OIL SPILL PUBLIC INFO. CENTER
3 6653 00006391 1

EVOS
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1552
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S42
1991
v.9

[Shoreline evaluations, 1991].

Kenai WB-02 to WB-06

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REGION: KENAI

SEGMENT: ST/WB-02

SUBDIVISIONS: A (1 OF 6)

SHORELINE EVALUATION

SEGMENT ST/ WB-02 SUBDIVISION A (1 OF 6) DATE 4/1/90

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid 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 43 m: Medium 112 m: Narrow 27 m: V.Light 171 m: No Oil 81 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

RECOMMENDATIONS:

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

COMMENTS: The recommended treatment activities are as follows: 1)Tarmat removal, 2) Manual pick up of mousse and pooled oil (see attached sketch map for specific locations), and 3) bioremediation of areas where pooled oil has been removed. No specific time constraints have been identified.

TAG COMMENTS:_____

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / WB-002 SUBDIVISION: A DATE 4-1-90

USCG
NAME R. BRYAN HURTLE SIGNATURE R. Bryan Hurtle

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

I agree with the findings of the shoreline Oiling Summary sheet for WB-002 subdivision A

ADEC
NAME Russell Kunibe SIGNATURE Russell Kunibe

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

See attached 1 sheet

LAND MANAGER
NAME Patrick Norman SIGNATURE Patrick Norman

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Recommend manual pick up of patties and mats in subdivision A. also follow up with bioremediation.

Segment WB-2 Subdivision A Date 4/1/90

ADEC Russell Kunibe Signature Russell Kunibe

Description:

The oiling which remains in this subdivision is weathered mousse in the sediments around and under the boulders and cobbles. This oil is found on the pocket beaches in the UITZ and MITZ.

Recommendations:

Manual pick up and break up of the mousse and tar mats where possible. Because the mousse is under and around small boulders and cobbles washing may be needed. This would be especially true if the mousse-asphalt becomes more mobile in warmer weather. After much of the gross contamination has been removed bioremediation may be needed.

SHORELINE OILING SUMMARY

REVISION NO. 05/22/90

OG Randy Siegel USCG Bryan Hirtle SEGMENT ST/ (W) B-2 (4 of 6)
BIO Mike Fawcett LAND REP Pat Norman (Pevc) SUBDIVISION A (1st of 4)
EXXON John Dean ADEC Russell Kunkes TIME 9:00 to 12:30
TEAM NO.: 17 TIDE LEVEL: +6.6 to 0.0 DATE 4 / 1 / 90
EST. SUBDIVISION LENGTH: 613 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
SURFACE SEDIMENTS: R 15 % B 60 % C 10 % P 10 % G 4 % S 1 % M Ø % V Ø %
SLOPE: Lang 40 % Hang 60 % Vert Ø % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W 50 m M 163 m N 87 m VL 248 m NO 65 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	/C	/B	/P	/R	SBL/BR	DCL/RW	DY/SL	DBRL/TL	LBR	SU	UI	MI	LI
ASPHALT PAVEMENT	+		✓	X		✓X +					T X ✓	+	
POOLED			X						X				X
COVER													
COAT	+	X	✓	!		+ X ✓ !		+ X ✓ !			+ ✓ X !	+	✓
STAIN	+	X	✓	!		+ X ✓ !		+ X ✓ !			+ ✓ X !	+	✓
MOUSSE	+		✓	X					+ X ✓		✓ + X	+	✓
PATTIES		✓	X			X ✓			✓X		X ✓	X	
TARBALLS		✓	X			X ✓			✓X		X ✓	X	
FILM	✓		X					✓X			✓X		
NO OIL										✓			

PAVEMENT: H (F) S 200 sq. m by 1 cm

PATTIES / TARBALLS 50 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT SM	MD	LG
Logs	X		
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE N/A

#BAGS Ø

Photographs:

Roll No. ST-17-3

Frames 1-21

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO	(CM-CM)	UO	UC	SBL/BR	DCL/RW	DY/SL	DBRL/TL	LBR	SU	UI	MI	LI		
1	30					X	0-0		X							X				P, G
2	12					X	0-0		X							X				C, G
3	12					X	0-0		X							X				C, G
4	10					X	0-0		X							X	W			C, G
5	15					X	0-0		X							X	X			C, G
						✓														

COMMENTS This subdivision consisted of a narrow (typically less than 10 m) strip of bedrock/boulder beach, occurring between the waterline and low/high angle cliffs. Pocket beaches were incised into the bedrock cliffs, and were concentrated within the pocket beaches, particularly in an 8-[illegible] along the UI. Some staining and coating of [illegible] and boulders near the cliffs was observed between the incised beaches.

next page for comments
ECS 4/19/90

COMMENTS This subdivision consisted of a narrow (typically less than 10 m) stretch of bedrock/boulder beach, occurring between the waterline and low/hi-angle cliffs. ~~Some~~ Pocket beaches were incised into the bedrock cliffs, and most oiling was concentrated within the pocket beaches, particularly in an 2-10 meter band along the UI. ~~Some~~ Some staining and coating of ~~some~~ cliffs and boulders near the cliffs was often observed between the incised beaches. Difficult to discriminate due to R

Page 1 of 1

REVIEWER [illegible] DATE 9 Apr 90

4/1/
Randy Siegel

WB-2

Total Oil Character Length for Each Subdivision

subdivision	AP	PO	CV	CT	ST	MS	PT	TB	FL	NO
A	50	N/A	N/A	350	350	75	150	150	20	~~75~~ 65
B	35	N/A	N/A	60	60	20	20	20	10	30
C	150	N/A	N/A	500	500	150	150	150	N/A	30

OG Ran[redacted]ngel

SEGMENT ST/ AWB-2

SUBDIVISION A

DATE 4 / 1 / 90

2 cm = 6 m
Approximate Scale

N

[redacted]ETCH MAP #1

Part of Subdivision A

CHECKLIST

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

LEGEND

1 △ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

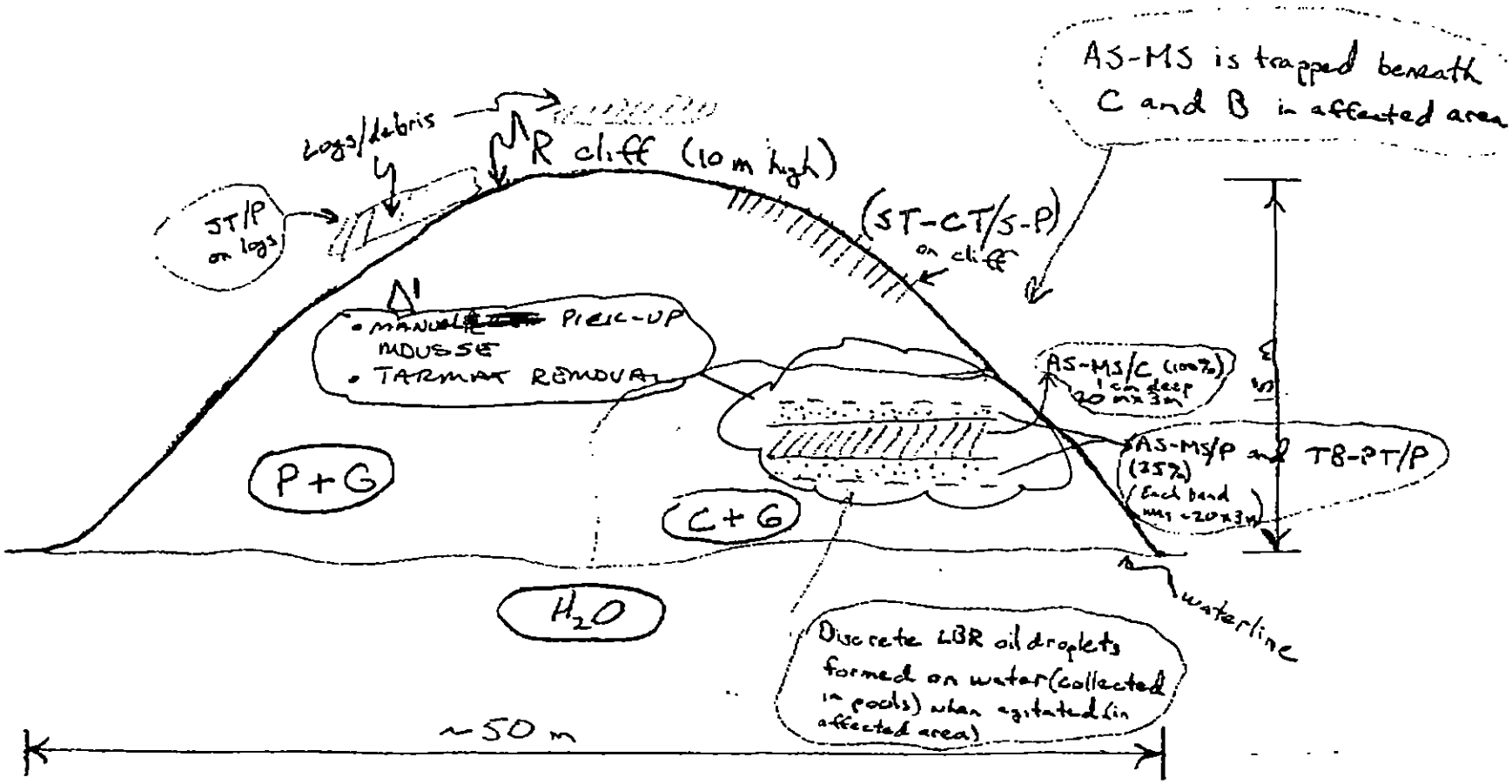
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 ●→ Photo location, direction, and number



Oil Character Length (m): AP 20 PO N/A CV N/A CT 30 ST 30 MS 20 PT 20 TB 20 FL 20 NO 20

REVISION:03/26/90

OG Rand[redacted]ge!

SEGMENT ST/ WB-2

SUBDIVISION A

DATE 4 / 1 / 90

CHECKLIST

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

LEGEND

1 △ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

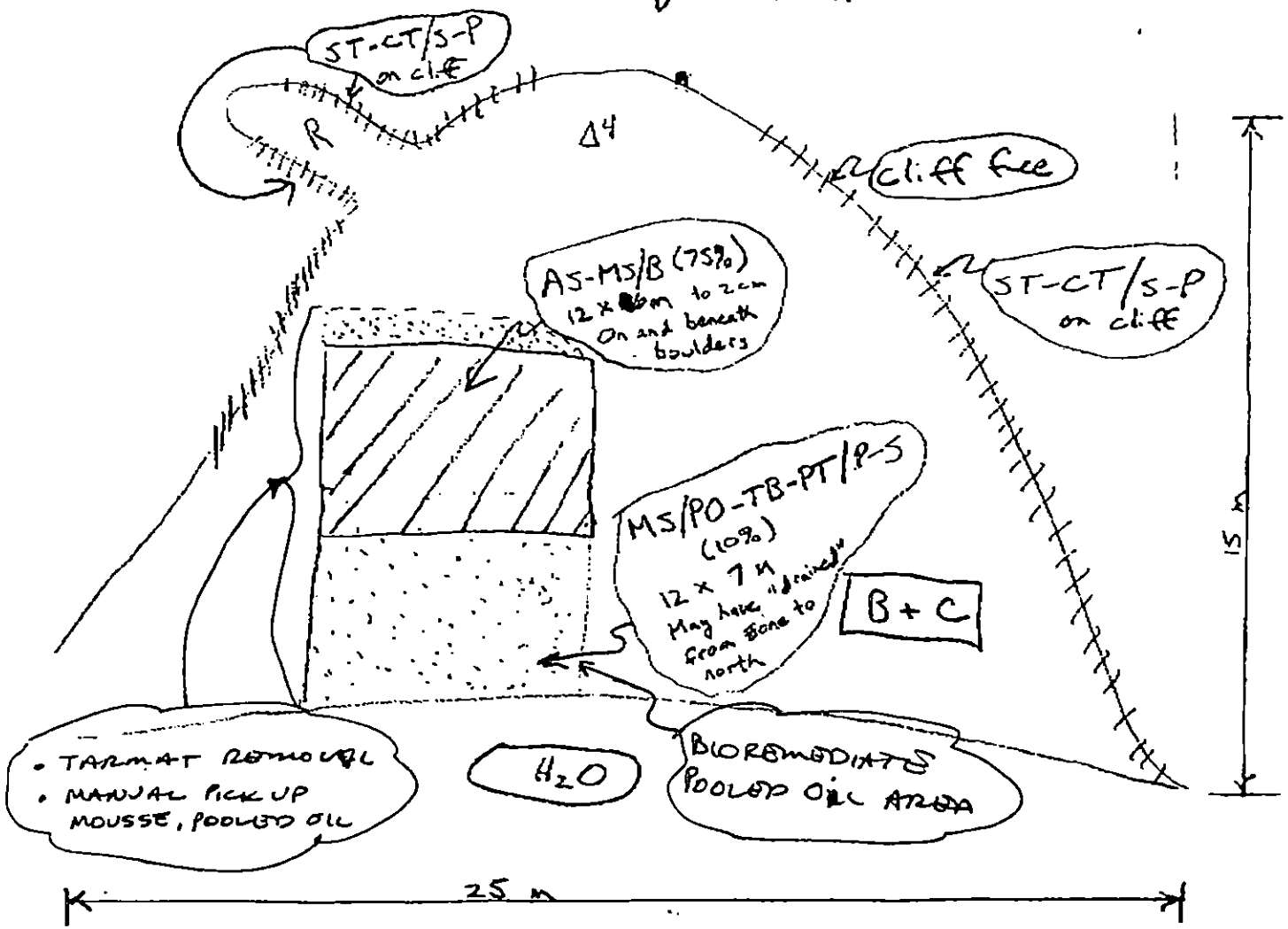
1 Photo location, direction, and number

N

2 cm = 3 m
App. Scale

SK[redacted]CH MAP
#3

Part of Subdivision A



Oil Character Length (m): AP 12 PO N/A CV N/A CT 20 ST 20 MS 12 PT 12 TB 12 FL N/A NO 5

REVISION: [redacted]

OG R[redacted] Stage 1

SEGMENT ST/ [redacted]WB-2

SUBDIVISION A

DATE 4 / 1 / 90

N

2 cm = 6 m
App. Scale

[redacted]ETCH MAP
#2

Part of Subdivision A

CHECKLIST

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

LEGEND

1 △ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

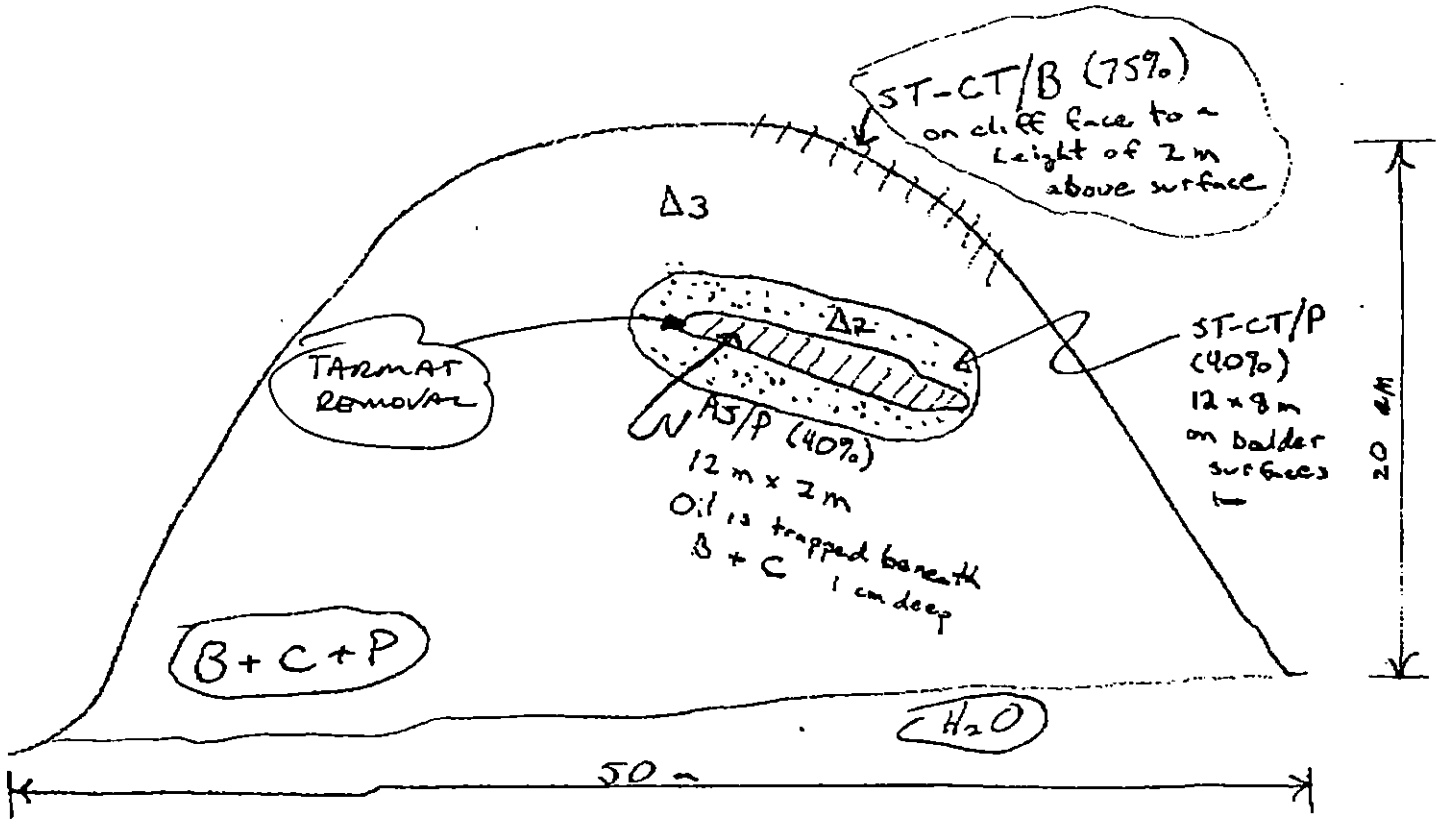
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 ●→ Photo location, direction, and number



OI Character Length (m): AP 12 PO N/A CV N/A CT 15 ST 15 MS N/A PT 12 TB 12 FL N/A NO 35

REVISION:03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / WB002 Subdivision A Date (mo / day / yr) 4/1/90

Time (24 hr) 1000-1100 Biologist M. Fawcett

(A) Substrate type and % of segments:
(1) Bedrock 15 (2) Boulder 60 (3) Cobble 10 (4) Pebble (incl. gravel) 14 (5) Sand 1 (6) Silt Ø

(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-17-3
Frames 1-11

BARNACLES

Dense			Moderate			Sparse			Rare			
1U	XM	1L	XU	1M	XL	1U	1M	1U	1U	1M	1L	
2	X	2	X	2	X	2	2	2	2	2	2	
3	X	3	X	3	X	3	3	3	3	3	3	NOT PRESENT
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	XM	1L	1U	1M	1L	XU	1M	XL	1U	1M	1L	
2	X	2	2	2	2	X	2	X	2	2	2	
3	X	3	3	3	3	X	3	X	3	3	3	NOT PRESENT
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	XM	1L	XU	1M	XL	1U	1M	1L	
2	2	2	2	X	2	X	2	X	2	2	2	
3	3	3	3	X	3	X	3	3	3	3	3	NOT PRESENT
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	XM	1L	1U	1M	XL	XU	1M	1L	1U	1M	1L	
2	X	2	2	2	X	X	2	2	2	2	2	
3	X	3	3	3	X	X	3	3	3	3	3	NOT PRESENT
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:

See attached sheets

Ecological Considerations:

No sensitivities listed

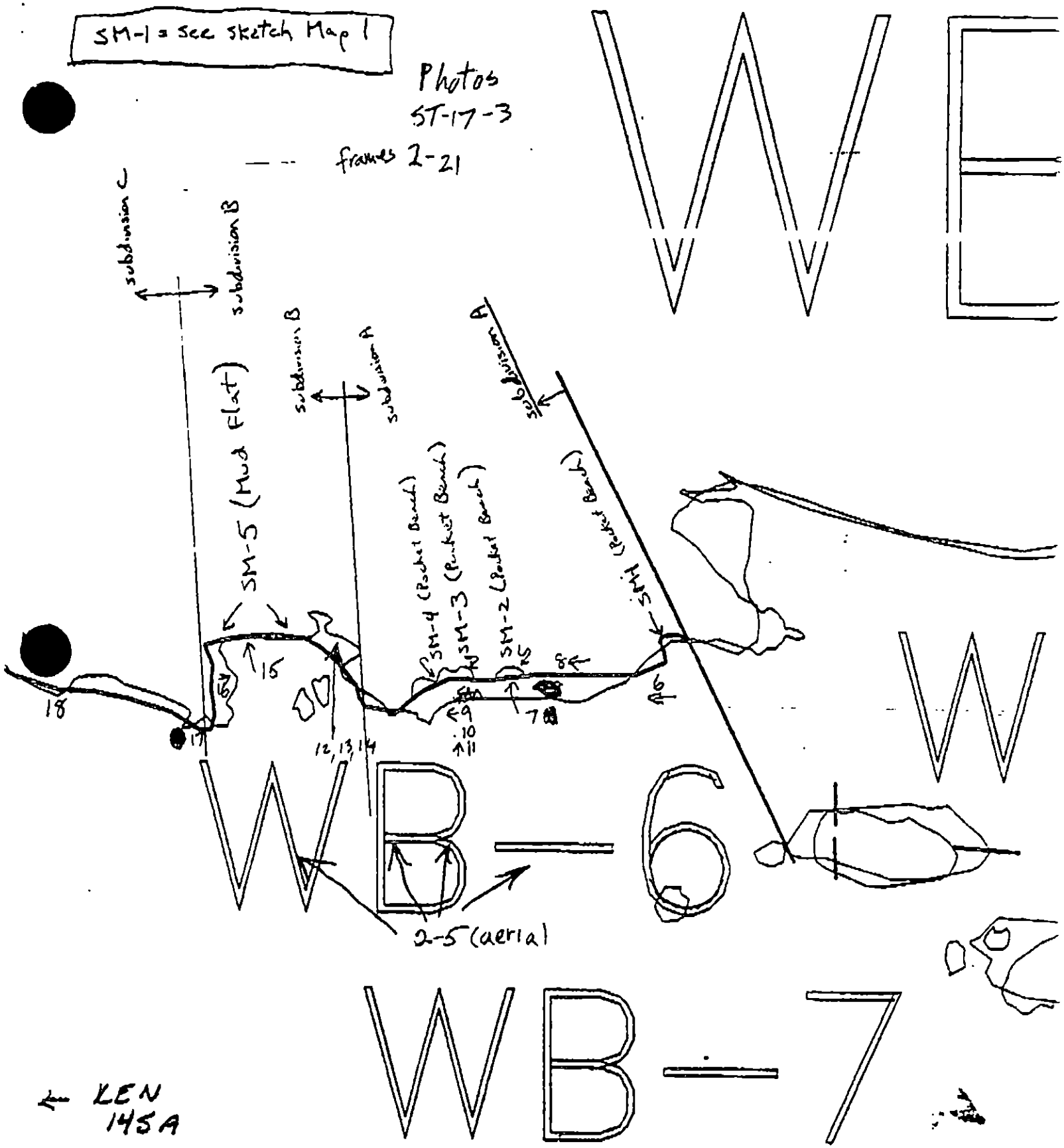
WB 002 A, B, C M. Fawcett 1 april 90
windy Bay

P. 1 of 2

wildlife Observations

This segment consists of vertical faces and large boulder outcrops separated by pocket beaches comprised of boulders, cobbles, and pebbles, with sand/silt matrix beneath. In the mid- and low intertidal zones on the beaches a well-developed infaunal community lives buried below the boulders and cobbles (clams, echinoids, worms, etc). There is also a rich infaunal community in the low intertidal mudflat indicated on the sketch map for subsection B. Numerous craters in mudflat indicate sea otters have been digging clams recently. There are high densities of mussels and barnacles on bedrock and boulders in the mid-intertidal, especially on the more exposed outcrops. There are also locally dense areas of Fucus. Other than Fucus, algae are sparse and not very diverse in this area, as is typical of quiet bays. The mussels mainly range from 2 to 60-70 mm in length, the smaller ones probably representing settlement from last summer or fall. In middle and upper zones, Balanus glandula often very dense, B. cariosus locally dense in lower zone. On one cobble beach about 120m west of seaward end of

on top of a heavy layer of mousse embedded in the surface sand at about the +6-7ft tide level. Removal of this mousse would require destruction of the mussels. Some barnacles (B. glandula) in upper intertidal zone on bedrock faces in subsections B and C of the segment are heavily coated with weathered oil. Barnacle scars on rock indicate up to about 50 percent mortality in small patches at upper fringe of distribution, but the causes of mortality could be either suffocation by oil or natural physical factors (weather extremes) which typically have the greatest effect on barnacles near the upper limit of their vertical distribution. The stream at the western end of subsection C appears too small for use by anadromous fish. Few birds seen, possibly owing to clearcut logging operation underway just above the shoreline in section C.



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

WB-2

ADEC Segment Length: 2232m

0 100 200 300

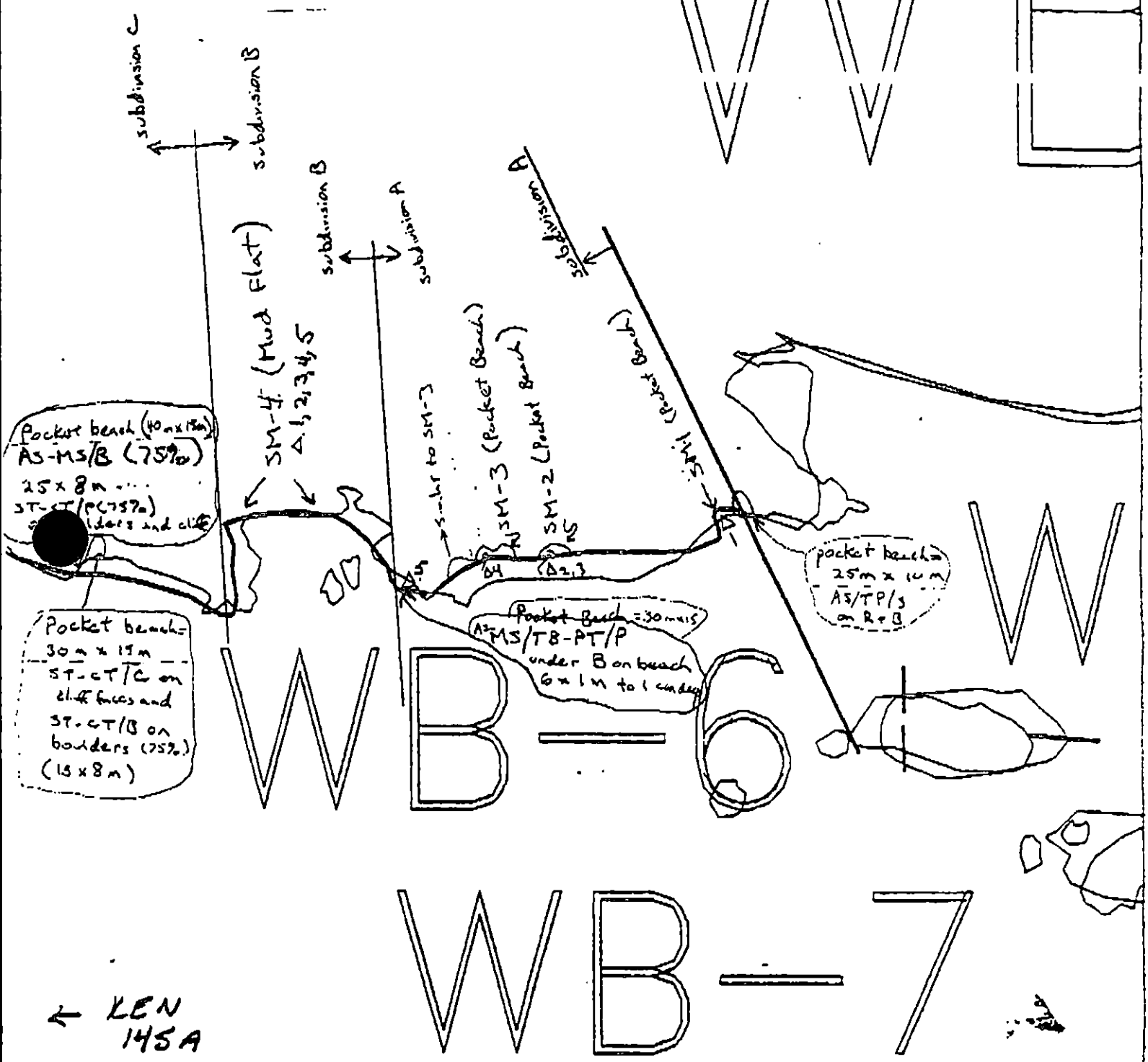
Map Key: KEN-145b

Name: _____

Date: _____

SM-1 = see sketch Map 1

Photos
ST 17-3
frames 1-21



← KEN 145A

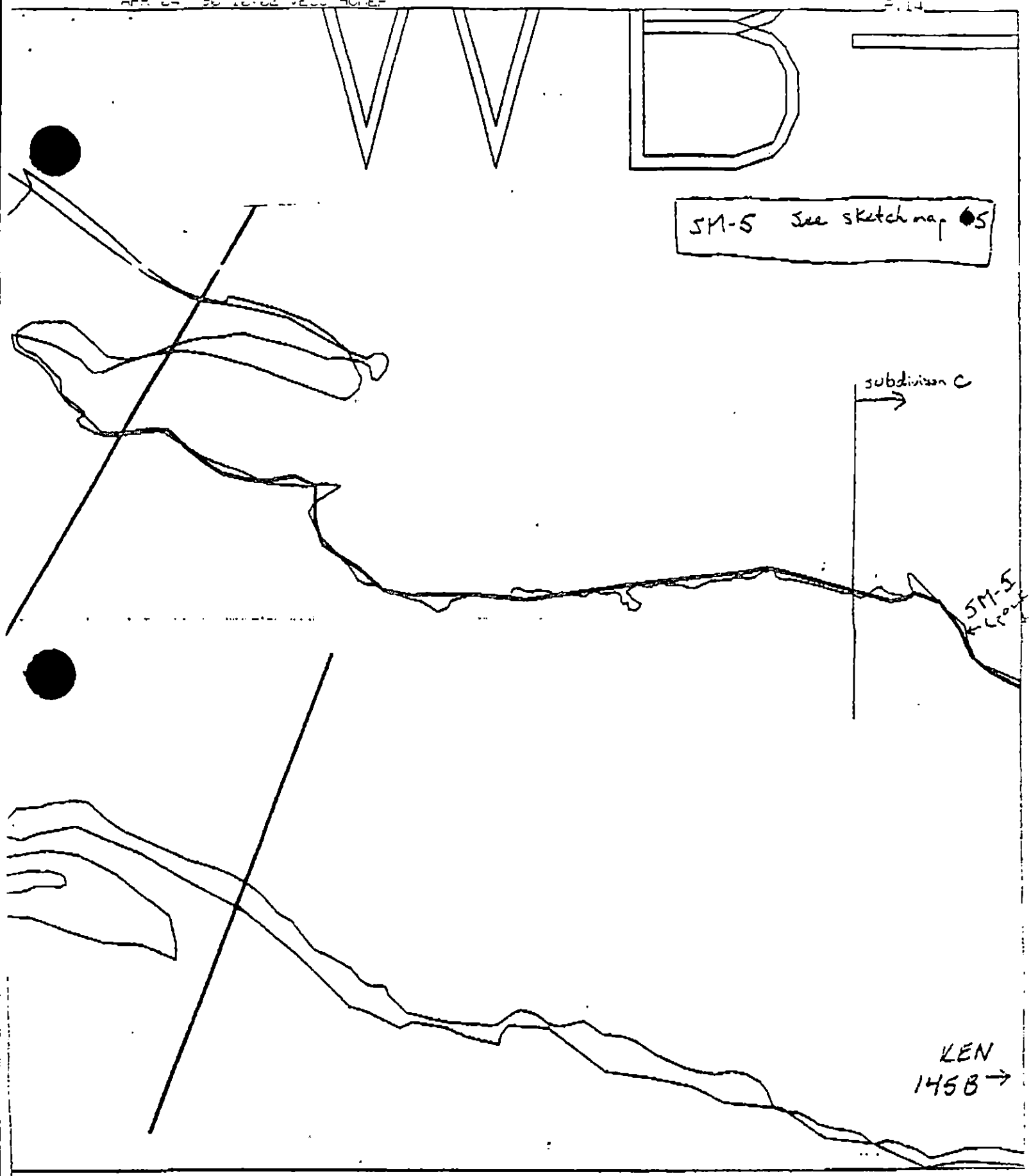
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

WB-2

ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145b
Name: [illegible]
Date: 4/1/90
Data Entered:



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

WB-2

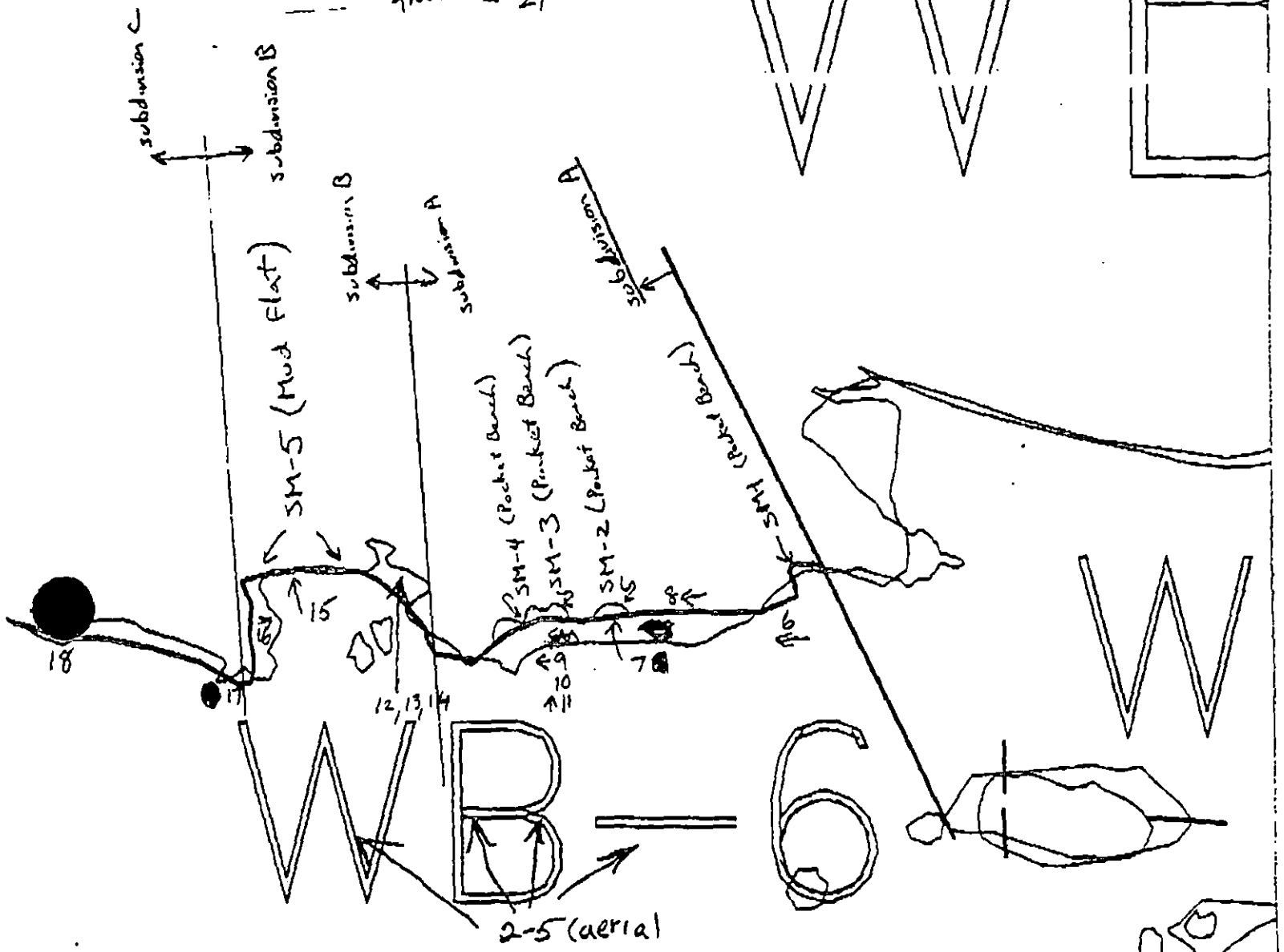
ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145a
Name: Cindy Stiegel
Date: 4/1/96
Data Entered:

SM-1 = see sketch Map 1

Photos
ST-17-3
frames 2-21



← KEN 145A

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

WB-2

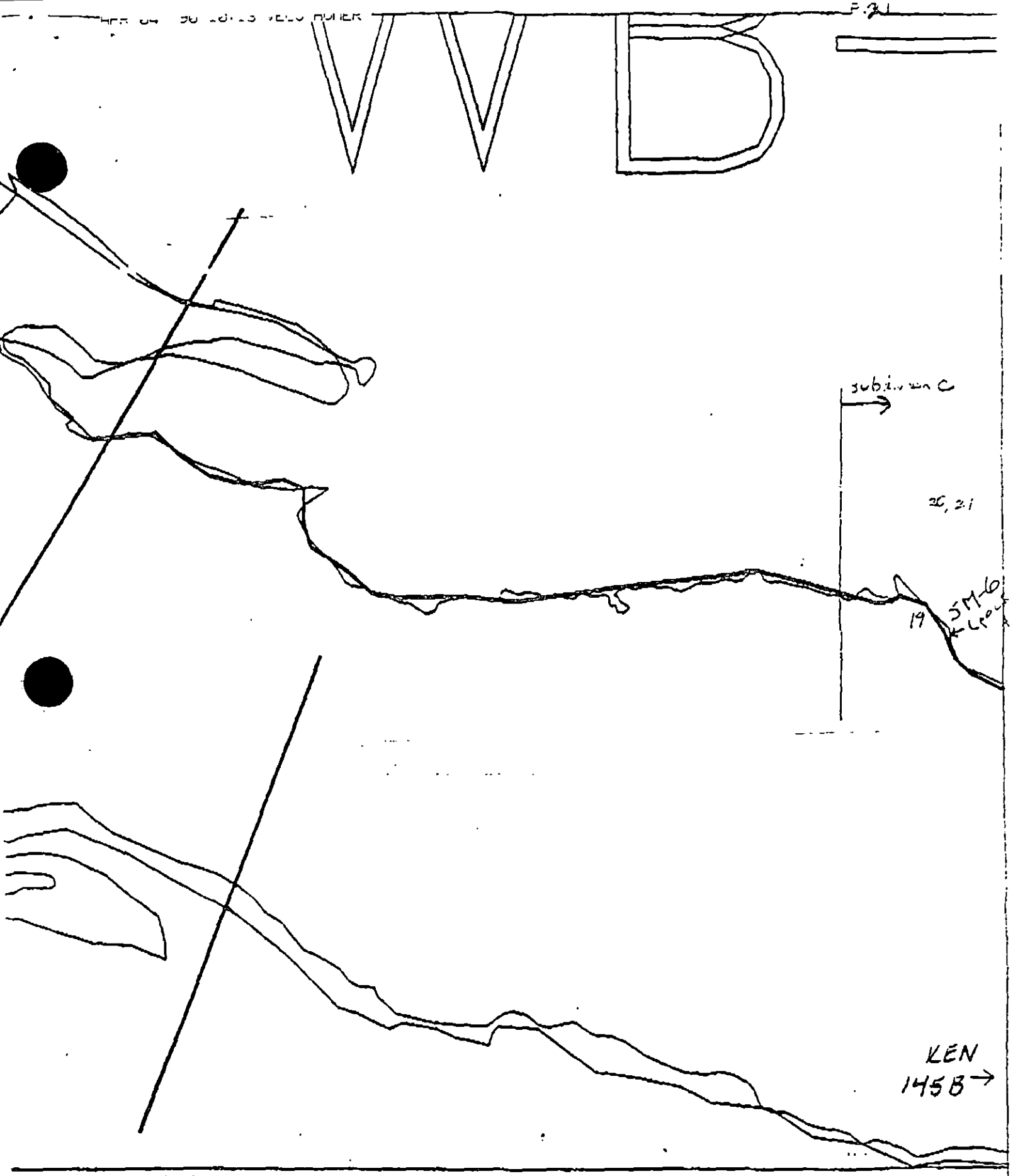
ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145b

Name: _____

Date: _____



XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 Non-Sig

WB-2

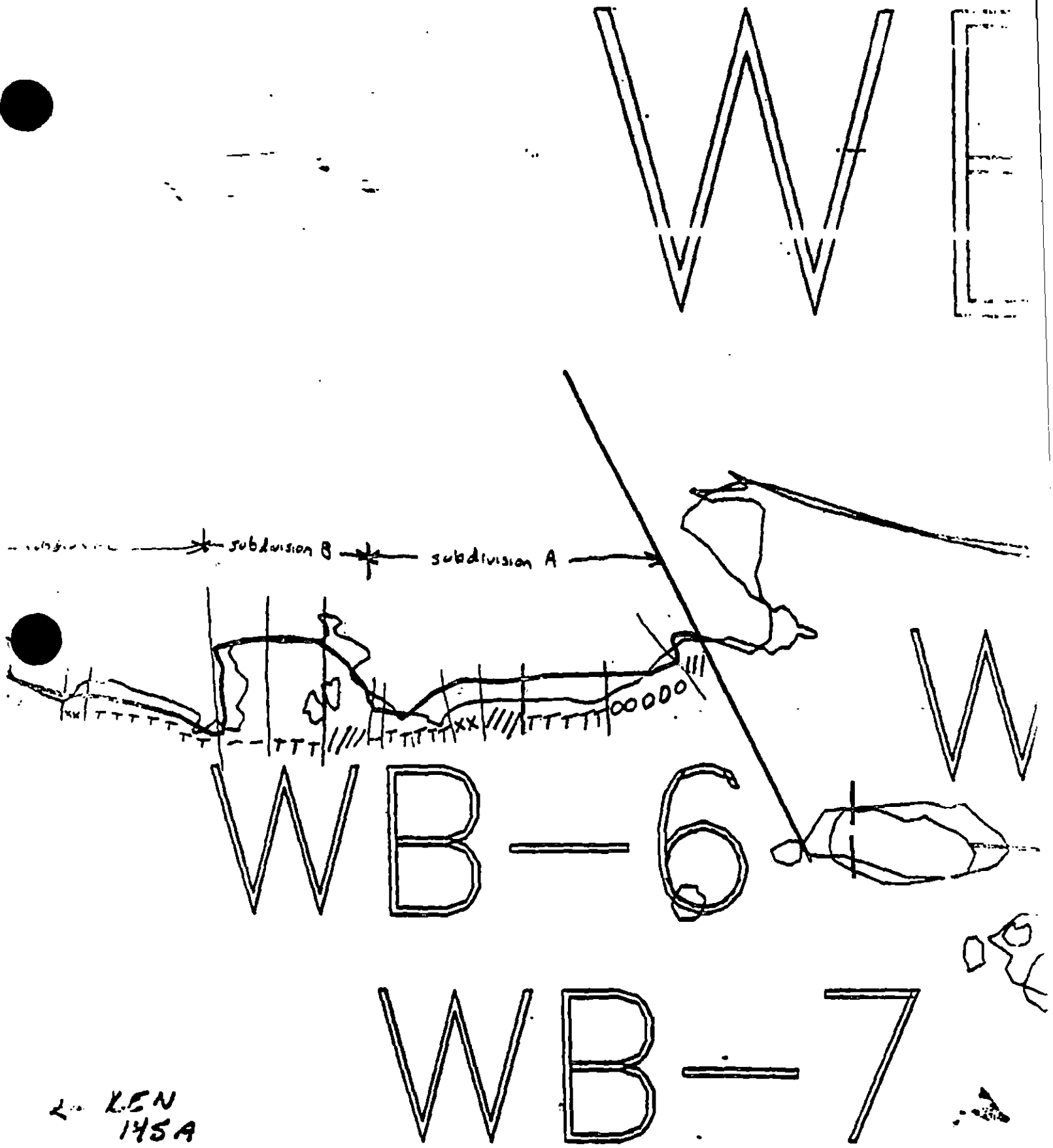
ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145a

Name: _____

Date: _____

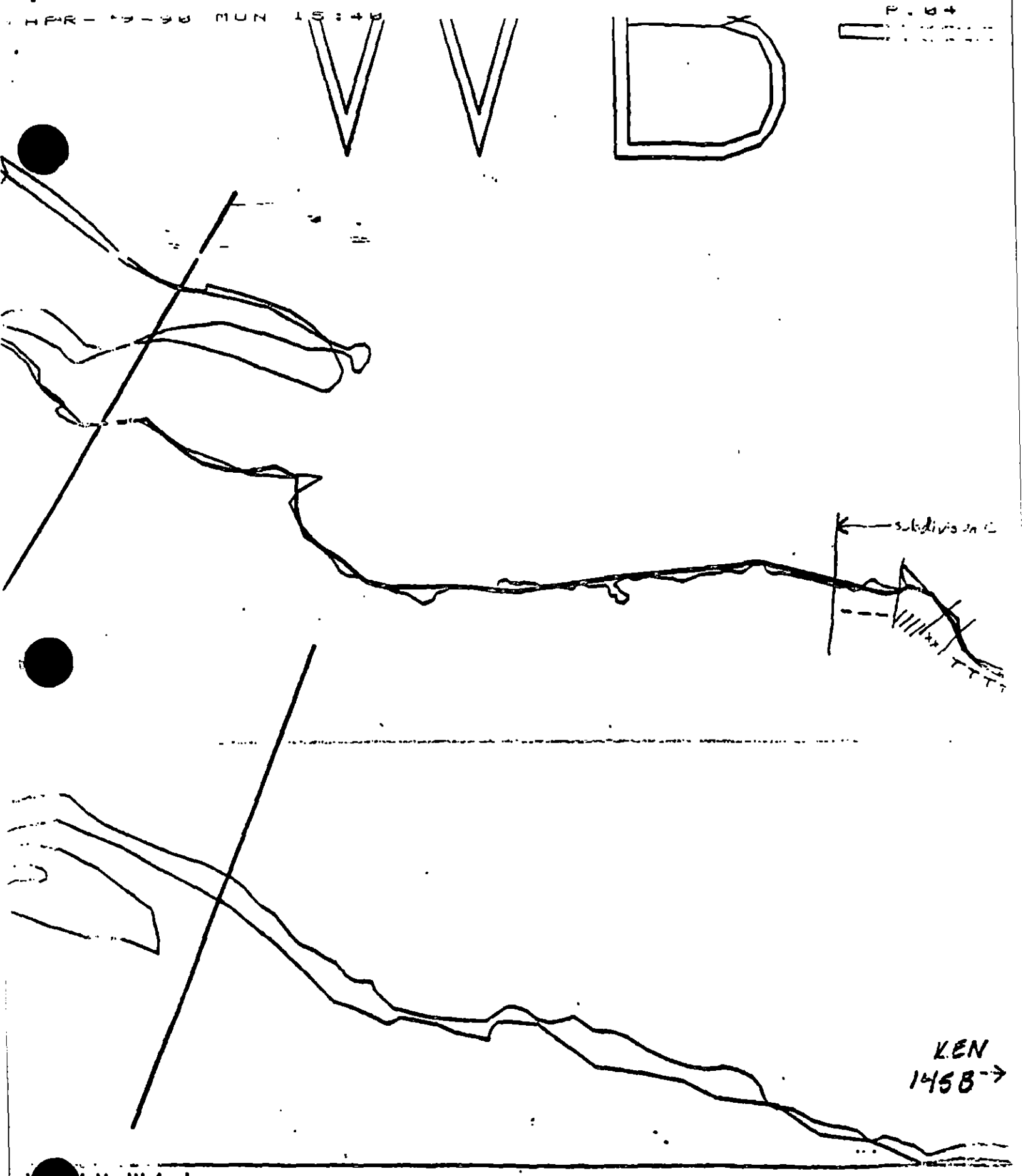


XXX Wide
//// Medium
---- Narrow
TTTT

WB-2

ADEC Segment Length: 2232m

Map Key: KEN-145b
Name:



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

WB-2

ADEC Segment Length: 2232m

Map Key: KEN-145a

Name: Ruby Arnold

Date: 4/1/90

REGION: KENAI

SEGMENT: ST/WB-02

SUBDIVISIONS: B (2 OF 6)

SHORELINE EVALUATION

SEGMENT ST/ WB-02 SUBDIVISION B (2 OF 6) DATE 4/1/90

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid 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 92 m: Narrow 164 m: V.Light 64 m: No Oil 0 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat removal and manual pick up of tar balls, patties, and oiled debris (see attached sketch map for locations). Bioremediation of areas with broken coats or stains is also recommended

TAG COMMENTS:_____

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / WB-002 SUBDIVISION: B DATE 4-1-90

USCG
NAME R. BRYAN HIRTLE SIGNATURE R. Bryan Hirtle

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
I agree with the findings of the Shoreline Oiling Summary sheet for WB-002 subdivision B

ADEC
NAME Russell Kunibe SIGNATURE Russell Kunibe

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
See attached 1 sheet.

LAND MANAGER
NAME Patrick Norman SIGNATURE Patrick Norman

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
recommend manual pickup of patties, mats, and asphalted layers ~~[illegible]~~ in subdivision B, also follow up with bioremediation.

Segment WB-2 Subdivision B Date: 4/1/90

ADEC Russell Kunibe Signature Russell Kunibe

Description:

This is a large cove with a mud flat below the boulder, cobble and pebble beach. The sketch map #4 misses a broken area of asphalt on the western beach which was approximately 5 M. X 10 M.

Recommendations:

Manual pick up and break up of the asphalt and mousse saturated sediments between the small boulders and cobbles. The tidal flushing of this cove is good so bioremediation may be effective.

SHORELINE OILING SUMMARY

REVISION NO. 05/22/90

OG Randy Siegel USCG Bryan Hirtle SEGMENT ST/ WB-2
BIO. Mike Fawcett LAND REP Pat Norman (PGVC) SUBDIVISION B (2nd of 4 of 6)
EXXON John Dean ADEC Russell Kunibe TIME 12:30 to 14:00
TEAM NO.: 17 TIDE LEVEL: 0.0 to 1.2 DATE 4 / 1 / 90
EST. SUBDIVISION LENGTH: 488 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
SURFACE SEDIMENTS: R 40 % B 35 % C 15 % P 10 % G 10 % S 10 % M 10 % V 0 %
SLOPE: Lang 40 % Hang 60 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W N/A m M 75 m N 244 m VL 169 m NO N/A m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	/C	/R	/P	/B	SOR/BR	OR/RW	OY/SL	DBR/TL	LBR	SU	UI	MI	LI
ASPHALT PAVEMENT		X			X	X						X	
POOLED													
COVER													
COAT		X	✓					X✓			✓		X
STAIN		✓	+	X				+✓			✓		X
MOUSSE		X							X		X		
PATTIES		X							X		X		
TARBALLS		X							X		X		
FILM		X						X			X		
NO OIL										X			

PAVEMENT: H (F) S 50 sq. m by 1 cm

PATTIES / TARBALLS 120 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

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

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE N/A

#BAGS 0

Photographs:

Roll No. ST-17-3

Frames 1-21

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SOR/BR	OR/RW	OY/SL	DBR/TL	LBR	SU	UI	MI	LI		
1	8				X		0 · 3		X			X				X				P, R
2	8				X		0 · 5		X			X				X				P, R
3	8				X		0 · 3		X			X				X				P, R
4	30					X	0 · 0									X				G, [illegible]
5	15					X	0 · 0									X				G

COMMENTS This subdivision consisted of a mudflat, and gravel to boulder beaches surrounding the mudflat. Low angle cliffs surrounded the beaches, at a distance of up to ~100 meter from the trace of the waterline. A band of asphalt and [illegible] ran across the UI, ranging in width from 8-10 meters. Some staining/coating on the base of the cliff was also frequently observed.

See next page for Comments LCD 4-10-90

DAT

COMMENTS This subdivision consisted of a mudflat, and gravel to boulder benches surrounding the mudflat. Low angle cliffs surrounded the benches, at a distance of up to ~100 meter from the trace of the waterline. A band of asphalt and [illegible] occurred across the UI, ranging in width from 8-10 meters. Some staining/coating of the cliff was also frequently observed.

OG Re[redacted] Siegel

SEGMENT 31/ WB-2

SUBDIVISION B

DATE 4 / 1 / 90

N

2 cm = 20 m
App. Scale

[redacted]TCH MAP #4

All of Subdivision B

CHECKLIST

- ___N Arrow
- ___Approx. Scale
- ___Seg/Sub Bndry
- ___Oil Dist.
  - Width
  - Length
  - % Cover
- ___Substrate Character
- ___Est. HWL/LWL
- ___SSL
- ___Profile Location(s)
- ___Profile(s)
- ___Pit Location(s)
- ___Photo Location(s)

LEGEND

1 △ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

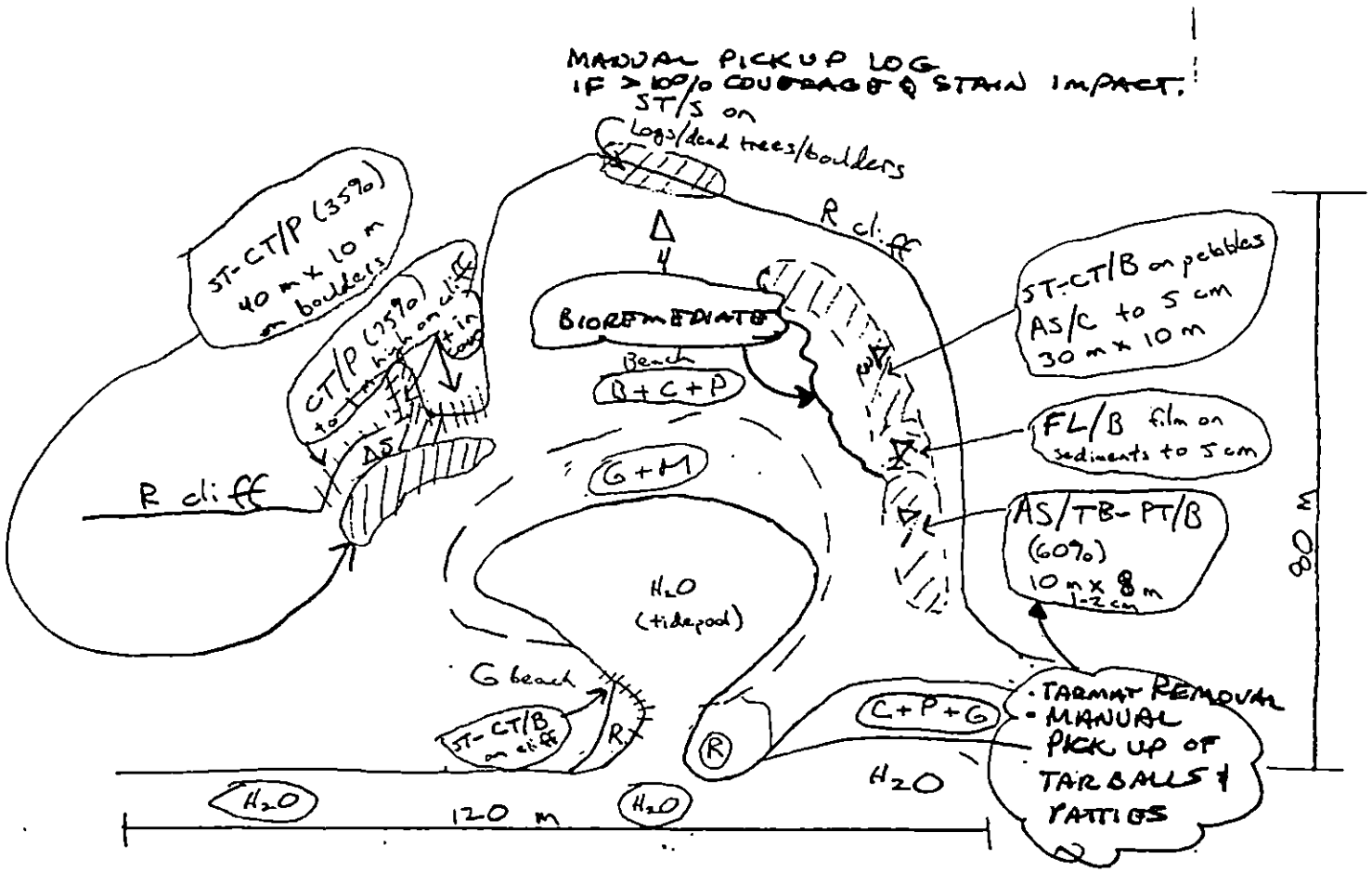
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 ●→ Photo location, direction, and number



Oil Character Length (m): AP 35 PO N/A CV N/A CT 60 ST 60 MS 20 PT 20 TB 20 FL 10 NO [redacted] N/A

REVISION:03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / WB002 Subdivision B Date (mo / day / yr) 4/1/90

Time (24 hr) 1100-1330 Biologist M. Fawcett

(A) Substrate type and % of segments:
(1) Bedrock 10 (2) Boulder 35 (3) Cobble 15 (4) Pebble (cinal-gravel) 20 (5) Sand 10 (6) Silt 10

(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-17-3
Frames 12-17

BARNACLES

Dense			Moderate			Sparse			Rare			
1U	XM	1L	XU	1M	XL	①U	①M	①L	1U	1M	1L	
2	X	2	X	2	X	2	②	②	2	2	2	
3	X	3	X	3	3	3	③	3	3	3	3	NOT PRESENT
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	XM	1L	1U	1M	1L	XU	1M	XL	1U	①M	1L	
2	X	2	2	2	2	X	2	X	2	②	2	
3	X	3	3	3	3	X	3	X	3	③	3	NOT PRESENT
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	XM	1L	XU	1M	XL	1U	1M	1L	
2	2	2	2	X	2	X	2	X	2	2	2	
3	3	3	3	X	3	X	3	3	3	3	3	NOT PRESENT
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	XM	1L	1U	1M	XL	XU	①M	1L	1U	1M	1L	
2	X	2	2	2	X	X	②	2	2	2	2	
3	X	3	3	3	X	X	③	3	3	3	3	NOT PRESENT
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:

see attached sheets

Ecological Considerations:

No sensitivities listed
However, high density of clams and other infauna in LTZ mudflat indicates caution required in any cleanup activities on cobble beach above mudflat. Avoid trampling and other disturbance in the mudflat, and avoid allowing

WB 002 A, B, C M. Fawcett 1 april 90
Windy Bay

P. 1 of 2

Wildlife Observations

This segment consists of vertical faces and large boulder outcrops separated by pocket beaches comprised of boulders, cobbles, and pebbles, with sand/silt matrix beneath. In the mid- and low intertidal zones on the beaches a well-developed infaunal community lives buried below the boulders and cobbles (clams, echinoids, worms, etc). There is also a rich infaunal community in the low intertidal mudflat indicated on the sketch map for subsection B. Numerous craters in mudflat indicate sea otters have been digging clams recently. There are high densities of mussels and barnacles on bedrock and boulders in the mid-intertidal, especially on the more exposed outcrops. There are also locally dense areas of Fucus. Other than Fucus, algae are sparse and not very diverse in this area, as is typical of quiet bays. The mussels mainly range from 2 to 60x7 mm in length, the smaller ones probably representing settlement from last summer or fall. In middle and upper zones, Balanus glandula often very dense, B. cariosus locally dense in lower zone. On one cobble beach about 120m west of seaward end of subsection C a dense bed of live mussels sits

on top of a heavy layer of mousse embedded in the surface sand at about the +6-7ft tide level. Removal of this mousse would require destruction of the mussels. Some barnacles (B. glandula) in upper intertidal zone on bedrock faces in subsections B and C of the segment are heavily coated with weathered oil. Barnacle scars on rock indicate up to about 50 percent mortality in small patches at upper fringe of distribution, but the causes of mortality could be either suffocation by oil or natural physical factors (weather extremes) which typically have the greatest effect on barnacles near the upper limit of their vertical distribution. The stream at the western end of subsection C appears too small for use by anadromous fish. Few birds seen, possibly owing to clearcut logging operation underway just above the shoreline in section C.

SM-1 = see sketch Map 1

Photos
ST 17-3
frames 1-21

SEE DETAILED MAP

subdivision C
subdivision B
subdivision B
subdivision A
subdivision A

SM-4 (Mud Flat)
Δ 1,2,3,4,5

similar to SM-3

SM-3 (Pocket Beach)
SM-2 (Pocket Beach)
SM-1 (Pocket Beach)

Pocket beach (40 m x 15 m)
As-MS/B (75%)
25 x 8 m
ST-CT/P (75%)
boulders and cliff

Pocket beach
30 m x 15 m
ST-CT/C on cliff faces and ST-CT/B on boulders (75%)
(15 x 8 m)

Pocket Beach = 30 m x 15
As-MS/TB-PT/P
under B on beach
6 x 1 m to 1 cm deep

pocket beach
25 m x 10 m
As/TP/s
on R + B

WB-6

WB-7

← KEN 145A

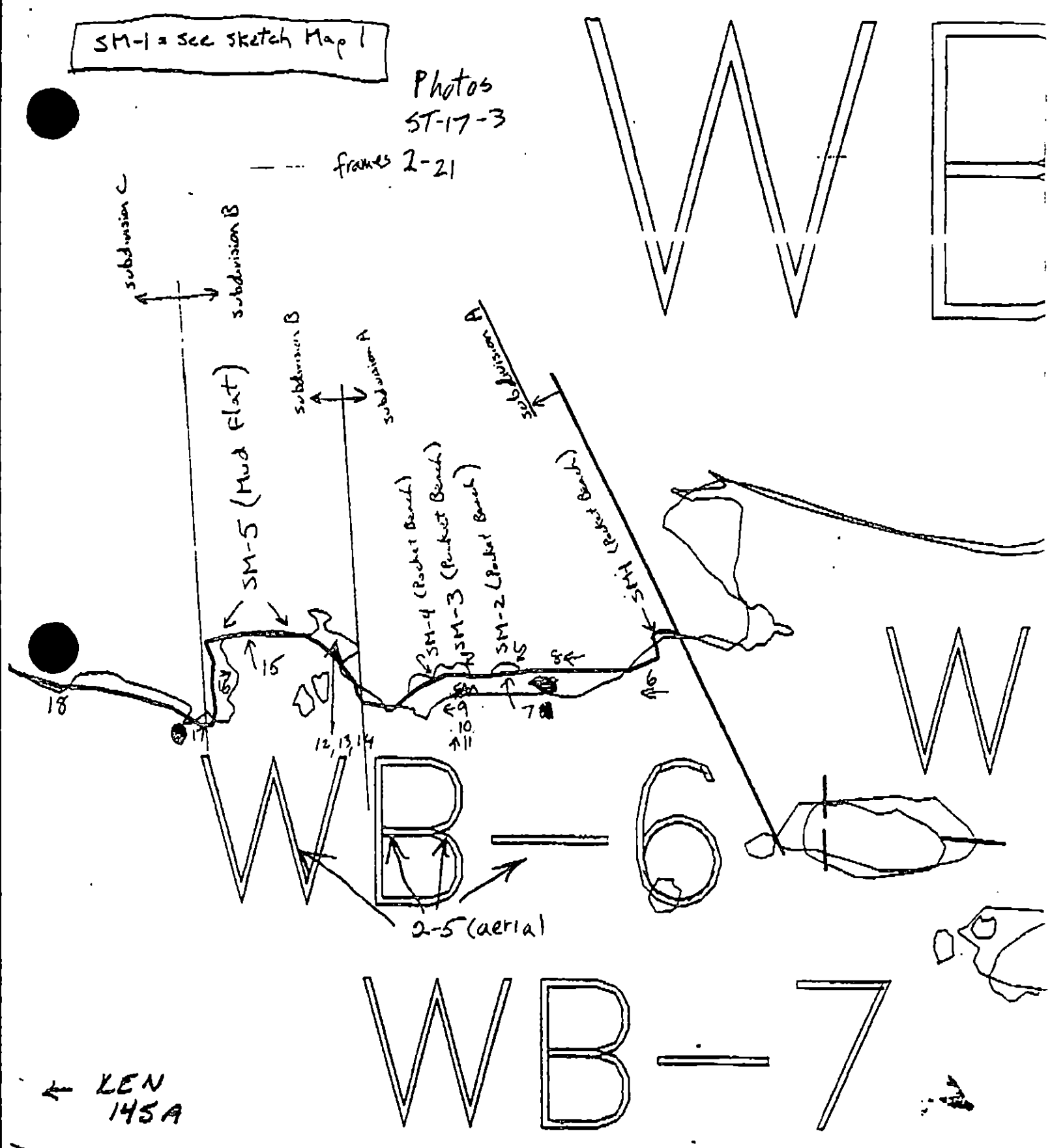
XXXX Wide
/// Medium
---- Narrow
TTTT Very Light
0000 No Oil

WB-2

ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145b
Name: Rudy Nagel
Date: 4/1/96
Date Entered:



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

WB-2

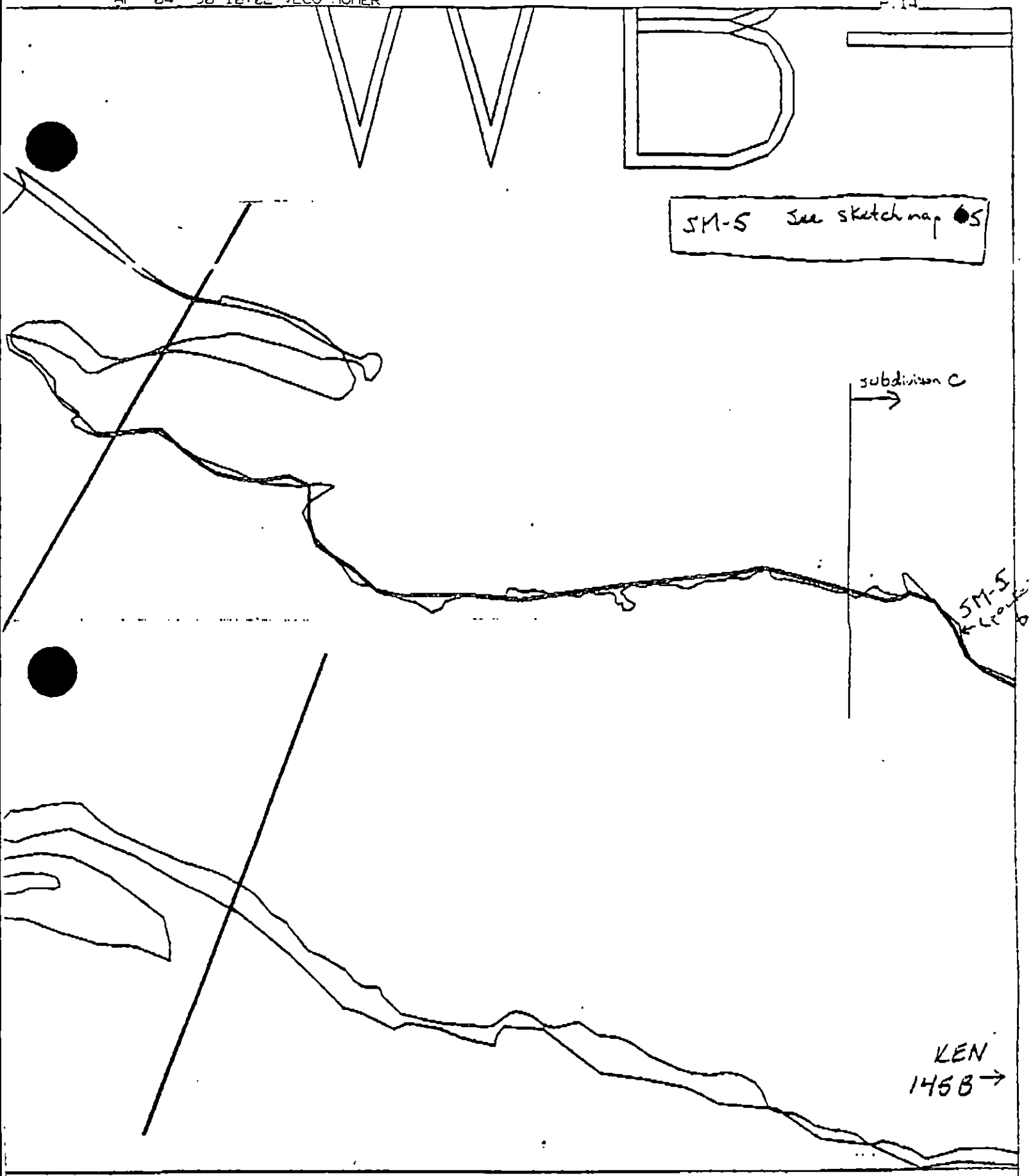
ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145b

Name: _____

Date: _____



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

WB-2

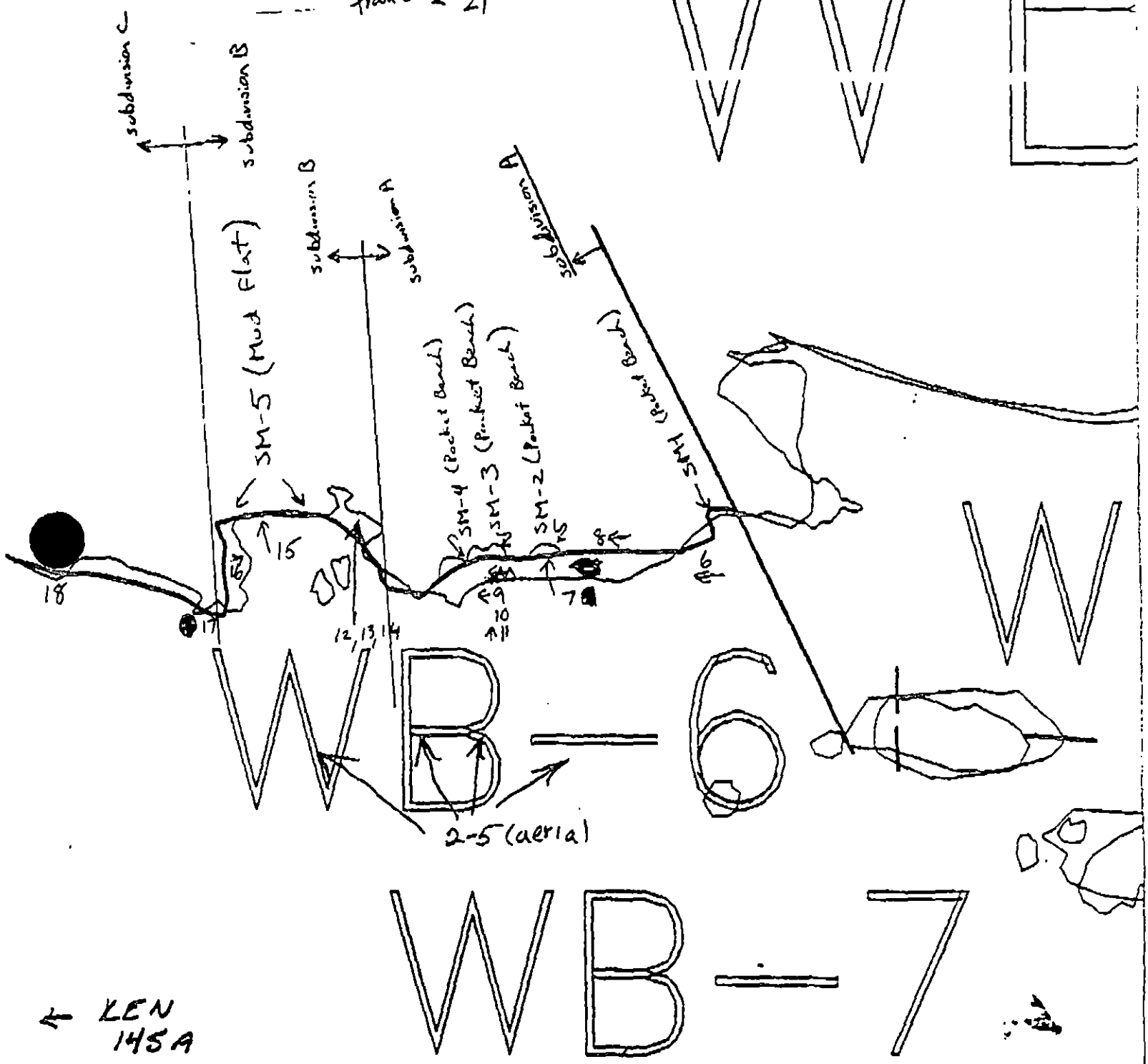
ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145a
Name: Cindy Siegel
Date: 4/1/90

SM-1 = see sketch Map 1

Photos
ST-17-3
frames 2-21



← KEN 145A

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

WB-2

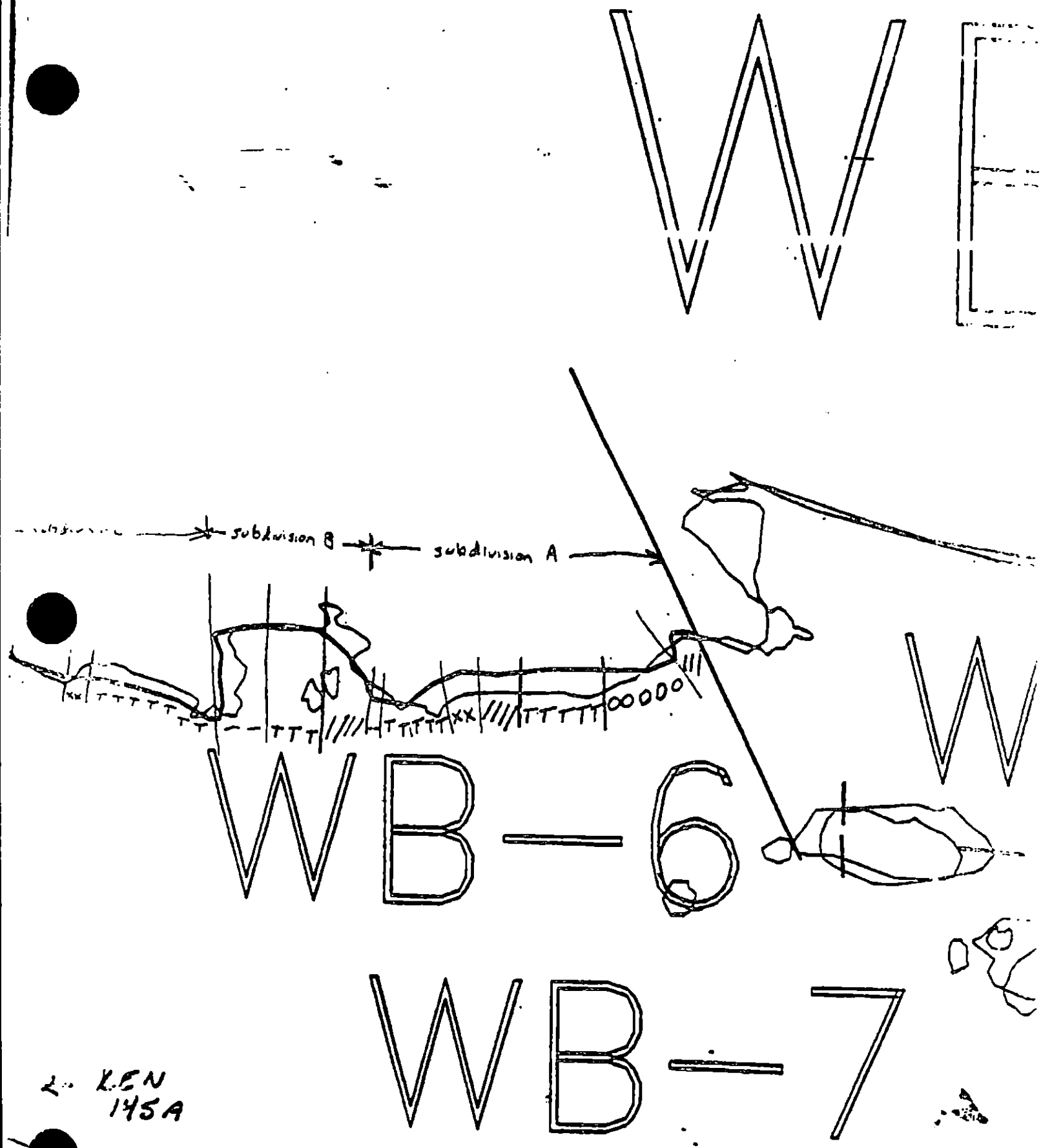
ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145b

Name: _____

Date: _____

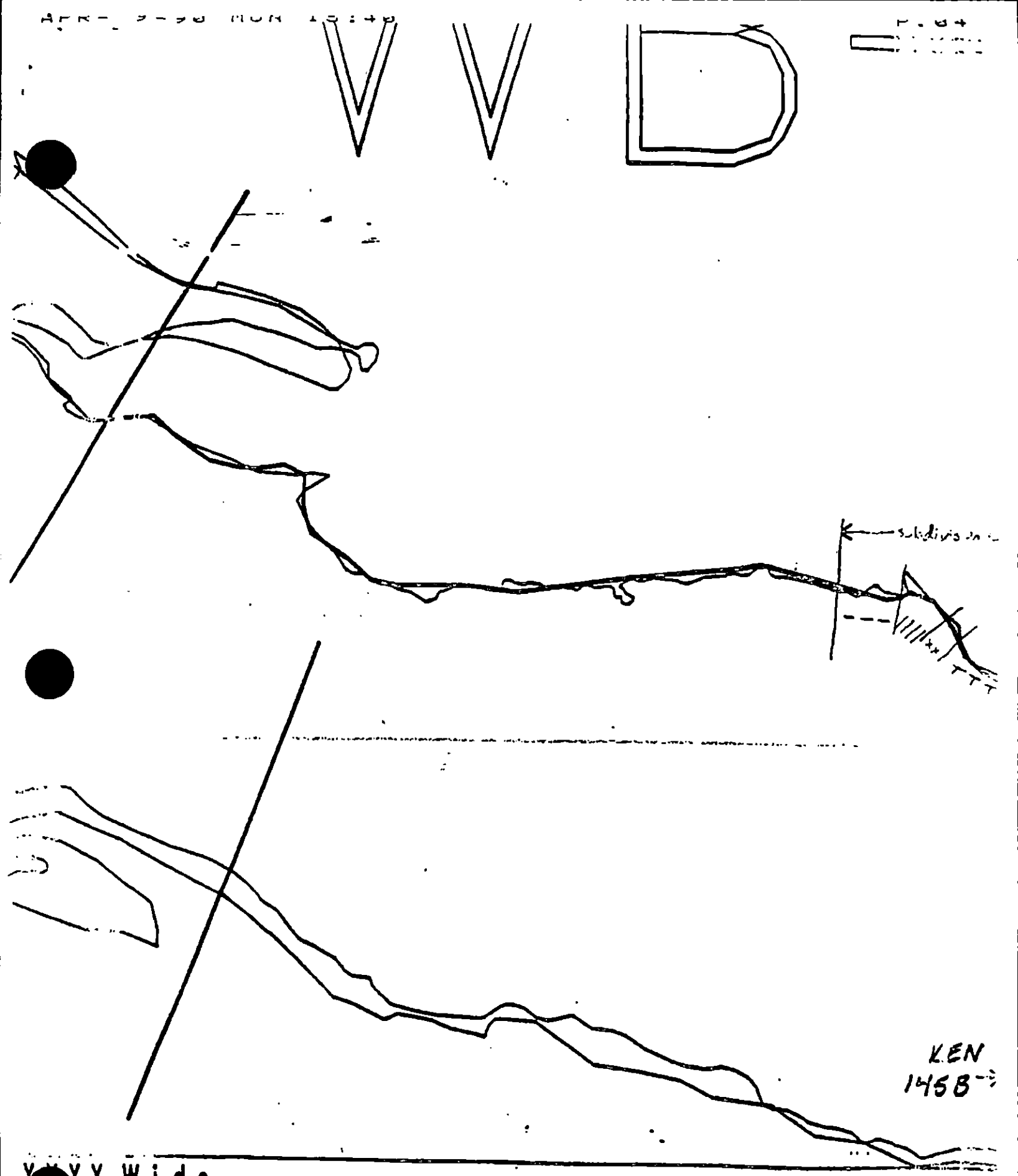


XXXX Wide
//// Medium
---- Narrow
TTTT

WB-2

ADEC Segment Length: 2232m

Map Key: KEN-145b
Name:



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

WB-2

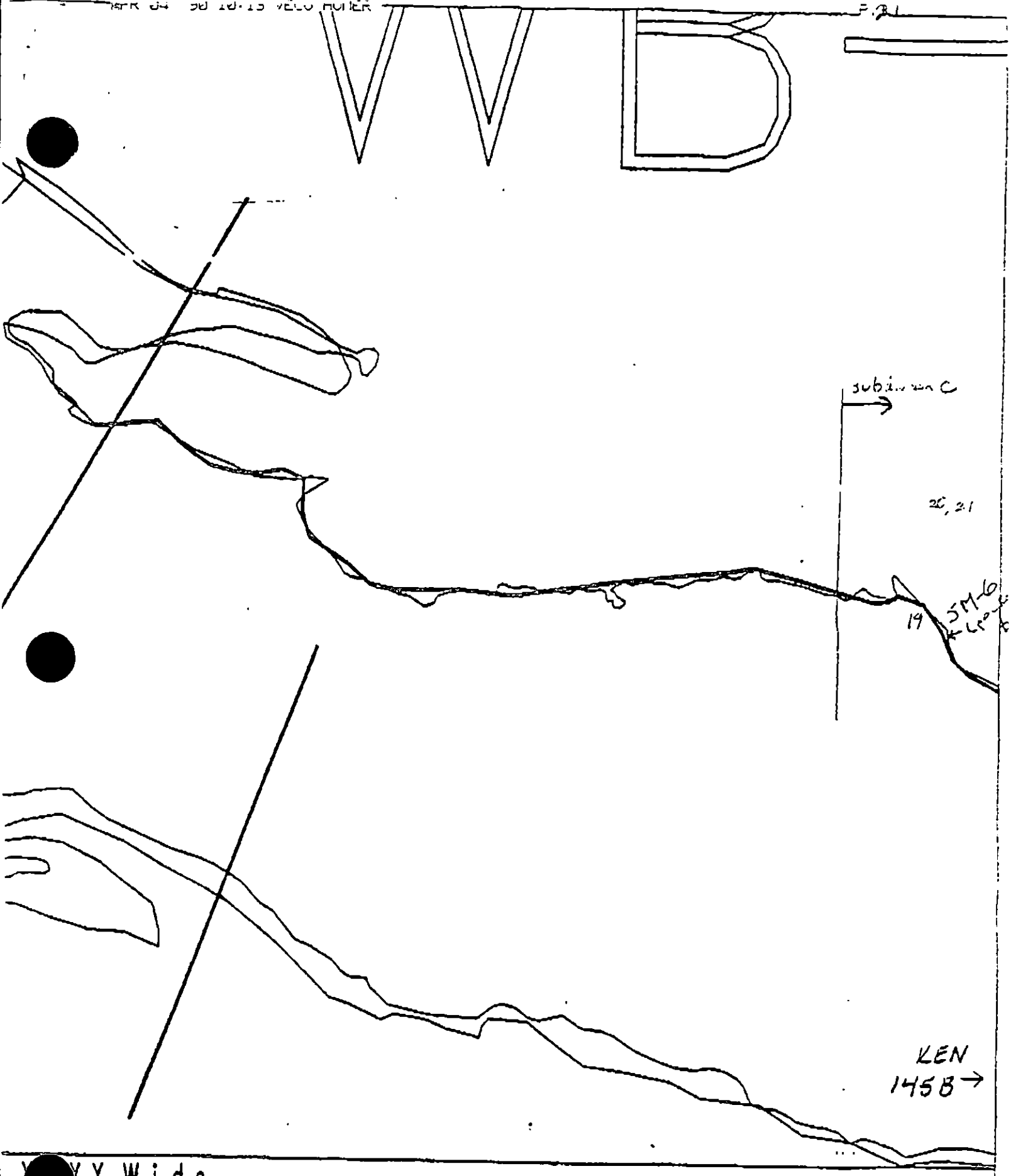
ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145a

Name: Ruby Arzagel

Date: 4/1/90



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

WB-2

ADEC Segment Length: 2232m

Map Key: KEN-145o

Name: _____

Date: _____

REGION: KENAI

SEGMENT: ST/WB-02

SUBDIVISIONS: C (3 OF 6)

SHORELINE EVALUATION

SEGMENT ST/ WB-02 SUBDIVISION C (3 OF 6) DATE 4/1/90

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid 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 58 m: Medium 162 m: Narrow 61 m: V.Light 240 m: No Oil 0 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat removal and manual pick up of mousse, oiled debris and oiled trash (see sketch map for specific locations). Bioremediate areas with coated sediments as indicated on sketch map.

TAG COMMENTS:_____

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ WB-002 SUBDIVISION: C DATE 4-1-90

USCG
NAME R. BRYAN-HIRTE SIGNATURE R. Bryan Hirte

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

I agree with the findings of the Shoreline Oiling summary sheet for WB-002 subdivision C

ADEC
NAME Russell Kunibe SIGNATURE Russell Kunibe

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

see attached 1 sheet

LAND MANAGER
NAME PATRICK NORMAN SIGNATURE Patrick Norman

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

recomend manual pick up of patties, mats and asphalted layers in subdivision C. cold or warm water flushing to break up heavy concentrations is recomended also. follow up with Bioremidiation.

Segment WB-2 Subdivision C Date 4/1/90

ADEC Russell Kunibe Signature Russell Kunibe

Description:

The oiling which remains in this subdivision is weathered mousse in the sediments around and under the boulders and cobbles. This oil is found on the pocket beaches in the UITZ. The area in sketch map #5 has been flagged off as the area where the logging company will filling and placing a dock.

Recommendations:

Manual pick up and break up of the mousse and tar mats where possible. Because the mousse is under and around small boulders and cobbles washing may be needed. This would be especially true if the mousse-asphalt becomes more mobile in warmer weather. After much of the gross contamination has been removed bioremediation may be needed.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Randy Siegel USCG Bryan SEGMENT ST/ WR-2
BIO Mike Fawcett LAND REP Pat Dorman (PGUC) SUBDIVISION C. (3 of 4) 3 of 6
EXXON John Dean ADEC Russell Kunibe TIME 14:00 to 15:00
TEAM NO.: 17 TIDE LEVEL: +1.2 to +3.1 DATE 4 / 1 / 90
EST. SUBDIVISION LENGTH: 500 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
SURFACE SEDIMENTS: R 15 % B 60 % C 10 % P 10 % G 4 % S 1 % M 0 % V Ø %
SLOPE: Lang 40 % Hang 60 % Vert Ø % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W 45 m M 140 m N 85 m VL 230 m NO N/A m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	/C	/B	/P	/S	SOL BR	DEL RW	GY SL	DEP TL	LBR	SU	UI	MI	LI
ASPHALT PAVEMENT	✓	X				✓X					X✓		
POOLED													
COVER													
COAT	X	+	✓			X		X+✓			X✓+		
STAIN	X	+	✓			X		X+✓			X✓+		
MOUSSE		X							X		X		
PATTIES		X				X					X		
TARBALLS		X				X					X		
FILM				X	X	X					X		
NO OIL										X			

PAVEMENT: H (B) S 350 sq. m by 1 cm
PATTIES / TARBALLS 50 BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

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

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE —
#BAGS 0

Photographs:
Roll No. ST-17-3
Frames 1-21

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SOL BR	DEL RW	GY SL	DEP TL	LBR	SU	UI	MI	LI		
1	20		X				0 - 2		X					X		X				C, G
							-													
							-													
							-													
							-													
							-													

COMMENTS This subdivision was very similar to Subdivision A. Narrow (<10 meters) stretches of bedrock/boulder beaches beneath low/h.-angle cliffs, with pocket beaches occassionally incised into the bedrock. Oiling typically was concentrated in the pocket beaches in a band along the UI. This subdivision included the area to be used for logging operations. Forest-clearing was being performed in this area during our survey. Difficult to dig pits due to B

REVIEWED RAT DATE 17 Nov 90

OG Ra[redacted] Siegel

SEGMENT [redacted] WB-2

SUBDIVISION C

DATE 4 / 1 90

N

2 cm = 10 m
App. Scale

[redacted]TCH MAP #5

Part of Subdivision C

CHECKLIST

- ___N Arrow
- ___Approx. Scale
- ___Seg/Sub Bndry
- ___Oil Dist.
  - Width
  - Length
  - % Cover
- ___Substrate Character
- ___Est. HWL/LWL
- ___SSL
- ___Profile Location(s)
- ___Profile(s)
- ___Pit Location(s)
- ___Photo Location(s)

LEGEND

1 △ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

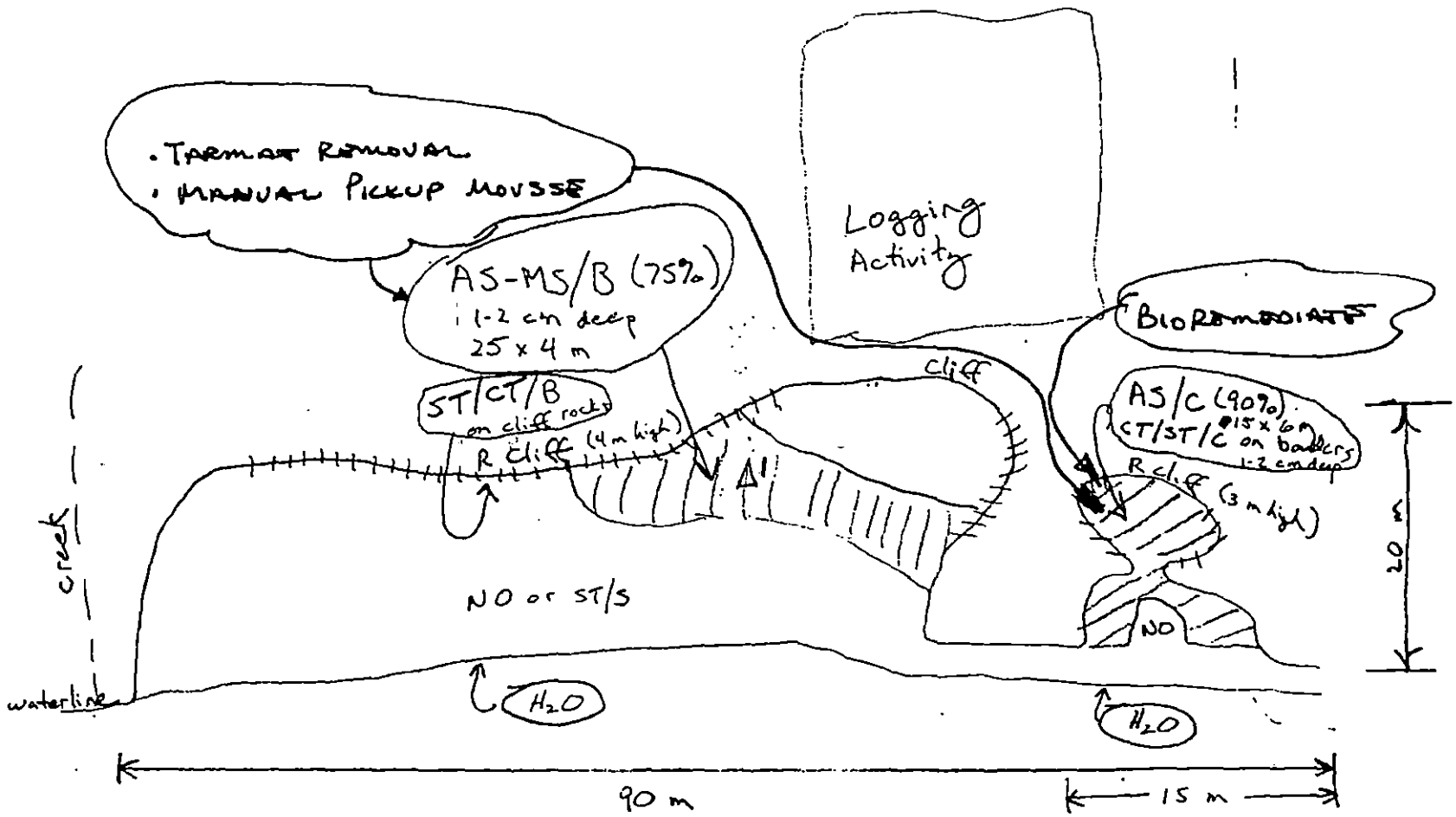
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 ●→ Photo location, direction, and number



Oil Character Length (m): AP 40 PO N/A CV N/A CT 70 ST 70 MS 30 PT 30 TB 30 FL N/A NO N/A

REVISION:03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / WB 08 2 Subdivision C Date (mo / day / yr) 4/1/90

Time (24 hr) 1330-1500 Biologist M.H. Fawcett

(A) Substrate type and % of segments:
(1) Bedrock 15 (2) Boulder 60 (3) Cobble 10 (4) Pebble (incl. gravel) 14 (5) Sand 1 (6) Silt ∅

(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-17-3
Frames 18-21

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

See attached sheets

Ecological Considerations:

No sensitivities listed

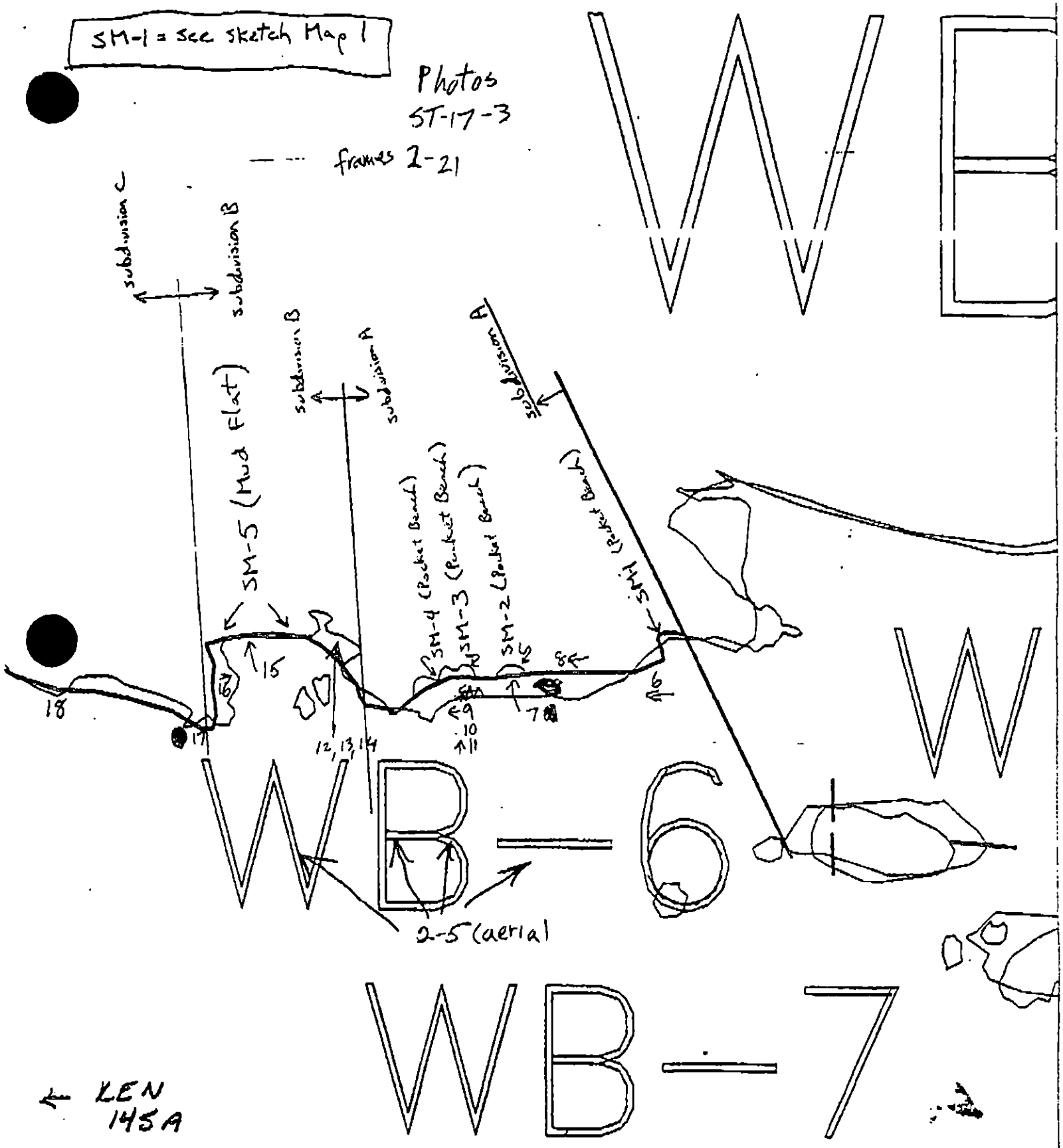
WB 002 A, B, C M. Fawcett 1 april 90
Windy Bay

P. 1 of 2

wildlife Observations

This segment consists of vertical faces and large boulder outcrops separated by pocket beaches comprised of boulders, cobbles, and pebbles, with sand/silt matrix beneath. In the mid- and low intertidal zones on the beaches a well-developed infaunal community lives buried below the boulders and cobbles (clams, echinoids, worms, etc). There is also a rich infaunal community in the low intertidal mudflat indicated on the sketch map for subsection B. Numerous craters in mudflat indicate sea otters have been digging clams recently. There are high densities of mussels and barnacles on bedrock and boulders in the mid-intertidal, especially on the more exposed outcrops. There are also locally dense areas of Fucus. Other than Fucus, algae are sparse and not very diverse in this area, as is typical of quiet bays. The mussels mainly range from 2 to 60-70 mm in length, the smaller ones probably representing settlement from last summer or fall. In middle and upper zones, Balanus glandula often very dense, B. cariosus locally dense in lower zone. On one cobble beach about 120m west of seaward end of subsection C a dense bed of live mussels site

on top of a heavy layer of mousse embedded in the surface sand at about the +6-7ft tide level. Removal of this mousse would require destruction of the mussels. Some barnacles (B. glandula) in upper intertidal zone on bedrock faces in subsections B and C of the segment are heavily coated with weathered oil. Barnacle scars on rock indicate up to about 50 percent mortality in small patches at upper fringe of distribution, but the causes of mortality could be either suffocation by oil or natural physical factors (weather extremes) which typically have the greatest effect on barnacles near the upper limit of their vertical distribution. The stream at the western end of subsection C appears too small for use by anadromous fish. Few birds seen, possibly owing to clearcut logging operation underway just above the shoreline in section C.



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

WB-2

ADEC Segment Length: 2232m

0 100 200 300

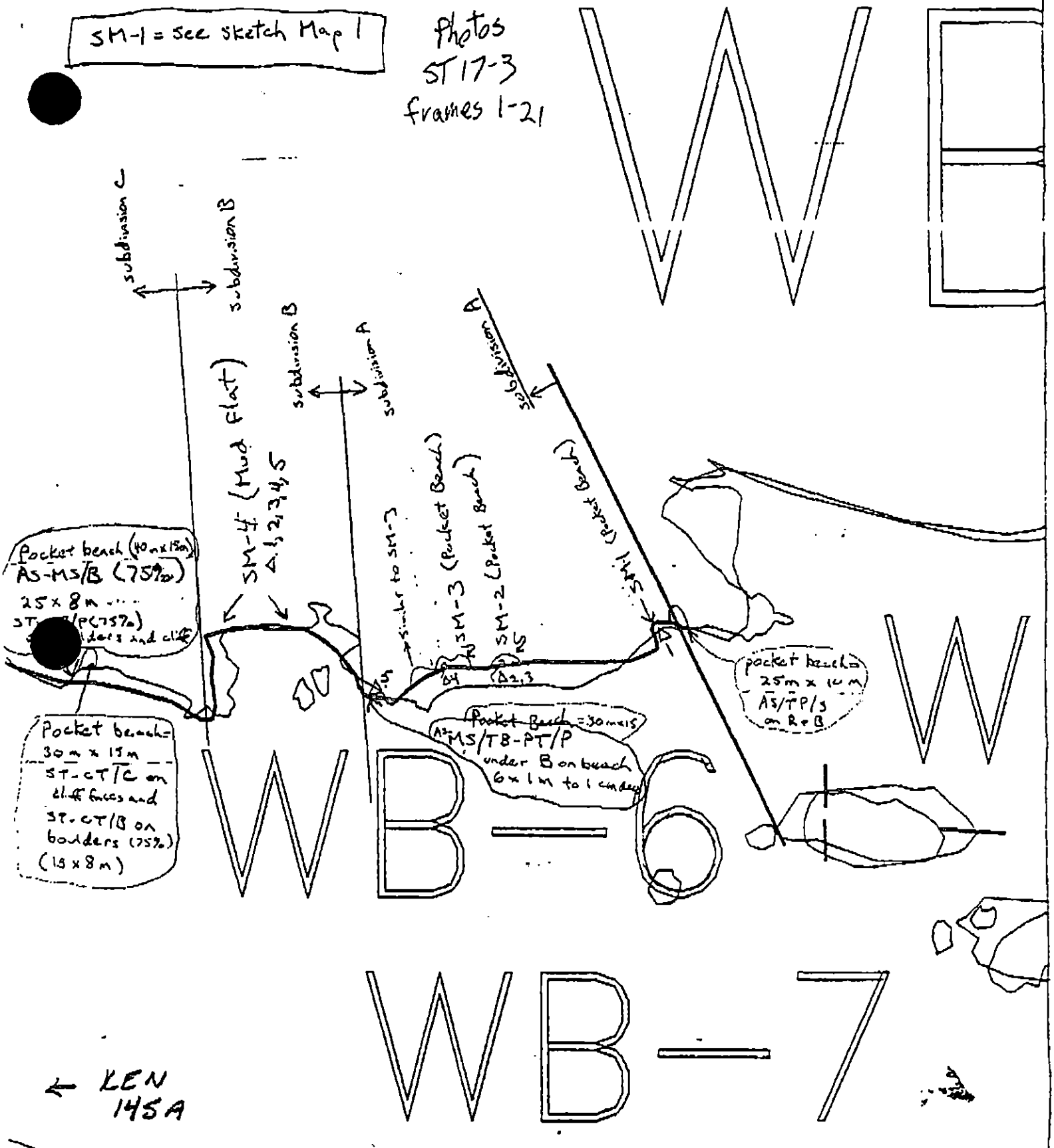
Map Key: KEN-145b

Name: _____

Date: _____

SM-1 = see sketch Map 1

Photos
ST 17-3
frames 1-21



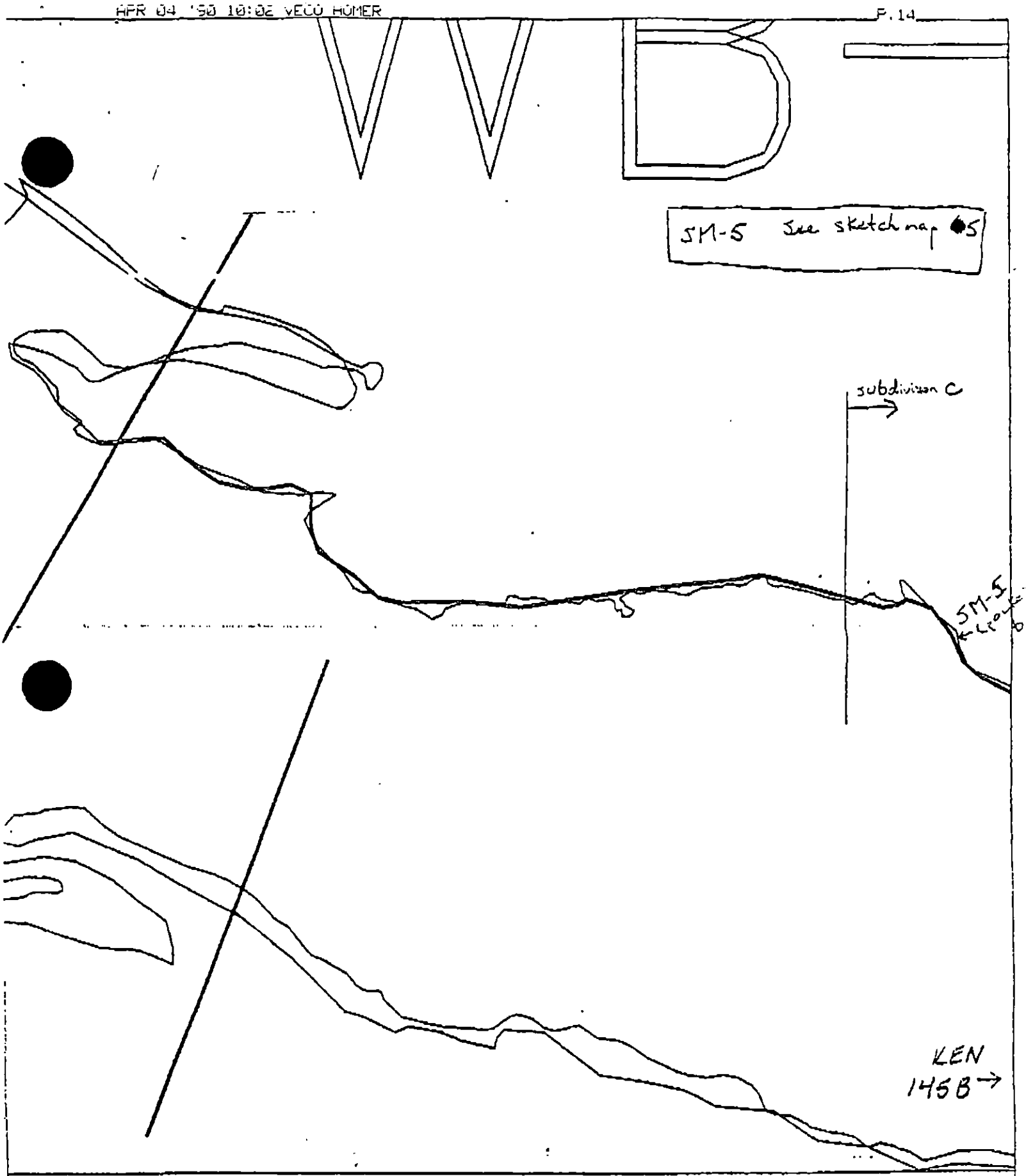
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

WB-2

ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145b
Name: [illegible]
Date: 4/1/90
Data Entered:



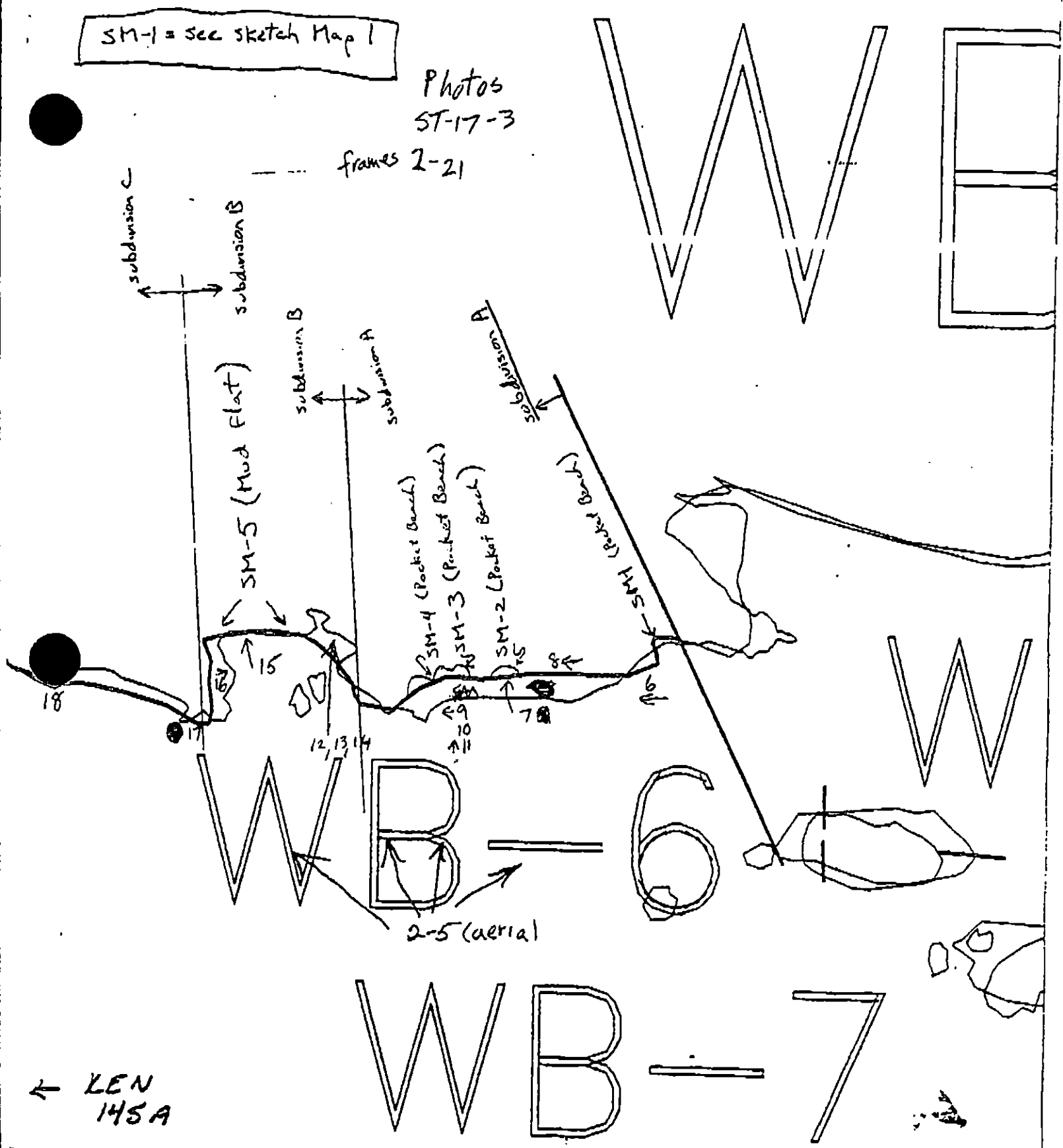
XXXX Wide
/// Medium
---- Narrow
TTTT Very Light
0000 No Oil

WB-2

ADEC Segment Length: 2232m

0 100 200 300
METERS

Map Key: KEN-145a
Name: Cindy Siegel
Date: 4/1/90
Data Entered:



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

WB-2

ADEC Segment Length: 2232m

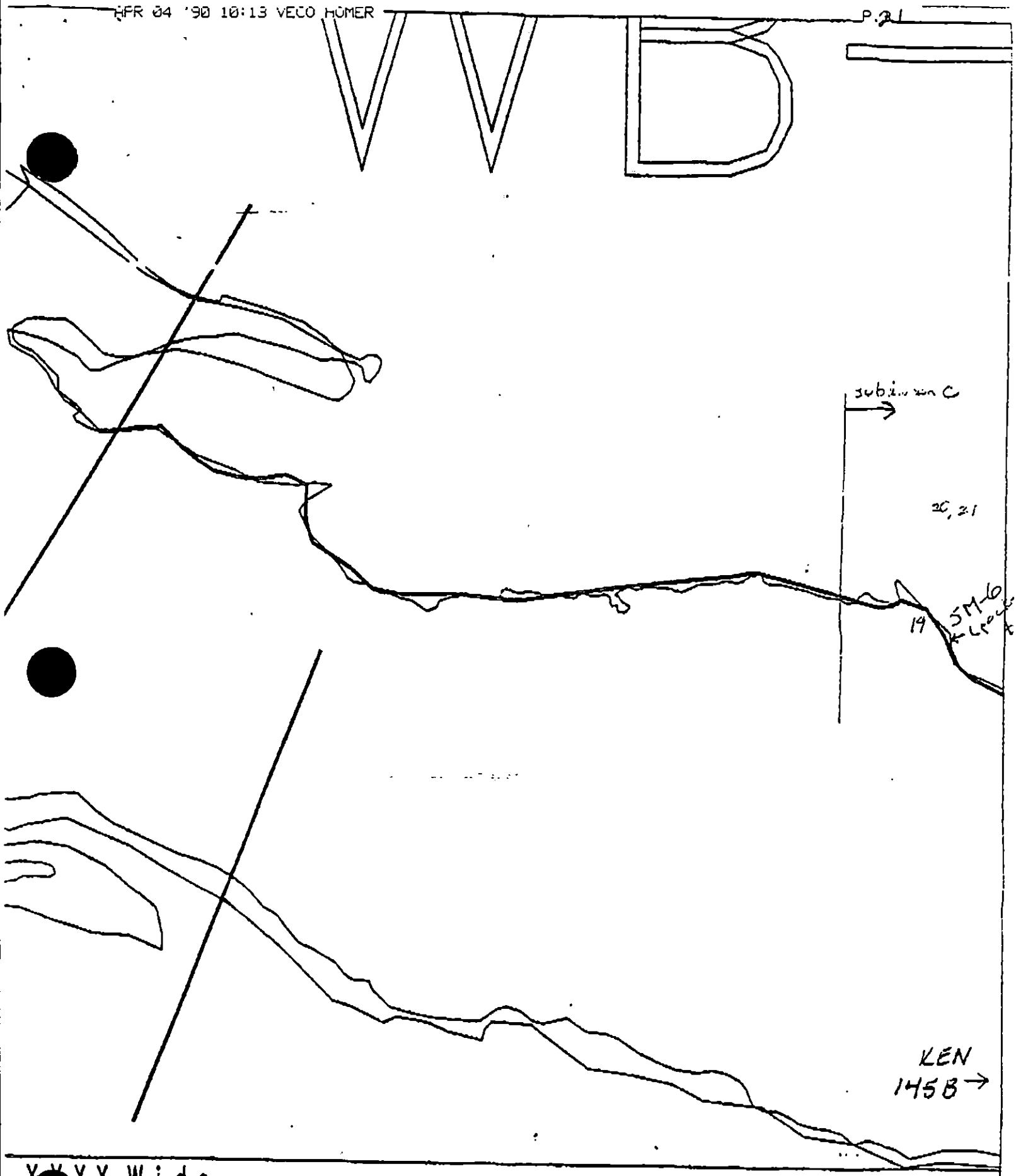
0 100 200 300

Map Key: KEN-145b

Name: _____

Date: _____

Data Entered:



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

WB-2

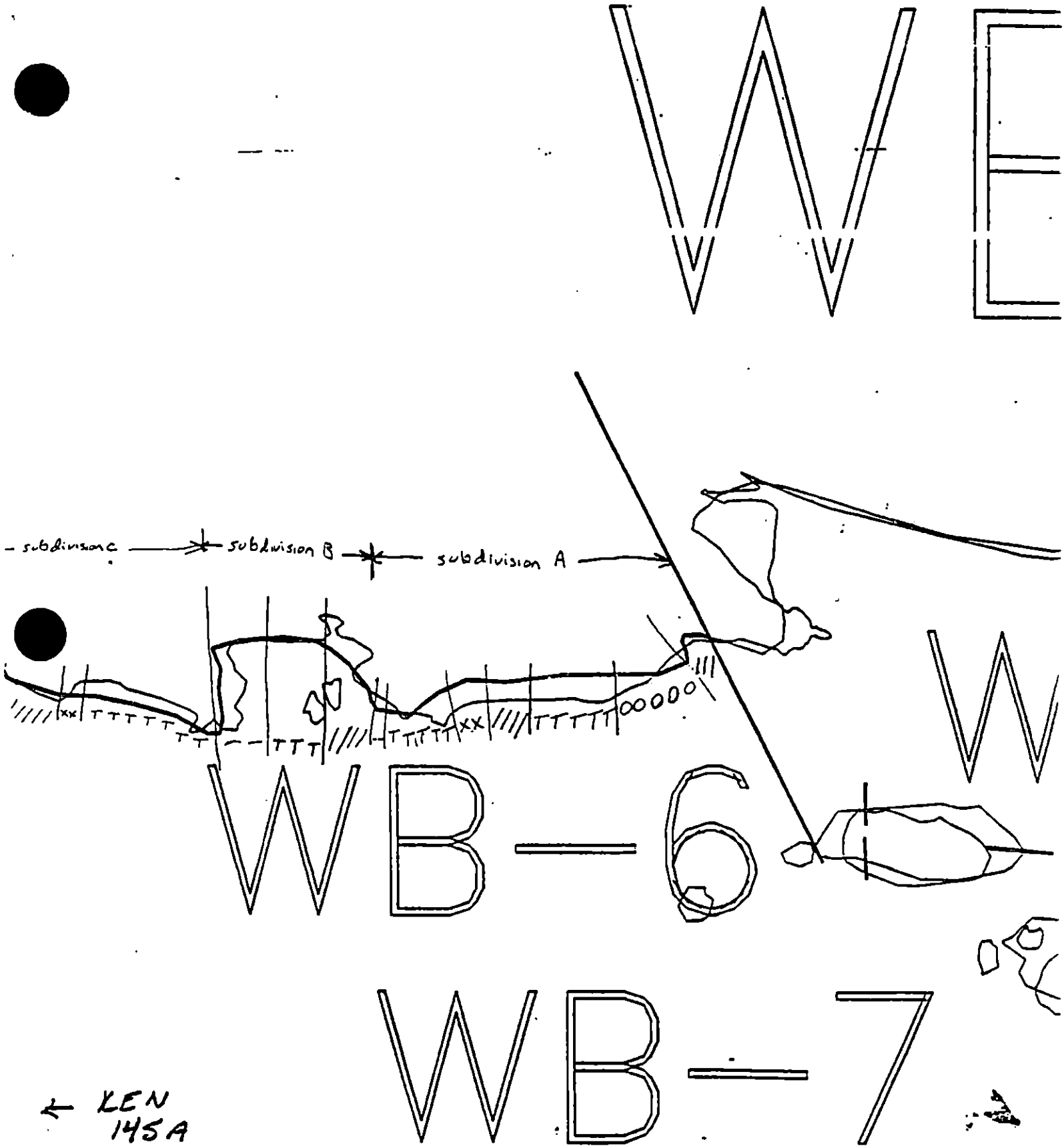
ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145a

Name: _____

Date: _____

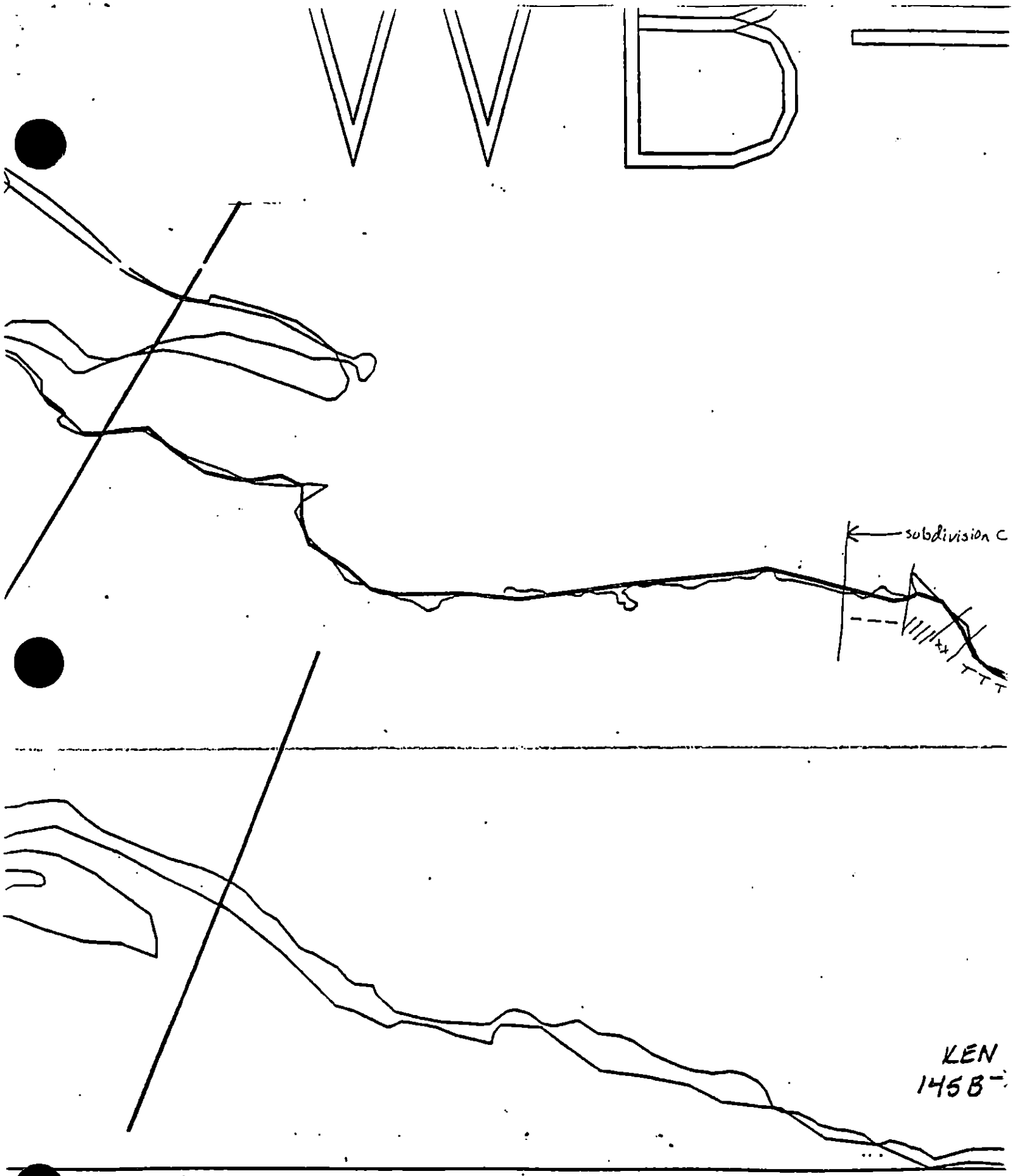


XXX Wide
//// Medium
---- Narrow
TTTT Very Light

WB-2

ADEC Segment Length: 2232m

Map Key: KEN-145b
Name: Ruby Siegel
Date: 4/1/90



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

WB-2

ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145a

Name: Ruby Siegel

Date: 4/1/90

REGION: KENAI

SEGMENT: ST/WB-02

SUBDIVISIONS: D (4 OF 6)

SHORELINE EVALUATION

SEGMENT ST/ WB-02 SUBDIVISION D (4 OF 6) DATE 4/6/90

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid 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 40 m: Narrow 93 m: V.Light 107 m: No Oil 0 m
Subsurface Oil Observed: Yes X No____ Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat removal and manual pick up of mousse, oiled trash, vegetation, and debris as indicated on sketch map. Bioremediation of two small areas also recommended.

TAG COMMENTS:_____

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / WB-2 SUBDIVISION: D DATE 4/6/90

USCG
NAME R. BRYAN HIRTE SIGNATURE R. Bryan Hirte DC1

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

I agree with the findings of the Shoreline Oiling Summary Sheet for WB-002 subdivision D

ADEC
NAME Russell Kunibe SIGNATURE Russell Kunibe

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

The oiling in this subdivision was a broken band of cover, coat and stain on the rock faces that was from ½ M. wide to 3 M. wide. The pocket beaches had patchy bands of asphalt and mousse from 3 M. to 12 M. wide. These beaches were predominantly medium sized boulders.
Recommended treatment: manual pick up of the asphalt and mousse appears to be the best method although because of the size of the sediments this would leave much of the oiling and other alternatives may need to be considered.
On the rock faces scraping or spot washing of the oil coating is recommended

LAND MANAGER
NAME Patrick Norman SIGNATURE Patrick Norman

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

manual pickup of asphalt layers and patties on surface. manual warm water flushing to get to the oil crown & larger boulders.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Randy Siegel USCG Bryan Hirtle SEGMENT ST/ WB-2
BIO Mike Fawcett LAND REP Pat Norman SUBDIVISION D
EXXON John Dean ADEC Russell Kimbe TIME 13:30 to 14:45
TEAM NO.: 17 TIDE LEVEL: +0.6 to +3.8 DATE 4 / 6 / 90
EST. SUBDIVISION LENGTH: 259 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
SURFACE SEDIMENTS: R 15 % B 60 % C 10 % P 5 % G 5 % S 5 % M Ø % V Ø %
SLOPE: Lang 75 % Hang 20 % Vert Ø % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W 25 m M 44 m N 60 m VL 130 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	/C	/B	/P	/S	SEL BR	OGL RW	OY SL	DBR TL	LBR	SU	UI	MI	LI
ASPHALT PAVEMENT		✓	+					✓	+		✓+		
POOLED													
COVER													
COAT		+	✓			+✓					+✓		
STAIN		+	✓			✓+					+✓		
MOUSSE		✓	+	X					+✓		X✓+	X	
PATTIES													
TARBALLS													
FILM				X				X			X	X	
NO OIL										X			

PAVEMENT: H (F) S 220 sq. m by 2 cm

PATTIES / TARBALLS 60 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

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

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. ST-17-4

Frames 31-36

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SEL BR	OGL RW	OY SL	DBR TL	LBR	SU	UI	MI	LI		
1	12	X		X			2·9		X					X		X				G,S
2	20		X				0·3		✓							X				S
3	25					X	0·0		✓							X				G,R
4	25				X		2·9		✓				✓			✓				S,G
5	30					X	0·0		✓							✓				S,G
6	15				X		2·6		✓				X				X			S,G

COMMENTS This subdivision consists of south-facing shoreline with pocket beaches covered predominantly with boulders. MS-AP collected beneath the boulders in a band of variable width across much of the subdivision. ~~Stain~~ ST-CT was observed on ~~most~~ much of the cliff walls. Some subsurface oiling was observed in pits dug in 2 of the pocket beaches but presence of boulders made additional investigation difficult.

REVIEWED [illegible] 4-9-90

SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 03/22/90

SEGMENT ST/ WB-2 SUBDIVISION D

SUBSURFACE OIL (CONTINUED)

	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	BR	DBR	RY	DGR	LBR	SU	UI	MI	LI		
7	30				X		5 - 10		✓			●	X				✓			S, G
8	30					X	0 - 0		✓							✓				G

COMMENTS

REVIEWED TW DATE 4/8/90

OG Randy Siegel

SEGMENT ST/ UB-2

SUBDIVISION D

DATE 4 / 16 / 90

CHECKLIST

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

LEGEND

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

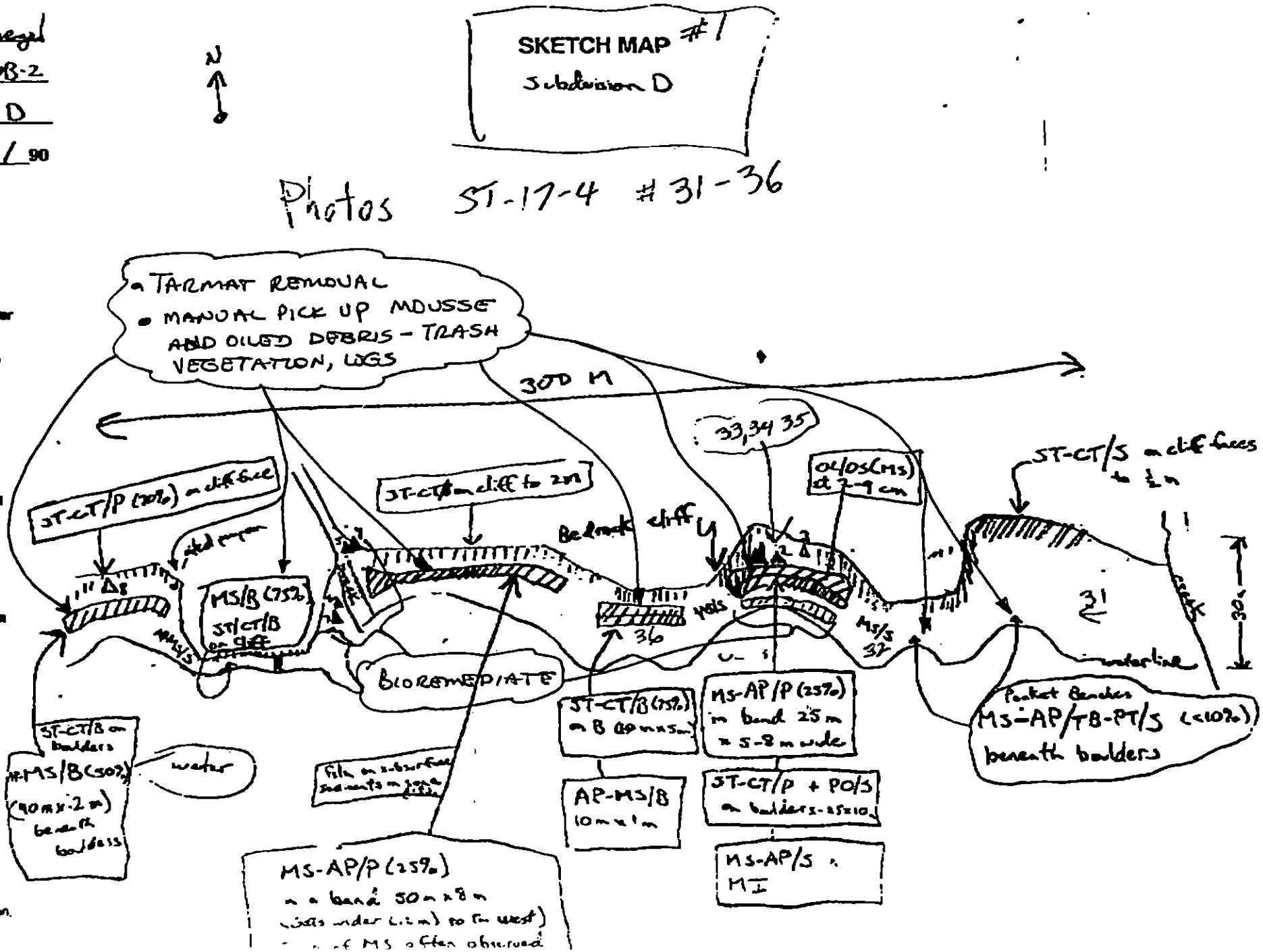
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

Photo location, direction, and number



OG Randy Siegel

SEGMENT ST/ UB-2

SUBDIVISION D

DATE 4 / 6 / 90

CHECKLIST

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

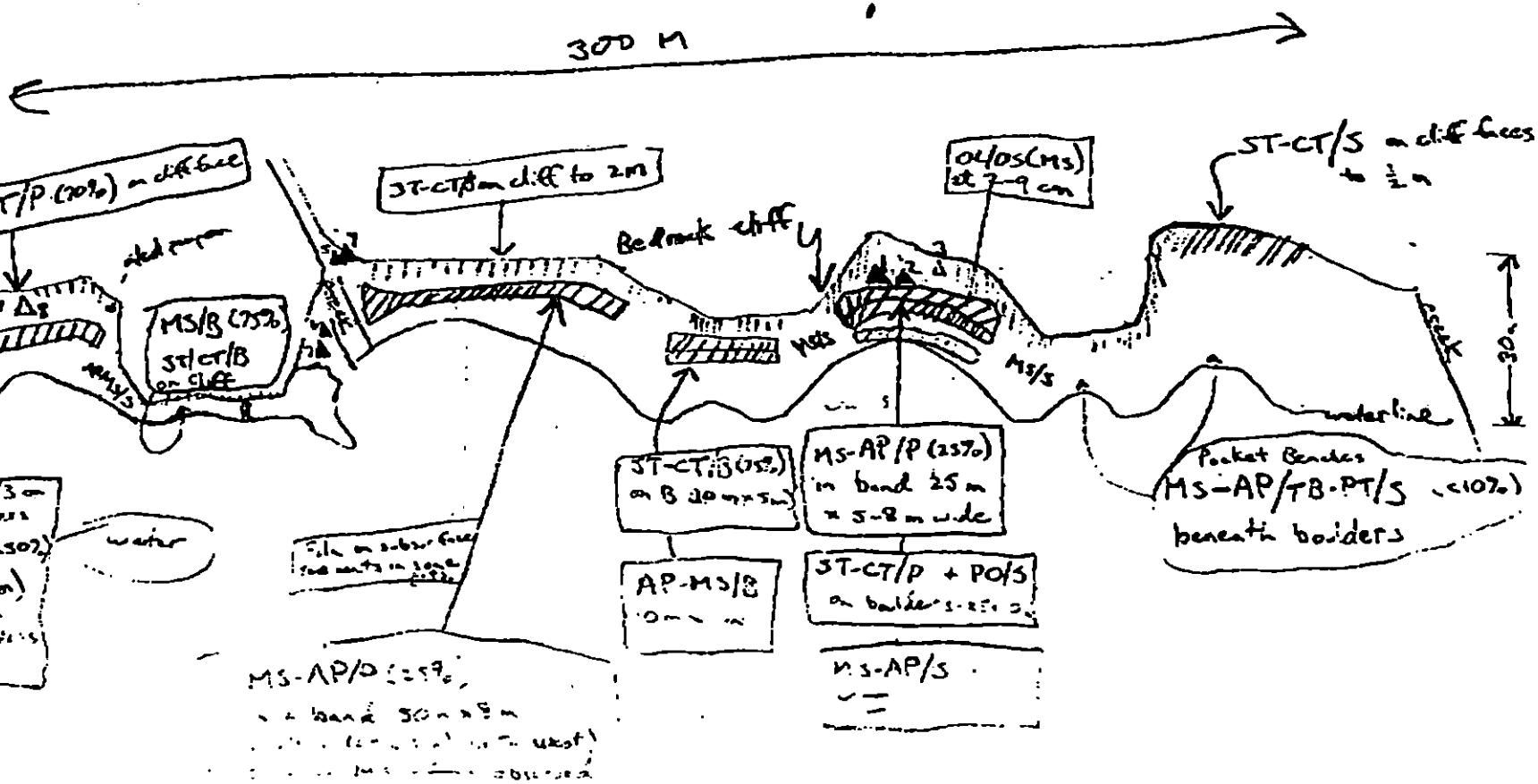
LEGEND

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

N

SKETCH MAP #1

Subdivision D



SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

: ST / NB 2 Subdivision D Date (mo / day / yr) 4/6/90

1 hr) 1830-2000 Biologist M. Fawcett

Substrate type and % of segments:
(1) Bedrock 15 (2) Boulder 60 (3) Cobble 10 (4) Pebble 5 (5) Sand 10 (incl. gravel) (6) Silt Ø

Overall % cover of biota (% of segment): Dense ✓ Moderate ____ Low ____

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 ____

LES

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

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

PODS

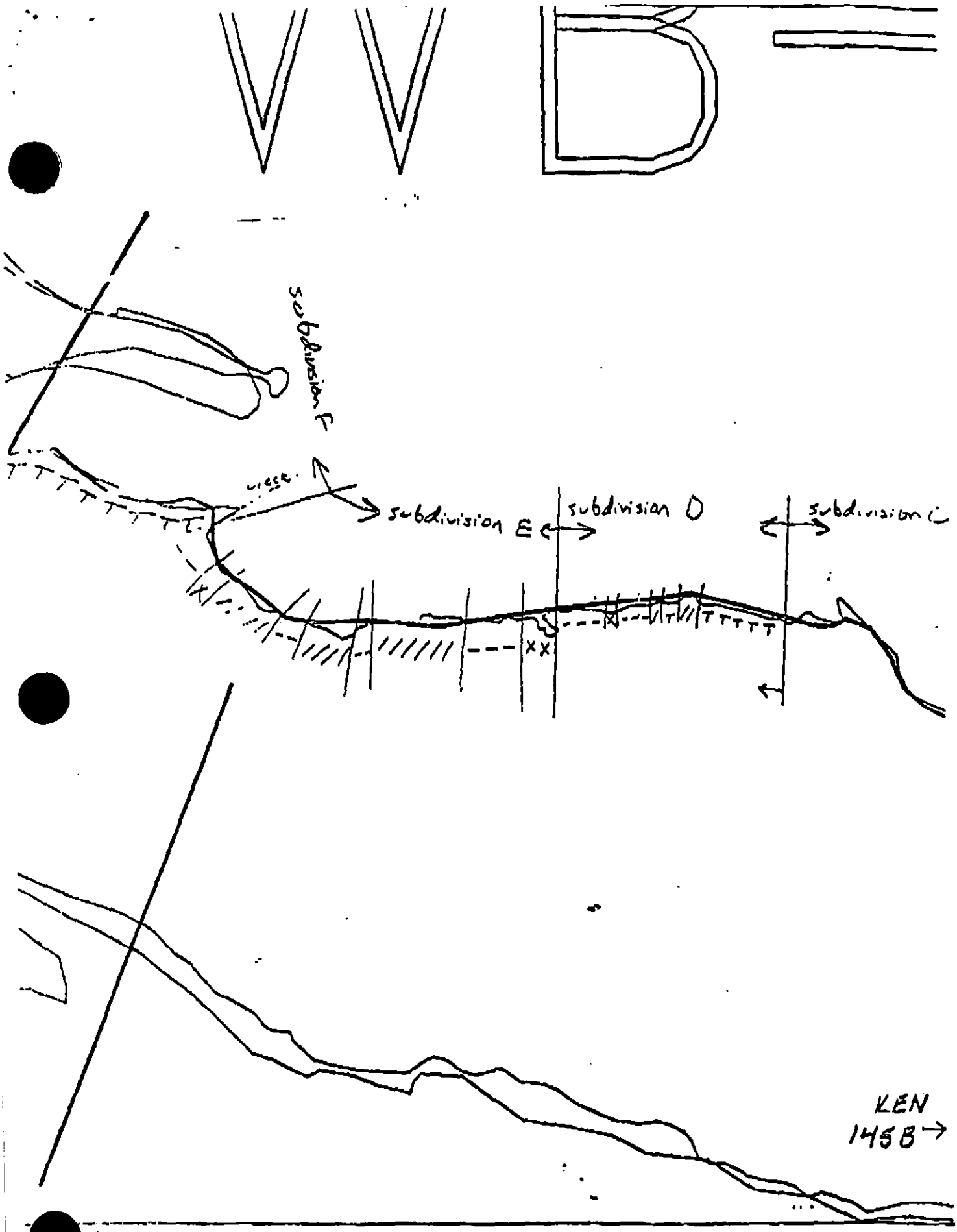
Dense		Moderate			Sparse			Rare			
1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	X	2	X	2	X	2	2	2	NOT PRESENT
3	3	3	X	3	X	3	X	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	

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

Observations/ General Comments:
weathered oil coating some barnacles in UTZ - most alive, some dead
[illegible] snails nassarius obsoletus laying eggs, MTZ. T. lamellosa and I canaliculata
[illegible] small blob of herring (or similar) eggs under boulder, [illegible] a piece of weathered mousse.

al Considerations:

[illegible] activities listed



de
Medium
Narrow
Very light

WB-2

ADEC Segment Length: 2232m

Map Key: KEN-145a
Name:
Date: 4/8/90

REGION: KENAI

SEGMENT: ST/WB-02

SUBDIVISIONS: E (5 OF 6)

SHORELINE EVALUATION

SEGMENT ST/ WB-02 SUBDIVISION E (5 OF 6) DATE 4/4/90

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid 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 72 m: Medium 238 m: Narrow 140 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No____ Maximum Depth 15 +cm

RECOMMENDATIONS:

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

COMMENTS: Recommend manual removal of tarmat and manual removal of mousse, patties and tar balls.

TAG COMMENTS:_____

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / WB-2 SUBDIVISION: E DATE 4/4/90

USCG
NAME R. Bryan Hirtle SIGNATURE R. Bryan HIRTLE LCDR

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

I agree with the findings of the Shoreline Oiling Summary sheet for segment WB-002 subdivision E

ADEC
NAME RUSSELL KUNIKE SIGNATURE Russell Kunike

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

See attached 1 page.

LAND MANAGER
NAME Patrick NORMAN SIGNATURE Patrick Norman

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Agree with oiling summary sheet for WB-2 - Subdivision E.. Recommend manual pickup of surface and subsurface oil. Probably will need to do additional warm water flushing to get rid of the oil.

REVISION NO. 03/21/89

SEGMENT WB-2 SUBDIVISION: E DATE: 4/4/90

ADEC
Russell Kunibe Signature Russell Kunibe

Treatment Suggested

The finding of the shoreline oiling summary accurately describe the oiling. In sketch map #1 the buried oil was under small boulders cobbles and gravel which could be moved. The pooled mousse in the segment was usually in the cracks of bedrock and around the base of the boulders.

Recommended clean up

Manual pick up of the mousse, asphalt and patties, including the buried mousse saturated lens in sketch map #1. Scraping or spot washing of the oil cover on the rock faces. Possible flood washing of the pocket beaches if the mousse and asphalt becomes less viscous in the warm weather. Deployment of snare booms if sheen develops during treatment. Bioremediation of the pocket beaches after they have been checked to insure that the gross contamination has been removed.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Randy Siegel USCG Bryan Hirtle SEGMENT ST/ WB-2
BIO M. Bel Gweet LAND REP Pat Varnes (POVC) SUBDIVISION E
EXXON John Dean ADEC Russel Kunbe TIME 13:00 to 13:00
TEAM NO.: 17 TIDE LEVEL: +1.6 to +3.9 DATE 4 / 4 / 90
EST SUBDIVISION LENGTH: 480 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
SURFACE SEDIMENTS: R 10 % B 45 % C 30 % P 10 % G 5 % S Ø % M Ø % V Ø %
SLOPE: Lang 90 % Hang 10 % Vert Ø % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W 130 m M 200 m N 150 m VL N/A m NO N/A m
0 0

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	IC	IB	IP	IB	SBL/BR	DBL/RW	OT/SL	DBL/TL	LBR	SU	UI	MI	LI
ASPHALT PAVEMENT		X	✓		X				X		X	X	
POOLED													
COVER			X			X					X		
COAT			X			X					X	X	
STAIN			X			X					X	X	
MOUSSE		X	✓						X✓		X	✓	
PATTIES		X	✓		X✓				X✓				
TARBALLS		X	✓		X✓				X✓		X✓	X✓	
FILM				X		X	X				X		
NO OIL										X			X

PAVEMENT: H (F) S 250 sq. m by 2 cm

PATTIES / TARBALLS 70 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

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

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. ST-17-4

Frames 5-12

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SUBSURFACE SEDIMENTS
		OF	OR	OL	OF	NO		UO	UC	SBL/BR	DBL/RW	OT/SL	DBL/TL	LBR	SU	UI	MI	LI		
1	15			X			6 · 15	X						X		X				G
2	12	X					0 · 7		X					X		X				G
3	10		X	X			6 · 7		X					X			X			G
4	12		X	X			6 · 7		X					X			X			G
5	15					X	0 · 0		X									X		G

COMMENTS This subdivision consists of shoreline with large boulders covering most of it. A band of oiling was observed along the UI across much of the subdivision, sometimes consisting of ST-CT-CV, TB-PT, or an AP layer. The oiled band was typically 3 meters in width. A buried layer of mousse — thickness and depth unknown — was observed on the largest pocket beach in this subdivision.

Sheen on water in intertidal pools.

REVIEWED DATE

OG [illegible]

SEGMENT [illegible]

SUBDIVISION E

DATE 4 / [illegible] / 90

CHECKLIST

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

LEGEND

1 △ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

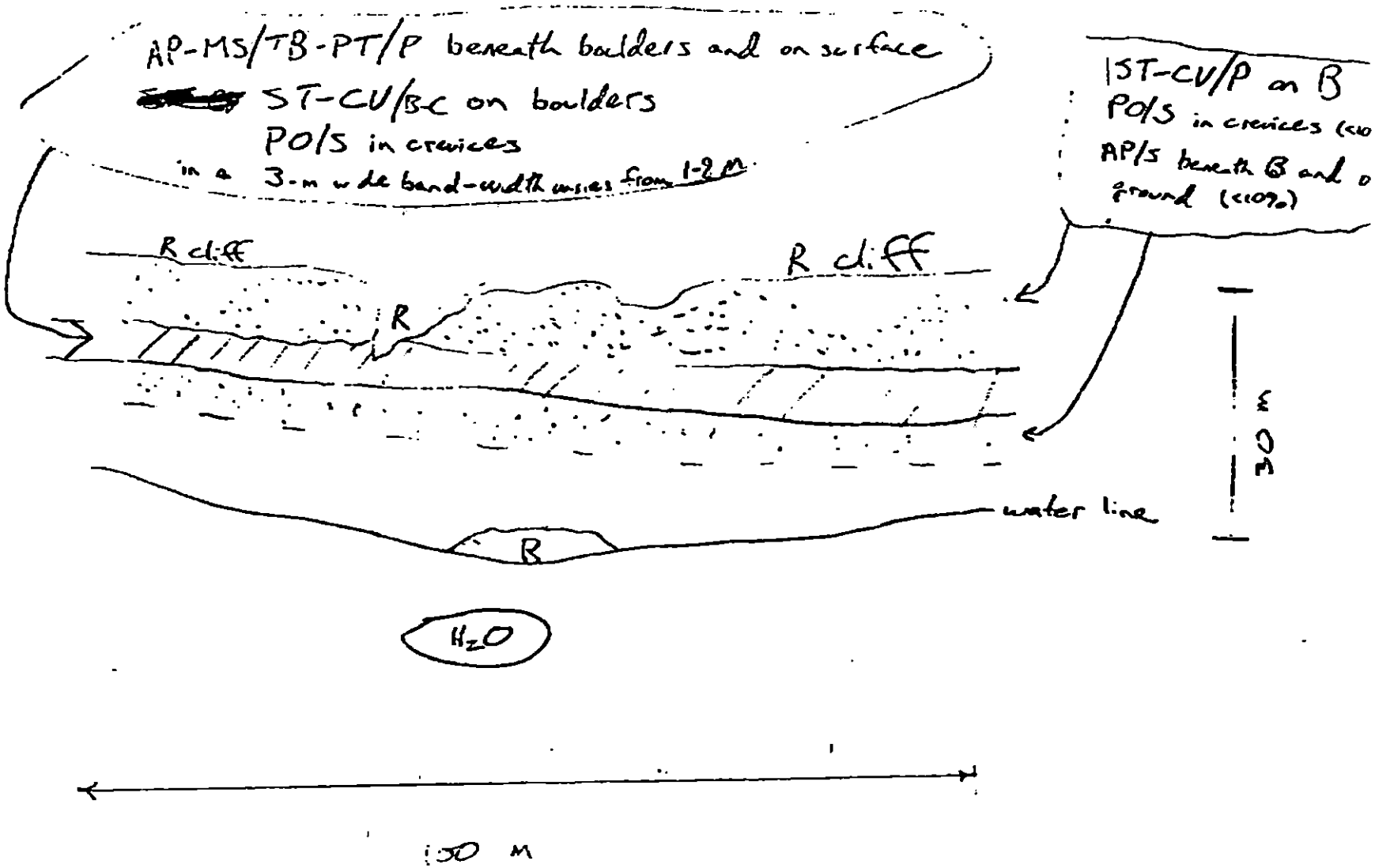
CT/S Splashed Distribution

Oiled Vegetation

1 ↔ Photo location, direction, and number

SKETCH MAP

#2



Oil Character Length (m): AP 75 PO [illegible] CV [illegible] CT [illegible] ST [illegible] MS 75 PT 75 TB 75 FL [illegible] NO [illegible]

REVISION:03/24/90

OG [illegible]

SEGMENT [illegible]3-2

SUBDIVISION E

DATE 4 / 4 / 90

CHECKLIST

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

LEGEND

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

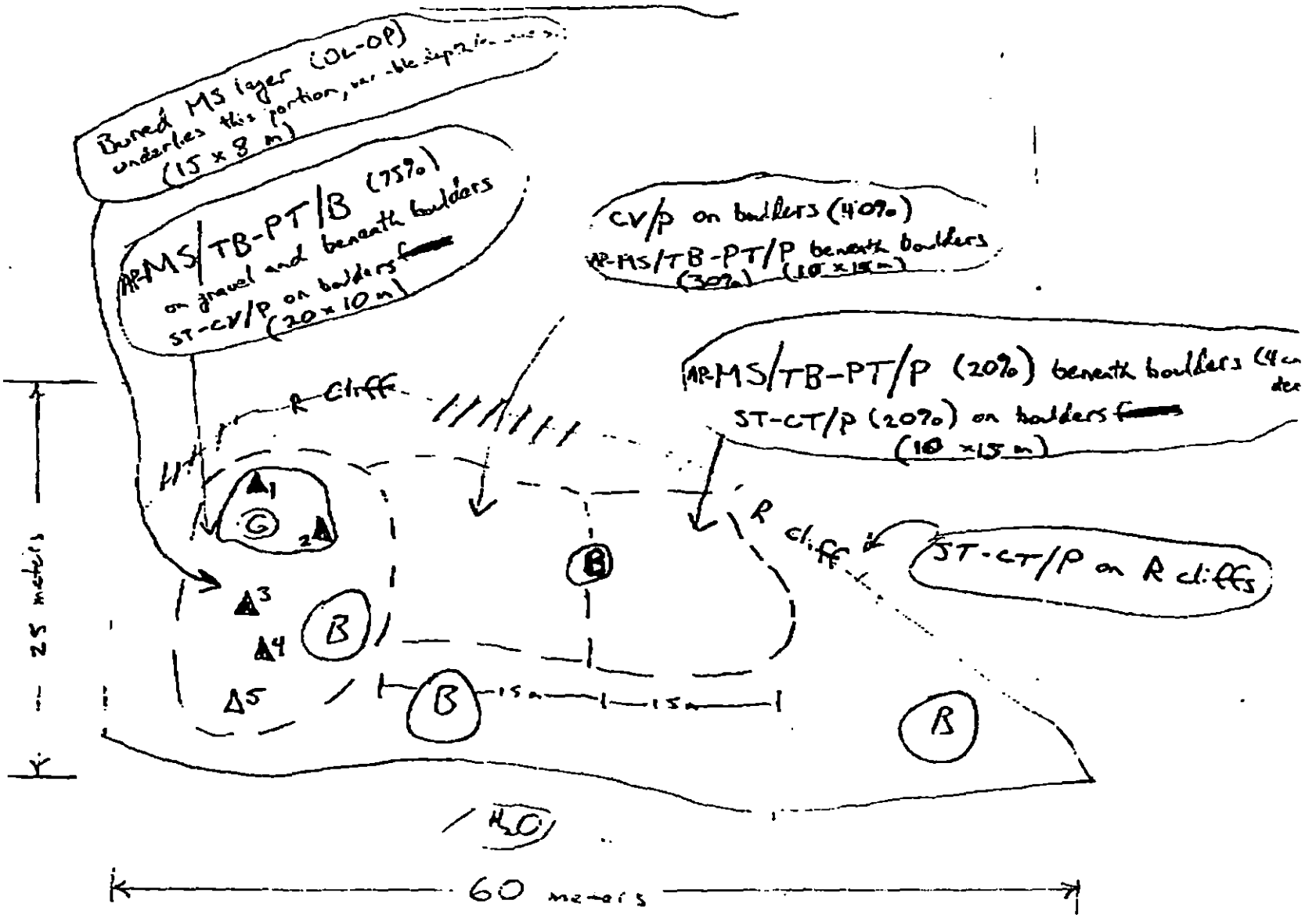
CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 Photo location, direction, and number

SKETCH MAP



Oil Character Length (m) AP 70 PO 1 CV [illegible] CT [illegible] ST [illegible] MS 50 PT [illegible] TB [illegible] FL [illegible] NO [illegible]

REVISION 03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03-22-90

Segment ST / WR-2 Subdivision E Date (mo / day / yr) 4/4/90

Time (24 hr) 1805-1900 Biologist Fawcett

(A) Substrate type and % of segments:
(1) Bedrock 10 (2) Boulder 45 (3) Cobble 30 (4) Pebble (incl. gravel) 15 (5) Sand Ø (6) Silt Ø

(B) Overall % cover of biota (% of segment): Dense ✓ Moderate (barnacles) ____ 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-17-4
Frames 5-12

BARNACLES

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

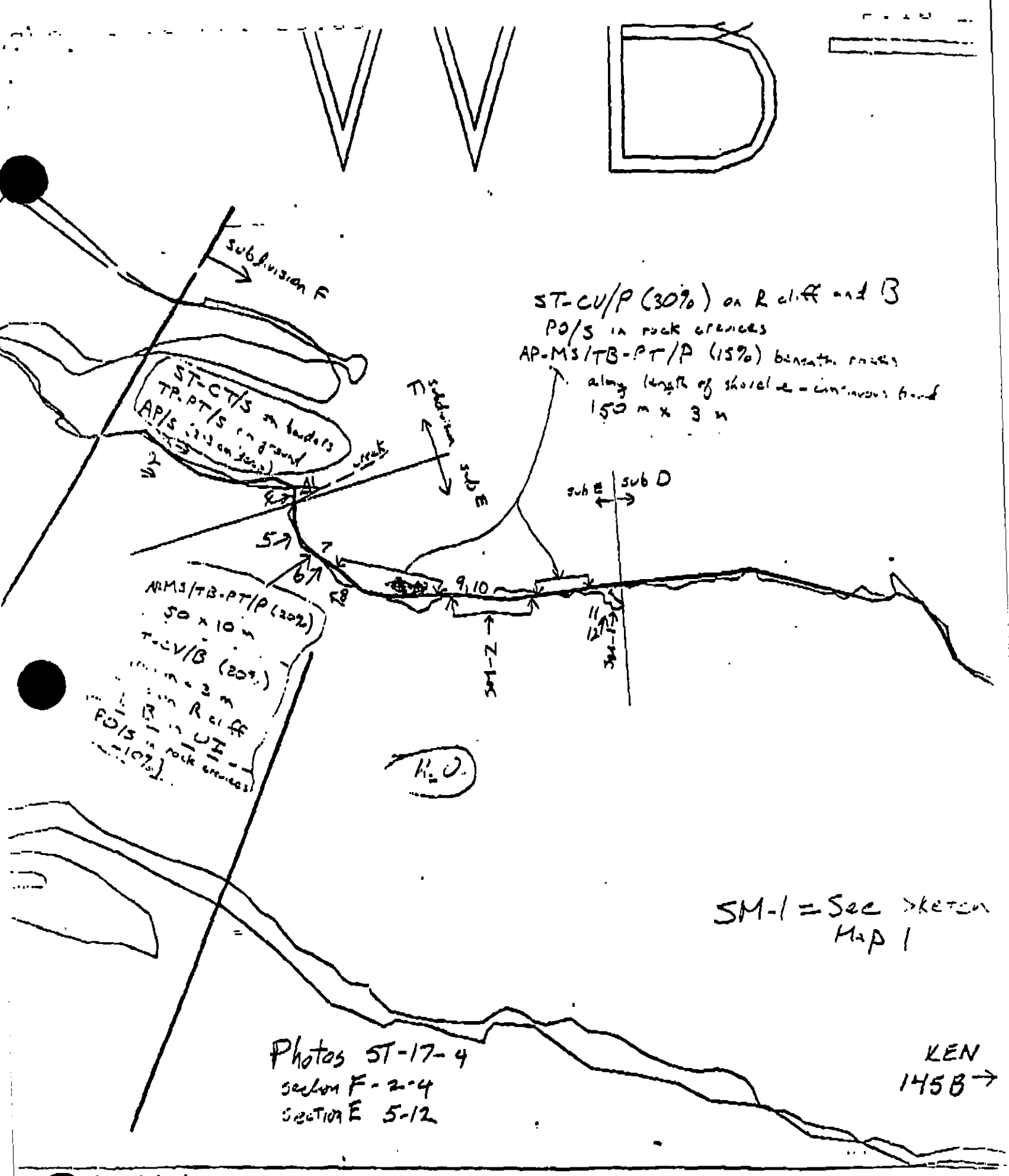
FUCUS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	X	X	2	2	2	X	2	2	
3	3	3	3	X	X	3	3	3	X	3	3	
4	4	4	4	X	4	4	4	4	4	4	4	NOT PRESENT
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:
Locally dense beds of mussels among pebbles in mini-cove areas. Dense c[illegible] in mud flat at mouth of small non-anadromous creek. Pat Norman, Int[illegible] (Image Corp.) confirms that fish do not use creek. very little algae in [illegible] whole subsection, other than Fucus and patches of Enteromorpha. Limpets moderately abundant among boulders & cobble. No birds or mammals seen.

