

OIL SPILL PUBLIC INFO. CENTER



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EVOS
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1552
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S42
1991
v.23

[Shoreline evaluations, 1991].

Prince William Sound BA-07 to BP-04

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REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/BA-07

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

Eagle nest in adjacent segment $\leq$ 400M (at boundary with BA-08)

6Y Recreation: Special use destination

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 105 m: Narrow 124 m: V.Light 315 m: No Oil 1116 m

Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

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 three areas indicated on sketch map. Work should be conducted after 6/1 with approval of USFWS regarding eagle nest constraint.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

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

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

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

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

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

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

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

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

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

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

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

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ GA-07 SUBDIVISION: A (1 of 1) DATE 4/24/90

NOAA

NAME Michael Buchman SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

~~[REDACTED]~~
~~[REDACTED]~~
~~[REDACTED]~~
~~[REDACTED]~~

SEE following Ammended Comment Sheet

ADEC

NAME John Hayes SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

(1) Manual removal of Asphalt putty/s & in N.E. section of segment. Shovels + mop up w/ sorbants. (pocket beaches)

(2) Manual removal of putties in M.I.T.Z. three Areas in center of segment. Shovels + garden rakes. (see sketch map)

MITZ Putties are hard and solid from cool intertidal water and should be removed at low tide. No S.S. oiling observed

LAND MANAGER

NAME Don Crumshaw (DNC) SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Nearly every pocket beach had CT/p in 1M band at MITZ zone on vertical faces. Likewise, these some beaches had putties & asphalt in pebbles & gravels 2cm - 4cm thick & in pockets & cracks of boulders. Recommend manual removal from all above areas. No bio.

Amended

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ BA 07 SUBDIVISION: A • (1061) DATE 4-29-90

NOAA

NAME Michael Buckman SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Asphalt patches observed in every pocket beach. Frequency & thickness diminished from EAST to WEST. Thick + many patches observed in rock fissures of headlands too (especially on EAST END). Patches were observed in the middle of the Focus zone in the center of the segment.

ADEC

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

LAND MANAGER

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

SHORELINE OILING SUMMARY

REVISION NO. 04-13-90

OG Mike Foget ^{NOAA} ~~USGS~~ Michael Buchman SEGMENT ST/ BA-07
 BIO Kathleen Cahlin LAND REP(ONR) Ron Greenhaw SUBDIVISION A (1 OF 1)
 EXXON Larry Olson ADEC John Hayes TIME 20:00 to 21:30
 TEAM NO. 11 TIDE LEVEL +0.9 DATE 4/24/90
 ST. SUBDIVISION LENGTH: 1602 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock Vertical Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 60 % B 20 % C 15 % P 5 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 10 % Hang 40 % Vert 50 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 106 m N 65 m VL 300 m NO 1212 m

SURFACE OIL

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

PAVEMENT H (F) S 10 sq. m by 5 cm(PATTIES) TARBALLS 10 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

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

Photographs:

Roll No. ST-11-4Frames 9-12

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (N/A)	T	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UD	US	1	2	3	4	5	SU	U	M	U				
1	30					X	-	X							X					N	-	P, C
2	40					X	-	X							X					N	-	P
3	25					X	-	X								X				N	-	P, G
4	20					X	-	X								X				N	+5	G, C, P
5	20					X	-	X								X				N	-	P, C
6	20					X	-	X								X				N	+5	P, C

COMMENTS

Shore zone consisted mostly of steep rocky headlands w/ small pocket boulder cobble beaches. Most of the oiling occurred in the eastern end of the segment in all of the pocket boulder beaches. The type of oiling that mostly occurred was asphalt pavement / patties ranging from the MITZ → Supra ITZ. (see map)

REVIEWED 7WDATE 4/26/90

OG Miktoget
 SEGMENT ST/ DA-07
 SUBDIVISION A
 DATE 4/24/90

CHECKLIST

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

LEGEND

1 Δ
 Pt - No Subsurface Oil

2 Δ
 Pt - Subsurface Oil

$\square$ CT/C
 Continuous Distribution

$\square$ CT/B
 Broken Distribution

$\square$ CT/P
 Patchy Distribution

$\square$ CT/S
 Splashed Distribution

$\square$ Oiled Vegetation

$\rightarrow$
 Photo location, direction,
 and number

Scale

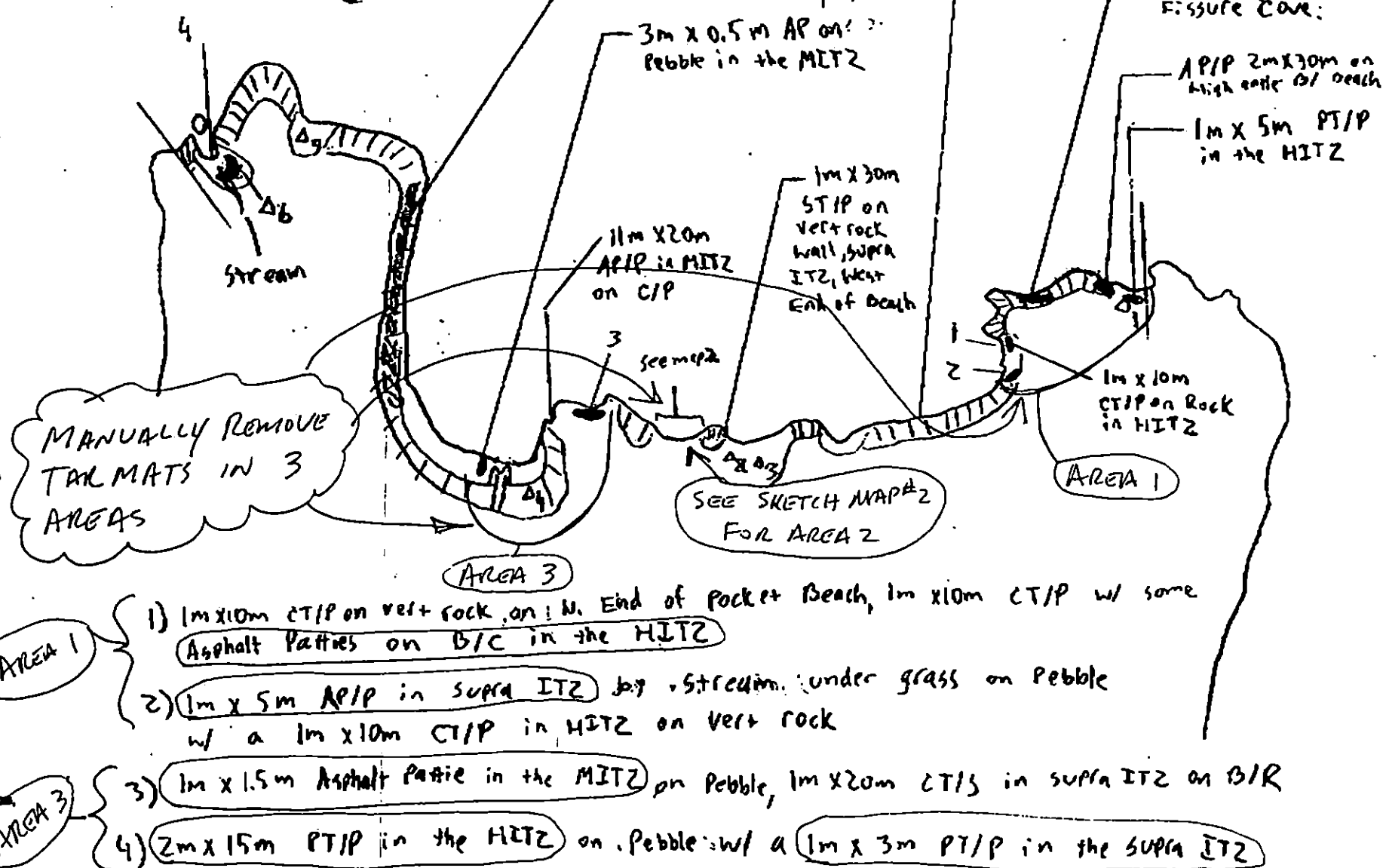
100m

Legend

/// - high angle
 Rock/boulder
 shore zone

$\uparrow$ - trees
 $\sim$ - stream

SKETCH MAP 1



Oil Character Length (m): AP 8.7 PO 0 CV 0 CT 300 ST 40 MS 0 PT 23 TB 0 FL 0 NO 1262

REVISION: 000000

OG Mik 99 ct

SEGMENT ST/ DA-07

SUBDIVISION A

DATE 4/25 90

CHECKLIST

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

LEGEND

1 Δ
P1 - No Subsurface Oil

2 Δ
P1 - Subsurface Oil

$\boxed{CT/C}$
Continuous Distribution

$\boxed{CT/B}$
Broken Distribution

$\boxed{CT/P}$
Patchy Distribution

$\boxed{CT/S}$
Splashed Distribution

Oil Vegetation

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

Legend

/// - high angle Rock Boulder
Back shore

$\bigcirc$ - Asphalt
 $\uparrow$ - trees

Scale

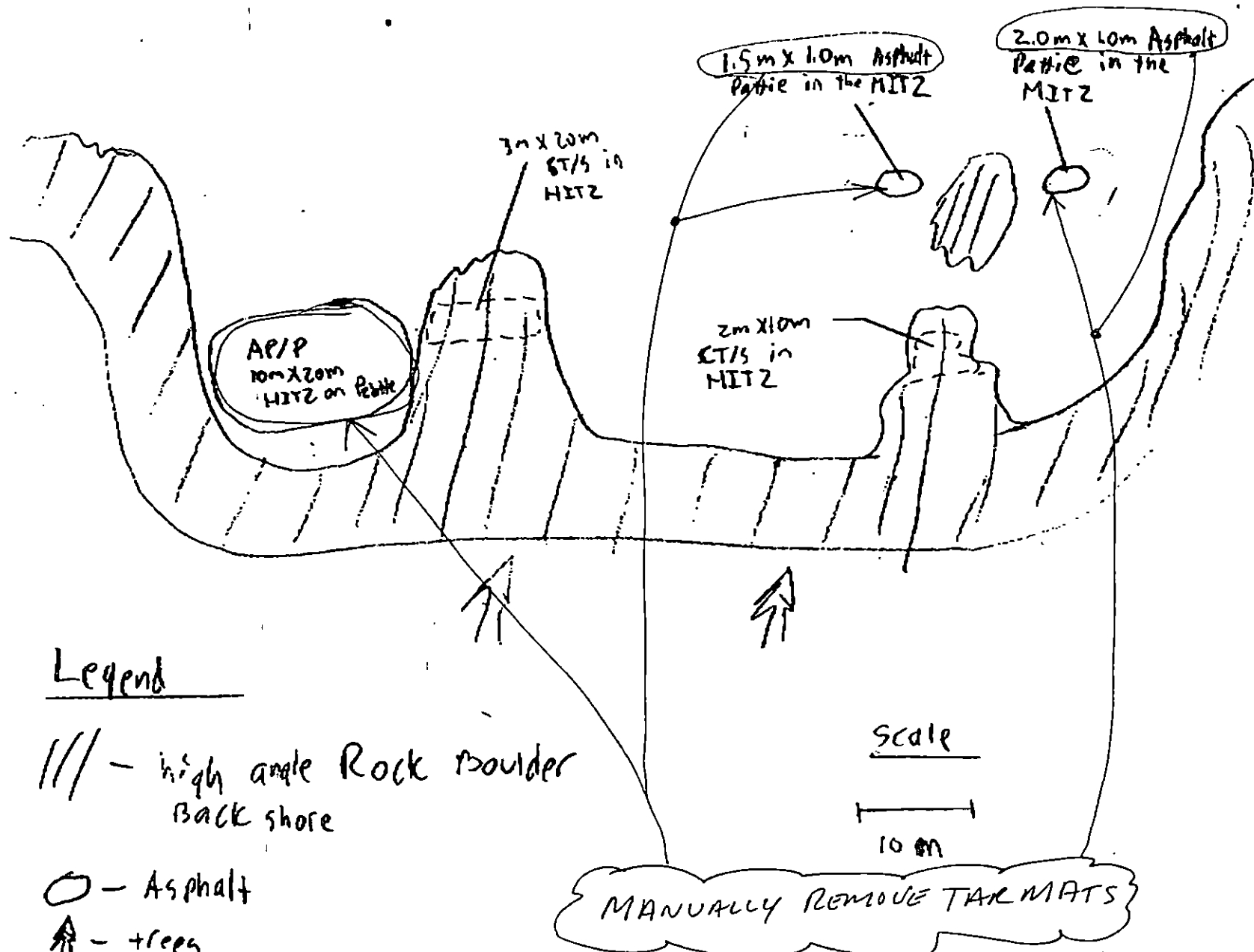
10 m

MANUALLY REMOVE TAR MATS

see map 1

OIL ON BEACH length (m): AP PO GV CT ST MS PT TB FL NO

SCH MAP 2



SHORELINE ECOLOGICAL SUMMARY

REVISION: 03

Segment ST/ BA-07 Subdivision A (1 OF 1) Date (mo / day / yr) 04/24/90Time (24 hr) 2006-2145 Biologist KATHLEEN CONLAN(A) Substrate type and % of segments:
(1) Bedrock 60 (2) Boulder 20 (3) Cobble 15 (4) Pebble 5 (5) Sand 0 (6) Silt 0(B) Overall % cover of biota (% of segment): Dense 20 Moderate 60 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-11-4Frames 9-12

BARNACLES

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

NOT PRESENT

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

NOT PRESENT

Wildlife Observations/ General Comments:

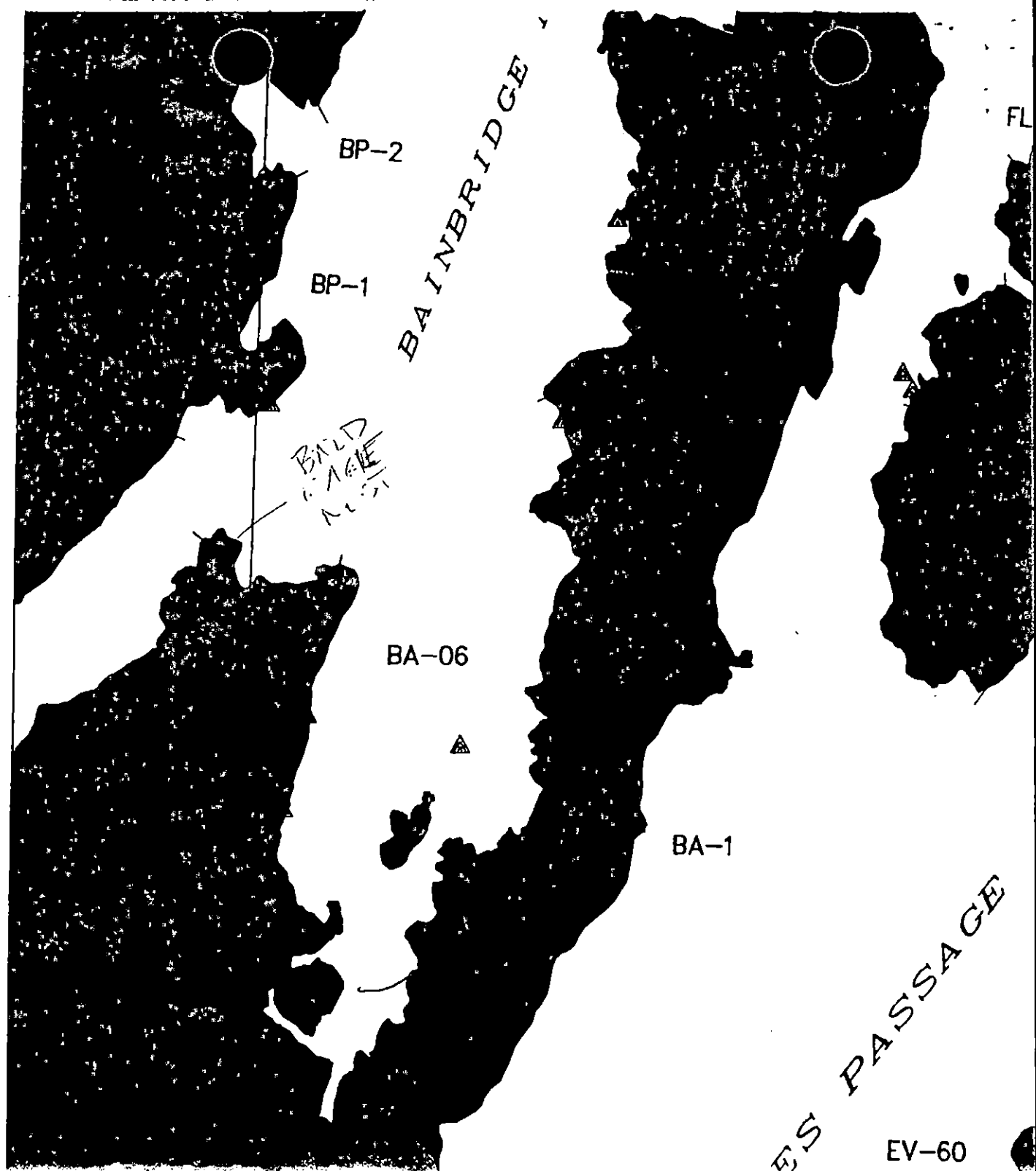
2 MERGANSERS.

2 RAVENS

Ecological Considerations:

E~~C~~OLOGICAL
MAP

ST(1)



ES PASSAGE

EV-60

BA-7A

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

BA-7A

ADEC Segment Length: 1651m

Map Key: PWS-18

Name: Mike Fogel

Date: 4/24/90



ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT BA-7 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1K	Purse Seine Hook-off	No constraint to manual pickup and tarmat removal.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS bald eagle impact assessments conducted on 5/12/90 and 5/19/90 by Mike Lockhart indicate no active nests within 400m of the work area.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

DATE

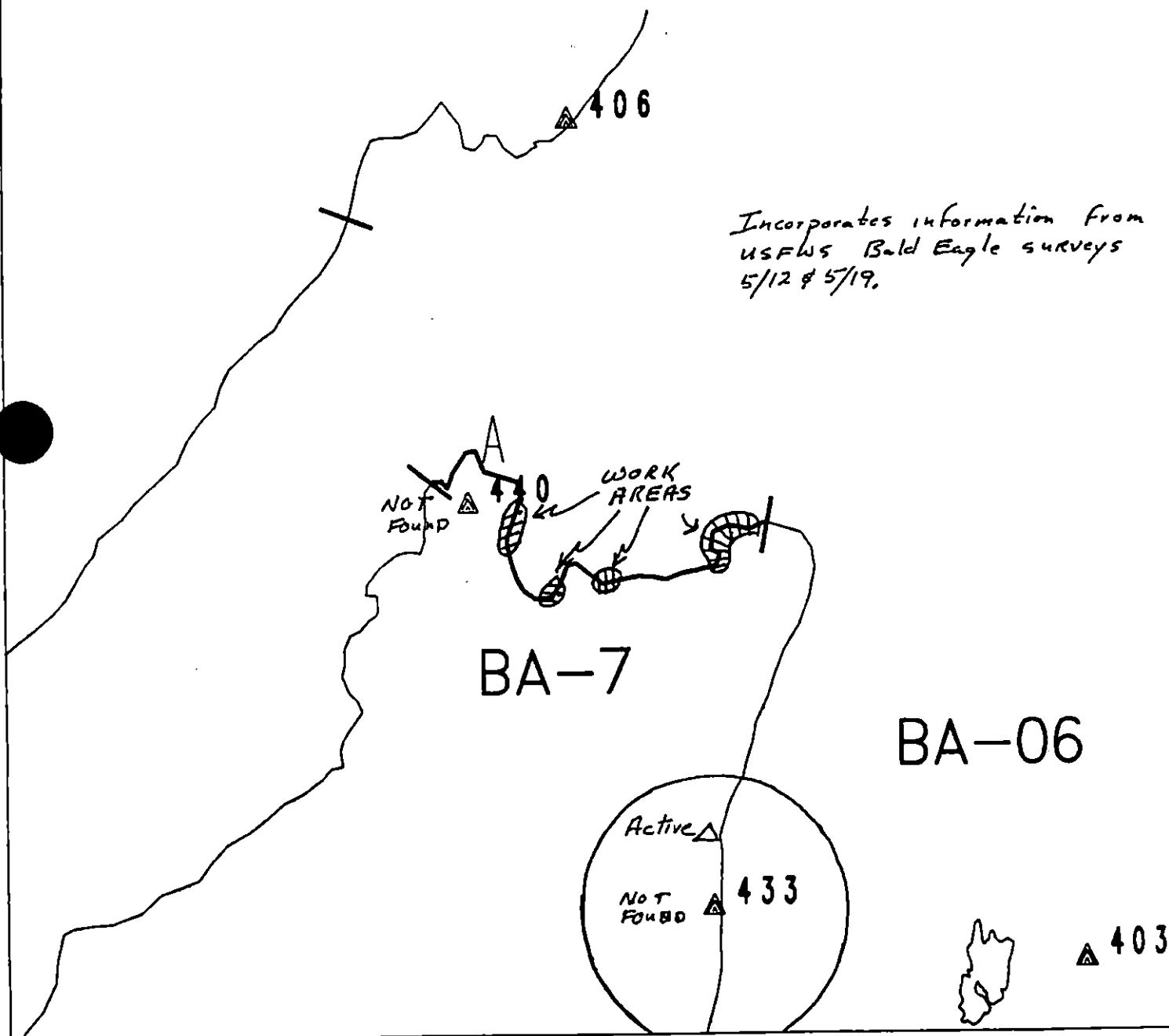
6-10-90

Prepared By:

Andrea Meyer *wkeller*

Date

5/31/90



Exxon Company, USA
Map Key: PWS-BA-7



ECOLOGY MAP 5/30
SEGMENT BA-7
SUBDIVISION A (1 of 1)
METERS



- ★ Seabird Colony
- △ Eagle Nest

1 inch = 1482 feet

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

Eagle nest in adjacent segment $\leq$ 400M (at boundary with BA-08)

6Y Recreation: Special use destination

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 Z. H. [Signature] DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 105 m: Narrow 124 m: V.Light 315 m: No Oil 1116 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

MS X 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
three areas indicated on sketch map. Work should be conducted after
6/1 with approval of USFWS regarding eagle nest constraint.

→ See Constraint Addendum Dated ~~6/1/90~~ 5/31/90 WJK

TAG COMMENTS:

TAG APPROVAL DATE: May 9, 1990

ADEC ART WEINER [Signature]

EXXON Mark N. Silbert, Mark N. Silbert FOSC: [Signature]

NOAA Gary Petrone [Signature]

USCG G.A. REITER [Signature]

DATE: 5-9-90

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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6Y Recreation: Special use destination

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. Holmes DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 105 m: Narrow 124 m: V.Light 315 m: No Oil 1116 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X 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
three areas indicated on sketch map. Work should be conducted after
6/1 with approval of USFWS regarding eagle nest constraint.

TAG COMMENTS:

TAG APPROVAL DATE: May 9 1990

ADEC ART WEINER

EXXON Mark N. Silber

NOAA Gary Petrac

USCG G.A. REITER

FOSC: W L DATE: 5-9-90

OG Mik 04et
 SEGMENT ST/ BA-07
 SUBDIVISION A
 DATE 4, 24 90

CHECKLIST

☐ N Arrow
☐ Approx. Scale
☐ Seg/Sub Body
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HWT/LWL
☐ SSL
☐ Profile Location(s)
☐ Photo(s)
☐ P/L Location(s)
☐ Photo Location(s)

LEGEND

1 Δ
 P/L - No Subsurface Oil

2 Δ
 P/L - Subsurface Oil

$\square$ CT/C
 Continuous Distribution

$\square$ CT/B
 Broken Distribution

$\square$ CT/P
 Patchy Distribution

$\square$ CT/S
 Splashed Distribution

Oiled Vegetation

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

Scale
 100m

Legend

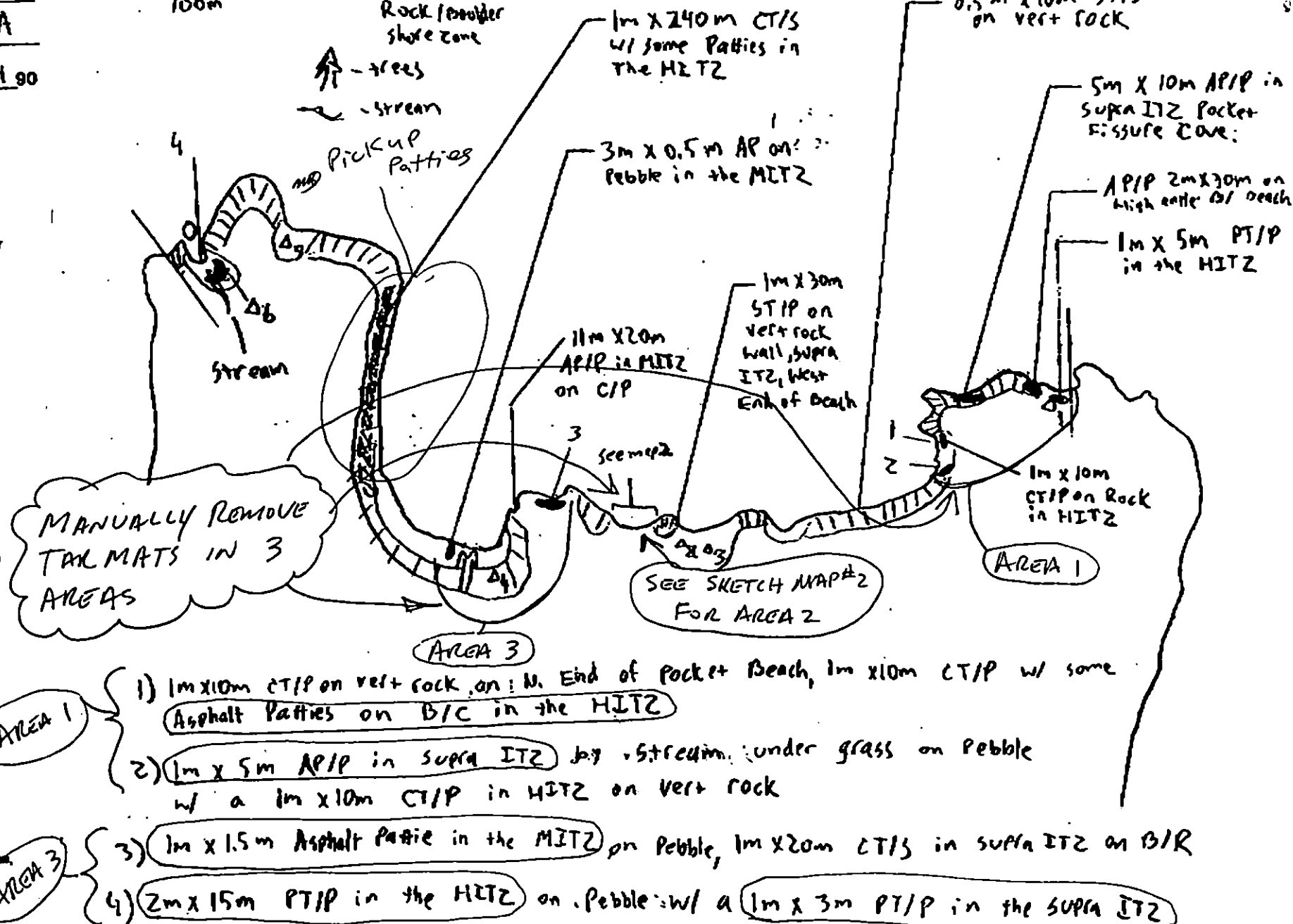
/// - high angle
 Rock / Boulder
 shore zone

Δ - trees

~ stream

Pickup
 Patties

SKETCH MAP 1



Oil Character Length (m): AP 8.7 PO 0 CV 0 CT 300 ST 40 MS 0 PT 23 TB 0 FL 0 NO 1262

REVISION: 02/24/90

OG Mik 1ct

SEGMENT ST/ DA-07

SUBDIVISION A

DATE 4/25 90

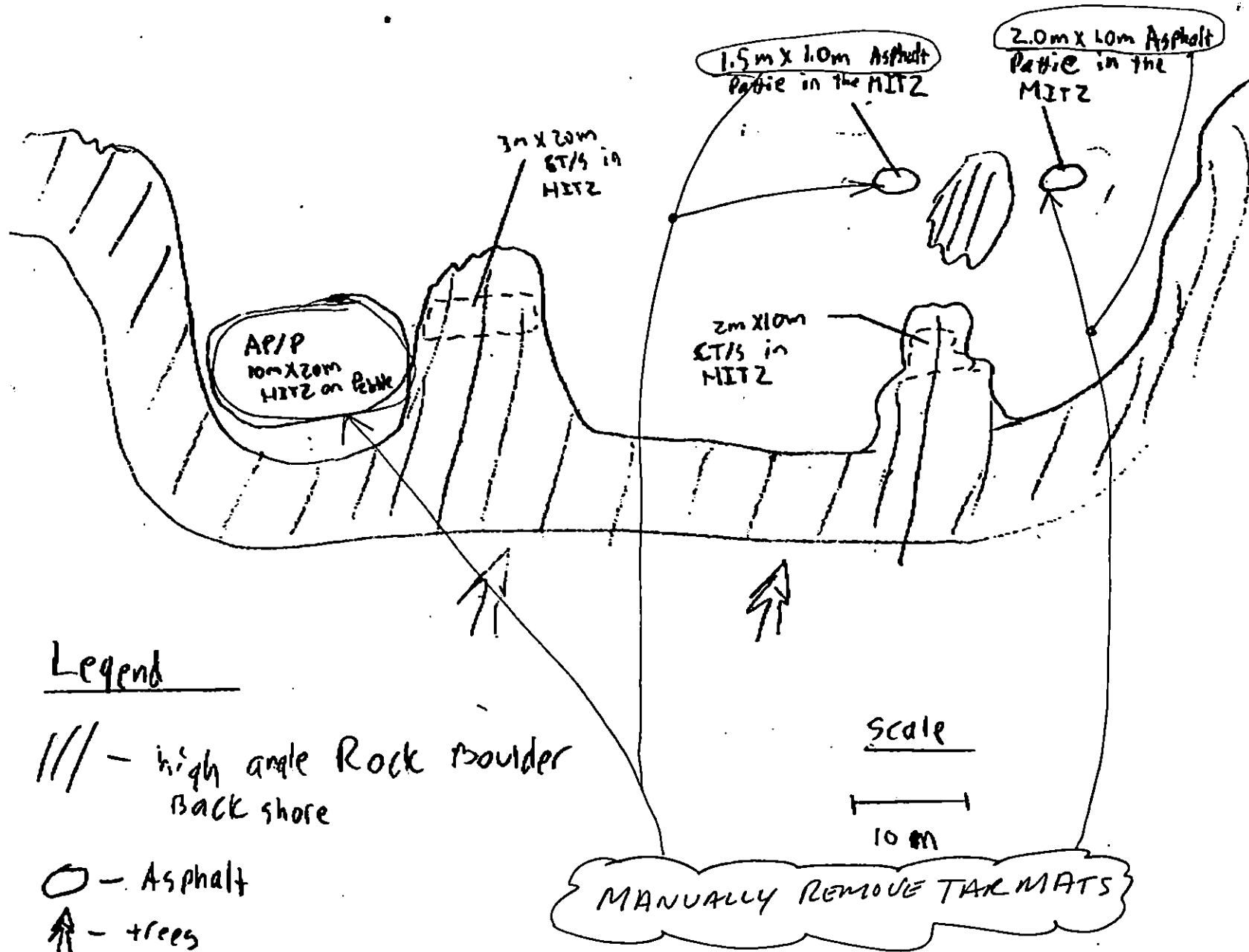
CHECKLIST

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

LEGEND

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

Sketch MAP 2



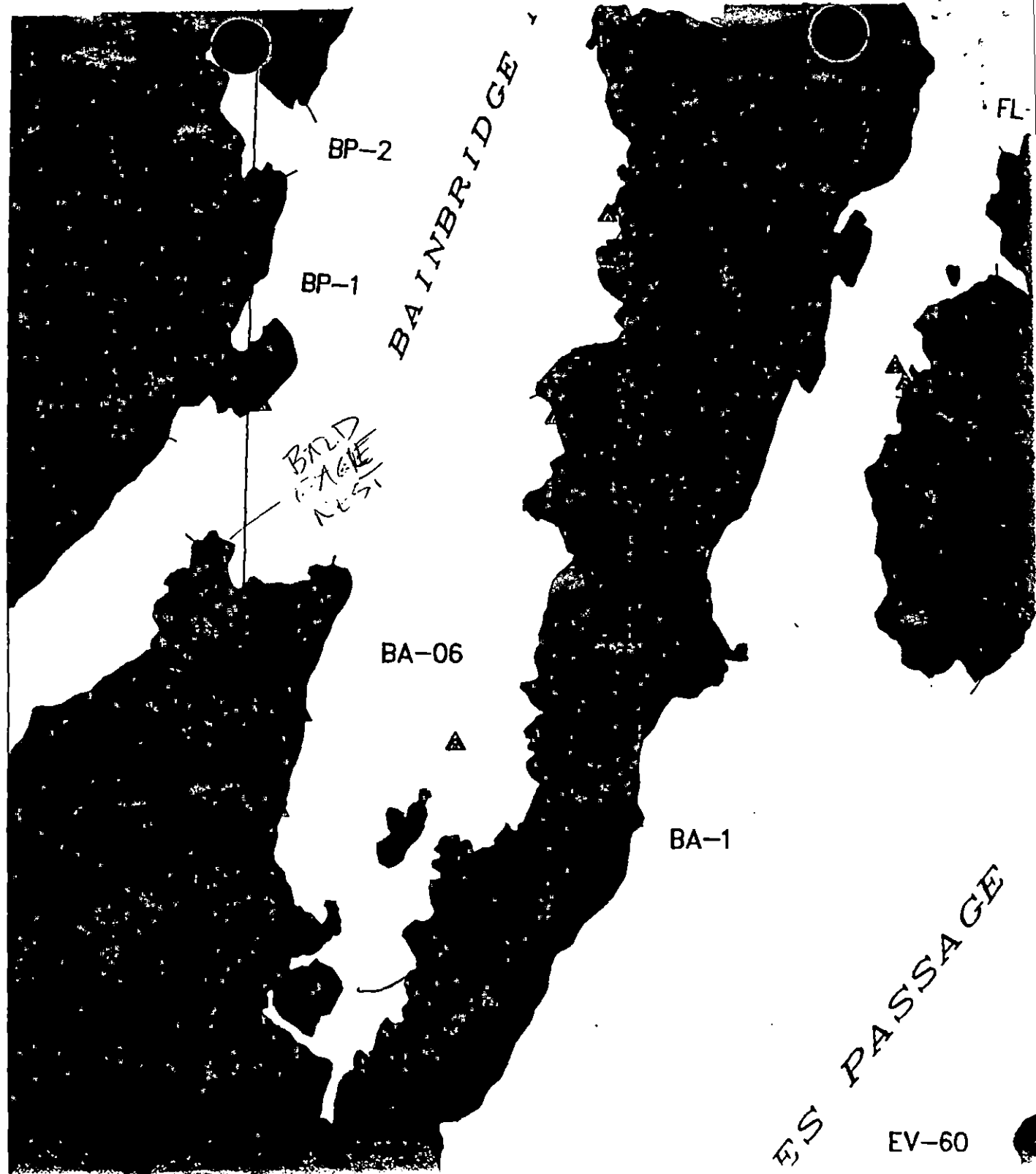
see map 1

Oil on beach length (m): AP PO GV CT ST MS PT TB FL NO

REVISION 003/90

ECOLOGICAL
MAP

ST(1)



ES PASSAGE

BA-7A

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

BA-7A

ADEC Segment Length: 1651m

Map Key: PWS-18

Name: Mike Fogel

Date: 4/24/90

1991 MAYSAP EVALUATION

SEGMENT: BA 007 SUB: A REGION: PWS SURVEY DATE: 5/20/91

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: 6/04/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL:

TAG:

FOSC: Commercial Fisheries & Recreational Area, both priorities for cleanup! Considerable ^{amount of} recoverable oil remains. DEC, NOAA + USCGR are recommending some oil. Remove readily accessible oil/HSDR + MS. CCP

TAG APPROVAL DATE: June 4 1991 FOSC APPROVAL DATE: 6/8/91

ADEC John Bauer

EXXON Beach

USCG John

NOAA John

FOSC

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

The State will evaluate the need to conduct treatment on this subdivision. John Bauer

**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. 5 SEGMENT BA-007 SUBDIVISION A DATE 5/20/91

ADEC

NAME

John Hayer

SIGNATURE

☐ NTR

Long our Og has done a very good job at detailing this map so all pleased with his attention to quickly detail throughout the system. Crews will be able to locate the oil remaining on this segment that needs treatment. Due to the # of cover + bbls I believe crews had difficulty locating the oiling as I recommended treatment here daily SSAT + ASAP in particular around areas with mouse filling the matrix around the cobbles.

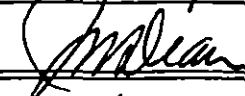
Recommend manual removal areas F thru J Crew p/o. was only partial due to time constraints and in particular fissure cove P, Area L, M, N, 10 are a lower priority.

EXXON

NAME

JOHN DEAN

SIGNATURE

☒

NTR

RECOVERABLE SURFACE OILING IS MINIMIZED, PLEASE SEE OG REPORT IE; DISTRIBUTION, AREA², CONCENTRATION.

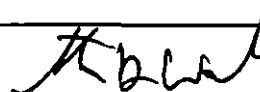
THERE ARE SOME AREAS THAT WOULD BENEFIT FROM BIO-REMEDIATION, HOWEVER THIS TECHNIQUE IS NOT APPROVED BY LAND MANAGER.

LANDMANAGER

NAME

Steve WARDOF CUC/KS

SIGNATURE

☐

NTR

This Sub-Div has a large amount of mouse to be removed. Area is saturated with 3'x3' puddles and a large area 30'x30' is heavily covered with thick brown oil. Ems. removed by manual crew this oil will soon be mobile and a heavy sheen was already visible in the area. See ADEC comments and Og notes for exact location.

NO-V.O.

USCG/NOAA

NAME

DREHER/CLINE

SIGNATURE

CWO K. L. Dreher☒

NTR

Oil present was well weathered and located in shallow, stable pockets, posing no hazard to the environment. KLD

☐

NTR

Subsurface oiling on either side of rock point (≈ sites F, G, H, I) slowed. be treated as it is typically covered by fines which may be eroded allowing remobilization of the oil. Surface oiling is common, but coverage is generally light. DDC

5

MAYSAP SHORELINE OILING SUMMARY

PAGE ____ OF ____

TEAM NO. ____

OG CHANEY

BIO CRANK

SEGMENT BA-7

ADEC HAYES

LANDMANAGER WARD

USFS &
CUC

SUBDIVISION A

EXXON DEAN

USCG/NOAA DREHER/CLINE

DATE MAY 20, 1991

TIME 11:25 to 16:30

TIDE LEVEL 0.0 ft. to 5.0 ft.

ENERGY LEVEL: ☐ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☒ SUN ☒ CLOUDS ☐ FOG ☐ RAIN ☐ SNOW

TOTAL LENGTH SHORELINE SURVEYED: 1001 m

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

EST. OIL CATEGORY LENGTH: W 0 m M 19 m N 12 m VL 239 m NO 731 m US 650 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				SPLATTER NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A					T	T					RB	VH	2	20		✓			ON MASSIVE BOULDERS
B				B							BP	H	1	1		✓			ONE PATCH
C				T							B	H	5	5		✓			BEHIND MASSIVE BLOW
D					T	T					RB	H	2	15		✓			ON BOULDERS SPLASH
E	T			T	S	T	T				RB	H	3	20		✓			BEHIND OUTCROP
F	T	T		P	S	S					BRGP	H	3	10		✓			MS VERY LOCALIZED IN RX
G							T			T	PG	M	10	10	✓	✓	✓		Oiled Spruce Needles Mat
H	T				T	T	T			T	BPG	H	10	20	✓	✓	✓		ISOLATED SMALL PATCHES
I				S							BPG	M	3	5			✓	1 bag	AP Removed SOR/H
J	T			T	T	S	T				BCP	M	10	15		✓	✓		AP Patches in pebbles & on Bdrk
K						T					R	V	2	3.5		✓			SPLATTERS ON BDRK
L				T	T	T					RB	H	2	4		✓			" "
M				B							BR	M	D.5	1			✓		THICK OP SOR
N	T			T	S	S					BR	H	3	70	✓	✓	✓		BEDROCK HEADLANDS
O				S	S	S	S		S		BC	L	1	25	✓	✓			POCKET COVE / 1.5m ²
P	S	S		S	S	S					RB	VH/M	10	4	✓	✓			FISSURE COVE, MOUSSE BETWEEN BOULDERS

DISTRIBUTION: C = 91-100%; B = 81-90%; P = 11-80%; S = 1-10%; T = <1%

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

PHOTO ROLL # MAYSAP-

5 - 20

FRAMES 5

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	40							✓	-	-	-	-		✓			P-PG	
2	35							✓	-	-	-	-		✓			P-PG	
3	30							✓	-	-	-	-		✓			P-PG	
4	25							✓	-	-	-	-		✓			P-PGM	
5	30							✓	-	-	-	-		✓			BC-BCPG	
6	25	✓							D-10					✓			PG-PG	2 m ²
			✓						10-20					✓			" "	12 bags removed
7	30							✓	-	-	-	-		✓			P-P	
8	20							✓	-	-	-	-		✓			P-P	

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

OG COMMENTS: PIT (6) IS IN AN ISOLATED POCKET OF OILED PEBBLES BEHIND A BEDROCK OUTCROP. 12 BAGS OF SOR/H WERE REMOVED FROM THIS AREA. SOR/M REMAINED.

