gnorimorsphaeroma oregonensis
11. Brachiopods (Lamp Shells) - Terebratalia transversa?
11. Mollusca
 - a. Chitons - Cryptochiton stelleri, Mopalia sp., M. mucosa, Katharina tunicata, Tonicella lineata,
 - b. Snails - Gastropods
Amphissa columbiana, Fusitriton oregonensis, Lirularia sp., Littorina sitkana, L. keenae, Nucella lamellosa, N. lima, Searlesia dira, Tachyrhynchus sp., Margarites sp.
 - c. Limpets - Lottia digitalis, L. limatula, L. persona, Tectura fenestrata, T. persona, T. scutum, Siphonaria thersites
 - d. Nudibranches - Lamellidoris fusca, Onchidella borealis
 - e. Bivalves - Chlamys hastata, Hiatella arctica, Macoma nasuta, Modiolus modiolus, Mytilus edulis, Pododesmus cepio, Prototheca staminea
12. Echinoderms
 - a. Brittle Stars - Ophiolus aculeatus?, Ophiothrix spiculata?, Amphipholis?
 - b. Sea stars - Crossaster papposus, Dermasterias imbricata, Evasterias truscheli, Henricia leviuscula, Leptasterias hexactis, Orthasterias keohleri, Pisaster ochraceus, Pycnopoda helianthoides, Solaster dawsoni

Reviewed M.B. 5/22/91

- c. Sea Cucumbers - Holothurians - Eupentacta sp.,
- d. Urchins - Strongylocentrotus droebachiensis
- 13. Bryozoans - Membranipora sp., Microporina borealis, Phidolopora pacifica, Schizoporella sp.
- 14. Ascidians - Synoicum? sp., Aplidium?, Cnemidocarpa finmarkiensis, Styela sp.
- 15. Fishes
 - Cottidae -
 - Stichaeidae - Xiphister atropurpureus, X. mucosus

III. Birds Bald Eagle (2), Common Murre (2), Red faced Cormorant (2), Marbled murrelet (2), Harlequin Ducks (5), Glaucous-winged Gull (3), Black-legged Kittiwake (2), Western Sandpiper (1)



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

YG004 A
 ADEC Subsegment Length: 3618m
 METERS
 0 200 400
 AK State Plane Zone 4
 49980400



Subdivision Field Map
 Map Key: KENYG004Aa
 Name: Jim Sempich
 Date: MAY 17/91
 Date Entered:

REVIEWED: MC 5/22/91
 reviewed 5.21.91

YG-4

A

XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

YG004 A

ADEC Subsegment Length: 3018m

METERS

0 200 400
AK State Plane Zone 4
nyg004ac



Subdivision Field Map

Map Key: KENYG004Ac

Name: for Samples

Date: May 17/91

Date Entered:

REVIEWERS: MC 5/22/91
Reviewed 5.21 Cjy

YG-

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

YG004 A
ADEC Subsegment Length: 3818m
METERS

0 200 400
AK State Plane Zone 4
nyg004ad



Subdivision Field Map

Map Key: KENYG004Ad

Name: JM Semple

Date: May 17/91

Date Entered:

Reviewed: MC 5/24/91
reviewed 5.21.91

REGION: KENAI

SEGMENT: ST/YP-04

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ YP-04 SUBDIVISION A (1 OF 1) DATE 4/28/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4GG Alaska State Parks

5T-1 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 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 183 m: No Oil 0 m

Subsurface Oil Observed: Yes X No _____ Maximum Depth 16 cm

RECOMMENDATIONS:

_____ No Treatment Recommended

X Treatment Recommended

X Manual Pickup

X Bioremediation

_____ Tarmat Removal

_____ Snare/Absorbent Booms

_____ Oil Snares (pom poms)

_____ Absorbents (pads, rolls, etc)

_____ Spot Washing: _____ Wands

_____ Beach Cleaner

*X Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pickup of mousse patties, 2) manual tilling of areas shown on attached sketch map followed by 3) bioremediation of areas shown on attached sketch map. Work should be conducted after 6/1 with approval of USFWS regarding eagle nest constraint.

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 uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235

3N 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 Rothly 267-2205

5T All Bald Eagle nests (3/1 to 6/1)

Active Bald Eagle nests (3/1 to 6/1)

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation: Tent sites (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

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 / YP-4 SUBDIVISION: A DATE 4-28-90

NOAA
USOS

NAME

STEPHEN STURM

SIGNATURE

Stephen Sturm

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

PATCHES OF MOUSSE WERE LOCATED AROUND THE PERIPHERY OF A RESTRICTED, LOW ENERGY TIDAL FLAT. THE MAJORITY OF THIS AREA IS UNDERLAIN BY IMPERMEABLE SILT AND CLAY KEEPING OIL/MOUSSE FROM PENETRATING TO ANY SIGNIFICANT DEPTH. OIL SHEENS WERE OBSERVED DOWNDIP FROM OILED AREAS, BEING RELEASED FROM PERCHED PATCHES OF MOUSSE COVERED BY GREEN ALGAE ON THE SE PART OF THE TIDAL FLAT (SEE SKETCH).

THE MOST EFFECTIVE METHOD OF CLEAN-UP WOULD BE TO MANUALLY REMOVE OILED AREAS AND TILL/PLOW/RAKE REMAINING SEDIMENTS TO PREVENT FORMATION OF TAR MATS AND INCREASE MICROBIAL DEGRADATION. UNDER NO CIRCUMSTANCE SHOULD INIPOOL BE USED DUE TO VERY LOW TIDAL FLUSHING.

ADEC

NAME

Wesley Ghormley

SIGNATURE

Wesley Ghormley

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Segment YP-4 has only one area that consisted of oil according to ADEC map. However, oil was observed & inspected by ADEC rep outside of oiled area quite a ways to the east. This oiling consisted of a very weather coat & splashes. Recommend evaluation of entire segment.

Location #1 - Consists of a small low energy tidal flat. Mousse patches were observed on both the surface & subsurface in a broken condition. Manual removal is recommended for surface patches both on the surface & under the thick growth of algae. Tilling of the MITZ & LITZ to expose chocolate brown mousse patches is suggested & then raking to retrieve oil, bag & remove. Hot H2O should not be a consideration do to mud flats in the lower MITZ & LITZ would make it impossible to retrieve oil. Very poor flushing also occurs in this

LAND MANAGER

NAME

J. David McMahon (ADNR)

SIGNATURE

J. David McMahon

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Segment YP-4 A, within Kachemak State Wilderness Park, is characterized by vertical rock faces interspersed with boulder/cobble pocket beach. Oil oiling, spotty and up to about 1cm thick, was noted in a small tidal lagoon at the western end of the segment (location #1). Treatment consistent with NOAA/ADEC recommendations, is warranted. However a cultural resource site may be present and is subject to CTAG review. A cleanup is recommended for spattering on vertical faces in the

SHORELINE OILING SUMMARY

REVISION NO. 04-13-90

OG K. DEBUSSCHERE ^{NRAA} USCG STEPHEN STURM SEGMENT ST/ YP-4
 BIO ID REED LAND REP J. David McMahon (ADG) SUBDIVISION H (LOFT)
 EXXON T. DILL ADEC Wesley Ghermley TIME 10:00 to 12:30
 TEAM NO. 9 TIDE LEVEL -2 TO 1 DATE 4/28/90
 ST. SUBDIVISION LENGTH: 130 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 20 % B 2 % C 13 % P 15 % G 0 % S 0 % M 50 % V 0 %
 SLOPE: Lang 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 130 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	IC	IS	IP	IS	SOL	DEL	GY	DEL	DEL	DEL	DEL	DEL	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER			X					X					X			
COAT																
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			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE 0#BAGS 0

Photographs:

Roll No. ST-9-4Frames 8, 9, 10

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CL)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SOL	DEL	GY	DEL	DEL	DEL	DEL	DEL	SU	U	M	U				
1	15	X					3-3.5		X						X			X					N	-	P-F/P/M
2	20					X	.											X					N	-	P-C/P/M
3	20		X				3-3.5		X						X			X					N	-	P-C/P/M
4	20	X					15-16		X						X			X					N	-	P-C/P/M
							.																		
							.																		

OR SHEEN IS PRESENT IN TIDAL POOLS NEAR MS/B
 COMMENTS
 SUBDIVISION CONSISTS OF A PROTECTED, LOW ENERGY TIDAL MUDFLAT WITH COBBLE AND PEBBLE DOMINATED SHOREFACE IN USE.
 - OILING IS VERY LIGHT BECAUSE OF OVERALL 'SPASHY' DISTRIBUTION OF OIL: SUBSURFACE OIL IS NOT CONTINUOUS. MOUSSE. PATTIES 'SETTLED' IN THIS LOW ENERGY ENVIRONMENT INTO THE MUD UP TO 15-16 CM BELOW THE SURFACE. SURFACE OIL CONSISTS OF ISOLATED BROKEN MOUSSE LAYER (± 0.5 CM THICK) UNDER FLOT IN MI AND SOME ISOLATED AREAS OF PATCHY COVER ON COBBLES & PEBBLES IN UT.
 - THE REMAINING SHORELINE OF YP-4 WAS REVIEWED BY DATE 1 MAY 90
 NOT SURVEYED B/C INDICATED AS "NO OIL" ON ADEC MAP, A THIRTING OF COAST LINES OBSERVED DURING A FAST SKIFF HIT * ON GIS MAP

DATE 4/28/90

CHECKLIST

_____ N Arrow
 _____ Approx. Scale
 _____ Seg/Sub Entry
 _____ CR Dist.
 _____ Width
 _____ Length
 _____ % Cover
 _____ Substrate Character
 _____ Est. HMLA/VL
 _____ SSI
 _____ Profile Location(s)
 _____ Profile(s)
 _____ Pk Location(s)
 _____ Photo Location(s)

LEGEND

1 Δ
Fit - No Subsurface Oil

2 ▲
PH - Subsurface Oil

CT/C
Continental Division

CT/8
Broken Distribution

CT/P
Pachy Distribution

CT/S
Splashed Distribution

Old Vegetation

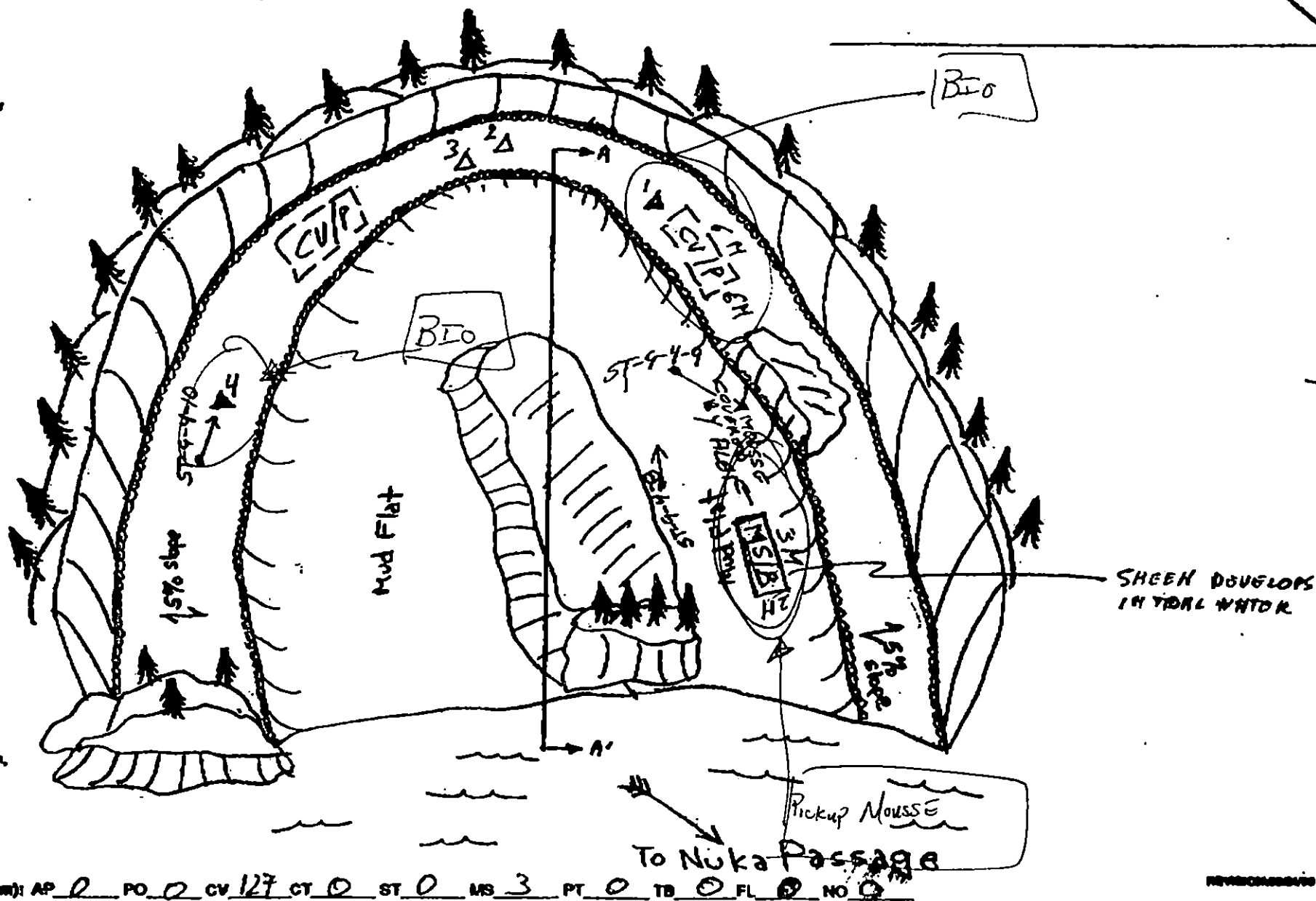
Photo location, direction,
and number

SKETCH MAP

T-YP-4-A
(loc. #1)