Ecological Considerations:

none listed

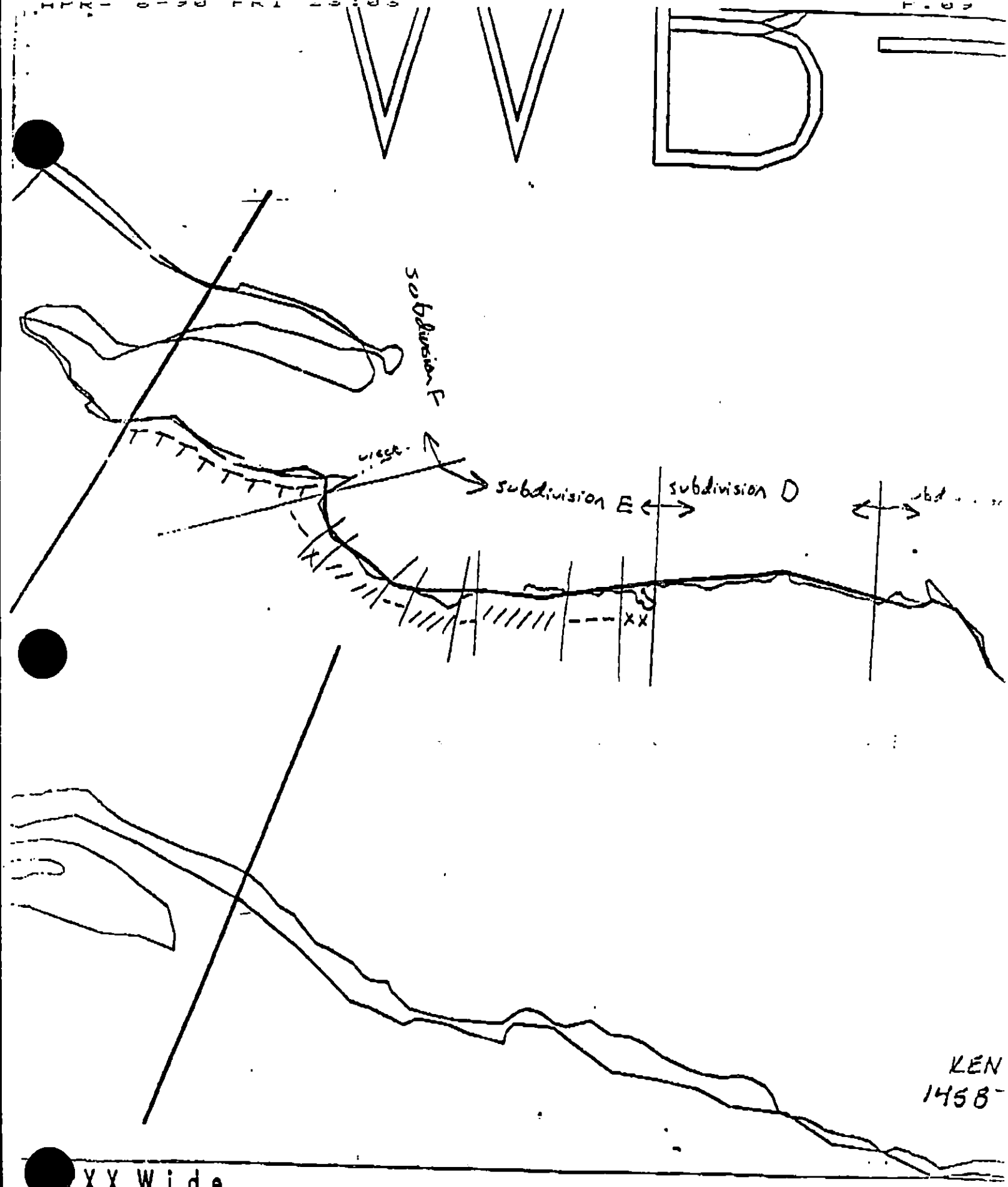


X X X Wide
/ / / / Medium
- - - - Narrow
T T T T Very Light

WB-2

ADEC Segment Length: 2232m

Map Key: KEN-145a
Name: [illegible]
Date: 4/4/90

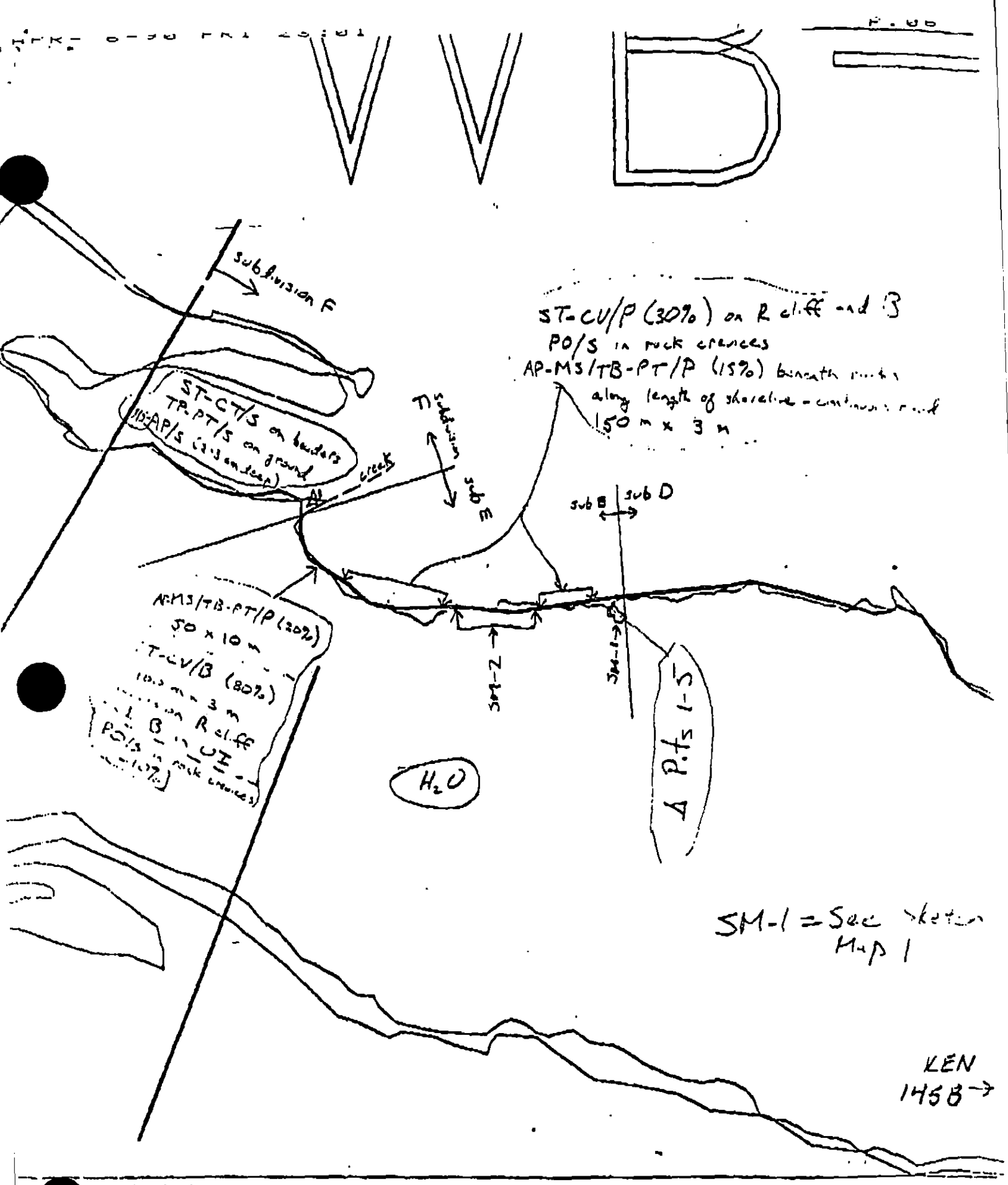


XXX Wide
//// Medium
---- Narrow
TTTT Very light

WB-2

ADEC Segment Length: 2232m

Map Key: KEN-145a
Name:
Date:



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

WB-2

ADEC Segment Length: 2232m

Map Key: KEN-145a

Name: Rudy Dwyer

Date: 4/4/92

REGION: KENAI

SEGMENT: ST/WB-02

SUBDIVISIONS: F (6 OF 6)

SHORELINE EVALUATION

SEGMENT ST/ WB-02 SUBDIVISION F (6 OF 6) DATE 4/4/90

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid 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 271 m: No Oil 0 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

RECOMMENDATIONS:

X No Treatment Recommended
_____Treatment Recommended
_____Manual Pickup
_____Bioremediation
_____Tarmat: _____Breakup
_____Removal

_____Snare/Absorbent Booms
_____Oil Snares (pom poms)
_____Absorbents (pads,rolls,etc)
_____Spot Washing:_____Wands
_____ Beach Cleaner
_____Other (see comments)

COMMENTS: _____

TAG COMMENTS:_____

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ WB-2 SUBDIVISION: F DATE 4/4/90

USCG
NAME R. BRYAN HIRTLE SIGNATURE R. Bryan Hirtle

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

I agree with the findings of the Shoreline Oiling summary sheet for Segment WB-002 Subdivision E

ADEC
NAME Russell Kunibe SIGNATURE Russell Kunibe

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

The oiling in this subdivision consisted of scattered splashes along the high tide line. O.I recovery would be minimal in this area.

LAND MANAGER
NAME Patrick NORMAN SIGNATURE Patrick Norman

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Agree with oiling summary sheet for WB-2 - Subdivision F.

REVISION NO. 03/21/90

SHORELINE OILING SUMMARY

REVISION NO. 03-22-90

OG Randy Siegel USCG Bryan Little SEGMENT ST/ WB-2
BIO Mike Fawcett LAND REP Pat Norman (Peak) SUBDIVISION E
EXXON John Dean ADEC Russel Kunibe TIME 17:00 to 18:00
TEAM NO.: 17 TIDE LEVEL: +1.6 to +3.9 DATE 4 / 4 / 90
1ST SUBDIVISION LENGTH: 270 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
SURFACE SEDIMENTS: R 10 % B 75 % C 5 % P 5 % G 5 % S Ø % M Ø % V Ø %
SLOPE: Lang 90 % Hang 10 % Vert Ø % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W ~~N/A~~ 0 m M ~~N/A~~ 0 m N ~~N/A~~ 0 m VL 270 m NO ~~N/A~~ 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	/C	/B	/P	/R	SBL/BR	DBL/RW	GY/SL	DBR/TL	LBR/	SU	UI	MI	LI
ASPHALT PAVEMENT				X		X		X			X		
POOLED													
COVER													
COAT				X		X		X			X		
STAIN				X		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 5 sq. m by 2 cm

PATTIES / TARBALLS 3 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

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

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE Ø

#BAGS Ø

Photographs:

Roll No. ST-17-4

Frames 2-4

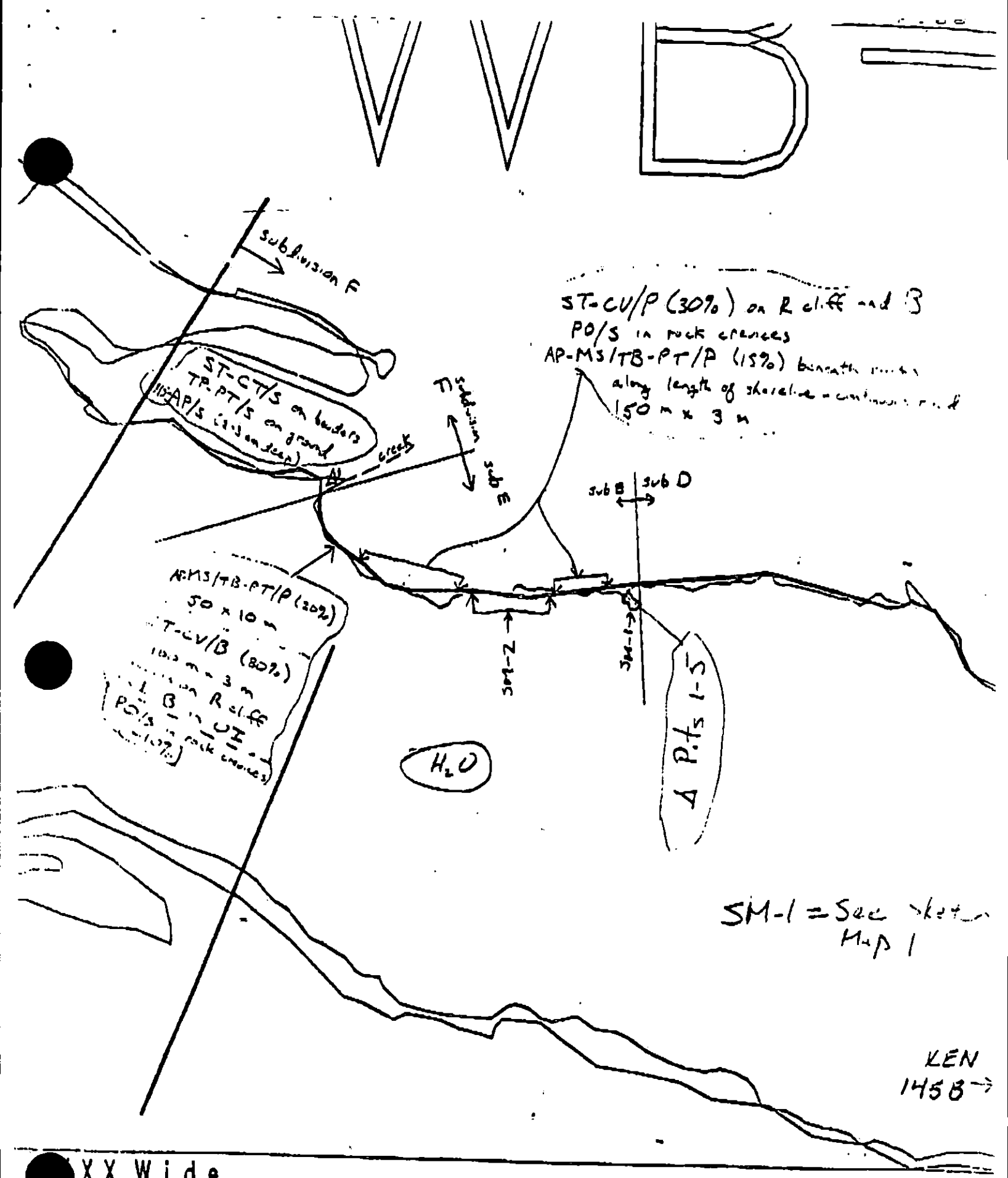
SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SBL/BR	DBL/RW	GY/SL	DBR/TL	LBR/	SU	UI	MI	LI		
1	25					X	0 - 0		X							X				S, g
				–			-													
							-													
							-													
							-													
							-													

COMMENTS This subdivision consists of south-facing beach covered largely with boulders. A creek with gravel floodbanks occurs at the east end of the subdivision. Very light oiling was observed across the length of the subdivision - occassional splashes on boulders, or isolated MS-AP patties/tarballs.

* Sheen on water in intertidal pools.

REVIEWED _____ DATE _____



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

WB-2

ADEC Segment Length: 2232m

Map Key: KEN-145a
Name: Cody Bergfeld
Date: 4/4/10

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/96

Segment ST / WB-2 Subdivision F Date (mo / day / yr) 4/4/90

Time (24 hr) 1720-1800 Biologist M. Faweeh

(A) Substrate type and % of segments:
(1) Bedrock 10 (2) Boulder 75 (3) Cobble 5 (4) Pebble (incl. gravel) 10 (5) Sand Ø (6) Silt Ø

(B) Overall % cover of biota (% of segment): Dense ✓ Moderate (barnacles) ____ 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-17-4
Frames 2-4

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

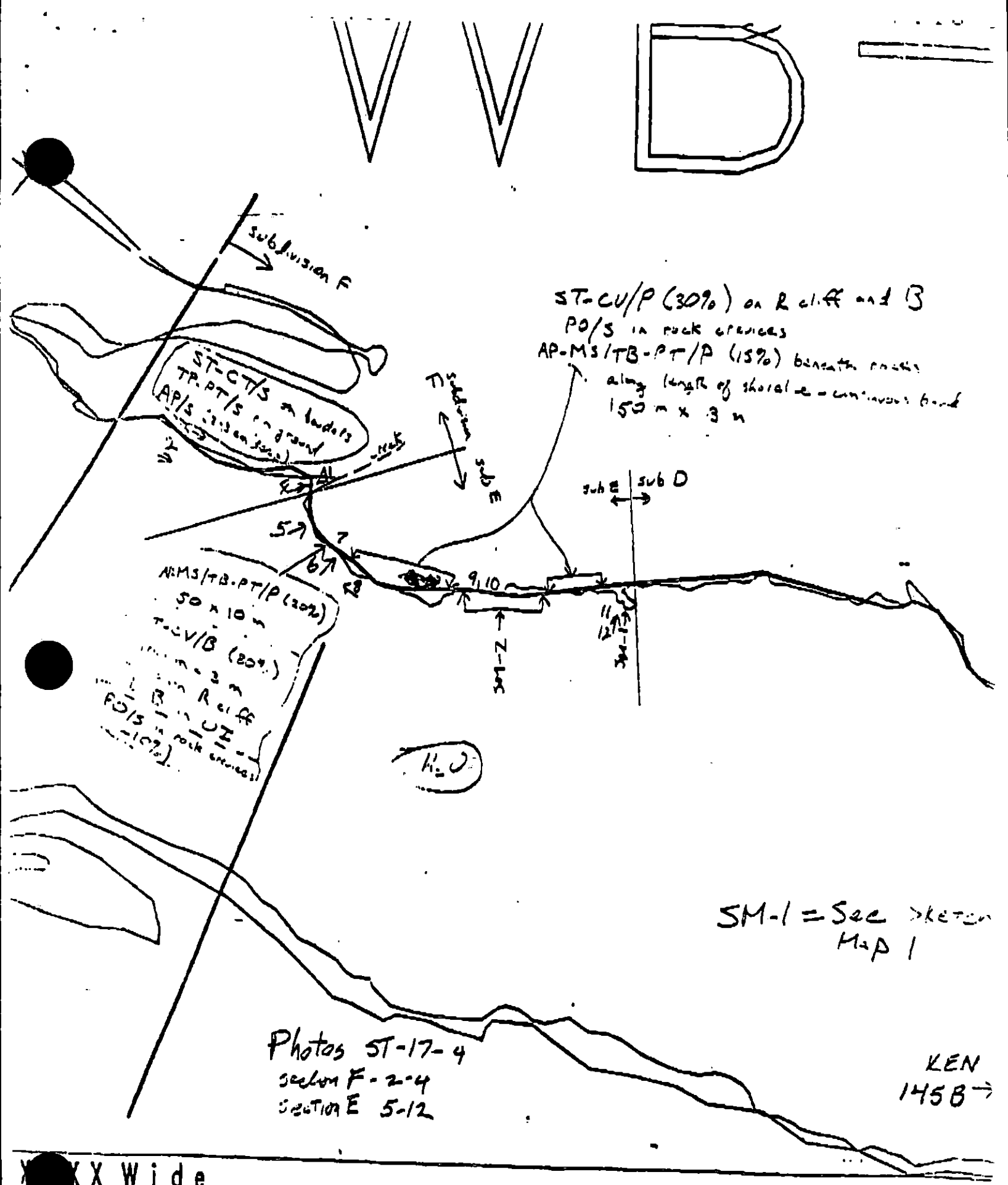
Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:
Fucus and Euhalidia were the only macro-algae observed (above + 1 ft tide level - low intertidal zone underwater). No birds or mammals seen.

Ecological Considerations:

No sensitivities listed.

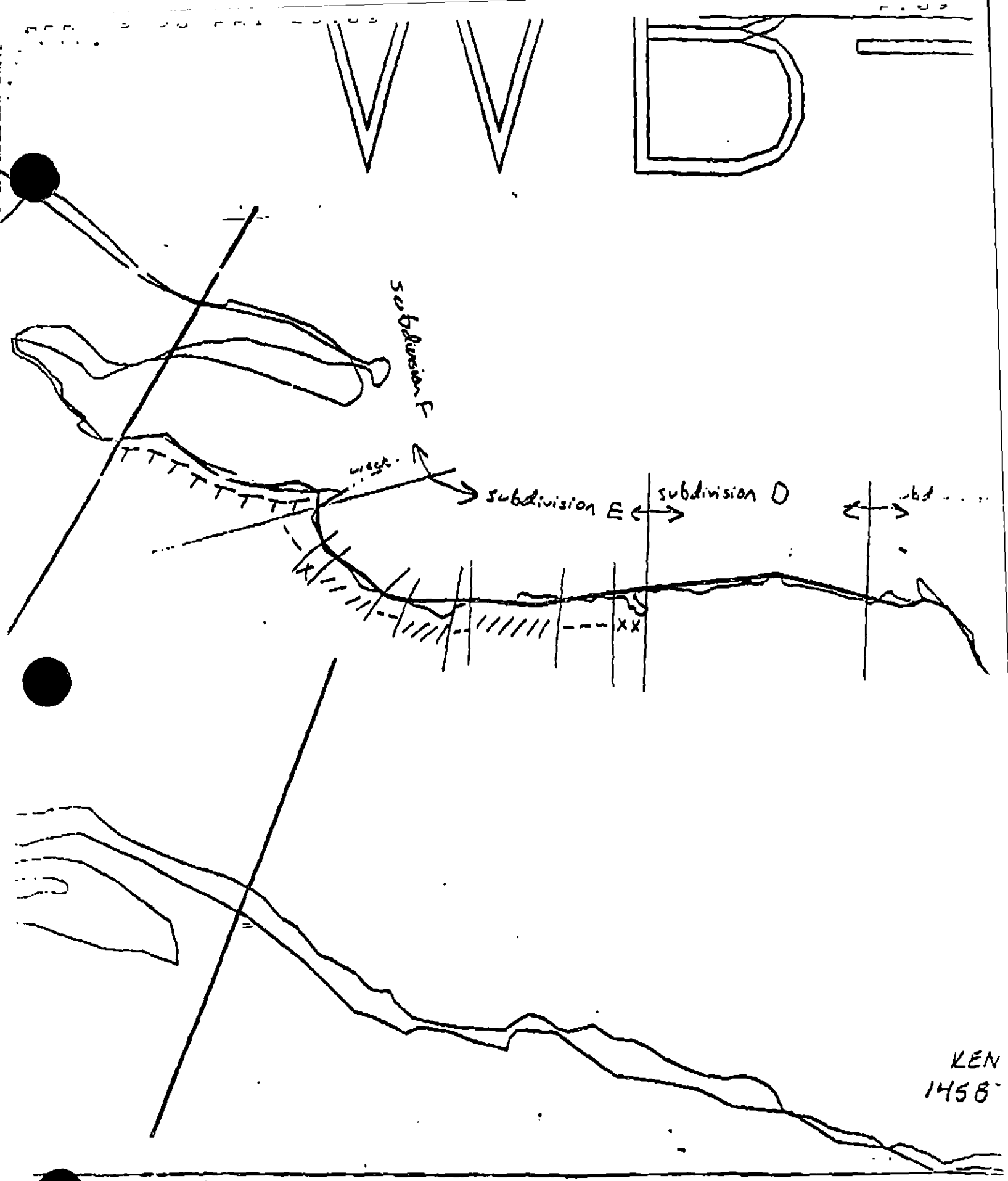


XXXX Wide
//// Medium
---- Narrow
TTTT Very Light

WB-2

ADEC Segment Length: 2232m

Map Key: KEN-145a
Name: Lady Island
Date: 4/4/90



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

WB-2

ADEC Segment Length: 2232m

Map Key: KEN-145a
Name:
Date: 4/8/95

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT WB-2 SUBDIVISION A (1 of 6)

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

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1J	**Purse Seine Area**	Closed to bioremediation and spot washing after 7/1. No constraint to manual pickup or tarmat removal.
5T	**Bald Eagle Nest**	NO CONSTRAINT. USFWS bald eagle impact assessment completed on 5/19/90 by Mary Portner indicates no active nests within 400m of the work area.

OTHER ECOLOGICAL CONSIDERATIONS

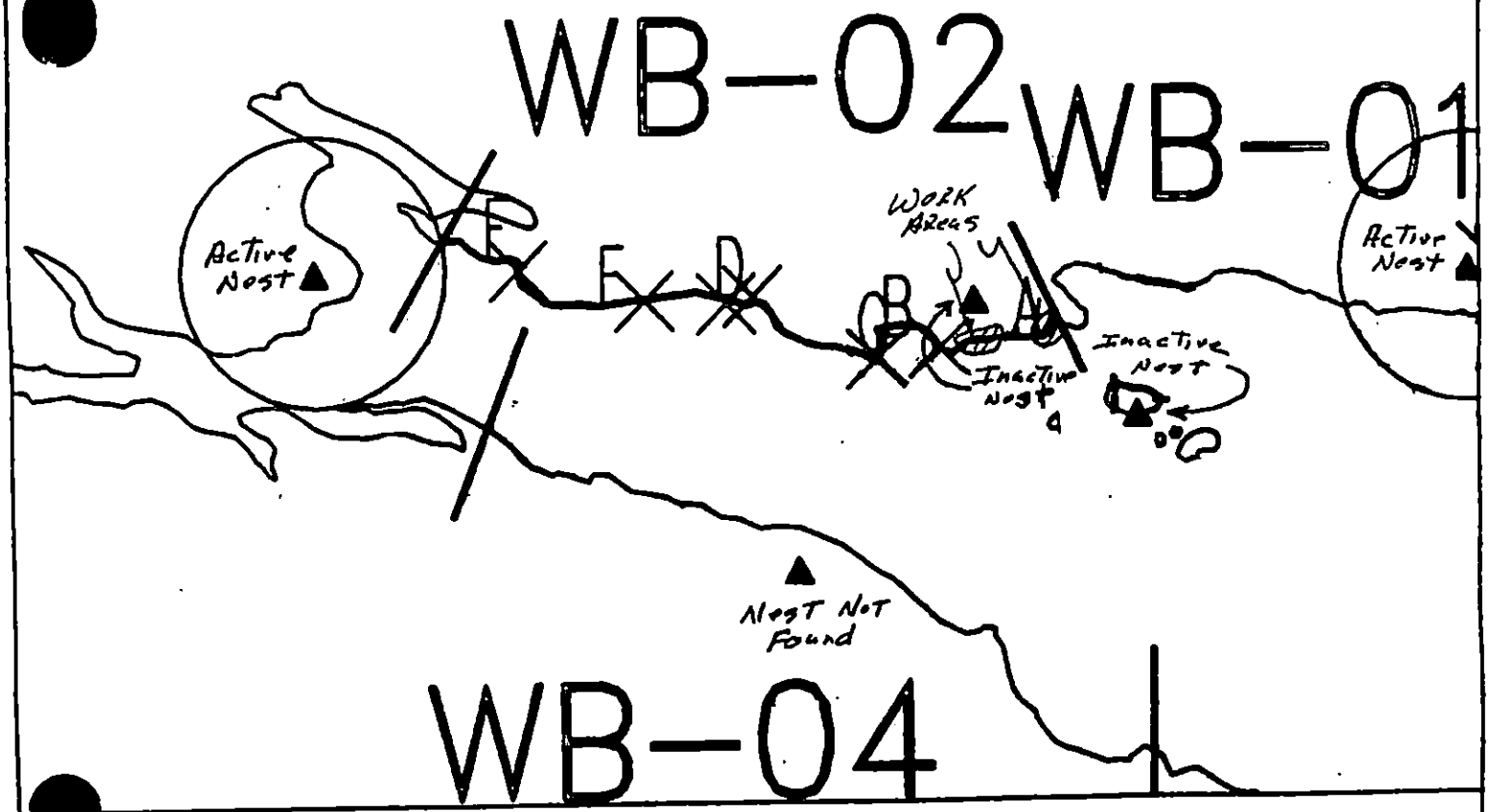
Restrict boat and air traffic to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

TAG APPROVAL DATE 5/29/90.
ADEC Art Weiner Art Weiner
EXXON Andy Tear
NOAA Bukcroft
USCG G.A. Reiter G.A. Reiter

FOSC [signature] DATE 5/29/90

Prepared By: Gordon Meyer RoC. Date 5/28/90

Incorporates information from
USFWS BALD EAGLE SURVEY 5-19-90



Exxon Company, USA

ECOLOGY MAP

SEGMENT WB-2

SUBDIVISION A (1 of 2)

METERS

★ Seabird Colony

▲ Eagle Nest

SHORELINE EVALUATION

SEGMENT ST WB-02 SUBDIVISION A (1 OF 6) DATE 4/1/90

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid 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. Holman DATE: 4/20/90

OILING CATEGORIZATION:

Wide 43 m: Medium 112 m: Narrow 27 m: V.Light 171 m: No Oil 81 m
Subsurface Oil Observed: Yes ____ No X Maximum Depth ____

RECOMMENDATIONS:

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

COMMENTS: The recommended treatment activities are as follows: 1) Tarmat removal, 2) Manual pick up of mousse + TARBALLS + PATTIES and pooled oil (see attached sketch map for specific locations), and 3) bioremediation of areas where pooled oil has been removed. No specific time constraints have been identified. SPOT WASH AS REQUIRED PRIOR TO BIOREMEDIATION SEE CONSTRAINT ADDENDUM DATED 5/28/90 REC.

TAG COMMENTS: ____

TAG APPROVAL DATE: 4/19/90.
ADEC Art Weiner
EXXON Amy Tere
NOAA Paul Wessell
USCG Kenneth Kraus
FOSC: ____ DATE: 5-12-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT WB-2 SUBDIVISION B (2 of 6)

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

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1J	**Purse Seine Area**	Closed to bioremediation and spot washing after 7/1. No constraint to manual pickup or tarmat removal.
5T	**Bald Eagle Nest**	NO CONSTRAINT. USFWS bald eagle impact assessment completed on 5/19/90 by Mary Portner indicates no active nests within 400m of the work area.

OTHER ECOLOGICAL CONSIDERATIONS

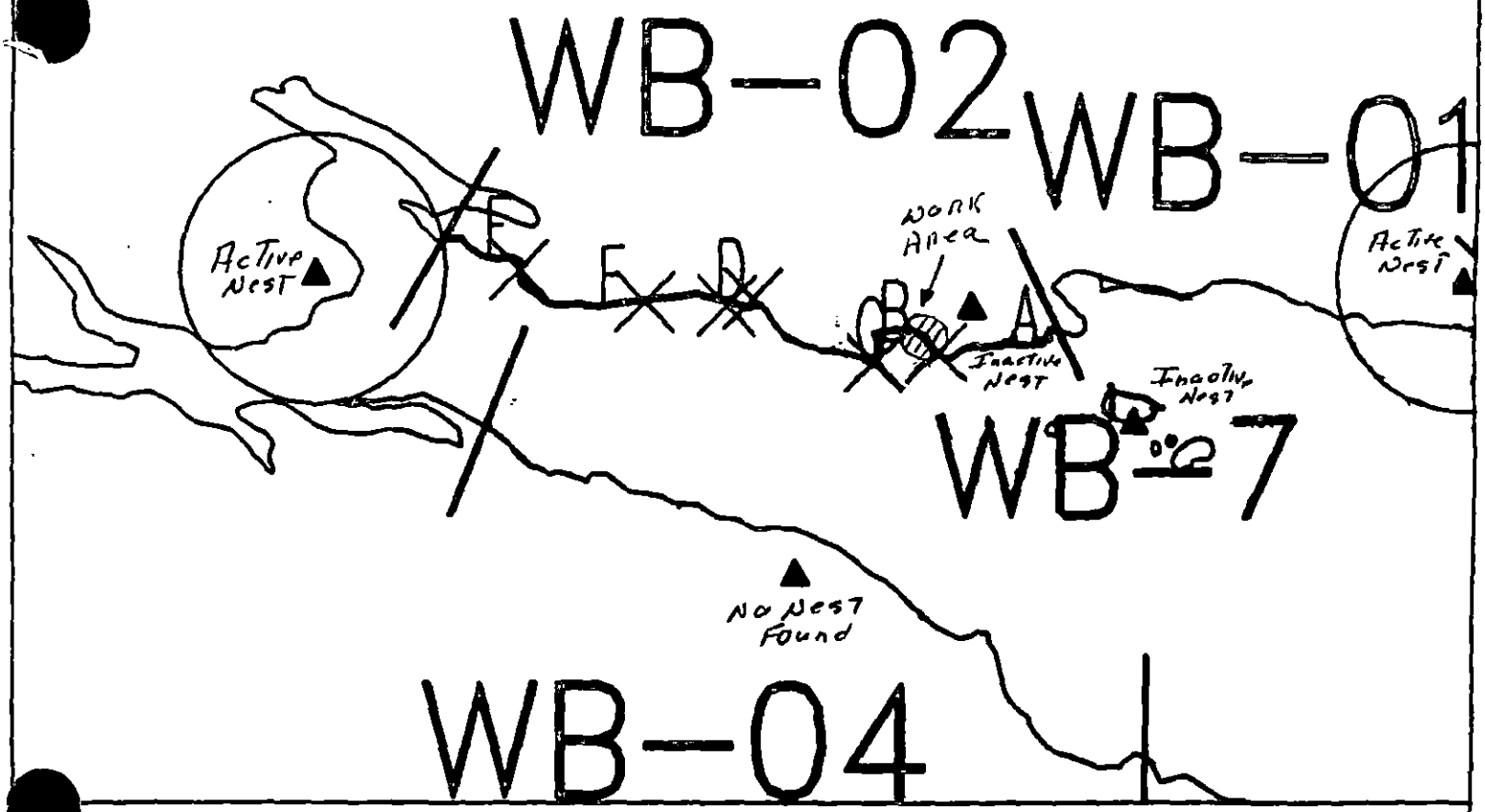
Restrict boat and air traffic to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Avoid trampling and flushing pollutants onto mud flat below the cobble beach. Avoid dense mussel beds during bioremediation.

TAG APPROVAL DATE 5/29/90
ADEC Art Weiner
EXXON Andy Tal
NOAA B Wescott
USCG G.A. Reiter G.A. Reiter

FOSC [signature] DATE 5/29/90

Prepared By: Andrea Mayer RPC. Date 5/28/90

Incorporates Information from
USFWS Bald Eagle Survey 5/19/90



EXXON

Exxon Company, USA
Mon Kavi KEN-WB-2

ECOLOGY MAP
SEGMENT WB-2
SUBDIVISION B (2 of 6)
METERS

★ Seabird Colony
▲ Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ WB-02 SUBDIVISION B (2 OF 6) DATE 4/1/90

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid disturbance or damage to unoiled biota and substrate.

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

SHPO SIGNATURE: [signature] DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 92 m: Narrow 164 m: V.Light 64 m: No Oil 0 m
Subsurface Oil Observed: Yes ____ No X Maximum Depth ____

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat removal and manual pick up of MOUSSE, tar balls, patties, and oiled debris (see attached sketch map for locations). Bioremediation of areas with broken coats or stains is also recommended SPOT WASH AS REQUIRED IN AREA OF MOUSSE + BIOREMEDIATE AS NECESSARY AVOID DENSE MUSSEL BEDS SEE CONSTRAINT ADDENDUM DATED 5/28/90 REV C

TAG COMMENTS: ____

TAG APPROVAL DATE: 4/19/90.
ADEC Art Weiner [signature]
EXXON Jimmy Tell [signature] FOSC: [signature] DATE: 5-12-90
NOAA Bill Wescott [signature]
USCG Kenneth H Keane [signature]

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT WB-2 SUBDIVISION C (3 of 6)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation Spot Washing	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 and spot washing after 7/1.
5T	**Bald Eagle Nest**	NO CONSTRAINT. USFWS bald eagle impact assessment completed on 5/19/90 by Mary Portner indicates no active nests within 400m of the work area.

OTHER ECOLOGICAL CONSIDERATIONS

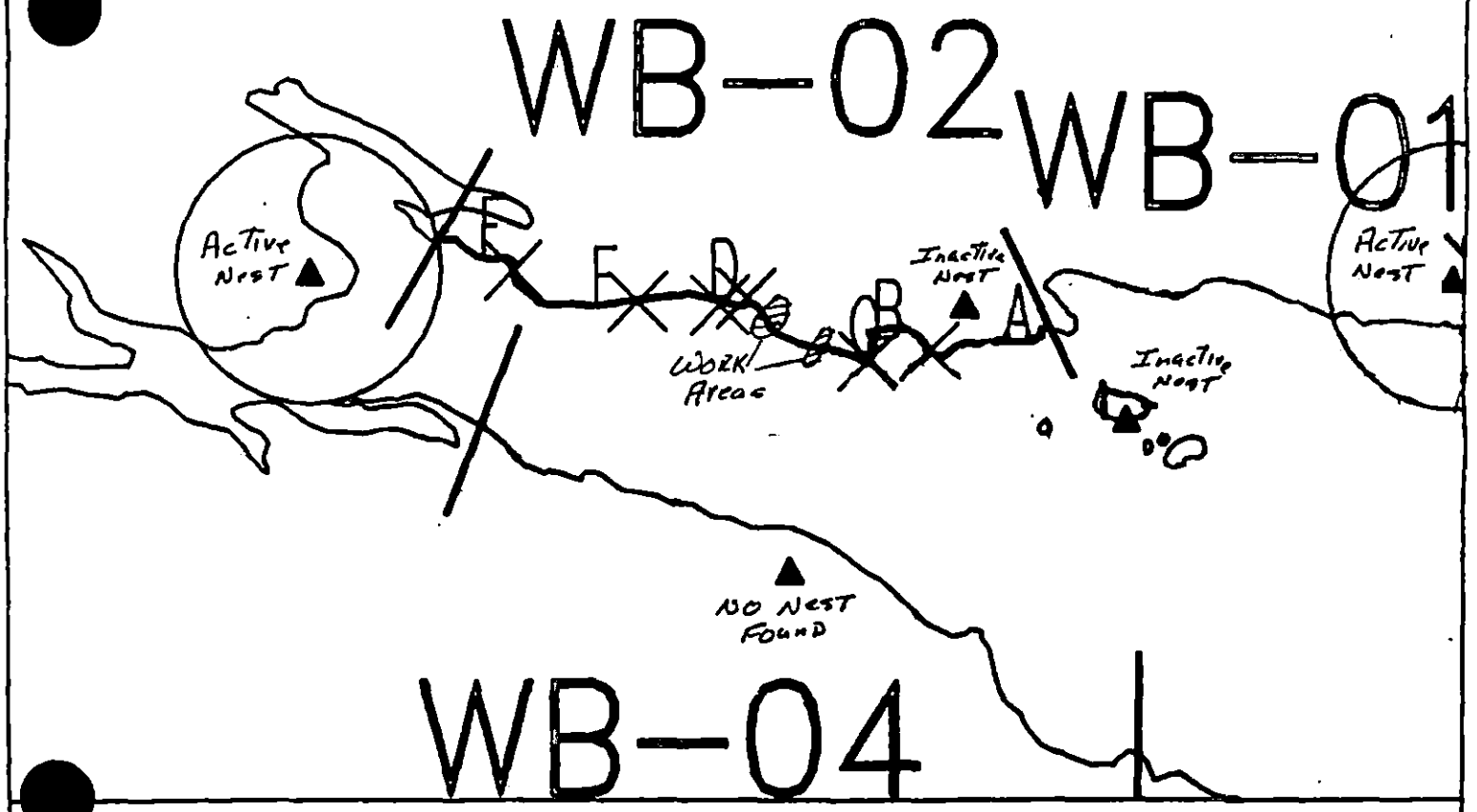
Restrict boat and air traffic to essential minimum after 7/1. Avoid mussel beds and disturbance or damage to unoiled biota and substrate.

TAG APPROVAL DATE 5/29/90.
ADEC Art Weiner
EXXON Andy Tak
NOAA B Wescott
USCG G.A. Reiter

FOSC _____ DATE 5/29/90

Prepared By: Rex C. Date 5/28/90

Incorporates information from
USFWS Bald Eagle Survey 5/28/90



EXXON

Exxon Company, USA

ECOLOGY MAP

SEGMENT WB-2

SUBDIVISION C (3 of 6)

METERS

★ Seabird Colony

▲ Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ WB-02 SUBDIVISION C (3 OF 6) DATE 4/1/90

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid disturbance or damage to unoiled biota and substrate.

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

SHPO SIGNATURE: [signature] DATE: 4/20/90

OILING CATEGORIZATION:

Wide 58 m: Medium 162 m: Narrow 61 m: V.Light 240 m: No Oil 0 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat removal and manual pick up of mousse, oiled debris and oiled trash (see sketch map for specific locations). Bioremediate areas with coated sediments as indicated on sketch map.
SPOT WASH AS REQUIRED, HOWEVER AVOID MUSSEL BEDS
SEE CONSTRAINT ADDENDUM DATED 5/28/90 REX C.

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/90.
ADEC ART WEILER [signature]
EXXON ANDY TEAL [signature]
NOAA BUD WESCOTT [signature]
USCG KENNETH KEANE [signature]
FOSC: [signature] DATE: 5-12-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT WB-2 SUBDIVISION E (5 of 6)

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

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

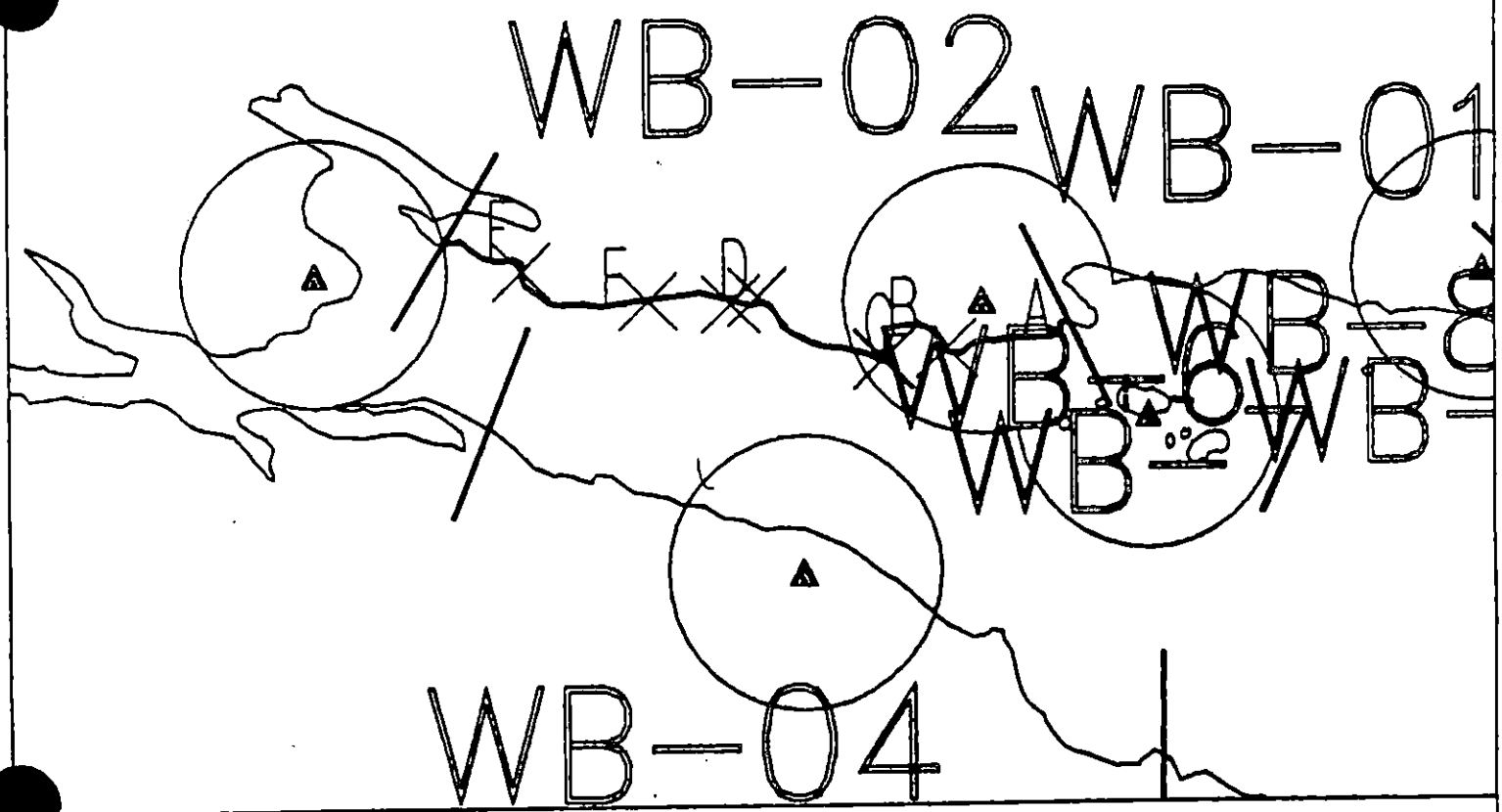
1J	Purse Seine Area	No constraint to manual pickup and tarmat removal; closed to spot washing after 7/1.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG ADDENDUM DATE 5/18/90
ADEC Art Weiner
EXXON Andy Tear
NOAA Joseph Talbott
USCG G.A. Reiter
FOSC _____ DATE 5-18-90

Prepared by: Andrea Meyer WTK Date: 5/17/90



EXXON

Exxon Company, USA

ECOLOGY MAP

SEGMENT WB-2

SUBDIVISION E (5 of 6)

METERS

★ Seabird Colony

▲ Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ WB-02 SUBDIVISION E (5 OF 6) DATE 4/4/90

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid disturbance or damage to unoiled biota and substrate.

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

SHPO SIGNATURE: [signature] DATE: 4/20/90

OILING CATEGORIZATION:

Wide 72 m: Medium 238 m: Narrow 140 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 15 +cm

RECOMMENDATIONS:

____ No Treatment Recommended
X Treatment Recommended
X Manual Pickup
____ Bioremediation
X Tarmat: ____ Breakup
X Removal

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

COMMENTS: Recommend manual removal of tarmat and manual removal of mousse, patties and tar balls. + DEBRIS / TRASH
SPOTWASH AS REQUIRED FOR AREAS INACCESSIBLE FOR MANUAL REMOVAL OF MOUSSE

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/90.
ADEC ART WEINER [signature]
EXXON ANDY TGL [signature]
NOAA BILL WALCOTT [signature]
USCG KENNETH KEANE [signature]

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

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT WB-2 SUBDIVISION F (6 of 6)

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 or tarmat removal.
5T	**Bald Eagle Nest**	No constraint. Recommended treatment area more than 400m from eagle nest.

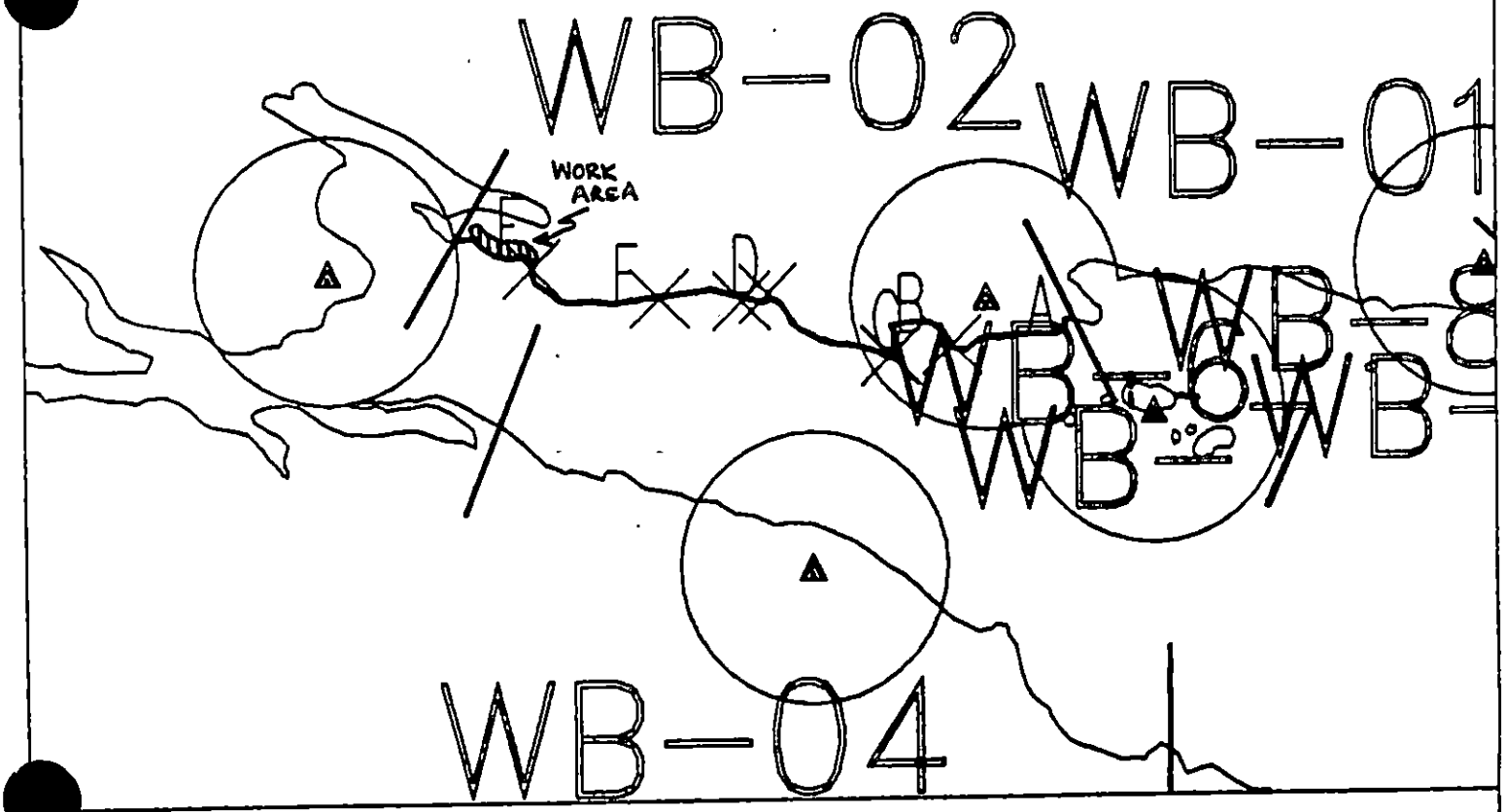
OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/20. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

TAG ADDENDUM DATE 5/18/90
ADEC ART WEINER Art Weiner
EXXON ANDY TERR
NOAA Joseph Talbott
USCG B.A. Reiter

FOSC _____ DATE 5-18-90

Prepared by: Anda Meyer WTK Date: 5/17/90



EXXON

Exxon Company, USA

ECOLOGY MAP

SEGMENT WB-2

SUBDIVISION F (6 of 6)

METERS

★ Seabird Colony

▲ Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ WB-02 SUBDIVISION F (6 OF 6) DATE 4/4/90

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid 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 ~~required prior~~ (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: J. David McMahan DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 271 m: No Oil 0 m
Subsurface Oil Observed: Yes ____ No X Maximum Depth ____

RECOMMENDATIONS:

X No Treatment Recommended
____ Treatment Recommended
X Manual Pickup
____ Bioremediation
X Tarmat: ____ Breakup
X Removal

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

COMMENTS: MANUAL PICK UP OF TARMATS, DEBRIS + TRASH.

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/20.
ADEC ART WEINER, Art Weiner
EXXON ANDY TGAL
NOAA Paul Wercott
USCG NORTH BEACH

FOSC: DATE: 5-8-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT WB-2 SUBDIVISION D (4 of 6)

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.

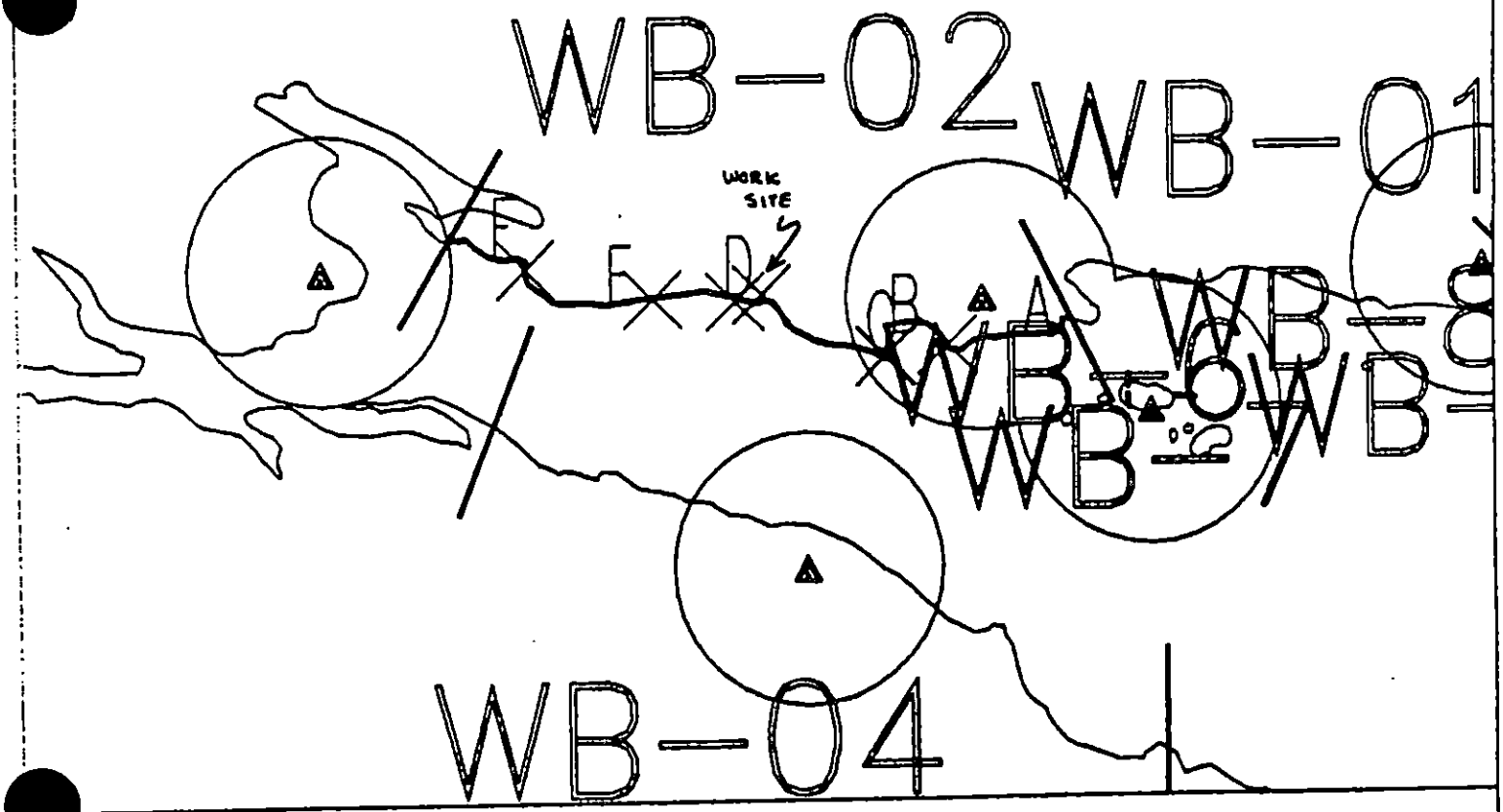
OTHER ECOLOGICAL CONSIDERATIONS

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

TAG ADDENDUM DATE 5/18/90
ADEC Art Weiner Art Weiner
EXXON Andy Tyl
NOAA Joseph Talbott
USCG G.A. Beiter

FOSC _____ DATE 5-18-90

Prepared by: Andrea Meyer WTK Date: 5/17/90



EXXON

Exxon Company, USA

ECOLOGY MAP

SEGMENT WB-2

SUBDIVISION D (1 of 6)

METERS

★ Seabird Colony

△ Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ WB-02 SUBDIVISION D (4 OF 6) DATE 4/6/90

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid disturbance or damage to unoiled biota and substrate.

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

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

OILING CATEGORIZATION:

Wide 13 m: Medium 40 m: Narrow 93 m: V.Light 107 m: No Oil 0 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat removal and manual pick up of mousse, oiled trash, vegetation, and debris as indicated on sketch map. Bioremediation of two small areas also recommended.

TAG COMMENTS: ____

TAG APPROVAL DATE: 4/19/90.
ADEC Art Weiner
EXXON Andy Toth
NOAA Burl Wescott
USCG Kenneth Keane
FOSC: [illegible] DATE: 5-12-90

SHORELINE EVALUATION

SEGMENT ST/ WB-02 SUBDIVISION A (1 OF 6) DATE 4/1/90

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid disturbance or damage to unoiled biota and substrate.

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

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

OILING CATEGORIZATION:

Wide 43 m: Medium 112 m: Narrow 27 m: V.Light 171 m: No Oil 81 m
Subsurface Oil Observed: Yes ____ No X Maximum Depth ____

RECOMMENDATIONS:

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

COMMENTS: The recommended treatment activities are as follows: 1)Tarmat removal, 2) Manual pick up of mousse + TARBALLS + PATTIES and pooled oil (see attached sketch map for specific locations), and 3) bioremediation of areas where pooled oil has been removed. No specific time constraints have been identified. SPOT WASH AS REQUIRED PRIOR TO BIOREMEDIATION.

TAG COMMENTS: ____

TAG APPROVAL DATE: 4/19/90.
ADEC Art Weiner
EXXON Andy Tetz
NOAA Burl Westcott
USCG Kenneth Keane
FOSC: ____ DATE: 5-12-90

OG P[redacted] Siegel

SEGMENT ST/ AWB-2

SUBDIVISION A

DATE 4 / 1 / 90

CHECKLIST

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

LEGEND

1 △ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

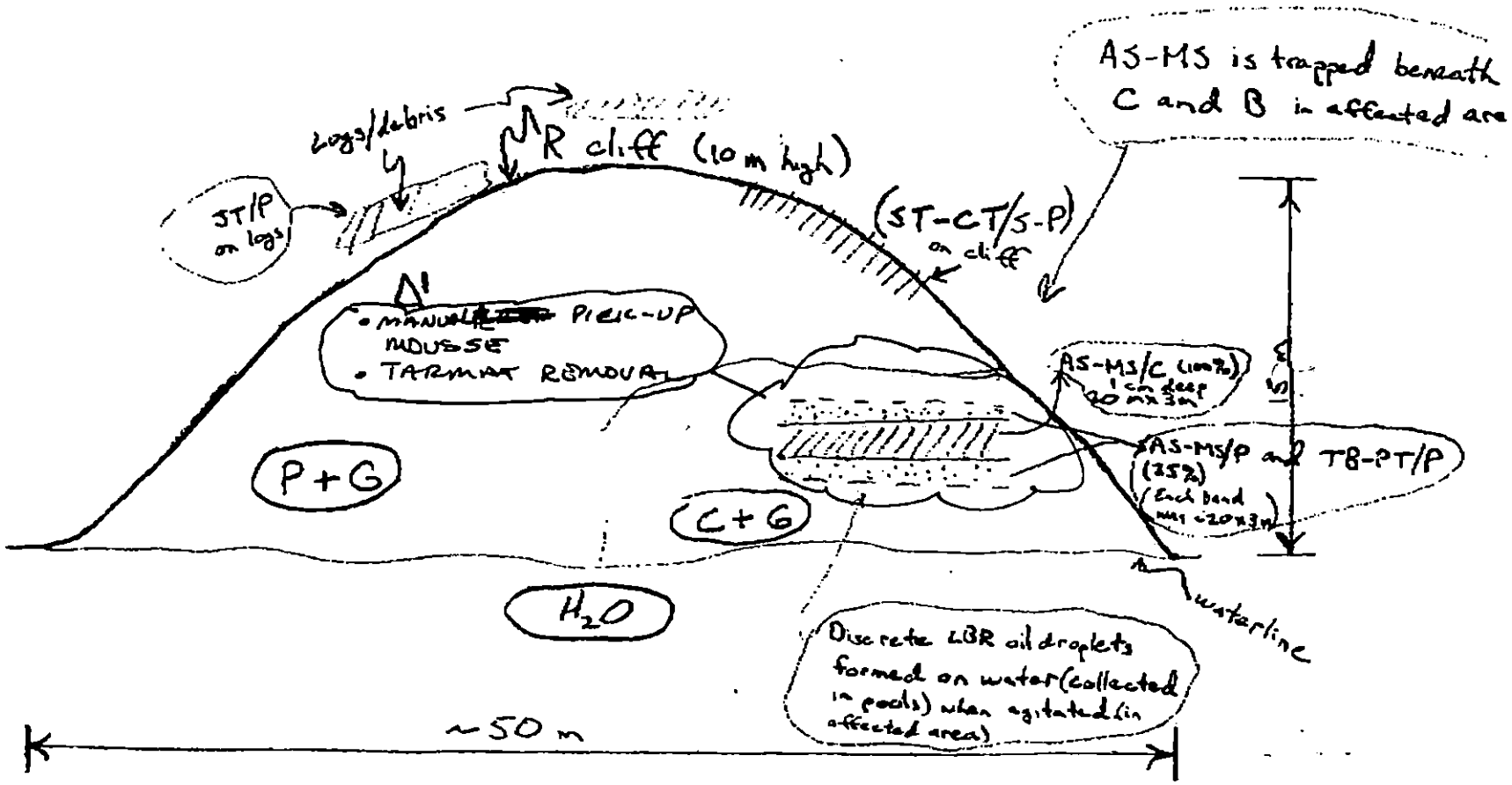
1 ⊕ Photo location, direction, and number

2 cm = .6 m
Approximate Scale

N

SKETCH MAP #1

Part of Subdivision A



Oil Character Length (m): AP 20 PO N/A CV N/A CT 30 ST 30 MS 20 PT 20 TB 20 FL 20 NO 20

REVISION:03/29/90

OG R[redacted] Siegel

SEGMENT ST/ WB-2

SUBDIVISION A

DATE 4 / 1 / 90

CHECKLIST

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

LEGEND

1 △ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

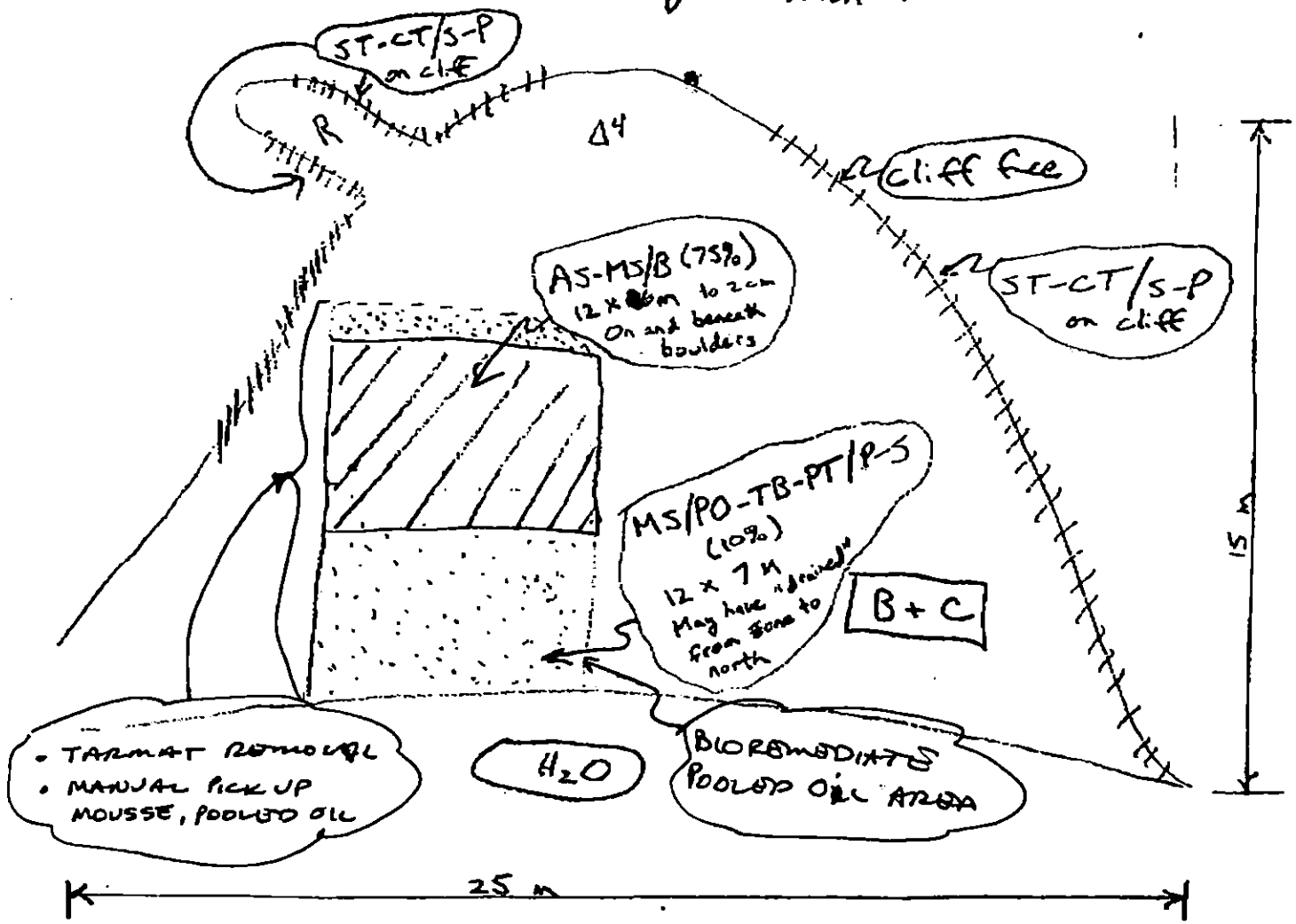
Oiled Vegetation

1 ●► Photo location, direction, and number

N ↑ 2 cm = 3 m App. Scale

SKETCH MAP #3

Part of Subdivision A



Oil Character Length (m): AP 12 PO N/A CV N/A CT 20 ST 20 MS 12 PT 12 TB 12 FL N/A NO 5

REVISION 08/2000

OG [redacted] Stage 1

SEGMENT ST/ [redacted] WB-2

SUBDIVISION A

DATE 4 / 1 / 90

N

2 cm = 6 m
Approx. Scale

SKETCH MAP #2

Part of Subdivision A

CHECKLIST

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

LEGEND

1 △ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

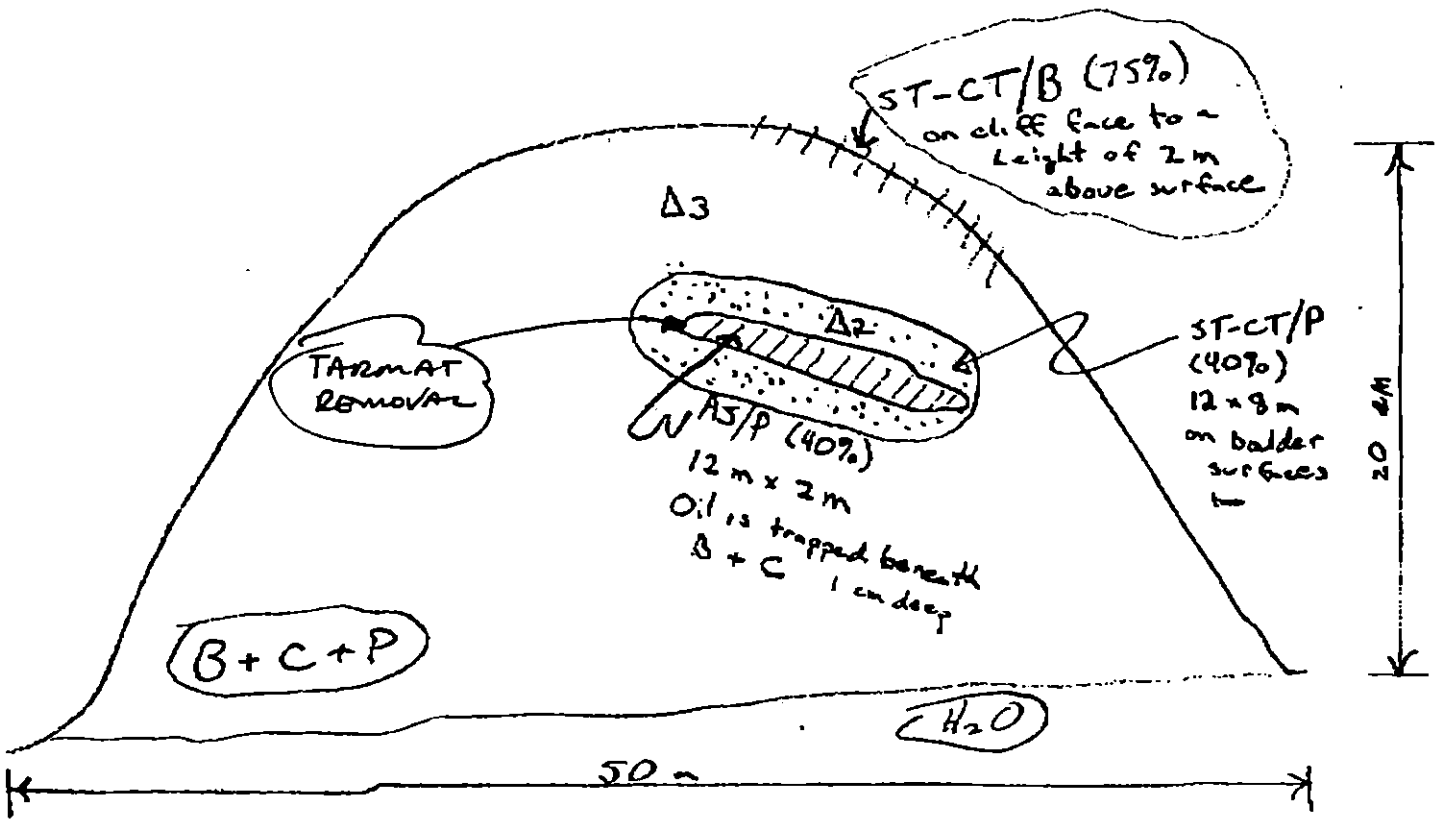
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

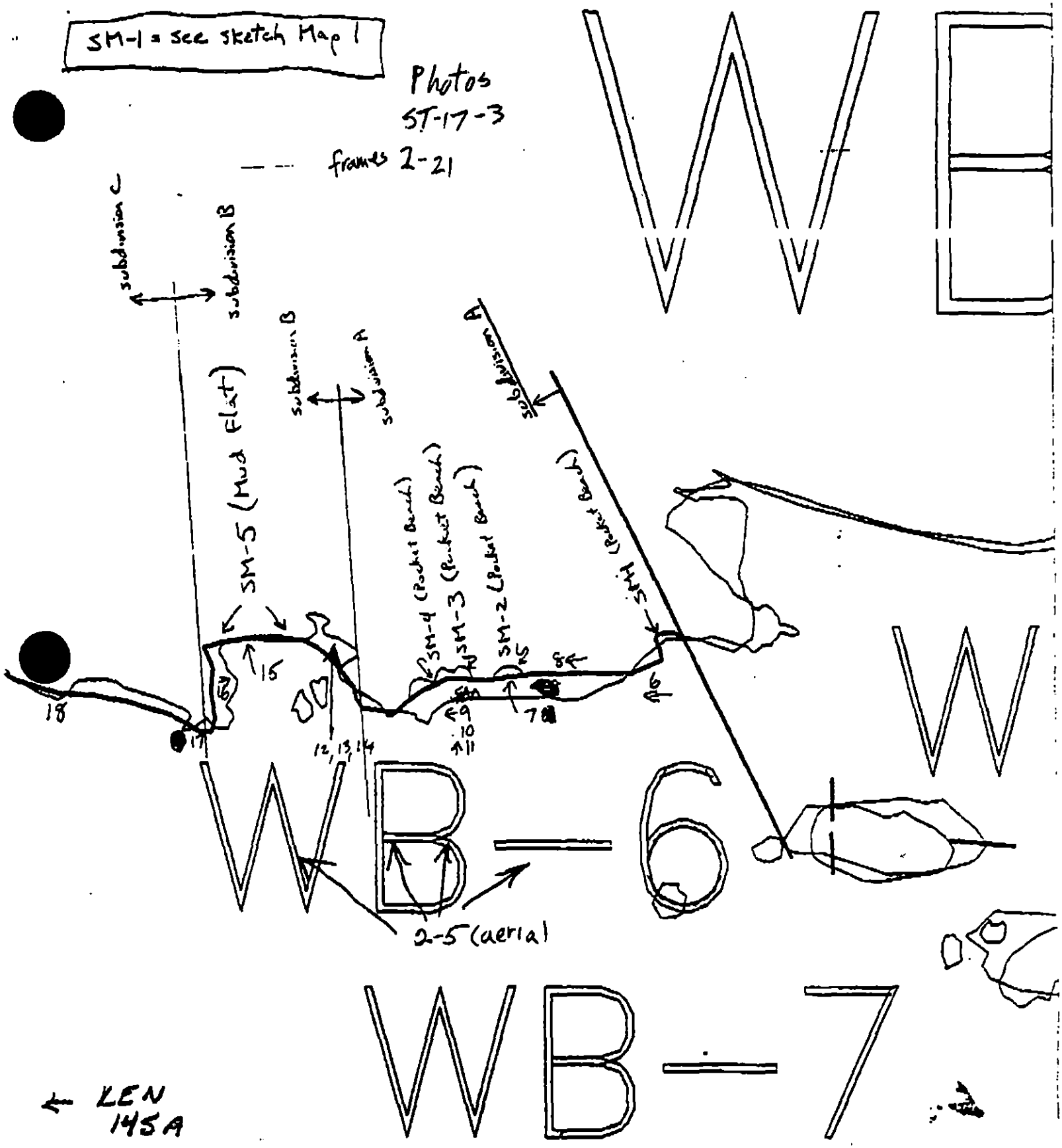
Oiled Vegetation

1 ⊕→ Photo location, direction, and number



Oil Character Length (m): AP 12 PO N/A CV N/A CT 15 ST 15 MS N/A PT 12 TB 12 FL N/A NO 35

REVISION:03/24/90



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

WB-2

ADEC Segment Length: 2232m

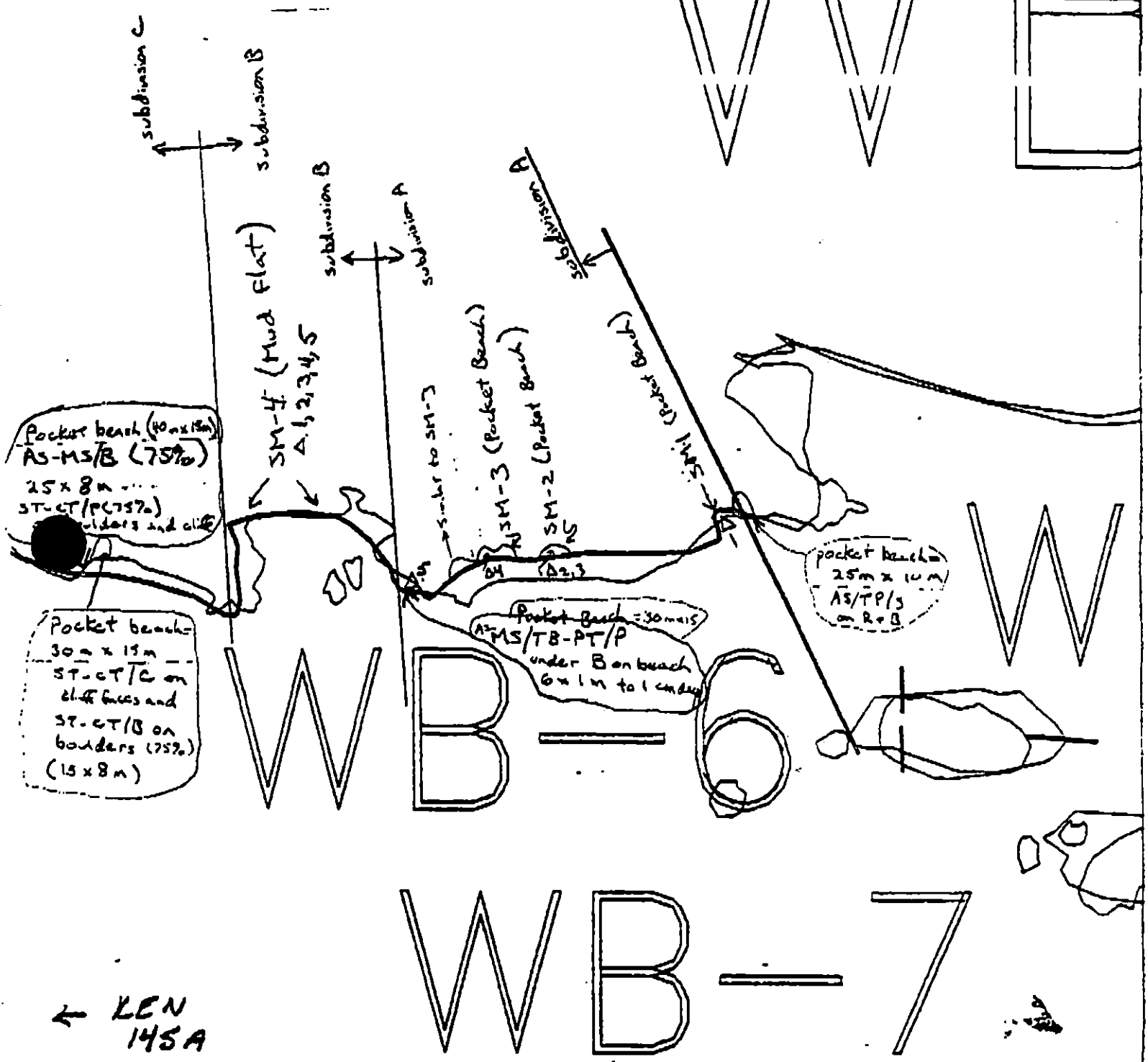
Map Key: KEN-145b

Name: _____

Date: _____

SM-1 = see sketch Map 1

Photos
ST 17-3
frames 1-21



← KEN 145A

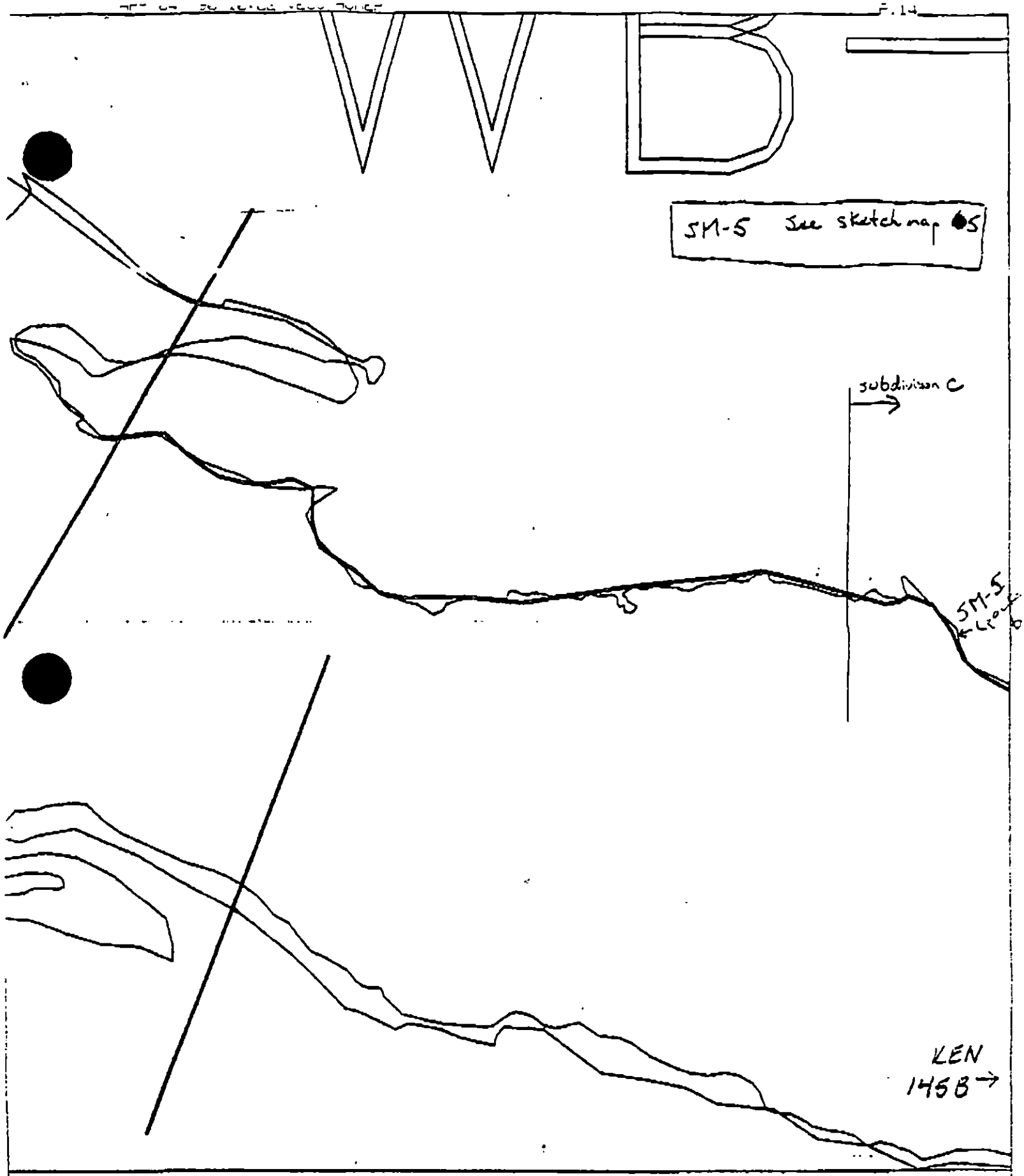
XXXX Wide
/// Medium
---- Narrow
TTTT Very Light
0000 No Oil

WB-2

ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145b
Name: [illegible]
Date: 4/1/90
Data Entered:



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

WB-2

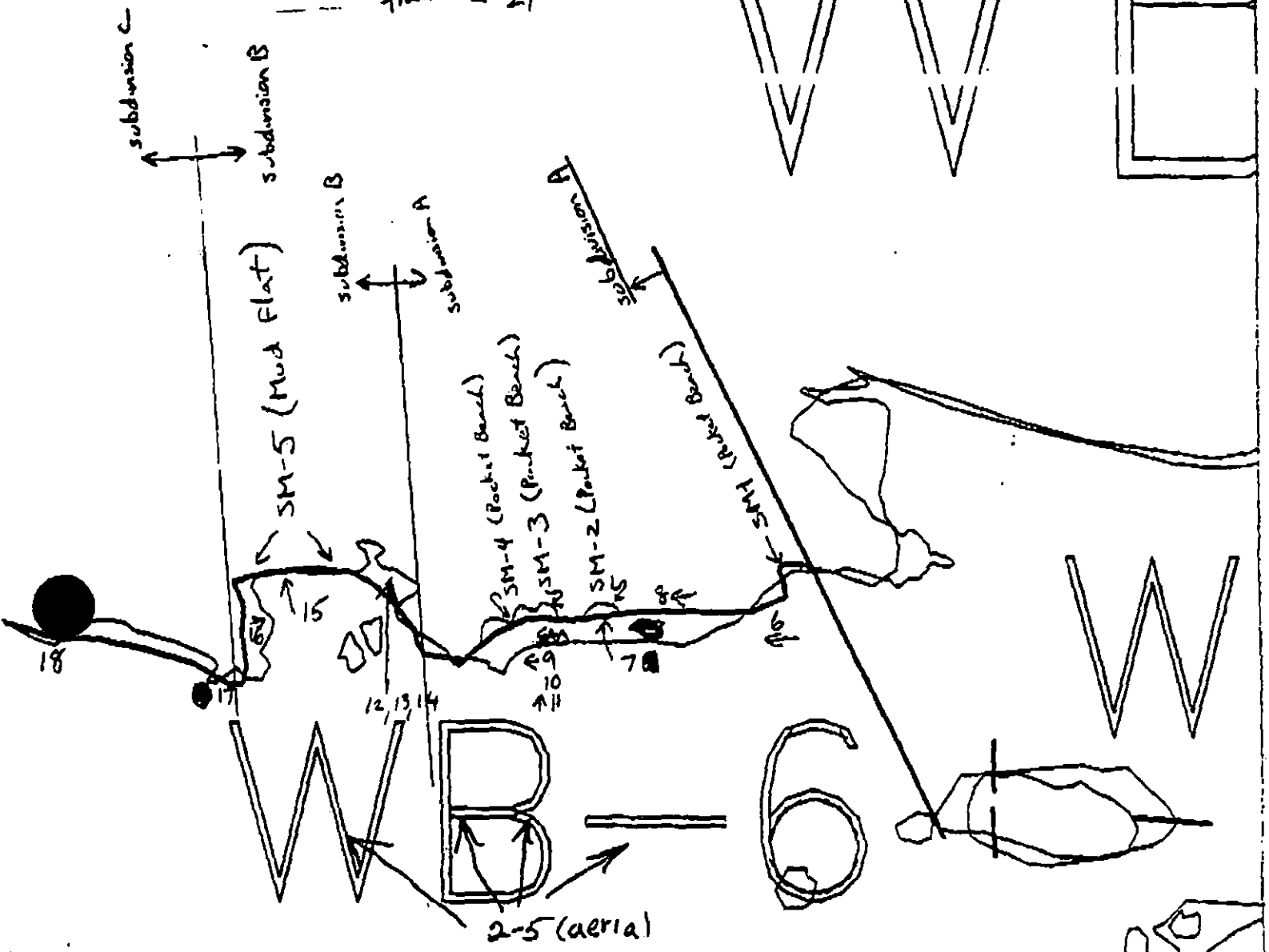
ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145a
Name: Cindy Siegel
Date: 4/1/90
Date Entered:

SM-1 = see sketch Map 1

Photos
ST-17-3
frames 2-21



WB-6

2-5 (aerial)

WB-7

← KEN 145A

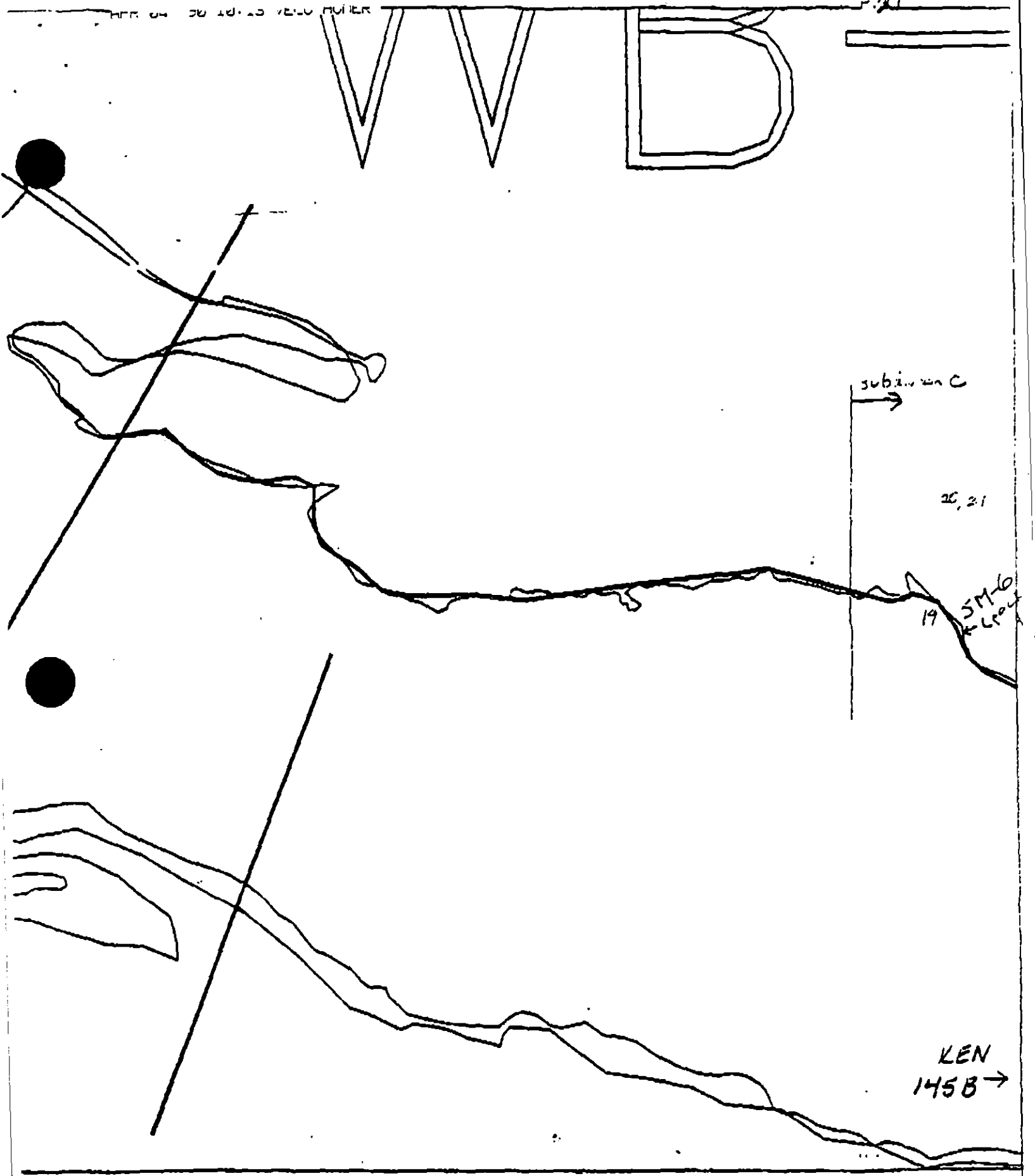
XXXX Wide
/// / Medium
---- Narrow
TTTT Very Light
0000 No Oil

WB-2

ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145b
Name: _____
Date: _____



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

WB-2

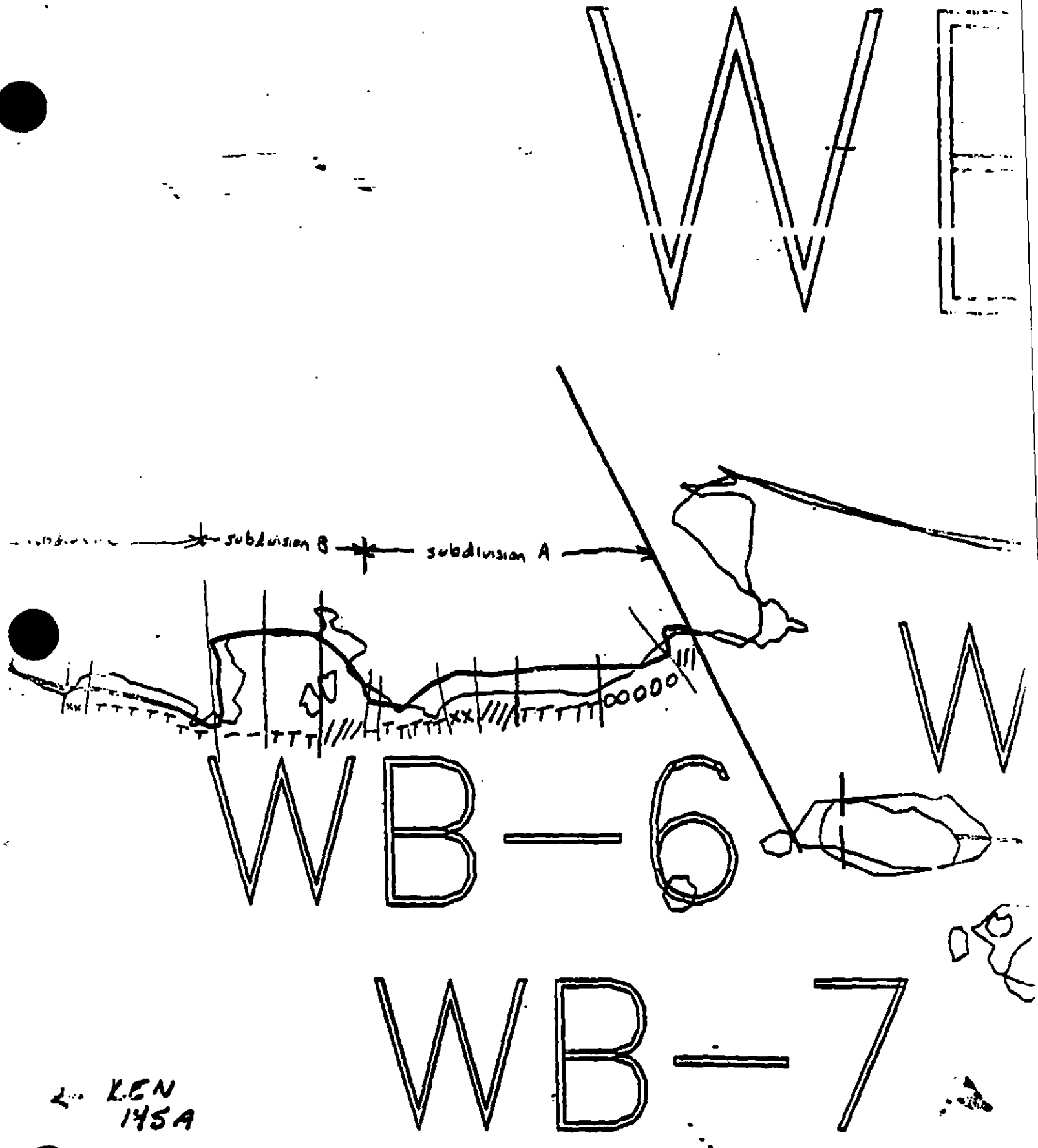
ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145a

Name: _____

Date: _____



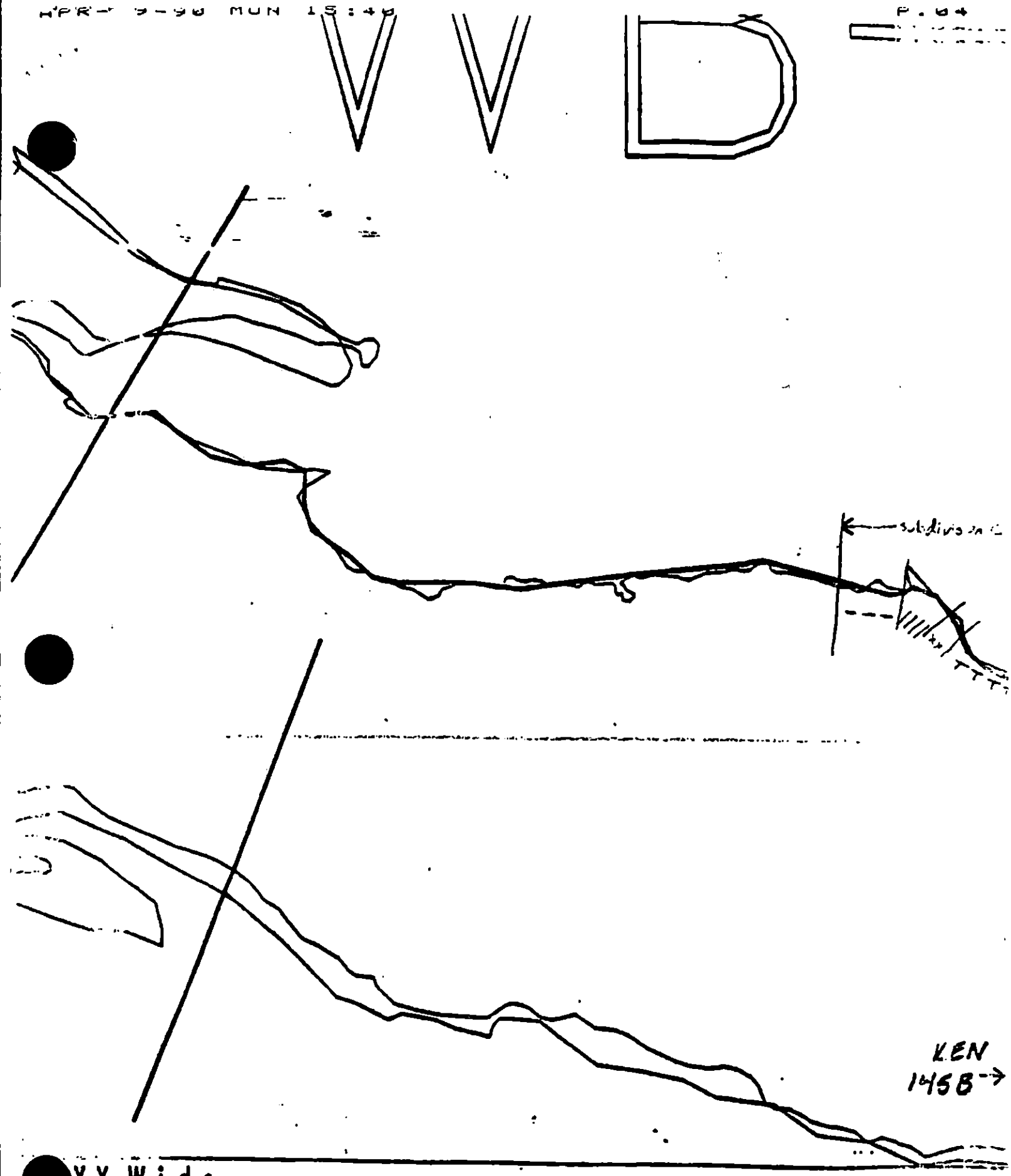
XXX Wide
//// Medium
---- Narrow
TTTT

WB-2

ABEC Segment Length: 2232m

Map Key: KEN-145b

Name:



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

WB-2

ABEC Segment Length: 2232m

Map Key: KEN-145a
Name: Ruby Angel
Date: 4/1/90

SHORELINE EVALUATION

SEGMENT ST/ WB-02 SUBDIVISION B (2 OF 6) DATE 4/1/90

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid disturbance or damage to unoiled biota and substrate.

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

SHPO SIGNATURE: [signature] DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 92 m: Narrow 164 m: V.Light 64 m: No Oil 0 m
Subsurface Oil Observed: Yes ____ No X Maximum Depth ____

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat removal and manual pick up of MOUSSE, tar balls, patties, and oiled debris (see attached sketch map for locations). Bioremediation of areas with broken coats or stains is also recommended
SPOT WASH AS REQUIRED IN AREA OF MOUSSE + BIOREMEDIATE AS NECESSARY
AVOID DENSE MUSSEL BEDS

TAG COMMENTS: ____

TAG APPROVAL DATE: 4/19/90.
ADEC ART WEINER [signature]
EXXON AMY TEAL [signature] FOSC: [signature] DATE: 5-12-90
NOAA Bud Wescott [signature]
USCG KENNETH KEANE [signature]

OG [redacted] Siegel

SEGMENT/ST/ WB-2

SUBDIVISION B

DATE 4 / 1 / 90

N

2 cm = 20 m
App. Scale

[redacted]ETCH MAP
#4

All of Subdivision B

CHECKLIST

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

LEGEND

1 △ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

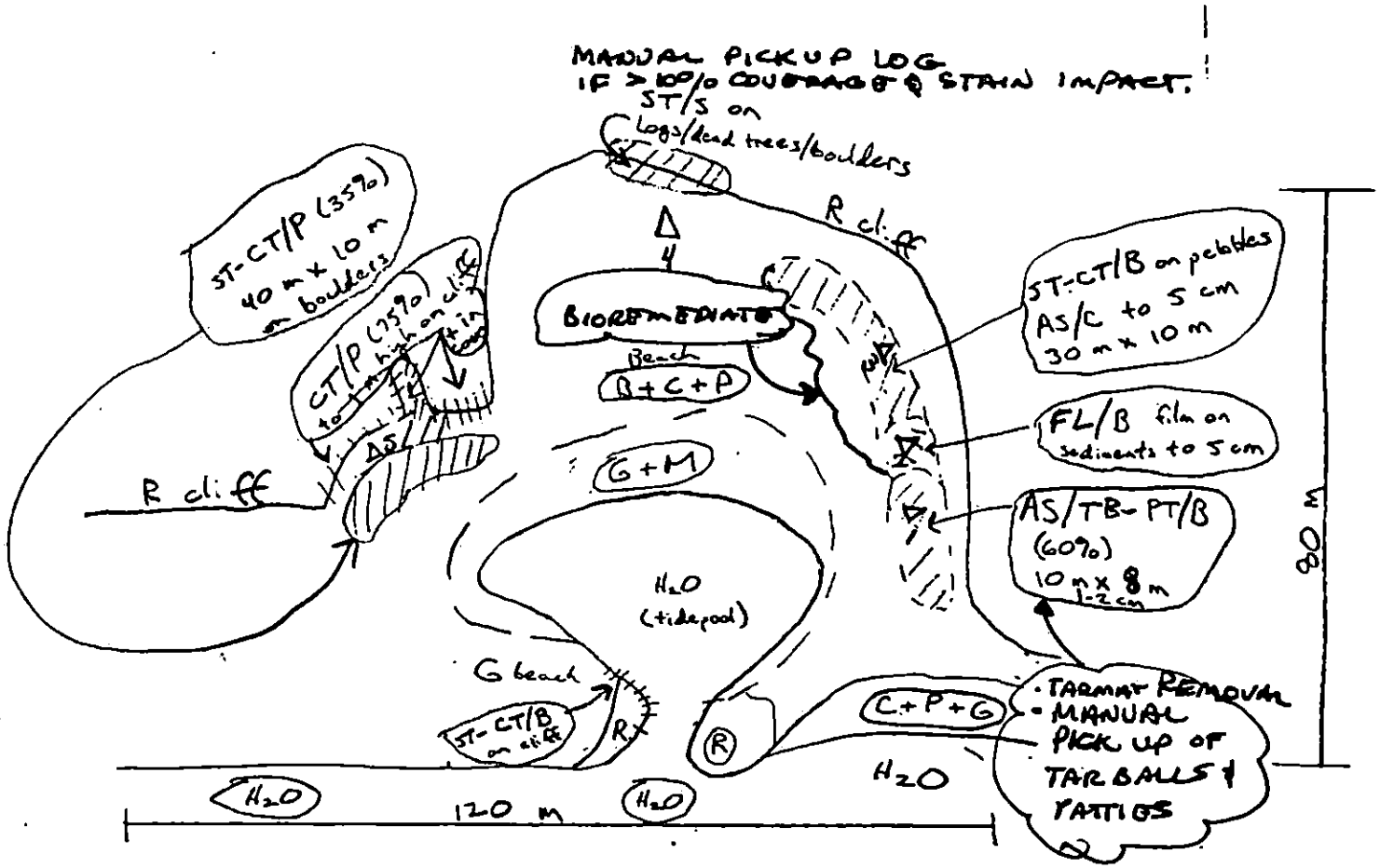
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

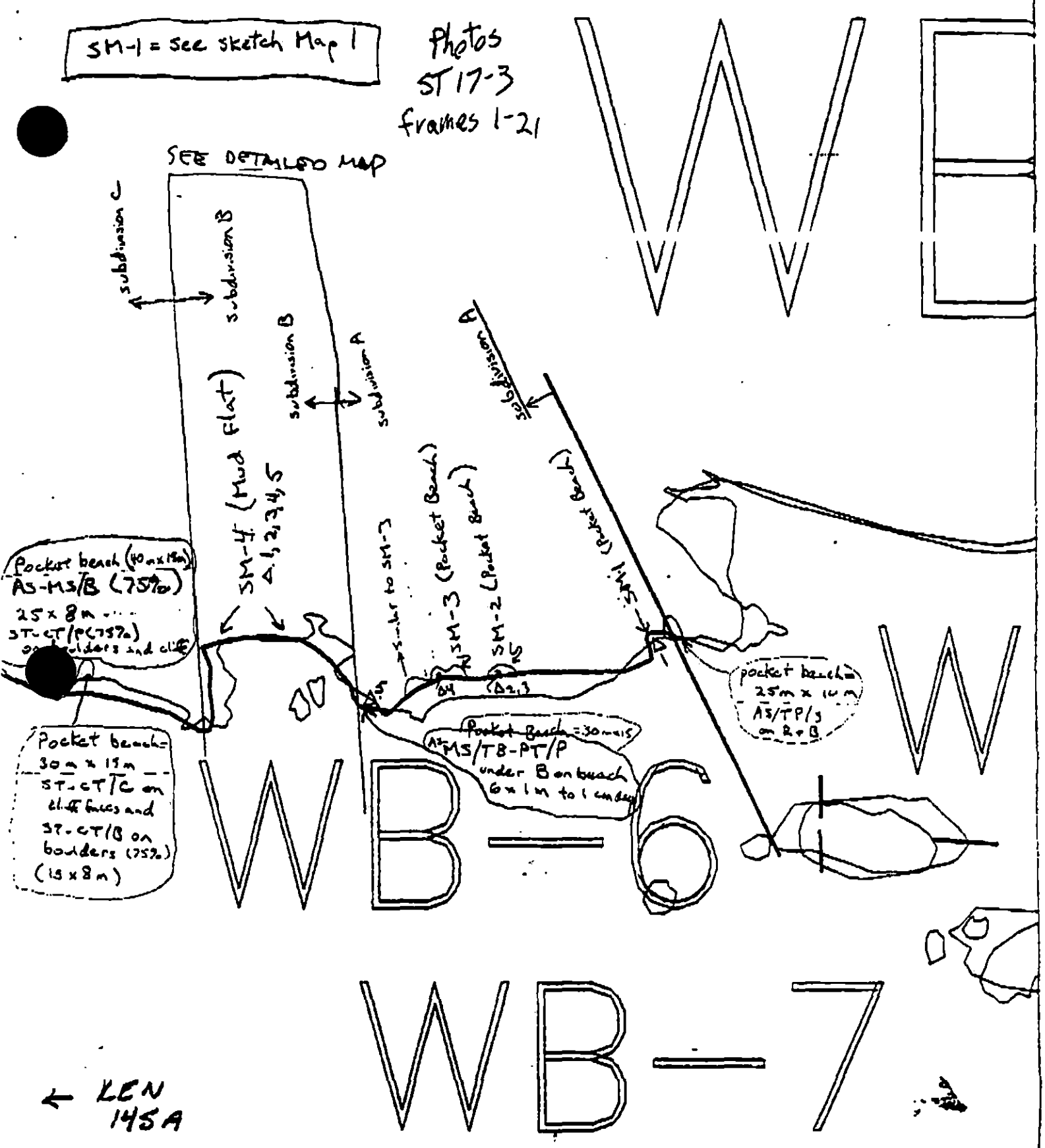
Oiled Vegetation

1 ●→ Photo location, direction, and number



Oil Character Length (m): AP 35 PO N/A CV N/A CT 60 ST 60 MS 20 PT 20 TB 20 FL 10 NO [redacted] N/A

REVISION:03/24/90



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

WB-2

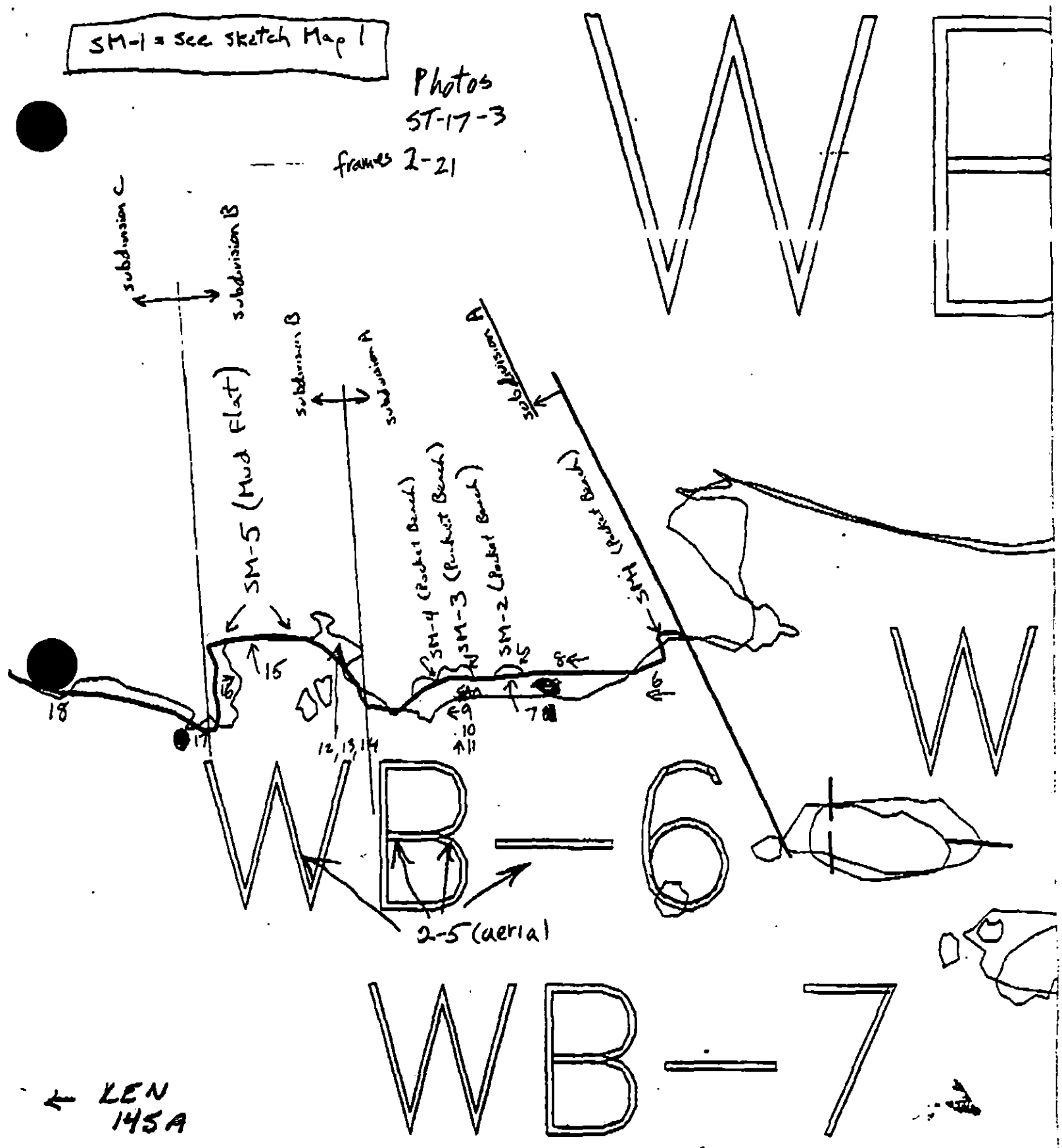
ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145b

Name: [illegible]

Date: 4/1/96



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

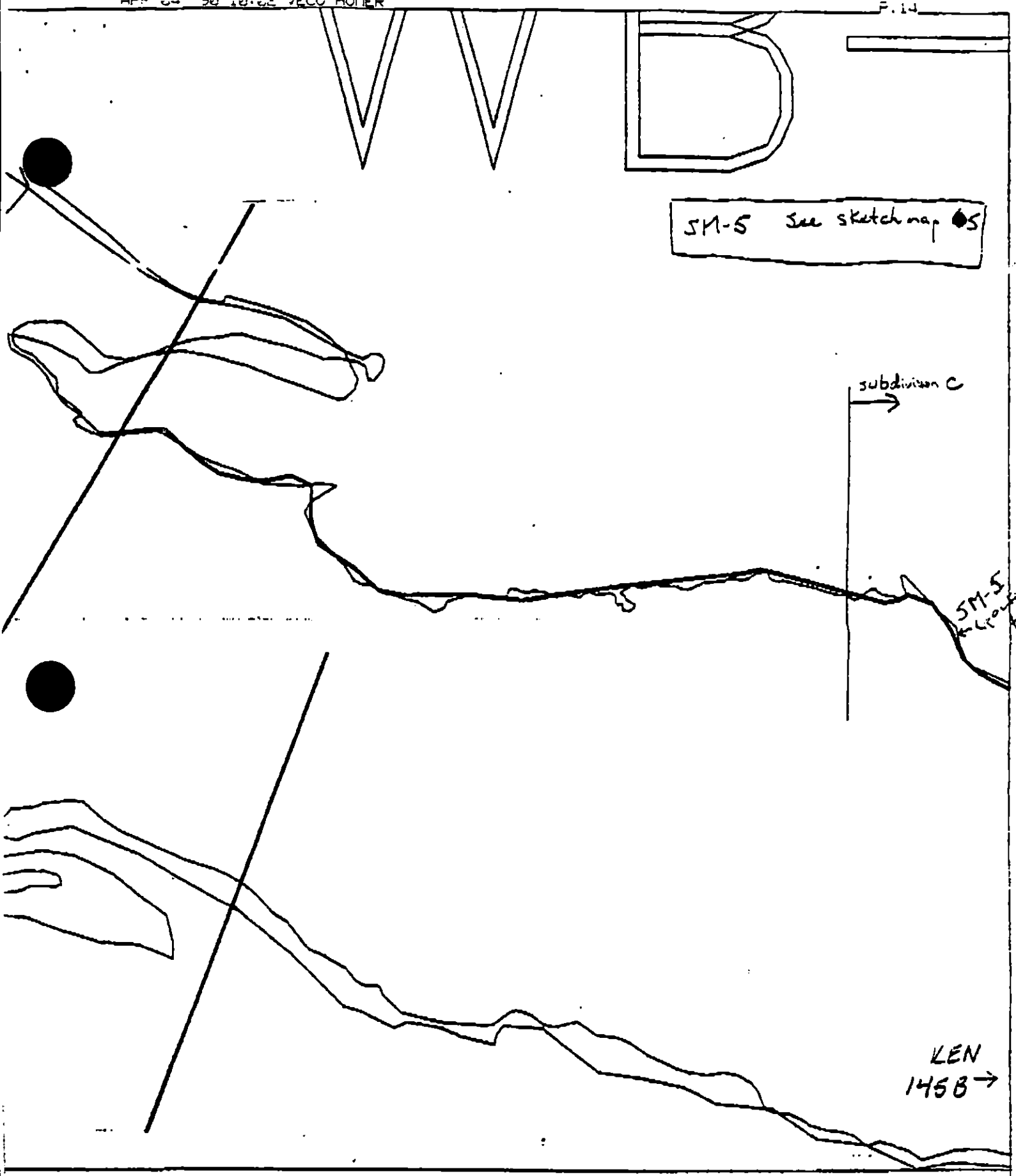
WB-2

ADEC Segment Length: 2232m

Map Key: KEN-145b

Name: _____

Date: _____



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

WB-2

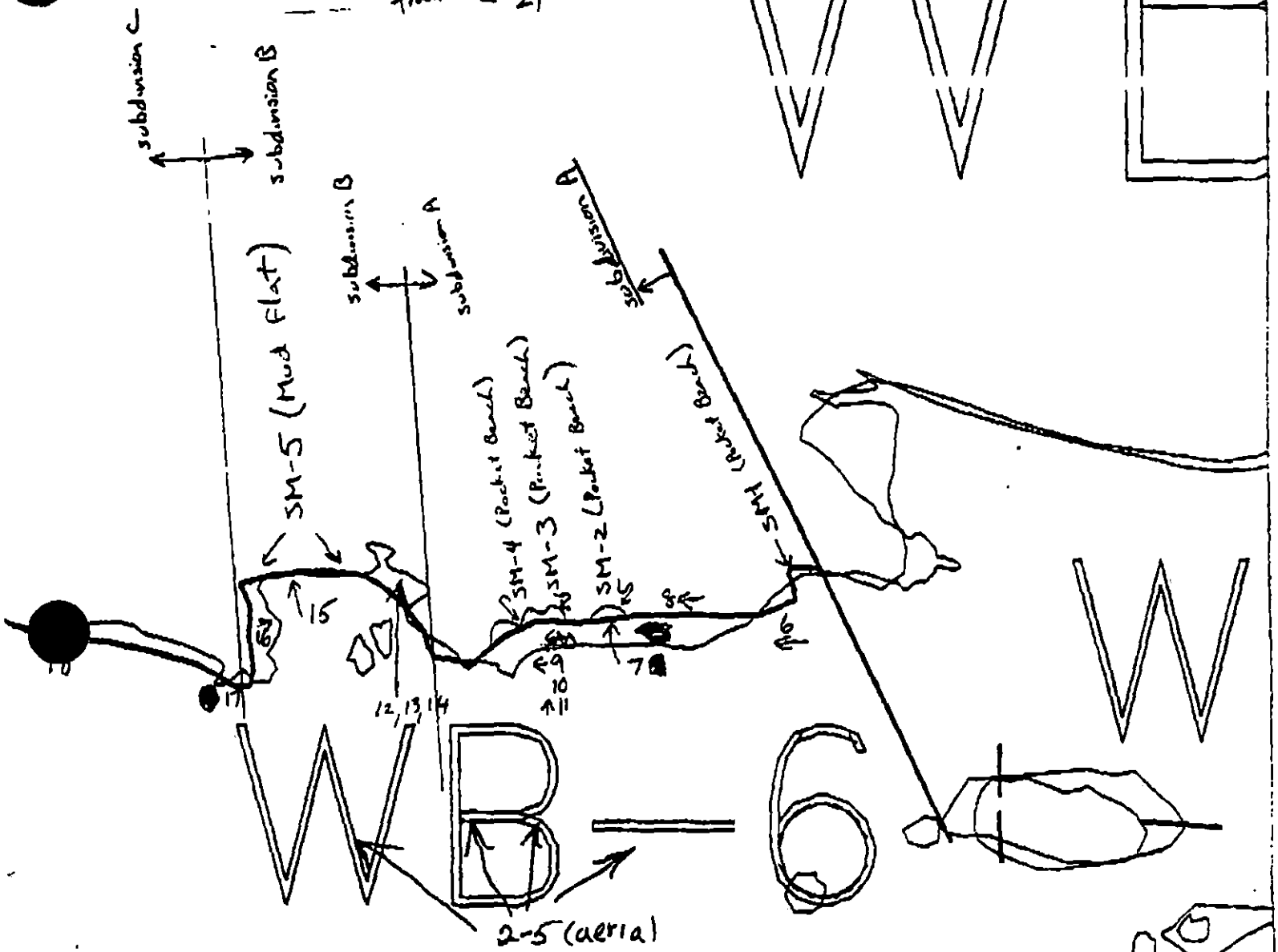
ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145a
Name: Cindy Stiegel
Date: 4/1/90

SM-1 = see sketch Map 1

Photos
ST-17-3
frames 2-21



← KEN 145A

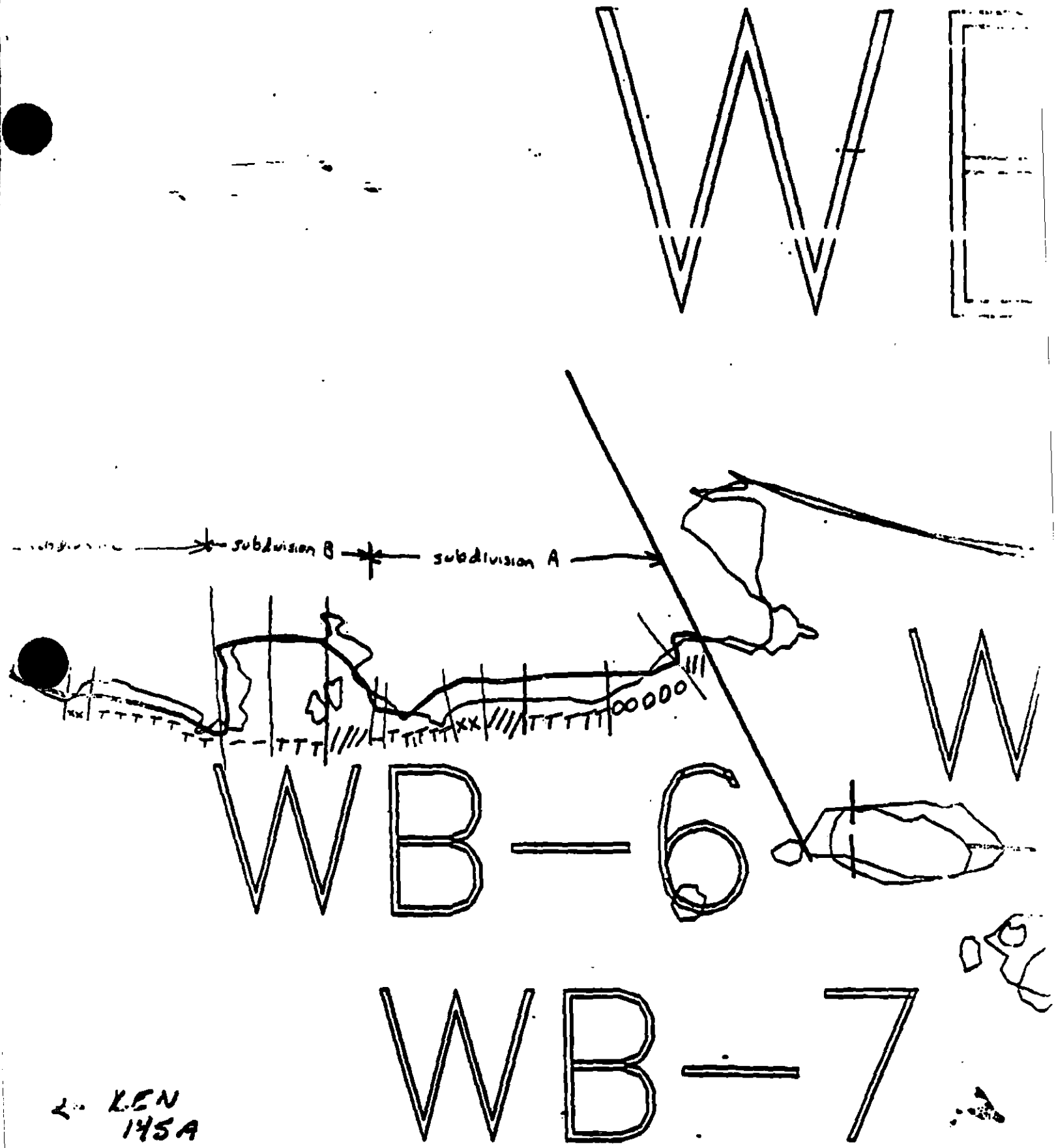
XXXX Wide
/●/ Medium
---- Narrow
TTTT Very Light
0000 No Oil

WB-2

ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145b
Name: _____
Date: _____

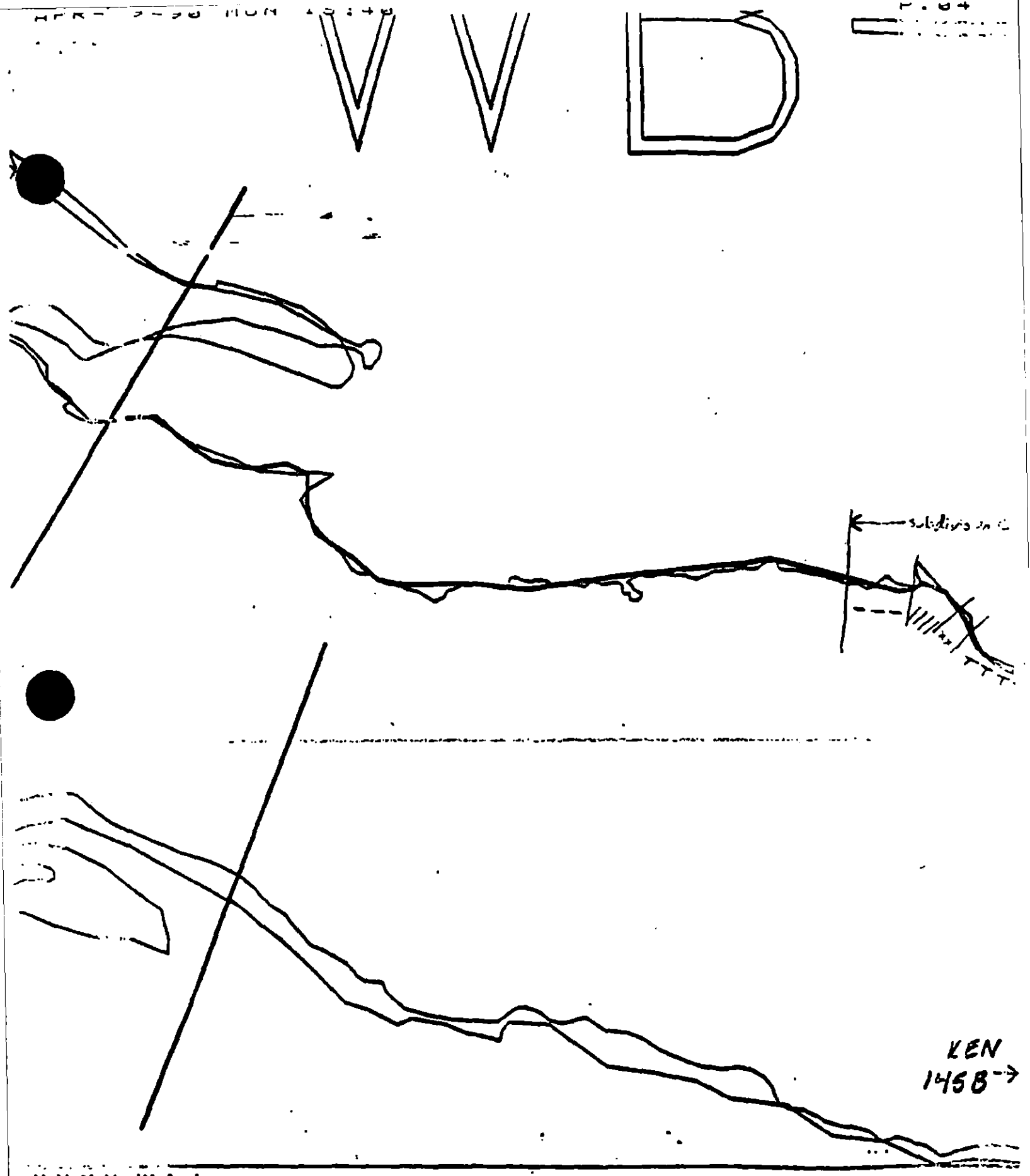


XX Wide
//// Medium
---- Narrow
TTTT Very light

WB-2

ABEC Segment Length: 2232m

Map Key: KEN-145b
Name:



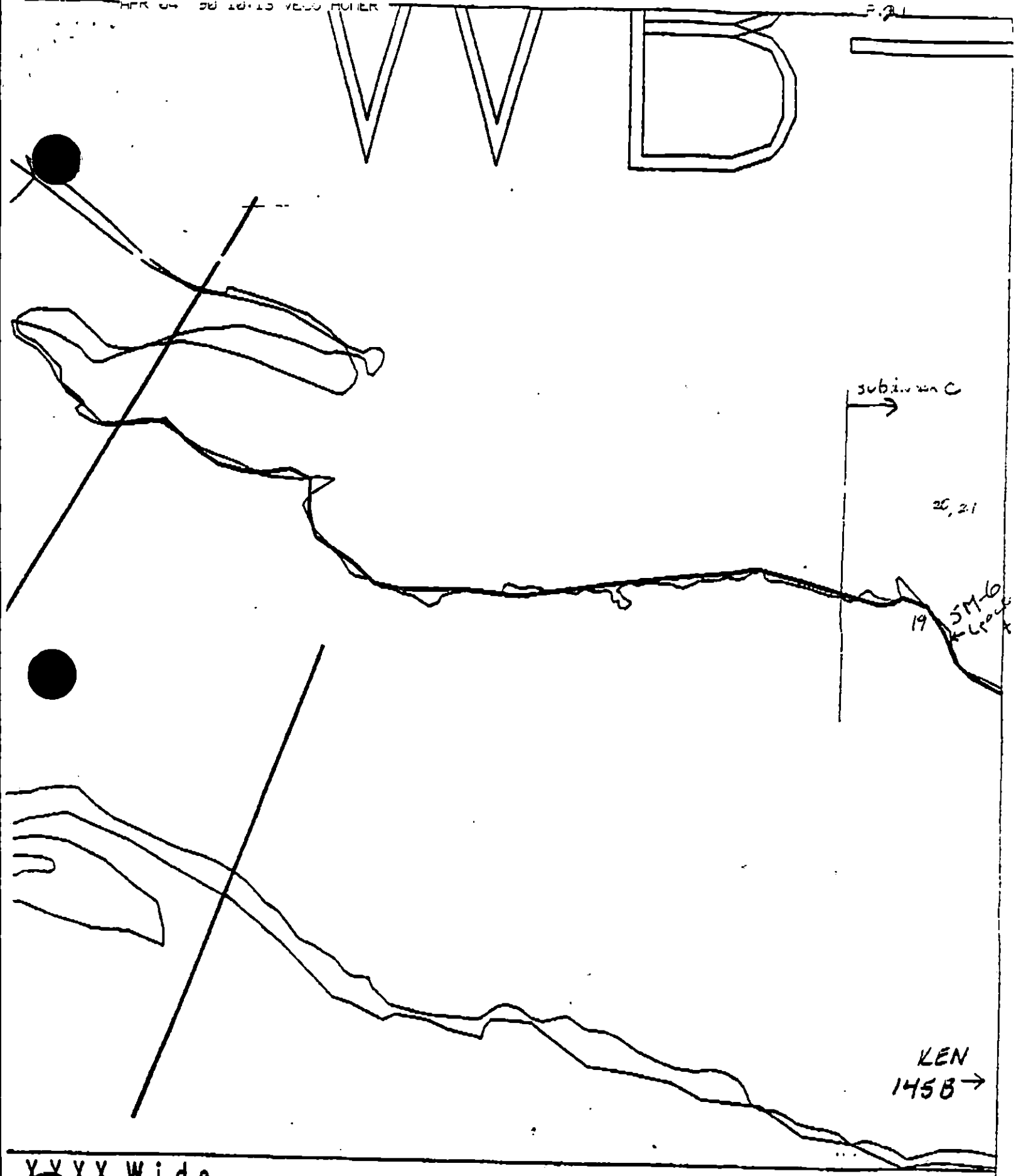
XXXX Wide
●// Medium
---- Narrow
TTTT Very Light

WB-2

ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145a
Name: Ruby Arvegd
Date: 4/1/98



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

WB-2

ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145a

Name: _____

Date: _____

SHORELINE EVALUATION

SEGMENT ST/ WB-02 SUBDIVISION C (3 OF 6) DATE 4/1/90

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid disturbance or damage to unoiled biota and substrate.

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

SHPO SIGNATURE [signature] DATE: 4/20/90

OILING CATEGORIZATION:

Wide 58 m: Medium 162 m: Narrow 61 m: V.Light 240 m: No Oil 0 m
Subsurface Oil Observed: Yes ____ No X Maximum Depth ____

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat removal and manual pick up of mousse, oiled debris and oiled trash (see sketch map for specific locations). Bioremediate areas with coated sediments as indicated on sketch map.
SPOT WASH AS REQUIRED, HOWEVER AVOID MUSSEL BEDS

TAG COMMENTS: ____

TAG APPROVAL DATE: 4/19/90.
ADEC Art Weiner [signature]
EXXON Andy Tate [signature] FOSC: [signature] DATE: 5-12-90
NOAA Bud Wescott [signature]
USCG Kenneth Keane [signature]

OG R[redacted] Siegel

SEGMENT ST/ WB-2

SUBDIVISION C

DATE 4 / 1 90

CHECKLIST

___N Arrow
___Approx. Scale
___Seg/Sub Bndry
___Oil Dist.
Width
Length
% Cover
___Substrate Character
___Est. HWL/LWL
___SSL
___Profile Location(s)
___Profile(s)
___Pit Location(s)
___Photo Location(s)

LEGEND

1 △ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

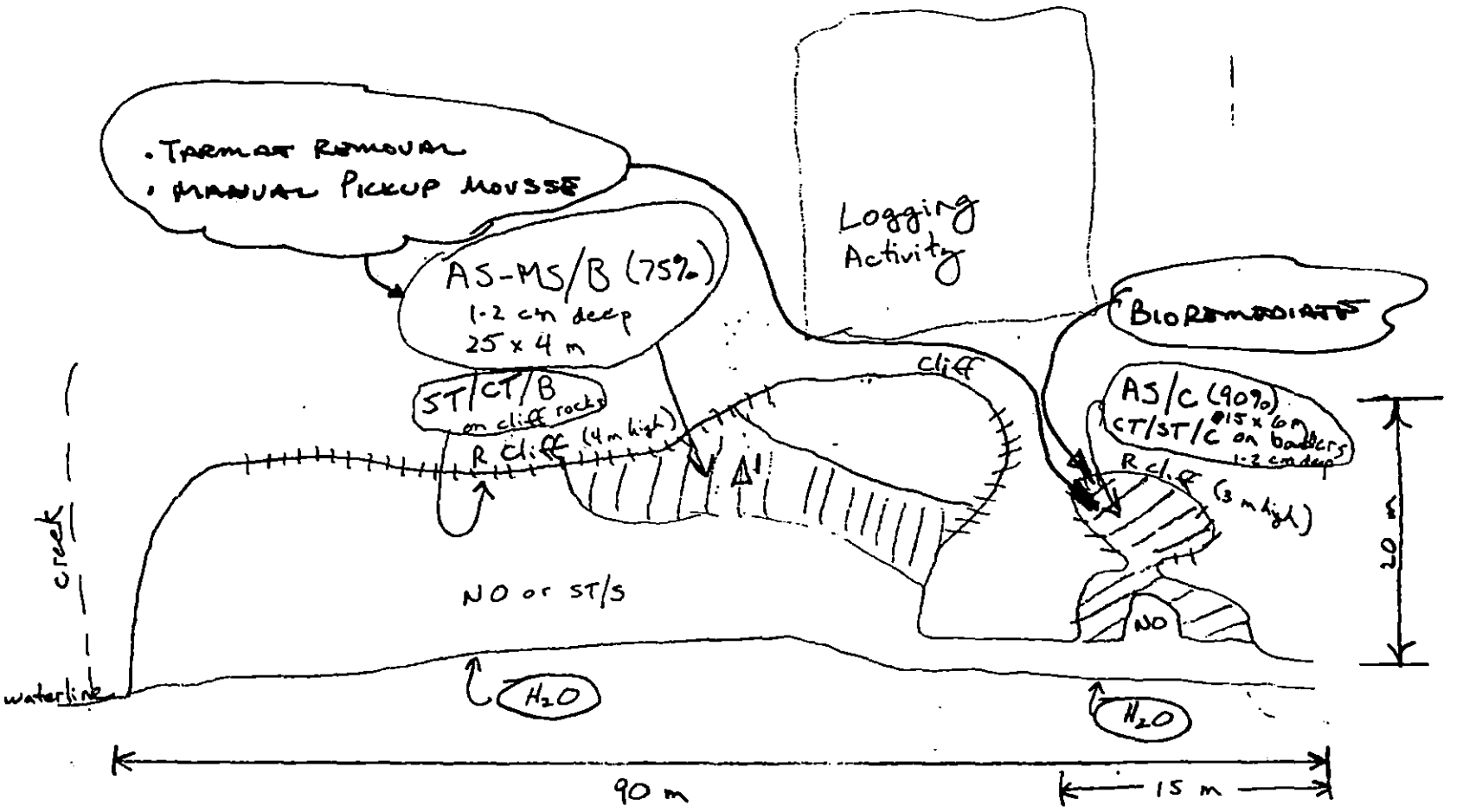
1 ●→ Photo location, direction, and number

N ↑

2 cm = 10 m App. Scale

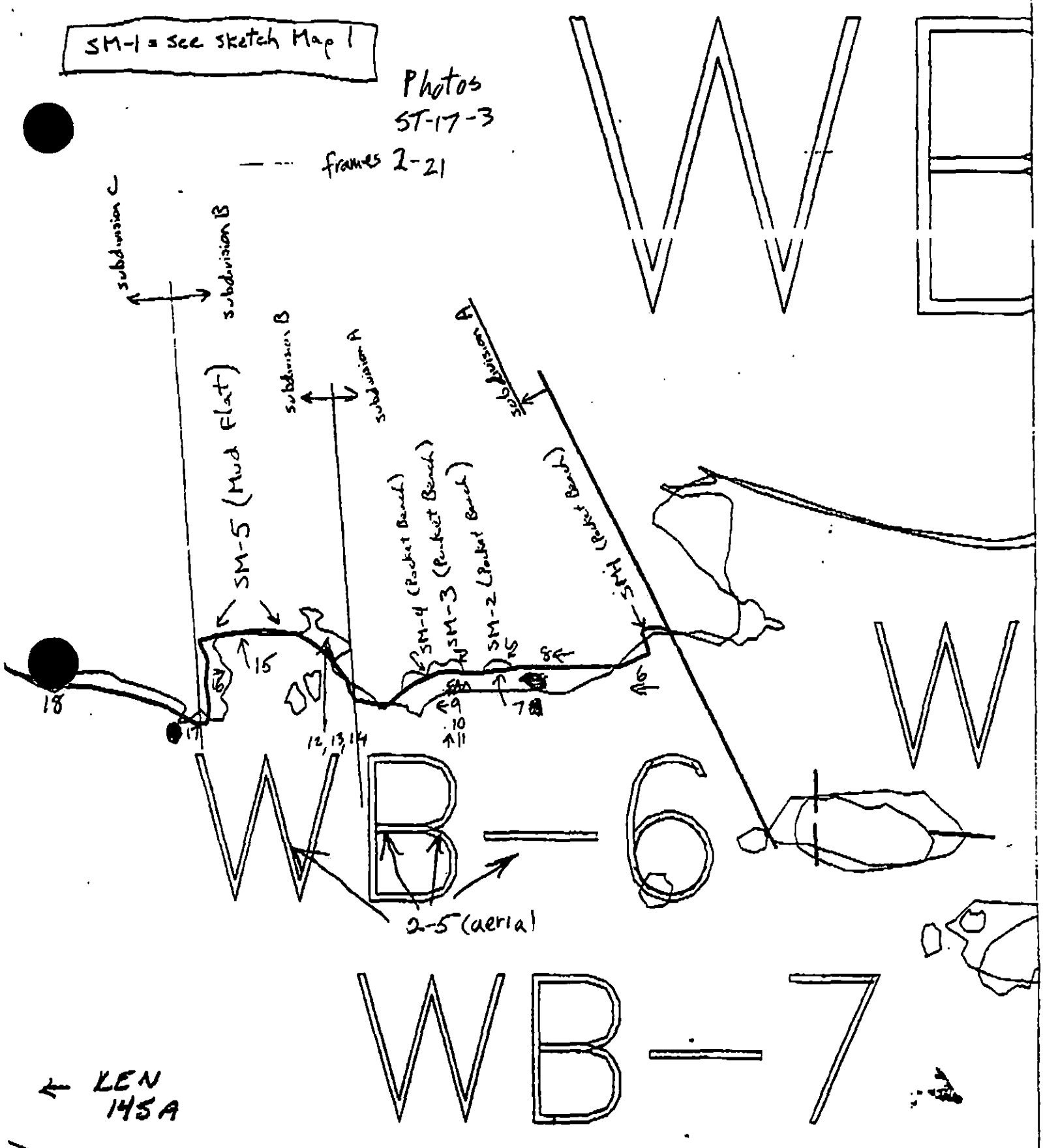
[redacted]ETCH MAP #5

Part of Subdivision C



Oil Character Length (m): AP 40 PO N/A CV N/A CT 70 ST 70 MS 30 PT 30 TB 30 FL N/A NO N/A

REVISION:03/24/98



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

WB-2

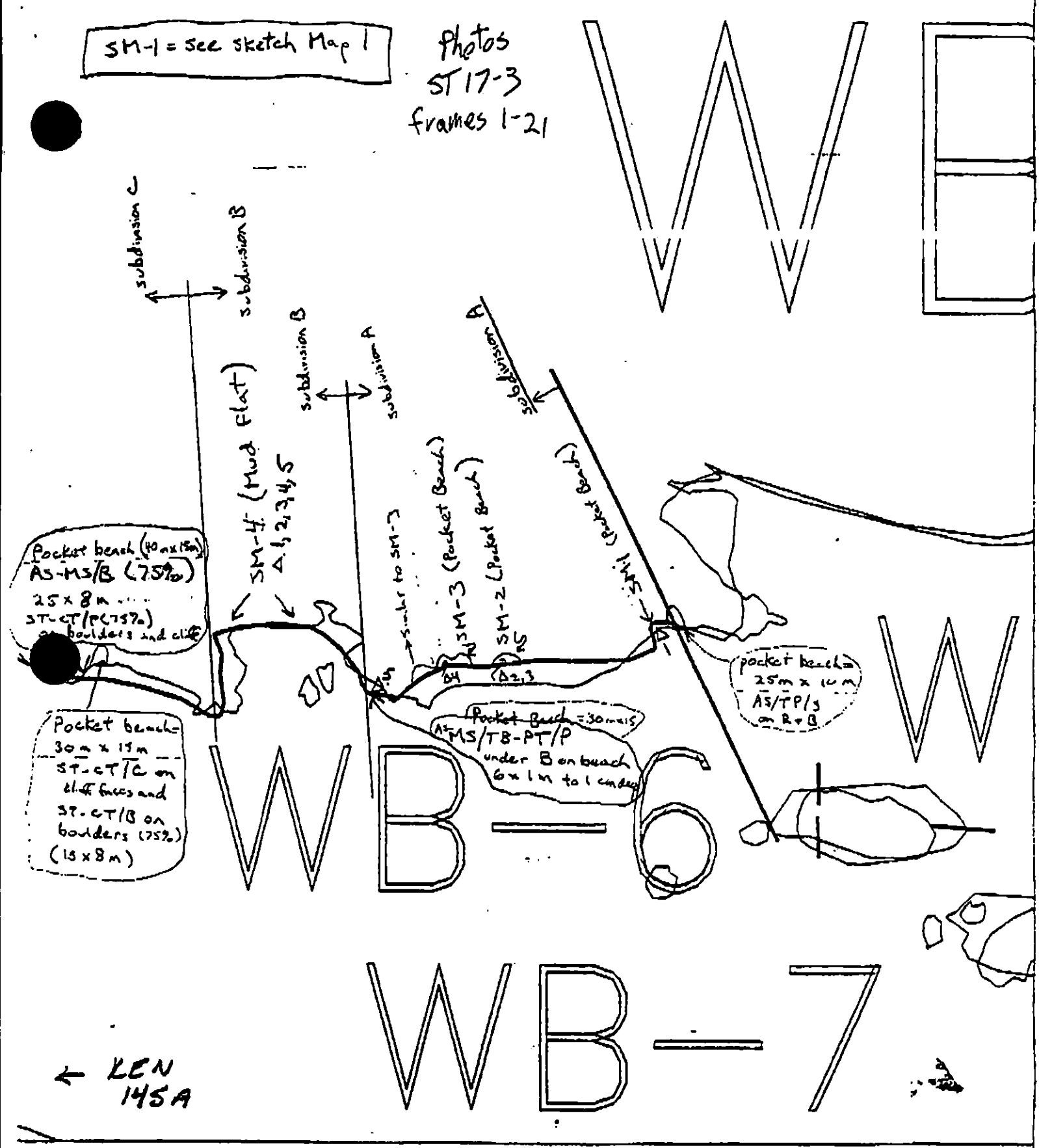
ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145b

Name: _____

Date: _____



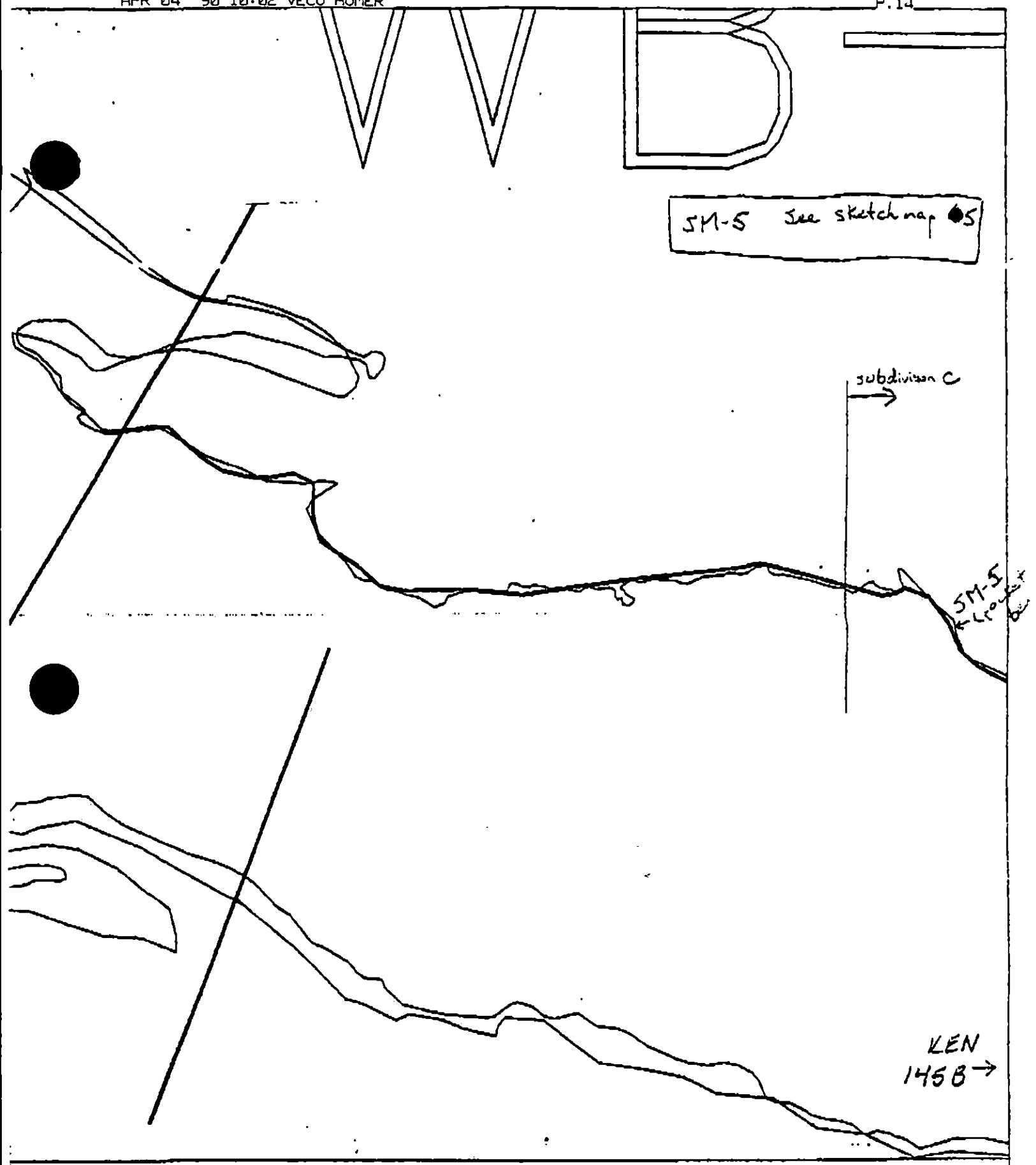
XXXX Wide
/// Medium
---- Narrow
TTTT Very Light
0000 No Oil

WB-2

ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145b
Name: Rudy Siegel
Date: 4/1/90
Date Entered:



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

WB-2

ADEC Segment Length: 2232m

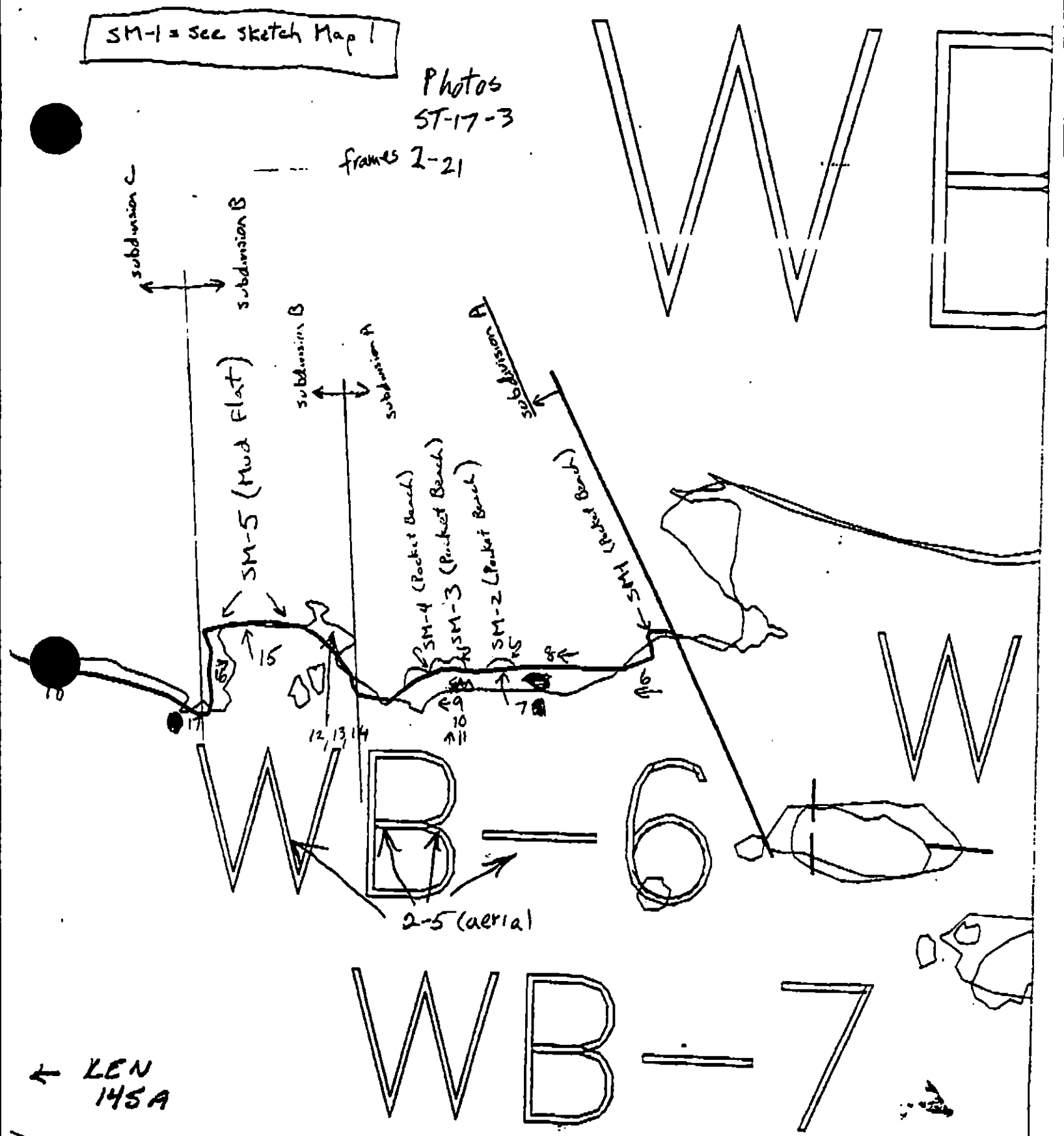
0 100 200 300

Map Key: KEN-145a

Name: Cindy Siegel

Date: 4/1/90

Data Entered:



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

WB-2

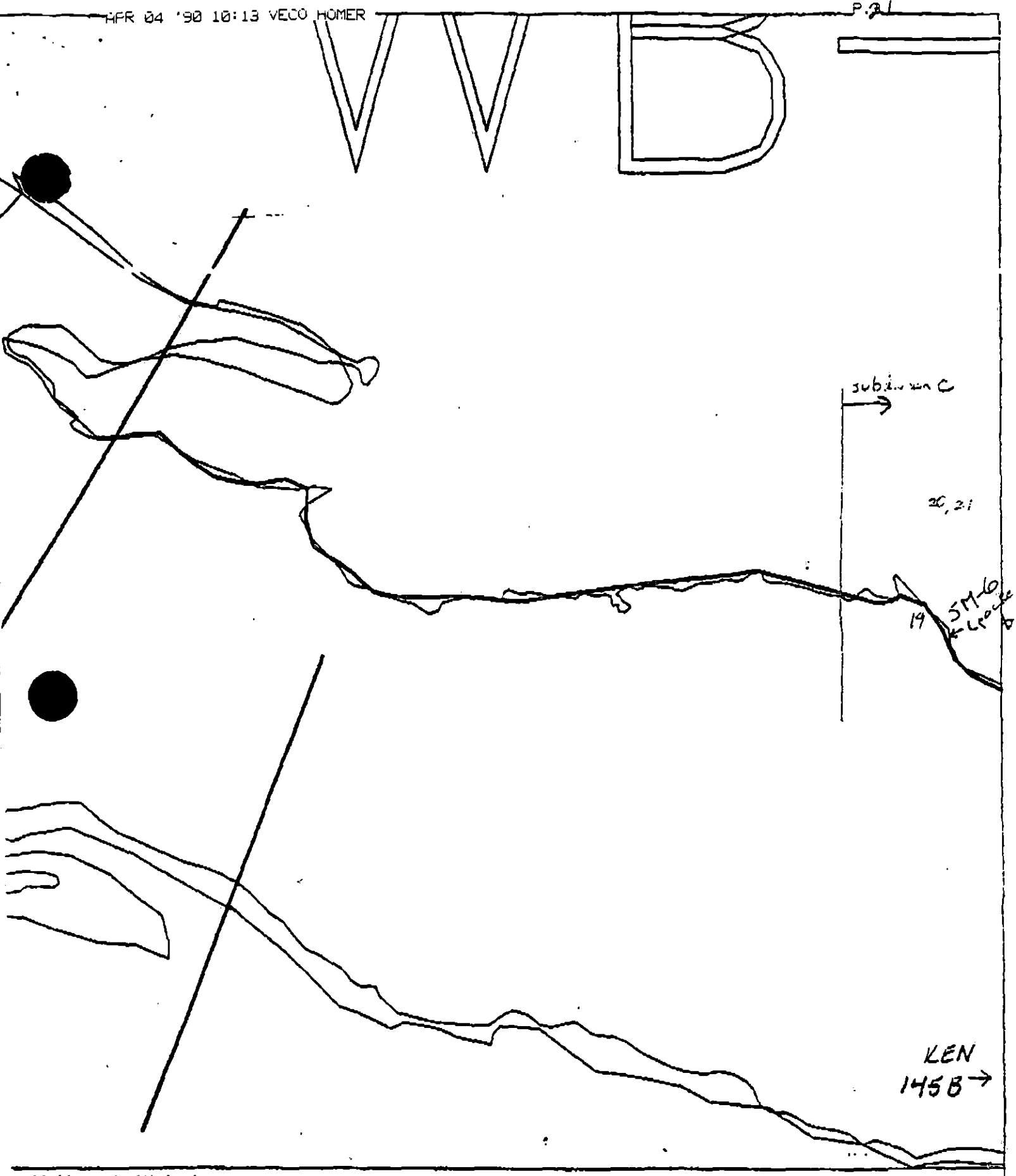
ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145b

Name: _____

Date: _____



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0 0 0 0 No Oil

WB-2

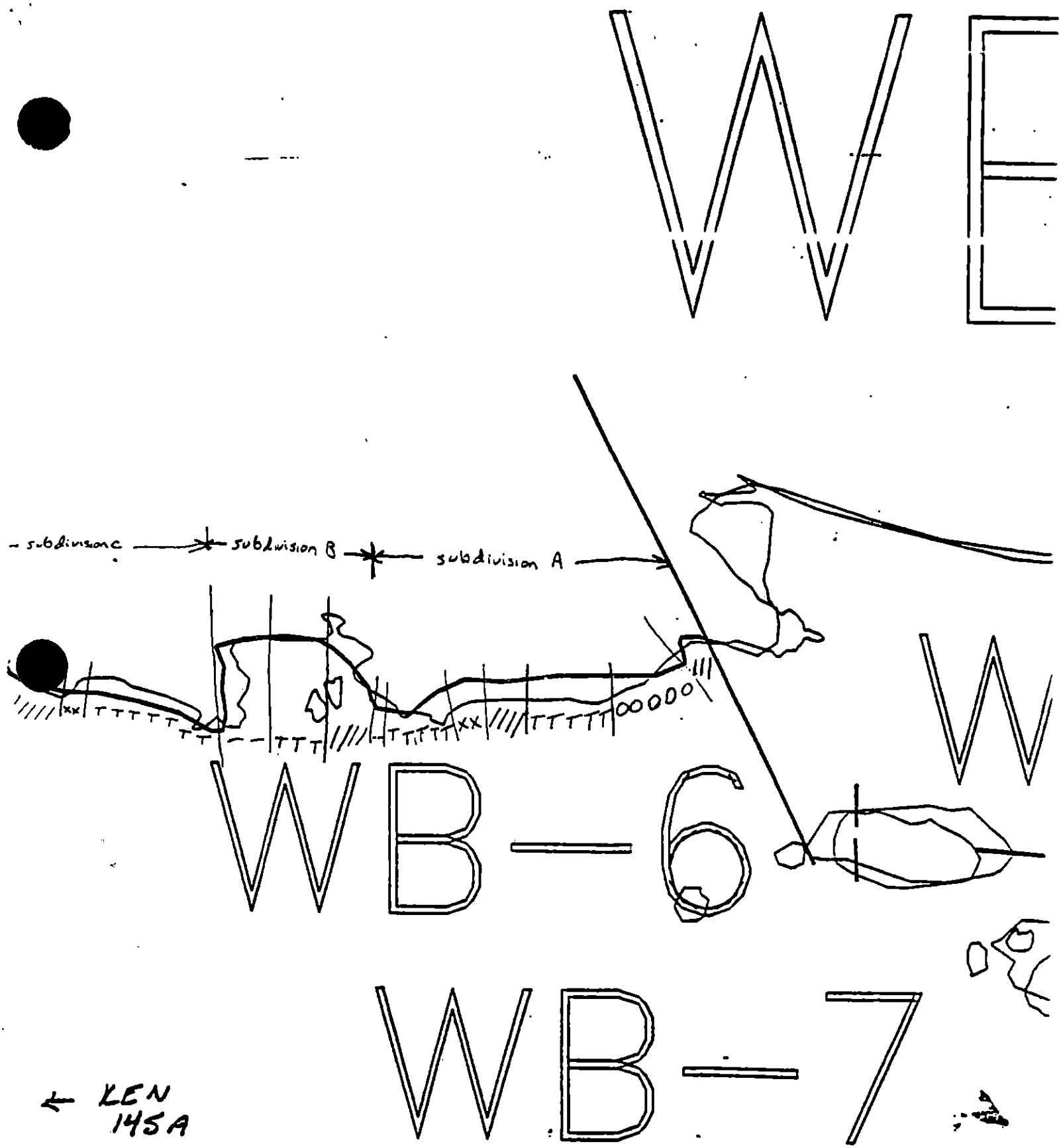
ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145a

Name: _____

Date: _____



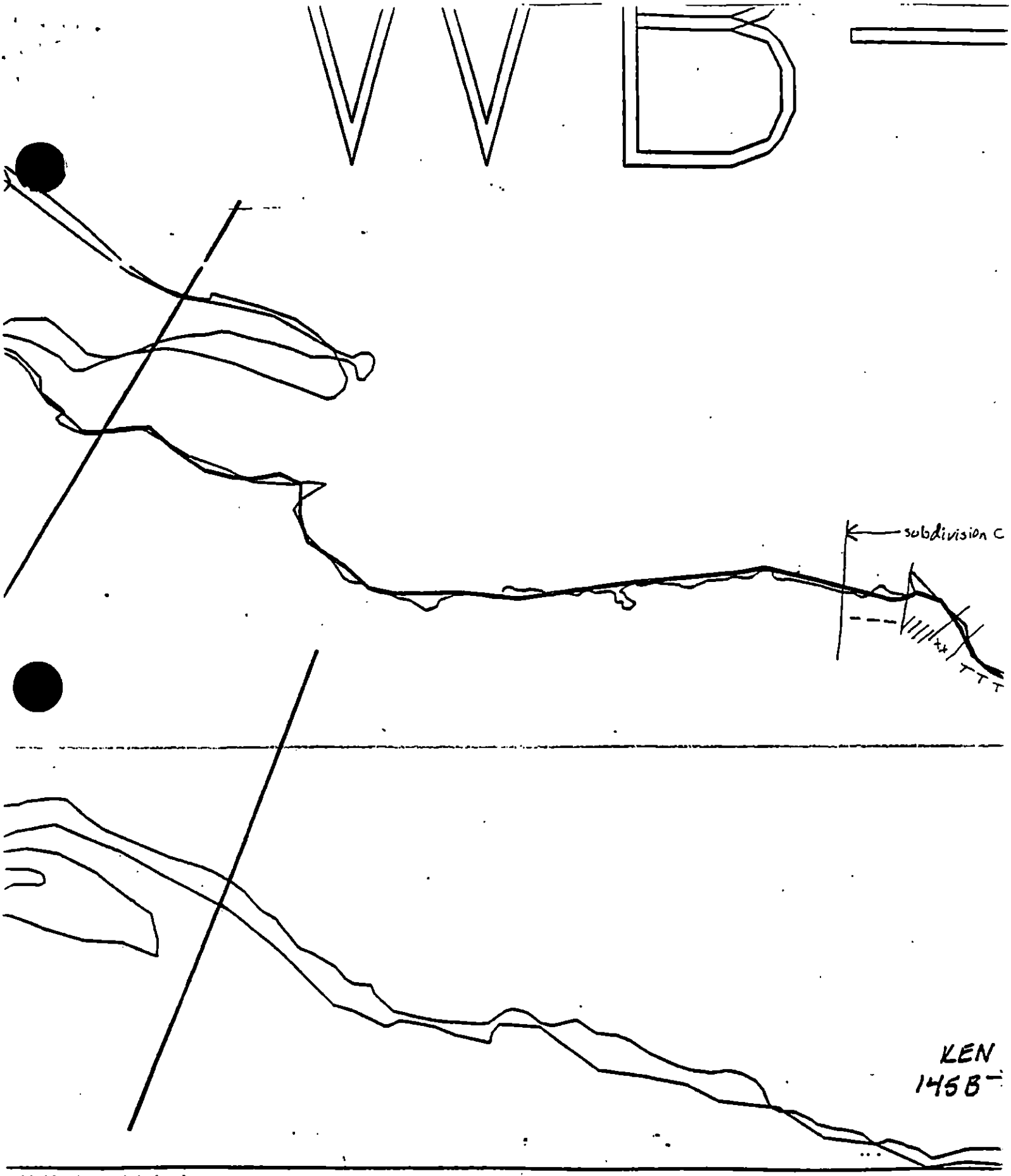
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light

WB-2

ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145b
Name: Rob Siegel
Date: 4/1/90



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

WB-2

ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145a

Name: Ruby Siegel

Date: 4/1/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ WB-02 SUBDIVISION D (4 OF 6) DATE 4/6/90

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid 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. Fohmer DATE: 4/20/90

OILING CATEGORIZATION:

Wide 13 m: Medium 40 m: Narrow 93 m: V.Light 107 m: No Oil 0 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat removal and manual pick up of mousse, oiled trash, vegetation, and debris as indicated on sketch map. Bioremediation of two small areas also recommended.