AREA (P) IS A NARROW DEEP FISSURE COVE WITH AP & SOR BETWEEN BOULDERS. IN A FEW PLACES INTERSTITIAL POOLED MOUSSE WITH SOME SPRUCE NEEDLES WAS OBSERVED.

revised 5.27.94
RMS: MC 5/28/91

SEGMENT

BA-7

SUBDIVISION

A

DATE May 120 / 91

DATE May 120 191

[illegible]

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

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

PHOTO ROLL # MAYSAP-

FRAMES

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		
9	15		✓						0 - 7	Y	-	-		✓			P - PB	1.5 m ²
10	35							✓	-		-	-		✓			P - P	
11	30							✓	-		-	-		✓			P - P	
12	30							✓	-		-	-		✓			P - P	
13	30							✓	-		-	-		✓			P - P	
14	40							✓	-		-	-		✓			P - PG	
15	40							✓	-		-	-		✓			P - P	
							✓		-		-	-		✓			P - PB	ONE PEBBLE AT

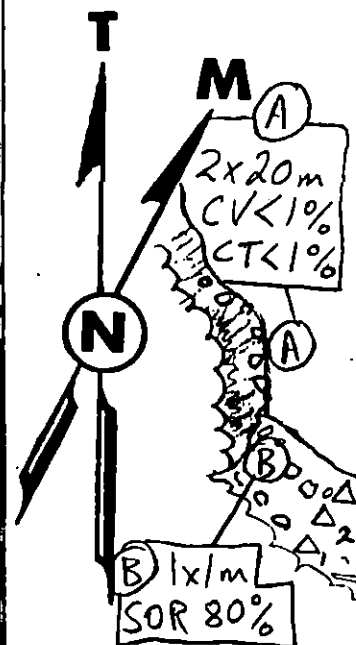
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS:

Reviews: MC 5728/91

reviewed 5.27 9y

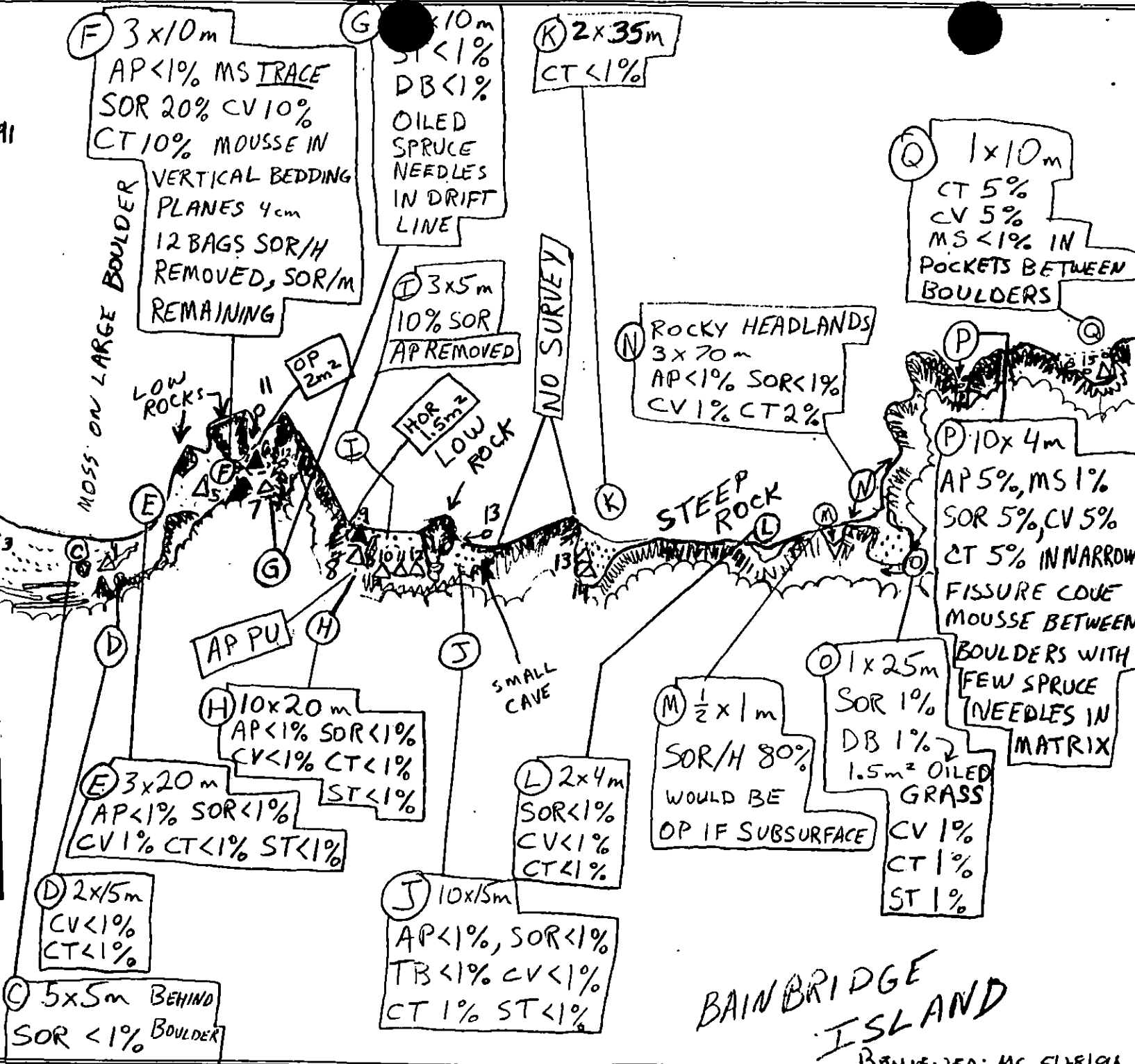
1991
 SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: **BA 7A**
 DATE: **MAY 20 1991**
 AIR P.#: **NONE**



LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE
 100 m
 ROUGHLY



BAINBRIDGE
 ISLAND

Reviewed: MC 5/28/91
 revised 5.27 94

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5

DATE 20 May 1991

pg 1 of 6

SEGMENT # BA-7

TIDAL HEIGHT(Range) +1.5 → 0

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 0

WIND SPEED/DIRECTION no wind

PHOTOGRAPHS: ROLL #

FRAME #

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

(A) Area is located in the U1TZ on the bedrock and boulders adjacent to a pocket beach. Within the site there is a moderate concentration of limpets; sparse Littorina, barnacles and a recent barnacle spat settlement; and a rare amount of Fucus. Biota cover is ~20%. Pink salmon fry have settled on the oil as well as green filamentous algae.

(B) Area is located high in the U1TZ. Black lichen and encrusting green algae covers 30% of the sediment. The other macrobiota was located within the site. The beach is composed of pebbles with scattered boulders. Below the pebbles there are oligochaete worms ~2 cm long, and on the pebbles there are juvenile Littorina. Biota cover is ~1%. On the boulder (Pinniped) area there is a moderate concentration. Littorina and limpets are also moderately concentrated, mussels are sparse and Fucus is rare. Barnacle spat is found on the shells of living mussels. Biota cover is ~60%. Pink Salmon fry were feeding near shore.

(C) Area is located high in the U1TZ and SUPRA. Black lichen and moss cover ~50% of the sediments.

There is a nearshore Laminarian Kelp bed.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	3	Pink Salmon fry
Seabirds			
Waterfowl	1	2	
Gulls/kittiwakes/Terns	2	2	
Shorebirds			
Corvids			
Other Birds	1 - Hummingbird	3	

MARINE MAMMALS

OBSERVED

LAND MAMMALS

SPECIES

OBSERVED

Sea Otters	2 (inc 1 pup)		
Pinnipeds(specify)	3 - Sealions		
	1 - Harbor Seal		
	3 - Humpbacks		

Shoreline subdivision map showing important biological features attached.

 REVIEWED: MC 5/28/91
 P. J. J. J. J. J.

Team # 5
Segment # BA-7
Subdivision A
Sea State 0

Date 20 May 1991 pg 2 of 6
Tidal Height +1.5 → 0
Biologist Crank
Wind Speed / Direction no wind

Comments (cont.)

- (D) Area is similar to site A. Below the site, in the freshwater runoff, there are dense to moderately concentrated interpebble/cobble mussels of various age classes. Concentrations of other biota are: moderate barnacles, dense Littorina, sparse Fucus, and rare Scytosiphon (alga). Recruitment for barnacles and mussels is strong. There are no Fucus sporelings. Biota cover is ~80%. On the bedrock, Littorina limpets; barnacles are dense, Fucus is moderate and mussels are sparse. Biota cover is ~90%.
- (E) Area is located high in the UITZ. Black lichen, encrustose green algae and moss covers 20% of the surface sediments. In the MITZ, barnacles are dominant covering ~80% of the sediments. Peck's area in the MITZ and LITZ has ~60% cover of Ulva and filamentous green algae. Volutharpa (snail) is present.
- (F and pit #6) Area and pit are located high in the UITZ in a pebble matrix. No intertidal biota was found in the area. One meter above the site rye grass is sprouting and on bedrock there is black and white lichen and moss with fruiting bodies. The MITZ is composed of a pocket pebble beach bordered by headlands. On the north headland, the vertical wall facing the beach has a moderate barnacle cover, no Fucus. On the south headland, the vertical wall facing the beach has dense Fucus (sporelings and maturing conceptacles present), moderate barnacles (spat present), Littorina and limpets, and rare mussels. On the south side of the beach there is a moderately concentrated interpebble mussel bed 7 m wide. Throughout the beach barnacles are sparse with a dense spat settlement; mussels are rare to sparse, and Fucus is rare. Biota cover is 20%. This is a good access beach.

Team # 5
Segment # BA-7
Subdivision A
Sea State 0

Date 20 May 1991 pg 3 of 4
Tidal Height +1.5 $\Rightarrow$ 0
Biologist Crank
Wind Speed / Direction no wind

Comments (cont.)

(G) Area is in the SUPRA and high ULTZ. In the SUPRA moss and rye grass sprouts are present. No macro-biota was found in the high ULTZ.

(H) Area is in the ULTZ. The moderately concentrated barnacles are the dominant species. Barnacle spat is abundant. Mussels of various age classes are found interpebblic in patches around boulder bases. Fucus, with maturing conceptacles and sporlings, are rare to sparsely concentrated. Limpets and Littorina have a moderate density. Green filamentous algae is growing on tar mat. The biota does not appear to be adversely affected by the remaining oil in this site.

(I) Area is in the MLTZ, below site H. There is a dense to moderately concentrated, interpebble mussel bed with various age classes up to the +3'; above +3' density is sparse. From the +4' to +8' barnacles are moderate along the cobbles and small boulders; Littorina and limpets are moderate. In the freshwater runoff, filamentous green algae is present. Biota cover is 50-70%.

Team # 5
Segment # BA-7
Subdivision A
Sea State 0

Date 20 May 1991
Tidal Height +1.5 $\rightarrow$ 0
Biologist Crank
Wind Speed / Direction no wind

Comments (cont.)

(J) Area is located in the UITZ and MITZ. Biota is similar to areas H; I. Barnacles with oil on their shells were tightly closing their inner plates when stimulated.

Recruitment in the mussel and barnacle populations is heavy on this beach.

(K) Area is located along bedrock, high in the UITZ. There is a pre-1964 barnacle line (same level as the moss), some of the barnacle shells still have their inner plates. Moss in the site covers <1% of the surface. The beach area is a pebble matrix. Low biota cover, barnacle spat is present.

(L) Area is located high in the UITZ. Encrustose green algae, moss and black lichen cover ~30% of the sediments. ~50cm below site, moderate Fucus and sparse barnacles cover ~100% of the sediments.

(M) Area is located at the top of the MITZ. There are sparse Fucus and barnacles. Biota cover is 20%. Directly below site biota cover is 80%, with moderate concentrations of Fucus and Ulva, sparse to moderate concentrations of barnacles and sparse concentrations of bladed red algae.

Team # 5
Segment # BA-7
Subdivision A
Sea State 0

Date 20 May 1991 pg 5 of 6
Tidal Height +1.5 → 0
Biologist Crank
Wind Speed / Direction no wind

Comments (cont.)

(N) Area is located in the UTZ, along the border of a pocket beach. Sparse concentrations of barnacles, black lichen, encrustose green algae and moderate concentrations of Littorina cover ~20% of the surface sediments. Live Littorina and barnacles were observed in direct contact with the oil cover.

(O) Area is in the SUPRA. Rye grass covers 100% of the sediments in the area.

The beach below sites N & O has a freshwater runoff. Filamentous green algae, Ulva (sea lettuce), pockets of moderately concentrated Fucus, densely concentrated Littorina and sparse Mussels are present. Biota cover is approximately 70%.

Team # 5

Date 20 May 1991

pg 4 of 4

Segment # BA-7

Tidal Height +1.5 $\rightarrow$ 0

Subdivision A

Biologist Crank

Sea State 0

Wind Speed / Direction no wind

Comments (cont.)

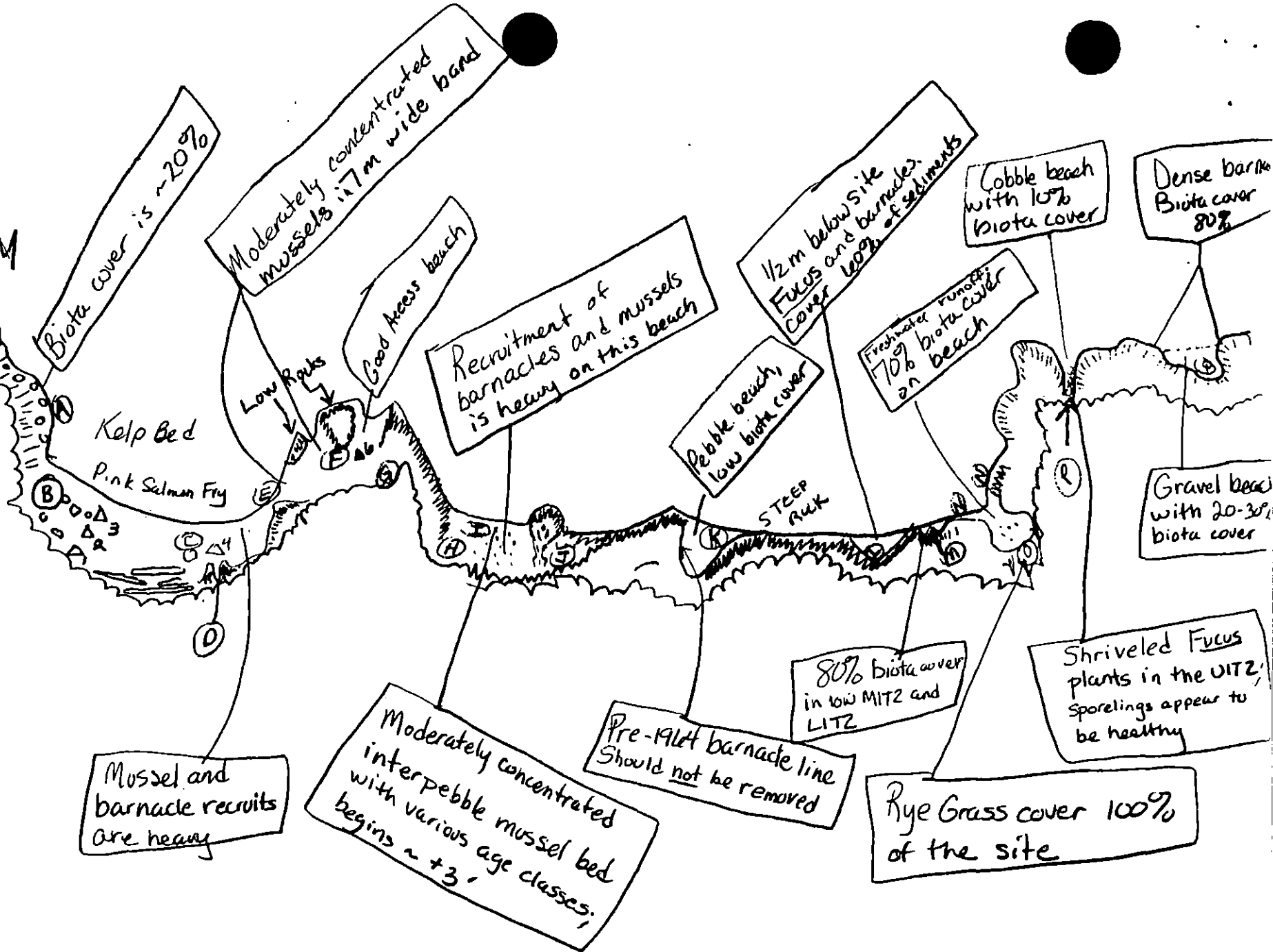
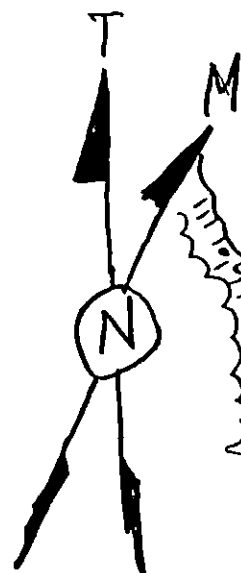
(P) Area is located in a shaded UITZ on a narrow pocket beach. Sparse barnacles and Fucus are present within the site. The mature Fucus plants are shriveled; the sporlings appear healthy. Biota cover is ~30% on the bedrock. Below the site, on cobbles, biota cover is ~10%.

(Q) Area is located in the UITZ on a narrow, gravel, pocket beach. Macro-biota was not located within the site along the bedrock sides. Non-reproductive Fucus in rare to sparse density and sparse concentrations of barnacles, limpets and Littorina cover 20-30% of the gravel beach. On the headland points, barnacles are dense and biota cover is ~80%.

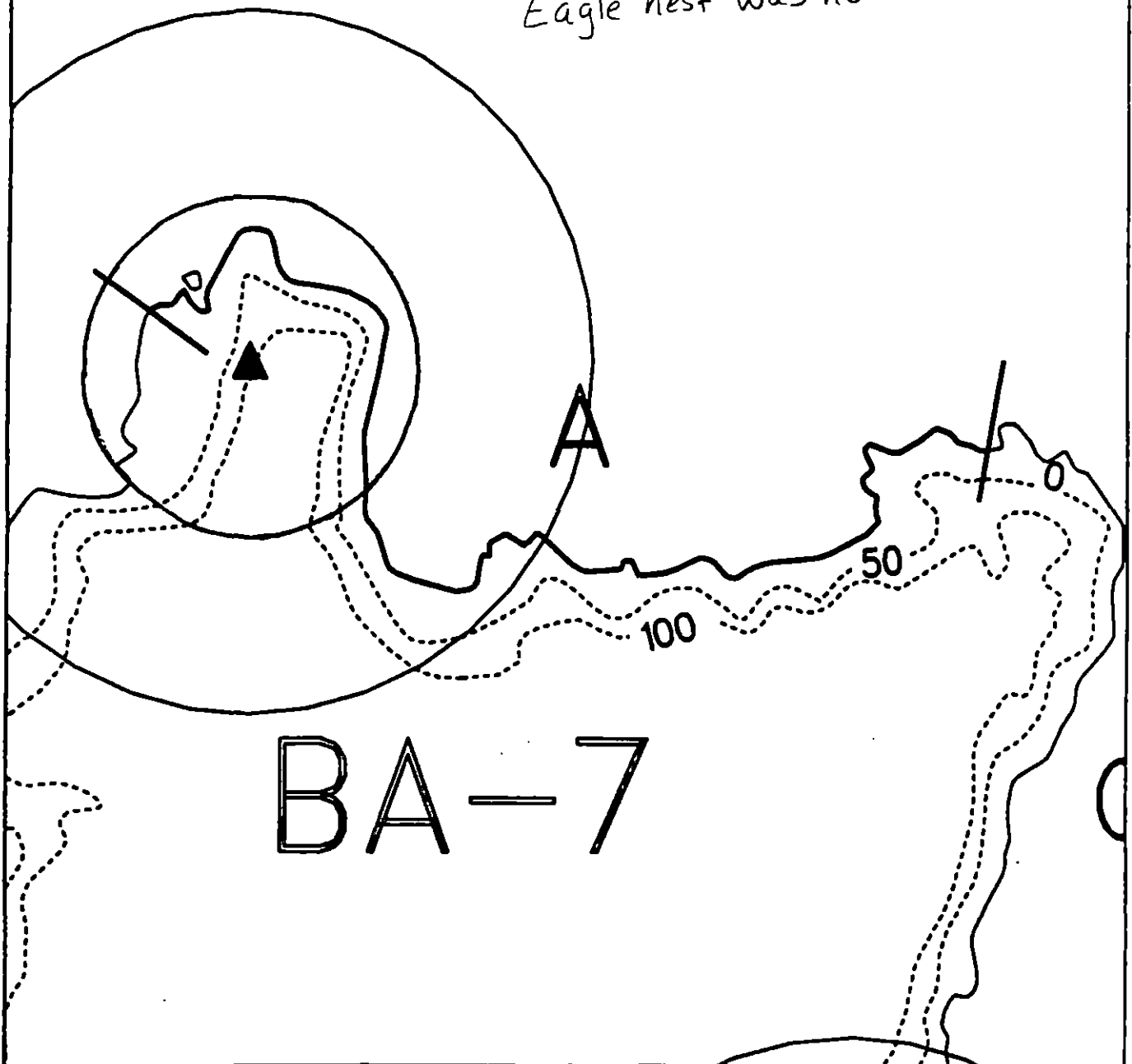
May 1991
Og: B
Chaney/Crank

BA-7A

20 May 1991

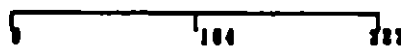


Eagle nest was not observed



BA007

METERS



AK State Plane Zone 4
1983

Segment Reference Map
Map Key: PVSB007



EAGLE NEST

P. Crank 5/20/91

1991 MAYSAP EVALUATION

SEGMENT: BA 007 **SUB:** A **REGION:** PWS **SURVEY DATE:** 5/20/91

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)	<u>N</u>	_____	_____
Manual Pickup (Check as Req.)	_____	_____	_____
Spot Washing	_____	_____	_____
Bio-Customblen Only	_____	_____	_____
Bio-Inipol/Customblen	_____	_____	_____
Other _____	_____	_____	_____
Other _____	_____	_____	_____

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____ **FOSC APPROVAL DATE:** _____

ADEC _____ **FOSC** _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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.

ADEC

NAME

John Hoyer

SIGNATURE

[Signature]

☐ NTR

Long our Og has done a very good job at detailing this map so all pleased with his attention to quickly detail throughout the survey. Crews will be able to locate the oil remaining on this segment that needs treatment. Due to the # of cores + blots I believe crews had difficulty locating the oiling as I recommended treatment here using SSAT + ASAP in particular around areas with mouse filling the matrix around the cobbles.

Recommended manual removal areas F thru J Crew p/d. was only partial due to time constraints and in particular from core P. Areas L, M, N, 10 are a lower priority.

EXXON

NAME

JOHN DEAN

SIGNATURE

[Signature]

☒ NTR

RECOVERABLE SURFACE OILING IS MINIMIZED, PLEASE SEE OIL REPORT IE; DISTRIBUTION, AREA², CONCENTRATION.

THERE ARE SOME AREAS THAT WOULD BENEFIT FROM BIO-REMEDIATION, HOWEVER THIS TECHNIQUE IS NOT APPROVED BY LAND MANAGER.

LANDMANAGER

NAME

Steve WARD

OF CUC/KS

SIGNATURE

[Signature]

☐ NTR

This Sub-Div has a large amount of mouse to be removed. Area is saturated with 3'x3' puddles and a large area 30'x30' is heavily covered with thick brown oil. Ess'ly removed by manual crews this oil will soon be mobile and a heavy sheen was already visible in the area. See ADEC Comments, And Og notes for NO-150. Exact Location.

USCG/NOAA

NAME

DREHER/CLINE

SIGNATURE

SWO H. L. Dreher

[Signature]

☒ NTR

Oil present was well weathered and located in shallow, stable pockets, posing no hazard to the environment. KLD

☐ NTR

Subsurface oiling on either side of rock point (≈ sites F, G, H, I) should be treated as it is typically covered by fines which may be eroded allowing remobilization of the oil. Surface oiling is common, but coverage is generally light. DDC

TEAM NO. UOG CHANEYBIO CRANKSEGMENT BA-7ADEC HAYESLANDMANAGER WARD for CUCSUBDIVISION AEXXON DEANUSCG/NOAA DREHER/CLINEDATE MAY, 20 1991TIME 11:25 to 16:30TIDE LEVEL 0.0 ft. to 5.0 ft.ENERGY LEVEL: ☐ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☒ SUN ☒ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 1001 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W 0 m M 19 m N 12 m VL 239 m NO 731 m US 650 m

LOC	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE V H M L	AREA		ZONE				SPLATTER NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A					T	T					RB	VH	2	20		✓			ON MASSIVE BOULDERS
B				B							BP	H	1	1		✓			ONE PATCH
C				T							B	H	5	5		✓			BEHIND MASSIVE BLDG/MOST
D					T	T					RB	H	2	15		✓			ON BOULDERS SPLASH
E	T			T	S	T	T				RB	H	3	20		✓			BEHIND OUTCROP
F	T	T		P	S	S					BRGP	H	3	10		✓			MS VERY LOCALIZED IN RX
G	T	T					T			T	PG	M	10	10	✓	✓	✓		Oiled Spruce Needle Mat
H	T				T	T	T				BPG	H	10	20	✓	✓			ISOLATED SMALL PATCHES
I				S							BPG	M	3	5			✓		12 bags removed SOR/H
J	T		T	T	T	S	T				BCP	M	10	15		✓			AP patches in pebbles on Bldk
K						T					R	V	2	35		✓			SPLATTERS ON BDRK
L				T	T	T					RB	H	2	4		✓			" " "
M				B							BR	M	0.5	1			✓		THICK OP SOR
N	T			T	S	S					BR	H	3	70	✓	✓			BEDROCK HEADLANDS
O				S	S	S	S		S		BC	L	1	25	✓	✓			POCKET COVE 1.5m ²
P	S	S		S	S	S					RB	VH/M	10	4	✓	✓			FISSURE COVE MOUSSE BETWEEN BOULDERS

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 5-20 FRAMES 8

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	40							✓	-		-	-		✓			P-PG	
2	35							✓	-		-	-		✓			P-PG	
3	30							✓	-		-	-		✓			P-PG	
4	25							✓	-		-	-		✓			P-PGM	
5	30							✓	-		-	-		✓			BC-BCPG	
6	25	✓							D-10					✓			PG-PG	2m ²
			✓						10-20					✓			" "	12 bags removed
7	30							✓	-		-	-		✓			P-P	
8	20							✓	-		-	-		✓			P-P	

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

OG COMMENTS: PIT (6) IS IN AN ISOLATED POCKET OF OILED PEBBLES BEHIND A BEDROCK OUTCROP. 12 BAGS OF SOR/H WERE REMOVED FROM THIS AREA. SOR/M REMAINED.

AREA (P) IS A NARROW DEEP FISSURE COVE WITH AP & SOR BETWEEN BOULDERS. IN A FEW PLACES INTERSTITIAL POOLED MOUSSE WITH SOME SPRUCE NEEDLES WAS OBSERVED.

revised 5.27.94
REVISOR: MC 5/28/91

DATE May 120 191

[illegible]

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

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

PHOTO ROLL # MAYSAP-

FRAMES

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		
9	15		✓						0 - 7	Y	-	-		✓			P - PB	1.5 m ²
10	35							✓	-		-	-		✓			P - P	
11	30							✓	-		-	-		✓			P - P	
12	30							✓	-		-	-		✓			P - P	
	30							✓	-		-	-		✓			P - P	
	40							✓	-		-	-		✓			P - PG	
	40							✓	-		-	-		✓			P - P	
							✓		-		-	-		✓			P - PB	ONE PEBBLE AT
									-		-	-						

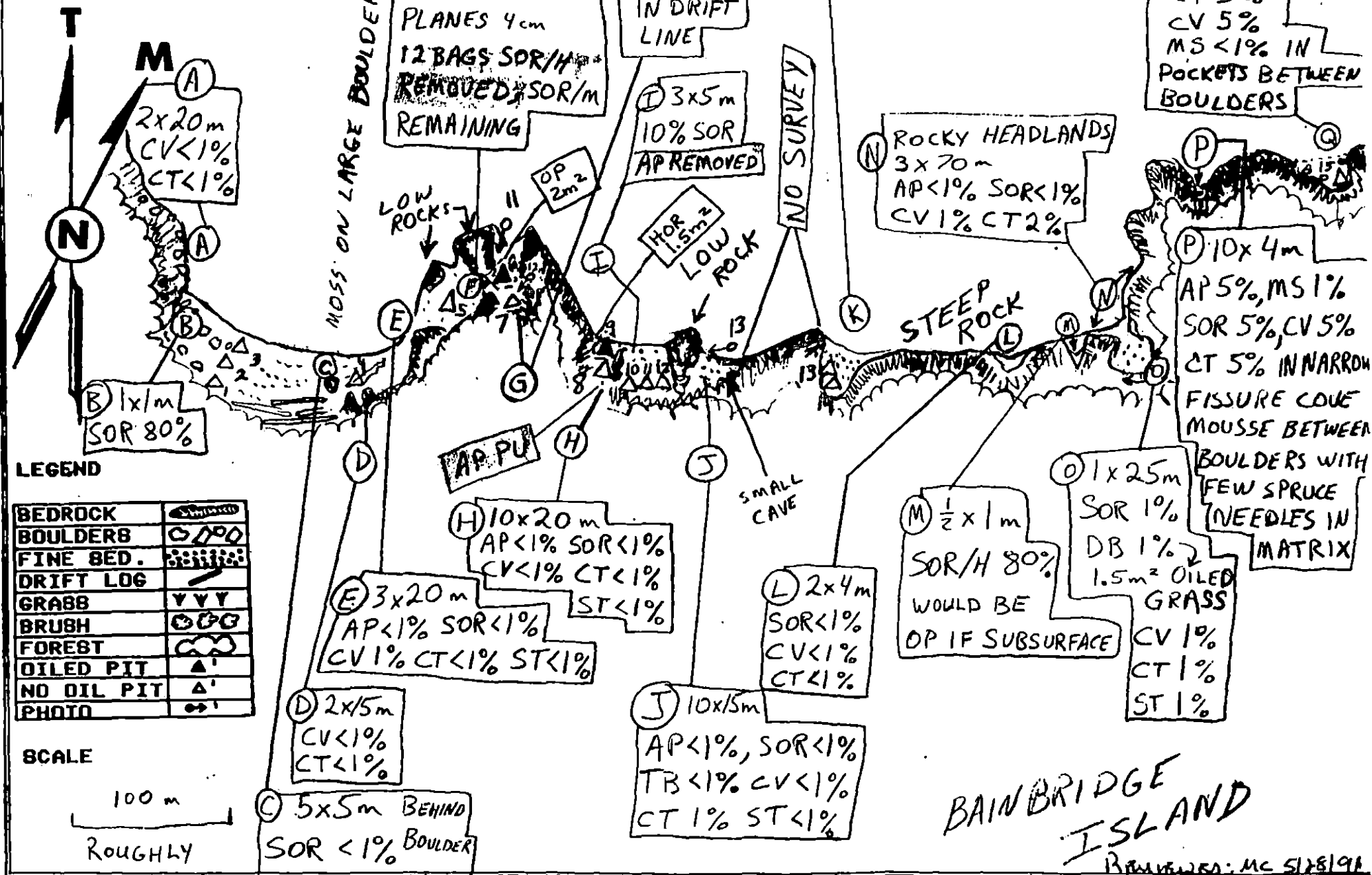
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS:

RECEIVED: MC 5728/91

reviewed 5.27 9y

MAP 1991
 SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: BA 7A
 DATE: MAY 20 1991
 AIR P.#: NONE



BAINBRIDGE
 ISLAND

REVIEWED: MC 5/28/91
 001500 0000 0000

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5

DATE 20 May 1991

pg 1 of 6

SEGMENT # BA-7

TIDAL HEIGHT(Range) +1.5 to 0

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 0

WIND SPEED/DIRECTION no wind

PHOTOGRAPHS: ROLL #

FRAME #

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

(A) Area is located in the U1T2 on the oodrock and now it is a pocket beach. Within the site there is a moderate concentration of Littorina, sparse Littorina, barnacles and a recent barnacle settlement. There is a small amount of Fucus. Biota cover is ~20%. There is a lot of oil on the oil as well as green filamentous algae.

(B) Area is located in the U1T2. Black lichen and encrusting green algae covers 20% of the sediment. The other macrobiota was located within the site. The beach is composed of pebbles with scattered boulders. Below the pebbles there are oligochaete worms ~2 cm long, and on the pebbles there are juvenile Littorina. Biota cover is ~1%. On the oodrock barnacles were with a moderate concentration. Littorina and Littorina are also moderately concentrated, mussels are sparse and Fucus is rare. Barnacle spat is found on the shells of living mussels. Biota cover is ~60%. Pink Salmon fry were seen, near shore.

(C) Area is located high in the U1T2 and SUPRA. Black lichen and moss cover ~50% of the sediments.

There is a nearshore Laminarian Kelp bed

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	3	Pink Salmon fry
Seabirds			
Waterfowl	1	2	
Gulls/kittiwakes/Terns	2	2	
Shorebirds			
Corvids			
Other Birds	1 - Hummingbird	3	

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters	2 (inc 1 pup)		
Pinnipeds(specify)	3 - Seals		
	1 - Harbor Seal		
Whales(specify)	3 - Humpbacks		

Shoreline subdivision map showing important biological features attached.

Reviewed: MC 5/28/91

Team # 5
Segment # BA-7
Subdivision A
Sea State 0

Date 20 May 1991 pg 2 of 4
Tidal Height +1.5 → 0
Biologist Crank
Wind Speed / Direction no wind

Comments (cont.)

- (D) Area is similar to site A. Below the site in the freshwater runoff, there are dense to moderately concentrated interpebble/cobble mussels of various age classes. Concentrations of other biota are: moderate barnacles, dense Littorina, sparse Fucus, and rare Scytosiphon (alga). Recruitment for barnacles and mussels is strong. There are no Fucus sporelings. Biota cover is ~80%. On the bedrock, Littorina limpets, barnacles are dense, Fucus is moderate and mussels are sparse. Biota cover is ~90%.
- (E) Area is located high in the ULITZ. Black lichen, encrustose green algae and moss covers 20% of the surface sediments. In the MITZ, barnacles are dominant covering ~80% of the sediments. Perennial area in the MITZ and LITZ has ~60% cover of Ulva and filamentous green algae. Volutharpa (snail) is present.
- (F and pit #6) Area and pit are located high in the ULITZ in a pebble matrix. No intertidal biota was found in the area. One meter above the site rye grass is sprouting and on bedrock there is black and white lichen and moss with fruiting bodies. The MITZ is composed of a pocket pebble beach bordered by headlands. On the north headland, the vertical wall facing the beach has a moderate barnacle cover, no Fucus. On the south headland, the vertical wall facing the beach has dense Fucus (sporelings and maturing conceptacles present), moderate barnacles (spat present), Littorina and limpets, and rare mussels. On the south side of the beach there is a moderately concentrated interpebble mussel bed 7 m wide. Throughout the beach barnacles are sparse with a dense spat settlement; mussels are rare to sparse, and Fucus is rare. Biota cover is 20%. This is a good access beach.

Team # 5
Segment # BA-7
Subdivision A
Sea State 0

Date 20 May 1991
Tidal Height +7.5 $\Rightarrow$ 0
Biologist Frank
Wind Speed / Direction no wind

Comments (cont.)

- (G) Area is in the SUPRA and high ULTZ. In the SUPRA moss and rye grass sprouts are present. No macro-biota was found in the high ULTZ.
- (H) Area is in the ULTZ. The moderately concentrated barnacles are the dominant species. Barnacle spat is abundant. Mussels at various age classes are found intertidal in patches around boulder bases. Fucus, with maturing conceptacles and sporlings, are rare to sparsely concentrated. Limpets and Littorina have a moderate density. Green filamentous algae is growing on tar mat. The biota does not appear to be adversely affected by the remaining oil in this site.
- (I) Area is in the MITZ, below site H. There is a dense to moderately concentrated, intertidal mussel bed with various age classes up to the +3'; above +3' density is sparse. From the +4' to +8' barnacles are moderate along the cobble's and small boulders; Littorina and limpets are moderate. In the freshwater runoff, filamentous green algae is present. Biota cover is 50-70%.

Team # 5
Segment # BA-7
Subdivision A
Sea State 0

Date 20 May 1991
Tidal Height $+1.5 \rightarrow 0$
Biologist Crank
Wind Speed / Direction no wind

Comments (cont.)

(J) Area is located in the UITZ and MITZ. Biota is similar to areas H & I. Barnacles with oil on their shells were tightly closing their inner plates when stimulated.

Recruitment in the mussel and barnacle populations is heavy on this beach.

(K) Area is located along bedrock, high in the UITZ. There is a pre-1964 barnacle line (same level as the moss), some of the barnacle shells still have their inner plates. Moss in the site covers $<1\%$ of the surface. The beach area is a pebble matrix. Low biota cover, barnacle spat is present.

(L) Area is located high in the UITZ. Encrustose green algae, moss and black lichen cover $\sim 30\%$ of the sediments. ~ 50 cm below site, moderate Fucus and sparse barnacles cover $\sim 10\%$ of the sediments.

(M) Area is located at the top of the MITZ. There are sparse Fucus and barnacles. Biota cover is 20% . Directly below site biota cover is 80% , with moderate concentrations of Fucus and Ulva, sparse to moderate concentrations of barnacles and sparse concentrations of black red algae.

Team # 5

Segment # BA-7

Subdivision A

Sea State 0

Date 20 May 1991

Tidal Height $+1.5 \rightarrow 0$

Biologist Crank

Wind Speed / Direction no wind

pg 5 of 6

Comments (cont.)

(N) Area is located in the ULTZ, along the border of a pocket beach. Sparse concentrations of barnacles, black lichen,

crustose green algae and moderate concentrations of Littorina cover ~20% of the surface sediments. Live Littorina and barnacles were observed in direct contact with the oil cover.

(O) Area is in the SUPRA. Rye grass covers 100% of the sediments in the area.

The beach below sites N+O has a freshwater runoff. Filamentous green algae, Ulva (sea lettuce), pockets of moderately concentrated Trucus, densely concentrated Littorina and sparse mussels are present. Biota cover is approximately 70%.

Team # 5

Segment # BA-7

Subdivision A

Sea State 0

Date 20 May 1991

Tidal Height +1.5 $\rightarrow$ 0

Biologist Crank

Wind Speed / Direction no wind

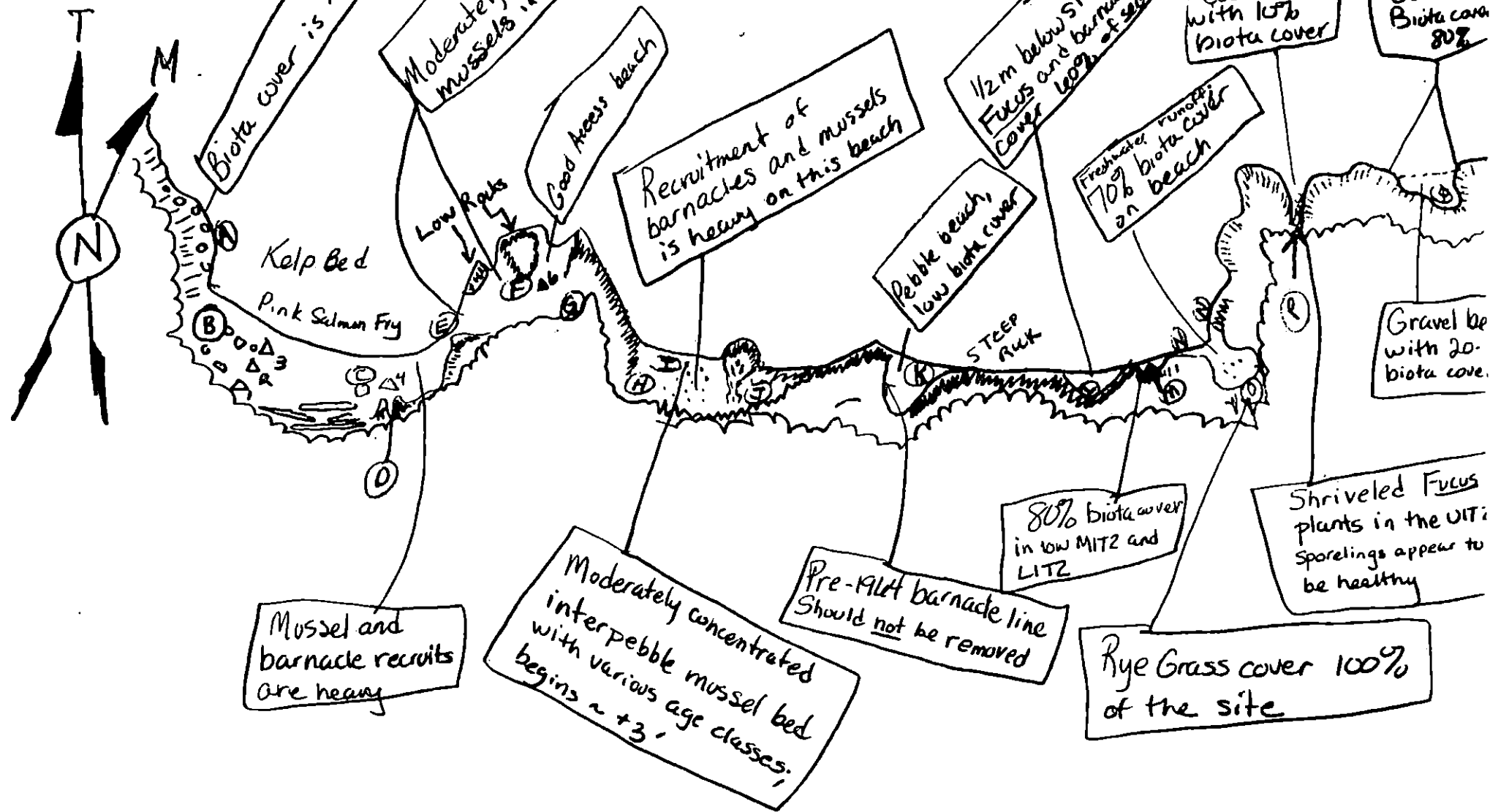
pg 4 of 4

Comments (cont.)

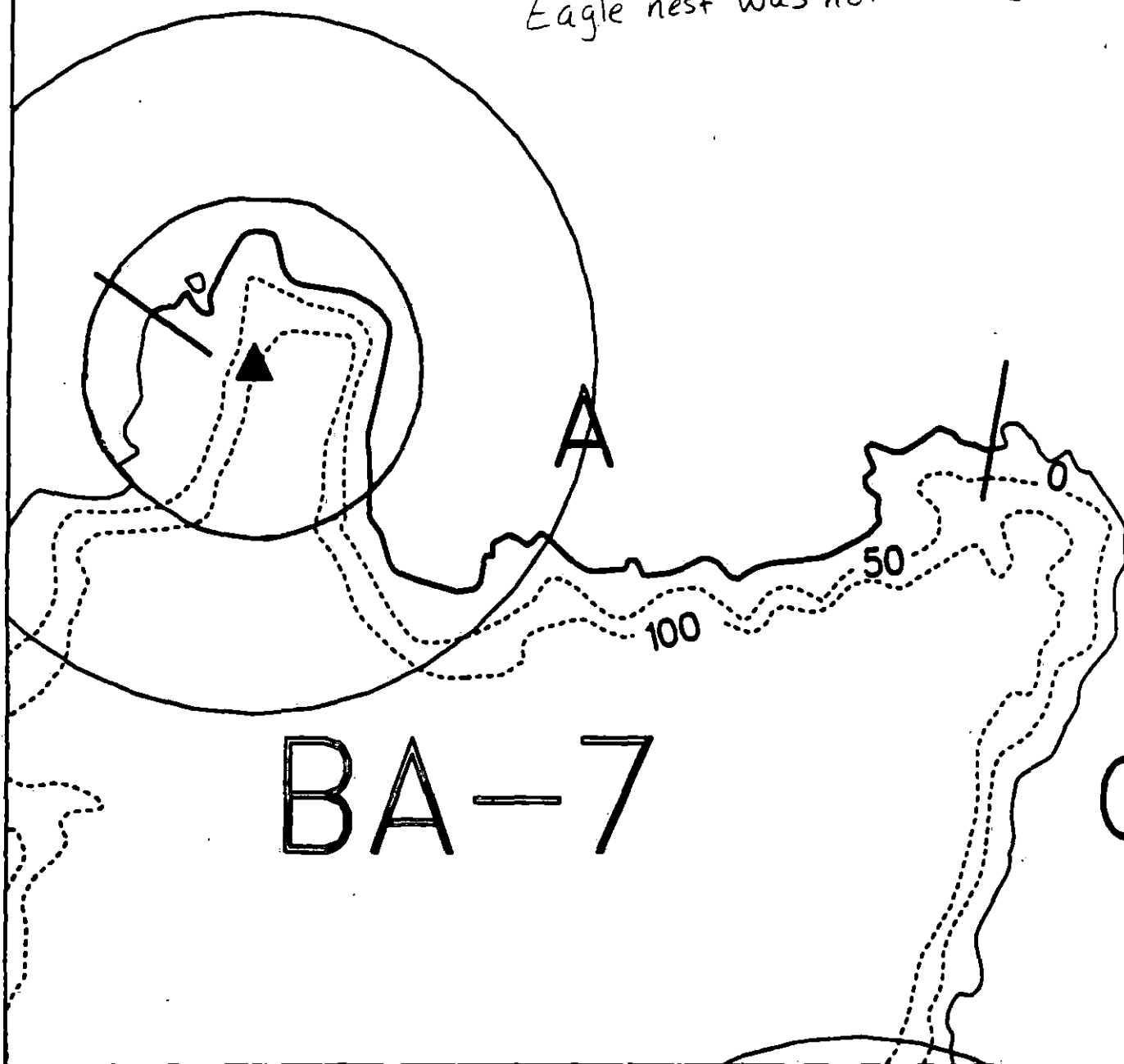
(P) Area is located in a shaded UITZ on a narrow pocket beach. Sparse barnacles and Fucus are present within the site. The mature Fucus plants are shriveled; the sporlings appear healthy. Biota cover is ~30% on the bedrock. Below the site, on cobbles, biota cover is ~10%.