Profile A -

Mean High Tide



Oil Character Length (m): AP 0 PO 0 CV 127 CT 0 ST 0 MS 3 PT 0 TB 0 FL 0 NO 0

Abstract

UNSURVEYED
BECAUSE INDICATED
RS NO OIL ON ROBC MAP

← KEN 138A

XXX Wide

//// Medium

--- Narrow

TTTT Very Light

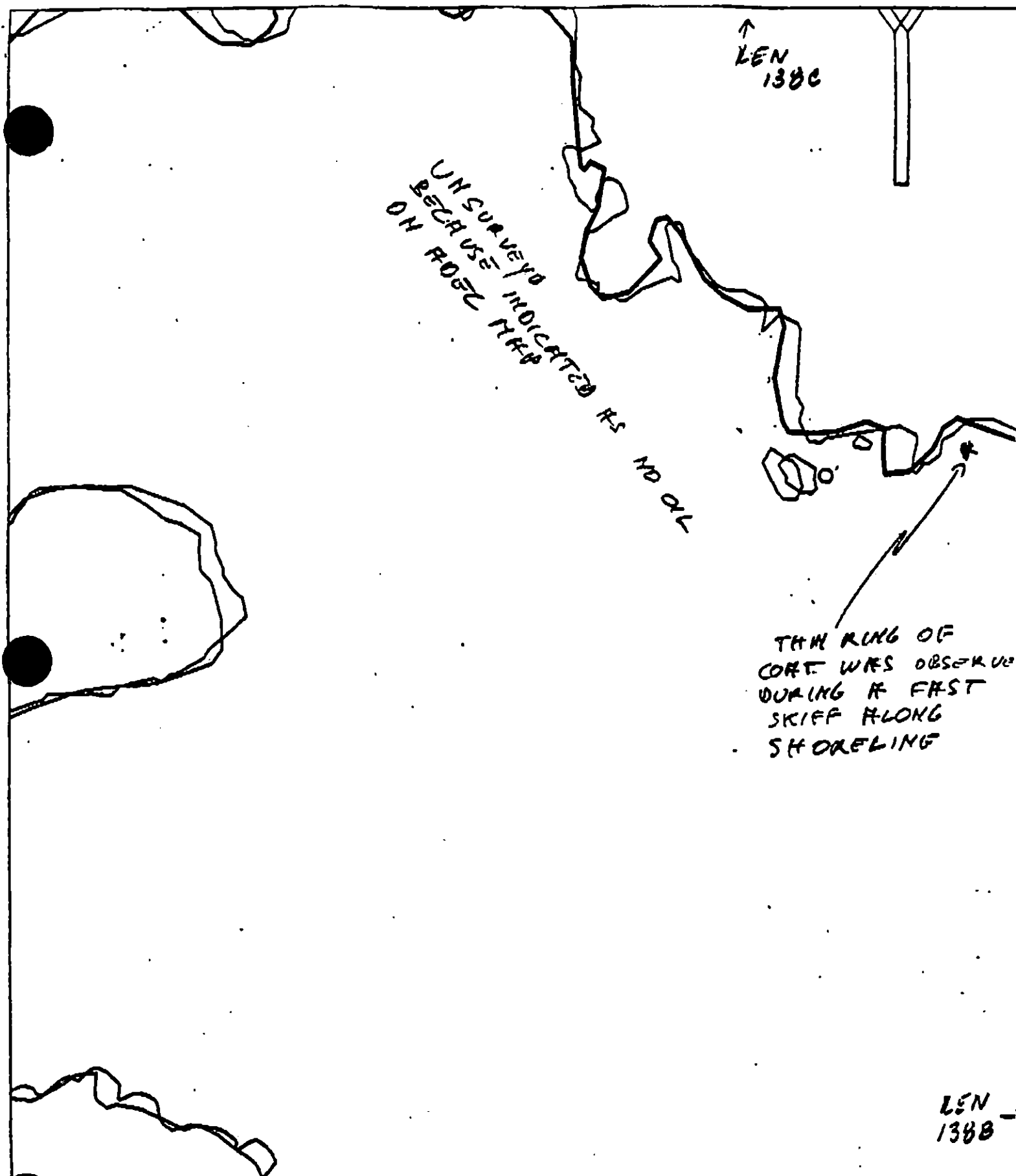
ST-YP-4-R

ADEC Segment Length: ⁴¹⁰⁷~~3500~~m

Map Key: KEN-138b

Name: K. DEBUSSCHERE

Date: 4/28/90



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

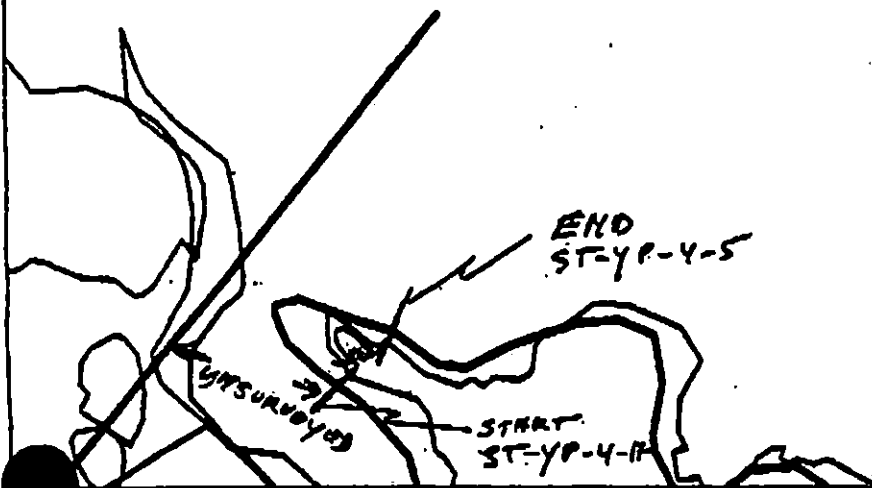
ST-YP-4-A

ADEC Segment Length: ⁴¹⁰⁷~~5411~~m

Map Key: KEN-138c

Name: K. DEBUSSCHEDate: 4/28/90

WALK



↓ ILEN 138A

XXXX Wide

//// Medium

--- Narrow

TTTT

ST-YP-4-R

ADEC Segment Length: ~~300m~~ 4107

Map Key: KEN-138c

Name: K. DEBUSSCHKE

Date: 4/29/90

*NO ECOLOGY MAP IS INCLUDED BECAUSE NO NOTEWORTHY RESOURCES WERE FOUND
SEE SKETCH MAP FOR LOCATION OF PHOTOGRAPHS.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/ YP-4 Subdivision A Date (mo / day / yr) 04/28/90

Time (24 hr) 1020 -1230 Biologist DAN REED

(A) Substrate type and % of segments:
(1) Bedrock 20 (2) Boulder 2 (3) Cobble 13 (4) Pebble 15 (5) Sand 0 (6) Silt 50

(B) Overall % cover of biota (% of segment): Dense 30 Moderate 40 Low 30

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

Photographs: Roll No. ST-9-4

Frames 8, 9, 10

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	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

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	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

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	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

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	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments:

ONLY A SMALL COVE OF THIS SEGMENT WAS SURVEYED. THE UNSURVEYED PORTION WAS PREVIOUSLY REPORTED AS NO OIL. MODERATE DENSITIES OF MUSSELS ON BEDROCK. LOW ZONE HAS DENSE ALGAL COVER CONSISTING PRIMARILY OF KELPS (LAMINARIA, COSTARIA, ALARIA).

Ecological Considerations:

CYMATHERE). MUD IN MID ZONE HAS MODERATE TO DENSE ALGAL COVER (ENTEROMORPHA, Filamentous BROWN ALGAE) THAT APPEARS TO BE GROWING DIRECTLY ON AN OIL MOUSSE LAYER ON THE MUD SURFACE. 1 PARIGRINE FALCON WITH ITS LIME PREY (SHORT-BILLED DOWITCHER?) FLEW LOW OVERHEAD AND DROPPED ITS PREY WHEN SURPRISED BY CSAT TEAM. NO OTHER WILDLIFE WAS OBSERVED IN THIS COVE.
— THERE APPEAR TO BE FEW "SENSITIVE" BIOLOGICAL RESOURCES IN THIS COVE.

OIL MAP

UNSURVEYED
BECAUSE INDICATED AS
OIL ON NOBEL MAP

← KEN 138A

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

ST-YP-4-R

ADEC Segment Length: ⁴¹⁰⁷~~3400~~m

0 100 200 300

Map Key: KEN-138b

Name: K. DEBUSSCHERE

Date: 4/28/90

↑
LEN
138C

UNSURVEYED BECAUSE
INDICATED HS NO OIL ON
ADEC MAP

OIL MAP

LEN
138B →

● XXX Wide

/// Medium

--- Narrow

TTTT Very Light

STYP-4-R

ADEC Segment Length: ⁴¹⁰⁷~~333m~~

0 12.5 100 200 300

Map Key: KEN-1380

Name: K. D. BRUSCHKE

Date: 4/22/90

OIL MAP

(SUBDIVISION "A")

END
ST-YO-4-5

START
ST-YO-4-4

↓ KEN 138A

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

ST-YP-4-A

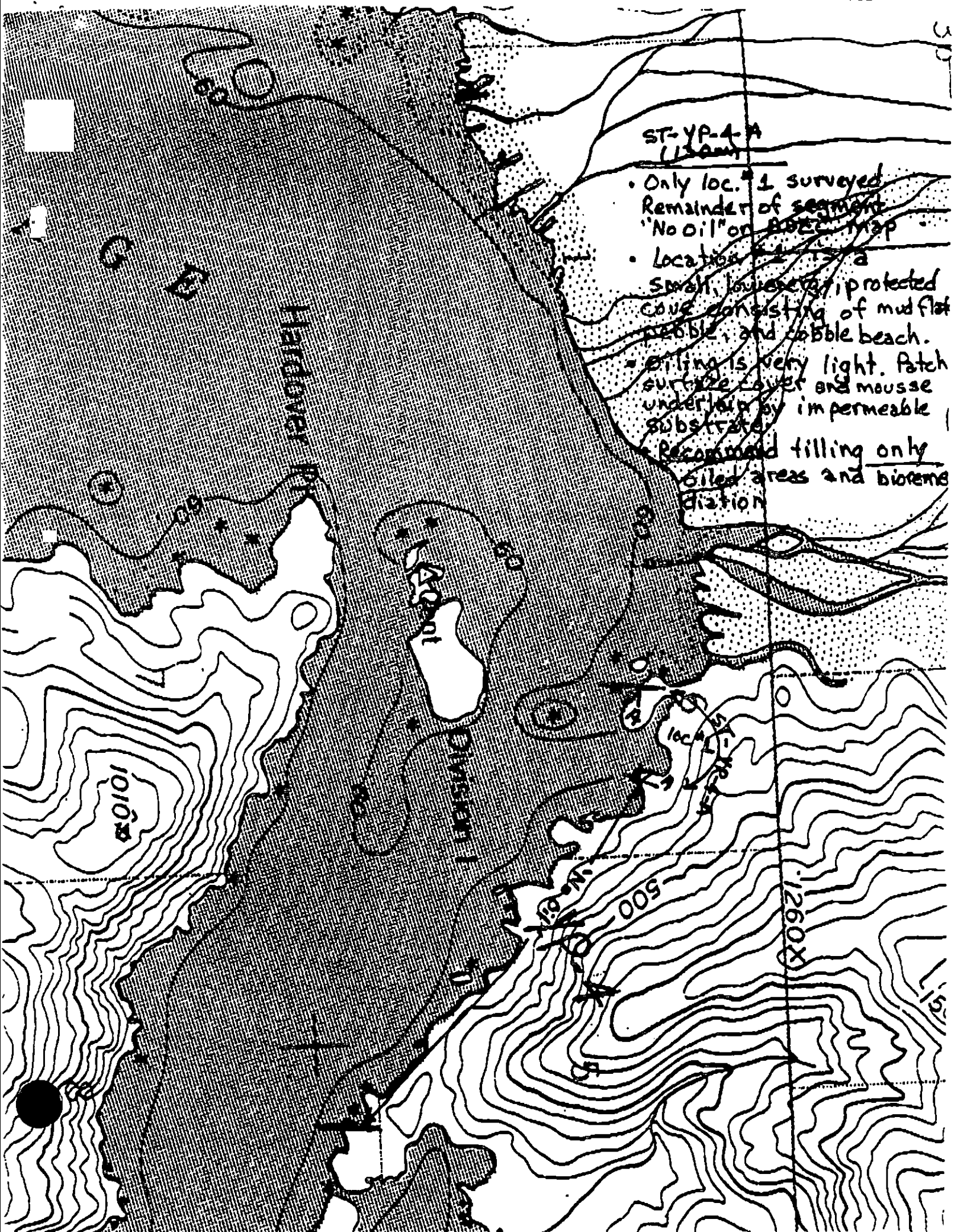
ADEC Segment Length: ⁴¹⁰⁷~~3300~~

Map Key: KEN-138c

Name: K. DEBUSSCHE

Date: 4/28/90





SHORELINE EVALUATION

SEGMENT ST/ YP-04 SUBDIVISION A (1 OF 1) DATE 4/28/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4GG Alaska State Parks
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and
contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

If 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: A. David McPherson DATE: 5/11/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 183 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 16 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of mousse patties, 2) manual tilling of areas shown on attached sketch map followed by 3) bioremediation of areas shown on attached sketch map. Work should be conducted after 6/1 with approval of USFWS regarding eagle nest constraint.