TAG COMMENTS: ____

TAG APPROVAL DATE: 4/19/90.
ADEC Art Weiner Art Weiner
EXXON Andy Tek
NOAA Burl Wescott Burl Wescott
USCG Kenneth Keane
FOSC: ____ DATE: 5-12-90

OG Randy Siegel

SEGMENT ST/ UB-2

SUBDIVISION D

DATE 4 / 6 / 90

CHECKLIST

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

LEGEND

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

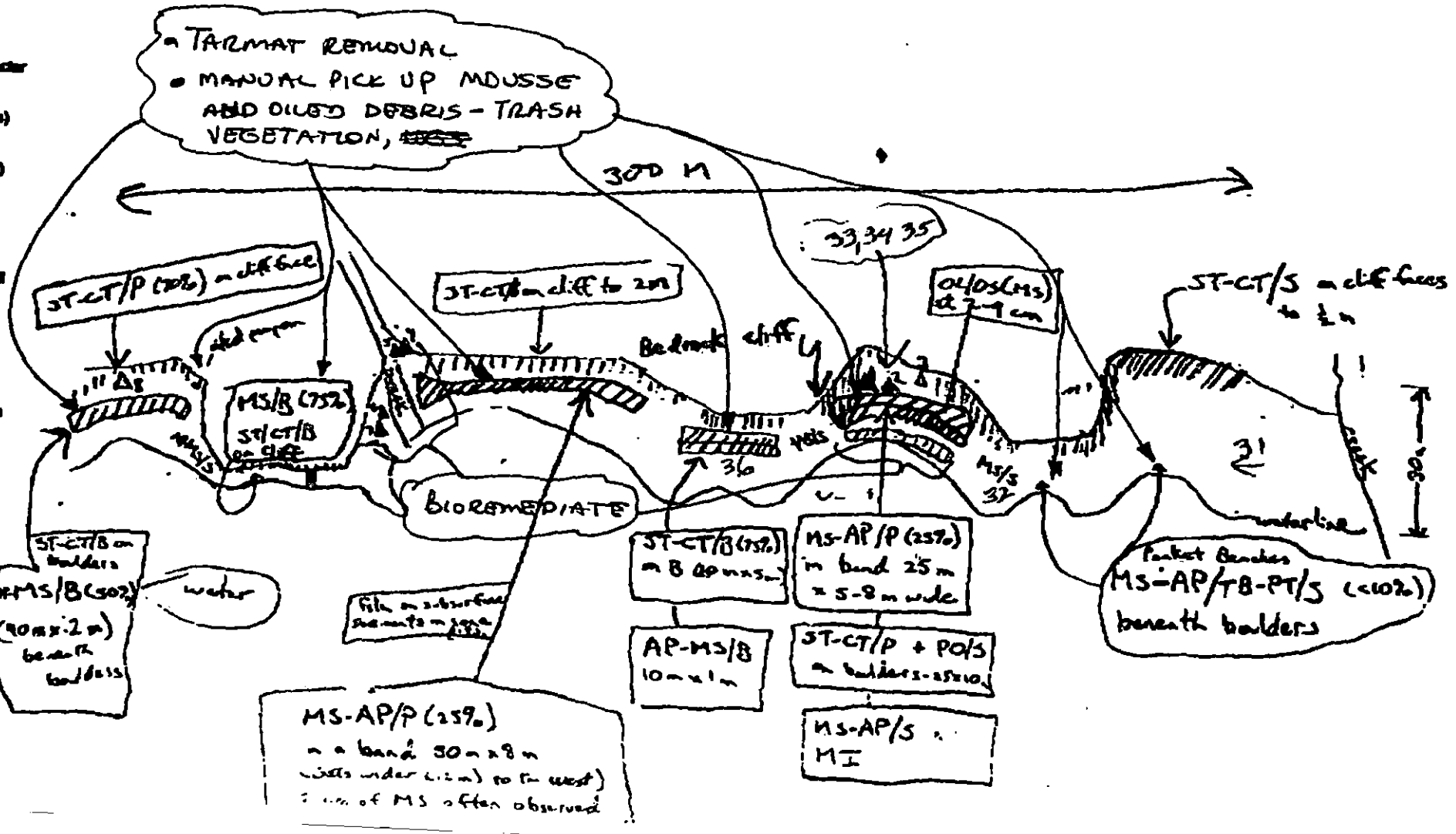
Oiled Vegetation

Photo location, direction, and number

N

SKETCH MAP #1
Subdivision D

Photos ST-17-4 #31-36



OG Randy Siegel

SEGMENT ST/ UB-2

SUBDIVISION D

DATE 4 / 6 / 90

CHECKLIST

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

LEGEND

1 △ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

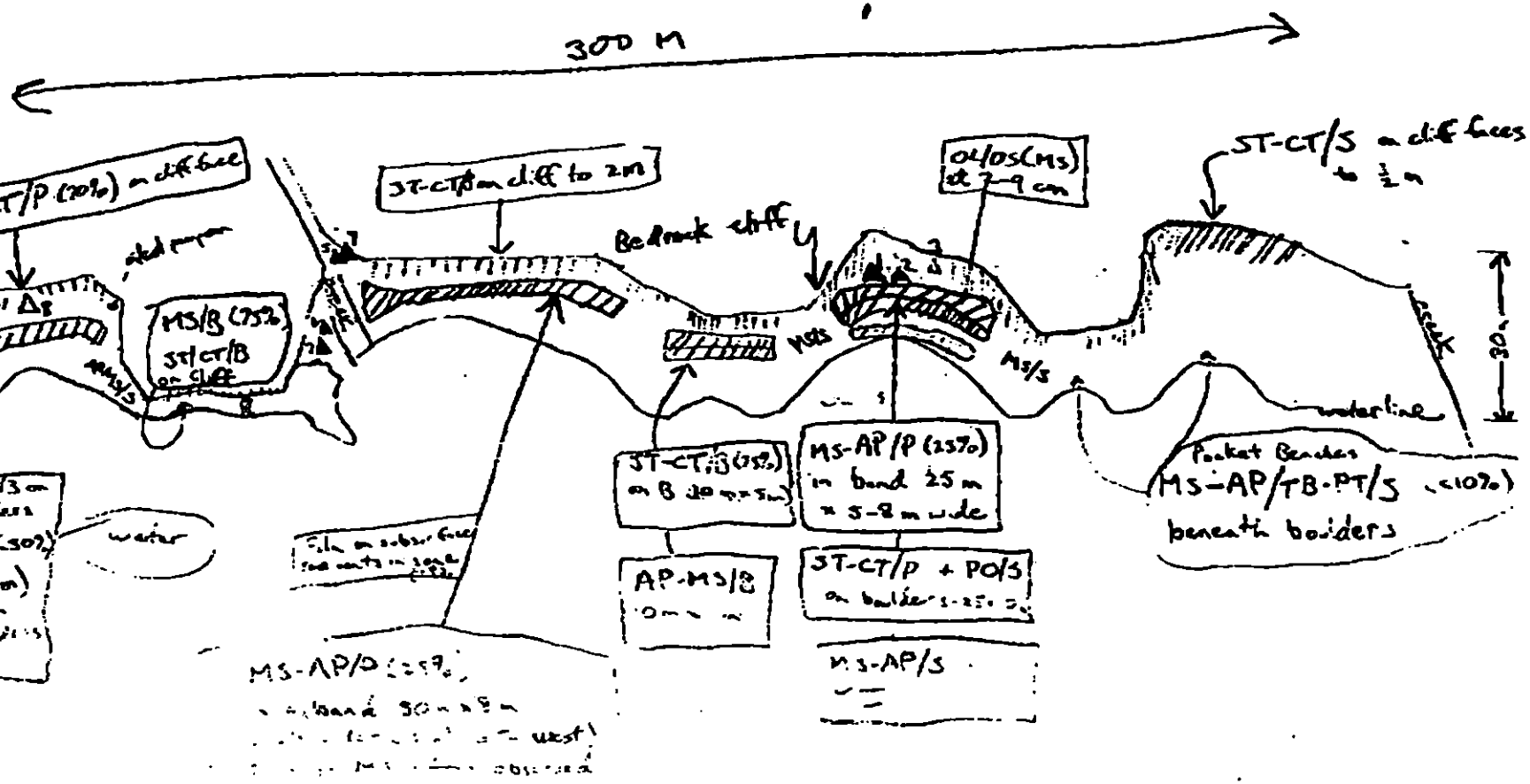
Oiled Vegetation

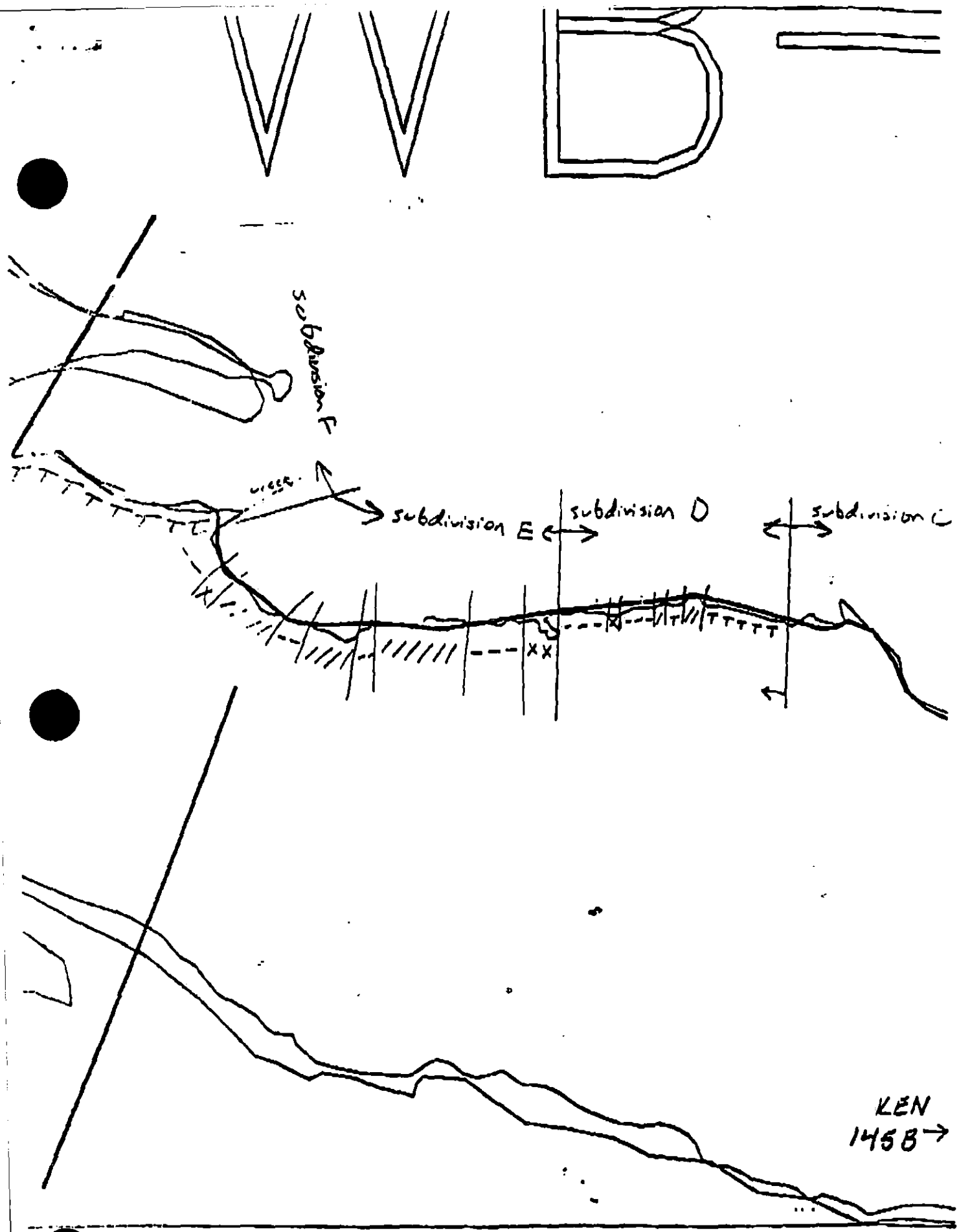
Photo location, direction, and number

N

SKETCH MAP #1

Subdivision D





Wide
Medium
Narrow
Very light

WB-2

ADEC Segment Length: 2232m

Map Key: KEN-145a
Name: [illegible]
Date: 4/8/90

SHORELINE EVALUATION

SEGMENT ST/ WB-02 SUBDIVISION E (5 OF 6) DATE 4/4/90

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid 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. Holman DATE: 4/20/90

OILING CATEGORIZATION:

Wide 72 m: Medium 238 m: Narrow 140 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 15 +cm

RECOMMENDATIONS:

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

COMMENTS: Recommend manual removal of tarmat and manual removal of mousse, patties and tar balls. + DEBRIS / TRASH
SPOTWASH AS REQUIRED FOR AREAS INACCESSIBLE FOR MANUAL REMOVAL OF MOUSSE

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/90.
ADEC ART WEINER Art Weiner
EXXON ANDY TEAL Andy Teal FOSC: [illegible] DATE: 5-12-90
NOAA BILL WESCOTT Bill Wescott
USCG KENNETH KEANE Kenneth Keane

OG [illegible]

SEGMENT [illegible] W3-2

SUBDIVISION E

DATE 4 / [illegible] / 90

CHECKLIST

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

LEGEND

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

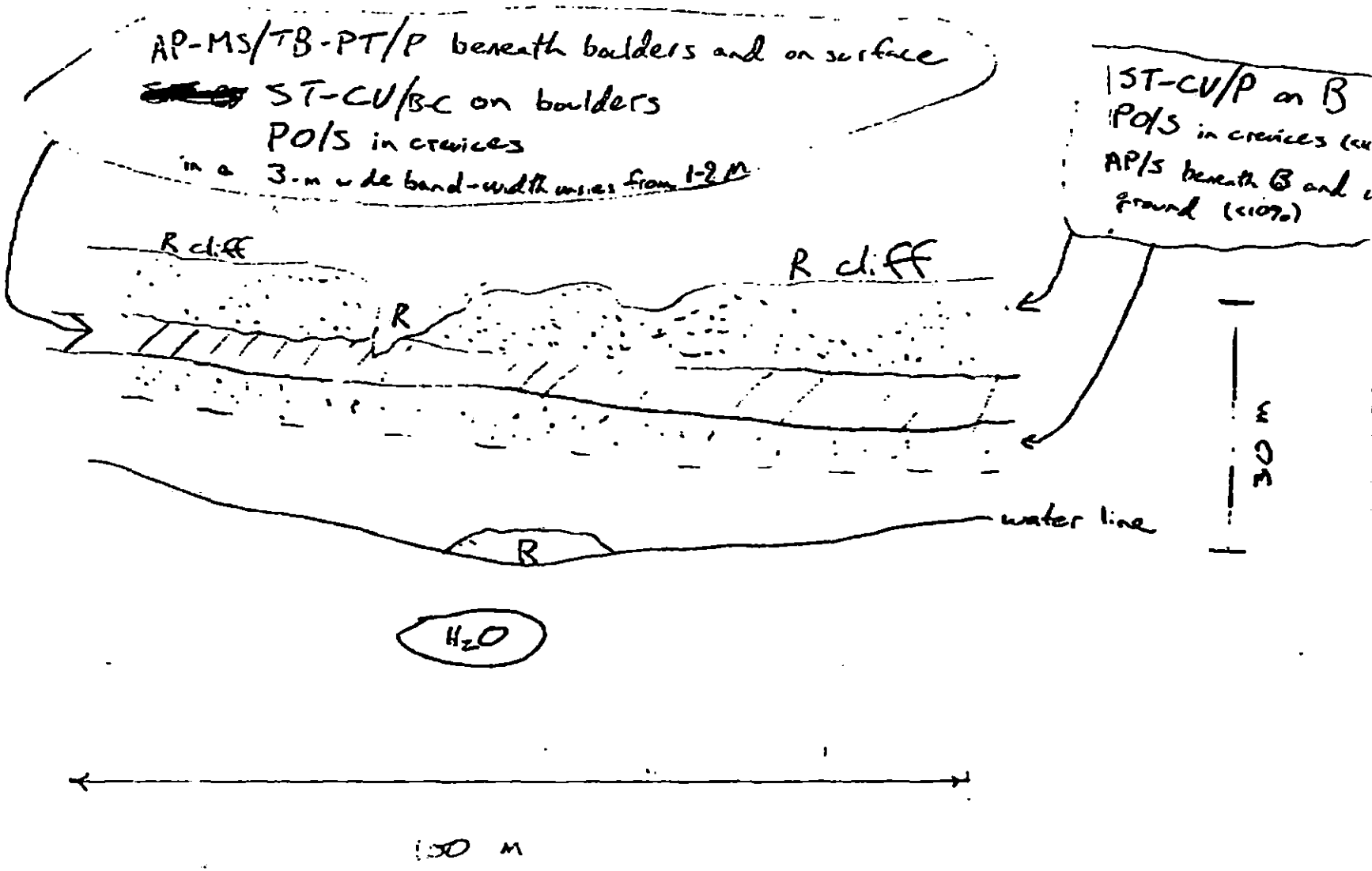
1 ⊕ Photo location, direction, and number

N

[illegible]

SKETCH MAP

#2



Oil Character Length (m): AP 75 PO [illegible] CV 2.5 CT [illegible] ST [illegible] MS 75 PT 2.5 TB 2.5 FL NA NC [illegible]

REVISION 03/31/90

OG [illegible]

SEGMENT [illegible] 03-2

SUBDIVISION E

DATE 4 / 4 / 90

CHECKLIST

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

LEGEND

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

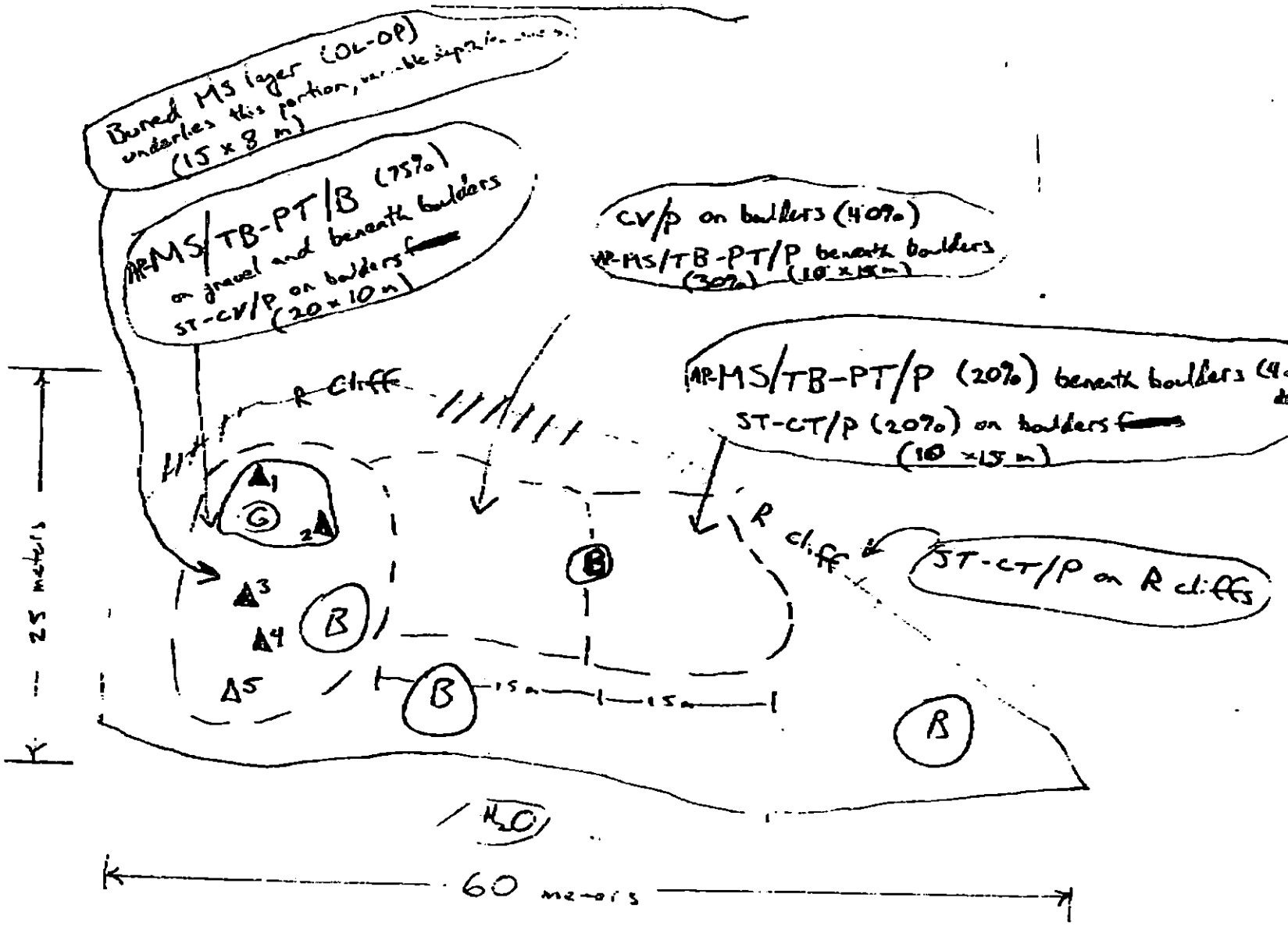
CT/S Splashed Distribution

Oiled Vegetation

1 ⊕ Photo location, direction, and number

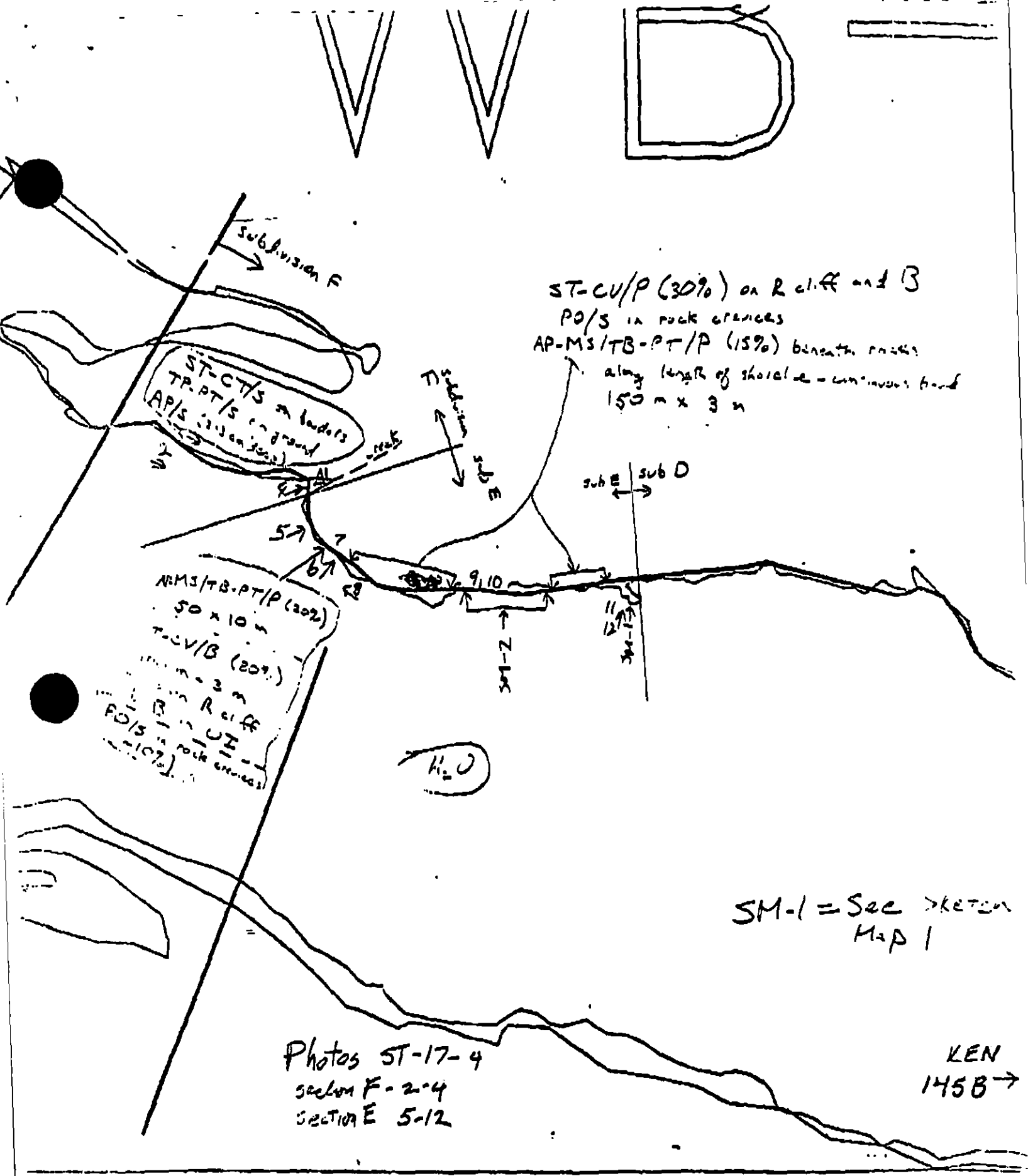
SKETCH MAP

Sketch Map =



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

REVISION 03/19/90

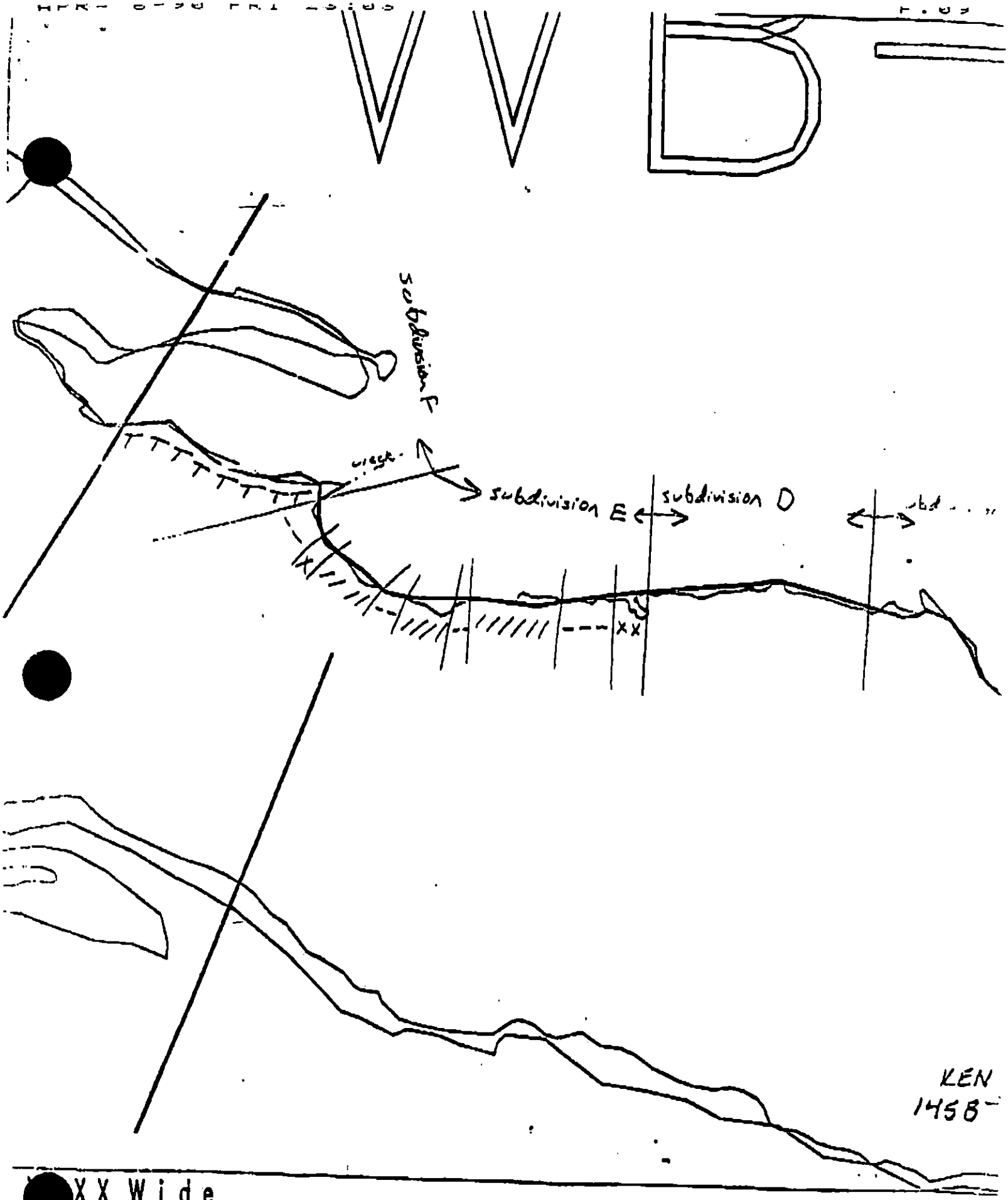


XXXX Wide
/// / Medium
---- Narrow
TTTT Very Light

WB-2

ADEC Segment Length: 2232m

Map Key: KEN-145a
Name: Lady Luck
Date: 4/4/90

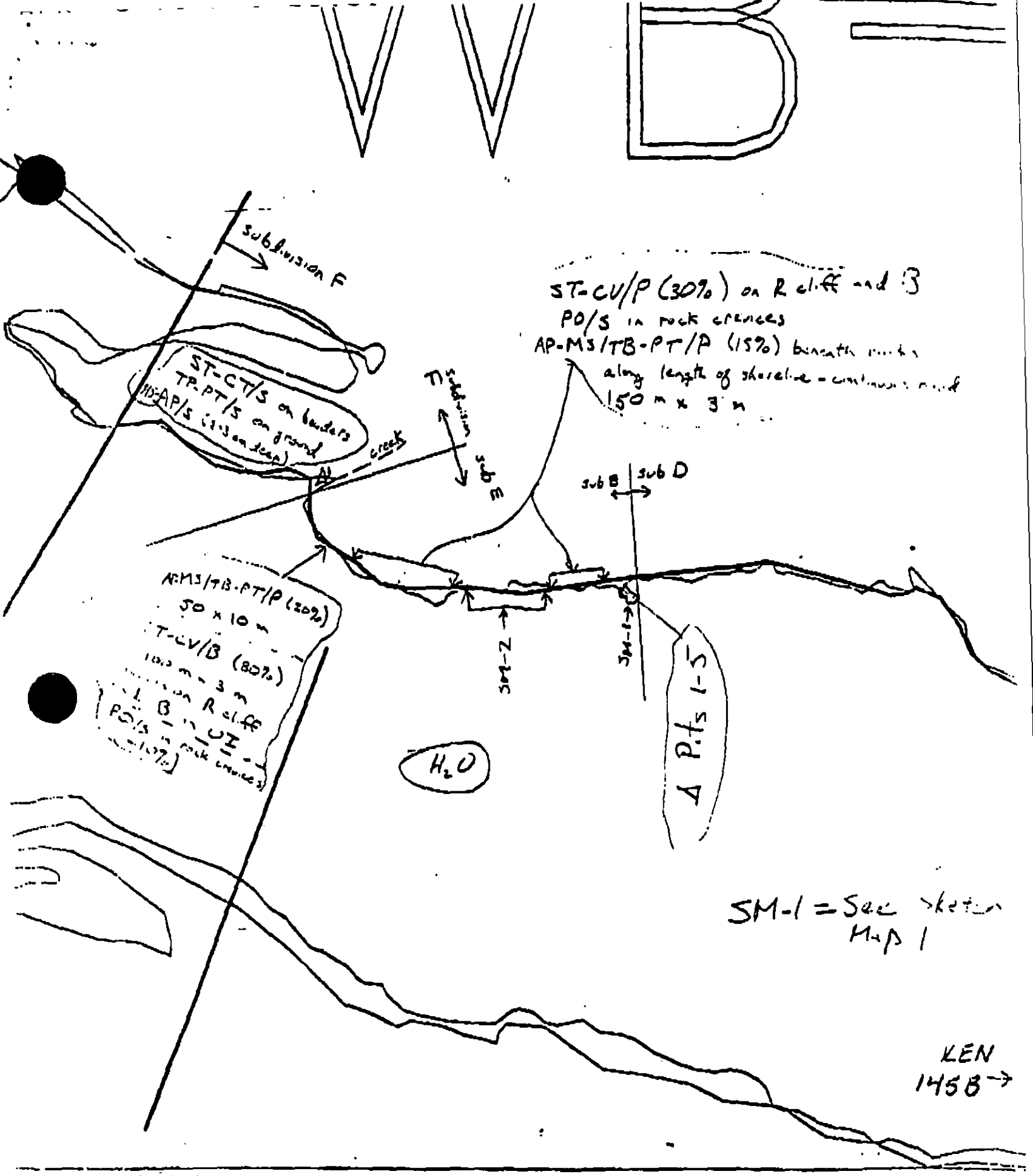


XX Wide
//// Medium
---- Narrow
TTTT Very light

WB-2

AOEC Segment Length: 2232m

Map Key: KEN-145a
Name:



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

WB-2

ADEC Segment Length: 2232m

0 100 200 300

Map Key: KEN-145a
Name: Lady Luck
Date: 4/4/10

SHORELINE EVALUATION

SEGMENT ST/ WB-02 SUBDIVISION F (6 OF 6) DATE 4/4/90

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid 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 ~~required prior~~ (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: J. David McMahan DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 271 m: No Oil 0 m
Subsurface Oil Observed: Yes ____ No X Maximum Depth ____

RECOMMENDATIONS:

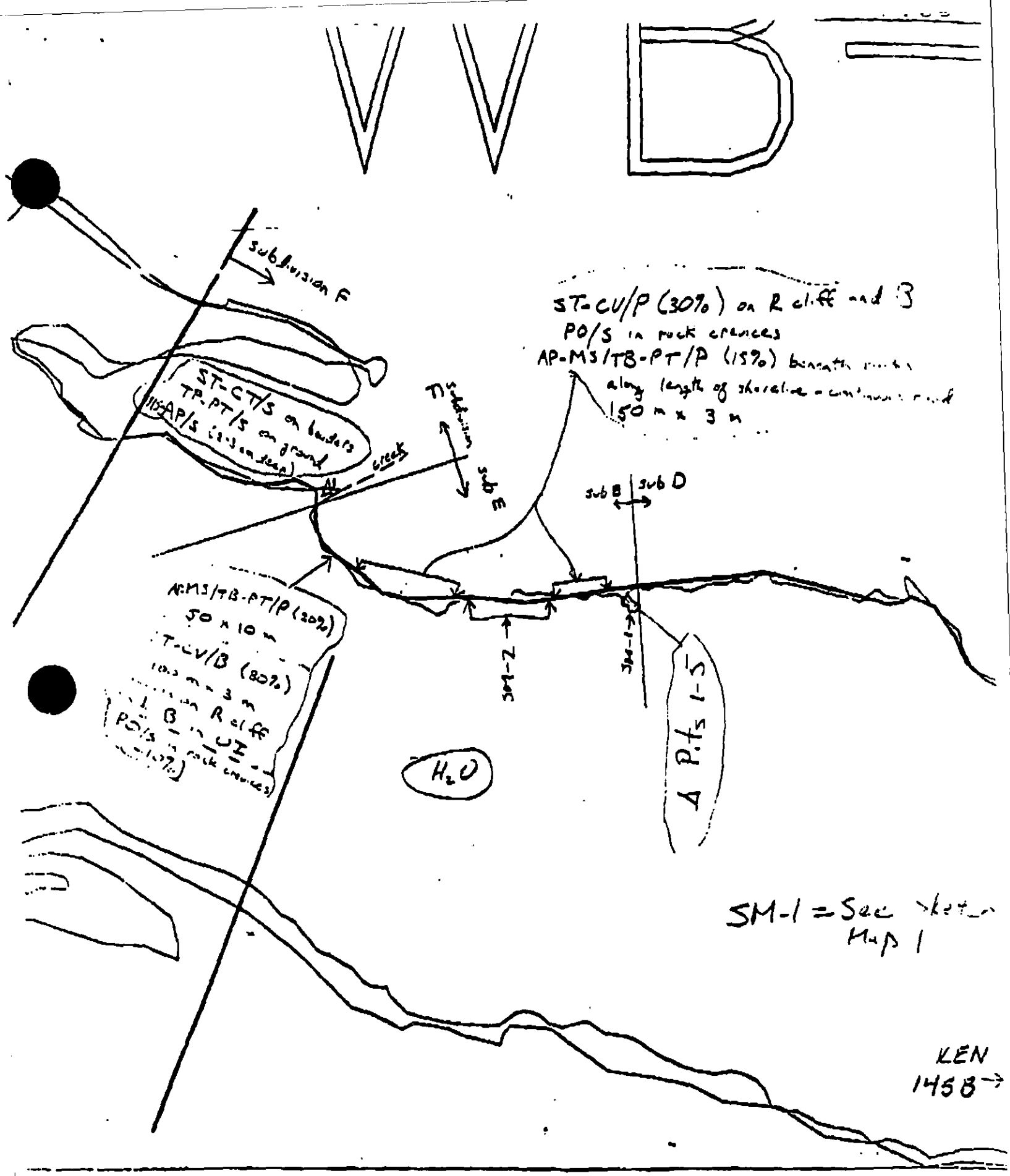
X No Treatment Recommended	____ Snare/Absorbent Booms
____ Treatment Recommended	____ Oil Snares (pom poms)
X Manual Pickup	____ Absorbents (pads,rolls,etc)
____ Bioremediation	____ Spot Washing: ____ Wands
X Tarmat: ____ Breakup	____ Beach Cleaner
X Removal	____ Other (see comments)

COMMENTS: MANUAL PICKUP OF TARMATS, DEBRIS + TRASH.

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/20.
ADEC ART WEINER Art Weiner
EXXON ANDY TGAL
NOAA Bert Wescott
USCG KENNETH KEANE

FOSC: DATE: 5-8-90



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

WB-2

ADEC Segment Length: 2232m

Map Key: KEN-145a
Name: Lady Island
Date: 4/4/02

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/88

Segment ST / WB-2 Subdivision F Date (mo / day / yr) 4/4/90

Time (24 hr) 1730-1800 Biologist M. Fawcett

(A) Substrate type and % of segments:
(1) Bedrock 10 (2) Boulder 75 (3) Cobble 5 (4) Pebble (incl. gravel) 10 (5) Sand Ø (6) Silt 1

(B) Overall % cover of biota (% of segment): Dense ✓ Moderate (barnacles) ____ 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-17-4
Frames 2-4

BARNACLES

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

GASTROPODS

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

FUCUS

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

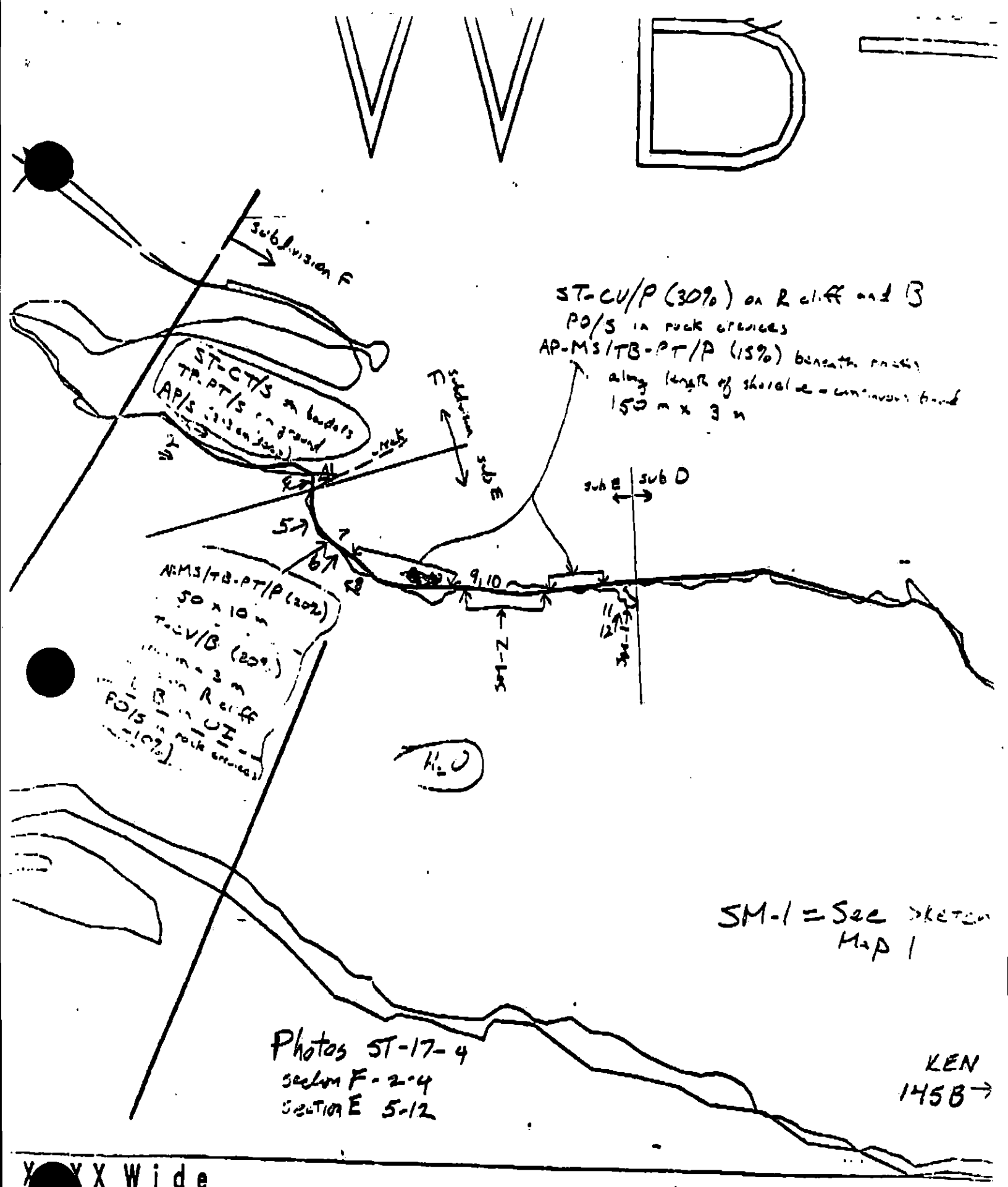
NOT PRESENT

Wildlife Observations/ General Comments:

Fucus and Endocladia were the only macro-algae observed (above + 1 ft tide level - low intertidal zone underwater). No birds or mammals seen.

Ecological Considerations:

No sensitivities listed.

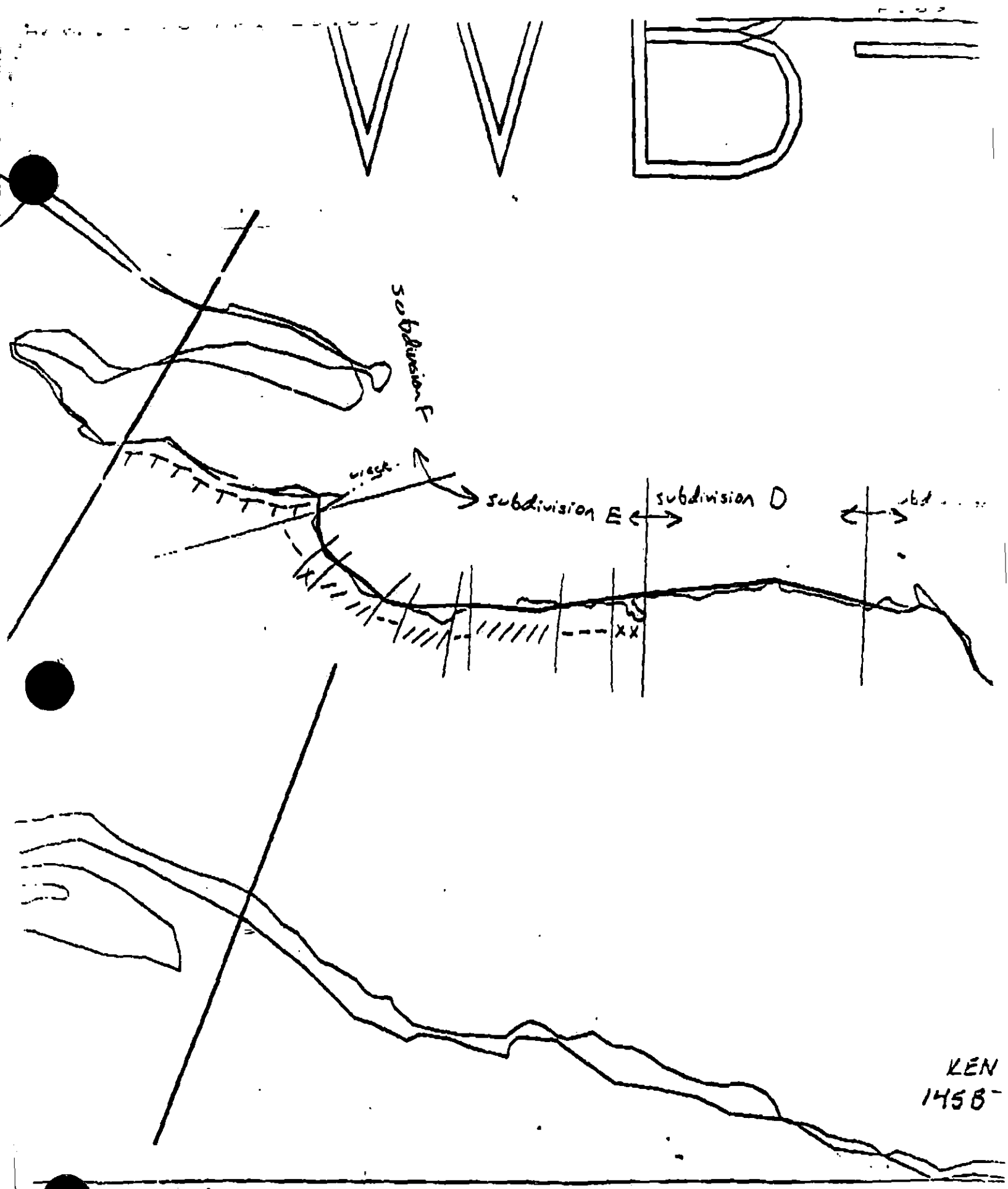


XXXX Wide
//// Medium
---- Narrow
TTTT Very Light

WB-2

ADEC Segment Length: 2232m

Map Key: KEN-145e
Name: Lady Luck
Date: 4/4/90



XX Wide
//// Medium
---- Narrow
TTTT Very light

WB-2

AOEC Segment Length: 2232m

Map Key: KEN-145a
Name:

WORK PLAN ADDENDUM

Segment WB 002 Subdivision D Dated 6/20/90

MODIFICATION

1. REASON FOR MODIFICATION

- TAG FIELD EVALUATION.

2. ADJUSTMENT TO WORK PLAN

- BIOREMEDIATION TEAM "OG" TO CLARIFY AREAS FOR BIO BEYOND THAT INITIALLY INDICATED ON SSAT PACKAGE. ALL AREAS WITHIN THIS SUBDIVISION WHERE OIL REMAINS SHOULD BE BIOREMEDIATED.
- MINOR PREP WORK PRIOR TO BIO (PICK UP ANY MOUSSE PATTIES) SHOULD BE CONDUCTED PRIOR TO BIO.
- SITE TO BE EVALUATED PRIOR TO FISHING SEASON

SHPO APPROVAL NEEDED YES ✓ SHPO SIGNATURE [signature] 6/22/90

NO X

TAG APPROVAL DATE 6/20/90.

ADEC Ray Morris R. Morris

EXXON Andy Tear [signature]

FOSC [signature] DATE 7/5/90

NOAA Jason Talbott [signature]

USCG G.A. Reiter G.A. Reiter

WORK PLAN ADDENDUM

Segment WB 002 Subdivision E Dated 6/20/90

MODIFICATION

1. REASON FOR MODIFICATION

- TAG FIELD EVALUATION

2. ADJUSTMENT TO WORK PLAN

- BIOREMEDIATION TEAM "OG" TO CLARIFY AREAS FOR BIO BEYOND THAT INITIALLY INDICATED ON SSAT PACKAGE. ALL AREAS WITHIN THIS SUBDIVISION WHERE OIL REMAINS SHOULD BE BIOREMEDIATED.
- MINOR PREP WORK PRIOR TO BIO (PICK UP ANY MOUSSE PATTIES) SHOULD BE CONDUCTED PRIOR TO BIO.
- SITE TO BE EVALUATED PRIOR TO FISHING SEASON.

SHPO APPROVAL NEEDED YES ✓ SHPO SIGNATURE [signature] 6/22/90
NO X

TAG APPROVAL DATE 6/20/90
ADEC [signature]
EXXON [signature]
NOAA [signature]
USCG [signature]

FOSC [signature] DATE 7/5/90

1991 MAYSAP EVALUATION

SEGMENT: WB 002 **SUB:** B **REGION:** KEN **SURVEY DATE:** 5/25/91

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)	Y		
Manual Pickup (Check as Req.)	X		
Spot Washing			
Bio-Customblen Only	X		
Bio-Inipol/Customblen			
Other			
Other			

COMMENTS:
INITIAL: Apply Customblen at locations B, C, and F after removing asphalt and high SOR. Avoid dense mussels at locations B and C.

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-002 SUBDIVISION B DATE 5/22/91

ADEC
NAME Steve Ferguson SIGNATURE [signature]

☐ NTR ☒ TREATMENT RECOMMENDED

THIS SMALL COVE WILL BE A LONG TIME BEFORE NATURAL ELEMEN WILL EFFECTIVELY BREAK DOWN THE AP/SOR → SO RECOMMEND TREATMENT. MANUAL REMOVAL OF AP/L-H SOR AT SITES A, B, C, D AND F.

EXXON
NAME George L Stiles SIGNATURE [signature] 5/27/91

☐ NTR The majority of oil remaining is located in the UI tide zone as a band of discontinuous AP/SOR patches.

LANDMANAGER
NAME Pat Noeman OF Port Graham SIGNATURE [signature]

☐ NTR ☒ Treatment recomended

recommend manual pickup of AP, TB, SOR in sites A, B, C, D, E F, K, on OG sketch map.

USCG/NOAA
NAME [illegible] SIGNATURE [signature]

☐ NTR Treatment recommended: found several bands of AP (see OG's map) heavy, high % at places - manual only

[signature]

OG B Trimm BIO J Roth SEGMENT WB002

ADEC S. Fregardo LANDMANAGER P Norman for Pt Graham SUBDIVISION B

EXXON G Stiles USCG/NOAA McMahon/McDonald DATE May 1 25 /91

TIME 17:15 to 18:03 TIDE LEVEL 3.61 ft. to 2.78 ft. ENERGY LEVEL: ☐ H ☐ M ☒

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

TOTAL LENGTH SHORELINE SURVEYED: 321 m NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

EST. OIL CATEGORY LENGTH: W 0 m M 75 m N 0 m VL 185 m NO 61 m US 0 m

LOC	SURFACE OIL CHARACTER AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO	SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA WIDTH m	AREA LENGTH m	ZONE S	UI	MI	LI	NOTES
A				S							CB	M	5	35		X	X		LT, MOD, HVY SOR under B
B	T			P			S				C	M	4	30		X			LT, MOD & HVY SOR
C	S			P			S				C	M	5	20		X			HVY SOR
D				S			S				CP	M	4	5		X			LT, MOD, HVY SOR
E									S		LOGS	M	3	100	X				SPLAT ON LOGS
F	S			P			S				CPR	M	5	20		X			HVY SOR
G			T	T		S	S				RCP	M	5	5		X			LT & HVY SOR
H	T			T							CP	M	2	5		X			
I						S	S				R	V	1	30		X			
J				T							P	M	1	30		X	X		LT SOR
K				T							P	M	1	10			X		LT & HVY SOR
L						S	S				R	V	2	15		X			

DISTRIBUTION: C = 61-100%; B = 31-60%; P = 11-30%; S = 1-10%; T = <1%

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYBAP- 4(III) - 9 FRAMES 9-1

No Pits

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER OP	HOR	MOR	LOR	OF	TR	NO	OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE S	UI	MI	LI	SURFACE-SUBSURFACE SEDIMENTS	NOTES
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									

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

OG COMMENTS:

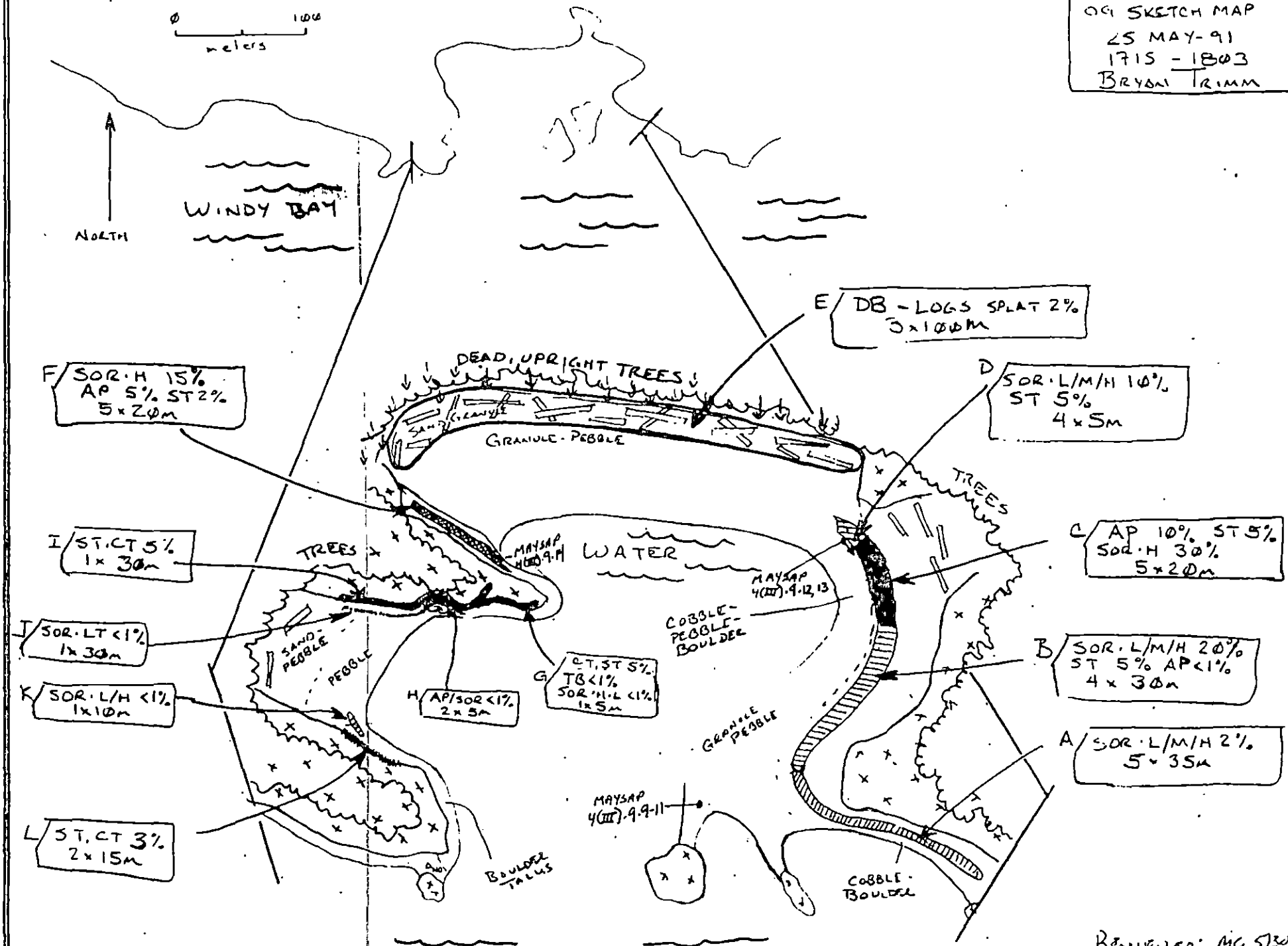
- No Pits — fine sediments beneath armor.
- Locations B, C, & D are adjacent & at the same tide height, however concentrations vary by location
- 40 cm². patches of discontinuous AP/SOR found in Location F

Revised: MC 5/30/91

Reviewed 5.30 [illegible]

KENAI PENINSULA -.

W/B002-B
OGI SKETCH MAP
25 MAY-91
1715 - 1803
BRYAN TRIMM



REVIEWED: MC 5/30/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4	DATE 25 MAY '91
SEGMENT # WB002	TIDAL HEIGHT (Range) +3.5 TO +2.8
SUBDIVISION B	BIOLOGIST Jim ROTH
SEA STATE FLAT	WIND SPEED/DIRECTION —
PHOTOGRAPHS: ROLL #	FRAME #

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

A - COBBLE-BOULDER IN MITZ/HITZ W/ SPARSE MUSSELS, BARNACLES; ABUNDANT LITTOR LIMPETS

B-C-D - DENSE MYTILUS, FUCUS, ENTEROMORPHA, LITTORINES

E - DENSE BARNACLES (2 SPP); MODERATE LITTORINES, BUT VERY DENSE IN SMALL POOLS MODERATELY DENSE MUSSELS; FUCUS

G - DENSE MYTILUS, LITTORINES; FUCUS. BARNACLES MOSTLY HIGHER UP

H - DENSE MYTILUS, LITTORINES, BARNACLES, FUCUS

I - J - MYTILUS, LITTORINES, BARNACLES; SPARSE FUCUS.

K - L - DENSE BARNACLES, LOCALLY DENSE LITTORINES, MUSSELS, FUCUS

GENERAL COMMENTS:

NO LOWER INTERTIDAL ZONE OBSERVATIONS COULD BE MADE. INTERTIDAL BIOTA IN MIDDLE AND UPPER ZONES APPEAR HEALTHY AND THRIVING. THIS SUBDIVISION INCLOSES A SMALL SHELTERED BAY WHICH CONTAINS AN EXTENSIVE MUD/SAND FLAT WITH A DIVERSE INFAUNA INCLUDING POLYCHAETE WORMS, PEANUT WORMS, AND A VARIETY OF BIVALVES INCLUDING EDIBLE SPECIES. TIDE WAS SUBOTIMAL FOR OBSERVATIONS HERE BUT THE FOLLOWING BIVALVES WERE NOTED:

LITTLENECK CLAM (PROTOTHACA STAMINEA)
HEART COCKLE (CLINOCARDIUM NUTTALLII)
BUTTER CLAM (SAXIDOMUS GIGANTEUS)
BENT-NOSE CLAM (MACOMA NASUTA)

AN CONTEMPLATED CLEAN-UP ACTIVITIES SHOULD AVOID THESE SHELLFISH BEDS

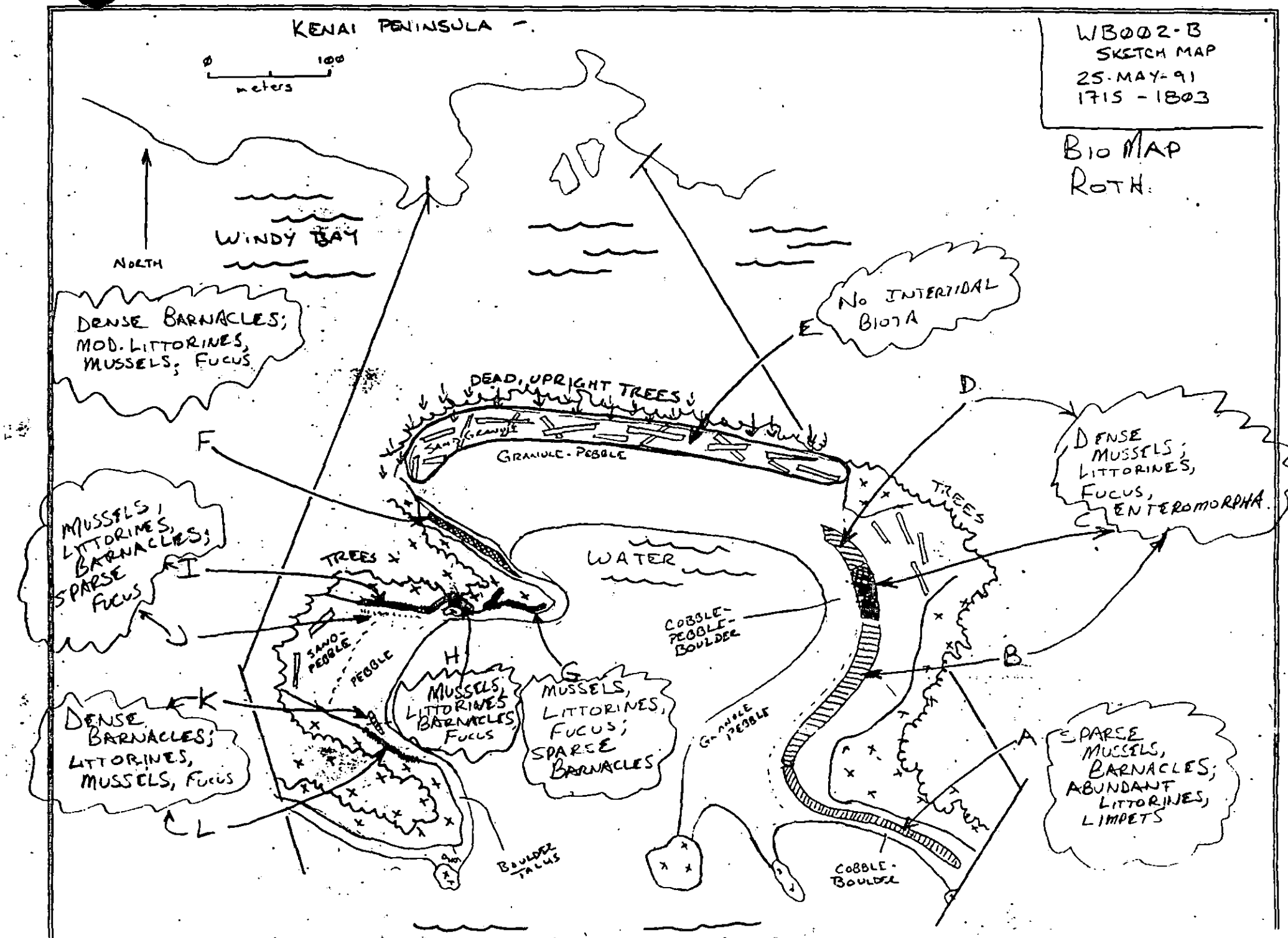
WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

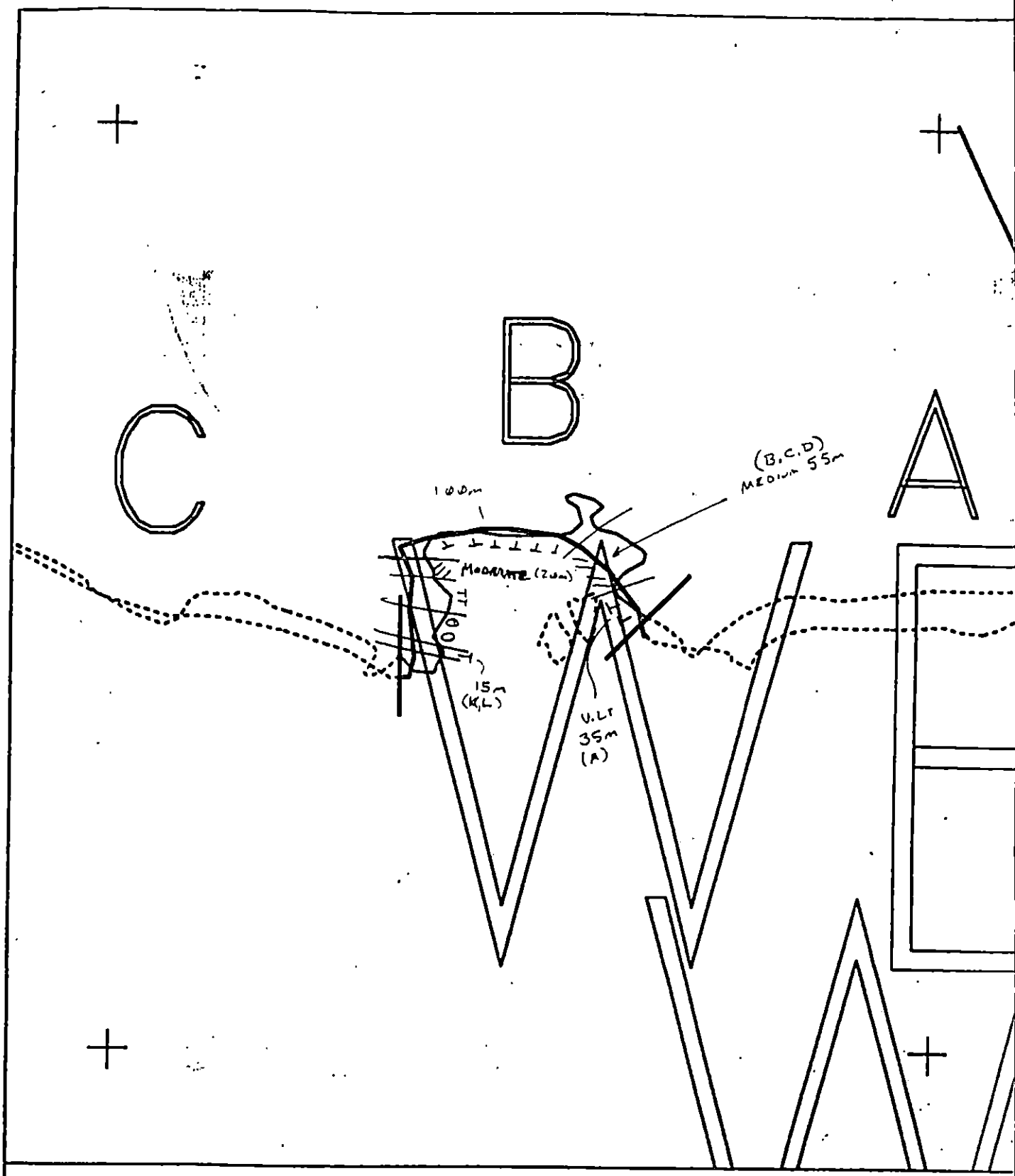
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds	1	3	
Waterfowl	2	15	
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

REVIEWED: MC 5/30/


KENAI PENINSULA
0
100
meters
WB002-B
SKETCH MAP
25-MAY-91
1715 - 1803
BIO MAP
ROTH.
NORTH
WINDY BAY
DENSE BARNACLES; MOD. LITTORINES, MUSSELS; FUCUS
NO INTERTIDAL BIOTA
E
DEAD, UPRIGHT TREES
D
GRANULE - PEBBLE
DENSE MUSSELS; LITTORINES, FUCUS, ENTEROMORPHA
F
TREES
MUSSELS, LITTORINES, BARNACLES; SPARSE FUCUS
I
TREES
WATER
COBBLE-PEBBLE-BOULDER
SAND-PEBBLE
PEBBLE
H
B
MUSSELS, LITTORINES BARNACLES, FUCUS
G
MUSSELS, LITTORINES, FUCUS; SPARSE BARNACLES
K
DENSE BARNACLES; LITTORINES, MUSSELS, FUCUS
GRANULE PEBBLE
A
SPARSE MUSSELS, BARNACLES; ABUNDANT LITTORINES, LIMPETS
L
BOULDER TALUS
COBBLE-BOULDER



XXXX	Wide	WB002 B	Subdivision Field Map
////	Medium	ADEC Subsegment Length: 321m	Map Key: KENWB002B
----	Narrow	METERS	Name: TRIMM
TTTT	Very Light	0 100 200	Date: 25-MAY-91
0000	No Oil	AK State Plane Zone 4 sub002b	Date Entered:

- SURFACE OIL CATEGORY MAP -

REVISED: MC 5/30/91
reviewed 5.30.91

1991 MAYSAP EVALUATION

SEGMENT: WB 002 SUB: C 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-002 SUBDIVISION C DATE 5/22/91

ADEC
NAME Steve Ferguson SIGNATURE [signature]

☐ NTR ☒ TREATMENT RECOMMENDED

MANUAL REMOVAL OF SOR-H (50%) AT SITE B ON THE SKETCH MAP. ALSO RECOMMEND REMOVAL OF SOR-H AT SITES I AND K. DUE TO THE LOCATION (UPPER INTERTIDAL) VERY LITTLE NATURAL EROSION IS TAKING PLACE AND MOST ALL OF THE OIL PREVIOUSLY OBSERVED WAS REMOVED BY MANUAL MEANS.

EXXON
NAME George P. Stiles SIGNATURE [signature] 5/22/91

☐ NTR The oil remaining is located in the UI tide zone mostly above the biota. It is in a weathered state and if removed it ~~[illegible]~~ for cosmetic reasons only.

LANDMANAGER
NAME Pat Norman OF Poe Beaches SIGNATURE [signature]

☐ NTR ☒ Treatment recommended.
manual pick up of oil on sites B, D, E, G, I, J, K. on the OG sketch map. The majority of the oil found was exposed and accessable. Area was worked in 1990 the remaining has become exposed mainly due to those efforts.

USCG/NOAA
NAME [illegible] SIGNATURE [illegible]

☐ NTR Some heavy boards up with SOR. This segment is borderline but if sub "B" is manually work "C" could be. However, I feel "C" is labor intensive with mod blowers/cobble. More environmental harm may result.

[signature]

PAGE ___ OF ___

TEAM NO. 7

OG B Trimm BIO J Roth SEGMENT WB002

SUBDIVISION C

ADEC S. Ferguson LANDMANAGER P Norman for P T Graham

DATE May 25 /91

EXXON G. Stiles USCG/NOAA McMahon/McDonald

TIME 18 : 03 to 19 : 11 TIDE LEVEL 2.78 ft. to 3.09 ft. ENERGY LEVEL: ☐ H ☐ M ☒ L

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

TOTAL LENGTH SHORELINE SURVEYED: 520 m NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

EST. OIL CATEGORY LENGTH: W Ø m M Ø m N 25 m VL 270 m NO 225 m US Ø m

LOC	SURFACE OIL CHARACTER AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO	SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA WIDTH m	LENGTH m	ZONE S	UI	MI	LI	NOTES
A							T				R	V	1	110		x			
B				P							B	M	2	25		x			HVYSOR UNDER/BETWEEN BOULDERS
C					S	S					R	H	2	30	x				
D				S	T	T	T				BC	M	2	40		x	x		SOR, 1/2 x 1/2 m DEPOSITS (LT. MED, HVY)
E				S	T	T	T				BC	M	2	60		x	x		LT. MED. HVY SOR
F					S	S	S				R	H	1	60		x			
G				T							PG	M	1	15		x			LT MED. HVY SOR
H					S	S	S				R	V	1	10		x			
I				S		T	T				BPC	M	1.5	10		x			HVY SOR UNDER/BETWEEN ARMOR
J				T							BPC	M	2	15		x			HVY SOR UNDER/BETWEEN ARMOR
K				S		T	T				B	M	1.5	10		x			HVY SOR UNDER/BETWEEN ARMOR
L					S	S	S				R	V	1	35	x				

DISTRIBUTION: C = 81-100%; B = 51-80%; P = 11-50%; S = 1-10%; T = <1%

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 4 (III) - 9 FRAMES 16-20

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER OP	HOR	MOR	LOR	OF	TR	NO	OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR BRSN	PIT ZONE S	UI	MI	LI	SURFACE-SUBSURFACE SEDIMENTS	NOTES
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									

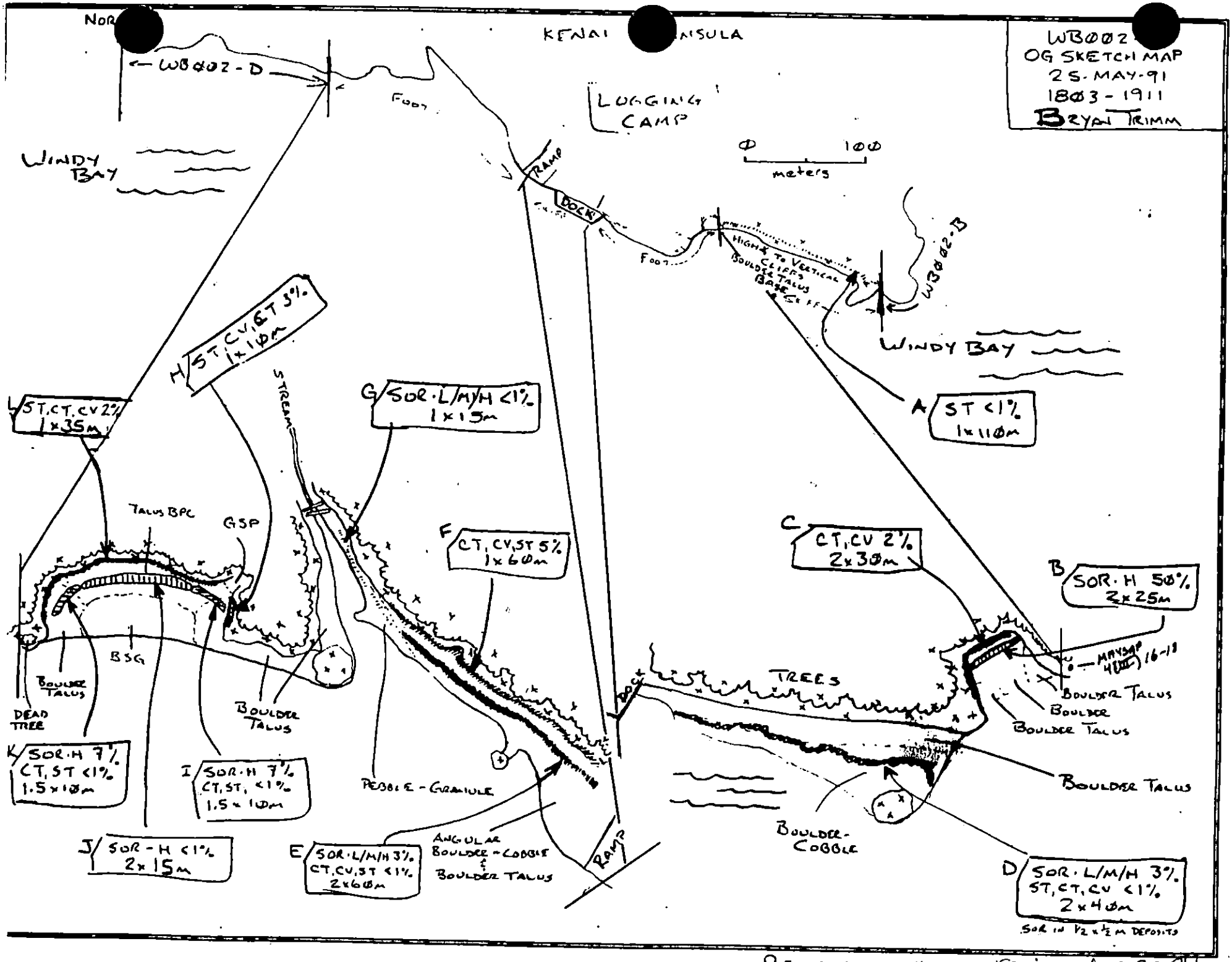
No Pits

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

OG COMMENTS:

THE SURFACE ARMOR IS GENERALLY BOULDER - COBBLE & THE SOR DEPOSITS ARE FOUND BETWEEN & BENEATH THE ARMOR.
STAIN, COAT & COVER FOUND ON ROCK FACES -
NO PITS

Reviewed: MC 5/30/91
revised 5.30 94



REVIEWED: MC 5/30/91 reviewed 5·30

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4	DATE 25 MAY 91
SEGMENT # WB002	TIDAL HEIGHT(Range) +2.75 TO +3.1
SUBDIVISION C	BIOLOGIST JIM ROTH
SEA STATE FLAT	WIND SPEED/DIRECTION
PHOTOGRAPHS: ROLL #	FRAME #

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

A- (SURVEYED FROM SKIFF) - DENSE BARNACLES, LOCALLY DENSE MUSSELS

B - C - D - BOULDER TALUS W/MODERATE TO LOCALLY DENSE MUSSELS, DENSE BARNACLES, SPARSE LITTORINES, FUCUS

E - BOULDERS W/ DENSE FUCUS, MODERATELY DENSE BARNACLES, LOCALLY DENSE MUSSELS, LITTORINES; ABUNDANT LIMPETS.

F - BOULDER/COBBLE W/ DENSE FUCUS, LOCALLY DENSE MUSSELS, BARNACLES; ABUNDANT LITTORINES

G - BOULDER/COBBLE W/ MODERATELY DENSE FUCUS, BARNACLES, LOCALLY DENSE MUSSELS, LITTORINES.

H-L - BOULDER/COBBLE W/ MODERATE TO DENSE BARNACLES (A FEW DEAD W/ OIL-STAINED SHELLS, MOST ALIVE); MUSSELS, LITTORINES, LIMPETS, (PRIMARILY NOTACMEA SCUTUM, BUT ALSO SOME N. PERSONA).

GENERAL COMMENTS: NO LOWER INTERTIDAL OBSERVATIONS COULD BE MADE. INTERTIDAL BIOTA IN THIS SUBDIVISION APPEAR TO BE HEALTHY AND THRIVING. EVIDENCE WAS FOUND OF RECENT RECRUITMENT IN BARNACLES, FUCUS.

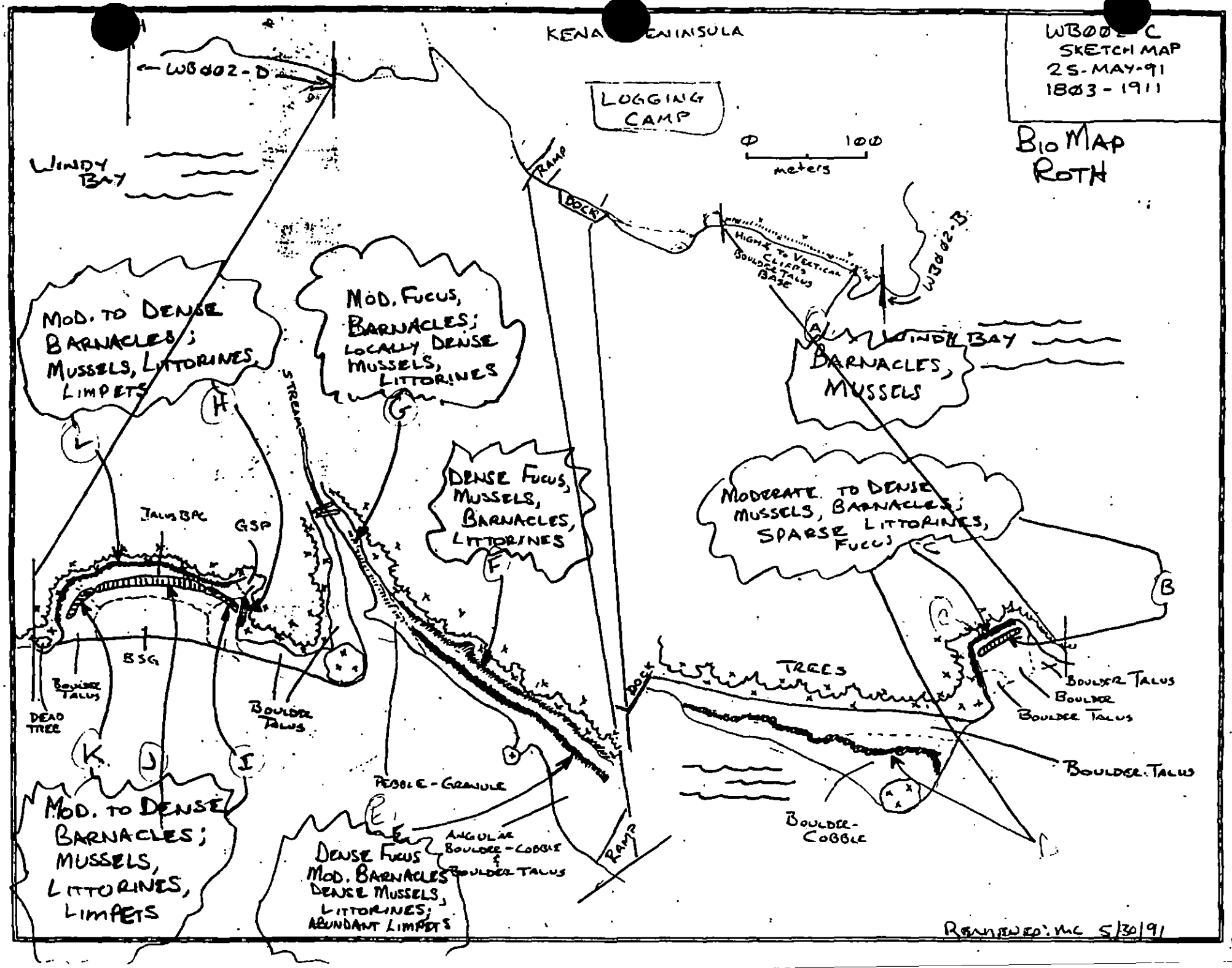
WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

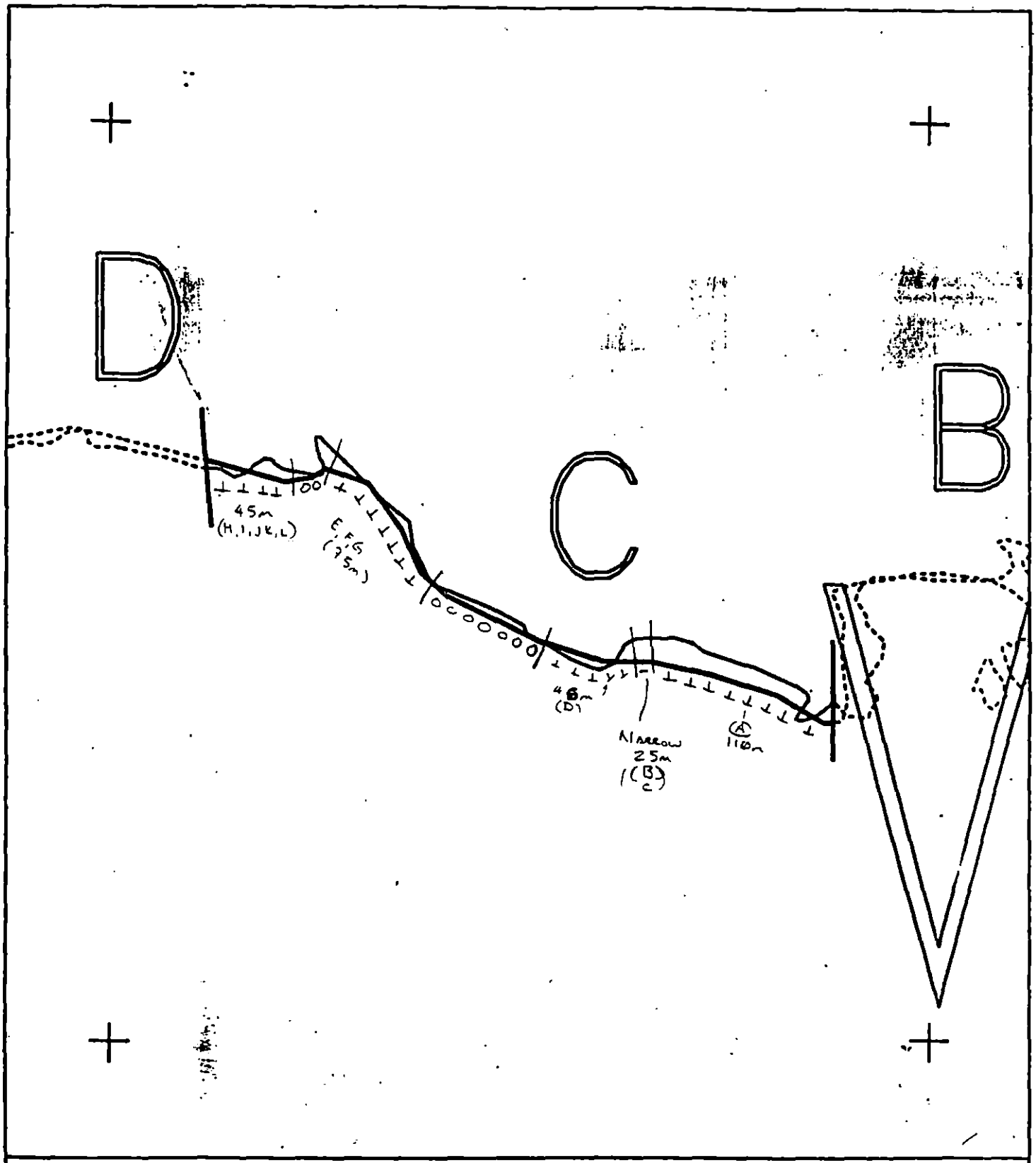
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl	1	6	
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds(specify)			
[illegible]les(specify)			

Shoreline subdivision map showing important biological features attached.

REVIEWED: MC 5/30/91


KENAI PENINSULA
WB002-C
SKETCH MAP
25-MAY-91
1803-1911
BIO MAP
ROTH
LOGGING CAMP
0 100
meters
WB002-D
WINDY BAY
RAMP
DOCK
HIGH TO VERTICAL CLIFFS
BOULDER TALUS
BASE
WB002-B
WINDY BAY
MOD. TO DENSE BARNACLES; MUSSELS, LITTORINES, LIMPETS
MOD. FUCUS, BARNACLES; LOCALLY DENSE MUSSELS, LITTORINES
BARNACLES, MUSSELS
STREAM
DENSE FUCUS, MUSSELS, BARNACLES, LITTORINES
MODERATE TO DENSE MUSSELS, BARNACLES; SPARSE LITTORINES, FUCUS
TALUS BAC
GSP
BSG
BOULDER TALUS
DEAD TREE
BOULDER TALUS
TREES
BOULDER TALUS
BOULDER
BOULDER TALUS
BOULDER TALUS
BOULDER-COBBLE
PEBBLE-GRANULE
ANGULAR BOULDER-COBBLE & BOULDER TALUS
MOD. TO DENSE BARNACLES; MUSSELS, LITTORINES, LIMPETS
DENSE FUCUS MOD. BARNACLES DENSE MUSSELS, LITTORINES; ABUNDANT LIMPETS
A
B
C
E
F
G
H
I
J
K
L
REVIEWED: MC 5/30/91



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

WB002 C

ADEC Subsegment Length: 520m

METERS

0 100 200

AK State Plane Zone 4
nad027c

N

Subdivision Field Map

Map Key: KENWB002C

Name: TRIMM

Date: 25-MAY-91

Date Entered:

- SURFACE OIL CATEGORY MAP -

REVIEWED: MC 5/30/91
Continued 5.30 QU

1991 MAYSAP EVALUATION

SEGMENT: WB 002 **SUB:** F **REGION:** KEN **SURVEY DATE:** 5/27/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN

Ecological/Constraints (see page two for details) 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

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-002 SUBDIVISION F DATE 5/27/91

ADEC
NAME Steve Ferguson SIGNATURE Steve Ferguson

☒ NTR ☐ TREATMENT RECOMMENDED

NO TREATMENT RECOMMENDED. All OILING OBSERVED WITH THE EXCEPTION OF CU/CT/ST WERE PICKED UP DURING SURVEY

EXXON
NAME George P. Stiles SIGNATURE George P. Stiles 5/27/91

☒ NTR A few tar patties and MS in some of the boulders and cobbles were retrieved. Very little oil remaining.

LANDMANAGER
NAME Pat Norman OF Port Graham SIGNATURE

☒ NTR exposed oil that was found was picked up while surveying

USCG/NOAA
NAME [redacted] SIGNATURE [redacted]

☒ NTR Some scattered AP, mousse found and picked-up.

[redacted]

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 1

TEAM NO. 4

SEGMENT WB022

OG B TRIMM

BIO J. ROTI

SUBDIVISION F

ADEC S. FERGUSON

LANDMANAGER P. Norman for PG

DATE MAY / 26 / 91

EXXON George P. Stiles

USCG/NOAA McMahon / McDonald

TIME 16 : 43 to 17 : 25

TIDE LEVEL 6.38 ft. to 4.85 ft.

ENERGY LEVEL: ☐ H ☐ M ☒ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 271 m

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

EST. OIL CATEGORY LENGTH: W Ø m M Ø m N Ø m VL 14 m NO 257 m US Ø m

LOC	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO		V H M L	WIDTH m	LENGTH m	S	UI	MI	LI	
A					T	T	T				R	V	1	10	X				
B					T	T	T				R	V	1	3	X				
C							T				R	V	1	1	X				

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

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

PHOTO ROLL # MAYSAP- 4(M) 11 FRAMES 5-8

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									

No Pits

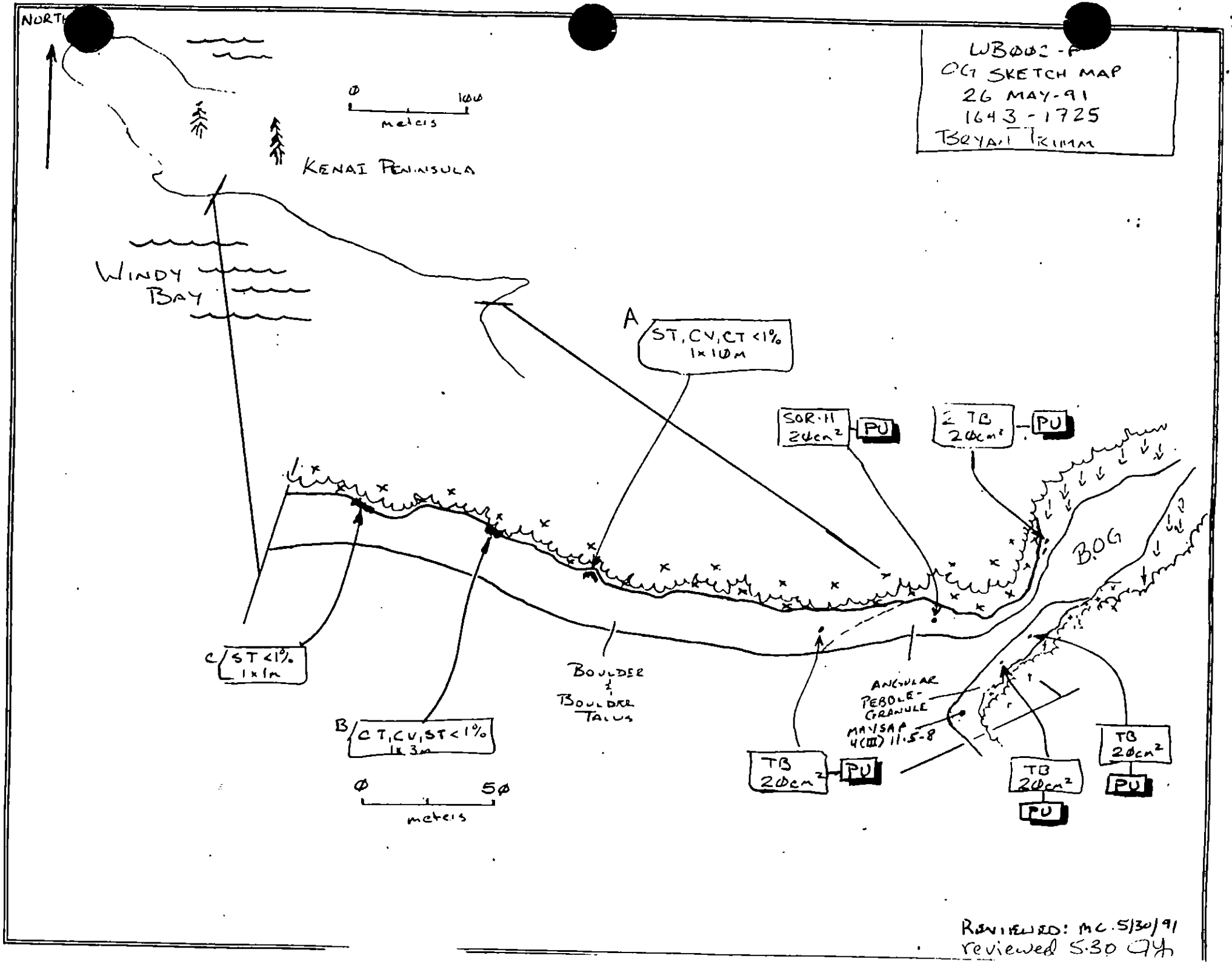
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS:

- NO PITS, NO PAST SUBSURFACE OIL HISTORY, VERY FINE SEDIMENTS UNDER BOULDER VENEER
- VERY LITTLE OILING REMAINS

REVIEWED: MC 5/30/91

REVISED 5-30-91



WB002-P
OG SKETCH MAP
26 MAY-91
1643-1725
BRYAN TRUMAN

REVIEWED: MC 5/30/91
reviewed 5.30 94

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #	4	DATE	26 MAY 91
SEGMENT #	WB-002	TIDAL HEIGHT(Range)	+5.75 TO +3.0
SUBDIVISION	F	BIOLOGIST	JIM ROTH
SEA STATE	FLAT	WIND SPEED/DIRECTION	
PHOTOGRAPHS: ROLL #		FRAME #	

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

A— SMALL CAVE IN HITZ BEDROCK w/ MODERATELY DENSE BARNACLES
B- HITZ BEDROCK w/ MODERATE BARNACLES, SCARCE LITTORINES
C- HITZ BEDROCK w/ MODERATELY DENSE BARNACLES, LITTORINES

GENERAL COMMENTS: A FAIRLY SHELTERED BOULDER + TALUS SHORE WITH A HEALTHY AND THRIVING INTERTIDAL BIOTA. MIDDLE-INTERTIDAL BOULDERS HAVE A DENSE COVER OF FUCUS WITH TYPICAL ANIMAL ASSOCIATES: MUSSELS, BARNACLES, LIMPETS, AND LITTORINES. FUCUS DENSITY INCREASES TOWARD THE WEST END OF THE SUBDIVISION, WHICH IS MORE EXPOSED THAN THE EAST. AT THE EAST END A GRAVEL-PEBBLE BEACH WITH MODERATE FUCUS, ELGRA AND BARNACLES, SPARSE MUSSELS, SURROUNDS THE MOUTH OF A SMALL STREAM. OBSERVED OIL CHARACTERS OCCUR IN THE HITZ, JUST ABOVE THE FUCUS ZONE.

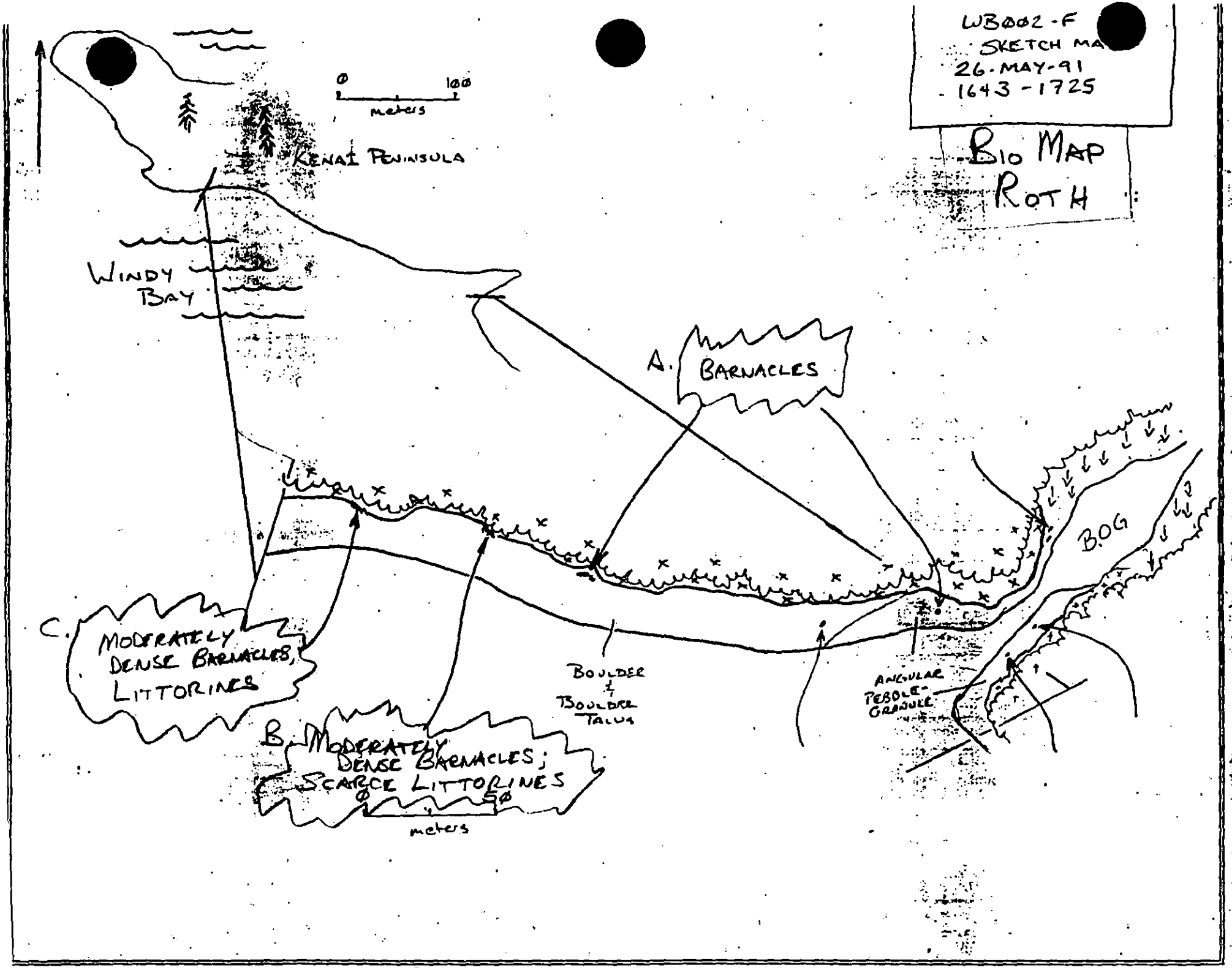
WATERFOWL OBSERVED: LESSER SCAUP, 100
CORMORANT 2
GULLS 24

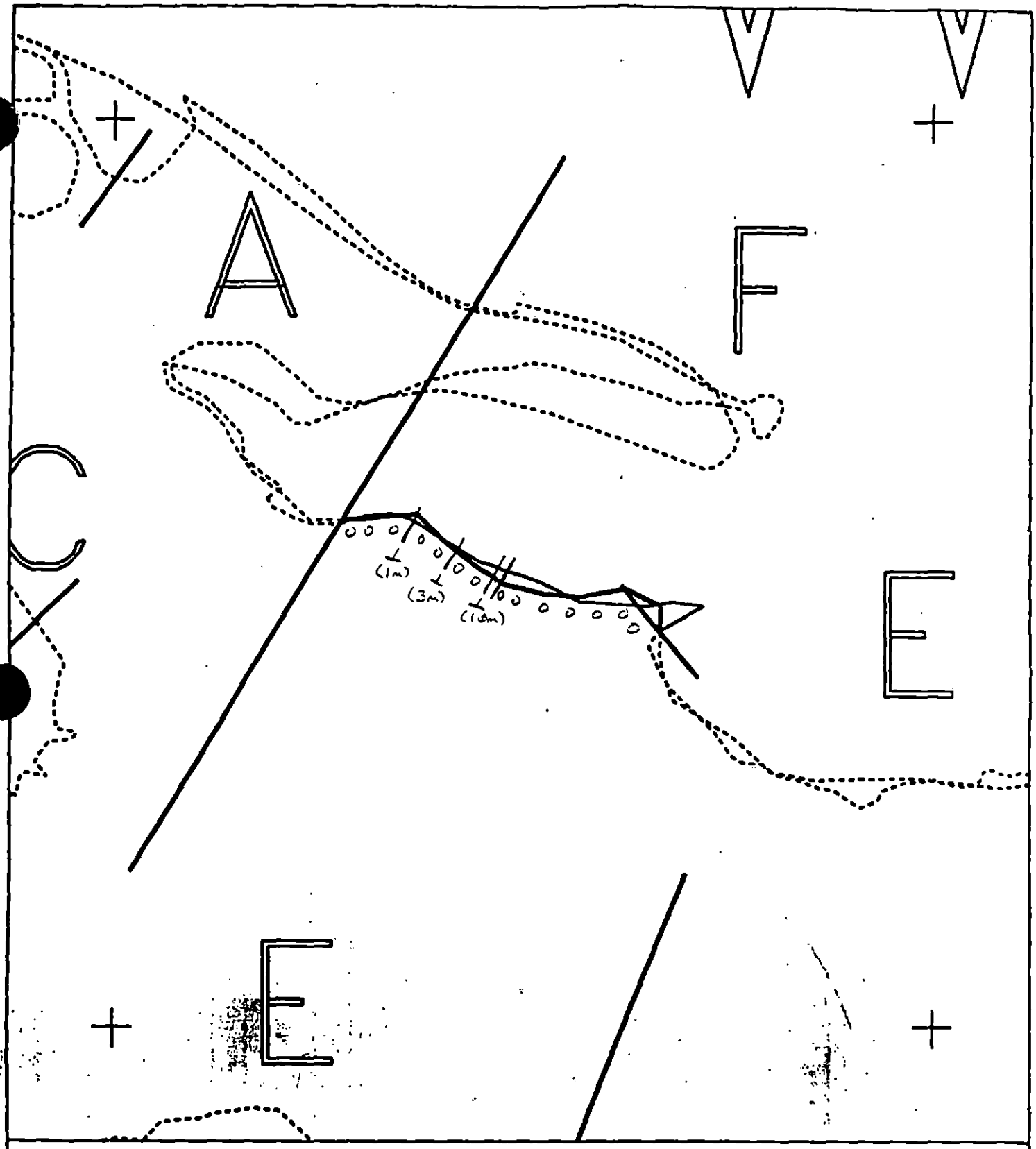
WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds	1	2	
Waterfowl	1	100	
Gulls/kittiwakes	1	24	
Shorebirds			
Corvids			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.


WB002-F
SKETCH MA
26-MAY-91
1643-1725
BIO MAP
ROTH
0
100
meters
KENAI PENINSULA
WINDY BAY
A. BARNACLES
BOG
C. MODERATELY DENSE BARNACLES, LITTORINES
BOULDER & BOULDER TALUS
ANGULAR PEBBLE-GRANULE
B. MODERATELY DENSE BARNACLES; SCARCE LITTORINES
0
50
meters



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

WB002 F

ADEC Subsegment Length: 271m

METERS

0 100 200

AK State Plane Zone 4
sub002f

Subdivision Field Map
Map Key: KENWB002F
Name: TRIMM
Date: 26-MAY-91
Date Entered:

— SURFACE OIL CATEGORY MAP —

REVIEWED: MC 5/30/91
revised 5-30 91

1991 MAYSAP EVALUATION

SEGMENT: WB 002 SUB: D REGION: KEN SURVEY DATE: 5/25/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN

Ecological/Constraints (see page two for details) 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

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

MATSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT WB-002 SUBDIVISION D DATE 5/22/91

ADEC
NAME Steve Ferguson SIGNATURE [signature]

☐ NTR ☒ TREATMENT RECOMMENDED

MANUAL REMOVAL OF SOR AT SITES A, C, AND D. THE STRATA FOUND AT THESE SITES ARE VERY small BOULDERS / COBBLES AND THE OIL IS LOCATED UNDER THEM AND IN THE INTERSTITIAL AREAS. ALSO RECOMMEN MANUAL REMOVAL OF MS/SOR.H AT SITE F. THERE ARE PLENTY OF OPEN AREAS BETWEEN THE BOULDERS IN SITE F WHERE OIL IS DEPOSITED THAT IT WOULD BE EASILY R

EXXON
NAME George P. Stiles SIGNATURE George P. Stiles 5/29/91

☐ NTR Several areas of SOR & MS exist through out the segment. See OG map.

LANDMANAGER
NAME Pat Doerner OF Port Graham SIGNATURE Pat Doerner

☐ NTR ☒ Treatment recommended. manual pickup of oil as shown on OG sketch map on site A, C thru I, The MS, SOR.H is exposed in a majority of the ~~area~~ sites in this segment. The continued damage to subsistence resources well be mitigated with additional manual work in this area.

USCG/NOAA
NAME Mike Mahoney / Mike McDonald SIGNATURE [signature]

☒ NTR Some subsurface SOR — neither Mousse nor bedrock and AP heavy at spots. Possible bioremediation site if characteristics warrant, otherwise no manual treatment VECO picked-up much of what was spotted.

[signature]

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 1

TEAM NO. 4

SEGMENT W3222

OG B Trimm

BIO J. Roth

SUBDIVISION D

ADEC S. Ferguson

LANDMANAGER Norman for D. Graham

DATE MAY 1 25 1 91

EXXON G Stiles

USCG/NOAA McMahon/McDonald

TIME 19 : 11 to 19 : 56

TIDE LEVEL 3.09 ft. to 4.22 ft.

ENERGY LEVEL: ☐ H ☐ M ☒ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 252 m

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

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 62 (32) m VL 26 (130) m NO 90 m US 0 m

LOC	SURFACE OIL CHARACTER AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO	SURFACE SEDIMENT TYPE	SHORE SLOPE V H M L	AREA WIDTH m	AREA LENGTH m	ZONE S	UI	MI	LI	NOTES
A		T		S							B	M	1.5	30		X			LT MED HVY SOR
B					S	S	S				R	H	1	30	X				
C		T		P	T						B	M	2	20		X			LT, MED HVY SOR
D		S		S	S	S		T			B R	M	5	15		X	X		HVY SOR
E		T		S							B	M	1	5		X	X		HVY SOR
F		S		S	S	S	S				B	M	2	30		X			HVY SOR (MOR DISCONTINUOUS)
G			T								B	M	1	5	X				
H		S		S		T	T				B	M	1	20		X			HVY SOR
I		S		S	P	P	P				B	M	2	12		X			HVY SOR
H				S	S	S	S				B	M	2	60		X			HVY SOR

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

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

PHOTO ROLL # MAYSAP-4(III) - 9 FRAMES 22, 23

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER OP	HOR	MOR	LOR	OF	TR	NO	OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE S	UI	MI	LI	SURFACE-SUBSURFACE SEDIMENTS	NOTES
1	33							X	—	Y	—	—			X		GP - GP	
2	13		X						5 - 11	Y	—	—		X			BCP - GP	Adjacent Pits
3	13							X	—	Y	—	—		X			BCP - GP	

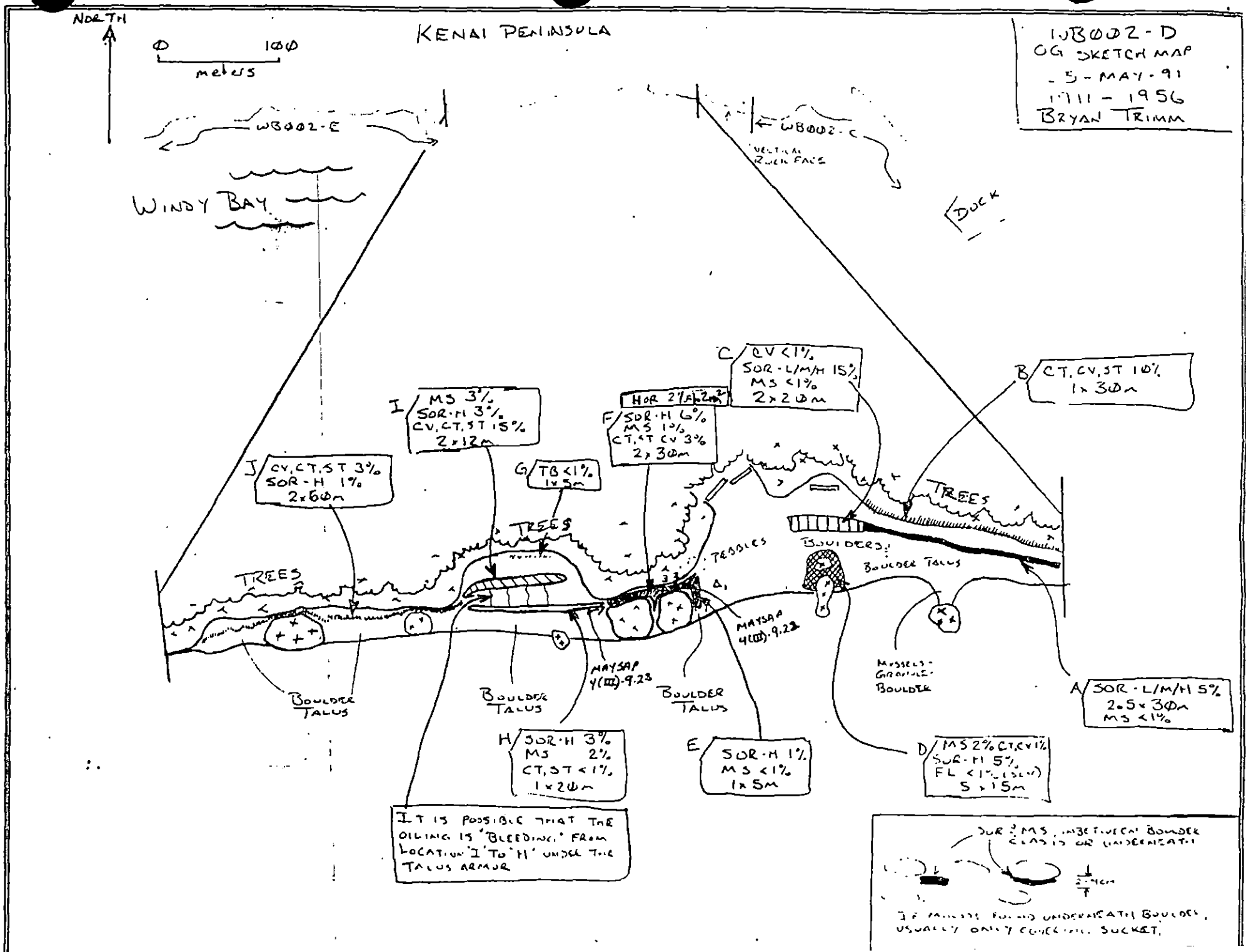
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS:

- IT IS POSSIBLE THAT OILING IN LOCATION I HAS BLED OR COULD BLEED DOWN TO LOCATION H.
- MOUSSE IS GENERALLY FOUND IN THE 'SOCKET' ON THE UNDERSIDE OF A SURFACE COBBLE OR BOULDER
- SOR IS FOUND UNDERNEATH OR BETWEEN SURFACE ARMOR
- MOR IS DISCONTINUOUS IN LOCATION 'F' (or 2% OF 2 x 30m AREA).

REVISED: MC 5/30/91

revised 5.30 91


NORTH
0 100
meters
KENAI PENINSULA
WB002-D
OG SKETCH MAP
5-MAY-91
1911 - 1956
BRYAN TRIMM
WB002-E
WB002-C
VERTICAL ROCK FACE
WINDY BAY
DOCK
C CV <1%
SOR-L/M/H 15%
MS <1%
2x20m
B CT, CV, ST 10%
1x30m
I MS 3%
SOR-H 3%
CV, CT, ST 15%
2x12m
HOR 2% 2m²
F SOR-H 6%
MS 1%
CT, ST CV 3%
2x30m
J CV, CT, ST 3%
SOR-H 1%
2x60m
G TB <1%
1x5m
TREES
TREES
TREES
PEBBLES
BOULDERS
BOULDER TALUS
A
MAYSAP
4(III)-9.23
MAYSAP
4(III)-9.23
BOULDER TALUS
BOULDER TALUS
BOULDER TALUS
MUSSELS - GRANULE - BOULDER
A SOR-L/M/H 5%
2.5x30m
MS <1%
H SOR-H 3%
MS 2%
CT, ST <1%
1x20m
E SOR-H 1%
MS <1%
1x5m
D MS 2% CT, CV 1%
SOR-H 5%
FL <1% (SLIM)
S x15m
IT IS POSSIBLE THAT THE OILING IS 'BLEEDING' FROM LOCATION 'I' TO 'H' UNDER THE TALUS ARMOR
SOR & MS, INBETWEEN BOULDER CLASTS OR UNDERNEATH
IF MUSSELS FOUND UNDERNEATH BOULDER, USUALLY ONLY QUICKSILL SUCKET.

HAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4	DATE 25 MAY '91
SEGMENT # WB002	TIDAL HEIGHT (Range) + 3.2 TO + 4.2
SUBDIVISION D	BIOLOGIST JIM ROTH
SEA STATE FLAT	WIND SPEED/DIRECTION
PHOTOGRAPHS: ROLL #	FRAME #

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

A- HIGH MITE/LOWER HITE BOULDERS W/ DENSE BARNACLES, SMALL MUSSELS, ABUNDANT LITTORINES.

B - BEDROCK CLIFF IN HITE - NO INTERIDAL FAUNA.

C - MITE/HITE BOULDERS W/ DENSE BARNACLES, MUSSELS; ABUNDANT LITTORINES AND LIMPETS

D - GRAVEL W/ DENSE MUSSEL BED

E - BOULDERS W/ DENSE FUCUS, LOCALLY DENSE MUSSELS, BARNACLES, ABUNDANT LITTORINES, LIMPETS.

F - BOULDERS W/ MOD. FUCUS, LOCALLY DENSE MUSSELS, BARNACLES; ABUNDANT LITTORINES, LIMPETS.

G - NO INTERTIDAL BIOTA (SUPRATIDAL)

H, I - BOULDERS W/ THIN PATINA OF GREEN ALGAE, MODERATELY DENSE BARNACLES, LITTORINES

J - BOULDERS W/ SPARSE BARNACLES, LITTORINES.

K - BOULDERS W/ SPARSE TO MODERATE BARNACLES, MUSSELS, AND LITTORINES.

GENERAL COMMENTS: NO LOWER INTERTIDAL OBSERVATIONS COULD BE MADE. INTERTIDAL BIOTA IN THIS SUBDIVISION APPEAR TO BE HEALTHY, WITH RECENT RECRUITMENT IN MUSSELS, LITTORINES. WATERFOWL OBSERVED WAS A RAFT OF LESSER SCAUP.

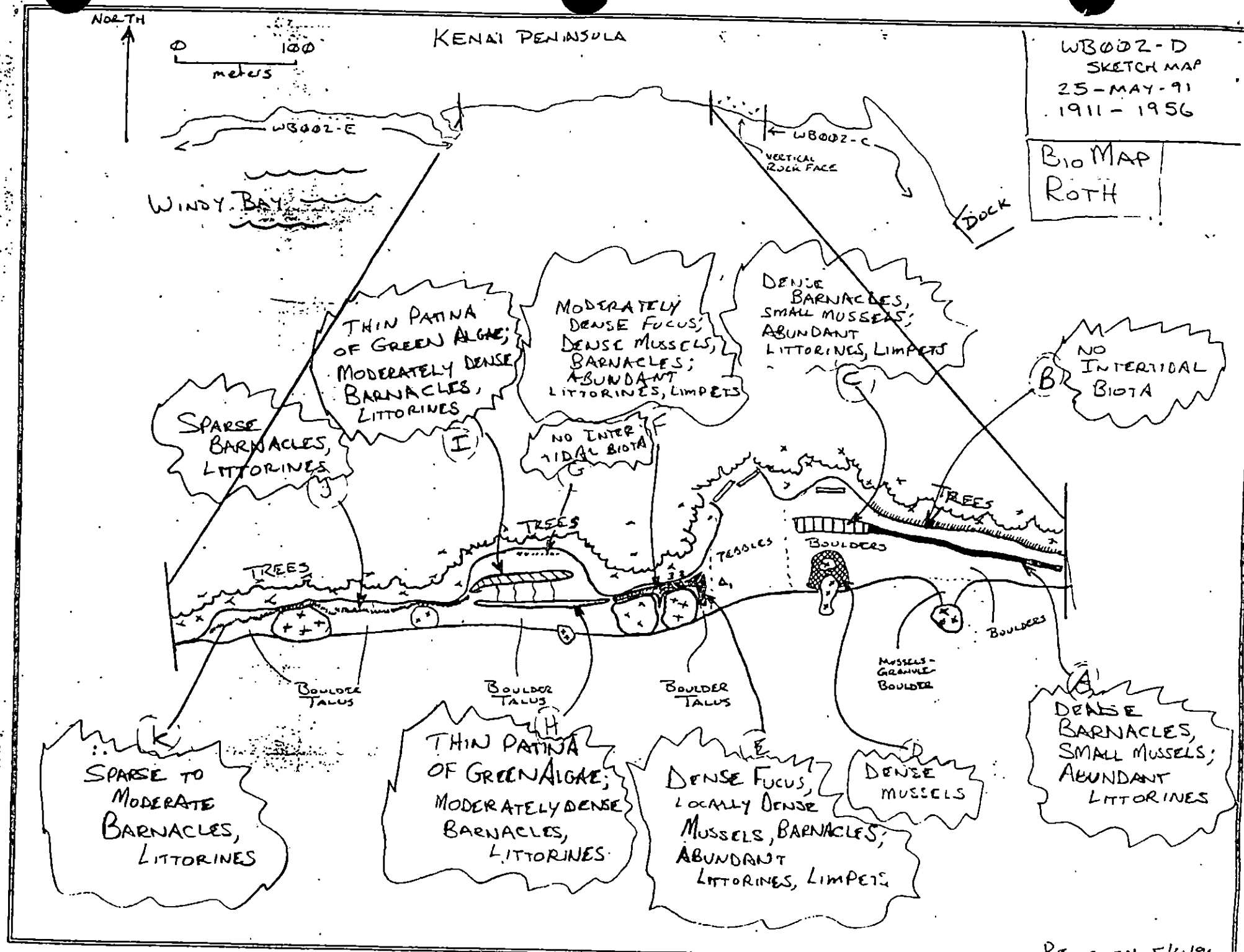
WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

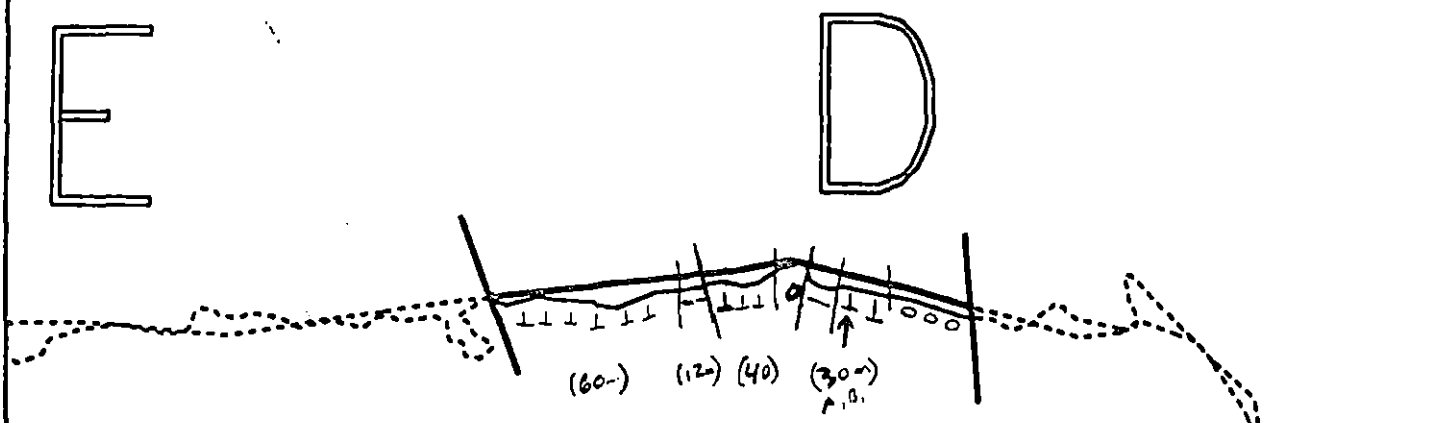
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			SALMON FRY
Seabirds			
Waterfowl	1	100	
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

REVIEWED: MC 5/30/91


NORTH
0
100
meters
KENAI PENINSULA
WB002-D
SKETCH MAP
25-MAY-91
1911 - 1956
BIO MAP
ROTH
WB002-E
WB002-C
VERTICAL ROCK FACE
DOCK
WINDY BAY
THIN PATINA OF GREEN ALGAE; MODERATELY DENSE BARNACLES, LITTORINES
I
MODERATELY DENSE FUCUS; DENSE MUSSELS, BARNACLES; ABUNDANT LITTORINES, LIMPETS
DENSE BARNACLES, SMALL MUSSELS; ABUNDANT LITTORINES, LIMPETS
C
NO INTERTIDAL BIOTA
B
SPARSE BARNACLES, LITTORINES
J
NO INTERTIDAL BIOTA
F
G
TREES
TREES
TREES
TESSELES
A
BOULDERS
BOULDERS
MUSSELS - GRANITE BOULDER
BOULDER TALUS
BOULDER TALUS
BOULDER TALUS
K
SPARSE TO MODERATE BARNACLES, LITTORINES
H
THIN PATINA OF GREEN ALGAE; MODERATELY DENSE BARNACLES, LITTORINES
E
DENSE FUCUS, LOCALLY DENSE MUSSELS, BARNACLES; ABUNDANT LITTORINES, LIMPETS
D
DENSE MUSSELS
A
DENSE BARNACLES, SMALL MUSSELS; ABUNDANT LITTORINES



XXXX	Wide	WB002 D	Subdivision Field Map
////	Medium	ADEC Subsegment Length: 252m	Map Key: KEHWB002D
----	Narrow	METERS	Name: TRIMM
TTTT	Very Light	0 100 200	Date: 25-MAY-91
0000	No Oil	AK State Plane Zone 4 sub002d	Date Entered:

— SURFACE OIL CATEGORY MAP —

Revised: MC 5/30/91
revised 5.30 91

1991 MAYSAP EVALUATION

SEGMENT: WB 002 **SUB:** A **REGION:** KEN **SURVEY DATE:** 5/25/91

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-002 SUBDIVISION A DATE 5/22/91

ADEC
NAME Steve Ferguson SIGNATURE [signature]

☐ NTR ☒ TREATMENT RECOMMENDED

MANUAL REMOVAL OF SOR·H AT SITES #A1 AND #A3 ON SKETCH MAP. ALSO RECOMMEND MANUAL REMOVAL OF THE SUBSURFACE LENS AT SITES #B4 AND #B5. WORK TIME TO ACCOMPLISH THIS CLEAN-UP IS MINIMAL AND WOULD GREATLY HELP OUT ENVIRONTAL AREA.

EXXON
NAME George P. St. Pierre SIGNATURE [signature]

☒ NTR Several areas of MS and SOR were found while surveying. The major areas were picked up.

LANDMANAGER
NAME Pat Norman OF Port Graham SIGNATURE [signature]

☐ NTR ☒ Treatment recommended / recommend manual pickup of oil on sites B4, B5, B6. Also Additional work can be done on areas marked with the PU symbol. Also sites A2 - A3 need manual removal of SOR·H. The removal of a majority of the remaining oil in this area will greatly reduce the existing and continued damage to our [illegible] in this area of windy Bay.

USCG/NOAA
NAME [illegible] SIGNATURE [signature]

☑ NTR Some subsurface oil (LOH), sheen, but high % is bedrock/boulders
Some surface mousse. Further removal operations would cause more environmental harm than good.

While removal would cause short term environmental damage including remobilized some of the oil component, however, the area would probably quickly recover through colonization from adjacent areas. It is questionable whether the amount of oil remaining in this segment would have any long term environmental impact which need to be prevented. [illegible]

TEAM NO. 1

OG B Trimm BIO J. Roth SEGMENT WB002

ADEC S. Ferguson LANDMANAGER P Norman for Pt Graham SUBDIVISION A

EXXON G. Stiles USCG/NOAA McMahon/McDonald DATE May 1 25 /91

TIME 15 : 35 to 17 : 15 TIDE LEVEL 6.92 ft. to 3.61 ft. ENERGY LEVEL: ☐ H ☒ M ☐ L

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

TOTAL LENGTH SHORELINE SURVEYED: 433 m NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

EST. OIL CATEGORY LENGTH: W 0 m M 40 m N 21 m VL 102 m NO 270 m US 0 m

LOC	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO		VHML	WIDTH m	LENGTH m	S	UI	MI	LI	
A1				P							CPB	M	2.5	10			X		HUY SOR under/between Boulders
A2						T	T				R	V	1	8		X			
A3				S							B	M	2.5	7			X		HUY SOR under/between Boulders
B1		T					T				BPR	M	1.5	20.		X			MS under Boulders & Rock crevice
B2				P							B	M	2	1		X			MED SOR under/between Boulders
B3						P	P				R	V	1.5	10	X	X			
B4				S		T	T				B	M	4	40		X	X		LT, MED, SOR under/between Boulders
B5				T							B	M	2	30		X			MED SOR under/between Boulders
B6				S							CB	M	1	30			X		LT SOR under/between Armor
B7						S	S				R	V	1.5	55	X	X			
B8				T							BS	M	1	7			X		MED SOR in Sand under/between Boulder
B9				T							BSR	M	1	4		X			MED SOR under/between Boulders
B10						T	T				R	V	1	20	X				

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 4 (III) - 9 FRAMES 2-7

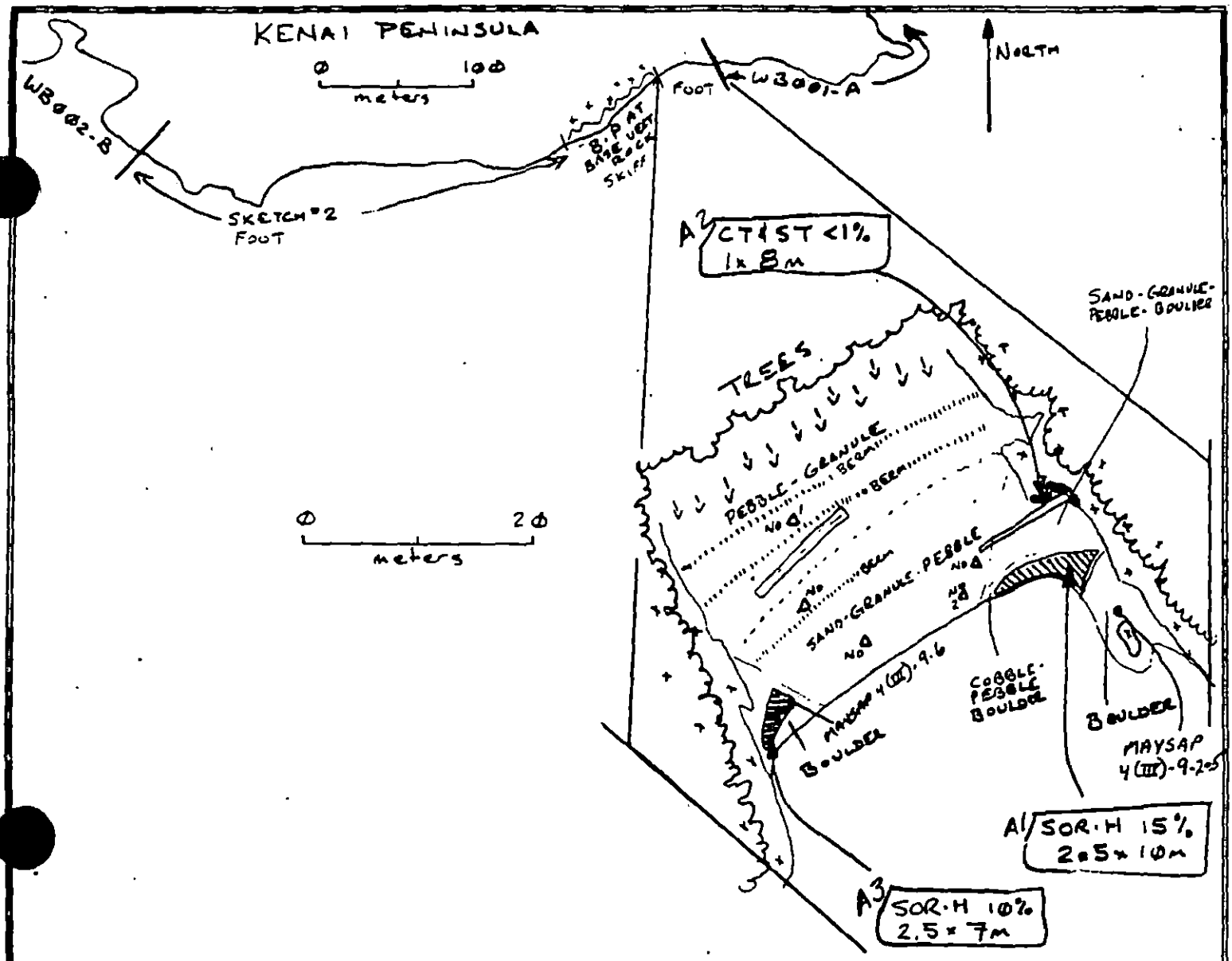
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO				BRBN	S	UI	MI	LI		
1	45							X	—	Y	—	—		X			P - SGP	
2	30							X	—	Y	—	—		X			P - PGS	
3	27			X					23 - 25	Y	—	—		X			BP - GSPB	
4	14			X					10 - 12	Y	—	—		X			B - SGP	
5	16			X					5 - 6	Y	—	—		X			BP - PBGR	
6	12			X					8 - 10	Y	—	—		X	X		BC - PBG	
7	29								22	Y	—	—					P - RGW	
[illegible]	[illegible]								26	Y	—	—					P - [illegible]	
[illegible]	[illegible]								17	Y	5	N					PB - [illegible]	

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

OG COMMENTS:

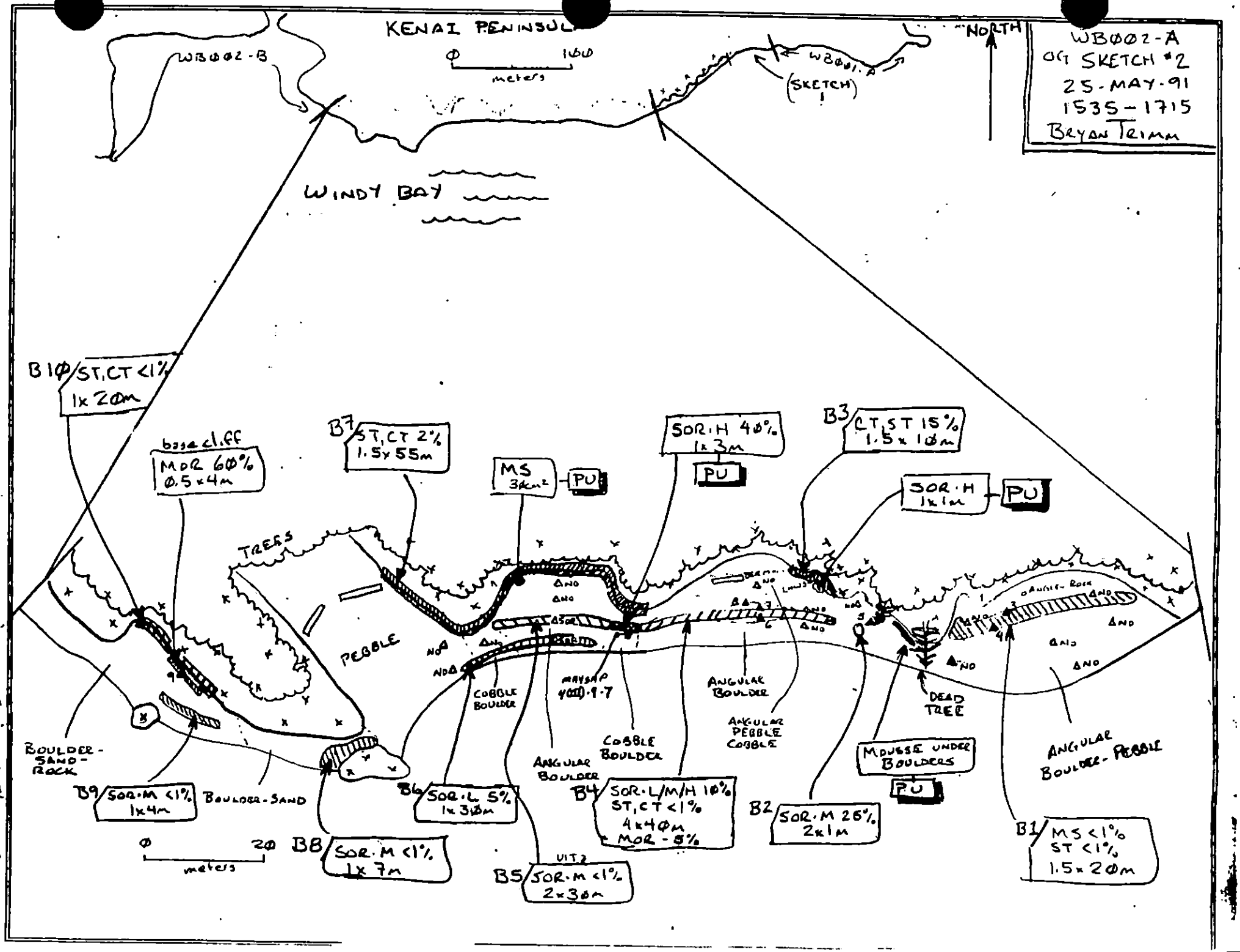
- The MOR found in location B4 occurs where SOR is greater than 5cm & on occasion where clean pebble - granule covered the SOR → now MOR.
- Locations B1, B2, B4, B5 are generally on the same tide height. The SOR is deposited between & beneath the surface armor. The SOR is discontinuous - NOT a continuous band - but discrete 20 cm² (avg) patches.

Revised: MG 5/30/91
revised 5/30/91 KG



WB002-A
OG SKETCH #1
25-MAY-91
1535-1715
BRYAN TRIMM

REVIEWED: 5/30/91 MC
reviewed 5/30/91 KG



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

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 25 MAY 91

SEGMENT # WB002- TIDAL HEIGHT(Range) + 6' TO + 3.5'

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/BOULDER W/ MODERATELY DENSE MUSSELS, LITTORINES, BARNACLES (INCL. SPAT). NO MACROALGAE.

A2 - BEDROCK W/ LOCALLY DENSE BARNACLES, MUSSELS (MOST 1" OR LESS), LITTORINES (INCL. NEW RECRUITS), LIMPETS (PRIMARILY N. SCUTUM, BUT SOME N. PERSONA), NO MACROALG

A3 - BEDROCK/BOULDER W/ DENSE BARNACLES, LITTORINES, LIMPETS. NO MACROALGAE

B1 - BOULDERS W/ BARNACLES (C. CARIOSUS + B. GLANDULA), LITTORINES (L. SITKANA, L. CARINATA) LIMPETS

B-2 - MITZ MUSSEL BED (ALL < 3/4" LONG), DENSE; ALSO DENSE BARNACLES (2 SPP), LOTS OF SMALL LIMPETS. NEMERTEANS, BEACHHOPPERS, AND HERMIT CRABS COMMON UNDER COBBLE.

B3 - BEDROCK W/ MUSSELS. OIL ON AND UNDER LIVING MUSSELS — (SOME MUST HAVE SETTLED ON CT OR ST), BARNACLES, LITTORINES, LIMPETS.

B4 - UPPER MITZ COBBLES W/ MODERATE MUSSELS, DENSE LITTORINES. BOULDERS W/ DENSE BARNACLES, SPARSE FUCUS, HALOSACCION

B5 - SIMILAR TO B4

B6 - MODERATELY DENSE MUSSELS; DENSE BARNACLES, LITTORINES. (OIL IN MITZ)

B7 - BEDROCK IN MITZ/HITZ W/ BARNACLES, LITTORINES, MUSSELS

B8 - MITZ GRAVEL/COBBLE W/ DENSE MUSSELS, LITTORINES, LIMPETS.

B9 - SMALL BOULDERS W/ DENSE BARNACLES, MUSSELS, LITTORINES, LIMPETS. NOT MUCH FUCUS

B10 - BEDROCK W/ DENSE MUSSELS, BARNACLES, FUCUS.

(SEE ATTACHED SHEET)

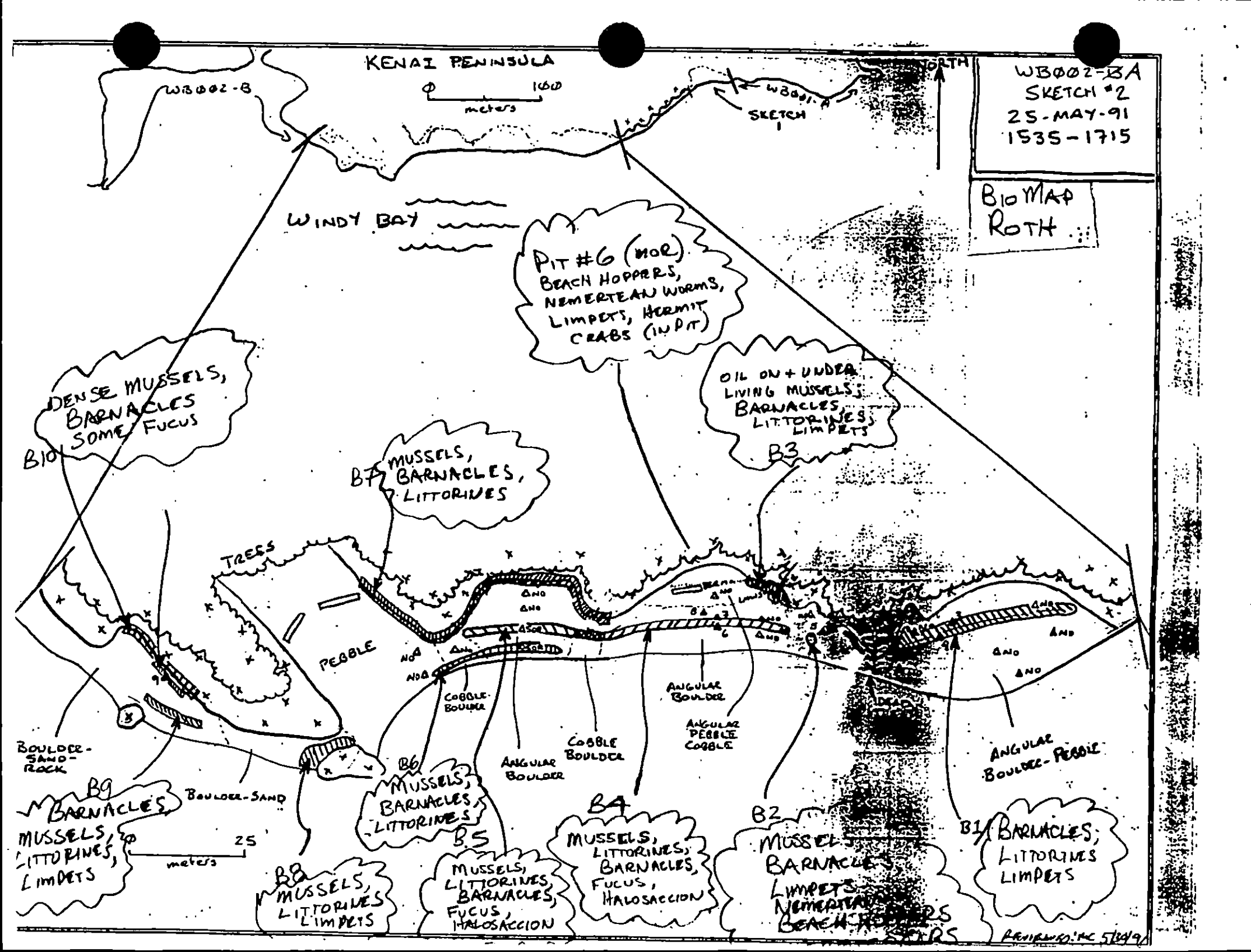
WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds	2	10	
Waterfowl	1	2	
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

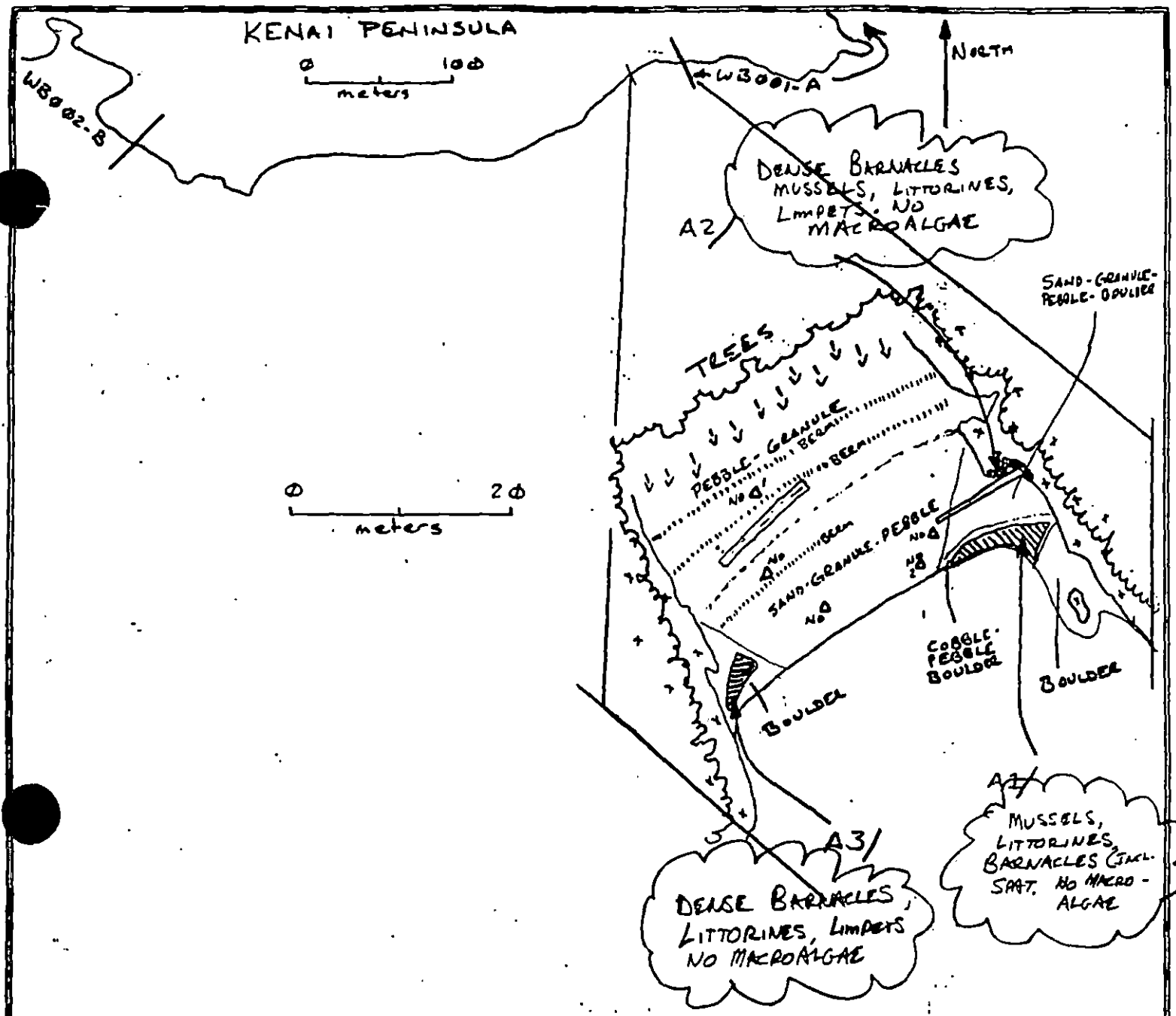
REVIEWED: MC 5/30/91


KENAI PENINSULA
0 100
meters
WB002-B
WB001-A
SKETCH 1
NORTH
WB002-BA
SKETCH #2
25-MAY-91
1535-1715
BIOMAP
ROTH
WINDY BAY
PIT #6 (MOR)
BEACH HOPPERS, NEMERTEAN WORMS, LIMPETS, HERMIT CRABS (IN PIT)
OIL ON + UNDER LIVING MUSSELS; BARNACLES, LITTORINES, LIMPETS
B3
DENSE MUSSELS, BARNACLES SOME FUCUS
B10
B7
MUSSELS, BARNACLES, LITTORINES
TREES
PEBBLE
COBBLE-BOULDER
ANGULAR BOULDER
COBBLE BOULDER
ANGULAR PEBBLE COBBLE
ANGULAR BOULDER-PEBBLE
BOULDER-SAND-ROCK
BOULDER-SAND
B9
BARNACLES, MUSSELS, LITTORINES, LIMPETS
0 25
meters
B6
MUSSELS, BARNACLES, LITTORINES
B5
B4
MUSSELS, LITTORINES, BARNACLES, FUCUS, HALOSACCION
B2
MUSSELS, BARNACLES, LIMPETS, NEMERTEANS, BEACH HOPPERS
B1
BARNACLES, LITTORINES LIMPETS
B8
MUSSELS, LITTORINES LIMPETS
MUSSELS, LITTORINES, BARNACLES, FUCUS, HALOSACCION

WB002A 25 MAY '91 ROTH

GENERAL COMMENTS:

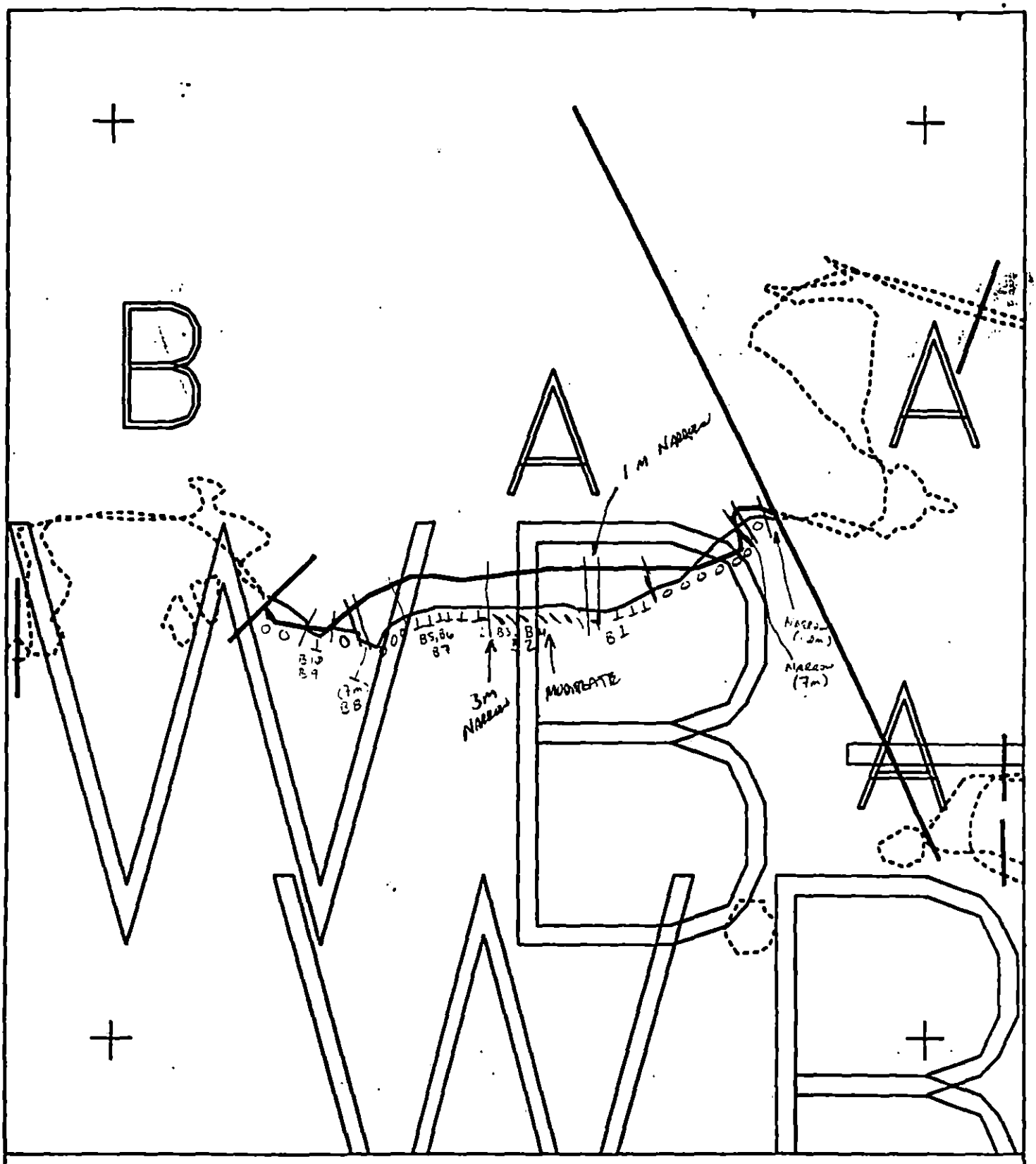
INTERTIDAL BIOTA IN THIS SUBDIVISION APPEAR HEALTHY + THRIVING. NEW RECRUITMENT IN ALL OF THE MOST ABUNDANT MITZ GROUPS (MUSSELS, BARNACLES, LITTORINES, LIMPETS) WAS NOTED. SUBDIVISION WAS VISITED ON A +3.5 FT TIDE, SO NO OBSERVATIONS ON THE LITZ WERE POSSIBLE. FOR THIS REASON THE TOTAL NUMBER OF SPECIES OBSERVED WAS LIMITED. HOWEVER A FEW MITZ TIDE POOLS OCCURRED IN BEDROCK OUTCROPPINGS, AND THESE CONTAINED TWO ANEMONE SPECIES (ANTHOPLEURA XANTHOGRAMMICA AND A. ARTEMISIA), AS WELL AS CORRALINE ALGAE, HERMIT CRABS, TIDEPOOL GOBIES, AND SEVERAL SPECIES OF ALGAE.



WB002-A
SKETCH #1
25-MAY-91
1535-1715

BIO MAP
OTH

REVIEWED: MC 5/30/91



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

WB002 A

ADEC Subsegment Length: 433m

METERS

0 100 200

AK State Plane Zone 4
nad83a

N

EXXON

Subdivision Field Map
Map Key: KENWB002A
Name: TR·MM
Date: 25-MAY-91
Date Entered:

SURFACE OIL CATEGORY MAP

REVISED: 5/30/91 RC
revised 5/30/91 LG

1991 MAYSAP EVALUATION

SEGMENT: WB 002 **SUB:** D **REGION:** KEN **SURVEY DATE:** 5/25/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN

Ecological/Constraints (see page two for details) **Fish harvest area**

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

SHPO Signature: Timothy Ostrich Date: 6/03/91

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

COMMENTS:
INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 31 1991 **FOSC APPROVAL DATE:** 6/3/91

ADEC J Bauer

EXXON

USCG E B Mallon

NOAA

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

The State will evaluate the need for treatment on this subdivision

ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

10 61

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT WB-002 SUBDIVISION D DATE 5/22/91

ADEC
NAME Steve Ferguson SIGNATURE [signature]

☐ NTR ☒ TREATMENT RECOMMENDED

MANUAL REMOVAL OF SOR AT SITES A, C, AND D. THE STRATA FOUND AT THESE SITES ARE VERY small BOULDERS / COBBLES AND THE OIL IS LOCATED UNDER THEM AND IN THE INTERSTITIAL AREAS. ALSO RECOMMEND MANUAL REMOVAL OF MS/SOR-H AT SITE F. THERE ARE PLENTY OF OPEN AREAS BETWEEN THE BOULDERS IN SITE F WHERE OIL IS DEPOSITED THAT IT COULD BE EASILY REMOVE

EXXON
NAME George P. Stiles SIGNATURE [signature] 5/29/91

☐ NTR Several areas of SOR & MS exist through out the segment. See OG map.

LANDMANAGER
NAME Pat Norman OF Fort Graham SIGNATURE Pat Norman

☐ NTR ☒ Treatment recommended. manual pickup of oil as shown on OG sketch map on site A, C thru I, The MS, SOR-H is exposed in a majority of the sites in this segment. The continued damage to subsistence resources well be mitigated with additional manual work in this area.

USCG/NOAA
NAME Mike Moe / McDonald SIGNATURE [signature]

☒ NTR Some subsurface SOR — weathered mousse in bedrock and AP heavy at spots. Possible bioremediation site if characteristics warrant, otherwise no manual treatment VECO picked-up much of what was spilled.