(Q) Area is located in the UITZ on a narrow, gravel, pocket beach. Macro-biota was not located within the site along the bedrock sides. Non-reproductive Fucus in rare to sparse density and sparse concentrations of barnacles, limpets and Littorina cover 20-30% of the gravel beach. On the headland points, barnacles are dense and biota cover is ~80%.

May 24, 1991
 Og: Bio
 Chaney/Crank
 BA-7A
 20 May 1991



Eagle nest was not observed



BA007

Segment Reference Map

Map Key: PWSBA007



METERS

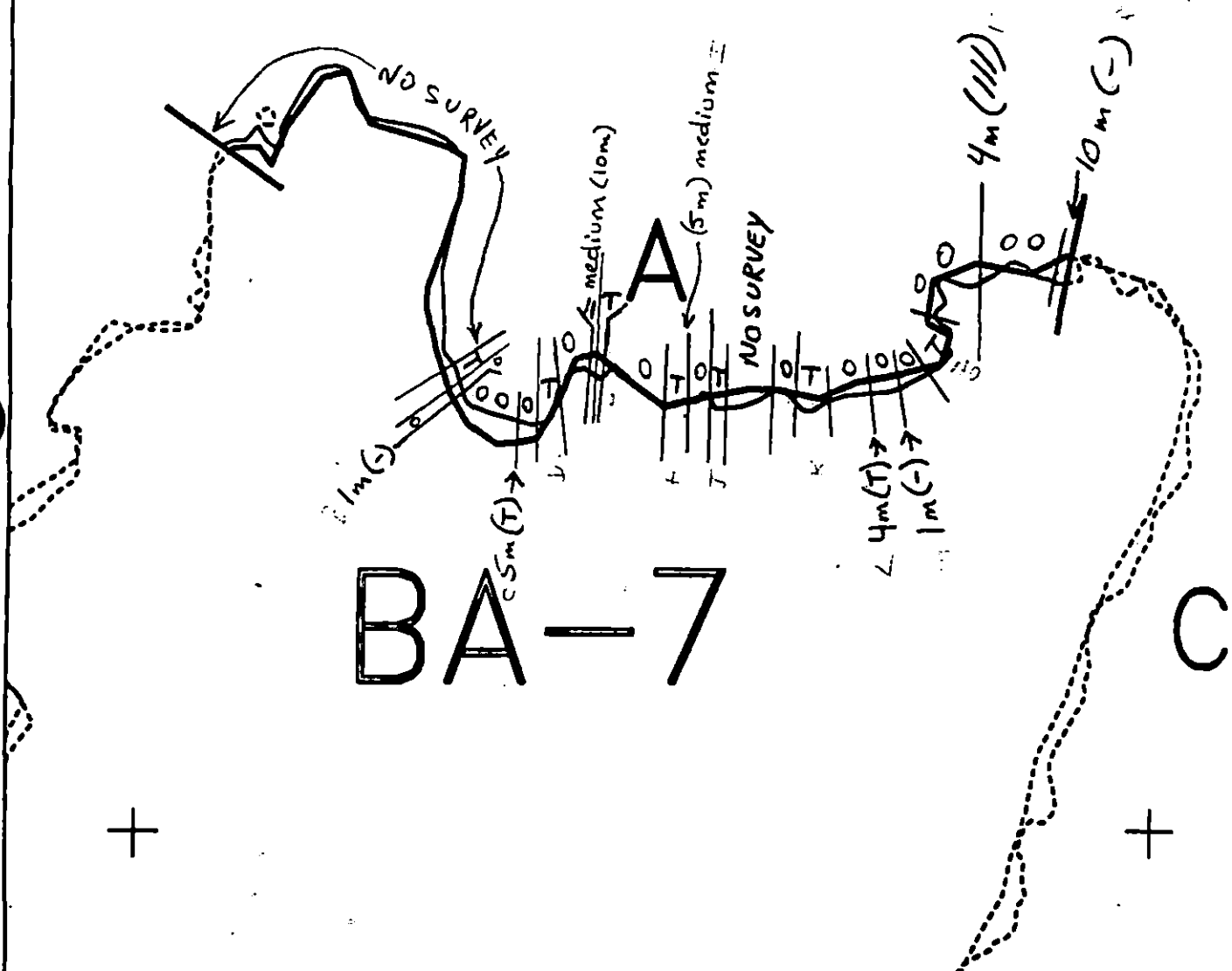


AK State Plane Zone 4
500007



EAGLE NEST

P. Crank 5/22/93



BA-7

C

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

BA007 A
 ADEC Subsegment Length: 1851m
 METERS
 0 200 400
 AK State Plane Zone 4
 pbs007a

Subdivision Field Map
 Map Key: PWSBA007A
 Name: CHANEY
 Date: MAY 20 1991
 Date Entered:

Reviewed: MC 5128191
 revised 6.27 91

SUPPLEMENT

1991 MAYSAP EVALUATION

SEGMENT: BA 7 SUB: A REGION: PWS SURVEY DATE: FIELD REQUEST July 1/91ENVIRONMENTAL SENSITIVITIES:

Work Window(s) _____

Ecological/Constraints (see page two for details) _____

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find, and contact Exxon's Cultural Resource Program immediately: 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.).

Timothy J. Smith for SHD July 2, 1991

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N) _____

Y

Manual Pickup (Check as Req.) _____

Spot Washing _____

Bio-Customblen Only _____

Bio-Inipol/Customblen _____

Other _____

Other _____

XCOMMENTS:

INITIAL: _____

TAG: ADD BIO - CUSTOMBLEN + INIPOL AS REQUIRED

FOSC: _____

TAG APPROVAL DATE: July 2 1991 FOSC APPROVAL DATE: _____ADEC John Bane

FOSC _____

EXXON RealUSCG T.M. Murphy etNOAA [Signature]

SUPPLEMENT

1991 MAYSAP EVALUATION

SEGMENT: BA 7 SUB: A REGION: PWS SURVEY DATE: FIELD REQUEST July 1/91ENVIRONMENTAL SENSITIVITIES:

Work Window(s) _____

RECEIVED

JUL 18 1991

Ecological/Constraints (see page two for details) _____

ANCHORAGE-AOC

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find, and contact Exxon's Cultural Resource Program immediately: 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.).

Timothy J. Smith for SH/D July 2, 1991

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N) _____

YY

Manual Pickup (Check as Req.) _____

Spot Washing _____

Bio-Customblen Only _____

Bio-Inipol/Customblen _____

Other _____

Other _____

XXCOMMENTS:

INITIAL: _____

TAG: ADD BIO - CUSTOMBLEN + INIPOL AS REQUIRED

FOSC: _____

TAG APPROVAL DATE: July 2 1991 FOSC APPROVAL DATE: 7/8/91ADEC WhitakerFOSC [Signature]EXXON Real

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

USCG T.M. Murphy LTNOAA [Signature]

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/BA Subd.: 06/C Site: 2.1 Date: 8-4 1990Conditions Observed: 1. ^{3x30m} SOR/B/m AP/S/F screening at
waterline. Surface oiling was OR/m+H 0.25m.2. 3x25m SOR/P FL/B MITZ3. 2.5x25m SOR/BFollowup Recommendations: ① Manual Tilling
② Removal of OR/H
③ Reapply custom blendCompleted by Pickup Crew: ☐ YES ☐ NOPriority for Addressing in 1990: ☐ High ☐ Mod. ☐ Low

ADEC

(name)

(signature)

Comments:

Surface oiling was predominantly SOR/m with
patches of OR/H. Worksite is on N shore of Site 1.

Exxon

Martinez N.J.
(name)

(signature)

Comments:

No visible oiling light SOR, high energy shore
no need for further work (was recoverable)
Nature should break down remaining SOR.

USCG

MSTC Michael D Brown
(name)

(signature)

Comments:

NO CLEAN-UP. NO RE-SURVEY FOR Spring 91

Land Rep.

DOUGLAS GIBSON
(name)

(signature)

Comments:

RECOMMEND BA-006/C/SITE 1 BE GIVEN PRIORITY
SITE STATUS FOR REASSESSMENT IN 1991 IF THIS ASAP
WORK REQUEST FOR 1990 IS NOT COMPLETED.

ASAP FOLLOWUP RECOMMENDATIONS

Segment: ASI BA-7A Subd.: A Site: 1 Date: 8/5/90 1990

Conditions Observed: Oiled fissure pocket cave identified on
original OG map but not recommended for treatment in 1990
by TAG.

MS/P/I 5X10m in UETZ

Followup Recommendations:

- ① Manual removal of MS/P/I
- ② Acute, manually expose subsurface oiling under
maneuverable rocks.
- ③ Custombles

Completed by Pickup Crew: ☐ YES ☐ NO

Priority for Addressing in 1990: ☐ High ☐ Mod. ☐ Low

ADEC

John Hayer
 (name)

[Signature]
 (signature)

Comments:

This area was overlooked and not treated.
Difficult to locate see sketch map.

Exxon

Martinez NJ
 (name)

[Signature]
 (signature)

Comments:

Not a priority site, given the degree of oiling
its exposure to winter wave action I believe
it will take care of itself

USCG

MSTC Michael O. Brown
 (name)

[Signature]
 (signature)

Comments:

NO, see conditions observed.

Land Rep.

DOUGLAS GIBSON
 (name)

[Signature]
 (signature)

Comments:

NOT A PRIORITY SITE FOR REASSESSMENT IN 1991
IF THIS 1990 WORK REQUEST IS ACCOMPLISHED

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT EB-11SUBDIVISION A(191)DATED 8-3-90

MODIFICATION

1. REASON FOR MODIFICATION:

2 areas on EB-11 will require further treatment in 1990. Moving N→S, on second prominent point encountered is an area approx. 2.5 x 4.5m of weathered interstitial murre, AP, and OP/OR subsurface oil (3-5cm penetration). Area 2 is North facing cone in middle of segment. From MITZ-HITZ the evidence indicates that bioremediation moved clean surface layer of rubble/5m. boulder aside to expose tar mats. These tar mats/AP were then bioremediated. AP and subsurf OP and OR oil still exist however and will require re-treatment in 1990.

2. SUGGESTED ADJUSTMENT TO WORK PLAN:

TAC should ^{assess segment} determine potential effectiveness of mechanical treatment. A large number of clean cobbles and small boulders will need to be relocated to access AP and subsurface oil. A manual crew could accomplish this task, but would require a substantially longer period of time. The next step is to remove AP and subsurface oil prior to bioremediation (Both Snigel and Customler).

3. TIMING ISSUES:

Treatment required in 1990

4. ADDITIONAL COMMENTS:

ADEC Bob McCreadyEKKON Randall K. BoyerUSCG DonnaLAND MANAGER John C. C.

(If field rep is on scene)

SEGMENT AS/BA-7 SUBDIVISION: A SITE: 1 DATE 8/4/90

SCG

NAME MTC Michael D. Brown SIGNATURE Michael D. Brown☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

ADEC

NAME John Hayer SIGNATURE John Hayer☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Work Plan Modification written for on pocket beach
on this site. The rest of site has JOR, MS and
should be reassessed to determine effectiveness of
b.b. + weathering.

LAND MANAGER

NAME DOUGLAS GIBSON SIGNATURE Douglas Gibson☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

EXXON

NAME Martinez, N.W. SIGNATURE Nicholas G. Martinez☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

FIELD SHORELINE COMMENT SHEET

SEGMENT AS/ BA-7 SUBDIVISION: A SITE: 2 DATE 8/4/90**USCG**NAME MSTC Michael D. Brown SIGNATURE Michael D. Brown☐ YES
REASON:☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

ADECNAME John Hayes SIGNATURE John Hayes☒ YES
REASON:☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

Site two has two areas in MITZ with SOR/H that were screening at waterline. In addition there is MS + TB's in the UITZ. Surface silt is 2-4 cm of OR/H. Crew manually removed most of the MS putter observed in the MITZ next to the bedrock although there is still AP + SOR.

LAND MANAGERNAME DOUGLAS GIBSON SIGNATURE Douglas Gibson☐ YES
REASON:☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

EXXONNAME Martinez N.W. SIGNATURE N.W. Martinez☐ YES
REASON:☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

FIELD SHORELINE COMMENT SHEET

SEGMENT AS 13A-7 SUBDIVISION: A SITE: 3 DATE 8/4/90

USCG

NAME Mste Michael D. Brown SIGNATURE Michael D. Brown

☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:

ADEC

NAME John Hayer SIGNATURE John Hayer

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:

SOR and MS observed on site also screen was
observed at waterline MITZ.

LAND MANAGER

NAME DOUGLAS GIBSON SIGNATURE Douglas Gibson

☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:

EXXON

NAME Martinez N.W. SIGNATURE Nicholas J. Martinez

☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:

FIELD SHORELINE COMMENT SHEET

SEGMENT AS 1BA-7 SUBDIVISION: A SITE: 4 DATE 8/4/90

USCG

NAME MTE Michael D. Brown SIGNATURE Michael D. Brown

REASON: ☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991

ADEC

NAME John Hayer SIGNATURE John Hayer

REASON: ☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991

*No treatment necessary at this time.
Site is lightly oiled with weathered s/patter.*

LAND MANAGER

NAME DOUGLAS GIBSON SIGNATURE Douglas Gibson

REASON: ☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991

EXXON

NAME Martinez N.J. SIGNATURE Nicholas J. Martinez

REASON: ☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991

ASAP SHORELINE OILING SUMMARY

PAGE 1 OF 1

TEAM NO ONE EXXON MARTINEZ SEGMENT AS BA 7
 OG Reimer USCG BROWN SUBDIVISION A
 ADEC HAYES LAND REP GIBSON TOTAL NO. SITES 4
 DATE 8/14/90 TIME 5010/19:00 TIDE LEVEL 5 to 4
 TOTAL EST LENGTH OF SHORELINE SURVEYED: 850 m
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 OIL CATEGORY LENGTH: W 0 m M 45 m N 58 m VL 260 m NO 487 m US 901 m

SURFACE OIL

SITE 1

SITE 2

SITE 3

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT								
S.O.R.		X	I			X		
POOLED								
COVER								
COAT		X	X	X		X		
STAIN								
MOUSSE			I	I		I		
PATTIES/T.B.								
FILM								
NO OIL					X		X	Y
EST. SITE LENGTH					260			

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT								
S.O.R.		H	H	X	I	X	H	H
POOLED								
COVER								
COAT			✓	X		✓	X	
STAIN								
MOUSSE				I		I	I	
PATTIES/T.B.				X			X	
FILM								
NO OIL					X			
EST. SITE LENGTH					130			

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT			F				F	
S.O.R.		X		I		I	X	
POOLED								
COVER								
COAT			X	X		X		
STAIN								
MOUSSE				I		I		
PATTIES/T.B.				X			X	
FILM								
NO OIL					X			X
EST. SITE LENGTH					220			

SUBSURFACE OIL

SITE NO.	PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER				OILED INTERVAL (cm)	CLEAN BELOW (Y/N)	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS
			OP	OR	OF	NO			SU	UI	MI	LI	
2	1	15				X	.	Y			X		P-GP
							.						
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Photographs:

Roll No. AP-01-02

Frames 18, 19, 20

REVIEWED
8/7/90 YW

COMMENTS Predominantly Rocky shoreline with narrow crevices and small Picket beaches. SOR is still found trapped in crevices and in pockets in sheltered areas behind near shore rocky areas. The beaches have patchy areas of SOR and friable Tarmato. Site 4 is a long Boulder beach with sporadic coat and patties in between boulders.

ASAP SHORELINE OILING SUMMARY
SEGMENT AS/ BA7 SUBDIVISION A

SURFACE OIL (CONTINUED)

SITE 4

SITE

SITE

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UL	MM	LI
ASPHALT								
S.O.R.								
POOLED								
COVER-								
COAT:				X		X		
STAIN								
MOUSSE:								
PATTIES/T.B.				I		I		
FILM-								
NO OIL					X		X	X
EST. SITE LENGTH							240	

DISTRIBUTION	OILED ZONES							
	/C	/B	/P	/S	SU	UL	MM	LI

SUBSURFACE OIL (CONTINUED)

[illegible]

REVIEWED
8/7/90 *[Signature]*

COMMENTS

Keymap
SEGMENT SITE A-7

SUBDIVISION A - Site 2

DATE 8 / 4 90

CHECKLIST

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

LEGEND

1 ▲

Pit - No Subsurface Oil

2 ▲

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

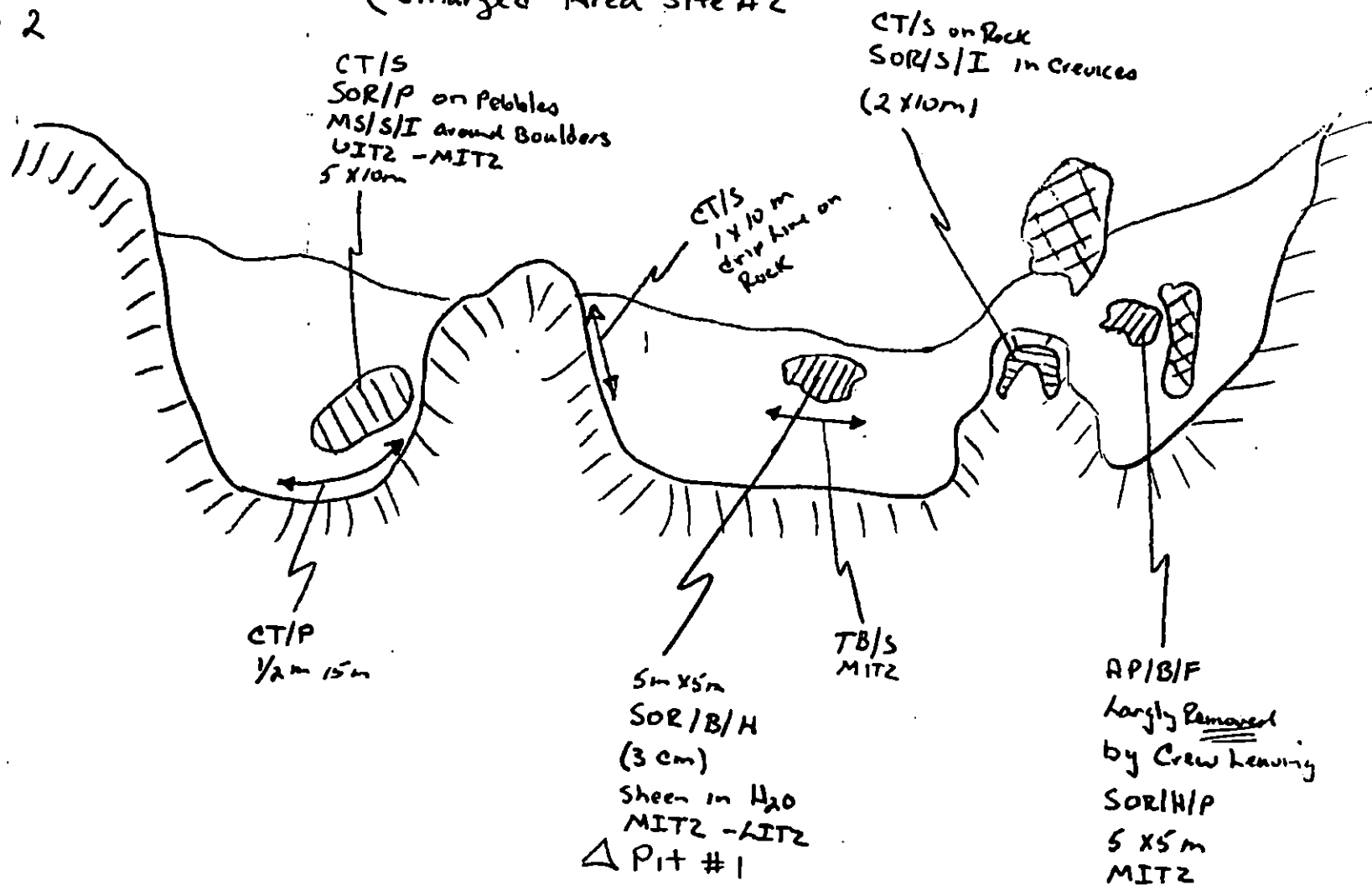
eee

Oiled Vegetation

1 ➡

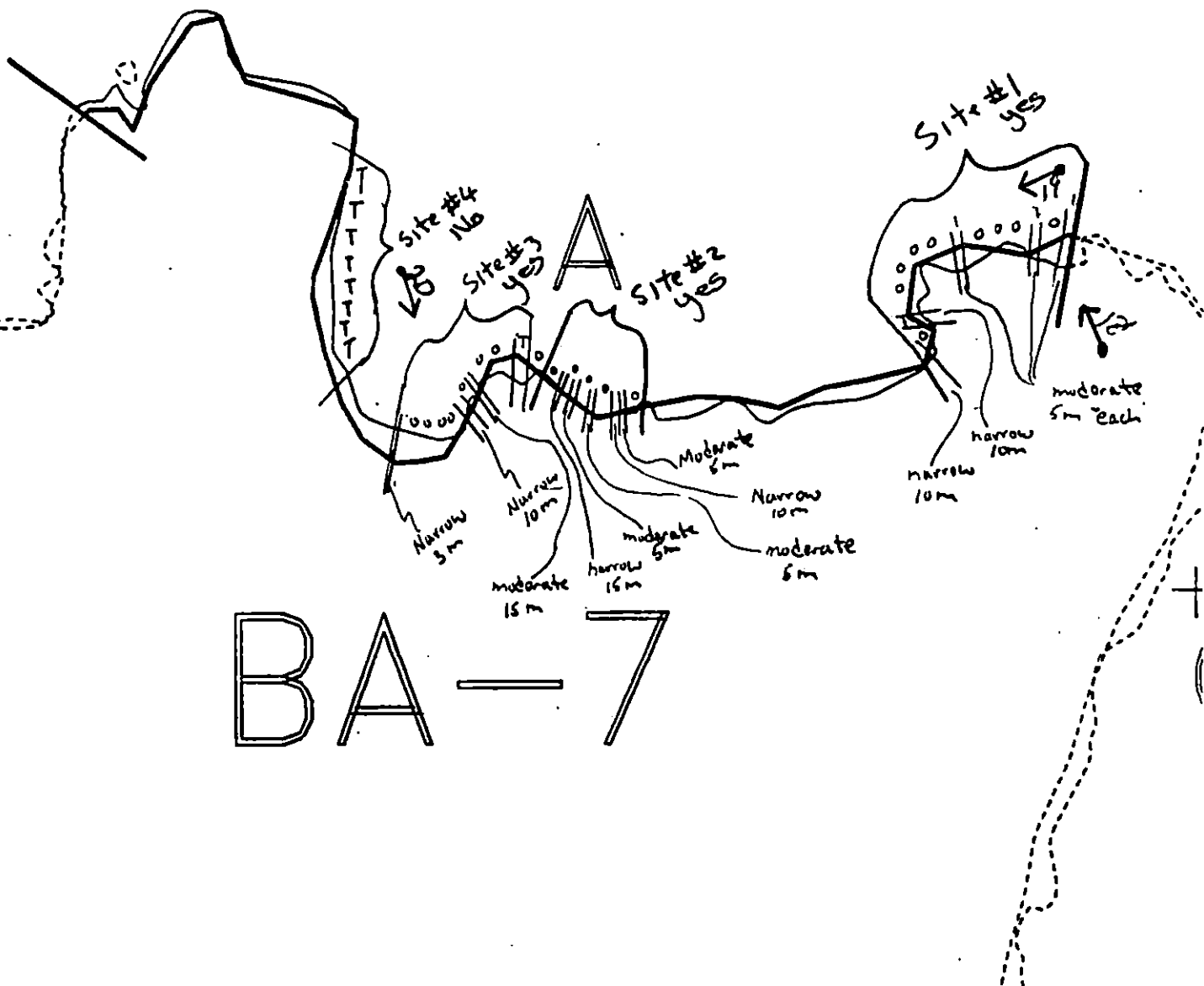
Photo location, direction,
and number

ATCH MAP
(Enlarged Area Site #2)



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

REVISION: 02/24/90



BA-7

XXXX
//

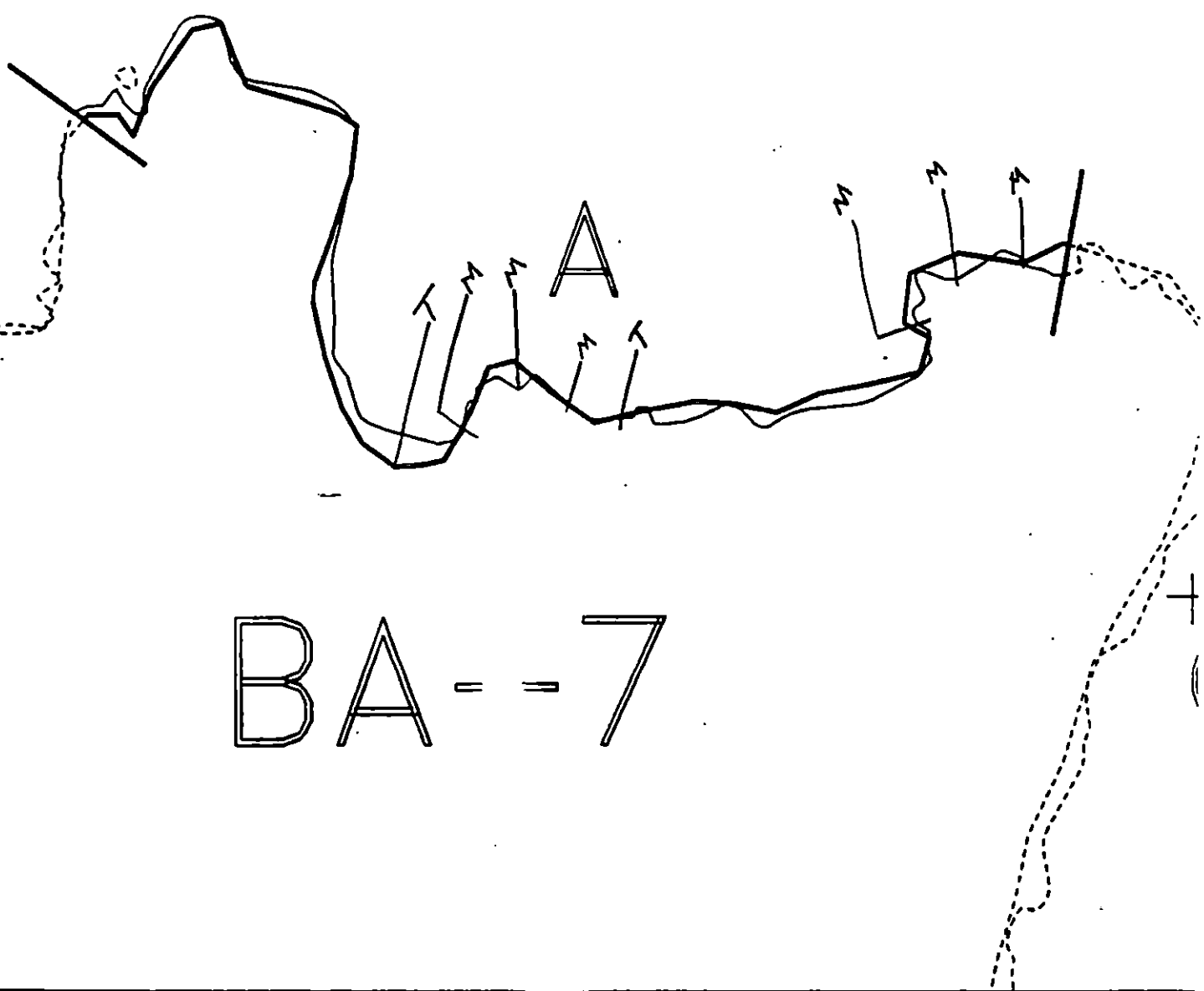
TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

BA-7 A
ADEC Subsegment Length: 1651m
METERS
0 163 320
AK State Plane Zone 4 1:6410
pba-7a



Subdivision Field Map
Map Key: PWSBA-7A
Name: Reimer
Date: 8/4/90
Data Entered:



BA--7

XXXX
//

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

BA - A
ADEC Subsegment Length: 1651m
METERS

0 103 320
AK State Plane Zone 4 1:6410
pba-7a



Subdivision Field Map
Map Key: PWSBA-7A
Name: Reimer
Date: 8/4/90
Date Entered:

Two Patches
1 X 3m
AP/P/F
MITZ

Sheen in H₂O
SOR/B } MITZ
PT/S }
(3 X 15 m)

1m X 10m
CT/P } UITZ
MS/I/S }
on Rock at
side of Pocket Beach

(2 X 20m)
CT/S on Rock face UITZ
MS/P/I on Boulders
Brown Sheen in Tidal Pools

5 X 10m
Fissure in
Rock
MS/P/I in BIDS
CT/B on Rock
NOT WORKED
UITZ

1m X 20m
CT/S }
SOR/S/I } on Rock
MS/S/I } upper
supra ITZ

CT/P
SOR/IP
4 X 5m
Continuum
on B A 6

See
Enlarged
Sketch
Site #2

1 X 240m
CT/S }
PT/S/I } on Boulders
Rock

CT/P
MS/I/S
on Rock UITZ
(1 X 10m)

1m X 5m
SOR/B
Supra tidal
in grass
plus
1m X 10m
CT/S on
Rock at side
of Beach

BA-7

BA-7 A

ADEC Subsegment Length: 1651m
METERS

0 103 320

AK State Plane Zone 4 1:6418
pba-7a



Subdivision Field Map

Map Key: PWSBA-7A

Name: Reimer

Date: 8/4/90

Date Entered:

XXXX
//

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/BA-08

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ BA-08 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-40-16249 (Ps, 12/89) and 226-40-16243 (Ps, 12/89)

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

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

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

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 161 m: No Oil 7115 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

1A
1B

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

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

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

AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

Salmon fry nursery area (4/31 to 7/31)

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

- 1D Esther Hatchery release (4/15 to 6/15)
- 1E Main Bay Hatchery release (4/20 to 6/15)
- 1F Sawmill Bay Hatchery release (4/15 to 6/1)
- 1G Cannery Creek Hatchery release (4/21 to 6/1)
- 1H Remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.

AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214

1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511

- 1I Gill net area (5/7 to 8/31)
- 1J Purse seine area (7/20 to 9/30)
- 1K Purse seine hook-off (7/20 to 9/30)
- 1L Set net sites (8/11 to 7/25)

Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

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

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

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

- 3N Harbor seal and sea lion pupping (5/15 to 7/1)
- 3O Harbor seal and sea lion molting (8/15 to 9/15)

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

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235

ADF&G Don Calkins 267-2403

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Roth 267-2206

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

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

- 6U Recreation: Tent sites (8/1 to 9/15)
- 6V Anchorages (8/1 to 9/15)
- 6W Forest Service cabins (8/1 to 9/15)
- 6X Lodge (8/1 to 9/15)
- 6Y Special use destination

7Z Subistence area: Salmon harvesting (5/1 to 9/30)

- 7H Finfish harvesting
- 7I Deer harvesting (8/15 to 2/25)
- 7J Invertebrate harvesting

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

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / BA-8 SUBDIVISION: BA-08 DATE 4-25-90

NOAA

NAME Michael Buchman SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

Small section of asphalt patties at the northern end of segment. ~~There~~ Slightly lower density of Algae are observed below this band of oiling. Though low priority, crews working on adjacent or nearby segments could easily remove.

ADEC

NAME John Hayer SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

minimal surface oil in the form of small asphalt patties as indicated on sketch map. Also band of oiling approx 1m. in UITE. Low priority area for treatment. Recommend manual pick up of patties. Oil Band is weathering + above very healthy intertidal.

LAND MANAGER

NAME Ron Crenshaw (MIE) SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

Sporadic patties where shown on OG sheet were numerous enough to be manually removed. Though human use of area is low & biota abundant, a small team, if nearby, should carefully remove patties with minimum disturbance of rest of beach. No bio.

SHORELINE OILING SUMMARY

REVISION NO. 06/12/90

OG Mike Fournier NOAA Michael Buchman SEGMENT ST/ BA-08
 BIO Kathy Carlin LAND REP Ron Greenhaw (ONR) SUBDIVISION A (1 OF 1)
 EXXON Larry Olson ADEC John Hayes TIME 7:00 to 10:30
 TEAM NO. 11 TIDE LEVEL -1.8 DATE 4/25/90
 EST. SUBDIVISION LENGTH: 2617 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock steep rocky backshore
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 30 % B 50 % C 15 % P 5 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 20 % Hang 60 % Vert 20 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 110 m NO 7507 m

SURFACE OIL

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

PAVEMENT H (F) S 3 sq. m by 3 cm(PATTIES) TARBALLS 5 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE PATTIES#BAGS 2

Photographs:

Roll No. —Frames —SUBSURFACE OIL* oil interval < 5cm in pit # 8³ does not constitute subsurface oil.

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	▽	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	SU	U	M	V				
1	25					X	-		X						X					N	-	P, G, C, M
2	10					X	-		X							X				N	5	C, P, R
3	20				X		0-2		X		X					X				N	-	G, S, C
4	20					X	-		X								X			N	5	P
5	25					X	-		X							X				N	-	C, P, G
6	20					X	-		X						X					N	10	P, G, C

COMMENTS

Oiling occurs in the northern end of the segment (see map 1) mostly as asphalt patties in the HITZ w/ some coating on the rocks, boulders and cobble. The sporadic asphalt patties were manually removed while the longer bands were left on the beach (map 2). Shore zone consists mostly of high angle rock/boulder beaches with some vertical rock faces and some low angle boulder/cobble.

REVIEWED 7/6 DATE 4/26/90

REVIEWED 7W DATE 4/26/90

OG Mike Fogel
 SEGMENT BA-08
 SUBDIVISION A
 DATE 4, 25 80

CHECKLIST

☐ N Arrow
☐ Apprx. Scale
☐ Seg/Sub Entry
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HW/LA/HL
☐ SSL
☐ Profile Location(s)
☐ Profile(s)
☐ PR Location(s)
☐ Photo Location(s)

LEGEND

1 Δ
 Pit - No Subsurface Oil

2 Δ
 Pit - Subsurface Oil

$\boxed{\text{CT/C}}$
 Continuous Distribution

$\boxed{\text{CT/B}}$
 Broken Distribution

$\boxed{\text{CT/P}}$
 Patchy Distribution

$\boxed{\text{CT/S}}$
 Splashed Distribution

eee
 Oil Vegetation

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



Scale

500m

ETCH MAP 1

Legend

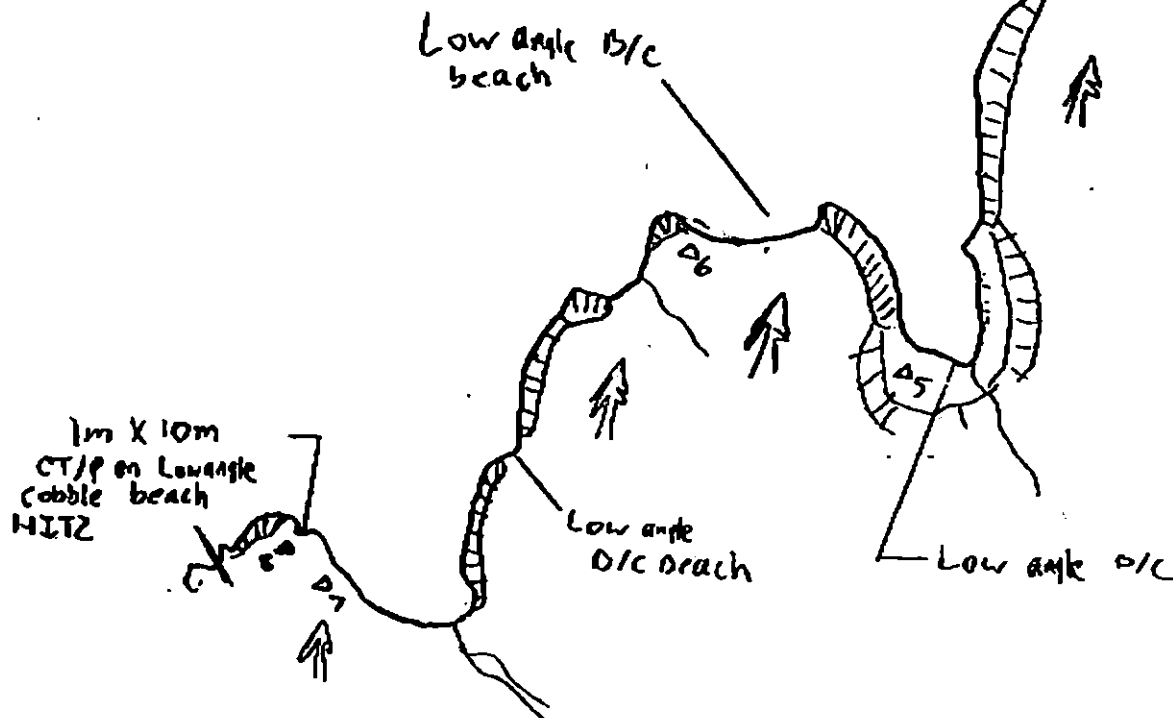
/// - high angle Rock/Boulder

$\Rightarrow$ - trees

10m x 1m CT/S w/
 some Patties (manually removed)
 HITZ

1m x 10m CT/S
 2 Patties manually
 removed, HITZ

see map 2



Character Length (m): AP 0 PO 0 CV 0 CT 30 ST 0 MS 0 PT 70 TB 0 FL 10 NO 7507

REVISION 000000

OG Mike royer

SEGMENT 08A-08

SUBMISSION A

DATE 4/25/80

CHECKLIST

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

LEGEND

1 Δ
PI - No Subsurface Oil

2 Δ
PI - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Palcly Distribution

CT/S
Splashed Distribution

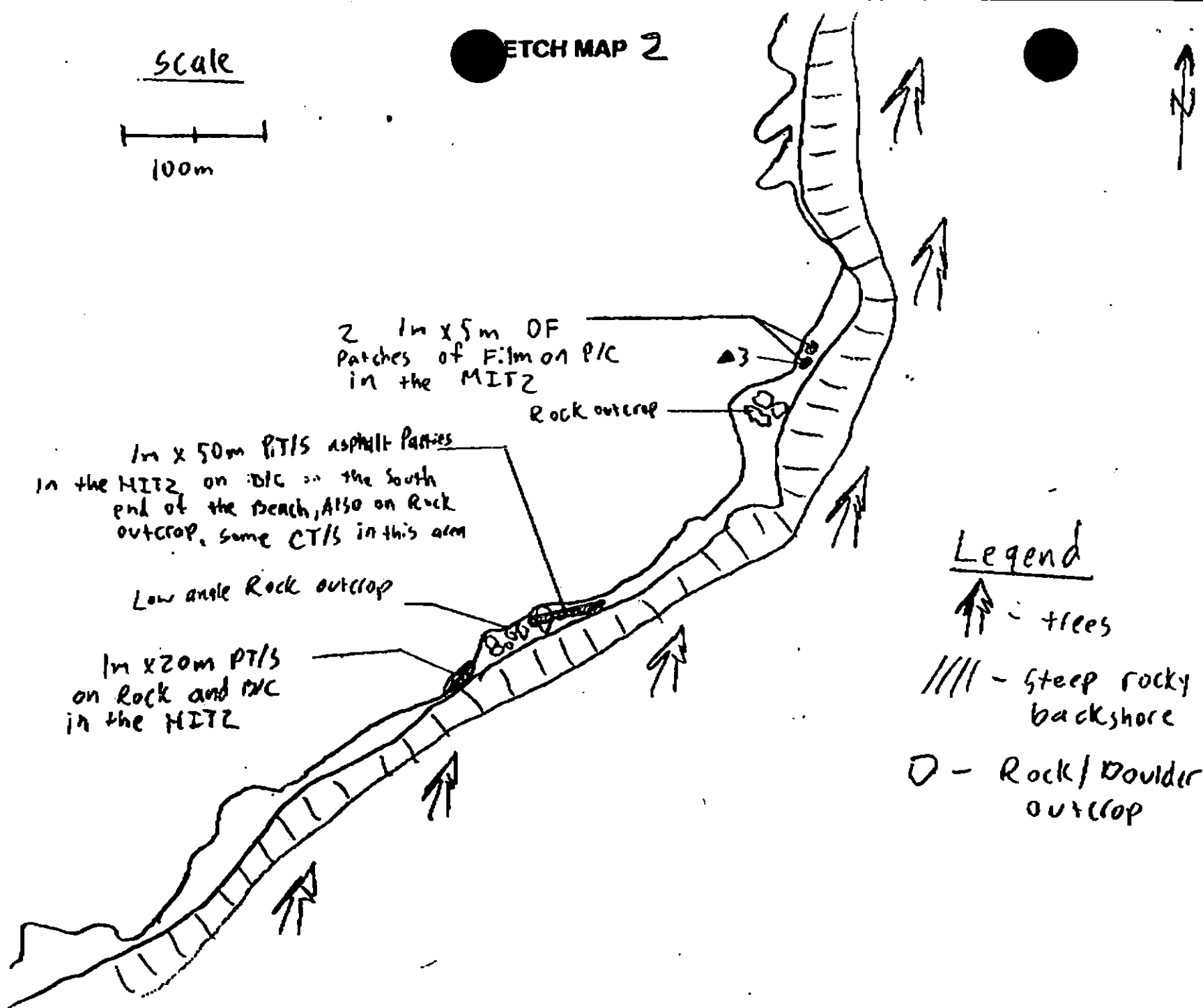
eee
Oiled Vegetation

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

Scale

100m

ETCH MAP 2



Legend

$\Rightarrow$ - trees

/// - steep rocky backshore

O - Rock/ Boulder outcrop

See map 1

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

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST / BA-08 Subdivision A (1 OF 1) Date (mo / day / yr) 04/25/90

Time (24 hr) 0655 - Biologist KATHLEEN COLLAN

1015

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

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

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

Photographs:

Roll No.