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/11/90 ..
 ADEC Art Wernick Art Wernick
 EXXON Andy Tera Andy Tera FOSC: my L DATE: 5-15-90
 NOAA Joseph Talbot Joseph Talbot
 USCG D. D. Rome D. D. Rome

OG K-DEB USSC HOK

SEGMENT TI/YP-4

SUBDIVISION A

DATE 4/28/90

SKETCH MAP

ST-YP-4-A

(loc. #1)

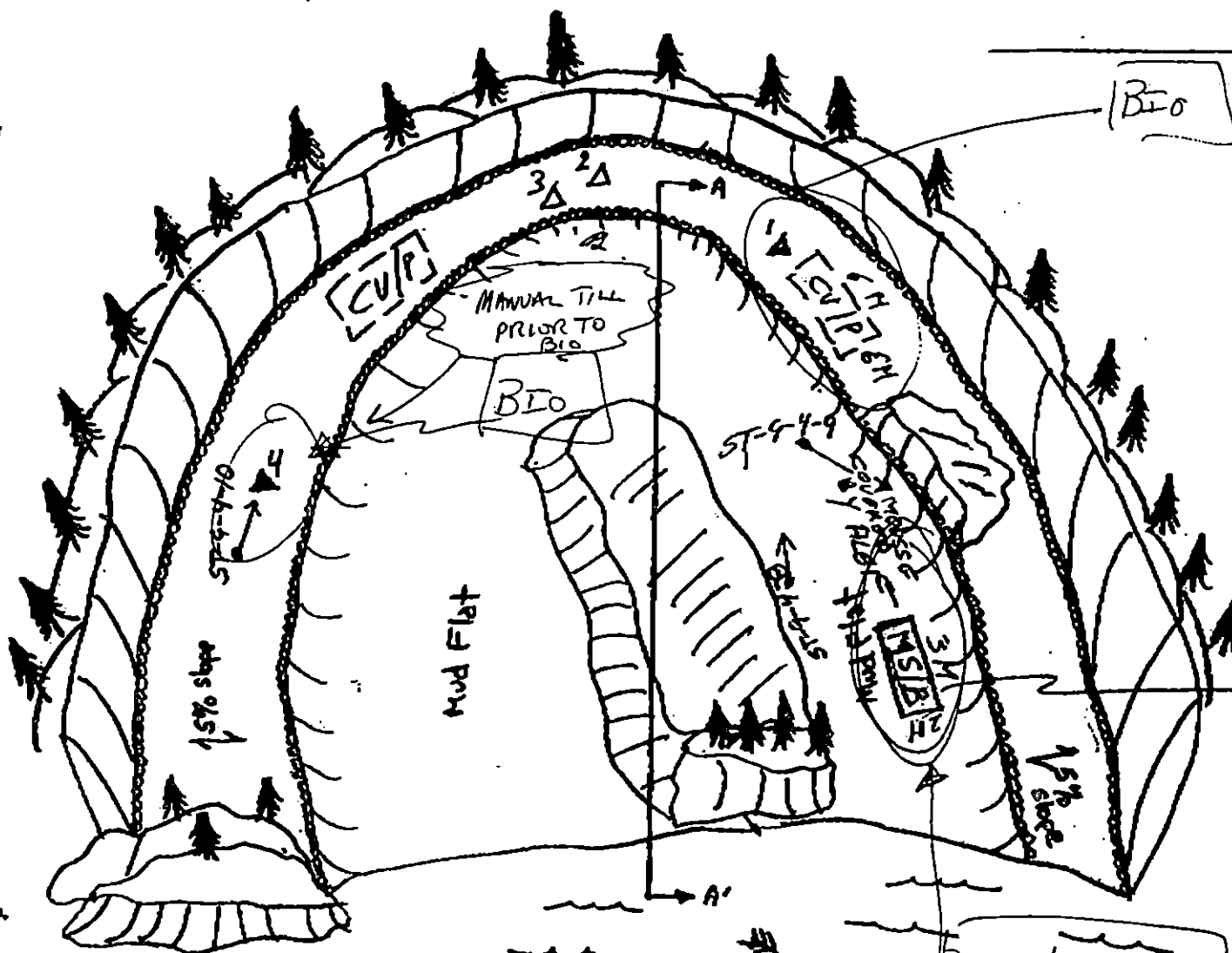
Profile A-

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Bdy Bdry
- ☐ 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
- PT - No Subsurface Oil
- 2 Δ
- PT - Subsurface Oil
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Spotted Distribution
- eee
- Obd Vegetation
- 1 ●
- Photo location, direction, and number



Oil Character Length (m): AP 0 PO 0 CV 127 CT 0 ST 0 MS 3 PT 0 TB 0 FL 0 NO 0

REVISIONS

UNSURVEYED
BECAUSE INDICATED
RS NO OIL ON ROBC MAP

← KEN 138A

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

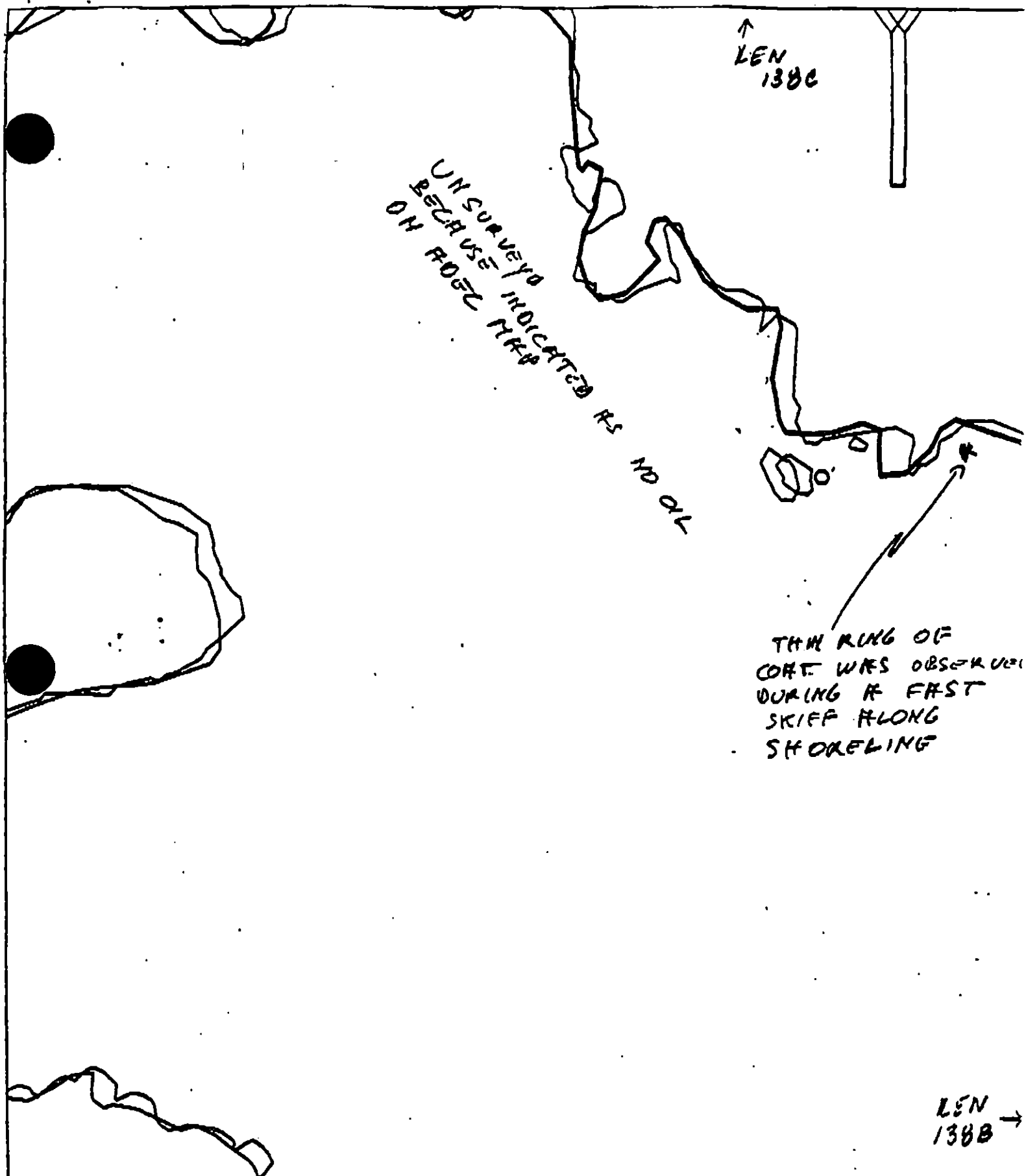
ST-YP-4-H

ADEC Segment Length: ⁴¹⁰⁷~~3900~~m

Map Key: KEN-138b

Name: K. DEBUSSCHERE

Date: 4/28/90



XXX Wide

/// Medium

--- Narrow

TTTT Very Light

ST-YP-4-H

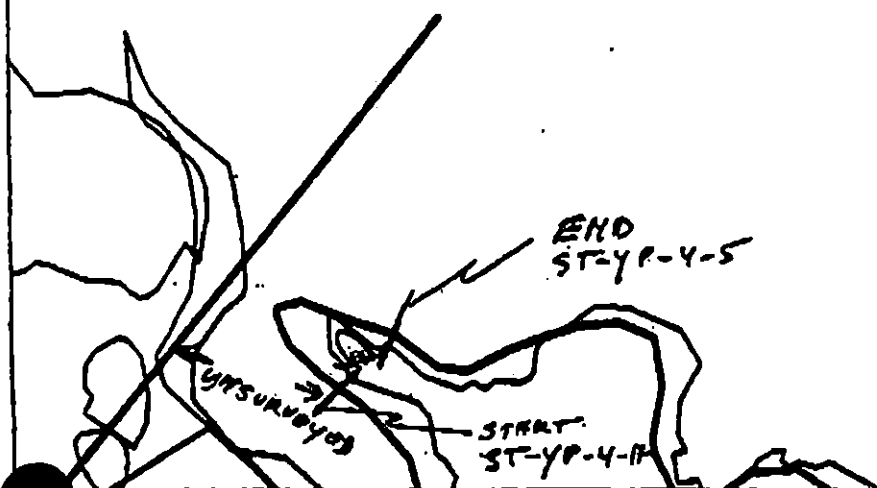
ADEC Segment Length: ~~500m~~ 4107

1 1.00 1.00 1.00

Map Key: KEN-1380

Name: K. DEBRUSSCHENDate: 4/28/90

W = WALK



↓ ILEN 138A

XXXX Wide

//// Medium

--- Narrow

TTTT Very Thin

ST-YP-4-R

ADEC Segment Length: ~~330m~~ 410m

Map Key: KEN-138c

Name: K. DEBUSSCHNE

Date: 4/29/90

OIL MAP

UNSURVEYED
BECAUSE INDICATED NO
OIL ON PROBE MARK

← KEN 138A

XXX Wide

/// Medium

--- Narrow

TTTT Very Light

ST-YP-4-R

ADEC Segment Length: ⁴¹⁰⁷~~3333~~m

0 100 200 300

Map Key: KEN-138b

Name: K. DEBUSSCHE

Date: 4/28/90

Date Entered:

↑
LEN
138C

UNSURVEYED BECAUSE
INDICATED RS NO OIL ON
ADEC MAP

OIL MAP

LEN →
138B

XXXX Wide

●/// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

STYP-4-R

ADEC Segment Length: ⁴¹⁰⁷~~3333~~m

12/17 100 200 300
meters

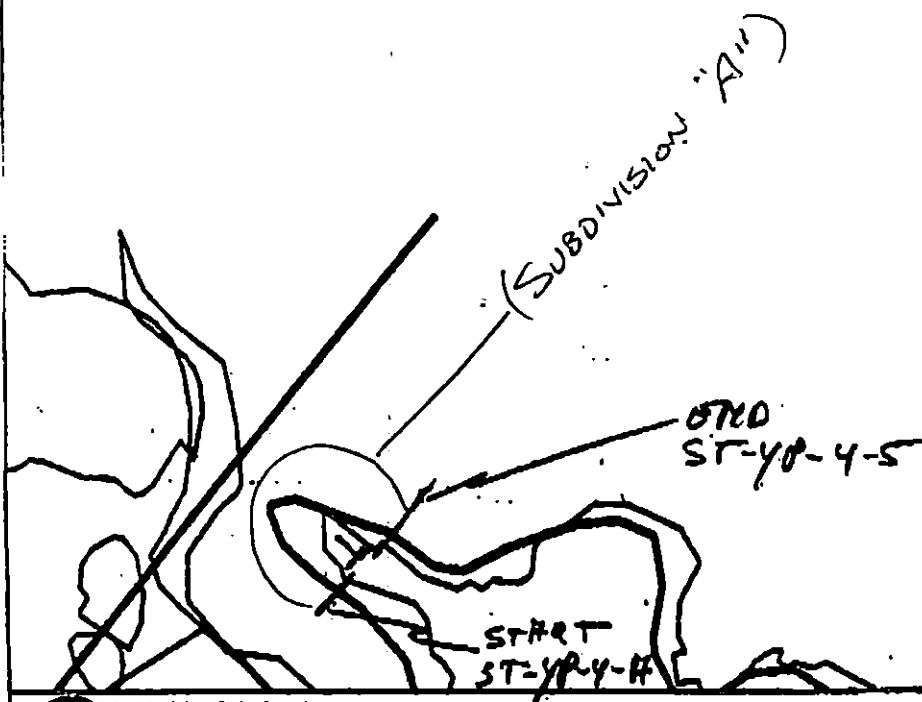
Map Key: KEN-1380

Name: K. DEBRUSSIERE

Date: 4/28/90

Data Entered:

OIL MAP



↓ KEN 138A

XXX Wide

//// Medium

---- Narrow

TTTT Very Light

ST-YP-4-A

ADEC Segment Length: ~~500m~~ 407



Map Key: KEN-138c

Name: K. DEBUSSCHE

Date: 4/24/90

ST-YP-4-A
(130m)

- Only loc. 1 surveyed. Remainder of segment "No oil" on BREC map.
- Location is a small, low-energy, protected cove consisting of mud flat, pebble, and cobble beach.
- Oiling is very light. Patch surface cover and mousse underlain by impermeable substrate.
- Recommended tilling only oiled areas and bioremediation.

Hardover Pt

1000

Division 1

1010

500

1260

loc 1

SEGMENT: YP 004 SUB: A REGION: KEN SURVEY DATE: 5/18/91

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

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

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

SHPO Signature: Timothy A. Smith Date: 6/03/91

FOSC

TREATMENT REQUIRED (Y or N)

N

 $\sim$

7

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 31 1991

FOSC APPROVAL DATE: 6/5/91

ADEC

FOSC

EXXON

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

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.

TEAM NO. 4 SEGMENT YP-4 SUBDIVISION A DATE 5/18/91

ADEC

 NAME Clara S. Crosby SIGNATURE Clara S. Crosby


NTR

Due to the light oiling & sensitivity of this area I don't believe any additional treatment of this subseg. would be effective -

EXXON

 NAME George P. Stiles SIGNATURE George P. Stiles 5/18/91


NTR

The majority of the segment's surface area is covered by a cobble/silt layer on top of peat. A silver sheen is produced when the armor coat is removed and the silt and peat is worked. A 3m x 6m area of 1cm thick AP was removed while surveying (4 bags). I feel no additional surface or subsurface oil can be effectively removed manually.

LANDMANAGER

 NAME Jeff Johnson OF ADNR SIGNATURE Jeff Johnson


NTR

Concur with other agency comments. Though the segment is within Kachemak Bay State Park, it would be impractical to attempt to remove the little oil that remains.

USCG/NOAA

 NAME John MacMahon/Dan Madenat SIGNATURE John MacMahon


NTR

very light oiling found among cobble. Further clean-up operations would cause more harm than good.

Donald Madenat

PAGE 2 OF 8

SEGMENT YP.004
SUBDIVISION A
DATE MAY 1 1991

ENERGY LEVEL: ☐ H ☒ M ☒ L

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 24 m NO 159 m US 0 m

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

OG COMMENTS: Small cove, bedrock steep bluffs backhous and bedrock outcrops as shoals. Pockets of pb/cb and substantial heat areas in the intertidal. Oiling consists of 250R, 750R, FC and some Ap. at the head of the cove (see map). Very scattered small patches. Look like remnants of more extensive oiled areas that were manually clean up. Oil very weathered, not very sticky, but relatively nonviscous, common.