[signature]

MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 4

SEGMENT W3ØD2

OG B TRIMM

BIO J. ROTH

SUBDIVISION D

ADEC S. Ferguson

LANDMANAGER D. NORMAN for D. GRAHAM

DATE MAY / 25 / 91

EXXON G STILES

USCG/NOAA McMahon/McDonald

TIME 19 : 11 to 19 : 56

TIDE LEVEL 3.09 ft. to 4.22 ft.

ENERGY LEVEL: ☐ H ☐ M ☒ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 252 m

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

EST. OIL CATEGORY LENGTH: W Ø m M Ø m N ~~62~~ 32 m VL ~~78~~ 130 m NO 90 m US Ø m

LOC	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO	SURFACE SEDIMENT TYPE	SHORE SLOPE V H M L	AREA WIDTH m	AREA LENGTH m	ZONE S	ZONE UI	ZONE MI	ZONE LI	NOTES
A		T		S							B	M	1.5	30		X			LT MED HVY SOR
B					S	S	S				R	H	1	30	X				
C		T		P	T						B	M	2	20		X			LT, MED, HVY SOR
D		S		S	S	S		T			B R	M	5	15		X	X		HVY SOR
E		T		S							B	M	1	5		X	X		HVY SOR
F		S		S	S	S	S				B	M	2	30		X			HVY SOR (MOR DISCONTINUOUS)
G			T								B	M	1	5	X				
H		S		S		T	T				B	M	1	20		X			HVY SOR
I		S		S	P	P	P				B	M	2	12		X			HVY SOR
J				S	S	S	S				B	M	2	60		X			HVY SOR

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP-4(m) - 9 FRAMES 22, 23

PIT NO.	PIT DEPTH (cm)	OP	HOR	MOR	LOR	OF	TR	NO	OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE S	PIT ZONE UI	PIT ZONE MI	PIT ZONE LI	SURFACE-SUBSURFACE SEDIMENTS	NOTES
1	33							X	—	Y	—	—			X		GP - GP	
2	13		X						5 - 11	Y	—	—		X			BCP - GP	Adjacent Pits
3	13							X	—	Y	—	—		X			BCP - GP	

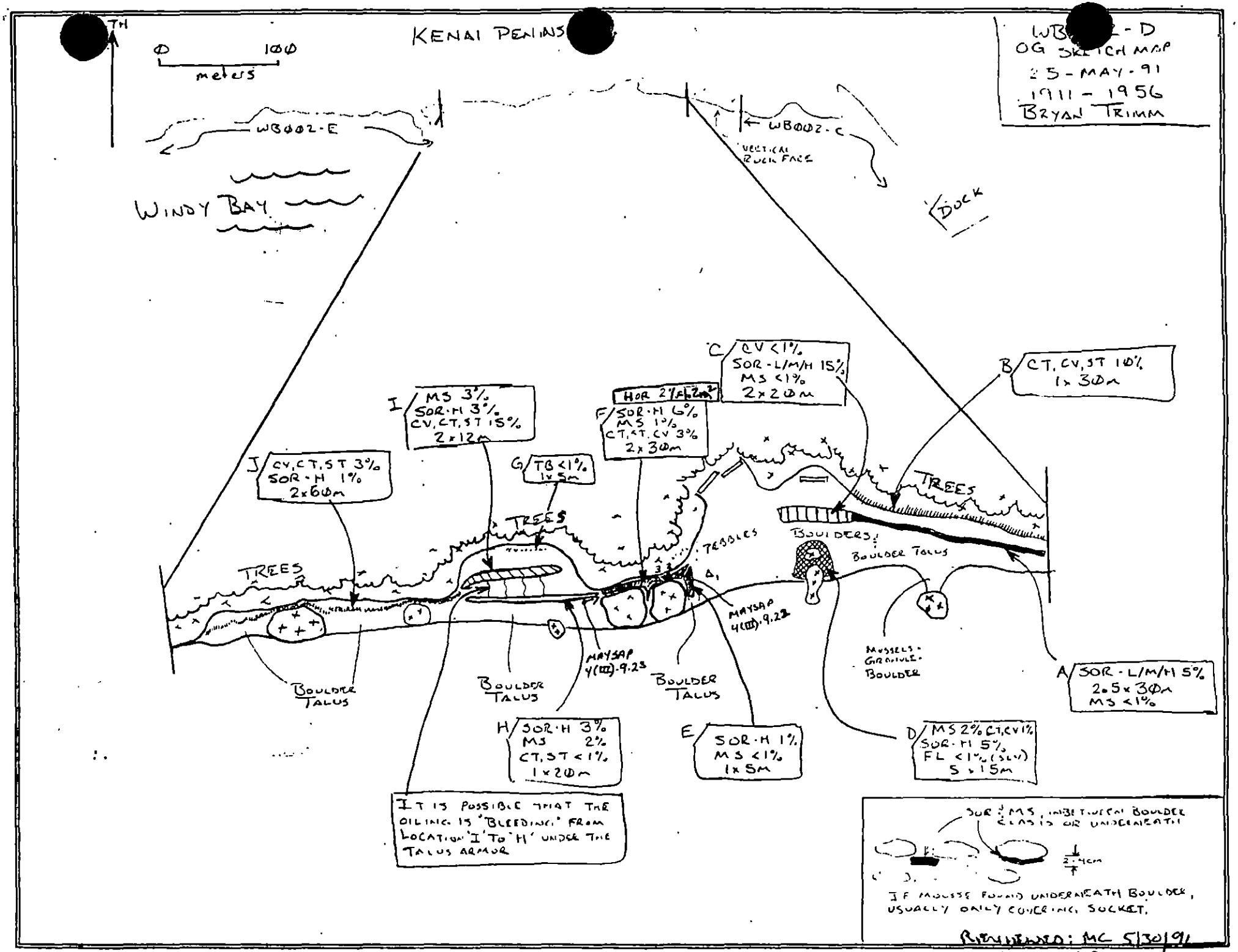
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS:

- IT IS POSSIBLE THAT OILING IN LOCATION I HAS BLED OR COULD BLEED DOWN TO LOCATION H.
- MOUSSE IS GENERALLY FOUND IN THE 'SOCKET' ON THE UNDERSIDE OF A SURFACE COBBLE OR BOULDER
- SOR IS FOUND UNDERNEATH OR BETWEEN SURFACE ARMOR
- MOR IS DISCONTINUOUS IN LOCATION 'F' (or 2% OF 2x30m AREA).

REVISED: MC 5/30/91

revised 5.30 gg


KENAI PENINS
TH
0 100
meters
WB002-E
WINDY BAY
WB002-C
VERTICAL ROCK FACE
DOCK
WB - D
OG SKETCH MAP
25-MAY-91
1911 - 1956
BRYAN TRIMM
C CV <1%
SOR-L/M/H 15%
MS <1%
2x20m
B CT, CV, ST 10%
1x30m
I MS 3%
SOR-H 3%
CV, CT, ST 15%
2x12m
HOR 2%
F SOR-H 6%
MS 1%
CT, ST, CV 3%
2x30m
J CV, CT, ST 3%
SOR-H 1%
2x60m
G TB <1%
1x5m
TREES
TREES
TREES
PEBBLES
BOULDERS
BOULDER TALUS
MAYSAP
4(III)-9.23
MAYSAP
4(III)-9.23
MUSSELS
GRANITE
BOULDER
BOULDER TALUS
BOULDER TALUS
BOULDER TALUS
A SOR-L/M/H 5%
2.5x30m
MS <1%
H SOR-H 3%
MS 2%
CT, ST <1%
1x20m
E SOR-H 1%
MS <1%
1x5m
D MS 2% CT, CV 1%
SOR-H 5%
FL <1% (SLV)
5x15m
IT IS POSSIBLE THAT THE OILING IS 'BLEEDING' FROM LOCATION 'I' TO 'H' UNDER THE TALUS ARMOR
SOR & MS, IN BETWEEN BOULDER & CLAYS OR UNDERNEATH
IF MOUSSE FOUND UNDERNEATH BOULDER, USUALLY ONLY COVERING SOCKET.
REVIEWED: MC 5/30/91
REVIEWED 6.30 AM

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4	DATE 25 MAY '91
SEGMENT # WB002	TIDAL HEIGHT (Range) + 3.2 TO + 4.2
SUBDIVISION D	BIOLOGIST JIM ROTH
SEA STATE FLAT	WIND SPEED/DIRECTION
PHOTOGRAPHS: ROLL #	FRAME #

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

A- HIGH MITE/LOWER HITE BOULDERS W/ DENSE BARNACLES, SMALL MUSSELS, ABUNDANT LITTORINES.

B - BEDROCK CLIFF IN HITE - NO INTERIDAL FAUNA.

C - MITE/HITE BOULDERS W/ DENSE BARNACLES, MUSSELS; ABUNDANT LITTORINES AND LIMPETS

D - GRAVEL W/ DENSE MUSSEL BED

E - BOULDERS W/ DENSE FUCUS, LOCALLY DENSE MUSSELS, BARNACLES, ABUNDANT LITTORINES, LIMPETS.

F - BOULDERS W/ MOD. FUCUS, LOCALLY DENSE MUSSELS, BARNACLES; ABUNDANT LITTORINES, LIMPETS.

G - NO INTERTIDAL BIOTA (SUPRATIDAL)

H, I - BOULDERS W/ THIN PATINA OF GREEN ALGAE, MODERATELY DENSE BARNACLES, LITTORINES

J - BOULDERS W/ SPARSE BARNACLES, LITTORINES.

K - BOULDERS W/ SPARSE TO MODERATE BARNACLES, MUSSELS, AND LITTORINES.

GENERAL COMMENTS: NO LOWER INTERTIDAL OBSERVATIONS COULD BE MADE. INTERTIDAL BIOTA IN THIS SUBDIVISION APPEAR TO BE HEALTHY, WITH RECENT RECRUITMENT IN MUSSELS, LITTORINES. WATERFOWL OBSERVED WAS A RAFT OF LESSER SCAUP.

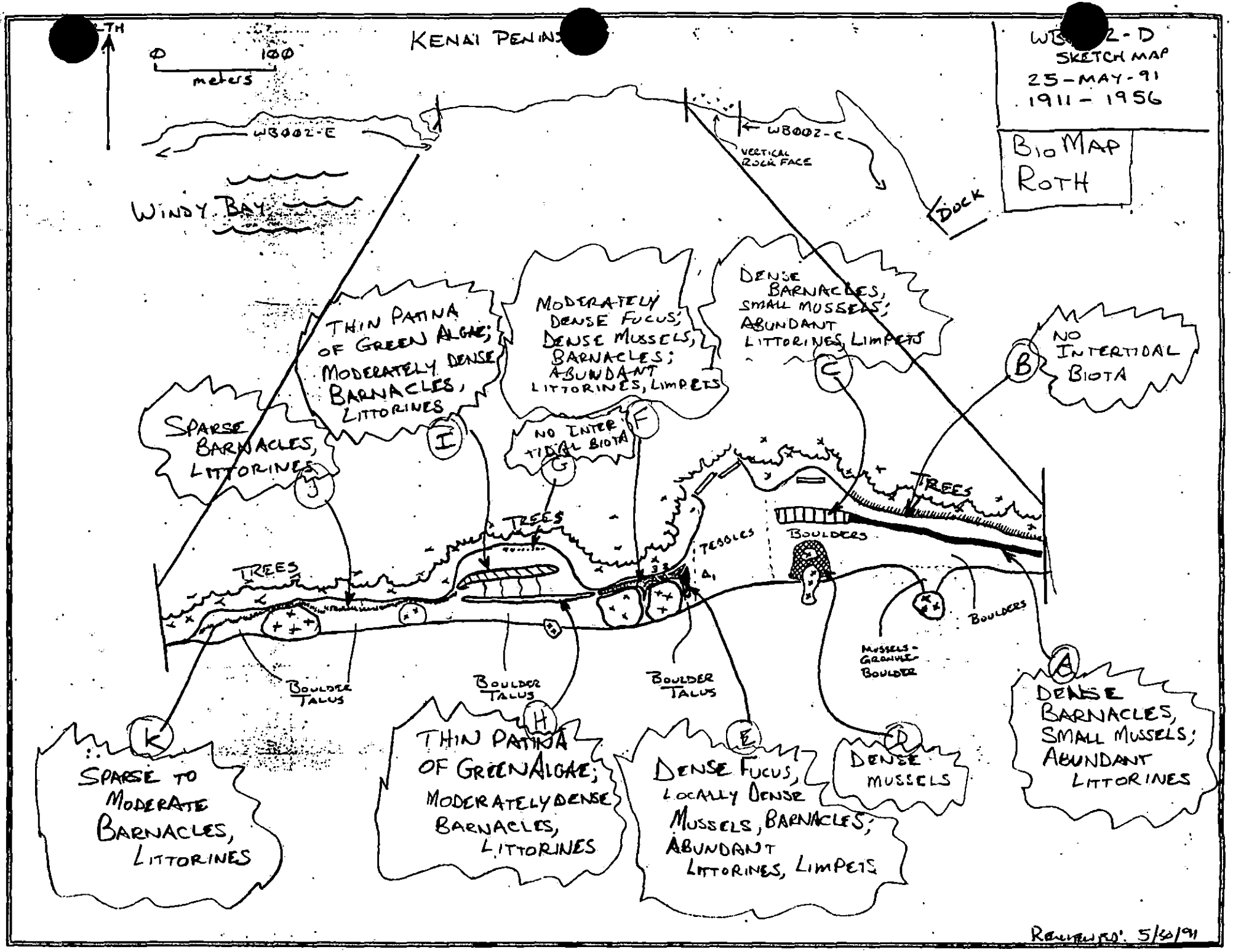
WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

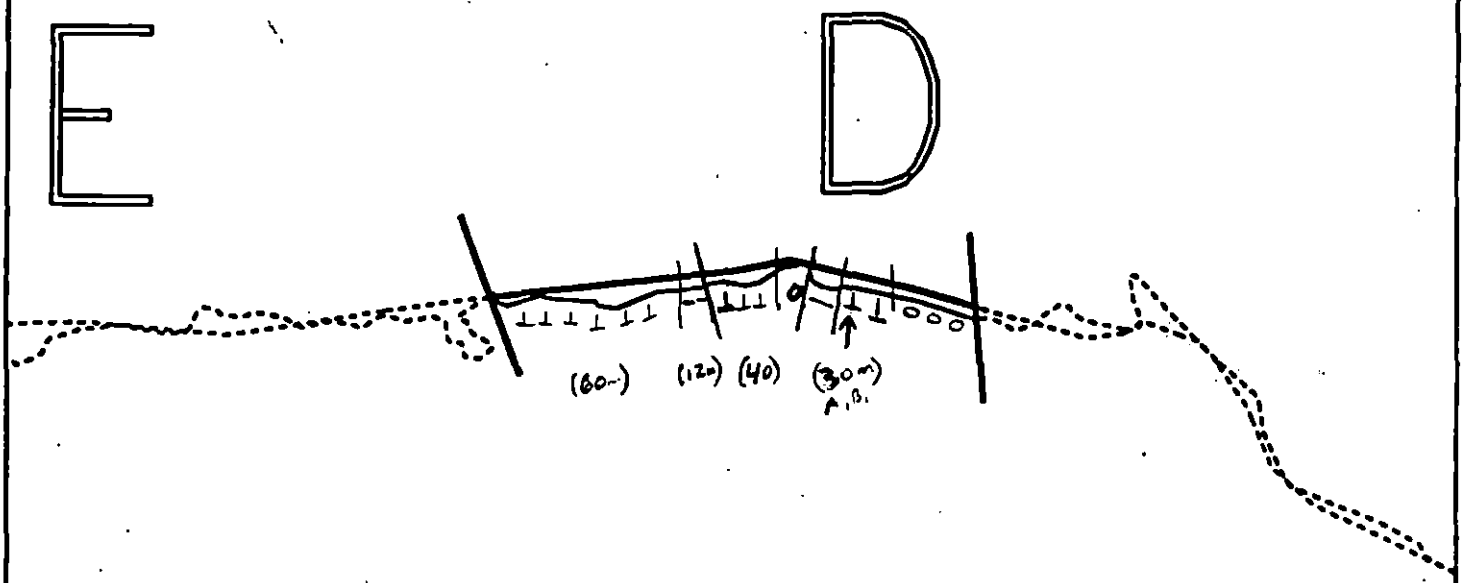
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			SALMON FRY
Seabirds			
Waterfowl	1	100	
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
[illegible]les (specify)			

Shoreline subdivision map showing important biological features attached.

REVIEWED: MC 5/30/91


KENAI PENIN
0 100
meters
WB002-D
SKETCH MAP
25-MAY-91
1911 - 1956
BIO MAP
ROTH
WB002-E
WB002-C
VERTICAL ROCK FACE
DOCK
WINDY BAY
THIN PATINA OF GREEN ALGAE; MODERATELY DENSE BARNACLES, LITTORINES
I
MODERATELY DENSE FUCUS; DENSE MUSSELS, BARNACLES; ABUNDANT LITTORINES, LIMPETS
F
DENSE BARNACLES, SMALL MUSSELS; ABUNDANT LITTORINES, LIMPETS
C
B
NO INTERTIDAL BIOTA
SPARSE BARNACLES, LITTORINES
J
NO INTER TIDAL BIOTA
G
TREES
TREES
TREES
TESSELES
BOULDERS
BOULDERS
MUSSELS - GRANITE BOULDER
BOULDER TALUS
BOULDER TALUS
BOULDER TALUS
K
SPARSE TO MODERATE BARNACLES, LITTORINES
H
THIN PATINA OF GREEN ALGAE; MODERATELY DENSE BARNACLES, LITTORINES
E
DENSE FUCUS, LOCALLY DENSE MUSSELS, BARNACLES; ABUNDANT LITTORINES, LIMPETS
D
DENSE MUSSELS
A
DENSE BARNACLES, SMALL MUSSELS; ABUNDANT LITTORINES
REVIEWED: 5/30/91



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

WB002 D

ADEC Subsegment Length: 252m

METERS

0 100 200

AK State Plane Zone 4

wb002d

EXXON

Subdivision Field Map

Map Key: KENWB002D

Name: TRIMM

Date: 25-MAY-91

Date Entered:

— SURFACE OIL CATEGORY MAP —

REVISED: MC 5/30/91

revised 5.30 9y

1991 MAYSAP EVALUATION

SEGMENT: WB 002 SUB: A REGION: KEN SURVEY DATE: 5/25/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) RESTRICTED 3/1 - 9/1

Ecological/Constraints (see page two for details) Eagle nest, Fish harvest area

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

SHPO Signature: [signature] Date: 6/3/91

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

COMMENTS:
INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 31 1991 FOSC APPROVAL DATE: 6/3/91

ADEC [signature]

EXXON [signature]

USCG [signature]

NOAA [signature]

FOSC [signature]

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

ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

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

15

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT WB-002 SUBDIVISION A DATE 5/27/91

ADEC
NAME Steve Ferguson SIGNATURE [signature]

☐ NTR ☒ TREATMENT RECOMMENDED

MANUAL REMOVAL OF SOR.H AT SITES #A1 AND #A3 ON SKETCH MAP. ALSO RECOMMEND MANUAL REMOVAL OF THE SUBSURFACE LENS AT SITES #B4 AND #B5. WORK TIME TO ACCOMPLISH THIS CLEAN-UP IS MINIMAL AND WOULD GREATLY HELP OUT ENVIRONTAL AREA.

EXXON
NAME George P. St. Ives SIGNATURE [signature]

☒ NTR Several areas of MS and SOR were found while surveying. The major areas were picked up.

LANDMANAGER
NAME Pat Norman OF Port Graham SIGNATURE [signature]

☐ NTR ☒ Treatment recommended / recommend manual pickup of oil on sites B4, B5, B6. Also Additional work can be done on areas marked with the PU symbol. Also sites A2 – A3 need manual removal of SOR.H. The removal of a majority of the remaining oil in this area well greatly ~~[illegible]~~ reduce the existing and continued damage to our subsistence foods in this area of windy Bay.

USCG/NOAA
NAME [illegible] SIGNATURE [signature]

☑ NTR Some subsurface oil (LOH), sheen, but high % in bedrock/boulders
Some surface mousse. Further removal operations would cause more environmental harm than good.

While removal would cause short term environmental damage, including remobilized some of the oil components, however, the area would probably quickly recover through colonization from adjacent areas. It is questionable whether the amount of oil remaining in this segment would cause any long term environmental impact which needs to be prevented. [illegible]

TEAM NO. 1

OG B. TRIMM BIO J. ROTH SEGMENT WB002

ADEC S. Ferguson LANDMANAGER P NORMAN for PT GRAHAM SUBDIVISION A

EXXON G. STILES USCG/NOAA McMahon/McDonald DATE MAY 1 25 /91

TIME 15 : 35 to 17 : 15 TIDE LEVEL 6.92 ft. to 3.61 ft. ENERGY LEVEL: ☐ H ☒ M ☐ L

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

TOTAL LENGTH SHORELINE SURVEYED: 433 m NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

EST. OIL CATEGORY LENGTH: W 0 m M 40 m N 21 m VL 102 m NO 270 m US 0 m

LOC	SURFACE OIL CHARACTER AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO	SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA WIDTH m	LENGTH m	ZONE S	UI	MI	LI	NOTES
A1				P							CPB	M	2.5	10			X		HVY SOR UNDER/BETWEEN BOULDERS
A2						T	T				R	V	1	8		X			
A3				S							B	M	2.5	7			X		HVY SOR UNDER/BETWEEN BOULDERS
B1		T					T				BPR	M	1.5	20.		X			MS UNDER BOULDERS/ROCK CREVICES
B2				P							B	M	2	1		X			MED SOR UNDER/BETWEEN BOULDERS
B3						P	P				R	V	1.5	10	X	X			
B4				S		T	T				B	M	4	40		X	X		LT, MED, SOR UNDER/BETWEEN BOULDERS
B5				T							B	M	2	30		X			MED SOR UNDER, BETWEEN BOULDERS
B6				S							CB	M	1	30			X		LT SOR UNDER/BETWEEN ARMOR
B7						S	S				R	V	1.5	55	X	X			
B8				T							BS	M	1	7			X		MED SOR IN SAND UNDER/BETWEEN BOULDERS
B9				T							BSR	M	1	4		X			MED SOR UNDER/BETWEEN BOULDERS
B10						T	T				R	V	1	20	X				

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 4 (III) - 9 FRAMES 2-7

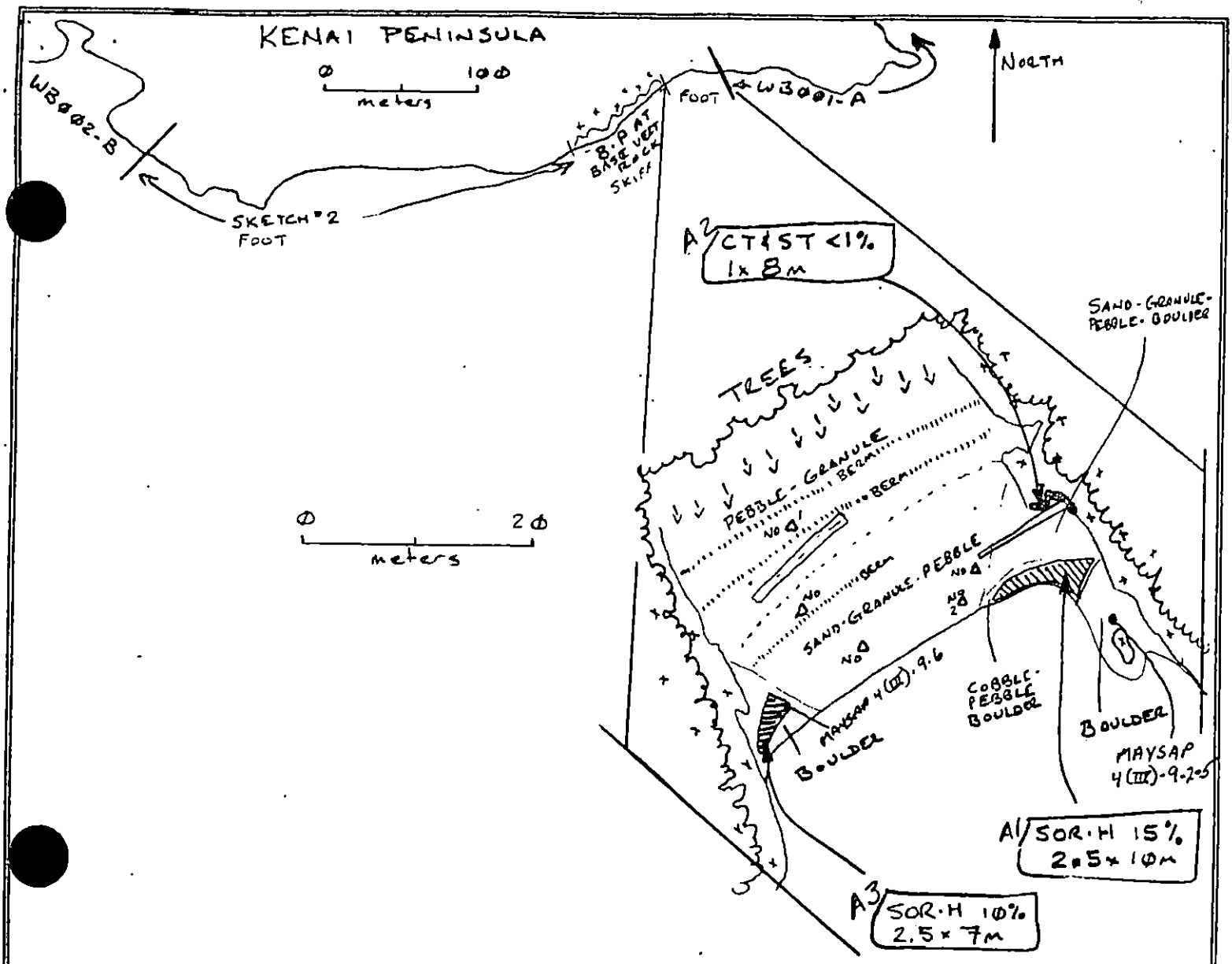
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER OP	HOR	MOR	LOR	OF	TR	NO	OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE S	UI	MI	LI	SURFACE-SUBSURFACE SEDIMENTS	NOTES
1	45							X	—	Y	—	—		X			P - SGP	
2	130							X	—	Y	—	—		X			P - PGS	
3	127			X					23 - 25	Y	—	—		X			BP - GSPB	
4	114			X					10 - 12	Y	—	—		X			B - SGP	
5	16			X					5 - 6	Y	—	—		X			BP - PBGR	
6	112			X					8 - 10	Y	—	—		X	X		BC - PSG	
7	129			X					18 - 22	Y	—	—		X			P - RGSA	
8	[illegible]			X					21 - 26	Y	—	—		X			P - GSB	
9	[illegible]			X					8 - 17	Y	S	N		X			PG - [illegible]	

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

OG COMMENTS:

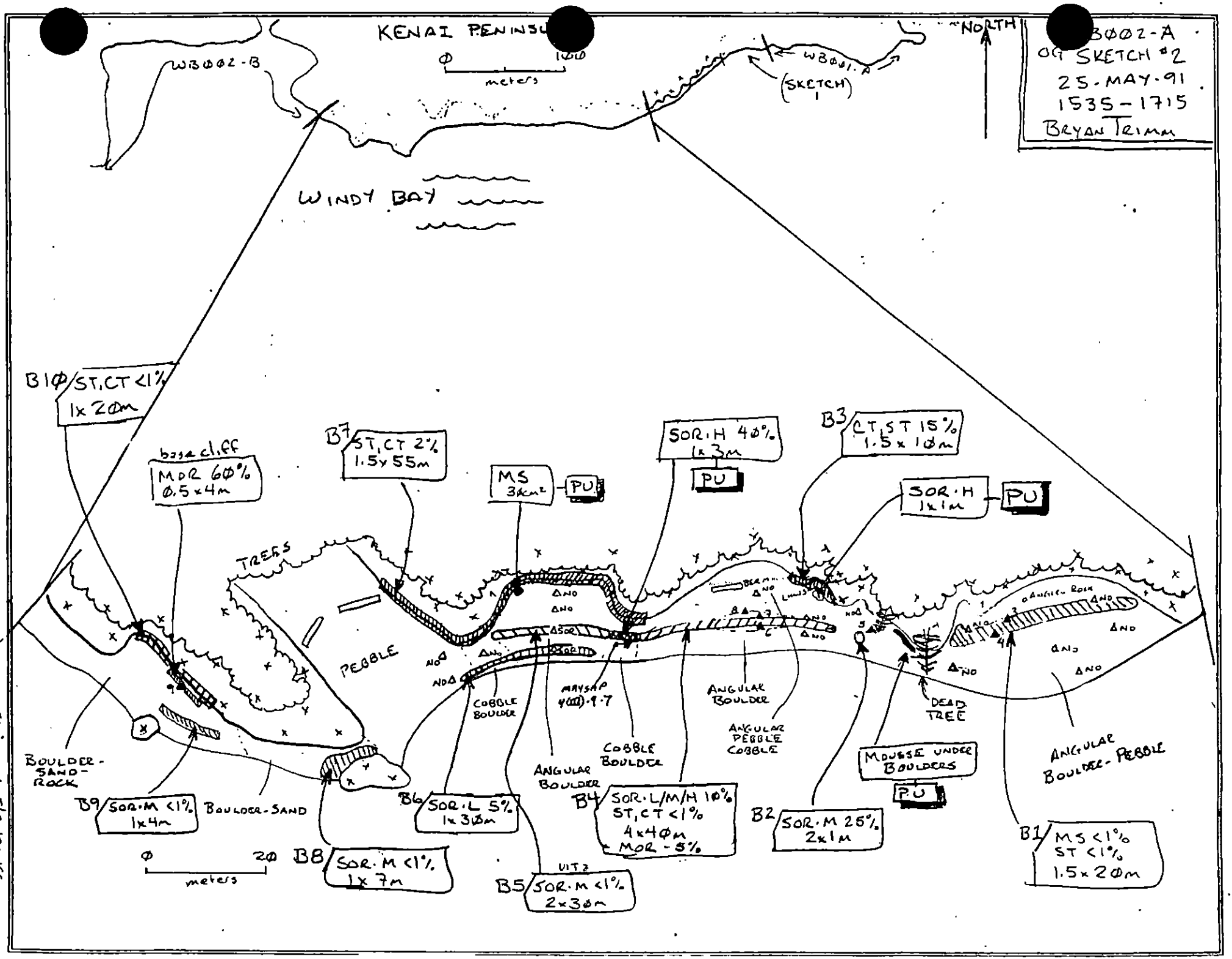
- THE MOR FOUND IN LOCATION B4 OCCURS WHERE SOR IS GREATER THAN 5cm & ON OCCASION WHERE CLEAN PEBBLE - GRANULE COVERED THE SOR → NOW MOR.
- LOCATIONS B1, B2, B4, B5 ARE GENERALLY ON THE SAME TIDE HEIGHT. THE SOR IS DEPOSITED BETWEEN & BENEATH THE SURFACE ARMOR. THE SOR IS DISCONTINUOUS - NOT A CONTINUOUS BAND - BUT DISCRETE 20cm² (AVG) PATCHES.

REVISED: MG 5/30/91
revised 5/30/91 KG



WB002-A
OG SKETCH #1
25-MAY-91
1535-1715
BRYAN TRIMM

REVIEWED: 5/30/91 MC
reviewed 5/30/91 KG



reviewed 5/30/91 KG
Remarked: MC 5/30/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 25 MAY 91

SEGMENT # WB002- TIDAL HEIGHT(Range) + 6' TO + 3.5'

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/BOULDER w/ MODERATELY DENSE MUSSELS, LITTORINES, BARNACLES (INCL. SPAT). NO MACROALGAE.

A2 - BEDROCK w/ LOCALLY DENSE BARNACLES, MUSSELS (MOST 1" OR LESS), LITTORINES (INCL. NEW RECRUITS), LIMPETS (PRIMARILY N. SCUTUM, BUT SOME N. PERSONA), NO MACROALGA

A3 - BEDROCK/BOULDER w/ DENSE BARNACLES, LITTORINES, LIMPETS. NO MACROALGAE

B1 - BOULDERS w/ BARNACLES (C. CARIOSUS + B. GLANDULA), LITTORINES (L. SITKANA, L. CARINATA), LIMPETS

B-2 - MITZ MUSSEL BED (ALL < 3/4" LONG), DENSE; ALSO DENSE BARNACLES (2 SPP), LOTS OF SMALL LIMPETS. NEMERTEANS, BEACHHOPPERS, AND HERMIT CRABS COMMON UNDER COBBLE.

B3 - BEDROCK w/ MUSSELS. OIL ON AND UNDER LIVING MUSSELS - (SOME MUST HAVE SETTLED ON CT OR ST), BARNACLES, LITTORINES, LIMPETS.

B4 - UPPER MITZ COBBLES w/ MODERATE MUSSELS, DENSE LITTORINES. BOULDERS w/ DENSE BARNACLES, SPARSE FUCUS, HALOSACCION

B5 - SIMILAR TO B4

B6 - MODERATELY DENSE MUSSELS; DENSE BARNACLES, LITTORINES. (OIL IN MITZ)

B7 - BEDROCK IN MITZ/MITZ w/ BARNACLES, LITTORINES, MUSSELS

B8 - MITZ GRAVEL/COBBLE w/ DENSE MUSSELS, LITTORINES, LIMPETS.

B9 - SMALL BOULDERS w/ DENSE BARNACLES, MUSSELS, LITTORINES, LIMPETS. NOT MUCH FUCUS

B10 - BEDROCK w/ DENSE MUSSELS, BARNACLES, FUCUS.

(SEE ATTACHED SHEET)

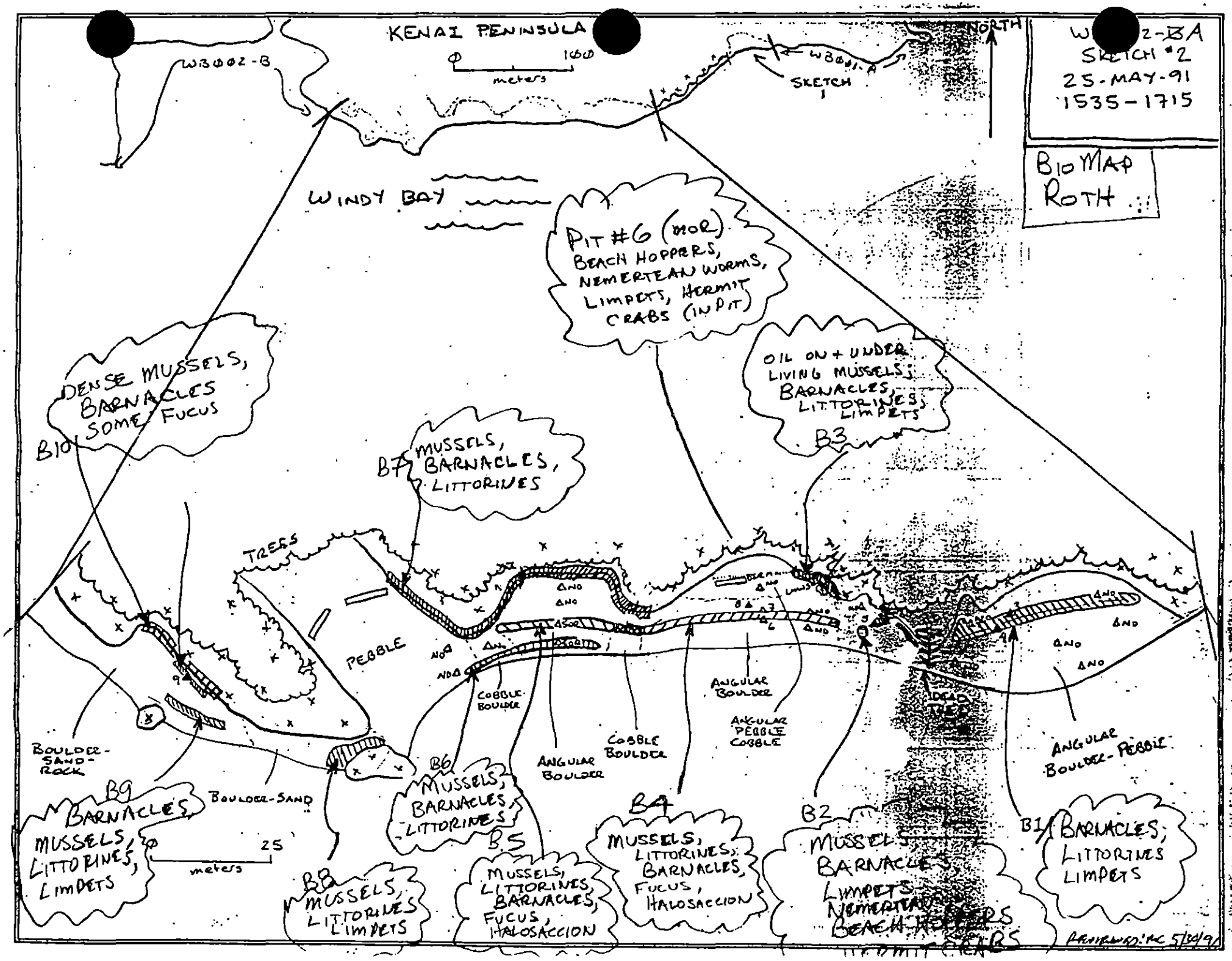
WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds	2	10	
Waterfowl	1	2	
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.

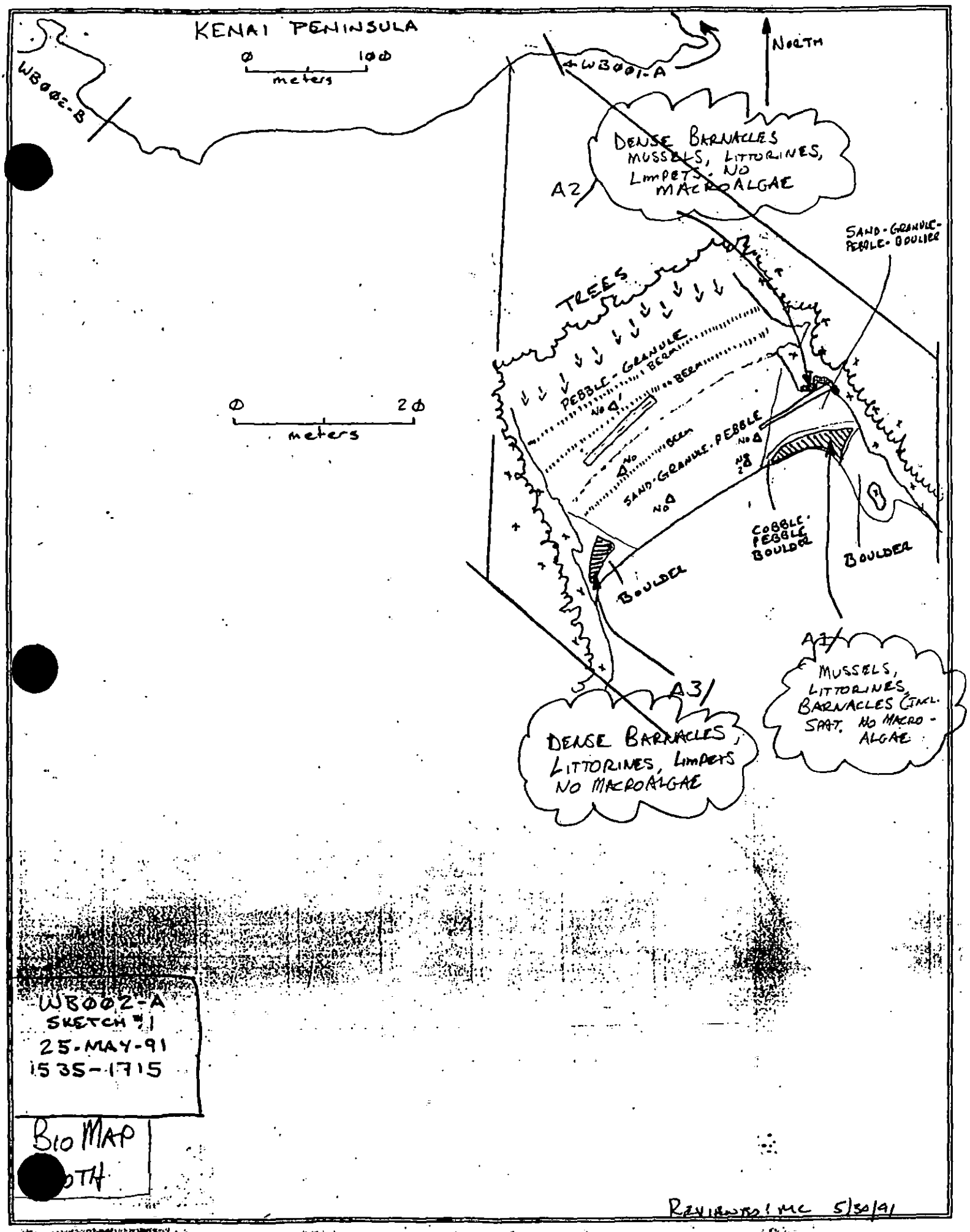
REVIEWED: MC 5/30/91


KENAI PENINSULA
0 100
meters
NORTH
WB002-B
WB001-A
SKETCH 1
W 2-BA
SKETCH #2
25-MAY-91
1535-1715
BIOMAP
ROTH
WINDY BAY
PIT #6 (MOR)
BEACH HOPPERS,
NEMERTEAN WORMS,
LIMPETS, HERMIT
CRABS (IN PIT)
DENSE MUSSELS,
BARNACLES
SOME FUCUS
B10
B7
MUSSELS,
BARNACLES,
LITTORINES
OIL ON + UNDER
LIVING MUSSELS;
BARNACLES,
LITTORINES,
LIMPETS
B3
TREES
PEBBLE
COBBLE
BOULDER
ANGULAR
BOULDER
COBBLE
BOULDER
ANGULAR
PEBBLE
COBBLE
DEAD
TREE
ANGULAR
BOULDER-PEBBLE
BOULDER-
SAND-
ROCK
BOULDER-SAND
B9
BARNACLES,
MUSSELS,
LITTORINES,
LIMPETS
25
meters
B6
MUSSELS,
BARNACLES,
LITTORINES
B5
B8
MUSSELS,
LITTORINES
LIMPETS
MUSSELS,
LITTORINES,
BARNACLES,
FUCUS,
HALOSACCION
B4
MUSSELS,
LITTORINES,
BARNACLES,
FUCUS,
HALOSACCION
B2
MUSSELS
BARNACLES,
LIMPETS
NEMERTEAN
BEACH HOPPERS
HERMIT CRABS
B1
BARNACLES;
LITTORINES
LIMPETS
REVIEWED: MC 5/30/91

WB002A 25 MAY '91 ROTH

GENERAL COMMENTS:

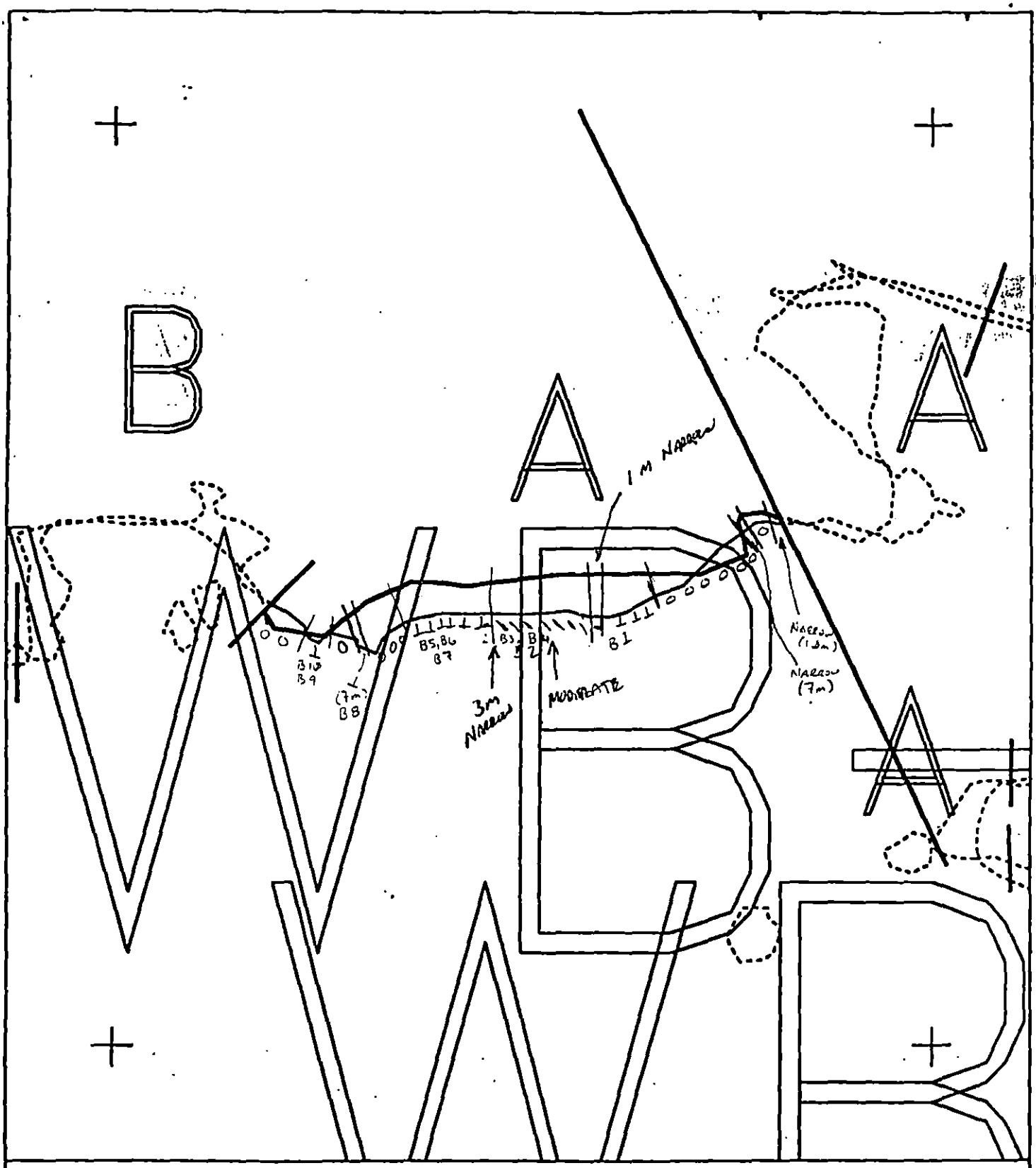
INTERTIDAL BIOTA IN THIS SUBDIVISION APPEAR HEALTHY + THRIVING. NEW RECRUITMENT IN ALL OF THE MOST ABUNDANT MITZ GROUPS (MUSSELS, BARNACLES, LITTORINES, LIMPETS) WAS NOTED. SUBDIVISION WAS VISITED ON A +3.5 FT TIDE, SO NO OBSERVATIONS ON THE LITZ WERE POSSIBLE. FOR THIS REASON THE TOTAL NUMBER OF SPECIES OBSERVED WAS LIMITED. HOWEVER A FEW MITZ TIDE POOLS OCCURRED IN BEDROCK OUTCROPPINGS, AND THESE CONTAINED TWO ANEMONE SPECIES (ANTHOPLEURA XANTHOGRAMMICA AND A. ARTEMISIA), AS WELL AS CORRALINE ALGAE, HERMIT CRABS, TIDEPOOL GOBIES, AND SEVERAL SPECIES OF ALGAE.



WB002-A
SKETCH #1
25-MAY-91
1535-1715

BIO MAP
OTH

REVIEWED: MC 5/30/91



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

WB002 A

ADEC Subsegment Length: 433m

METERS

0 100 200

AK State Plane Zone 4
nad83m

N

Subdivision Field Map

Map Key: KENWB002A

Name: TRIMM

Date: 25-MAY-91

Date Entered:

SURFACE OIL CATEGORY MAP

REVISED: 5/30/91 MC
revised 5/30/91 KG

1991 MAYSAP EVALUATION

SEGMENT: WB 002 **SUB:** F **REGION:** KEN **SURVEY DATE:** 5/27/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN

Ecological/Constraints (see page two for details) **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: 6/03/91

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

COMMENTS:
INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 31 1991 **FOSC APPROVAL DATE:** 6/3/91

ADEC

EXXON

USCG

NOAA

FOSC

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

ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

CU · ST

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT WB-002 SUBDIVISION F DATE 5/27/91

ADEC
NAME Steve Ferguson SIGNATURE Steve Ferguson

☒ NTR ☐ TREATMENT RECOMMENDED

NO TREATMENT RECOMMENDED. All OILING OBSERVED WITH THE EXCEPTION OF CU/CT/ST WERE PICKED UP DURING SURVEY

EXXON
NAME George P. Stiles SIGNATURE George P. Stiles 5/27/91

☒ NTR A few tar patties and MS in some of the boulders and cobbles were retrieved. Very little oil remaining.

LANDMANAGER
NAME Pat Naemen OF Port Graham SIGNATURE

☒ NTR exposed oil that was found was picked up while surveying

USCG/NOAA
NAME [illegible] SIGNATURE [illegible]

☒ NTR Some scattered AP, mousse found and picked-up.

[illegible]

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 1

TEAM NO. 4

SEGMENT WB002

OG B TRIMM

BIO J. ROTI

SUBDIVISION F

ADEC S. FERGUSON

LANDMANAGER P. Norman for PG

DATE MAY / 26 / 91

EXXON George P. Stiles

USCG/NOAA McMahon / McDonald

TIME 16 : 43 to 17 : 25

TIDE LEVEL 6.38 ft. to 4.85 ft.

ENERGY LEVEL: ☐ H ☐ M ☒ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 271 m

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

EST. OIL CATEGORY LENGTH: W Ø m M Ø m N Ø m VL 14 m NO 257 m US Ø m

LOC	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO		V H M L	WIDTH m	LENGTH m	S	UI	MI	LI	
A					T	T	T				R	V	1	10	X				
B					T	T	T				R	V	1	3	X				
C							T				R	V	1	1	X				

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

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

PHOTO ROLL # MAYSAP- 4(m) 11 FRAMES 5-8

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO				B R S N	S	UI	MI	LI		
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									

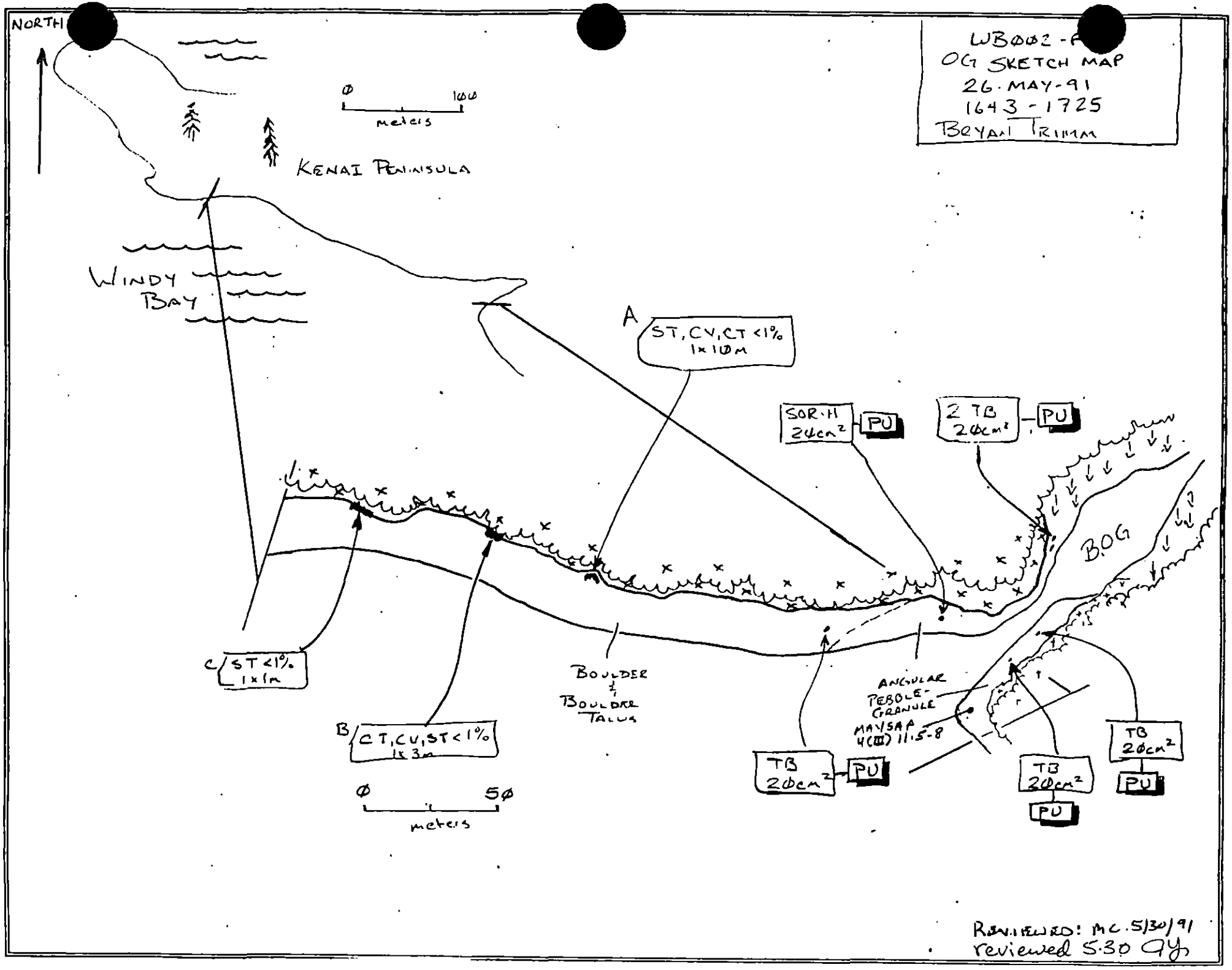
No Pits

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

OG COMMENTS:

- No Pits, No past subsurface oil history, very fine sediments under boulder veneer
- Very little oiling remains

Reviewed: MC 5/30/91
revised 5.30.91


NORTH
WB002-F
OG SKETCH MAP
26-MAY-91
1643-1725
BRYAN TRIMM
0
100
meters
KENAI PENINSULA
WINDY BAY
A
ST, CV, CT <1%
1x10m
SOR-H
24cm²
PU
2 TB
20cm²
PU
BOG
C
ST <1%
1x1m
BOULDER & BOULDER TALUS
B
CT, CV, ST <1%
1x3m
ANGULAR PEBBLE-GRANULE
MAYSAP 4(III) 11.5-8
TB
20cm²
PU
TB
20cm²
PU
TB
20cm²
PU
0
50
meters
REVIEWED: MC 5/30/91
reviewed 5-30 91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 26 MAY '91

SEGMENT # WB-002 TIDAL HEIGHT(Range) + 5.75 TO + 3.0

SUBDIVISION F BIOLOGIST JIM ROTH

SEA STATE FLAT WIND SPEED/DIRECTION

PHOTOGRAPHS: ROLL # FRAME #

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

A— SMALL CAVE IN HITZ BEDROCK w/ MODERATELY DENSE BARNACLES

B- HITZ BEDROCK w/ MODERATE BARNACLES, SCARCE LITTORINES

C- HITZ BEDROCK w/ MODERATELY DENSE BARNACLES, LITTORINES

GENERAL COMMENTS: A FAIRLY SHELTERED BOULDER + TALUS SHORE WITH A HEALTHY AND THRIVING INTERTIDAL BIOTA. MIDDLE-INTERTIDAL BOULDERS HAVE A DENSE COVER OF FUCUS WITH TYPICAL ANIMAL ASSOCIATES: MUSSELS, BARNACLES, LIMPETS, AND LITTORINES. FUCUS DENSITY INCREASES TOWARD THE WEST END OF THE SUBDIVISION, WHICH IS MORE EXPOSED THAN THE EAST. AT THE EAST END A GRAVEL-PEBBLE BEACH WITH MODERATE FUCUS, ECLGRAS. AND BARNACLES, SPARSE MUSSELS, SURROUNDS THE MOUTH OF A SMALL STREAM. OBSERVED OIL CHARACTERS OCCUR IN THE HITZ, JUST ABOVE THE FUCUS ZONE.

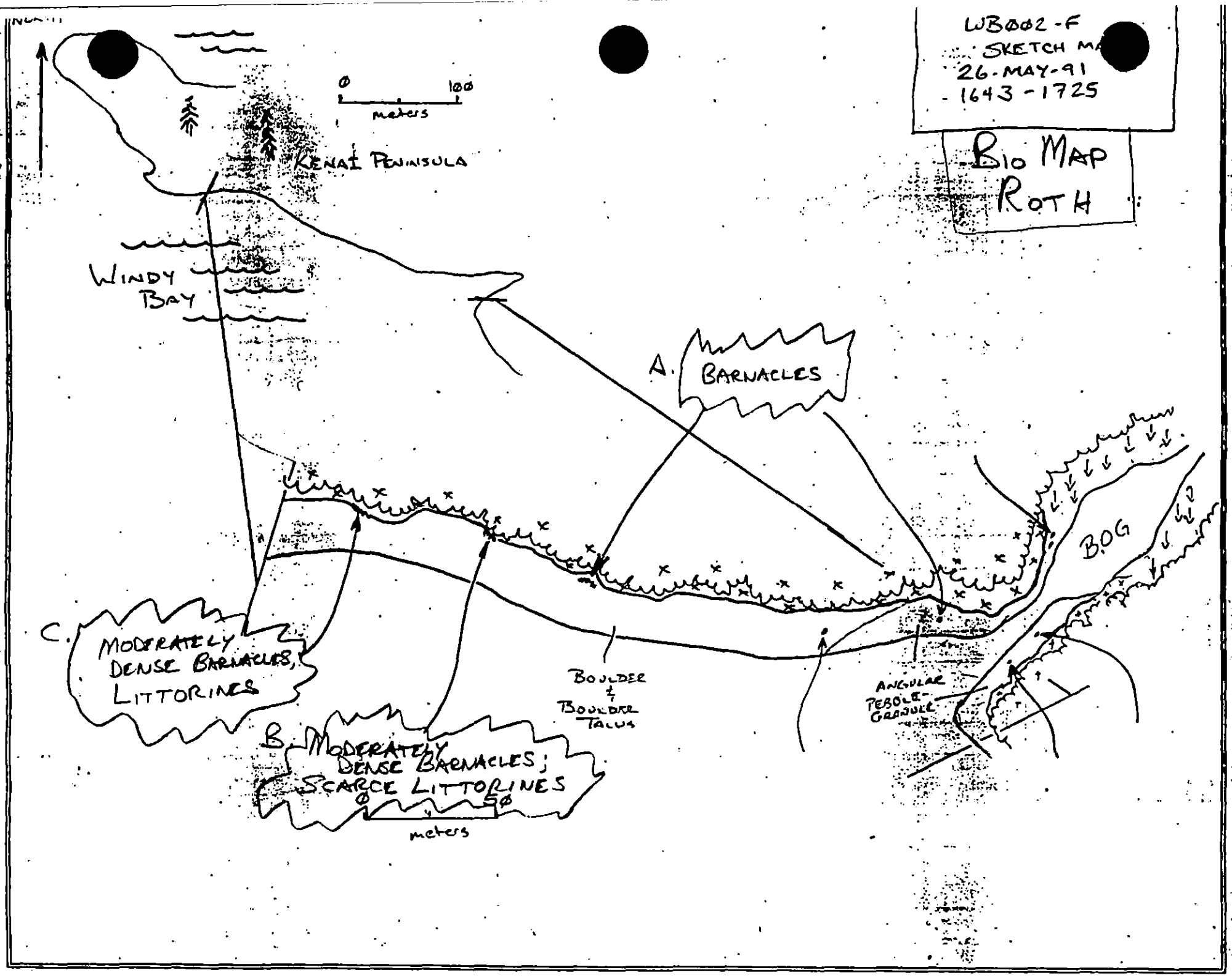
WATERFOWL OBSERVED: LESSER SCAUP, 100
CORMORANT 2
GULLS 24

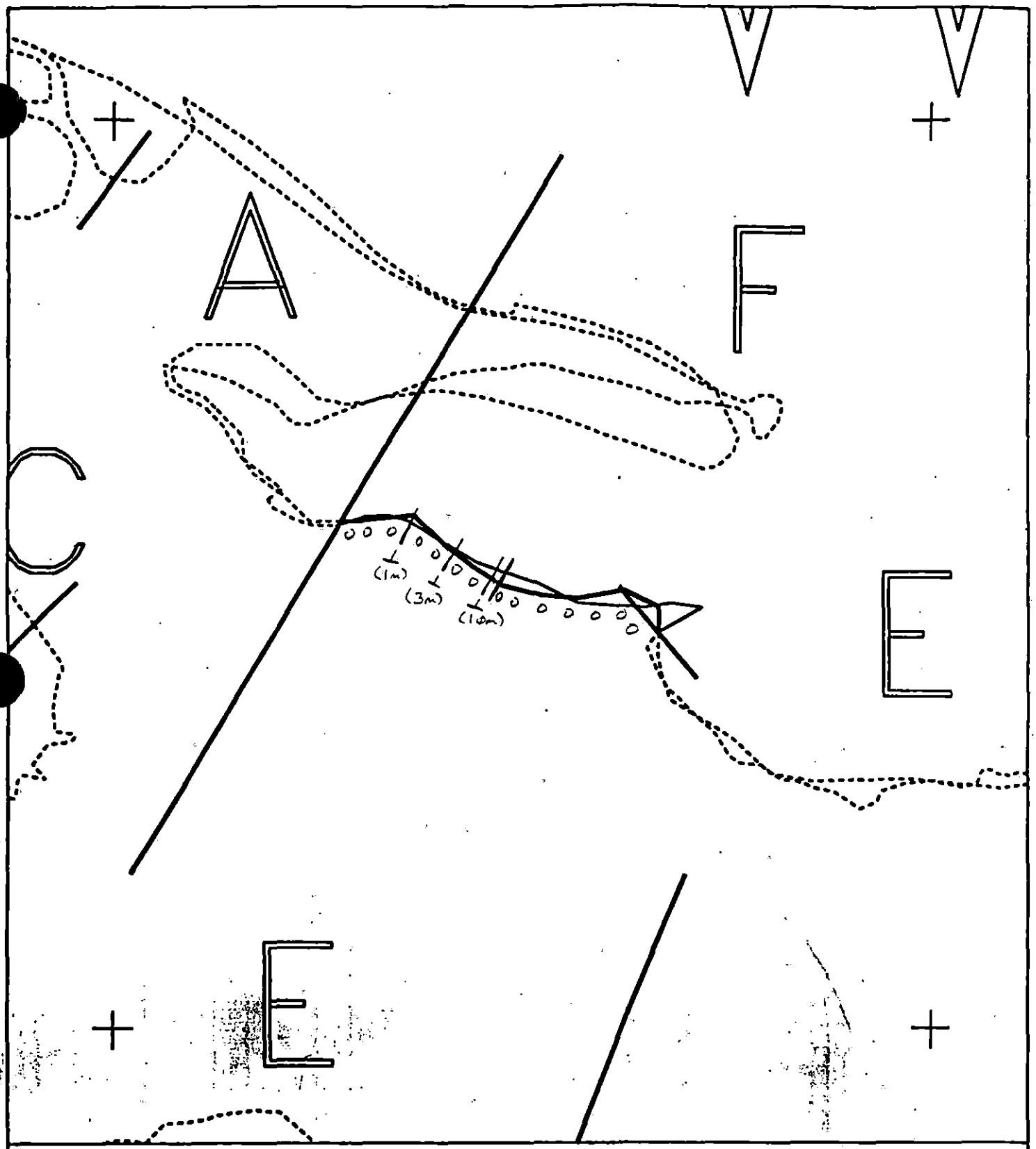
WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds	1	2	
Waterfowl	1	100	
Gulls/kittiwakes	1	24	
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.


WB002-F
SKETCH MA
26-MAY-91
1643-1725
BIO MAP
ROTH
NORTH
0
100
meters
KENAI PENINSULA
WINDY BAY
A. BARNACLES
BOG
C. MODERATELY DENSE BARNACLES, LITTORINES
BOULDER & BOULDER TALUS
ANGULAR PEBBLE-GRANULE
B. MODERATELY DENSE BARNACLES; SCARCE LITTORINES
0
50
meters



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

WB002 F

ADEC Subsegment Length: 271m

METERS

0 100 200

AK State Plane Zone 4

sub002f

N

EXXON

Subdivision Field Map

Map Key: KENWB002F

Name: TRIMM

Date: 26-MAY-91

Date Entered:

— SURFACE OIL CATEGORY MAP —

REVIEWED: MC 5/30/91

revised 5-30 94

1991 MAYSAP EVALUATION

SEGMENT: WB 002 **SUB:** E **REGION:** KEN **SURVEY DATE:** 5/25/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN

Ecological/Constraints (see page two for details) 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

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-002 SUBDIVISION E DATE 5/27/91

ADEC
NAME Steve Ferguson SIGNATURE [signature]

☐ NTR ☒ TREATMENT RECOMMENDED

MANUAL REMOVAL OF SOR·H AT SITES D AND E. COLLECTION POINTS OF THE HORIZONTAL BEDROCK WHERE SEDIMENTS HAVE FILLED IN ARE AREAS TO BE PARTICULARY ADDRESSED DURING CLEAN-UP. I WAS THE MONITOR ON SITE LAST YEAR (90) AND SOME OF THE AREAS WHERE OIL HAS COLLECTED WERE CLEANED THEN. IT APPEARS THAT OIL IS STILL BLEEDING INTO THESE COLLECTION POINTS

EXXON
NAME George P. Stiles SIGNATURE [signature] 5/30/91

☐ NTR The MS + SOR are located between and underneath the boulders and in bed rock cracks. The areas of coverage are large but the percentage of HSOR and MS are small.

LANDMANAGER
NAME Pat Wseman OF Pat Graham SIGNATURE Pat Wseman

☐ NTR ☒ Treatment recommended.
manual pickup of MS/SOR on, A, B, D, E, G on OG sketchmap
oil is exposed and accesable around the rock edges and Horizontal bedrock.

USCG/NOAA
NAME [redacted] SIGNATURE [signature]

☑ NTR
Moderate AP in cobble at [redacted] times, and among cobble and bedrock cracks. some sheen. Removal operations would further endanger the environmental balance.

Removal operations would cause short term environmental damage, while the oil remaining on the segment was probably cause little if any long term environmental damage.

[signature]

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 1

TEAM NO. 4

SEGMENT W3002

OG B Trimm

BIO J. Roth

SUBDIVISION E

ADEC S. Ferguson

LANDMANAGER P Norman for Pt Graham

DATE MAY / 25 / 91

EXXON G. Stiles

USCG/NOAA McMahon / McDonald

TIME 19 : 56 to 20 : 47

TIDE LEVEL 4.22 ft. to 6.12 ft.

ENERGY LEVEL: [ ] H [ ] M [X] L

SURVEYED FROM: [X] FOOT [X] BOAT [ ] HELO

WEATHER: [ ] SUN [X] CLOUDS [X] FOG [ ] RAIN [ ] SNOW

TOTAL LENGTH SHORELINE SURVEYED: 449 m

NEAR SHORE SHEEN: [ ] BR [ ] RB [ ] SL [X] NONE

EST. OIL CATEGORY LENGTH: W 0 m M 30 m N 210 m VL 6 m NO 203 m US 0 m

LOC	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO		V H M L	WIDTH m	LENGTH m	S	UI	MI	LI	
A		S		S	S	S	S				B	M	2	60		X			HVY SOR & MS INBETWEEN BENEATH BOULDERS
B		S		S	S	S	S	T			B	M	1	10		X			SAME 'A' PLUS SLV SHEEN
C					T	T	T				R	V	1	25		X			
D		S		S	S	S	S				B	M	4	30		X	X		HVY SOR & MS INBETWEEN BENEATH BOULDERS
E		S		S							B	M	1	6			X		HVY SOR & MS BETWEEN BENEATH BOULDERS
F					T	T	T				R	H	1	5		X			
G		S		S	S	S	S				R B	H	2	150		X			SEE COMMENTS

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

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

PHOTO ROLL # MAYSAP- — - — FRAMES —

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO				B R S N	S	UI	MI	LI		
1	35							X	—	Y	—	—		X			BP - BPGS	

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

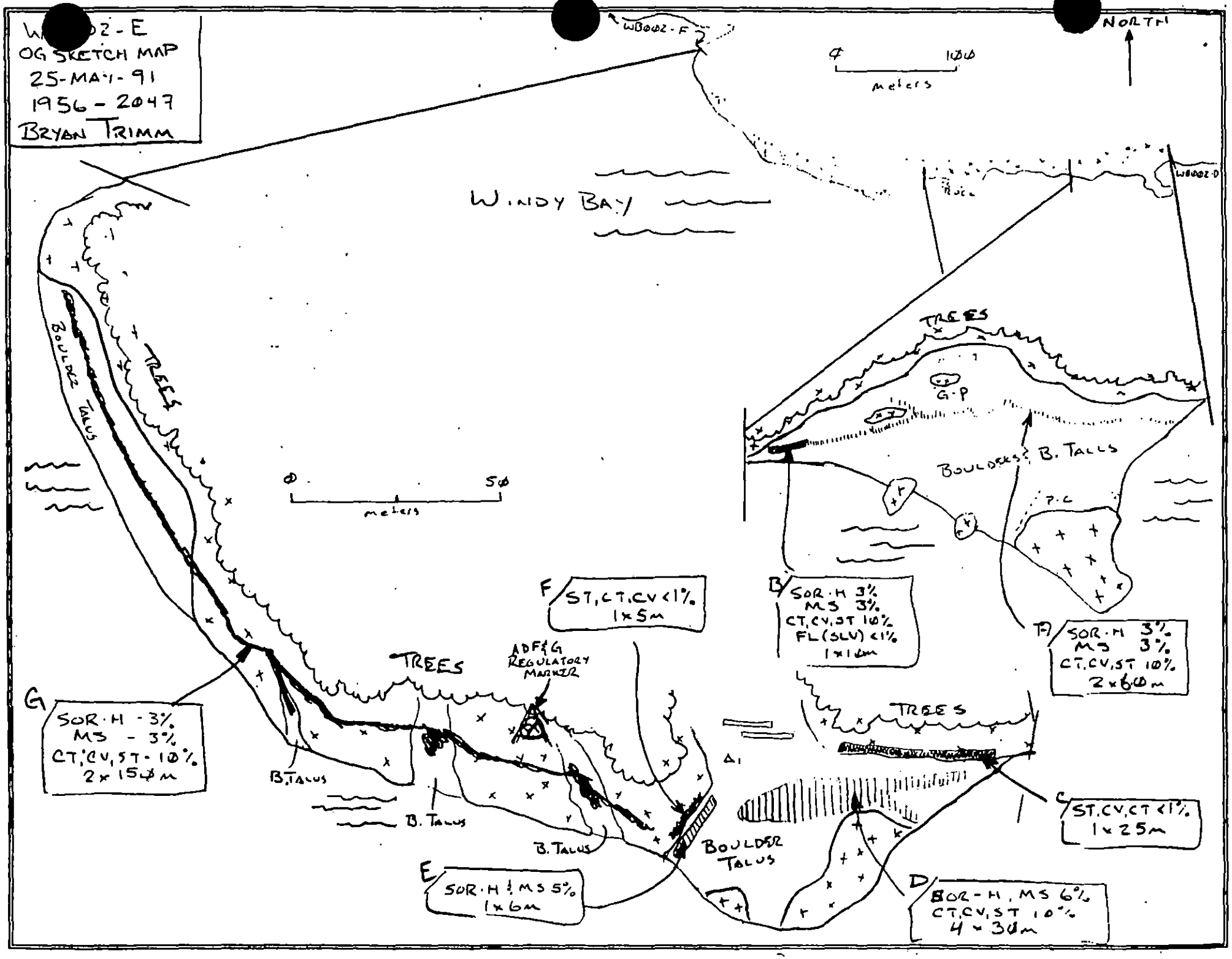
OG COMMENTS:

• IN LOCATION 'G', THE CREVICES IN THE BEDROCK HAVE THE MOUSSE, SOR, COAT, COVER & STAIN WHEREAS THE ROCK FACE ONLY HAS COAT & STAIN

• ON BOULDER ARMOR BEACHES, THE MOUSSE & SOR ARE LOCATED BETWEEN & UNDERNEATH THE BOULDER ARMOR

REVISED: MC 6/1/91

Reviewed 5.31 94 A


W[illegible]02-E
OG SKETCH MAP
25-MAY-91
1956 - 2047
BRYAN TRIMM
WBOOZ-F
NORTH
0 100
meters
WINDY BAY
WBOOZ-D
TREES
BOULDER TALUS
0 50
meters
G.P
BOULDERS? B. TALUS
P.C
F
ST, CT, CV <1%
1x5m
B
SOR-H 3%
MS 3%
CT, CV, ST 10%
FL (SLV) <1%
1x1m
A
SOR-H 3%
MS 3%
CT, CV, ST 10%
2x60m
ADF&G REGULATORY MARKER
TREES
G
SOR-H - 3%
MS - 3%
CT, CV, ST - 10%
2x150m
B. TALUS
B. TALUS
B. TALUS
A1
TREES
C
ST, CV, CT <1%
1x25m
BOULDER TALUS
E
SOR-H & MS 5%
1x6m
D
SOR-H, MS 6%
CT, CV, ST 10%
4x30m

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4	DATE 25 MAY 91
SEGMENT # WB002	TIDAL HEIGHT (Range) +4.3 TO 5.9
SUBDIVISION E	BIOLOGIST JIM ROTH
SEA STATE FLAT	WIND SPEED/DIRECTION —
PHOTOGRAPHS: ROLL #	FRAME #

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

A – MUCH OF THIS OILED BAND IS IN HITZ BOULDER/COBBLE, AND HAS LITTLE INTERTIDAL BIOTA. AT EAST END OILED ZONE EXTENDS SHOREWARD TO TOP OF MITZ, WHERE FUCUS, BARNACLES, AND LOCALLY DENSE MUSSELS OCCUR.

B – AT WEST END OILED BAND INTERSECTS LOWER HITZ BARNACLES AND MUSSELS.

C – HITZ BEDROCK/BOULDER: SPARSE INTERTIDAL BIOTA — A FEW BARNACLES + LITTORINES.

D – MUCH OF THIS OILED BAND OCCURS IN THE HITZ, WHICH HAS LITTLE INTERTIDAL BIOTA. AT EAST END OILED ZONE EXTENDS TO MITZ, WHERE DENSE FUCUS, BARNACLES, MUSSELS, LITTORINES, AND LIMPETS WERE FOUND.

E – HITZ BEDROCK/BOULDER: SPARSE INTERTIDAL BIOTA — A FEW BARNACLES + LITTORINES

F – HITZ BEDROCK FACE W/ SPARSE INTERTIDAL FAUNA – PRIMARILY LICHEN (VERRUCARIA)

G – OIL IN THIS BAND IS LOCATED IN HITZ BOULDER/TALUS, AND IS GENERALLY ABOVE THE FUCUS/BARNACLE/MUSSEL ZONE, EXCEPT AT THE NW END, WHERE FUCUS, AND MODERATELY DENSE BARNACLES EXTEND TO THE OILED ZONE.

GENERAL COMMENTS: NO LOWER INTERTIDAL OBSERVATIONS COULD BE MADE. INTERTIDAL BIOTA APPEARS HEALTHY + THRIVING, INCLUDING AREAS IN CLOSE PROXIMITY TO OIL. WATERFOWL OBSERVED INCLUDED LESSER SCAUP, SURF SCOTERS, AND 1 UNIDENTIFIED DUCK SPECIES.

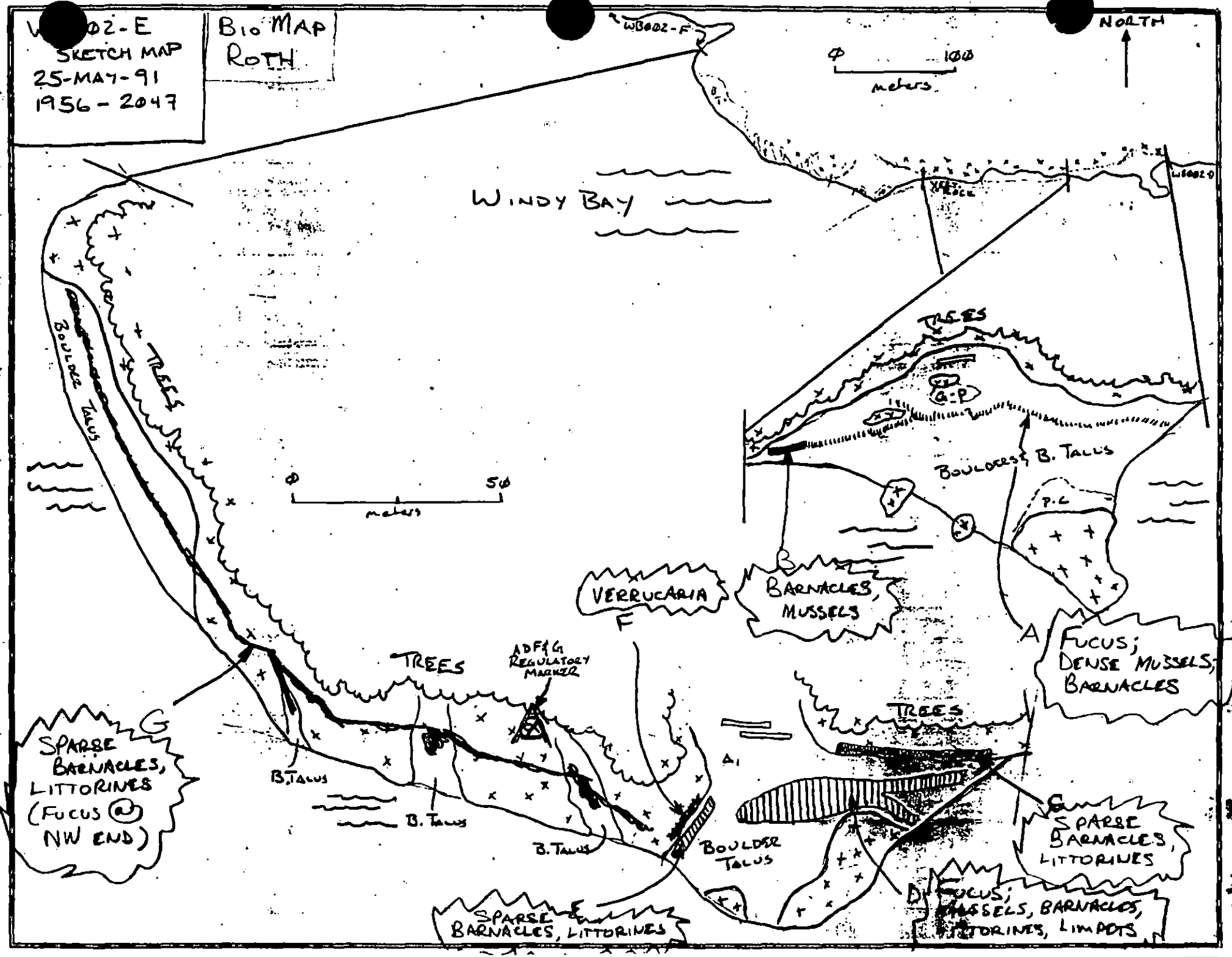
WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

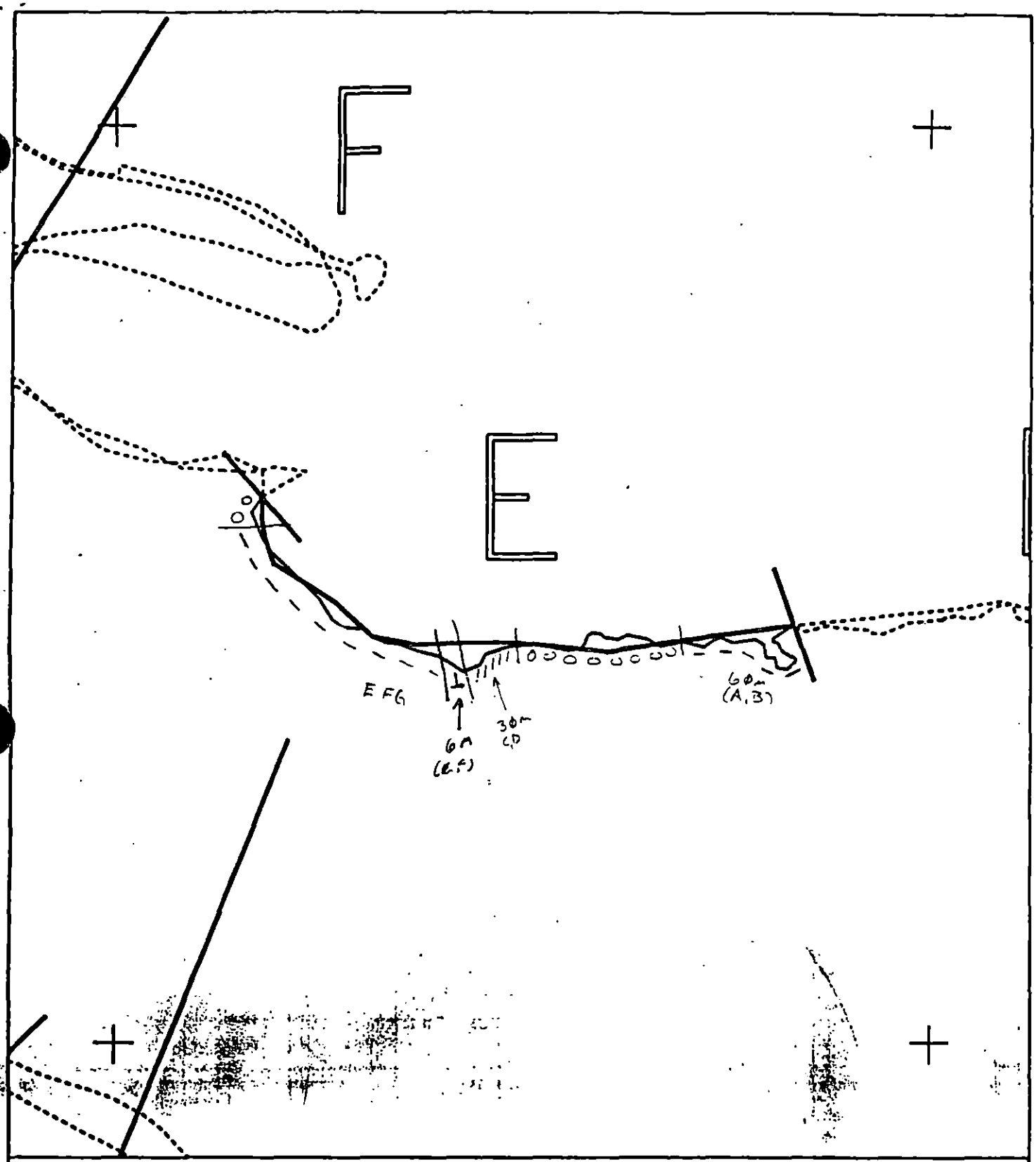
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl	3	150	
Gulls/Kittiwakes			
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
[illegible]les (specify)			

Shoreline subdivision map showing important biological features attached.

REVIEWED: MC 6/1/91
Rev'd 6/11/91 [illegible]


W[illegible]02-E
SKETCH MAP
25-MAY-91
1956 - 2047
BIO MAP
ROTH
WBOOZ-F
NORTH
0
100
meters
WINDY BAY
WBOOZ-D
TREES
BOULDER TALUS
0
50
meters
TREES
Q.P
BOULDERS & B. TALUS
P.C
B
BARNACLES, MUSSELS
VERRUCARIA
F
A
FUCUS; DENSE MUSSELS; BARNACLES
TREES
ADF&G REGULATORY MARKER
G
SPARSE BARNACLES, LITTORINES (FUCUS @ NW END)
B.TALUS
B. TALUS
B. TALUS
A1
TREES
BOULDER TALUS
C
SPARSE BARNACLES, LITTORINES
D
FUCUS; MUSSELS, BARNACLES, LITTORINES, LIMPETS
E
SPARSE BARNACLES, LITTORINES



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

WB002 E

ADEC Subsegment Length: 449m

METERS

0 100 200

AK State Plane Zone 4

sub002e

Subdivision Field Map

Map Key: KENWB002E

Name: TRIMM

Date: 25-MAY-91

Date Entered:

- SURFACE OIL CATEGORY MAP -

Revised: MC 1/6/91

reviewed 5.31.91

1991 MAYSAP EVALUATION

SEGMENT: WB 002 SUB: E REGION: KEN SURVEY DATE: 5/25/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN

Ecological/Constraints (see page two for details) 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)	N	N	N
Manual Pickup (Check as Req.)			
Spot Washing			
Bio-Customblen Only			
Bio-Inipol/Customblen			
Other			
Other			

COMMENTS:
INITIAL:

TAG:

FOSC:

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

ADEC [signature] FOSC [signature]
E. E. PAGE, CDR, USCG
CHIEF OF STAFF, FOSC

EXXON [signature]

USCG [signature]

NOAA [signature]

The State will evaluate the need to treat this subdivision [signature]

ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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-002 SUBDIVISION E DATE 5/27/91

ADEC
NAME Steve Ferguson SIGNATURE [signature]

☐ NTR ☒ TREATMENT RECOMMENDED

MANUAL REMOVAL OF SOR·H AT SITES D AND E. COLLECTION POINTS OF THE HORIZONTAL BEDROCK WHERE SEDIMENTS HAVE FILLED IN ARE AREAS TO BE PARTICULARY ADDRESSED DURING CLEAN-UP. I WAS THE MONITOR ON SITE LAST YEAR (90) AND SOME OF THE AREAS WHERE OIL HAS COLLECTED WERE CLEANED THEN. IT APPEARS THAT OIL IS STILL BLEEDING INTO THESE COLLECTION POINTS.

EXXON
NAME George P. Stiles SIGNATURE [signature] 5/30/91

☐ NTR The MS + SOR are located between and underneath the boulders and in bed rock cracks. The areas of coverage are large but the percentage of HSOR and MS are small.

LANDMANAGER
NAME Pat Wagner OF Port Graham SIGNATURE [signature]

☐ NTR ☒ Treatment recommended.
manual pickup of MS/SOR on, A, B, D, E, G on OG sketchmap
Oil is exposed and accessible around the rock edges and Horizontal bedrock.

USCG/NOAA
NAME [illegible] SIGNATURE [signature]

☑ NTR
Moderate AP in cobble at [illegible] times, and among cobble and bedrock cracks. Some sheen. Removal operations would further endanger the environmental balance.

Removal operations would cause short term environmental damage, while the oil remaining on the segment was probably cause little if any long term environmental damage.

[signature]

MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 4

SEGMENT WB002

OG B TRIMM

BIO J. ROTH

SUBDIVISION E

ADEC S. Ferguson

LANDMANAGER P NORMAN for PT GRAHAM

DATE MAY / 25 / 91

EXXON G. STILES

USCG/NOAA McMahon / McDonald

TIME 19 : 56 to 20 : 47

TIDE LEVEL 4.22 ft. to 6.12 ft.

ENERGY LEVEL: ☐ H ☐ M ☒ L

SURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 449 m

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

EST. OIL CATEGORY LENGTH: W 0 m M 30 m N 210 m VL 6 m NO 203 m US 0 m

LOC	SURFACE OIL CHARACTER AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO	SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA WIDTH m	AREA LENGTH m	ZONE S	UI	MI	LI	NOTES
A		S		S	S	S	S				B	M	2	60		X			HVY SOR & MS IN BETWEEN BENEATH BOULDERS
B		S		S	S	S	S	T			B	M	1	10		X			SAME 'A' PLUS SLV SHEEN
C					T	T	T				R	V	1	25		X			
D		S		S	S	S	S				B	M	4	30		X	X		HVY SOR & MS IN BETWEEN BENEATH BOULDERS
E		S		S							B	M	1	6			X		HVY SOR & MS BETWEEN BENEATH BOULDERS
F					T	T	T				R	H	1	5		X			
G		S		S	S	S	S				R B	H	2	150		X			SEE COMMENTS

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

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

PHOTO ROLL # MAYSAP- — - — FRAMES —

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER OP	HOR	MOR	LOR	OF	TR	NO	OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE S	UI	MI	LI	SURFACE-SUBSURFACE SEDIMENTS	NOTES
1	35							X	—	Y	—	—		X			BP - BPGS	

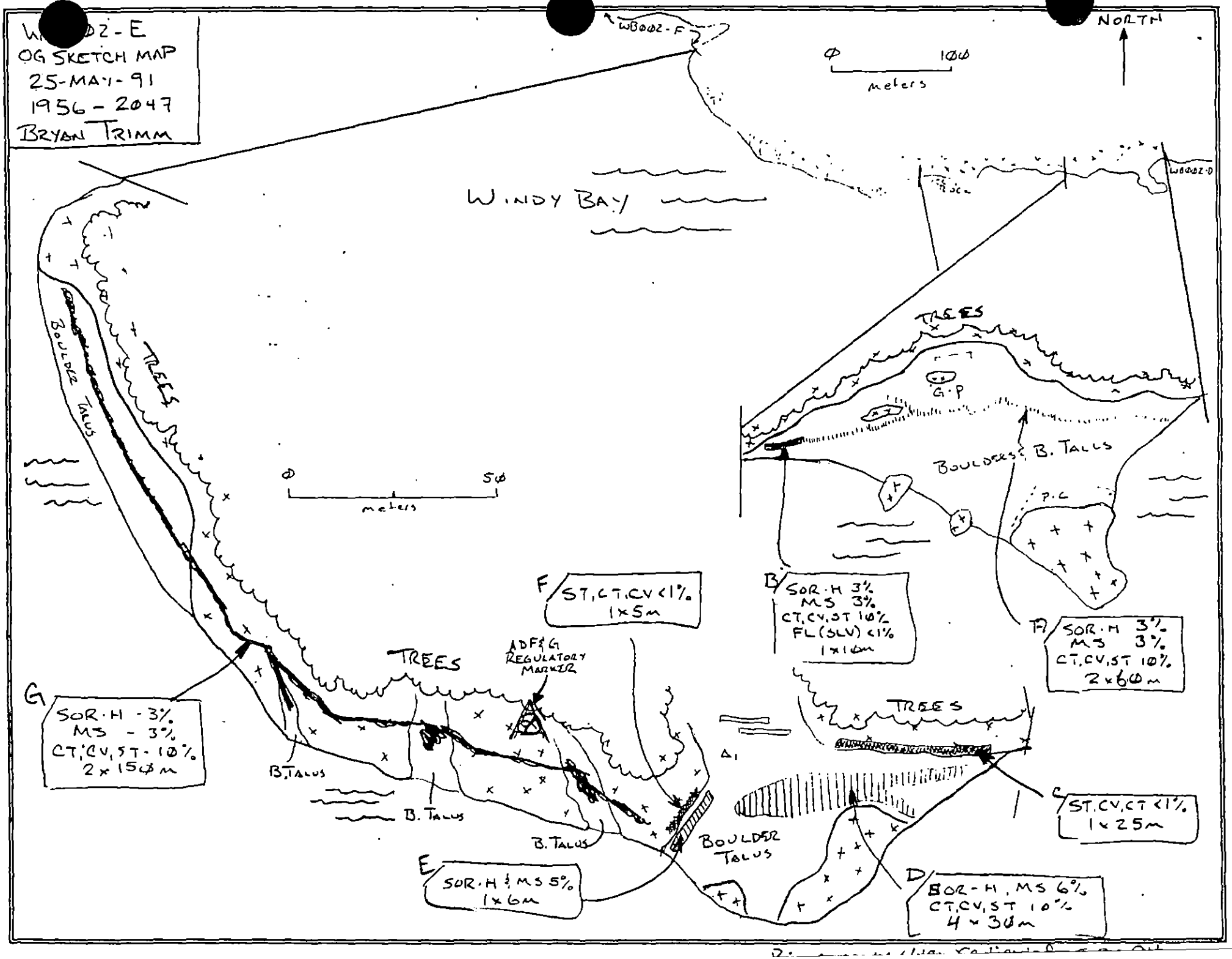
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS:

- IN LOCATION 'G', THE CREVICES IN THE BEDROCK HAVE THE MOUSSE, SOR, COAT, COVER & STAIN WHEREAS THE ROCK FACE ONLY HAS COAT & STAIN
- ON BOULDER ARMOR BEACHES, THE MOUSSE & SOR ARE LOCATED BETWEEN & UNDERNEATH THE BOULDER ARMOR

REVISED: MC 6/1/91

reviewed 5.31 94 AT


W[illegible]02-E
OG SKETCH MAP
25-MAY-91
1956 - 2047
BRYAN TRIMM
WBOOZ-F
NORTH
0 100
meters
WINDY BAY
WBOOZ-D
TREES
BOULDER TALUS
0 50
meters
G.P
BOULDERS & B. TALUS
P.C
F
ST, CT, CV <1%
1x5m
B
SOR-H 3%
MS 3%
CT, CV, ST 10%
FL (SLV) <1%
1x10m
A
SOR-H 3%
MS 3%
CT, CV, ST 10%
2x60m
ADF&G
REGULATORY
MARKER
G
SOR-H - 3%
MS - 3%
CT, CV, ST - 10%
2x150m
B. TALUS
B. TALUS
B. TALUS
A1
BOULDER
TALUS
C
ST, CV, CT <1%
1x25m
E
SOR-H & MS 5%
1x6m
D
SOR-H, MS 6%
CT, CV, ST 10%
4x30m

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4	DATE 25 MAY '91
SEGMENT # WB002	TIDAL HEIGHT (Range) 4.4.3 TO 5.9
SUBDIVISION E	BIOLOGIST JIM ROTH
SEA STATE FLAT	WIND SPEED/DIRECTION —
PHOTOGRAPHS: ROLL #	FRAME #

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

A – MUCH OF THIS OILED BAND IS IN HITZ BOULDER/COBBLE, AND HAS LITTLE INTERTIDAL BIOTA. AT EAST END OILED ZONE EXTENDS SHOREWARD TO TOP OF MITZ, WHERE FUCUS, BARNACLES, AND LOCALLY DENSE MUSSELS OCCUR.

B – AT WEST END OILED BAND INTERSECTS LOWER HITZ BARNACLES AND MUSSELS.

C – HITZ BEDROCK/BOULDER: SPARSE INTERTIDAL BIOTA — A FEW BARNACLES + LITTORINES.

D – MUCH OF THIS OILED BAND OCCURS IN THE HITZ, WHICH HAS LITTLE INTERTIDAL BIOTA. AT EAST END OILED ZONE EXTENDS TO MITZ, WHERE DENSE FUCUS, BARNACLES, MUSSELS, LITTORINES, AND LIMPETS WERE FOUND.

E – HITZ BEDROCK/BOULDER: SPARSE INTERTIDAL BIOTA — A FEW BARNACLES + LITTORINES

F – HITZ BEDROCK FACE W/ SPARSE INTERTIDAL FAUNA – PRIMARILY LICHEN (VERRUCARIA)

G – OIL IN THIS BAND IS LOCATED IN HITZ BOULDER/TALUS, AND IS GENERALLY ABOVE THE FUCUS/BARNACLE/MUSSEL ZONE, EXCEPT AT THE NW END, WHERE FUCUS, AND MODERATELY DENSE BARNACLES EXTEND TO THE OILED ZONE.

GENERAL COMMENTS: NO LOWER INTERTIDAL OBSERVATIONS COULD BE MADE. INTERTIDAL BIOTA APPEARS HEALTHY + THRIVING, INCLUDING AREAS IN CLOSE PROXIMITY TO OIL. WATERFOWL OBSERVED INCLUDED LESSER SCAUP, SURF SCOTERS, AND 1 UNIDENTIFIED DUCK SPECIES.

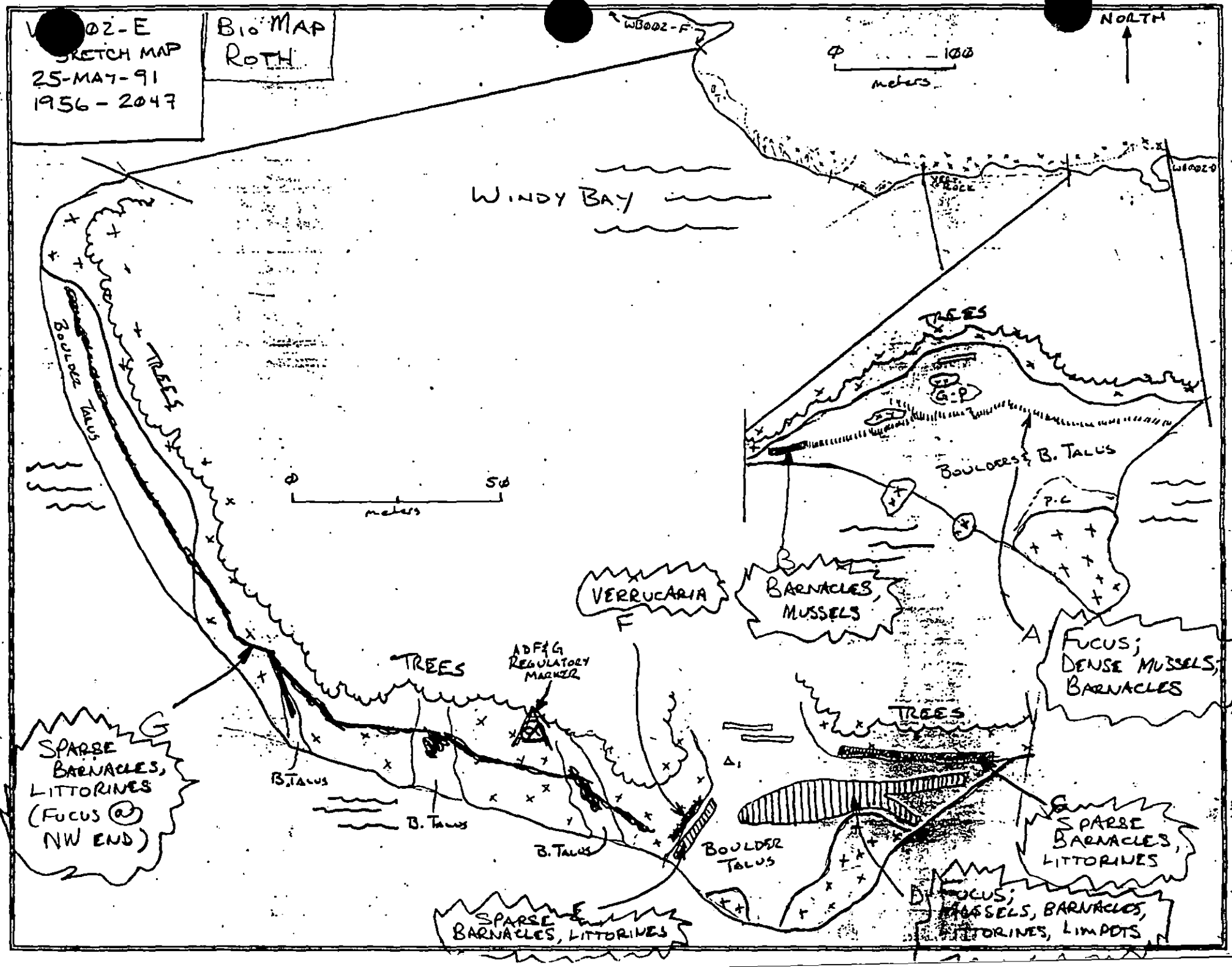
WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

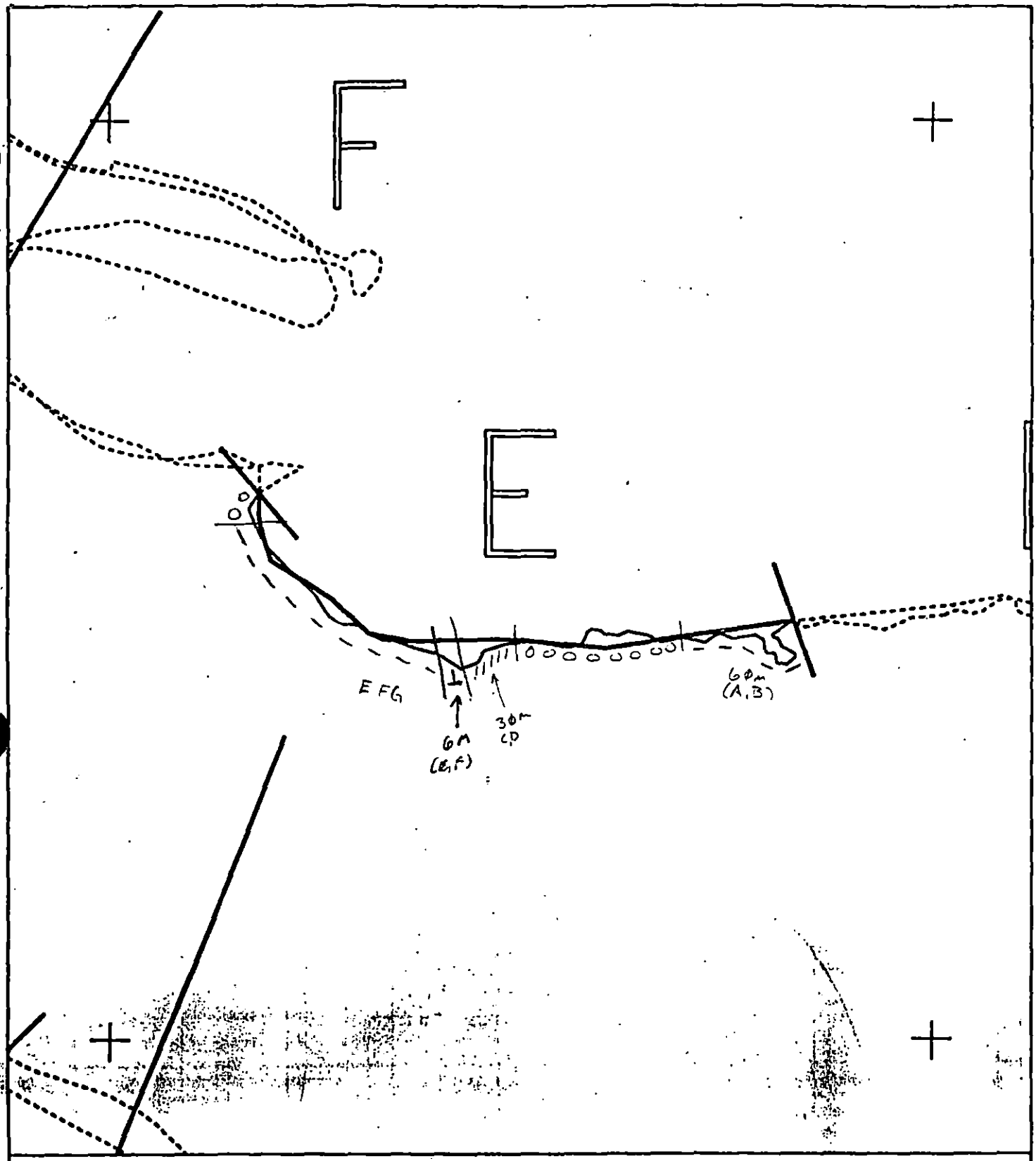
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl	3	150	
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

REVIEWED: MC 6/1/91
Rev'd 6/1/91 DM


W[illegible]02-E
SKETCH MAP
25-MAY-91
1956 - 2047
BIO MAP
ROTH
WBOOZ-F
NORTH
0
100
meters
WINDY BAY
WBOOZ-D
TREES
BOULDER TALUS
0
50
meters
G-P
BOULDERS & B. TALUS
P.C
B
BARNACLES, MUSSELS
VERRUCARIA
F
A
FUCUS; DENSE MUSSELS; BARNACLES
TREES
ADF&G REGULATORY MARKER
TREES
G
SPARSE BARNACLES, LITTORINES (FUCUS @ NW END)
B.TALUS
B. TALUS
B. TALUS
BOULDER TALUS
SPARSE BARNACLES, LITTORINES
SPARSE BARNACLES, LITTORINES
FUCUS; MUSSELS, BARNACLES, LITTORINES, LIMPETS



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

WB002 E

ADEC Subsegment Length: 449m

METERS

0 100 200

AK State Plane Zone 4
sub002e

N

EXXON

Subdivision Field Map
Map Key: KENWB002E
Name: TRIMM
Date: 25-MAY-91
Date Entered:

- SURFACE OIL CATEGORY MAP -

REVISED: MC 1/6/91
reviewed 5.31.91

ASAP TAG REVIEW SHEET

Segment: WB02 **Subd:** C **Site:** 1 **Date PRE-Review** 14 AUG 90

Priority For Addressing In 1990

____ HIGH X MEDIUM ____ LOW ____ NTR (X None)

Treatment Recommended: M/P + BIO

~~ASPHALT~~, MOUSE

Priority Site For Reassessment In 1991

YES	NO		YES	NO		YES	NO		YES	NO
X		CG	X		ADEC	X		EXXON	X		LAND MGR

TAG 15 AUG 90

~~ONE~~ Manual pickup of AP and mousse where accessable (one day max.) followed by B/O

Medium Priority

ASAP FOLLOWUP RECOMMENDATIONS

Segment: ASI WB02 Subd.: C Site: _____ Date: Aug 8 1990

Conditions Observed: Subdivision C of WB02 is on both sides of the dock it has moderate and soft asphalt in a medium concentration. It appears to be under the rock and cobble.

Followup Recommendations: Manually pick up the asphalt patches. The majority is concentrated in the Middle Tidal range. After pick up maybe another application of emulsifier may help

Completed by Pickup Crew: ☐ YES ☒ NO	Priority for Addressing in 1990: ☐ High ☐ Mod. ☐ Low

ADEC Clara S. Crosby (name) Clara S. Crosby (signature)

Comments: Consider this a high priority for 1990 - Significant & persistent band of MFSP/HSOR! Should be removed - throughout segment.

Exxon JON CZARNECKI (name) Jon Czarnecki (signature)

Comments: There is about a days work for a crew here of manual pick up. Probably about 2 super sacks of debris to pick up

USCG AEC Vandepeek (name) AEC Vandepeek (signature)

Comments: Recommend manual + bioremediation 60 M east and west of log dock this year.

Land Rep. Patrick NORMAN (name) Patrick Norman (signature)

Comments: subsistence gathering area (sick) bioactives, moose

FIELD SHORELINE COMMENT SHEET

SEGMENT AS / WB-02 SUBDIVISION: WB-02 SITE: C DATE 07 Aug '90

USCG

NAME AEC Vandepeels SIGNATURE AEC Vandepeels

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Band of AP/MS extends 60 M east and west of log dock. Recommend manual and bio. (inpol) again this year. Reassess in 91.

ADEC

NAME Clara Crosby SIGNATURE Clara S. Crosby.

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Work order modification requested for '90. Priority site for reassessment in '91. This Subsegment has a consistent band of MS/AP → ranging from Surface to subsurface. OP. (note photos). The oiling is easily accessible by rolling B/C – or using shovel to move Sm. C. High Priority for reassessment in '91.

LAND MANAGER

NAME Patrick Norman SIGNATURE Patrick Norman

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: requested additional work on C segment for 1990. st. ' has exposed and unexposed subsurface oil. The surface oil was to be picked up in 1990. and the segment reassest to see if any more subsurface oil has become exposed. subsistence gathering area.

EXXON

NAME Jim Czarnecki SIGNATURE Jim Czarnecki

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

On both sides of the logging dock there is quite a bit of AP/MS, and OR. Because of the use of this area it needs to be checked next Spring

REVISION NO. 7/26/90

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/ 302 Subd.: C Site: _____ Date: Aug 8 1990

Conditions Observed: Subdivision C of WB02 is on both sides of the dock it has mousse and soft asphalt in a medium concentration. It appears to be under the rock and cobble.

Followup Recommendations: manually pick up the asphalt patches. The majority is concentrated in the middle tidal range. After pick up maybe another application of cosmolene may help

Completed by Pickup Crew: ☐ YES ☒ NO	Priority for Addressing in 1990: ☐ High ☐ Mod. ☐ Low

ADEC Clara S. Crosby (name) Clara S. Crosby (signature)

Comments: Consider this a high priority for 1990 - Significant & consistent band of MSAP/HSOR! Should be removed - throughout Segment.

Exxon Jon Czarnecki (name) Jon Czarnecki (signature)

Comments: There is about a days work for a crew of manual pick up. Probably about 3 super sacks of debris to pick up.

USCG AEC Vandepeek (name) AEC Vandepeek (signature)

Comments: Recommend manual + bioremediation 60 M east and west of log dock this year.

Land Rep. Patrick NORMAN (name) Patrick Norman (signature)

Comments: subsistence gathering area, (snails, bidarkies, mussels

ASAP SHORELINE OILING SUMMARY

TEAM NO 04 EXXON Jon Czarnecki SEGMENT AS: WB-02
OG Rick Marty ~~USGS~~ USCG AEC Vandepels SUBDIVISION C
ADEC Chris Crosby LAND REP Pat Norman (P.Gr) TOTAL NO. SITES 1
DATE 07 / Aug / 90 TIME 9 : 15 to 10 : 10 TIDE LEVEL -1.75' to -0.3'
TOTAL EST LENGTH OF SHORELINE SURVEYED: 370 m
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
OIL CATEGORY LENGTH: W — m M 135 m N — m VL 255 m NO 20 m US — m

SURFACE OIL

CHARACTER	SITE 1 DISTRIBUTION /C	/B	/P	/S	SITE 1 OILED ZONES SU	UI	MI	LI	SITE 2 DISTRIBUTION /C	/B	/P	/S	SITE 2 OILED ZONES SU	UI	MI	LI	SITE 3 DISTRIBUTION /C	/B	/P	/S	SITE 3 OILED ZONES SU	UI	MI	LI
ASPHALT	—	U I	U I	U I	—	U I	U I	—																
S.O.R.																								
POOLED																								
COVER	X	—	—	—	—	X	—	—																
COAT																								
STAIN																								
MOUSSE	U	U I	I	X	—	U I	U X I	X																
PATTIES/T.B.																								
FILM																								
NO OIL					X																			
EST. SITE LENGTH					370																			

SUBSURFACE OIL

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

Photographs:
ASAP-04-02-CC
Roll No. 04-03 - CC
Exp 02 → 32-36
Frames 03 → 1-4

COMMENTS There is quite a bit of mousse remaining interstitial to (between) and under large cobbles and boulders. This material would be quite difficult to recover.

REVISION NO. 7/27/88

OG Ra[redacted]egel

SEGMENT ST/ WB-2

SUBDIVISION C

DATE 4 / 1 90

CHECKLIST

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

LEGEND

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 Photo location, direction, and number

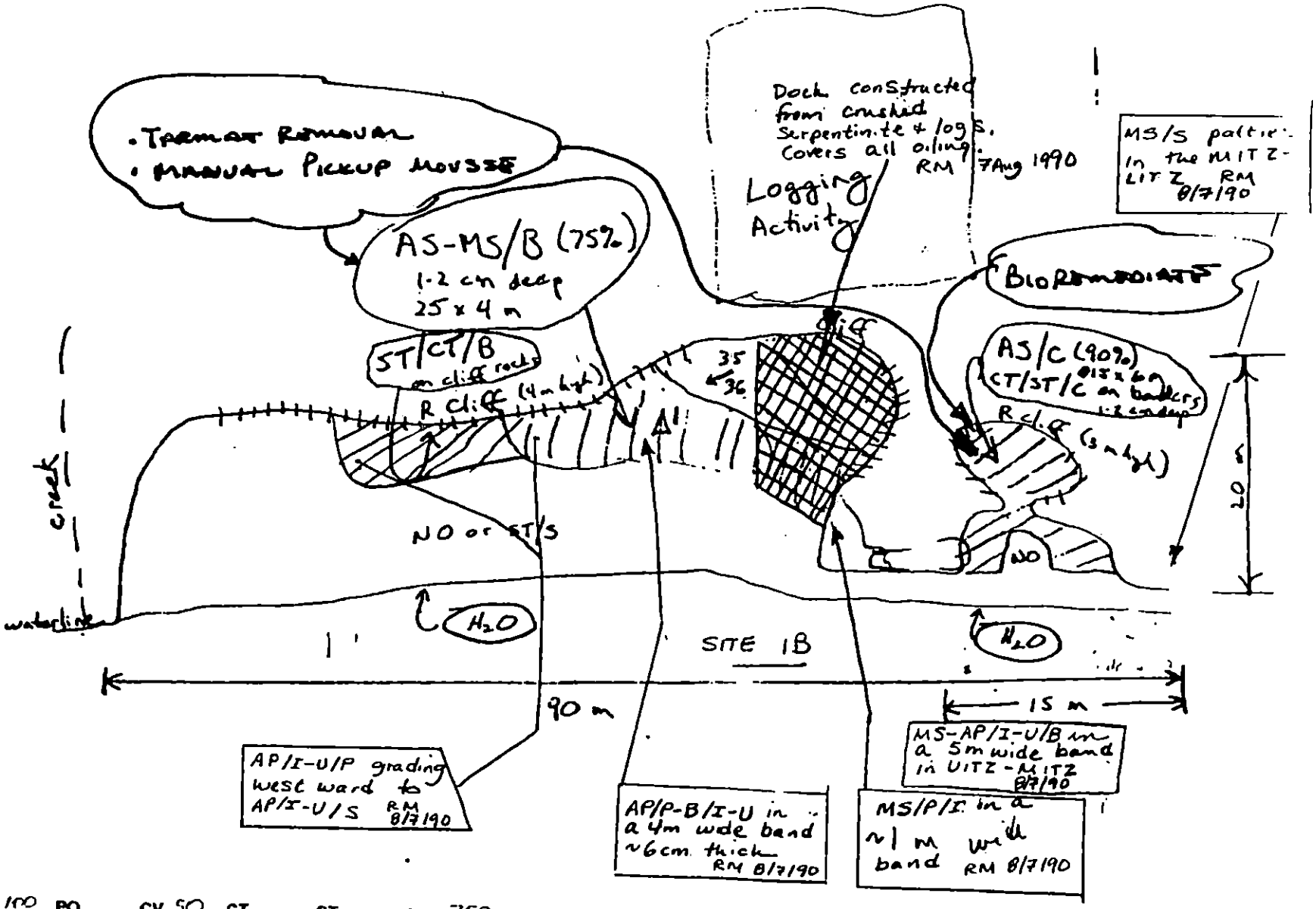
N

2 cm = 10 m
Apr. Scale

SKETCH MAP #5

Part of Subdivision C

ASAP Annotations 08/07/90
R. Marty

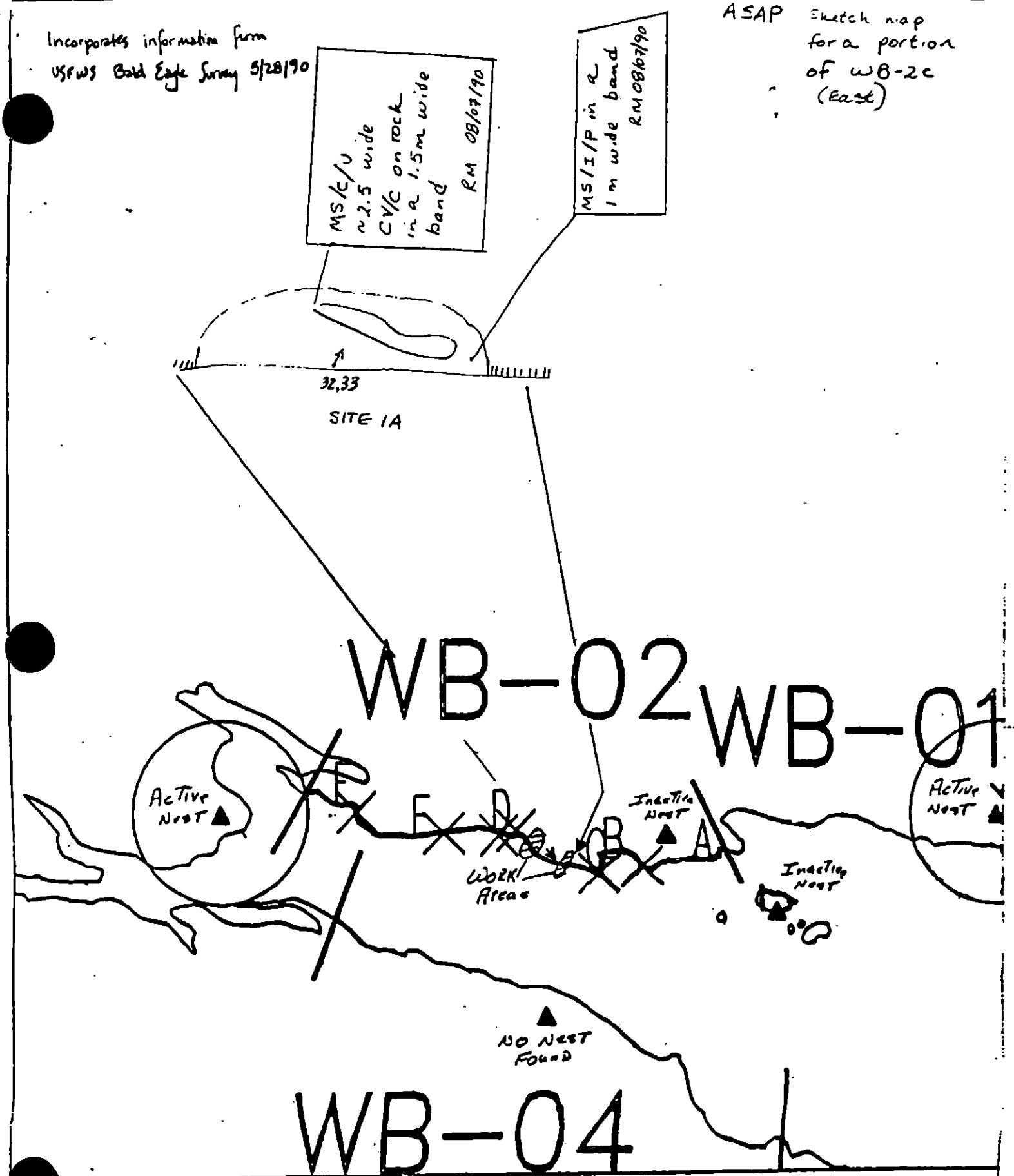


Oil Character Length (m): AP 100 PO ____ CV 50 CT ____ ST ____ MS 350 PT ____ TB ____ FL ____ NO 20 -ASAP-

REVISION 03/24/90

Incorporates information from USFWS Bald Eagle Survey 5/28/90

ASAP Sketch map for a portion of WB-2c (East)



EXXON

Exxon Company, USA

ECOLOGY MAP

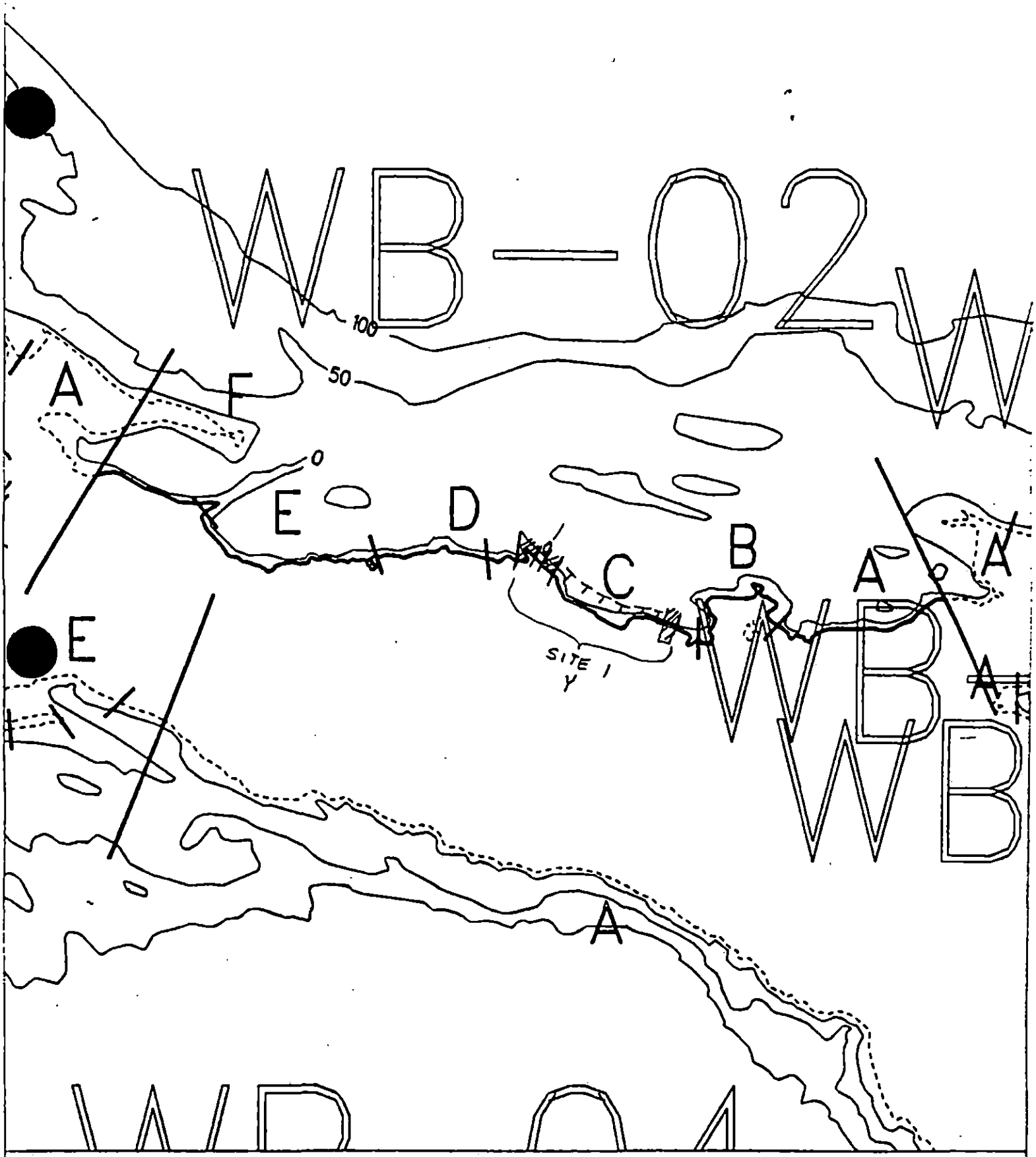
SEGMENT WB-2

SUBDIVISION C (3 of 6)

METERS

★ Seabird Colony

▲ Eagle Nest



EXXON

SEGMENT WB-2

OIL INTENSITY MAP

METERS

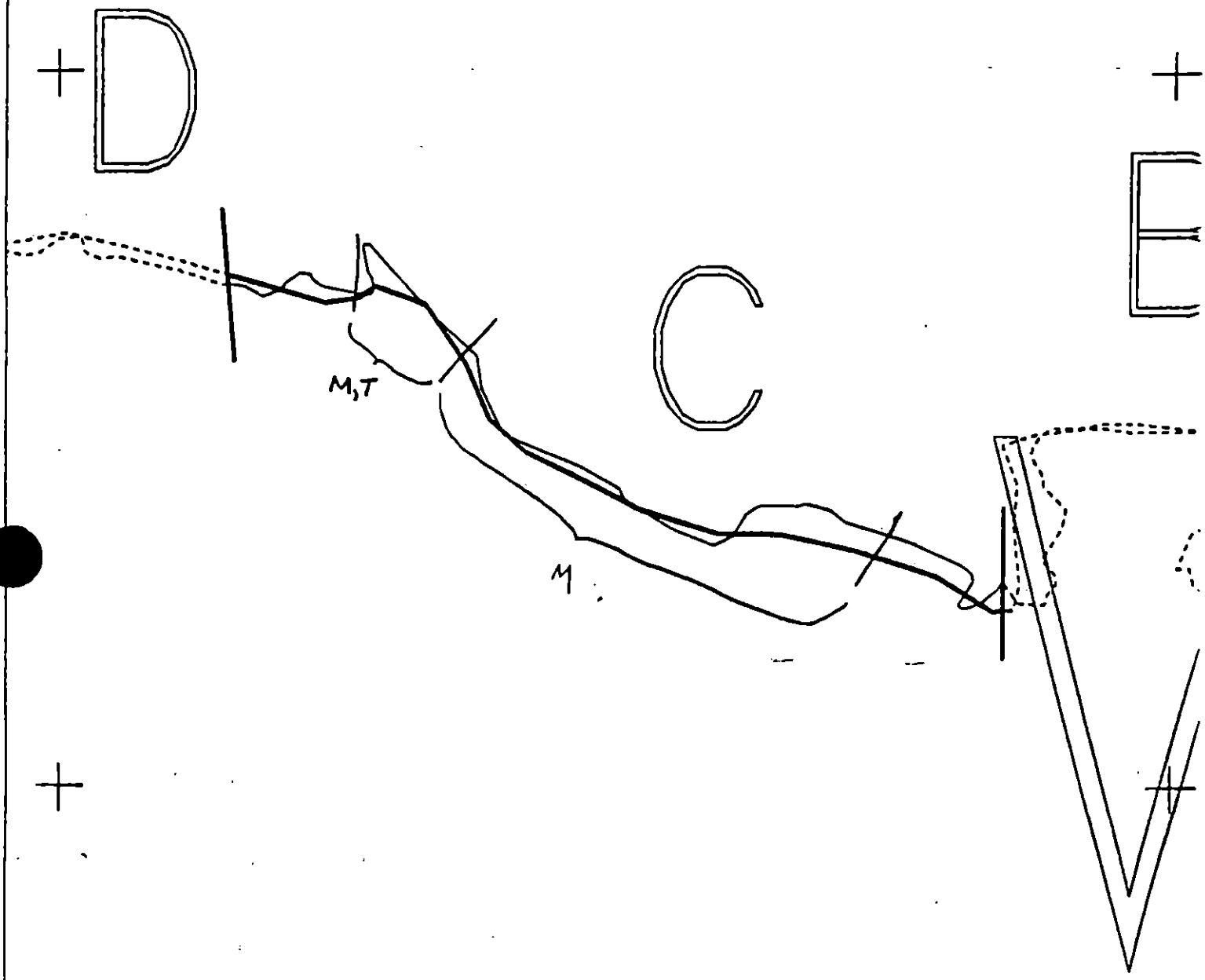
0 283 566

Segment Location Map

Map Key: KENWB-2

July 18, 1990

1:11134



"SIGNIFICANT" OILING

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

WB-2 C

ADEC Subsegment Length: 520m

METERS

0 89 178

AK State Plane Zone 4 1:3505

nwb-2c

EXXON

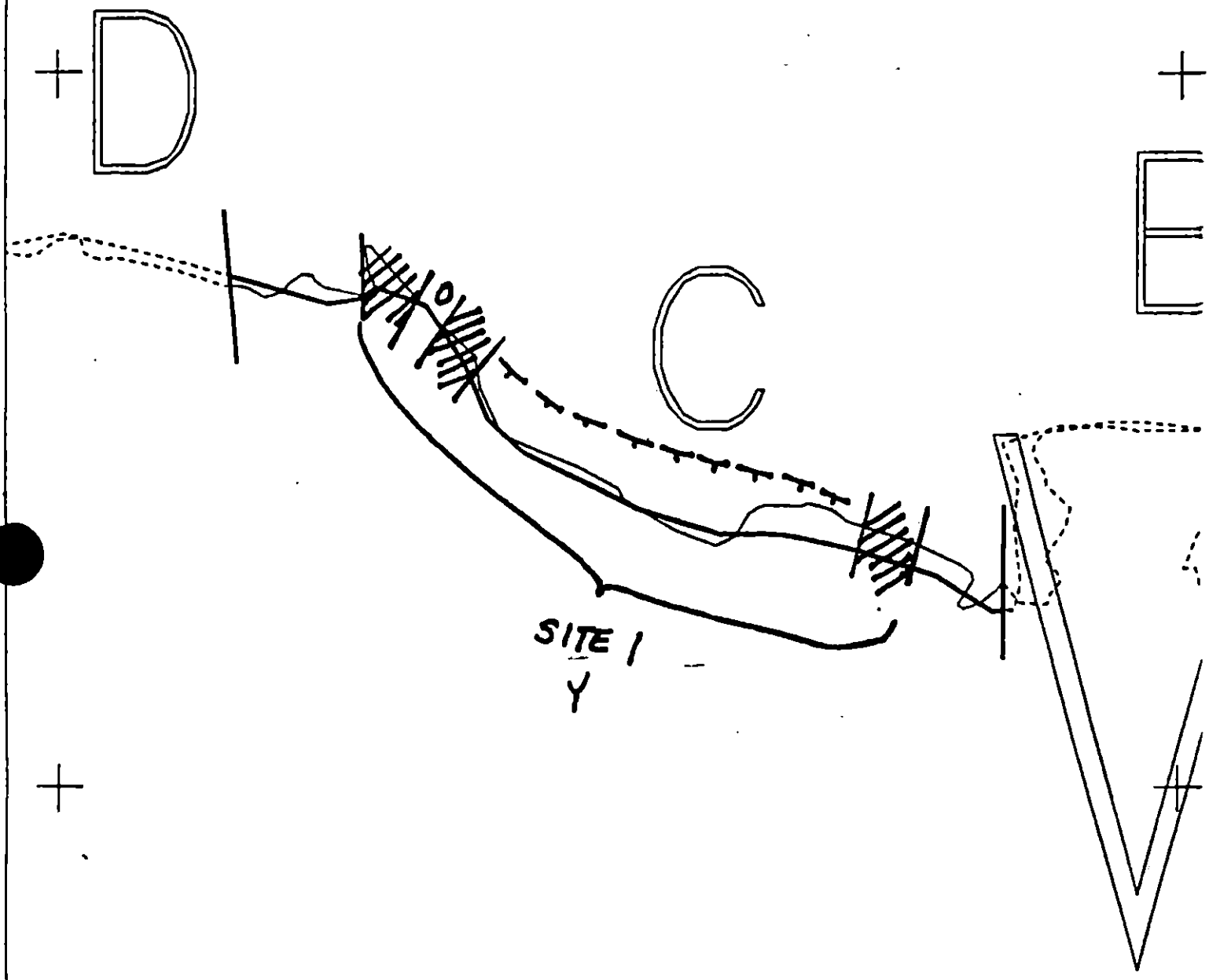
Subdivision Field Map

Map Key: KENWB-2C

Name: R. Marty

Date: 11 Aug 1990

Date Entered:



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

WB-2 C

ADEC Subsegment Length: 520m

METERS

0 89 178

AK State Plane Zone 4 1:3505

nwb-2c

EXXON

Subdivision Field Map

Map Key: KENWB-2C

Name: R. Marty

Date: 11 Aug 1990

Data Entered:

ASAP DATA ENTRY FORM

SUBSURFACE DATA

SEGMENT ID: WB02 SUBDIV: C SITE: 1

PIT # 0 PIT DEPTH 0 OIL CHARACTER ~~OIL INTVAL: FROM~~ ~~TO~~
CLEAN BELOW: ~~PIT ZONE: SU~~ UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

NO PITS DUG THIS SEGMENT.

PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

ASAP DATA ENTRY FORM PAGE 2 OF 2

GENERAL DATA

SEG ID: WB02 SBDV: C SITE: 1 TEAM: 4 DATE: 7/aug/90
SITE LGTH 370 OIL CATEGORIES: W — M 135 N — VL 235 NO 20 U —
1991 REASSESSMENT: USCG: Y ADEC: Y LDMGR: Y EXXON: Y

SURFACE DATA

CHAR #: 1 OIL CHAR: AP OIL DIST: CONT — BRKN U I PTCH U I SPLH U I
TIDAL ZONE: SU — UI U I MI U I LI —

CHAR #: 2 OIL CHAR: CO OIL DIST: CONT X BRKN — PTCH — SPLH X
TIDAL ZONE: SU — UI X MI — LI —

CHAR #: 3 OIL CHAR: MS OIL DIST: CONT U BRKN U I PTCH I SPLH X
TIDAL ZONE: SU — UI U I MI U I LI X

CHAR #: 4 OIL CHAR: NO OIL DIST: CONT — BRKN — PTCH — SPLH —
TIDAL ZONE: SU X UI — MI — LI —

CHAR #: ____ OIL CHAR: ____ OIL DIST: CONT ____ BRKN ____ PTCH ____ SPLH ____
TIDAL ZONE: SU ____ UI ____ MI ____ LI ____

CHAR #: ____ OIL CHAR: ____ OIL DIST: CONT ____ BRKN ____ PTCH ____ SPLH ____
TIDAL ZONE: SU ____ UI ____ MI ____ LI ____

CHAR #: ____ OIL CHAR: ____ OIL DIST: CONT ____ BRKN ____ PTCH ____ SPLH ____
TIDAL ZONE: SU ____ UI ____ MI ____ LI ____

CHAR #: ____ OIL CHAR: ____ OIL DIST: CONT ____ BRKN ____ PTCH ____ SPLH ____
TIDAL ZONE: SU ____ UI ____ MI ____ LI ____

CHAR #: ____ OIL CHAR: ____ OIL DIST: CONT ____ BRKN ____ PTCH ____ SPLH ____
TIDAL ZONE: SU ____ UI ____ MI ____ LI ____

CHAR #: ____ OIL CHAR: ____ OIL DIST: CONT ____ BRKN ____ PTCH ____ SPLH ____
TIDAL ZONE: SU ____ UI ____ MI ____ LI ____

ASAP TAG REVIEW SHEET

Segment: WB02 **Subd:** D **Site:** 1 **Date PRE-Review** 14 Aug 90

Priority For Addressing In 1990

____ HIGH ____ MEDIUM ____ LOW ____ NTR (X None)

Treatment Recommended: M/P + BIO

Asphalt, soil, mousse

Priority Site For Reassessment In 1991

YES	NO	YES	NO	YES	NO	YES	NO
X CG		X ADEC		X EXXON		X LAND MGR	

TAG 15 AUG 90

Re bio (already scheduled)

Reassess 91

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/WB02 Subd.: D Size: _____ Date: Aug - 8 1990

Conditions Observed: Lots of oil about 2½ square yards of debris remain on this segment. When we cleaned up there time this summer looks better than expected. There is oil on top and between the rocks & bottle the mousse is undulating on a lens about 1½ "inches" thick

Followup Recommendations: Manually remove the oil & sediment that are covered. Then inspect the area

Completed by Pickup Crew:	☒ YES ☐ NO	Priority for Addressing in 1990:	☐ High ☐ Mod. ☐ Low

ADEC Clara S. Crosby (name) Clara S. Crosby (signature)

Comments: Manually remove AP & MSOR within segment. Roll BIC to access oil/MS/AP seams when possible. This segment can be worked in conjunction w/ E&C.

Exxon Jon Czaenerki (name) Jon Czaenerki (signature)

Comments: The 4 man crew that I have on hand will spend about 7 to 9 hr on this site before we leave the Bio team is here. Between them it should look better before we leave.

USCG AEC Vandepeels (name) AEC Vandepeels (signature)

Comments: We will have our crew work this area while we are here. Respectfully yr. This is one of 2 areas in Windy Bay where oil "oozes" from bedrock

Land Rep. Patrick Norman (name) Patrick Norman (signature)

Comments: Asphalt and mousse layers have become exposed since the crew worked this segment last. Can be picked up with little effort.

FIELD SHORELINE COMMENT SHEET

SEGMENT AS / WB-2 SUBDIVISION: D SITE: 01 DATE 07 Aug 1990

USCG

NAME AEC Vandepels SIGNATURE AEC Vandepels

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Our crew will work this beach area while we are here. Requests in 91. This was one of the areas looked at by CDR. Ritter to use corexit.

ADEC

NAME Clara Crosby SIGNATURE Clara S. Crosby

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Work modification request for further work in '90. Areas of MS & AP remains under easily rolled B/C.

LAND MANAGER

NAME PATRICK NORMAN SIGNATURE Patrick Norman

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Subsurface mousse and asphalt layers could be exposed over the winter.
subsistence gathering area, snails, bidarkis, mussels.

EXXON

NAME JON CZARNECKI SIGNATURE Jon Czarnecki

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

This area has sub surface oil on and into the bed rock area. Still has MS + AP. We worked this area while here and removed an additional super sack.

REVISION NO. 7/28/88

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/WB02 Subd.: R Site: _____ Date: Aug - 8 1990

Conditions Observed: Lots of oil about 2½ square yards of debris remain on this segment. When we cleaned up there time this summer looks better than expected. There is oil on top and between the rocks & bottle the mousse is undulating as a lens about 1½ "inches" thick

Followup Recommendations: Manually remove the oil & sediment that are covered. Then inspect the area

~~Completed by~~ Pickup Crew:	☒ YES ☐ NO	Priority for Addressing in 1990:	☐ High ☐ Mod. ☐ Low

ADEC Clara S. Crosby (name) Clara S. Crosby (signature)

Comments: Manually remove AP & HSOR within segment. Roll B/C to access oil/MS/AP seams when possible. This segment can be worked in conjunction w/ E & C.

Exxon Jon Czarnecki (name) Jon Czarnecki (signature)

Comments: The 4 man crew that I have on hand will spend about 7 to 9 hr on this site before we leave the Bio team is here. Between them it should look better before we leave.

USCG AEC Vandegeels (name) AEC Vandegeels (signature)

Comments: We will have our crew work this area while we are here. Reassess in 91. This is one of 2 areas in Windy Bay where oil "oozes" from bedrock.

Land Rep. Patrick Norman (name) Patrick Norman (signature)

Comments: Asphalt and mousse layers have become exposed since the crew worked this segment last. can be picked up with little effort.

ASAP SHORELINE OILING SUMMARY

TEAM NO 04 | EXXON Jon Czarnecki | SEGMENT AS/ WB-2
OG Rick Marty | ~~USGS~~ USCG AEC Vandepels | SUBDIVISION 3
ADEC Chris Cosby | LAND REP Pat Norman (P.Gr) | TOTAL NO. SITES 1
DATE 07 / Aug / 90 | TIME 10 : 10 to 10 : 30 | TIDE LEVEL -.3 to +0.3

TOTAL EST LENGTH OF SHORELINE SURVEYED: ~~250~~ 252m RM 8/11/90

SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow

OIL CATEGORY LENGTH: W — m M 108 m N ~~144~~ 146 m VL — m NO — m US — m RM 8/11/90

SURFACE OIL

CHARACTER	SITE 1 DISTRIBUTION /C	/B	/P	/S	OILED ZONES SU	UI	MI	LI	SITE 2 DISTRIBUTION /C	/B	/P	/S	OILED ZONES SU	UI	MI	LI	SITE 3 DISTRIBUTION /C	/B	/P	/S	OILED ZONES SU	UI	MI	LI
ASPHALT	—	I U	U I	—	—	I U	—	—																
S.O.R.	—	—	I U	—	—	—	—	—																
POOLED																								
COVER																								
COAT																								
STAIN	X	—	—	—	—	X	—	—																
MOUSSE	—	I U	I U	—	—	I U	—	—																
PATTIES/T.B.																								
FILM																								
NO OIL					X	—	X	X																
EST. SITE LENGTH					~~250m~~ 252m RM 8/11																			

SUBSURFACE OIL

SITE NO.	PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER OP	OR	OF	NO	OILED INTERVAL (CM-CM)	CLEAN BELOW (Y/N)	PIT ZONE SU	UI	MI	LI	SURFACE-SUBSURFACE SEDIMENTS
1	1	18	X				8 - 17	Y		X			BCP/SGBC

Photographs: ASAP-04-03
Roll No. -CC
Frames 5-15

COMMENTS

Major oiling type consists of a mousse pavement which is beginning to solidify into asphalt. This generally occurs between & beneath large cobbles & boulders and does not appear to be easily recoverable.

REVISION NO. 7/27/88

OG Randy Siegel

SEGMENT ST/ UB-2

SUBDIVISION D

DATE 4/6/90

CHECKLIST

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

LEGEND

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Scattered Distribution

Other Vegetation

Photo location, direction, and number

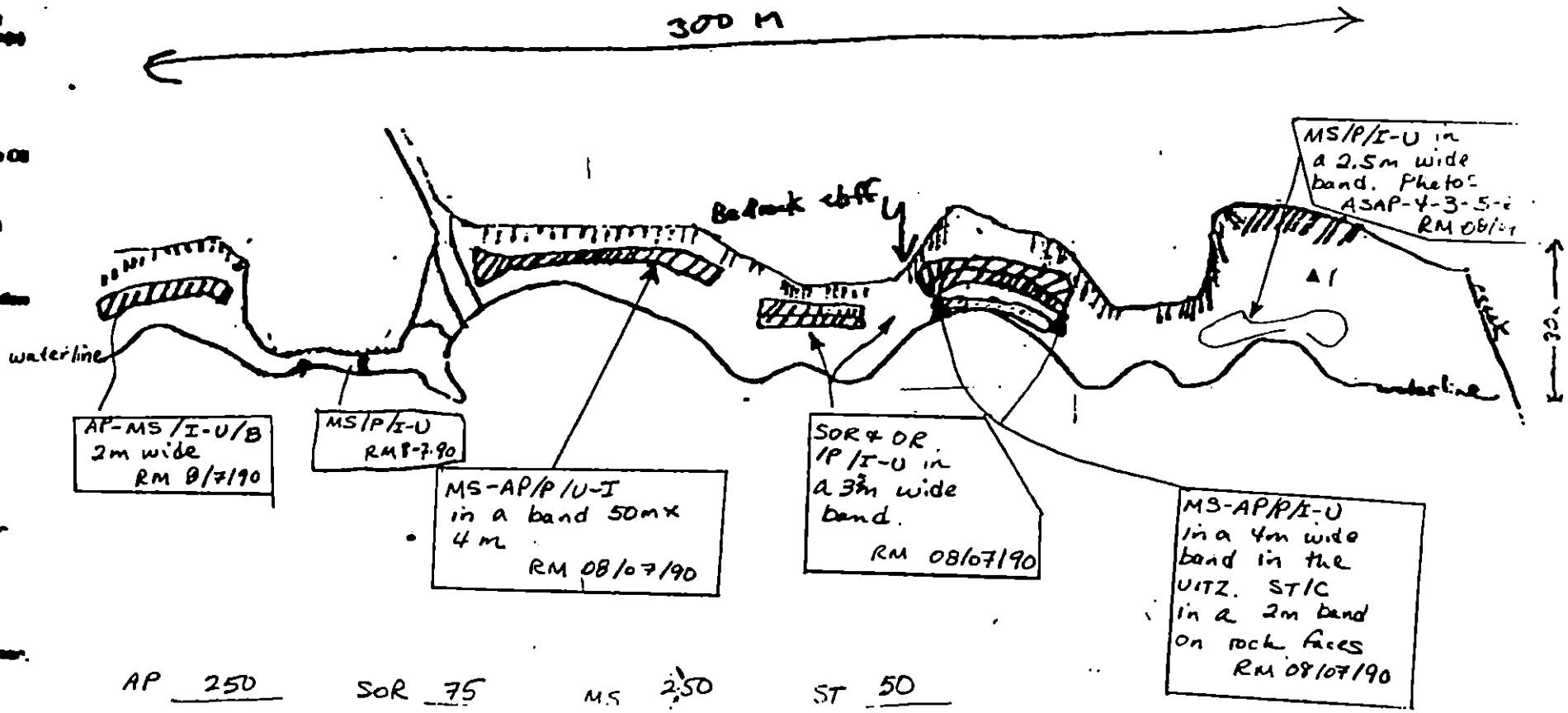
N

SKETCH MAP

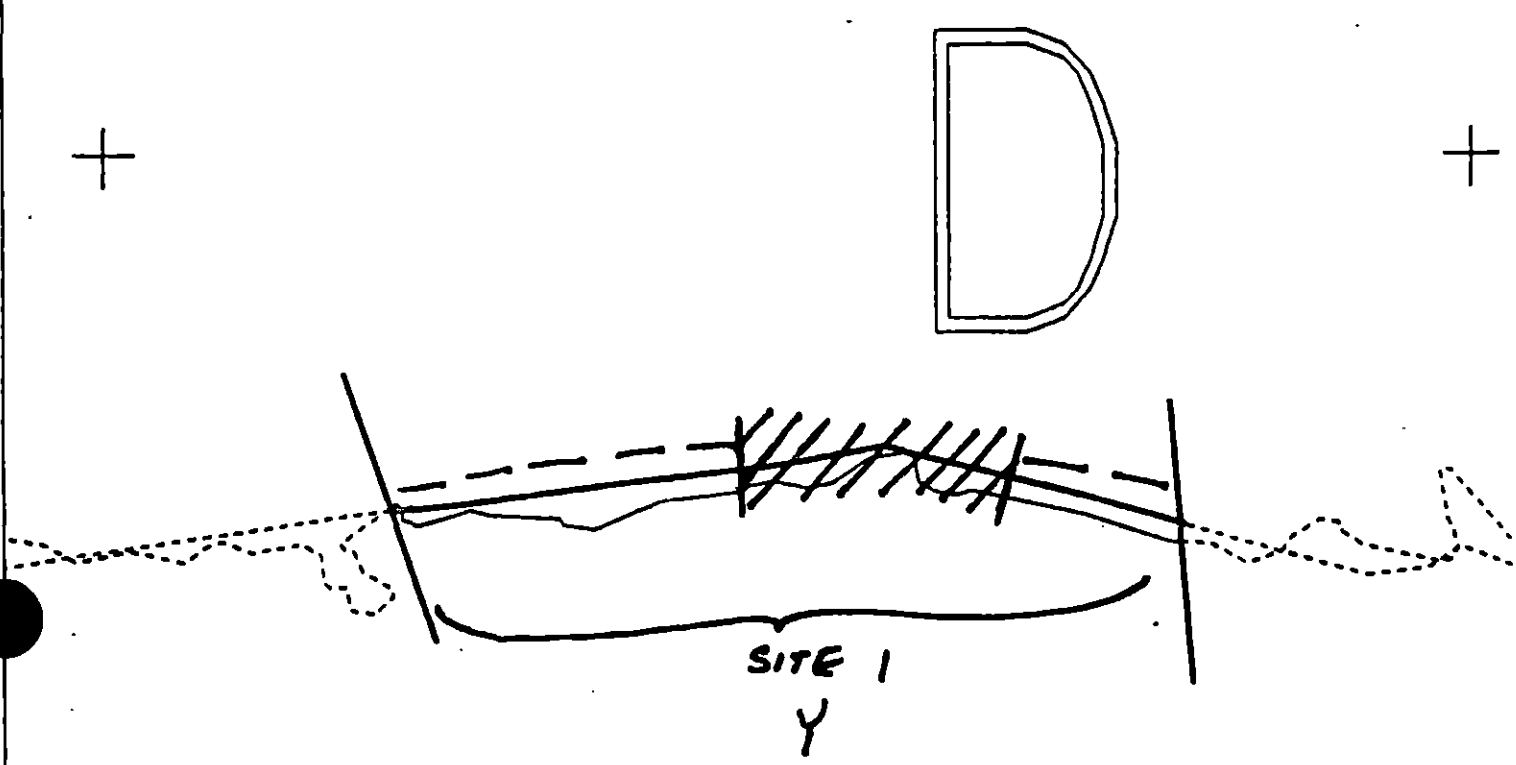
Subdivision D

ASAP Annotations
08/07/90
R. Marty

▲1 OP 8-17cm
Y TD=18cm
BCP/SG BC



AP 250 SOR 75 MS 250 ST 50



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

WB-2 D

ADEC Subsegment Length: 252m

METERS

0 61 122

AK State Plane Zone 4 1:2388

EXXON

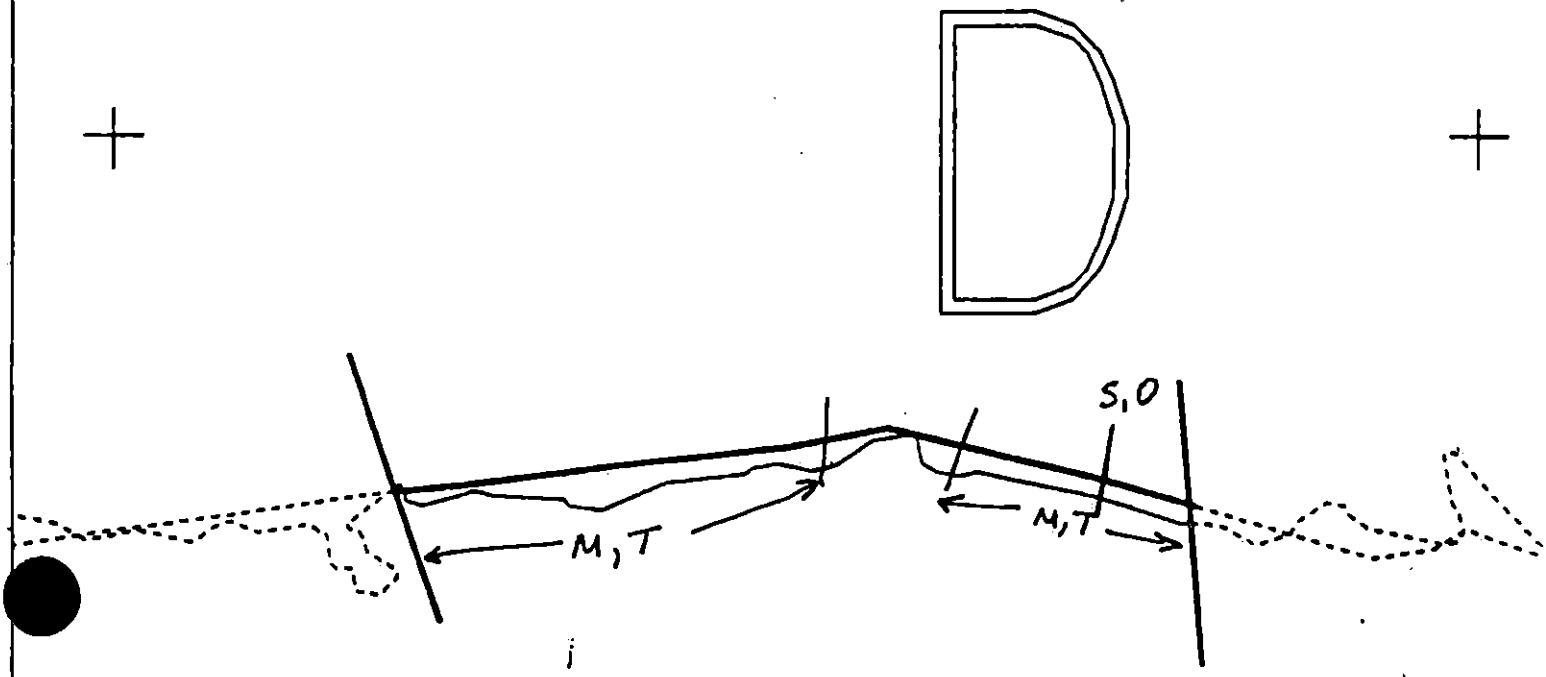
Subdivision Field Map

Map Key: KENWB-2D

Name: R. Marty

Date: 11 Aug '90

Data Entered:



"SIGNIFICANT" OILING

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

WB-2 D

ADEC Subsegment Length: 252m

METERS

0 61 122

AK State Plane Zone 4 1:2300

EXXON

Subdivision Field Map

Map Key: KENWB-2D

Name: R. Marty

Date: 11 Aug 1990

Date Entered:

ASAP DATA ENTRY FORM PAGE 2 / OF 2

GENERAL DATA

SEG ID: WB02 SBDV: D SITE: 1 TEAM: 4 DATE: 8/7/90

SITE LGTH 25 ~~250~~ 25 OIL CATEGORIES: W ___ M 108 N 142 VL ___ NO ___ U ___
RM 8/11/90 146 RM 8/11/90

1991 REASSESSMENT: USCG: ✓ ADEC: ✓ LDMGR: ✓ EXXON: ✓

SURFACE DATA

CHAR #: 1 OIL CHAR: AP OIL DIST: CONT ___ BRKN I U PTCH U I SPLH ___
TIDAL ZONE: SU ___ UI I U MI ___ ~~LI~~ ___

CHAR #: 2 OIL CHAR: SO OIL DIST: CONT ___ BRKN ___ PTCH I U SPLH ___
TIDAL ZONE: SU ___ ~~UI~~ ___ ~~MI~~ ___ ~~LI~~ ___

CHAR #: 3 OIL CHAR: ST OIL DIST: CONT X BRKN ___ ~~PTCH~~ ___ ~~SPLH~~ ___
TIDAL ZONE: SU ~~X~~ UI X MI ___ ~~LI~~ ___

CHAR #: 4 OIL CHAR: MS OIL DIST: CONT ___ BRKN I U PTCH I U SPLH ___
TIDAL ZONE: SU ___ UI I U MI ___ ~~LI~~ ___

CHAR #: 5 OIL CHAR: NO OIL DIST: CONT ___ BRKN ___ PTCH ___ SPLH ___
TIDAL ZONE: SU X UI ___ MI X LI X

CHAR #: ___ OIL CHAR: ___ OIL DIST: CONT ___ BRKN ___ PTCH ___ SPLH ___
TIDAL ZONE: SU ___ UI ___ MI ___ LI ___

CHAR #: ___ OIL CHAR: ___ OIL DIST: CONT ___ BRKN ___ PTCH ___ SPLH ___
TIDAL ZONE: SU ___ UI ___ MI ___ LI ___

CHAR #: ___ OIL CHAR: ___ OIL DIST: CONT ___ BRKN ___ PTCH ___ SPLH ___
TIDAL ZONE: SU ___ UI ___ MI ___ LI ___

CHAR #: ___ OIL CHAR: ___ OIL DIST: CONT ___ BRKN ___ PTCH ___ SPLH ___
TIDAL ZONE: SU ___ UI ___ MI ___ LI ___

CHAR #: ___ OIL CHAR: ___ OIL DIST: CONT ___ BRKN ___ PTCH ___ SPLH ___
TIDAL ZONE: SU ___ UI ___ MI ___ LI ___

ASAP DATA ENTRY FORM

SUBSURFACE DATA

SEGMENT ID: CUB02 SUBDIV: D SITE: 1

PIT # 1 PIT DEPTH 18cm OIL CHARACTER OP OIL INTVAL: FROM 8 TO 17
CLEAN BELOW: X PIT ZONE: SU ___ UI X MI ___ LI ___
SUBSURF SEDIMENT: BRK ___ BLD X COB X PEB X GRN X SAN X MUD ___ VEG ___

PIT # ___ PIT DEPTH ___ OIL CHARACTER ___ OIL INTVAL: FROM ___ TO ___
CLEAN BELOW: ___ PIT ZONE: SU ___ UI ___ MI ___ LI ___
SUBSURF SEDIMENT: BRK ___ BLD ___ COB ___ PEB ___ GRN ___ SAN ___ MUD ___ VEG ___

PIT # ___ PIT DEPTH ___ OIL CHARACTER ___ OIL INTVAL: FROM ___ TO ___
CLEAN BELOW: ___ PIT ZONE: SU ___ UI ___ MI ___ LI ___
SUBSURF SEDIMENT: BRK ___ BLD ___ COB ___ PEB ___ GRN ___ SAN ___ MUD ___ VEG ___

PIT # ___ PIT DEPTH ___ OIL CHARACTER ___ OIL INTVAL: FROM ___ TO ___
CLEAN BELOW: ___ PIT ZONE: SU ___ UI ___ MI ___ LI ___
SUBSURF SEDIMENT: BRK ___ BLD ___ COB ___ PEB ___ GRN ___ SAN ___ MUD ___ VEG ___

PIT # ___ PIT DEPTH ___ OIL CHARACTER ___ OIL INTVAL: FROM ___ TO ___
CLEAN BELOW: ___ PIT ZONE: SU ___ UI ___ MI ___ LI ___
SUBSURF SEDIMENT: BRK ___ BLD ___ COB ___ PEB ___ GRN ___ SAN ___ MUD ___ VEG ___

PIT # ___ PIT DEPTH ___ OIL CHARACTER ___ OIL INTVAL: FROM ___ TO ___
CLEAN BELOW: ___ PIT ZONE: SU ___ UI ___ MI ___ LI ___
SUBSURF SEDIMENT: BRK ___ BLD ___ COB ___ PEB ___ GRN ___ SAN ___ MUD ___ VEG ___

PIT # ___ PIT DEPTH ___ OIL CHARACTER ___ OIL INTVAL: FROM ___ TO ___
CLEAN BELOW: ___ PIT ZONE: SU ___ UI ___ MI ___ LI ___
SUBSURF SEDIMENT: BRK ___ BLD ___ COB ___ PEB ___ GRN ___ SAN ___ MUD ___ VEG ___

PIT # ___ PIT DEPTH ___ OIL CHARACTER ___ OIL INTVAL: FROM ___ TO ___
CLEAN BELOW: ___ PIT ZONE: SU ___ UI ___ MI ___ LI ___
SUBSURF SEDIMENT: BRK ___ BLD ___ COB ___ PEB ___ GRN ___ SAN ___ MUD ___ VEG ___

PIT # ___ PIT DEPTH ___ OIL CHARACTER ___ OIL INTVAL: FROM ___ TO ___
CLEAN BELOW: ___ PIT ZONE: SU ___ UI ___ MI ___ LI ___
SUBSURF SEDIMENT: BRK ___ BLD ___ COB ___ PEB ___ GRN ___ SAN ___ MUD ___ VEG ___

PIT # ___ PIT DEPTH ___ OIL CHARACTER ___ OIL INTVAL: FROM ___ TO ___
CLEAN BELOW: ___ PIT ZONE: SU ___ UI ___ MI ___ LI ___
SUBSURF SEDIMENT: BRK ___ BLD ___ COB ___ PEB ___ GRN ___ SAN ___ MUD ___ VEG ___

ASAP TAG REVIEW SHEET

Segment: WB02 **Subd:** E **Site:** 1 **Date PRE-Review** 14 Aug 90

Priority For Addressing In 1990

X HIGH X MEDIUM ____ LOW ____ NTR

Treatment Recommended: M/P - Y - A - D

Asphalt, Soil, Mowitze

Priority Site For Reassessment In 1991

YES X CG NO ____ YES X ADEC NO ____ YES X EXXON NO ____ YES X LAND MGR NO ____

TAB 15 Aug 90

NTR reassess 91

ASAP FOLLOWUP RECOMMENDATIONS

Segment: ASI WBOQ Subd.: E. Site: _____ Date: Aug 8 1990

Conditions Observed: Some oil under lying the rocks and leaching to the surface in small asphalt patches. the Oil appears to go to the bedrock layer below and leach up wards as the top layers get removed

Followup Recommendations: Manually pick up and expose if MDF+6 weather allows

Completed by Pickup Crew:	☐ YES ☒ NO	Priority for Addressing in 1990:	☒ High ☐ Mod. ☐ Low

ADEC Clara S. Crosby (name) Clara S. Crosby (signature)

Comments: Exposed MS & AP recovery — when possible the crew should follow: Seams & remove
Work this segment in conjunction w/ D.C.