Frames

BARNACLES

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

NOT PRESENT

GASTROPODS

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

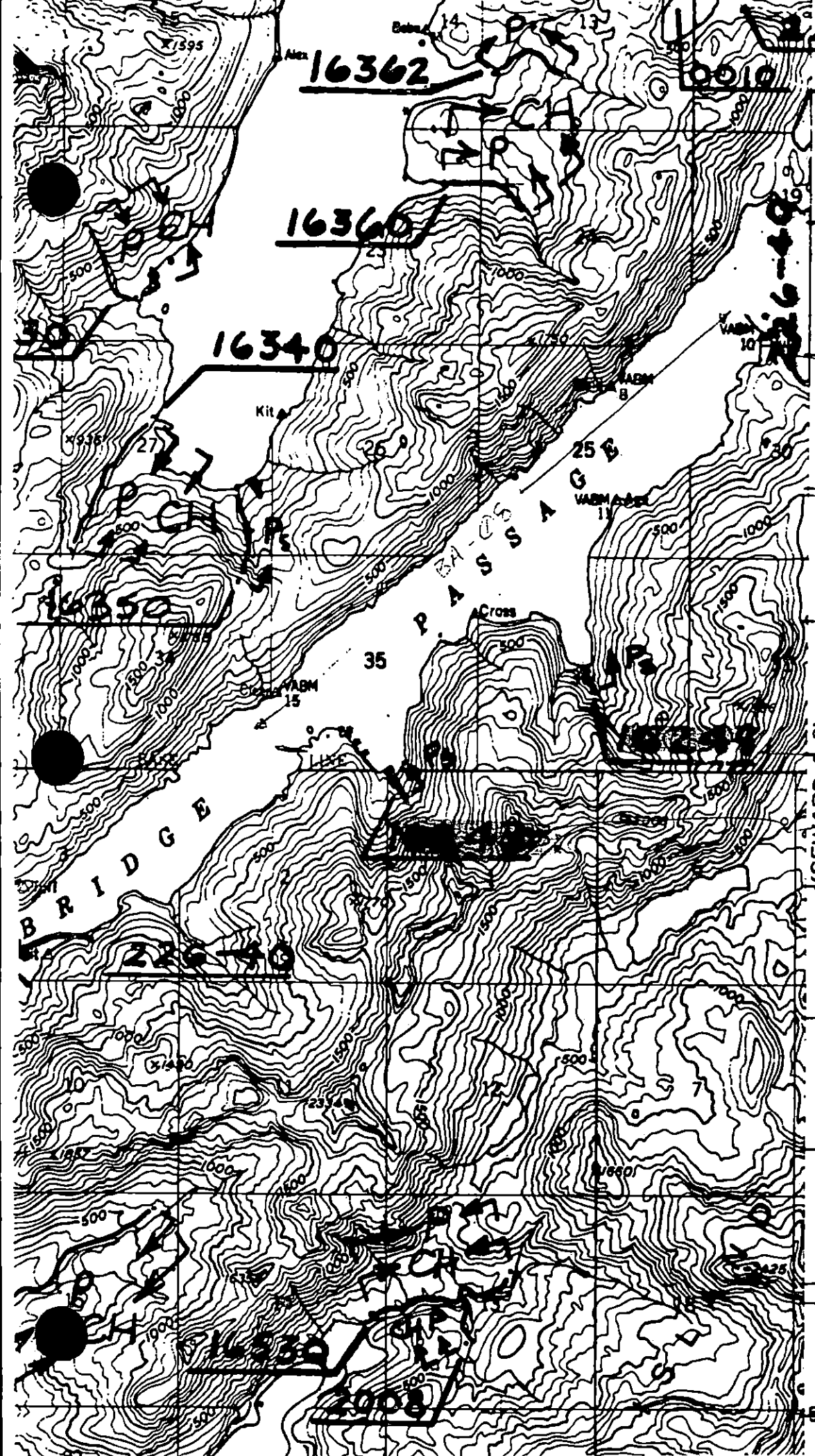
Dense			Moderate			Sparse			Rare		
XU	XM	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	X	X	2	2	2	2	2	2	2
3	3	3	3	3	3	X	X	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

6 SEALS. SALMON FINGERLINGS. 2 GOLDENEYES
2 SEA OTTERS 220 GLAUCOUS WINGED GULLS

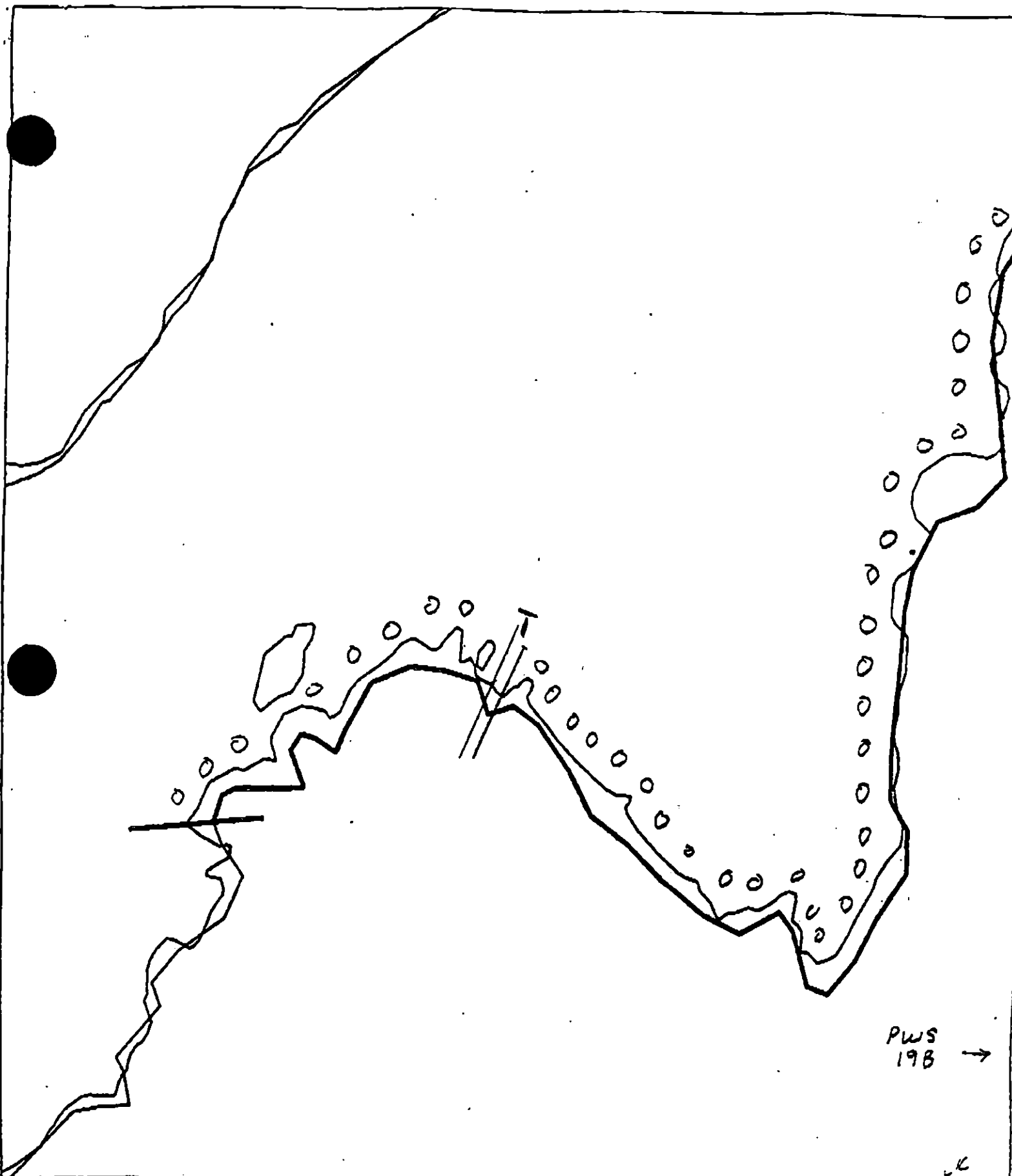
Ecological Considerations: 4 MERMAIDS.



ECOLOGICAL
MAP
BA-08

BALD
EAGLE NEST

ANADROMOUS
STREAMS



PWS
198 →

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

BA-8

ADEC Segment Length: 7276m



Map Key: PWS-19a
 Name: Mike Foget
 Date: 4/25/90

↑ PWS
19F

E

PWS
19C →

← PWS 19A

OK

BA-8

ADEC Segment Length: 7276m

Map Key: PWS-19b

Name: Mike Fogel

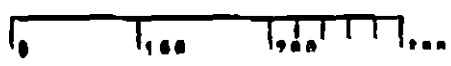
Date: 4/25/90

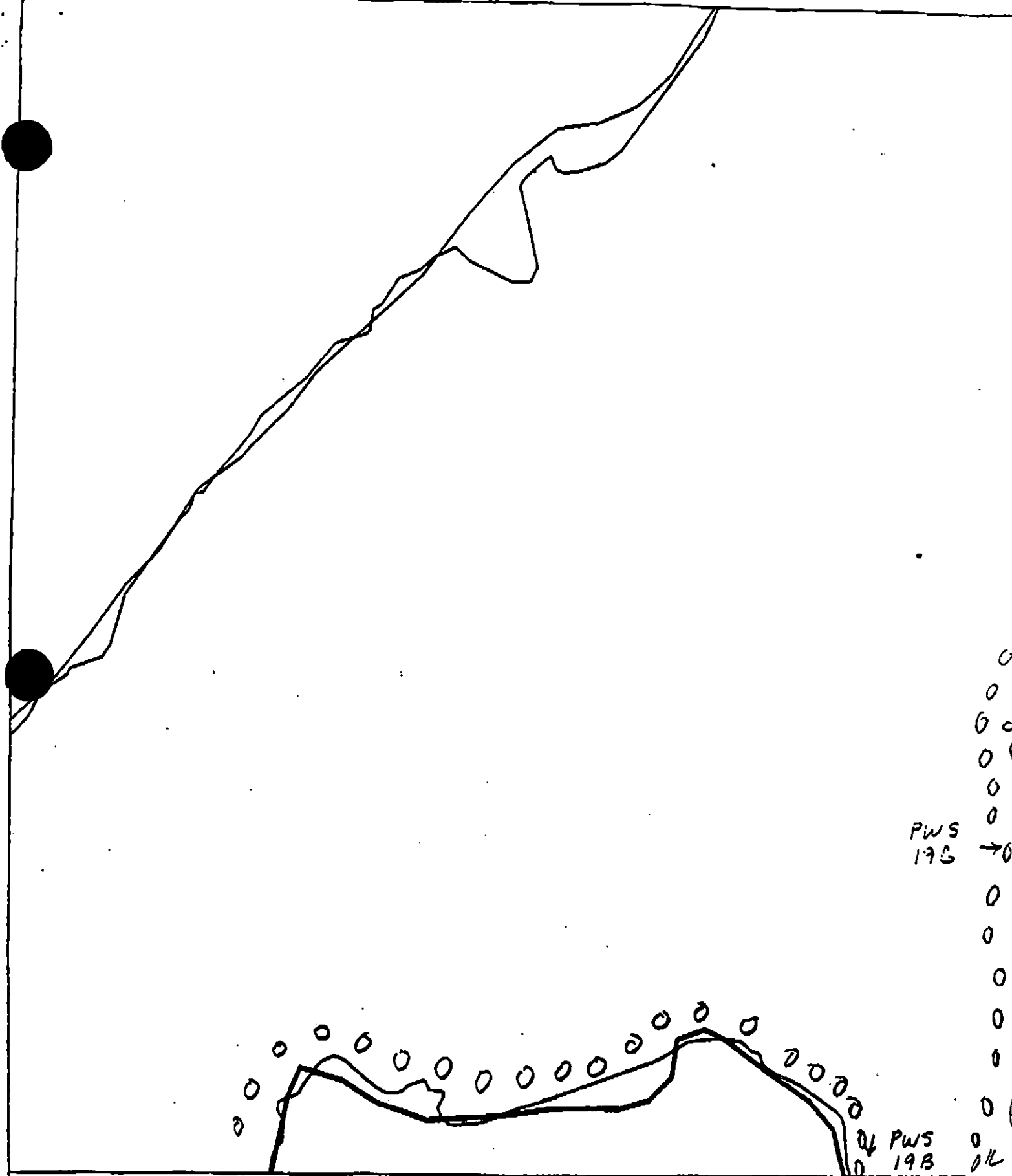
XXXX Wide

/// Medium

--- Narrow

TTTT Very Light





XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

BA-8A

ADEC Segment Length: 7276m



Map Key: PWS-19f

Name: Mike Foye

Date: 4/25/10

↑ PWS 198

A-8

← PWS 198

04

XXXX Wide

/// Medium

---- Narrow

TTTT Very Light

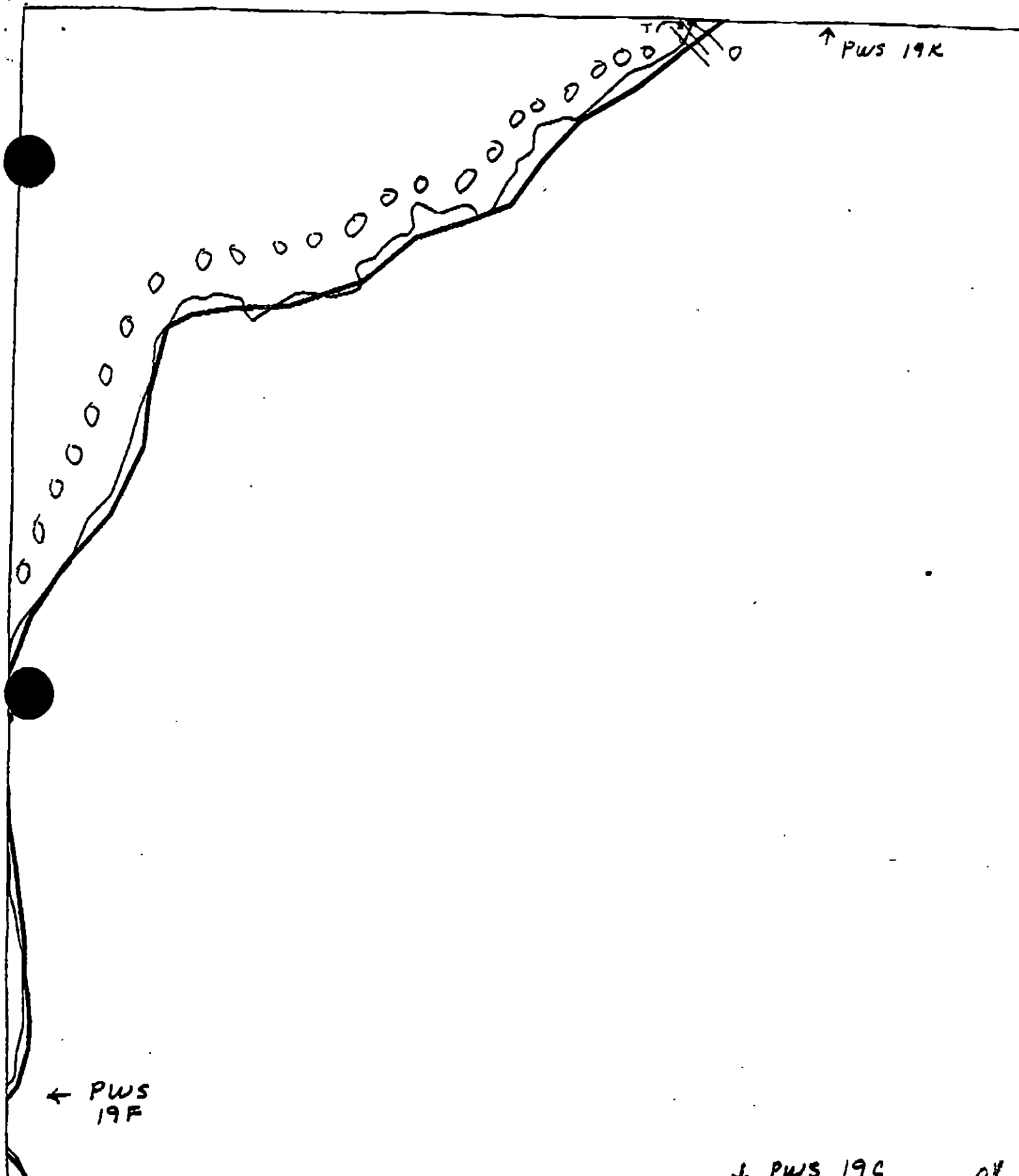
BA-8

ADEC Segment Length: 7276m

Map Key: PWS-19c

Name: Mike Foget

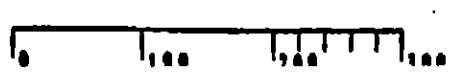
Date: 4/25/90



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

BA-8A

ADEC Segment Length: 7278m

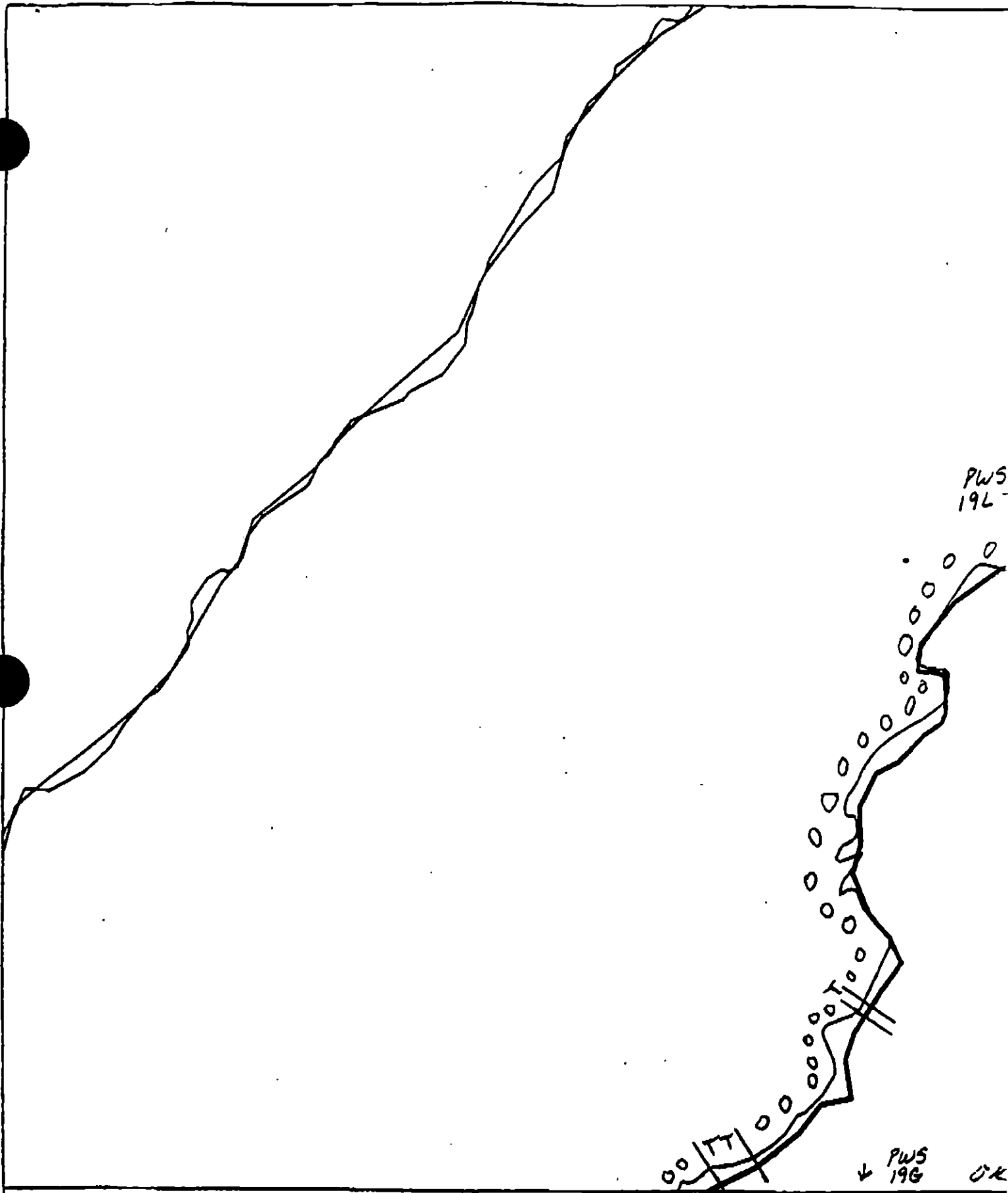


↓ PWS 19C OK

Map Key: PWS-19g

Name: Mike Fogat

Date: 4/25/40



XXXX Wide
//// Medium

--- Narrow

TTTT Very Light

BA-8

ADEC Segment Length: 7276m

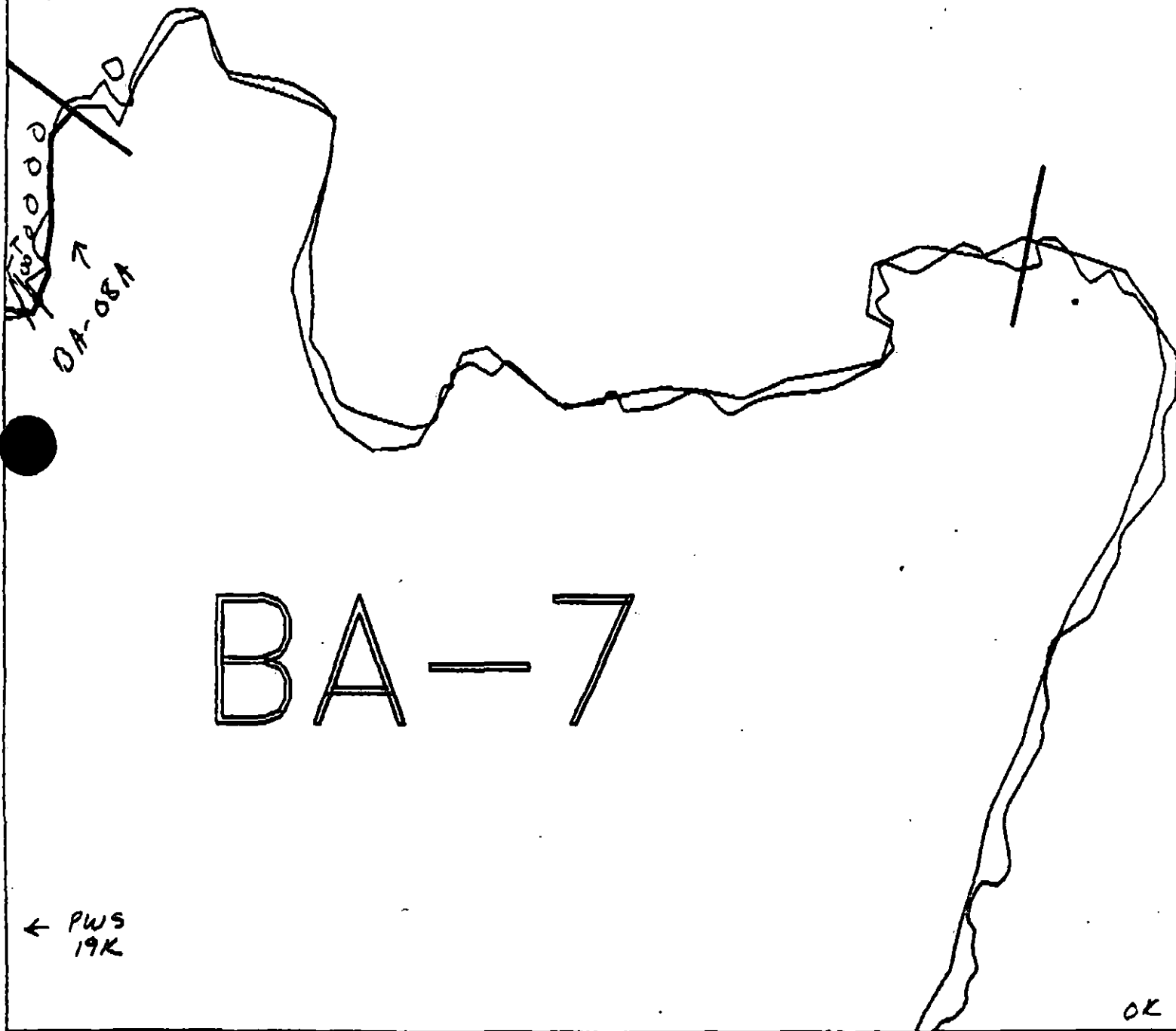


Map Key: PWS-19k

Name: Mike Foyet

Date: 4/25/40





XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

BA-8A

ADEC Segment Length: 7276m

Map Key: PWS-191

Name: Mike Forget

Date: 4/25/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT BA-8 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued streams (226-40-16249 and 226-40-16243) are in Subdivision A. No constraint to manual pickup.

1K Purse Seine Hook-off

No constraint to manual pickup.

5T Bald Eagle Nest

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

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE _____

ADEC

EXXON

NOAA

USCG

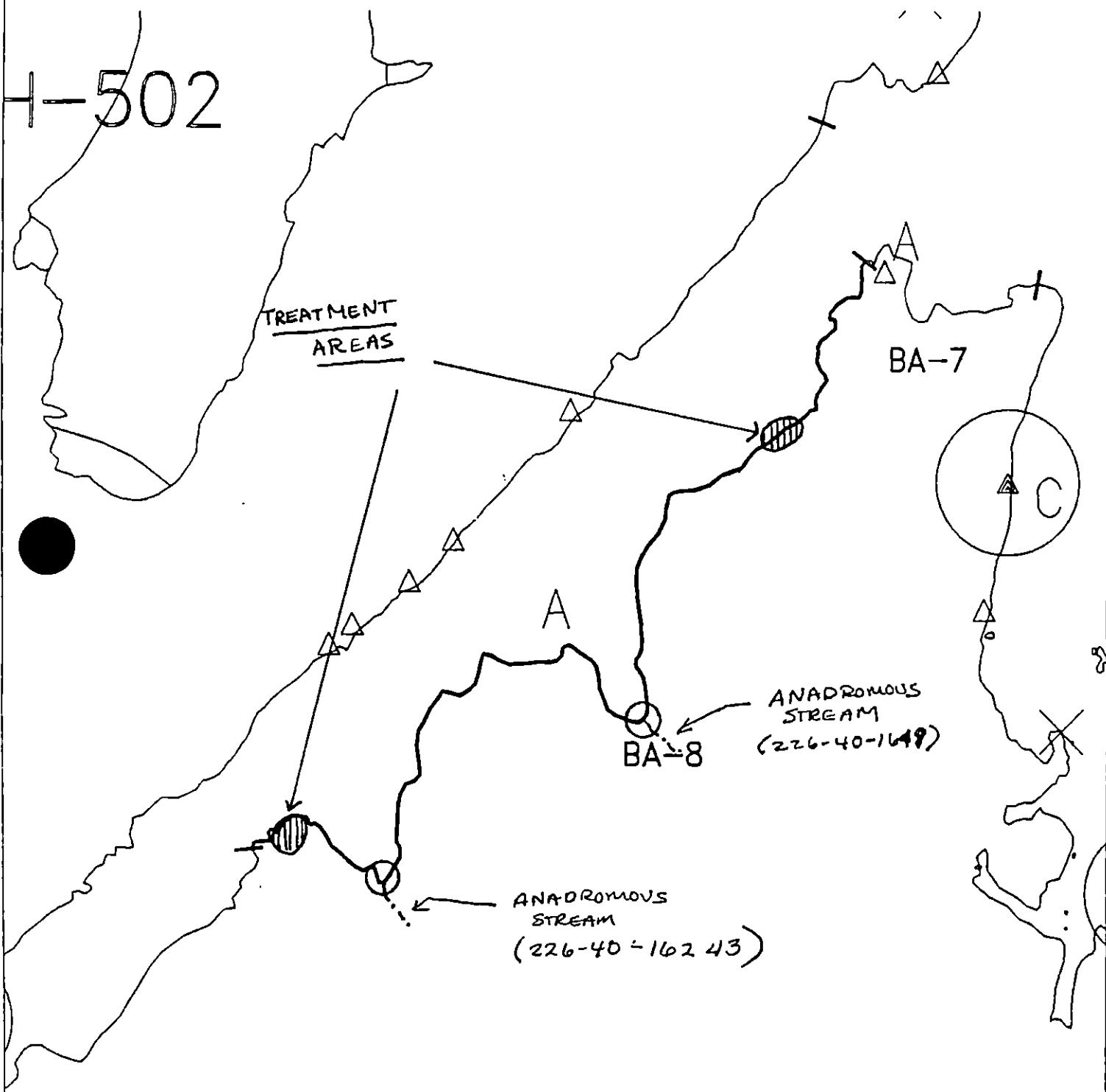
Prepared By: _____

FOSC

DATE 8 June 90

Date

6/7/90



EXXON
 Exxon Company, USA
 Map Key: PWS-BA-8



ECOLOGY MAP
 SEGMENT BA-8
 SUBDIVISION ___ (___ of ___)
 METERS

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

SHORELINE EVALUATION

SEGMENT ST/ BA-08 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-40-16249 (Ps, 12/89) and 226-40-16243 (Ps, 12/89)

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

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

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

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

or

SHPO SIGNATURE: [Signature] DATE: 5/10/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 161 m: No Oil 7115 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: See Addendum dated 6/7/90 w/

TAG COMMENTS: MANUAL PICKUP OF ASPHALT PATCHES + PATCHES AS
INDICATED ON SKETCH.

TAG APPROVAL DATE: 5/7/90

ADEC ART WEINER

EXXON ANDY TEE

NOAA GARY PETERSON

USCG G.A. BEITER

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

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-55 SUBDIVISION C (3 of 3)

WORK WINDOW

Bioremediation
Manual Raking

WORK BEFORE 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/90 to Exxon/Tom Kelley.

5T Bald Eagle Nests

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

7II Subsistence: Deer Harvesting

Closed to bioremediation and manual raking after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE _____

ADEC

EXXON HANS O. JAHNS FOSC

NOAA

USCG

DATE 6-8-90

Prepared By: WJK

Date 6/7/90

SHORELINE EVALUATION

SEGMENT ST/ EN-46 SUBDIVISION A (1 OF 2) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINT: 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: Rachel Dan Oren DATE: 5/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 51 m: Narrow 62 m: V.Light 0 m: No Oil 587 m
Subsurface Oil Observed: Yes X No Maximum Depth 30+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommend 1) manual pick up of trash, 2) bioremediation of oil-coated beach (see sketch map), and 3) burning of logs with greater than 10% oil cover.

See Constraints Addendum dated 6/1/90

TAG COMMENTS:

TAG APPROVAL DATE: 4/23/90.

ADEC ART WEINER
EXXON ANDY TATE
NOAA Joseph Talbot
USCG KENNETH KEANE

FOSC: [Signature] DATE: 6/4/90

SHORELINE EVALUATION

SEGMENT ST/ BA-08 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-40-16249 (Ps, 12/89) and 226-40-16243 (Ps, 12/89)

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

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

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

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

or

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 161 m: No Oil 7115 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS: MANUAL PICKUP OF ASPHALT PIECES + PATCHES AS
INDICATED ON SKETCH.

TAG APPROVAL DATE: 5/7/90

ADEC ART WEINER

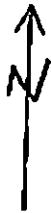
EXXON DWY TEAL

NOAA GARY PETRO

USCG G.A. BEITER

FOSC: DATE: 5-15-90

OG Mike Toget
 SEGMENT S A-08
 SUBDIVISION A
 DATE 4/25/90



Scale
 500m

TCH MAP 1

CHECKLIST

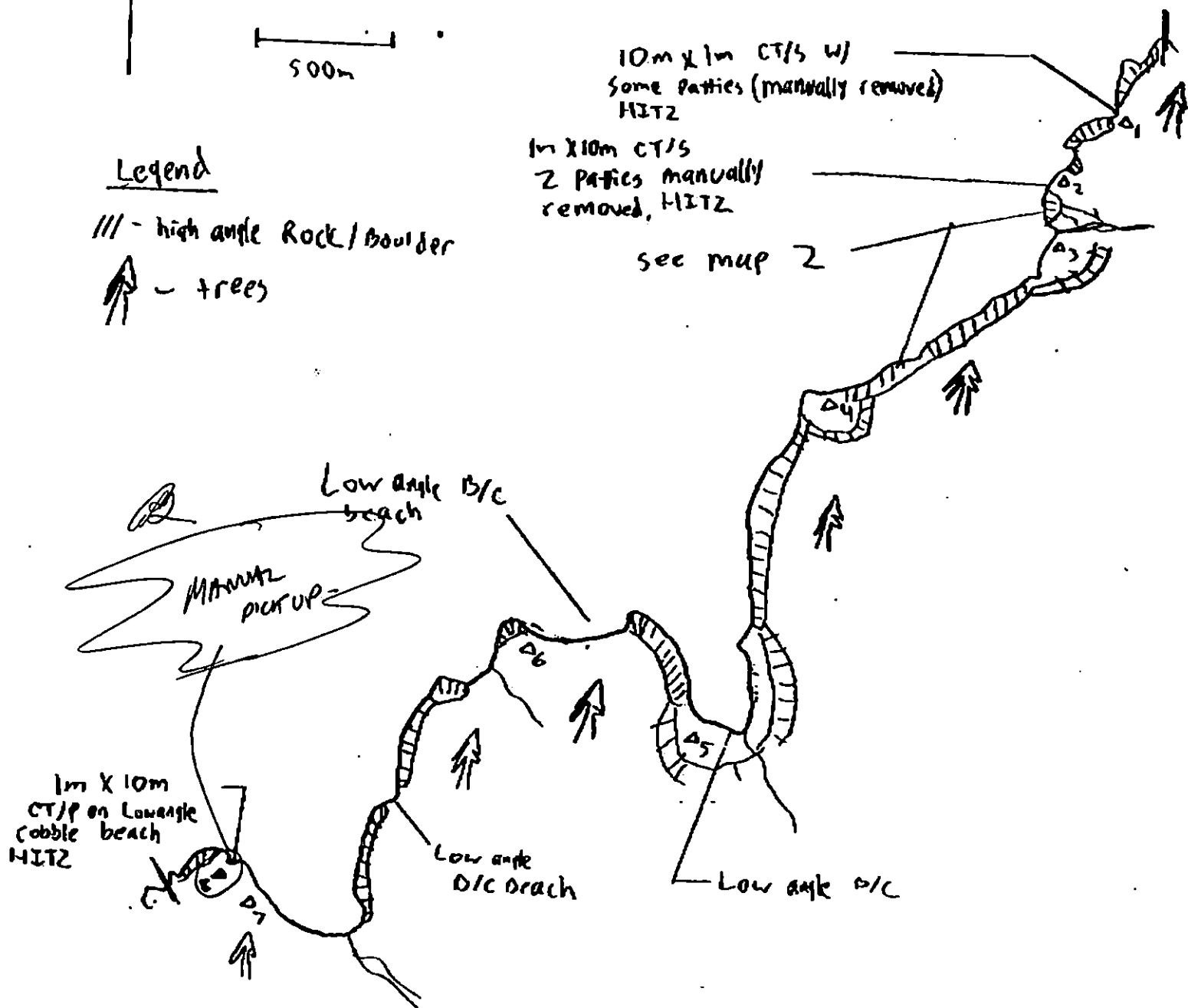
- ☐ N Area
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HW/LA/VL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PR Location(s)
- ☐ Photo Location(s)

LEGEND

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

Legend

- /// - high angle Rock/Boulder
- ▲ - trees



Character Length (m): AP 0 PO 0 CV 0 CT 30 ST 0 MS 0 PT 70 TB 0 FL 10 NO 7507

REVISIONS

OG Mike Roget

SEGMENT S A-08

SUBDIVISION A

DATE 4/25/90

CHECKLIST

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

LEGEND

1 Δ
PI - No Subsurface CI

2 Δ
PI - Subsurface CI

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Pecchy Distribution

CT/S
Speckled Distribution

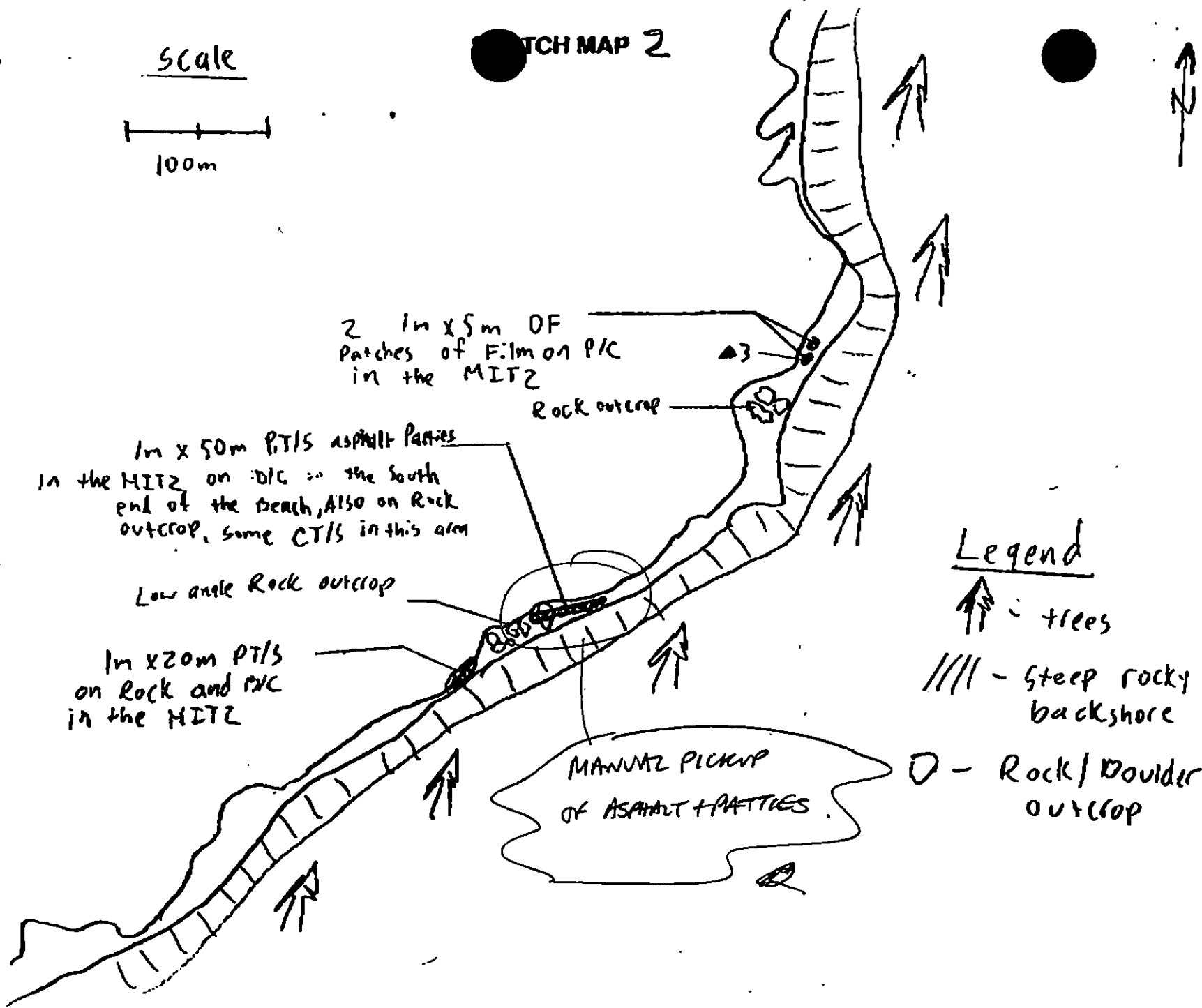
eee
Oiled Vegetation

1 →
Photo location, direction,
and number

Scale

100m

ATCH MAP 2



Legend

↑↑↑ trees

//// - steep rocky backshore

○ - Rock/Boulder outcrop

See map 1

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

REVISION 000000

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST / BA-08 Subdivision A (LOF 1) Date (mo / day / yr) 04/25/90

Time (24 hr) 0655 - Biologist KATHLEEN COLLAN
1015

- (A) Substrate type and % of segments:
(1) Bedrock 30 (2) Boulder 50 (3) Cobble 15 (4) Pebble 5 (5) Sand 0 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 40 Moderate 30 Low 30
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs: _____
Roll No. _____
Frames _____

BARNACLES

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

NOT PRESENT

GASTROPODS

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

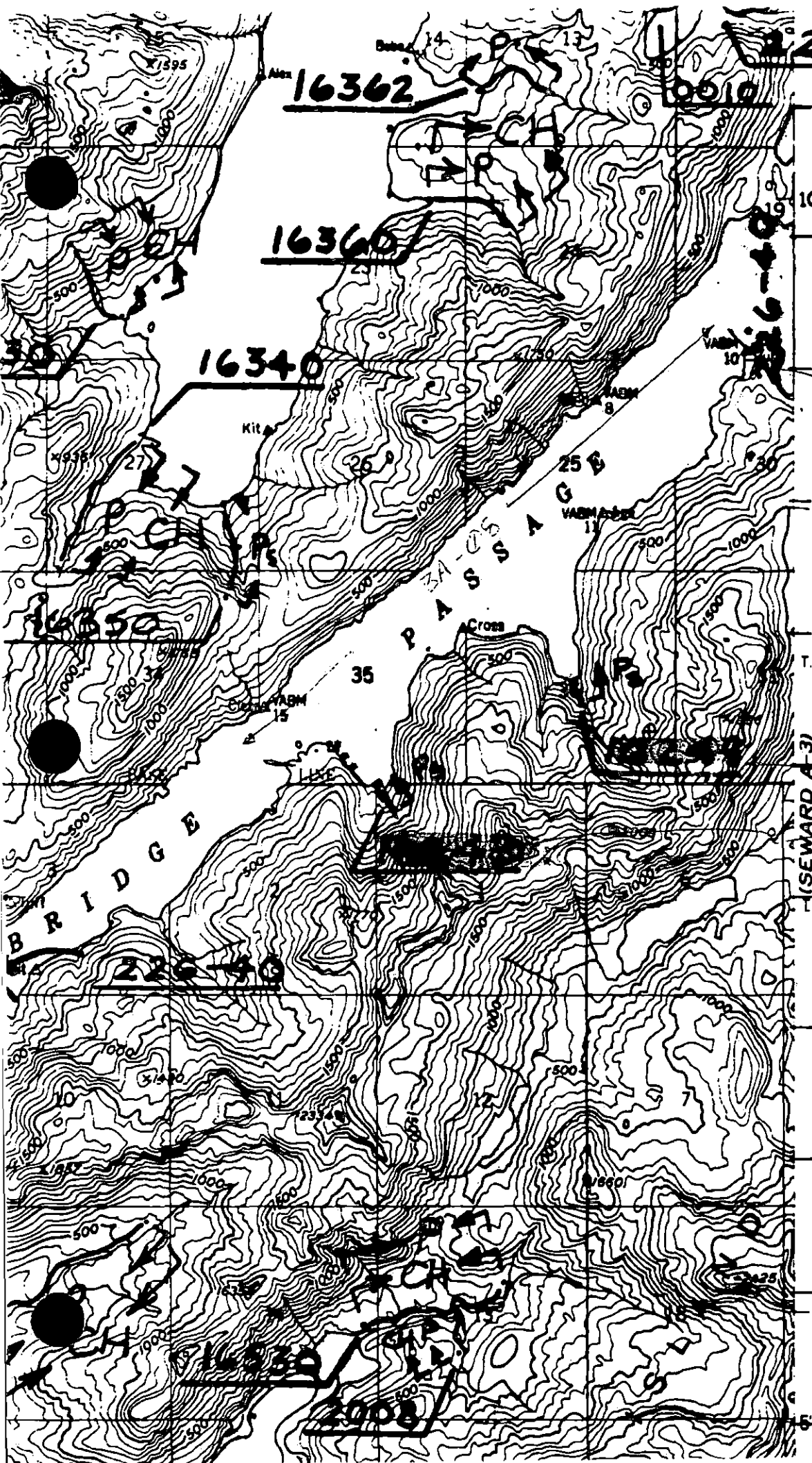
Dense			Moderate			Sparse			Rare		
XU	XM	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	X	X	2	2	2	2	2	2	2
3	3	3	3	3	3	X	X	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

6 SEALS SALMON FINGERINGS 2 GOLDENEYES
2 SEA OTTERS 220 GLAUCOUS WINGED GULLS

Ecological Considerations: 4 MERMAISERS

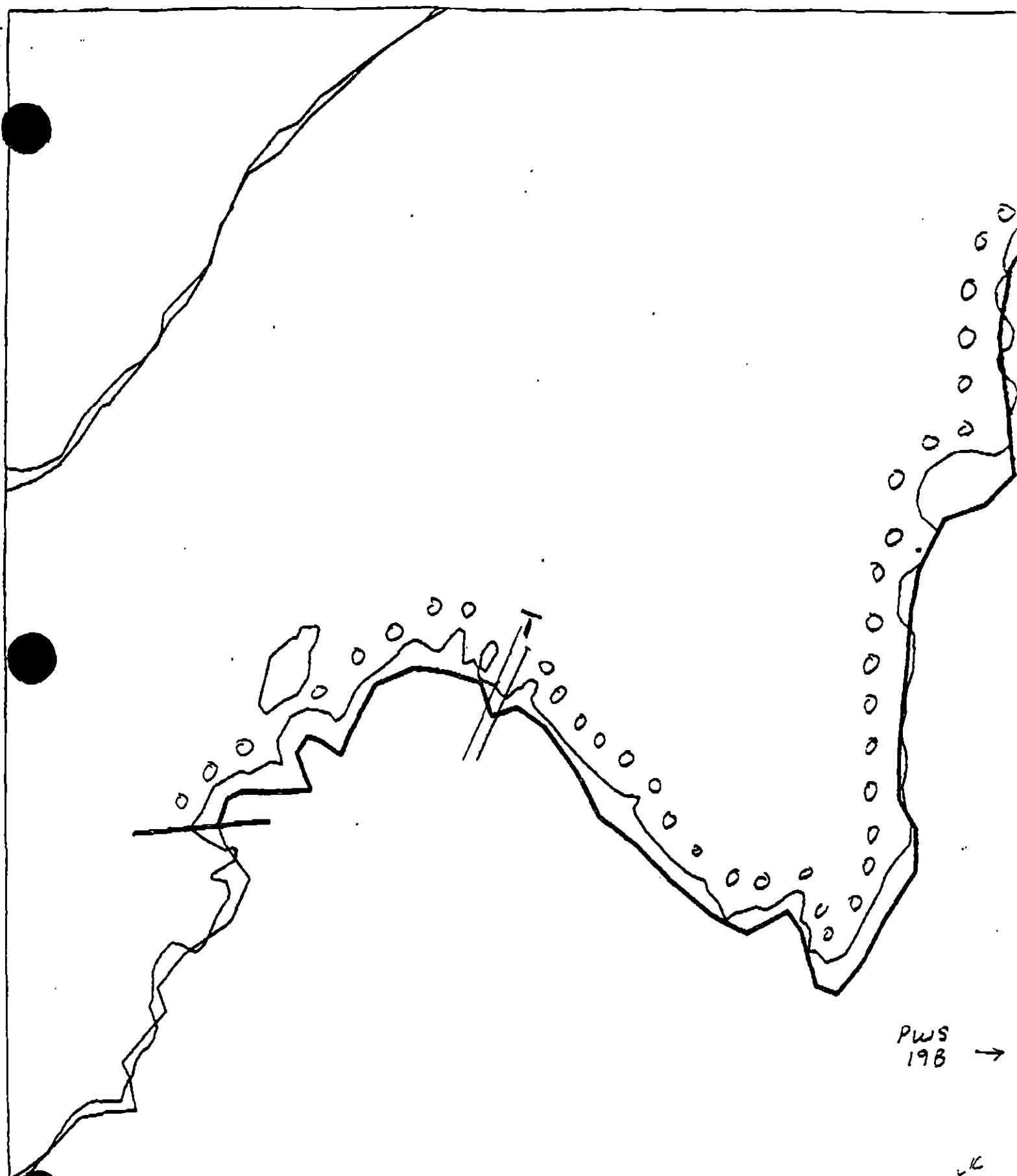


26-40-1618.