REVIEWER: MC 5/22/91 reviewed 5.21 9y

Obj Sketch Map

7P.004-A

for Samples

MAY 18/91

0800 - 0855

Legend

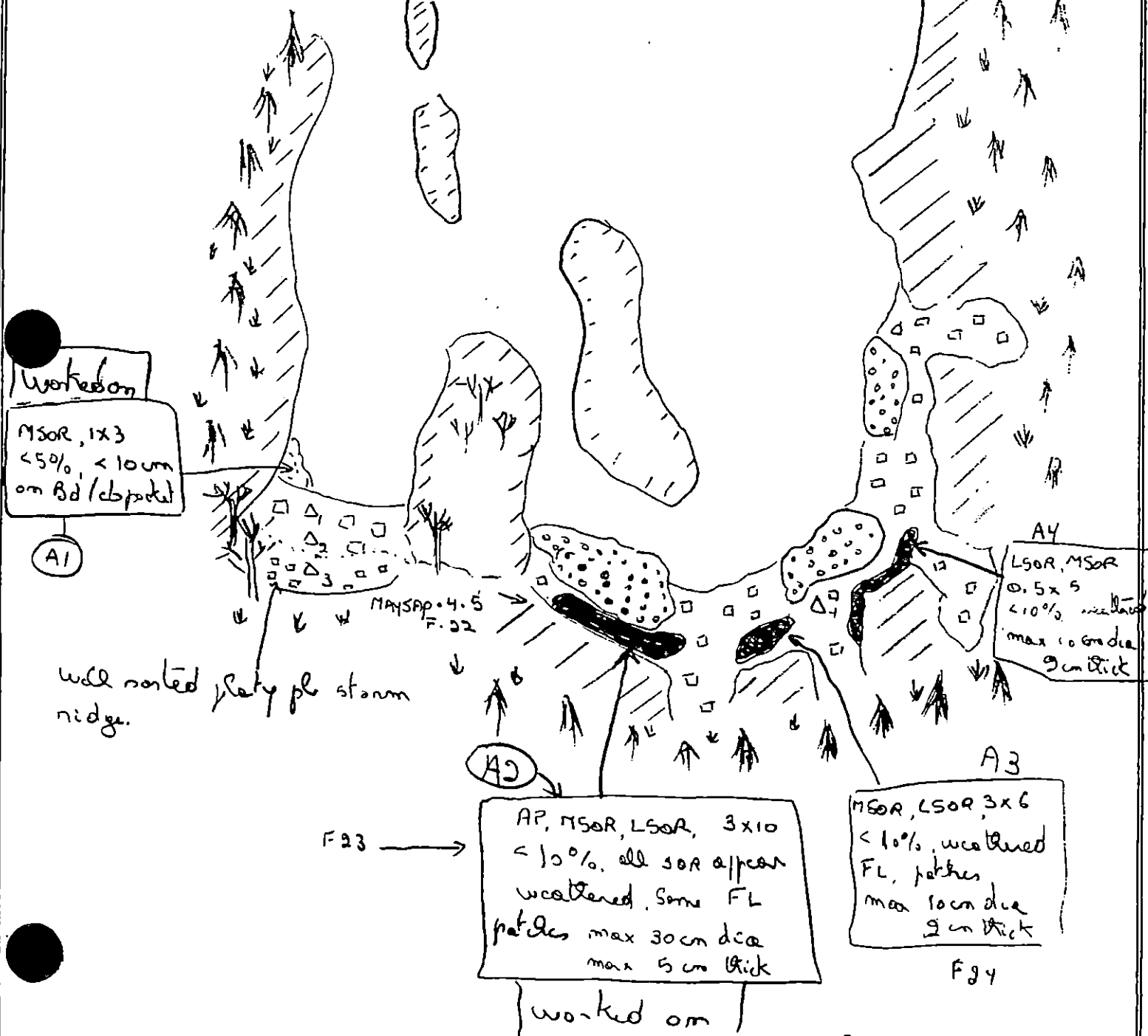
Bedrock bluff

vegetated hinterland

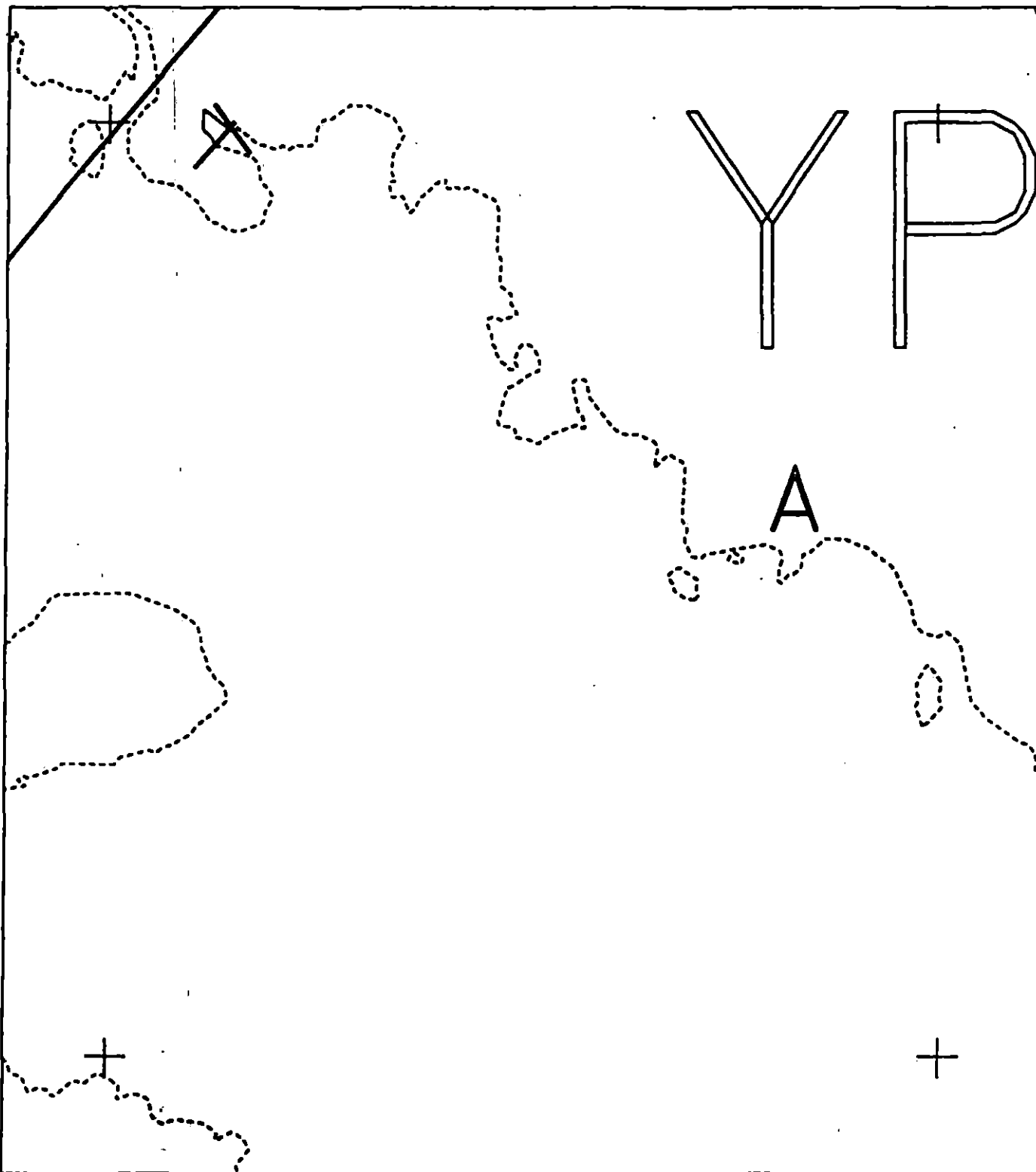
mosses, trees, grass
gentle slope

platy angular pb/cb

peat.



REVIEWED: MC 5/22/91
reviewed 5.21.94



YP004 A

METERS



AK State Plane Zone 4
87900400

Subdivision Field Map

Map Key: KENY0004Aa

Name: J M Semple

Date: MAY 18/9

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #	4	DATE/TIME	May 18, 1991 0806 - 0900
SEGMENT #	YP004	TIDAL HEIGHT (Range)	+6.0 => +3.2
SUBDIVISION	A	BIOLOGIST	JIM BARRY
SEA STATE	Calm	WIND SPEED/DIRECTION	SW 5-20 kt, rain

COMMENTS / OBSERVATIONS - OILED SUBDIVISIONS

A1-A4 This small cove has small patches of LSOR or MSOR and a band of LSOR which has been tilled and bioremediated. This area produces small sheens with films on some cobble, appears to have been well mixed with the poorly sorted fined grained sediments.

The oiled sediments are in the upper intertidal zone, where biota are generally sparse. Filamentous green algae are the most apparent organisms at the oiled area and form a sparse cover over some cobble. Littorine snails are found in high densities under some cobble, but are most abundant at the lower tidal level of the oiled site and much more abundant in the middle to low intertidal. Limpets are sparse at the oiled site. Oligochaete worms, amphipods, and isopods also are present under cobble in the oiled area.

The middle zone has a dense cover of Fucus over most of the larger cobble, boulders, and bedrock outcrops. Barnacles are similarly abundant from the lower edge of the upper zone to the lower zone. Mussels are sparsely distributed in the finer sediments, but occur in fairly dense patches in crevices on bedrock. Fucus, amphipods, mussels, barnacles, limpets, and littorine snails all show evidence of recruitment.

(continued)

WILDLIFE OBSERVATIONS - Completed on all subdivisions

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds	1	2	
Waterfowl	1	1	
Gulls/Kittiwakes	1	1	
Shorebirds	1	15	
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
Whales (specify)			
Killer Whales	4	in channel off Nuka Island	

Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/22/91

Thick peat layers are probably the most biologically sensitive feature of the site. This peat layer extends throughout the cove and probably into the lower intertidal, which was not observed during this tidal window. Clams are present in the sediments of the middle zone and may be much more abundant below.

Manual cleanup was performed at this site. Additional cleanup, if recommended, should not cause the removal of the peat layer. Manual tilling and bioremediation was performed in this area last year. A film and occasional coat of oil is present in the sediments, but treatment appears to have accelerated the degradation of the remaining oil.

Wildlife Observations

Harlequin Duck	1
Western Sandpiper	15
Pigeon Guillemot	2
Glaucous-winged Gull	1
Killer Whale	4 offshore

SEGMENTS YG-001, YG-002 AND YG-003

LEGEND

- | | |
|---|--|
|  SNOW |  BEDROCK CLIFFS |
|  WATER |  CORAL / REEF |
|  AREA OF OCCURRENCE OF OIL |  ROCK / SAND |
| |  SAND / MUD |

YALIX GLACIER

MAY 17, 1991

BLACK LICHEN,
SEA BIRDS, BIRDS,
CRABS, SPARSE LITTORINIDS,
LITTORINIDS, ANATIDES

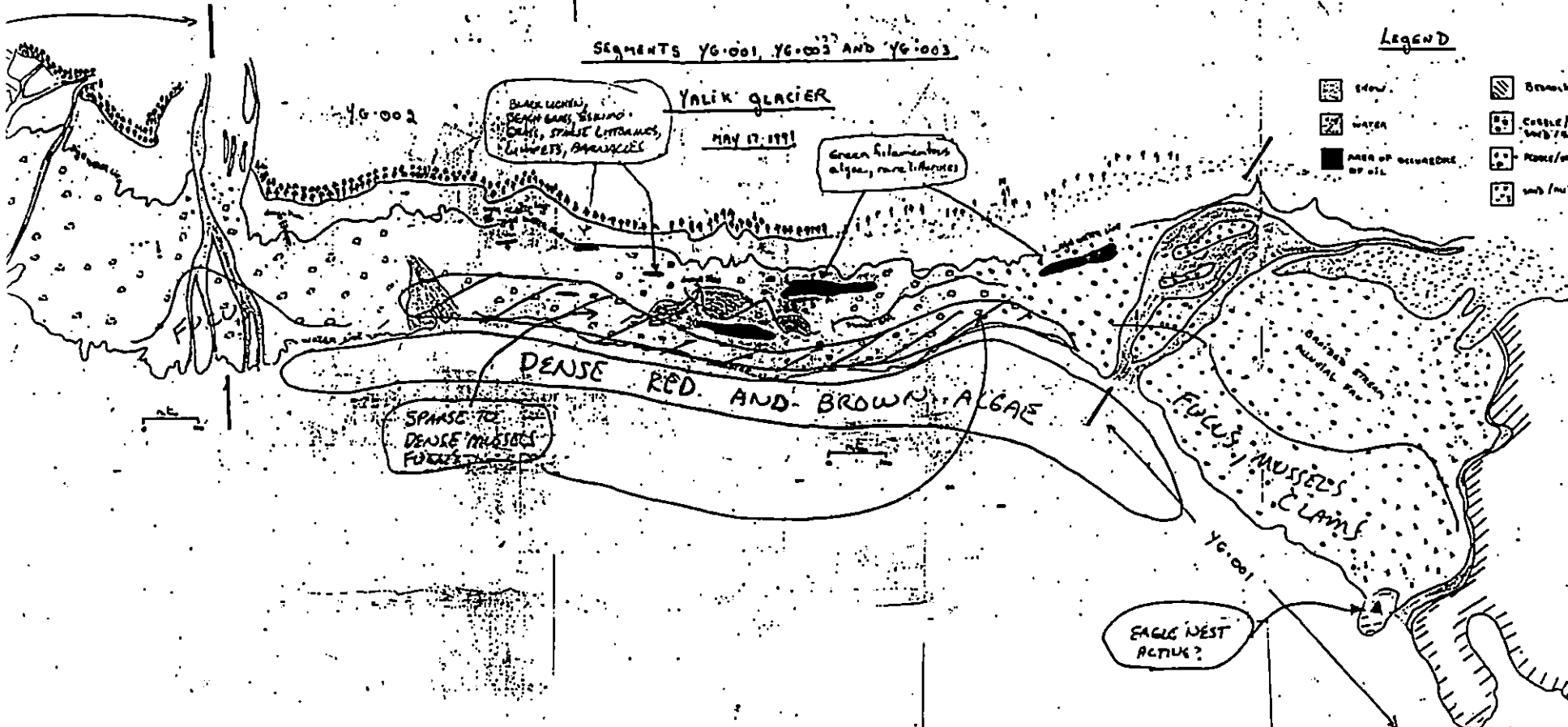
Green filamentous
algae, rare Littorinids

DENSE RED AND BROWN ALGAE

SPARSE TO
DENSE MUSSELS
FUCUS

FUCUS, MUSSELS
& LARVAE

EAGLE NEST
ACTIVE?