Exxon Fox Czarnecki (name) Fox Czarnecki (signature)

Comments: Manually remove the small concentration of asphalt which is leaching up wards from the bedrock.

USCG AEC Vandegrek (name) AEC Vandegrek (signature)

Comments: Manually remove AP + Bion this year. This is one of 2 areas in Windy Bay that oil "oozes" from bedrock.

Land Rep. Patrick Norman (name) Patrick Norman (signature)

Comments: The oil that has become exposed can be picked up manually by a crew.
substance gathering area,

FIELD SHORELINE COMMENT SHEET

SEGMENT AS / WB-02 SUBDIVISION: E SITE: 01 DATE 07 Aug '90

USCG

NAME AEC Vandepels SIGNATURE AEC Vandepels

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Found 2 X 4 M area of AP/MS on eastern most pocket beach. This was an area looked at by CDR Reitter to use corexit. Recommend manual + bio again this year. Western most pocket beach had 5 1/2 M areas of AP/MS that also needs manual and bio this year. Reassess in 91.

ADEC

NAME Clara S. Crosby SIGNATURE Clara S. Crosby

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Work modification request for further cleanup in '90. High priority site for reassessment in '91.

There are pockets of mousse remaining under some easily rolled B/C armor.

LAND MANAGER

NAME Patrick Dorman SIGNATURE Patrick Dorman

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: unexposed subsurface oil in E segment should become exposed over the winter and needs to be reassessed in 1991

Additional work requested on exposed mousse layers 8-3-90. also all of E segment is a subsistence gathering area. (E) snails, bidarkis

EXXON

NAME Jon Czarnecki SIGNATURE Jon Czarnecki

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: This area is one that corexit was discussed to remove the oil. It bleeds as weather warms up. MS, AP, CR are highly usable on this sub segment.

REVISION NO. 7/26/90

ASAP SHORELINE OILING SUMMARY

TEAM NO 24 | EXXON Jon Czarnecki | SEGMENT AS/ WB—
OG Rich Marty | ~~USGS~~ USCG AEC Vandepels | SUBDIVISION E
ADEC Chris Crosby | LAND REP Pat Norman (P.Gr) | TOTAL NO. SITES 1
DATE 07 / Aug / 90 | TIME 10:30 to 10:45 | TIDE LEVEL +0.3' to +0.3'

TOTAL EST LENGTH OF SHORELINE SURVEYED: ~~360~~ 449 m RM 8/11/90

SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow

OIL CATEGORY LENGTH: W — m M ~~60~~ m 75 N ~~300~~ m 374 VL — m NO — m US — m RM 8/11/90

SURFACE OIL

CHARACTER	SITE 1 DISTRIBUTION /C	/B	/P	/S	OILED ZONES SU	UI	MI	LI	SITE 2 DISTRIBUTION /C	/B	/P	/S	OILED ZONES SU	UI	MI	LI	SITE 3 DISTRIBUTION /C	/B	/P	/S	OILED ZONES SU	UI	MI	LI
ASPHALT	—	—	I U	I U	—	I U	I U	—																
S.O.R.	—	—	X	—	—	X	X	—																
POOLED																								
COVER																								
COAT																								
STAIN																								
MOUSSE	—	—	I U	I U	—	I U	I U	—																
PATTIES/T.B.																								
FILM																								
NO OIL					X	—	—	X																
EST. SITE LENGTH					~~360~~ 449 m RM 8/11/90																			

SUBSURFACE OIL

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

Photographs: ASAP-04-03
Roll No. -CC
Frames 16-24

COMMENTS Most of the remaining oil consists of a mousse pavement which is solidifying to asphalt. This oil is found between & beneath cobbles, boulders & rubble & has associated SOR. The remaining oil will not be easily recovered.

REVISION NO. 7/27/90

UG [illegible]

SEGMENT STI 03-2

SUBDIVISION E

DATE 4 / 4 / 90

CHECKLIST

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

LEGEND

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Isolated Distribution

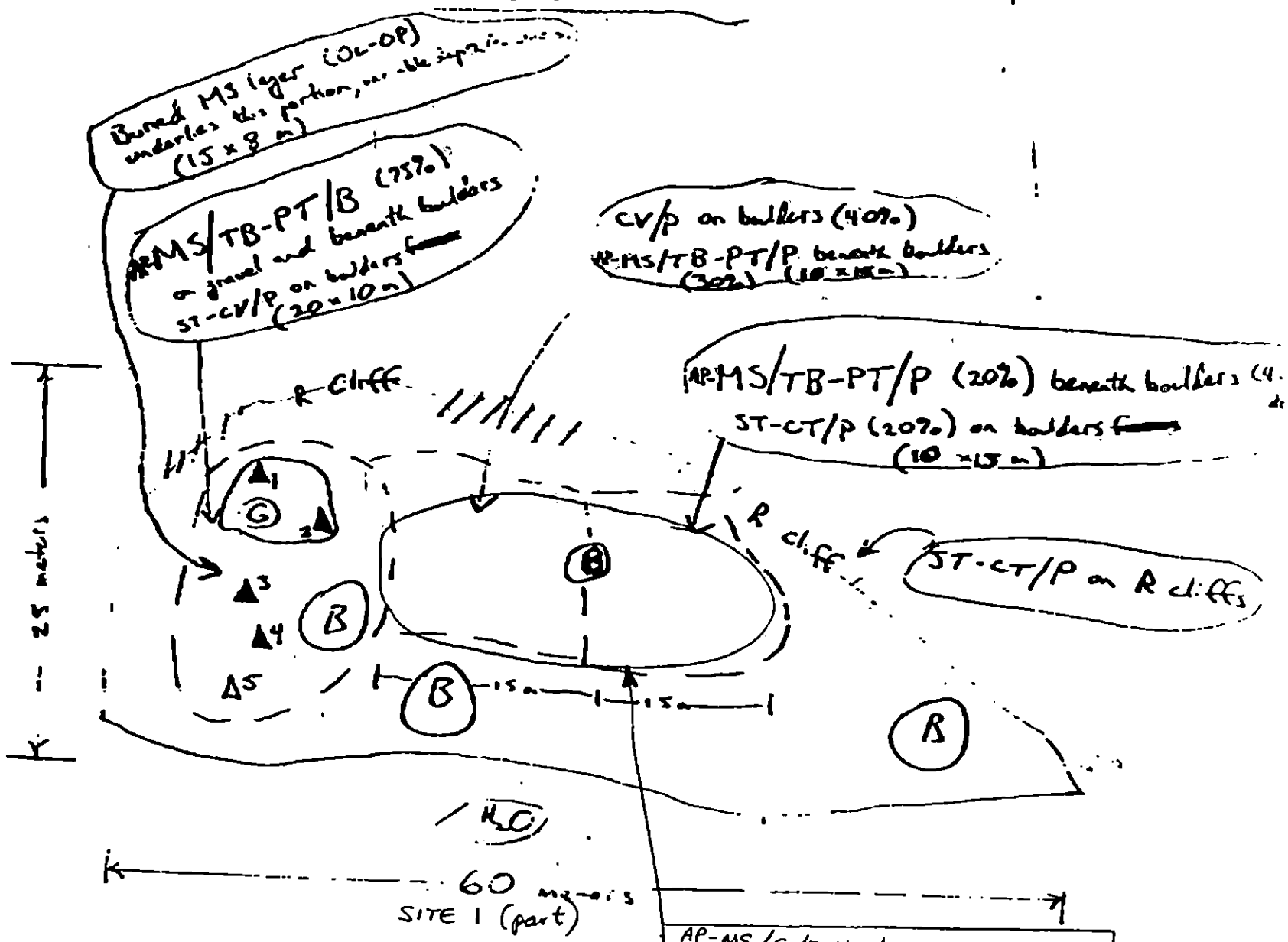
Tidal Vegetation

Photo location, direction, & number

SKETCH MAP

Sketch Map = of eastern area

ASAP Annotations
R. Marty 08/07/90



Character Length (m) AP 300 PO CV CT ST MS 300

OG [illegible]

SEGMENT ST/ [illegible]

SUBDIVISION [illegible]

DATE 4 / [illegible] 90

CHECKLIST

- Bl Answer
- Approx. Scale
- Bag/Sub Study
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HWL/MWL
- SSL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

LEGEND

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Bottom Distribution

CT/P Patchy Distribution

CT/S Stranded Distribution

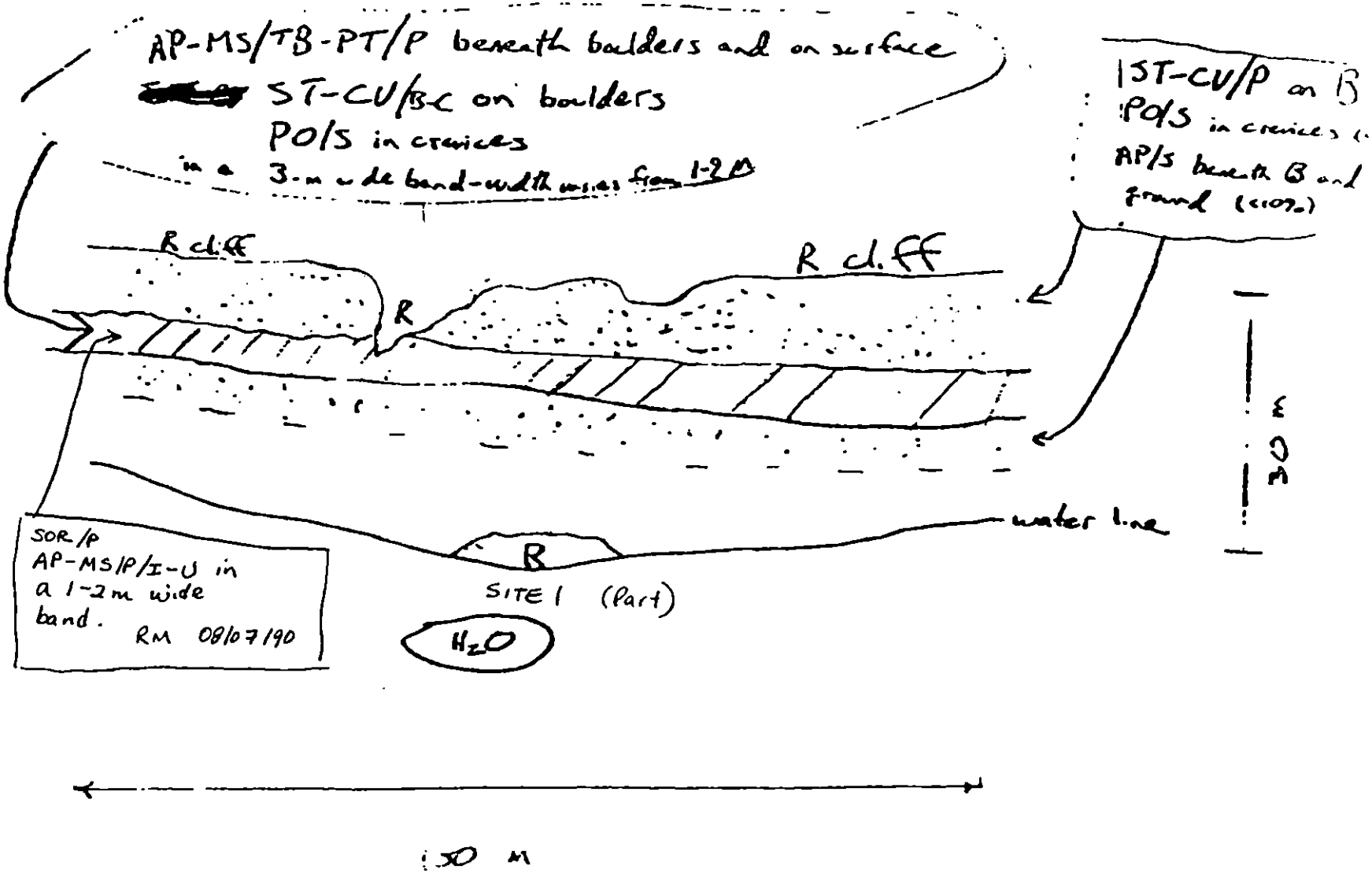
Bed Vegetation

Photo location, direction, and number

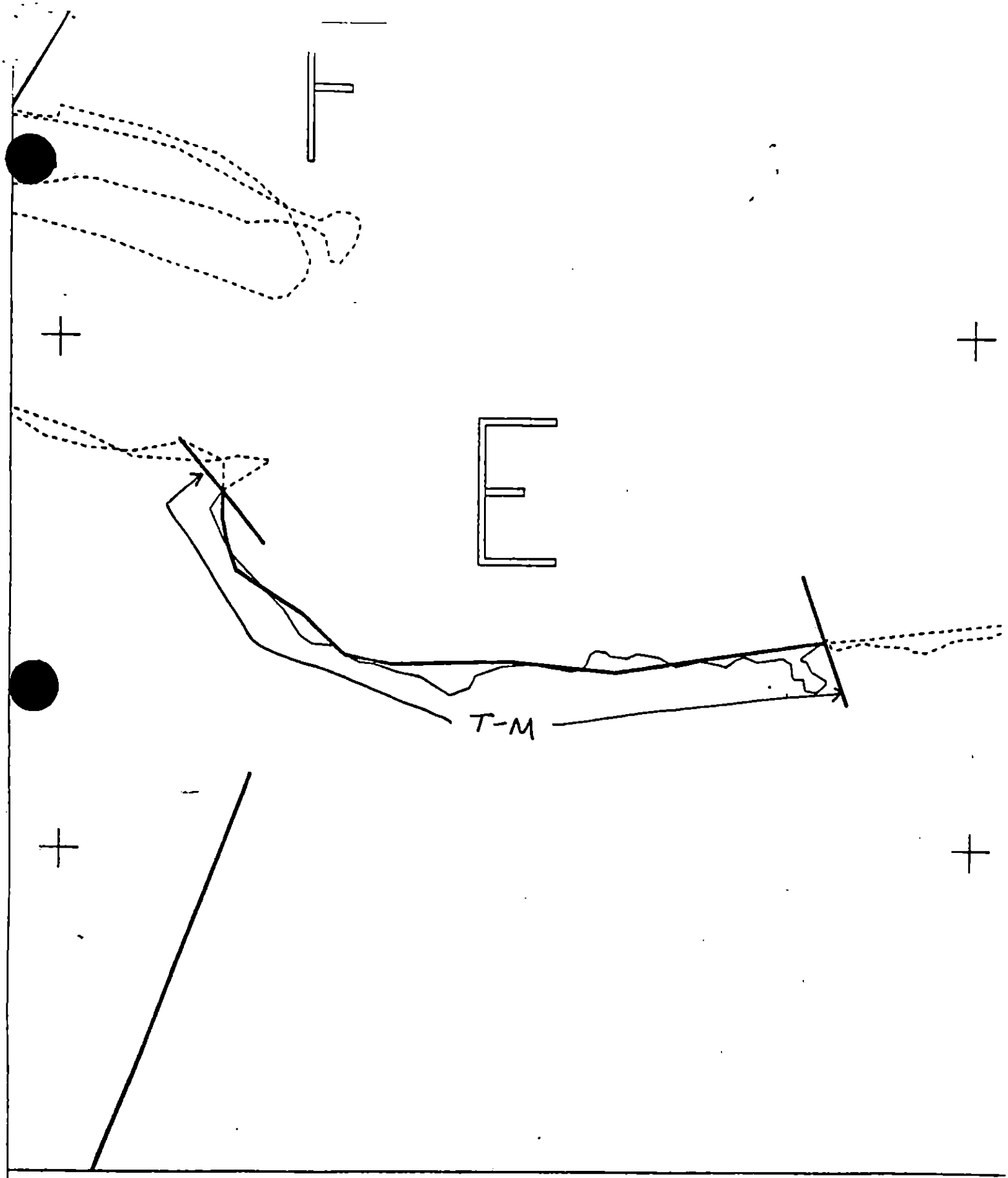
N

SKETCH MAP

2 of western area



Character Length (m) AP ___ PO ___ CV ___ CT ___ ST ___ MS ___ PT ___ TB ___ FI ___



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

WB-2 E

ADEC Subsegment Length: 449m

METERS

0 81 162

AK State Plane Zone 4 1:3183

kwb-2e

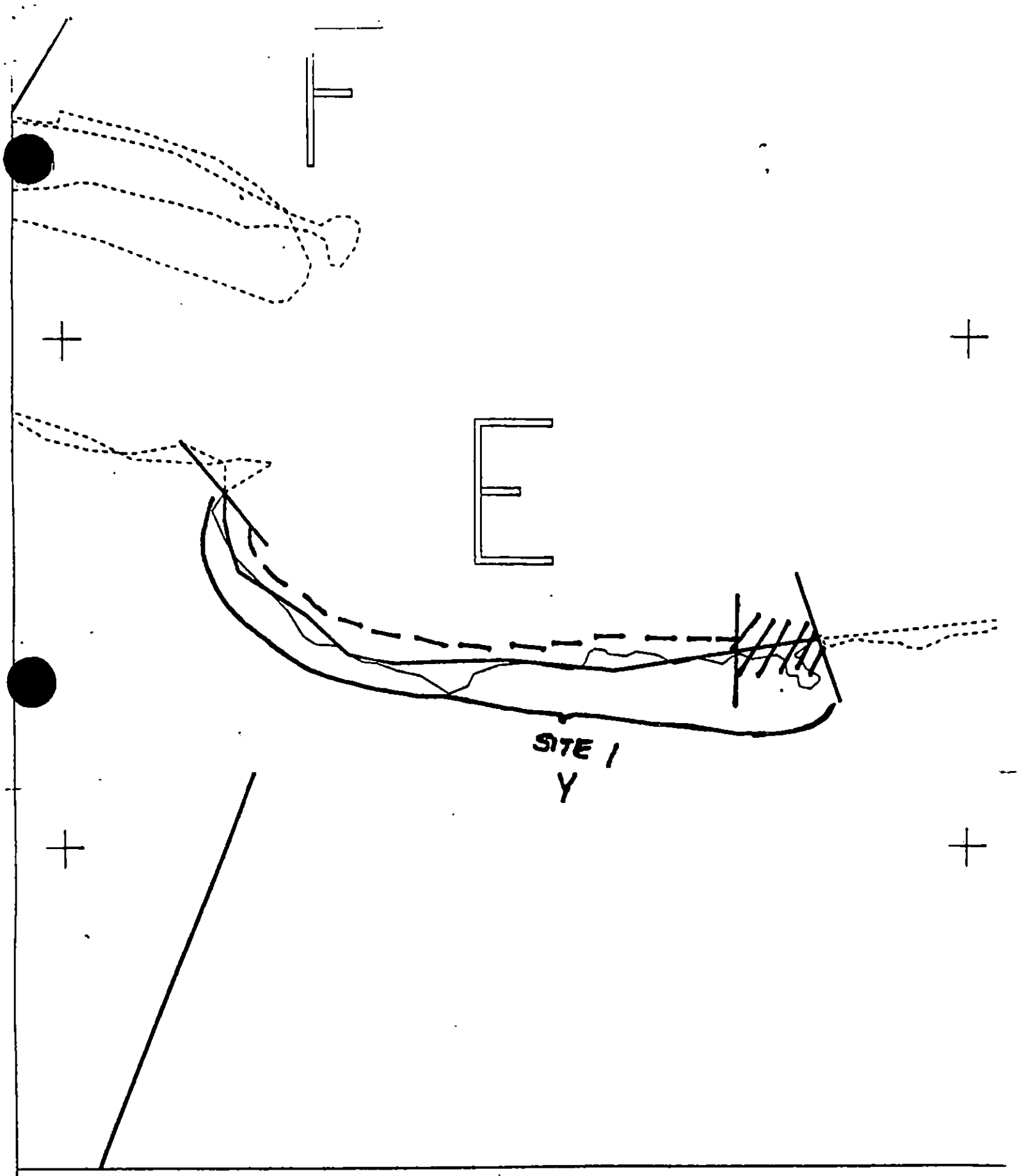
Subdivision Field Map

Map Key: KENWB-2E

Name: R. Marty

Date: 11 Aug 1990

Data Entered:



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

WB-2 E

ADEC Subsegment Length: 449m

METERS

0 81 162

AK State Plane Zone 4 1:3183

N

Subdivision Field Map

Map Key: KENWB-2E

Name: R. Marty

Date: 11 Aug 1990

Date Entered:

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/WB02 Subd.: E Site: _____ Date: Aug 8 1990

Conditions Observed: Some oil underlying the rocks and leaching to the surface in small asphalt patches. The oil appears to go to the bedrock layer below and back up waves as the top layer gets removed.

Followup Recommendations: Manually suck up and enzyme if ADF&G allow.

Completed by Pickup Crew: ☐ YES ☒ NO	Priority for Addressing in 1990: ☒ High ☐ Mod. ☐ Low

ADEC Clara S. Crosby (name) Clara S. Crosby (signature)

Comments: Exposed MS & AP recovery – when possible the crew should follow seams & remove
Work this segment in conjunction w/ D.C.

Exxon Jon Czarnecki (name) Jon Czarnecki (signature)

Comments: Manually remove the small concentrations of asphalt which is leaching up waves from the bedrock.

USCG AEC Vandegeek (name) AEC Vandegeek (signature)

Comments: Manually remove AP & bio this year. This is one of 2 areas in Windy Bay that oil "oozes" from bedrock.

Land Rep. Patrick Norman (name) Patrick Norman (signature)

Comments: The oil that has become exposed can be picked up manually by a crew.
subsistence gathering area

ASAP DATA ENTRY FORM PAGE 1 OF 2

GENERAL DATA

SEG ID: WB03 SBDV: E SITE: 1 TEAM: 4 DATE: Aug 2-1990
SITE LGTH ~~360~~ 449 OIL CATEGORIES: W — M ~~60~~ 75 N ~~300~~ 374 VL — NO — U — RM 8/11/9
1991 REASSESSMENT: USCG: Y ADEC: Y LDMGR: Y EXXON: Y

SURFACE DATA

CHAR #: 1 OIL CHAR: AP OIL DIST: CONT — BRKN — PTCH I U SPLH I U
TIDAL ZONE: SU — UI I U MI I U LI —

CHAR #: 2 OIL CHAR: SO OIL DIST: CONT — BRKN — PTCH X SPLH —
TIDAL ZONE: SU — UI X MI X LI —

CHAR #: 3 OIL CHAR: MS OIL DIST: CONT — BRKN — PTCH I U SPLH I U
TIDAL ZONE: SU — UI I U MI I U LI —

CHAR #: 4 OIL CHAR: NO OIL DIST: CONT — BRKN — PTCH — SPLH —
TIDAL ZONE: SU X UI — MI — LI X

CHAR #: ____ OIL CHAR: ____ OIL DIST: CONT ____ BRKN ____ PTCH ____ SPLH ____
TIDAL ZONE: SU ____ UI ____ MI ____ LI ____

CHAR #: ____ OIL CHAR: ____ OIL DIST: CONT ____ BRKN ____ PTCH ____ SPLH ____
TIDAL ZONE: SU ____ UI ____ MI ____ LI ____

CHAR #: ____ OIL CHAR: ____ OIL DIST: CONT ____ BRKN ____ PTCH ____ SPLH ____
TIDAL ZONE: SU ____ UI ____ MI ____ LI ____

CHAR #: ____ OIL CHAR: ____ OIL DIST: CONT ____ BRKN ____ PTCH ____ SPLH ____
TIDAL ZONE: SU ____ UI ____ MI ____ LI ____

CHAR #: ____ OIL CHAR: ____ OIL DIST: CONT ____ BRKN ____ PTCH ____ SPLH ____
TIDAL ZONE: SU ____ UI ____ MI ____ LI ____

CHAR #: ____ OIL CHAR: ____ OIL DIST: CONT ____ BRKN ____ PTCH ____ SPLH ____
TIDAL ZONE: SU ____ UI ____ MI ____ LI ____

ASAP DATA ENTRY FORM

SUBSURFACE DATA

SEGMENT ID: WB02 SUBDIV: e SITE: 1

PIT # 0 PIT DEPTH 0 OIL CHARACTER ____ OIL INTVAL: FROM ____ TO ____
CLEAN BELOW: ____ PIT ZONE: SU ____ UI ____ MI ____ LI ____
SUBSURF SEDIMENT: BRK ____ BLD ____ COB ____ PEB ____ GRN ____ SAN ____ MUD ____ VEG ____

100 Pits Dug this Subsegment.

PIT # ____ PIT DEPTH ____ OIL CHARACTER ____ OIL INTVAL: FROM ____ TO ____
CLEAN BELOW: ____ PIT ZONE: SU ____ UI ____ MI ____ LI ____
SUBSURF SEDIMENT: BRK ____ BLD ____ COB ____ PEB ____ GRN ____ SAN ____ MUD ____ VEG ____

PIT # ____ PIT DEPTH ____ OIL CHARACTER ____ OIL INTVAL: FROM ____ TO ____
CLEAN BELOW: ____ PIT ZONE: SU ____ UI ____ MI ____ LI ____
SUBSURF SEDIMENT: BRK ____ BLD ____ COB ____ PEB ____ GRN ____ SAN ____ MUD ____ VEG ____

PIT # ____ PIT DEPTH ____ OIL CHARACTER ____ OIL INTVAL: FROM ____ TO ____
CLEAN BELOW: ____ PIT ZONE: SU ____ UI ____ MI ____ LI ____
SUBSURF SEDIMENT: BRK ____ BLD ____ COB ____ PEB ____ GRN ____ SAN ____ MUD ____ VEG ____

PIT # ____ PIT DEPTH ____ OIL CHARACTER ____ OIL INTVAL: FROM ____ TO ____
CLEAN BELOW: ____ PIT ZONE: SU ____ UI ____ MI ____ LI ____
SUBSURF SEDIMENT: BRK ____ BLD ____ COB ____ PEB ____ GRN ____ SAN ____ MUD ____ VEG ____

PIT # ____ PIT DEPTH ____ OIL CHARACTER ____ OIL INTVAL: FROM ____ TO ____
CLEAN BELOW: ____ PIT ZONE: SU ____ UI ____ MI ____ LI ____
SUBSURF SEDIMENT: BRK ____ BLD ____ COB ____ PEB ____ GRN ____ SAN ____ MUD ____ VEG ____

PIT # ____ PIT DEPTH ____ OIL CHARACTER ____ OIL INTVAL: FROM ____ TO ____
CLEAN BELOW: ____ PIT ZONE: SU ____ UI ____ MI ____ LI ____
SUBSURF SEDIMENT: BRK ____ BLD ____ COB ____ PEB ____ GRN ____ SAN ____ MUD ____ VEG ____

PIT # ____ PIT DEPTH ____ OIL CHARACTER ____ OIL INTVAL: FROM ____ TO ____
CLEAN BELOW: ____ PIT ZONE: SU ____ UI ____ MI ____ LI ____
SUBSURF SEDIMENT: BRK ____ BLD ____ COB ____ PEB ____ GRN ____ SAN ____ MUD ____ VEG ____

PIT # ____ PIT DEPTH ____ OIL CHARACTER ____ OIL INTVAL: FROM ____ TO ____
CLEAN BELOW: ____ PIT ZONE: SU ____ UI ____ MI ____ LI ____
SUBSURF SEDIMENT: BRK ____ BLD ____ COB ____ PEB ____ GRN ____ SAN ____ MUD ____ VEG ____

PIT # ____ PIT DEPTH ____ OIL CHARACTER ____ OIL INTVAL: FROM ____ TO ____
CLEAN BELOW: ____ PIT ZONE: SU ____ UI ____ MI ____ LI ____
SUBSURF SEDIMENT: BRK ____ BLD ____ COB ____ PEB ____ GRN ____ SAN ____ MUD ____ VEG ____

REVISED 1
7/20/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT WB-2 SUBDIVISION D (4 of 6)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation	WORK PRIOR TO ~~7/1~~ 7/23

COMMERCIAL PURSE SEINE AREA CLOSED THROUGH 7/23. NO CONSTRAINT TO BIOREMEDIATION AS PER CONVERSATION W/ TOM MONAHAN W/ LUE GLENN, ADFG ON 7/20 [illegible]

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~~ 23.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after ~~7/1~~ 23. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

TAG ADDENDUM DATE 5/18/90
ADEC Art Weiner
EXXON Amy [illegible]
NOAA Jason Ellwood
USCG [illegible]

FOSC [illegible] DATE 5-18-90

Prepared by: Andrea Meyer WK Date: 5/17/90

7/20/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT WB-2 SUBDIVISION E (5 of 6)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Spot Wash & bioremediation	WORK PRIOR TO ~~7/15~~ 7/23

COMMERCIAL PURSE SEINE AREA CLOSED THROUGH 7/23. NO CONSTRAINT TO BIOREMEDIATION AS PER CONVERSATION OF TOM MONAHAN W/ LEE GLENN, ADF&G ON 7/20 PP

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 spot washing after 7/~~9~~. 23

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/~~9~~, Avoid any unnecessary disturbance or damage to unoiled biota and substrate. 23

TAG ADDENDUM DATE 5/18/90
ADEC Art Weiner
EXXON Andy Tan
NOAA Jason Talbott
USCG G.A. Ritz
FOSC
DATE 5-18-90

Prepared by: Andy Meyer WTK

Date: 5/17/90

7/20/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PD-001 SUBDIVISION A (1 of 2)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation Manual/Mechanical Tilling Manual/Mechanical Raking Spot Washing	WORK PRIOR TO 7/~~20~~ 23

COMMERCIAL PURSE SEINE AREA CLOSED THROUGH 7/23. NO CONSTRAINT TO BIOREMEDIATION AS PER CONVERSATION OF TOM MONAHAN W/ LEE BURN

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED. ADF&G ON 7/20

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1J	Purse Seine Area	No constraints to manual pickup and tarmat removal. Closed to bioremediation, manual/mechanical raking, manual/mechanical tilling, and spot washing after 7/~~20~~ 23.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC _____ Date 6-10-90

Prepared by R. P. Phillips Date 6/10/90

7/20/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PD-05 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation	WORK PRIOR TO ~~8/25~~ 7/23

COMMERCIAL PURSE SEINE AREA CLOSED THROUGH 7/23. NO CONSTRAINT TO BIOREMEDIATION AS PER CONVERSATION OF TOM MANALLAW W/ LEE GUNN, ADF&G ON 7/20 PP.

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1J	Purse Seine Area	Closed to bioremediation between ~~8/25~~ 7/23 and 8/31. No Constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Restrict boat and air traffic to essential minimum after ~~8/25~~ 7/23.

TAG ADDENDUM DATE 5/21/90
ADEC Art Weiner
EXXON Andy Tear
NOAA Joseph Tallott
USCG M. J. Hack

FOSC _____ DATE 5-21-90

Prepared by: _____ Date: 5/20/90

7/20/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT CB-3 SUBDIVISION B (2 of 3)

WORK WINDOW	
Manual Pickup	OPEN
Spot Washing & bioremediation	OPEN TO 7/23 ~~WORK BEFORE 7/1~~

COMMERCIAL PURSE SEINE AREA CLOSED THROUGH 7/23, NO CONSTRAINT TO BIOREMEDIATION AS PER CONVERSATION OF TOM MONAHAN W/ LEE GUEW, ADF&G ON 7/20 PP

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	NO CONSTRAINT. ADF&G catalogued anadromous stream (242-20-10190) is more than 100m from work area.
1J	Purse Seine Area	Closed to spot washing & bioremediation after ~~7/1~~ 7/23. No constraint to manual pickup.
7JJ	Subsistence: Invertebrate Harvesting	NO CONSTRAINT. Per contacts with Mark Kuwada/ADF&G 5/22/90 and Pat Norman/Port Graham Village Corporation 5/20/90 by Rex Coulter/Exxon.
5T	Bald Eagle Nest	NO CONSTRAINT. Work site is more than 400m from nest.

Confirmed + noted by FOSC. 7/20/90 MJS

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after ~~7/1~~ 7/23. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

TAG APPROVAL DATE 5/29/90
ADEC Art Weiner Art Weiner
EXXON Andy Gal
NOAA Bill Wescott
USCG G.A. Reiter G.A. Reiter

FOSC [signature] DATE 5/30/90

Prepared By: Andrea Meyer Date 5/29/90

REGION: KENAI

SEGMENT: WB-03

SUBDIVISIONS: A (1 OF 5)

SHORELINE EVALUATION

SEGMENT ST/ WB-03 SUBDIVISION A (1 of 5) DATE 4/6/90

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)
5T All Bald Eagle nests (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
8AA Sensitive Estuary
7JJ Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid any unnecessary disturbance or damage to unoiled substrate and biota.

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

SHPO SIGNATURE:_____ DATE:_____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 169 m: V.Light 1364 m: No Oil 928 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

RECOMMENDATIONS:

____No Treatment Recommended	____Snare/Absorbent Booms
X Treatment Recommended	____Oil Snares (pom poms)
X Manual Pickup	____Absorbents (pads,rolls,etc)
X Bioremediation	____Spot Washing:____Wands
X Tarmat: ____Breakup	____ Beach Cleaner
X Removal	____Other (see comments)

COMMENTS: Recommend tarmat removal and pick-up of mousse, and tarballs from areas indicated on the field sketch. Bioremediation is recommended for broken coat areas. Treatment should be limited to the period from 6/2 to 7/10 and should be cleared with ~~ADF&G~~ due to possible presence of bald eagle nests.

TAG COMMENTS:

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / WB-3 SUBDIVISION: A DATE 4/6/90

USCG
NAME R. Bryan HIRTZE SIGNATURE R. Bryan Hirtze

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

I agree with the findings of the Shoreline Oiling Summary Report for WB-3 subdivision A

ADEC
NAME Russell Kunibe SIGNATURE Russell Kunibe

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Overall the oiling in this area was very light. There was asphalt, mousse and sediment patties on the sandy spit at the beginning of the segment near WB-2. There were a few asphalt patches at the head of the first lagoon and a splashy distribution of asphalt and mousse in the MITZ and UITZ along the north shore to the east of the mouth of the stream in the boulders and cobbles.

Recommended treatment: Manual pick up of all of asphalt and mousse patties in this area. The asphalt and mousse on the spit and at the head of the lagoon was in fine sediments making pick up easy. Pat Norman of the Port Graham Village Association informed me that the mud flats were used by the natives for subsistence gathering of clams and mussels.

LAND MANAGER
NAME Patrick Norman SIGNATURE

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

manual pick up of asphalt and mousse patties can be done throughout subdivision A

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Randy Siegel USCG Bryan Hirtle SEGMENT ST/ WB-3
BIO Mike Fawcett LAND REP Pat Norman (PGVC) SUBDIVISION A
EXXON John Dean ADEC Russell Kunibe TIME 14 :00 to 15 :00
TEAM NO.: 17 TIDE LEVEL: +6.0 to +5.2 DATE 4 / 6 / 90
ST. SUBDIVISION LENGTH: 350 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
SURFACE SEDIMENTS: R 10 % B 40 % C 35 % P 5 % G 5 % S 5 % M 5 % V Ø %
SLOPE : Lang 80 % Hang 20 % Vert Ø % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W 0 ~~N/A~~ m M ~~N/A~~ 0 m N 20 m VL 230 m NO 100 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	/C	/B	/P	/S	SBL/BR	DBL/RW	GY/SL	DBR/TL	LBR	SU	UI	MI	LI
ASPHALT PAVEMENT			✓	X				✓X			X✓	X	
POOLED													
COVER													
COAT				X		X		X			X		
STAIN				X		X		X			X		
MOUSSE			✓	X				✓X			X✓	X	
PATTIES			✓	X				✓X			✓X	X	
TARBALLS			✓	X				✓X			X✓	X	
FILM				X			X				X		
NO OIL										X			X

PAVEMENT: H (F) S 10 sq. m by 2 cm

PATTIES / TARBALLS 25 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

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

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE N/A

#BAGS 0

Photographs:

Roll No. ST-17-4

Frames 13-20

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO	(CM-CM)	UO	UC	SBL/BR	DBL/RW	GY/SL	DBR/TL	LBR	SU	UI	MI	LI		
1	25					X	0-0		X							X				S
2	25					X	0-0		X							X				S
							-													
							-													
							-													
							-													

COMMENTS This subdivision surrounded a tidal bay. Beaches was covered with boulders, cobble and finer sediments. Generally light oiling across shoreline, with the occassional MS-AP patties and tarballs. One band of AP observed. A few areas had no observable oiling.

REVIEWED BJT DATE 12 Apr 90

OG Randy Siegel

SEGMENT WB-3

SUBDIVISION A

DATE 4 / 6 / 90

SKETCH MAP

N

2 cm = 20 m
App. scale

CHECKLIST

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

LEGEND

1 △ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

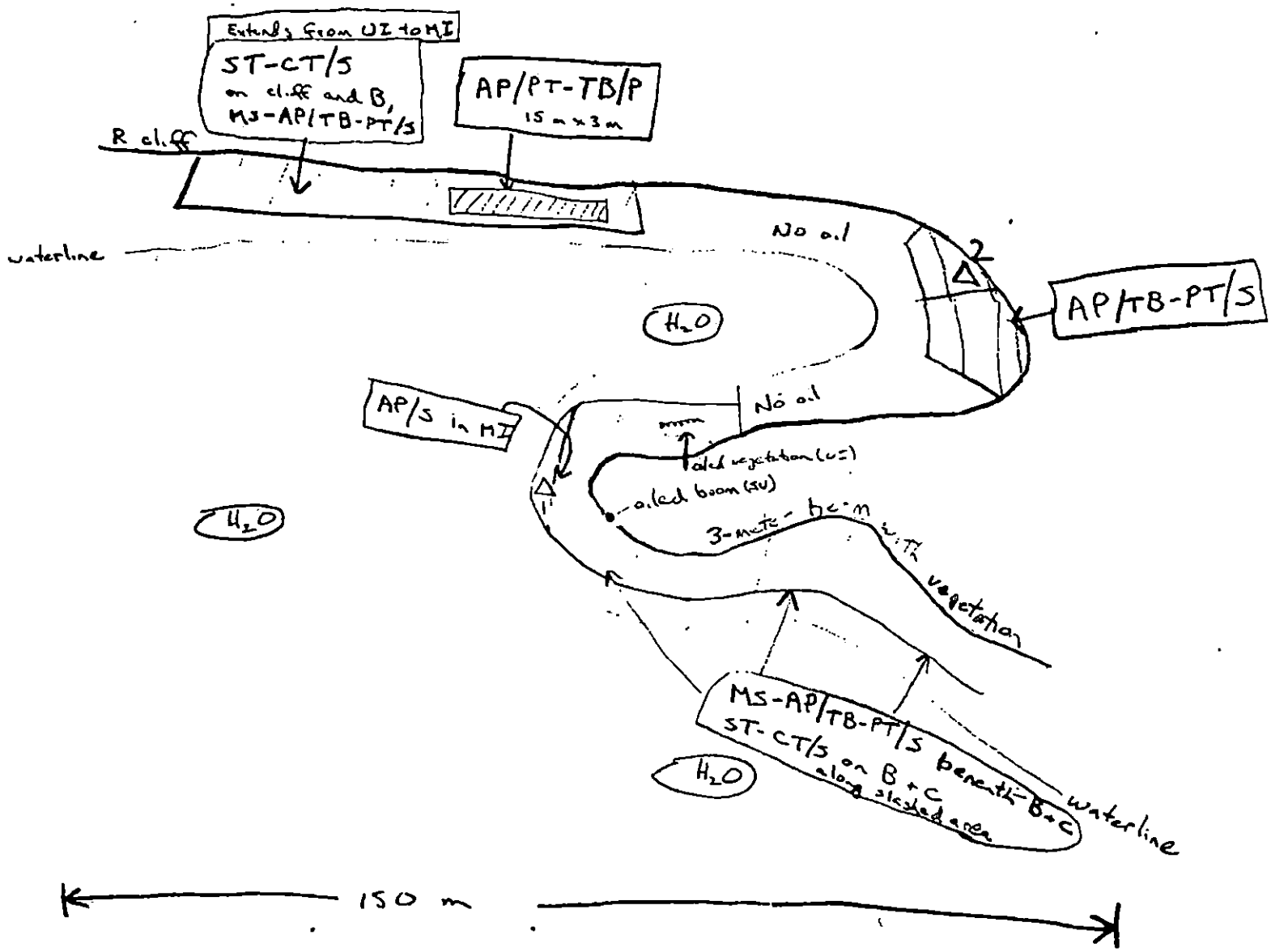
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 ⊶ Photo location, direction, and number



Oil Character Length (m): AP 15 PO 0 CV 0 CT 200 ST 270 MS 15 PT 100 TB 100 FL Ø NO 100

REVISION:03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / WB3 Subdivision A Date (mo / day / yr) 4/6/90

Time (24 hr) 1500-1600 Biologist M. H. Fawcett

(A) Substrate type and % of segments:
(1) Bedrock 10 (2) Boulder 40 (3) Cobble 35 (4) Pebble 5 (5) Sand 5 (6) Silt 5

(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-17-4
Frames 13-20

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	NOT PRESENT
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	
3	3	3	3	3	3	3	3	3	3	3	3	NOT PRESENT
4	4	4	4	4	4	4	4	4	4	4	4	
5	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	
3	3	3	3	3	3	3	3	3	3	3	3	NOT PRESENT
4	4	4	4	4	4	4	4	4	4	4	4	
5	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	
3	3	3	3	3	3	3	3	3	3	3	3	NOT PRESENT
4	4	4	4	4	4	4	4	4	4	4	4	
5	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:

See Attachment

Ecological Considerations:

7JJ
5T
8AA
1A
1R

WB3A Windy Bay M. Fawcett 4/6/90

Wildlife Observations & Comments

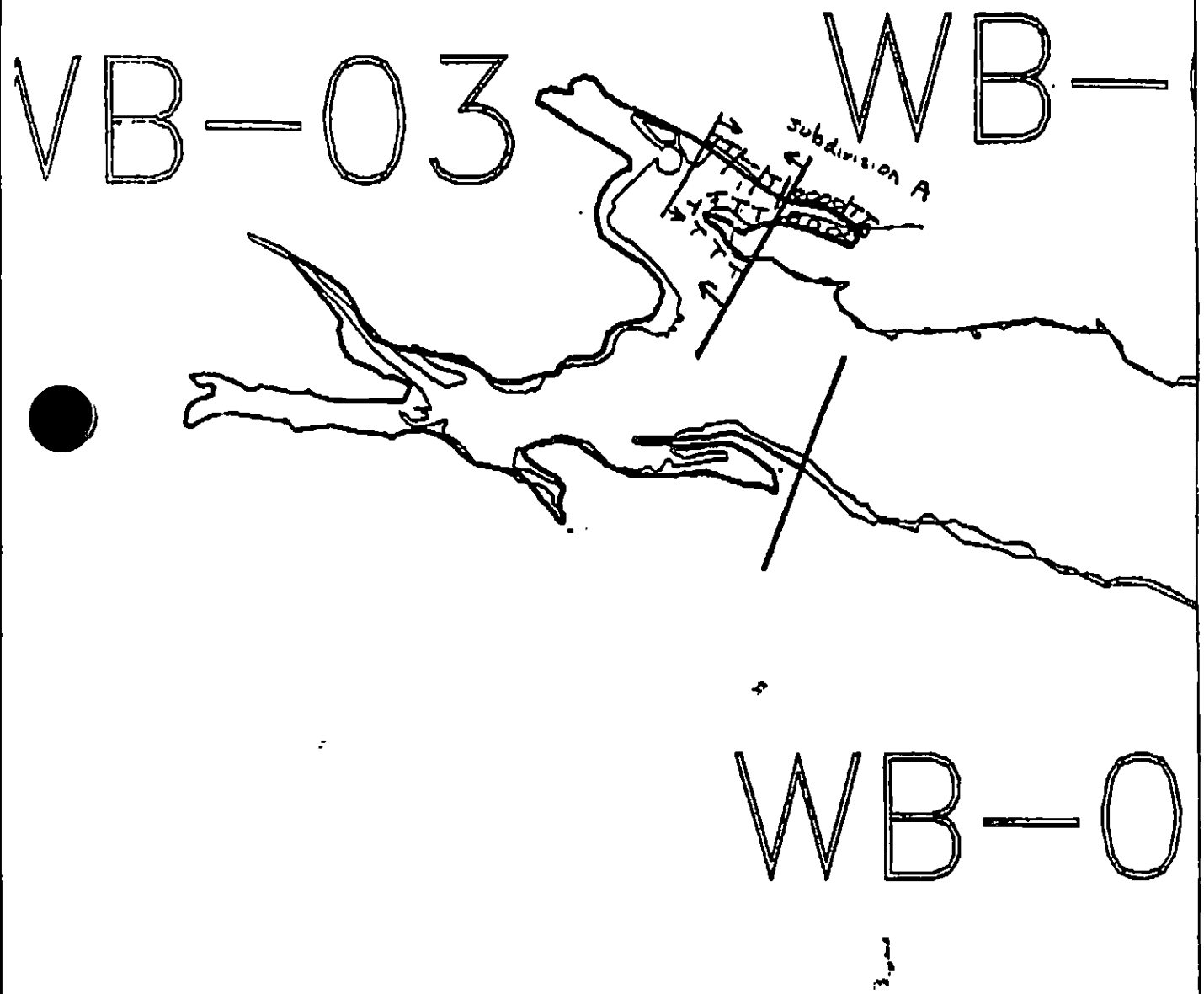
At the east end of WB3A, on the relatively exposed side of the spit, the mid-intertidal zone has dense *Fucus*, moderately abundant mussels and barnacles, and sparse limpets (*Acipersona*), littorines, and whelks (*Thais emarginata*). Moving around to the leeward side of the spit and into the dead-end cove, mussels become rare, barnacles are restricted to isolated small cobbles in the mid-intertidal, *Fucus* occurs in sparse patches among pebbles and gastropods are sparse. The lower intertidal is soft mud with sparse clams, and sparse burrowing shrimp, worms, etc., overlain by fairly dense *Ulva*. This is a very quiet water area.

Birds observed: 15 swans
~25 mallards
6 bufflehead
+ several small flocks of ducks on water, too far away to identify

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 unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.	
3N, 3P 3O, 3Q	Harbor seal and sea lion pupping (5/15 to 7/1) Harbor seal and sea lion molting (8/15 to 9/15) Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.	
5R	Seabird colony (5/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.	
5S	Shorebird/waterfowl concentration (4/1 to 5/15) Restrict all activity to essential minimum, especially air traffic.	
5T	All Bald Eagle nests (3/1 to 6/1) Active Bald Eagle nests (3/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.	
6U	Recreation:	Tent sites (6/1 to 9/15)
6V		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.

subdivision A



Wide
Medium
Narrow
Very Light

WB-3

ADEC Segment Length: 8154m

0 500 1000

Map Key: KEN-127

Name: Randy Siegel

Date: 4/6/90

REGION: KENAI

SEGMENT: WB-03

SUBDIVISIONS: B (2 OF 5)

SHORELINE EVALUATION

SEGMENT ST/ WB-03 SUBDIVISION B (2 of 5) DATE 04/06/90

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)
5T All Bald Eagle nests (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
8AA Sensitive Estuary
7JJ Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid any unnecessary disturbance or damage to unoiled substrate and biota.

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

SHPO SIGNATURE:_____ DATE:_____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 1228 m: V.Light 502 m: No Oil 171 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

RECOMMENDATIONS:

____No Treatment Recommended	____Snare/Absorbent Booms
X Treatment Recommended	____Oil Snares (pom poms)
X Manual Pickup	____Absorbents (pads,rolls,etc)
____Bioremediation	____Spot Washing:____Wands
X Tarmat: ____Breakup	____ Beach Cleaner
X Removal	____Other (see comments)

COMMENTS: Recommend manual pick up of mousse, tarballs, patties, and oiled debris, (debris, trash, vegetation). Work should be conducted between 6/1 and 7/9 with USFWS Service permission due to eagle constraints.

TAG COMMENTS:_____

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

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)	
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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 unoiled 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-3 SUBDIVISION: B DATE 4-6 90

USCG
NAME R. Bryan Hirsle SIGNATURE R. Bryan Hirsle

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

AGREE with the findings of Shoreline Oiling Summary sheet for WB-3 subdivision B

ADEC
NAME Russell Kunibe SIGNATURE Russell Kunibe.

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

See attached 1 page.

LAND MANAGER
NAME Patrick Norman SIGNATURE Patty Norman

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

recommend manual pick up of Ashpalt and mousse patties in Subdivision B of WB-3

SEGMENT: WB-3 SUBDIVISION: B DATE: 4/6/90

ADEC COMMENTS:
Russell Kunibe, EFOII ADEC Signature Russell Kunibe

This segment includes the mouth of an anadromous stream and the salt marsh adjacent to the stream. There was a continuous asphalt band 1/2 M. wide and 50 M. long along the north shore of the salt marsh. A small 5 cm. mousse ball was noted sheening on the mud along the bank of a small branch of the stream which also had salmon fry in it. There were a few thin patties of mousse on the mud between the grass in the grassy salt marsh. I also noted a small asphalt area in the gravel along the stream bank.

South of the creek there is a long cobble, pebble, gravel beach which is above a large mud flat. There was a splashy distribution of asphalt between the cobbles and mousse under the cobbles. Sheen was observed in the runoff water and on the mud flats just below the cobble, pebble, gravel area.

Recommended treatment:

Manual pick up is recommended for the oil contamination along the stream and in the salt marsh and for the mousse and asphalt in the beach above the mud flats. This subdivision is both an anadromous stream and a subsistence clam gathering area.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Randy Siegel USCG Bryan Hirtle SEGMENT ST/ WB-3 (5 subdivisions)
BIO Kim Fawcett LAND REP Pat Norman (PGUC) SUBDIVISION B (2nd of 5)
EXXON John Dean ADEC Russell Kunibe TIME 15:00 to 16:00
TEAM NO.: 17 TIDE LEVEL: +3.2 to +3.6 DATE 4 / 6 / 90
EST. SUBDIVISION LENGTH: 825 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
SURFACE SEDIMENTS: R 10 % B 10 % C 10 % P 20 % G 15 % S 15 % M 20 % V 0 %
SLOPE: Lang 75 % Hang 25 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W ~~N/A~~ 0 m M ~~N/A~~ m N 650 m VL 50 m NO 125 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	/C	/B	/P	/R	SBR/BR	DBL/RW	GY/SL	DBR/TL	LBR	SU	UI	MI	LI
ASPHALT PAVEMENT	X			X		X					X		
POOLED													
COVER													
COAT				X		X					X		
STAIN				X		X					X		
MOUSSE				X		X			X		X		
PATTIES				X		X			X		X		
TARBALLS				X		X			X		X		
FILM				X				X			X	X	X
NO OIL										X			

PAVEMENT: H (F) S 40 sq. m by 2 cm

PATTIES / TARBALLS 20 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

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

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE N/A

#BAGS 0

Photographs:

Roll No. ST-17-4

Frames 13-22

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SBR/BR	DBL/RW	GY/SL	DBR/TL	LBR	SU	UI	MI	LI		
1	25					X	0-0		X							X				S, g
2	25					X	0-0		X							X				S, g
3	[illegible]					X	0-0		X							X				S, g
4	30					X	0-0		X							X				G, S
5	15					X	0-0		X								X			S
~~[illegible]~~	~~[illegible]~~				~~[illegible]~~		~~[illegible]~~													

COMMENTS This area surrounds a tidal inlet with extensive mud flats. A number of stream channels (2 to 15 meters in width) cut through this area and discharged into the tidal inlet. Oiling was generally light within the subdivision. A few isolated patties/tarballs were found on the stream banks. This is an anadromous area.

~~[illegible]~~ Silver sheen on ~~[illegible]~~ pooled water in UI, MI, LI zones.

REVIEWED BAT DATE 11 Apr 90

Site [illegible]

SEGMENT ST-B3-3

SUBDIVISION B

DATE 4 / 6 90

CHECKLIST

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

LEGEND

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

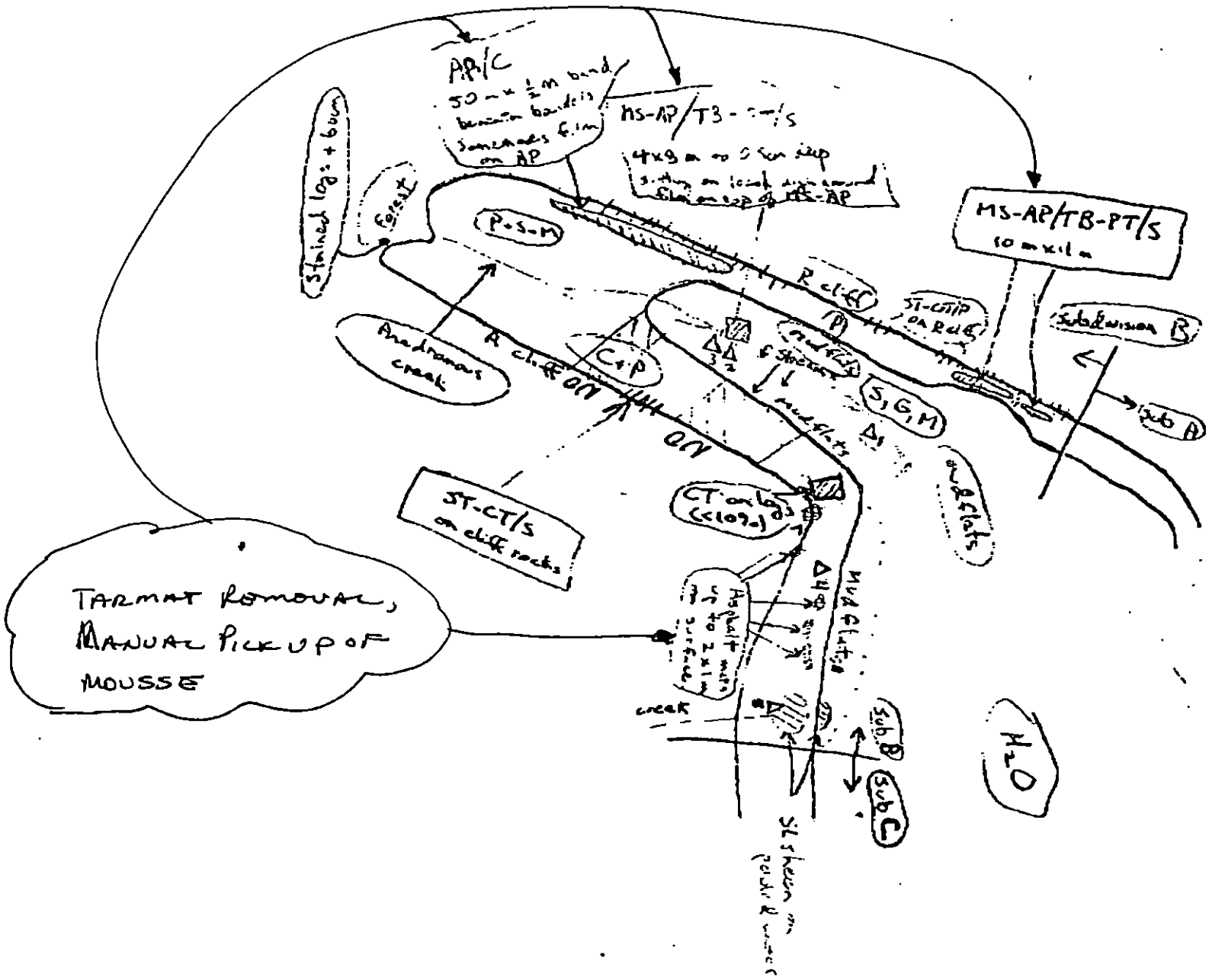
CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 Photo location, direction, and number

SKETCH MAP



Oil Character Length (m): AP 600 PO N/A CV N/A CT 300 ST 300 MS 30 PT 30 TB 30 FL N/A [illegible]

REVISION 93/24/98

APR- 8-90 SUN 21:20 P.03

OG [illegible]

SEGMENT ST· WB-3

SUBDIVISION B

DATE 4 / 6 / 90

CHECKLIST

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

LEGEND

1 △ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

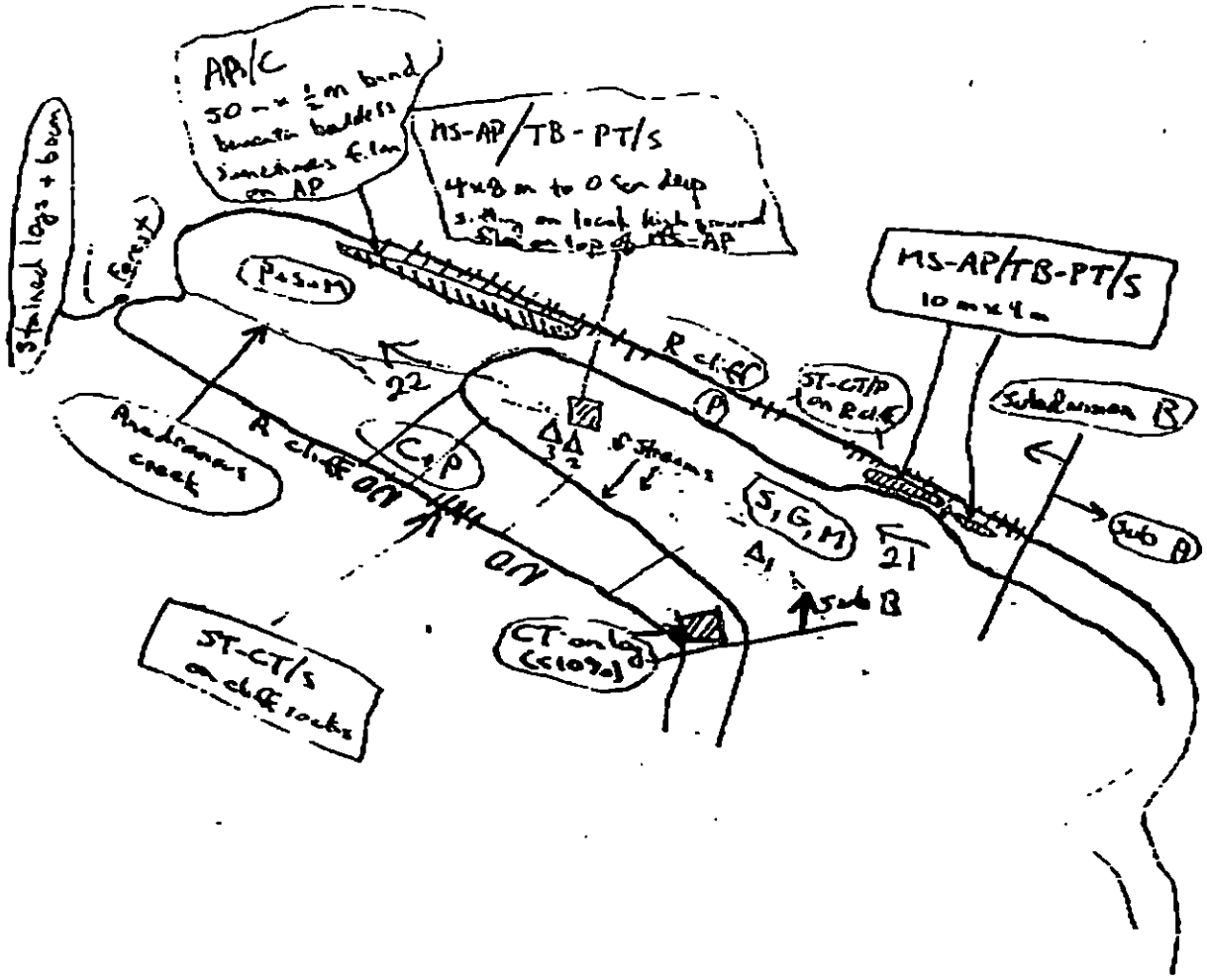
Oiled Vegetation

1 ●→ Photo location, direction, and number

SKETCH MAP

↑ N

2 cm = 60 m
Approx. Scale



Photos

ST-17-4

frames 13-16 (aerial)
+ 21 - 23

13-16 aerial

Character Length (m) AP 60 PO N/A CV N/A CT 300 ST 300 MS 30 PT 30 TB 30 FL N/A NO 15

REVISION:03/24/90

DPRI 0190 SCN 21:22

P.00

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / WB3 Subdivision B Date (mo / day / yr) 4/6/90

Time (24 hr) 1600-1745 Biologist M. Fawcett

(A) Substrate type and % of segments:
(1) Bedrock 10 (2) Boulder 10 (3) Cobble 10 (4) Pebble 20 (5) Sand 30 (6) Silt ____

(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-17-4
Frames 21-23

BARNACLES

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

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	X	2	2	
3	3	3	3	X	3	3	3	X	X	3	3	NOT PRESENT
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	

Wildlife Observations/ General Comments:

See Attached sheet

birds: 1 belted Kingfisher
10 magpies
2 ravens

Ecological Considerations:

7 JJ
5 T
8 A A
1 A

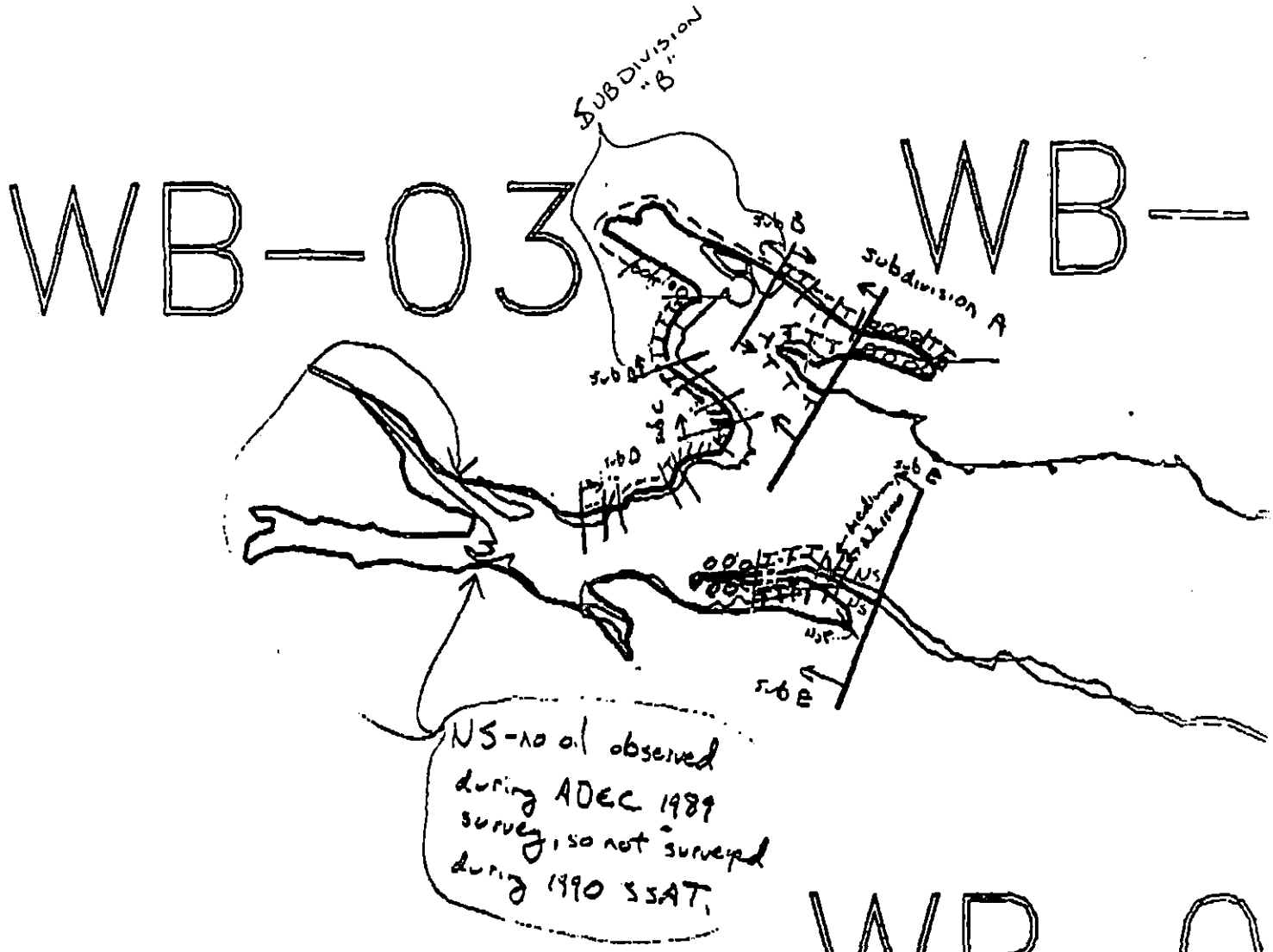
WB3B Windy Bay M. Fawcett 4/6/90

Wildlife Observations and Comments

This subsection includes an anadromous fish stream used by Pink, chum, and silver salmon and dolly varden (according to Pat Norman). We observed 50-60 salmon fry in a small side channel on the north side of the stream mouth, next to the base of the hill. Buried mousse, splatters and oil sheen were found along the north bank of this small "channel" (2-6 ft wide channel). At the mouth of the main stream is a deltaic mudflat containing clams and other infauna. Fucus, barnacles, and a dense bed of mussels covering 100 % of the surface in one area about 60 x 8 at the +3-4 ft tide level (Photo ST-17-4, #23). Most of the mussels are adults (size range 5-30 mm). Besides Fucus, the only attached algae observed were patches of Enteromorpha, Ulva, and some filamentous greens.

note: original of this sheet destroyed by copy machine

~~Subdivision~~



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

WB-3

ADEC Segment Length: 8154m

0 300 600 900

Map Key: KEN-127

Name: Randy Singel

Date: 4/6/90

REGION: KENAI

SEGMENT: WB-03

SUBDIVISIONS: C (3 OF 5)

SHORELINE EVALUATION

SEGMENT ST/ WB-03 SUBDIVISION C (3 of 5) DATE 04/06/90

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)
5T All Bald Eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
8AA Sensitive Estuary
7JJ Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid any unnecessary disturbance or damage to unoiled substrate and biota.

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

SHPO SIGNATURE:_____ DATE:_____

OILING CATEGORIZATION:

Wide 0 m: Medium 136 m: Narrow 182 m: V.Light 129 m: No Oil 0 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

RECOMMENDATIONS:

____No Treatment Recommended
X Treatment Recommended
X Manual Pickup
____Bioremediation
X Tarmat: ____Breakup
X Removal

____Snare/Absorbent Booms
____Oil Snares (pom poms)
____Absorbents (pads,rolls,etc)
____Spot Washing:____Wands
____ Beach Cleaner
____Other (see comments)

COMMENTS: Recommend tarmat removal and manual pick up of mousse, tarballs and oiled debris (trash, vegetation debris) as indicated in the attached sketch map. Work should be conducted between 6/1 and 7/9, USFWS permitting, due to eagle constraint.

TAG COMMENTS:_____

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

PWS 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. 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 unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.	
3N, 3P 3O, 3Q	Harbor seal and sea lion pupping (5/15 to 7/1) Harbor seal and sea lion molting (8/15 to 9/15) Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.	
5R	Seabird colony (5/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.	
5S	Shorebird/waterfowl concentration (4/1 to 5/15) Restrict all activity to essential minimum, especially air traffic.	
5T	All Bald Eagle nests (3/1 to 6/1) Active Bald Eagle nests (3/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.	
6U	Recreation:	Tent sites (6/1 to 9/15)
6V		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-3 SUBDIVISION: C DATE 4-6-90

USCG
NAME R. Bryan Hirte SIGNATURE R. Bryan Hirte

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

I agree with the Shoreline Oiling Summary sheet

ADEC
NAME Russell Kunibe SIGNATURE Russell Kunibe

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

The oiling in this subdivision consisted of a spotty to broken distribution of black coat, cover and stain on the rocks and boulders and asphalt and mousse between the rocks above the mud flats.
Recommended treatment: manual pick up of the asphalt and mousse. Following the treatment bioremediation may be appropriate.

LAND MANAGER
NAME Patrick Norman SIGNATURE Patrick Norman

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

recommend manual pickup of Asphalt and mousse patches in Subdivision C. Manual pickup should pick up some of the oil but not all of it, so it needs to be looked at very closely to determine other means of collecting remaining oil in subdivision C.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Randy Siegel USCG Brian Hirtle SEGMENT ST/ WB-3 (5 subdivision)
BIO Mikel Fawcett LAND REP Pat Norman (PGUC) SUBDIVISION C (3rd of 5)
EXXON John Dean ADEC Russell Kunibe TIME 16:00 to 16:30
TEAM NO.: 17 TIDE LEVEL: +3.6 to +0.6 DATE 4 / 6 / 90
EST. SUBDIVISION LENGTH: 200 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: NW to SE
SURFACE SEDIMENTS: R 10 % B 10 % C 60 % P 5 % G 5 % S 5 % M 5 % V Ø %
SLOPE : Lang 50 % Hang 50 % Vert Ø % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W N/A m M 80 m N 80 m VL 40 m NO N/A m

SURFACE OIL

CHARACTER	DISTRIBUTION /C	/B	/P	/S	OIL / FILM COLOR SBL/BR	DBL/RW	GY/SL	DBR/TL	LBR	IMPACTED ZONES SU	UI	MI	LI
ASPHALT PAVEMENT		✓	X			✓					✓		
POOLED													
COVER													
COAT			X			X		X			X		
STAIN			X			X		X			X		
MOUSSE		✓		X				✓X			X✓		
PATTIES													
TARBALLS		✓		X				X			✓X	✓	
FILM				✓			✓				✓	✓	✓
NO OIL										✓			

PAVEMENT: H (F) S 200 sq. m by 2 cm

PATTIES / TARBALLS 80 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

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

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE N/A

#BAGS 0

Photographs:

Roll No. ST-17-4

Frames 23-30

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER OP	OR	OL	OF	NO	OILED INTERVAL (CM-CM)	BELOW UO	UC	OIL / FILM COLOR SBL/BR	DBL/RW	GY/SL	DBR/TL	LBR	PIT ZONE SU	UI	MI	LI	ANA	SUBSURFACE SEDIMENTS
1	30				X		0-5		X			X				X				S
2	30				X		0-5		X			X					X			S
3	30				X		0-5		X			X					X			S

COMMENTS This subdivision consists of a beach covered largely with boulders. Oiling generally increased from north to south across the beach. A band of MS or AP was observed along most of the beach along the UI, but staining of rocks and a silver sheen were observed in the MI and LI zones towards the south end. (on collected intertidal water)

Page 1 of 1 REVIEWED PAM DATE 12 Apr 90

OG Ron Siegel

SEGMENT WB-3

SUBDIVISION C

DATE 4 / 6 90

SKETCH MAP

CHECKLIST

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

LEGEND

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

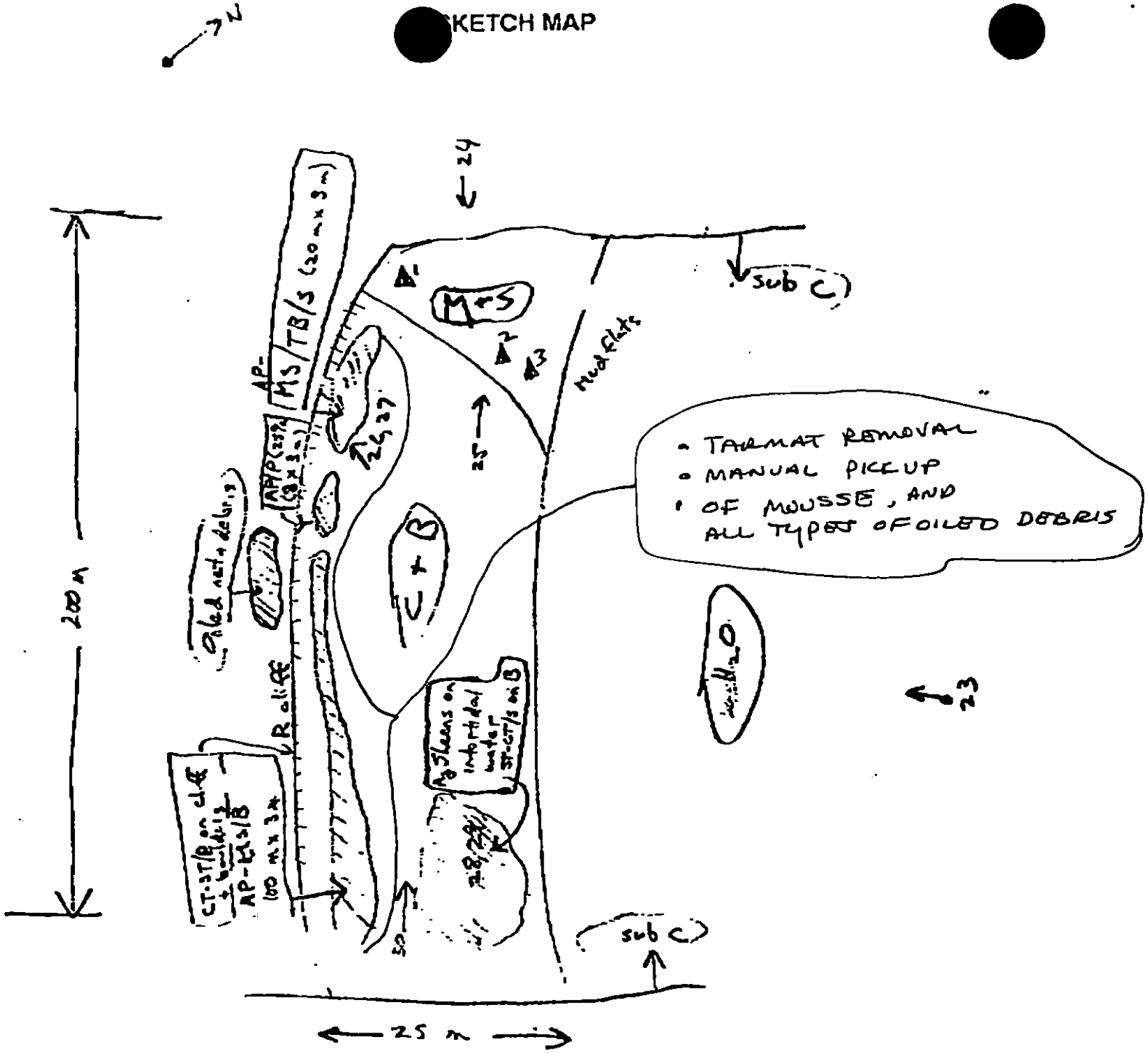
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 Photo location, direction, and number



Oil Character Length (m): AP 120 . PO N/A CV N/A CT 130 ST 130 MS 120 PT 120 TB 30 FL 20 NO N/A

REVISION: 03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / WB3 Subdivision C Date (mo / day / yr) 4/6/90

Time (24 hr) 1745-1830 Biologist M. Fawcett

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

(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-17-4
Frames 24-30

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:
LTZ mudflat has moderately abundant clams, Gunnels, echinoids, hermit crabs, littorines beneath MTZ boulders. Observed and photographed a 15 in. diameter mousse patty covered with film of green algae, and with numerous young, vigorous *Fucus* germlings sprouting up through it (Photo ST-17-4-26,27).

Ecological Considerations:

7JJ
5T
8AA

WB-03 WB-

NS-no oil observed during ADEC 1989 survey, so not surveyed during 1990 SSAT.

WB-0

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

WB-3

ADEC Segment Length: 8154m

Map Key: KEN-127
Name: Randy Sing
Date: 4/6/90

REGION: KENAI

SEGMENT: WB-03

SUBDIVISIONS: D (4 OF 5)

SHORELINE EVALUATION

SEGMENT ST/ WB-03 SUBDIVISION D (4 of 5) DATE 04/06/90

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)
5T All Bald Eagle nests (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
8AA Sensitive Estuary
7JJ Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid any unnecessary disturbance or damage to unoiled substrate and biota.

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

SHPO SIGNATURE:_____ DATE:_____

OILING CATEGORIZATION:

Wide 0 m: Medium 429 m: Narrow 434 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No____ Maximum Depth 7 cm

RECOMMENDATIONS:

____No Treatment Recommended
X Treatment Recommended
X Manual Pickup
____Bioremediation
X Tarmat: ____Breakup
X Removal

____Snare/Absorbent Booms
____Oil Snares (pom poms)
____Absorbents (pads,rolls,etc)
____Spot Washing:____Wands
____ Beach Cleaner
____Other (see comments)

COMMENTS: Recommend tarmat removal and manual pick up of mousse, tarballs and oiled debris (trash, vegetation debris) as indicated in the attached sketch map. Work should be conducted between 6/1 and 7/9, USFWS permitting, due to eagle constraint.

TAG COMMENTS:_____

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

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 unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.	
3N, 3P 3O, 3Q	Harbor seal and sea lion pupping (5/15 to 7/1) Harbor seal and sea lion molting (8/15 to 9/15) Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.	
5R	Seabird colony (5/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.	
5S	Shorebird/waterfowl concentration (4/1 to 5/15) Restrict all activity to essential minimum, especially air traffic.	
5T	All Bald Eagle nests (3/1 to 6/1) Active Bald Eagle nests (3/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.	
6U	Recreation:	Tent sites (6/1 to 9/15)
6V		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 B-3 SUBDIVISION: B DATE 4-7-90

USCG
NAME R. Bryan Hirtz SIGNATURE R. Bryan Hirtz DCI

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

I agree with the findings of the Shoreline Oiling Summary Sheet for WB-003 subdivision D

ADEC
NAME Russell Kunibe SIGNATURE Russell Kunibe

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

There was asphalt and some mousse in between the boulders on the beach near the point between the two anadromous streams at the head of the bay. The asphalt at the west end of this segment was in fine sediments or in silt, small to the lower tide.
Recommended treatment. Manual pick up of the mousse and asphalt.

LAND MANAGER
NAME Patrick Norman SIGNATURE Patrick Norman

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

manual pickup of Asphalt and mousse patties should work in this area. The west end of the subdivision may require some other type of clean up along with the manual pickup. The east end extends in to a Archeological site but still the Asphalt and mousse needs to be picked up.

SHORELINE OILING SUMMARY

REVISION NO. 03

OG Randy Siegel USCG Bryan Hurtle SEGMENT ST/ WB-3 (5 subdivisions)
BIO Mike Fawcett LAND REP Pat Norman (Sevuc) SUBDIVISION D (4th of 5)
EXXON John Dean ADEC Russell Kunkel TIME 0:845 to 10:20
TEAM NO.: 17 TIDE LEVEL: +1.7 to +5.0 DATE 4 / 7 / 90
EST. SUBDIVISION LENGTH: 575 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
SURFACE SEDIMENTS: R 15 % B 75 % C 5 % P 3 % G 2 % S 0 % M 0 % V 0 %
SLOPE: Lang 20 % Hang 30 % Vert Ø % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W ~~N/A~~ 0 m M 215 m N 305 m VL 60 m NO ~~N/A~~ 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	/C	/B	/P	/S	SOL/BR	DEC/RW	OY/SL	DEB/TL	LBR	SU	UI	MI	LI
ASPHALT PAVEMENT	X	+		✓		X✓ +		X✓ +			X	✓	✓
POOLED				X				X			X		
COVER													
COAT		X	✓			X✓		X			X✓	✓	
STAIN		X	✓			✓					✓	✓	
MOUSSE				X					X		X		
PATTIES			✓	X		X✓			X✓		X		
TARBALLS			✓	X		X✓			✓X		X		
FILM				✓			✓	✓			✓	✓	✓
NO OIL										✓			

PAVEMENT: H (F) S 210 sq. m by 2 cm

PATTIES / TARBALLS 100 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

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

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE N/A

#BAGS 0

Photographs:

Roll No. ST-17-5

Frames 1-3

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO	(CM-CM)	UO	UC	SOL/BR	DEC/RW	OY/SL	DEB/TL	LBR	SU	UI	MI	LI		
1	10		X				1-3		X					X		X				G, R
2	10		X				1-3		X					X		X				G, R
3	20		X				0-7		X					X		X				G
4	30					X	0-0		X							X				G
							•													
							•													

COMMENTS This subdivision consists primarily of boulder-covered beaches with rock cliffs above. A band of oiling, usually asphalt, extended along the UI, either as /C, /B, or /S. Splashes of AP were present in one narrow band in the MI and LI. Subdivision D is separated from subdivision to the east by about 4300 meters on "No Oil" shoreline from ADEC 1989 survey and was therefore not surveyed for the 4/90 SSAT.

* Sheen on collected water.

REVIEWED BAT DATE 12 Apr 90

OG Randy Stagel

SEGMENT WB-3

SUBDIVISION D

DATE 4 / 7 90

CHECKLIST

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

LEGEND

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

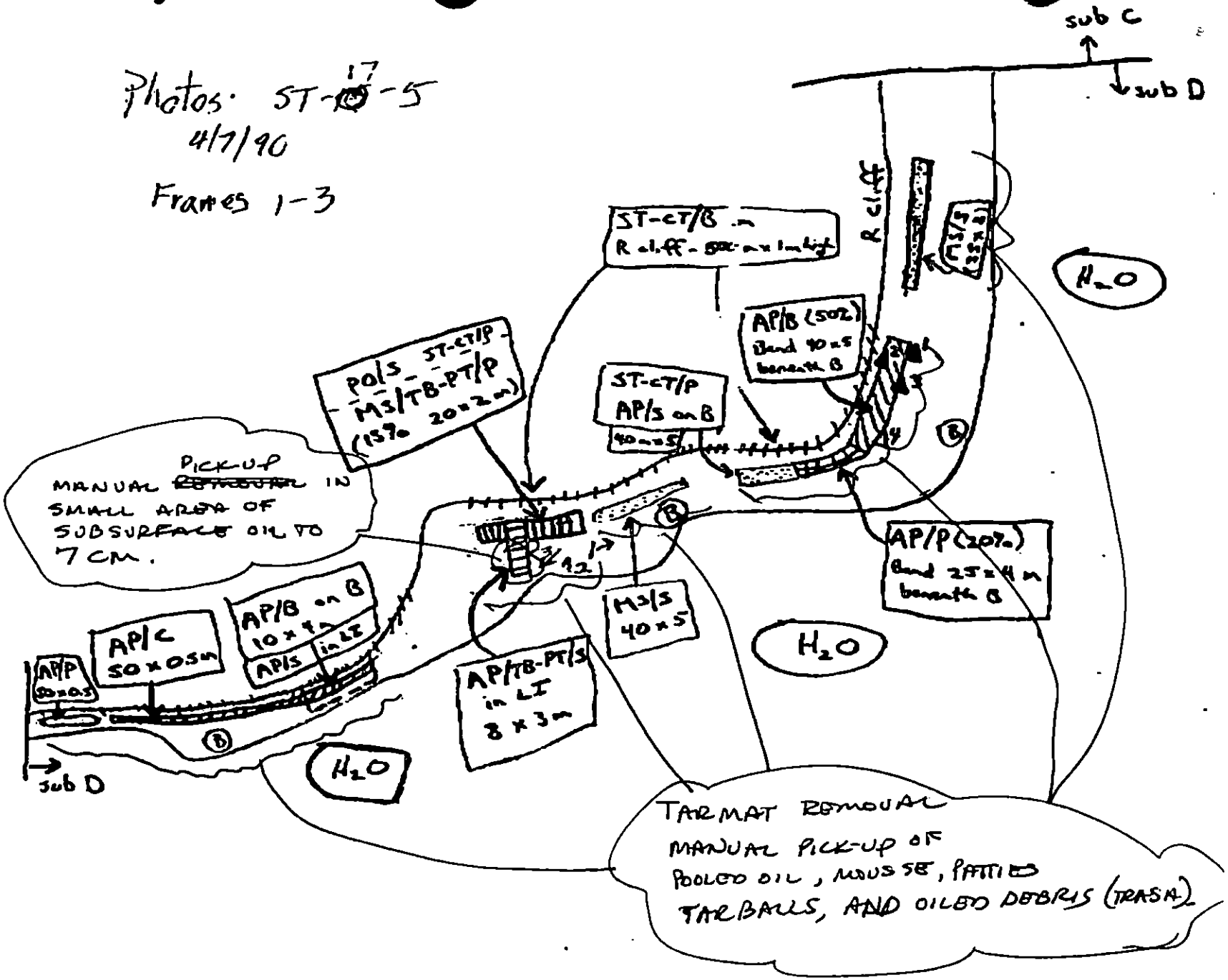
1 Photo location, direction, and number

N

2 cm = 60 m
Aerial Scale

SKETCH MAP

Photos: ST-17-5
4/7/90
Frames 1-3



Oil Character Length (m): AP 190 PO 20 CV N/A CT 500 ST 500 MS 100 PT 500 TB 500 FL N/A NO N/A

REVISION 08/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / WB3 Subdivision D Date (mo / day / yr) 4/7/90

Time (24 hr) 0850 - 1020 Biologist M. Fawcett

(A) Substrate type and % of segments:
(1) Bedrock 15 (2) Boulder 75 (3) Cobble 5 (4) Pebble 3 (5) Sand 2 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense ✓ Moderate ____ Low ____

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

Photographs: Roll No. ST-17-5 Frames 1-3

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

FUCUS

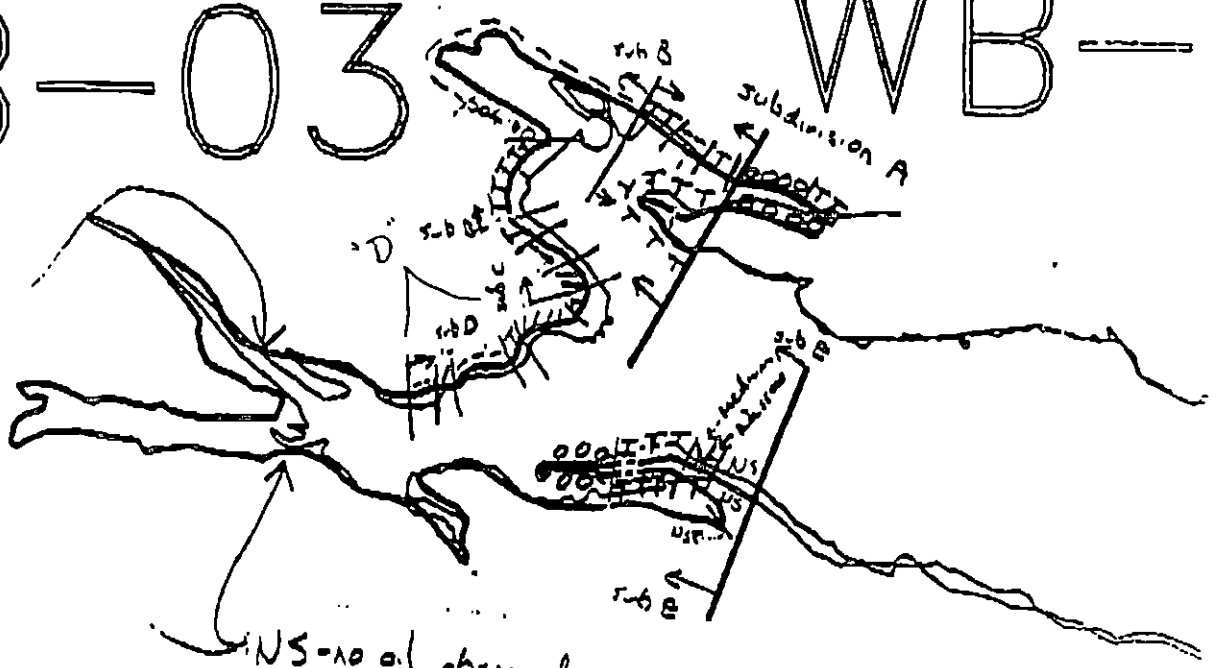
Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	NOT PRESENT
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments:
44 bufflehead
20 white-winged scoter 2 belted kingfisher
1 raven
many gulls

Ecological Considerations:

TJD
LT
JAA

WB-03 WB-



NS-no oil observed during ADEC 1989 survey, so not surveyed during 1990 SSAT.

WB-0

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

WB-3

ADEC Segment Length: 8154m

Map Key: KEN-127
Name: Rodey
Date: 4/8/90

REGION: KENAI

SEGMENT: WB-03

SUBDIVISIONS: E (5 OF 5)

SHORELINE EVALUATION

SEGMENT ST/ WB-03 SUBDIVISION E (5 of 5) DATE 04/07/90

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)
5T All Bald Eagle nests (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
8AA Sensitive Estuary
7JJ Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid any unnecessary disturbance or damage to unoiled substrate and biota.

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

SHPO SIGNATURE:_____ DATE:_____

OILING CATEGORIZATION:

Wide 0 m: Medium 72 m: Narrow 58 m: V.Light 788 m: No Oil 447 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

RECOMMENDATIONS:

____No Treatment Recommended
____Treatment Recommended
X Manual Pickup
____Bioremediation
X Tarmat: ____Breakup
X Removal

____Snare/Absorbent Booms
____Oil Snares (pom poms)
____Absorbents (pads,rolls,etc)
____Spot Washing:____Wands
____ Beach Cleaner
____Other (see comments)

COMMENTS: Recommend manual removal of patties, tarballs, and tarmat as shown on attached sketch map. Work should be conducted between 6/2 and 7/10 with USFWS permission (active eagle nest).

TAG COMMENTS:_____

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

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 unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.	
3N, 3P 3O, 3Q	Harbor seal and sea lion pupping (5/15 to 7/1) Harbor seal and sea lion molting (8/15 to 9/15) Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.	
5R	Seabird colony (5/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.	
5S	Shorebird/waterfowl concentration (4/1 to 5/15) Restrict all activity to essential minimum, especially air traffic.	
5T	All Bald Eagle nests (3/1 to 6/1) Active Bald Eagle nests (3/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.	
6U	Recreation:	Tent sites (6/1 to 9/15)
6V		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-3 SUBDIVISION: E DATE 4-7-90

USCG
NAME R. Bryan Hirtle SIGNATURE R. Bryan Hirtle

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Agree with the Shoreline Oiling Summary sheet for WB-003, E

ADEC
NAME Russell Kanibe SIGNATURE Russell Kanibe

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

There was asphalt along the high tide line on the sand and gravel spit in spotty distribution. There were some pockets of of asphalt in the boulders and cobbles along the the south shore of Windy Bay to the east of the spit.
Recommended treatments Manual pick up of the asphalt ~~and~~.

LAND MANAGER
NAME Patrick Norman SIGNATURE Patrick Norman

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

manual pick up of Ashpalt and mousse patties should collect the majority of oil found in this subdivision.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Randy Siegel USCG Bryan Hirtle SEGMENT ST/ WB-3 (5 subdivisions)
BIO Mike Fawcett LAND REP Pat Norman (PWC) SUBDIVISION E (5th of 5)
EXXON John Dean ADEC Russell Kunibe TIME 10:20 to 11:15
TEAM NO.: 17 TIDE LEVEL: +5.0 to +6.2 DATE 4/7/90
EST. SUBDIVISION LENGTH: 790 ~~450~~ m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
SURFACE SEDIMENTS: R 10 % B 10 % C 5 % P 5 % G 10 % S 60 % M Ø % V Ø %
SLOPE: Lang 90 % Hang 10 % Vert Ø % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W N/A m M 10 m N 30 m VL 150 m NO 600 m
~~US=160~~

SURFACE OIL

CHARACTER	DISTRIBUTION /C	/B	/P	/S	OIL / FILM COLOR SBL/BR	DBL/RW	GY/SL	DBR/TL	LBR	IMPACTED ZONES SU	UI	MI	LI
ASPHALT PAVEMENT		✓		X		X		✓			X✓		
POOLED													
COVER													
COAT				X		X					X		
STAIN				X		X					X		
MOUSSE													
PATTIES				X				X			X		
TARBALLS				X				X			X		
FILM													
NO OIL										X		X	X

PAVEMENT: H (F) S ~~1~~ 30 sq. m by 2 cm
PATTIES / TARBALLS 25 BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris	X		

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE N/A
#BAGS 0

Photographs:
Roll No. 5T-17-5
Frames 4,5, 7,8

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER OP	OR	OL	OF	NO	OILED INTERVAL (CM-CM)	BELOW UO	UC	OIL / FILM COLOR SBL/BR	DBL/RW	GY/SL	DBR/TL	LBR	PIT ZONE SU	UI	MI	LI	ANA	SUBSURFACE SEDIMENTS
1	40					X	0-0		X							X				G
2	30		X				0-2		X				X			X				G
3	30					X	0-0		X							X				G, P
							.													
							.													
							.													

COMMENTS This subdivision consists largely of a sand spit about 30-40 meters in width. The spit extends inland and becomes wider - groundcover changes to R + B. The easternmost 80 m on each side of the spit were not surveyed due to high tide. Minor oiling was observed on the sand spit - a few TB and PT. Further inland, two areas contained heavier oiling, although the presence of kelp in one of areas prevented thorough surveying. This subdivision is separated from subdivision [illegible] to the west by about 1300 meters of shoreline which did not contain observable oil during ADECs 1989 survey, and was [illegible]

 REVIEWED [illegible] DATE 12 Apr 90

OG Randy Siegel

SEGMENT WB-3

SUBDIVISION E

DATE 4 / 7 90

CHECKLIST

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

LEGEND

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

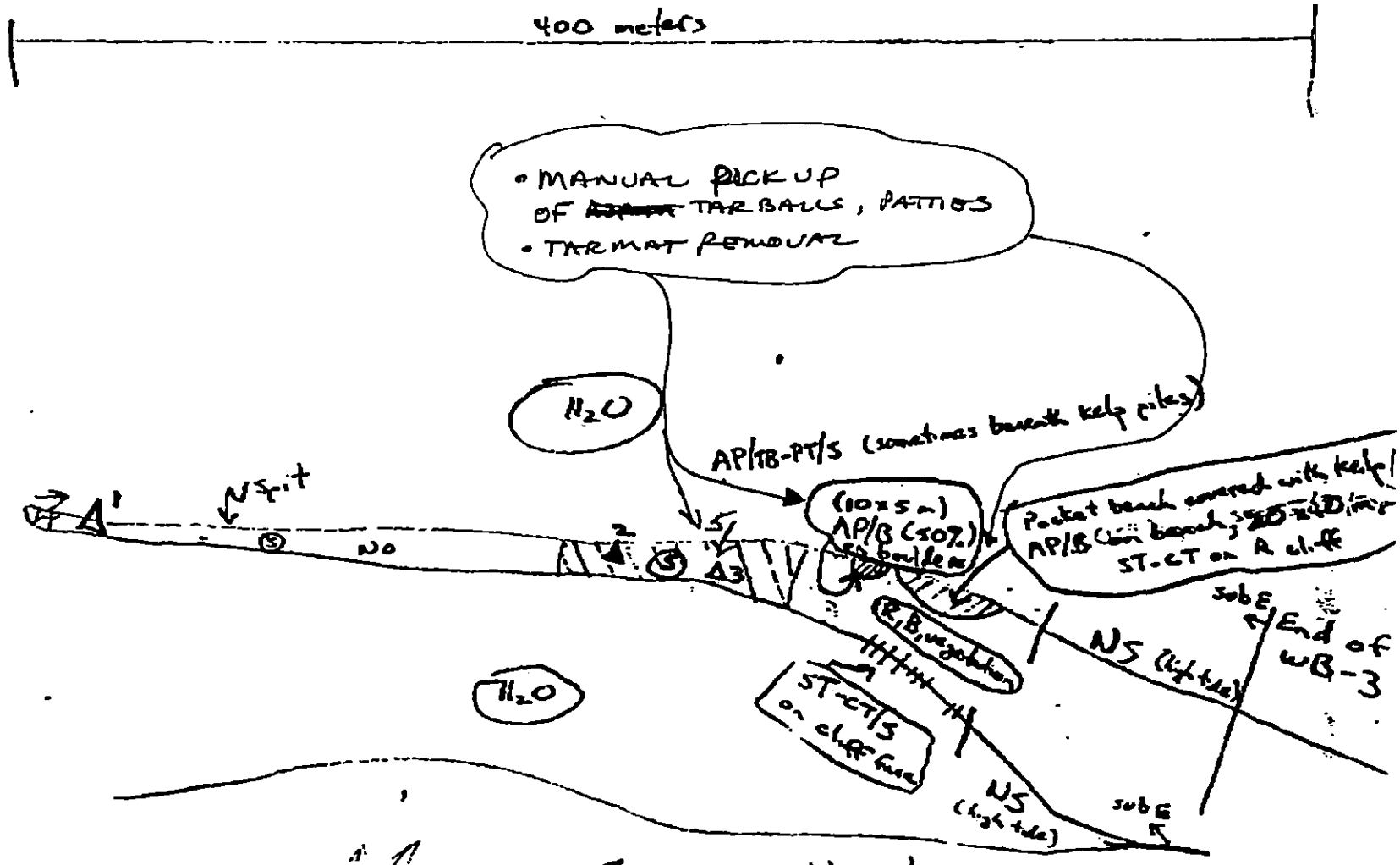
CT/S Splashed Distribution

Oiled Vegetation

Photo location, direction, and number

SKETCH MAP

PATTIES STILL ON
SURVEY 7.8 .5



Oil Character Length (m): AP 30 PO N/A CV N/A CT 60 ST 60 MS N/A PT 140 TB 140 FL N/A NO 600 ~~TPS 160~~

REVISION 03/30/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / WB 3 Subdivision E Date (mo / day / yr) 4/7/90

Time (24 hr) 1040-1115 Biologist M. Fawcett

(A) Substrate type and % of segments:
(1) Bedrock____ (2) Boulder____ (3) Cobble____ (4) Pebble____ (5) Sand____ (6) Silt____

(B) Overall % cover of biota (% of segment): Dense____ Moderate____ Low ✓

(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. 5T-17-5
Frames 4-5

BARNACLES

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

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

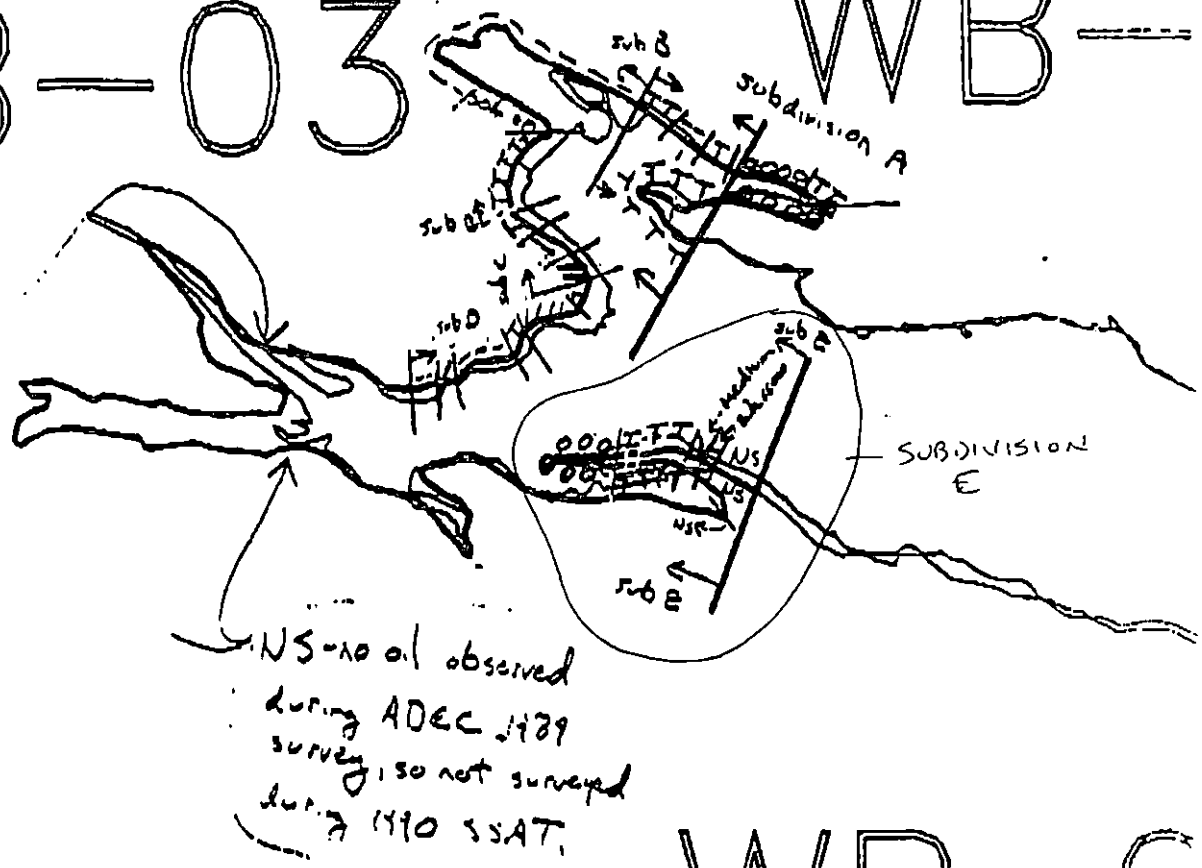
NOT PRESENT

Wildlife Observations/ General Comments:
The main part of spit is unstable gravel/pebble bar, no attached biota
[illegible] outcrop toward east has dense Fucus/barnacle cover in MTI [illegible]
[illegible] MI 7-8 white-winged scoter 1 harborseal - magpies

Ecological Considerations:

/ JJ
[illegible]
SPA

WB-03 WB-



WB-C

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

WB-3

ADEC Segment Length: 8154m

Map Key: KEN-127
Name: Randy Seiger
Date: 4/30/90

SHORELINE EVALUATION

SEGMENT ST/ WB-03 SUBDIVISION A (1 of 5) DATE 4/6/90

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)
5T All Bald Eagle nests (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
8AA Sensitive Estuary
7JJ Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid any unnecessary disturbance or damage to unoiled substrate and biota.

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

SHPO SIGNATURE: J. David McMahan DATE: 5/9/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 169 m: V.Light 1364 m: No Oil 928 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

RECOMMENDATIONS:

____No Treatment Recommended	____Snare/Absorbent Booms
X Treatment Recommended	____Oil Snares (pom poms)
X Manual Pickup	____Absorbents (pads,rolls,etc)
X Bioremediation	____Spot Washing:____Wands
X Tarmat: ____Breakup	____ Beach Cleaner
X Removal	____Other (see comments)

COMMENTS: Recommend tarmat removal and pick-up of mousse, sorbent boom + OILED VEG. and tarballs from areas indicated on the field sketch. Bioremediation is recommended for broken coat areas. Treatment should be limited to the period from 6/2 to 7/10 and should be cleared with ~~ADF&G~~ USFW due to possible presence of bald eagle nests.

TAG COMMENTS:

TAG APPROVAL DATE: 4/23/90.
ADEC ART WEINER Art Weiner
EXXON ANDY TEAR
NOAA Joseph Talbott
USCG KENNETH KEANE

FOSC: DATE: 5-18-90

OG Randy Siegel

SEGMENT / WB-3

SUBDIVISION A

DATE 4 / 6 / 90

CHECKLIST

- ___N Arrow
- ___Approx. Scale
- ___Seg/Sub Bndry
- ___Oil Dist.
  - Width
  - Length
  - % Cover
- ___Substrate Character
- ___Est. HWL/LWL
- ___SSL
- ___Profile Location(s)
- ___Profile(s)
- ___Pit Location(s)
- ___Photo Location(s)

LEGEND

1 △ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

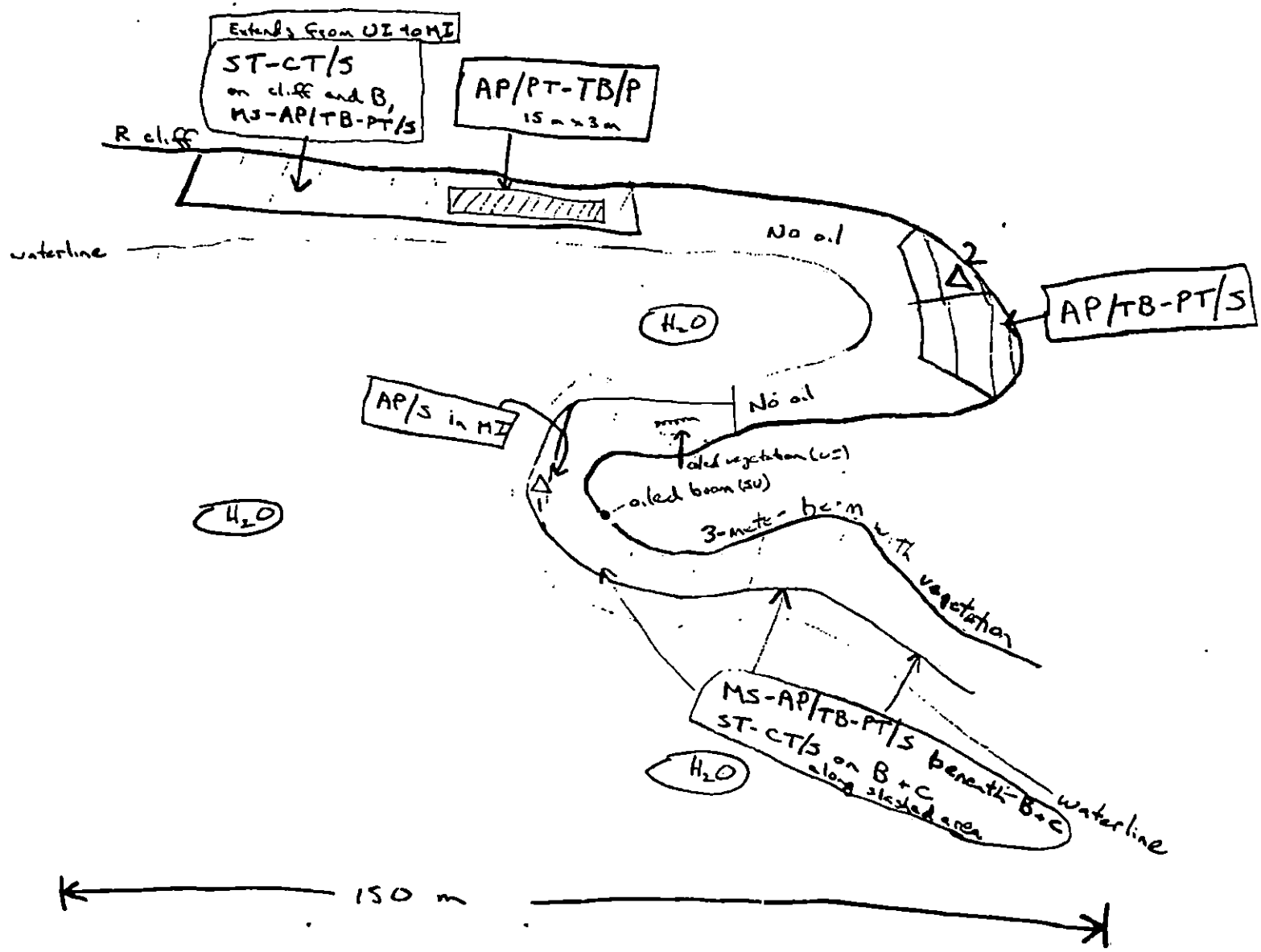
Oiled Vegetation

1 Photo location, direction, and number

SKETCH MAP

N

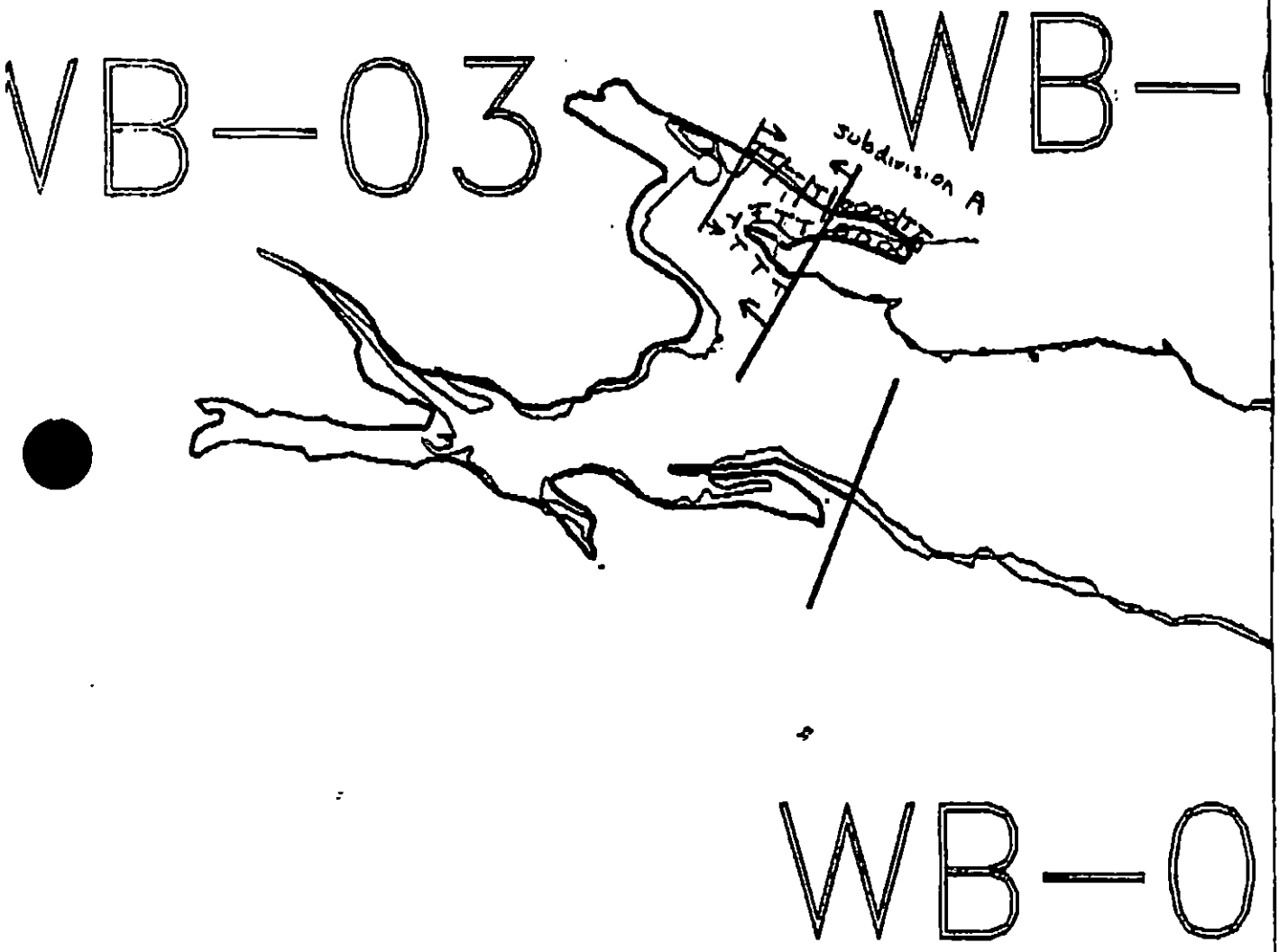
2 cm = 20 m
App. scale



Oil Character Length (m): AP 15 PO 0 CV 0 CT 200 ST 270 MS 15 PT 100 TB 100 FL Ø NO 100

REVISION:03/24/90

subdivision A



Wide
Medium
Narrow
Very Light
Non Oil

WB-3

ADEC Segment Length: 8154m

0 300 600 900

Map Key: KEN-127
Name: Randy Siegel
Date: 4/6/90
Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ WB-03 SUBDIVISION B (2 of 5) DATE 04/06/90

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)
5T All Bald Eagle nests (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
8AA Sensitive Estuary
7JJ Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid any unnecessary disturbance or damage to unoiled substrate and biota.

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

SHPO SIGNATURE: J. David McMahan DATE: 5/9/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 1228 m: V.Light 502 m: No Oil 171 m
Subsurface Oil Observed: Yes ____ No X Maximum Depth ____

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of mousse, tarballs, patties, and oiled debris, (debris, trash, vegetation). Work should be conducted between 6/1 and 7/9 with USFWS Service permission due to eagle constraints.

TAG COMMENTS: ____

TAG APPROVAL DATE: 4/23/90.
ADEC ART WEGNER
EXXON ANDY TER
NOAA Joseph Talbott
USCG KENNETH KEANE
FOSC: ____ DATE: 5-11-90

SEGMENT ST- 03-3

SUBDIVISION B

DATE 4 / 6 90

CHECKLIST

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

LEGEND

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

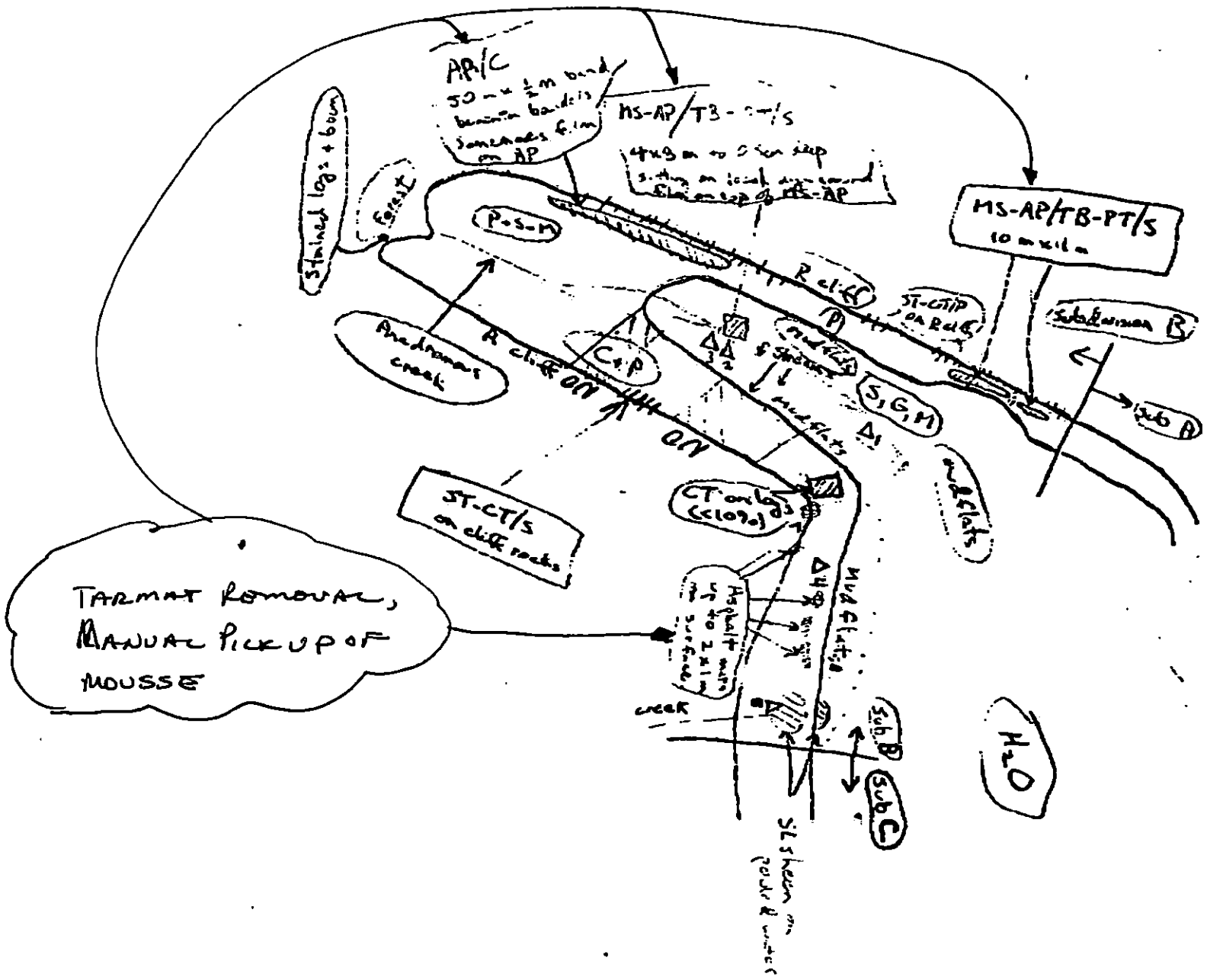
CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 Photo location, direction, and number

SKETCH MAP



Oil Character Length (m): AP 600 PO N/A CV N/A CT 300 ST 300 MS 30 PT 30 TB 30 FL N/A [illegible]

REVISION 93/04/08

OG [illegible]

SEGMENT ST: WB-3

SUBDIVISION B

DATE 4 / 6 90

CHECKLIST

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

LEGEND

1 ▲ PR - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

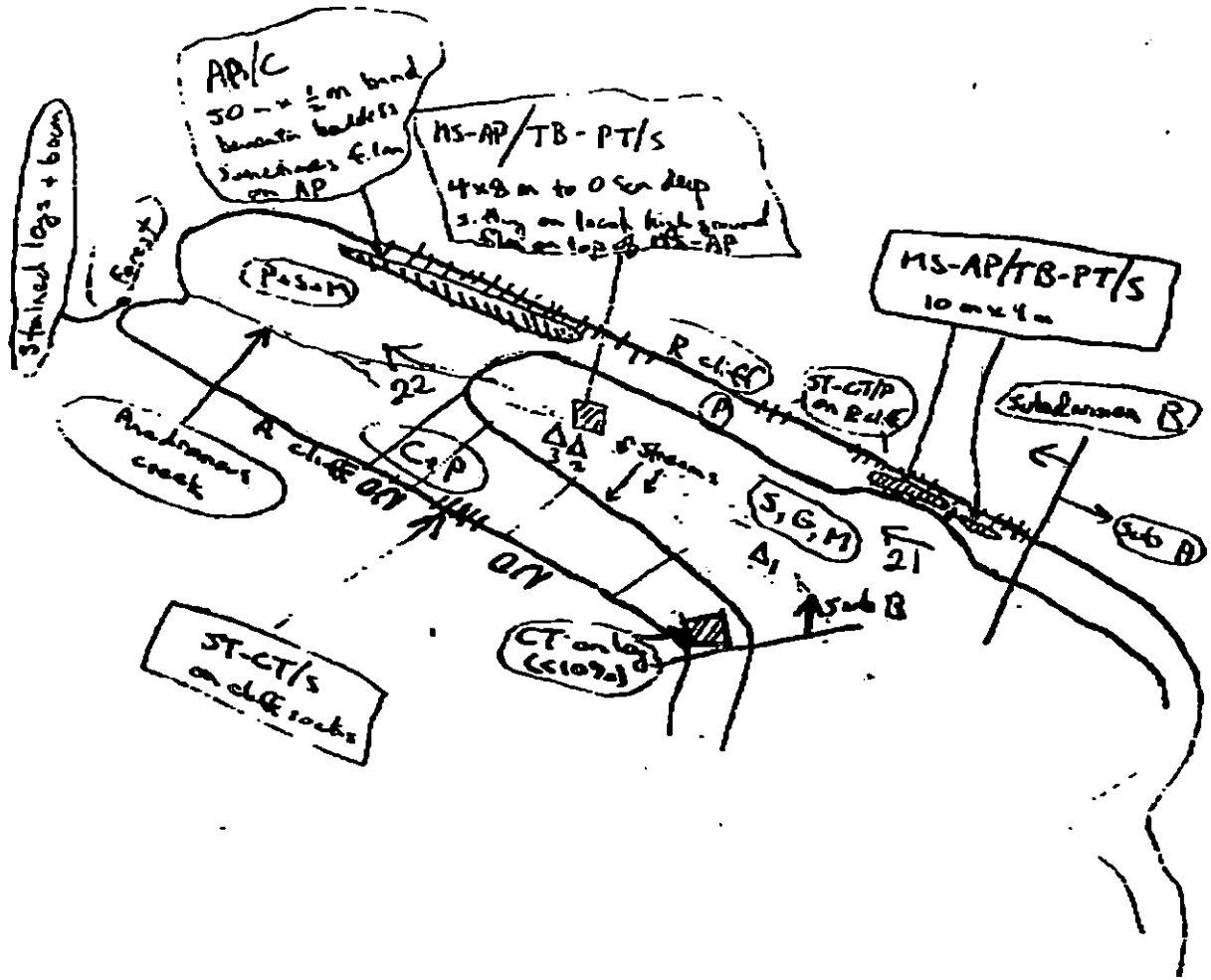
CT/S Splashed Distribution

Oiled Vegetation

1 ●→ Photo location, direction, and number

SKETCH MAP

↑ ● 2 cm = 60 m / Appr. Scale



Photos

ST-17-4

frames 13-16 (aerial)

+ 21 - 22

13-16 aerial

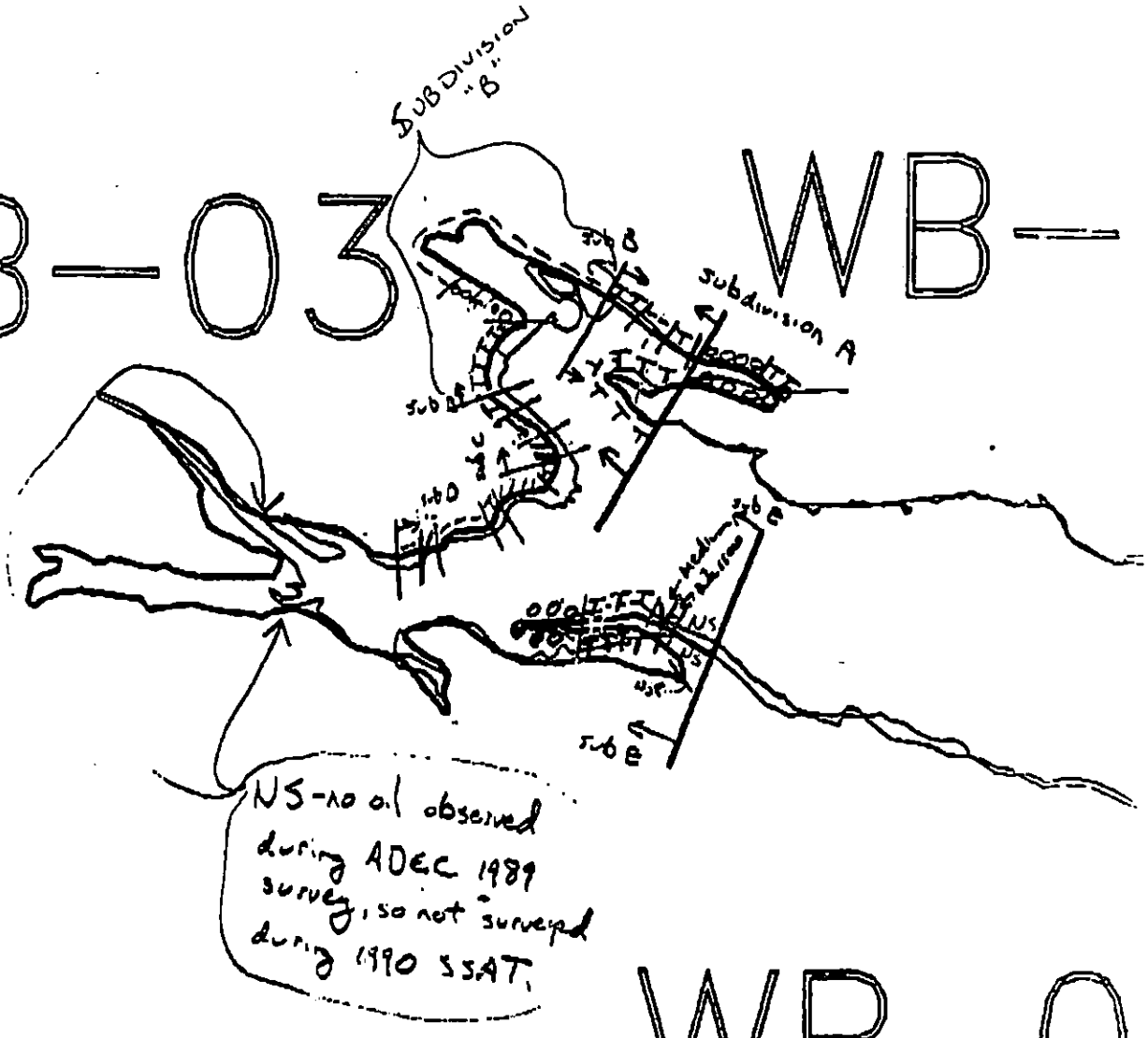
Oil Character Length (m) AP 60 PO N/A CV N/A CT 300 ST 300 MS 30 PT 30 TB 30 FL N/A NO 15

REVISION 20/04/90

DRI. 0-90 SCN 21:22 P.06

~~Subdivision A~~

WB-03 WB-



WB-0

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

WB-3

ADEC Segment Length: 8154m

0 300 600 900

Map Key: KEN-127
Name: Randy Siegel
Date: 4/6/90

SHORELINE EVALUATION

SEGMENT ST/ WB-03 SUBDIVISION C (3 of 5) DATE 04/06/90

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)
5T All Bald Eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
8AA Sensitive Estuary
7JJ Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid any unnecessary disturbance or damage to unoiled substrate and biota.

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

SHPO SIGNATURE: J. Daniel McMahan DATE: 5/9/90

OILING CATEGORIZATION:

Wide 0 m: Medium 136 m: Narrow 182 m: V.Light 129 m: No Oil 0 m
Subsurface Oil Observed: Yes ____ No X Maximum Depth ____

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat removal and manual pick up of mousse, tarballs and oiled debris (trash, vegetation debris) as indicated in the attached sketch map. Work should be conducted between 6/1 and 7/9, USFWS permitting, due to eagle constraint.

TAG COMMENTS: FOLLOWING MANUAL PICKUP BIOREMEDIATE DURING LOW TIDE BUT NOT AT A MINUS TIDE LEVEL.

TAG APPROVAL DATE: 4/23/90
ADEC ART WEINER
EXXON ANDY TER
NOAA JOSEPH TALBOTT
USCG KENNETH KEANE

FOSC: DATE: 5-18-90

OG Rocky Siegel

SEGMENT WB-3

SUBDIVISION C

DATE 4 / 6 90

SKETCH MAP

CHECKLIST

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

LEGEND

1 ▲ PR - No Subsurface Oil

2 ▲ PR - Subsurface Oil

CT/C Continuous Distribution

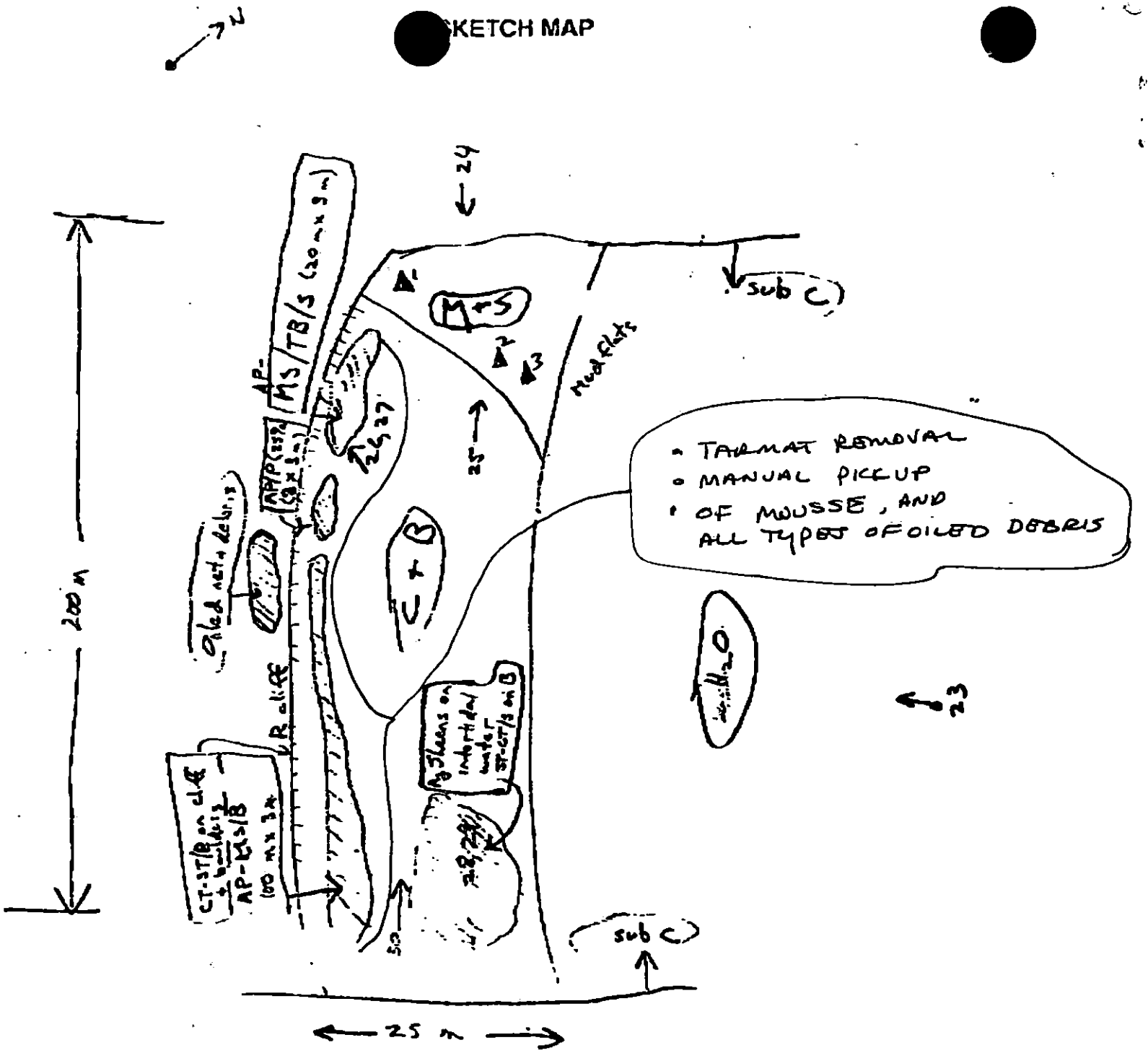
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 Photo location, direction, and number



Oil Character Length (m): AP 120, PO N/A CV N/A CT 120 ST 120 MS 120 PT 120 TB 20 FL 20 NO N/A

REVISION 03/2000

WB-03 WB-

US-no oil observed during ADEC 1989 survey, so not surveyed during 1990 SSAT.

WB-0

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

WB-3

ADEC Segment Length: 8154m

Map Key: KEN-127
Name: Randy Sing
Date: 4/3/90

SHORELINE EVALUATION

SEGMENT ST/ WB-03 SUBDIVISION D (4 of 5) DATE 04/06/90

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)
5T All Bald Eagle nests (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
8AA Sensitive Estuary
7JJ Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid any unnecessary disturbance or damage to unoiled substrate and biota.

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

SHPO SIGNATURE: J. David McMahan DATE: 5/9/90

OILING CATEGORIZATION:

Wide 0 m: Medium 429 m: Narrow 434 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 7 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat removal and manual pick up of mousse, tarballs and oiled debris (trash, vegetation debris) as indicated in the attached sketch map. Work should be conducted between 6/1 and 7/9, USFWS permitting, due to eagle constraint.

TAG COMMENTS: BIOREMEDIATE COATS AND REMAINING OIL IN AREAS OF MANUAL REMOVAL

TAG APPROVAL DATE: 4/23/90

ADEC Art Werner
EXXON Amoy Teal
NOAA Joseph Talbott
USCG Kenneth Keane

FOSC: ____ DATE: 5-18-90

OG Kandy Siegel

SEGMENT/ WB-3

SUBDIVISION D

DATE 4 / 7 90

CHECKLIST

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

LEGEND

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

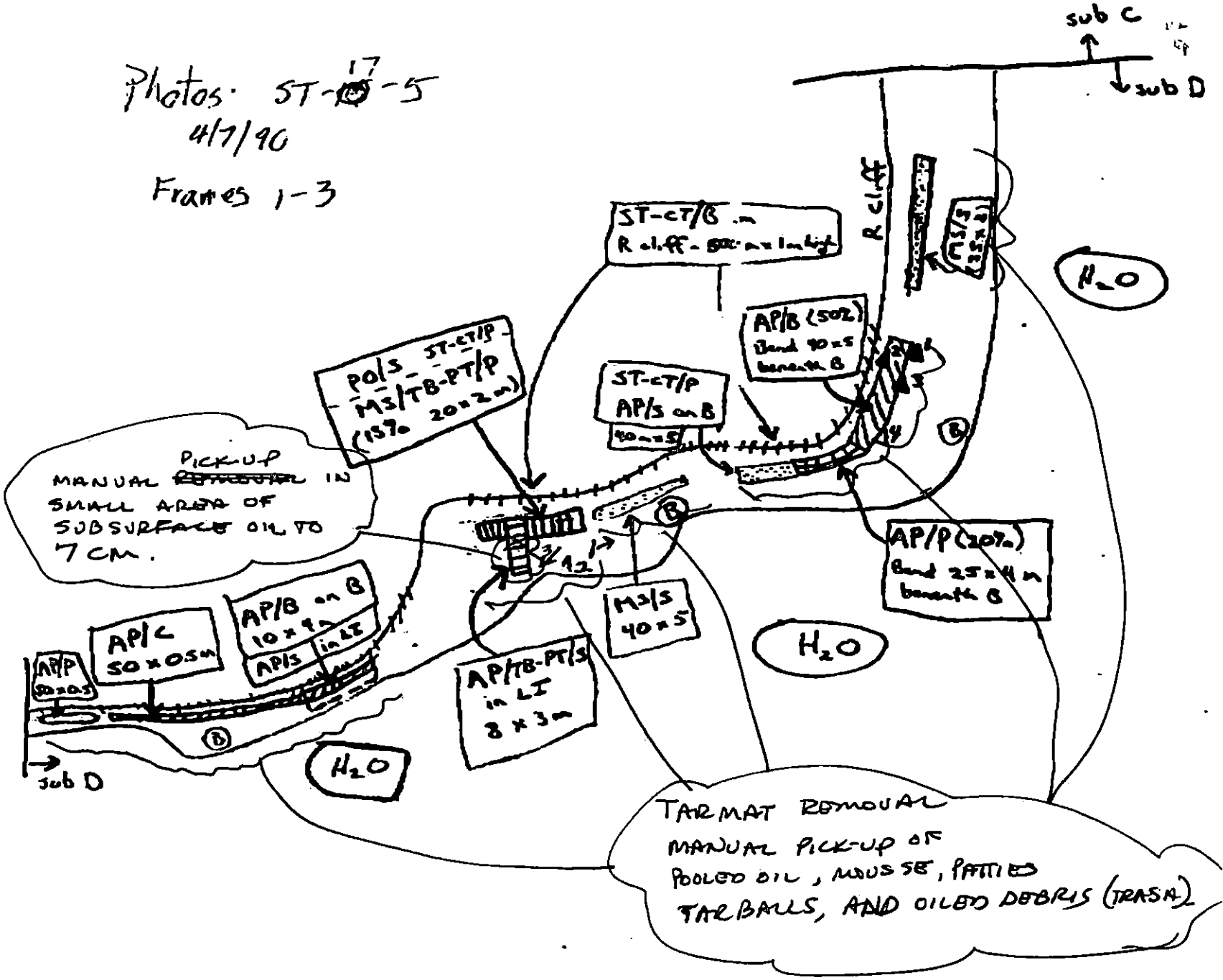
Photo location, direction, and number

N

2 cm = 60 m
Approx Scale

SKETCH MAP

Photos: ST-17-5
4/7/90
Frames 1-3



Oil Character Length (m): AP 180 PO 20 CV N/A CT 500 ST 500 MS 100 PT 500 TB 500 FL N/A NO N/A

REVISION 10/26/90

WB-03 WB-

NS - no oil observed during ADEC 1989 survey, so not surveyed during 1990 SSAT.

WB-0

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

WB-3

ADEC Segment Length: 8154m

Map Key: KEN-127
Name: Rodey
Date: 4/8/90

SHORELINE EVALUATION

SEGMENT ST/ WB-03 SUBDIVISION E (5 of 5) DATE 04/07/90

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)
5T All Bald Eagle nests (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
8AA Sensitive Estuary
7JJ Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid any unnecessary disturbance or damage to unoiled substrate and biota.

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

SHPO SIGNATURE: J. David McMahan DATE: 5/9/90

OILING CATEGORIZATION:

Wide 0 m: Medium 72 m: Narrow 58 m: V.Light 788 m: No Oil 447 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

RECOMMENDATIONS:

____No Treatment Recommended
____Treatment Recommended
X Manual Pickup
____Bioremediation
X Tarmat: ____Breakup
X Removal

____Snare/Absorbent Booms
____Oil Snares (pom poms)
____Absorbents (pads,rolls,etc)
____Spot Washing:____Wands
____ Beach Cleaner
____Other (see comments)

COMMENTS: Recommend manual removal of patties, tarballs, debris, and tarmat as shown on attached sketch map. Work should be conducted between 6/2 and 7/10 with USFWS permission (active eagle nest).

TAG COMMENTS:

TAG APPROVAL DATE: 4/23/90.
ADEC JOHN BAUER
EXXON ANDY TEAL
NOAA JOSEPH TALLOTT
USCG KENNETH KEANE
FOSC: DATE: 5-18-90

OG [redacted]y Siegel

SEGMENT ST/ WB-3

SUBDIVISION E

DATE 4 / 7 90

CHECKLIST

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

LEGEND

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

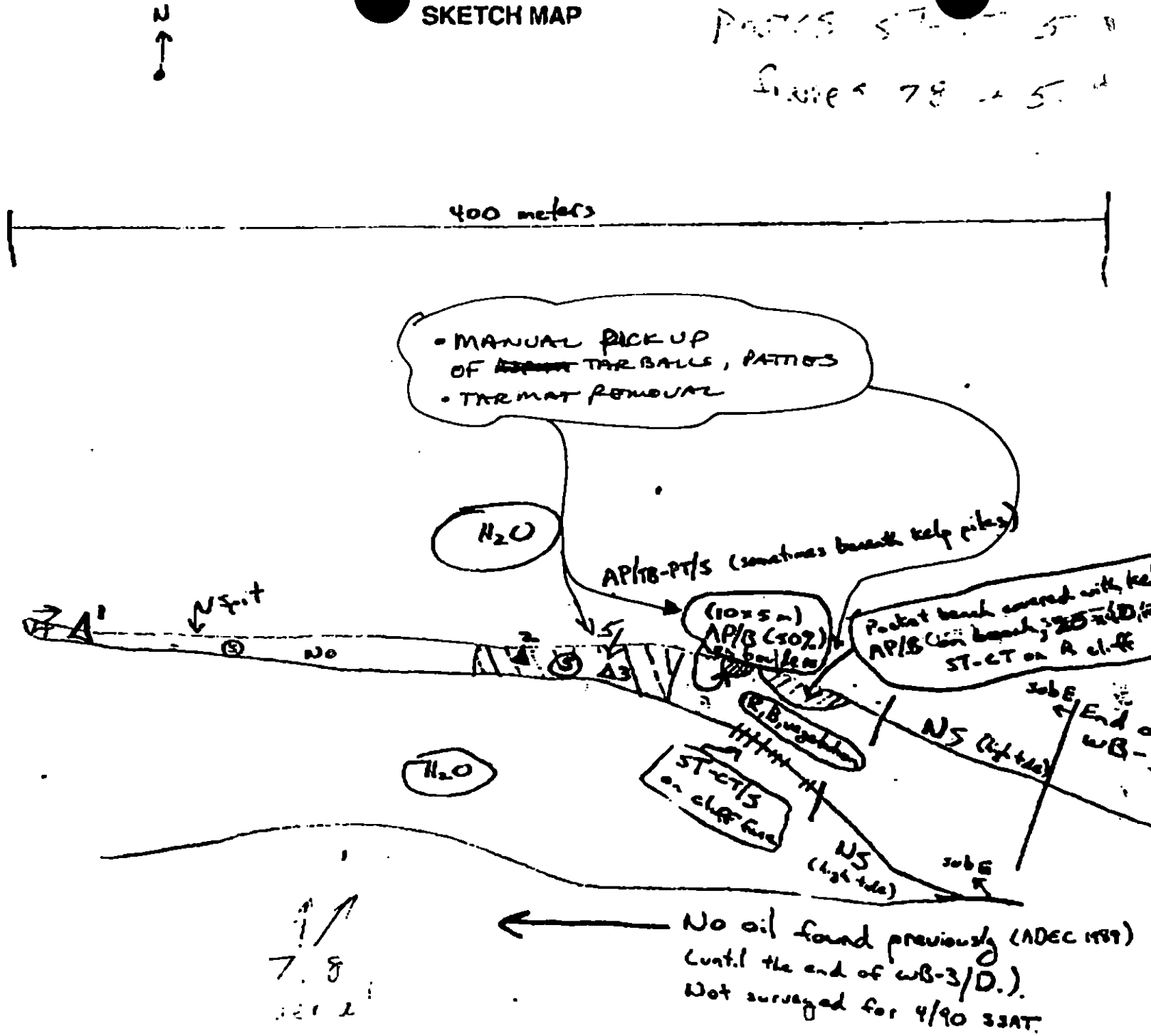
CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

Photo location, direction, and number

SKETCH MAP



No oil found previously (ADEC 1989) (until the end of WB-3/D.). Not surveyed for 4/90 SSAT.

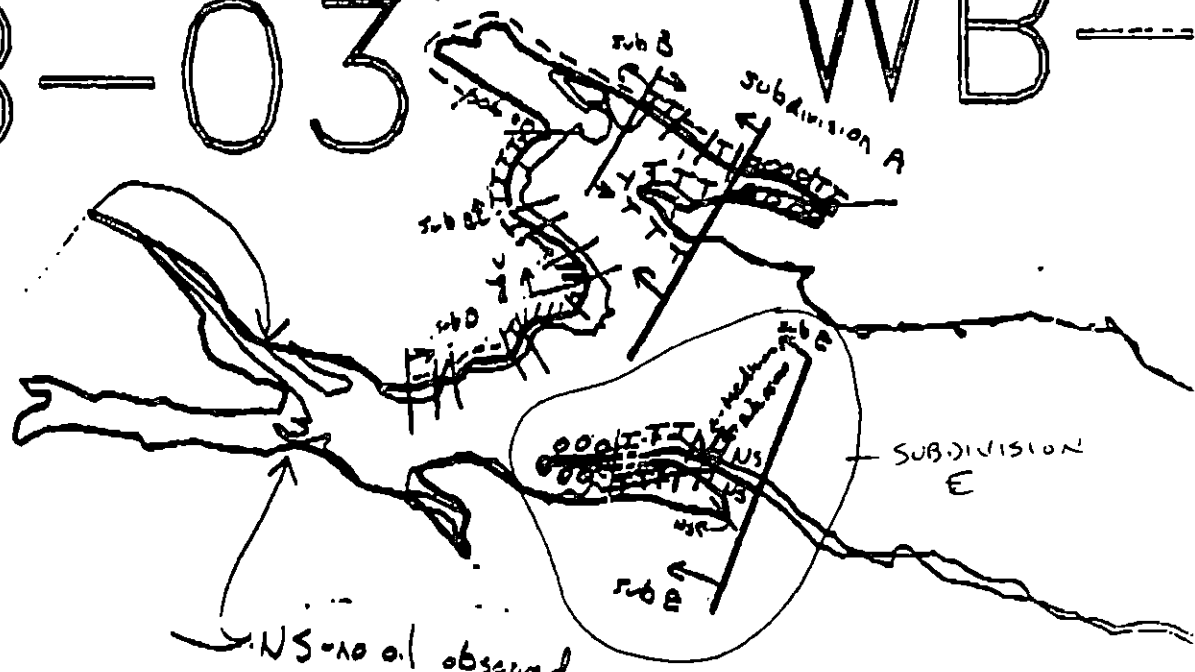
Oil Character Length (m): AP 30 PO N/A CV N/A CT 60 ST 60 MS N/A PT 140 TB 140 FL N/A NO 600 ~~[illegible]~~

REVISIONS

P.13 APR-8-90 SUN 21:32

WB-03

WB-



NS-no oil observed during ADEC 1989 survey, so not surveyed during 1990 SSAT.

WB-C

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

WB-3

ADEC Segment Length: 8154m

0 300 600 900

Map Key: KEN-127
Name: Rudy Geiger
Date: 4/8/90
Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: WB 003 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, Subsistence - Invertebrate harvesting

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

SHPO Signature: Timothy A. Smith Date: 6/07/91

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

COMMENTS:
INITIAL:

TAG:

FOSC:

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

ADEC

EXXON

USCG

NOAA

FOSC

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

ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

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

Subsistence, Invertebrate Harvesting: Unlimited treatment except avoid disturbance of clam/mussel beds unless specifically directed by TAG Work Order.

C1 B7

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT WB-003 SUBDIVISION A DATE 5/22/91

ADEC
NAME Steve Ferguson SIGNATURE [signature]

☒ NTR ☐ TREATMENT RECOMMENDED

All OILING OBSERVED WITH THE EXCEPTION OF CV/CT/ST WERE picked up DURING SURVEY. NO TREATMENT RECOMMENDED.

EXXON
NAME George P. Stiles SIGNATURE George P. Stiles 5/22/91

☒ NTR Very little oil found still remaining. 2 bags picked up during the survey.

LANDMANAGER
NAME Pat Norman OF Port Graham SIGNATURE Pat Norman

☒ NTR small Amounts of AP, SOR will continue to become exposed in this area, we picked up patches in the ASAP 90 survey also.

USCG/NOAA
NAME [illegible] SIGNATURE [signature]

☒ NTR Some AP + TB found and picked-up.

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 1

TEAM NO. 4

SEGMENT WB003

OG B TRIMM

BIO J. ROTH

SUBDIVISION A

ADEC S. Ferguson

LANDMANAGER Pat Norman for PB

DATE MAY / 26 / 91

EXXON George R. Stiles

USCG/NOAA McMahon / McDonald

TIME 17 : 25 to 18 : 21

TIDE LEVEL 4.85 ft. to 3.31 ft.

ENERGY LEVEL: ☐ H ☐ M ☒ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 1142 m

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

EST. OIL CATEGORY LENGTH: W Ø m M Ø m N Ø m VL 16 m NO 1126 m US Ø m

LOC	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO		V H M L	WIDTH m	LENGTH m	S	UI	MI	LI	
A		T									R	H	1	5		X			MS IN ROCK CREVICES
B							P				R	H	1	1		X			
C				S		S	S				R P	H	1	10		X			SOR-H IN CREVICES OF ROCK FACE

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

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

PHOTO ROLL # MAYSAP- 4(III) - 11 FRAMES 10-17

No Pits

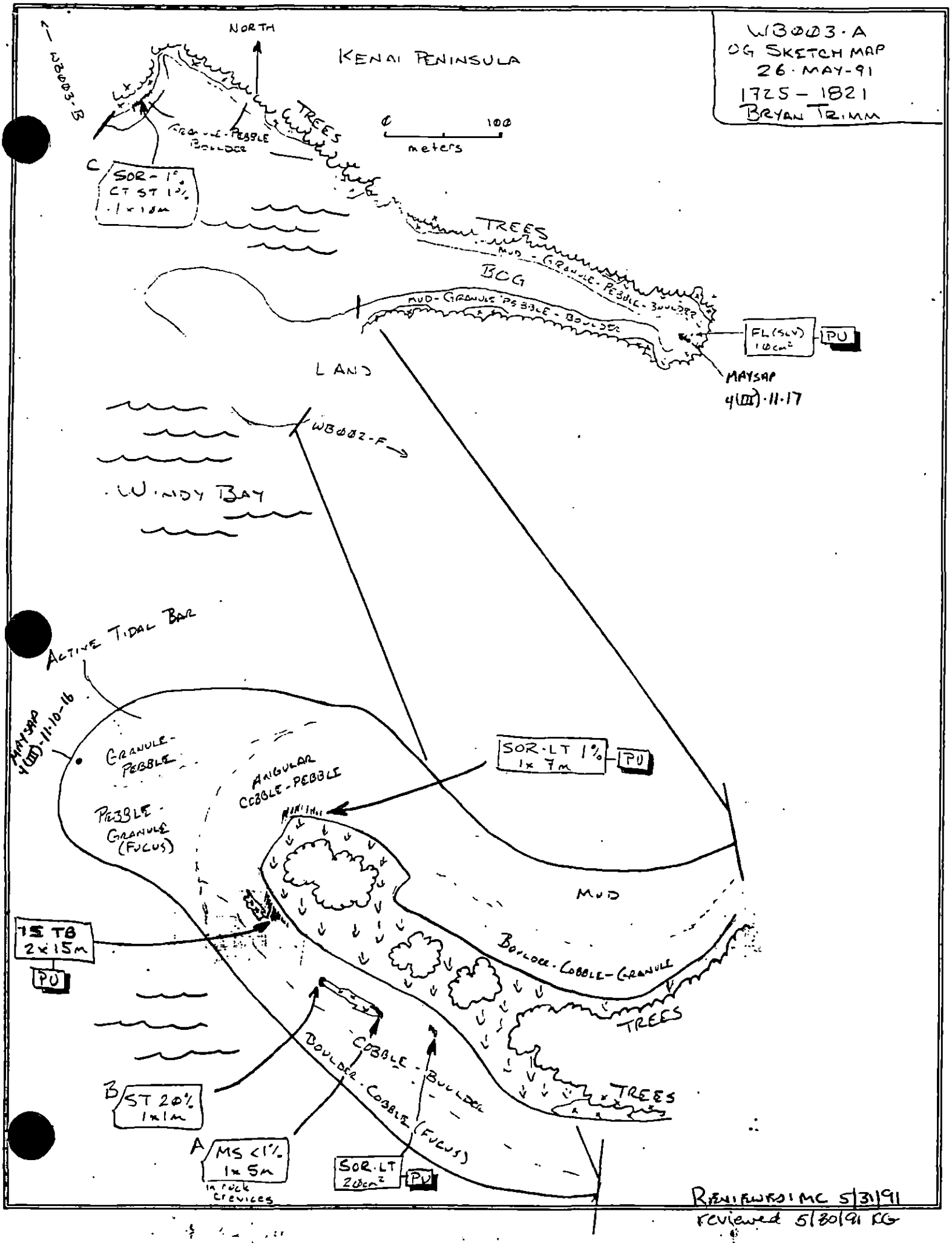
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO				B R S N	S	UI	MI	LI		
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									

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

OG COMMENTS:

SMALL DISCONTINUOUS DEPOSITS OF SOR, TB & FL ON MUD WERE RECOVERED
ACTIVE TIDAL BAR WEST OF LOCATION 'B'.
NO OIL OBSERVED IN BOG.

REVIEWED: MC 5/31/91
revised 5/30/91 KG



RENIEWED: MC 5/31/91
reviewed 5/30/91 KG

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #	4	DATE	26 MAY 91
SEGMENT #	WB003	TIDAL HEIGHT(Range)	+ 5.0 TO + 3.3 FT
SUBDIVISION	A	BIOLOGIST	JIM ROTH
SEA STATE	FLAT	WIND SPEED/DIRECTION	–
PHOTOGRAPHS: ROLL #		FRAME #	

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

A – BEDROCK OUTCROPPING IN MITZ w/ MODERATELY DENSE BARNACLES; SPARSE FUCUS SPORLINGS.

B – BEDROCK OUTCROPPING IN MITZ w/ MODERATELY DENSE BARNACLES, SPARSE FUCUS SPORLINGS.

GENERAL COMMENTS: THIS SUBDIVISION CONTAINS A SMALL COVE WITH A SHELTERED MUDFLAT WITH FUCUS, EEL GRASS, ENTEROMORPHA ON GRAVEL AND MUD BANKS IN THE MITZ. MUDFLAT PROBABLY CONTAINS EDIBLE BIVALVES, BUT TIDE WAS TOO HIGH FOR OBSERVATIONS IN LOWER ZONE. OUTSIDE THE TIDAL BAR THE COBBLE-BOULDER SHORE HAS A TYPICALLY RICH INTERTIDAL BIOTA WITH DENSE FUCUS, MUSSELS, BARNACLES, LIMPETS, AND LITTORINES IN THE MIDDLE ZONE.

BEAR TRACKS OBSERVED IN COVE MUDFLAT.