ECOLOGICAL
MAP
BA-08

BIRD
EAGLE NEST

ANADROMOUS
STREAMS



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

BA-8

ADEC Segment Length: 7276m

Map Key: PWS-19a

Name: Mike Fogel

Date: 4/25/90

↑
PWS
19F

PWS
19C →

← PWS 19A

OK

BA-8

XXX Wide

//// Medium

---- Narrow

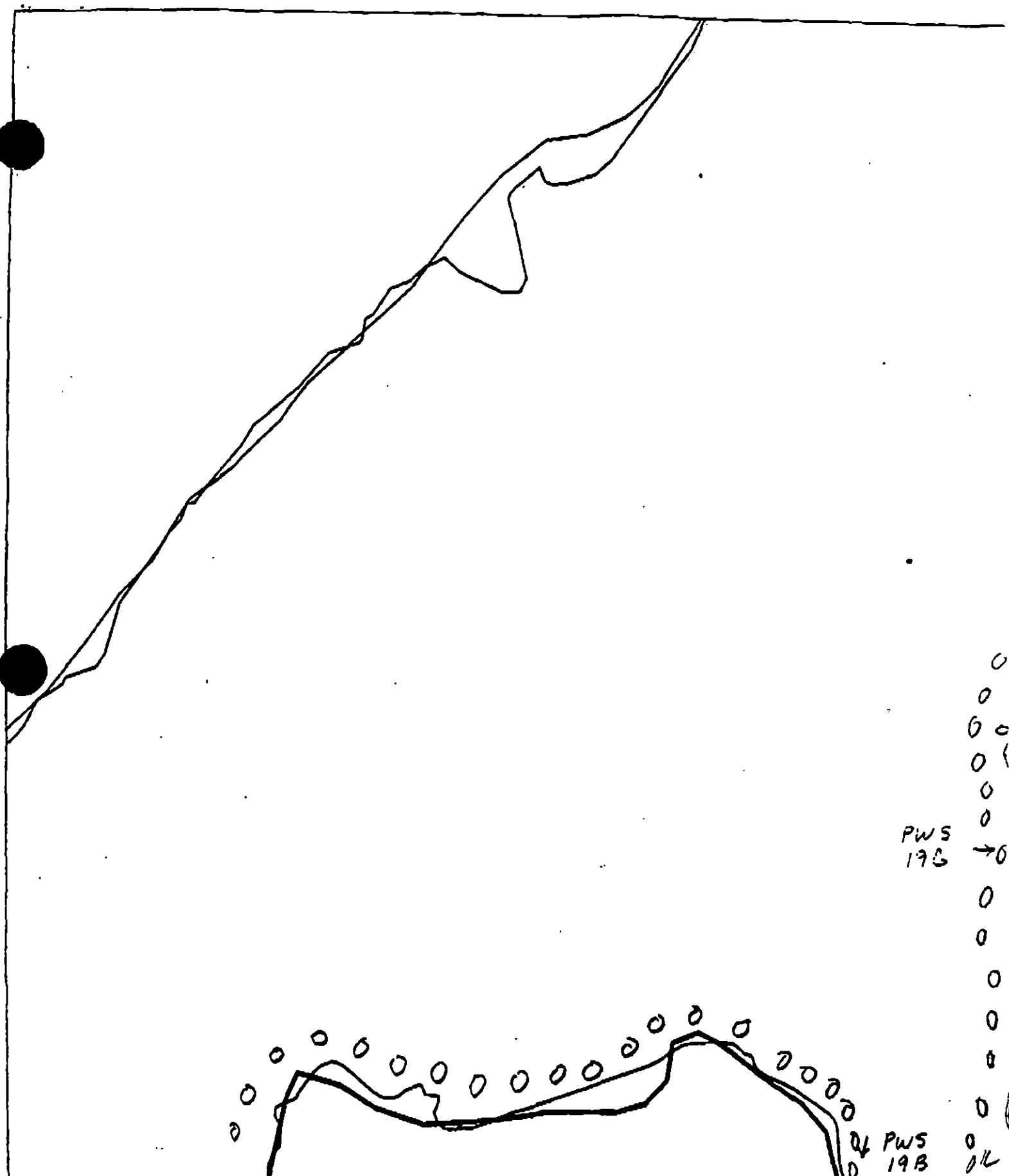
TTTT Very Light

ADEC Segment Length: 7276m

Map Key: PWS-19b

Name: Mike Foyet

Date: 4/25/90



PWS
19B →

Q PWS
19B

XXXX Wide

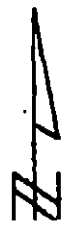
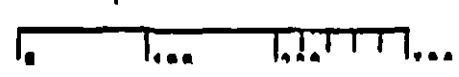
//// Medium

--- Narrow

TTTT Very Light

BA-8A

ADEC Segment Length: 7276m



Map Key: PWS-191

Name: Mike Foye

Date: 4/25/90

↑ PWS 198

A-8

← PWS 198

04

XXX Wide

//// Medium

--- Narrow

TTTT Very Light

BA-8

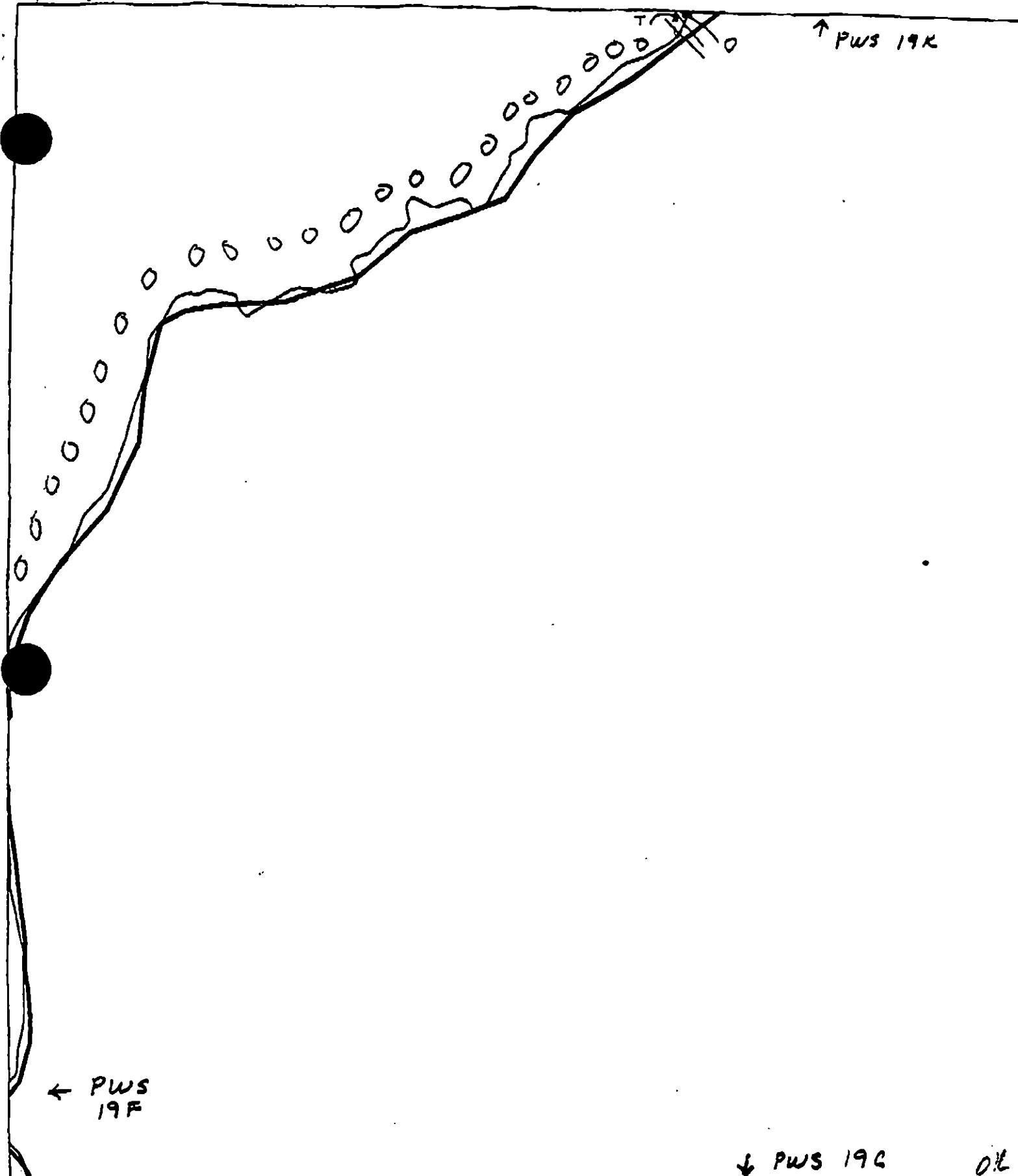
ADEC Segment Length: 7276m

Map Key: PWS-19c

Name: Mike Foget

Date: 4/25/90





XXX Wide

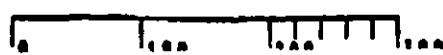
//// Medium

--- Narrow

TTTT Very Light

BA-8A

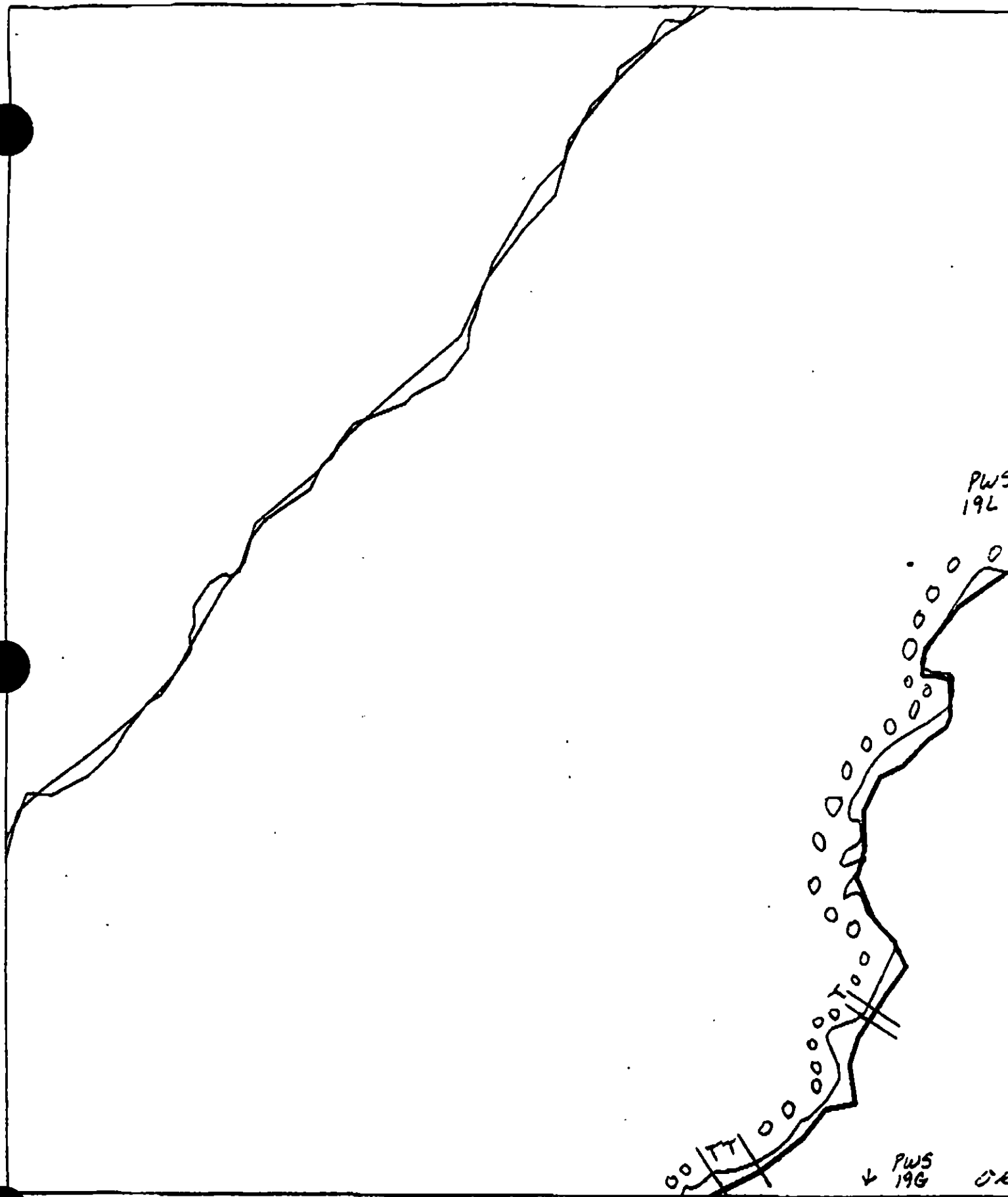
ADEC Segment Length: 7276m



Map Key: PWS-19g

Name: Mike Roget

Date: 4/25/10



PWS
19L

PWS
19G

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

BA-8

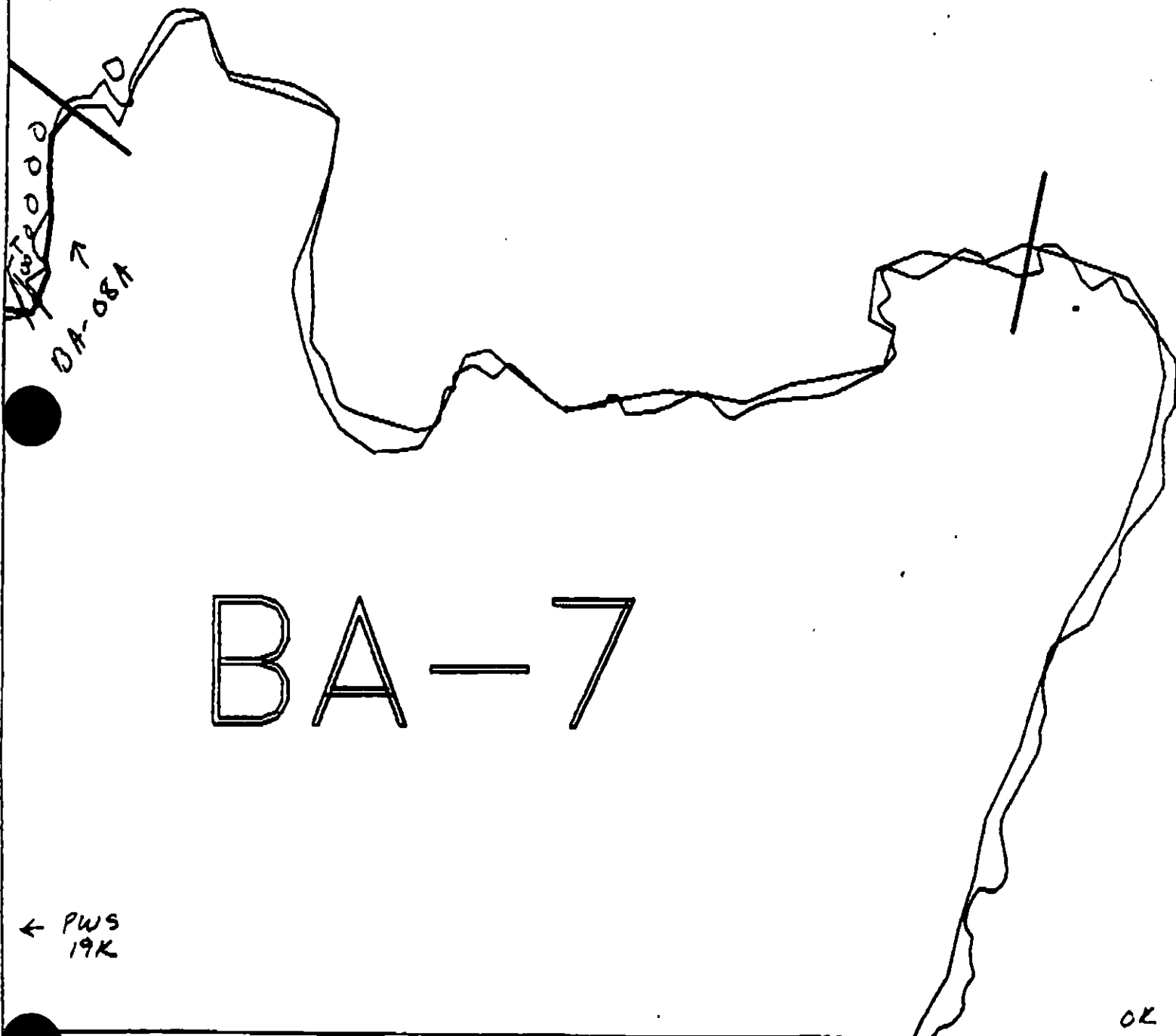
ADEC Segment Length: 7276m

Map Key: PWS-19k

Name: Mike Foyet

Date: 4/25/40





BA-7

← PWS
19K

OK

BA-8A

XXX Wide

//// Medium

--- Narrow

TTTT Very light

ADEC Segment Length: 7276m



Map Key: PWS-191

Name: Mike Forget

Date: 4/25/90

1991 MAYSAP EVALUATION

SEGMENT: BA 008 SUB: A REGION: PWS SURVEY DATE: 5/19/91
5/26/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find, and contact Exxon's Cultural Resource Program immediately: 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.).

Timothy A. Smith for SHPS 6/07/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: Remove high SOR at locaiton H. Manually rake/till
in Customblen at location H.

TAG:

FOSC:

TAG APPROVAL DATE: June 7 1991

FOSC APPROVAL DATE: 6/12/91

ADEC *[Signature]*

FOSC *[Signature]*

EXXON *[Signature]*

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

USCG *[Signature]*

NOAA *[Signature]*

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

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. 5 SEGMENT B-A-8 SUBDIVISION A DATE 5/19/91

ADEC

NAME John Hoyer SIGNATURE [Signature]

☐ NTR

Recommend that sub-surface oiling in LITZ be reversed tide was not low enough to determine extent of oiling. Rolling cobbles under H₂O I determined sub-surface extended to O-tide level of LITZ in Area H. Rest of segment was lightly oiled + TB's observed were picked up.

EXXON

NAME John Deem SIGNATURE [Signature]

☒ NTR

See Comments on Paper Dated 5/26/91

LANDMANAGER

NAME Steve GARD OF CUC-FS SIGNATURE [Signature]

☐ NTR

This Area showed a very lg amount of sheening. We were forced to leave because of Eagle nest on site. This Sub-div. must be re-surveyed as there appears to be high content of sub-surface oiling. SPORADIC ASPHALT PATTIES observed during short time on beach.
No-Bio. Survey Incomplete

USCG/NOAA

NAME DREHER / CLINE SIGNATURE CWO R.L. Dreher [Signature]

☒ NTR

At time of survey the tide was steadily incoming. Upon landing at 4' mark, ADEC monitor dug into small tar pattie trapped behind boulder at 4' water line mark. As wake from skiffs struck beach there was a small amount of RB sheen generated. Recommend no clean up at this time. Do recommend re-survey at more appropriate tide level and with assistance of U.S.F.W.S. H&D

The only oil of note here is site H; the amount of nearshore sheen produced by subsurface oil disturbance is surprising given the low level of the intertidal that it occurs in.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT BA-8 SUBDIVISION A DATE 5/26/91

ADEC

NAME _____ SIGNATURE _____

☐ NTR

EXXON

NAME Leith Kern SIGNATURE [Signature]

☒ NTR Small quantity (1/2 bag) TB picked up during survey. Much cycling at site of sheening is degrading.

LANDMANAGER

NAME _____ OF _____ SIGNATURE _____

☐ NTR

USCG/NOAA

NAME DREHER/CLINE SIGNATURE CWO K. L. Dreher

☒ ^{KLD} NTR Found one area about 3m² that sheened when cobbles were moved at water's edge. Any further clean up of this area ~~would~~ would do more harm to the environment than the small amount of oil residue found. KLD

MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 5PAGE 1 OF 2OG CHANEYBIO CRANKSEGMENT BA-8ADEC HAYESLANDMANAGER WARD for CUCSUBDIVISION AEXXON DEANUSCG/NOAA DREHER/CLINEDATE MAY 19 1991MAY 20 1991
MAY 26 1991SITE 1 15:20 to 16:05
SITE 2 TIME 10:07 to 11:04
SITE 1 17:45 to 18:44TIDE LEVEL +5.5 ft. to +13.0 ft.
4.0 +3.0ENERGY LEVEL: ☐ H ☐ M ☒ LSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO WEATHER: ☒ SUN ☒ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 595 m NEAR SHORE SHEEN: ☐ BR ☒ RB ☐ SL ☐ NONEEST. OIL CATEGORY LENGTH: W — m M 5 m N — m VL 55 m NO 535 m US 6681 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A						T					C	M	2	2		✓			AP PATE Removed
B				T							PG	M	2	2		✓			MOSTLY REMOVED
C						T					R	V	1	1			✓		ONE GRIP ON BOULDER
D			T		T						R	VH	3	15		✓			
E			T		T						R	VH	2	10		✓			
F				T	T						R	VH	1	15	✓				SPLASH CV & SOR
G				T							PG	M	6	10		✓			AP REMOVED
H				C							G	L	5 ^(A)	5			✓	?	LOW VISCOSITY BROWN

DISTRIBUTION: C = 01-100%; 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-

5 - 23 FRAMES 4-8
20 1-6

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	15						✓		-	3	10	R			✓	BCG-BCP		
2	30							✓	-		28	N		✓		PG-PCM		
3	20							✓	-		0	N		✓		BCP-BCP		
4	15		✓						D-3	Y	10	BR		✓		CP-CPB	SOR/H Mostly gone	
5	20							✓	-		10	N		✓		PC-PCM		
6	15							✓	-		-	-		✓		PG-PGR		
7	30							✓	-		20	N		✓		PG-PCM		
8	20							✓	-		-	-		✓		PG-PGC		
9	20							✓	-		-	-		✓		PG-PG		

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

* NOTE: OIL < 5cm DEEP NOT SUBSURFACE

OG COMMENTS: THE SURVEY OF THIS SUBDIVISION WAS LIMITED TO THOSE SITES WHERE OIL WAS OBSERVED DURING THE SSAT SURVEY IN 1990. WE VISITED THIS SUBDIVISION 3 TIMES BUT WERE HAMPERED BY TIME CONSTRAINTS EACH TIME. AT SITE 2 WE RECOVERED SEVERAL TAR BALLS FROM THE DRIFT LINE WHICH WERE COMPOSED OF A SPRUCE NEEDLE MATRIX AND WERE LOOSE AND STILL BOUYANT.

revised 5/30/91 XG

REVIEWED: MC 6/1/91

CONT. ON NEXT PAGE

SEGMENT

BA-8

SUBDIVISION

A

DATE May, 26, 1911

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

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

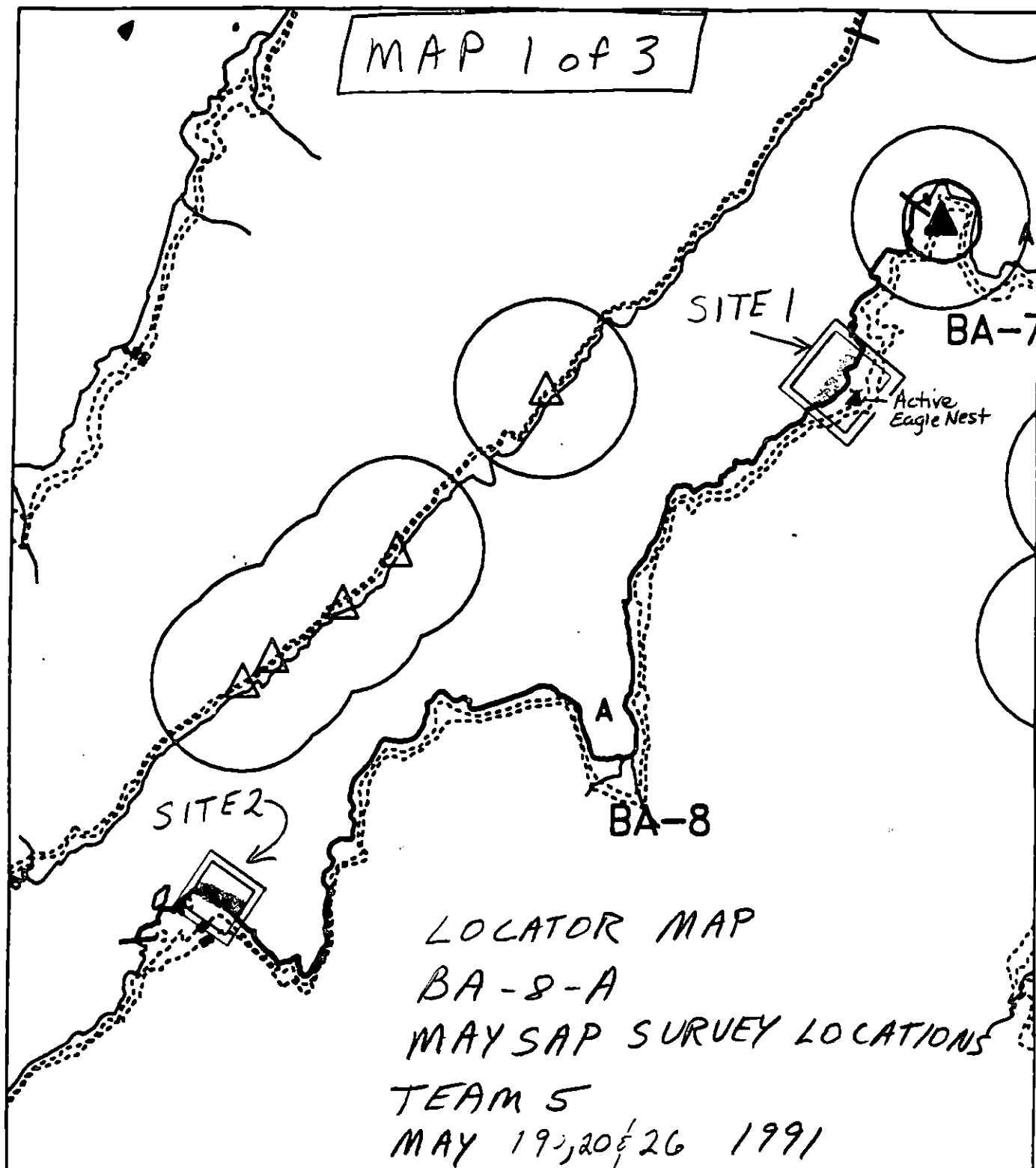
SITE 1

* $< 5\text{cm}$ in P/G DOES NOT CONSTITUTE SUBSURFACE ON

OG COMMENTS: AREA (H) AROUND PIT 12. ~5X5m SOR/H TOP 2 cm of GRANUL SUBSTRATE. THE WIDTH OF THIS AREA EXTENDS DOWN AT LEAST TO THE TWO FOOT STAND OF TIDE, A BRIGHT RAINBOW SHEEN RUNS OFF THE SITE. WHEN THE SEDIMENTS ARE DISTURBED, WHEN ROCKS ARE OVERTURED BROWN DROPLETS FLOAT TO THE SURFACE. THESE FORM A DISCONTINUOUS BROWN SHEEN ON THE RESULTING TIDE POOL. THE LOWER LIMIT OF THIS SITE COULD NOT BE ESTABLISHED BECAUSE the low tide WATER LINE AT THE TIME OF THE SURVEY WAS 2 ft.

REVISER: MC 6/1/91
reviewed 5/30/91 KG

MAP 1 of 3



BA008

Segment Reference Map

Map Key: PUSBA008

METERS



AS State Plane Zone 4
1983



EAGLE NEST

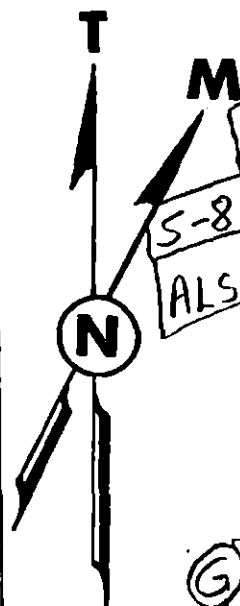
MAP 1991
 06 SKETCH MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: BA-7-A
 DATE: MAY 19 1991
 AIR P.#: NONE

MAP 2 of 3

BAINBRIDGE PASSAGE

NOTE: OILING AREAS D, E & F AND PITS
 5-8 ARE LOCATED ON MAP 3
 ALSO PHOTOS 5 & 6 ROLL MAYSAP-5-20

LOW BEDROCK



G 6x10m AP PU
 SOR < 1% REMAINS

C 1x1m
 ONE DRIP
 CT ON
 BOULDER

NO FIELD DATA
 ASSUMING:
 2x2m HUC

PATCH SOR
 MOSTLY PU

B 2x2m
 SOR < 1%

H 5x5m SOR/H
 100% THIS SITE
 PRODUCES A BRIGHT
 RAINBOW SHEEN WHEN
 SEDS ARE DISTURBED.

CURVED
 DEAD TREE
 LEANING
 OVER WATER

LOW BEDROCK

ALDERS

DRIFTED TREE
 STUMP

THIN SPRUCE
 FOREST

A 2x2m
 CT < 1%

1 PATIE
 AP PU

LEGEND

BEDROCK	
BOULDERS	
FINE SED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE

ROUGHLY
 50
 METERS

BAINBRIDGE
 ISLAND

FALLEN
 TREE

APPROXIMATE
 LOCATION OF

EAGLE NEST DISCOVERED DURING SURVEY

STREAM

TIDE POOL SHEEN

BOULDER

DEAD TREE LEANING
 OVER BEACH

BAINBRIDGE
 ISLAND

revised 5/30/90 K6
 revised: mc 6/1/91

SITE 2

MAP 3 of 3

MAY 1991
OG SKETCH MAP
GREG CHANEY
TEAM 5

SEGMENT: BA-8-A

DATE: MAY 21, 1991

AIR P.H.: NONE

BAINBRIDGE
ISLAND

D 3x15m
TB<1% CV<1%

SEVERAL TARBALLS
RECOVERED FROM
THIS AREA

55 GAL
DRUM

56 ♀

MOSS

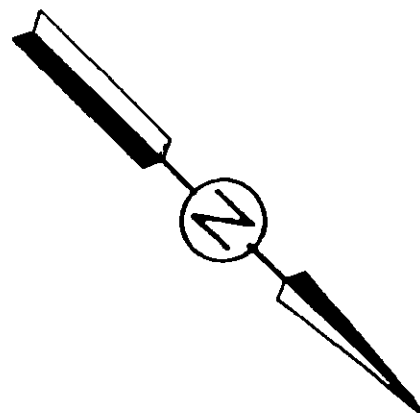
BAINBRIDGE
PASSAGE

E 2x10m
TB<1% CV<1%

F 1x15m
SOR<1%
CT<1%

NOTE: PHOTOS 5 & 6. 2 TARBALLS WHICH WERE PICKED UP
FROM THE DRIFT LINE AND MOMENTARILY PLACED IN
THE WATER TO SEE IF THEY WOULD STILL FLOAT. THEY DID.

WE RECOVERED
THESE TARBALLS.



revised 5/30/91 kg
Revised 6/1/94

MAYSAP BIOLOGICAL SUMMARY FORM

pg 1 of 3

TEAM #5

DATE 19/20 May 1991

SEGMENT # BA-8

TIDAL HEIGHT (Range) +4 to +6 / +5.5 to +3 / +4 to +

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 0

WIND SPEED/DIRECTION no wind

PHOTOGRAPHS: ROLL #

FRAME #

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

(A) Area is located next to a stream in the UITZ. Dense concentrations of *Littorina* and limpets; moderate concentrations of barnacles and sparse concentrations of *Fucus* cover ~30% of the surface sediments.

(B) Area is located in the UITZ. *Fucus* sporlings were growing on the removed turmat. Fifty cm away from the mat, *Fucus* has a moderate concentration, conceptacles are maturing. Approx 20% of the plants are 'stipe-only'. There is also a sparse *Littorina* population. Biota cover is 50%.

(C) Area is located in the UITZ on a rock face. Limpets are densely concentrated (several age classes present); *Littorina* are sparsely concentrated. Both species of gastropods were observed grazing along the oil drip. Barnacles are sparsely concentrated. Biota cover is 30%. Above the drip there is a sparse concentration of *Fucus*.

Areas A, B, C are located relatively close together. In the MITZ below the sites, barnacles have a sparse to moderate concentration; *Littorina* and limpets are dense with various age classes; *Nucella* (whelks) are sparse; Mussels are also sparse many of the empties have drill holes typical of whelk predation; *Fucus* is sparse with pockets of moderate concentration; *Littorina* egg masses are common. Biota cover is 20-30%, which is lower than the biota cover in the UITZ (~30%). An active (not listed by FWS)

WILDLIFE OBSERVATIONS

eagles nest was spotted by the Land Manager. An eagle TO BE COMPLETED IN ALL SUBDIVISIONS in incubating posture was present and a second eagle was standing guard - survey was suspended.

FISH OBSERVED

BIRDS	# OF SPECIES	TOTAL BIRDS	SPECIES PRESENT
Eagles	1	2 Active Nest	
Seabirds	1	~80	
Waterfowl			
Gulls/Kittiwakes/Hens	3	~35	
Shorebirds			
Corvids			
Other Birds	2	2	

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters	3	Black bear on Mainland	
Pinnipeds (specify)		across from site D	
Whales (specify)	5-Humpbacks in Bainbridge Passage near Knight Is. Passage		

Shoreline subdivision map showing important biological features attached.

REVIEWED: MC 6/1/91

REVIEWED M.B. 5/30/91

Team #5
Segment # BA-8
Subdivision A
Sea State 0

Date 19/20 May 1991 pg 2 of 3
Tidal Height +4 → +6 / +5.5 → +3
Biologist Crank
Wind Speed / Direction no wind

Comments (cont.)

- (D) Area is located in the ULTZ. At the top of the area black lichen encrusts 80% of the sediments. Low in the site Fucus (with maturing conceptacles; no sporelings) cover 60% of the sediments. Rare concentrations of barnacles and moderate concentrations of Littorina are also present in the site. In the MLTZ, moderately concentrated Fucus with maturing conceptacles; dense filamentous green algae, Odonthalia (an alga); sparse intergravel mussels; dense Littorina; rare limpets cover 80% of the surface sediments. Fucus sporelings are next present in or below this site. Mysid shrimp are present nearshore.
- (E) Area is located on a rock wall face in the ULTZ. Within the site black lichen, moss and barnacles (located low in the site) cover ~10% of the surface area. Directly below the site there is a 3m wide, sparse concentrated barnacle band and sparsely concentrated mussels. In the bedrock cracks sparse Fucus and moderate Littorina are also found on the wall. Beneath the wall, on the beach, there are dense concentrations of Fucus and Littorina; biota cover is 80%.
- (F) Area is in the SUPRA. White lichen, moss (with fruiting bodies) and seasonal plants (just beginning to sprout) cover ~60% of the surface sediments. Beach area below the site is pebbles with scattered cobbles & boulders. Fucus has a sparse to moderate concentration. Littorina and limpets are moderate and barnacles (with spat) are sparsely concentrated. Biota cover is ~50%.

Team #5

Date 19/20/24 May 1991

pg 3 of 3

Segment BA-8

Tidal Range +4 → +6 / +5.5 → +3 / +4 → +3

Subdivision A

Biologist Crank

State 0

Wind Speed / Direction no wind

Comments (cont)

(G) Area is in the UITZ. Rare barnacles and sparse concentrations of Littorina and limpets are present within the site. Biota cover is <1%. In the MITZ there are sparse concentrations of barnacles, Fucus and interpebble mussels. Dense to moderate concentrations of Littorina and limpets are present. Nemertean worms are present and a rare concentration of Glyciopeltis. Biota cover is ~30%.

(Pit #12H) The pit is located low in the MITZ. In the vicinity, there is a sparse concentration of barnacles; moderate concentrations of Littorina and limpets and rare mussels. Cover is ~30%. On either side of the sheening area mussels are moderately concentrated.

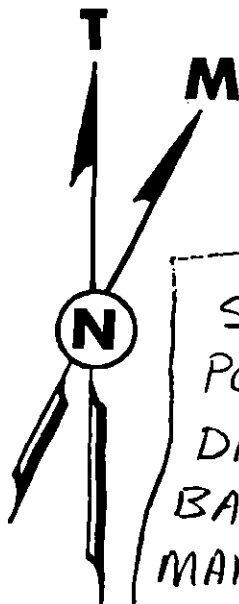
This contaminated area appears to be isolated. It is easily accessible and with the reduction of mussels appears to be having (had) an adverse effect on the biota. This area should be treated.

Reviewed: MC 6/1/91

Reviewed M.B. 5/30/91

MAY 8 1991
 06 30 AM MAP
 GREG CHANEY
 TEAM 5
 SEGMENT: BA-7-A
 DATE: MAY 19 1991
 AIR P.N.: NONE

BAINBRIDGE PASSAGE [MAP 2 of 3]



SURVEY TERMINATED AT THIS POINT DUE TO EAGLE NEST DISCOVERY. NOTE: NEST IS SET BACK FROM THE BEACH WHICH MAKES IT DIFFICULT TO OBSERVE.

LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE ROUGHLY
 50
 METERS

APPROXIMATE LOCATION OF EAGLE NEST DISCOVERED DURING SURVEY

VITZ has a greater biota concentration than the MITZ (~20%)

PATCH SOR MOSTLY PU

(B) 2x2m SOR < 1%

(C) 1x1m ONE DRIP CT ON BOULDER

WATER TABLE TOO HIGH FOR PITS BRIGHT RAINBOW SHEEN AT WATER'S EDGE ~5 FT TIDE

DEAD TREE LEANING OVER WATER

DRIFTED TREE STUMP THIN SPRUCE FOREST

(A) 2x2m CT < 1%

1 PATIE AP PU

LOW BEDROCK

Mussel concentrations drop dramatically in shading area

LOW BEDROCK

ALDERS

BAINBRIDGE ISLAND

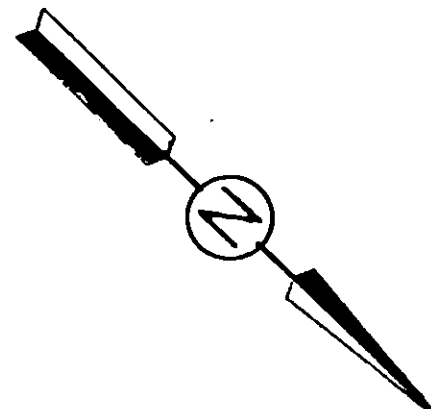
STREAM

Reviewed MB. 5/24/91

SITE 2

MAP 3 of 3

MAYSAN 91
OG SKETCH MAP/Bio
GREG CHANEY/Crank
TEAM 5
SEGMENT: BA-8-A
DATE: MAY 21, 1991
AIR P.#: NONE



D 3x15m
TB < 1% CV < 1%

BAINBRIDGE
ISLAND

SEVERAL TARBALLS
RECOVERED FROM
THIS AREA

55 GAL
DRUM

Dense Fucus: biota cover ~ 80%

Fucus covers 60-80%
of the beach. No sporophytes
present, but con cap tubes
are maturing

BAINBRIDGE
PASSAGE

E 2x10m
TB < 1% CV < 1%

Sparsely concentrated
mussels and
barnacles

Moss

Biota cover ~ 50%

F 1x15m
SOR < 1%
CT < 1%

WE RECOVERED
THESE TARBALLS.