BIO SKETCH MAP

4P004-A

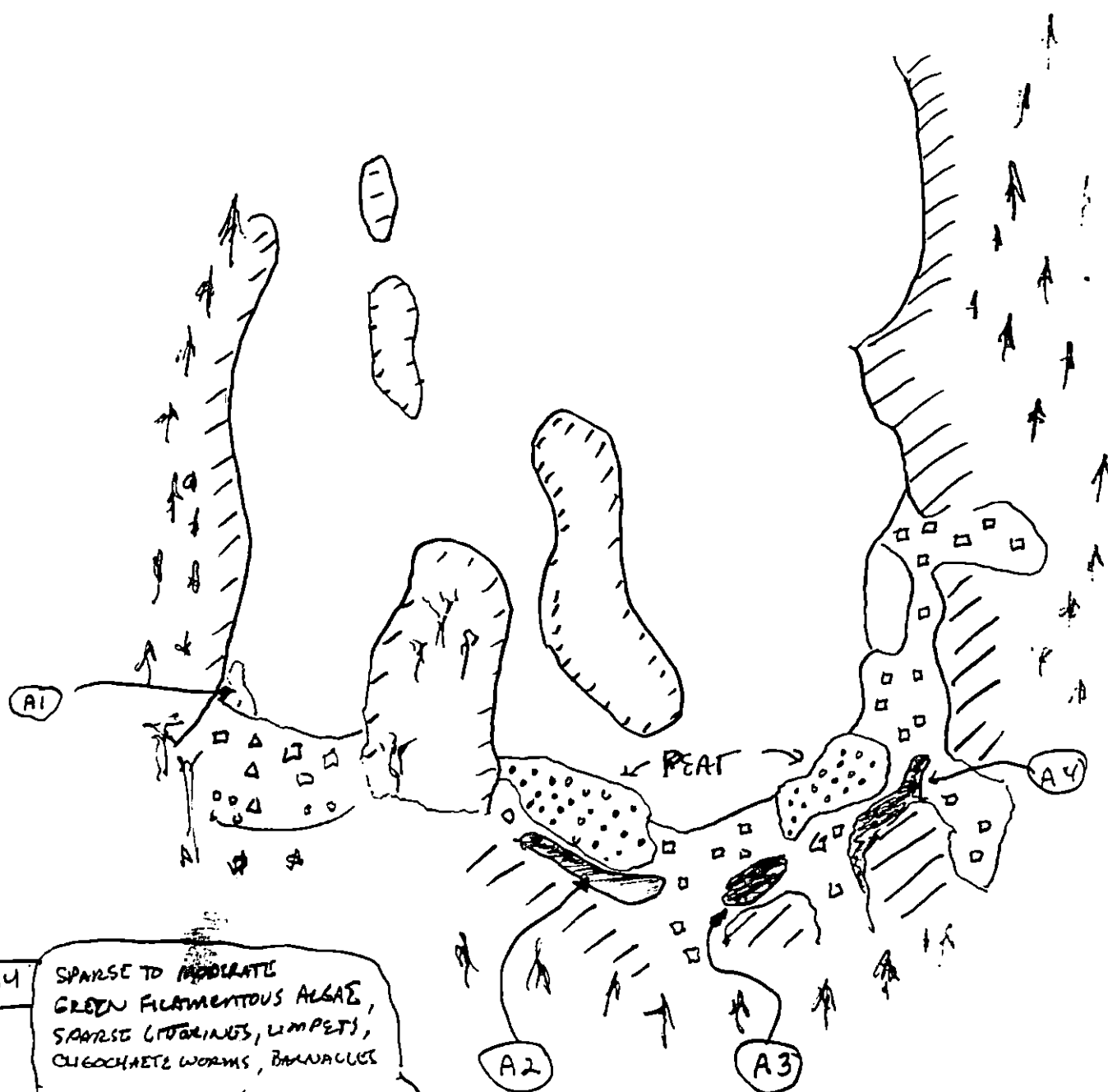
JP BARRY

MAY 18 1991

0800 - 0900

Legend

-  Bedrock Cliffs
-  Vegetated upland
-  FLAT ANGULAR PIRACI/COBBLE
-  PEAT



A1-A4

SPARSE TO MODERATE
GREEN FILAMENTOUS ALGAE,
SPARSE LICHENS, LIMPETS,
OLIGOCHAETE WORMS, BARNACLES

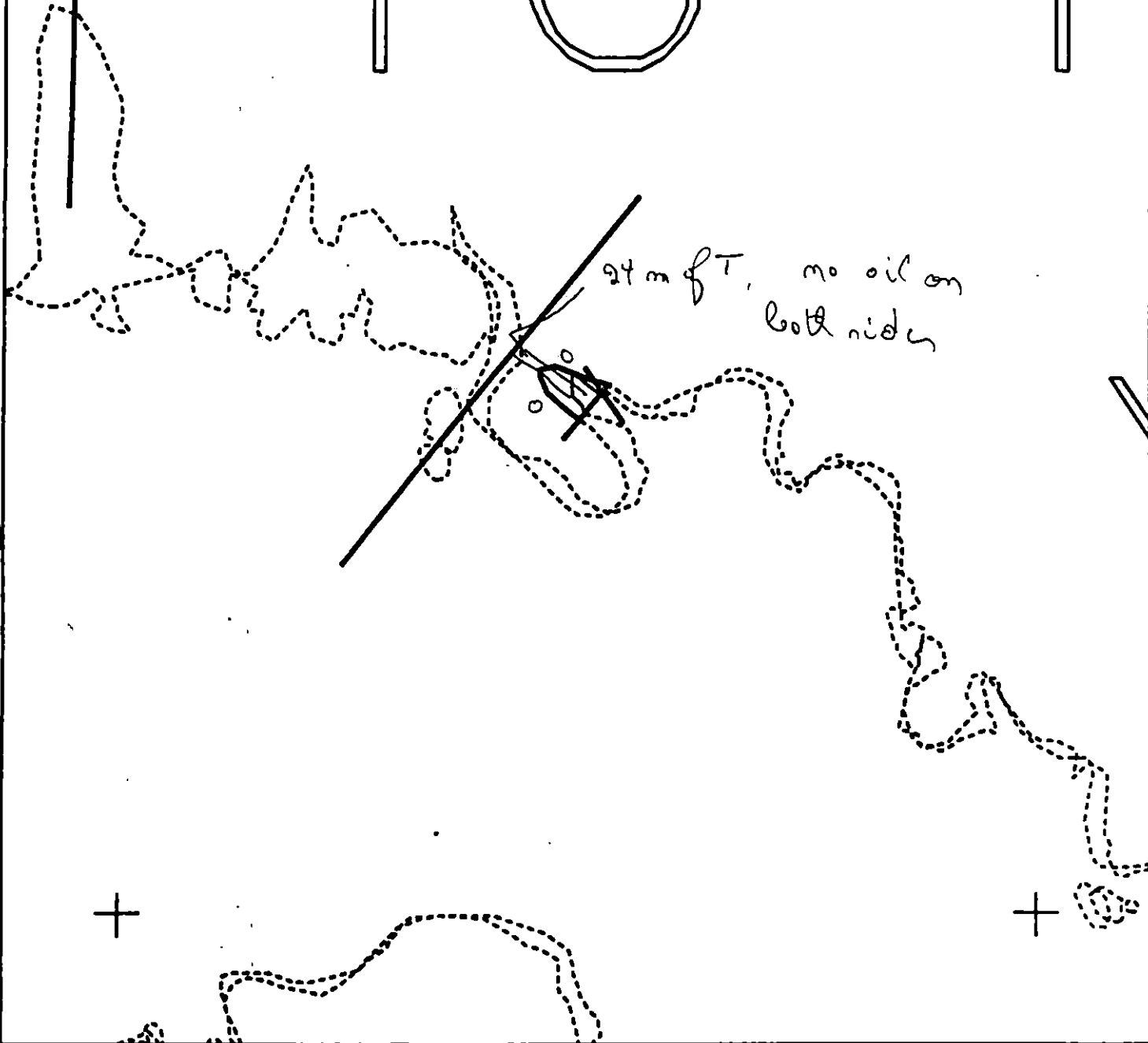
MODERATE FUCUS / BARNACLES ON
COBBLE / BOULDERS BELOW.
PATCHES OF MUSSELS ON BEDROCK
OUTCROPS. SCATTERED MUSSELS
IN COBBLE. THICK PEAT-CONTAINING
SEDIMENTS NEARBY & UNDER OILED
SEDIMENTS

+

Y G

—

1



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

YP004 A
 ADEC Subsegment Length: 183m
 METERS
 0 200 400
 AK State Plane Zone 4
 nyp004a

Subdivision Field Map
 Map Key: KENYP004A
 Name: J. J. Semples
 Date: MAY 18/90
 Date Entered:



Reviewed: MC 5/21/91
 reviewed 5.21.91

1991 MAYSAP EVALUATION

SEGMENT: YP 004 **SUB:** A **REGION:** KEN **SURVEY DATE:** 5/18/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ **Date:** _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.) _____

Spot Washing _____

Bio-Customblen Only _____

Bio-Inipol/Customblen _____

Other _____

Other _____

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

TEAM NO. 4 SEGMENT YP-4 SUBDIVISION A DATE 5/18/91

ADEC

NAME

Clara S. Crosby

SIGNATURE

Clara S. Crosby

☒ NTR

Due to the light oiling & sensitivity of this area I don't believe any additional treatment of this subseg. would be effective -

EXXON

NAME

George P. Stiles

SIGNATURE

George P. Stiles 5/18/91

☒ NTR

The majority of the segment's surface area is covered by a cobble/silt layer on top of peat. A silver sheen is produced when the armor coat is removed and the silt and peat is worked. A 3m x 6m area of 1cm thick AP was removed while surveying (4 bags). I feel no additional surface or subsurface oil can be effectively removed manually.

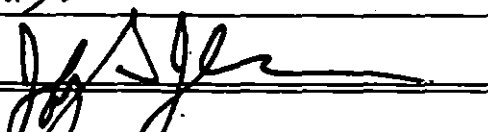
LANDMANAGER

NAME

Jeff Johnson

OF ADNR

SIGNATURE


☒ NTR

Concur with other agency comments. Though the segment is within Kachemak Bay State Park, it would be impractical to attempt to remove the little oil that remains.

USCG/NOAA

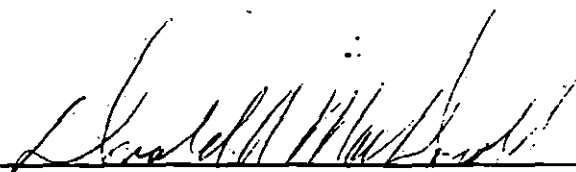
NAME

John McManus/Dan McDonald

SIGNATURE


☒ NTR

Very light oiling found among rubble. Further clean-up operations would cause more harm than good.