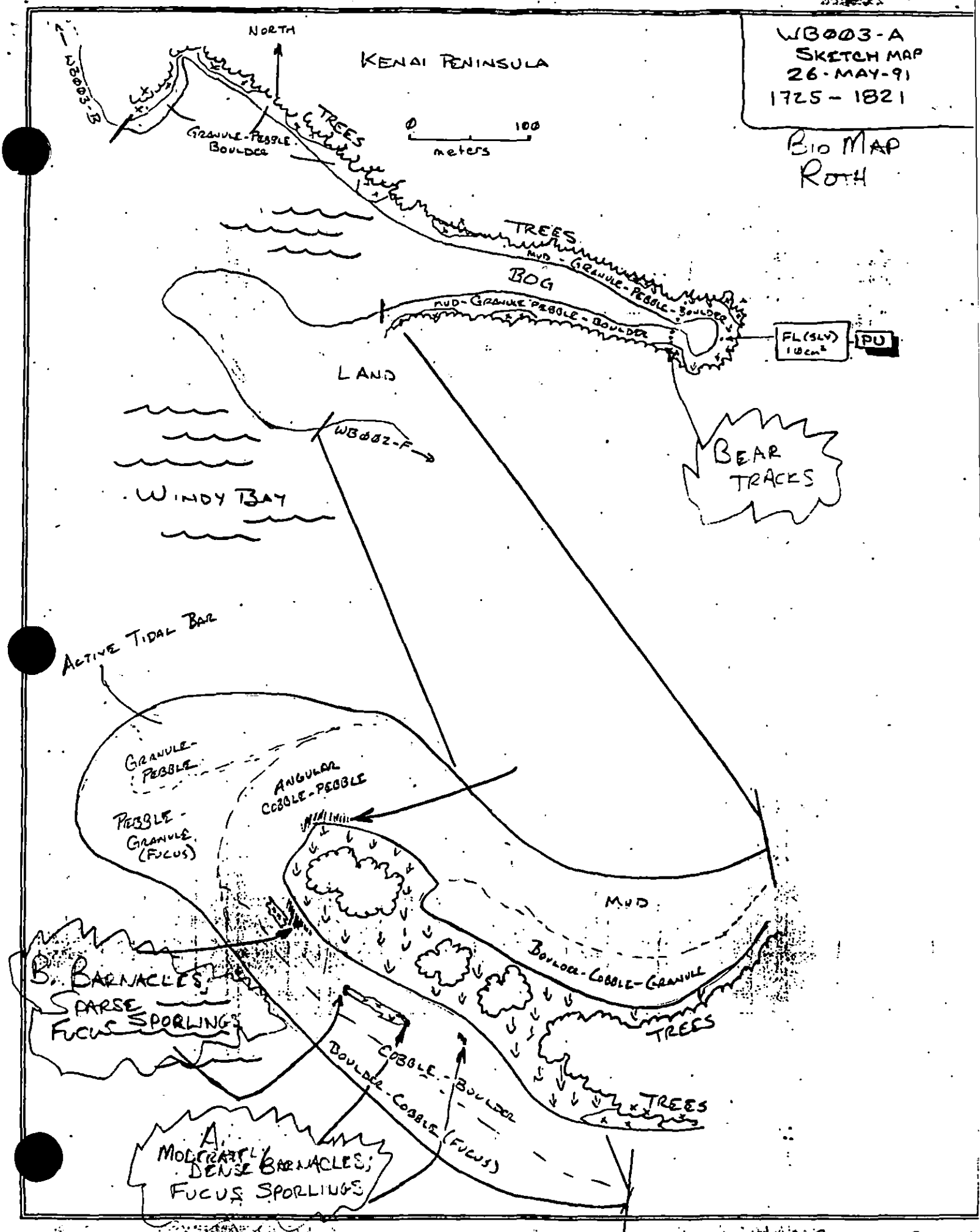
WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds			

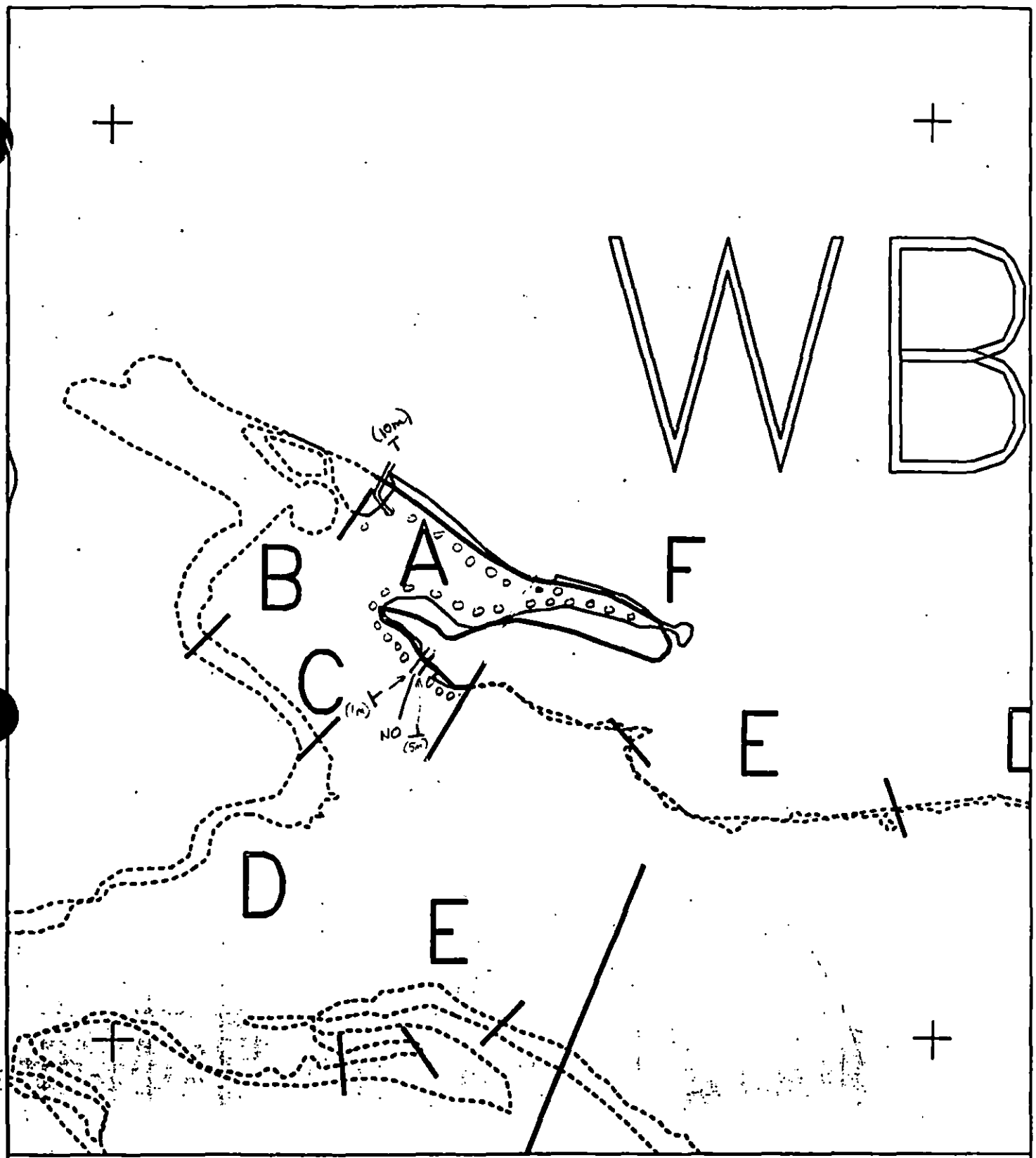
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds(specify)			
les(specify)			

Shoreline subdivision map showing important biological features attached.

REVIEWED 5/31/91 MB



REVIEWED MCB 5/31



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

WB003 A

ADEC Subsegment Length: 1142m

METERS

0 200 400

AK State Plane Zone 4
nad83e

Subdivision Field Map
Map Key: KENWB003A
Name: TRIMM
Date: 26-MAY-91
Date Entered:

- SURFACE OIL CATEGORY MAP -

REVIEWED: MC 5/31/91
revised 5/30/91 KG

1991 MAYSAP EVALUATION

SEGMENT: WB 003 SUB: C 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, Subsistence - Invertebrate harvesting

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

SHPO Signature: Timothy A. Smith Date: 6/07/91

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

COMMENTS:
INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: June 7 1991

ADEC

EXXON

USCG

NOAA

FOSC APPROVAL DATE: 6/14/91

FOSC

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

ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

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

Subsistence, Invertebrate Harvesting: Unlimited treatment except avoid disturbance of clam/mussel beds unless specifically directed by TAG Work Order.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT WB-003 SUBDIVISION C DATE 5/27/91

ADEC
NAME Steve Ferguson SIGNATURE [signature]

☒ NTR ☐ TREATMENT RECOMMENDED

NO TREATMENT RECOMMENDED. THERE IS REMAINING SOR-H FROM THE SURVEY THAT COULD BE PICKED UP AT SITES A AND B. DUE TO THE LOCATION IN THE SEAMS, CREVISES AND LARGE OPENINGS IT WOULD TAKE A VERY DETERMINED CREW TO FULLY ADDRESS THE OILING.

EXXON
NAME George P. Stiles SIGNATURE George P. Stiles 5/27/91

☒ NTR Some areas of MS + HSOR were found in the bedrock cracks and around the edges of the boulders. These areas were picked during the survey (5 bags). No appreciable oil remaining.

LANDMANAGER
NAME Pat Norman OF Port Graham SIGNATURE Patrl Norman

☐ NTR recomend. Additional manual pickup of MS & HSOR as shown on OG sketch map There is enough remaining oil in CAD segments of WD-3 to warrant additional work.

USCG/NOAA
NAME [illegible] SIGNATURE [signature]

☒ NTR very little oil found late in bedrock prohibitive effective clean-up. VECO did manage to take some out.

[signature]

MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 4

SEGMENT W3002

OG B. Trimm

BIO J. Roth

SUBDIVISION C

ADEC S. Ferguson

LANDMANAGER Pat Norman for PG

DATE MAY 1 26 / 91

EXXON George P. Stiles

USCG/NOAA McMahon/McDonald

TIME 18 : 39 to 18 : 56

TIDE LEVEL 3.03 ft. to 2.89 ft.

ENERGY LEVEL: ☐ H ☒ M ☐ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 225 m

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

EST. OIL CATEGORY LENGTH: W Ø m M Ø m N Ø m VL 225 m NO Ø m US Ø m

LOC	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO		V H M L	WIDTH m	LENGTH m	S	UI	MI	LI	
A		T		S	S	S	S				TB R	H	2	221	x	x			HVY SOR under/between Talus & MS in Rock Crevices
B				S							BR	H	2	4	x				

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

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

No Pits

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE	CLEAN BELOW	H2O LEVEL	SHEEN COLOR	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO	cm-cm	Y/N	(cm)	B R S N	S	UI	MI	LI		
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									

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

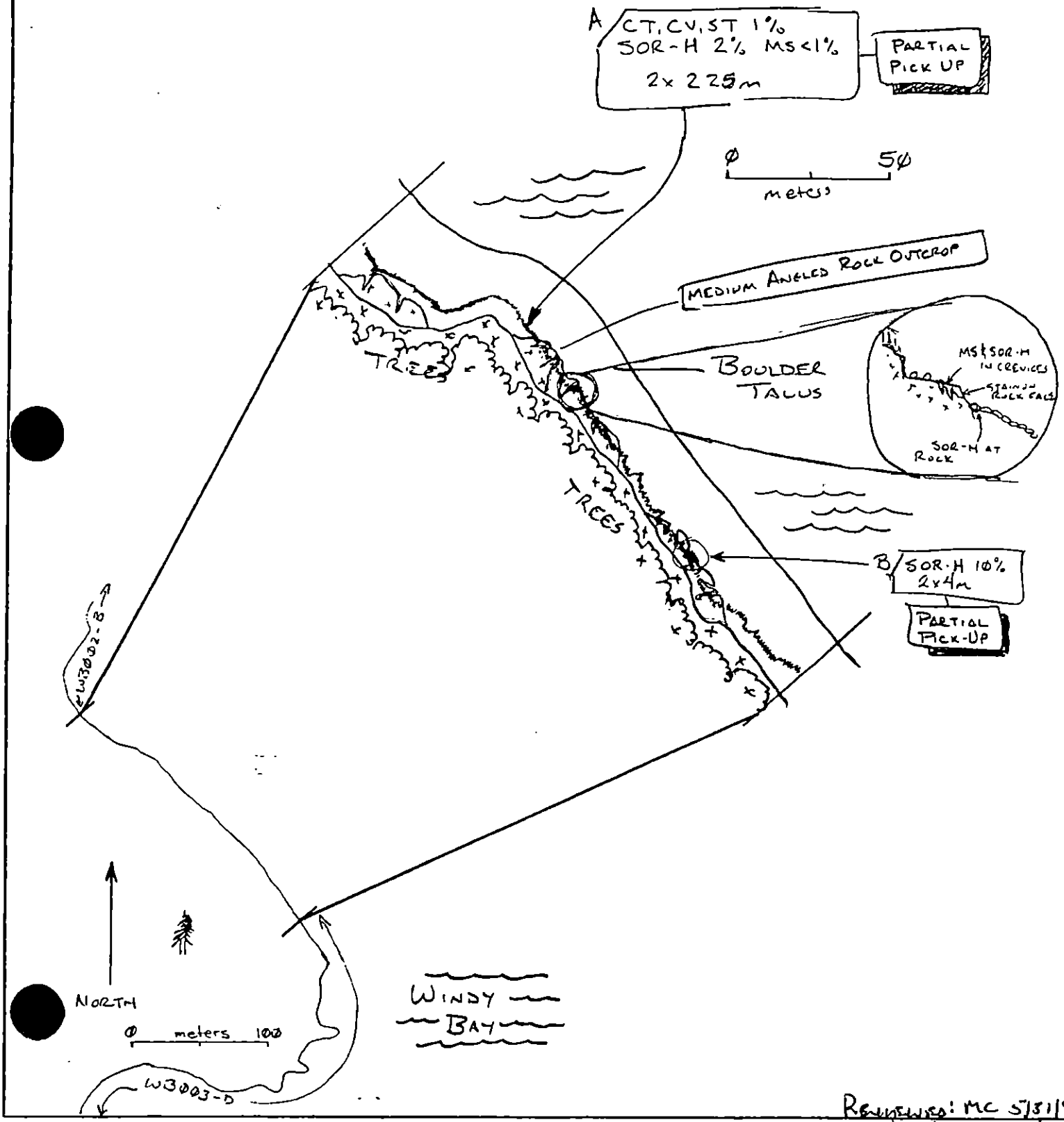
OG COMMENTS:

Boulder Talus & High Angled Rock Face shoreline. Oiling is predominantly a narrow band of mousse & SOR in the Supra & Uitz zones. Mousse has persisted in rock crevices whereas the SOR is located at the base of the rock or within small sediment catches on top of the rock.

Reviewed: MC 5/31/91

Revised 5.30 [illegible]

WB003-C
OG SKETCH MAP
26-MAP-91
1839-1856
BRYAN TRIMM



REVIEWED: MC 5/31/91
revised 5-30 gy

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 26 MAY 91

SEGMENT # WB003 TIDAL HEIGHT(Range) +3.0 TO +2.95

SUBDIVISION C BIOLOGIST Jim ROTH

SEA STATE 1 FT WIND SPEED/DIRECTION

PHOTOGRAPHS: ROLL # FRAME #

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

A - HITZ BEDROCK AND BOULDERS W/ SPARSE INTERTIDAL BIOTA (PRIMARILY VERRUCARIA) AT THE SHELTERED (NORTHWEST END), AND MODERATELY DENSE FUCUS, BARNACLES, LITTORINES AND LIMPETS AT MORE EXPOSED LOCATIONS (PRIMARILY TOWARD SOUTHWEST END.

GENERAL COMMENTS: A FAIRLY EXPOSED SITE — MORE EXPOSED TOWARD THE SOUTHEAST. BOULDER/BEDROCK SHORE HAS A TYPICALLY ZONATED INTERTIDAL BIOTA WITH FUCUS, BARNACLES, MUSSELS, LIMPETS AND LITTORINES DOMINATING THE MIDDLE ZONE. MIDDLE ZONE BIOTA EXTENDS UPWARD AT MORE EXPOSED SITES.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

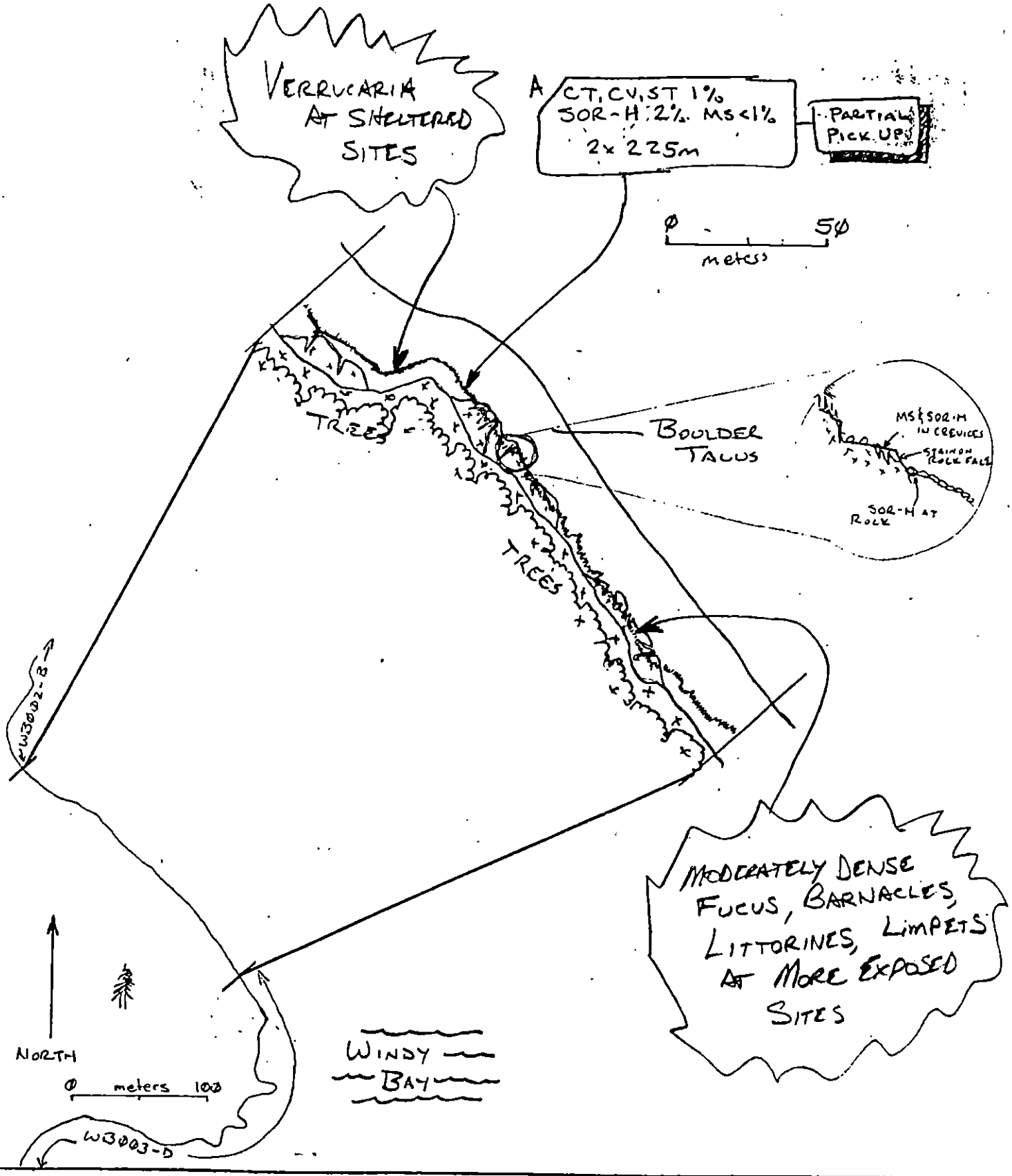
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds(specify)			
[illegible]les(specify)			

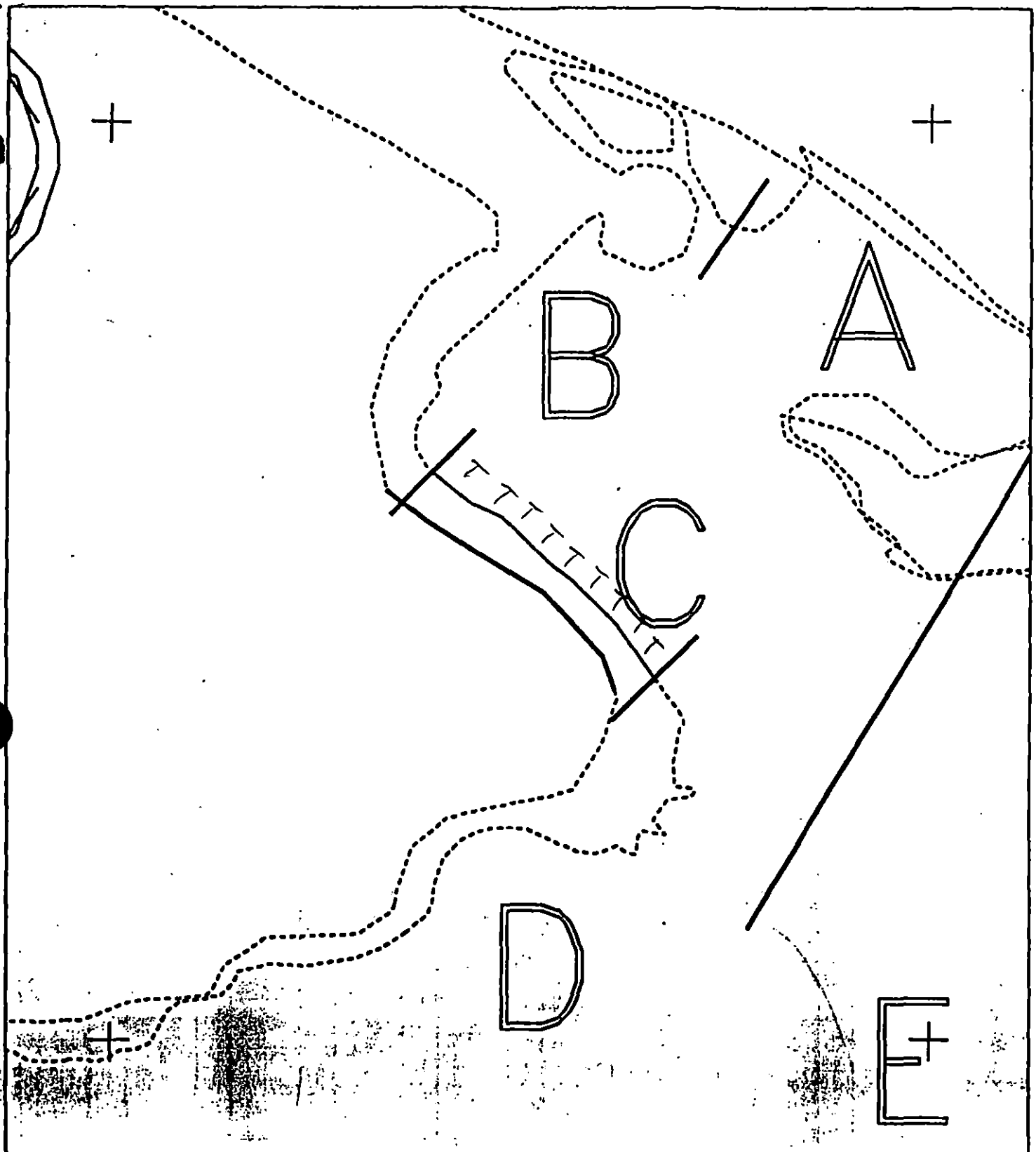
Shoreline subdivision map showing important biological features attached.

Reviewed MB 5/31/91

WB003-C
OG SKETCH MAP
26-MAP-91
1839-1856
BRYAN TRIMM
BIO MAP
ROTH



Reviewed MB 5/31/91



XXXX	Wide	WB003 C	Subdivision Field Map
////	Medium	ADEC Subsegment Length: 225m	Map Key: KENWB003C
----	Narrow	METERS	Name: TRIMM
TTTT	Very Light	0 100 200	Date: 26-MAY-91
0000	No Oil	AK State Plane Zone 4 NAD83	Date Entered:

EXXON

- SURFACE OIL CATEGORY MAP -

REVIEWED: MC 5/31/91
reviewed 5-30-96

1991 MAYSAP EVALUATION

SEGMENT: WB 003 SUB: B REGION: KEN SURVEY DATE: 5/15/91

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

Ecological/Constraints (see page two for details) Eagle nest, Fish harvest area, Anadromous stream, Subsistence - Invertebrate harvesting

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

SHPO Signature: Rachel Dan Dan Date: 5/24/91

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

COMMENTS:
INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 24 1991 FOSC APPROVAL DATE: 6/1/91

ADEC

EXXON

USCG

NOAA

FOSC

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

ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

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

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

Subsistence, Invertebrate Harvesting: Unlimited treatment except avoid disturbance of clam/mussel beds unless specifically directed by TAG Work Order.

TEAM NO. 6 Helo SEGMENT WB-003 SUBDIVISION B DATE 5/15/91

ADEC
NAME Doug Hill - ADF&G SIGNATURE Douglas D Hill

☒ NTR Patches of AP remain on the beach ("Main Beach") to the South of the stream mouth — A more detailed exploration would most likely reveal more oil. Trace oil remains on the north shore approximately 200 meters upstream of the stream mouth.

EXXON
NAME Rex Coulter SIGNATURE Rex R. Coulter

☑ NTR THE SURFACE LOOKS EXCELLENT. AN EXERCISE IN TURNING OVER COBBLES REVEALED SMALL, SPORADIC AREAS OF VERY LIGHT SOR. ADF&G REP. RECOVERED 2 POM POMS, AND THE VECO WORKERS COLLECTED ALL OTHER RECOVERABLE OILED SEDIMENTS, DEBRIS AND ONE SMALL PATCH OF MOUSSE.

LANDMANAGER
NAME Seraphim Megranick OF Port Graham SIGNATURE Seraphim Megranick

☒ NTR By The Dead Trees Mousse/SOR 1x2 meters wide & 20 meters Long upper Intertidal zone going back towards The Gopters Mid Intertidal zone 2x4 meters wide 2 meters Long SOR Drift Line stained wood 100 meters crossed The Stream 1x20 meter SOR in Frequent along Grass high angle slope Supra Tidal Zone

USCG/NOAA
NAME Chief Jensen/Gary Shigenaka SIGNATURE Chief Jensen Gary Shigenaka

☒ NTR 1/2 bag removed from this site. Have to search very closely for any traces of oil. Further removal operations would cause more environmental harm than the trace of oil to be removed.

SURVEYED PORTION OF THE SEGMENT CONSISTED OF A COBBLE BEACH THAT OPENED OUT ONTO A BROAD TIDAL FLAT WITH AN EELGRASS BED, AND A WIDE SALT MARSH THROUGH WHICH A MULTI-CHANNEL STREAM FLOWED. THIS AREA WAS HEAVILY OILED IN 1989. SOME PATCHY SOR WAS OBSERVED AND RECOVERED/BROKEN UP ON THE COBBLE BEACH. THE ONLY OTHER AREA WHERE OILING WAS EVIDENT WAS IN COBBLE RUBBLE BORDERING THE NORTHERN SIDE OF THE SALT MARSH, WHERE SOR AND A WEATHERED MOUSSE PATTY WERE FOUND.

MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 6-Helo

SEGMENT WB03

OG D. FitzGerald

BIO T. Schroeder

SUBDIVISION B

ADEC Doug Hill of ADF6

LANDMANAGER S. McGranick for Port GRAHAM

DATE 15 / MAY / 91

EXXON R. Coulter

USCG/NOAA Chief Jensen / G. SHIGENAKA

TIME 8 : 25 to 9 : 20

TIDE LEVEL -3 ft. to -3 ft.

ENERGY LEVEL: ☐ H ☒ M ☒ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 1092 m

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

EST. OIL CATEGORY LENGTH: W — m M — m N — m VL 140 m NO 952 m US — m

LOC	SURFACE OIL CHARACTER AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO	SURFACE SEDIMENT TYPE	SHORE SLOPE V H M L	AREA WIDTH m	AREA LENGTH m	ZONE S	UI	MI	LI	NOTES
A		T		T							B-S-P-G	L	2	20		X			I/u around dead trees
B							T				V - Logs	L	6	100	X				Storm wrack line
C (Light)				T							B-C	L	3	70			X		I/u middle of Beach ABOV
D (Light2)				T							V-grass	L	1	20	X				SUTZ IN GRASS slope LOCA

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

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

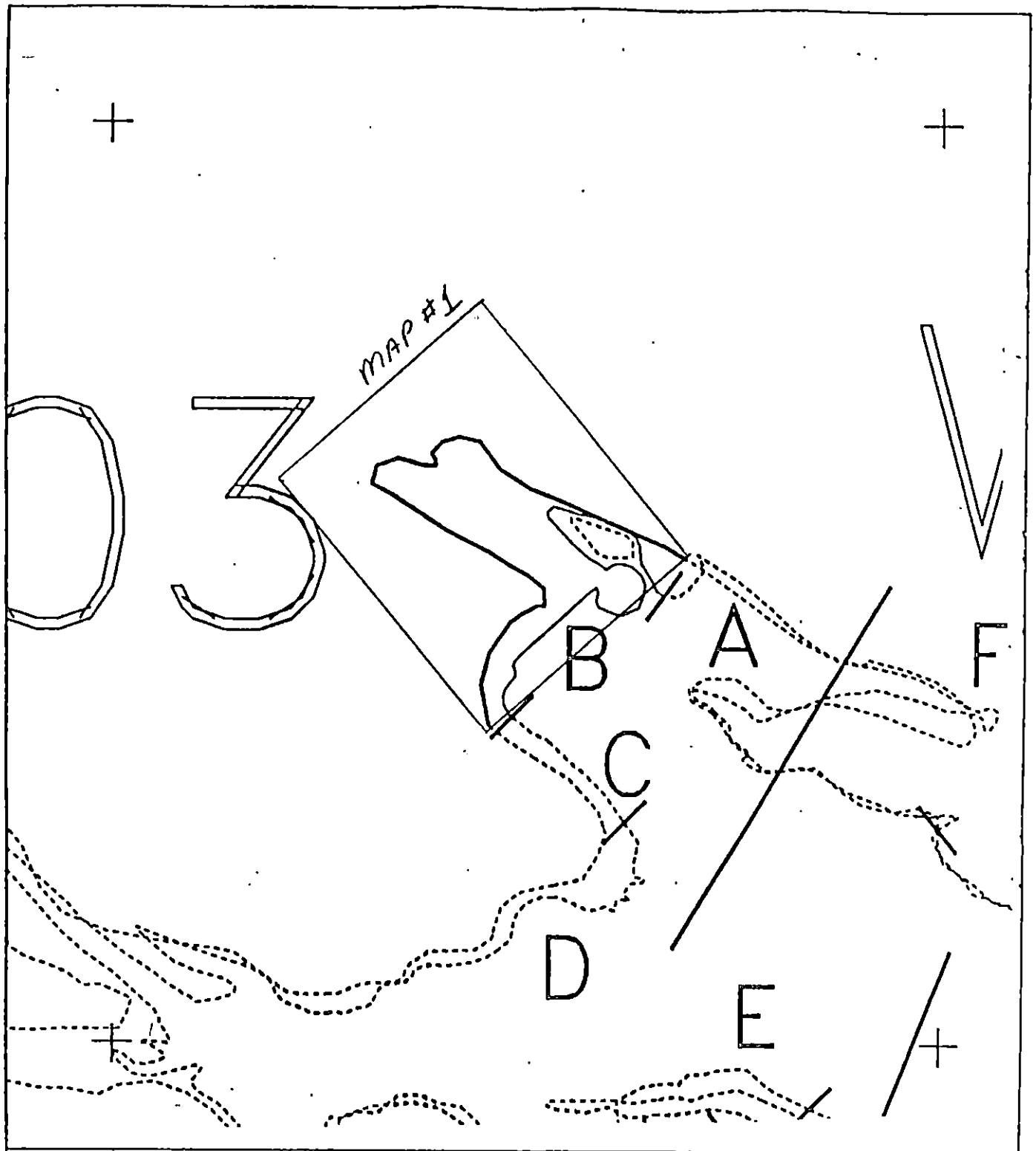
PHOTO ROLL # MAYSAP- 6 - 15 FRAMES 7-1

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER OP	HOR	MOR	LOR	OF	TR	NO	OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE S	UI	MI	LI	SURFACE-SUBSURFACE SEDIMENTS	NOTES
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									

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

OG COMMENTS: This segment is located at the west end and head of Windy Bay, consisting of a short beach with an indented Anan. Stream embayment. The stre is braided and empties into a broad tidal flat region. The oiling of this area wa documented at four sites, including: 1) SOR and MS at the southern end of the beach between and under boulders, 2) stained driftwood in the SUTZ (100m length), 3) Trace amoun of SOR along 70m of b-c beach in the MITZ above the fucus zone, and 4) a narrow 20m length of SOR along the northern slope of the Anan. Stream. VECO worker collected a 1/2 bag of mousse and oiled sediment from this segment and removed all seen and accessible oil.

reviewed 5.17.91 G
cf reviewed 5/17



WB003 B

METERS

0 100 200

AK State Plane Zone 4

Subdivision Field Map

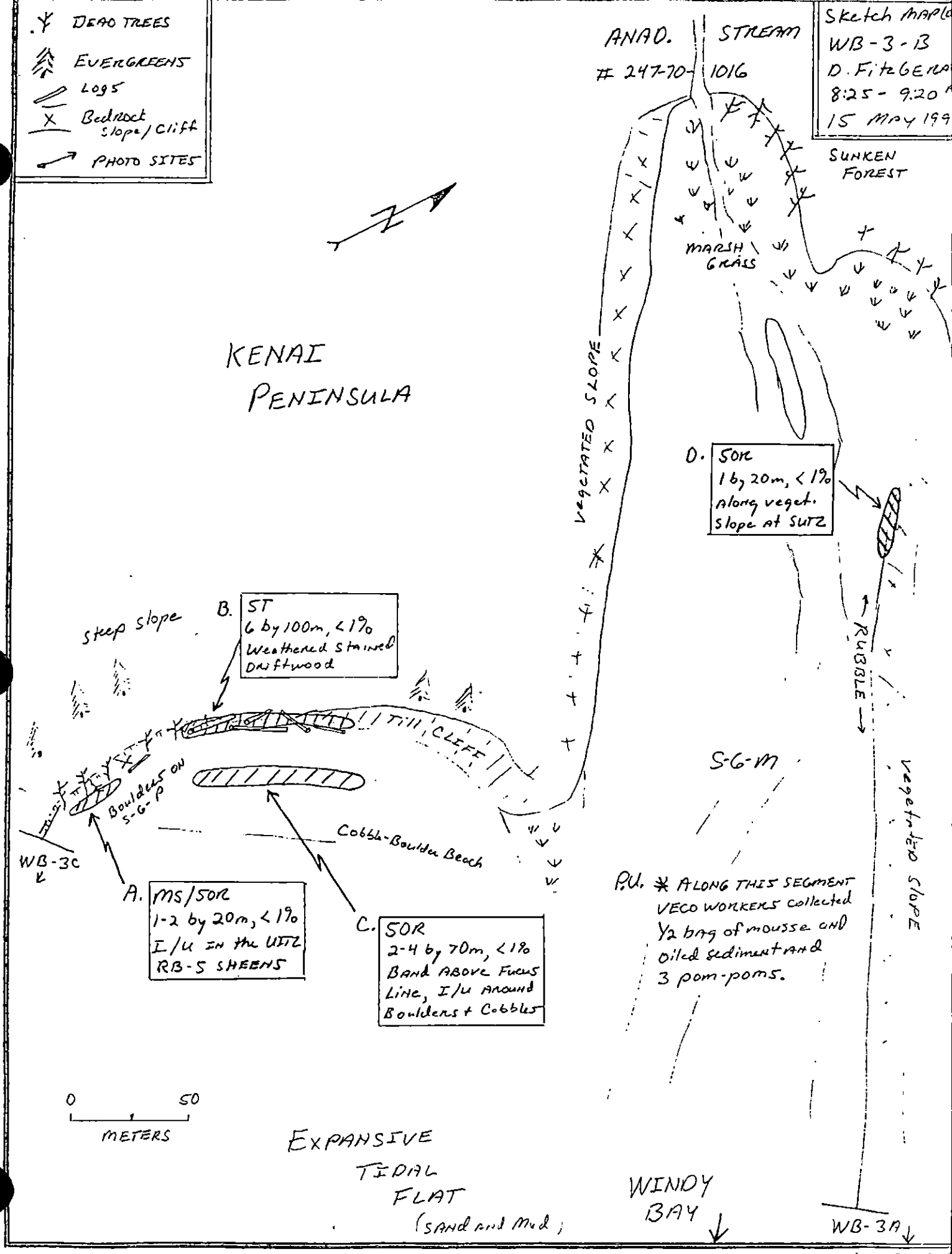
Map Key: KENWB003Ba

Name: D. FitzGerald

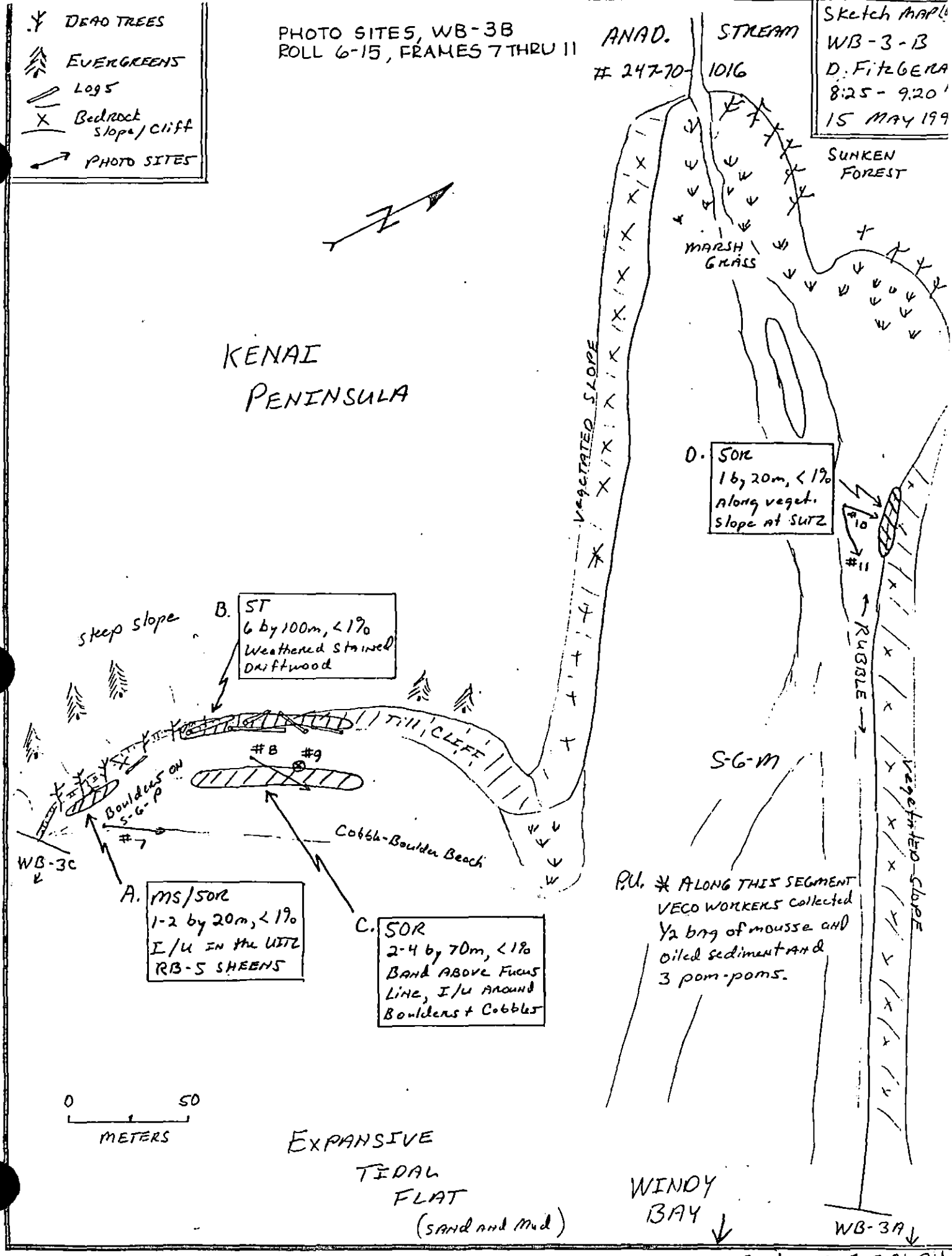
Date: 15 MAY 1991

reviewed 5.17.91 gy

EC reviewed 5/17



Reviewed 5.17.
& reviewed 5/17



reviewed 5.17.91 9y

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 DATE 5/15/91

SEGMENT # WB-003 TIDAL HEIGHT (Range) -3.5 ft

SUBDIVISION B BIOLOGIST T. R. Schroeder

SEA STATE light chop WIND SPEED/DIRECTION West = 5-10 mph

PHOTOGRAPHS: ROLL # FRAME #

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

(A, B & C) = Fucus kelp mixed with sea lettuce is growing very well along the entire beach segment south of the anadromous stream. Limpets, rock crabs and barnacles are abundant throughout the fucus beds. Some marsh regrowth is occurring and littorine snails are in masses were present but not numerous. The remaining oil does not appear to be affecting reestablishment of the plant and animal communities in this area. The LTP and extensive mud flats were being utilized by large flocks of sandpipers and were extremely rich environments. None of this oil is within 300 yards of the intertidal spawning area of the stream.

(D) = Intertidal beach grasses and fucus kelp were thriving on the north side of the anadromous stream. A large bed of mill shell clams were located in a back, mud slough.

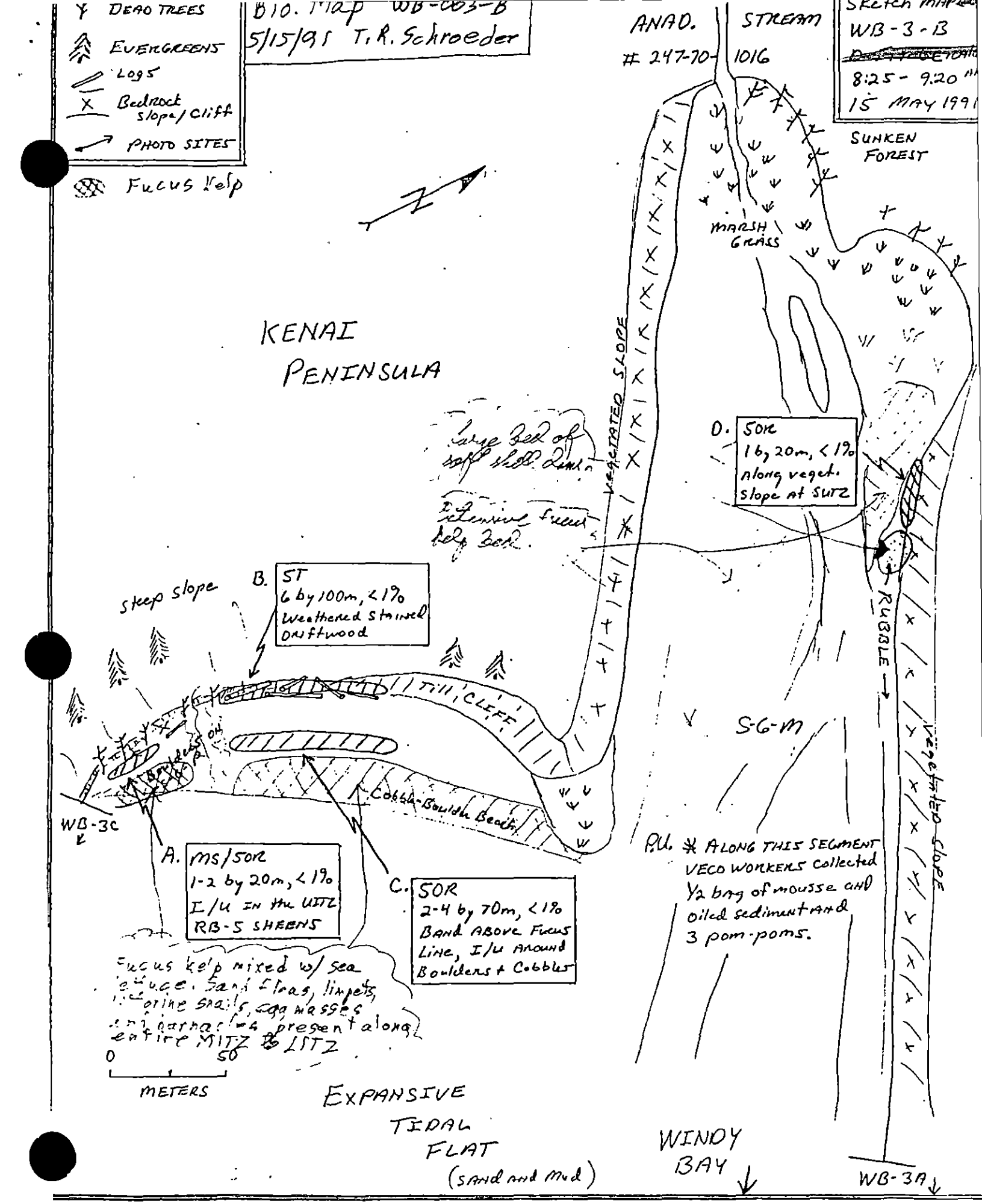
This is an extremely good producing anadromous stream which supports several species of salmon. The intertidal spawning gravels were never affected by the spill and the area appears clean and as good as new. None of the remaining traces of oil will affect adult spawning.

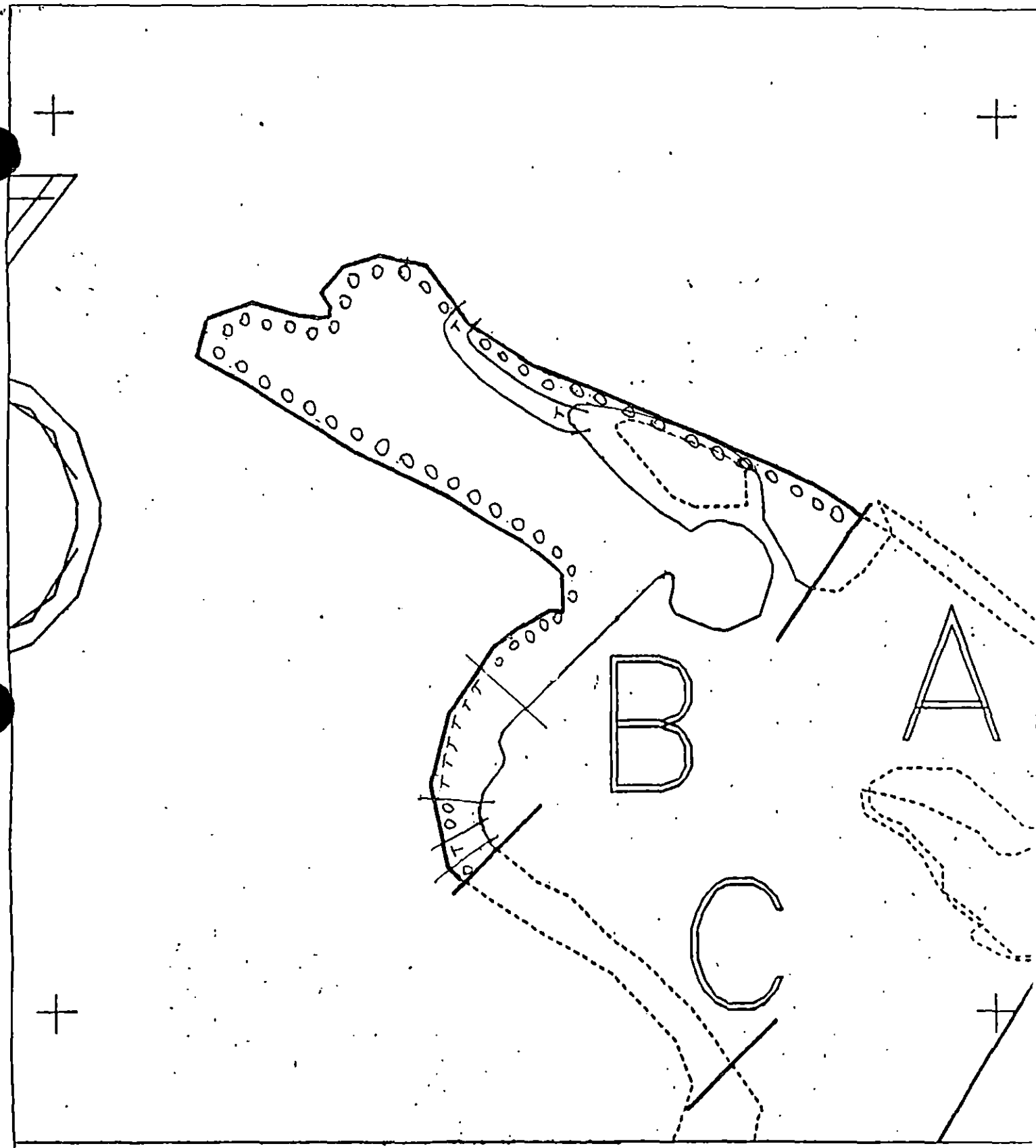
WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/kittiwakes	gull	12	
Shorebirds	sandpipers	250	
Corvids			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.


DEAD TREES
EVERGREENS
LOGS
Bedrock slope/cliff
PHOTO SITES
Fucus kelp
B10. Map WB-003-B
5/15/91 T.R. Schroeder
ANAD. # 247-70-1016
STREAM
Sketch Map
WB-3-B
8:25 - 9.20 AM
15 MAY 1991
SUNKEN FOREST
MARSH GRASS
KENAI PENINSULA
VEGETATED SLOPE
Large Bed of soft shell Clams
Extensive Fucus kelp Bed
D. 50R
1 by 20m, <1%
Along veget. slope at SUTZ
RUBBLE
S-6-M
B. ST
6 by 100m, <1%
Weathered stained Driftwood
steep slope
TILL CLIFF
Cobble-Boulder Beach
WB-3C
A. MS/50R
1-2 by 20m, <1%
I/u in the UITZ
RB-5 SHEENS
C. 50R
2-4 by 70m, <1%
Band above Fucus Line, I/u around Boulders + Cobbles
Fucus kelp mixed w/ sea lettuce, sand fleas, limpets, periwinkle snails, egg masses and barnacles present along entire MITZ & LITZ
0 50
METERS
EXPANSIVE TIDAL FLAT (sand and Mud)
WINDY BAY
WB-3A
P.U. * ALONG THIS SEGMENT VECO WORKERS collected 1/2 bag of mousse and oiled sediment and 3 pom-poms.



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

WB-3 B

ADEC Subsegment Length: 1092m

METERS

0 88 177

AK State Plane Zone 4 1:3404

nub-3b

Subdivision Field Map

Map Key: KENWB-3B

Name: D. FitzGerald

Date: 15 MAY 1991

Date Entered:

reviewed 5.17.91 gy

1991 MAYSAP EVALUATION

SEGMENT: WB 003 **SUB:** B **REGION:** KEN **SURVEY DATE:** 5/15/91

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

Ecological/Constraints (see page two for details) Eagle nest, Fish harvest area, Anadromous stream, Subsistence - Invertebrate harvesting

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

SHPO Signature: _____ Date: _____

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

COMMENTS:
INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: _____ **FOSC APPROVAL DATE:** _____

ADEC _____ FOSC _____

EXXON _____

USCG _____

NOAA _____

ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

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

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

Subsistence, Invertebrate Harvesting: Unlimited treatment except avoid disturbance of clam/mussel beds unless specifically directed by TAG Work Order.

TEAM NO. 6 Helo SEGMENT WB-003 SUBDIVISION B DATE 5/15/91

ADEC
NAME Doug Hill - ADF&G SIGNATURE Douglas D Hill

☒ NTR Patches of AP remain on the beach ("Main Beach") to the South of the stream mouth — a more detailed exploration would most likely reveal more oil. Trace oil remains on the north shore approximately 200 meters upstream of the stream mouth.

EXXON
NAME Rex Coulter SIGNATURE Rex R. Coulter

☑ NTR THE SURFACE LOOKS EXCELLENT. AN EXERCISE IN TURNING OVER COBBLES REVEALED SMALL, SPORADIC AREAS OF VERY LIGHT SOR. ADF&G REP. RECOVERED 2 POM POMS, AND THE VECO WORKERS COLLECTED ALL OTHER RECOVERABLE OILED SEDIMENTS, DEBRIS AND ONE SMALL PATCH OF MOUSSE.

LANDMANAGER
NAME Seraphim Megranick OF Port Graham SIGNATURE [illegible]

☒ NTR By The Dead Trees Mousse/SOR 1x2 meters wide & 20 meters long upper Intertidal zone going back towards the Coppers Mid Intertidal zone 2x4 meters wide 2 meters long SOR Drift Line Stained Wood 100 meters crossed The Stream 1x20 meter SOR in Frequent along Grass High Angle slope Supra Tidal Zone

USCG/NOAA
NAME Chief Jensen Gary Shigenaka SIGNATURE [illegible] Gary Shigenaka

☒ NTR Va beg removed from this site. Have to search very closely for any traces of oil. Further removal operations would cause more environmental harm than the trace of oil to be removed.

SURVEYED PORTION OF THE SEGMENT CONSISTED OF A COBBLE BEACH THAT OPENED OUT ONTO A BROAD TIDAL FLAT WITH AN EELGRASS BED, AND A WIDE SALT MARSH THROUGH WHICH A MULTI-CHANNEL STREAM FLOWED. THIS AREA WAS HEAVILY OILED IN 1989. SOME PATCHY SOR WAS OBSERVED AND RECOVERED/BROKEN UP ON THE COBBLE BEACH THE ONLY OTHER AREA WHERE OILING WAS EVIDENT WAS IN COBBLE RUBBLE BORDERING THE NORTHERN SIDE OF THE SALT MARSH, WHERE SOR AND A WEATHERED MOUSSE PATTY WERE FOUND.

MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 6-Helo

SEGMENT WB03

OG D. FitzGerald

BIO T. Schroeder

SUBDIVISION B

ADEC Doug Hill of ADF6

LANDMANAGER S. McGranick for Port Graham

DATE 15 / MAY / 91

EXXON R. Coulter

USCG/NOAA Chief Jensen / G. Shigenaka

TIME 8:25 to 9:20

TIDE LEVEL -3 ft. to -3 ft.

ENERGY LEVEL: [ ] H [X] M [X] L

SURVEYED FROM: [X] FOOT [ ] BOAT [ ] HELO

WEATHER: [ ] SUN [X] CLOUDS [ ] FOG [X] RAIN [ ] SNOW

TOTAL LENGTH SHORELINE SURVEYED: 1092 m

NEAR SHORE SHEEN: [ ] BR [X] RB [X] SL [ ] NONE

EST. OIL CATEGORY LENGTH: W — m M — m N — m VL 140 m NO 952 m US — m

LOC	SURFACE OIL CHARACTER AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO	SURFACE SEDIMENT TYPE	SHORE SLOPE V H M L	AREA WIDTH m	AREA LENGTH m	ZONE S	UI	MI	LI	NOTES
A		T		T							B-S-PG	L	2	20		X			I/u around dead trees
B							T				V-Logs	L	6	100	X				Storm wrack line
C (Light)				T							B-C	L	3	70			X		I/u middle of Beach above F
D (Light)				T							V-gravel	L	1	20	X				SUTZ IN GRASS Slope LOCATI

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

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

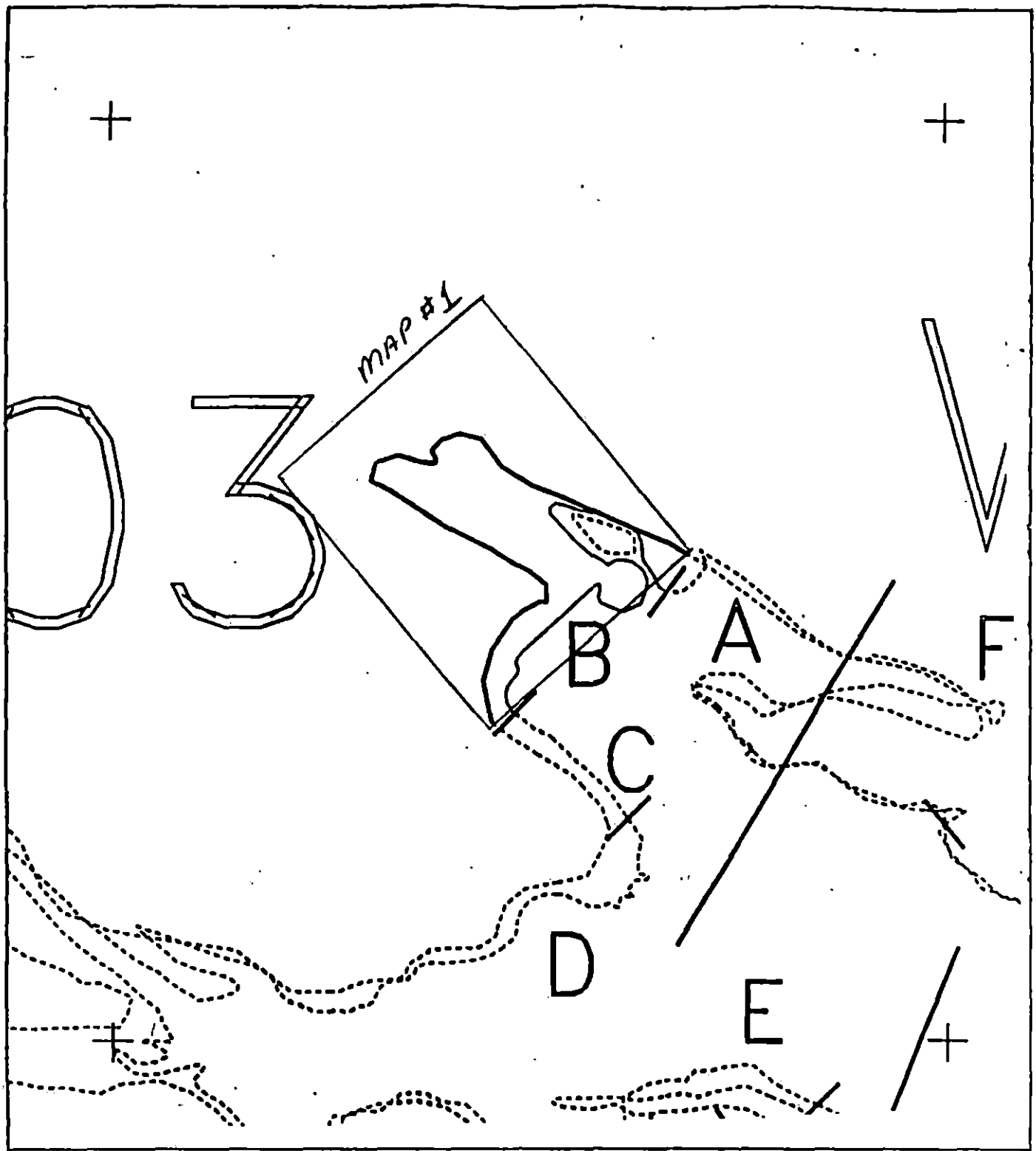
PHOTO ROLL # MAYSAP- 6 - 15 FRAMES 7-11

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER OP	HOR	MOR	LOR	OF	TR	NO	OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE S	UI	MI	LI	SURFACE-SUBSURFACE SEDIMENTS	NOTES
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									

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

OG COMMENTS: This segment is located at the west end and head of Windy Bay, consisting of a short beach with an indented anan. stream embayment. The stream is braided and empties into a broad tidal flat region. The oiling of this area was documented at four sites, including: 1) SOR and MS at the southern end of the beach between and under boulders, 2) stained driftwood in the SUTZ (100m length), 3) Trace amount of SOR along 70m of b-c beach in the MHTZ above the fucus zone, and 4) a narrow 20m length of SOR along the northern slope of the anad. stream. VECO worker collected a 1/2 bag of mousse and oiled sediment from this segment and removed all seen accessible oil.

reviewed 5.17.91 [illegible]



WB003 B

METERS

0 200 400

AK State Plane Zone 4

Subdivision Field Map

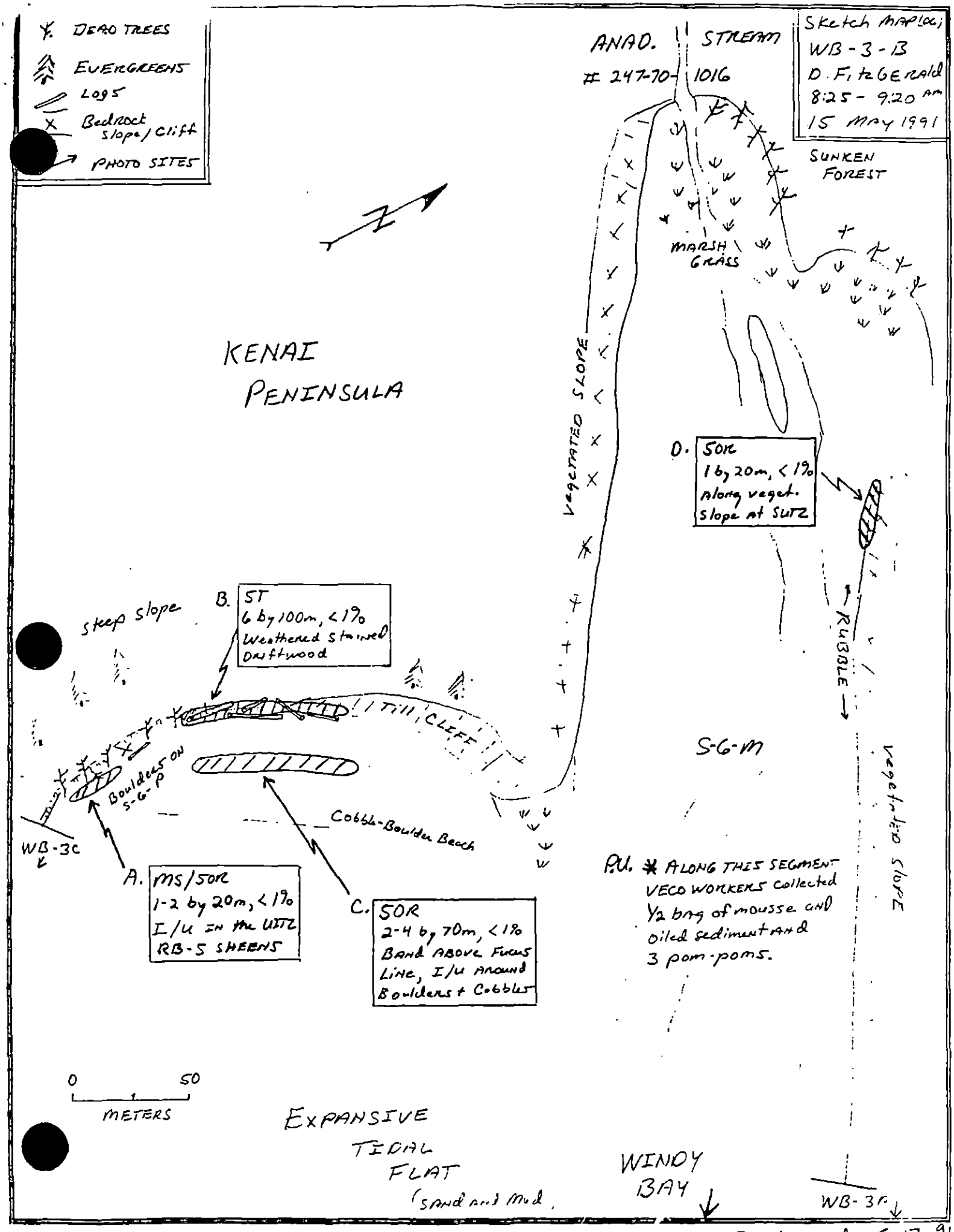
Map Key: KENTB003Ba

Name: D. FitzGerald

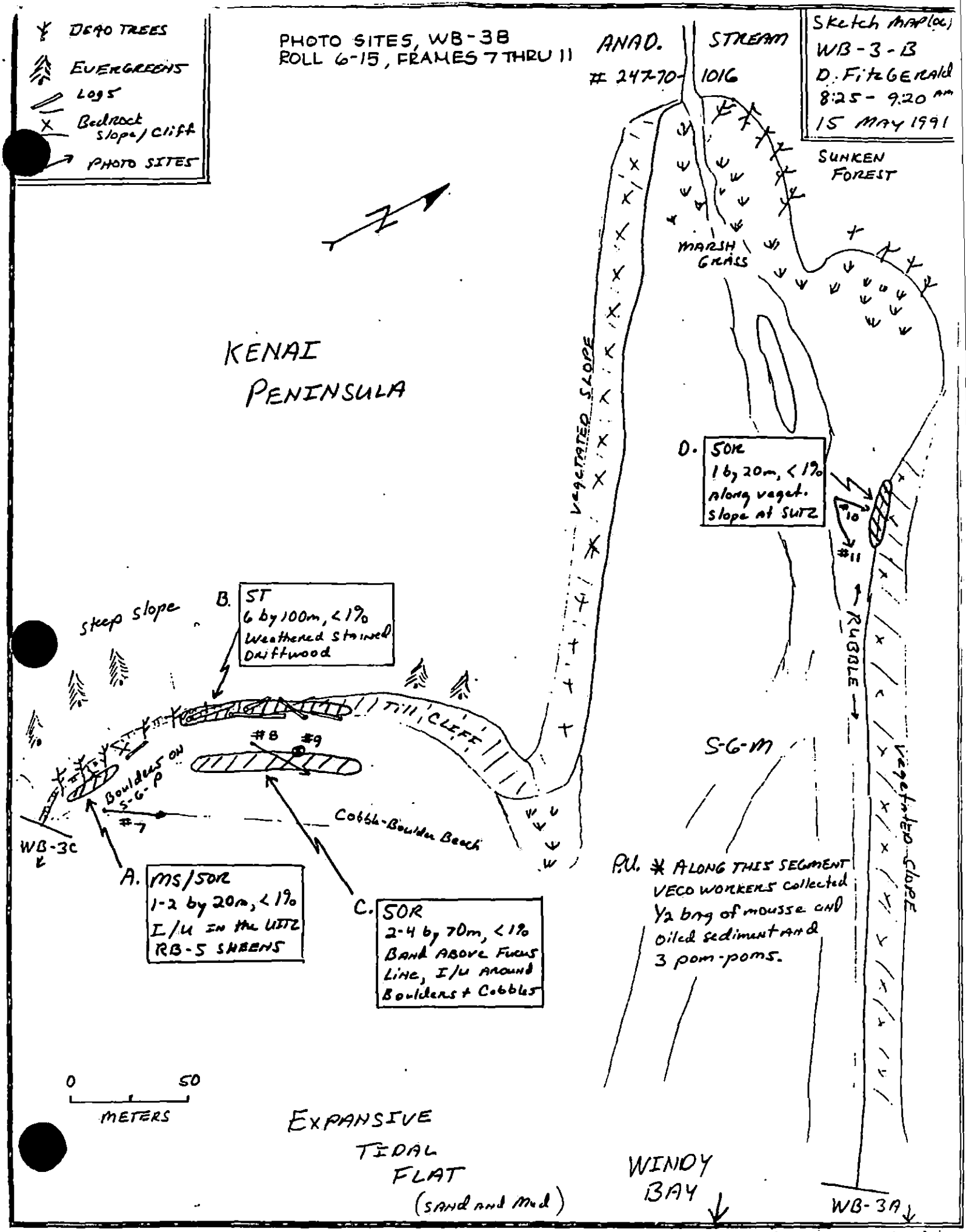
Date: 15 May 1991

reviewed 5-17-91 [illegible]

EG reviewed 5/17



Reviewed 5.17.91



reviewed 5.17.91 ff

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 DATE 5/15/91

SEGMENT # WB-003 TIDAL HEIGHT (Range) -3.5 ft

SUBDIVISION B BIOLOGIST T. R. Schroeder

SEA STATE light chop WIND SPEED/DIRECTION West = 5-10 mph

PHOTOGRAPHS: ROLL # FRAME #

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

(A, B & C) = Fucus beds mixed with sea lettuce is growing very well along the entire beach segment south of the anadromous stream. Limpets, sand fleas and isopods are abundant throughout the fucus beds. Some mussel regrowth is occurring and littorine snails are in masses where present but not numerous. The remaining oil does not appear to be effecting reestablishment of the plant and animal communities in this area. The LITE and extensive mud flats were being utilized by large flocks of sandpipers and were extremely rich environments. None of this oil is within 300 yards of the intertidal spawning area of the stream.

(D) = Intertidal beach grasses and fucus beds were thriving on the north side of the anadromous stream. A large bed of soft shell clams were located in a back, tidal slough.

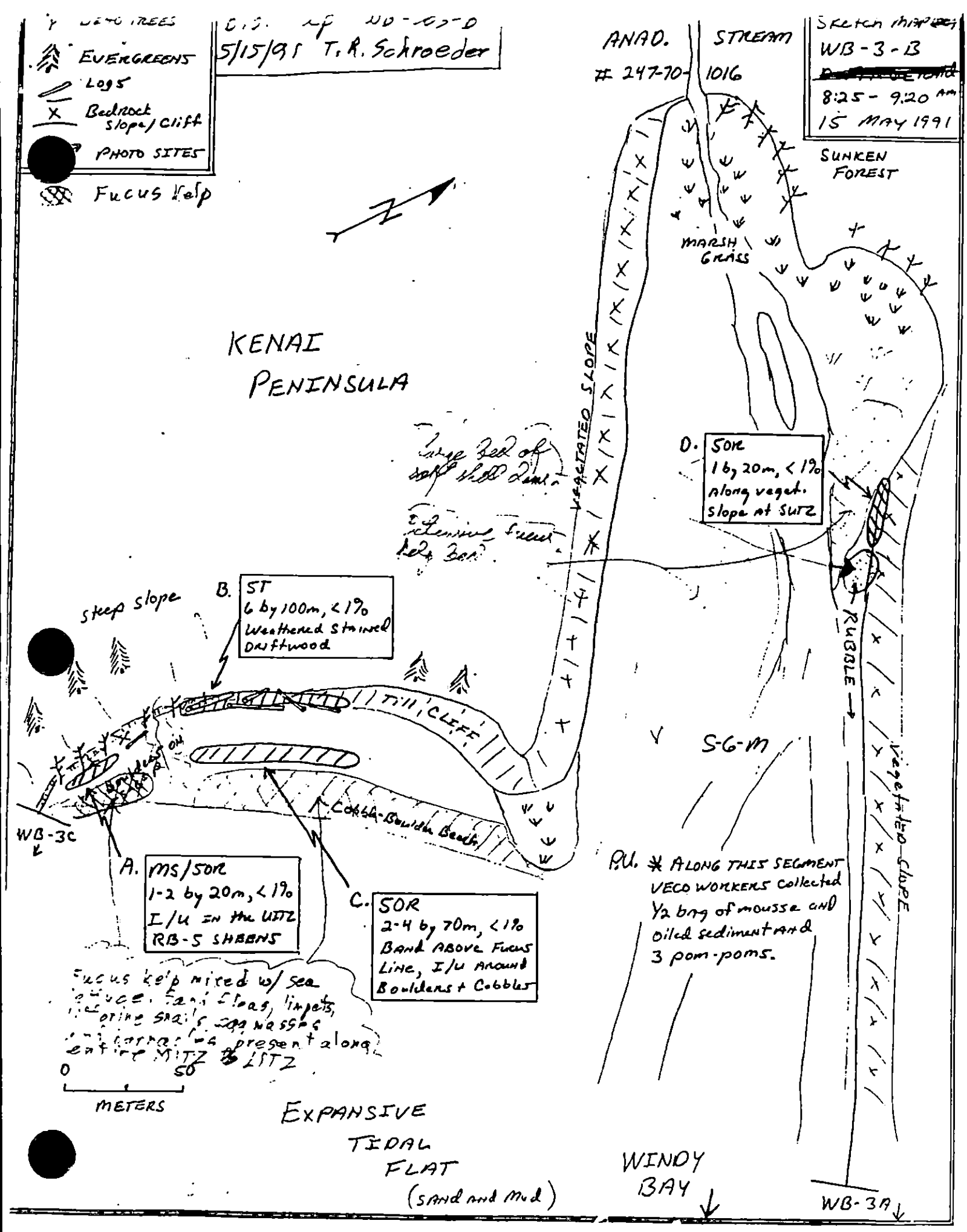
This is an extremely good producing anadromous stream which supports several species of salmon. The intertidal spawning gravels were never affected by the spill. The area appears clean and as good as new. None of the remaining traces of oil will effect fish spawning.

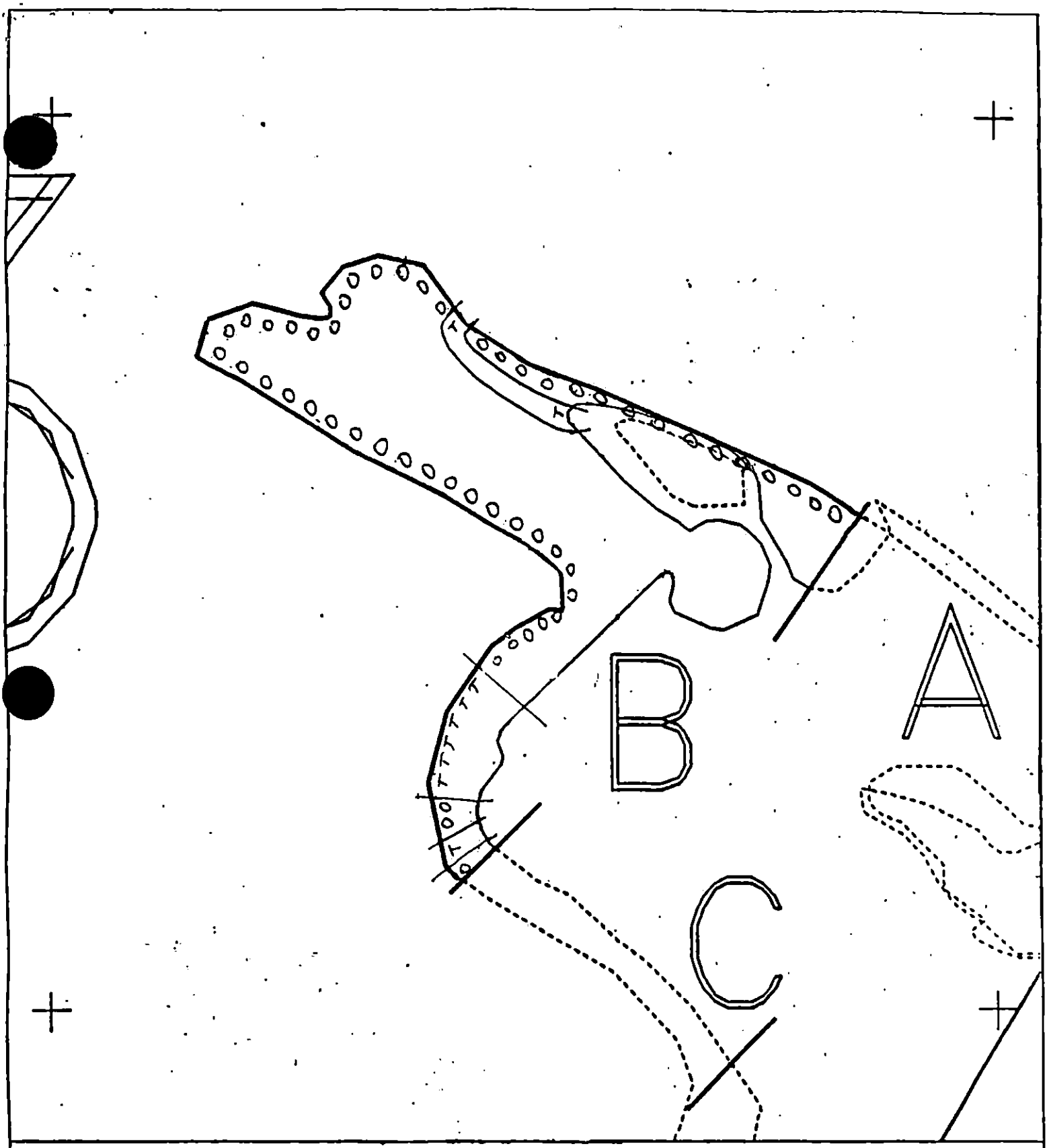
WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/Kittiwakes	1 gull	12	
Shorebirds	1 sandpiper	250	
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
[illegible]les (specify)			

Shoreline subdivision map showing important biological features attached.


DEAD TREES
EVERGREENS
LOGS
Bedrock Slope/Cliff
PHOTO SITES
Fucus Kelp
5/15/91 T.R. Schroeder
ANAD. STREAM
247-70-1016
Sketch map
WB-3-B
8:25 - 9.20 AM
15 MAY 1991
SUNKEN FOREST
MARSH GRASS
KENAI PENINSULA
VEGETATED SLOPE
D. SOR
1 by 20m, < 1%
Along veget. Slope at SUTZ
RUBBLE
steep slope
B. ST
6 by 100m, < 1%
Weathered stained Driftwood
TILL CLIFF
S-6-M
COBBLE-Boulder Beach
WB-3C
A. MS/SOR
1-2 by 20m, < 1%
I/U in the UITZ
RB-5 SHEENS
C. SOR
2-4 by 70m, < 1%
Band above Fucus Line, I/U Around Boulders + Cobbles
P.U. * ALONG THIS SEGMENT VECO WORKERS collected 1/2 bag of mousse and oiled sediment and 3 pom-poms.
Fucus kelp mixed w/ sea lettuce, barnacles, limpets, periwinkle snails and mussels are present along entire MITZ & LITZ
0 50
METERS
EXPANSIVE TIDAL FLAT (SAND and Mud)
WINDY BAY
WB-3A



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

WB-3 B

ADEC Subsegment Length: 1082m

METERS

0 88 177

AK State Plane Zone 4 1:3484

sub-3b

EXXON

Subdivision Field Map

Map Key: KENWB-3B

Name: D. FitzGerald

Date: 15 MAY 1991

Date Entered:

reviewed 5.17.91 JJ

1991 MAYSAP EVALUATION

SEGMENT: WB 003 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, Subsistence - Invertebrate harvesting

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

SHPO Signature: _____ Date: _____

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

COMMENTS:
INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: _____ FOSC APPROVAL DATE: _____

ADEC _____ FOSC _____

EXXON _____

USCG _____

NOAA _____

ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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.

Subsistence, Invertebrate Harvesting: Unlimited treatment except avoid disturbance of clam/mussel beds unless specifically directed by TAG Work Order.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT WB-003 SUBDIVISION A DATE 5/22/91

ADEC
NAME Steve Ferguson SIGNATURE [signature]

☒ NTR ☐ TREATMENT RECOMMENDED
All OILING OBSERVED WITH THE EXCEPTION OF CV/CT/ST WERE picked up DURING SURVEY. NO TREATMENT RECOMMENDED.

EXXON
NAME George P. Stiles SIGNATURE George P. Stiles 5/22/91

☒ NTR Very little oil found still remaining.
2. bags picked up during the survey.

LANDMANAGER
NAME Pat Norman OF Port Graham SIGNATURE Pat Norman

☒ NTR small Amounts of AP, SOR will continue to become exposed in this area, we picked up patches in the ASAP 90 survey also.

USCG/NOAA
NAME [redacted] SIGNATURE [signature]

☒ NTR Some AP + TB found and picked-up.

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 1

TEAM NO. 4

SEGMENT WB003

OG B TRIMM

BIO J. ROTH

SUBDIVISION A

ADEC S. Ferguson

LANDMANAGER Pat Norman for PB

DATE MAY / 26 / 91

EXXON George P. Stiles

USCG/NOAA McMahon / McDonald

TIME 17 : 25 to 18 : 21

TIDE LEVEL 4.85 ft. to 3.31 ft.

ENERGY LEVEL: ☐ H ☐ M ☒ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 1142 m

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

EST. OIL CATEGORY LENGTH: W Ø m M Ø m N Ø m VL 16 m NO 1126 m US Ø m

LOC	SURFACE OIL CHARACTER AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO	SURFACE SEDIMENT TYPE	SHORE SLOPE V H M L	AREA WIDTH m	AREA LENGTH m	ZONE S	UI	MI	LI	NOTES
A		T									R	H	1	5		X			MS IN ROCK CREVICES
B							P				R	H	1	1		X			
C				S		S	S				R P	H	1	10		X			SOR-H IN CREVICES OF ROCK FACE

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

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

PHOTO ROLL # MAYSAP- 4(III) - 11 FRAMES 10-1

No Pits

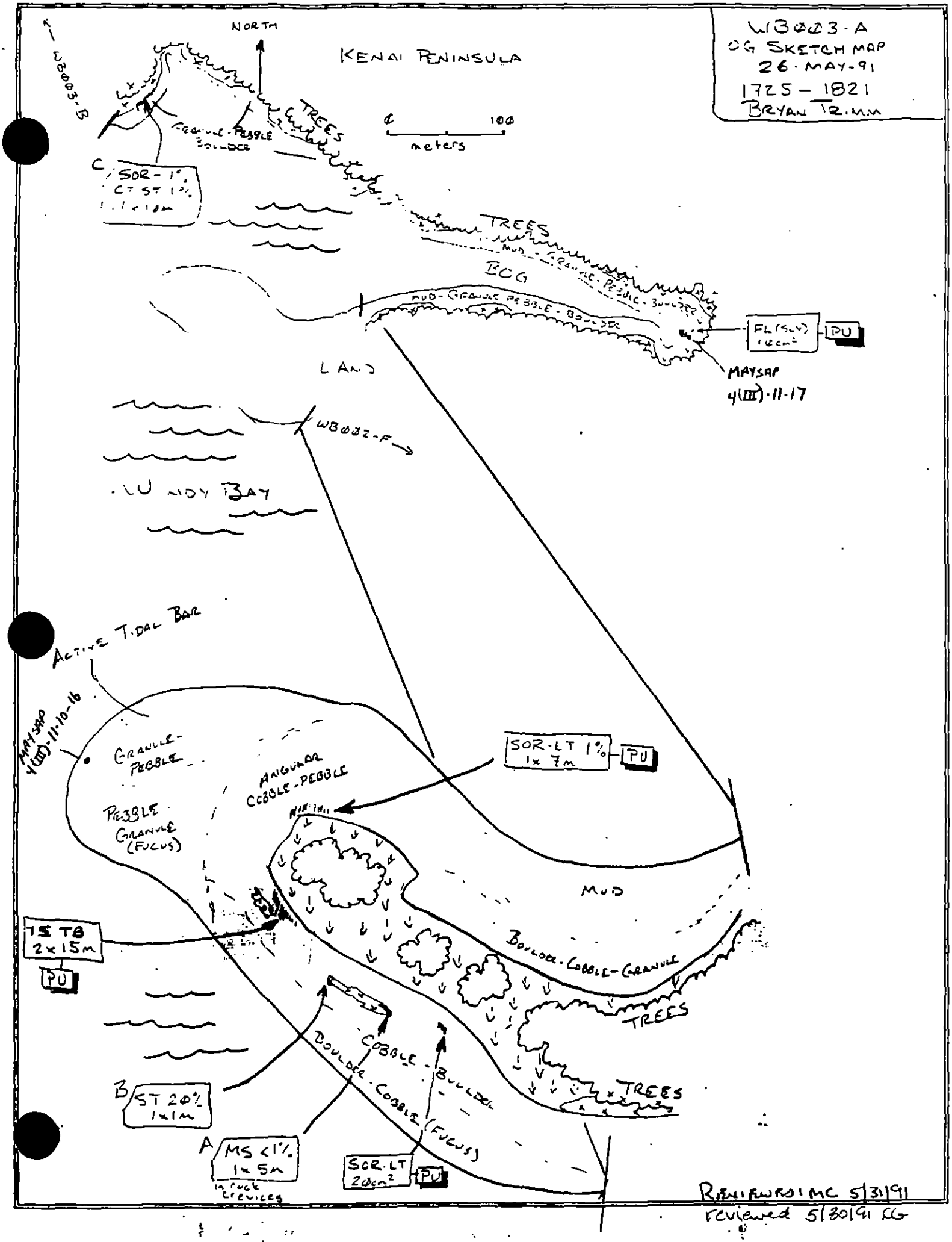
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER OP	HOR	MOR	LOR	OF	TR	NO	OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE S	UI	MI	LI	SURFACE-SUBSURFACE SEDIMENTS	NOTES
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									

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

OG COMMENTS:

SMALL DISCONTINUOUS DEPOSITS OF SOR, TB & FL ON MUD WERE RECOVERED
ACTIVE TIDAL BAR WEST OF LOCATION 'B'.
NO OIL OBSERVED IN BOG.

REVIEWED: MC 5/31/91
revised 5/30/91 KG


WB003-A
OG SKETCH MAP
26-MAY-91
1725 - 1821
BRYAN TRIMM
NORTH
KENAI PENINSULA
WB003-B
TREES
GRANULE-PEBBLE
BOULDER
0 100
meters
C
SOR-1%
CT ST 1%
1.1x10m
TREES
MUD-GRANULE-PEBBLE-BOULDER
BOG
MUD-GRANULE PEBBLE-BOULDER
FL(S-V)
1 cm²
PU
MAYSAP
4(III)-11-17
LAND
WB002-F
LUNDY BAY
ACTIVE TIDAL BAR
MAYSAP
4(III)-11-16
GRANULE-PEBBLE
ANGULAR COBBLE-PEBBLE
PEBBLE GRANULE (FUCUS)
SOR-LT 1%
1x 7m
PU
MUD
BOULDER-COBBLE-GRANULE
TREES
15 TB
2x15m
PU
COBBLE-BOULDER
BOULDER-COBBLE (FUCUS)
TREES
B
ST 20%
1x1m
A
MS <1%
1x 5m
in rock crevices
SOR-LT
2 cm²
PU
REVIEWED: MC 5/31/91
reviewed 5/30/91 KG

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 26 MAY 91

SEGMENT # WB003 TIDAL HEIGHT(Range) + 5.0 TO + 3.3 FT

SUBDIVISION A BIOLOGIST JIM ROTH

SEA STATE FLAT WIND SPEED/DIRECTION –

PHOTOGRAPHS: ROLL # FRAME #

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

A – BEDROCK OUTCROPPING IN MITZ W/ MODERATELY DENSE BARNACLES; SPARSE FUCUS SPORLINGS.

B – BEDROCK OUTCROPPING IN MITZ W/ MODERATELY DENSE BARNACLES, SPARSE FUCUS SPORLINGS.

GENERAL COMMENTS: THIS SUBDIVISION CONTAINS A SMALL COVE WITH A SHELTERED MUDFLAT WITH FUCUS, EEL GRASS, ENTEROMORPHA ON GRAVEL AND MUD BANKS IN THE MITZ. MUDFLAT PROBABLY CONTAINS EDIBLE BIVALVES, BUT TIDE WAS TOO HIGH FOR OBSERVATIONS IN LOWER ZONE. OUTSIDE THE TIDAL BAR THE COBBLE-BOULDER SHORE HAS A TYPICALLY RICH INTER-TIDAL BIOTA WITH DENSE FUCUS, MUSSELS, BARNACLES, LIMPETS, AND LITTORINES IN THE MIDDLE ZONE.

BEAR TRACKS OBSERVED IN COVE MUDFLAT.

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			

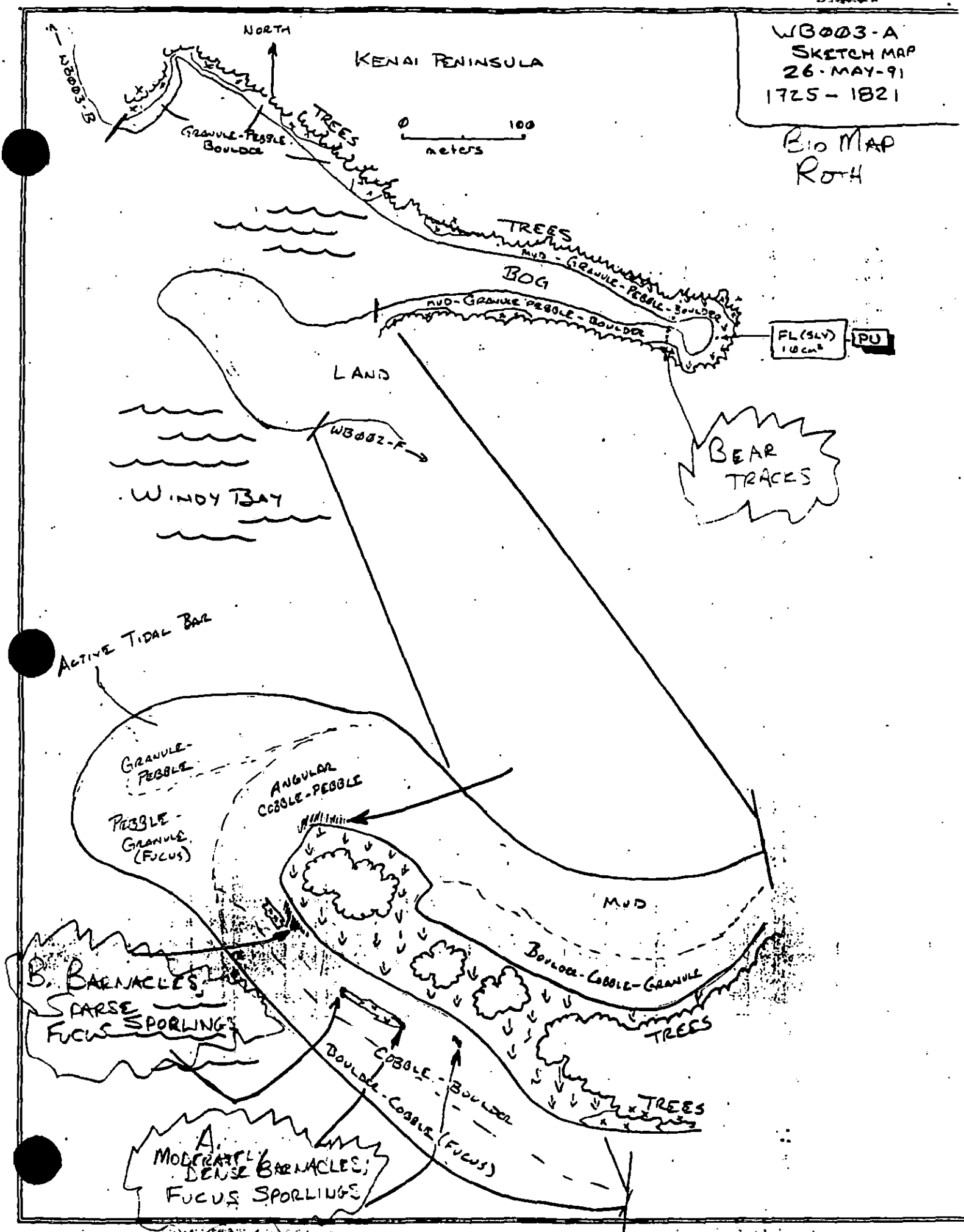
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds(specify)			
Whales(specify)			

Shoreline subdivision map showing important biological features attached.

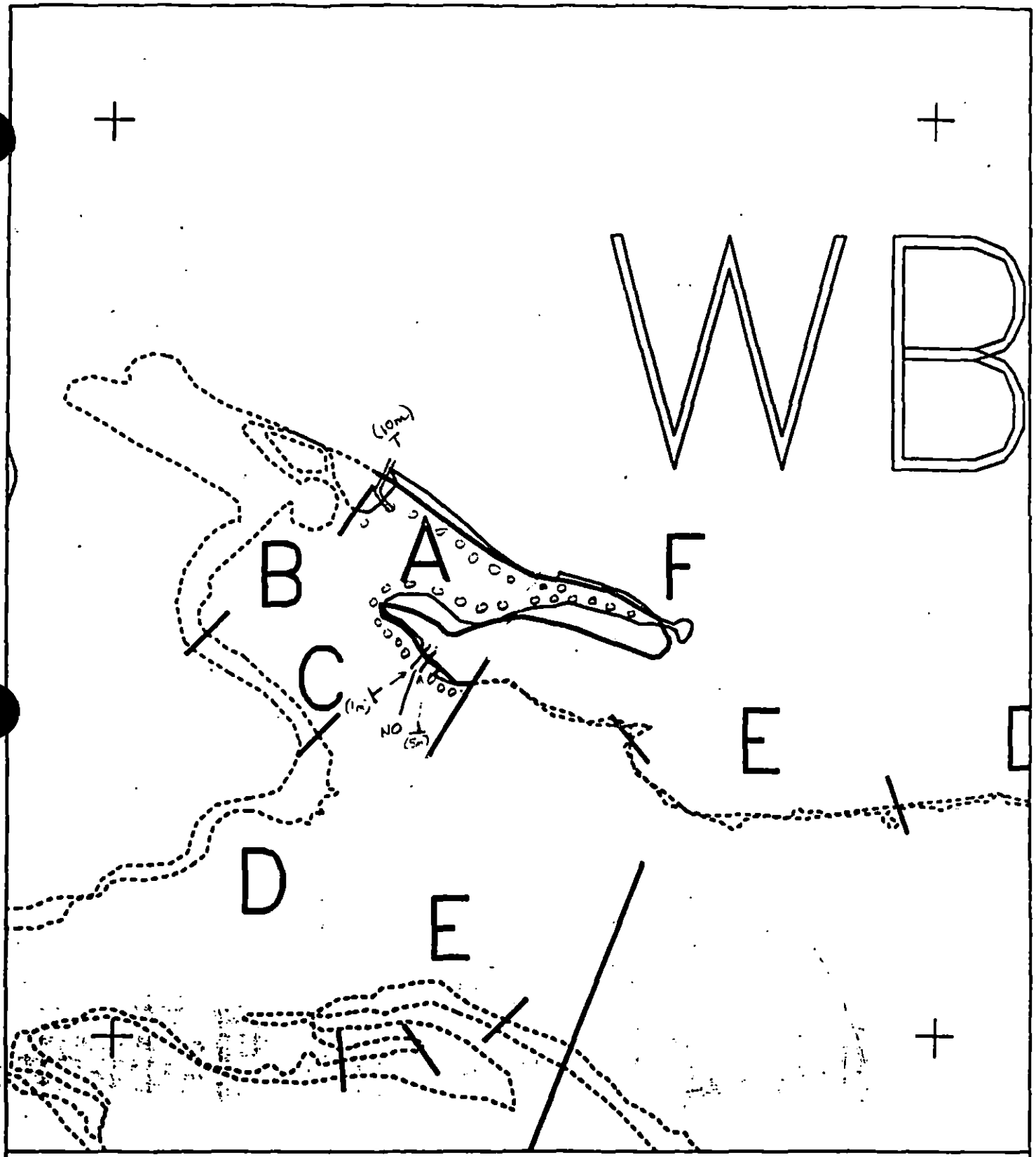
Reviewed 5/21/91 MB

WB003-A
SKETCH MAP
26-MAY-91
1725 - 1821

BIO MAP
ROTH



Reviewed MB 5/31



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

WB003 A

ADEC Subsegment Length: 1142m

METERS

0 200 400

AK State Plane Zone 4

wb003a

Subdivision Field Map

Map Key: KENWB003A

Name: TRIMM

Date: 26-MAY-91

Date Entered:

- SURFACE OIL CATEGORY MAP -

REVIEWED: MC 5/31/91
revised 5/30/91 KG

1991 MAYSAP EVALUATION

SEGMENT: WB 003 **SUB:** C **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, Subsistence - Invertebrate harvesting**

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

SHPO Signature:_____ Date:_____

RECOMMENDATIONS:	**INITIAL**	**TAG**	**FOSC**
TREATMENT REQUIRED (Y or N)	N		
Manual Pickup (Check as Req.)			
Spot Washing			
Bio-Customblen Only			
Bio-Inipol/Customblen			
Other_____			
Other_____			

COMMENTS:
INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE:_____ **FOSC APPROVAL DATE:**_____

ADEC_____ FOSC _____

EXXON_____

USCG_____

NOAA_____

ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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.

Subsistence, Invertebrate Harvesting: Unlimited treatment except avoid disturbance of clam/mussel beds unless specifically directed by TAG Work Order.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT WB-003 SUBDIVISION C DATE 5/27/91

ADEC
NAME Steve Ferguson SIGNATURE [signature]

☒ NTR ☐ TREATMENT RECOMMENDED

NO TREATMENT RECOMMENDED. THERE IS REMAINING SOR-H FROM THE SURVEY THAT COULD BE PICKED UP AT SITES A AND B. DUE TO THE LOCATION IN THE SEAMS, CREVISES AND LARGE OPENINGS IT WOULD TAKE A VERY DETERMINED CREW TO FULLY ADDRESS THE OILING.

EXXON
NAME George P. Stiles SIGNATURE [signature] 5/27/91

☒ NTR Some areas of MS+HSOR were found in the bed rock cracks and around the edges of the boulders. These areas were picked during the survey (5 bags). No appreciable oil remaining.

LANDMANAGER
NAME Pat Norman OF Port Graham SIGNATURE [signature]

☐ NTR recommend additional manual pickup of MS+HSOR as shown on OY sketch map There is enough remaining oil in CAO segments of WD-3 to warrant additional work.

USCG/NOAA
NAME [redacted] SIGNATURE [redacted]

☒ NTR very little oil found late in season. Prohibitive effective clean-up. VECO did manage to take some out.

[signature]

MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 4

SEGMENT W3002

OG B. TRIMM

BIO J. ROTH

SUBDIVISION C

ADEC S. Ferguson

LANDMANAGER Pat Norman for PG

DATE MAY 1 26 / 91

EXXON George P. Stiles

USCG/NOAA McMahon/McDonald

TIME 18 : 39 to 18 : 56

TIDE LEVEL 3.03 ft. to 2.89 ft.

ENERGY LEVEL: ☐ H ☒ M ☐ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 225 m

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

EST. OIL CATEGORY LENGTH: W Ø m M Ø m N Ø m VL 225 m NO Ø m US Ø m

LOC	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO		VHML	WIDTH m	LENGTH m	S	UI	MI	LI	
A		T		S	S	S	S				BR	H	2	221	x	x			HV-SOR under/between Talus & MS in Rock Crevices
B				S							BR	H	2	4	x				

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

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

No Pits

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO				B R S N	S	UI	MI	LI		

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

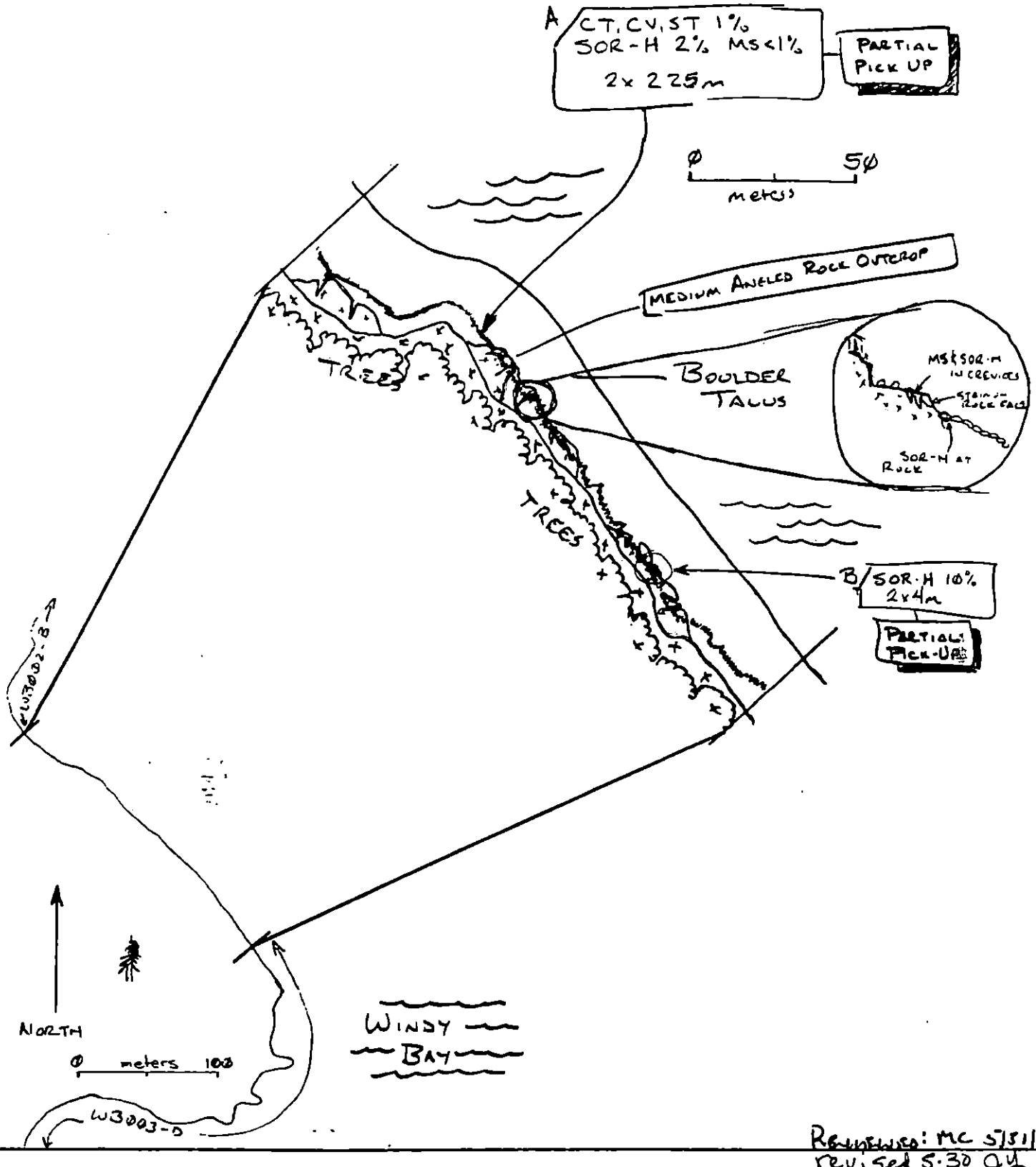
OG COMMENTS:

BOULDER TALUS & HIGH ANGLED ROCK FACE SHORELINE. OILING IS PREDOMINANTLY A NARROW BAND OF MOUSSE & SOR IN THE SUPRA & UITZ ZONES. MOUSSE HAS PERSISTED IN ROCK CREVICES WHEREAS THE SOR IS LOCATED AT THE BASE OF THE ROCK OR WITHIN SMALL SEDIMENT CATCHES ON TOP OF THE ROCK.

REVIEWED: MC 5/31/91

revised 5.30

W3003-C
OG SKETCH MAP
26-MAP-91
1839-1856
BRYAN TRIMM



REVIEWED: MC 5/31/91
revised 5.30 qy

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #	4	DATE	26 MAY 91
SEGMENT #	WB003	TIDAL HEIGHT(Range)	+3.0 TO +2.95
SUBDIVISION	C	BIOLOGIST	JIM ROTH
SEA STATE	1 FT	WIND SPEED/DIRECTION	
PHOTOGRAPHS: ROLL #		FRAME #	

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

A - LITE BEDROCK AND BOULDERS W/ SPARSE INTERTIDAL BIOTA (PRIMARIL VERRUCARIA) AT THE SHELTERED (NORTHWEST END), AND MODERATELY DENSE FUCUS, BARNACLES, LITTORINES AND LIMPETS AT MORE EXPOSED LOCATIONS (PRIMARILY TOWARD SOUTHWEST END.

GENERAL COMMENTS: A FAIRLY EXPOSED SITE — MORE EXPOSED TOWARD THE SOUTHEAST. BOULDER/BEDROCK SHORE HAS A TYPICALLY ZONATED INTERTIDAL BIOTA WITH FUCUS, BARNACLES, MUSSELS, LIMPETS AND LITTORINES DOMINATING THE MIDDLE ZONE. MIDDLE ZONE BIOTA EXTENDS UPWARD AT MORE EXPOSED SITES.

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			

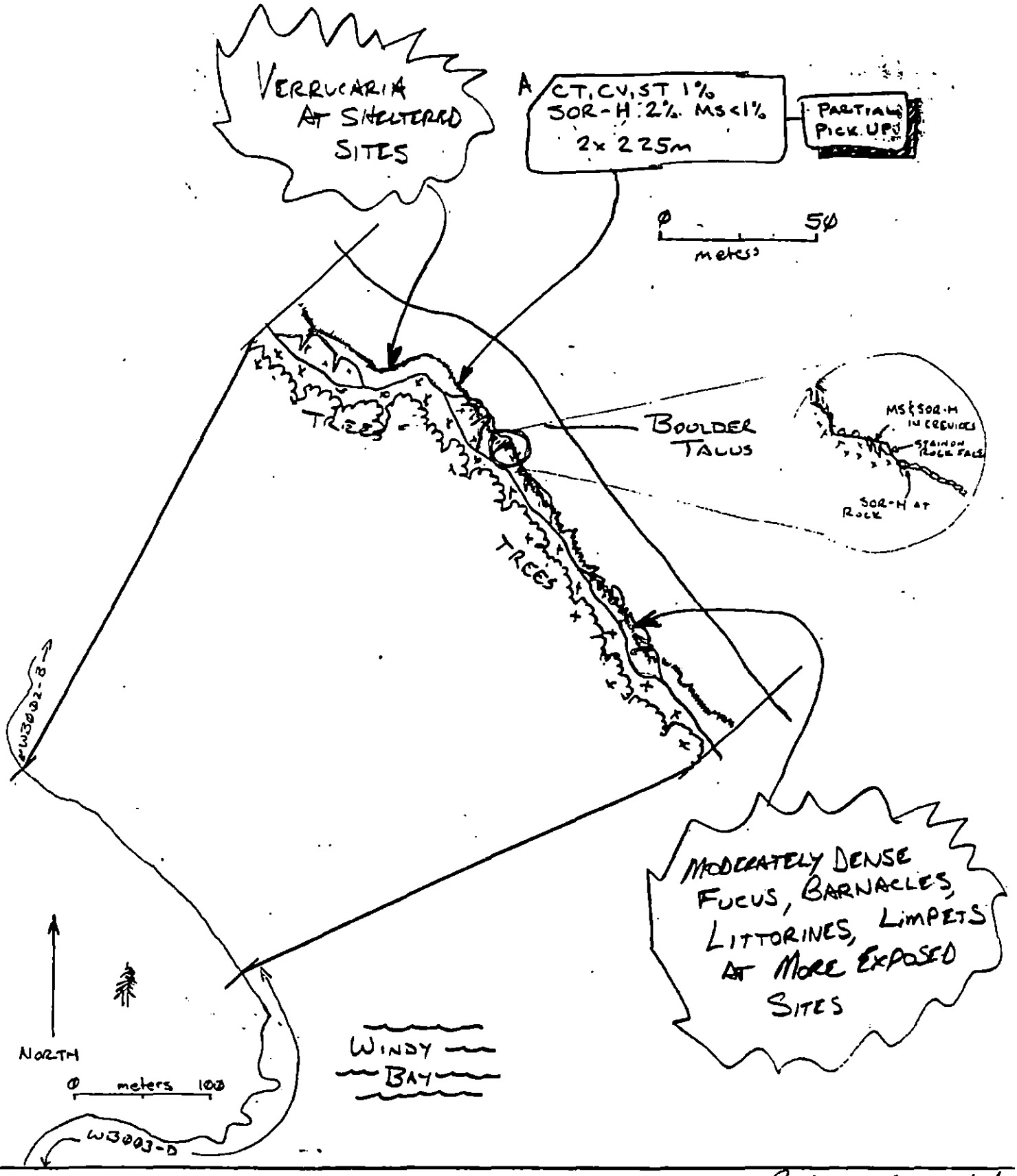
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds(specify)			
Whales(specify)			

Shoreline subdivision map showing important biological features attached.

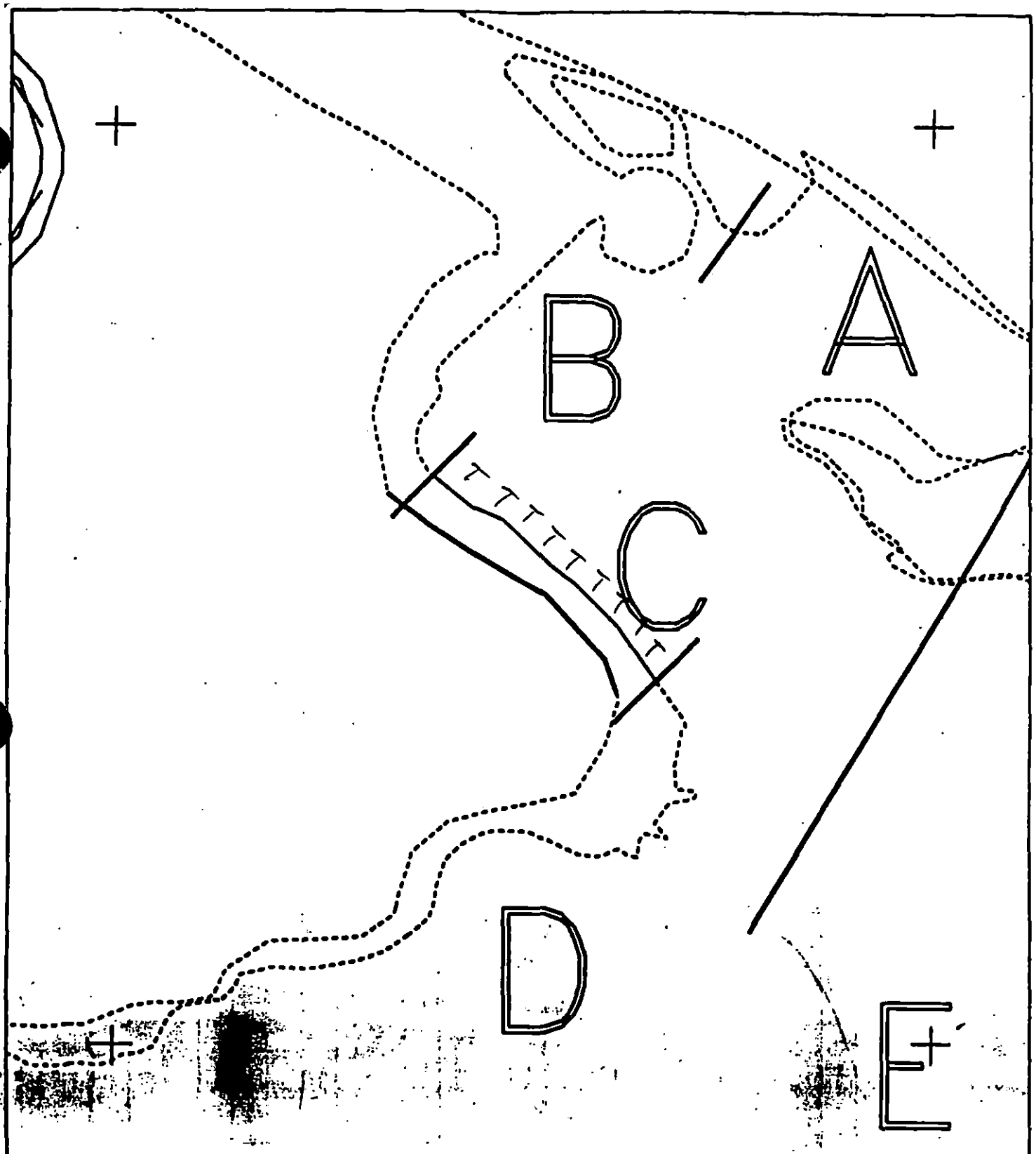
Reviewed MB 5/31/91

WB003-C
OG SKETCH MAP
26-MAP-91
1839-1856
BRYAN TRIMM

BIO MAP
ROTH



Reviewed MB 5/31/91



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

WB003-C

ADEC Subsegment Length: 225m

METERS

0 100 200

AK State Plane Zone 4
nad083e

EXXON

Subdivision Field Map
Map Key: KENWB003C
Name: TRIMM
Date: 26-MAY-91
Date Entered:

– SURFACE OIL CATEGORY MAP –

REVIEWED: MC 5/31/91
reviewed 5-30-9

1991 MAYSAP EVALUATION

SEGMENT: WB 003 **SUB:** D **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, Subsistence - Invertebrate harvesting

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:	**INITIAL**	**TAG**	**FOSC**
TREATMENT REQUIRED (Y or N)	N		
Manual Pickup (Check as Req.)			
Spot Washing			
Bio-Customblen Only			
Bio-Inipol/Customblen			
Other _____			
Other _____			

COMMENTS:
INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: _____ **FOSC APPROVAL DATE:** _____

ADEC _____ FOSC _____

EXXON _____

USCG _____

NOAA _____

ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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.

Subsistence, Invertebrate Harvesting: Unlimited treatment except avoid disturbance of clam/mussel beds unless specifically directed by TAG Work Order.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT WB-005 SUBDIVISION [redacted]D DATE 5/27/91

ADEC
NAME Steve Ferguson SIGNATURE

☐ NTR ☐ TREATMENT RECOMMENDED

HAVE NOT MARKED EITHER BOX! WILL LET YOOR JUDGEMENT OF THE STATE GUIDELINES DECIDE THIS ISSUE. I WOULD ONLY WORK THIS AREA IF AN [redacted] SITE BEING FREE OF OIL (EXCEPTION BEING CT/ST) IS A CRITERIA THAT THE STATE HAS FOR STANDARDS IN CONJUCTION WITH ITS' PRESENT ABORIGINAL PEOPLES. WTK 5/31/

EXXON
NAME George P. Stiles SIGNATURE George P. Stiles 5/27/91

☒ NTR Several areas of AP/SOR & MS were found and mostly picked up during the survey (10 bags). Very little retrievable oil remaining.

LANDMANAGER
NAME Pat Norman OF Port Graham SIGNATURE Patrick Norman

☐ NTR recomend additional work on D segment in conjunction with work on C, AP/MS/SOR remaining thru out this segment is significant enough to require additional work. All oil remaining in and around the [redacted] site needs to be removed! WTK 5/31/91

USCG/NOAA
NAME [redacted] SIGNATURE [redacted]

☒ NTR weathered marine, SOR deep in bedrock and cracks, picked-up as much as possible by VECO

Donald W. Westmoll

MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 4

SEGMENT WB003

OG B TRIMM

BIO J. ROTH

SUBDIVISION D

ADEC S. Ferguson

LANDMANAGER P. Norman for PG

DATE MAY 26 /91

EXXON George R. Stiles

USCG/NOAA Mike Mahen/McDonald

TIME 13 : 56 to 20 : 11

TIDE LEVEL 2.89 ft. to 3.71 ft.

ENERGY LEVEL: ☐ H ☒ M ☒ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 516 m

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

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 35 m VL 330 m NO 151 m US 0 m

LOC	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO		V H M L	WIDTH m	LENGTH m	S	UI	MI	LI	
A		T		S	S	S	S				RB	H	2	60	x	x			HVY SOR
B		S	S	S		S	S				GSPB	M	1.5	60		x			HVY SOR
C		T		S		S	S				RB	M	3	15		x			LT & HVY SOR
D				S		T	T				BPG2	M	2	35		x			LT, MED & HVY SOR
E				T							B	M	1	12		x			HVY SOR
F					S	S	S				R	V	1	20	x				
G			S	S		S	S				B	M	2	100	x	x			HVY SOR
H			T	S		T	T				BLG	M	2	40		x			LT SOR
I				T							BLG	M	2	30		x			MED & HVY SOR
J	S			S							PGB	M	1	40		x			MED & HVY SOR

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

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

PHOTO ROLL # MAYSAP- 4(III) - 11 FRAMES 19 - 25

No Pits

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO				B R S N	S	UI	MI	LI		
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									

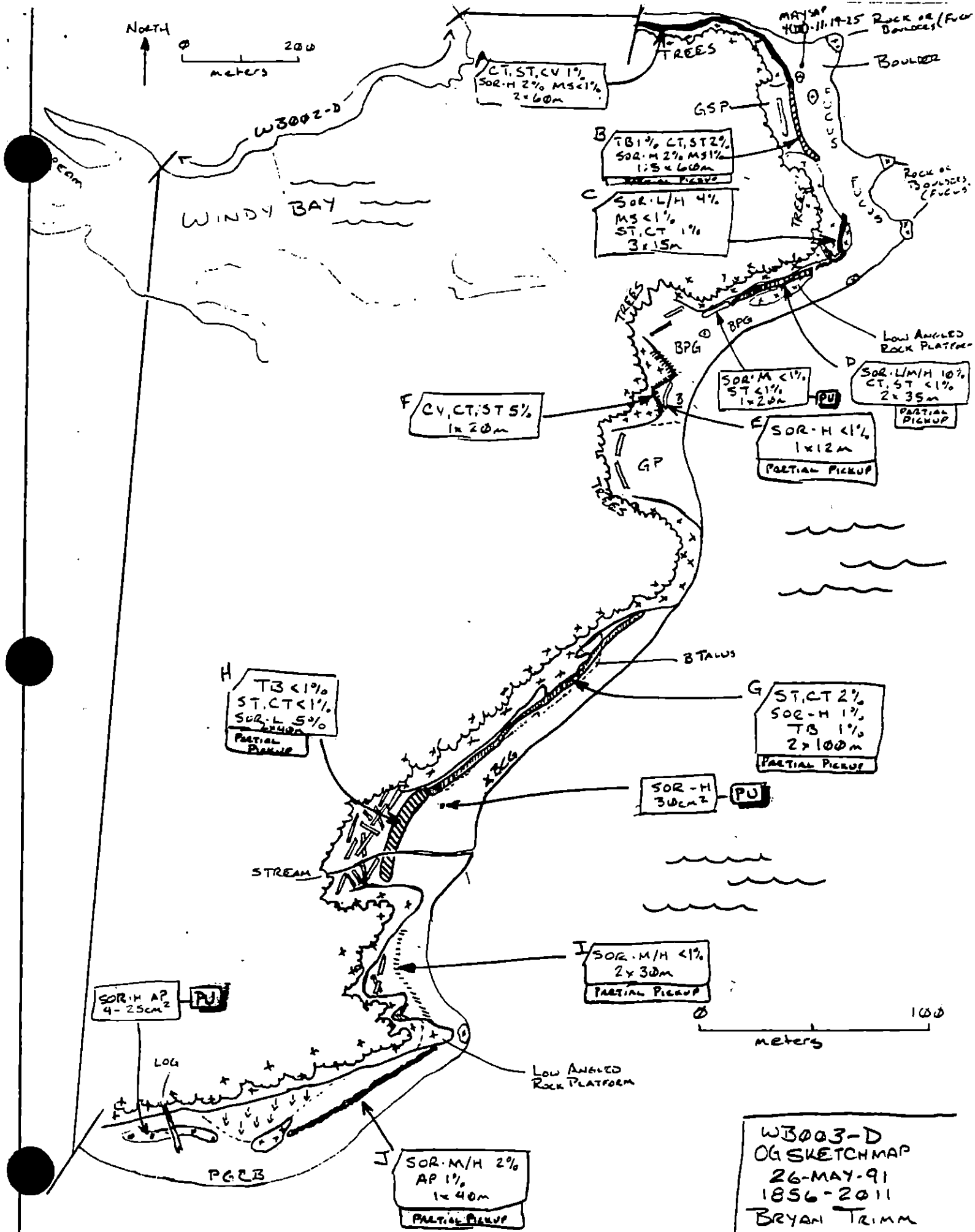
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS:

No Pits were Dug.

- The SOR is predominantly under or between boulders whereas the mousse is found in rock crevices (locations A, B, C, D).
- Locations G, H, I & J have a finer-grained surface sediment with little cobble or boulder clasts.

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



WB003-D
OG SKETCHMAP
26-MAY-91
1856-2011
BRYAN TRIMM

REVIEWED: MC 5/31/91
reviewed 5.30.91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #	4	DATE	26 MAY 91
SEGMENT #	WB003	TIDAL HEIGHT(Range)	+ 2.95 TO + 3.8 FT
SUBDIVISION	D	BIOLOGIST	JIM ROTH
SEA STATE	~1 FT	WIND SPEED/DIRECTION	
PHOTOGRAPHS: ROLL #		FRAME #	

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

A - HITZ BOULDER/BEDROCK/COBBLE W/ VERRUCARIA, SPARSE FUCUS, BARNACLE LITTORINES
B - HITZ BOULDER/BEDROCK/COBBLE W/ VERRUCARIA, SPARSE FUCUS, BARNACLES
C - HITZ BOULDER/GRAVEL W/ VERRUCARIA
D - HITZ BOULDER/COBBLE W/ VERRUCARIA
E - HITZ BOULDERS W/ MODERATELY DENSE FUCUS, BARNACLES, LITTORINES
F - HITZ BEDROCK W/ MODERATELY DENSE FUCUS, BARNACLES, LITTORINES
G - HITZ BOULDERS W/ SPARSE FUCUS, MODERATELY DENSE BARNACLES, SPARSE MUSSELS, MODERATELY DENSE LITTORINES
H - HITZ BOULDERS W/ MODERATELY DENSE FUCUS, LIMPETS, LITTORINES, BEACHHOPPERS; SPARSE BARNACLES
I - HITZ GRAVEL/BOULDER W/ VERRUCARIA, BEACH HOPPERS
J - HITZ COBBLE/GRAVEL W/ LIMPETS, LITTORINES, BEACHHOPPERS, SPARSE BARNACLES.

GENERAL COMMENTS: A HIGH-ENERGY (EXPOSED) SITE WITH A HEALTHY AND THRIVING INTERTIDAL BIOTA DOMINATED IN THE MIDDLE ZONE BY THE TYPICAL ASSOCIATION OF FUCUS, MUSSELS, BARNACLES, LITTORINES, AND LIMPETS.

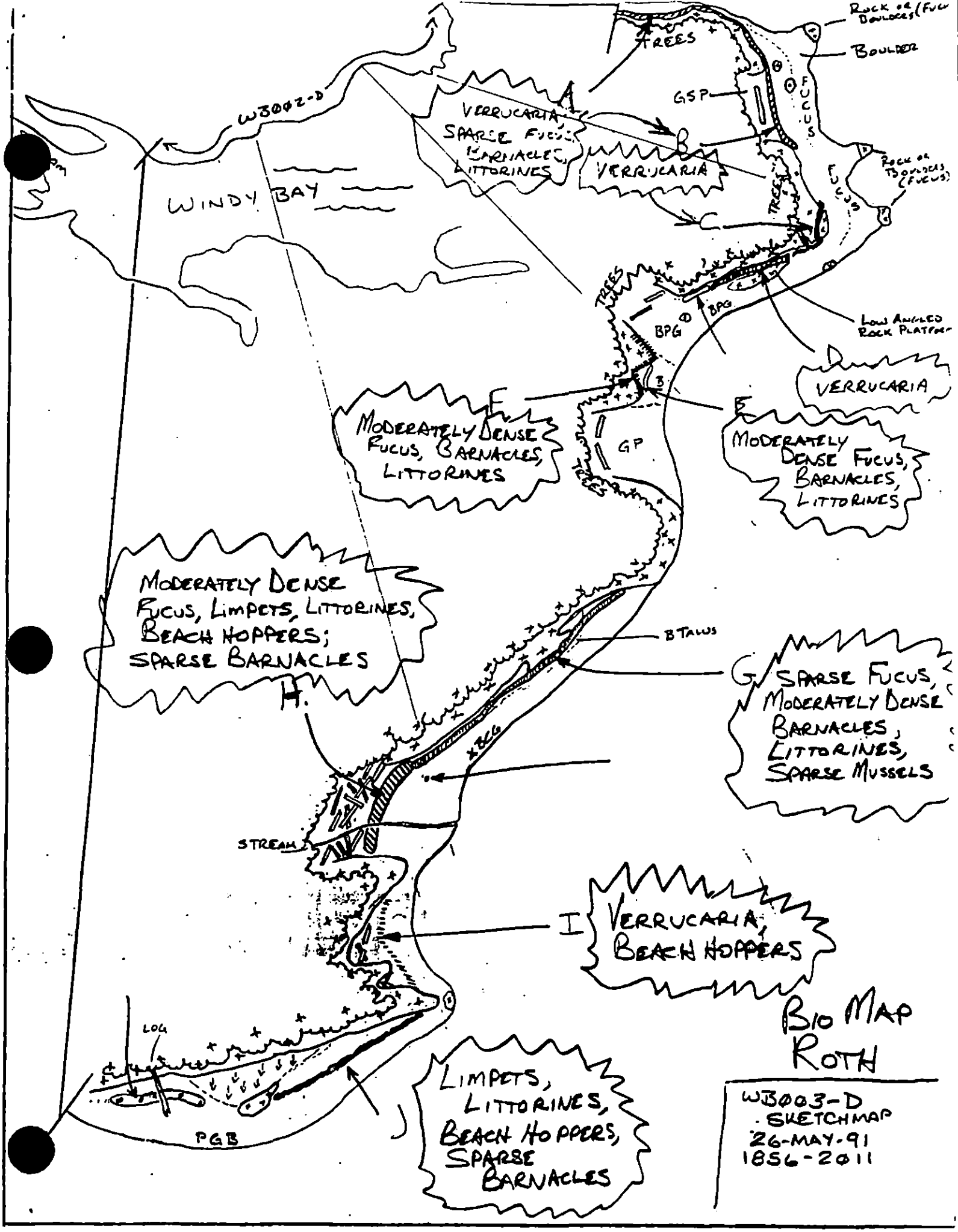
WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

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)			
[illegible]les(specify)			

Shoreline subdivision map showing important biological features attached.

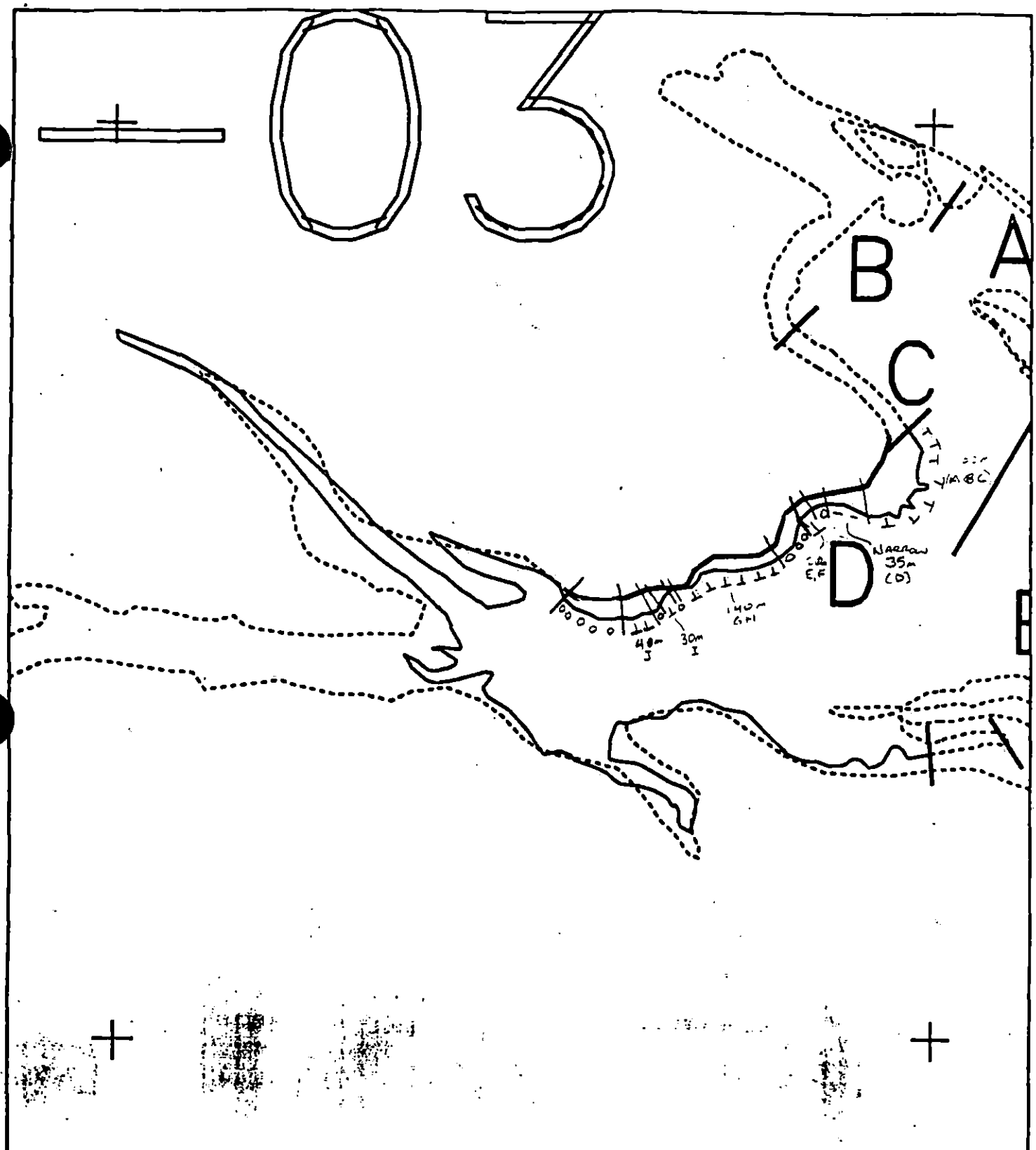
Reviewed MB 5/21/91



BIO MAP
ROTH

WB003-D
SKETCHMAP
26-MAY-91
1856-2011

REVIEWED MB 5/31/91



XXXX	Wide	**WB003 D**	Subdivision Field Map
////	Medium	ADEC Subsegment Length: 516m	Map Key: KEKWB003D
----	Narrow	METERS	Name: TRIMM
TTTT	Very Light	0 200 400	Date: 26-MAY-91
0000	No Oil	AK State Plane Zone 4	Date Entered:

EXXON

— SURFACE OIL CATEGORY MAP —

Reviewed: mc 5/31/91
revised 5.30 91

1991 MAYSAP EVALUATION

SEGMENT: WB 003 SUB: E REGION: KEN SURVEY DATE: 5/27/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN

Ecological/Constraints (see page two for details) Fish harvest area, Subsistence - Invertebrate harvesting

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

SHPO Signature: _____ Date: _____

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

COMMENTS:
INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: _____ FOSC APPROVAL DATE: _____

ADEC _____ FOSC _____

EXXON _____

USCG _____

NOAA _____

ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

Subsistence, Invertebrate Harvesting: Unlimited treatment except avoid disturbance of clam/mussel beds unless specifically directed by TAG Work Order.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT WB-003 SUBDIVISION E DATE 5/27/91

ADEC
NAME Steve Ferguson SIGNATURE

☒ NTR ☐ TREATMENT RECOMMENDED

NO TREATMENT RECOMMENDED. L-SOR FOUND ALONG BEACH AREA WEST OF BEDROCK <1%. M-SOR DEPOSITED IN SEAMS AND CREVISES OF BEDROCK <1%. REST OF OILING OBSERVED WAS IN THE FORM OF CT/ST.

EXXON
NAME George P. Stiles SIGNATURE George P. Stiles 5/27/91

☒ NTR No appreciable oil found. 1 bag of HSOR was retrieved during the survey.

LANDMANAGER
NAME Pat Norman OF Pat Graham SIGNATURE Pat Norman

☒ NTR some SOR remains, hopefully this well be dispersed by wave action.

USCG/NOAA
NAME [illegible] SIGNATURE [illegible]

☒ NTR very little oil found and picked-up

[illegible]

MAYSAP SHORELINE OILING SUMMARY

PAGE [illegible] OF 6

TEAM NO. 4

SEGMENT WB003

OG B. Trimm

BIO J. Roth

SUBDIVISION E

ADEC S. Ferguson

LANDMANAGER Pat Norman for NG

DATE May 1 25 / 91

EXXON George R Stiles

USCG/NOAA McMahon/McDonald

TIME 20 : 20 to 20 : 40

TIDE LEVEL 3.95 ft. to 4.58 ft.

ENERGY LEVEL: ☐ H ☒ M ☒ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 599 m

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

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 170 m NO 429 m US 250 m

LOC	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO		V H M L	WIDTH m	LENGTH m	S	UI	MI	LI	
A				T							GP	M	1	20		X			LT SOR
B						S	S				R	H	1	60		X			
C				T							P	M	1	20.		X			MED SOR
D						T	T				P/R	M	1	70		X			

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

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

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO				B R S N	S	UI	MI	LI		
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									

No Pits

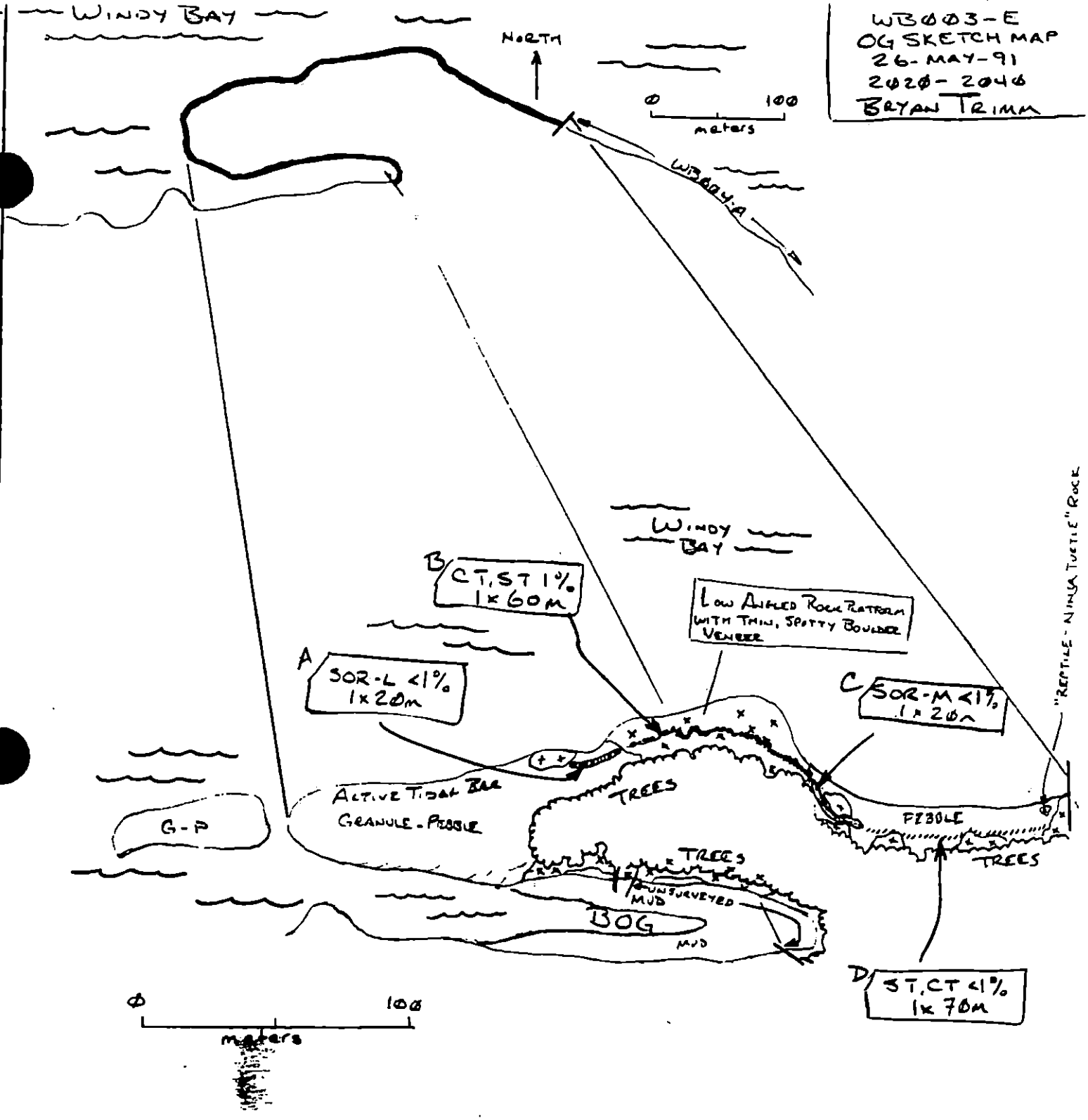
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS:

Very Little Oiling Found

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

WB003-E
OG SKETCH MAP
26-MAY-91
2020-2040
BRYAN TRIMM



REVIEWED: MC 5/31/91
reviewed 5/30/91 KG

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #	4	DATE	26 MAY '91
SEGMENT #	WB 3	TIDAL HEIGHT (Range)	+ 4.0 TO + 4.6 FT
SUBDIVISION	E	BIOLOGIST	JIM ROTH
SEA STATE	1 FT	WIND SPEED/DIRECTION	
PHOTOGRAPHS: ROLL #		FRAME #	

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

A. HITZ BOULDER/BEDROCK w/ NO INTERTIDAL BIOTA
B. HITZ BOULDER/BEDROCK w/ NO INTERTIDAL BIOTA
C HITZ BOULDERS w/ NO INTERTIDAL BIOTA

GENERAL COMMENTS: THIS SUBDIVISION CONSISTS OF A SAND-PEBBLE TIDAL BAR ENCLOSING A SMALL BOG. A HEALTHY INTERTIDAL BIOTA IS FOUND ALONG THE BEDROCK OUTCROPPING FACING WINDY BAY. NO OBSERVATIONS ON LITZ OR LOWER MITZ COULD BE MADE. ALL OIL WAS FOUND IN HITZ ABOVE THE LEVEL WHERE INTERTIDAL BIOTA IS FOUND.

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			

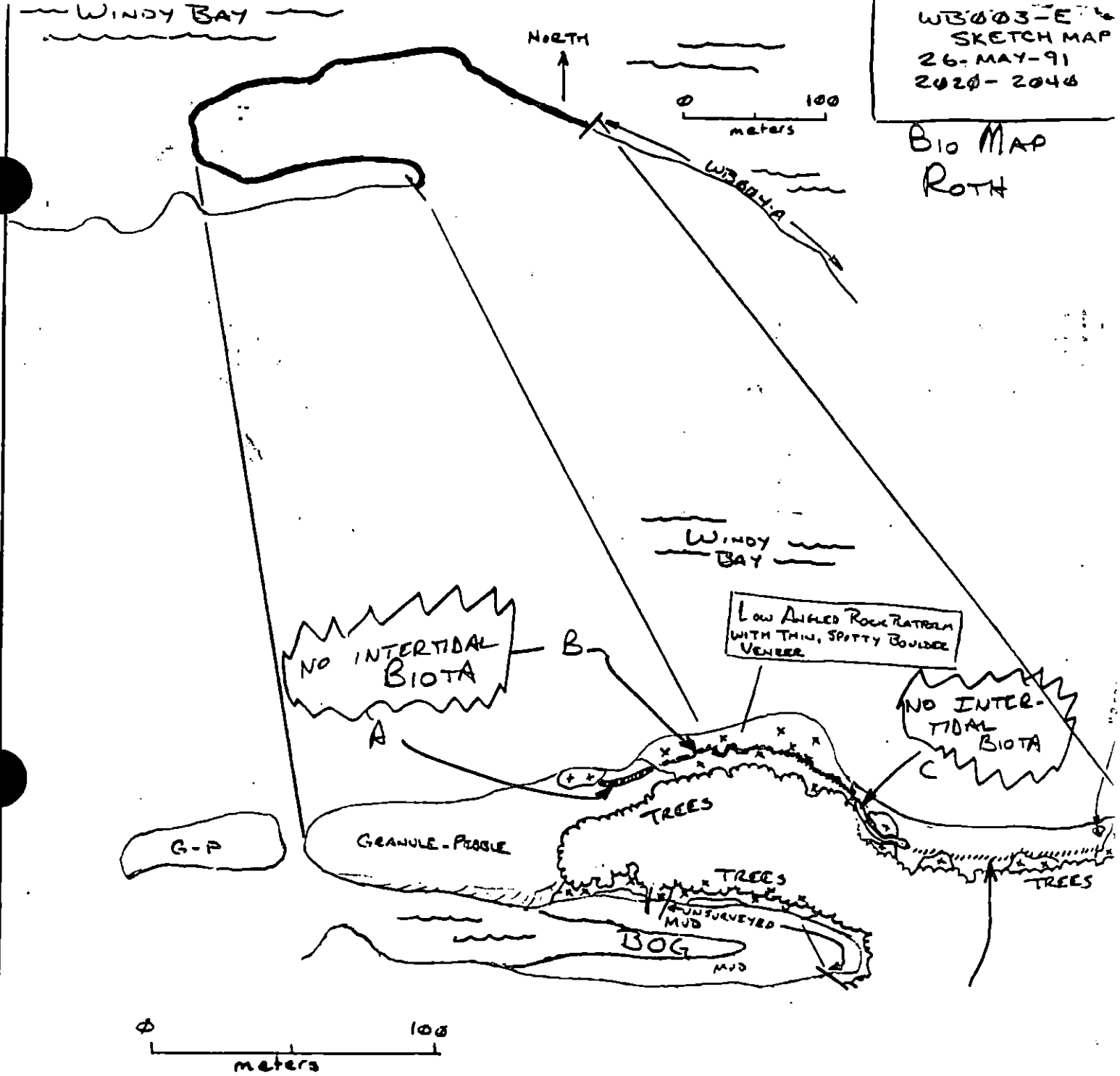
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
Cetaceans (specify)			

Shoreline subdivision map showing important biological features attached.

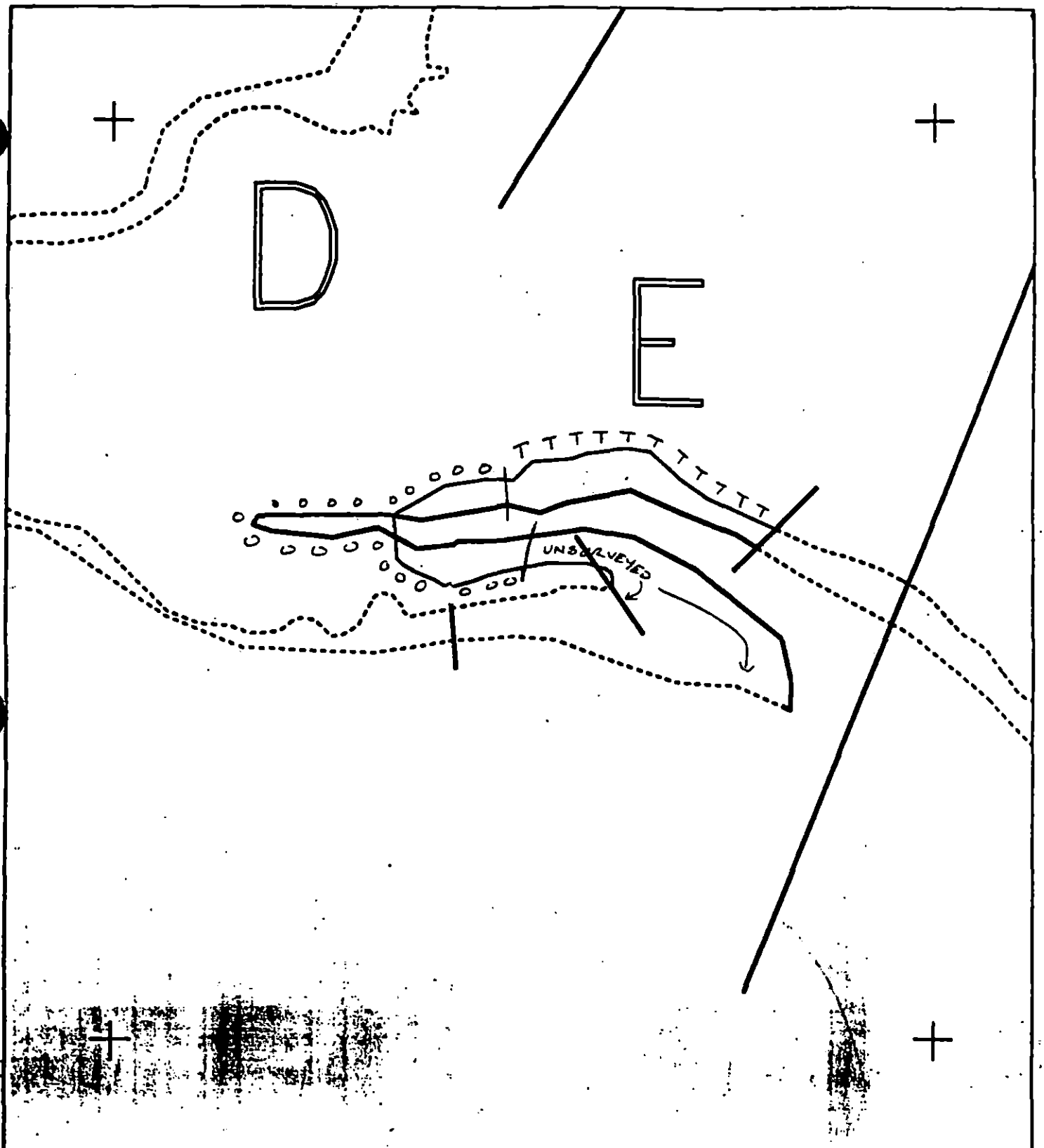
Reviewed MB 5/31/91

WB003-E
SKETCH MAP
26-MAY-91
2020-2040

BIO MAP
ROTH



Reviewed MB 5/31/91



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

WB003 E

ADEC Subsegment Length: 849m

METERS

0 100 200

AK State Plane Zone 4
NAD83s

N

EXXON

Subdivision Field Map
Map Key: KENWB003E
Name: TRIMM
Date: 26-MAY-91
Date Entered:

— SURFACE OIL CATEGORY MAP —

REVIEWED: MC 5/31/91
reviewed 5/30/91 KG

1991 MAYSAP EVALUATION

SEGMENT: WB 003 **SUB:** E **REGION:** KEN **SURVEY DATE:** 5/27/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN

Ecological/Constraints (see page two for details) **Fish harvest area, Subsistence - Invertebrate harvesting**

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

SHPO Signature: Timothy A. Smith Date: 6/07/91

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

COMMENTS:
INITIAL:

TAG:

FOSC:

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

ADEC

EXXON

USCG

NOAA

FOSC

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

ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

Subsistence, Invertebrate Harvesting: Unlimited treatment except avoid disturbance of clam/mussel beds unless specifically directed by TAG Work Order.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT WB-003 SUBDIVISION E DATE 5/27/91

ADEC
NAME Steve Ferguson SIGNATURE

☒ NTR ☐ TREATMENT RECOMMENDED

NO TREATMENT RECOMMENDED. L-SOR FOUND ALONG BEACH AREA WEST OF BEDROCK <1%. M-SOR DEPOSITED IN SEAMS AND CREVISES OF BEDROCK <1%. REST OF OILING OBSERVED WAS IN THE FORM OF CT/ST.

EXXON
NAME George P. Stiles SIGNATURE George P. Stiles 5/27/91

☒ NTR No appreciable oil found. 1 bag of HSOR was retreived during the survey.

LANDMANAGER
NAME Pat Norman OF Port Graham SIGNATURE Patrick Norman

☒ NTR some SOR remains, hopefully this well be dispersed by wave Action.

USCG/NOAA
NAME McMahon/Mitchell SIGNATURE

☒ NTR very little oil found and picked-up

Donald A. Mitchell

MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 4

SEGMENT WB003

OG B. Trimm

BIO J. Roth

SUBDIVISION E

ADEC S. Ferguson

LANDMANAGER Pat Norman for PG

DATE May 1 25 / 91

EXXON George R Stiles

USCG/NOAA McMahon/McDonald

TIME 20 : 20 to 20 : 40

TIDE LEVEL 3.95 ft. to 4.58 ft.

ENERGY LEVEL: [ ] H [X] M [X] L

SURVEYED FROM: [X] FOOT [ ] BOAT [ ] HELO

WEATHER: [ ] SUN [ ] CLOUDS [ ] FOG [X] RAIN [ ] SNOW

TOTAL LENGTH SHORELINE SURVEYED: 599 m

NEAR SHORE SHEEN: [ ] BR [ ] RB [ ] SL [X] NONE

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 170 m NO 429 m US 250 m

LOC	SURFACE OIL CHARACTER										SURFACE SEDIMENT	SHORE SLOPE	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO	TYPE	V H M L	WIDTH m	LENGTH m	S	UI	MI	LI	
A				T							GP	M	1	20		X			LT SOR
B						S	S				R	H	1	60		X			
C				T							P	M	1	20.		X			MED SOR
D						T	T				P/R	M	1	70		X			

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

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

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									

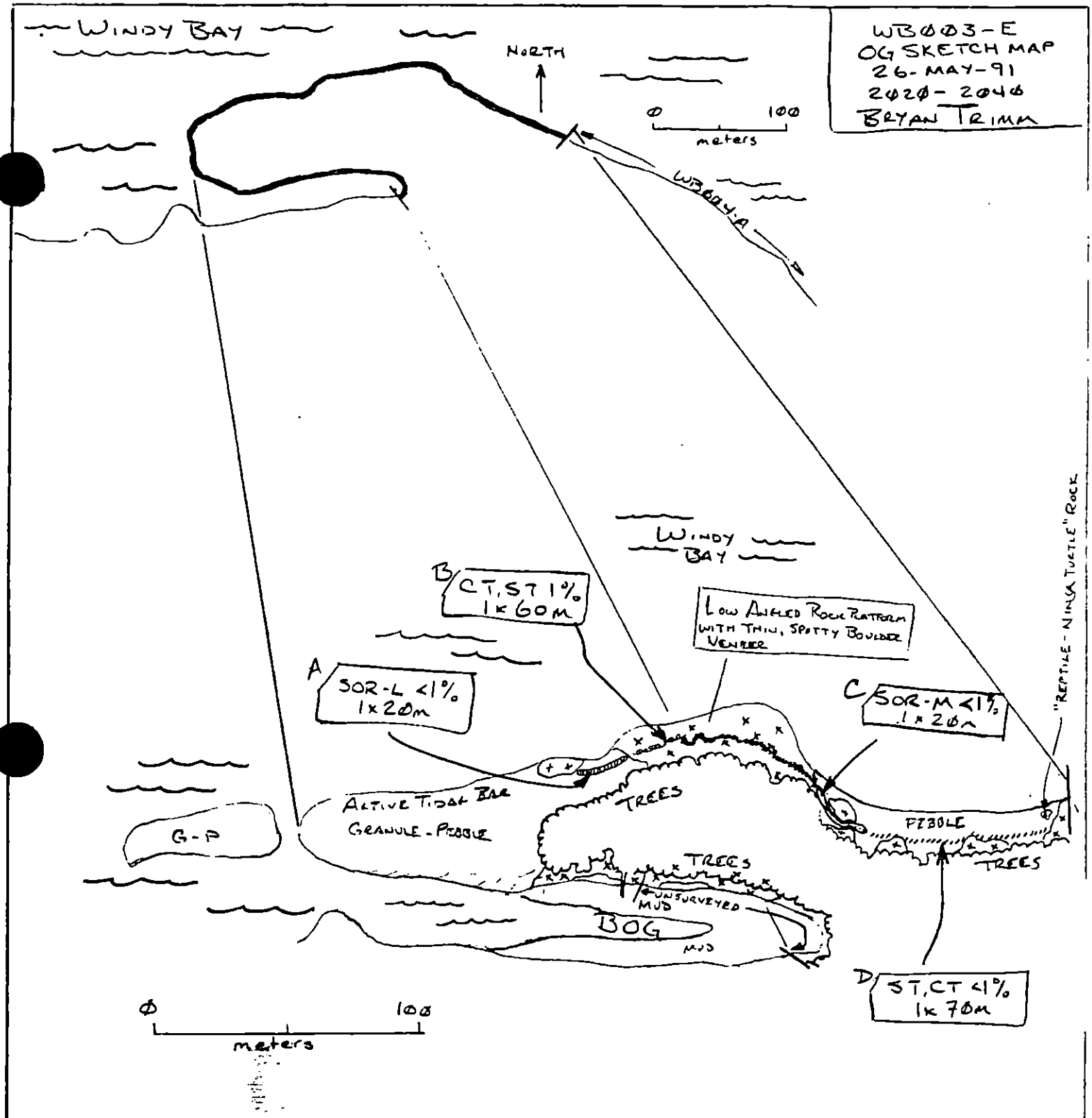
No Pits

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

OG COMMENTS:

Very Little Oiling Found

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



REVIEWED: MC 5/31/91
reviewed 5/30/91 KG

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #	4	DATE	26 MAY '91
SEGMENT #	WB 3	TIDAL HEIGHT(Range)	+ 4.0 TO + 4.6 FT
SUBDIVISION	E	BIOLOGIST	Jim ROTH
SEA STATE	1 FT	WIND SPEED/DIRECTION	
PHOTOGRAPHS: ROLL #		FRAME #	

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

A. HITZ BOULDER/BEDROCK w/ NO INTERTIDAL BIOTA
B. HITZ BOULDER/BEDROCK w/ NO INTERTIDAL BIOTA
C HITZ BOULDERS w/ NO INTERTIDAL BIOTA

GENERAL COMMENTS: THIS SUBDIVISION CONSISTS OF A SAND-PEBBLE TIDAL BAR ENCLOSING A SMALL BOG. A HEALTHY INTERTIDAL BIOTA IS FOUND ALONG THE BEDROCK OUTCROPPING FACING WINDY BAY. NO OBSERVATIONS ON LITZ OR LOWER MITZ COULD BE MADE. ALL OIL WAS FOUND IN HITZ ABOVE THE LEVEL WHERE INTERTIDAL BIOTA IS FOUND.

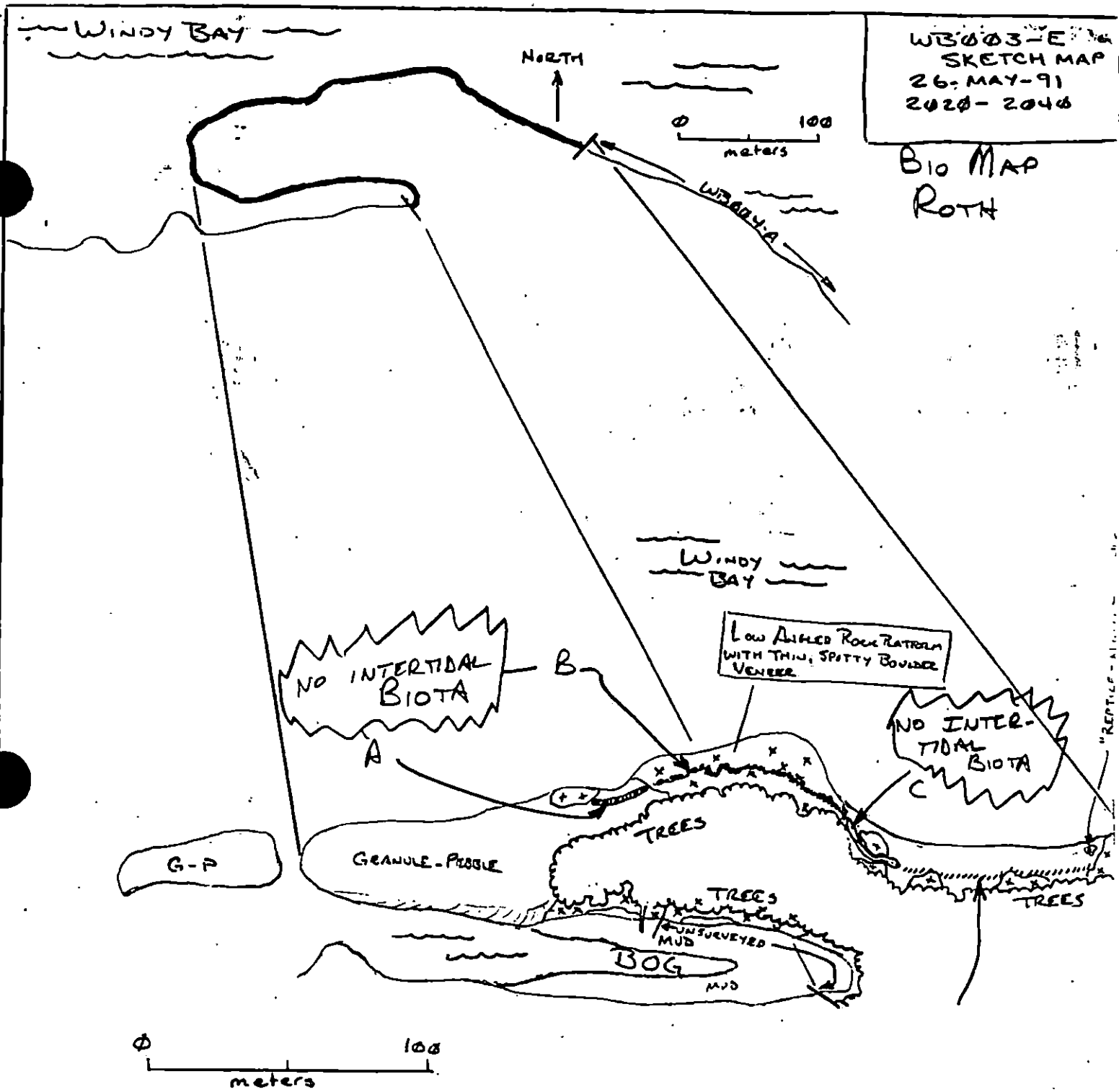
WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds			

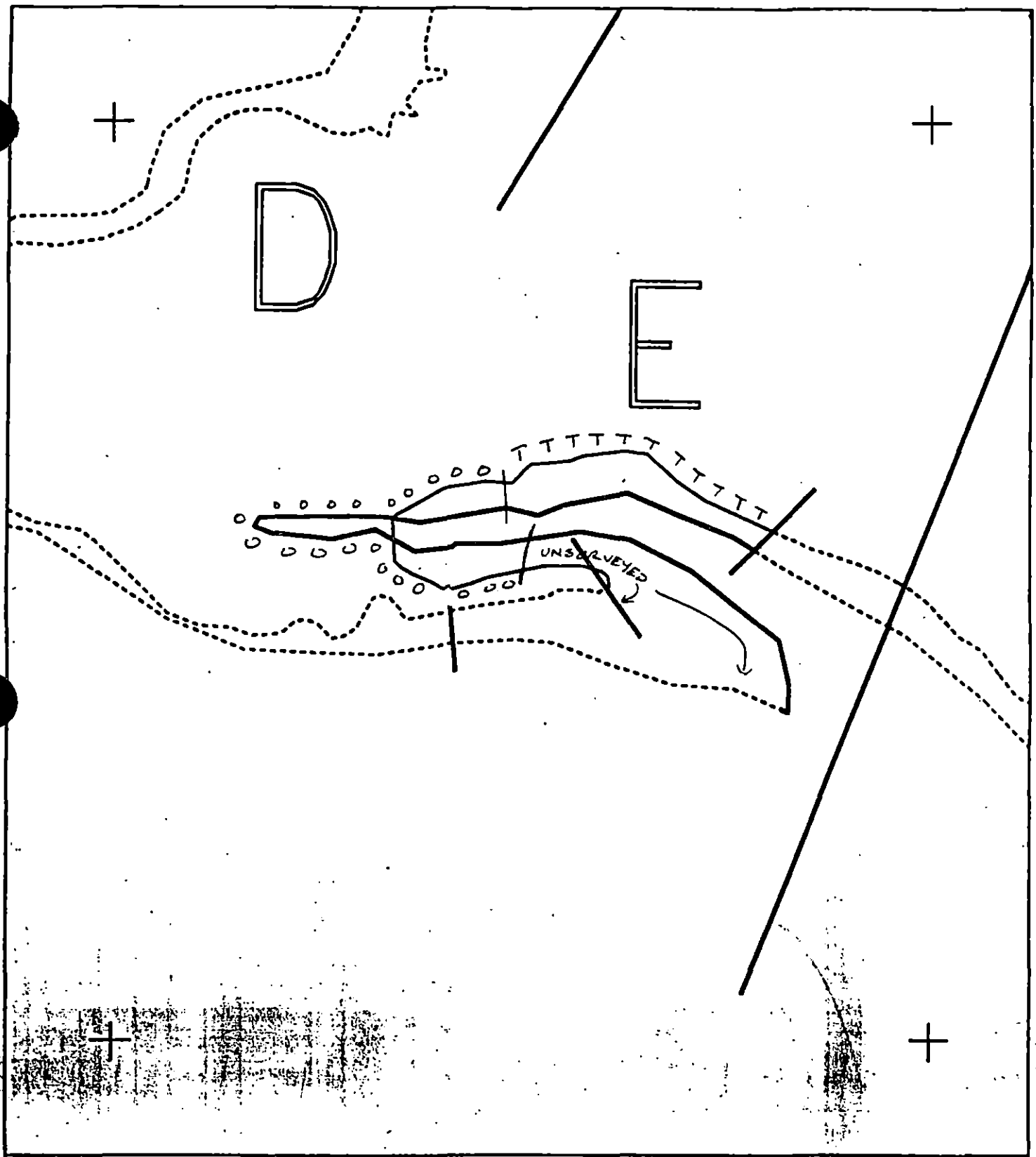
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds(specify)			
les(specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed MB 5/21/91



Reviewed MB 5/31/91



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

WB003 E

ADEC Subsegment Length: 849m

METERS

0 100 200

AK State Plane Zone 4
nad83s

Subdivision Field Map
Map Key: KENWB003E
Name: TRIMM
Date: 26-MAY-91
Date Entered:

— SURFACE OIL CATEGORY MAP —

REVIEWED: MC 5/31/91
reviewed 5/30/91 KG

1991 MAYSAP EVALUATION

SEGMENT: WB 003 **SUB:** D **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, Subsistence - Invertebrate harvesting

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

SHPO Signature: Timothy A. Smith Date: 6/07/91

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

COMMENTS:
INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: JUNE 7 1991

ADEC

EXXON

USCG

NOAA

FOSC APPROVAL DATE: 6/14/91

FOSC

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

ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

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

Subsistence, Invertebrate Harvesting: Unlimited treatment except avoid disturbance of clam/mussel beds unless specifically directed by TAG Work Order.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT WB-005 SUBDIVISION D DATE 5/27/91

ADEC
NAME Steve Ferguson SIGNATURE

☐ NTR ☐ TREATMENT RECOMMENDED

HAVE NOT MARKED EITHER BOX! WILL LET YOUR JUDGEMENT OF THE STATE GUIDELINES DECIDE THIS ISSUE. I WOULD ONLY WORK THIS AREA IF AN [redacted] SITE BEING FREE OF OIL (EXCEPTION BEING CT/ST) IS A CRITERIA THAT THE STATE HAS FOR STANDARDS IN CONJUCTION WITH ITS' PRESENT ABORIGINAL PEOPLES. WK 5/31/91

EXXON
NAME George P. Stiles SIGNATURE George P. Stiles 5/27/91

☒ NTR Several areas of AP/SOR & MS were found and mostly picked up during the survey (10 bags). Very little retrievable oil remaining.