NOTE: PHOTOS 5 & 6. 2 TARBALLS WHICH WERE PICKED UP
FROM THE DRIFT LINE AND MOMENTARILY PLACED IN
THE WATER TO SEE IF THEY WOULD STILL FLOAT. THEY DID.

U.S. FISH AND WILDLIFE SERVICE (FWS)
SHORELINE ACTIVITY/BALD EAGLE IMPACT EVALUATION

Date 5/26/91 Shoreline Segment/Subdivision BAS

Shoreline activity Assessment Team Survey

Time - Begin

Time - End

FWS Observer 5:50 PM

7:30 PM

Surveyors/workers _____

Nest in view/monitored: ☒ Y ☐ N Adult in nest: ☒ Y ☐ N Unk.

Adverse eagle response: Y ☒ N Adult left nest: Y ☒ N Unk.

Time

Type of human activity/eagle response

6:00 The survey crew went ashore at the
Site 1 nest. The nest was approximately
75 yds. off the shoreline with a female
eagle on the nest. The Survey
team worked through the area
with no problems. No other eagles
were sighted.

Survey/work activities completed: ☒ Y ☐ N

Personnel withdrawn due to eagle conflict: Y ☒ N

Recommendations: _____

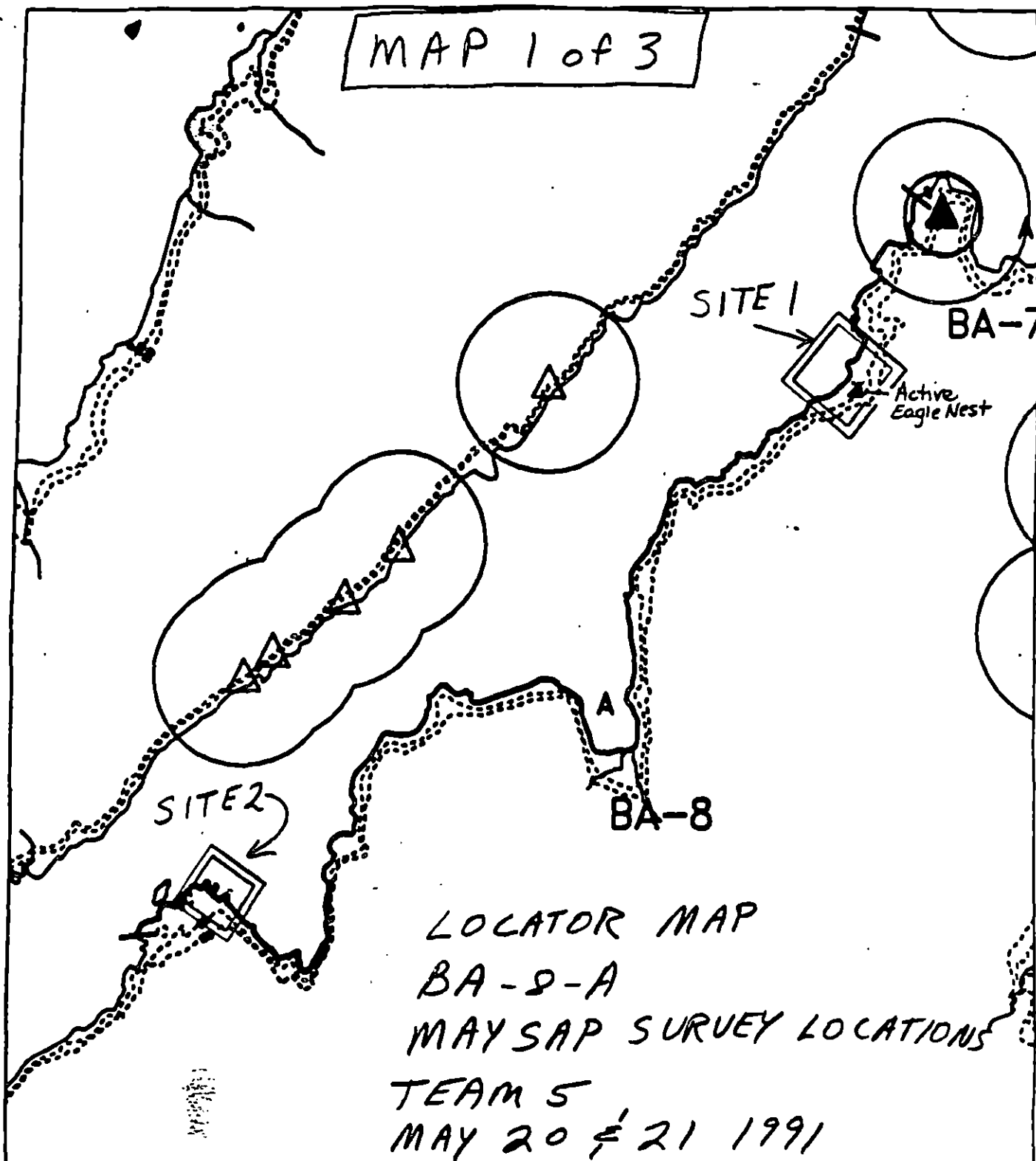
The area around site 1 needs a monitor.

FWS Observer Mike Luke

Date 9/27/91

Reviewed M.B. 5/30/91

MAP 1 of 3



BA008

0 500 1000



AS State Plane Zone 4
NAD83

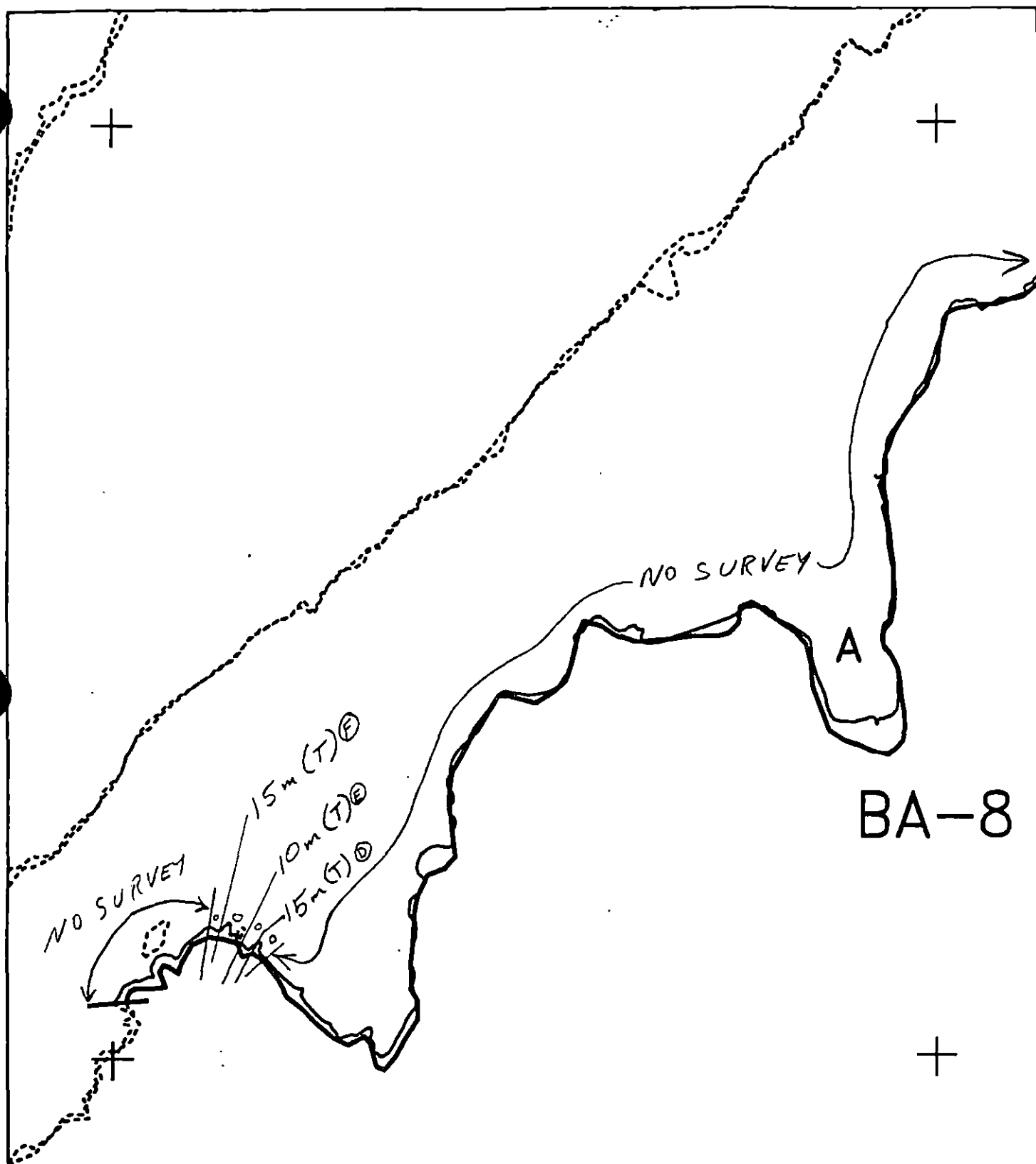
Segment Reference Map

Map Key: PV88A000



EAGLE NEST

Reviewed MB 5/30/91



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

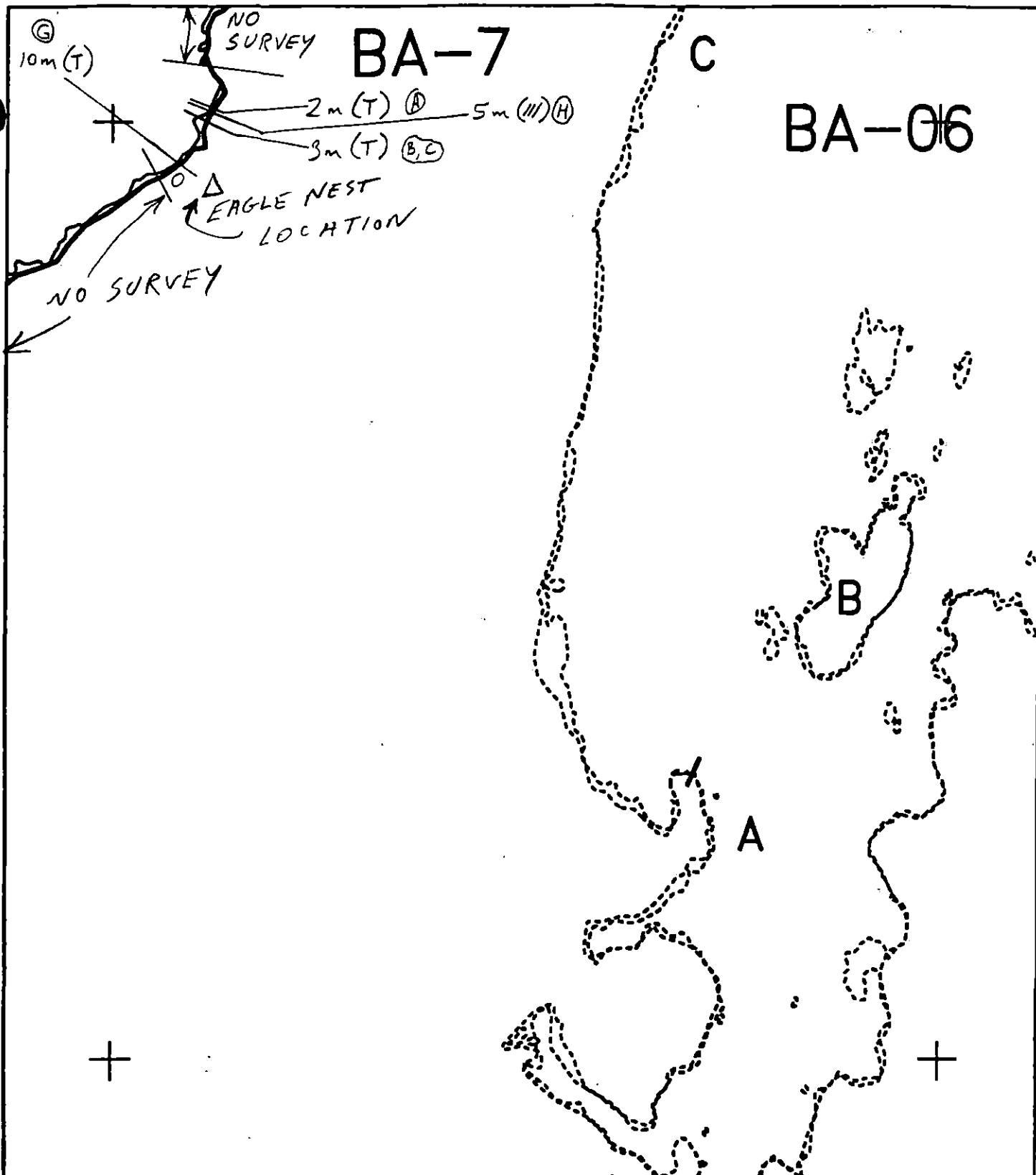
BA008 A
 ADEC Subsegment Length: 7276m
 METERS

AK State Plane Zone 4
 1400
 200
 600000



Subdivision Field Map
 Map Key: PWSBA008Aa
 Name: CHANEY
 Date: MAY 20 1991
 Data Entered:

Reviewed: 6/1/91 mc
 Reviewed 5/30/91 kb



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

BA008 A
 ADEC Subsegment Length: 7276m
 METERS

AK State Plane Zone 4
 pba008ab



Subdivision Field Map
 Map Key: PWSBA008Ab
 Name: CHANEY
 Date: MAY 20 1991
 Date Entered:

Reviewed: MC 6/1/91
 reviewed 5/30/91 K6

BP-1

C

B

A

A

NO SURVEY

XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

BA008 A

ADEC Subsegment Length: 7276m

METERS

0 400 800

AK State Plane Zone 4
ph0000ed



Subdivision Field Map

Map Key: PWSBA008Ad

Name: CHANEY

Date: MAY 20 1991

Date Entered:

Reviewed: MC 6/1/91
Reviewed 5/30/91 Co

1991 MAYSAP EVALUATION

SEGMENT: BA 008 **SUB:** A **REGION:** PWS **SURVEY DATE:** 5/19/91
5/26/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest,
Anadromous stream, 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 Manual Raking

X

Other _____

COMMENTS:

INITIAL: Remove high SOR at locaiton H. Manually rake/till
in Customblen at location H.

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____ **FOSC APPROVAL DATE:** _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

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. 5 SEGMENT B-A-8 SUBDIVISION A DATE 5/19/91

ADEC

NAME

John Hoyer

SIGNATURE

[Signature]

☐ NTR

Recommend that sub-surface oiling in LITZ be reversed tide was not low enough to determine extent of oiling. Rolling cobbles under H₂O I determined subsurface extended to O-tide level of LITZ in Area H. Rest of segment was lightly oiled + TB's observed were picked up.

EXXON

NAME

John Dean

SIGNATURE

[Signature]

☒ NTR

See Comments on Procraten 5/26/91

LANDMANAGER

NAME

Steve WARD

OF

CVC-FS

SIGNATURE

[Signature]

☐ NTR

This Area showed a very lg amount of sheening. We were forced to leave because of Eagle nest on site. This Sub-div. must be re-surveyed as there appears to be high content of sub-surface oiling. Sporadic asphalt patties observed during short time on beach.
No-Bio. Survey Incomplete

USCG/NOAA

NAME

DREHER / CLINE

SIGNATURE

CWO K.L. Disher

[Signature]

☒ NTR

At time of survey the tide was steadily incoming. Upon landing at 4' mark, ADEC monitor dug into small tar pattie trapped behind boulder at 4' water line mark. As wake from skiffs struck beach there was a small amount of RB sheen generated. Recommend no clean up at this time. Do recommend re-survey at more appropriate tide level and with assistance of U.S.F.W.S. H&D

The only oil of note here is site H; the amount of nearshore sheen produced by subsurface oil disturbance is surprising given the low level of the intertidal that it occurs in.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT BA-8 SUBDIVISION A DATE 5/26/91

ADEC

NAME _____ SIGNATURE _____

☐ NTR

EXXON

NAME Leith Dean SIGNATURE [Signature]

☒ NTR Small quantity (1/2 bag) TB picked up during survey. Minor
cleaning at site of sheening is degrading.

LANDMANAGER

NAME _____ OF _____ SIGNATURE _____

☐ NTR

USCG/NOAA

NAME DREHER/CLINE SIGNATURE CWO K. L. Dreher

☒ ^{KLD} NTR Found one area about 2m² that sheened when cobbles were moved at water's edge.
Any further clean up of this area ~~and~~ would do more harm to the environment
than the small amount of oil residue found. KLD

TEAM NO. 5 MATSAP SHORELINE OILING SUMMARY PAGE 01 OF 01
 OG CHANEY BIO CRANK SEGMENT BA-8
 ADEC HAYEB LANDMANAGER WARD for CUC SUBDIVISION A
 EXXON DEAN USC&NOAA DREHER/CLINE DATE MAY 19 1991
 SITE 1 15:20 to 16:05 TIDE LEVEL +4 ft. to +6 ft. ENERGY LEVEL: ☐ H ☐ M ☒ L
 SITE 2 TIME 10:07 to 11:04 TIDE LEVEL +5.5 ft. to +3.0 ft. ENERGY LEVEL: ☐ H ☐ M ☒ L
 SITE 1 17:45 SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO WEATHER: ☒ SUN ☒ CLOUDS ☐ FOG ☐ RAIN ☐ SNOW
 TOTAL LENGTH SHORELINE SURVEYED: 595 m NEAR SHORE SHEEN: ☐ BR ☒ RB ☐ SL ☐ NONE
 EST. OIL CATEGORY LENGTH: W — m M 5 m N — m VL 55 m NO 535 m US 668 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOF	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A						T					C	M	2	2		✓			AP Pate Removed
B				T							PG	M	2	2		✓			MOSTLY REMOVED
C						T					R	V	1	1			✓		ONE GRIP ON BOULDER
D			T		T						R	VH	3	15		✓			
E			T		T						R	VH	2	10		✓			
F				T	T						R	VH	1	15	✓				SPLASH CV & SOR
G				T							PG	M	6	10		✓			AP REMOVED
H				C							G	L	5(?)	5			✓	?	LOW VISCOSITY BROWN OIL

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 # MATSAP-

5 - 23 4-8
20 FRAMES 1-6

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				BRGN	S	UI	MI	LI		
1	15						✓		-	?		10	R			✓		BCG-BGP	
2	30							✓	-			28	N			✓		PG-PGM	
3	20							✓	-			0	N			✓		BCA-BGP	
* 4	15		✓						D-3	Y		10	BR			✓		CP-CPB	SOR/H Mostly gone
5	20							✓	-			10	N			✓		PC-PCM	
6	15							✓	-			-	-			✓		PG-PGR	
7	30							✓	-			20	N			✓		PG-PGM	
8	20							✓	-			-	-			✓		PG-PGC	
9	20							✓	-			-	-			✓		PG-PG	

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

* NOTE: OIL < 5cm DEEP IS NOT SUBSURFACE

OG COMMENTS: THE SURVEY OF THIS SUBDIVISION WAS LIMITED TO THOSE SITES WHERE OIL WAS OBSERVED DURING THE SSAT SURVEY IN 1990. WE VISITED THIS SUBDIVISION 3 TIMES BUT WERE HAMPERED BY TIME CONSTRAINTS EACH TIME. AT SITE 2 WE RECOVERED SEVERAL TAR BALLS FROM THE DRIFT LINE WHICH WERE COMPOSED OF A SPRUCE NEEDLE MATRIX AND WERE LOOSE AND STILL BOUYANT.

revised 5/30/91 KG

Reviewed: MC 6/1/91

CONT. ON NEXT PAGE

DATE May, 26 191

FRAMES

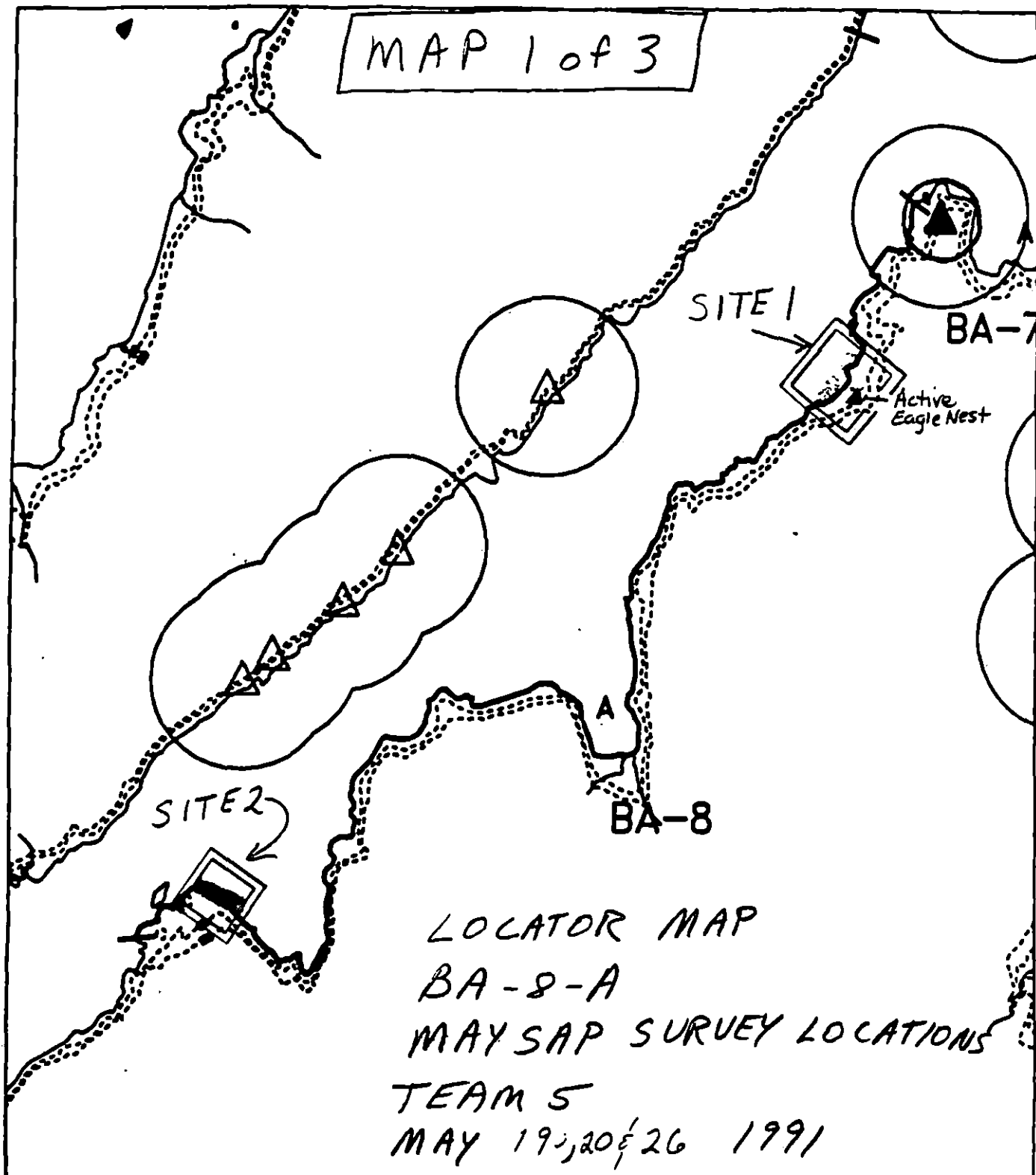
SHEEN COLOR: B - BROWN: R - RAINBOW: S - SILVER: N - NONE

* $< 5\text{cm}$ in P/G DOES NOT CONSTITUTE SUBSURFACE ON

OG COMMENTS: AREA (H) AROUND PIT 12. ~5X5m SOR/H TOP 2 cm of GRANUL SUBSTRATE. THE WIDTH OF THIS AREA EXTENDS DOWN AT LEAST TO THE TWO FOOT STAND OF TIDE, A BRIGHT RAINBOW SHEEN RUNS OFF THE SITE WHEN THE SEDIMENTS ARE DISTURBED. WHEN ROCKS ARE OVERTURED BROWN DROPLETS FLOAT TO THE SURFACE. THESE FORM A DISCONTINUOUS BROWN SHEEN ON THE RESULTING TIDE POOL. THE LOWER LIMIT OF THIS SITE COULD NOT BE ESTABLISHED BECAUSE the low tide WATER LINE AT THE TIME OF THE SURVEY WAS 2 ft.

REVISER: MC 6/1/91
reviewed 5/30/91 KG

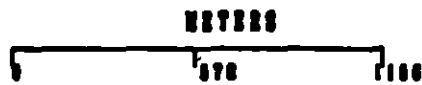
MAP 1 of 3



BA008

Segment Reference Map

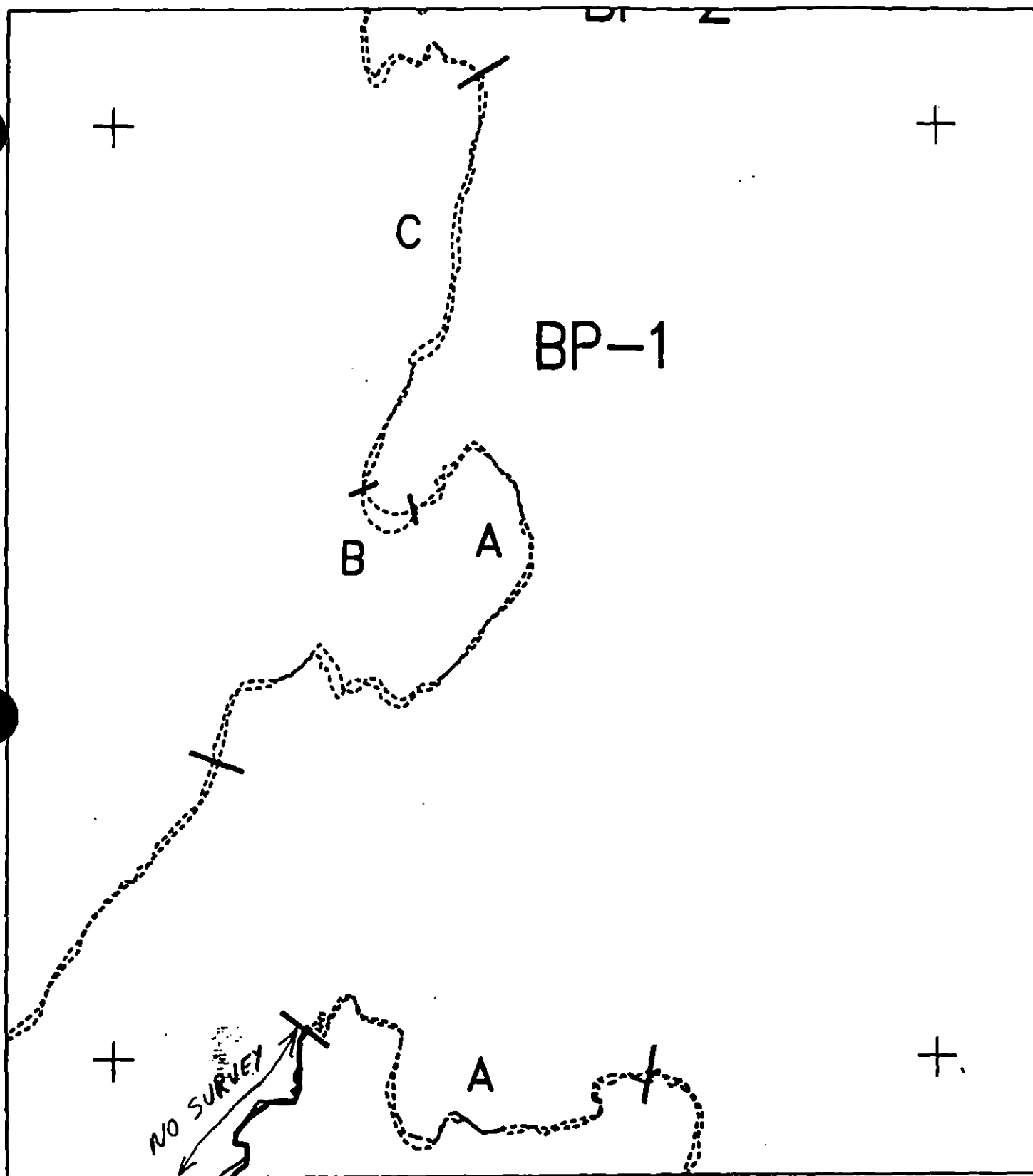
Map Key: PVSBA000



AS State Plane Zone 4
1:50,000



EAGLE NEST



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

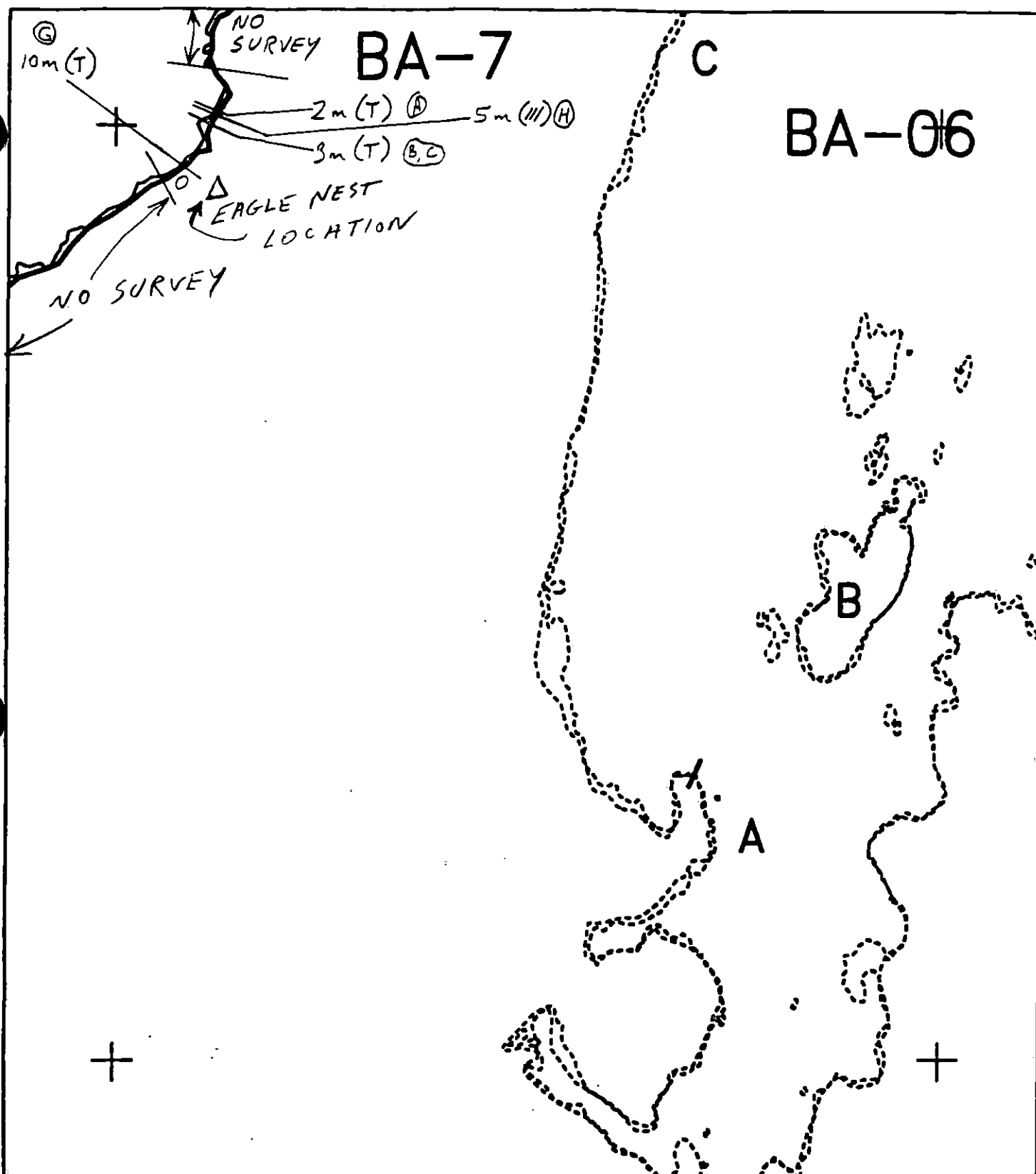
BA008 A
 ADEC Subsegment Length: 7276m
 METERS

400 800
 AK State Plane Zone 4
 projected



Subdivision Field Map
 Map Key: PWSBA008Ad
 Name: CHANEY
 Date: MAY 20 1991
 Date Entered:

Reviewed: MC 6/1/91
 reviewed 5/30/91 KG



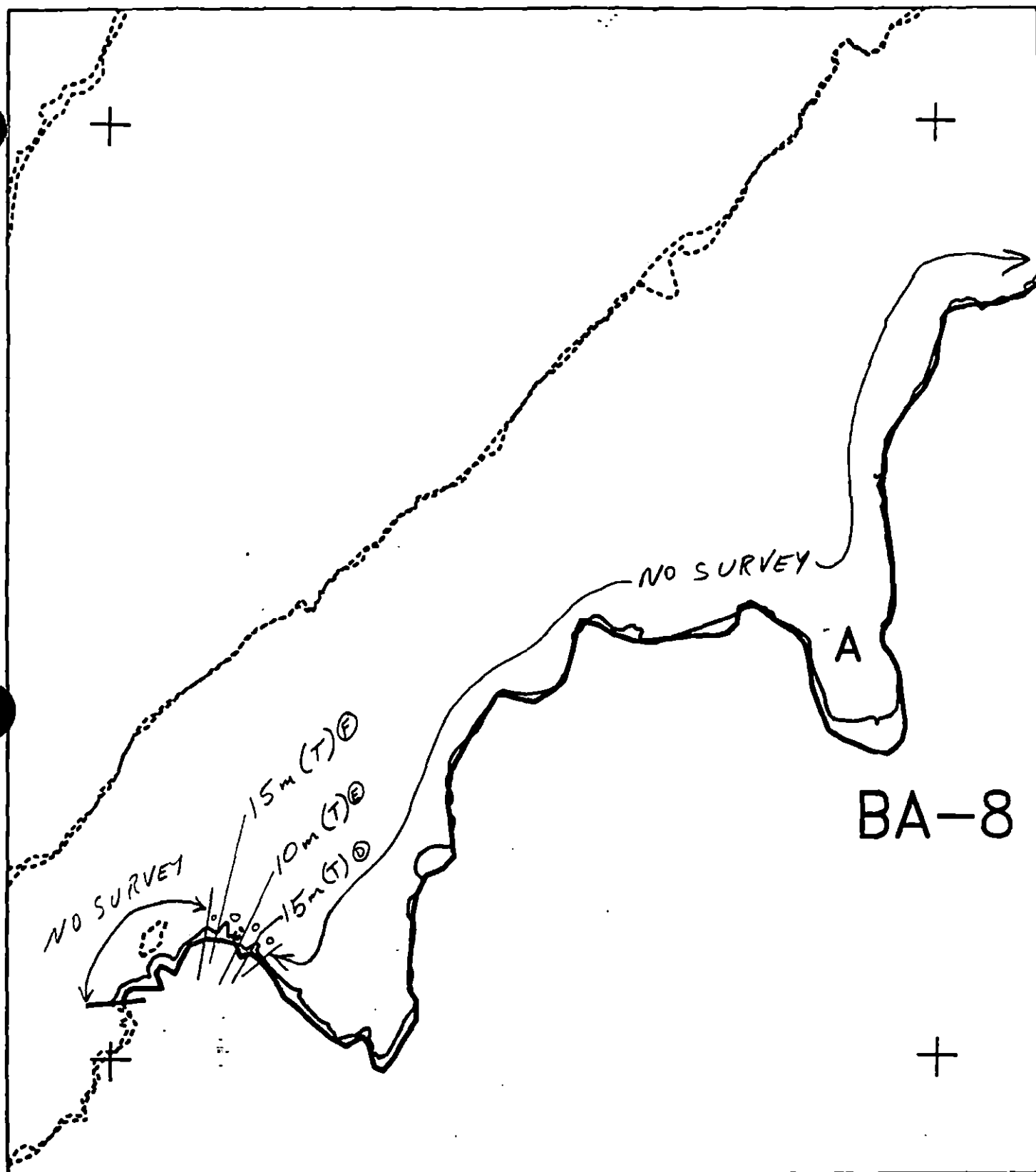
XXXX Wide
 ///// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

BA008 A
 ADEC Subsegment Length: 7278m
 METERS
 0 400 800
 AK State Plane Zone 4
 ph000ab



Subdivision Field Map
 Map Key: PWSBA008Ab
 Name: CHANEY
 Date: MAY 20 1991
 Date Entered:

Reviewed: MC 6/11/91
 reviewed 5/30/91 KCB



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

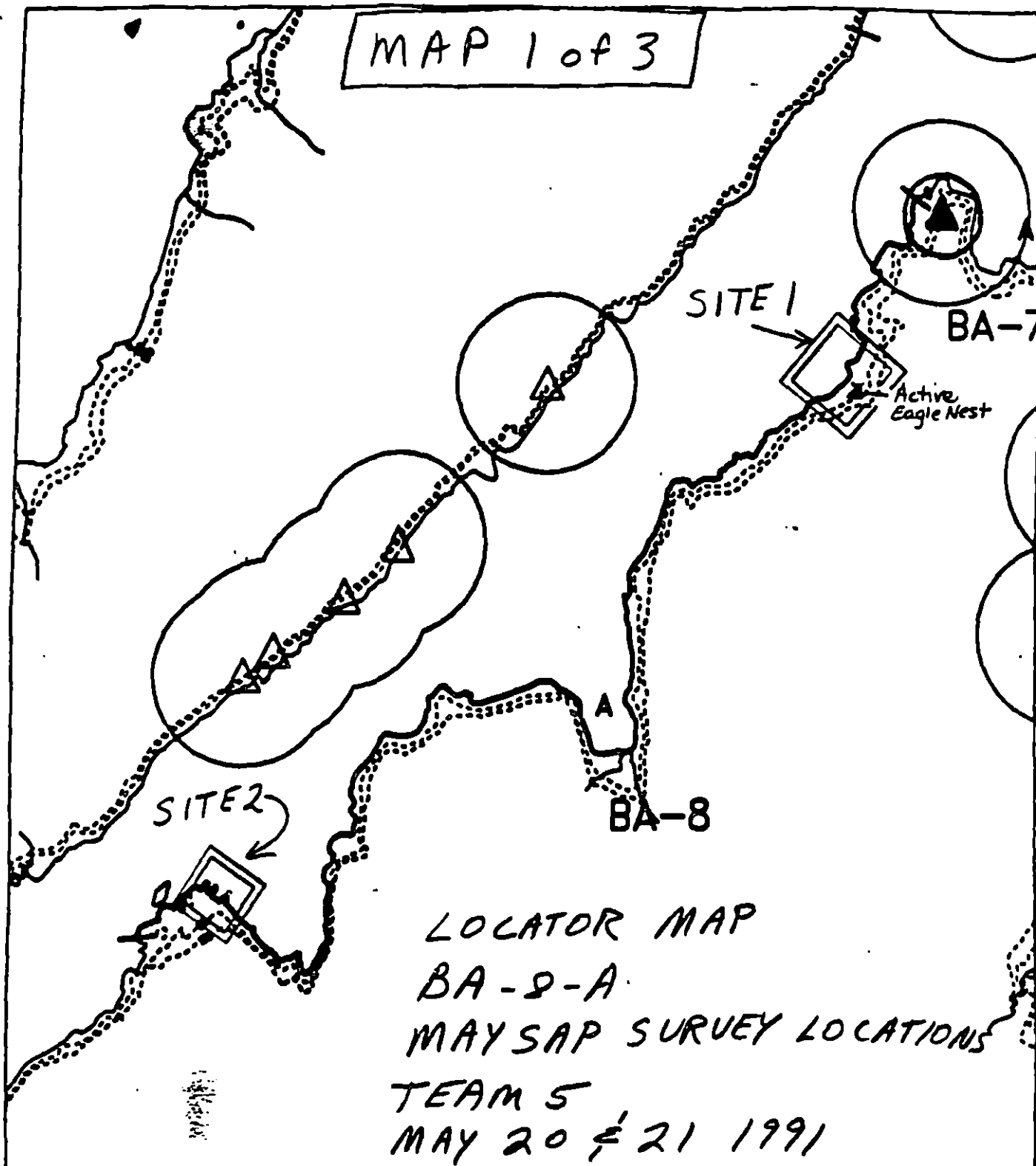
BA008 A
 ADEC Subsegment Length: 7270m
 METERS
 0 400 800
 AK State Plane Zone 4
 pba008a

Subdivision Field Map
 Map Key: PWSBA008Aa
 Name: CHANEY
 Date: MAY 20 1991
 Date Entered:



Reviewed: 6/1/91 mc
 Reviewed 5/3/91 kg

MAP 1 of 3



BA008

METERS



at State Plane Zone 4

Segment Reference Map
Map Key: PUBA008



EAGLE NEST

Reviewed MIB 5/30/91

U.S. FISH AND WILDLIFE SERVICE (FWS)
SHORELINE ACTIVITY/BALD EAGLE IMPACT EVALUATION

Date 5/26/91 Shoreline Segment/Subdivision BA8

Shoreline activity Assessment Team Survey

Time - Begin

Time - End

FWS Observer 5:50 PM

7:30 PM

Surveyors/workers _____

Nest in view/monitored: ☒ Y ☐ N Adult in nest: ☒ Y ☐ N Unk.

Adverse eagle response: Y ☒ N Adult left nest: Y ☒ N Unk.

Time

Type of human activity/eagle response

6:00 The survey crew went ashore at the
Site 1 nest. The nest was approximately
75 yds. off the shoreline, with a female
eagle on the nest. The survey
team worked through the area
with no problems. No other eagles
were sighted.

Survey/work activities completed: ☒ Y ☐ N

Personnel withdrawn due to eagle conflict: Y ☒ N

Recommendations: _____

The area around site 1 needs a monitor.