PAGE 2 OF 8

REVIEWER: MC 5/22/91 reviewed 5.21 9y

Og Sketch Map

YP.004 . A

for Samples

MAY 13/91

0800 - 0855

Legend

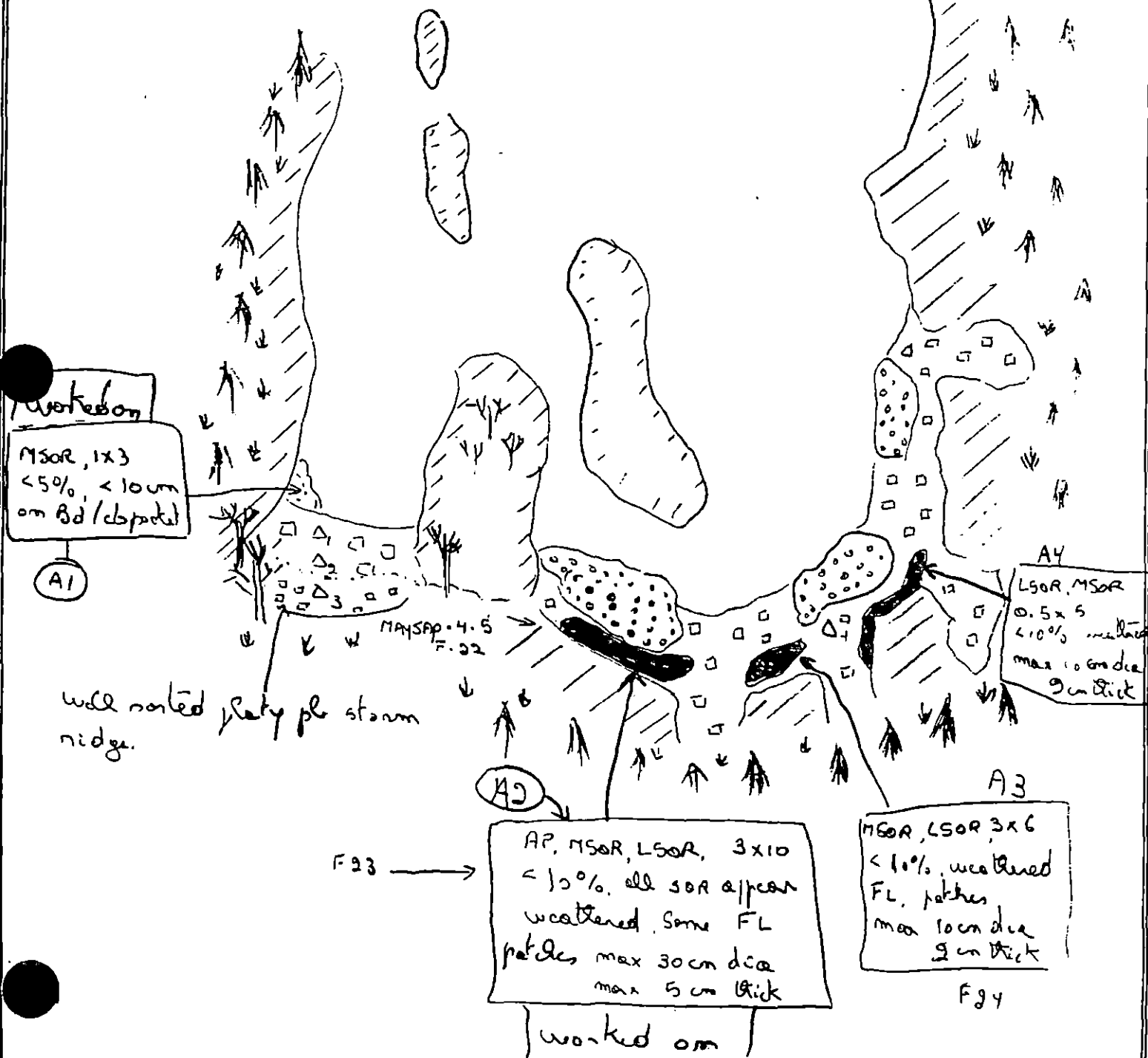
Bedrock bluff

vegetated hinterland

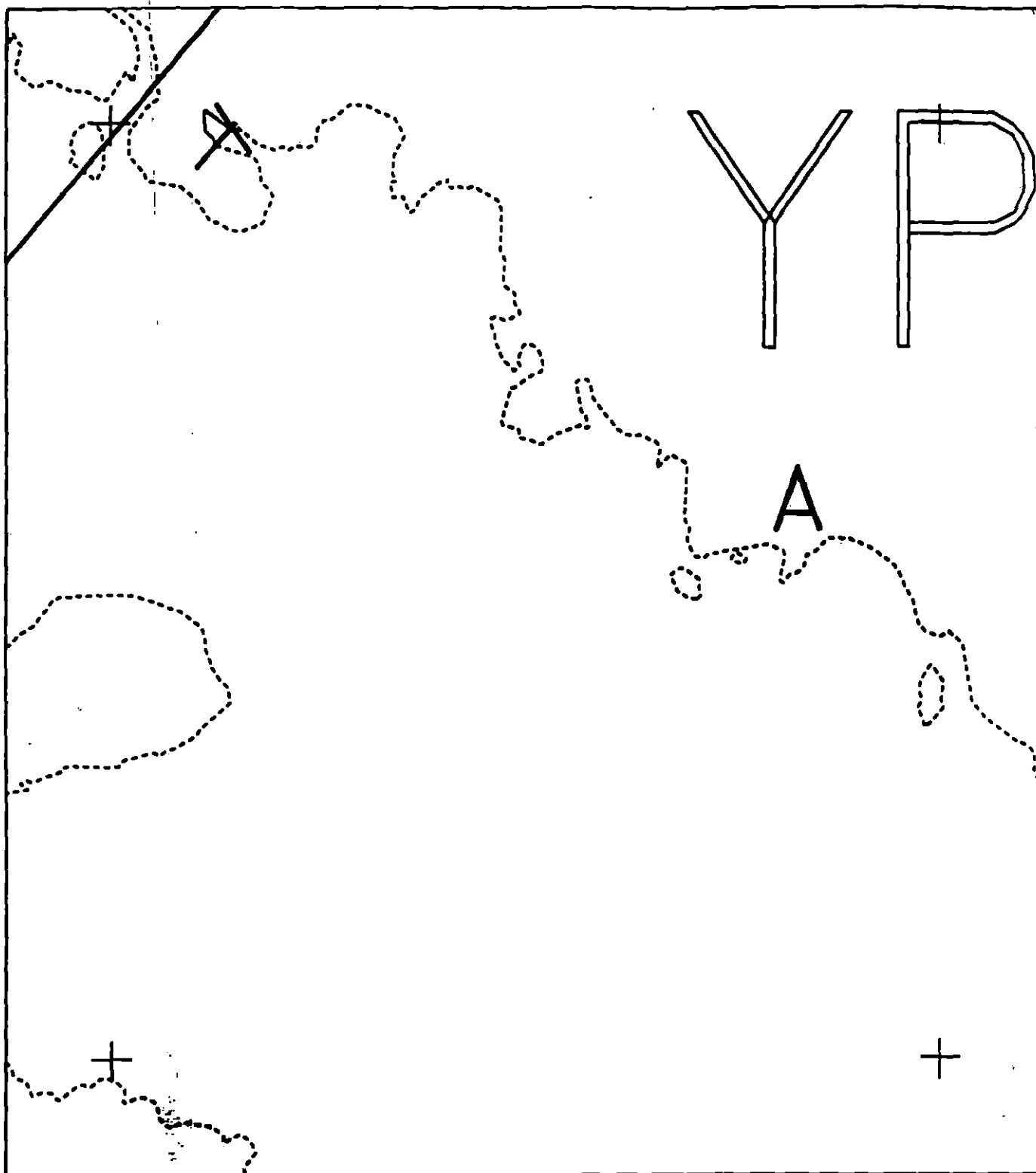
mosses trees grass
gentle slope

platy angular pb/ch

peat.



Reviewed: MC 5/22/91
reviewed 5.21.94



YP004 A

METERS

AK State Plane Zone 6
8700400

Subdivision Field Map

Map Key: KENYP004Aa

Name: J M SempleDate: MAY 18/9

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #	4	DATE/TIME	May 18, 1991 0806 - 0900
SEGMENT #	YP004	TIDAL HEIGHT (Range)	+6.0 => +3.2
SUBDIVISION	A	BIOLOGIST	JIM BARRY
SEA STATE	Calm	WIND SPEED/DIRECTION	SW 5-20 kt, rain

COMMENTS / OBSERVATIONS - OILED SUBDIVISIONS

A1-A4 This small cove has small patches of LSOR or MSOR and a band of LSOR which has been tilled and bioremediated. This area produces small sheens with films on some cobble, appears to have been well mixed with the poorly sorted fined grained sediments.

The oiled sediments are in the upper intertidal zone, where biota are generally sparse. Filamentous green algae are the most apparent organisms at the oiled area and form a sparse cover over some cobble. Littorine snails are found in high densities under some cobble, but are most abundant at the lower tidal level of the oiled site and much more abundant in the middle to low intertidal. Limpets are sparse at the oiled site. Oligochaete worms, amphipods, and isopods also are present under cobble in the oiled area.

The middle zone has a dense cover of Fucus over most of the larger cobble, boulders, and bedrock outcrops. Barnacles are similarly abundant from the lower edge of the upper zone to the lower zone. Mussels are sparsely distributed in the finer sediments, but occur in fairly dense patches in crevices on bedrock. Fucus, amphipods, mussels, barnacles, limpets, and littorine snails all show evidence of recruitment.

(continued)

WILDLIFE OBSERVATIONS - Completed on all subdivisions

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds	1	2	
Waterfowl	1	1	
Gulls/Kittiwakes	1	1	
Shorebirds	1	15	
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
Whales (specify)			
Killer Whales	4, in channel off Nuka Island		

Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/22/91

YP004-A

Thick peat layers are probably the most biologically sensitive feature of the site. This peat layer extends throughout the cove and probably into the lower intertidal, which was not observed during this tidal window. Clams are present in the sediments of the middle zone and may be much more abundant below.

Manual cleanup was performed at this site. Additional cleanup, if recommended, should not cause the removal of the peat layer. Manual tilling and bioremediation was performed in this area last year. A film and occasional coat of oil is present in the sediments, but treatment appears to have accelerated the degradation of the remaining oil.

Wildlife Observations

Harlequin Duck	1
Western Sandpiper	15
Pigeon Guillemot	2
Glaucous-winged Gull	1
Killer Whale	4 offshore

BIO SKETCH MAP

4P004-A

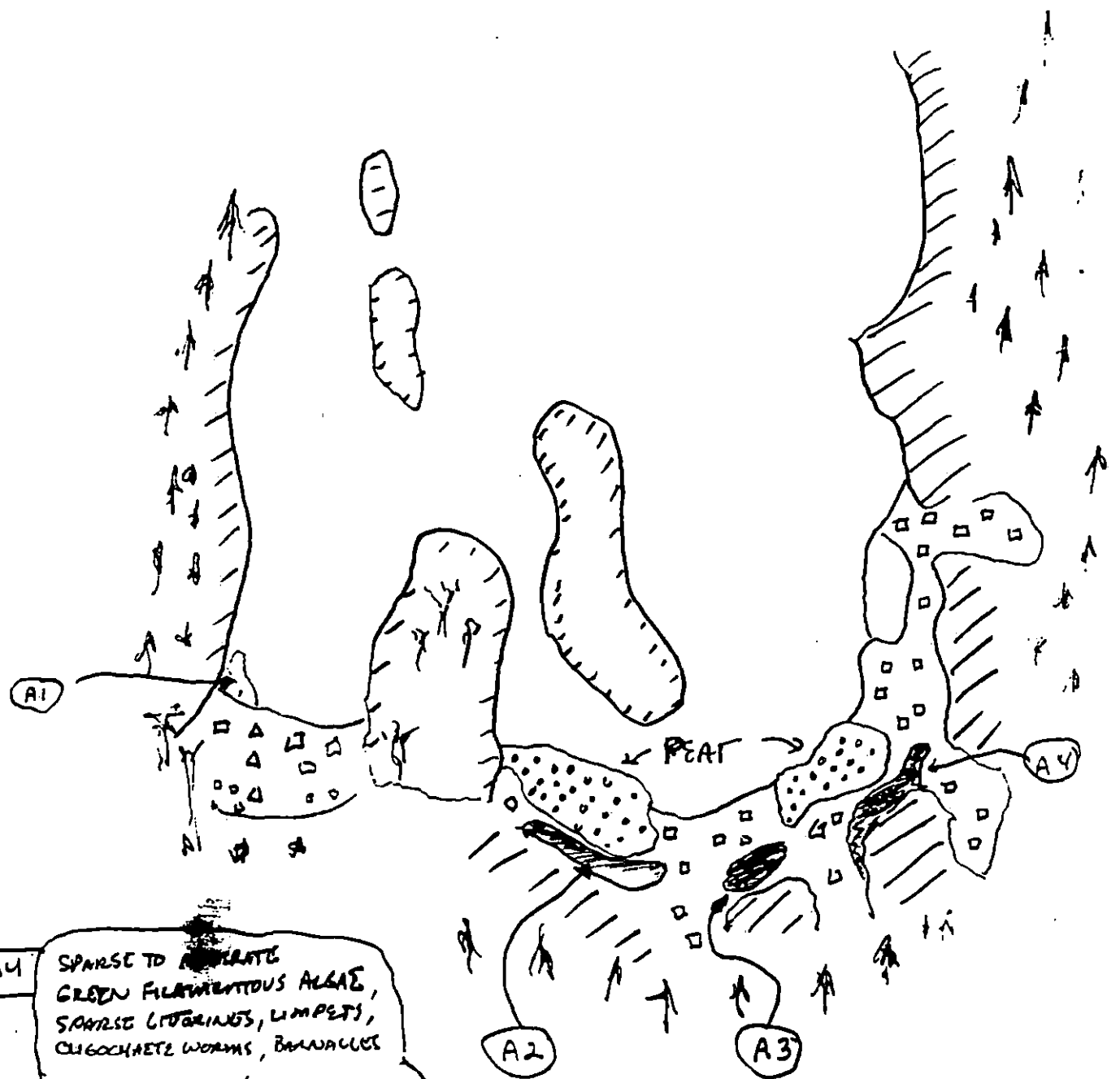
JP BARRY

MAY 18 1991

0800-0900

Legend

-  Bedrock Cliffs
-  Vegetated upland
-  FLAT ANGULAR PIRALIS/COBBLE
-  PEAT

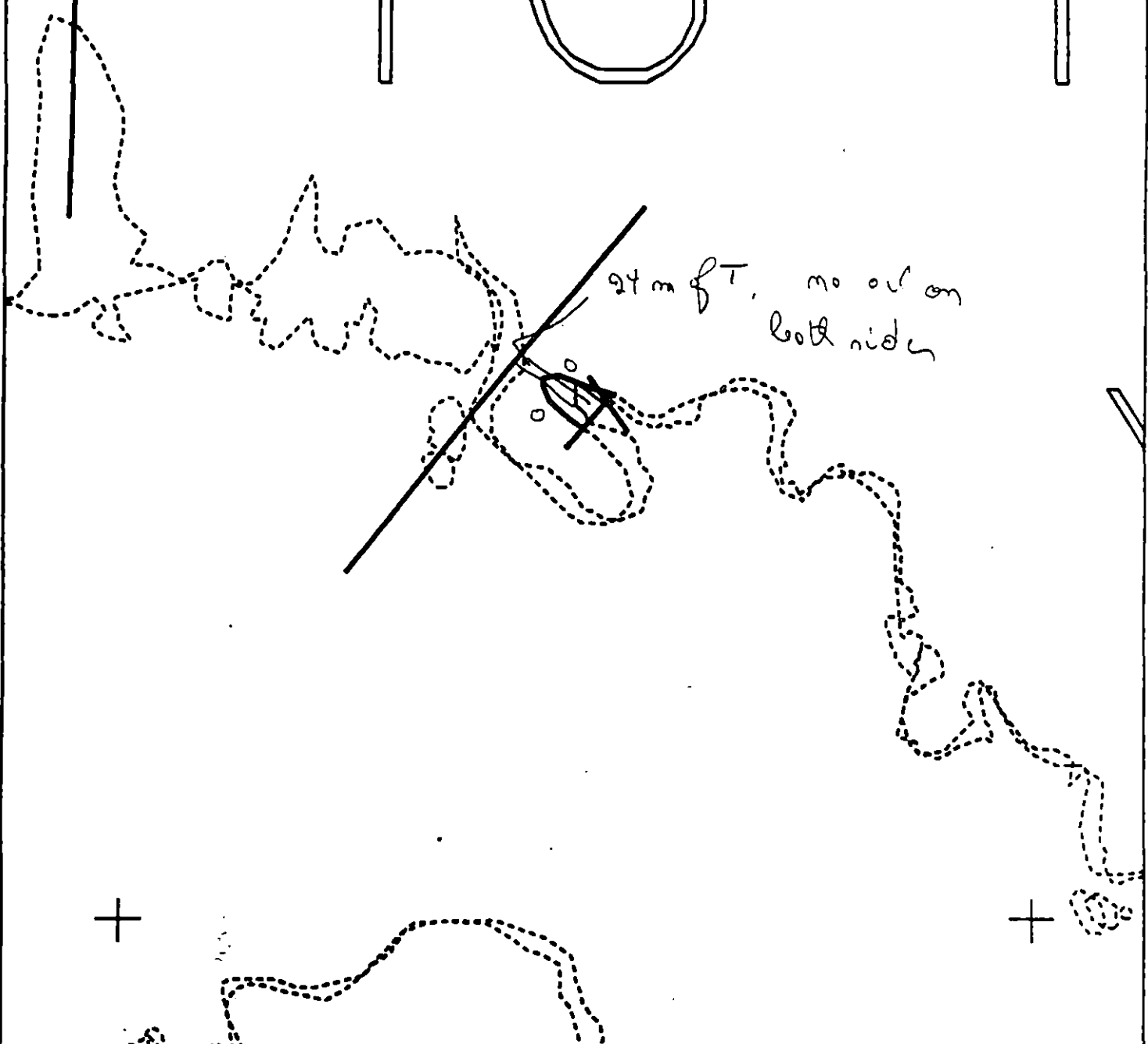


A1-A4

SPARSE TO MODERATE
GREEN FILAMENTOUS ALGAE,
SPARSE LITHAMNIDS, LIMPETS,
CHIRONOMID WORMS, BARNACLES

MODERATE FOCUS (BARNACLES ON
COBBLE/BOULDERS BELOW.
PATCHES OF MUSSELS ON BEDROCK
OUTCROPS. SCATTERED MUSSELS
IN COBBLE. THICK PEAT-CONTAINING
SEDIMENTS NEARBY & UNDER OILED
SEDIMENTS

+ Y G - 1



XXXX	Wide	YP004 A	Subdivision Field Map
////	Medium	ADEC Subsegment Length: 183m	Map Key: KENYP004A
----	Narrow	METERS	Name: <u>J. J. Sample</u>
TTTT	Very Light	0 200 400	Date: <u>MAY 18/91</u>
0000	No Oil	AK State Plane Zone 4 nyp004a	Date Entered:

Reviewed: MC 5/21/91
Reviewed 5.21.91

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT YP-4 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	CLOSED
Bioremediation Manual Tilling	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T **Bald Eagle Nest**

USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to manual pickup, bioremediation, and manual tilling within 400m of active nest. No constraint to manual pickup, bioremediation, and manual tilling more than 400m from active nest.