LANDMANAGER
NAME Pat Norman OF Port Graham SIGNATURE Patrick Norman

☐ NTR recommend additional work on D segment in conjunction with work on C, AP/MS/SOR remaining thru out this segment is significant enough to require additional work. All oil remaining in and around the [redacted] site needs to be removed! WK 5/31/91

USCG/NOAA
NAME [illegible] SIGNATURE [illegible]

☒ NTR weathered mousse, SOR deep in bedrock and cracks, picked-up as much as possible by VECO

[illegible]

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 1

TEAM NO. 4

SEGMENT WB003

OG B TRIMM

BIO J. ROTH

SUBDIVISION D

ADEC S. Ferguson

LANDMANAGER P. Norman for PC

DATE MAY 26 / 91

EXXON George P. Stiles

USCG/NOAA Mike Mahen / Joe Donald

TIME 18 : 50 to 20 : 11

TIDE LEVEL 2.89 ft. to 3.71 ft.

ENERGY LEVEL: ☐ H ☒ M ☒ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 516 m

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

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 35 m VL 330 m NO 151 m US 0 m

LOC	SURFACE OIL CHARACTER AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO	SURFACE SEDIMENT TYPE	SHORE SLOPE V H M L	AREA WIDTH m	LENGTH m	ZONE S	UI	MI	LI	NOTES
A		T		S	S	S	S				RB	H	2	60	x	x			HVY SOR
B		S	S	S		S	S				GSPB	M	1.5	60		x			HVY SOR
C		T		S		S	S				RB	M	3	15		x			LT & HVY SOR
D				S		T	T				BPGR	M	2	35		x			LT, MED & HVY SOR
E				T							B	M	1	12		x			HVY SOR
F					S	S	S				R	V	1	20	x				
G			S	S		S	S				B	M	2	100	x	x			HVY SOR
H			T	S		T	T				BLG	M	2	40		x			LT SOR
I				T							BLG	M	2	30		x			MED & HVY SOR
J	S			S							PGB	M	1	40		x			MED & HVY SOR

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

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

PHOTO ROLL # MAYSAP- 4(III) - 11 FRAMES 19 - 25

No Pits

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER OP	HOR	MOR	LOR	OF	TR	NO	OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE S	UI	MI	LI	SURFACE-SUBSURFACE SEDIMENTS	NOTES
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									

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

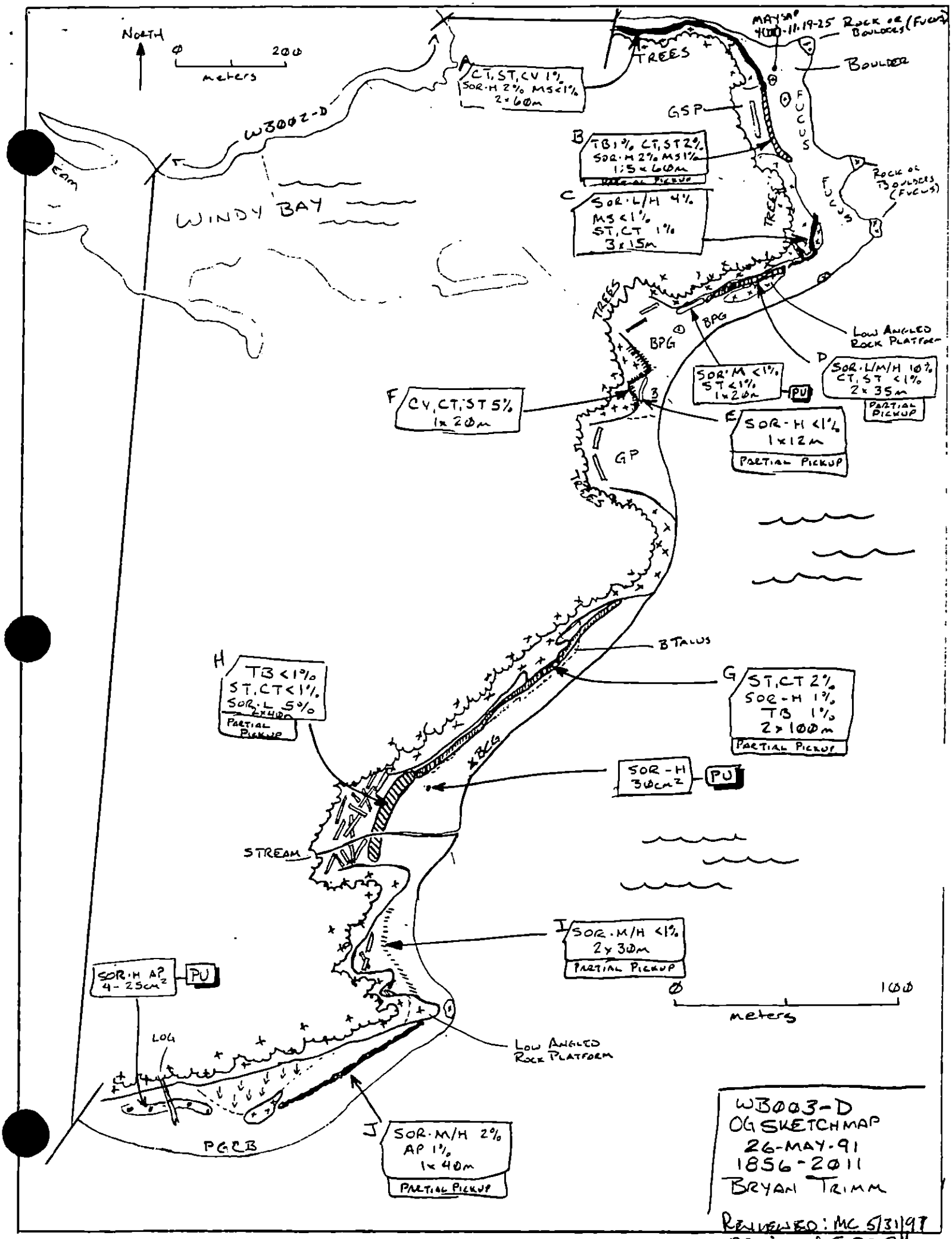
OG COMMENTS:

No Pits were Dug.

- The SOR is predominantly under or between boulders whereas the mousse is found in rock crevices (locations A, B, C, D).
- Locations G, H, I & J have a finer-grained surface sediment with little cobble or boulder clasts.

Reviewed: MC 5/31/91

Revised 5-30 91


NORTH
0
200
meters
WB002-D
WINDY BAY
A
CT, ST, CV 1%
SOR-H 2% MS<1%
2×60m
TREES
MAY'90 4000-11.19-25 ROCK OR BOULDERS (FUCUS)
BOULDER
GSP
B
TB 1% CT, ST 2%
SOR-H 2% MS 1%
1.5×60m
PARTIAL PICKUP
FUCUS
C
SOR-L/H 4%
MS<1%
ST, CT 1%
3×15m
ROCK OR BOULDERS (FUCUS)
BPG
LOW ANGLED ROCK PLATFORM
D
SOR-L/M/H 10%
CT, ST <1%
2×35m
PARTIAL PICKUP
SOR-M <1%
ST <1%
1×20m
PU
F
CV, CT, ST 5%
1×20m
E
SOR-H <1%
1×12m
PARTIAL PICKUP
GP
B TALUS
H
TB <1%
ST, CT <1%
SOR-L 5%
PARTIAL PICKUP
G
ST, CT 2%
SOR-H 1%
TB 1%
2×100m
PARTIAL PICKUP
SOR-H
30cm²
PU
STREAM
I
SOR-M/H <1%
2×30m
PARTIAL PICKUP
SOR-H AP
4-25cm²
PU
0
100
meters
LOG
LOW ANGLED ROCK PLATFORM
J
SOR-M/H 2%
AP 1%
1×40m
PARTIAL PICKUP
PGCB
WB003-D
OG SKETCHMAP
26-MAY-91
1856-2011
BRYAN TRIMM
REVIEWED: MC 5/31/91
reviewed 5.30.91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #	4	DATE	26 MAY 91
SEGMENT #	WB 003	TIDAL HEIGHT(Range)	+ 2.95 TO + 3.8 FT
SUBDIVISION	D	BIOLOGIST	JIM ROTH
SEA STATE	~ 1 FT	WIND SPEED/DIRECTION	
PHOTOGRAPHS: ROLL #		FRAME #	

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

A - HITZ BOULDER/BEDROCK/COBBLE W/ VERRUCARIA, SPARSE FUCUS, BARNACLES, LITTORINES
B - HITZ BOULDER/BEDROCK/COBBLE W/ VERRUCARIA, SPARSE FUCUS, BARNACLES
C - HITZ BOULDER/GRAVEL W/ VERRUCARIA
D - HITZ BOULDER/COBBLE W/ VERRUCARIA
E - HITZ BOULDERS W/ MODERATELY DENSE FUCUS, BARNACLES, LITTORINES
F - HITZ BEDROCK W/ MODERATELY DENSE FUCUS, BARNACLES, LITTORINES
G - HITZ BOULDERS W/ SPARSE FUCUS, MODERATELY DENSE BARNACLES, SPARSE MUSSELS, MODERATELY DENSE LITTORINES
H - HITZ BOULDERS W/ MODERATELY DENSE FUCUS, LIMPETS, LITTORINES, BEACHHOPPERS; SPARSE BARNACLES
I - HITZ GRAVEL/BOULDER W/ VERRUCARIA, BEACH HOPPERS
J - HITZ COBBLE/GRAVEL W/ LIMPETS, LITTORINES, BEACHHOPPERS, SPARSE BARNACLES.

GENERAL COMMENTS: A HIGH-ENERGY (EXPOSED) SITE WITH A HEALTHY AND THRIVING INTERTIDAL BIOTA DOMINATED IN THE MIDDLE ZONE BY THE TYPICAL ASSOCIATION OF FUCUS, MUSSELS, BARNACLES, LITTORINES, AND LIMPETS.

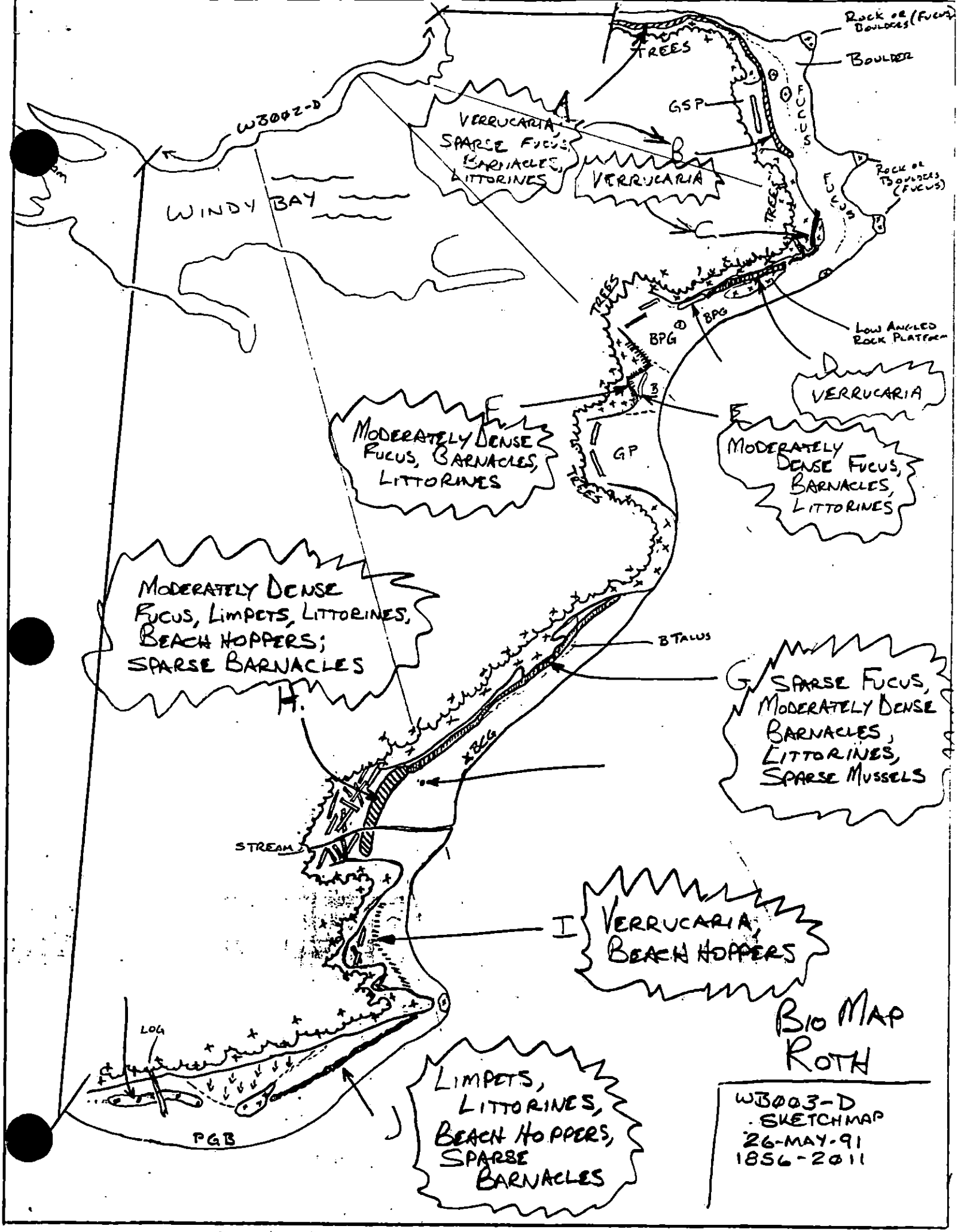
WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds			

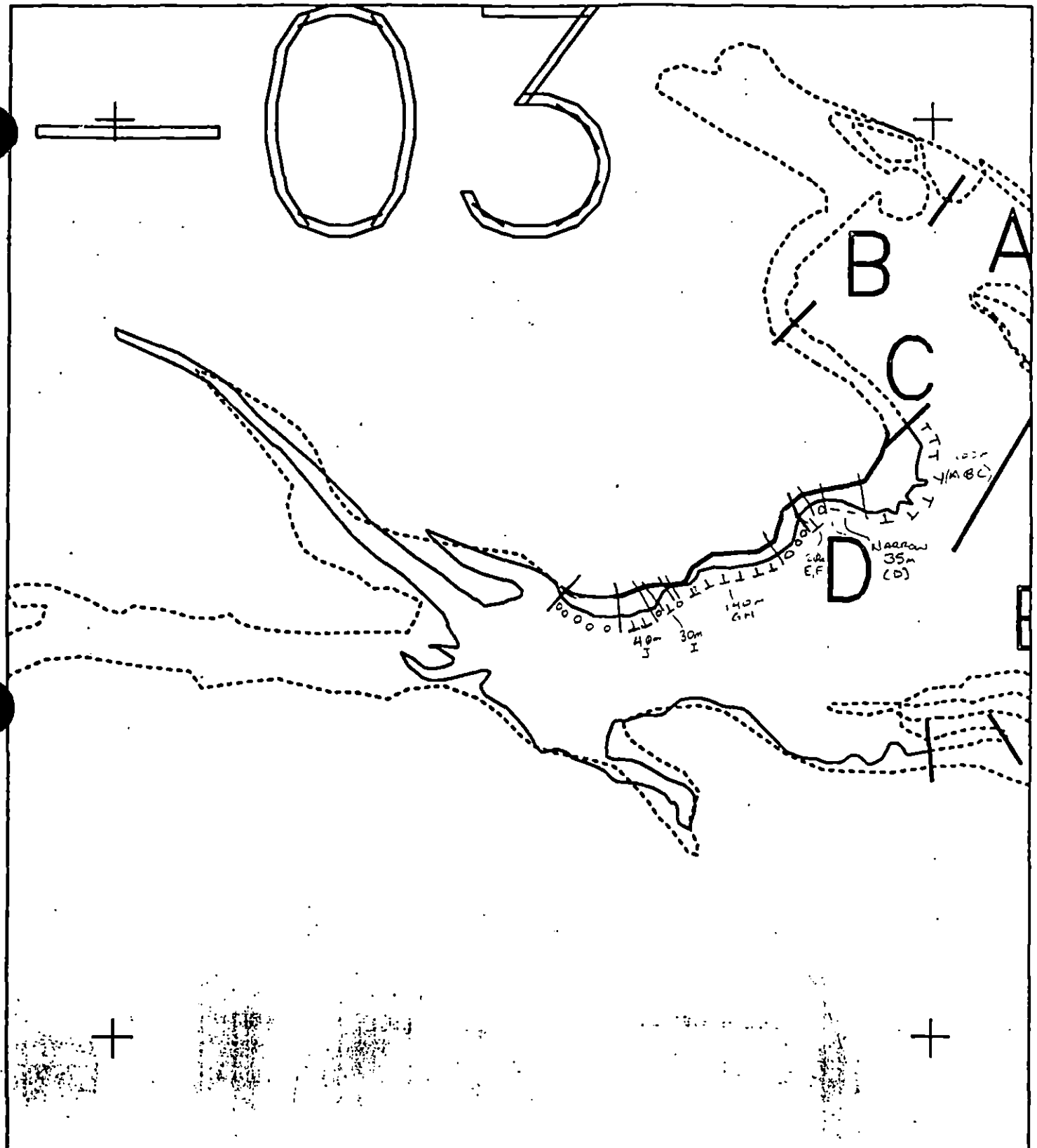
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds(specify)			
ales(specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed MB 5/21/91



REVIEWED MB 5/31/91



XXXX	Wide	**WB003 D**	Subdivision Field Map
////	Medium	ADEC Subsegment Length: 516m	Map Key: KENWB003D
----	Narrow	METERS	Name: TRIMM
TTTT	Very Light	0 200 400	Date: 26-MAY-91
0000	No Oil	AK State Plane Zone 4 wb003d	Date Entered:

EXXON

N

– SURFACE OIL CATEGORY MAP –

Reviewed: mc 5/31/91
revised 5.30 91

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ WB-003 STREAM NO: 242-32-10160 DATE 4/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1J Purse seine area (7/1 TO 8/31)
7JJ Subsistence area: Invertebrate harvesting
8AA Sensitive estuary
5T All bald eagle nests (3/1 to 6/1)
Active eagle nests (3/1 to 9/1)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Subject stream is located within subdivision B (2 of 5). Eagle nest within 400m of stream no. 242-32-10160

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

SHPO SIGNATURE: Rachel Jan Dale DATE: 5/22/90

Subsurface Oil Observed: Yes____ No X Maximum Depth____

RECOMMENDATIONS:

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

+ TARBALLS

COMMENTS: Recommend manual removal of pavement and oiled vegetation as indicated on attached sketch map. Work from 6/2 to 7/1 with approval of USFWS regarding eagle nests.

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

TAG APPROVAL DATE: 5/18/90.
ADEC ART WEINER Art Weiner
EXXON ANDY TEAL Andy Teal
NOAA Guy Petrone Guy Petrone
USCG G.A. REITER G.A. Reiter

FOSC: [illegible] DATE: 6-June 90

OG CA[redacted]ARSON

SEGMENT STI UB03

STREAM 2AZ-76-10160

DATE 4 /29 /90

SKETCH MAP

CHECKLIST

- ___N Arrow
- ___Approx. Scale
- ___Sep/Sub Bndy
- ___Oil Dist.
- ___Width
- ___Length
- ___% Cover
- ___Substrate Character
- ___Est. HWL/AWL
- ___SSL
- ___Profile Location(s)
- ___Profile(s)
- ___Pit Location(s)
- ___Photo Location(s)

LEGEND

1 ▲ Pit - No Substrate Oil

2 ▲ Pit - Substrate Oil

CT/C Continuous Oil Distribution

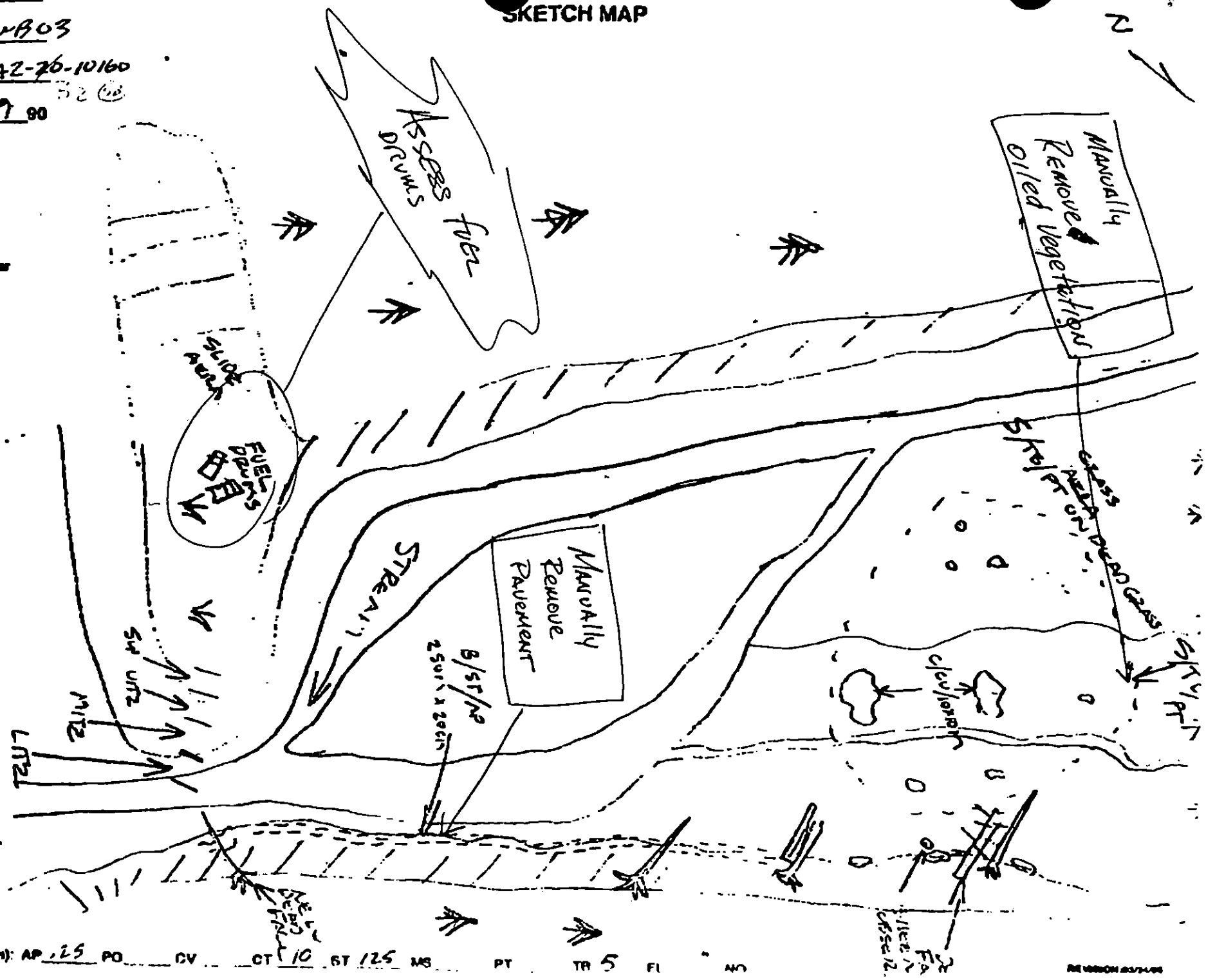
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 Photo location, direction, and number



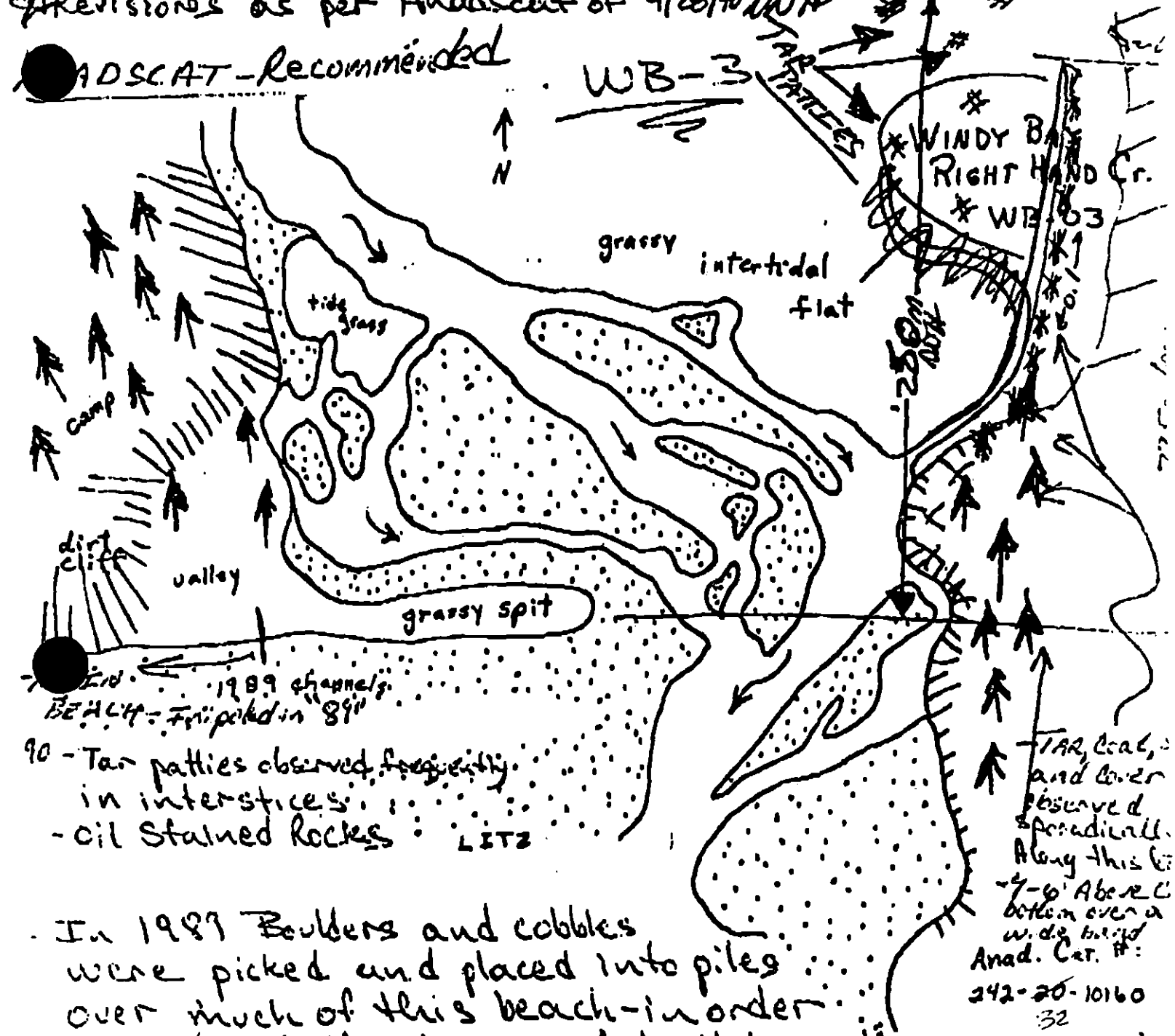
Oil Character Length (m): AP .25 PO ___ CV ___ CT 10 ST 125 MS ___ PT ___ TR 5 FI ___ NO ___

REVISION 03/24/88

FRAME(S) 11,12,13 — Sorbent boom left on flat DESCRIPTION from 1989

Revisions as per Anadscat of 4/28/90 220 ft

ADSCAT - Recommended



90 - Tar patties observed frequently in interstices.
- oil Stained Rocks

In 1989 Boulders and cobbles were picked and placed into piles over much of this beach - in order to get at the heavy packed oil beneath and in the interstices. Crews were later told to cease moving rocks (changing the beach morphology) - As NOAA/Exxon stated concerns that it could cause an erosional problem.

In 1990 none of the cairn/graveyard-like piles were evident - only a uniform-random [illegible]

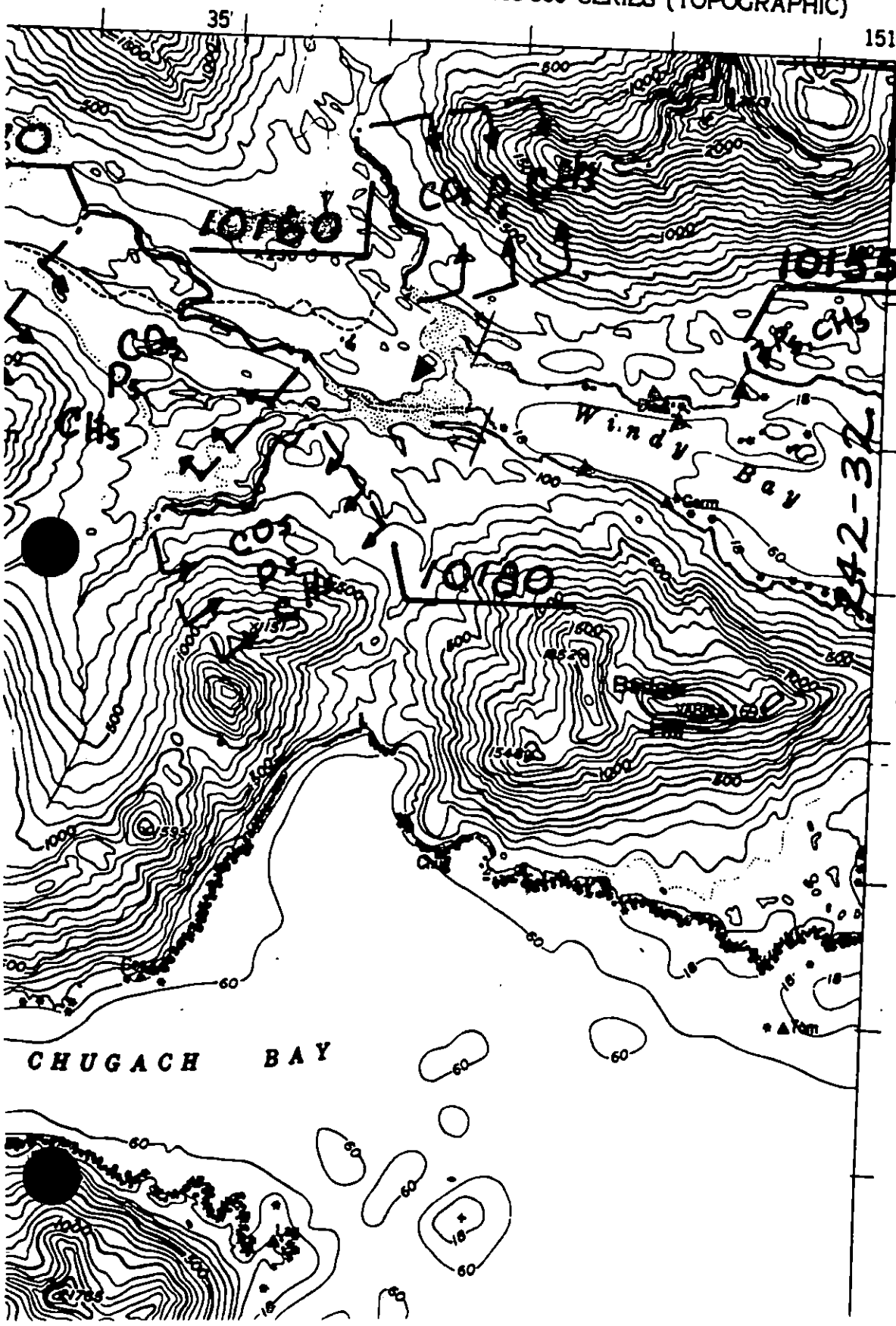
PROJECT AREA:
= 142-32-10160 (SELDOVIA B-4)

SELDOVIA (A-5) QUADRANGLE

ALASKA-THIRD JUDICIAL DIVISION

1:63 360 SERIES (TOPOGRAPHIC)

(SELDOVIA B-4)



WE - CE
(Formerly B-1 & 5
GEOLOGICAL
MAP)

1A 1B 1T
TT 6/11

▲ = BALD EAGLE NESTS

✓ = SEGMENT NUMBERS

ANADROMOUS FISH STREAM ASSESSMENT

REGION: KENAI

SEGMENT: WB-003

SUBDIVISION: B

STREAM NO: 242-32-10160

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ WB-003 STREAM NO: 242-32-10160 DATE 4/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1J Purse seine area (7/1 TO 8/31)
7JJ Subsistence area: Invertebrate harvesting
8AA Sensitive estuary
5T All bald eagle nests (3/1 to 6/1)
Active eagle nests (3/1 to 9/1)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Subject stream is located within subdivision B (2 of 5). Eagle nest within 400m of stream no. 242-32-10160

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE:_____ DATE:_____

Subsurface Oil Observed: Yes_____ No X Maximum Depth_____

RECOMMENDATIONS:

_____No Treatment Recommended	_____Snare/Absorbent Booms
X Treatment Recommended	_____Oil Snares (pom poms)
X Manual Pickup	_____Absorbents (pads,rolls,etc)
_____Bioremediation	_____Spot Washing:_____Wands
X Tarmat Removal	_____Beach Cleaner
	_____Other (see comments)

COMMENTS: Recommend manual removal of pavement and oiled vegetation as indicated on attached sketch map. Work from 6/2 to 7/1 with approval of USFWS regarding eagle nests.

TAG COMMENTS:_____

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

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 Suzomoto 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 unoiled 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 Rothy 267-2206

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

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

7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7H 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 / WB-003 SUBDIVISION: ASC 242-20-10160 DATE 29 APR 90

USCG
NAME Kerwin L. Dreher SIGNATURE CWO K.L. Dreher

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Type A manual removal

~~ADEC~~ → ADF&G
NAME LEE GLENN SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS Manual pick up is recommended for oil along the west side of stream and salt marsh. Oil extends 250 meters up this side. Remove patches of oil in grass flats located approx 250 meters from stream mouth. Remove mousse and asphalt along north beach. This subdivision area is also a subsistence food gathering area.

Contact Lee Glenn prior to work so that ADF&G can place an observer on site.
The attached ADF&G assessment completed on 4-7-90 has not changed from the 4-28-90 Anchorage survey.

~~LAND MANAGER~~ → NONE
NAME SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

SHORELINE OILING SUMMARY (ANAU)

REVISION NO. 32 SB

OG CAL LARSON USCG DREHER, CWE SEGMENT ST/ WB-03
BIO KEN CRITCHLOW LAND REP STREAM 242-20-10160 OF
EXXON DARRYL YOKES ADFG LEE GLOMN TIME 3:15 to 3:45
TEAM NO. 14 TIDE LEVEL -0- FT. DATE 4/29/90
EST. SUBDIVISION LENGTH: 300 m ☐ Sun ☑ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☑ Grass ☑ Forest ☑ Rock
SURVEYED FROM: ☑ Foot ☐ Boat ☐ Helo
SURFACE SEDIMENTS: R 10 % B 10 % C 10 % P 10 % G 10 % S 20 % M 30 % V
SLOPE: Lang 100 % Hang % Vert % WAVE EXPOSURE: ☑ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W m M m N 250 m VL 50 m NO

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	AC	AB	AP	AS	BR/BK	RW/RB	OL/OK	SL/SK	TI/TK	SU	UI	MI	LI
ASPHALT PAVEMENT		✓				✓					✓		
POOLED													
COVER													
COAT													
STAIN		✓				✓				✓	✓		
MOUSSE													
PATTIES				✓		✓					✓		
TARBALLS				✓	✓	✓					✓		
FILM													
NO OIL												✓	✓

PAVEMENT H (F) S 10 sq. m by .1

PATTIES / TARBALLS 5 BA

NEAR SHORE SHEEN? (NO) BR RW SL TI

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation	✓		
Trash			
Debris			

Did You Col DEBRIS ☐ YES ☑ NO

TYPE

#BAGS

Photographs:

Roll No.

Frames

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	▼	SURFAC SUBSURF SEDIMEN
		OP	OR	OL	OF	NO		UO	UC	BR/BK	RW/RB	OL/OK	BR/TI	SL/SK	SU	UI	MI	LI				
							•															
							•															
							•															
							•															
							•															
							•															

COMMENTS NO PITS DUG DUE TO LACK OF OIL PENETRATION. EXTREMELY WEATHERED OIL AT SITE. SPORADIC PATTIES, TAR BA SETTLING ON GRASSES IN UPPER TIDAL GRASS FLATS.

REVIEWED DATE

OG CAL[redacted]RSON

SEGMENT STA UB03

STREAM 242-76-10160 32 (58)

DATE 4 / 29 / 90

SKETCH MAP

CHECKLIST

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

LEGEND

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Oil Distribution

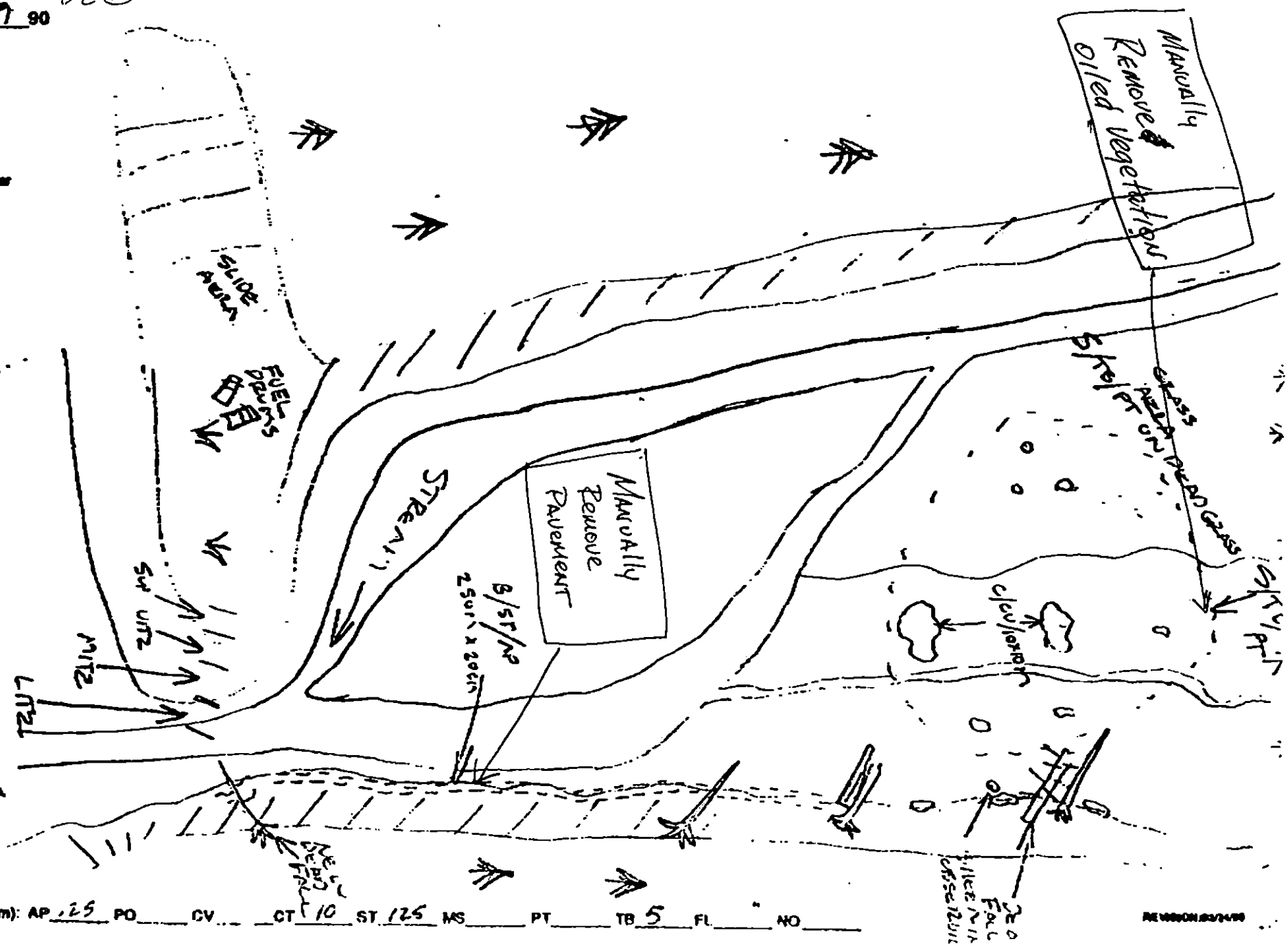
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 Photo location, direction, and number



Oil Character Length (m): AP .25 PO ___ CV ___ CT 10 ST 125 MS ___ PT ___ TB 5 FL ___ NO ___

REVISION 03/14/90

GROUP A

Prescreening

ADF&G MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: DB (SP) DS TS AVS SCHA HMHS PTA 2 REGION: PWS (KP,CI) K,AP

METHOD: Aerial (Ground) Boat

Sites As per ANADSCAT of 4/28/90 - See MAP DOH

3 DATE: 4/7/90 16 HIGH TIDE TIMES: 1 21 TEAM RECORDER: Doug Hill

4 START TIME: 0825 18 HIGH TIDE HTS: 1 22 OBSERVERS: Lee Gibson

5 STOP TIME: 0925 17 LOW TIDE TIMES: 0702 1 23 AGENCY: ADF&G

6 SEGMENT #: WR-003 18 LOW TIDE HTS: 1.3 1 24 PHOTOS TAKEN: (Y) N

7 STATION #: 19 TIDE HT AT SURVEY: Roll #: 90-00H-001 Frame: 11,12,13

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

9 STAT AREA: 242-20 20 USCG QUAD: SELDOVIA A-5 Start: End:

10 LAT: 59°13'80" 11 LONG: 151°30'90" 26 SAMPLES TAKEN? (Y) (N) Number

12 SOURCE: (Map) Loran Oil

13 LOCATION: AFS#242-20-1060; Head of Windy Bay Sediment

14 DESCRIPTION: North Shore, Right Hand Creek Biological

EXTENT OF OIL Water

	SHORELINE L	W	M²	%	STREAM L	W	M²	%
27 SURFACE COVERAGE								
29 PENETRATION								

30 OVERALL OIL IMPACT: N VL L M H

31 OIL TYPE: Pooled Mousse (Tar) Asphalt (Sticky) (Stain)

32 OILED DEBRIS? Y (N)

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

34 WAVE EXPOSURE: High Moderate (Low)

35 SUBSTRATE TYPE: Bedrock Boulder 10 Cobble 30 Gravel 30 Sand 20 Mud/silt 10

36 CATALOGED ANAD. FISH STREAM? (Y) N

37 CATALOG #: 242-20-1060 32 (58)

40 OIL ON STREAM BANKS? (Y) N

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

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

Where:

43 ANADROMOUS FISH PRESENT? (Y)

44 ANADROMOUS FISH OBSERVATION

Species	Aerial	Ground
Chum Fry		60

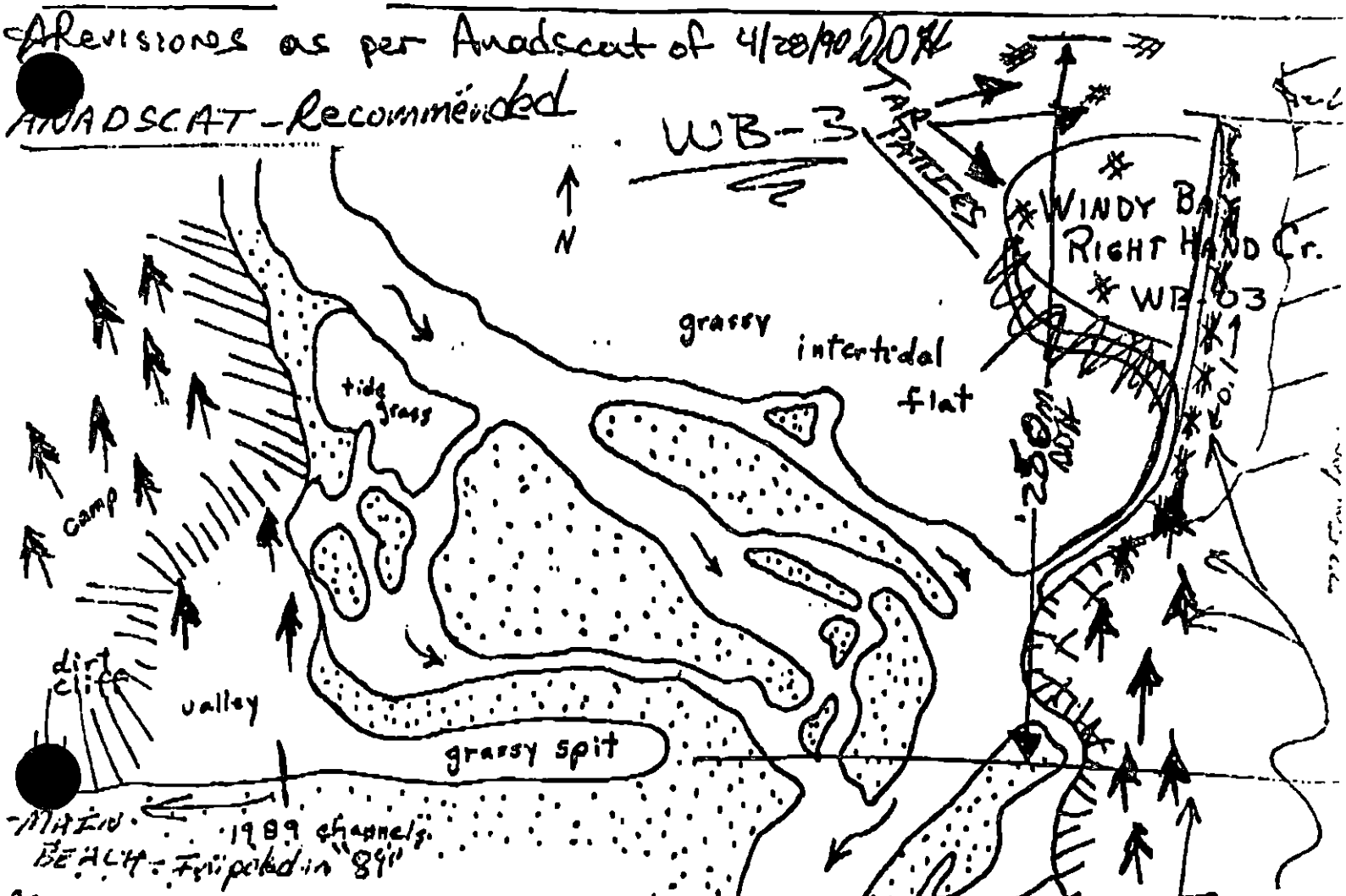
COMMENTS: Chum, Pink and Coho Rivers, Flats used by otter/seal and River, moose, Migratory waterfowl utilize this area, Bald Eagles frequent (Nest within 1/2 mile). Eelgrass and clam bed at mouth of stream.

Douglas Hill

FRAME(S) 11,12,13 — Sorbent boom left on flats DESCRIPTION from 1989

Revisions as per Anadscat of 4/28/90 DOK

ANADSCAT - Recommended



90 - Tar patties observed frequently in interstices.
- Oil Stained Rocks

In 1989 Boulders and cobbles were picked and placed into piles over much of this beach - in order to get at the heavy forked oil beneath and in the interstices. Crews were later told to cease moving rocks (changing the beach morphology) - As NOAA/Exxon stated concerns that it could cause an erosional problem.

In 1990 none of the cairn/graveyard-like piles were evident - only a [illegible]

Seg ID: WB-003 Subdiv: 242-~~20~~ 32-10160
Survey Date: 4/29/90
Comments by: Ken Critchlow

The area surveyed was behind the main beach berm. Most of the oil observed was located in two areas. One area, characterized by dead and new emerging grass, contained several areas of scattered patties or tarballs. Some of these oiled spots were staked and flagged to facilitate relocation; in one or two weeks the oil would be very difficult to find. The other oiled area was located along the east side of the site adjacent to a small stream channel. Oil in this location was located in a broken band of stain and asphalt pavement in the MIT2 and UIT2.

I recommend that patties and tarballs in both oiled areas be removed by shovel for disposal. No other treatment is recommended.

K R Critchlow

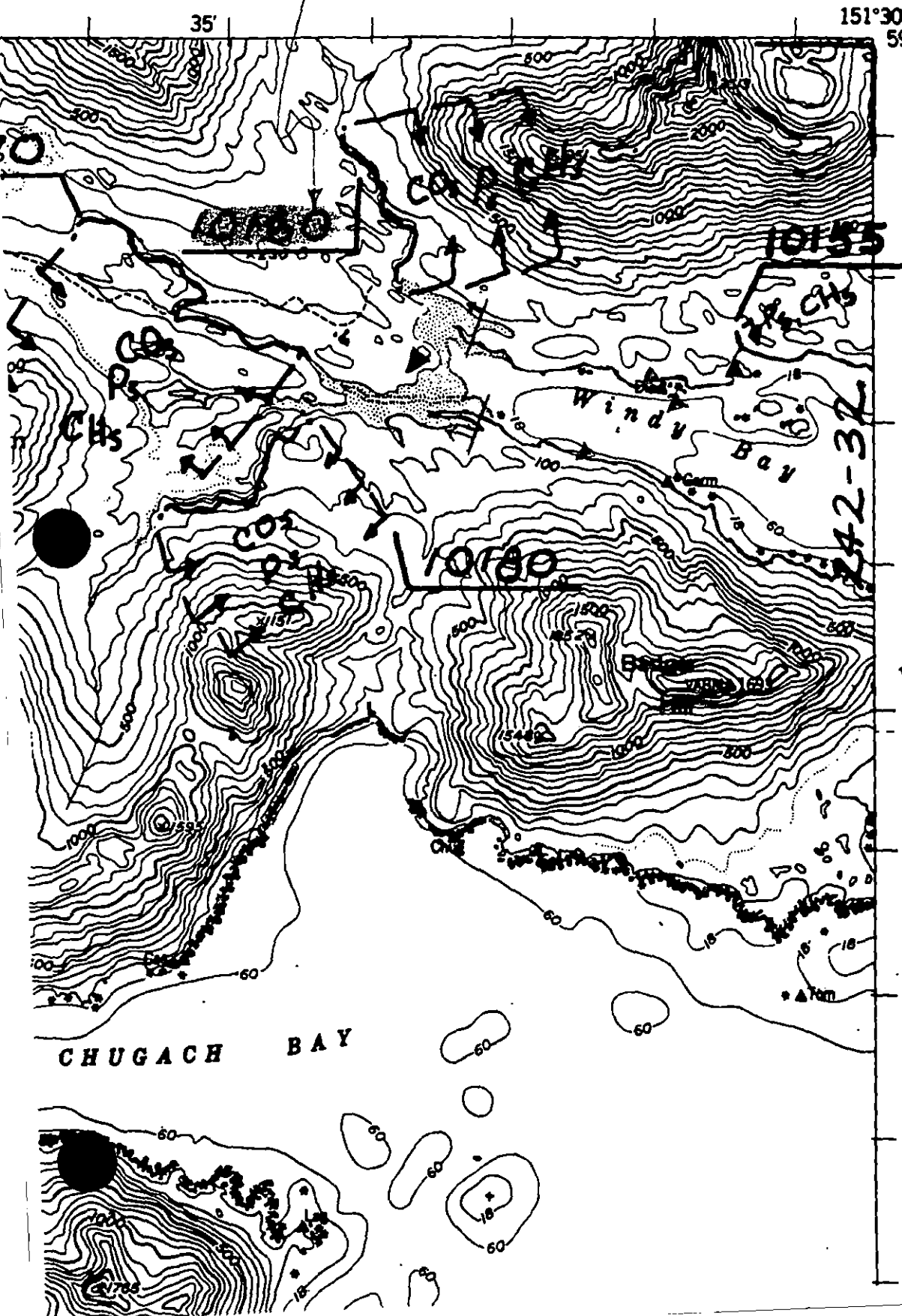
SUBJECT. STREAM:
= 242-32-10160 (CCs, Ps, CHs, 2/90)

SELDOVIA (A-5) QUADRANGLE

ALASKA-THIRD JUDICIAL DIVISION

1:63 360 SERIES (TOPOGRAPHIC)

(SELDOVIA B-4)



WB-CE
(Subdiv. B, 1 of 5)
ECOLOGICAL MAP

1A, 1B 1T+
7JT 8AH

▲ = BALD EAGLE NESTS

✓ = SEGMENT DIVISION

ASAP TAG REVIEW SHEET

Segment: WB03 **Subd:** D **Site:** 1 **Date PRE-Review** 14 Aug 90

Priority For Addressing In 1990

____ HIGH ____ MEDIUM X LOW ____ NTR

Treatment Recommended: M/P + BJO

Asphalt, SOR-H

Mouse, TB-PATHO

Priority Site For Reassessment In 1991

X YES CG ___ NO X YES ADEC ___ NO X YES EXXON ___ NO X YES LAND MGR ___ NO

TAG 15 AUG 90

manual pickup mouse & AP

BIO

(Low Priority)

ASAP TAG REVIEW SHEET

Segment: WB03 **Subd:** D **Site:** 2 **Date PRE-Review** 14 Aug 90

Priority For Addressing In 1990

____ HIGH ____ MEDIUM X LOW ____ NTR

Treatment Recommended:

~~NFRC~~

SOR, mouse

~~Reassessment 91 only~~

Priority Site For Reassessment In 1991

YES X CG NO ___ YES X ADEC NO ___ YES X EXXON NO ___ YES X LAND MGR NO ___

TAB 15 AUG 90

Same as Site 1

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/WB003 Subd.: D Site: 1 & 2 Date: 8/08 1990

Conditions Observed: Asphalt & Mousse = 4 m Band - OS/P
Asphalt & Mousse / U-I/P 3-5 m Band. - Site #1
MS & SOR/P in UITZ & MITZ / U-I as a 2 meter Band at
Site #2 -

Followup Recommendations: Manual Removal of Mousse & Asphalt

Completed by Pickup Crew: ☐ YES ☒ NO	Priority for Addressing in 1990: ☐ High ☐ Mod. ☒ Low

ADEC Clara Crosby (name) Clara L. Crosby. (signature)

Comments: I feel that work ~~[illegible]~~ cc. was incomplete - Bands are relatively easily secured & while work crews are in Windy Bay - mod. request for CDE - these subdivisions can be addressed too well.

Exxon CZARNECKI (name) Jon Czarnecki (signature)

Comments: the oil what remains is about 1/2 days work for a 9 man crew. Could be picked up in 1 Super sacks

USCG (name) (signature)

Comments:

Land Rep. Patrick Norman (name) Patrick Norman (signature)

Comments: Asphalt and mousse is mostly exposed and can be picked up.

FIELD SHORELINE COMMENT SHEET

SEGMENT AS / WB-3 SUBDIVISION: D SITE: 01/02 DATE 07 Aug 1990

USCG

NAME AEC Vandepels SIGNATURE AEC Vandepels

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Some AP/MS found on segment. Reassess in 91.

ADEC

NAME Clara S. Crosby SIGNATURE Clara S. Crosby

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Manual removal of AP & MS incomplete. It is adjacent to an anadromous stream. Subsurface oiling was observed in the berm @ pit site #2. A thorough reassessment & delineation & treatment of subsurface oiling is needed. Area has been Bioremediated.

LAND MANAGER

NAME Patrick Norman SIGNATURE Patrick Norman

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: The western end of this segment still has subsurface mousse, pad is on Archeological site that is important to us also a subsistence area

EXXON

NAME JON CZARNECKI SIGNATURE Jon Czarnecki

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: This area is next to an active salmon stream and used for subsistence fishing reassessment in 91 would be helpful.

REVISION NO. 7/26/90

ASAP SHORELINE OILING SUMMARY

TEAM NO 04 | EXXON Jon Czarnecki | SEGMENT AS WB — 1
OG Rich Marty | ~~USGS~~ USCG Alec Vandepeis | SUBDIVISION D
ADEC Chris Crosby | LAND REP Pat Norman (P.Gr) | TOTAL NO. SITES 1
DATE 0 7/ Aug / 90 | TIME 19 :05 to 19 : 35 | TIDE LEVEL +4' to +3'
TOTAL EST LENGTH OF SHORELINE SURVEYED: 516 m
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
OIL CATEGORY LENGTH: W — m M 269 m N 194 m VL 54 m NO — m US — m

SURFACE OIL

SITE 1

CHARACTER	DISTRIBUTION /C	/B	/P	/S	OILED ZONES SU	UI	MI	LI
ASPHALT	—	—	U	I	U I	U I	U I	—
S.O.R.	—	—	—	H	—	H X	U I	—
POOLED								
COVER								
COAT								
STAIN								
MOUSSE	—	—	U	I	U I	U I	U	—
PATTIES/T.B.	—	—	—	X	—	X	X	—
FILM								
NO OIL					—	—	—	X
EST. SITE LENGTH					421 m			

SITE 2

CHARACTER	DISTRIBUTION /C	/B	/P	/S	OILED ZONES SU	UI	MI	LI
ASPHALT								
S.O.R.	—	—	U I	—	—	U I	U I	—
POOLED								
COVER								
COAT								
STAIN								
MOUSSE	—	—	U I	—	—	U I	U I	—
PATTIES/T.B.								
FILM								
NO OIL					X	—	—	X
EST. SITE LENGTH					95m			

SITE 3

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

SUBSURFACE OIL

SITE NO.	PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER OP	OR	OF	NO	OILED INTERVAL (CM-CM)	CLEAN BELOW (Y/N)	PIT ZONE SU	UI	MI	LI	SURFACE-SUBSURFACE SEDIMENTS
1	1	55	—	—	—	X	—	Y	—	X	—	—	SG/S
1	2	12		X			5 - 11	Y	X	—	—	—	PC/SG

Photographs:
Roll No. ASAP-04-03-CC
Frames 25-32

COMMENTS All comments are presented on the annotated sketch.

REVISION NO. 7/27/90

SEGMENT: WB-3

SUBDIVISION: D

DATE: 9 / 7 / 90

CHECKLIST

- N Arrow
- Approx. Scale
- Graphic Scale
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HWL & WL
- SSL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

LEGEND

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

Photo location, direction, and number

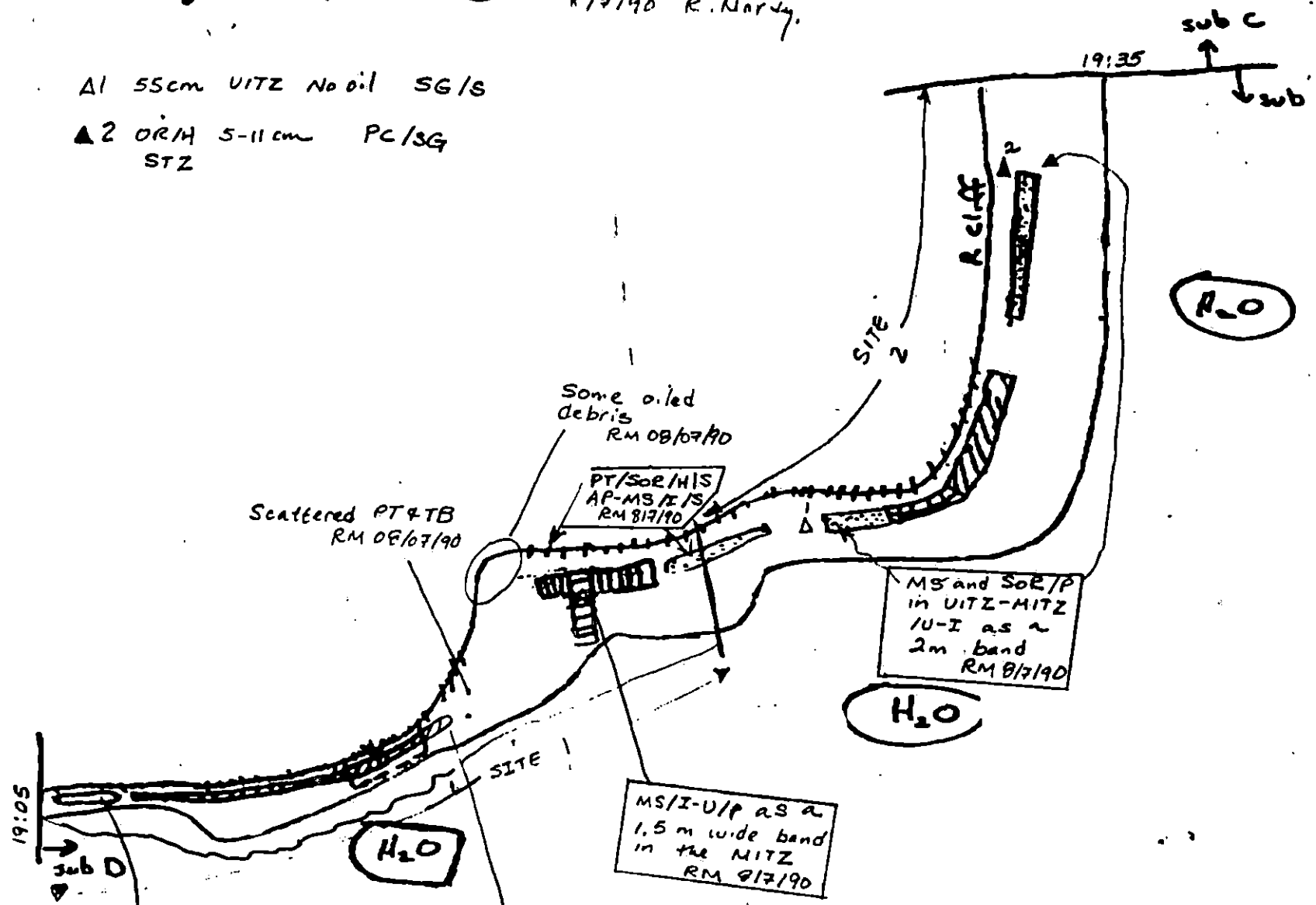
SKETCH MAP

ASAP Annotations
8/7/90 R. Narvy.

Arr Scale

Δ1 55cm UITZ No oil SG/S

▲2 OR/H 5-11 cm PC/SG
STZ

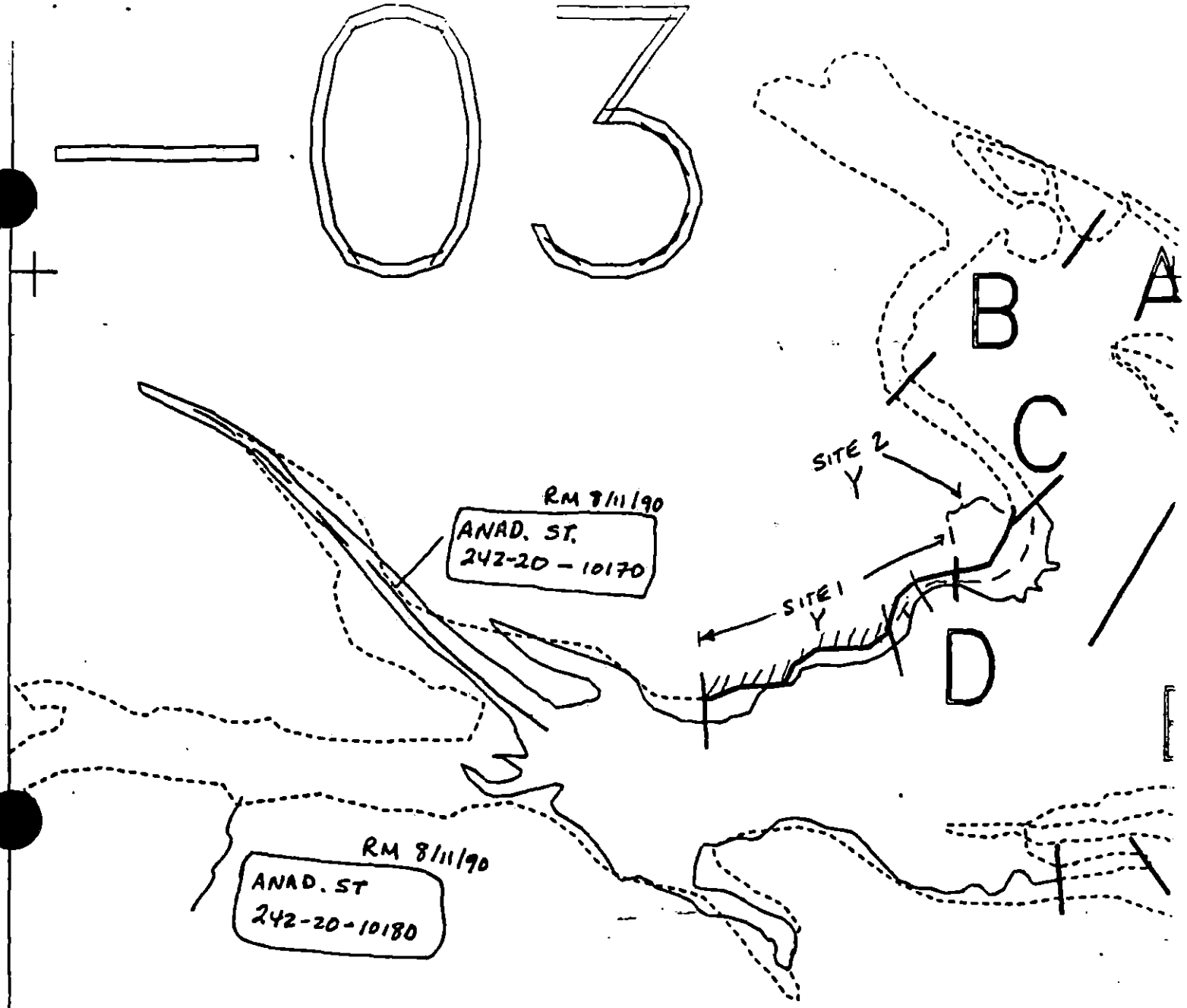


NOTE: There is a marked discrepancy between the WB-3D/3C boundary on this map and on the computer map. RM 08/07/90

Oil Character Length (m): AP____ PO____ CV____ CT____ ST____ MS____ PT____ TB____ FL____ NO____

REVISION:

-03



				Site1	Site2	
VL	0.25	47	54	54	0	
L	0.9°	170	194	99m	0.5"	95m
M	1.25	236	268	268m	0	
		453	516	421m	95m	

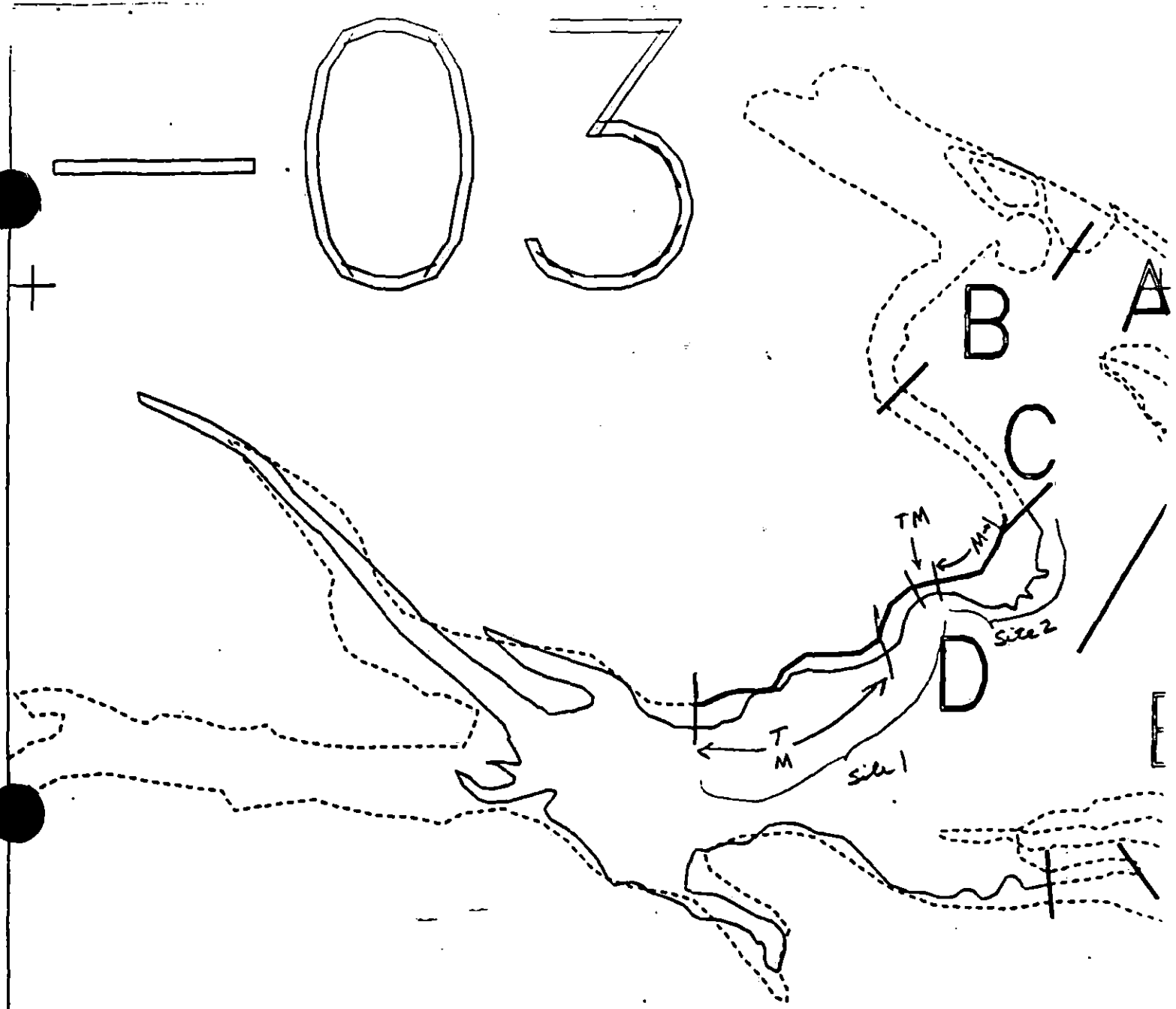
OILING SEVERITY

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

WB-3 D
ADEC Subsegment Length: 516m
METERS
0 180 370
AK State Plane Zone 4 1:7430
Awb-3d

EXXON

Subdivision Field Map
Map Key: KENWB-3D
Name: R. Marty
Date: 8/7/90
Date Entered:



DISTRIBUTION OF "SIGNIFICANT" OILING

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

WB-3 D

ADEC Subsegment Length: 516m

METERS

0 189 378

AK State Plane Zone 4 1:7438

nwb-3d

Subdivision Field Map

Map Key: KENWB-3D

Name: R. Marty

Date: 8/7/90

Date Entered:

ASAP DATA ENTRY FORM PAGE 1 OF 4

GENERAL DATA

SEG ID: WB03 SBDV: D SITE: 1 TEAM: 4 DATE: 8/8/90

SITE LGTH 421 OIL CATEGORIES: W — M ~~X~~ 268 N 194 VL 54 NO — U — Rm 8/11/

1991 REASSESSMENT: USCG: Y ADEC: Y LDMGR: ____ EXXON: Y

SURFACE DATA

CHAR #: 1 OIL CHAR: AP OIL DIST: CONT — ~~BRKN~~ — PTCH I V SPLH I
TIDAL ZONE: SU VI UI VI MI VI LI —

CHAR #: 2 OIL CHAR: SO OIL DIST: CONT — ~~BRKN~~ — ~~PTCH~~ — SPLH H
TIDAL ZONE: SU — UI H MI W I LI —

CHAR #: 3 OIL CHAR: MS OIL DIST: CONT — ~~BRKN~~ — PTCH I U SPLH I
TIDAL ZONE: SU VI UI I U MI I U LI —

CHAR #: 4 OIL CHAR: TB OIL DIST: CONT — ~~BRKN~~ — ~~PTCH~~ — SPLH X
TIDAL ZONE: SU — UI X MI X LI —

CHAR #: 5 OIL CHAR: NO OIL DIST: CONT — ~~BRKN~~ — ~~PTCH~~ — ~~SPLH~~ ____
TIDAL ZONE: SU — ~~UI~~ — ~~MI~~ — LI X

CHAR #: ____ OIL CHAR: ____ OIL DIST: CONT ____ BRKN ____ PTCH ____ SPLH ____
TIDAL ZONE: SU ____ UI ____ MI ____ LI ____

CHAR #: ____ OIL CHAR: ____ OIL DIST: CONT ____ BRKN ____ PTCH ____ SPLH ____
TIDAL ZONE: SU ____ UI ____ MI ____ LI ____

CHAR #: ____ OIL CHAR: ____ OIL DIST: CONT ____ BRKN ____ PTCH ____ SPLH ____
TIDAL ZONE: SU ____ UI ____ MI ____ LI ____

CHAR #: ____ OIL CHAR: ____ OIL DIST: CONT ____ BRKN ____ PTCH ____ SPLH ____
TIDAL ZONE: SU ____ UI ____ MI ____ LI ____

CHAR #: ____ OIL CHAR: ____ OIL DIST: CONT ____ BRKN ____ PTCH ____ SPLH ____
TIDAL ZONE: SU ____ UI ____ MI ____ LI ____

ASAP DATA ENTRY FORM

SUBSURFACE DATA PAGE ____ OF ____

SEGMENT ID: NB03 SUBDIV: D SITE: 1

PIT # 1 PIT DEPTH 55 OIL CHARACTER NO OIL INTVAL: FROM ____ TO ____
CLEAN BELOW: Y PIT ZONE: SU ____ UI X MI ____ LI ____
SUBSURF SEDIMENT: BRK ____ BLD ____ COB ____ PEB ____ GRN X SAN X MUD ____ VEG ____

NO more Pits.

PIT #____ PIT DEPTH____ OIL CHARACTER____ OIL INTVAL: FROM____ TO____
CLEAN BELOW:____ PIT ZONE: SU____ UI____ MI____ LI____
SUBSURF SEDIMENT: BRK____ BLD____ COB____ PEB____ GRN____ SAN____ MUD____ VEG____

PIT #____ PIT DEPTH____ OIL CHARACTER____ OIL INTVAL: FROM____ TO____
CLEAN BELOW:____ PIT ZONE: SU____ UI____ MI____ LI____
SUBSURF SEDIMENT: BRK____ BLD____ COB____ PEB____ GRN____ SAN____ MUD____ VEG____

PIT #____ PIT DEPTH____ OIL CHARACTER____ OIL INTVAL: FROM____ TO____
CLEAN BELOW:____ PIT ZONE: SU____ UI____ MI____ LI____
SUBSURF SEDIMENT: BRK____ BLD____ COB____ PEB____ GRN____ SAN____ MUD____ VEG____

PIT #____ PIT DEPTH____ OIL CHARACTER____ OIL INTVAL: FROM____ TO____
CLEAN BELOW:____ PIT ZONE: SU____ UI____ MI____ LI____
SUBSURF SEDIMENT: BRK____ BLD____ COB____ PEB____ GRN____ SAN____ MUD____ VEG____

PIT #____ PIT DEPTH____ OIL CHARACTER____ OIL INTVAL: FROM____ TO____
CLEAN BELOW:____ PIT ZONE: SU____ UI____ MI____ LI____
SUBSURF SEDIMENT: BRK____ BLD____ COB____ PEB____ GRN____ SAN____ MUD____ VEG____

PIT #____ PIT DEPTH____ OIL CHARACTER____ OIL INTVAL: FROM____ TO____
CLEAN BELOW:____ PIT ZONE: SU____ UI____ MI____ LI____
SUBSURF SEDIMENT: BRK____ BLD____ COB____ PEB____ GRN____ SAN____ MUD____ VEG____

PIT #____ PIT DEPTH____ OIL CHARACTER____ OIL INTVAL: FROM____ TO____
CLEAN BELOW:____ PIT ZONE: SU____ UI____ MI____ LI____
SUBSURF SEDIMENT: BRK____ BLD____ COB____ PEB____ GRN____ SAN____ MUD____ VEG____

PIT #____ PIT DEPTH____ OIL CHARACTER____ OIL INTVAL: FROM____ TO____
CLEAN BELOW:____ PIT ZONE: SU____ UI____ MI____ LI____
SUBSURF SEDIMENT: BRK____ BLD____ COB____ PEB____ GRN____ SAN____ MUD____ VEG____

PIT #____ PIT DEPTH____ OIL CHARACTER____ OIL INTVAL: FROM____ TO____
CLEAN BELOW:____ PIT ZONE: SU____ UI____ MI____ LI____
SUBSURF SEDIMENT: BRK____ BLD____ COB____ PEB____ GRN____ SAN____ MUD____ VEG____

ASAP DATA ENTRY FORM

GENERAL DATA

SEG ID: WB03 SBDV: D SITE: 2 TEAM: 4 DATE: 8/8/90
SITE LGTH 95 OIL CATEGORIES: W ___ M ___ N X VL ___ NO ___ U ___
1991 REASSESSMENT: USCG: ___ ADEC: Y LDMGR: ___ EXXON: Y

SURFACE DATA

CHAR #: 1 OIL CHAR: SO OIL DIST: CONT — BRKN — PTCH UI SPLH —
TIDAL ZONE: SU — UI UI MI UI LI —

CHAR #: 2 OIL CHAR: MS OIL DIST: CONT — ~~BRKN~~ — PTCH UI SPLH —
TIDAL ZONE: SU — UI UI MI UI LI —

CHAR #: 3 OIL CHAR: UO OIL DIST: CONT — ~~BRKN~~ — ~~PTCH~~ — ~~SPLH~~ —
TIDAL ZONE: SU X UI — ~~MI~~ — LI X

CHAR #: ___ OIL CHAR: ___ OIL DIST: CONT ___ BRKN ___ PTCH ___ SPLH ___
TIDAL ZONE: SU ___ UI ___ MI ___ LI ___

CHAR #: ___ OIL CHAR: ___ OIL DIST: CONT ___ BRKN ___ PTCH ___ SPLH ___
TIDAL ZONE: SU ___ UI ___ MI ___ LI ___

CHAR #: ___ OIL CHAR: ___ OIL DIST: CONT ___ BRKN ___ PTCH ___ SPLH ___
TIDAL ZONE: SU ___ UI ___ MI ___ LI ___

CHAR #: ___ OIL CHAR: ___ OIL DIST: CONT ___ BRKN ___ PTCH ___ SPLH ___
TIDAL ZONE: SU ___ UI ___ MI ___ LI ___

CHAR #: ___ OIL CHAR: ___ OIL DIST: CONT ___ BRKN ___ PTCH ___ SPLH ___
TIDAL ZONE: SU ___ UI ___ MI ___ LI ___

CHAR #: ___ OIL CHAR: ___ OIL DIST: CONT ___ BRKN ___ PTCH ___ SPLH ___
TIDAL ZONE: SU ___ UI ___ MI ___ LI ___

CHAR #: ___ OIL CHAR: ___ OIL DIST: CONT ___ BRKN ___ PTCH ___ SPLH ___
TIDAL ZONE: SU ___ UI ___ MI ___ LI ___

ASAP DATA ENTRY FORM

SUBSURFACE DATA

SEGMENT ID: WB03 SUBDIV: D SITE: 2

PIT # 1 PIT DEPTH 12 OIL CHARACTER OR OIL INTVAL: FROM 5 TO 11
CLEAN BELOW: X PIT ZONE: SU X UI ___ MI ___ LI ___
SUBSURF SEDIMENT: BRK ___ BLD ___ COB X PEB X GRN X SAN X MUD ___ VEG ___

PIT #___ PIT DEPTH___ OIL CHARACTER___ OIL INTVAL: FROM___ TO___
CLEAN BELOW:___ PIT ZONE: SU___ UI___ MI___ LI___
SUBSURF SEDIMENT: BRK___ BLD___ COB___ PEB___ GRN___ SAN___ MUD___ VEG___

PIT #___ PIT DEPTH___ OIL CHARACTER___ OIL INTVAL: FROM___ TO___
CLEAN BELOW:___ PIT ZONE: SU___ UI___ MI___ LI___
SUBSURF SEDIMENT: BRK___ BLD___ COB___ PEB___ GRN___ SAN___ MUD___ VEG___

PIT #___ PIT DEPTH___ OIL CHARACTER___ OIL INTVAL: FROM___ TO___
CLEAN BELOW:___ PIT ZONE: SU___ UI___ MI___ LI___
SUBSURF SEDIMENT: BRK___ BLD___ COB___ PEB___ GRN___ SAN___ MUD___ VEG___

PIT #___ PIT DEPTH___ OIL CHARACTER___ OIL INTVAL: FROM___ TO___
CLEAN BELOW:___ PIT ZONE: SU___ UI___ MI___ LI___
SUBSURF SEDIMENT: BRK___ BLD___ COB___ PEB___ GRN___ SAN___ MUD___ VEG___

PIT #___ PIT DEPTH___ OIL CHARACTER___ OIL INTVAL: FROM___ TO___
CLEAN BELOW:___ PIT ZONE: SU___ UI___ MI___ LI___
SUBSURF SEDIMENT: BRK___ BLD___ COB___ PEB___ GRN___ SAN___ MUD___ VEG___

PIT #___ PIT DEPTH___ OIL CHARACTER___ OIL INTVAL: FROM___ TO___
CLEAN BELOW:___ PIT ZONE: SU___ UI___ MI___ LI___
SUBSURF SEDIMENT: BRK___ BLD___ COB___ PEB___ GRN___ SAN___ MUD___ VEG___

PIT #___ PIT DEPTH___ OIL CHARACTER___ OIL INTVAL: FROM___ TO___
CLEAN BELOW:___ PIT ZONE: SU___ UI___ MI___ LI___
SUBSURF SEDIMENT: BRK___ BLD___ COB___ PEB___ GRN___ SAN___ MUD___ VEG___

PIT #___ PIT DEPTH___ OIL CHARACTER___ OIL INTVAL: FROM___ TO___
CLEAN BELOW:___ PIT ZONE: SU___ UI___ MI___ LI___
SUBSURF SEDIMENT: BRK___ BLD___ COB___ PEB___ GRN___ SAN___ MUD___ VEG___

PIT #___ PIT DEPTH___ OIL CHARACTER___ OIL INTVAL: FROM___ TO___
CLEAN BELOW:___ PIT ZONE: SU___ UI___ MI___ LI___
SUBSURF SEDIMENT: BRK___ BLD___ COB___ PEB___ GRN___ SAN___ MUD___ VEG___

ASAP TAG REVIEW SHEET

Segment: WB09 **Subd:** A **Site:** 1 **Date PRE-Review** 14 Aug 90

Priority For Addressing In 1990

X HIGH X MEDIUM ____ LOW ____ NTR

Treatment Recommended: M/P + BD

H - Soil, Asphalt

Recontamination

Priority Site For Reassessment In 1991

YES X CG NO ____ YES X ADEC NO ____ YES X EXXON NO ____ YES X LAND MGR NO ____

TAG 15 AUG 90

Reapply B10

LOW PRIORITY

ASAP FOLLOWUP RECOMMENDATIONS

Segment: ASI WB09 Subd.: A Size: 1 Date: 7 Aug 1990

Conditions Observed: Lots of heavy SOR and mousse on beach after clean up. Area was just bloed the week of July 23, 1990.

Followup Recommendations: Check again before summer ends and do a follow application of Bio

Completed by Pickup Crew: ☒ YES ☐ NO

Priority for Addressing in 1990: ☒ High ☐ Mod. ☐ Low

ADEC Clara Crosby (name) Clara L. Crosby (signature)

Comments: Manual removal of H SOR. & MS. before reapplication of inspect.

Exxon Jon Czarnecki (name) Jon Czarnecki (signature)

Comments: This needs to be bioed again this year to make a large difference by next Spring.

USCG AEC Vandepeels (name) AEC Vandepeels (signature)

Comments: Bio Spot again this year + reassess in 91.

Land Rep. Patrick Norman (name) Patrick Norman (signature)

Comments: Another application of Bio could help with the remaining SOR + MS

FIELD SHORELINE COMMENT SHEET

SEGMENT AS / WB-09 SUBDIVISION: A SITE: 01 DATE 06 Aug '90

USCG

NAME AEC Vandepels SIGNATURE AEC Vandepels

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: No manual work more required on this segment. SOR present. Reassess in 91. Should bio. with Inpol. again this year.

ADEC

NAME Clara S. Crosby SIGNATURE Clara S. Crosby

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Reassess in '91 - H/SOR - L/SOR - obs. Manual removal of Heavy residual oiling and reapply inpol/customblen in '90.

LAND MANAGER

NAME Patrick Norman SIGNATURE Patrick Norman

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Heavy residual oiling still remains at many areas to be looked at in spring to assess what the inpol. treatment was done also what the B.O treatment was done.

EXXON

NAME Jon Czarnecki SIGNATURE Jon Czarnecki

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Area seals to be broad again and then check to see how it did next Spring — This place is covered with Heavy SOR.

REVISION NO. 7/26/90

ASAP SHORELINE OILING SUMMARY

TEAM NO. [illegible] BEACH [illegible] SEGMENT AS WB-[illegible]
CG [illegible] ~~USGS~~ USFG [illegible] SUBDIVISION A
ADEC [illegible] LAND REP Pat Norman (FGr) TOTAL NO. SITES 1
DATE 06 / Aug / 90 TIME 19 : 45 to 20 : 15 TIDE LEVEL +3.5' to +2.2'
TOTAL EST LENGTH OF SHORELINE SURVEYED: 60 m
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
OIL CATEGORY LENGTH: W — m M 60 m N — m VL — m NO — m US — m

SURFACE OIL

SITE 1

CHARACTER	DISTRIBUTION /C	/B	/P	/S	OILED ZONES SU	UI	MI	LI
ASPHALT	—	—	I	—	—	I	—	—
S.O.R.	—	H	I	—	—	I	H	—
POOLED								
COVER	—	—	X	—	—	—	X	—
COAT								
STAIN								
MOUSSE								
PATTIES/T.B.								
FILM								
NO OIL					X	—	—	X
EST. SITE LENGTH					60 m			

SITE 2

DISTRIBUTION /C	/B	/P	/S	OILED ZONES SU	UI	MI	LI

SITE 3

DISTRIBUTION /C	/B	/P	/S	OILED ZONES SU	UI	MI	LI

SUBSURFACE OIL

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

Photographs: ASAP-04-02
Roll No. -CC
Frames 07-11

COMMENTS A significant quantity of oil remains on this beach. Signs of oiling are readily identifiable.

TEAM: R. Mac

SEGMENT STATION: SAP/WB-09

SUBDIVISION: A

DATE: 06 / Aug 90

SKETCH MAP

SITE 1

CHECKLIST

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

LEGEND

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

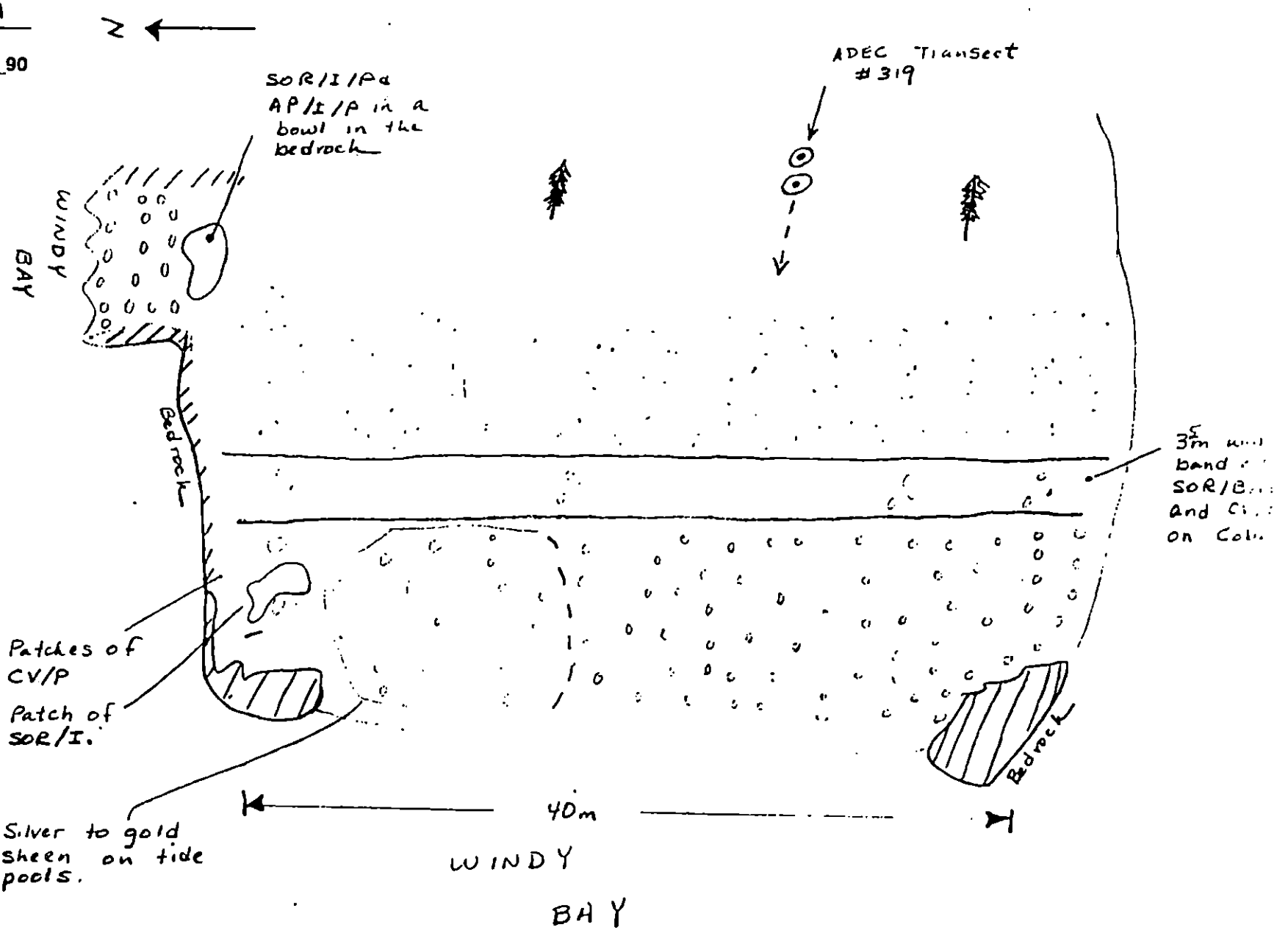
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

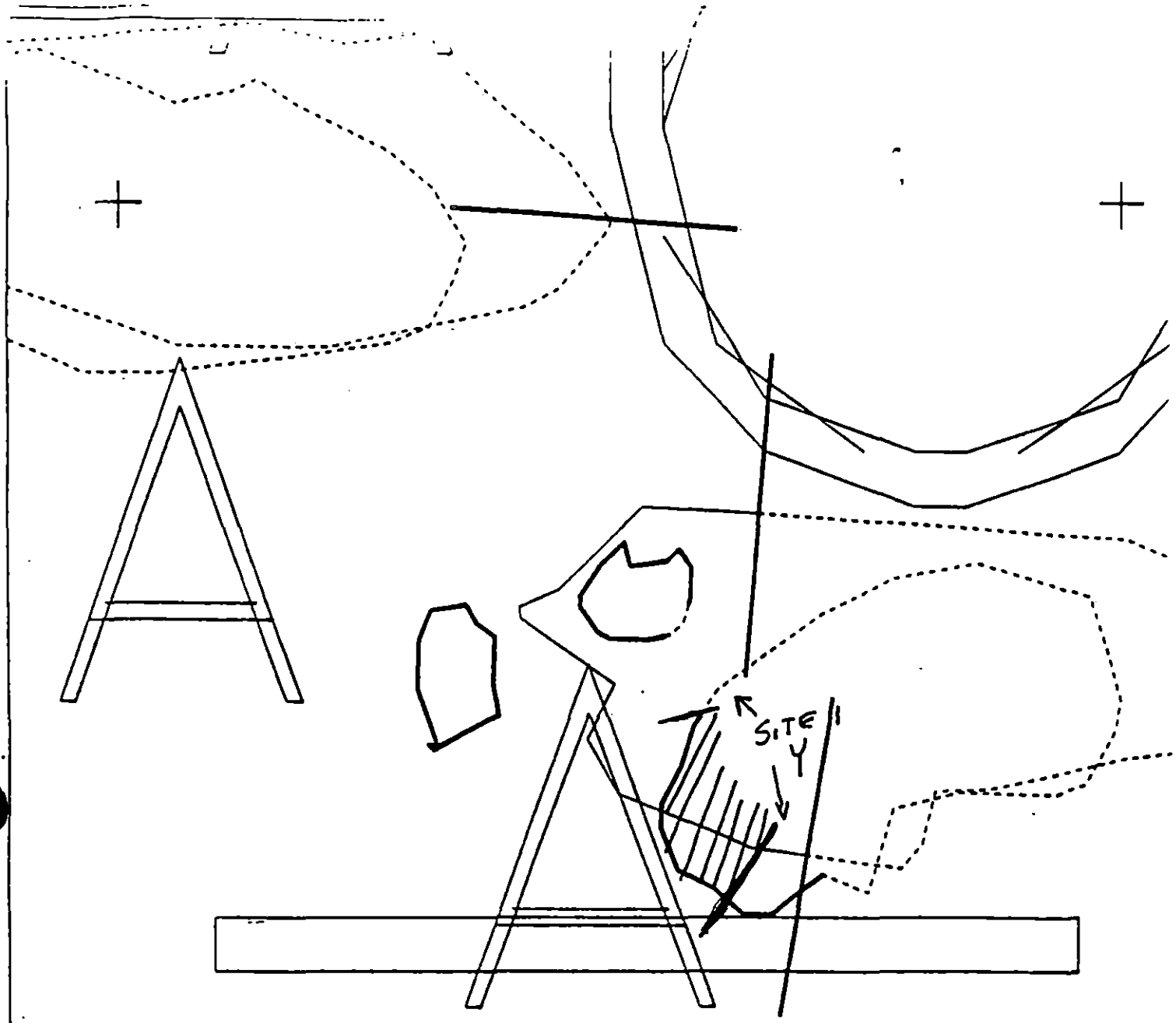
RR Oiled Vegetation

1 Photo location, direction, and number



Oil Character Length (m): AP 10 PO ____ CV 20 CT ____ ST ____ MS ____ PT ____ TB ____ FL ____ NO ____ SOR 50

REVISION: 03/24/90



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

WB-9 A

ADEC Subsegment Length: 283m

METERS

0 42 84

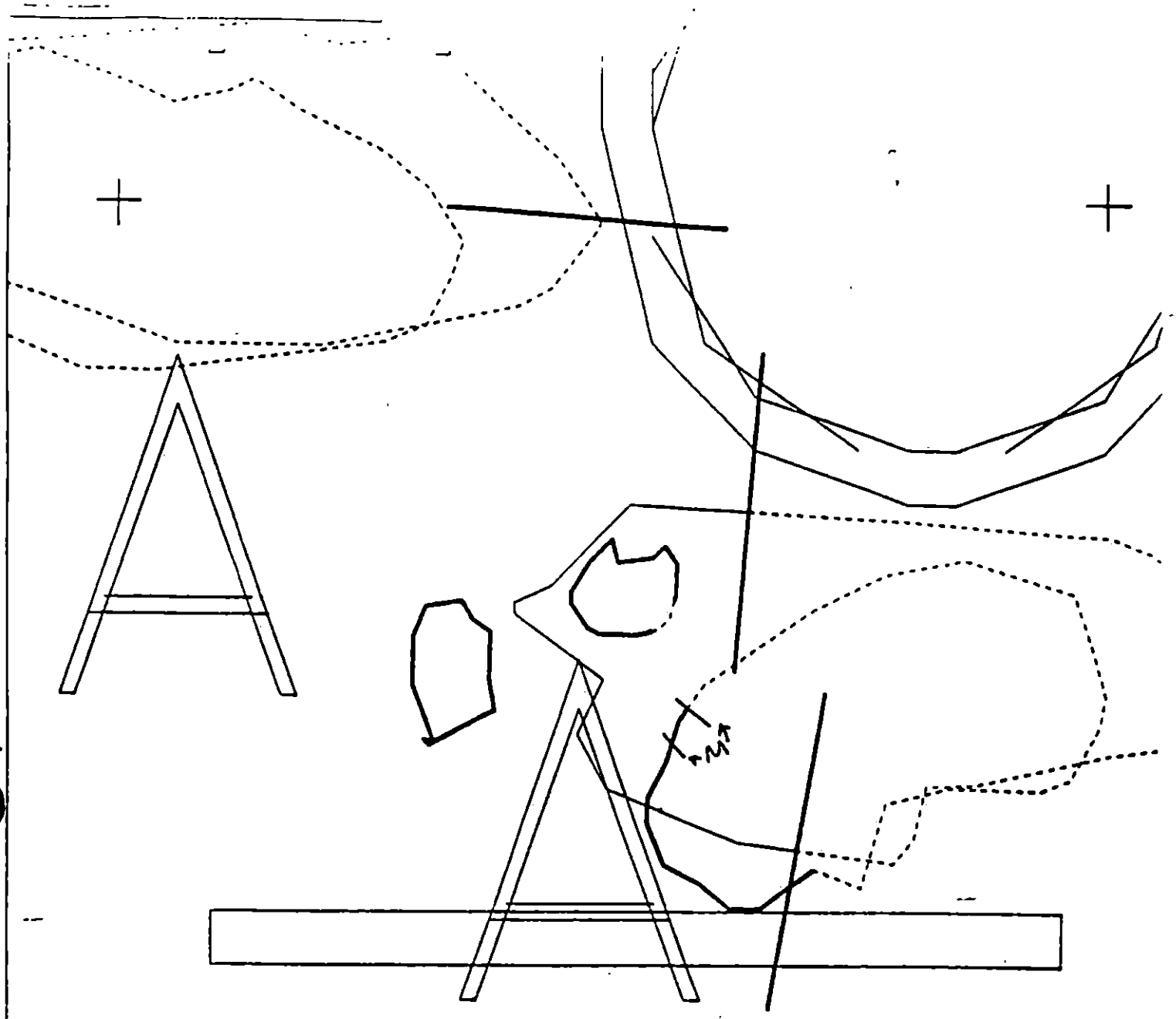
EXXON

Subdivision Field M

Map Key: KENWB-9A

Name: _____

Date:



"SIGNIFICANT"
OILING

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

WB-9 A
ADEC Subsegment Length: 283m
METERS
0 42 84

Subdivision Field M
Map Key: KENWB-9A
Name: _____
Date: _____

ASAP DATA ENTRY FORM PAGE 1 OF 2

GENERAL DATA

SEG ID: WB09 SBDV: A SITE: 1 TEAM: 4 DATE: 06 AUG 90
SITE LGTH 60 OIL CATEGORIES: W — M 60 N — VL — NO — U —
1991 REASSESSMENT: USCG: Y ADEC: Y LDMGR: Y EXXON: Y

SURFACE DATA

CHAR #: 1 OIL CHAR: AP OIL DIST: CONT — BRKN — PTCH I SPLH —
TIDAL ZONE: SU — UI I MI — LI —

CHAR #: 2 OIL CHAR: SO OIL DIST: CONT — BRKN H PTCH I SPLH —
TIDAL ZONE: SU ___ UI ___ MI ___ LI ___

CHAR #: 3 OIL CHAR: CO OIL DIST: CONT — BRKN — PTCH X SPLH —
TIDAL ZONE: SU — UI — MI X LI —

CHAR #: 4 OIL CHAR: NO OIL DIST: CONT — BRKN — PTCH — SPLH —
TIDAL ZONE: SU X UI — MI — LI X

CHAR #: ___ OIL CHAR: ___ OIL DIST: CONT ___ BRKN ___ PTCH ___ SPLH ___
TIDAL ZONE: SU ___ UI ___ MI ___ LI ___

CHAR #: ___ OIL CHAR: ___ OIL DIST: CONT ___ BRKN ___ PTCH ___ SPLH ___
TIDAL ZONE: SU ___ UI ___ MI ___ LI ___

CHAR #: ___ OIL CHAR: ___ OIL DIST: CONT ___ BRKN ___ PTCH ___ SPLH ___
TIDAL ZONE: SU ___ UI ___ MI ___ LI ___

CHAR #: ___ OIL CHAR: ___ OIL DIST: CONT ___ BRKN ___ PTCH ___ SPLH ___
TIDAL ZONE: SU ___ UI ___ MI ___ LI ___

CHAR #: ___ OIL CHAR: ___ OIL DIST: CONT ___ BRKN ___ PTCH ___ SPLH ___
TIDAL ZONE: SU ___ UI ___ MI ___ LI ___

CHAR #: ___ OIL CHAR: ___ OIL DIST: CONT ___ BRKN ___ PTCH ___ SPLH ___
TIDAL ZONE: SU ___ UI ___ MI ___ LI ___

ASAP DATA ENTRY FORM

SUBSURFACE DATA

SEGMENT ID: WB09 SUBDIV: A SITE: 1

PIT # ~~0~~ PIT DEPTH ~~0~~ OIL CHARACTER ~~0~~ OIL INTVAL: FROM ~~0~~ TO ~~0~~
CLEAN BELOW: ~~0~~ PIT ZONE: ~~SU UI MI LI~~
SUBSURF SEDIMENT: ~~BRK BLD COB PEB GRN SAN MUD VEG~~
NO PIT dug this transect

PIT #___ PIT DEPTH___ OIL CHARACTER___ OIL INTVAL: FROM___ TO___
CLEAN BELOW:___ PIT ZONE: SU___ UI___ MI___ LI___
SUBSURF SEDIMENT: BRK___ BLD___ COB___ PEB___ GRN___ SAN___ MUD___ VEG___

PIT #___ PIT DEPTH___ OIL CHARACTER___ OIL INTVAL: FROM___ TO___
CLEAN BELOW:___ PIT ZONE: SU___ UI___ MI___ LI___
SUBSURF SEDIMENT: BRK___ BLD___ COB___ PEB___ GRN___ SAN___ MUD___ VEG___

PIT #___ PIT DEPTH___ OIL CHARACTER___ OIL INTVAL: FROM___ TO___
CLEAN BELOW:___ PIT ZONE: SU___ UI___ MI___ LI___
SUBSURF SEDIMENT: BRK___ BLD___ COB___ PEB___ GRN___ SAN___ MUD___ VEG___

PIT #___ PIT DEPTH___ OIL CHARACTER___ OIL INTVAL: FROM___ TO___
CLEAN BELOW:___ PIT ZONE: SU___ UI___ MI___ LI___
SUBSURF SEDIMENT: BRK___ BLD___ COB___ PEB___ GRN___ SAN___ MUD___ VEG___

PIT #___ PIT DEPTH___ OIL CHARACTER___ OIL INTVAL: FROM___ TO___
CLEAN BELOW:___ PIT ZONE: SU___ UI___ MI___ LI___
SUBSURF SEDIMENT: BRK___ BLD___ COB___ PEB___ GRN___ SAN___ MUD___ VEG___

PIT #___ PIT DEPTH___ OIL CHARACTER___ OIL INTVAL: FROM___ TO___
CLEAN BELOW:___ PIT ZONE: SU___ UI___ MI___ LI___
SUBSURF SEDIMENT: BRK___ BLD___ COB___ PEB___ GRN___ SAN___ MUD___ VEG___

PIT #___ PIT DEPTH___ OIL CHARACTER___ OIL INTVAL: FROM___ TO___
CLEAN BELOW:___ PIT ZONE: SU___ UI___ MI___ LI___
SUBSURF SEDIMENT: BRK___ BLD___ COB___ PEB___ GRN___ SAN___ MUD___ VEG___

PIT #___ PIT DEPTH___ OIL CHARACTER___ OIL INTVAL: FROM___ TO___
CLEAN BELOW:___ PIT ZONE: SU___ UI___ MI___ LI___
SUBSURF SEDIMENT: BRK___ BLD___ COB___ PEB___ GRN___ SAN___ MUD___ VEG___

PIT #___ PIT DEPTH___ OIL CHARACTER___ OIL INTVAL: FROM___ TO___
CLEAN BELOW:___ PIT ZONE: SU___ UI___ MI___ LI___
SUBSURF SEDIMENT: BRK___ BLD___ COB___ PEB___ GRN___ SAN___ MUD___ VEG___

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT WB-3 SUBDIVISION A (1 of 5)

WORK WINDOW	
Manual Pickup and Tarmat Removal Less Than 400m From Active Nest	CLOSED
Manual Pickup and Tarmat Removal More Than 400m From Active Nest	OPEN
Bioremediation and Other Approved Treatment Less Than 400m From Active Nest	CLOSED
Bioremediation and Other Approved Treatment More Than 400m From Active Nest	WORK PRIOR TO 7/10

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	**Salmon Stream**	ADF&G catalogued anadromous streams (242-20-10160, 242-20-10170, and 242-20-10180) are present in Segment WB-3. No constraint to manual pickup, tarmat removal, bioremediation and other approved treatment. The work area is more than 100m from the nearest anadromous stream.
1J	**Purse Seine Area**	No constraint to manual pickup and tarmat removal. Closed to bioremediation and other approved treatment after 7/10.
5T	**Bald Eagle Nest**	USFWS bald eagle impact assessment conducted on 5/19/90 by Mary Portner indicates an active nest within 400m of the work area. Closed to manual pickup, tarmat removal, bioremediation and other approved treatment within 400m of eagle nest buffer zone. No constraint to manual pickup, tarmat removal, bioremediation, and other approved treatment more than 400m from eagle nest buffer zone.
7JJ	**Subsistence: Invertebrate Harvesting**	No constraint to manual pickup, tarmat removal, bioremediation and other approved treatment.

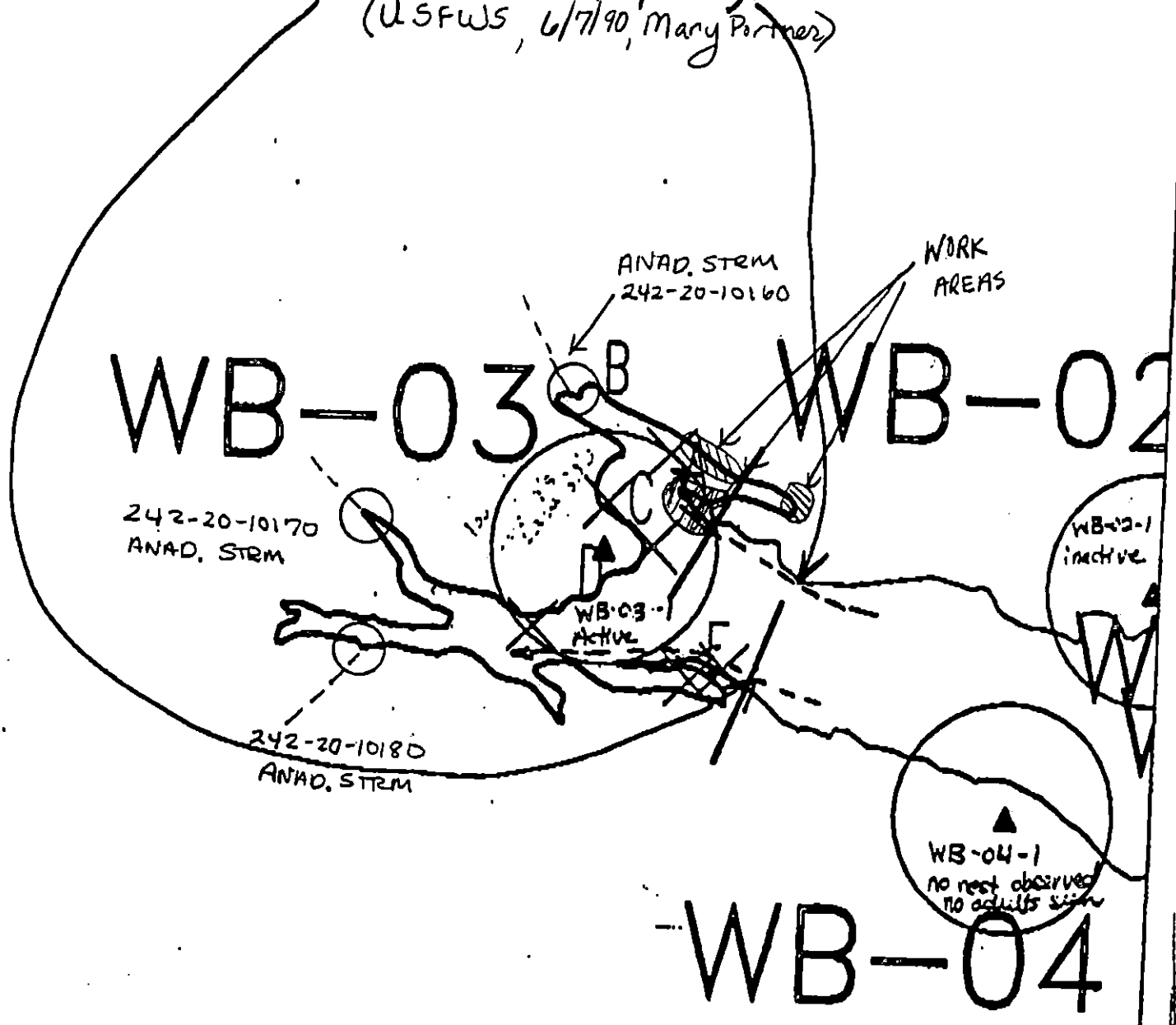
OTHER ECOLOGICAL CONSIDERATIONS

Restrict air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Restrict boat and beach disturbance to essential minimum. Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Sensitive estuary.

FOSC [signature] Date 6/16/90

Prepared by [signature] Date 6/11/90

Access routes approved to minimize disruption of nearby eagle nest, (USFWS, 6/7/90, Mary Portner)



EXXON

Exxon Company, USA
Map Key: KEN-WB-3
May 17, 1990

ECOLOGY MAP
SEGMENT WB-3
SUBDIVISION A (1 of 5)

METERS
0 579 1158

★ Seabird Colony
▲ Eagle Nest

1 inch = 1887 feet

SHORELINE EVALUATION

SEGMENT ST/ WB-03 SUBDIVISION A (1 of 5) DATE 4/6/90

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)
5T All Bald Eagle nests (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
8AA Sensitive Estuary
7JJ Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid any unnecessary disturbance or damage to unoiled substrate and biota.

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 169 m: V.Light 1364 m: No Oil 928 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

RECOMMENDATIONS:

____No Treatment Recommended	____Snare/Absorbent Booms
X Treatment Recommended	____Oil Snares (pom poms)
X Manual Pickup	____Absorbents (pads,rolls,etc)
X Bioremediation	____Spot Washing:____Wands
X Tarmat: ____Breakup	____ Beach Cleaner
X Removal	____Other (see comments)

COMMENTS: Recommend tarmat removal and pick-up of mousse, sorbent boom + OILED VEG. and tarballs from areas indicated on the field sketch. Bioremediation is recommended for ~~broken~~ coat areas. Treatment should be limited to the period from 6/2 to 7/10 and should be cleared with ~~ADF&G~~ due to possible presence of bald eagle nests. SEE CONSTRAINT ADDENDUM dated 6/14/90 DPD

TAG COMMENTS:

TAG APPROVAL DATE: 4/23/90.
ADEC ART WEBNER [signature]
EXXON ANDY TEAL [signature]
NOAA Joseph Talbot [signature]
USCG KENNETH KEANE [signature]
FOSC: [signature] DATE: 5-18-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT WB-3 SUBDIVISION B (2 of 5)

WORK WINDOW

Manual Pickup
Tarmat Removal — **OPEN**

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	**Salmon Stream**	ADF&G catalogued anadromous streams (242-20-10160, 242-20-10170, and 242-20-10180 are in WB-3. No constraint to manual pickup and tarmat removal.
1J	**Purse Seine Area**	No constraint to manual pickup and tarmat removal.
5T	**Bald Eagle Nest**	USFWS bald eagle impact assessment conducted on 5/19/90 by Mary Portner indicates an active nest within 400m of the work area. USFWS has granted limited access to Subdivision B through active eagle nest buffer zone as outlined on map (Mary Portner, 6/7/90)
7JJ	**Subsistence: Invertebrate Harvesting**	No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

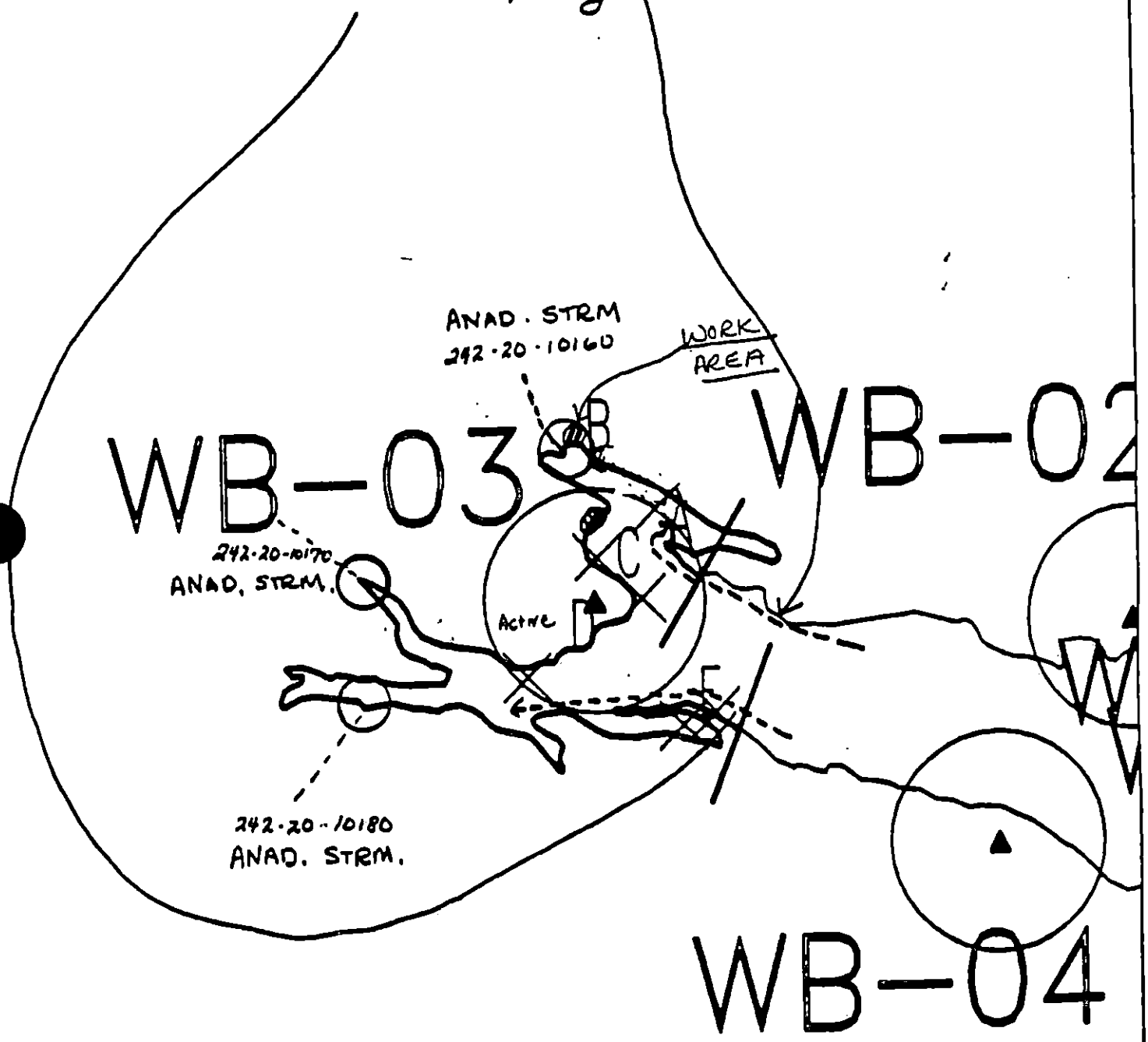
No disturbance to stream bed or banks. Restrict air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Restrict boat and beach disturbance to essential minimum. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM 242-20-10160) FOR ADDITIONAL CONSTRAINT INFORMATION

FOSC _____ Date 6/15/90

Prepared by _____ Date 6/14/90

Access routes approved to minimize disruption of nearby eagle nest (USFWS 6/7/90, Mary Portner)



ANADROMOUS STREAM EVALUATION

EXXON

Exxon Company, USA
Map Key: KEN-WB-3

ECOLOGY MAP 6/2/90

SEGMENT WB-3

SUBDIVISION B (2 of 5)

METERS

★ Seabird Colony

▲ Eagle Nest

1 inch = 1887 feet

SHORELINE EVALUATION

SEGMENT ST/ WB-03 SUBDIVISION B (2 of 5) DATE 04/06/90

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)
5T All Bald Eagle nests (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
8AA Sensitive Estuary
7JJ Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid any unnecessary disturbance or damage to unoiled substrate and biota.

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 1228 m: V.Light 502 m: No Oil 171 m
Subsurface Oil Observed: Yes____ No X Maximum Depth____

RECOMMENDATIONS:

____No Treatment Recommended
X Treatment Recommended
X Manual Pickup
____Bioremediation
X Tarmat: ____Breakup
X Removal

____Snare/Absorbent Booms
____Oil Snares (pom poms)
____Absorbents (pads,rolls,etc)
____Spot Washing:____Wands
____ Beach Cleaner
____Other (see comments)

COMMENTS: Recommend manual pick up of mousse, tarballs, patties, and oiled debris, (debris, trash, vegetation). Work should be conducted between 6/1 and 7/9 with USFWS Service permission due to eagle constraints. SEE CONSTRAINTS ADDENDUM dated 6/14/90 [illegible]

TAG COMMENTS:

TAG APPROVAL DATE: 4/23/90.
ADEC Art Wegner [signature]
EXXON Amy Tex [signature] FOSC: [signature] DATE: 5-15-90
NOAA Joseph Talbott [signature]
USCG Kenneth Keane [signature]

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT WB-3 SUBDIVISION C (3 of 5)

WORK WINDOW	
Manual Pickup Tarmat Removal	CLOSED
Bioremediation	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	**Salmon Stream**	NO CONSTRAINT. ADF&G catalogued anadromous streams (242-20-10160, 242-20-10170, and 242-20-10180) are in Segment WB-3. The work area is more than 100m from the nearest anadromous stream.
1J	**Purse Seine Area**	Closed to bioremediation after 7/10. No constraint to manual pickup and tarmat removal.
5T	**Bald Eagle Nest**	USFWS bald eagle impact assessment conducted on 5/19/90 by Mary Portner indicates an active nest within 400m of the work area. Closed to manual pickup, tarmat removal, and bioremediation.
7JJ	**Subsistence: Invertebrate Harvesting**	No constraint to manual pickup, tarmat removal, and bioremediation.

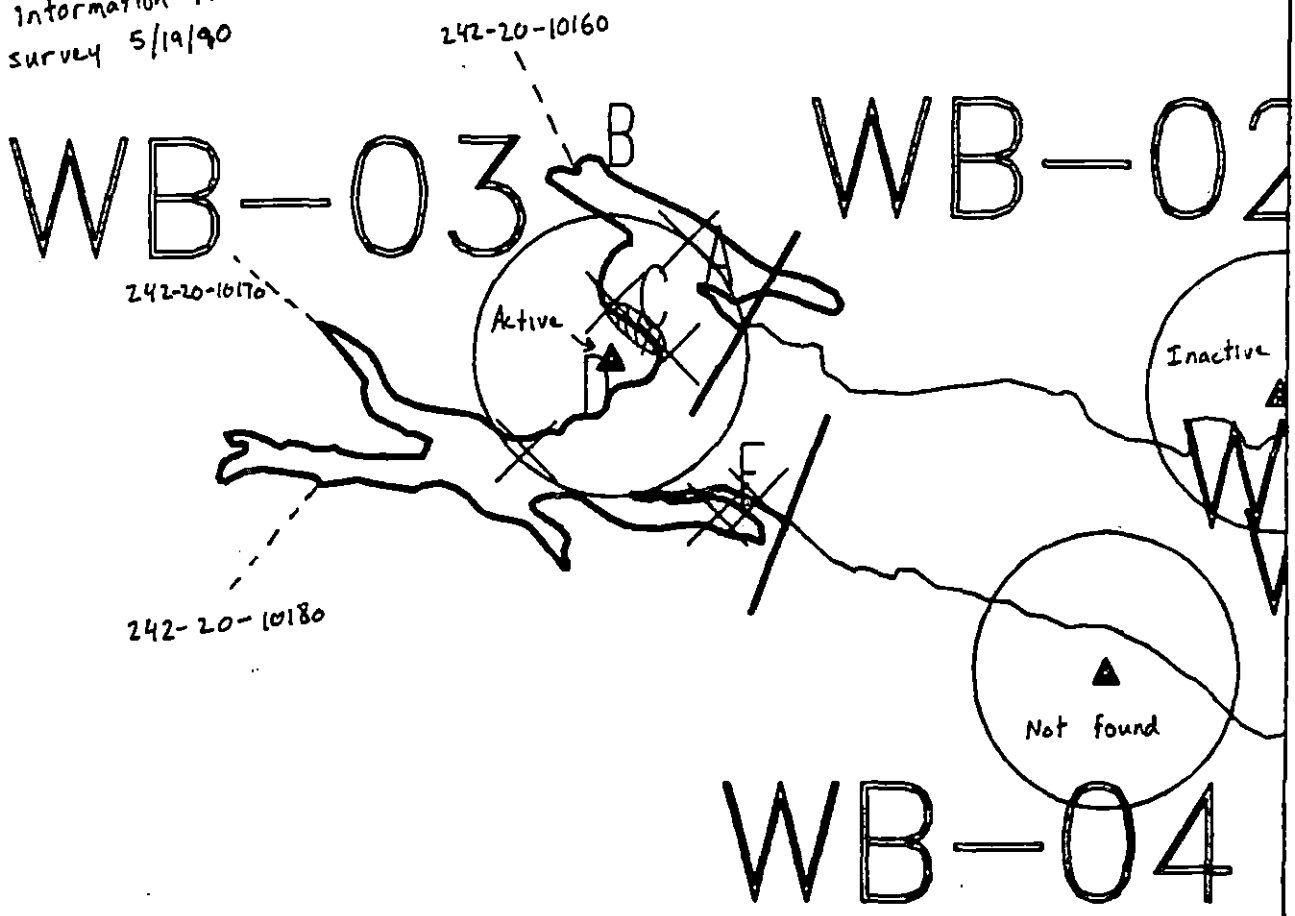
OTHER ECOLOGICAL CONSIDERATIONS

If eagle nest constraint is removed, other ecological considerations will apply.

FOSC [signature] Date 6/15/90

Prepared by [signature] Date 6/14/90

Incorporates information from USFWS bald eagle survey 5/19/90



EXXON

Exxon Company, USA

ECOLOGY MAP

SEGMENT WB-3

SUBDIVISION C (3 of 5)

METERS

★ Seabird Colony

▲ Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ WB-03 SUBDIVISION C (3 of 5) DATE 04/06/90

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)
5T All Bald Eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
8AA Sensitive Estuary
7JJ Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid any unnecessary disturbance or damage to unoiled substrate and biota.

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 136 m: Narrow 182 m: V.Light 129 m: No Oil 0 m
Subsurface Oil Observed: Yes ____ No X Maximum Depth ____

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat removal and manual pick up of mousse, tarballs and oiled debris (trash, vegetation debris) as indicated in the attached sketch map. Work should be conducted between 6/1 and 7/9; USFWS permitting, due to eagle constraint. SEE ADDENDUM dated 6/14/90 /PP

TAG COMMENTS: FOLLOWING MANUAL PICKUP BIOREMEDIATE DURING LOW TIDE BUT NOT AT A MINUS TIDE LEVEL

TAG APPROVAL DATE: 4/23/90

ADEC ART WEINER [signature]
EXXON ANDY TEAL [signature]
NOAA JOSEPH TALBOTT [signature]
USCG KENNETH KEANE [signature]

FOSC: [signature] DATE: 5-18-90

REVISION 1
7/21/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT WB-3 SUBDIVISION C (3 of 5)

WORK WINDOW	
Manual Pickup Tarmat Removal	* OPEN ~~CLOSED~~
Bioremediation	* OPEN TO 7/23 ~~CLOSED~~

*USFWS EAGLE MONITOR REQUIRED

COMMERCIAL PURSE SEINE AREA CLOSED UNTIL 7/23 AS PER CONVERSATION OF TIM MANAHAN W/ LEE GLENN, ADF&G ON 7/20. NO CONSTRAINT TO BIOREMEDIATION. PP

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	**Salmon Stream**	NO CONSTRAINT. ADF&G catalogued anadromous streams (242-20-10160, 242-20-10170, and 242-20-10180) are in Segment WB-3. The work area is more than 100m from the nearest anadromous stream.
1J	**Purse Seine Area**	Closed to bioremediation after 7/23 PP. No constraint to manual pickup and tarmat removal.
5T	**Bald Eagle Nest**	USFWS bald eagle impact assessment conducted on 5/19/90 by Mary Portner indicates an active nest within 400m of the work area. ~~Closed~~ to manual pickup, tarmat removal, and bioremediation. OPEN AS PER USFWS SURVEY OF 7/18. USFWS MONITOR REQUIRED. PP
7JJ	**Subsistence: Invertebrate Harvesting**	No constraint to manual pickup, tarmat removal, and bioremediation.

OTHER ECOLOGICAL CONSIDERATIONS

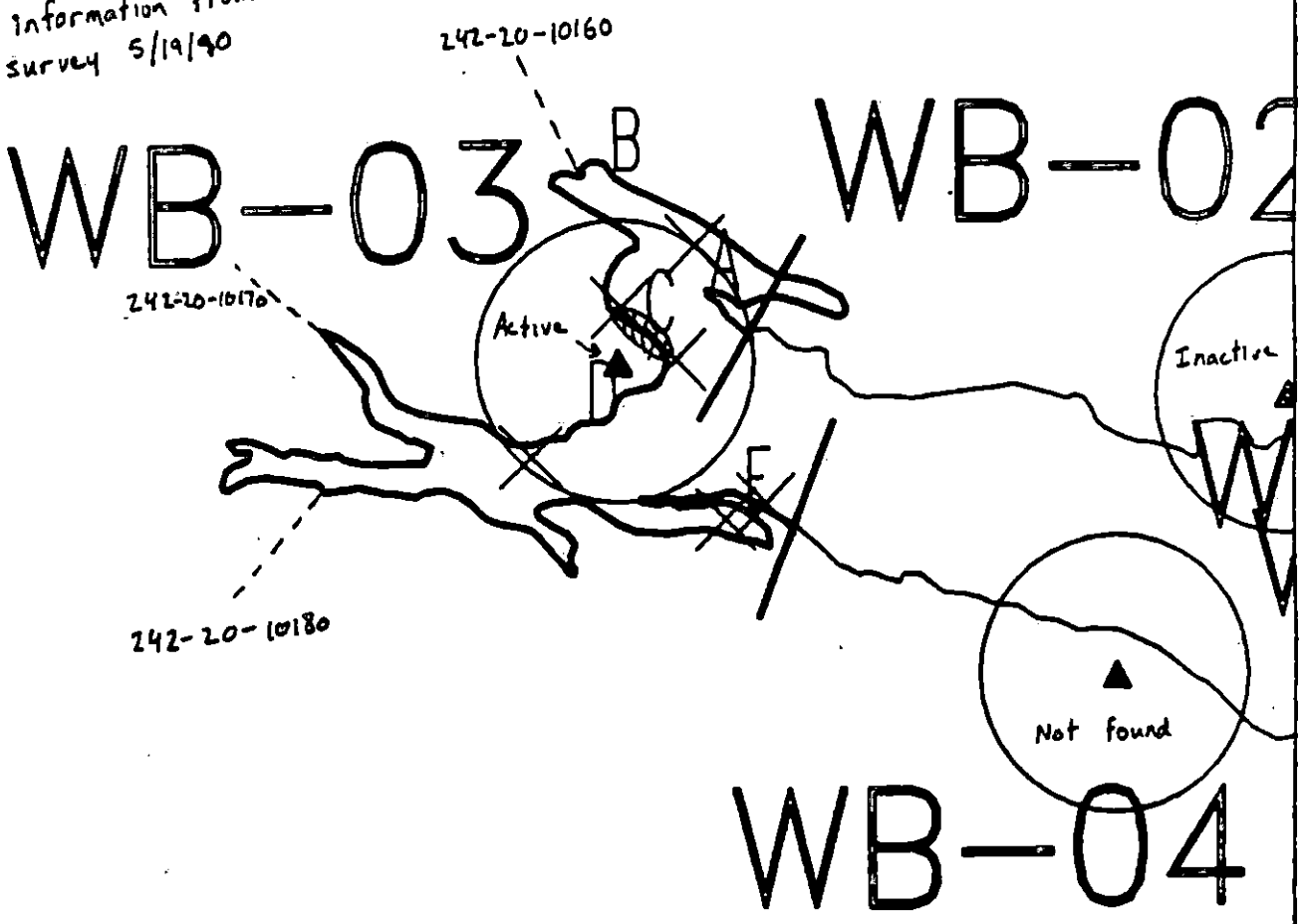
If eagle nest constraint is removed, other ecological considerations will apply.

G.A. Reiter for FOSC

FOSC [signature] Date 6/15/90

Prepared by [signature] Date 6/14/90

Incorporates information from USFWS bald eagle survey 5/19/90



EXXON

Exxon Company, USA

ECOLOGY MAP
SEGMENT WB-3
SUBDIVISION C (3 of 5)

METERS

★ Seabird Colony

▲ Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ WB-03 SUBDIVISION C (3 of 5) DATE 04/06/90

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)
5T All Bald Eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
8AA Sensitive Estuary
7JJ Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid any unnecessary disturbance or damage to unoiled substrate and biota.

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 136 m: Narrow 182 m: V.Light 129 m: No Oil 0 m
Subsurface Oil Observed: Yes ____ No X Maximum Depth ____

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat removal and manual pick up of mousse, tarballs and oiled debris (trash, vegetation debris) as indicated in the attached sketch map. Work should be conducted between 6/1 and 7/9 USFWS permitting, due to eagle constraint. SEE ADDENDUM dated 6/14/90 JPP

TAG COMMENTS: FOLLOWING MANUAL PICKUP BIOREMEDIATE DURING LOW TIDE BUT NOT AT A MINUS TIDE LEVEL

TAG APPROVAL DATE: 4/23/90
ADEC ART WEINOR
EXXON ANDY TAR
NOAA JOSEPH TALBOTT
USCG KENNETH KUHNE
FOSC: [signature] DATE: 5-12-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT WB-3 SUBDIVISION D (4 of 5)

WORK WINDOW	
Manual Pickup Tarmat Removal	CLOSED
Bioremediation	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	**Salmon Stream**	ADF&G catalogued anadromous streams (242-20-10160, 242-20-10170, and, 242-20-10180) are in Segment WB-3. No constraint to manual pickup, tarmat removal, and bioremediation . The work area is more than 100m from the nearest anadromous stream.
1J	**Purse Seine Area**	Closed to bioremediation after 7/20. No constraint to manual pickup and tarmat removal.
5T	**Bald Eagle Nest**	USFWS bald eagle impact assessment conducted on 5/19/90 by Mary Portner indicates an active nest within 400m of the work area. Closed to manual pickup, tarmat removal, and bioremediation.
7JJ	**Subsistence: Invertebrate Harvesting**	No constaint to manual pickup, tarmat removal, and bioremediation.

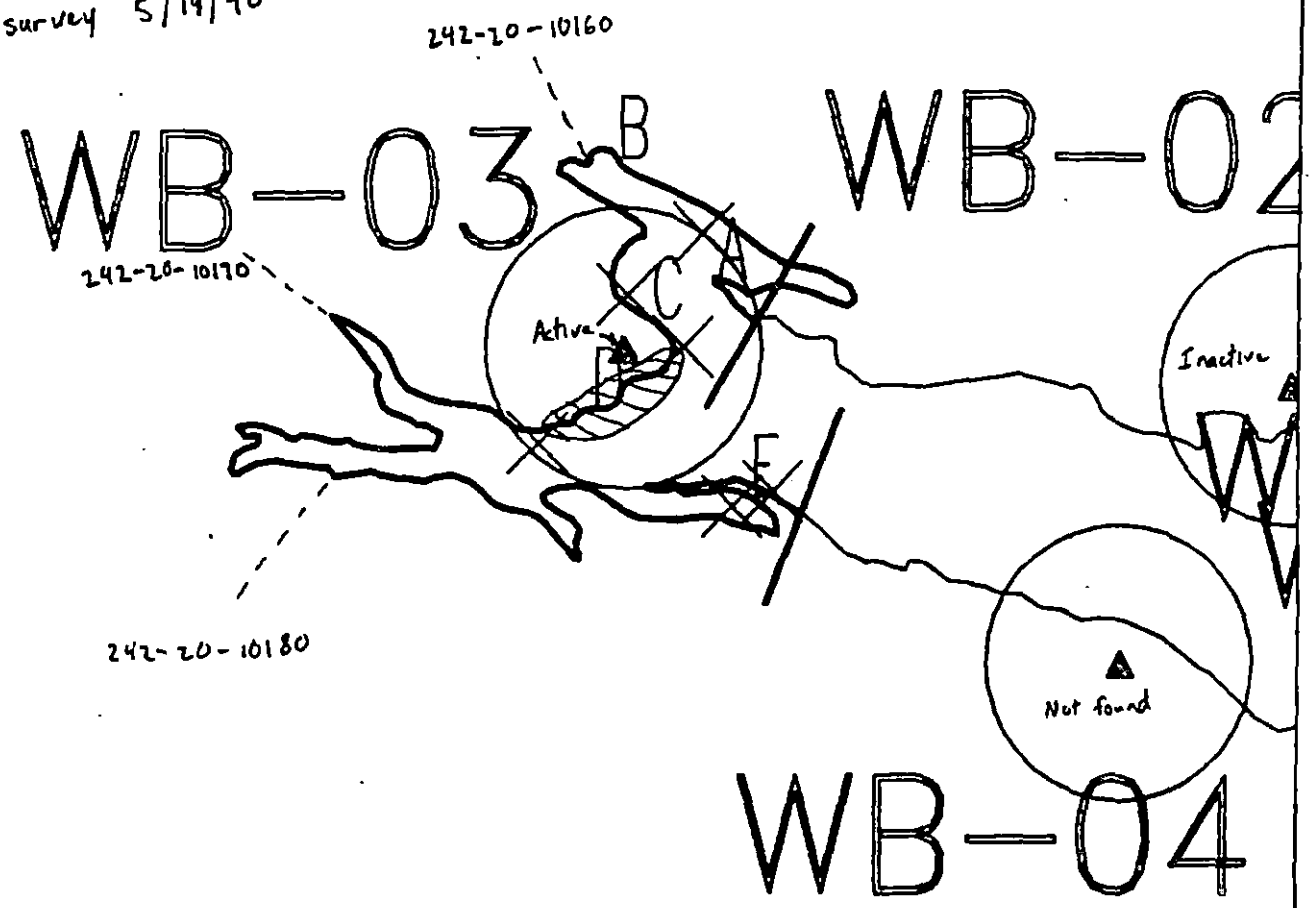
OTHER ECOLOGICAL CONSIDERATIONS

If eagle nest constraint is removed, other ecological considerations will apply.

FOSC [signature] Date 6/15/90

Prepared by [signature] Date 6/14/90

Incorporates information from USFWS
bald eagle survey 5/19/90



EXXON

Exxon Company, USA
Mac Kovi KFN-WB-3

ECOLOGY MAP
SEGMENT WB-3
SUBDIVISION D (4 of 5)
METERS

★ Seabird Colony
▲ Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ WB-03 SUBDIVISION D (4 of 5) DATE 04/06/90

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)
5T All Bald Eagle nests (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
8AA Sensitive Estuary
7JJ Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid any unnecessary disturbance or damage to unoiled substrate and biota.

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

SHPO SIGNATURE: J. David McMahan DATE: 5/9/90

OILING CATEGORIZATION:

Wide 0 m: Medium 429 m: Narrow 434 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 7 cm

RECOMMENDATIONS:

____ No Treatment Recommended
X Treatment Recommended
X Manual Pickup
X Bioremediation
X Tarmat: ____ Breakup
X Removal

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

COMMENTS: Recommend tarmat removal and manual pick up of mousse, tarballs and oiled debris (trash, vegetation debris) as indicated in the attached sketch map. Work should be conducted between 6/1 and 7/9, USFWS permitting, due to eagle constraint. SEE ADDENDUM dated 6/4/90 RD

TAG COMMENTS: BIOREMEDIATE COATS AND REMAINING OIL IN AREAS OF MANUAL REMOVAL

TAG APPROVAL DATE: 4/23/90
ADEC Art Werner
EXXON Andy Gay
NOAA Joseph Talbott
USCG Kenneth Keane

FOSC: ____ DATE: 5-18-90

REVISION 1
7/21/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT WB-3 SUBDIVISION D (4 of 5)

WORK WINDOW	
Manual Pickup Tarmat Removal	* OPEN ~~CLOSED~~
Bioremediation	* OPEN TO 7/23 ~~CLOSED~~

* USFWS EAGLE MONITOR REQUIRED

COMMERCIAL PURSE SEINE AREA CLOSED UNTIL 7/23 AS PER CONVERSATION OF TOM MONAHAN W/ LEE GLENN, ADFG NO CONSTRAINT TO BIOREMEDIATION. RP

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous streams (242-20-10160, 242-20-10170, and, 242-20-10180) are in Segment WB-3. No constraint to manual pickup, tarmat removal, and bioremediation. The work area is more than 100m from the nearest anadromous stream. RP
1J	Purse Seine Area	Closed to bioremediation after 7/23. No constraint to manual pickup and tarmat removal.
5T	Bald Eagle Nest	USFWS bald eagle impact assessment conducted on 5/19/90 by Mary Portner indicates an active nest within 400m of the work area. ~~Closed~~ to manual pickup, tarmat removal, and bioremediation. OPEN AS PER USFWS SURVEY OF 7/18. USFWS MONITOR REQUIRED. RP
7JJ	Subsistence: Invertebrate Harvesting	No constaint to manual pickup, tarmat removal, and bioremediation.

OTHER ECOLOGICAL CONSIDERATIONS

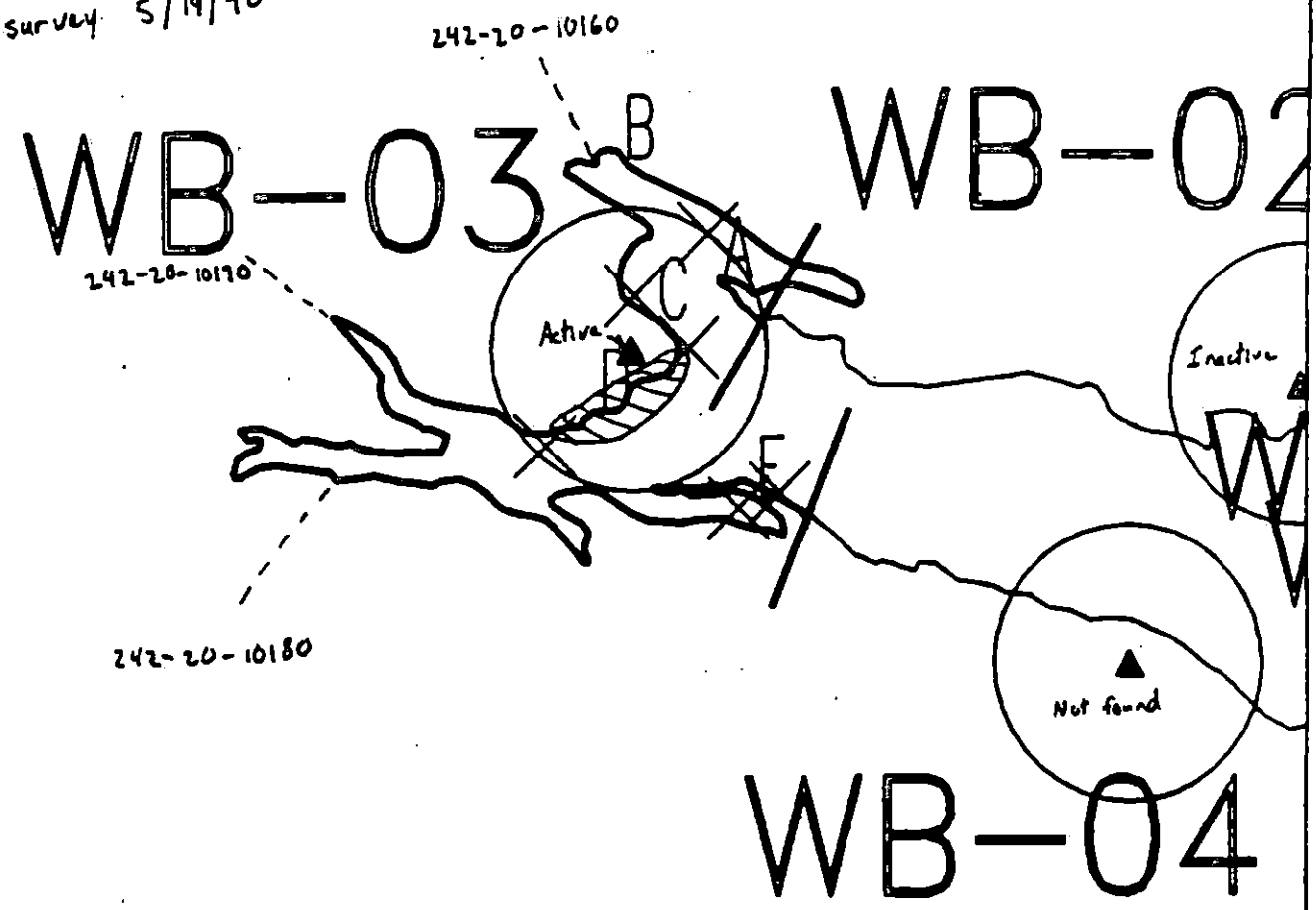
If eagle nest constraint is removed, other ecological considerations will apply.

G.A. Reiter for FOSC

FOSC [signature] Date 6/15/90

Prepared by [signature] Date 6/14/90

Incorporates information from USFWS bald eagle survey 5/19/90



EXXON

Exxon Company, USA

Map Kent KEN-WB-3

ECOLOGY MAP

SEGMENT WB-3

SUBDIVISION D (4 of 5)

METERS

★ Seabird Colony

▲ Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ WB-03 SUBDIVISION D (1 of 5) DATE 04/06/90

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)
5T All Bald Eagle nests (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
8AA Sensitive Estuary
7JJ Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid any unnecessary disturbance or damage to unoiled substrate and biota.

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

SHPO SIGNATURE: J. David McMahan DATE: 5/9/90

OILING CATEGORIZATION:

Wide 0 m: Medium 429 m: Narrow 434 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 7 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat removal and manual pick up of mousse, tarballs and oiled debris (trash, vegetation debris) as indicated in the attached sketch map. Work should be conducted between 6/1 and 7/9, USFWS permitting, due to eagle constraint. SEE ADDENDUM attached 5/90

TAG COMMENTS: BIOREMEDIATE COATS AND REMAINING OIL IN AREAS OF MANUAL REMOVAL

TAG APPROVAL DATE: 4/23/90
ADEC Art Weiner
EXXON Andy Bar
NOAA Joseph Talbott
USCG Kenneth Keane

FOSC: ____ DATE: 5-18-90

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 242-20-10160

SEGMENT WB-3 SUBDIVISION B

WORK WINDOW	
Manual Pickup Tarmat Removal	**OPEN**
Bioremediation Less Than 100m From Stream	**WORK PRIOR TO 7/1 (ADF&G MONITOR REQ.)**
Bioremediation More Than 100m From Stream	**WORK PRIOR TO 7/1**

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	**Salmon Stream**	ADF&G catalogued anadromous stream (242-20-10160) is present in Subdivision B. No constraint to manual pickup and tarmat removal. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream.
1J	**Purse Seine Area**	No constraint to manual pickup and tarmat removal. Closed to bioremediation after 7/10.
5T	**Bald Eagle Nest**	No constraint to manual pickup, tarmat removal and bioremediation. USFWS (Mary Portner, 6/7/90) has granted access to Subdivision B through eagle nest buffer zone (see map).
7JJ	**Subsistence: Invertebarate Harvesting**	No constraint to manual pickup, tarmat removal, and bioremediation per conversationg of Pat Norman/Port Graham Village Corp. with Rex Coulter/Exxon on 6/11/90.

OTHER ECOLOGICAL CONSIDERATIONS

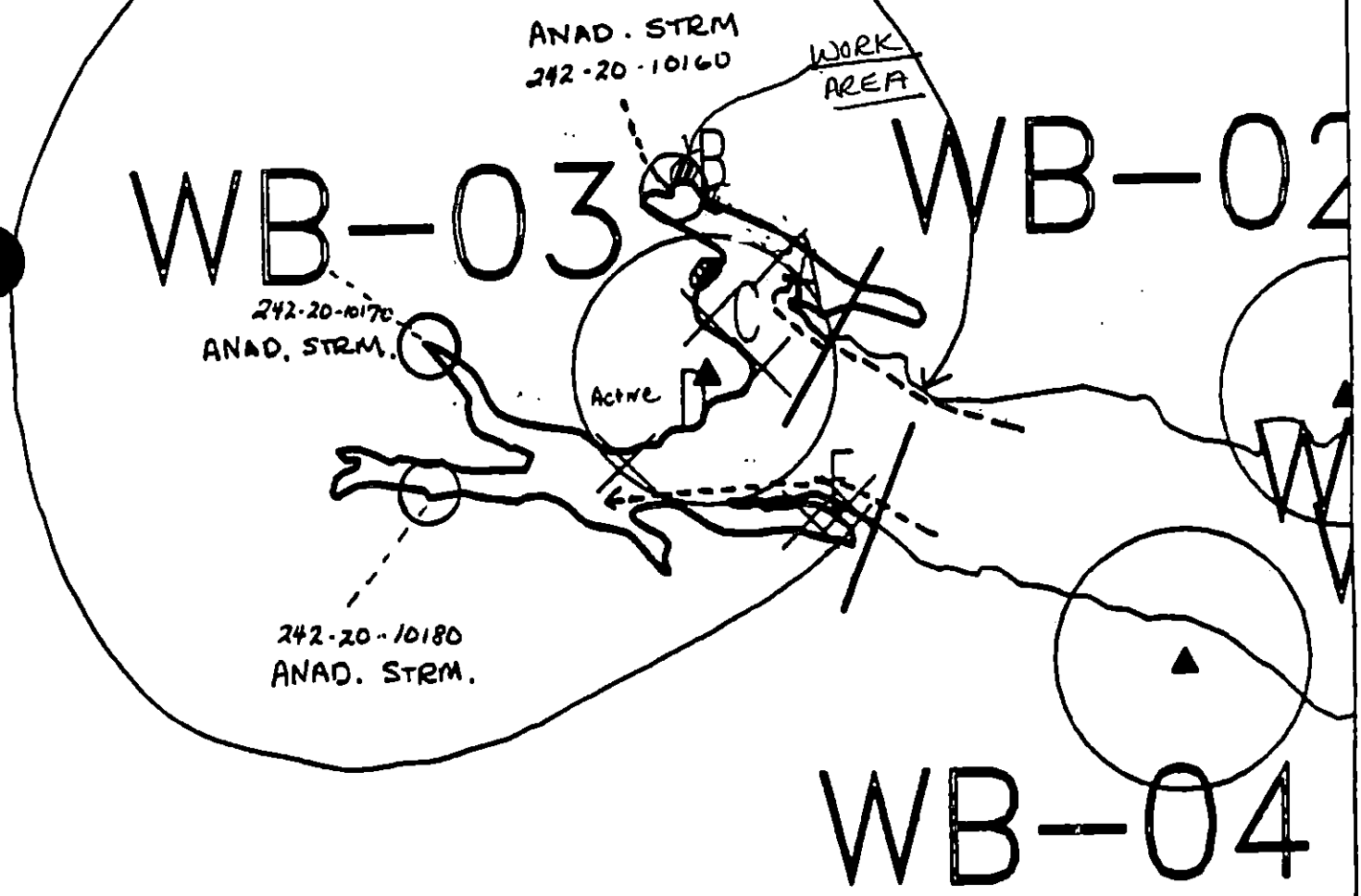
No disturbance to stream bed or banks. Restrict air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. No flushing of pollutants or sediments into stream drainage; do not allow Inipol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Restrict boat and beach disturbance to essential minimum. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM WB-3B FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC _____ Date 6/26/90

Prepared by _____ Date 6/14/90

Access routes approved to minimize disruption of nearby eagle nest (USFWS 6/7/90, Mary Portner)



ANADROMOUS STREAM EVALUATION

EXXON

Exxon Company, USA
Map Key: KEN-WB-3

ECOLOGY MAP 6/2/90

SEGMENT WB-3

SUBDIVISION B (2 of 5)

METERS

★ Seabird Colony

▲ Eagle Nest

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ WB-003 STREAM NO: 242-32-10160 DATE 4/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1J Purse seine area (7/1 TO 8/31)
7JJ Subsistence area: Invertebrate harvesting
8AA Sensitive estuary
5T All bald eagle nests (3/1 to 6/1)
Active eagle nests (3/1 to 9/1)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Subject stream is located within subdivision B (2 of 5). Eagle nest within 400m of stream no. 242-32-10160

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

SHPO SIGNATURE: Rachel Jean Orth DATE: 5/22/90

Subsurface Oil Observed: Yes____ No X Maximum Depth____

RECOMMENDATIONS:

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

+ TARBALLS

COMMENTS: Recommend manual removal of pavement and oiled vegetation as indicated on attached sketch map. Work from 6/2 to 7/1 with approval of USFWS regarding eagle nests.
SEE CONSTRAINTS ADDENDUM dated 6/4/90

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

TAG APPROVAL DATE: 5/18/90.
ADEC ART WEINER Art Weiner
EXXON ANDY TGAL
NOAA Guy Petrae
USCG G.A. REITER G.A. Reiter

FOSC: DATE: 6 June 90

REGION: KENAI

SEGMENT: ST/WB-04

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1J Purse seine area (7/1 to 8/31)
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 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 394 m: V.Light 767 m: No Oil 1317 m
Subsurface Oil Observed: Yes X No____ Maximum Depth 10 cm

RECOMMENDATIONS:

____No Treatment Recommended
X Treatment Recommended
____Manual Pickup
____Bioremediation
X Tarmat Removal

____Snare/Absorbent Booms
____Oil Snares (pom poms)
____Absorbents (pads,rolls,etc)
____Spot Washing:____Wands
____Beach Cleaner
____Other (see comments)

COMMENTS: Recommended treatment includes manual removal of tarmats in areas indicated on sketch map. Work should be conducted between 6/1 and 7/1 with approval of USFWS regarding eagle nest constraint.

TAG COMMENTS:_____

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

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 Suzomoto 424-7511

1I Gill net area (6/7 to 8/31)
X 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 unoiled 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 Rothy 267-2206

X 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
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

GMENT ST / WB-04 SUBDIVISION: A-1of1 DATE 04/28/90

USCG
NAME David S. Thomas SIGNATURE [illegible]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

ADEC
NAME Clara S. Crosby SIGNATURE Clara S. Crosby

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Suggest removal of AP at western end of segment — easily recovered.