FWS Observer

Mike Luke

Date

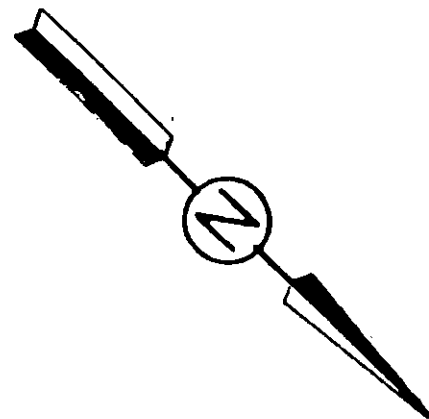
9/27/91

Reviewed M.B. 2/3/91

SITE 2

MAP 3 of 3

MAY 1991
OG SKETCH MAP/BIO
GREG CHANEY/crank
TEAM 5
SEGMENT: BA-8-A
DATE: MAY 21 1991
AIR P.H.: NONE



D 3x15m
TB < 1% CV < 1%

BAINBRIDGE
ISLAND

SEVERAL TARBALLS
RECOVERED FROM
THIS AREA

SS GAL
DRUM

Dense Fucus: biota cover ~ 80%

Fucus covers 60-80%
of the beach. No sporophytes
present, but conceptacles
are maturing

BAINBRIDGE
PASSAGE

E 2x10m
TB < 1% CV < 1%

Sparsely concentrated
mussels and
barnacles

moss

Biota cover ~ 50%

F 1x15m
SOR < 1%
CT < 1%

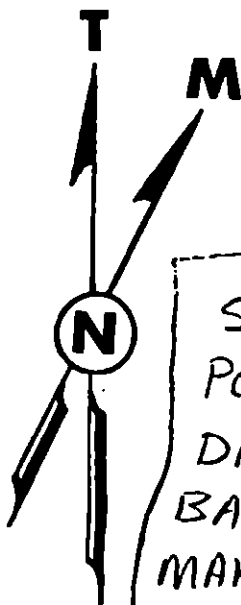
WE RECOVERED
THESE TARBALLS.

NOTE: PHOTOS 5 & 6. 2 TARBALLS WHICH WERE PICKED UP
FROM THE DRIFT LINE AND MOMENTARILY PLACED IN
THE WATER TO SEE IF THEY WOULD STILL FLOAT. THEY DID.

Reviews M.B. 5/19/91

MAYBAP 1991
 06 BAY MAP
 GREY HANEY
 TEAM 5
 SEGMENT: BA-7-A
 DATE: MAY 19 1991
 AIR P.H.: NONE

BAINBRIDGE PASS E / MAP 2 of 3



SURVEY TERMINATED AT THIS POINT DUE TO EAGLE NEST DISCOVERY. NOTE: NEST IS SET BACK FROM THE BEACH WHICH MAKES IT DIFFICULT TO OBSERVE.

LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE ROUGHLY
 50
 METERS

BAINBRIDGE ISLAND

APPROXIMATE LOCATION OF EAGLE NEST DISCOVERED DURING SURVEY

UITZ has a greater biota concentration than the MITZ (~20%)

PATCH SOR MOSTLY PU

(B) 2x2m SOR < 1%

(C) 1x1m ONE DRIP CT ON BOULDER

WATER TABLE TOO HIGH FOR PITS BRIGHT RAINBOW SHEEN AT WATER'S EDGE ~5 FT TIDE

DEAD TREE LEANING OVER WATER

DRIFTED TREE STUMP

THIN SPRUCE FOREST

(A) 2x2m CT < 1%

1 PATIE AP PU

LOW BEDROCK

Mussel concentrations drop dramatically in sheering area

WATER TABLE TOO HIGH FOR PITS

LOW BEDROCK

ALDERS

Reviews M.S. 5/25/91

Team #5

Date 19/20/24 May 1991

pg 3 of 3

Segment BA-8

Tidal Range +4 → +6 / +5.5 → +3 / +4 → +3

Subdivision A

Biologist Crank

Qu State 0

Wind Speed/Direction no wind

Comments (cont)

(G) Area is in the U1T2. Rare barnacles and sparse concentrations of Littorina and limpets are present within the site. Biota cover is <1%. In the i1T2 there are sparse concentrations of barnacles, Fucus and interpebble mussels. Dense to moderate concentrations of Littorina and limpets are present. Nemertean worms are present and a rare concentration of Glycymeris. Biota cover is ~30%.

(Pit #12H) The pit is located low in the M1T2. In the vicinity, there is a sparse concentration of barnacles; moderate concentrations of Littorina and limpets and rare mussels. Cover is ~30%. On either side of the sheening area mussels are moderately concentrated.

This contaminated area appears to be isolated. It is easily accessible and with the reduction of mussels appears to be having ~~had~~ an adverse effect on the biota. This area should be treated.



Reviewed: MC 6/1/91

Reviewed M.B. 5/30/91

Team #5
Segment # BA-8
Subdivision A
Sea State 0

Date 19/20 May 1991 pg 2 of 3
Tidal Height +4 → +6 / +5.5 → +3
Biologist Crank
Wind Speed / Direction no wind

Comments (cont.)

- (D) Area is located in the ULTZ. At the top of the area black lichen encrusts 80% of the sediments. Low in the site Fucus (with maturing conceptacles; no sporelings) cover 60% of the sediments. Rare concentrations of barnacles and moderate concentrations of Littorina are also present in the site. In the MITZ, moderately concentrated Fucus with maturing conceptacles; dense filamentous green algae, Odonthalia (an alga); sparse intergravel mussels; dense Littorina & rare limpets cover 80% of the surface sediments. Fucus sporelings are not present in or below this site. Mysid shrimp are present nearshore.
- (E) Area is located on a rock wall face in the ULTZ. Within the site black lichen, moss and barnacles (located low in the site) cover ~10% of the surface area. Directly below the site there is a 3m wide, sparse concentrated barnacle band and sparsely concentrated mussels. In the bedrock cracks, sparse Fucus and moderate Littorina are also found on the wall. Beneath the wall, on the beach, there are dense concentrations of Fucus and Littorina, biota cover is 80%.
- (F) Area is in the SUPRA. White lichen, moss (with fruiting bodies) and seasonal plants (just beginning to sprout) cover ~60% of the surface sediments. Beach area below the site is pebbles with scattered cobbles & boulders. Fucus has a sparse to moderate concentration. Littorina and limpets are moderate and barnacles (with spat) are sparsely concentrated. Biota cover is ~50%.

MAYSAP BIOLOGICAL SUMMARY FORM

pg 1 of 3

TEAM #5

DATE 19/20 May 1991

SEGMENT # BA-8

TIDAL HEIGHT (Range) +4 to +6 / +5.5 to +3 / +4 to

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 0

WIND SPEED/DIRECTION no wind

PHOTOGRAPHS: ROLL #

FRAME #

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

(A) Area is located next to a stream in the UITZ. Dense concentrations of Littorina and limpets; moderate concentrations of barnacles and sparse concentrations of Fucus cover ~30% of the surface sediments.

(B) Area is located in the UITZ. Fucus sporlings were growing on the removed tarmit. Fifty cm away from the mat, Fucus has a moderate concentration, conceptacles are maturing. Approx 20% of the plants are 'stipe-only'. There is also a sparse Littorina population. Biotin cover is 50%.

(C) Area is located in the UITZ on a rock face. Limpets are densely concentrated (several age classes present); Littorina are sparsely concentrated. Both species of gastropods were observed grazing along the oil drip. Barnacles are sparsely concentrated. Biotin cover is 30%. Above the drip there is a sparse concentration of Fucus.

Areas A, B, C are located relatively close together. In the MITZ below the sites, barnacles have a sparse to moderate concentration; Littorina and limpets are dense with various age classes; Nucula (whelks) are sparse; Mussels are also sparse many of the empties have drill holes typical of whelk predation; Fucus is sparse with pockets of moderate concentration. Littorina egg masses are common. Biotin cover is 20-30%, which is lower than the biotin cover in the UITZ (~30%). An active (not listed by FW)

WILDLIFE OBSERVATIONS eagles nest was spotted by the Land Manager. An eagle TO BE COMPLETED IN ALL SUBDIVISIONS in incubating posture was present and a second eagle was standing guard - survey was suspended.

FISH OBSERVED

BIRDS	# OF SPECIES	TOTAL BIRDS	SPECIES PRESENT
Eagles	1	2 Active Nest	
Seabirds	1	~80	
Waterfowl			
Gulls/kittiwakes	3	~35	
Shorebirds			
Corvids			
Other Birds	2	2	

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters	3	Black bear on Mainland	
Pinnipeds (specify)		across from site D	
Whales (specify)	5 - Humpbacks in Bainbridge Passage near Knight Is. Passage		

Shoreline subdivision map showing important biological features attached.

Reviewed: MC 6/1/91

Reviewed M.B. 5/30/91

SITE 2

MAP 3 of 3

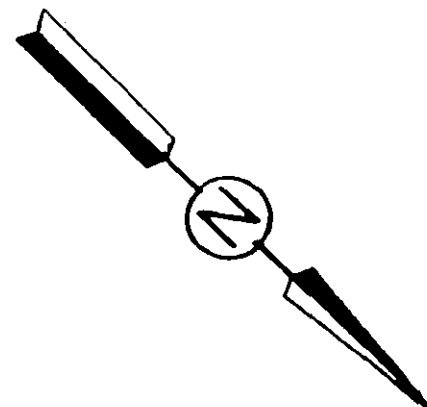
MAY 1991
OG SKETCH MAP
GREG CHANEY

TEAM 5

SEGMENT: BA-8-A

DATE: MAY 21, 1991

AIR P.#: NONE



BAINBRIDGE
ISLAND

D 3x15m
TB<1% CV<1%

SEVERAL TARBALLS
RECOVERED FROM
THIS AREA

55 GAL
DRUM

56 ♀

MOSS

BAINBRIDGE
PASSAGE

E 2x10m
TB<1% CV<1%

F 1x15m
SOR<1%
CT<1%

WE RECOVERED
THESE TARBALLS.

NOTE: PHOTOS 5 & 6. 2 TARBALLS WHICH WERE PICKED UP
FROM THE DRIFT LINE AND MOMENTARILY PLACED IN
THE WATER TO SEE IF THEY WOULD STILL FLOAT. THEY DID.

REVIEWED 5/30/91 KG
REVIEWED 6/11/94-

MAP 1991
OG SKETCH MAP
GREG CHANEY
TEAM 5
SEGMENT: BA-7-A
DATE: MAY 19 1991
AIR P.#: NONE

MAP 2 of 3

BAINBRIDGE PASSAGE

NOTE: OILING AREAS D, E & F AND PITS
S-8 ARE LOCATED ON MAP 3
ALSO PHOTOS 5 & 6 ROLL MAYSAP-5-20



G 6x10m AP PU
SOR <1% REMAINS

LEGEND

BEDROCK	
BOULDERS	
FINE BED.	
DRIFT LOG	
GRASS	
BRUSH	
FOREST	
OILED PIT	
NO OIL PIT	
PHOTO	

SCALE ROUGHLY
50
METERS

NO FIELD DATA
ASSUMING:
2x2m HOC

C 1x1m
ONE DRIP
CT ON
BOULDER

PATCH SOR
MOSTLY PU

B 2x2m
SOR <1%

H 5x5m SOR/H
100% THIS SITE
PRODUCES A BRIGHT
RAINBOW SHEEN WHEN
SEDS ARE DISTURBED

CURVED
DEAD TREE
LEANING
OVER WATER

BOULDER
TIDE POOL SHEEN
DEAD TREE LEANING
OVER BEACH

DRIFTED TREE
STUMP
THIN SPRUCE
FOREST

A 2x2m
CT <1%

1 PATIE
AP PU

BAINBRIDGE
ISLAND

FALLEN
TREE

APPROXIMATE
LOCATION OF

EAGLE NEST DISCOVERED DURING SURVEY

LOW BEDROCK

BAINBRIDGE
ISLAND

LOW
BEDROCK

ALDERS

A

revised 5/30/90 JG
PMS: MC 6/1/91

1991 MAYSAP EVALUATION

SEGMENT: BL 012 SUB: A REGION: PWS SURVEY DATE: 5/4/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find, and contact Exxon's Cultural Resource Program immediately: 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.). *Bo*

RECOMMENDATIONS:

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

COMMENTS:

INITIAL:

TAG: MANUAL PICKUP OF EASILY ACCESSIBLE AP/HBOR
AT LOCATIONS A, G1-4. FOLLOWED BY CUSTOMBLEN
APPLICATION IF REQUIRED.

FOSC:

TAG APPROVAL DATE: MAY 17 1991

FOSC APPROVAL DATE: 6/26/91

ADEC [Signature]

FOSC

EXXON [Signature]

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

USCG [Signature]

NOAA [Signature]

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT BL 12 SUBDIVISION A DATE 5/9/91

ADEC

NAME Peter MontesanoSIGNATURE [Signature]☐ NTR ☒ TREATMENT RECOMMENDED

THIS Segment IS ADJACENT TO EL-16 WHICH ALSO REQUIRES WORK. Block Island could be improved if the following area were to gain attention with the shovel + 1 Rowel Brigade.

(A) Remove Heavy SDR - from 10 AP; OPAREA NOT Viewed By USCG Rep.

(B) Remove SDR - AP/SOR

(C) OG expressed negative interest in documenting the area - if it is to be removed

(D) Remove Heavy SDRs + SDR - AP

(E) a good % of AP/SOR is recoverable some of which is below scattered small C's

NOTE: ADNR LISTS THIS ISLAND AS A SPECIAL USE DESTINATION.

EXXON

NAME C.M. KotsimposSIGNATURE [Signature]

☐ NTR I AGREE FIRMLY WITH USCG. THE SURVEY WAS MORE THAN ADEQUATE IN TERMS OF IDENTIFYING DEGREE OF OILING & LOCATION. WE TOOK NEARLY 4 HOURS TO DOCUMENT BLOCK ISLAND IN AN EFFORT TO SATISFY ALL PARTIES.

LANDMANAGER

NAME Dennis J. Kennedy OF USFSSIGNATURE [Signature]

☐ NTR This subdivision receives recreational use. The shoreline survey was very well done. There was nothing unique about area and survey - straight forward

USCG/NOAA

NAME JAICHEL (NOAA) Bm ZENONESIGNATURE [Signature]

☐ NTR We visited each pocket beach and sketch by boulder rubble by foot. This is a comprehensive survey. Beach A has 2 sheltered small coves which retain heavy SDR at each end. Beach location C has a large boulder veneer covering 100m of HOR/HSR in a sheltered tombolo pocket. Beach D has very scattered SDR in large boulder fields, which is pretty inaccessible. The NW shoreline (location GL-43) has pockets where the SDR (heavy) coverage is significant (>5%) and accessible

THIS Segment WAS COVERED EXTENSIVELY. SOME WORK IS NEEDED IN SPECIFIC AREAS AS PER OG REPORT AND AS POINTEDLY NOTED BY NOAA. 3

TEAM NO. 2OG B. TRIMMADEC P. MONTESANOEXXON C. KATSIMPALISBIO J. BensonLANDMANAGER D. Kennedy for USFSUSCG/NOAA JACQUI MICHEL/NOAASEGMENT BL12SUBDIVISION ADATE MAY 14 1991ME 08:24 to 12:14TIDE LEVEL +5.2 ft. to +1.0 ft.ENERGY LEVEL: ☐ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☐ SUN ☐ CLOUDS ☐ FOG ☒ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 1514 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W 0 m M 39 m N 614 m VL 117 m NO 744 m US 1433 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A1				S							BCR	M	2	3		X			HEAVY SOR IN SAND POCKET
A2	S										BC	M	1	5			X		
A3				S							BC	M	1.5	20		X			UNDER BOULDERS-HWY
A4					S						BC	M	1	20		X			
A5				P							BC	M	2.5	3	X				BEHIND BOULDER TALUS-HWY
B	S			S	S	S					BC	M	1.5	40		X			SOR-HEAVY
C				S	P	S	S				BC	M	7	6		X			SOR-HEAVY / LOR, MOR, HOR FOUND UNDER 'C'
D1				S	S	S					BC	M	0.5	8		X			
D2				S	S	S					BC	M	0.5	10		X			
D3				P							B	M	2	5		X			BEHIND BEBROCK OUTCROP
D4				S							BCP	M	2	7		X			MOR/OP UNDER TALUS / SOR BETWEEN BOULDER TALUS
D5						S					BC	M	3	3		X			behind sea stack
					S						RB	M	2	3		X			IN CREVICES ON ROCK/BEH: RS
					S	S					B	H	1	8		X			BEHIND FEEDER DITCH - P
	S										BC	M	1	15		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- 2 - 6FRAMES 1-11

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	15			X					2 - 15	N	15	B	X				B - GPCB	follows surface oiling
2	25				X				5 - 12	Y	3	N	X	X			PB - GPB	follows surface oiling
3	20						X		6 - 15	Y	15	S		X			BP - MGPB	lee side, Boulder Talus
4	22							X	—	Y	—	—		X			PG C - PGC	
5	15							X	—	Y	12	N		X			P - GP	
6	19		X						10 - 19	N	12	R		X			BC - PGB	
7	23				X				10 - 20	Y	12			X			BC - PGB	
8	25							X	—	Y	—	—	X				P - PG	
9	16		X						5 - 10	N	—	—	X				B - PG	Assoc. w/ HWY SOR

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

OG COMMENTS:

- BLOCK ISLAND IS COMPOSED OF SEVERAL POCKET BEACHES AMONG VERTICAL CLIFFS & HIGH ANGLED BOULDER TALUS SHORES.

 REVISED: 5/18/91 MC
 revised 5/17/91 KG

TEAM NO. 2SEGMENT BL 12OG B. TRIMMBIO J. BensonSUBDIVISION AADEC P. MONTESANOLANDMANAGER D. Kennedy for USFSDATE 5/14/91EXXON C. KATSIMPALISBM1 ZENONE
USCG/NOAA JACQUI MICHEL/NOAATIME : to : TIDE-LEVEL ft. to ft.ENERGY LEVEL: ☐ H ☐ M ☐ LSURVEYED FROM: ☐ FOOT ☐ BOAT ☐ HELICOPTERWEATHER: ☐ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☐ NONEEST. OIL CATEGORY LENGTH: W m M m N m VL m NO m US m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
F2					S	S	S				BC	M	2	30		X			
F3					S	S					B	M	1	3		X			BEHIND BEDROCK OUTCROP
F4			S	S		S	S				BC	M	5	23		X			-
G1				S							BCR	M	3	10		X			7 IN BOULDER
G2				P							BCR	M	3	10		X			SUBMERGED AT ROBE F BEACH
G3				P							PBC	M	2	15		X			HEAVY SOR
G4				S							BC	M	1.5	40		X			" "
G5				S							BC	M	1	4		X			" "
G6				S		S					BC	M	1	7		X			" "
H						S					R BC	M	2	500		X			under talus band on 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- - FRAMES

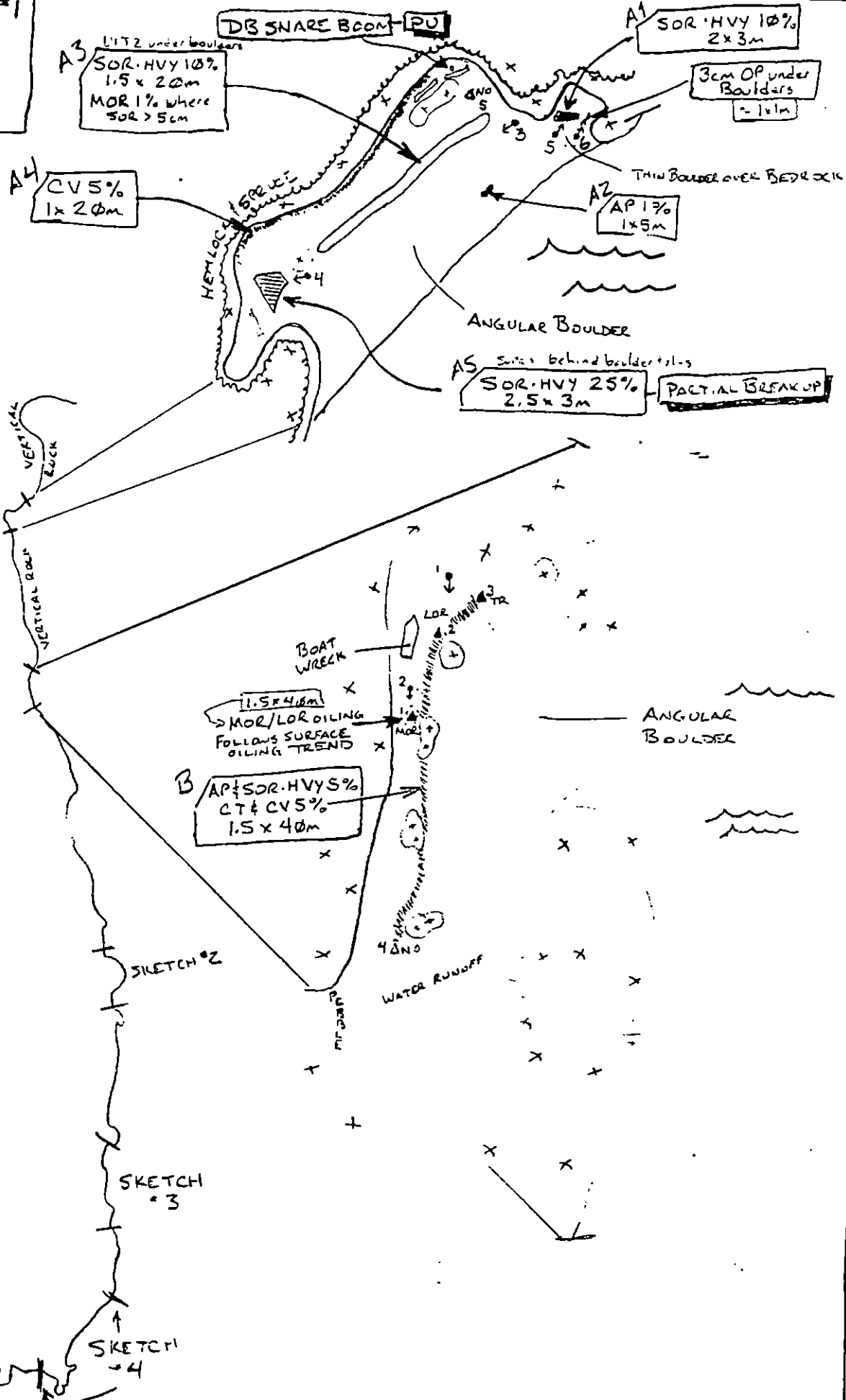
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
10	51				X				10 - 14	Y	—	—		X			PC - GP. ^{15% H₂O}	
11	26							X	—	Y	—	—		X			CB - GPBMS	
12	10				X				0 - 10	Y	—	—		X			PCB - PGL	BEDROCK BOTTOM
13	10			X					0 - 10	N	—	—		X			B - GPB	MOR under SOR
14	6			X					0 - 6	N	—	—		X	X		B - GPC(BR)	Rock - no. 1000
									—									
									—									
									—									
									—									

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

OG COMMENTS:

REVIEWED: 5/8/91 MC
reviewed 5/7/91 KC

OG SKETCH MAP #1
 BLO12-A
 4-MAY-91
 ØB24-1214
 BRYAN TRIMM
 MAP 1 OF 6



REVIEWED: 5/8/91 MC
 renewed 5/7/91 RG

OG SKETCH MAP*2
 BL012-A
 4-MAY-91
 0824-1214
 Bryan Trimn
 MAP 2 of 6

NORTH
 0 100 200
 meters

BLOCK
 ISLAND

SKETCH*1

SKETCH*1

C
 CV 20% CT 15%
 [BOR HVY 10%
 under veneer]
 7x6m
 LOR/MOR/HOR
 found under
 veneer

SKETCH*3

SKETCH
 *5

SKETCH
 *4

ANGULAR
 BOULDER-COBBLE

2 HEMLOCKS

NO FIELD DATA
 ASSUME:
 ANGULAR 2x2m HOR
 BOULDER

ANGULAR
 BOULDERS
 ROCK

REVIEWED: 5/8/91 MC
 revised 5/7/91 ICC

OG SKETCH MAP #3
 BLO12-A
 4 MAY - 91
 0824-1214
 BRYAN L. AM
 MAP 3 OF 6

NORTH
 0 100 200
 meters

BLOCK
 ISLAND

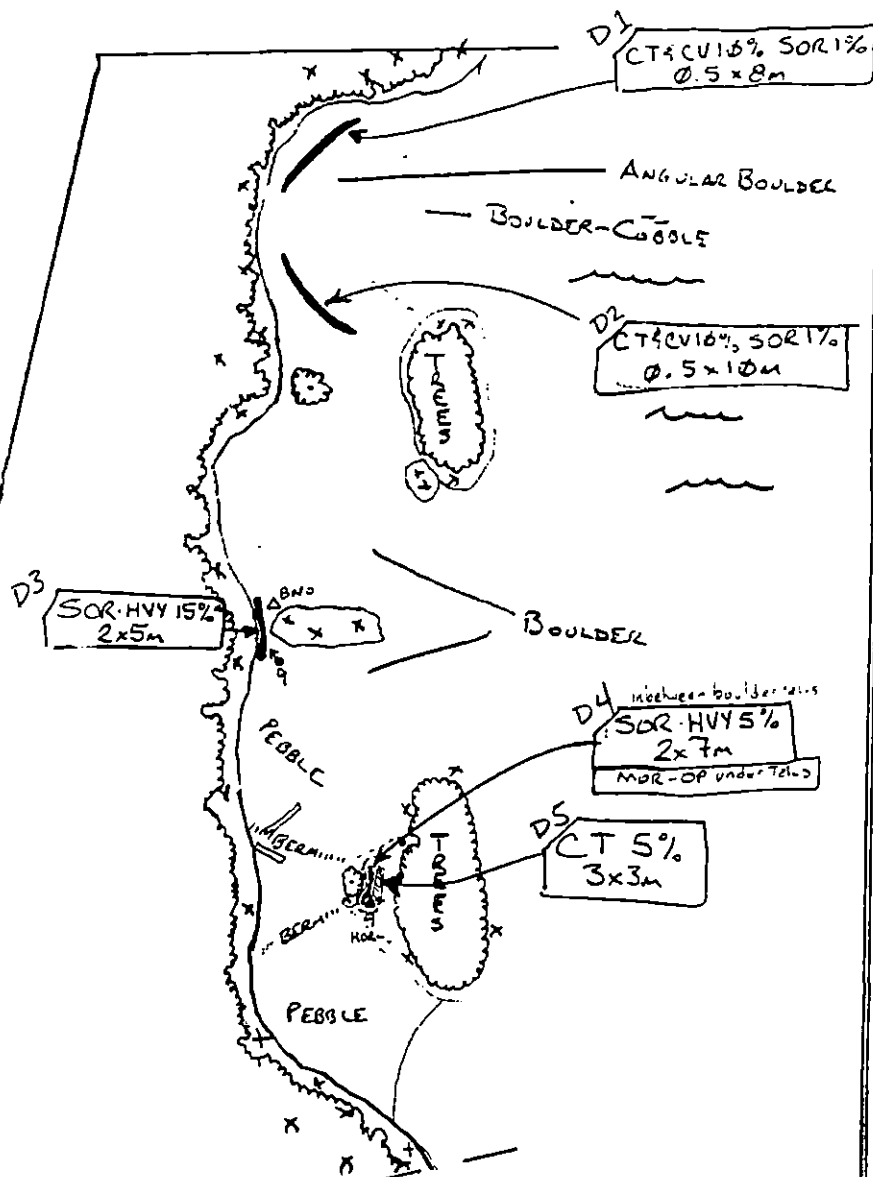
SKETCH #1

SKETCH #1

SKETCH #2

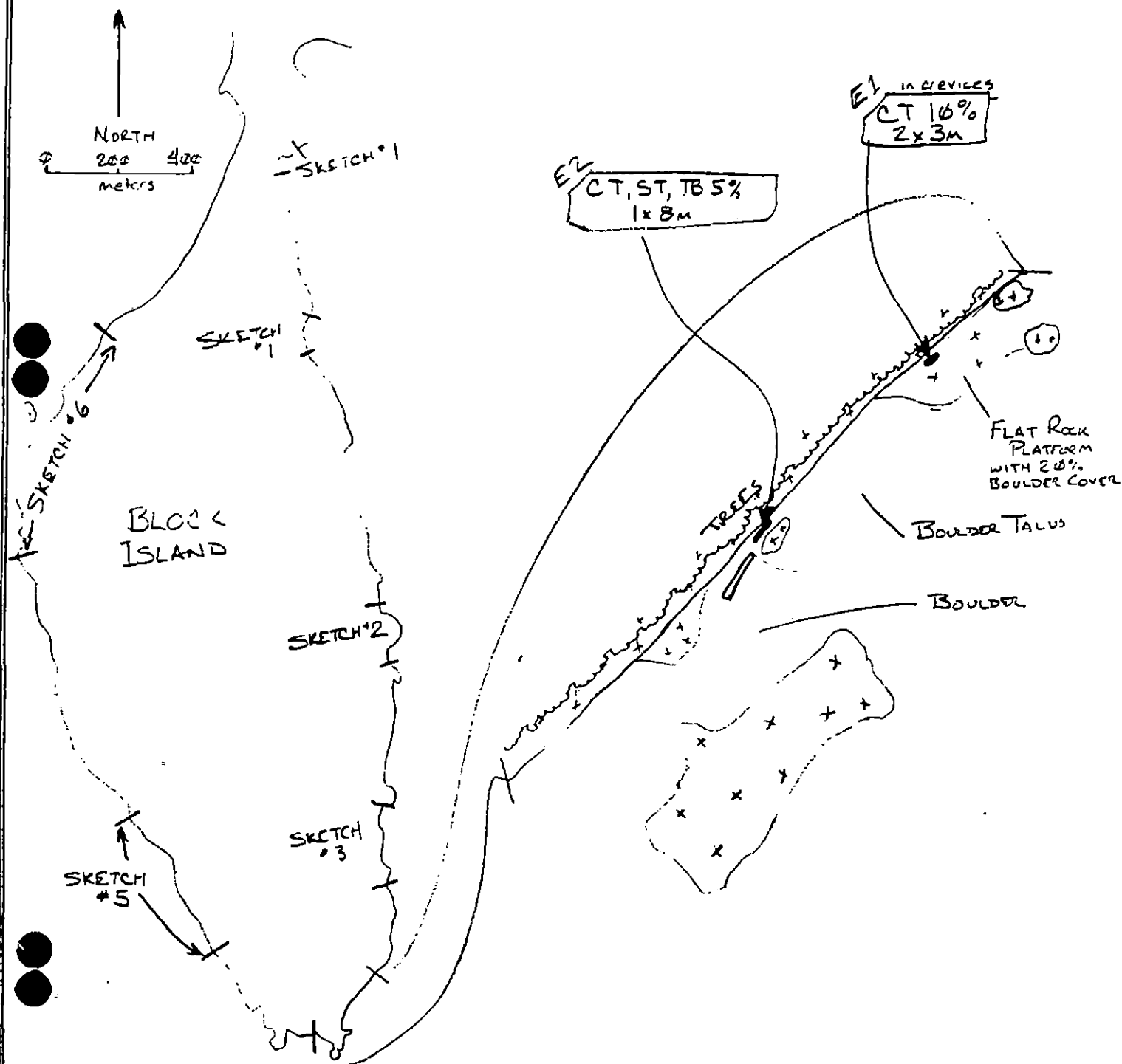
SKETCH #5

SKETCH #4



REVIEWED: 5/8/91 MC
 REVISED 5/7/91 KG

OG SKETCH MAP #4
BL012-A
4-MAY-91
0824-1214
BRYAN TRIMM
MAP 4 OF 6



REVIEWED: 5/8/91 AC
reviewed 5/7/91 KG

OG SKETCH MAP #5

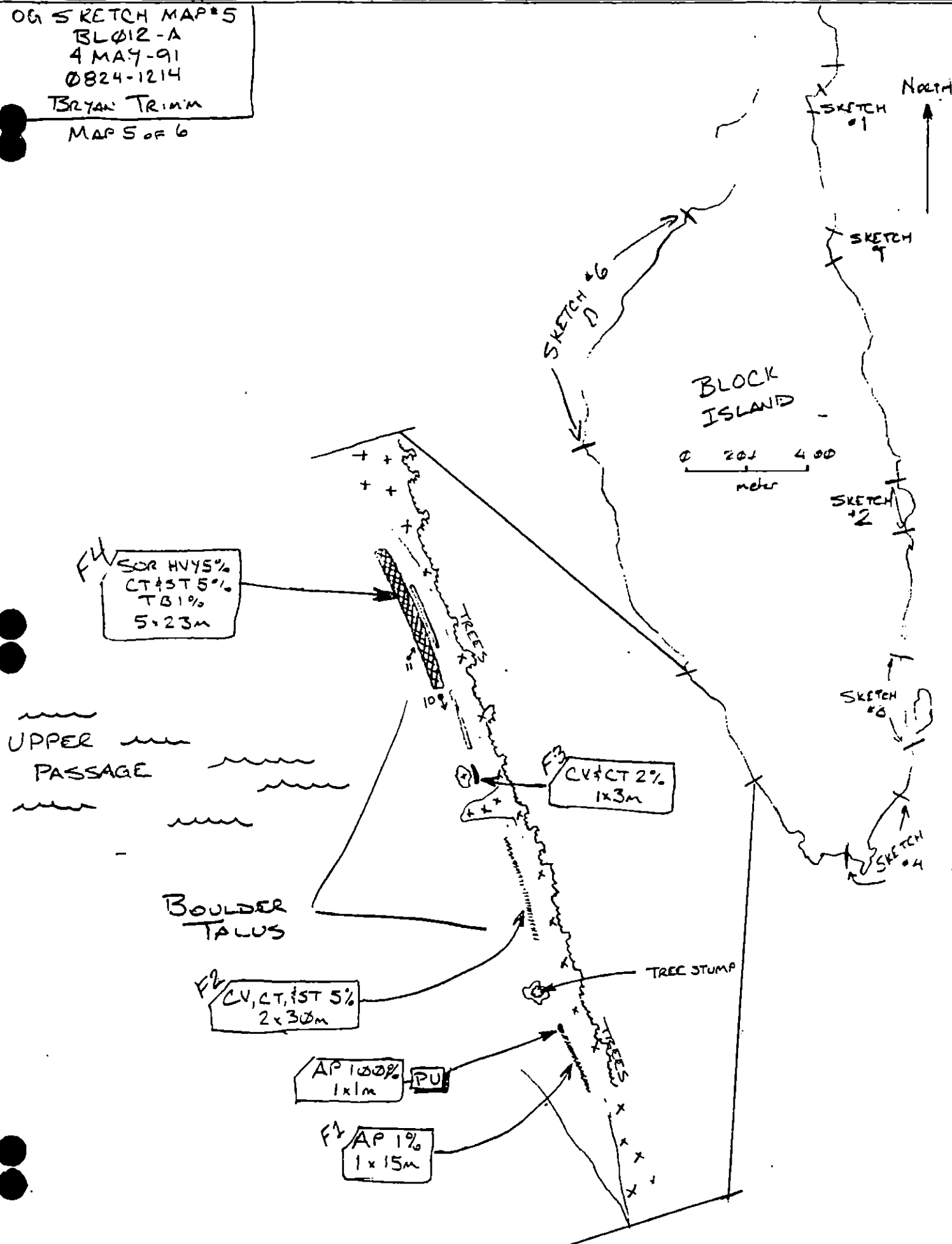
BL012-A

4 MAY-91

0824-1214

Bryan Trimm

MAP 5 of 6



REVIEWED: 5/8/91 MC
reviewed 5/7/91 KG

OG SKETCH MAP #6

BL012-A

4 MAY-91

0824-1214

BRYAN TRIMM

MAP 6 OF 6

UPPER
PASSAGE

G5 SOR-HVY 2%
1x4m

G6 SOR-HVY 5% CTS%
1x7m

G4 SOR-HVY 5%
1.5x4.0m

G2 SOR-HVY 20%
3x1.0m

G1 SOR-MED 5%
3x1.0m

ANGULAR
BOULDER

BOULDER-COBBLE
TALUS

PEBBLE-BOULDER

COBBLE-
BOULDER

G3 SOR-HVY 15%
2x1.5m

PEBBLE

WATER
RUNOFF

SOR (SOR under talus) 5%
1x1.0m

BOULDER
TALUS

BOULDER-
COBBLE

MOR
1x3

DB Pom Pom PU

DB Pom Pom PU

BLOCK
ISLAND

0 200 400
meter

SKETCH
#2

SKETCH
#3

SKETCH
#5

H CT 10%
2x5.00m

under talus
occasional rock faces
with boulder talus
high angle shores
also band of rock face

SKETCH
#4

SKETCH
#6

SKETCH
#7

SKETCH
#8

SKETCH
#9

SKETCH
#10

SKETCH
#11

SKETCH
#12

SKETCH
#13

SKETCH
#14

SKETCH
#15

SKETCH
#16

SKETCH
#17

SKETCH
#18

SKETCH
#19

SKETCH
#20

SKETCH
#21

SKETCH
#22

SKETCH
#23

REVIEWED: 5/8/91
revised 5/11/91 LG

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 4 May '91
 SEGMENT # BL 012 TIDAL HEIGHT(Range) +6' to +1'
 SUBDIVISION A BIOLOGIST John Benson
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

(A1) - (A5) —

I could not observe the LITZ. No biota grew on the oiled surfaces in the UITE. In (A1), filamentous green algae (FGA) grew on the tops of boulders in the oiled area. In the MITZ, the boulders supported communities of moderate diversity & moderately-low biomass. There is evidence that many boulders have been turned over, which kills organisms on both sides of the rock. Barnacles are moderately abundant in this area. Littorina egg masses were observed.

(B) & Pits #1-3 — I could not observe the LITZ. No biota grew on the oiled surfaces. This location has low species diversity & low biomass. A thin veneer of FGA grew on the tops of rocks in the MITZ & LITZ. Barnacles (*Balanus glandula* & *Semibalanus cariosus*) were moderately dense on the boulders & bedrock in the MITZ. Low-diversity tidepools lie in the MITZ bedrock. Fucus was dense only on the seaward side of the bedrock at the mouth of the cove.

(C) & Pits #6,7 — No biota grew on the oiled surfaces, but FGA was found below them & *Verrucaria* above them on boulders & cobbles. There is evidence again that boulders have been overturned (continued on next page)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2	"blenny eel"
Seabirds	—	—	
Waterfowl	2	8	
Gulls/Kittiwakes	3	22	
Shorebirds	—	—	
Corvids	2	2	
Other Birds	—	—	

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters	—	—	
Pinnipeds (specify)	1		
Sea lion			
Wales (specify)	—		

Shoreline subdivision map showing important biological features attached.

Reviewed: 5/5/91 me

Subdivision: Bk 12 A

Team: 2

Lio: John Benson

Environment (cont.) -

② (cont.) - There are a large number of barnacles here as well. Barnacles, particularly *B. glandula*, are moderately abundant, unattached, and one of their predators, *Nucella*, is more abundant here than in A or B. This site is also more exposed to waves, which correlates with *Nucella* abundance. A cream-yellow mass of eggs was found with a "flurry" of eggs. I could not observe the LITZ.

①, ② - FGA grew near, but not on, oiled surfaces. *Fucus* grew in moderate density on top of boulders in the LITZ, but not on cobbles. There is evidence of rock overturning both on the more protected north, and the more exposed south, sides of each of the intertidal bedrock outcrops. Recent recruitment of *Mytilus*, *Notacmacea*, *Ectocarpus*, & *Fucus* was observed. Diversity is moderate. *Nucella* is dense.

Pit 9

②, ④, ⑤ - Similar to other ① Locations, except some of the boulders are surprisingly bare. *Mytilus* has recruited to some boulders, and since the upper LITZ is now available, % cover is moderately dense. Access to the ④, ⑤ locations would be biologically less destructive from the south side of the bedrock outcrop, because the pebble beach supports little macrobiota. From a safety standpoint, however, the north side is less wave-exposed and safer.

(continued on next page)

Subdivision: BL 12 A

Team: 2

Eio: John Benzon

Comments (cont.)

(E1), (E2) — I could not verify the presence of an eagle nest here. This appears to be the most exposed portion of BL 12 A. This location is comprised of three basic substrate-habitat types: boulder-cobble fields, bedrock point, & bedrock tidepools. The boulder-cobble fields had moderate % cover, comprised of the regionally common species *Mytilus*, *Balanus glandula*, *Semibalanus cariosus* (in exposed sites), & *Odonthalia* in the MITZ. The LITZ contained more macroalgal diversity, & % cover as well as the starfish *Pycnopodia*. On the bedrock biotic % cover was high & diversity moderately high. Significant abundances of *Fucus* both barnacles, *Mytilus*, *Rhodomele*, *Ulva* & *Scytosiphon* were found. The tidepools in the MITZ just behind the bedrock point contained hermit crabs, coralline algae, *Littorina* & *Detrasieria*s. Location (E), on the whole, is diverse & has moderately high % cover. *Verrucaria* occurred near the oiled surfaces in the UITZ.

(F1) - (F5) — *Verrucaria* grows on the tops of rocks near oiled surfaces. The intertidal zonation pattern here is: UITZ: *Verrucaria* higher in zone & FGA lower in the zone; MITZ: FGA & *Balanus* higher in the zone & *Balanus* & *Fucus* lower in the zone; LITZ: diverse mixture of macroalgae (eg. *Fucus*, *Odonthalia*, *Palmaria*, *Scytosiphon*) & *Pycnopodia*. *Littorina* occurs throughout the MITZ & LITZ. Species diversity and % cover were moderately high. The only special biological sensitivities in locations (E) & (F) are eagle nests.

(continued on next page)
REMARKS: STATION 100

Subdivision: BL 12 A

Team: 2

Bio: John Benson

Comments (cont.)

⑥-⑦ - These sites were all boulder or boulder-cobble shores having low-to-moderate NW exposure. This shoreline orientation allows filamentous & membranous algae to form relatively high % cover. FGA forms nearly 100% cover in the lower MITZ, where species diversity is lower. In the higher MITZ, FGA is dense but is replaced by high % cover of *Fucus* and moderate diversity of associated algae & invertebrates (limpets, Littorina, amphipods). On the bedrock in the MITZ, barnacles & *Fucus* are moderately dense. The bedrock outcrops, including the tidal island, contain tidepools that add little to the overall diversity of this location and are not, therefore, biologically sensitive habitats here.

⑧ - This shore bears the consistent zonation pattern described above for Location ⑥. Total biotic % cover here is approximately 100% in all 3 tidal zones. This location has two eagle nests mapped on it: the location of the more southerly nest was verified.

This subdivision has a fairly complex mixture of substrate types & wave exposures. Biotic cover ranges from very low on the pebble beach in Location D to ~100% in ⑧. Diversity was highest at the southern point where diverse "microhabitats" were found. The major biological sensitivities here are eagle nests

BIO SKETCH MAP #1
BL012-A
4-MAY-91
0824-1214
John Benson.

MAP 1 OF 6

(A1)-(A5)

Moderate diversity &
moderately low biomass
Boulders overturned.

DB SNARE BOOM - PU

THIN BOULDER OVER BEDROCK

ANGULAR BOULDER

NORTH
0 100 200
meters

(B)

low diversity,
low biomass.
Barnacles &
FGA most common.