OTHER ECOLOGICAL CONSIDERATIONS

If eagle nest constraint is removed, other ecological considerations will apply.

FOSC

A. Zampelli

Date

6/14/90

Prepared by

V. P. Phillips

Date

6/14/90

YG-1

YP-4

WORK
AREA

YP-3



Exxon Company, USA
Map Key: KEN-YP-4
June 10, 1990



ECOLOGY MAP
SEGMENT YP-4
SUBDIVISION A (1 of 1)
METERS

0 557 1114

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

1 inch = 1827 feet

SHORELINE EVALUATION

SEGMENT ST/ YP-04 SUBDIVISION A (1 OF 1) DATE 4/28/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4GG Alaska State Parks

5T-1 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 Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: [Signature]

DATE: 5/11/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 183 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 16 cm

RECOMMENDATIONS:

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

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

COMMENTS: Recommended treatment includes 1) manual pickup of mousse patties, 2) manual tilling of areas shown on attached sketch map followed by 3) bioremediation of areas shown on attached sketch map. Work should be conducted after 6/1 with approval of USFWS regarding eagle nest constraint.

SEE CONSTRAINTS ADDENDUM dated 6/14/90

TAG COMMENTS:

TAG APPROVAL DATE: 5/11/90

ADEC [Signature]
EXXON [Signature]
NOAA [Signature]
USCG [Signature]

FOSC: [Signature]

DATE: 5-18-90

REGION: KENAI

SEGMENT: ST/YP-02

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ YP-02 SUBDIVISION A (1 OF 1) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 51 m: No Oil 2084 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: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ YP-2 SUBDIVISION: A DATE 4-26-90NAME STEPHEN STURM SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

NARROW BAND OF BROKEN COAT WAS PRESENT ON VERTICAL ROCK FACES AT LOCATION #1. NO SUBSURFACE OIL WAS PRESENT ON THE PEBBLE/GRAVEL BEACH ITSELF AS PREVIOUSLY REPORTED IN ADEC FALL SURVEY MAP. PITS WERE DUG ALONG AN EXXON SURVEY TRANSECT. AS STATED PREVIOUSLY NO OIL WAS PRESENT IN THE SUBSURFACE.

SIMPLY STATED THERE WAS NOT ENOUGH OIL PRESENT TO WARRANT TREATMENT. VERY SCENIC AREA.

ADEC

NAME Wesley Ghormley SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

- ONLY a very small portion of oil consisting of coat was observed on this segment. It was located on the west side of gravel beach in location #1. Exxon had a test site on location dated 3-15-90, Exxon subsurface test site. 5 pits were dug @ an average of 50 CM to try to locate subsurface oil. None was observed. A very large portion of this segment was classified as no oil on ADEC walkathon map. It was surveyed by Team via skiff due to vertical bedrock cliffs. No oil was observed.

- small amount of coat that was present was extremely weathered; beach seems to be a very high energy beach due to overturned boulders.

LAND MANAGER

NAME David McMahon ADUR SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

ST-YP-2A location #1 is a small pocket beach and adjacent vertical rock exposures. A drowned forest is situated just above the existing storm barrier. Only traces of oil were found on the vertical rock faces & no cleanup is recommended. Due to close proximity of cultural resource site SEL-119, it is desirable to keep cleanup in the area to a minimum. Area is not recommended for public use. Fresh black bean

SHORELINE OILING SUMMARY

REVISION NO. 04-12-90

OG K. DEBUSSCHERE ~~NOVA~~ STEPHEN STURN SEGMENT ST/ YP-2
 BIO D. REED LAND REP David McMahon ADNR SUBDIVISION H (1 OF 1)
 EXXON T. 0142 ADEC Wesley Goharmley TIME 19:50 to 20:50
 TEAM NO. 9 TIDE LEVEL 2 → 1.75 FT DATE 4/26/90
 EST. SUBDIVISION LENGTH: 2821 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 90 % B 2 % C 2 % P 5 % G 0 % S 1 % M 0 % V 0 %
 SLOPE: Lang 10 % Hang 30 % Vert 60 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 30 m NO 2791 m

SURFACE OIL

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

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

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

Photographs:

Roll No. ST-9-3Frames 29

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	SP BR	OR BR	OT BR	SL	SR BR	LT BR	SU	U	M	L						
1	60					X	.									X						N	-	P-P&S	
2	50					X	.									X						N	-	P-P&S	
3	50					X	.											X				N	-	P&S-P&Soc	
4	60					X	.									X						N	-	P-P&S	
5	30					X	.										X					N	-	P-P&S	
							.																		

COMMENTS

- SEGMENT IS DOMINATED BY VERTICAL TO HIGH ANGLE BEDROCK WITH SOME PEBBLE/COBBLE/SAND BEACHES. - RELATIVELY HIGH ENERGY ENVIRONMENT
- LOCATION ①, A LOW ANGLE P/C/S BEACH, IS THE ONLY AREA WHERE OIL WAS OBSERVED - OIL CONSISTED OF VERY WEATHERED COAT ON VERTICAL BEDROCK WALLS TO THE N AND S OF THE BEACH AT LOCATION ①
- SUBSURFACE OIL INDICATED ON FALL '89 ADEC SURVEY MAP WAS NOT OBSERVED (PITS # 1-5)
- NOTE: A MARKER WITH THE "EXXON SUBSURFACE MARKER IS 1990" IS LOCATED ON BEACH AT LOCATION ①

REVIEWED

DATE 4/27/90

S = SKIFF

W = WALK

END
ST-YP-2-A

PIT #1 → 5

COAT/P
ON BEDROCK

COAT/B
ON BEDROCK

ST-9-3-29

START
ST-YP-2-A

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ST-YP-2-A

2821

ADEC Segment Length: ~~2821~~ m



Map Key: KEN-1360

Name: K. DEBUSSCHERF

Date: 4/26/90

Date Entered:

SHORELINE ECOLOGICAL SUMMARY

REVISED: 03/22/90

Segment ST / YP-2 Subdivision A Date (mo / day / yr) 07/26/90
 Time (24 hr) 1945-2050 Biologist D. Reed

- (A) Substrate type and % of segments:
 (1) Bedrock 10 (2) Boulder 2 (3) Cobble 2 (4) Pebble 5 (5) Sand 1 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 75 Moderate 5 Low 20
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs: ST-9-3
 Roll No. 29
 Frames 29

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

NOT PRESENT

Wildlife Observations/ General Comments: 15 HERRING GULLS, 2 OYSTER CATCHERS, 35 GLAUCOUS WING GULLS, DENSE BANDS OF MUSSELS 2m wide on vertical bedrock. mostly 2cm in length. Low zone has dense algal cover consisting primarily of Alaria, Halgasacum, Rhodomenia, and Callophyllus s. NEREACYSTIS IN SUBTIDAL.

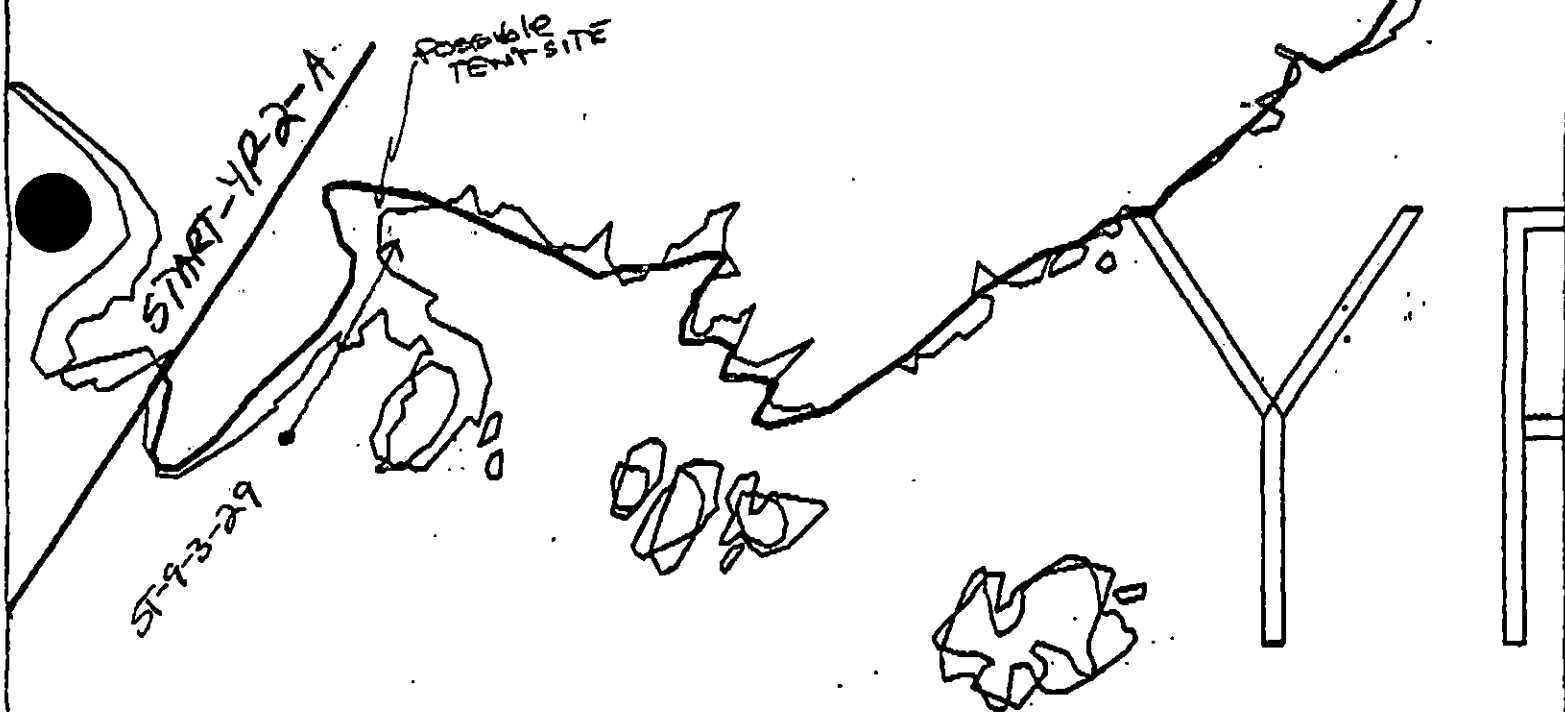
Ecological Considerations:

NONE - VERY little oil in this segment of relatively exposed shoreline. IF cleaning is recommended, recovery of intertidal biota from disturbances incurred during cleaning would probably be rapid.

ECOLOGY MAP

Resource codes for entire segment
bu

END ST-YP-2-A



XXXX Wide

ST-YP-2-A

/// Medium

ADEC Segment Length: 1891m

--- Narrow

TTTT Very Light

0000 No Oil

7/13 100 200 300
METERS



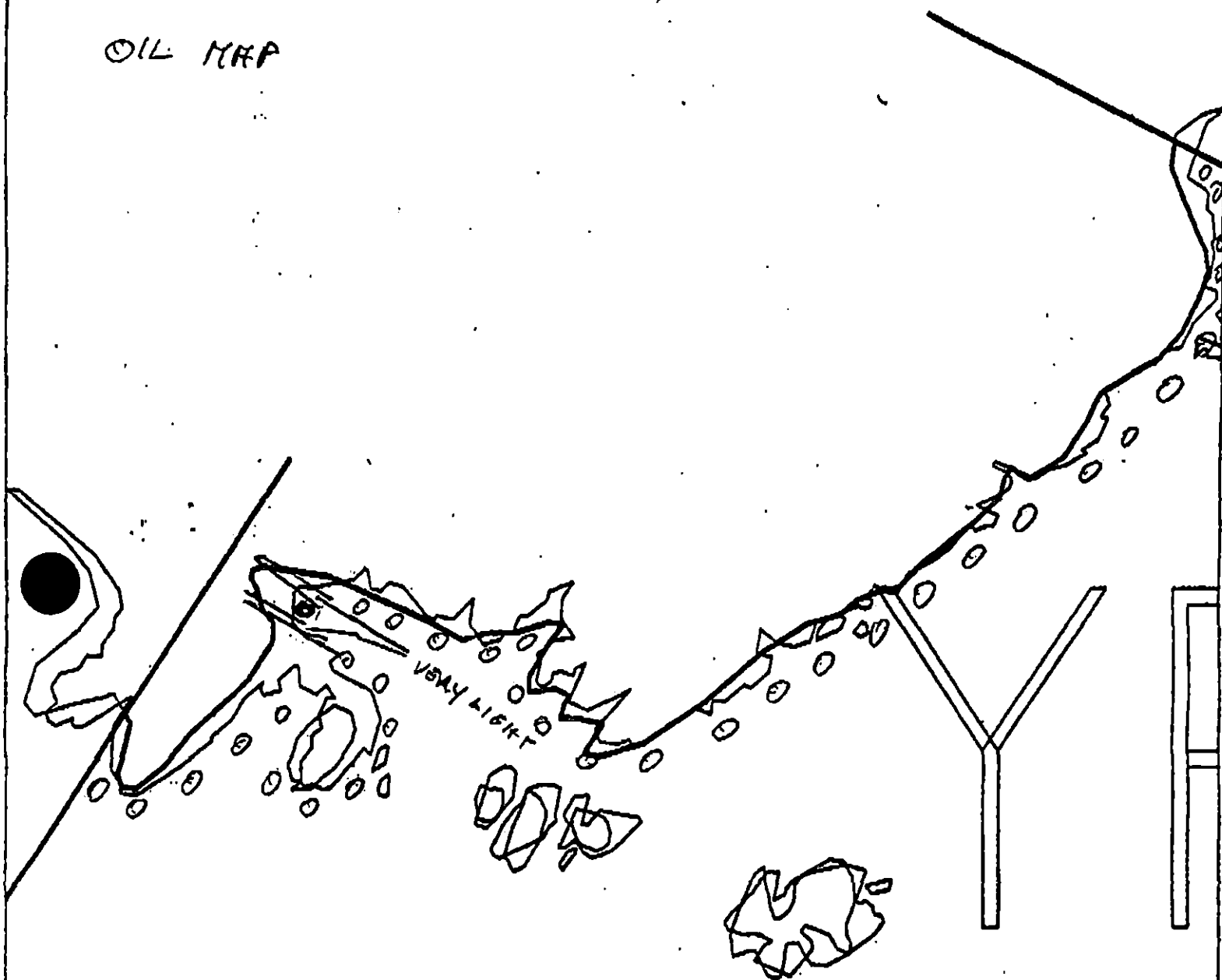
Map Key: KEN-136a

Name: DAN Reed

Date: 04/26

Date Entered:

OIL MAP



XXXX Wide

● // Medium

--- Narrow

TTTT Very Light

0000 No Oil

ST-YP-2-A

ADEC Segment Length: 282/100m

8/13 100 200 300 METERS

Map Key: KEN-136a

Name: K. VERUSCHKE

Date: 4/26/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ YP-02 SUBDIVISION A (1 OF 1) DATE 4/26/90

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

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 J. Holmes DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 51 m: No Oil 2084 m
Subsurface Oil Observed: Yes No X Maximum Depth

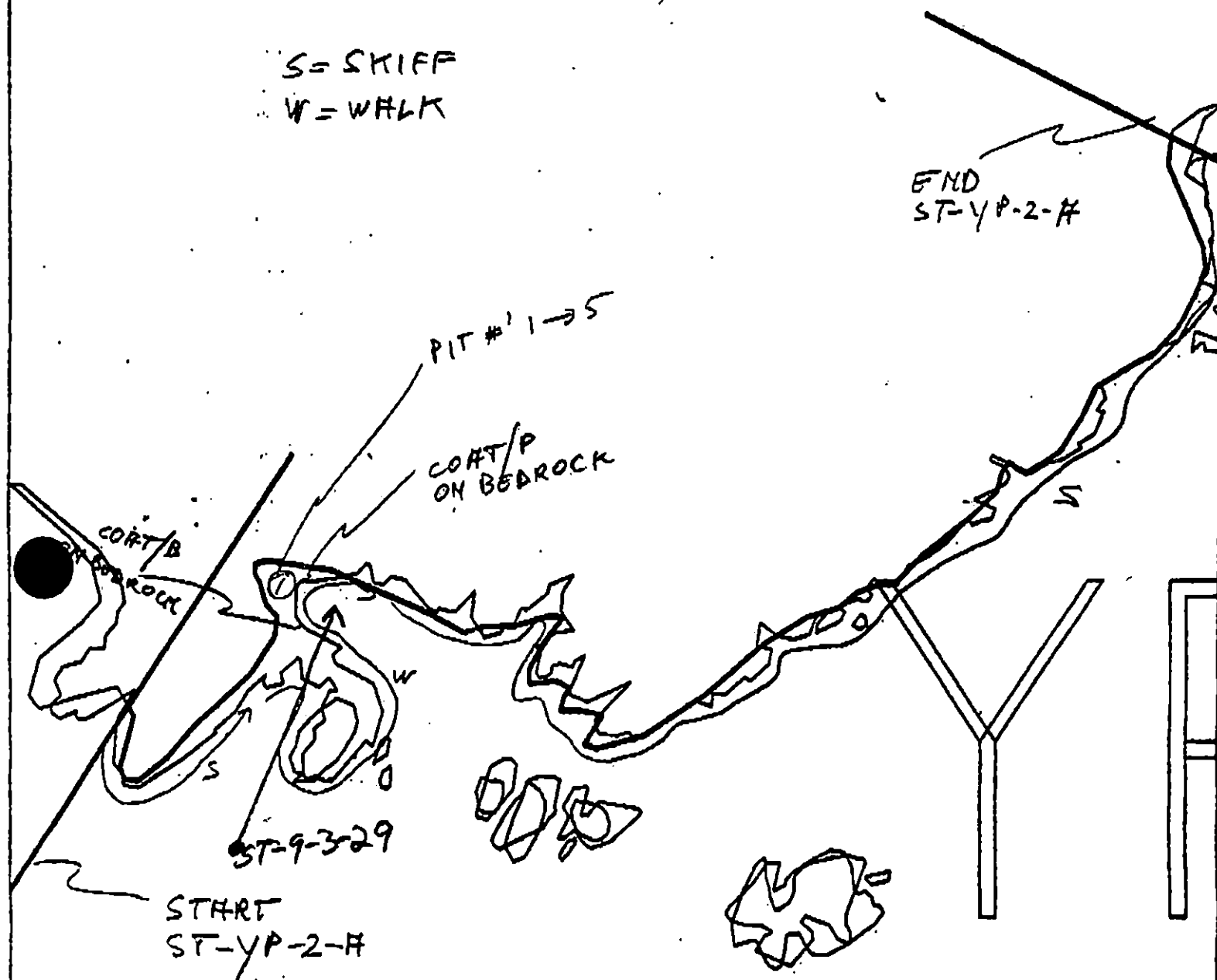
RECOMMENDATIONS:

<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: 5/4/90
ADEC Art Weiner Art Weiner
EXXON ANDY TELL Andy Tell FOSC: WJL DATE: 5-9-90
NOAA Gary Petras Gary Petras
USCG G.A. REITER G.A. Reiter



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ST-YP-2-A

ADEC Segment Length: 2821 ~~2821~~ m

3/13 100 200 300
METERS

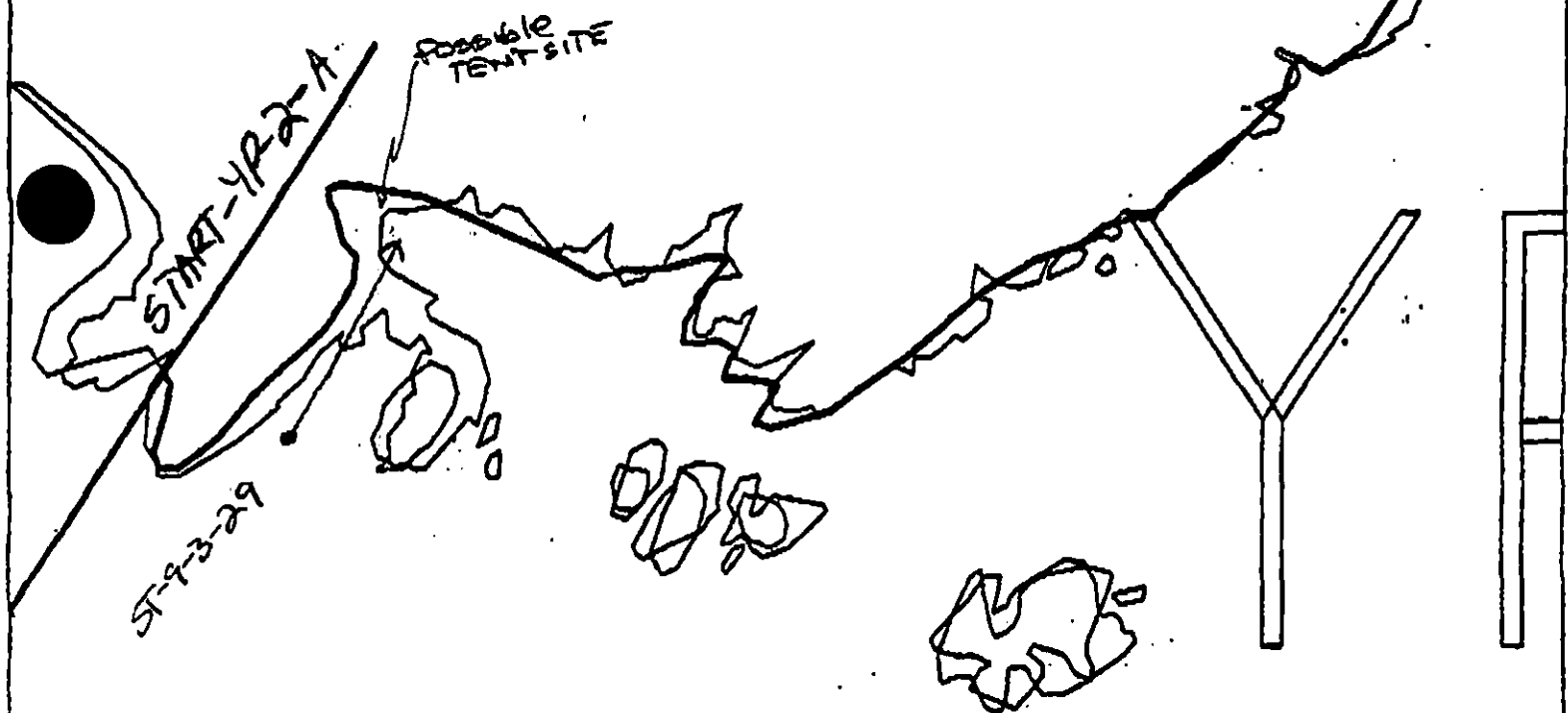
Map Key: KEN-1360

Name: K. DEBUSSCHEREDate: 4/26/90

Data Entered:

ECOLOGY MAP
Resource codes for entire segment
bu

END ST-YP-2-A



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ST-YP-2-A

ADEC Segment Length: 1891m

7/13 100 200 300
METERS

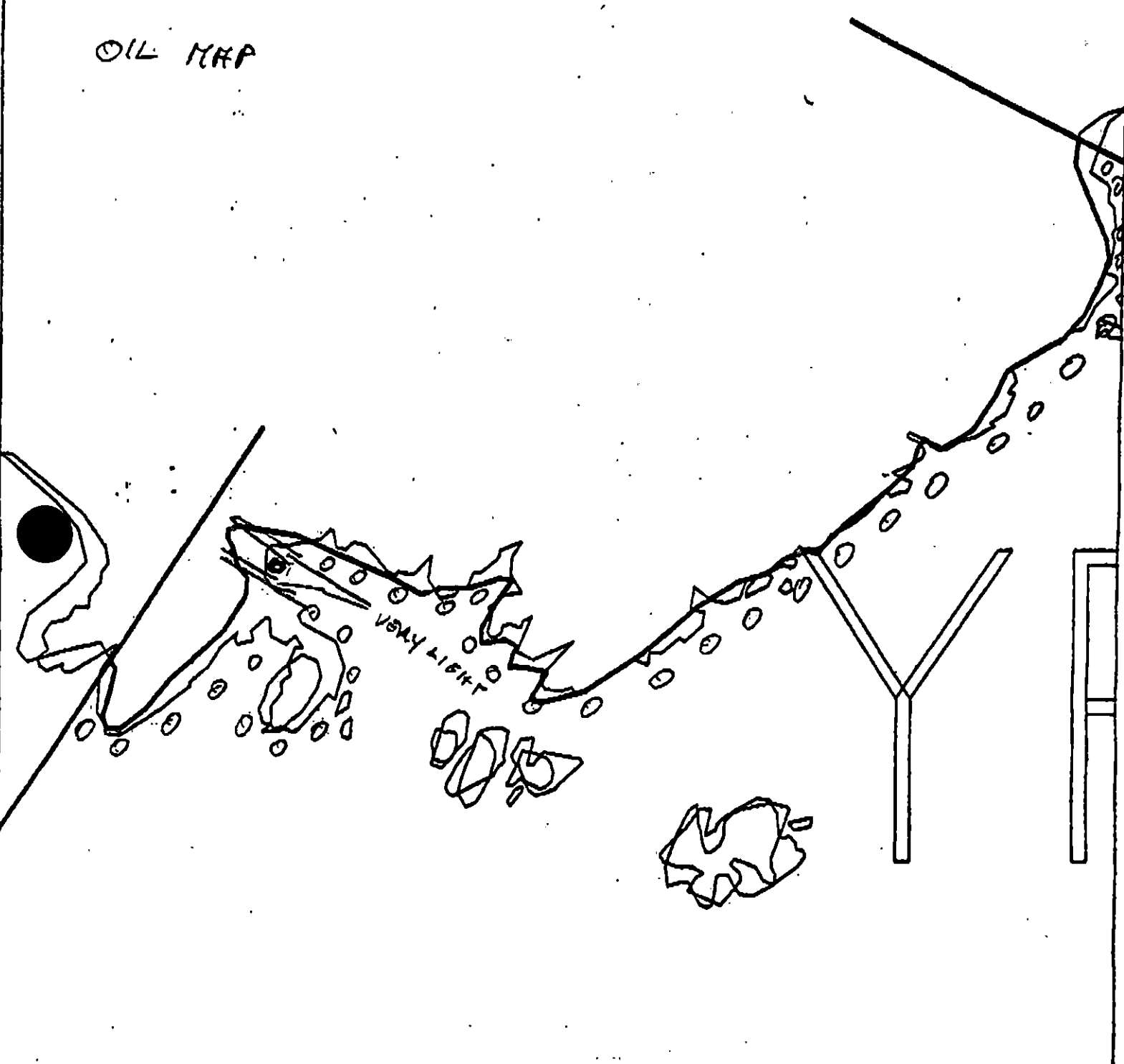
Map Key: KEN-1360

Name: Dan Reed

Date: 04/26

Data Entered:

OIL MAP



XXXX Wide

● // Medium

--- Narrow

TTTT Very Light

OOOO No Oil

ST-YP-2-A

ADEC Segment Length: 2821m



Map Key: KEN-136a

Name: K. VERUSCHKE

Date: 4/26/90

Data Entered:

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Anchorage, AK