LAND MANAGER
NAME Dick Woodard SIGNATURE Dick Woodard

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

SHORELINE OILING SUMMARY

REVISION NO. 26-12-88

OG RICK GILLIE USCG DAVE THOMAS SEGMENT ST/ WB-04
BIO DAVE LOHSE LAND REP DICK MOONIN (DT) SUBDIVISION A ( ) OF ( )
EXXON FRANK BOX ADEC CLARA CROSBY TIME 07:20 to 11:00
TEAM NO. 13 TIDE LEVEL +6 to -3 DATE 04/28/90
EST. SUBDIVISION LENGTH: 2535 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
SURFACE SEDIMENTS: R 50 % B 20 % C 20 % P 10 % G 0 % S 0 % M 0 % V 0 %
SLOPE: Lang 50 % Hang 30 % Vert 20 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 400 m VL 800 m NO 1335 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	SU	UI	MI	LI
ASPHALT PAVEMENT			✓	X		X					X	✓	
POOLED													
COVER													
COAT	✓			X		X					X		
STAIN													
MOUSSE													
PATTIES													
TARBALLS				X		X					X		
FILM													
NO OIL										X			X

PAVEMENT H F (S) 40 sq. m by 5 cm
PATTIES / TARBALLS 1 BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

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

DID YOU COLLECT DEBRIS? YES ☒ NO ☐
TYPE Pom-Pom
#BAGS 1

Photographs:
Roll No. ST-13-05
Frames 33-37

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-cm)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	!	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UO	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	SU	UI	MI	LI				
1	30					X	-		X							X						S-S
2	40					X	-		X							X						S-S
3	20					X	-		X								X					S-P,G
4	30					X	-		X							X						P-P,S
5	20					X	-		X							X						S-P,T
6	25					X	-		X							X						S-S,P

COMMENTS

GEOMORPHOLOGY: PREDOMINANTLY NARROW RUBBLE BEACHES BACKED BY VERTICAL CLIFF (5m HIGH). 3 LARGER BEACHES (200 M LONG) COBBLE / PEBBLE

OILING: AREA OF "NARROW" AT WEST END COMPRISING ASPHALT PAVEMENT BANDS IN HTZ AT TWO SITES

REVIEWED BAT DATE 1 MAY 90

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 04-13-90

SEGMENT ST/ WB-04 SUBDIVISION A (1 OF 1)

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SHEEN (Y/N)	!	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC						SU	UI	MI	LI				
7	20					X	-		X							X						P-S,P
8	30				V		5-10		X		X					X						P-S,P,G
9	20					X	-		X							X						P-S, G
10	25					X	-		X							X						C-P,G
11	25					X	-		X							X						C-P,G
12	25					X	-		X							X						C-P,G
							-															
							-															
							-															
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							-															
							-															
							-															
							-															

COMMENTS

REVIEWED BAT DATE 1MAY90

OG RICK GILLIE

SEGMENT ST/ [illegible]-04

SUBDIVISION A-1 of 1

DATE 04/29/90

CHECKLIST

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

LEGEND

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

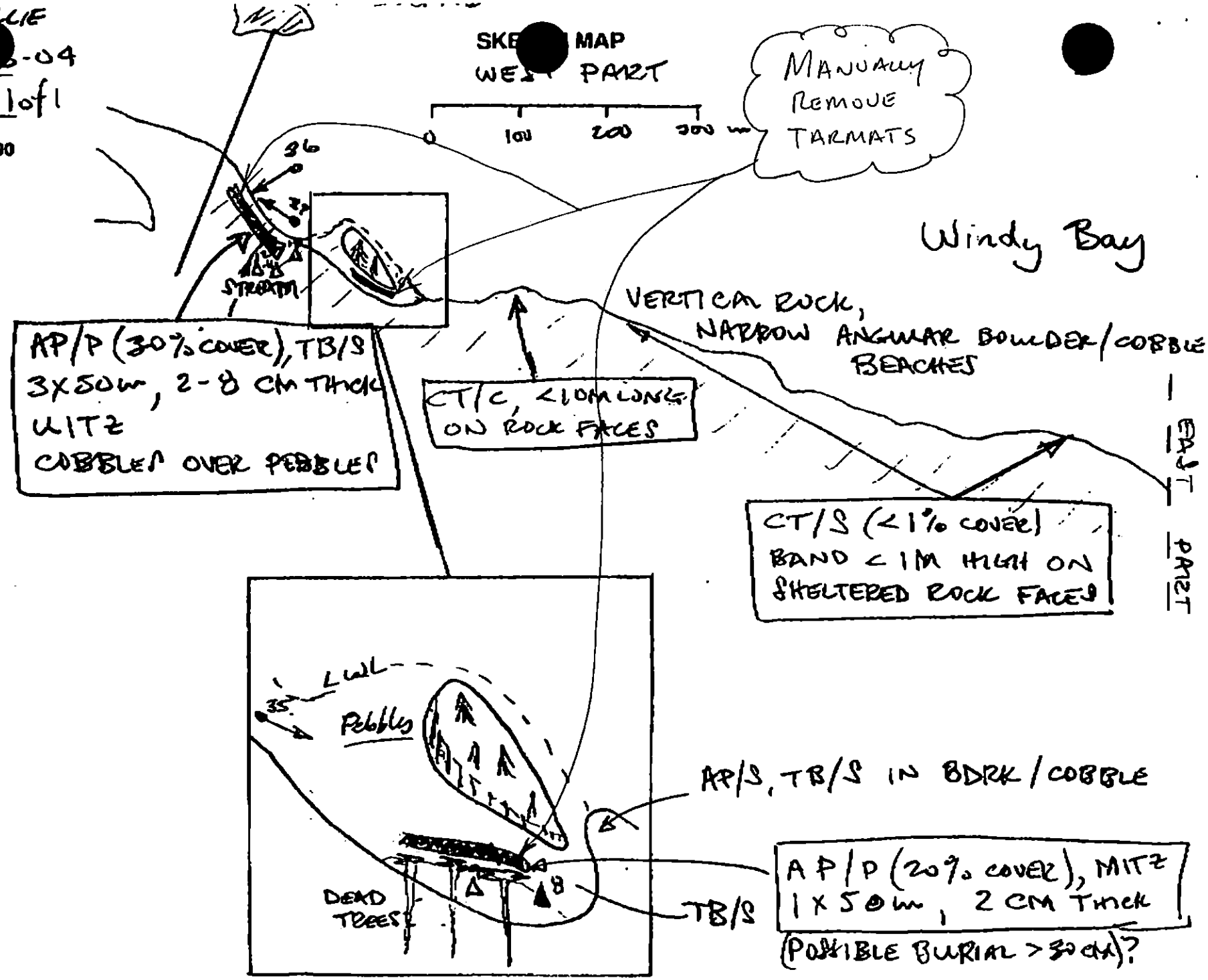
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 Photo location, direction, and number



Shoreline Character (Single Line): AP PO PK CT ST MP PP RB FP NO

REVISION 02/24/89

OG RICK GILLIE

SEGMENT ST/ [redacted]3-04

SUBDIVISION A-1of1

DATE 04/29/90

CHECKLIST

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

LEGEND

1 △ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

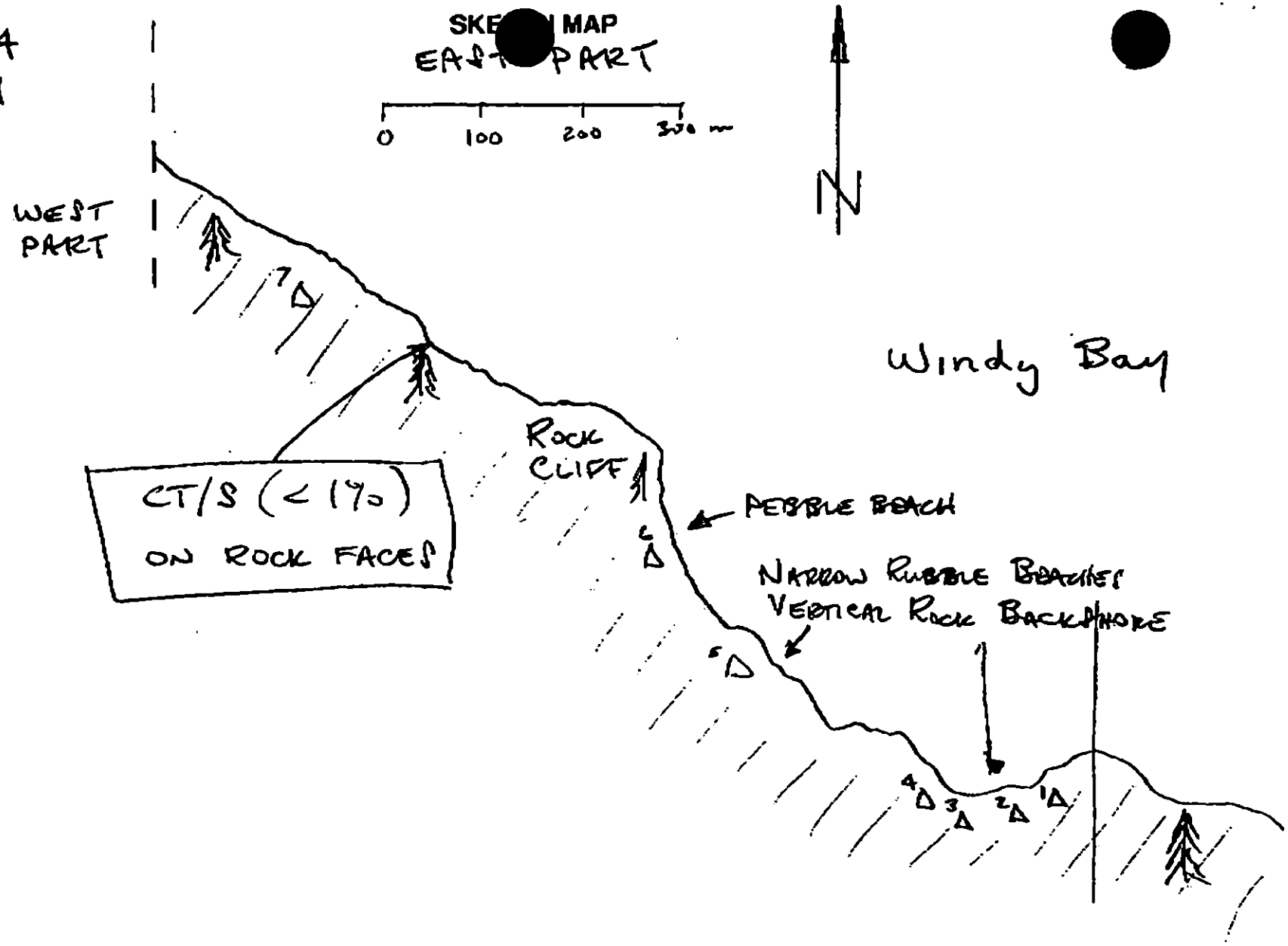
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 Photo location, direction, and number



Oil Character Length (m): AP 20 PO 0 CV 0 CT 100 ST 0 MS 0 PT 0 TB 5 FL 0 NO 2410

(FOR ENTIRE SEGMENT)

RICK G[illegible]

SMENT ST/ WB-04

DIVISION A

E 24, 2 90

ECKLIST

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

GEND

1 ▲ No Subsurface Oil

2 ▲ Subsurface Oil

CT/C inuous Distribution

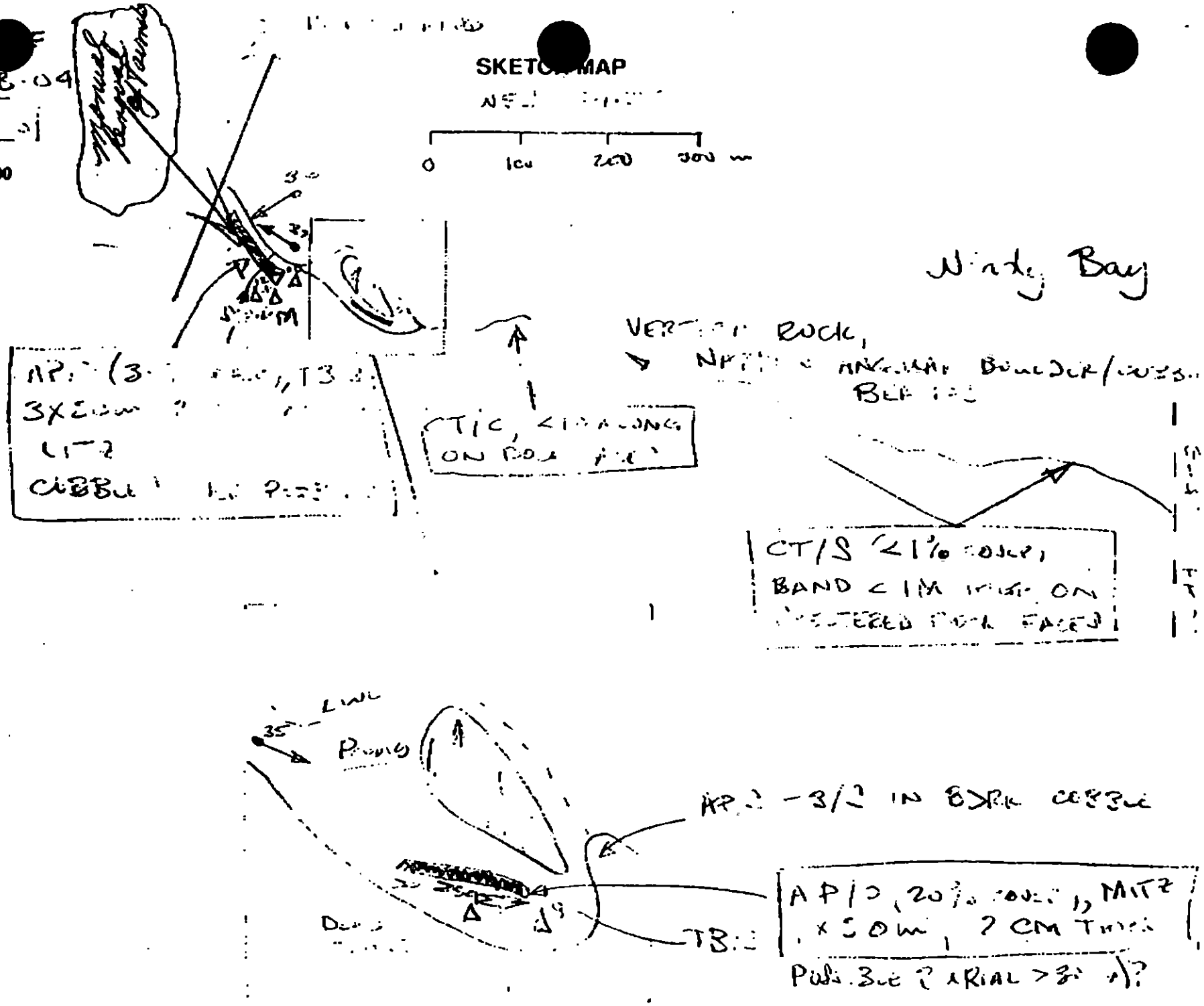
CT/B en Distribution

CT/P hy Distribution

CT/S shed Distribution

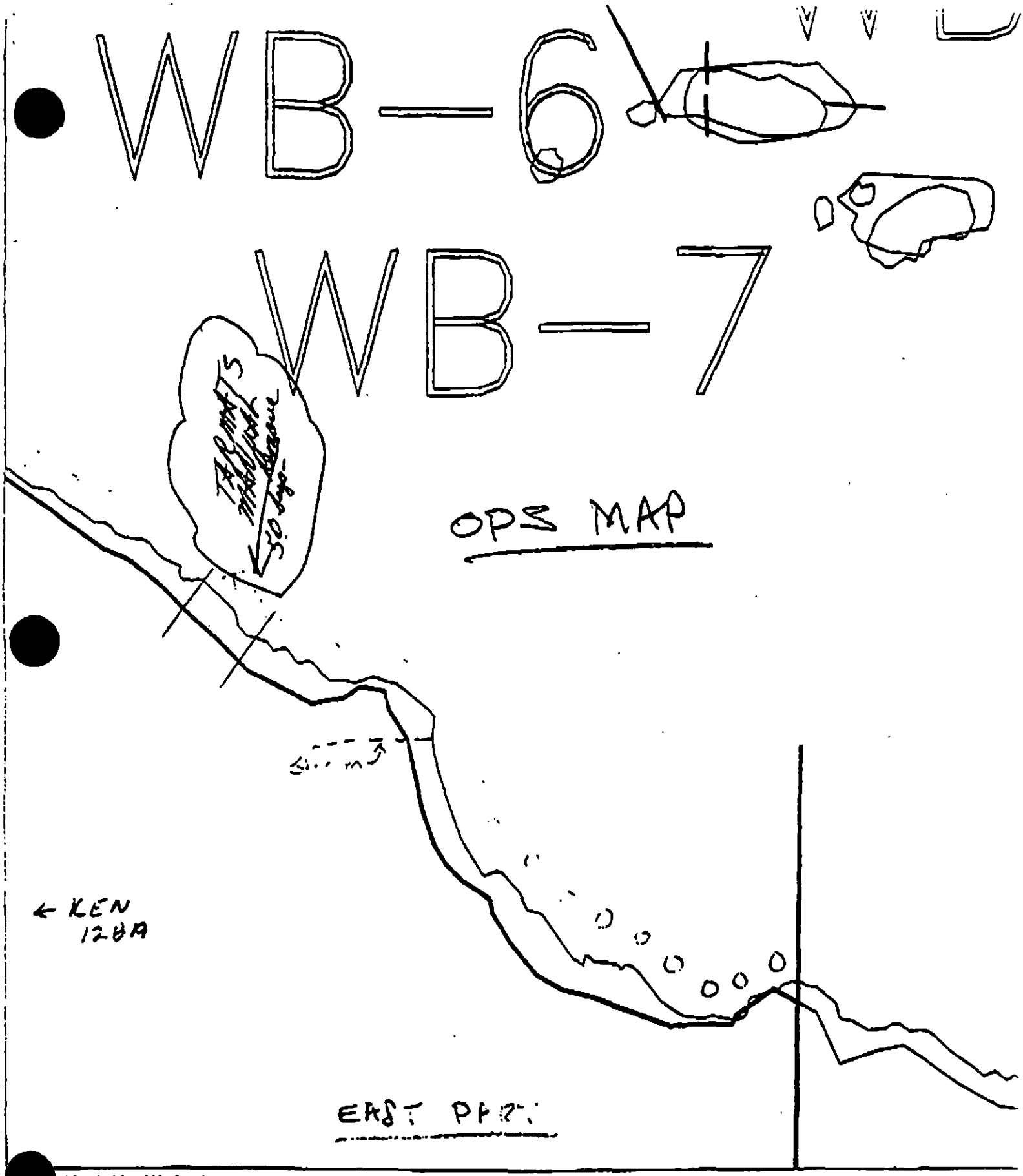
Vegetation

o location, direction, number



racter Length (m): AP SO CV CT ST MS PT TB F ND

REVISION:03/24/98



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

WB-4

ADEC Segment Length: 2465m

Map Key: KEN-128b
Name: Rick Grillie
Date: 04/23/90

OPS MAP

WEST PA

LEN 258 →

WB-0

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

WB-4

ADEC Segment Length: 2465m

Map Key: KEN-128a
Name: Rick Grilla
Date: 04/28/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / WB004 Subdivision A Date (mo / day / yr) 4-28-90

Time (24 hr) 7:15 Biologist David Lohse

(A) Substrate type and % of segments:
(1) Bedrock 50 (2) Boulder 20 (3) Cobble 20 (4) Pebble 10 (5) Sand ____ (6) Silt ____

(B) Overall % cover of biota (% of segment): Dense 45 Moderate 35 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:
Roll No. ST-13-5
Frames 33-37

BARNACLES

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

See page 2

Ecological Considerations:

One commercial salmon fishing regulatory marker was posted at the western boundary of this segment. Unknown how far any anadromous streams are from this segment boundary.

Shoreline Ecological Summary Lot L

Segment ST-WB004 Subdivision A 4-28-90

Biologist: David Lohse

Wildlife Observations / General Comments

1. Present in low intertidal: Halosacion, Alaria, Nuella, Ulva, Enteromorpha, unknown red algal "branch" (Rhodomenia?), unknown yellow sponge, Analipus, Scytosiphon, Kathrina tunicata, Pycnopodia, Laminaria

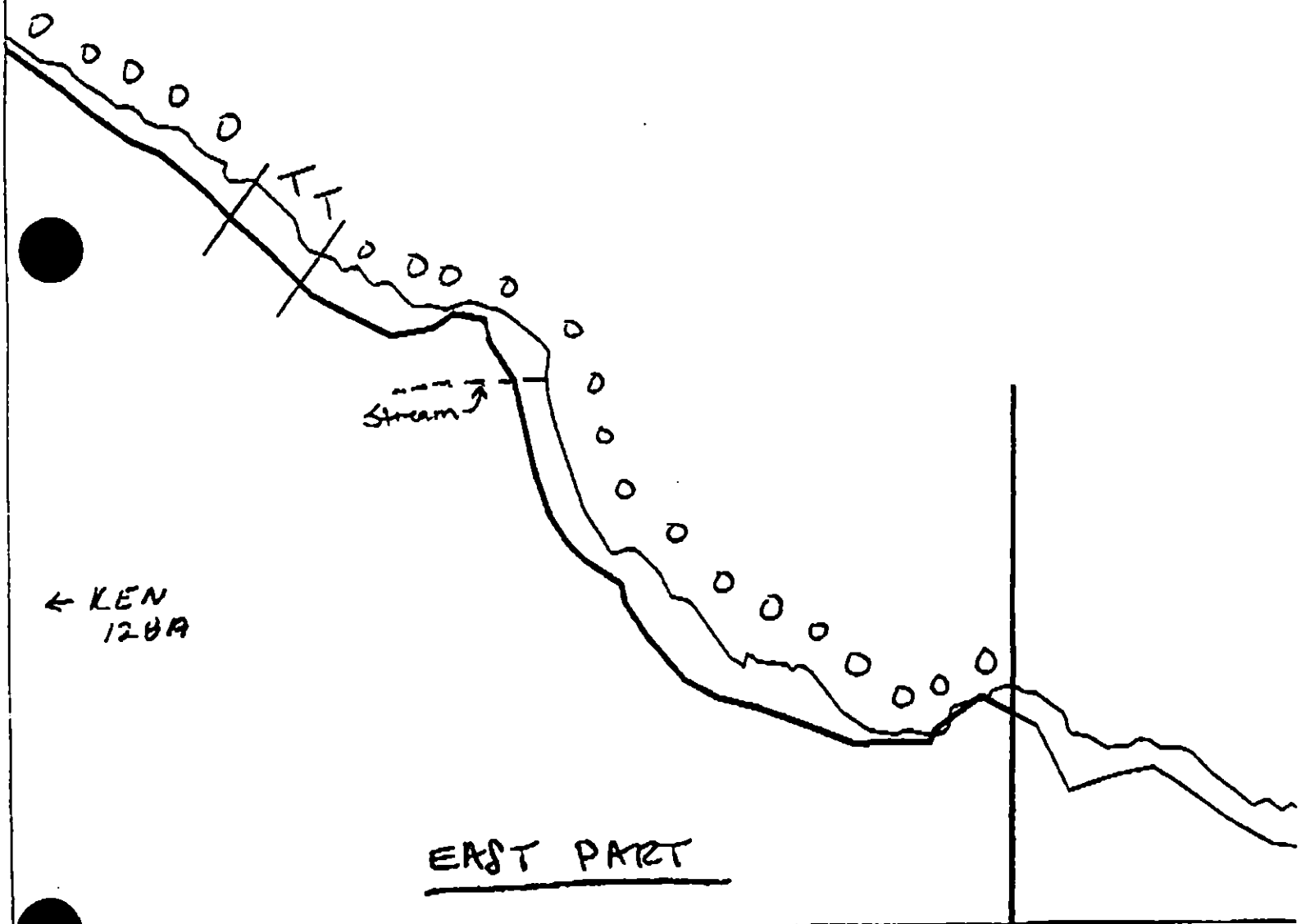
   mid intertidal: Scytosiphon, Ulva, coralline algae, Anthopleura, Kathrina tunicata, sculpins, Pagurus, Halosacion, Nuella, Porphyra, unknown red algal "branch" (Rhodomenia?), Tealia, Metridium, Alaria, Endocladia

   high - Cladophora

2. 2 cormorants, 1 squirrel, and many ducks were observed in the area.
3. A few, small (less than 100 cm²) patches of byssal threads were found on mid-intertidal bedrock
4. Algal cover in low intertidal was 75% on boulders (2 estimates), 75% on bedrock (1 estimate), and 80% on cobble (2 estimates).
5. Barnacle mortality on mid intertidal boulder was ~5% (estimate of one site), 10% on mid intertidal bedrock (1 site), and 5-25% on high intertidal bedrock (2 sites).
6. One stream located in segment. Unknown whether or not it is anadromous. See OG map for location.
7. A commercial salmon fishing regulatory marker was posted at the western boundary of this segment.

WB-6

WB-7

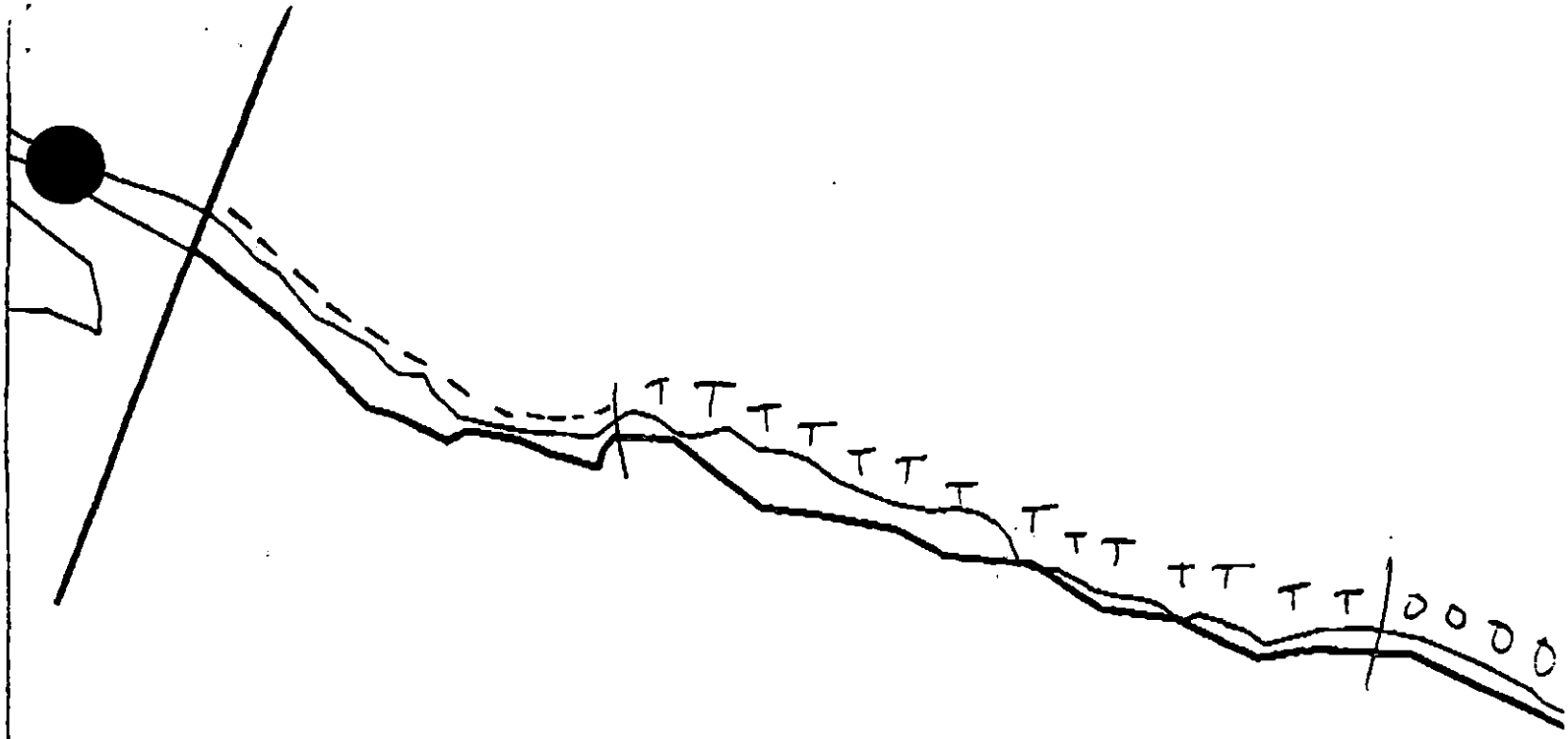


XXXX Wide
//// Medium
---- Narrow
TTTT Very light

WB-4

ADEC Segment Length: 2485m

Map Key: KEN-128b
Name: Rick Gillie
Date: 04/23/90


TTTT

1991 MAYSAP EVALUATION

SEGMENT: WB 004 **SUB:** A **REGION:** KEN **SURVEY DATE:** 5/26/91

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-004 SUBDIVISION A DATE 5/27/91

ADEC
NAME Steve Ferguson SIGNATURE [signature]

☒ NTR ☐ TREATMENT RECOMMENDED

NO TREATMENT RECOMMENDED. All oiling observed with the exception of CT/ST were picked up during survey.

EXXON
NAME George P. Stiles SIGNATURE [signature] 5/27/91

☒ NTR Very little oil was found to remain. The survey crew picked up several areas of AP/HSOC (weathered). Picked up. 1 bag.

LANDMANAGER
NAME Pat Norman OF Pat Norman SIGNATURE [signature]

☒ NTR this spot could be checked over the summer when work is done on other sites in Windy Bay.

USCG/NOAA
NAME [illegible] SIGNATURE [signature]

☒ NTR very little found.

[signature]

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 1

TEAM NO. 4

OG B TRIMM

BIO J ROTH

SEGMENT WB004

SUBDIVISION A

ADEC S FERGUSON

LANDMANAGER P NOCMAN for P GLEAMAN

DATE MAY 26 / 91

EXXON G SILES

USCG/NOAA McMAHON / McDONALD

TIME 20 : 44 to 20 : 55

TIDE LEVEL 4.72 ft. to 5.12 ft.

ENERGY LEVEL: ☐ H ☒ M ☐ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 75 m

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

EST. OIL CATEGORY LENGTH: W Ø m M Ø m N Ø m VL 10 m NO 65 m US 2403 m

LOC	SURFACE OIL CHARACTER AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO	SURFACE SEDIMENT TYPE	SHORE SLOPE V H M L	AREA WIDTH m	AREA LENGTH m	ZONE S	UI	MI	LI	NOTES
A						S	S				R	V	1	5	X	X			
B						S	S				R	V	1	5	X	X			

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

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

PHOTO ROLL # MAYSAP- — - — FRAMES —

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER OP	HOR	MOR	LOR	OF	TR	NO	OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE S	UI	MI	LI	SURFACE-SUBSURFACE SEDIMENTS	NOTES
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									

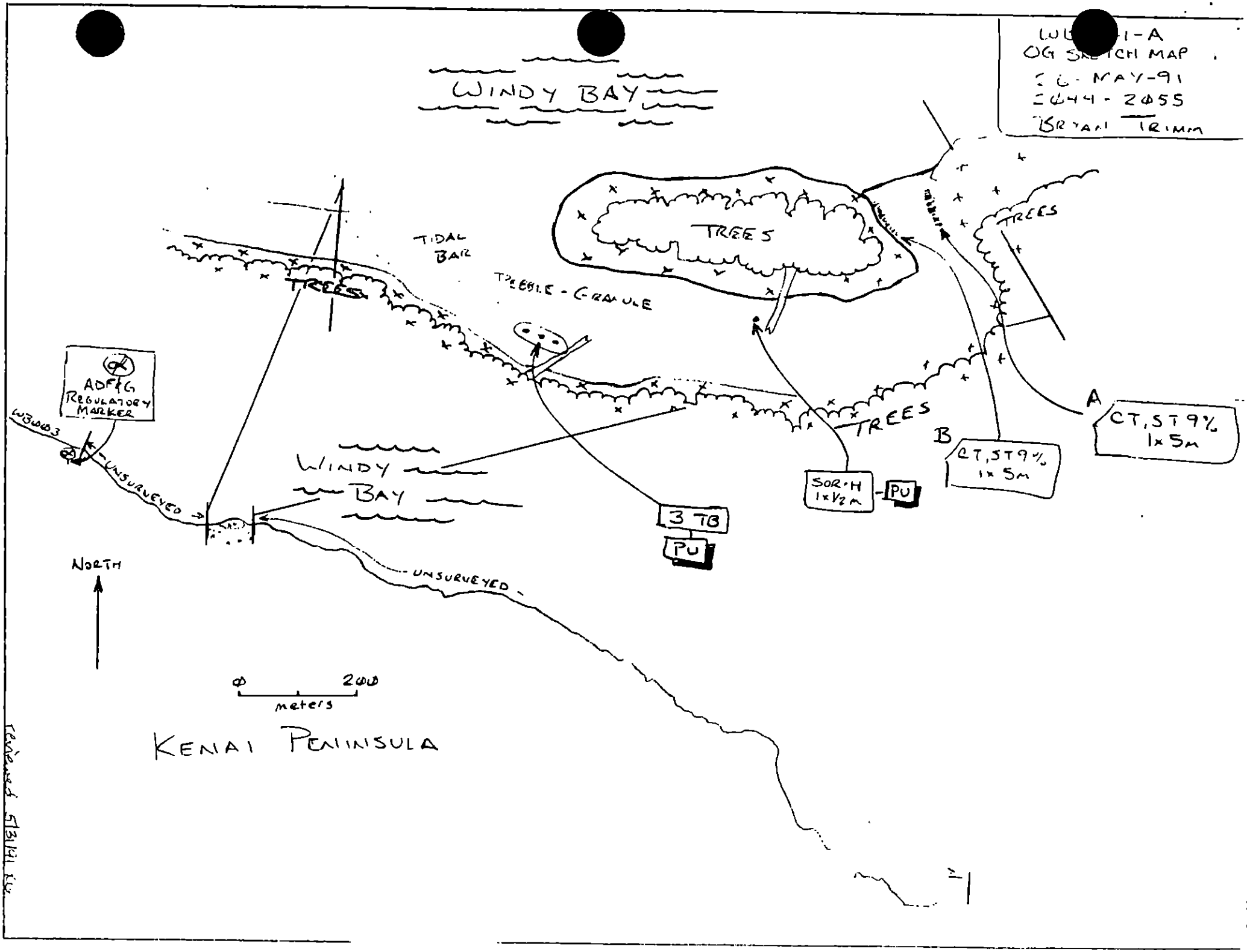
No Pits

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

OG COMMENTS:

VERY LITTLE OIL REMAINS

RAINWOOD, MC 6/24/91
revised 5/31/91 KG


LUB 1-A
OG SKETCH MAP
6-MAY-91
2044 - 2055
BRYAN TRIMM
WINDY BAY
TIDAL BAR
TREES
TREES
TREES
TREES
PEBBLE - GRANULE
ADF&G REGULATORY MARKER
W3003
UNSURVEYED
WINDY BAY
UNSURVEYED
3 TB
PU
SOR-H 1x1/2m
PU
B
CT, ST 9% 1x5m
A
CT, ST 9% 1x5m
NORTH
0
200
meters
KENAI PENINSULA
REVISED 5/31/91 KW
RENUMBERED: MC 6/24/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #	4	DATE	26 MAY 91
SEGMENT #	WB 4	TIDAL HEIGHT(Range)	+ 4.6 TO 4.65
SUBDIVISION	A	BIOLOGIST	Jim ROTH
SEA STATE	1 FT	WIND SPEED/DIRECTION	
PHOTOGRAPHS: ROLL #		FRAME #	

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

A - HITE BEDROCK W/ VERRUCARIA

B - HITE BEDROCK W/ VERRUCARIA, SPARSE BARNACLES, LITTORINES.

GENERAL COMMENTS: A FAIRLY HIGH-ENERGY SITE CONSISTING OF A CLEAN PEBBLE-GRANULE BEACH WHICH IS DEVOID OF INTERTIDAL BIOTA; AND A BEDROCK OUTCROPPING WHICH HAS A WELL-DEVELOPED AND THRIVING INTERTIDAL BIOTA ON THE NORTH SIDE.

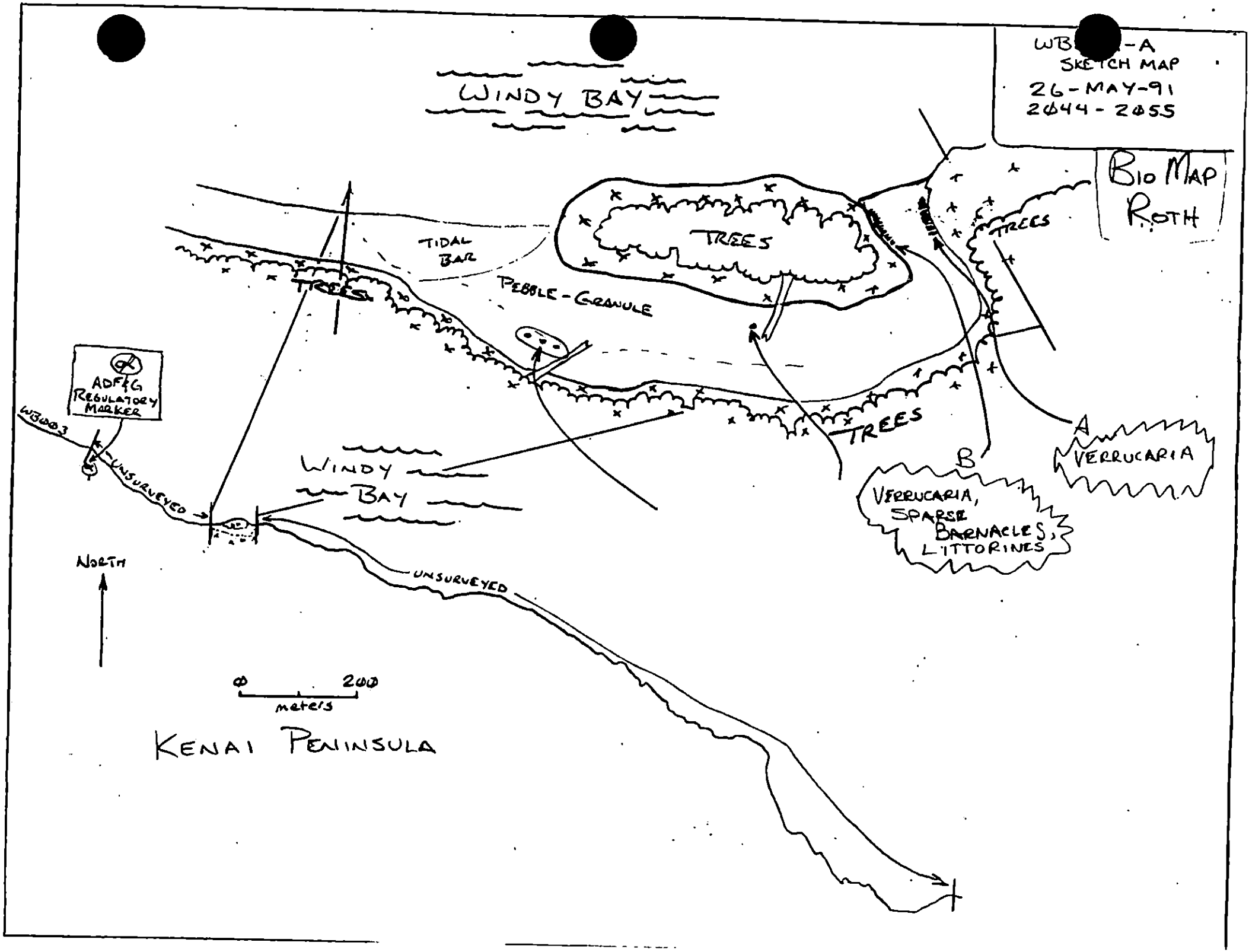
WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

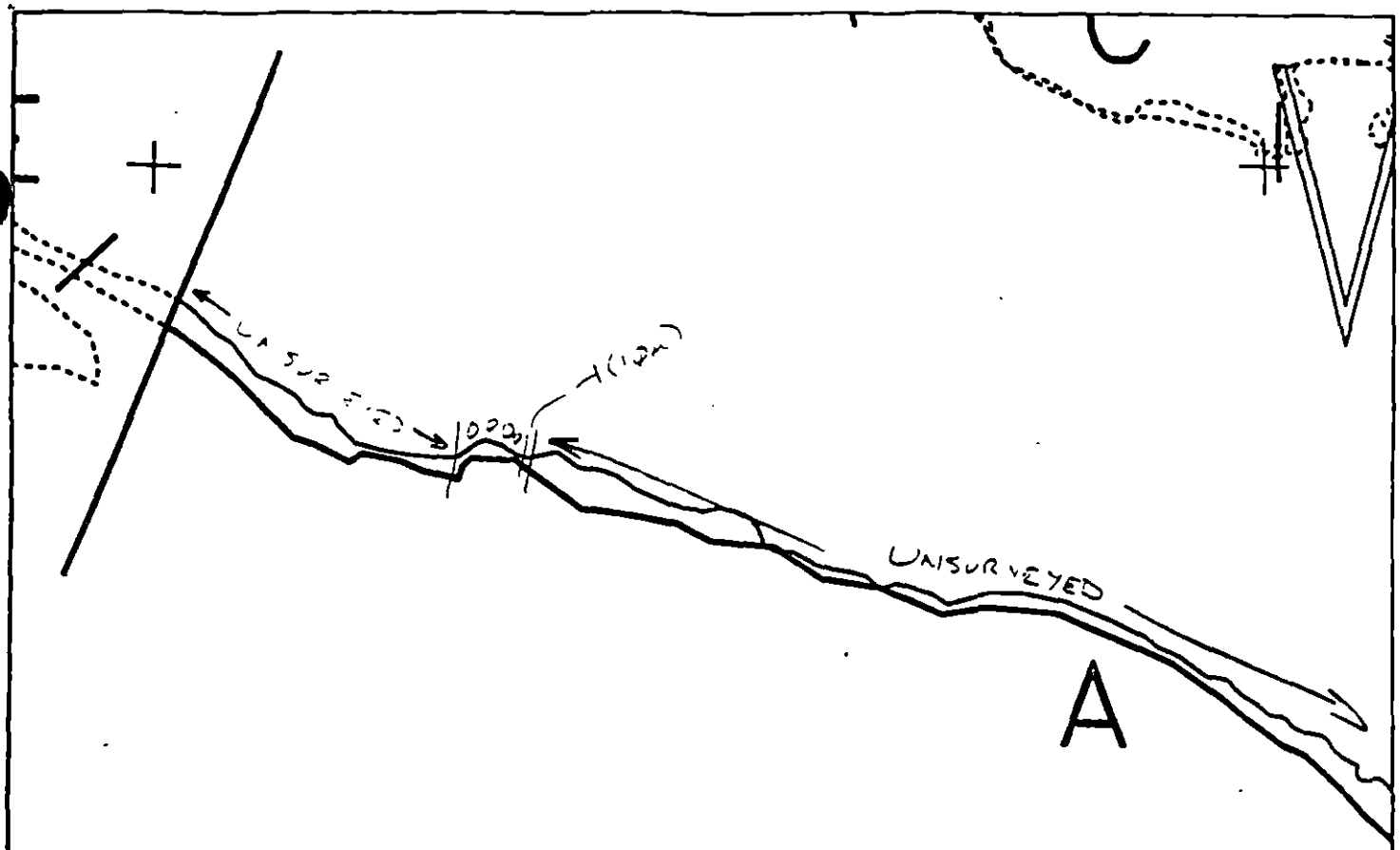
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds(specify)			
[illegible]les(specify)			

Shoreline subdivision map showing important biological features attached.

Carl [illegible]


WB[illegible]-A
SKETCH MAP
26-MAY-91
2044-2055
BIO MAP
ROTH
WINDY BAY
TIDAL BAR
PEBBLE-GRANULE
TREES
TREES
TREES
TREES
ADF&G REGULATORY MARKER
WB003
UNSURVEYED
WINDY BAY
UNSURVEYED
A
VERRUCARIA
B
VERRUCARIA, SPARSE BARNACLES, LITTORINES
NORTH
0
200
meters
KENAI PENINSULA



WB-04

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

WB004 A

ADEC Subsegment Length: 2478m

METERS

0 200 400

AK State Plane Zone 4

wb004aa

N

EXXON

Subdivision Field Map

Map Key: KENWB004Aa

Name: TRIMM

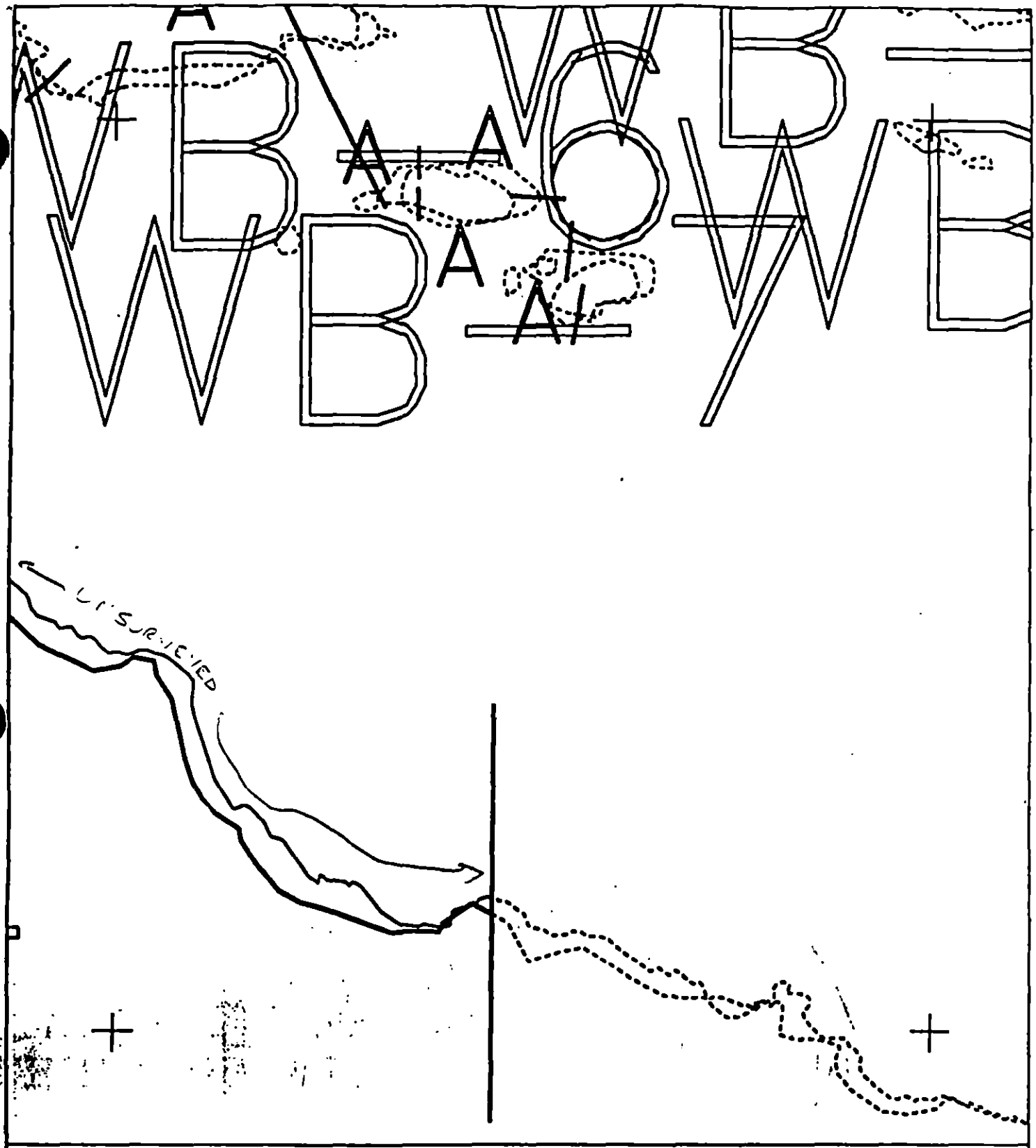
Date: 26-MAY-91

Date Entered:

SURFACE OIL CATEGORY MAP

REVIEWED: MC 6/2/91

reviewed 5/31/91 KG



XXXX	Wide	WB004 A	Subdivision Field Map
////	Medium	ADEC Subsegment Length: 2478m	Map Key: KENWB004Ab
----	Narrow	METERS	Name: TRIMM
TTTT	Very Light	0 200 400	Date: 26-MAY-91
0000	No Oil	AK State Plane Zone 4 wb004ab	Date Entered:

EXXON

– SURFACE OIL CATEGORY MAP — REVIEWED: MC 6/8/91

1991 MAYSAP EVALUATION

SEGMENT: WB 004 **SUB:** A **REGION:** KEN **SURVEY DATE:** 5/26/91

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)	N	N	N
Manual Pickup (Check as Req.)			
Spot Washing			
Bio-Customblen Only			
Bio-Inipol/Customblen			
Other			
Other			

COMMENTS:
INITIAL:

TAG:

FOSC:

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

ADEC John Baum

EXXON Real

USCG L. M. Murphy LT

NOAA J. Terrell

FOSC

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

ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

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

25 B1

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT WB-004 SUBDIVISION A DATE 5/27/91

ADEC
NAME Steve Ferguson SIGNATURE [signature]

☒ NTR ☐ TREATMENT RECOMMENDED

NO TREATMENT RECOMMENDED. All oiling observed with the exception of CT/ST were picked up during survey.

EXXON
NAME George P. Stiles SIGNATURE [signature] 5/27/91

☒ NTR Very little oil was found to remain. The survey crew picked up several areas of AP/HSOR (weathered). Picked up. 1 bag.

LANDMANAGER
NAME Pat Norman OF Pat Berthan SIGNATURE [signature]

☒ NTR this spot could be checked over the summer when work is done on other sites in Windy Bay.

USCG/NOAA
NAME [illegible] SIGNATURE [signature]

☒ NTR very little found.

[signature]

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 1

TEAM NO. 4

SEGMENT WB004

OG B TRIMM

BIO J ROTH

SUBDIVISION A

ADEC S FERGUSON

LANDMANAGER P NOEMAN for P GRAHAM

DATE MAY 1, 26 /91

EXXON G SILES

USCG/NOAA McMAHON/McDONALD

TIME 20:44 to 20:55

TIDE LEVEL 4.72 ft. to 5.12 ft.

ENERGY LEVEL: ☐ H ☒ M ☐ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 75 m

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

EST. OIL CATEGORY LENGTH: W Ø m M Ø m N Ø m VL 10 m NO 65 m US 2403 m

LOC	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO		V H M L	WIDTH m	LENGTH m	S	UI	MI	LI	
A						S	S				R	V	1	5	X	X			
B						S	S				R	V	1	5	X	X			

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

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

PHOTO ROLL # MAYSAP- — - — FRAMES —

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE	CLEAN BELOW	H2O LEVEL	SHEEN COLOR	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO	cm-cm	Y/N	(cm)	B R S N	S	UI	MI	LI		
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									
									-									

No Pits

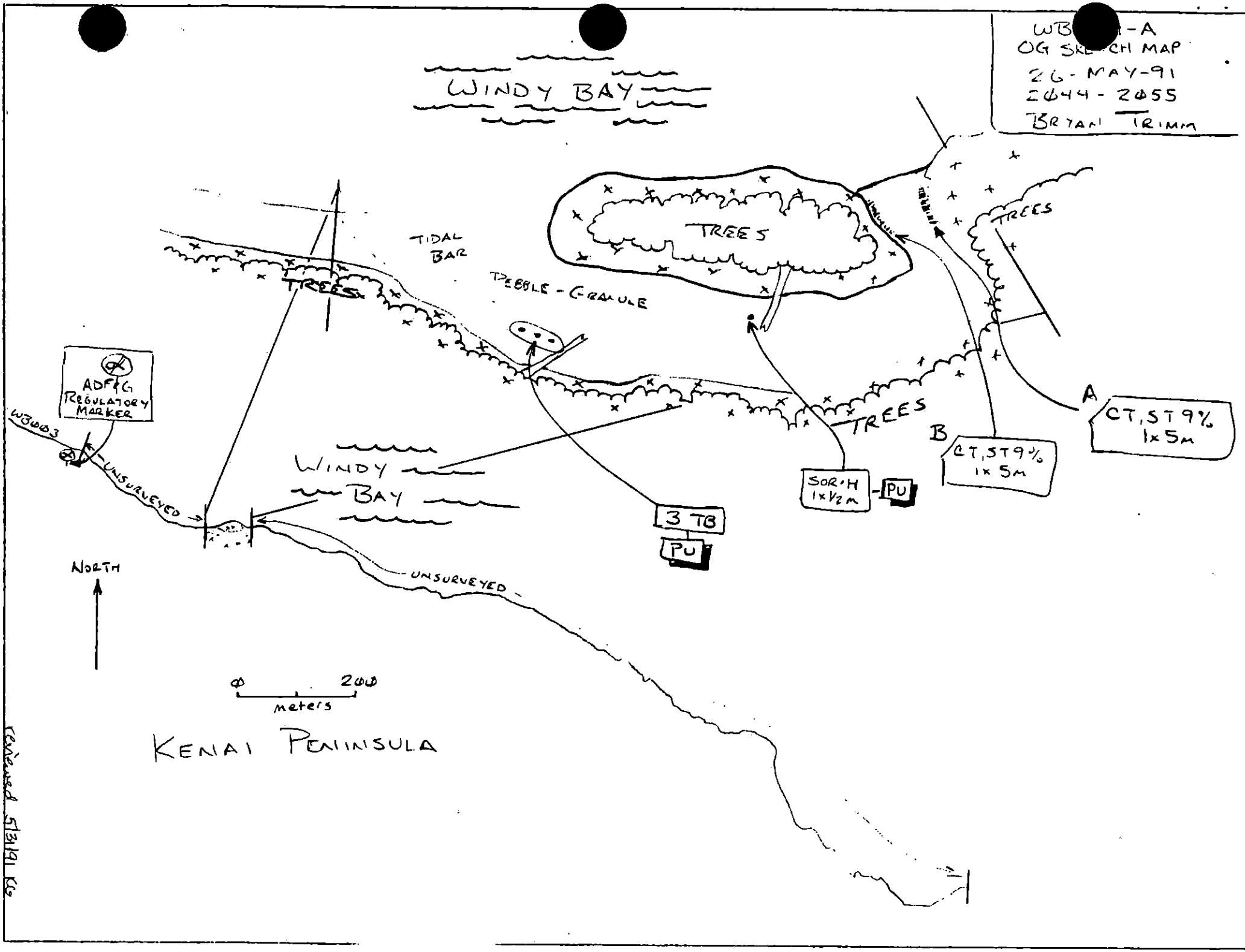
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS:

VERY LITTLE OIL REMAINS

REVIEWED: MC 6/24/91
revised 5/31/91 KG

WB[illegible]-A
OG SKETCH MAP
26-MAY-91
2044 - 2055
BRYAN TRIMM



Reviewed 5/31/91 KG
RENIBUSD: MC GRAW

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #	4	DATE	26 MAY 91
SEGMENT #	WB 4	TIDAL HEIGHT(Range)	+ 4.6 TO 4.65
SUBDIVISION	A	BIOLOGIST	Jim ROTH
SEA STATE	1 FT	WIND SPEED/DIRECTION	
PHOTOGRAPHS: ROLL #		FRAME #	

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

A - HITE BEDROCK W/ VERRUCARIA

B - HITE BEDROCK W/ VERRUCARIA, SPARSE BARNACLES, LITTORINES.

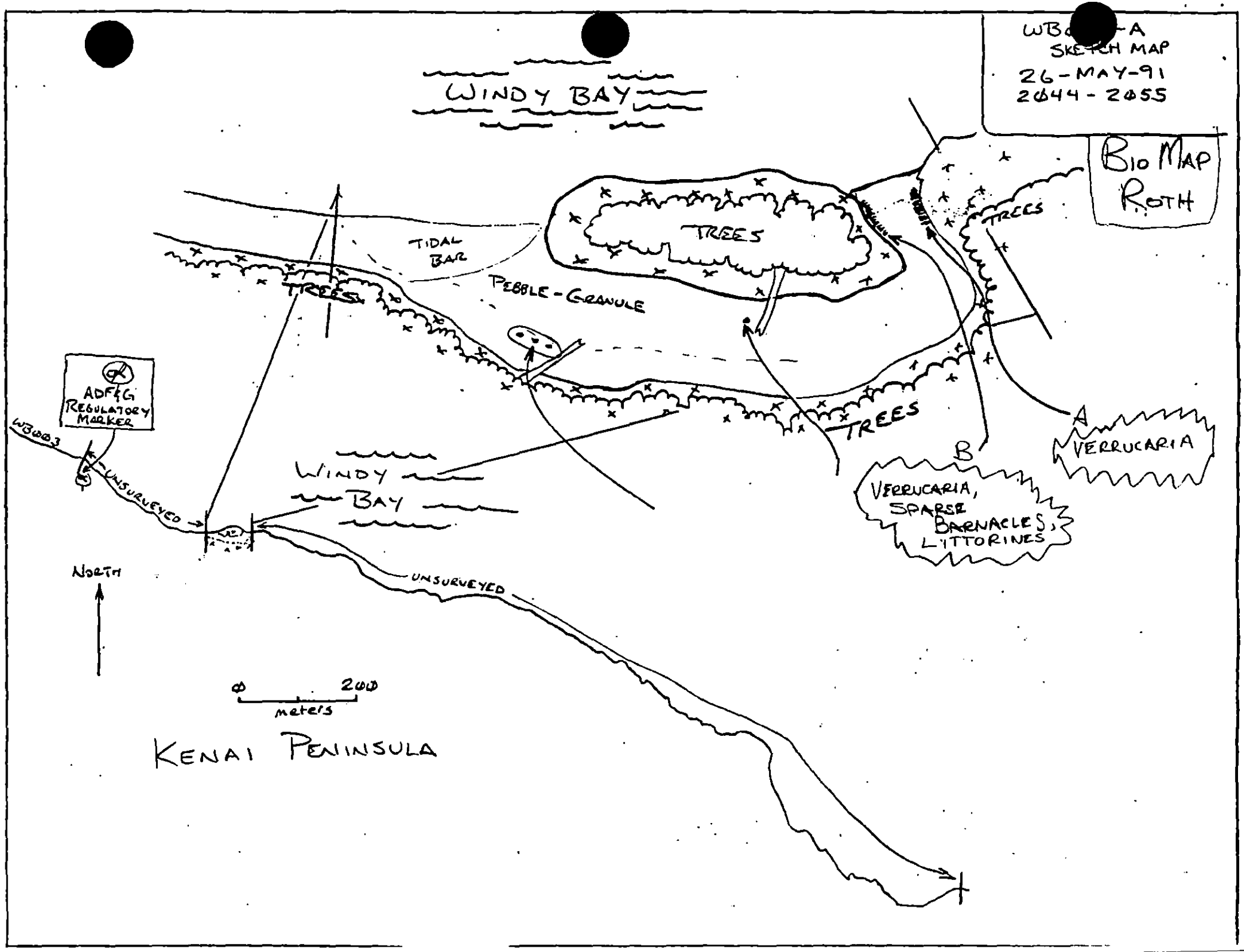
GENERAL COMMENTS: A FAIRLY HIGH-ENERGY SITE CONSISTING OF A CLEAN PEBBLE-GRANULE BEACH WHICH IS DEVOID OF INTERTIDAL BIOTA; AND A BEDROCK OUTCROPPING WHICH HAS A WELL-DEVELOPED AND THRIVING INTERTIDAL BIOTA ON THE NORTH SIDE.

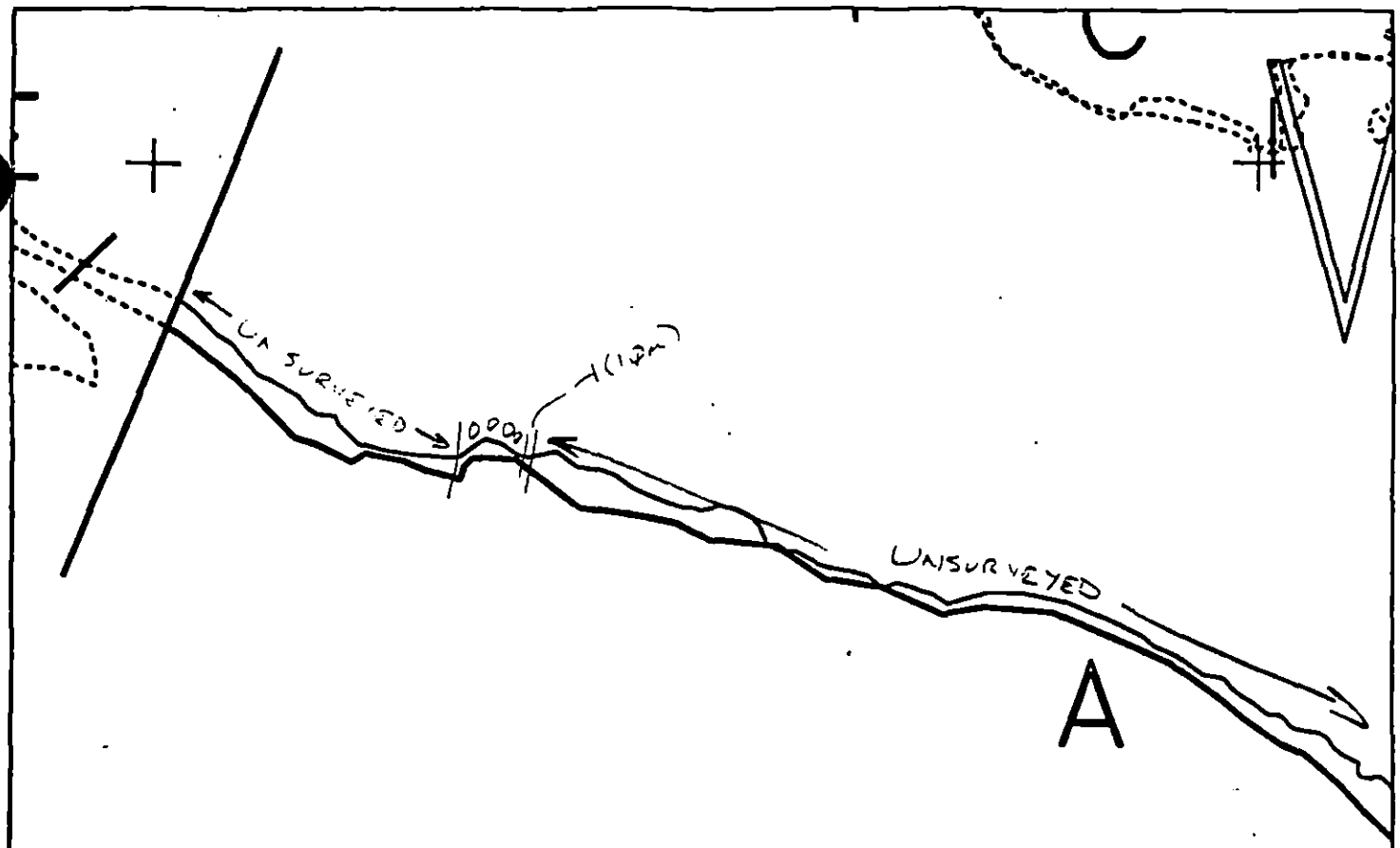
WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

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.


WB[illegible]-A
SKETCH MAP
26-MAY-91
2044-2055
BIO MAP
ROTH
WINDY BAY
TREES
TIDAL BAR
PEBBLE-GRANULE
TREES
TREES
TREES
ADF&G REGULATORY MARKER
WB003
UNSURVEYED
WINDY BAY
UNSURVEYED
A
VERRUCARIA
B
VERRUCARIA, SPARSE BARNACLES, LITTORINES
NORTH
0
200
meters
KENAI PENINSULA



WB-04

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

WB004 A

ADEC Subsegment Length: 2478m

METERS

0 200 400

AK State Plane Zone 4

wb004aa

Subdivision Field Map

Map Key: KENWB004Aa

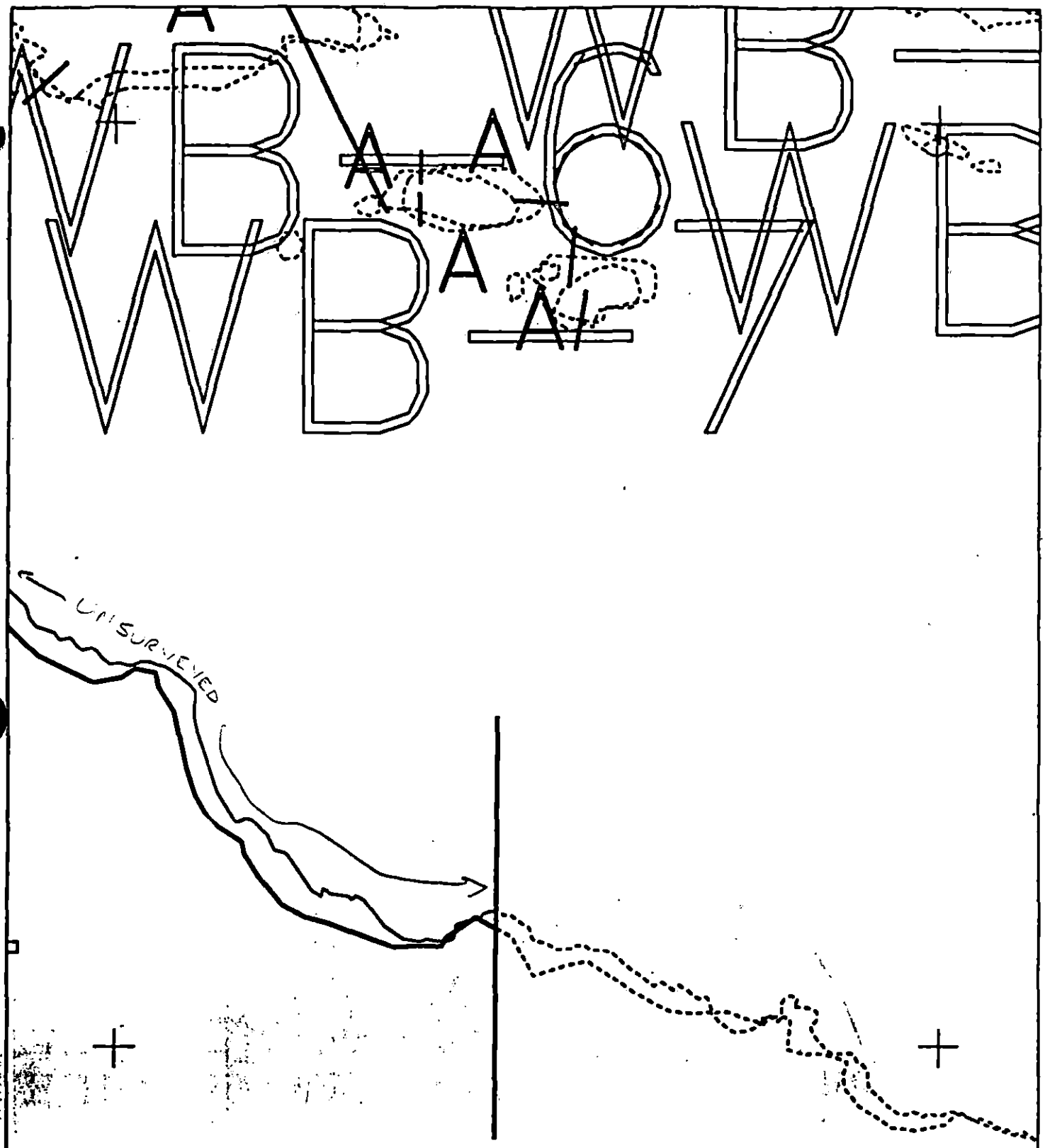
Name: TRIMM

Date: 26-May-91

Date Entered:

SURFACE OIL CATEGORY MAP

REVIEWED: MC 6/2/91
reviewed 5/31/91 KG



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

WB004 A

ADEC Subsegment Length: 2478m

METERS

0 200 400

AK State Plane Zone 4
wb004ab

EXXON

Subdivision Field Map
Map Key: KENWB004Ab
Name: TRIMM
Date: 26-MAY-91
Date Entered:

— SURFACE OIL CATEGORY MAP — REVIEWED: MC 6/2/91

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1J Purse seine area (7/1 to 8/31)
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 a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: J. Daniel McMahan DATE: 5/11/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 394 m: V.Light 767 m: No Oil 1317 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes manual removal of tarmats in areas indicated on sketch map. Work should be conducted between 6/1 and 7/1 with approval of USFWS regarding eagle nest constraint.

TAG COMMENTS: ____

TAG APPROVAL DATE: 5/11/90
ADEC Art Weiner Art Weiner
EXXON Amy Tan
NOAA Joseph C Tuggett
USCG D.D. Rome D.D. Rome

FOSC: ____ DATE: 6 June 90

OG KICK GILLIE

SEGMENT ST/ [redacted]-04

SUBDIVISION A-1 of 1

DATE 04/28/90

CHECKLIST

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

LEGEND

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

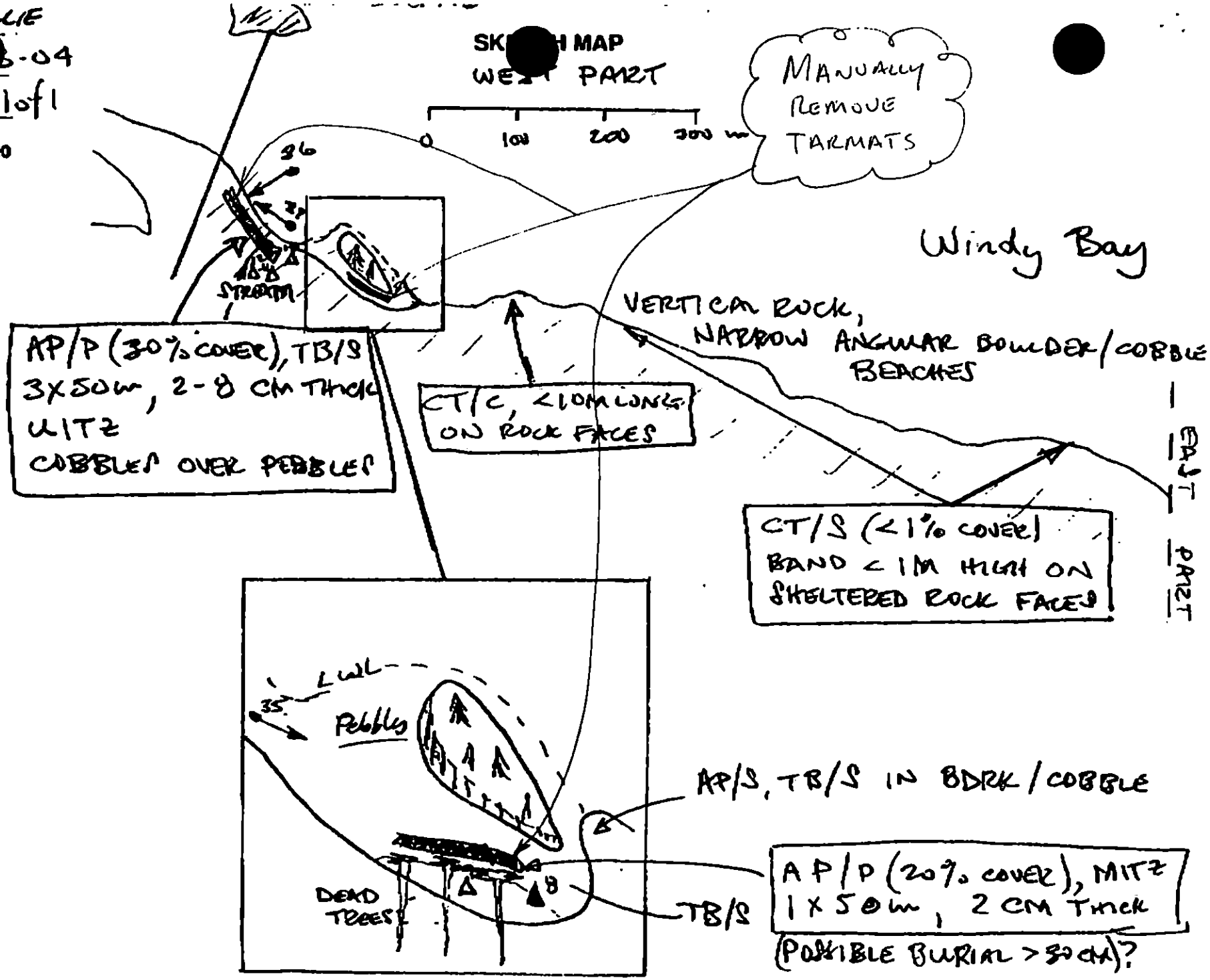
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 Photo location, direction, and number



OG RICK GILLIE

SEGMENT ST/ B-04

SUBDIVISION A-1of1

DATE 04/29/90

CHECKLIST

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

LEGEND

1 △ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

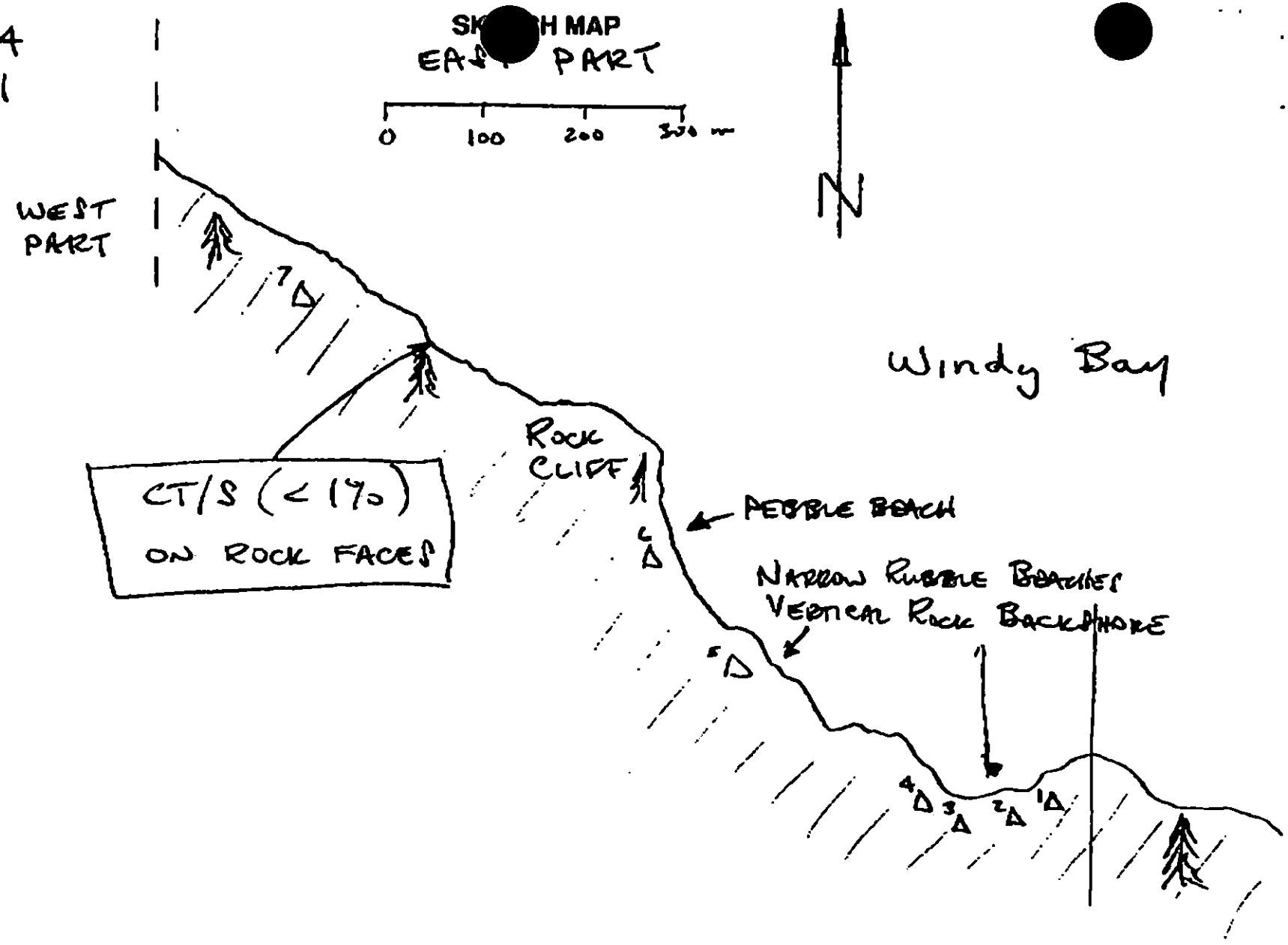
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 ⊕ Photo location, direction, and number



Oil Character Length (m): AP 20 PO 0 CV 0 CT 100 ST 0 MS 0 PT 0 TB 5 FL 0 NO 2410

(FOR ENTIRE SEGMENT)

APR-29-1990 07:18 FROM SEA TRADER TO EXXON&SSAT)) P.05

RICK C[illegible]E

GMENT ST/ [illegible]

BDIVISION A

TE [illegible] 90

HECKLIST

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

EGEND

1 ▲
No Subsurface Oil

2 ▲
Subsurface Oil

CT/C
[illegible]nuous Distribution

CT/B
[illegible]ken Distribution

CT/P
[illegible]ty Distribution

CT/S
[illegible]ished Distribution

[illegible]d Vegetation

[illegible]
[illegible]o location, direction, number

SKETCH MAP

N[illegible]

0 100 200 300 m

Windy Bay

VER[illegible] ROCK,
NA[illegible] BOULDER/[illegible]
BE[illegible]

AP[illegible] (3[illegible], T3[illegible]
3X[illegible]
[illegible]
CIBBL[illegible]

CT/C, <[illegible] ALONG
ON [illegible]

CT/S <1% [illegible],
BAND <1M [illegible] ON
[illegible]TERED [illegible] FACES

LWL
35
POND
DE[illegible]

AP[illegible] -3/2 IN BOXR CIBBLE

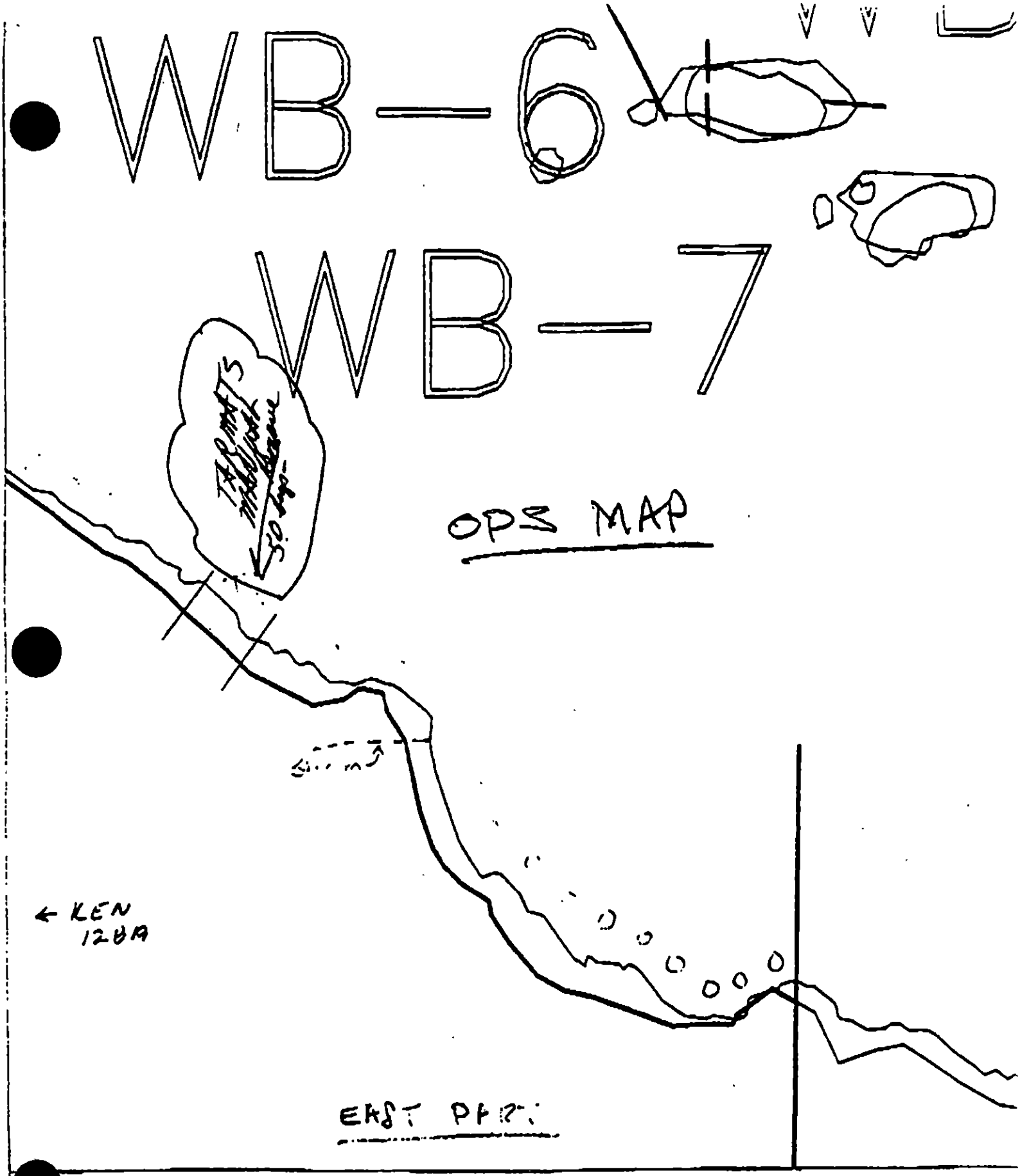
AP/[illegible], 20% [illegible], MITZ
X[illegible]0M, 2 CM THI[illegible]

TB[illegible]

PUS[illegible] BUC[illegible] ?ARIAL >3[illegible]

[illegible]tracer Length (m): [illegible] PO CV CT ST MS PT TB FF ND

REVISION 03/90



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

WB-4

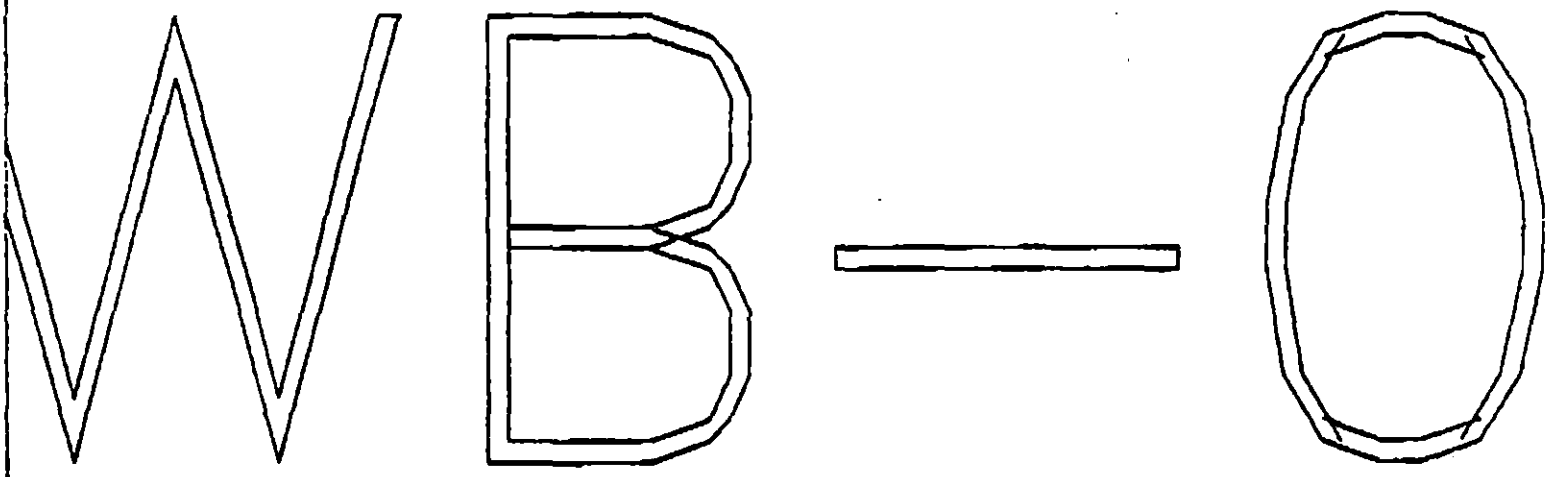
ADEC Segment Length: 2465m

Map Key: KEN-128b
Name: Rick Gillie
Date: 04/23/90

OPS MAP

NEXT PA

LEN 2



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

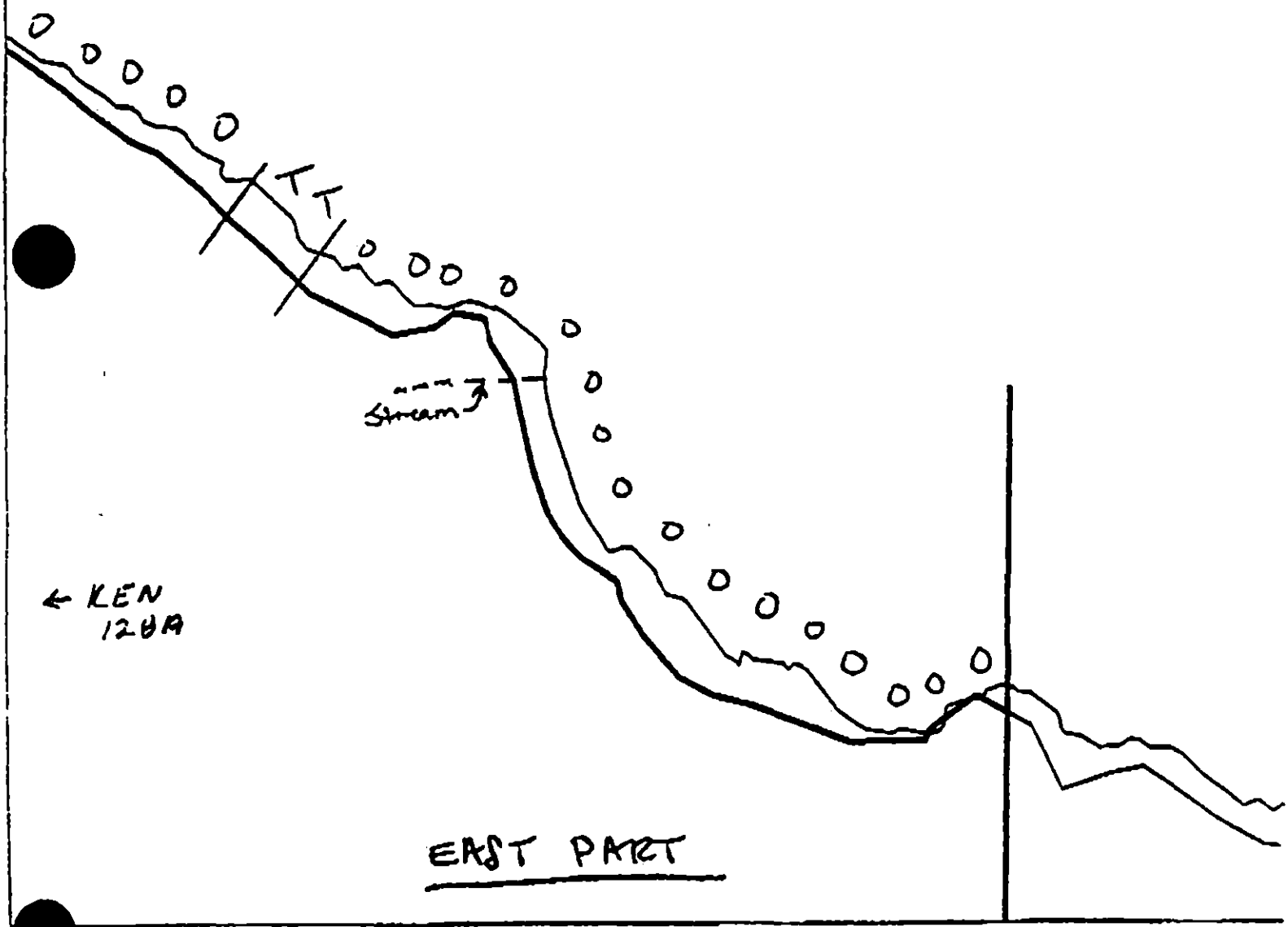
WB-4

ADEC Segment Length: 2465m

Map Key: KEN-128a
Name: Rick Grilie
Date: 04/28/90

WB-6

WB-7

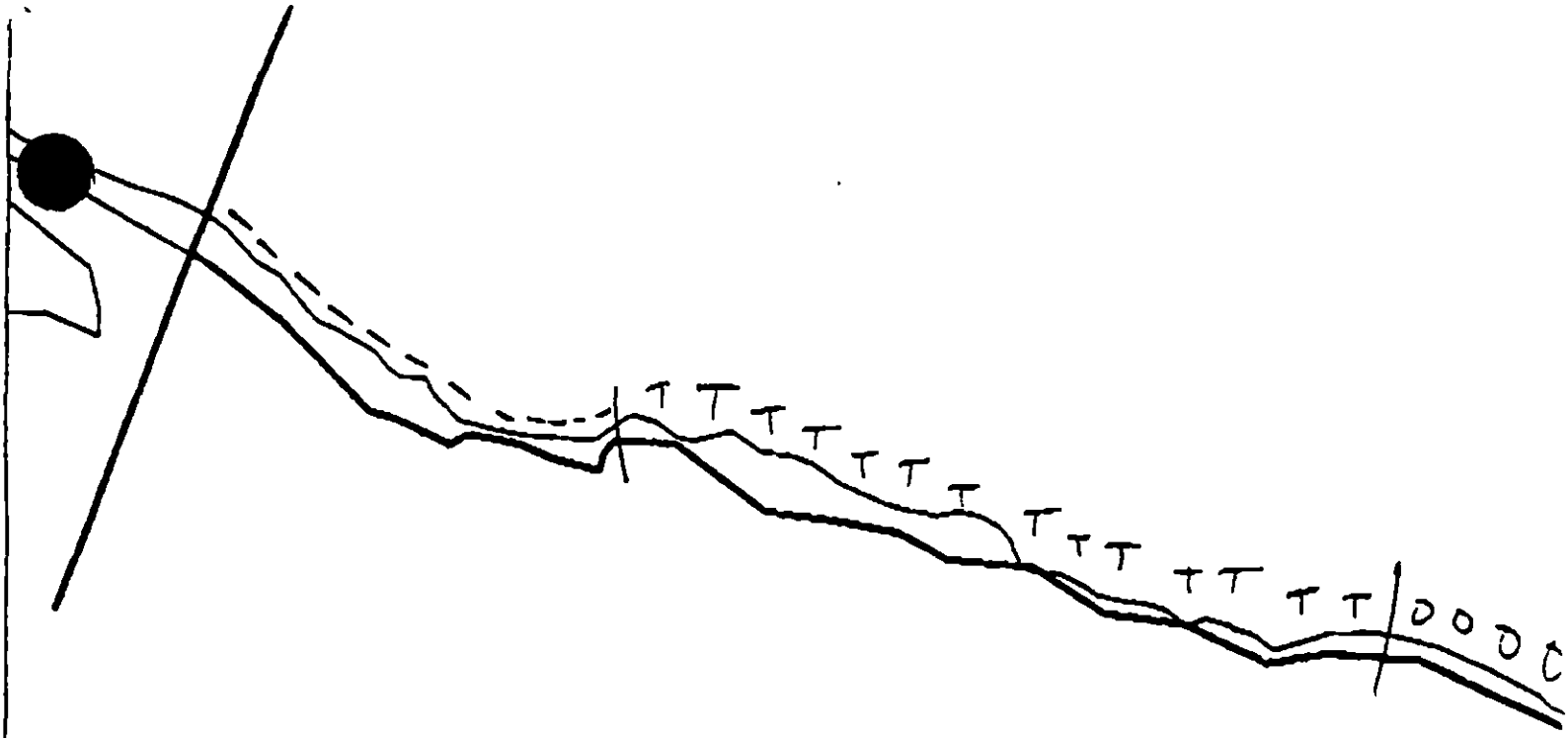


XXXX Wide
//// Medium
---- Narrow
TTTT Very Light

WB-4

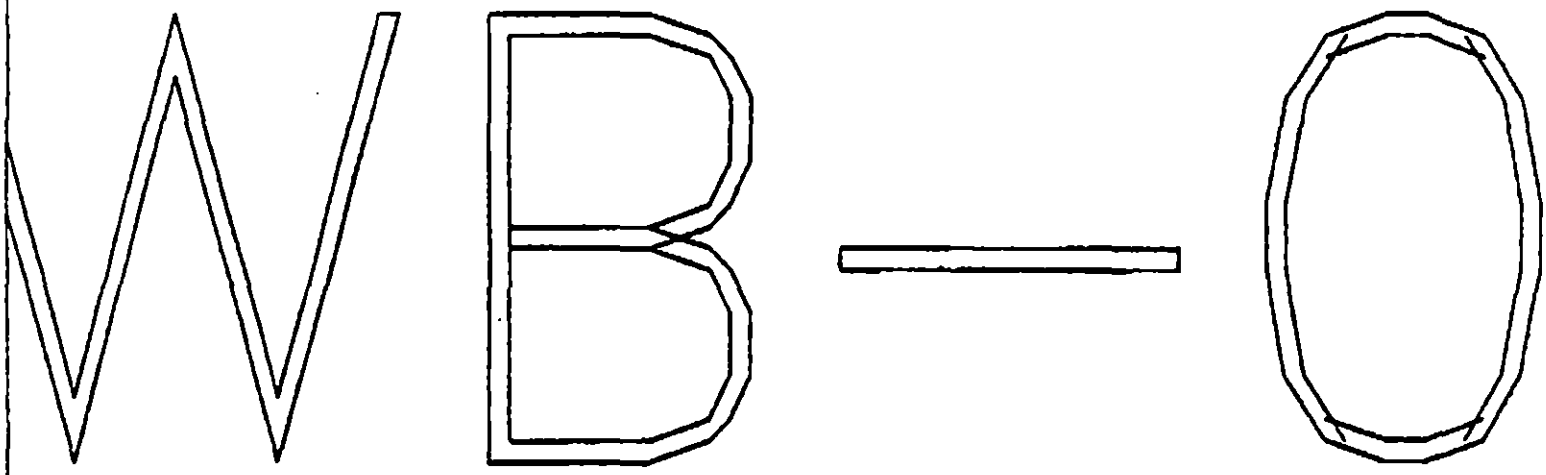
ADEC Segment Length: 2465m

Map Key: KEN-128b
Name: Rick Gillie
Date: 04/29/90



WEST PART

LEN 128a →



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

WB-4

ADEC Segment Length: 2465m

Map Key: KEN-128a
Name: Rick Grillie
Date: 04/28/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT WB-4 SUBDIVISION A (1 of 1)

WORK WINDOW	
Tarmat Removal	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

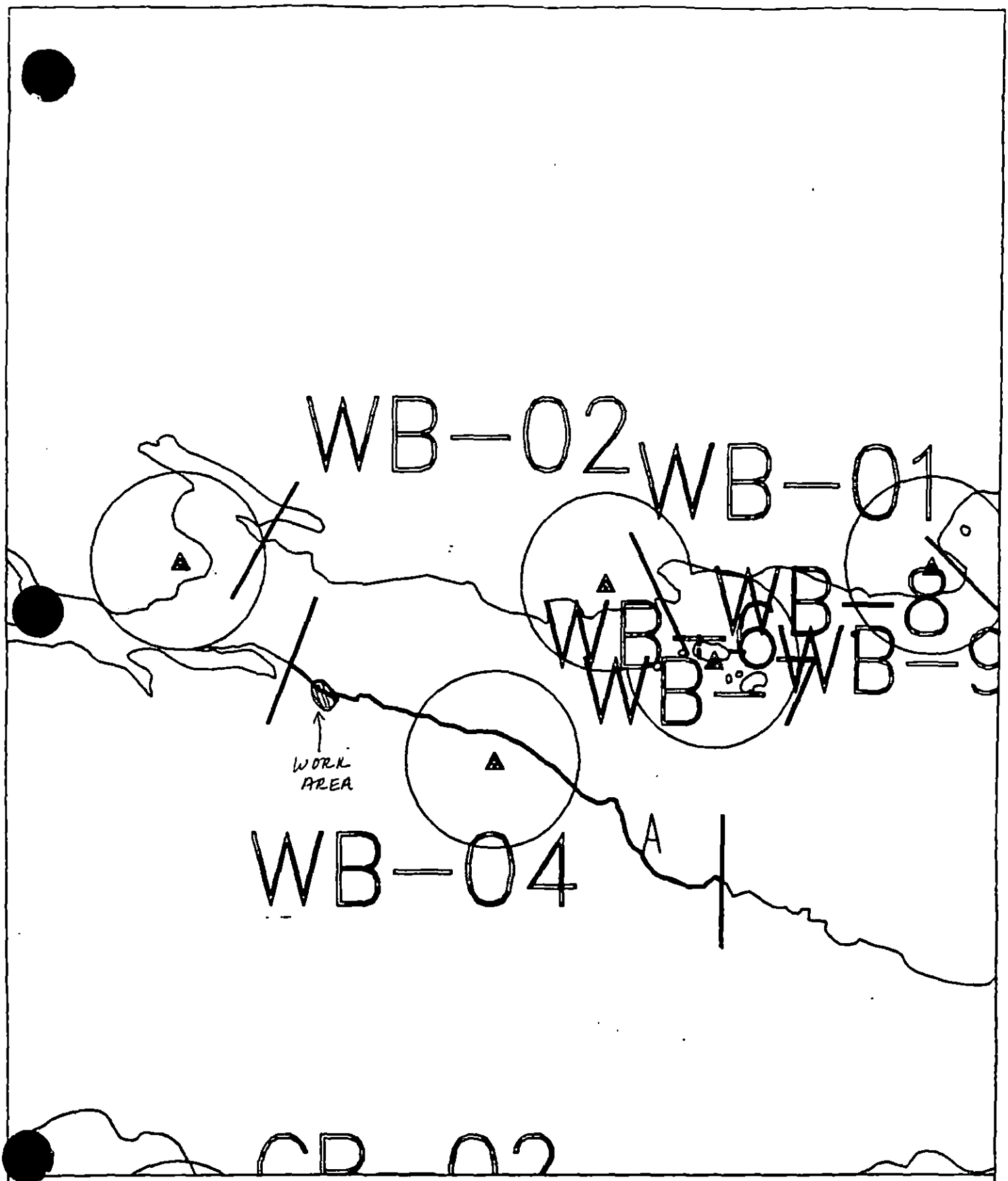
1J	**Purse Seine Area**	No constraint to tarmat removal.
5T	**Bald Eagle Nest**	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.

OTHER ECOLOGICAL CONSIDERATIONS 1

Restrict boat and air traffic to essential minimum after 7/1. Restrict air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

FOSC _____ Date 6-19-90

Prepared by _____ Date 6/16/90



EXXON

Exxon Company, USA

ECOLOGY MAP

SEGMENT WB-4

SUBDIVISION A (1 of 1)

METERS

★ Seabird Colony

▲ Eagle Nest

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1J Purse seine area (7/1 to 8/31)
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 a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: J. Daniel McMahan DATE: 5/11/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 394 m: V.Light 767 m: No Oil 1317 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes manual removal of ~~tarmats~~ in areas indicated on sketch map. Work should be conducted between 6/1 and 7/1 with approval of USFWS regarding eagle nest constraint.
SEE CONSTRAINTS ADDENDUM dated 6/16/90

TAG COMMENTS:

TAG APPROVAL DATE: 5/11/90
ADEC Art Weiner
EXXON Amy Teh
NOAA Joseph C. Tuggett
USCG D.D. Rome

FOSC: ML DATE: 6 June 90

REGION: KENAI

SEGMENT: ST/WB-06

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ WB-06 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 0 m: Medium 0 m: Narrow 0 m: V.Light 17 m: No Oil 79 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat removal and bioremediation of oil coated boulders and bedrock as indicated on sketch map. Work should be conducted after 5/15 based on above shorebird/waterfowl constraints.

TAG COMMENTS:_____

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

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 unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.	
3N, 3P 3O, 3Q	Harbor seal and sea lion pupping (5/15 to 7/1) Harbor seal and sea lion molting (8/15 to 9/15) Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.	
5R	Seabird colony (5/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.	
5S	Shorebird/waterfowl concentration (4/1 to 5/15) Restrict all activity to essential minimum, especially air traffic.	
5T	All Bald Eagle nests (3/1 to 6/1) Active Bald Eagle nests (3/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.	
6U	Recreation:	Tent sites (6/1 to 9/15)
6V		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-6 SUBDIVISION: A DATE 4/7/90

USCG
NAME R. Bryan Hirtle SIGNATURE R. Bryan Hirtle

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Agree with the findings of the Shoreline Oiling Summary Sheet

ADEC
NAME Russell Kunibe SIGNATURE Russell Kunibe

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Only one 25cm patty and some tarring on the boulders and rocks was found.

LAND MANAGER
NAME Patrick Norman SIGNATURE Patrick Norman

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

SHORELINE OILING SUMMARY

REVISION NO. 03.21.90

OG Randy Siegel USCG Bryan Hirtle SEGMENT ST/ WB-6
BIO Mike Egweet LAND REP Pat Norman (PGUC) SUBDIVISION A
EXXON John Dean ADEC Russell Kunbe TIME 16:45 to 17:10
TEAM NO.: 17 TIDE LEVEL: +4.0 to +3.5 DATE 4/7/90
ST. SUBDIVISION LENGTH: 92 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: NE to SE
SURFACE SEDIMENTS: R 15 % B 10 % C 5 % P 5 % G 60 % S 5 % M 0 % V 0 %
SLOPE: Lang 75 % Hang 25 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W ~~N/A~~ Ø m M ~~N/A~~ Ø m N ~~N/A~~ Ø m VL 30 m NO 62 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	/C	/B	/P	/S	BRN/BR	DBL/RW	GY/SL	DBR/TL	LBR	SU	UI	MI	LI
ASPHALT PAVEMENT				X				X			X		
POOLED													
COVER													
COAT		X				X					X		
STAIN		X				X					X		
MOUSSE													
PATTIES				X				X			X		
TARBALLS				X				X			X		
FILM													
NO OIL										X		X	X

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

OILED DEBRIS	AMOUNT SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

↑None

DEBRIS COLLECTED: ☐ YES ☒ NO
TYPE —
#BAGS 0

Photographs:
Roll No. ST-17-5
Frames 6,9,10,15

SUBSURFACE OIL

PIT NO	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				ANA	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	BRN/BR	DBL/RW	GY/SL	DBR/TL	LBR	SU	UI	MI	LI		
* 1	25				X		0-5		X	X						X				G
* 2	25				X		0-5		X	X						X				G

COMMENTS This segment consists of a west-facing gravel beach on an island. The segment is ~~only~~ listed as only 92 meters long. The beach is flanked by bedrock outcrops. 4 or 5 PT/TB were observed within the northern outcrop and some ST/CT was observed on the southern outcrop. Very minor oiling.

* ST/S on some gravel from pits 1+2.

REVIEWED BAC DATE 12 Apr 90

SEGMENT STA 6

SUBDIVISION B

DATE 4 / 7 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)
- PH 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

Stained Vegetation

1 ⇒

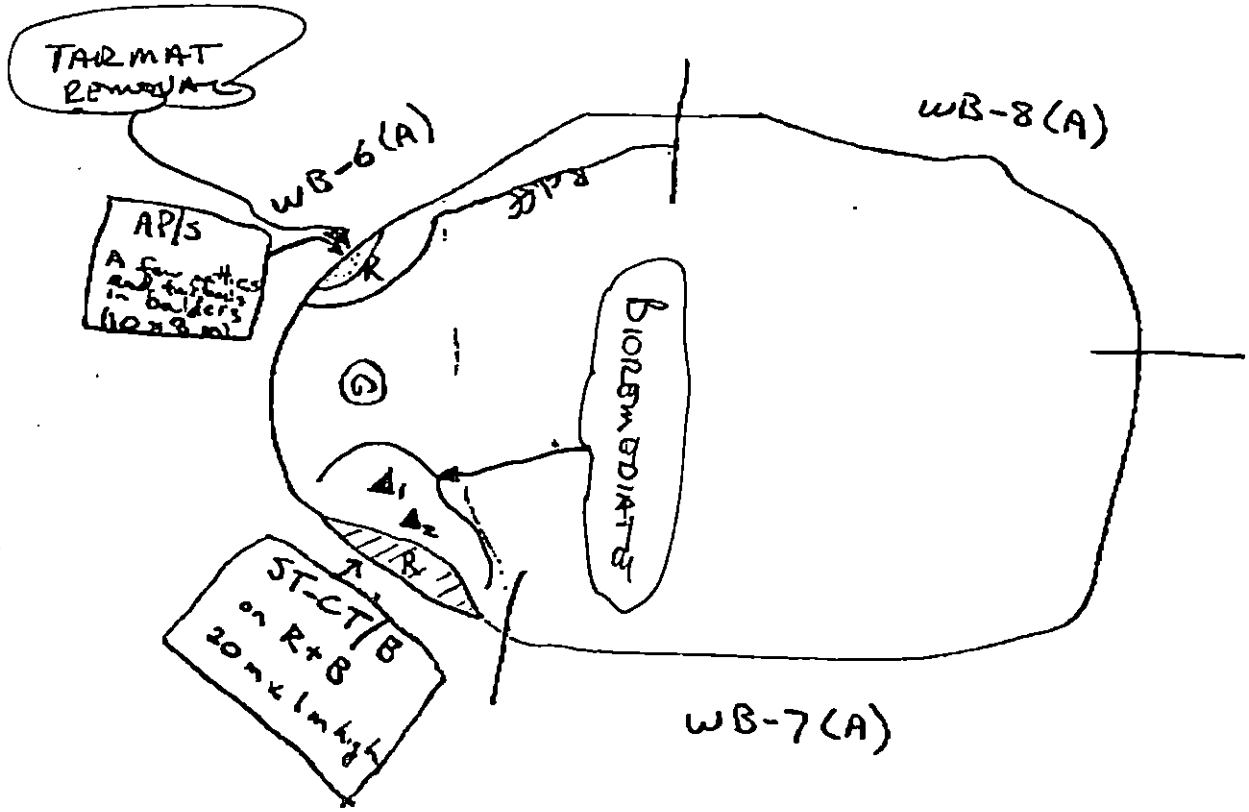
Photo location, direction, and number

2 cm = 16 m

Appr Scale

N

SKETCH MAP



The island dimensions are scaled down according to Exxon's published segment lengths - I believe the dimensions of the island are significantly larger than those indicated.

Character Length (m): AP ; PO N/A CV N/A CT 20 ST 20 MS N/A PT 1 TB 1 FL N/A NO 77 62

REVISED 12/5/89

APR 1 0 1990 SUN 21:45 P.04

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / WB6 Subdivision A Date (mo / day / yr) 4/7/90

Time (24 hr) 1720-1735 Biologist M. H. Fawcett

(A) Substrate type and % of segments:
(1) Bedrock 15 (2) Boulder 10 (3) Cobble 5 (4) Pebble 5 (5) Sand 65 (Sand. gravel) (6) Silt Ø

(B) Overall % cover of biota (% of segment): Dense____ Moderate____ Low ✓

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

Photographs: Roll No. ST-17-5 Frames 6, 9, 10, 15

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

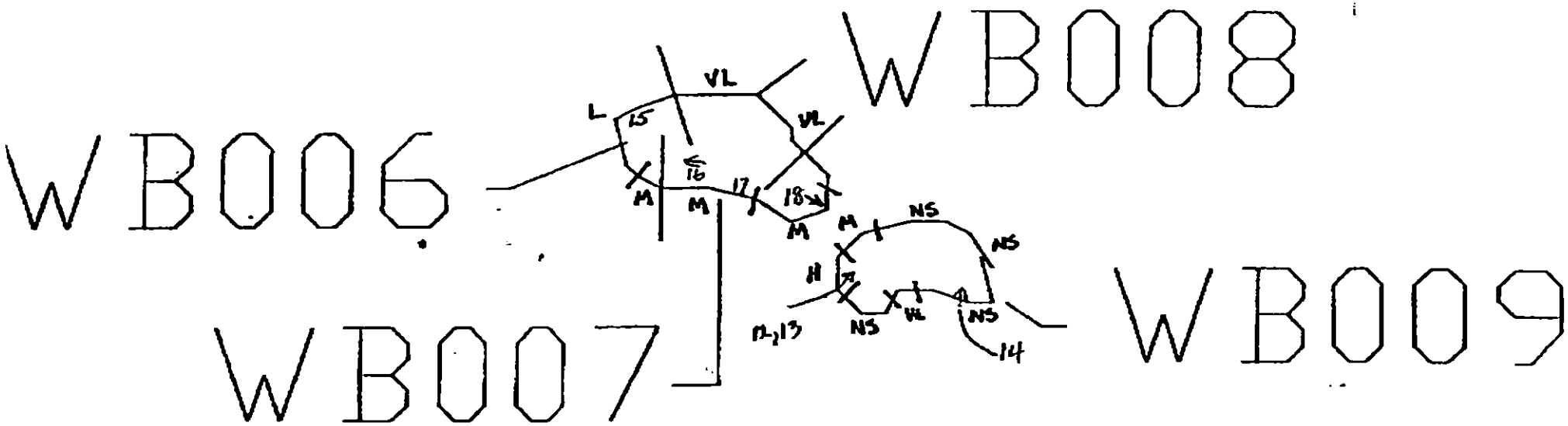
NOT PRESENT

Wildlife Observations/ General Comments:
Most of the segment consists of a barren, unstable sand/gravel spit, with no macro-biota. However a large rock outcrop on the north side of the spit spans the intertidal zone and has dense barnacles in MTZ and UTZ

Ecological Considerations: dense mussels in MTZ, moderately dense littorines and limpets in MTZ & UTZ, and sparse Fucus in MTZ.

US - bird concentration area

Photos: ST-17-5
frames: 6, 9, 10, ~~[illegible]~~ 15
4/7/90



6, 9, 10 (aerial)
1000'

500.0

OILING

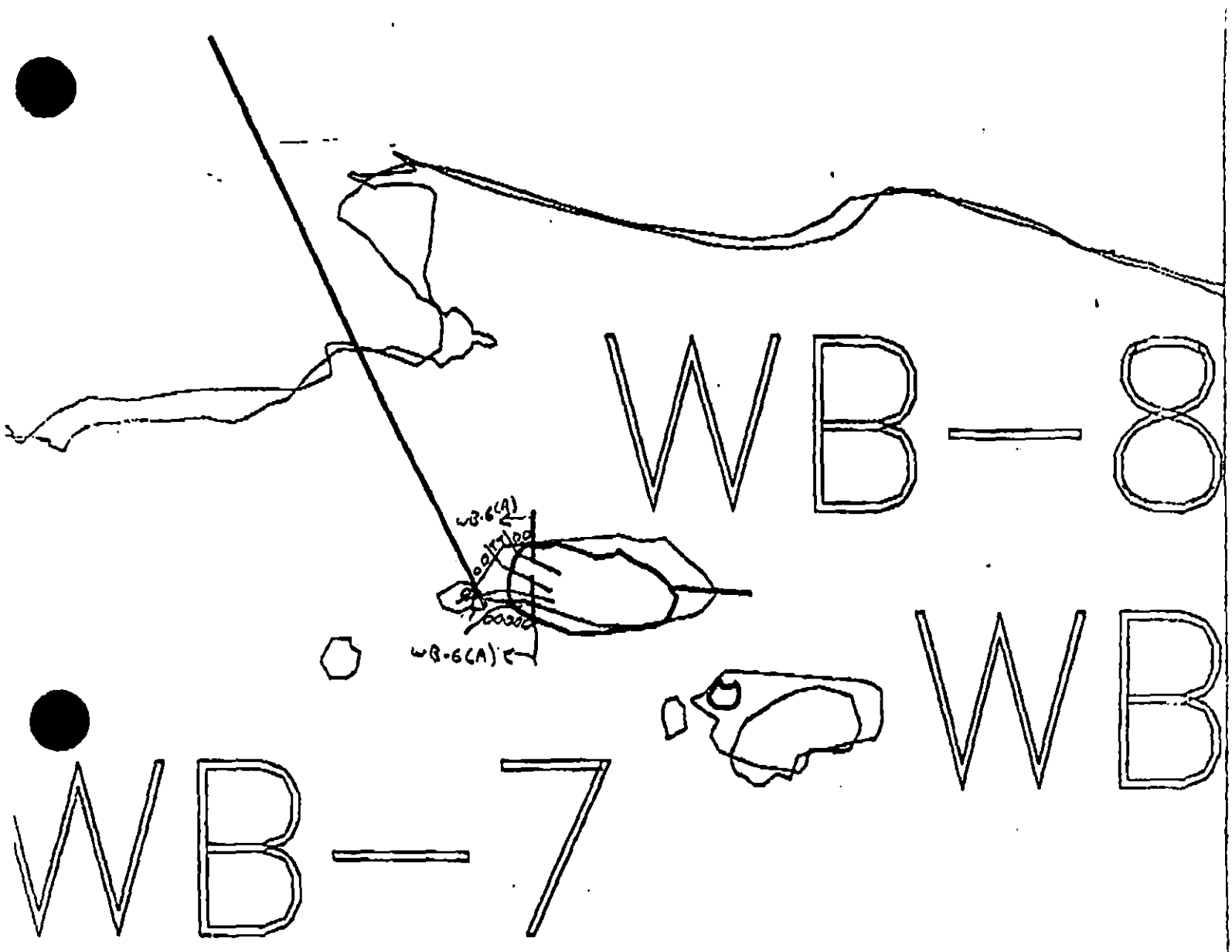
- Heavy
- Moderate
- Light
- Very Light
- None
- Not Surveyed

tance In Meters

Sep/Oct 1988 Survey

N

APR 0-90 SCZ 21:45 P.05



WB-6
subdivision A
(only 1 subdivision)

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

WB-6

ADEC Segment Length: 513m

Map Key: KEN-149
Name: Rudy Siegel
Date: 4/7/90

SHORELINE EVALUATION

SEGMENT ST/ WB-06 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 E. Holman DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 17 m: No Oil 79 m
Subsurface Oil Observed: Yes ____ No X Maximum Depth ____

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat removal and bioremediation of oil coated boulders and bedrock as indicated on sketch map. Work should be conducted after 5/15 based on above shorebird/waterfowl constraints.

TAG COMMENTS: ____

TAG APPROVAL DATE: 4/19/90
ADEC ART WEINER Art Weiner
EXXON ANDY TEAL Andy Teal FOSC: [signature] DATE: 5-12-90
NOAA Burl Westcott Burl Westcott
USCG KENNETH KEANE Kenneth Keane

SEGMENT [redacted]B-6

SUBDIVISION A

DATE 4 / 7 90

CHECKLIST

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

LEGEND

1 △ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Speckled Distribution

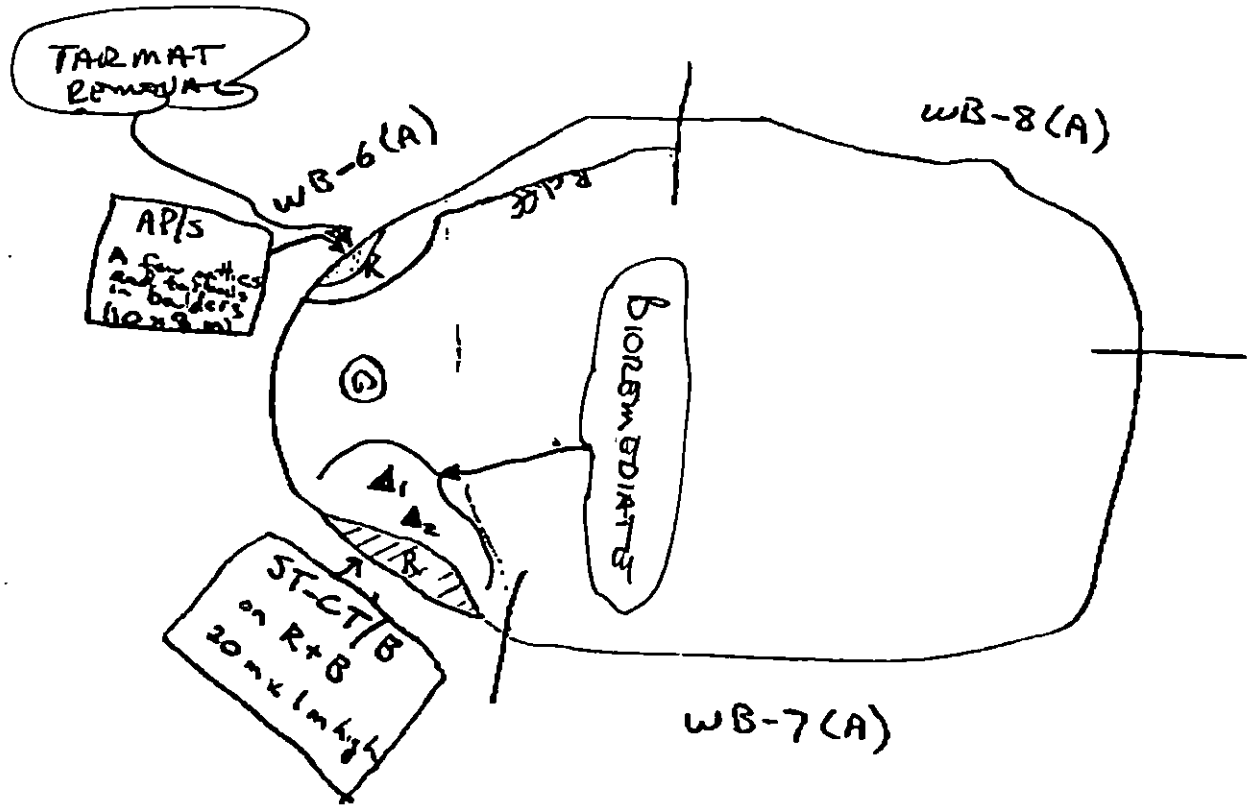
Bed Vegetation

1 Photo location, direction, and number

2 cm = 16 m
Appr Scale

N

[redacted]ETCH MAP



The island dimensions are scaled down according to Exxon's published segment lengths - I believe the dimensions of the island are significantly larger than those indicated.

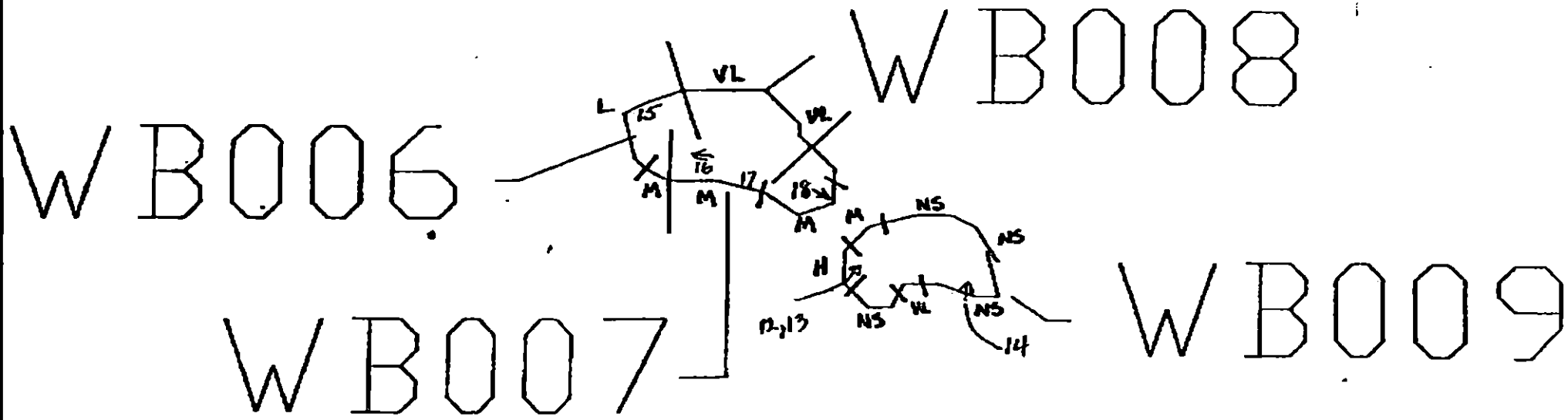
Character Length (m): AP ___ PO N/A CV N/A CT 20 ST 20 MS N/A PT 1 TB 1 FL N/A NO 72 62

REVISIONS

DRI-0190 SCN 11:49

T.04

Photog: ST-17-5
frames 6, 9, 10, ~~[illegible]~~ 15
4/7/90



6, 9, 10 (aerial)
1000'

500.0

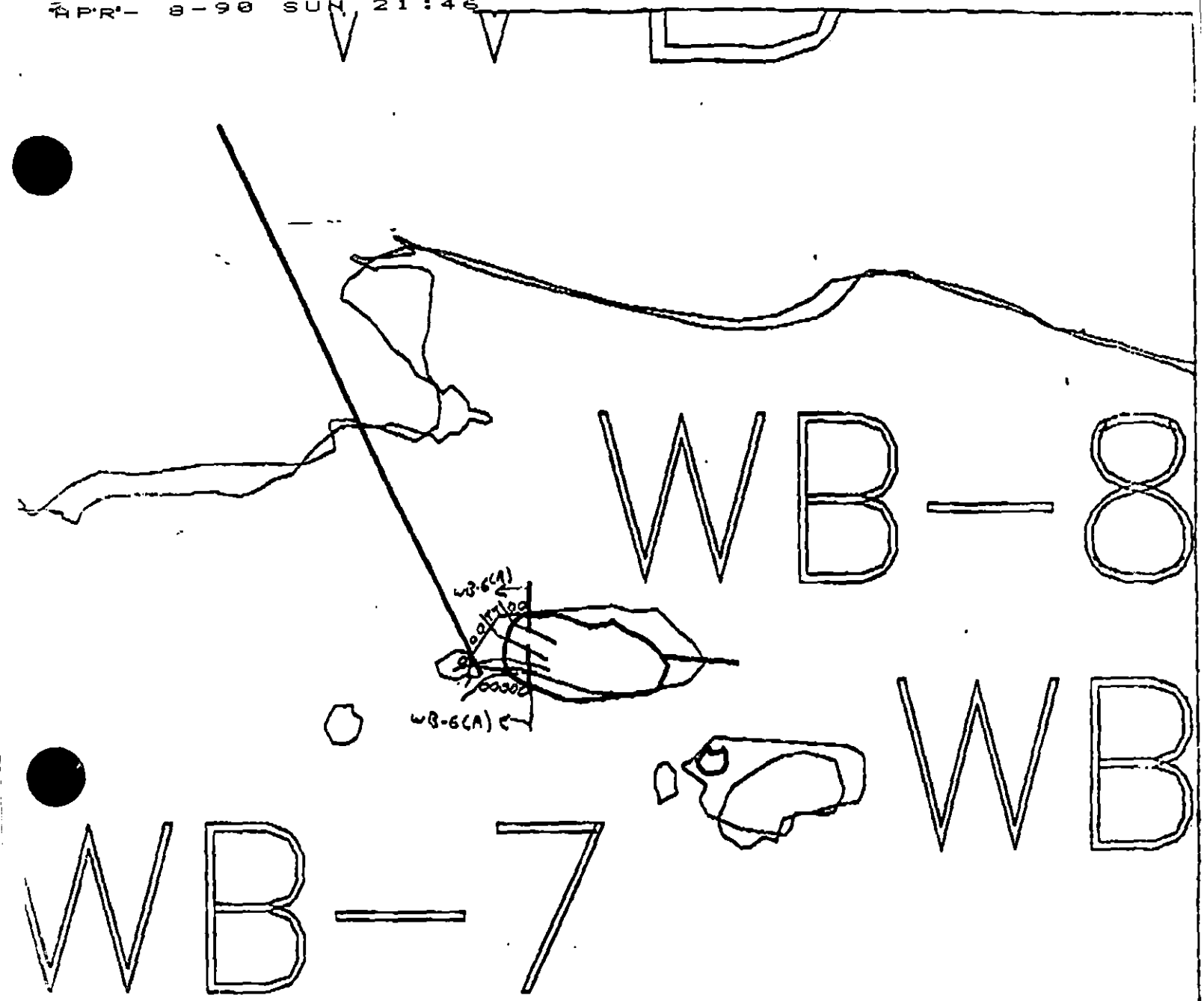
OILING

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

N

stance In Meters

Sep/Oct 1989 Survey



WB-6
subdivision A
(only 1 subdivision)

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

WB-6

ADEC Segment Length: 513m

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

1991 MAYSAP EVALUATION

SEGMENT: WB 006 **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-006 SUBDIVISION A DATE 5/27/91

ADEC
NAME Steve Ferguson SIGNATURE [signature]

☒ NTR ☐ TREATMENT RECOMMENDED

THE 2m(w) x 2m(L) AREA OF MSOR EXPOSED BY TURNING OVER SURFACE COBBLES WAS LOCATED IN AN OPEN AREA OF AN ABUNDENT FUCUS GROWTH. A FEW OTHER OPEN AREAS WHERE COBBLES WERE TURNED REVEALED NO OIL. THE FUCUS AREA WAS NOT DISTURBED BY TURNING OVER A LOT OF COBBLES TO CHECK THE UNDERSIDES FOR OIL.

EXXON
NAME George P. Stiles SIGNATURE [signature] 5/27/91

☒ NTR No appreciable oil remaining.

LANDMANAGER
NAME Pat Norman OF Pat Cochran SIGNATURE [signature] 5-27-91

☒ NTR Any remaining oil is subsurface and would be difficult to find. However when work is done on WB-7A, WB-6-A can be worked if any oil becomes expose.

USCG/NOAA
NAME McMahon/McDonald SIGNATURE [signature]

☑ NTR no noticeable surface oil

[signature]

TEAM NO. ____

OG J M Scopel DIO J. Berry SEGMENT WR-001

ADEC S Fergerson LANDMANAGER P. Nolan for Pat Gordon SUBDIVISION A

EXXON J St. Ch[redacted] USCG/NOAA J Malan / D McDonald DATE May 26 /91

TIME 09 : 00 to [redacted] :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: 97 m NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

EST. OIL CATEGORY LENGTH: W — m M — m N — m VL 2 m NO 95 m US — m

LOC	SURFACE OIL CHARACTER AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO	SURFACE SEDIMENT TYPE	SHORE SLOPE V H M L	AREA WIDTH m	AREA LENGTH m	ZONE S	UI	MI	LI	NOTES
A1				S	T						Sd/pb/cb	M	3	2		*			See map

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYBAP- 4(III) - 10 FRAMES 23

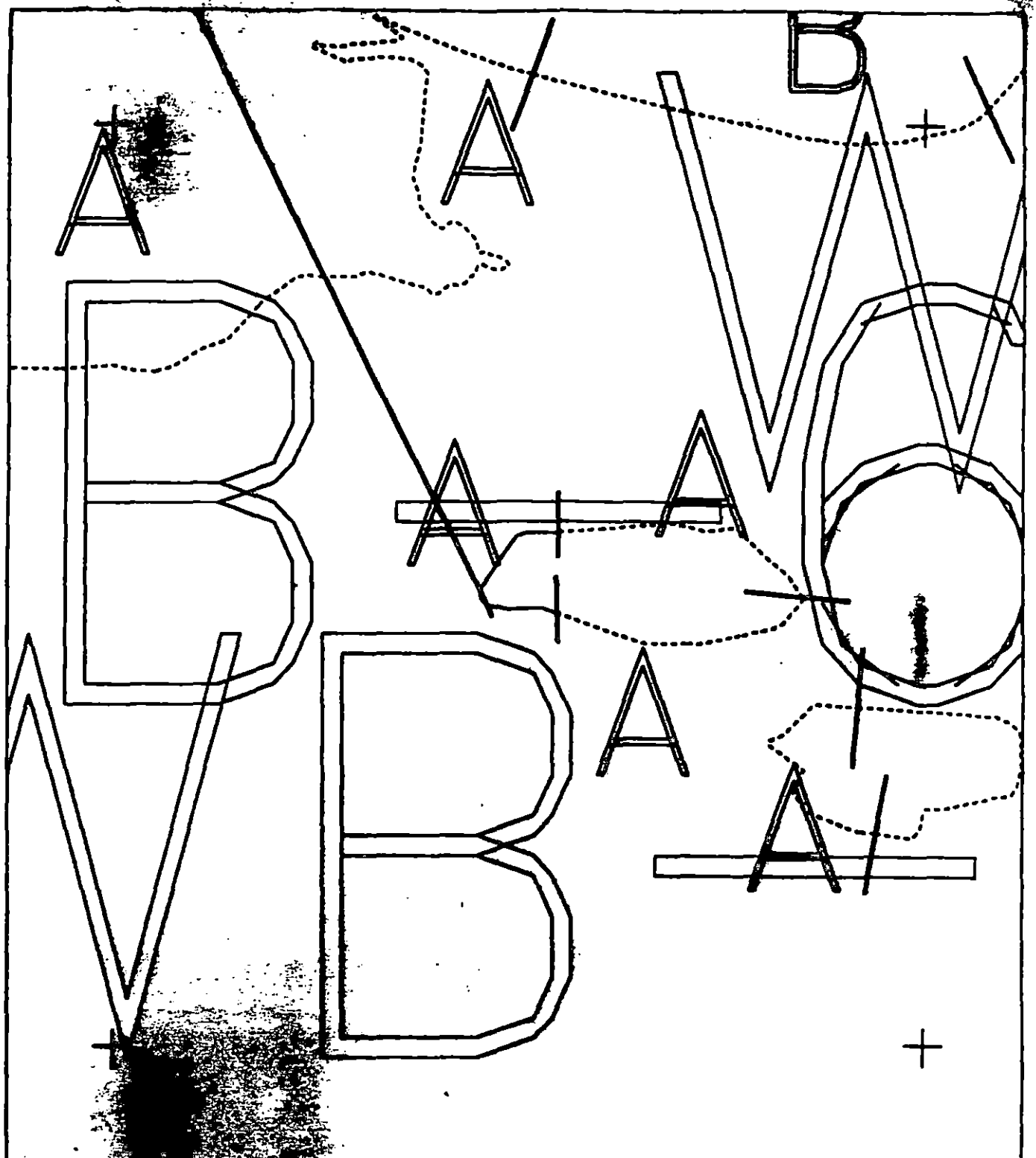
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER OP	HOR	MOR	LOR	OF	TR	NO	OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE S	UI	MI	LI	SURFACE-SUBSURFACE SEDIMENTS	NOTES
1	30							✓	-	Y	—	—		*	1		sd/pb/cb	See map

[redacted] R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS: WA-001-A forms the western extremity on the largest island shown on the OG sketch map. It consists of a saddle shaped accumulation of relatively well sorted sand/pebble/granule/cobble deposit between the bedrock cliff backshore and a nearby bare bedrock outcrop. Oil was found near the bedrock outcrop as a few MSOR pebbles < 20 cm dia under surface cobbles.

REVIEWED: MC 5/31/91

revised 5/30/91 KG



WB006 A

METERS

0 100 200

AK State Plane Zone 4

Subdivision Field Map

Map Key: XXXXXXXA

Name: Joe Sampels

Date: May 26/91

Dry Beach Map

[redacted]-006-A

JM Sempels

MAY 26/91

0900 - 0935

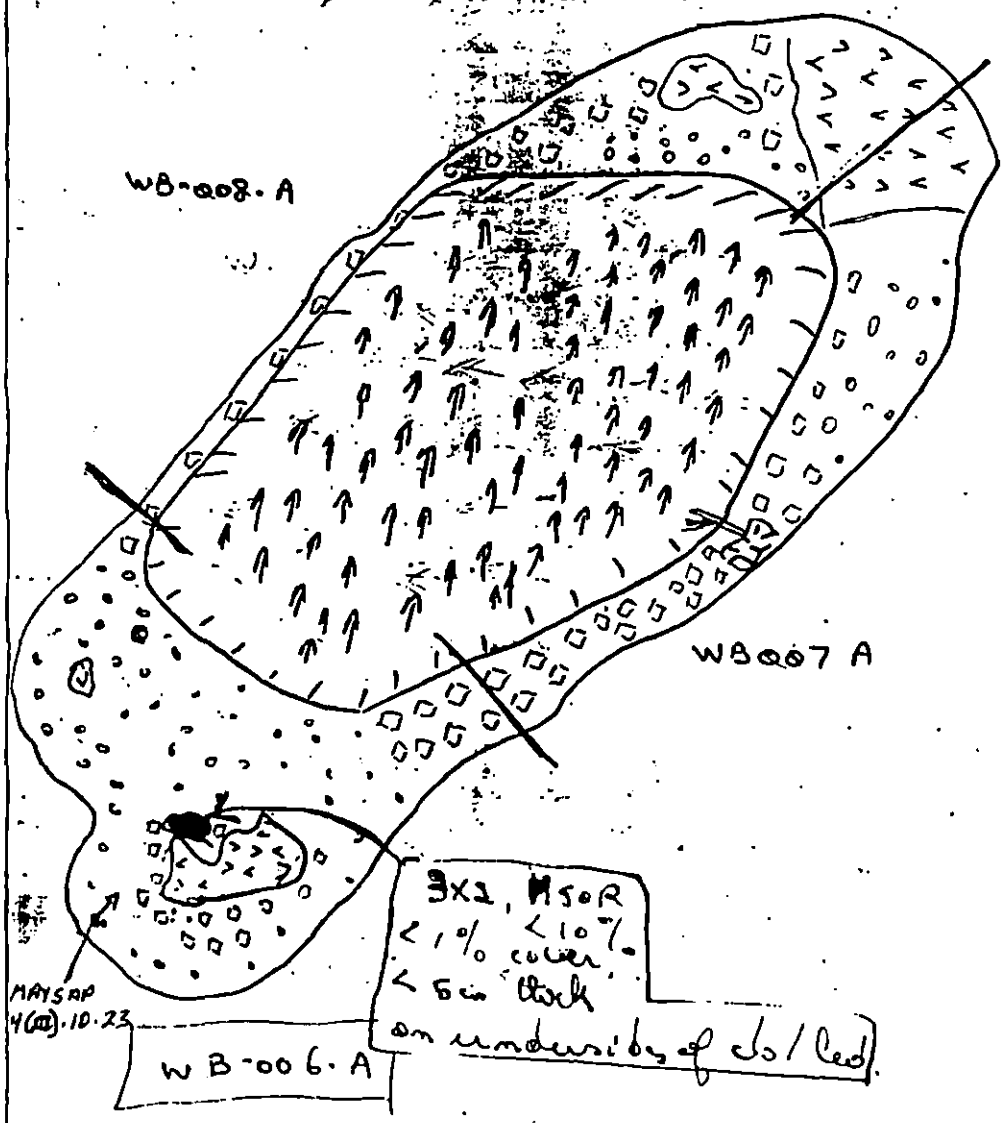
Legend

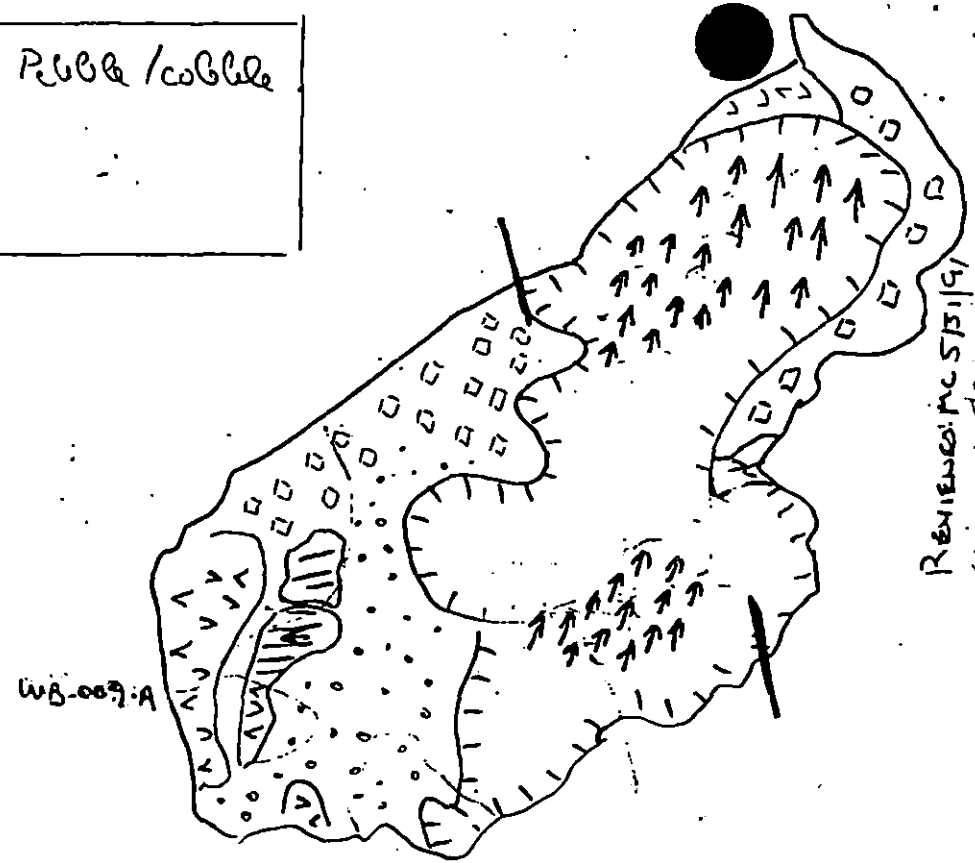
Bedrock cliffs/bluffs

Intertidal Outcrops/ bedrock ramp

Boulder/cobble

Pebble/cobble





Reviewed: MCS 31/91

Metres

0 50 100

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #	4	DATE	26 MAY '91
SEGMENT #	WB-006	TIDAL HEIGHT(Range)	+ 0.9 TO +1.0
SUBDIVISION	A	BIOLOGIST	Jim ROTH
SEA STATE	FLAT	WIND SPEED/DIRECTION	
PHOTOGRAPHS: ROLL #		FRAME #	

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

A1 - BOULDER/COBBLE IN MITZ W/ MODERATELY ABUNDANT MUSSELS, DENSE BARNACLES AND LITTORINES ON BOULDERS.

GENERAL COMMENTS: THIS SUBDIVISION HAS A HEALTHY AND THRIVING INTERTIDAL BIOTA, PARTICULARLY ON BEDROCK OUTCROPPINGS, WHICH HAVE DENSE MUSSEL BEDS, DENSE BARNACLES (BOTH BALANUS AND SEMIBALANUS), FUCUS, LITTORINES AND LIMPETS. OCCASIONAL MITE POOLS CONTAINED ANEMONES AND THE SIX-ARMED SEA STAR (LEPTASTARIAS)

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)			
Whales(specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed MB 5/31/91

WB-006.A

by Semyck

MAY 30/91

0980 - 0935

Bedrock cliffs/bluffs

Intertidal outcrops/

Bedrock ramp

Sand/cobble

Pebble/cobble

EIO MAP

ROTH

WB-008.A

WB-007.A

WB-007.A

MODERATELY ABUNDANT MUSSELS; DENSE BARNACLES, LITTORINES

<6 m back on elevation of dol/led.

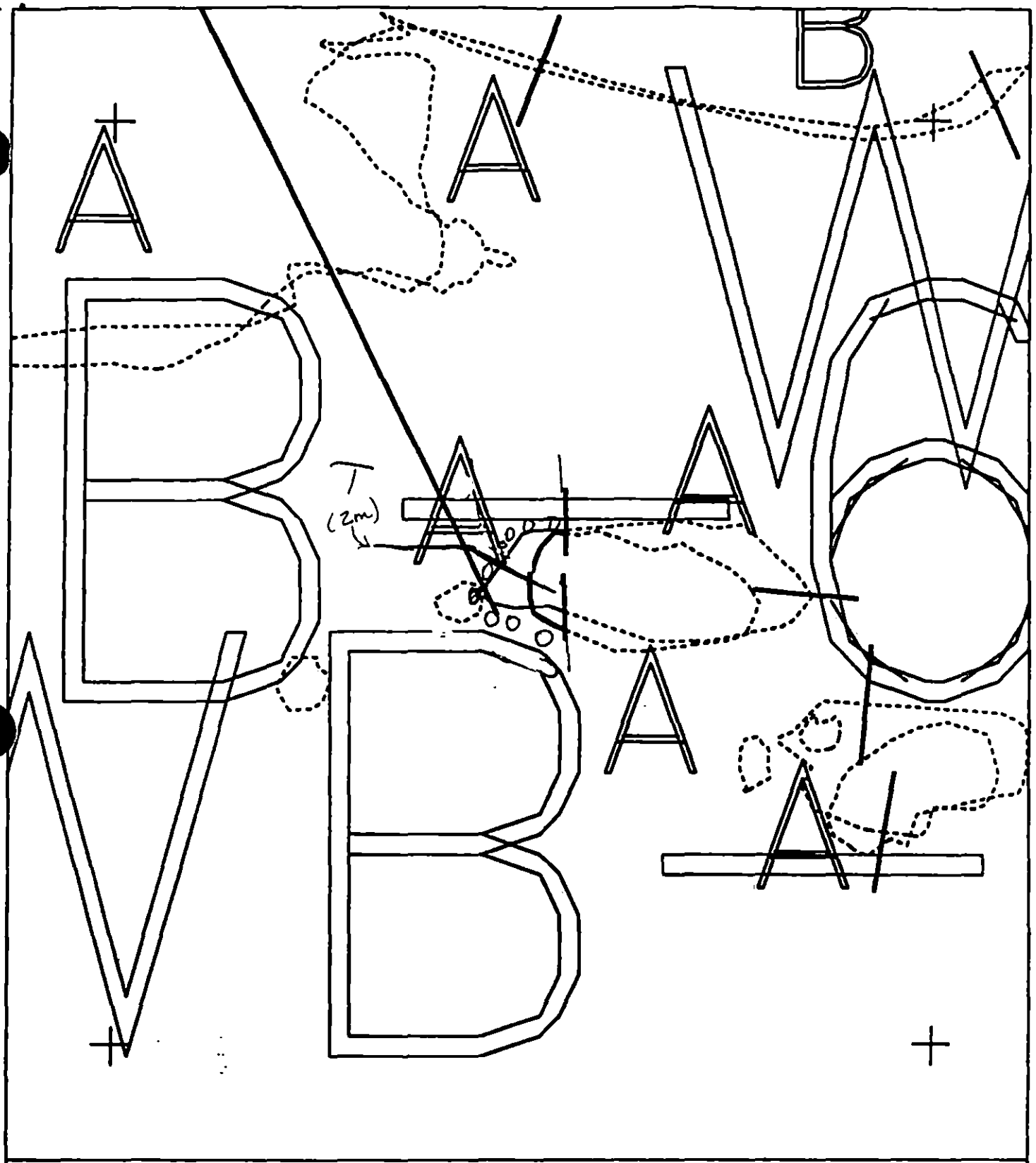
MAYSAP 4(a).10.23

WB-006.A

Reviewed MA 5/21/91

Meters

0 50 100



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

WB006 A

ADEC Subsegment Length: 97m

METERS

0 100 200

AK State Plane Zone 4

NAD83

DXON

Subdivision Field Map

Map Key: KENWB006A

Name: Jim Sempsh

Date: MAY 26 / 91

Date Entered:

Revised: 5/31/91 MC

revised 5/30/91 KG

1991 MAYSAP EVALUATION

SEGMENT: WB 006 **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)	N	N	N
Manual Pickup (Check as Req.)			
Spot Washing			
Bio-Customblen Only			
Bio-Inipol/Customblen			
Other			
Other			

COMMENTS:
INITIAL:

TAG:

FOSC:

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

ADEC

EXXON

USCG T. M. Naughton CT

NOAA

FOSC

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

ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

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

2.6 B 7 M3

MAYSAP FIELD SHORELINE COMMENT SHEET

53

TEAM NO. 4 SEGMENT WB-006 SUBDIVISION A DATE 5/27/91

ADEC
NAME Steve Ferguson SIGNATURE [signature]

☒ NTR ☐ TREATMENT RECOMMENDED

THE 2m(w) x 2m(L) AREA OF MSOR EXPOSED BY TURNING OVER SURFACE COBBLES WAS LOCATED IN AN OPEN AREA OF AN ABUNDENT FUCUS GROWTH. A FEW OTHER OPEN AREAS WHERE COBBLES WERE TURNED REVEALED NO OIL. THE FUCUS AREA WAS NOT DISTURBED BY TURNING OVER A LOT OF COBBLES TO CHECK THE UNDERSIDES FOR OIL.

EXXON
NAME George P. Stiles SIGNATURE [signature] 5/27/91

☒ NTR No appreciable oil remaining.

LANDMANAGER
NAME Pat Norman OF Pat Cockham SIGNATURE [signature] 5-27-91

☒ NTR Any remaining oil is subsurface and would be difficult to find. However when work is done on WB-7A, WB-6-A can be worked if any oil becomes expose.

USCG/NOAA
NAME McMahon/McDonald SIGNATURE [signature]

☑ NTR no noticeable surface oil

[signature]

NATURAL SHORELINE OILING SUMMARY

TEAM NO. 4

SEGMENT WB-001

OG J M Sempels

BIO J. Berry

SUBDIVISION A

ADEC S Fergerson

LANDMANAGER P. Nolan for Pat Gordon

DATE May 26 1991

EXXON J Stiles

USCG/NOAA J Malan / D McDonald

TIME 09 : 00 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: 97 m

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

EST. OIL CATEGORY LENGTH: W — m M — m N — m VL 2 m NO 95 m US — m

LOC	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE	AREA WIDTH m	AREA LENGTH m	ZONE				NOTES
	AP	MS	TB	BOR	CV	CT	ST	FL	DB	NO		V H M L			S	UI	MI	LI	
A1				S	T						Sd/pb/cb	M	3	2		*			See map

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

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

PHOTO ROLL # MAYSAP- 4(III) - 10 FRAMES 23

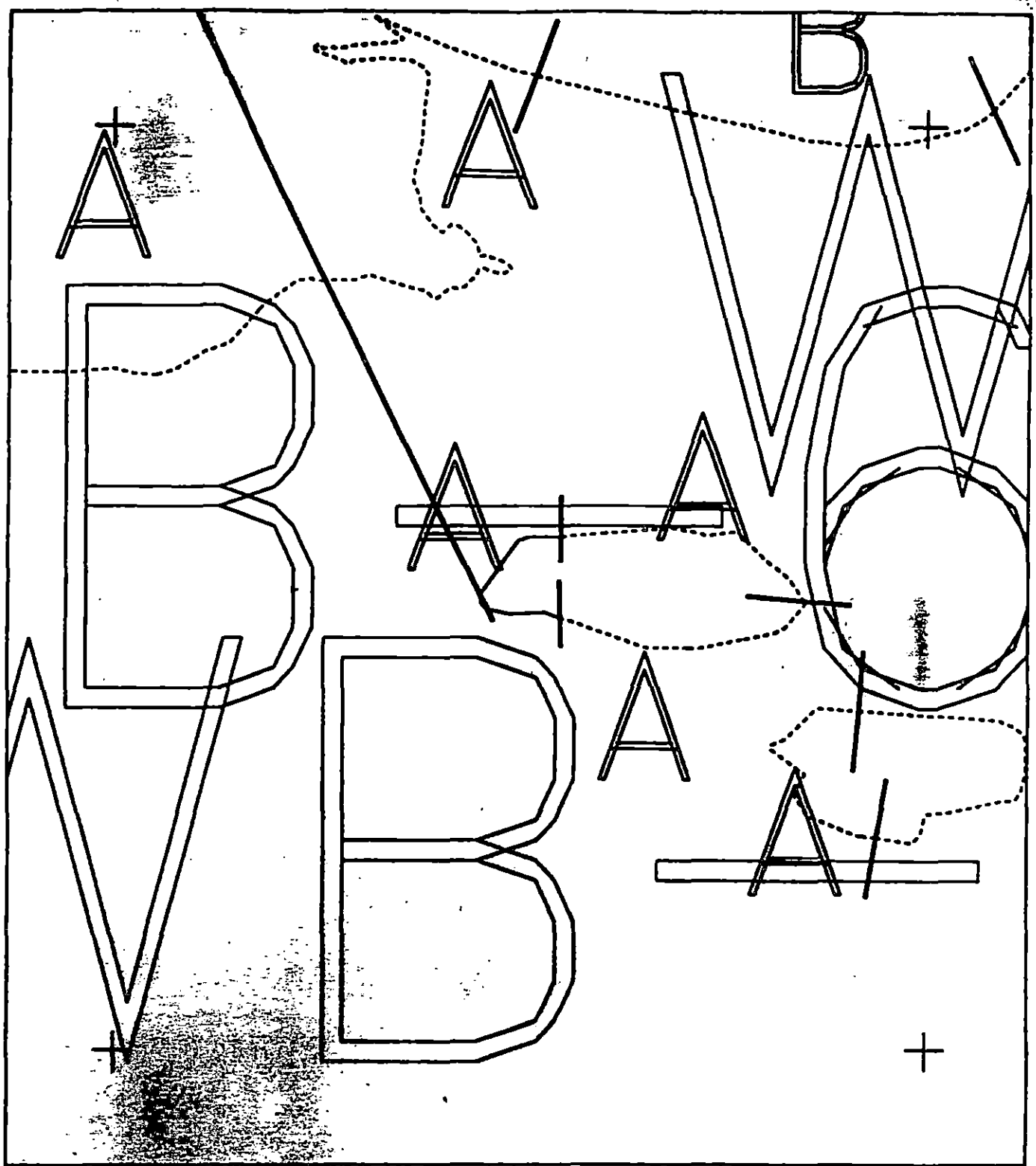
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H_2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	30							✓	-	Y	—	—		*			sd/pb/cb	See map

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

OG COMMENTS: WB-001-A forms the western extremity on the largest island shown on the OG sketch map. It consists of a saddle shaped accumulation of relatively well sorted sand/pebble/granule/cobble deposit between the bedrock cliff backshore and a nearby bedrock outcrop. Oil was found near the bedrock outcrop as a few MSOR pebbles < 20 cm dia under surface cobbles.

REVIEWED: MC 5/31/91

revised 5/30/91 RG



WB006 A

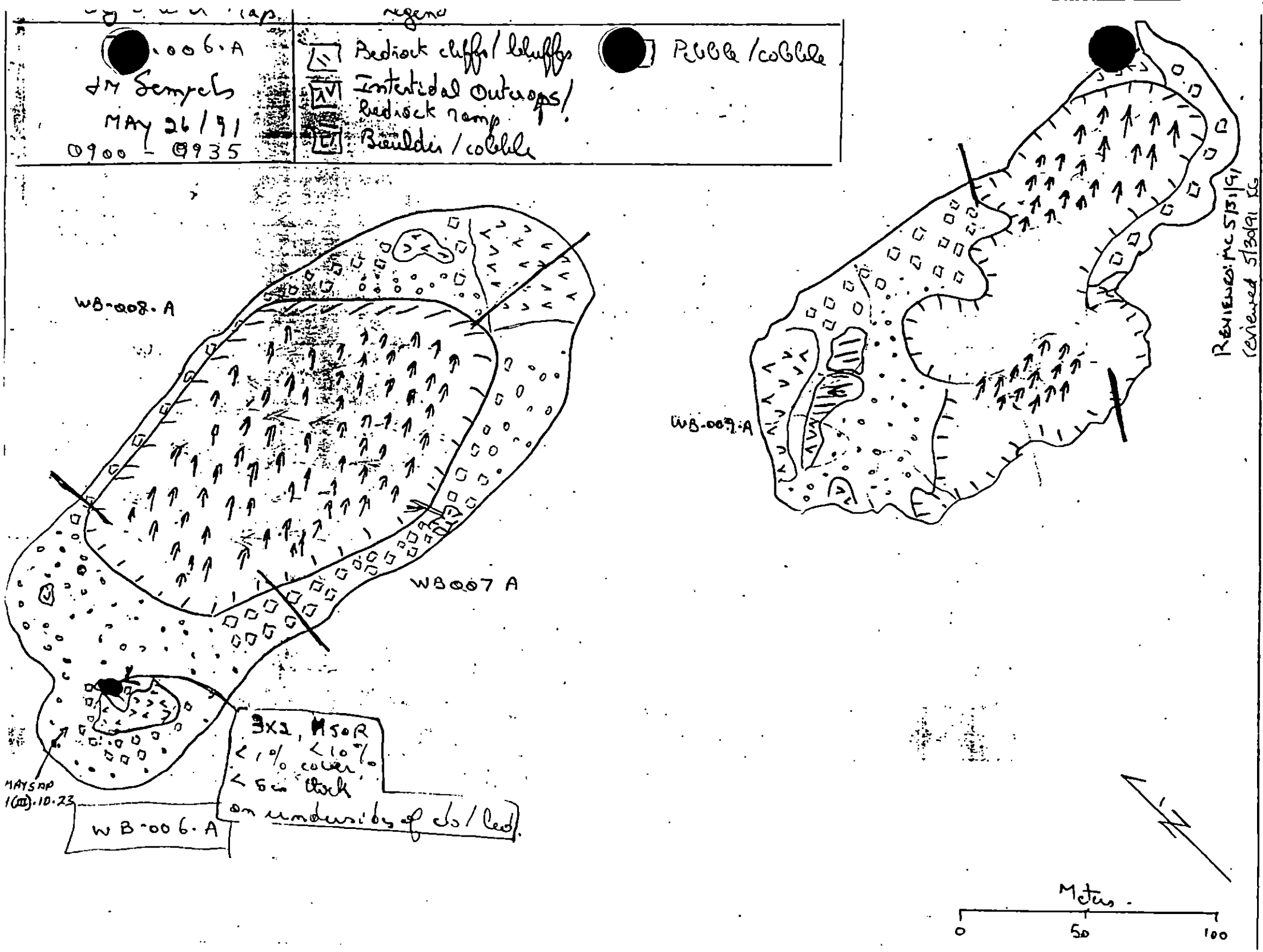
METERS

0 100 200

AK State Plane Zone 4
Outside

EXXON

Subdivision Field Map
Map Key: KENWB006A
Name: JR Samples
Date: May 26/91


Map
Legend
.006.A
dM Semych
MAY 26/91
0900 - 0935
Bedrock cliffs/bluffs
Intertidal Outcrops/
bedrock ramp
Boulder/cobble
Pebble/cobble
WB-008.A
WB007 A
WB-009.A
WB-006.A
MAYSMP
1(III).10.23
3x2, M50R
<1% cover
<10%
<5cm thick
on underside of ds/bed
Reviewed: MC 5/31/91
reviewed 5/30/91 KG
Meters
0
50
100

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 26 MAY '91

SEGMENT # WB-006 TIDAL HEIGHT(Range) + 0.9 TO +1.0

SUBDIVISION A BIOLOGIST Jim ROTH

SEA STATE FLAT WIND SPEED/DIRECTION

PHOTOGRAPHS: ROLL # FRAME #

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

A1 - BOULDER/COBBLE IN MITZ W/ MODERATELY ABUNDANT MUSSELS, DENSE BARNACLES AND LITTORINES ON BOULDERS.

GENERAL COMMENTS: THIS SUBDIVISION HAS A HEALTHY AND THRIVING INTERTIDAL BIOTA, PARTICULARLY ON BEDROCK OUTCROPPINGS, WHICH HAVE DENSE MUSSEL BEDS, DENSE BARNACLES (BOTH BALANUS AND SEMIBALANUS), FUCUS, LITTORINES AND LIMPETS. OCCASIONAL MITE POOLS CONTAINED ANEMONES AND THE SIX-ARMED SEA STAR (LEPTASTARIAS)

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.

REDIGITIZED MB 5/21/91

WB-006.A

J M Sempels

MAY 30/91

0980 - 0935

Finished rock cliffs/ bluffs

Intertidal Outcrops/ bedrock ramp

Boulder / cobble

Pebble / cobble

BIO MAT ROIH

WB-008.A

WB-009.A

WB007 A

MODERATELY ABUNDANT MUSSELS; DENSE BARNACLES, LITTORINES

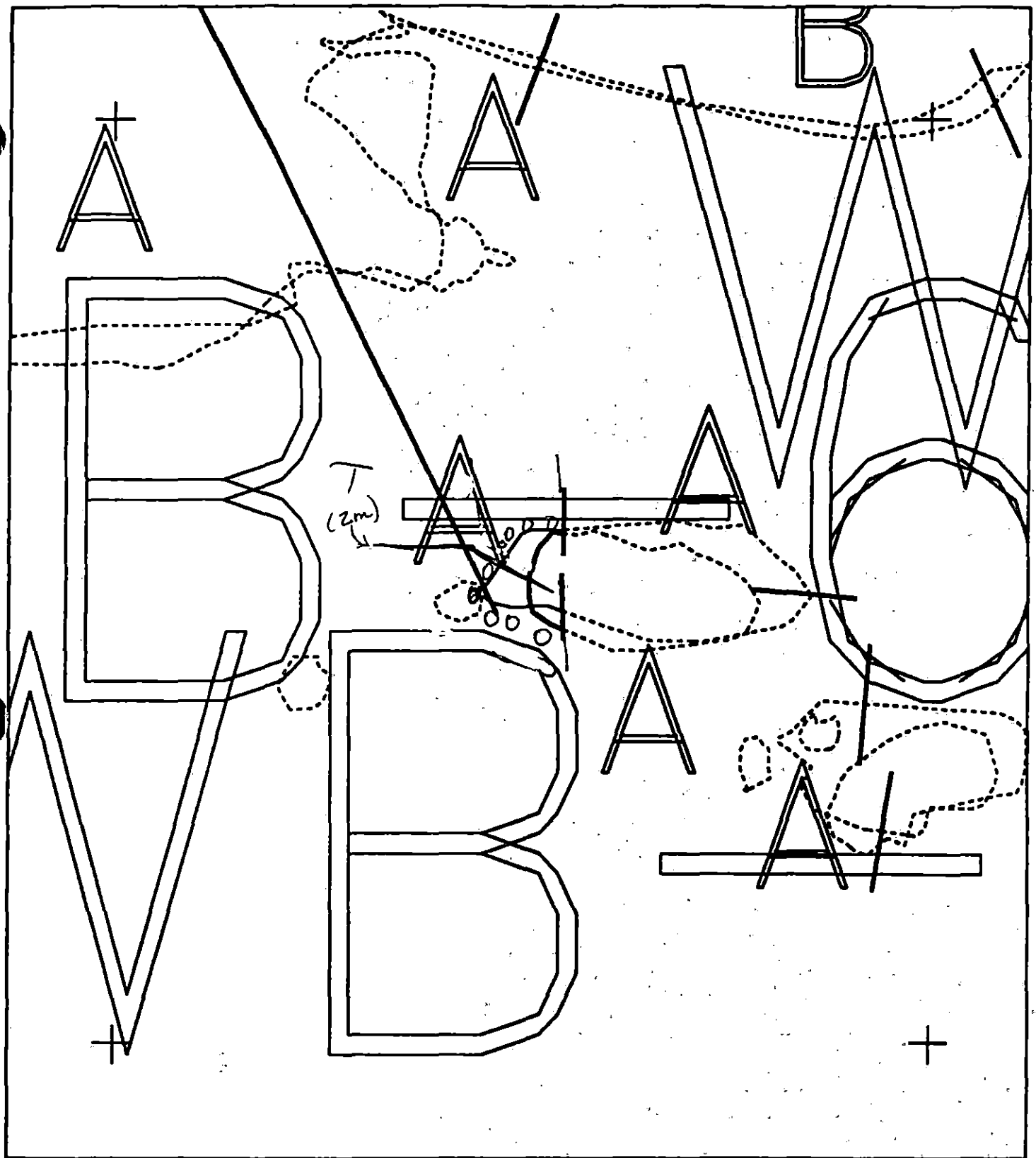
MAYSAP 4(2).10.23

WB-006.A

Reviewed 5/21/91 MB

Meters

0 50 100



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

WB006 A

ADEC Subsegment Length: 97m

METERS

0 100 200

AK State Plane Zone 4
nad0000

Subdivision Field Map

Map Key: KENWB006A

Name: Jim Semple

Date: MAY 26 / 91

Date Entered:

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

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Library & Information Services
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