BOAT
WRECK

ANGULAR
BOULDER

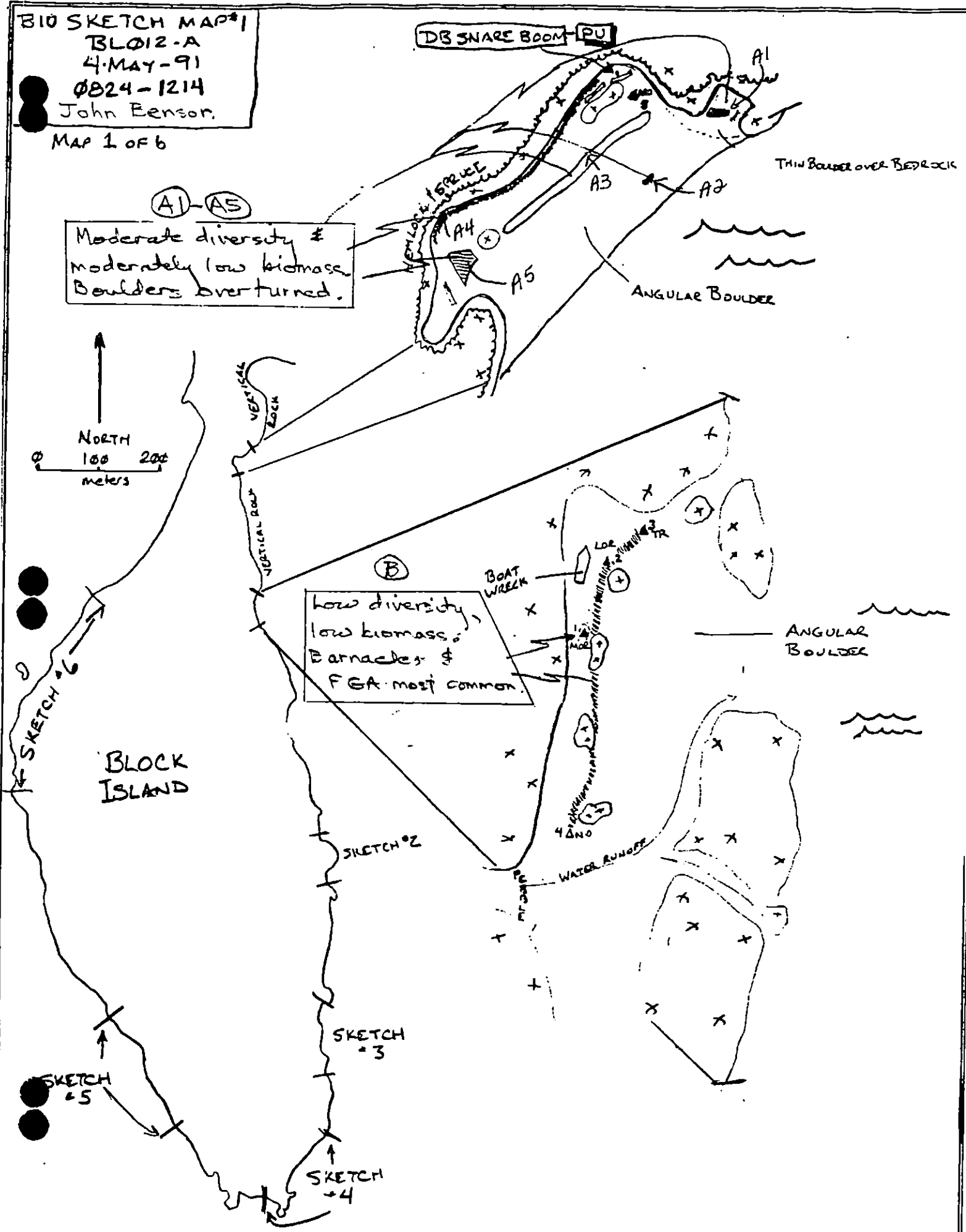
BLOCK
ISLAND

SKETCH #2

SKETCH
#3

SKETCH
#5

SKETCH
#4



BID SKETCH MAP #2

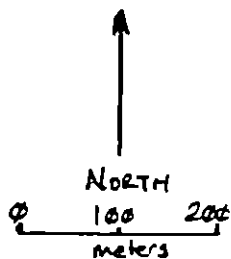
BLO12-A

4-MAY-91

ØB24-1214

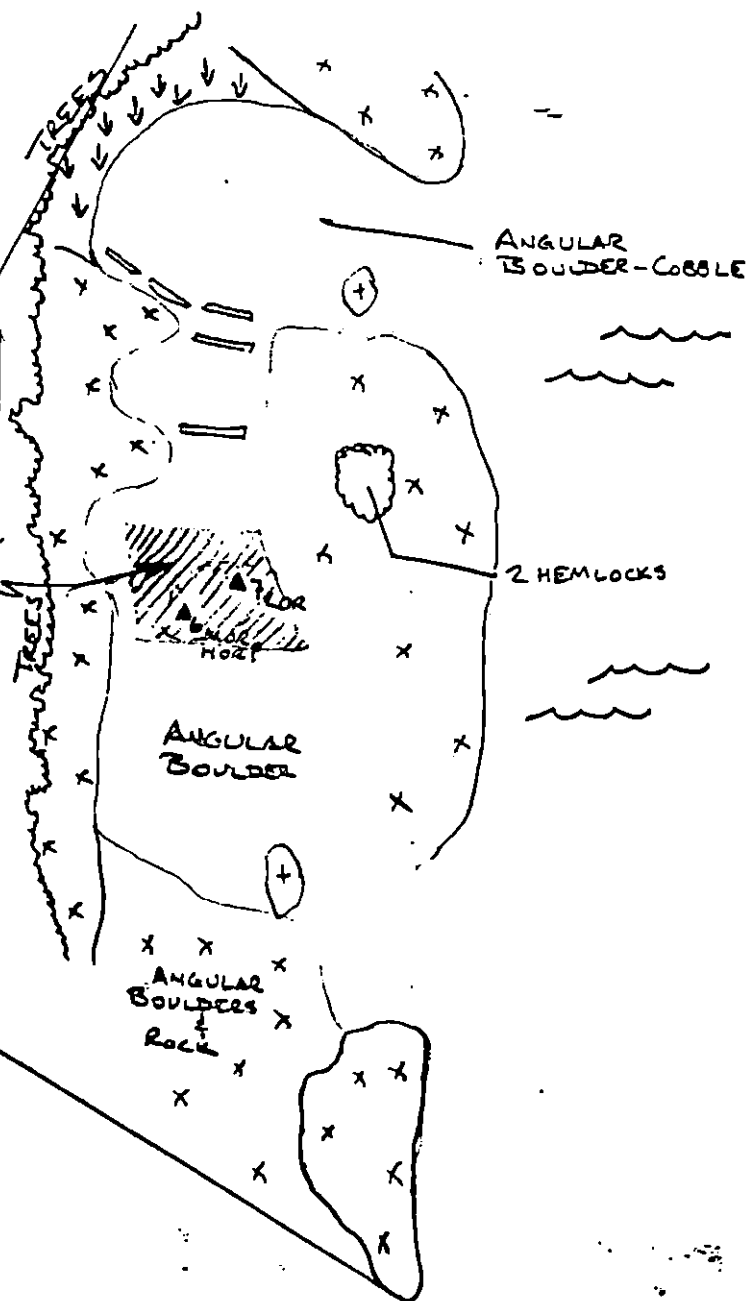
John Benson

MAP 2 of 6



(C)
No biota on oiled
surfaces. Blenny
eel(?) egg mass.
Balanus & Nucella
moderately dense

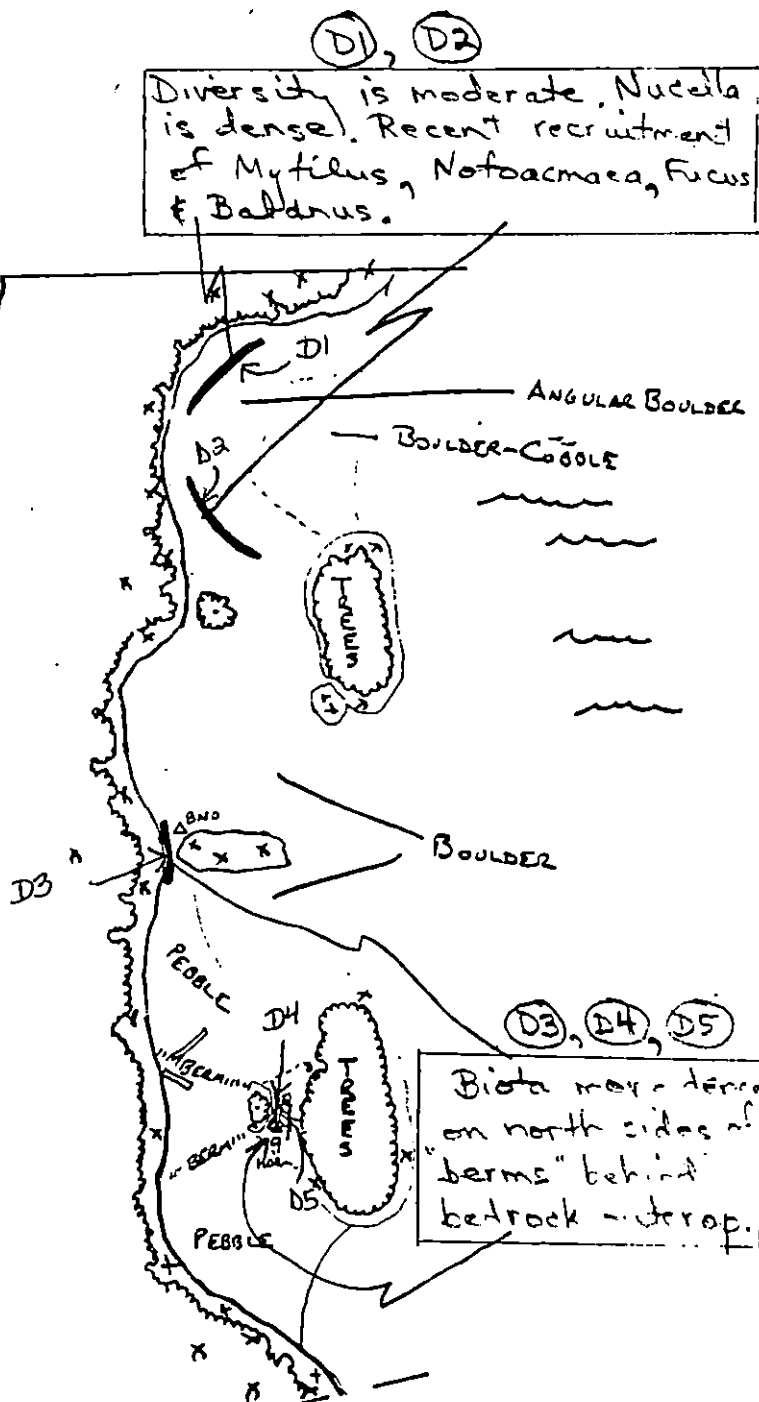
BLOCK
ISLAND



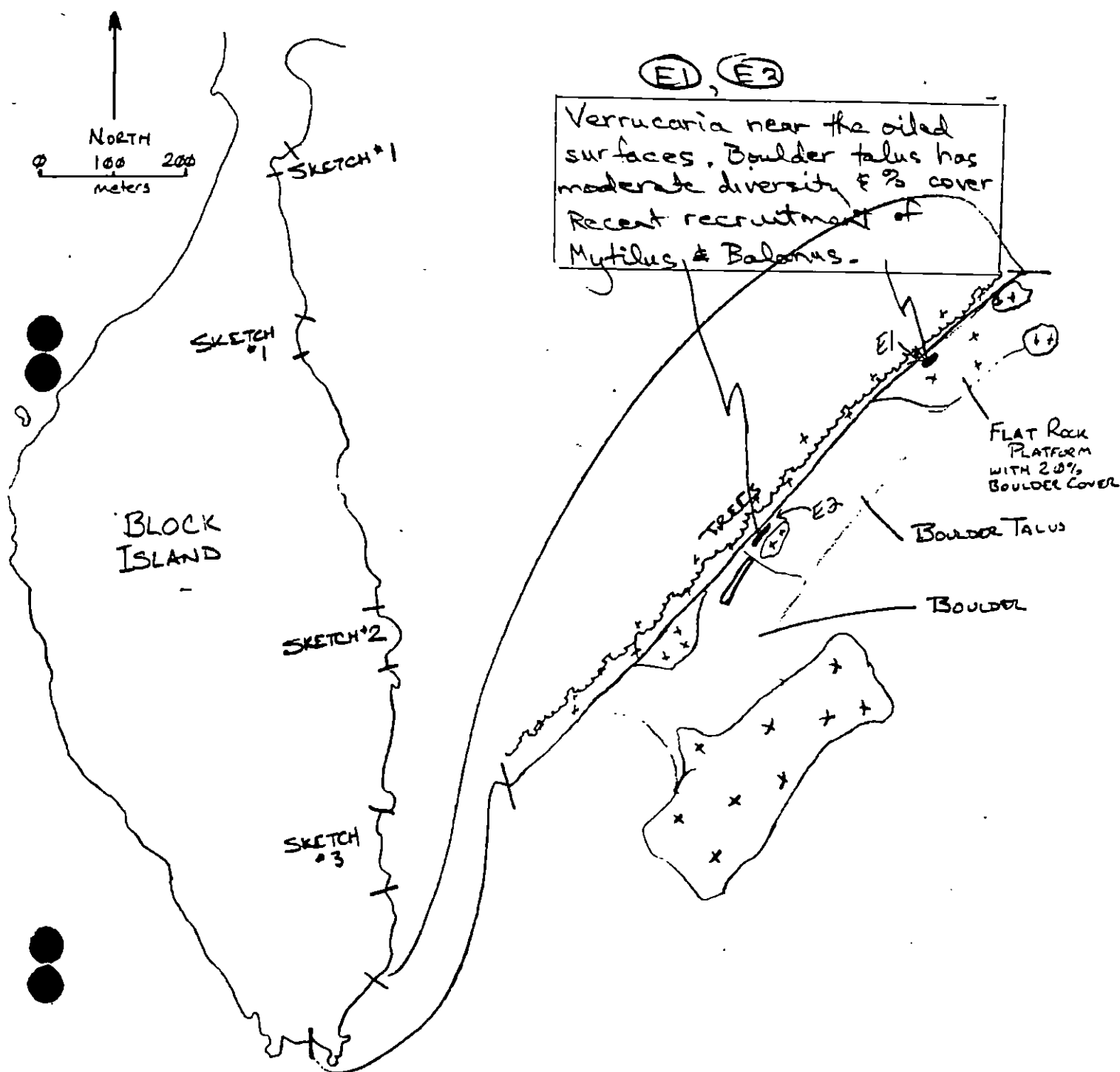
BIO SKETCH MAP #3
 BLO12-A
 4 MAY-91
 0824-1214
 John Benson
 MAP 3 OF 6

NORTH
 0 100 200
 meters

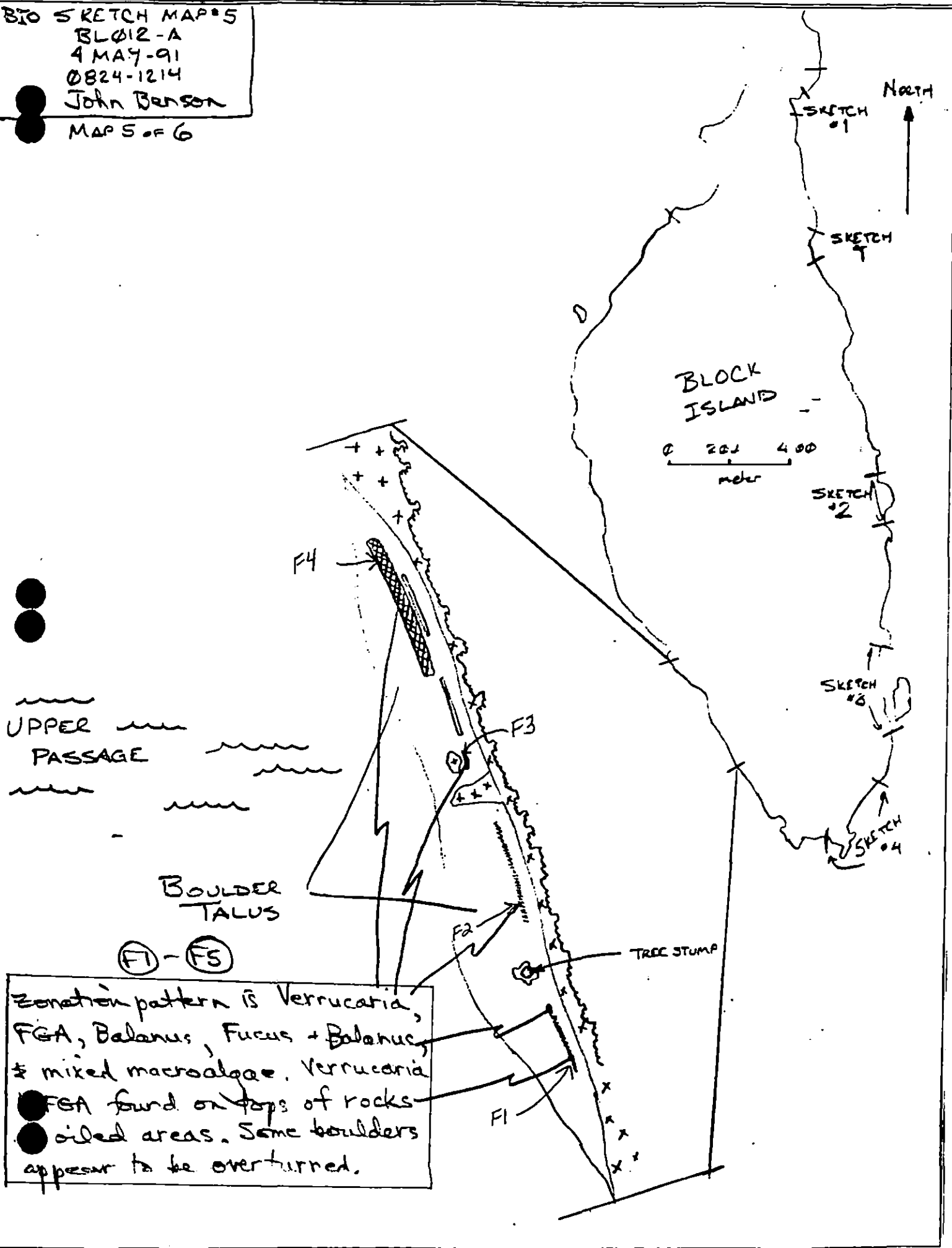
BLOCK
 ISLAND



BIG SKETCH MAP #4
BLO12-A
4 MAY - 91
0824-1214
John Benson
MAP 4 OF 6



BIO SKETCH MAP #5
 BL012-A
 4 MAY-91
 0824-1214
 John Benson
 MAP 5 of 6



BIC SKETCH MAP #6

BL012-A

4 MAY-91

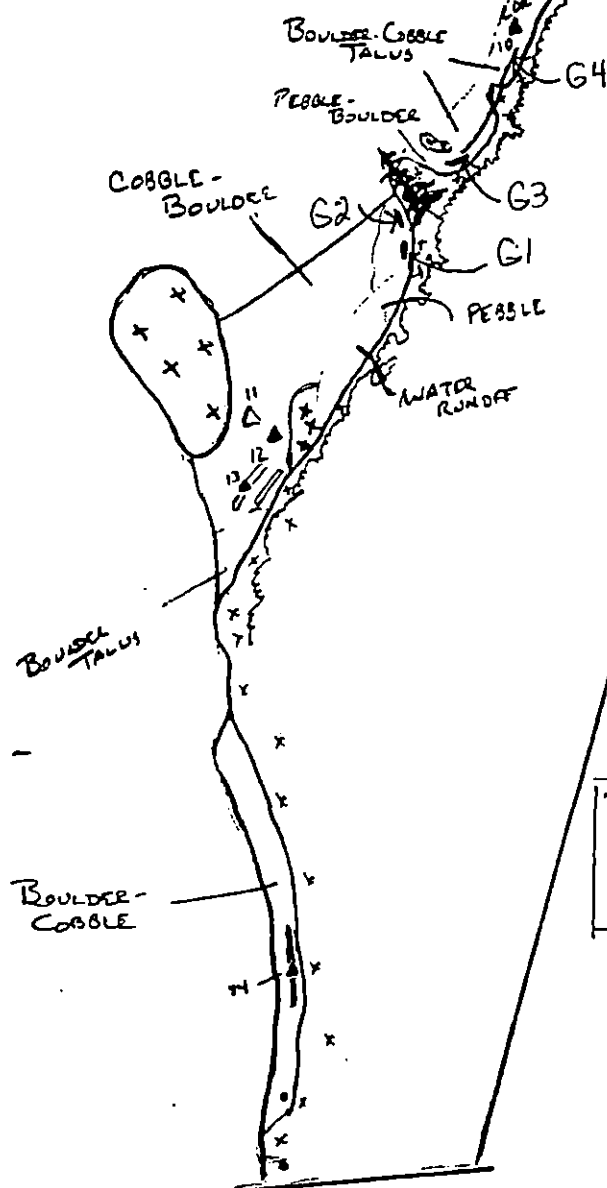
0824-1214

John Bensen

MAP 6 of 6

G1 - G7

Moderately low exposure:
macroalgal biomass dominated
by FGA, Scytosiphon, Ulva
in the upper MITZ & UITE.
Nudibranch eggs & barnacle spots



BLOCK
ISLAND

0 200 400
meters

Distinct zonation with
100% cover. Uniform
biota along this shore.

ELQIDA

NATH

SKETCH #1

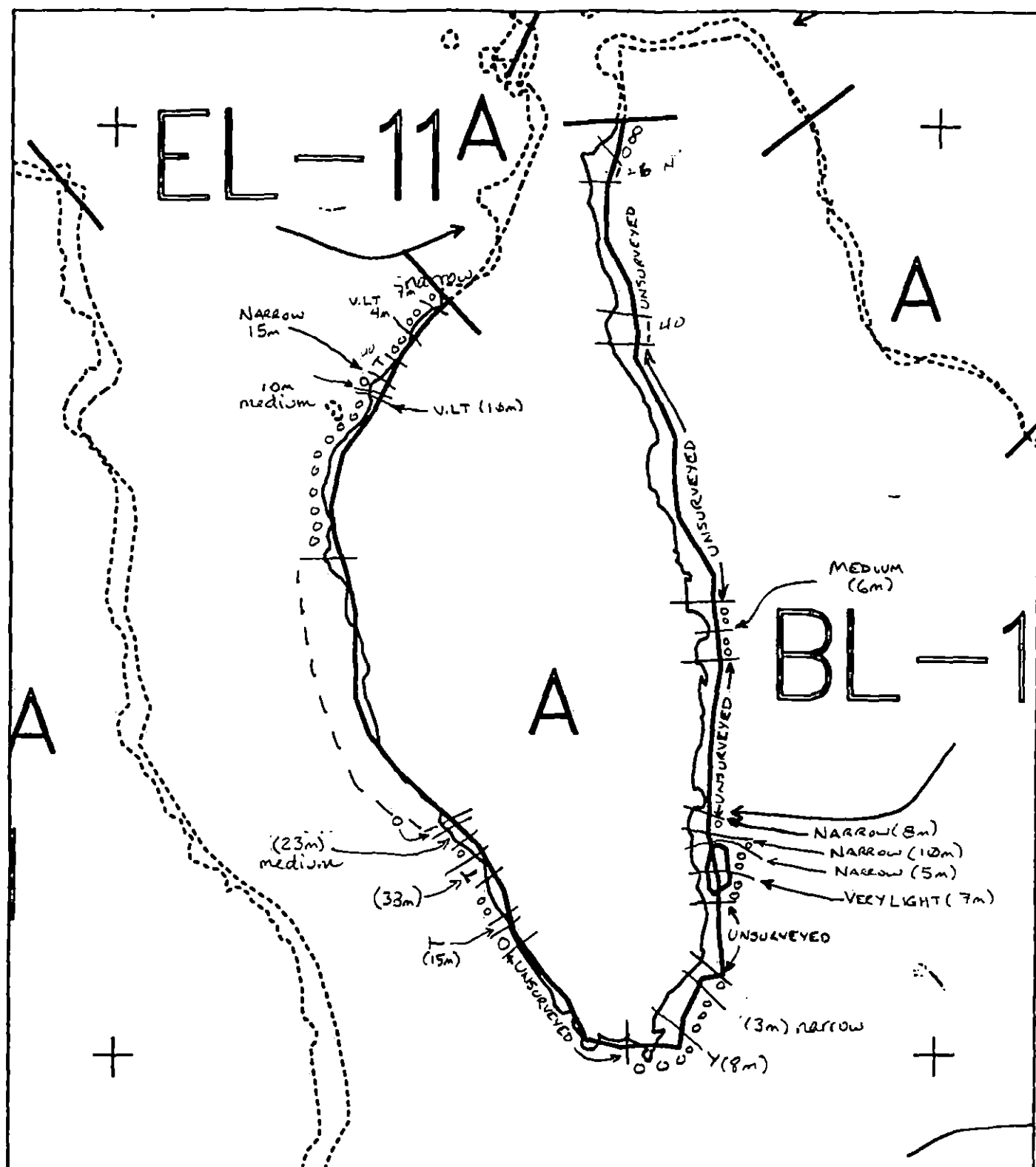
SKETCH #1

SKETCH #2

SKETCH #3

SKETCH #4

SKETCH #5



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

BL012 A
 ADEC Subsegment Length: 2847m
 METERS
 200 400
 AK State Plane Zone 4
 661012a

Subdivision Field Map
 Map Key: KNIBL012A
 Name: TRIMM
 Date: 4 MAY '91
 Data Entered:



- SURFACE OIL CATEGORY MAP.

revised 5/19/91 KG
 REVISOR: 5/8/91 MC

1991 MAYSAP EVALUATION

SEGMENT: BL 012 SUB: A REGION: PWS SURVEY DATE: 5/4/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

ADEC

NAME Peter Montesano

SIGNATURE

[Signature]

☐ NTR ☒ TREATMENT RECOMMENDED

THIS Segment IS ADJACENT TO EL-10 WHICH ALSO HAS WORK. Block Island could be improved if the following area were to stay adjacent to the Shore & Power Brigade.

(A) Remove nearly 5000 sq ft of soft AP; OPAER not viewed By USCG Rep.

(B) Remove 1000 sq ft of soft AP

(C) SO exposed near to interest in documents to be removed where is to be removed

(D) Remove 1000 sq ft of soft AP

(E) A good 1000 sq ft of AP/SOR is seen in the size of which is below standard small C.

NOTE: ADNR LISTS THIS ISLAND AS A SPECIAL USE DESTINATION.

EXXON

NAME C.M. Kotsimpass

SIGNATURE

[Signature]

☐ NTR I AGREE FIRMLY WITH USCG. THE SURVEY WAS MORE THAN ADEQUATE IN TERMS OF IDENTIFYING DEGREE OF OILING & LOCATION. WE TOOK NEARLY 4 HOURS TO DOCUMENT BLOCK ISLAND IN AN EFFORT TO SATISFY ALL PARTIES.

LANDMANAGER

NAME Dorris E. Kennedy OF USFS

SIGNATURE

[Signature]

☐ NTR This subdivision occurs recreational use. The shoreline survey was very well done. There was nothing urgent about area and survey is being forwarded

USCG/NOAA

NAME MIKEL (NOAA) Bui ZENQUE

SIGNATURE

[Signature]

[Signature]

☐ NTR We visited each pocket beach and sketched by boulder rubble by foot. This is a comprehensive survey. Beach A has 2 sheltered small coves which retain heavy SOR at each end. Beach location C has a large boulder veneer covering 100m of HOR. In a sheltered tombolo pocket. Beach D has very scattered SOR in large boulder fields, which is pretty inaccessible. The NW shoreline (location GL-43) has pockets where the SOR (heavy) coverage is significant (>5%) and accessible.

THIS Segment WAS COVERED EXTENSIVELY Some WORK IS NEEDED IN SPECIFIC AREAS AS PER OG REPORT

AS PREVIOUSLY NOTED BY NOAA. 3

TEAM NO. 2OG B. TRIMMADEC P. MONTESANOEXXON C. KATSIMPALISBIO J. BensonLANDMANAGER D. Kennedy for USFSBMT ZENONR
USCG/NOAA JACQUI MICHEL/NOAASEGMENT BL12SUBDIVISION ADATE MAY 14 1991TIME 08:24 to 12:14TIDE LEVEL +5.2 ft. to +1.0 ft.ENERGY LEVEL: ☐ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☐ SUN ☐ CLOUDS ☐ FOG ☒ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 1514 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W 0 m M 39 m N 614 m VL 117 m NO 744 m US 1433 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A1				S							BCR	M	2	3		X			HEAVY SOR IN SAND GULCH
A2	S										BC	M	1	5			X		
A3				S							BC	M	1.5	20		X			UNDER BOULDERS - HWY
A4					S						BC	M	1	20		X			
A5				P							BC	M	2.5	3	X				BEHIND BOULDER TALUS - HWY
B	S			S	S	S					BC	M	1.5	40		X			SOR - HEAVY
C				S	P	S	S				BC	M	7	6		X			SOR - HEAVY / LOR MOR MOR / FOUND UNDER 'C'
D1				S	S	S					BC	M	0.5	8		X			
D2				S	S	S					BC	M	0.5	10		X			
D3				P							B	M	2	5		X			BEHIND BECK ROCK OUTCROP
D4				S							BCP	M	2	7		X			MOR/OP UNDER TALUS / SOR BETWEEN BOULDER TALUS
D5						S					BC	M	3	3		X			behind sea stack
1					S						RB	M	2	3		X			IN CREVICES ON ROCK 18' - 25'
2				S		S	S				B	H	1	8		X			BEHIND ROCK - P
3	S										BC	M	1	15		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- 2 - 6 FRAMES 1-11

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	B				R	S	N	S	UI	MI	LI
1	15				X				2-15	N	15	B	X					B - GPCB	Follows surface oiling
2	25					X			5-12	Y	3	N	X	X				PB - GPB	Follows surface oiling
3	20							X	6-15	Y	15	S		X				BP - MGFB	lee side, Boulder Talus
4	22							X		Y				X				PGC - PGC	
5	15							X		Y	12	N		X				P - GP	
6	19		X						10-19	N	12	R		X				BC - PGB	
7	23				X				10-20	Y	12			X				BC - PGB	
8	25							X		Y			X					P - PG	
9	12		X						5-10	N			X					B - PG	Assoc. w/ HWY SOR

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

OG COMMENTS:

- BLOCK ISLAND IS COMPOSED OF SEVERAL POCKET BEACHES AMONG VERTICAL CLIFFS & HIGH ANGLED BOULDER TALUS SHORES.

 REVISED: 5/18/91 MC
 revised 5/17/91 KG

TEAM NO. 4SEGMENT BL 12OG B. TRIMMBIO J. BensonSUBDIVISION AADEC P. MONTESANOLANDMANAGER D. Kennedy for USFSDATE 5/14/91EXXON C. KATSIMPALISBMT ZENONE
USCG/NOAA JACQUI MICHEL/NOAATIME : to :TIDE LEVEL ft. to ft.ENERGY LEVEL: ☐ H ☐ M ☐ LSURVEYED FROM: ☐ FOOT ☐ BOAT ☐ HELICOPTERWEATHER: ☐ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☐ NONEEST. OIL CATEGORY LENGTH: W m M m N m VL m NO m US m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
F2					S	S	S				BC	M	2	30	X				
F3					S	S					B	M	1	3	X				BEHIND BEDROCK - CORP
F4			S	S		S	S				BC	M	5	23	X				
G1				S							BCR	M	3	10	X				7 IN BOULDER
G2				P							PCR	M	3	10	X				SUNNER AT TOP OF BEACH
G3				P							PBC	M	2	15	X				HEAVY SOR
G4				S							BC	M	1.5	40	X				" "
G5				S							BC	M	1	4	X				" "
G6				S		S					BC	M	1	7	X				" "
H						S					RBC	M	2	500	X				under talus on 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- FRAMES

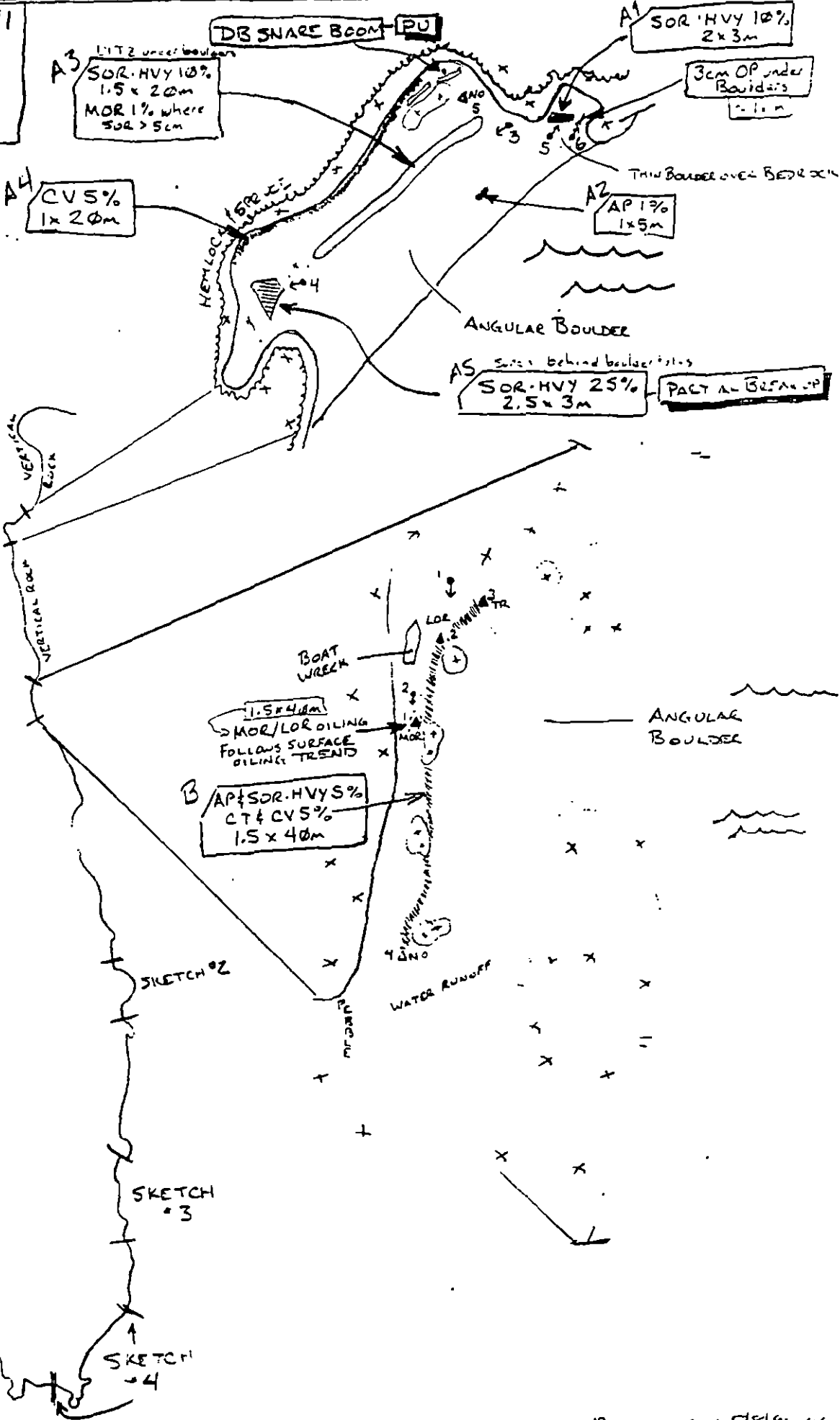
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
10	21				X				10-14	Y	-	-		X			PC-GP. ^{15%+1} _{12%h}	
11	26							X	-	Y	-	-		X			CB-GPBMS	
12	10				X				0-10	Y	-	-		X			PCB-PGL	BEHIND BOTTOM
13	10			X					0-10	N	-	-		X			B-GPB	MORPHOLOGY
14	6			X					0-6	N	-	-		X	X		B-GPCBR	Rock face
									-									
									-									
									-									
									-									

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

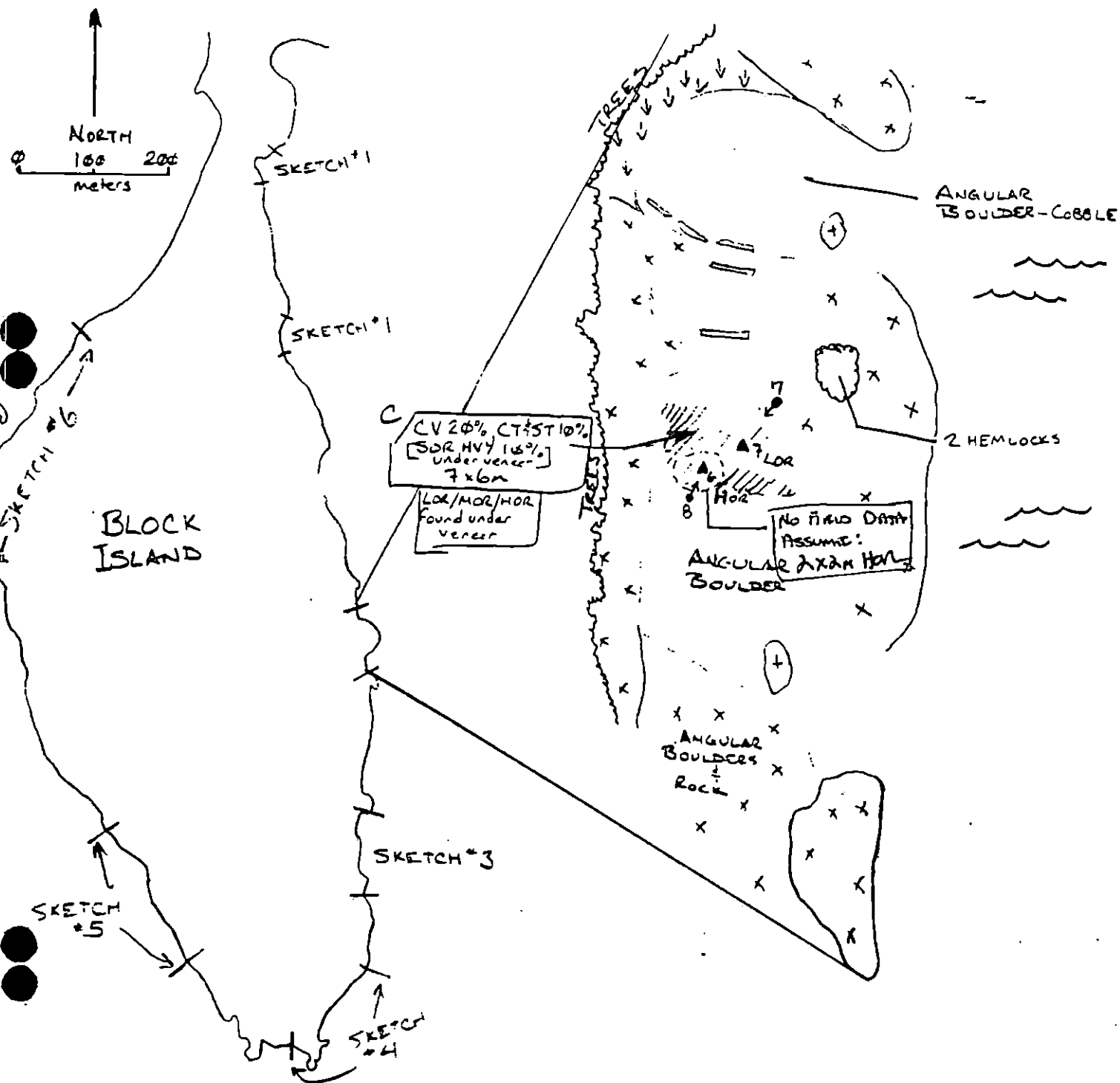
OG COMMENTS:

REVIEWED: 5/8/91 MC
reviewed 5/7/91

OG SKETCH MAP #1
 BL012-A
 4-MAY-91
 0824-1214
 BRYAN TR.MM
 MAP 1 OF 6



OG SKETCH MAP*2
 BLO12-A
 4-MAY-91
 0824-1214
 Bryan Trimn
 MAP 2 of 6

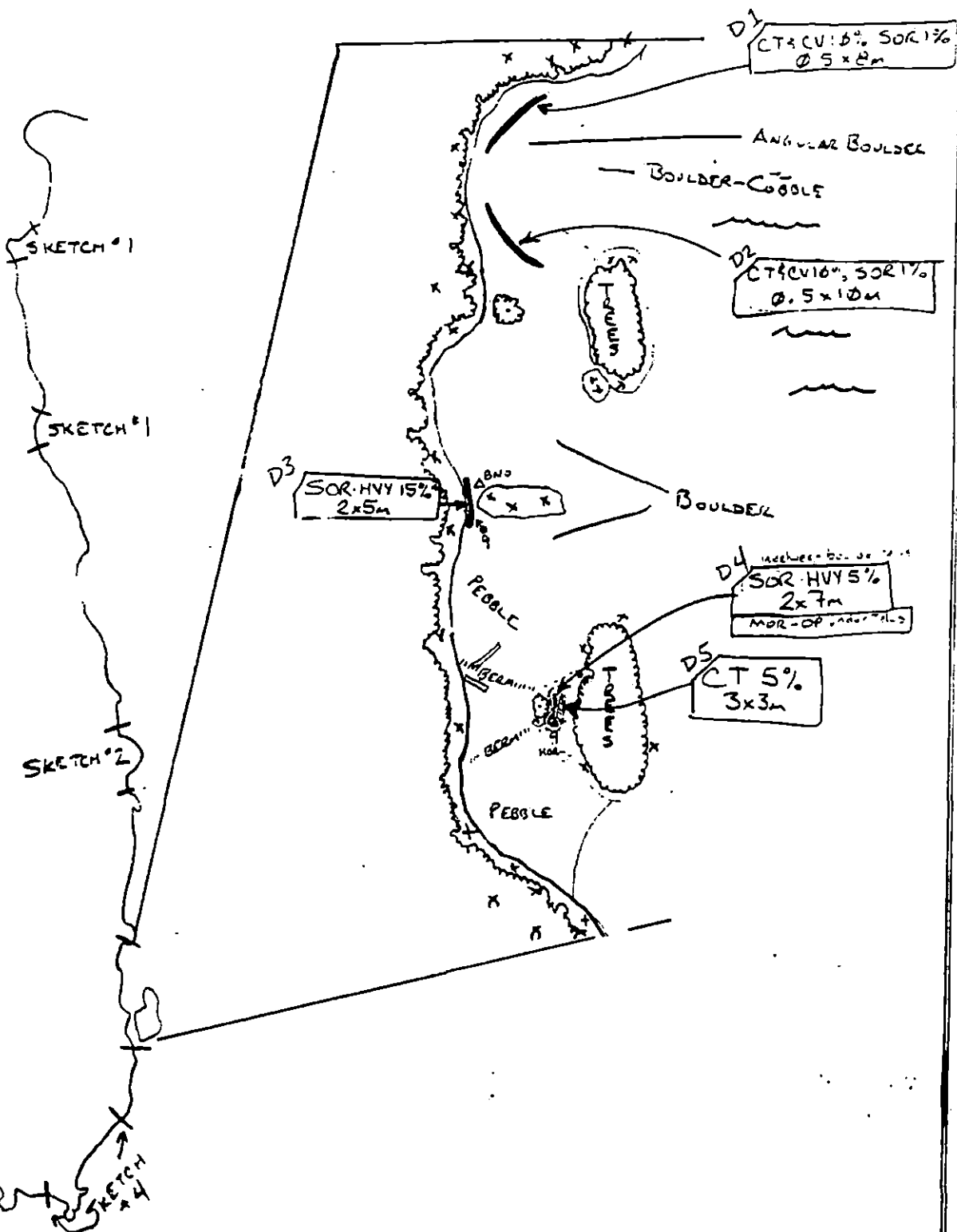


REVIEWED: 5/8/91 MC
 REUSCK 5/7/91

OG SKETCH MAP #3
 BLO12-A
 4 MAY - 91
 ØB24-1214
 BRYAN L. AN
 MAP 3 OF 6

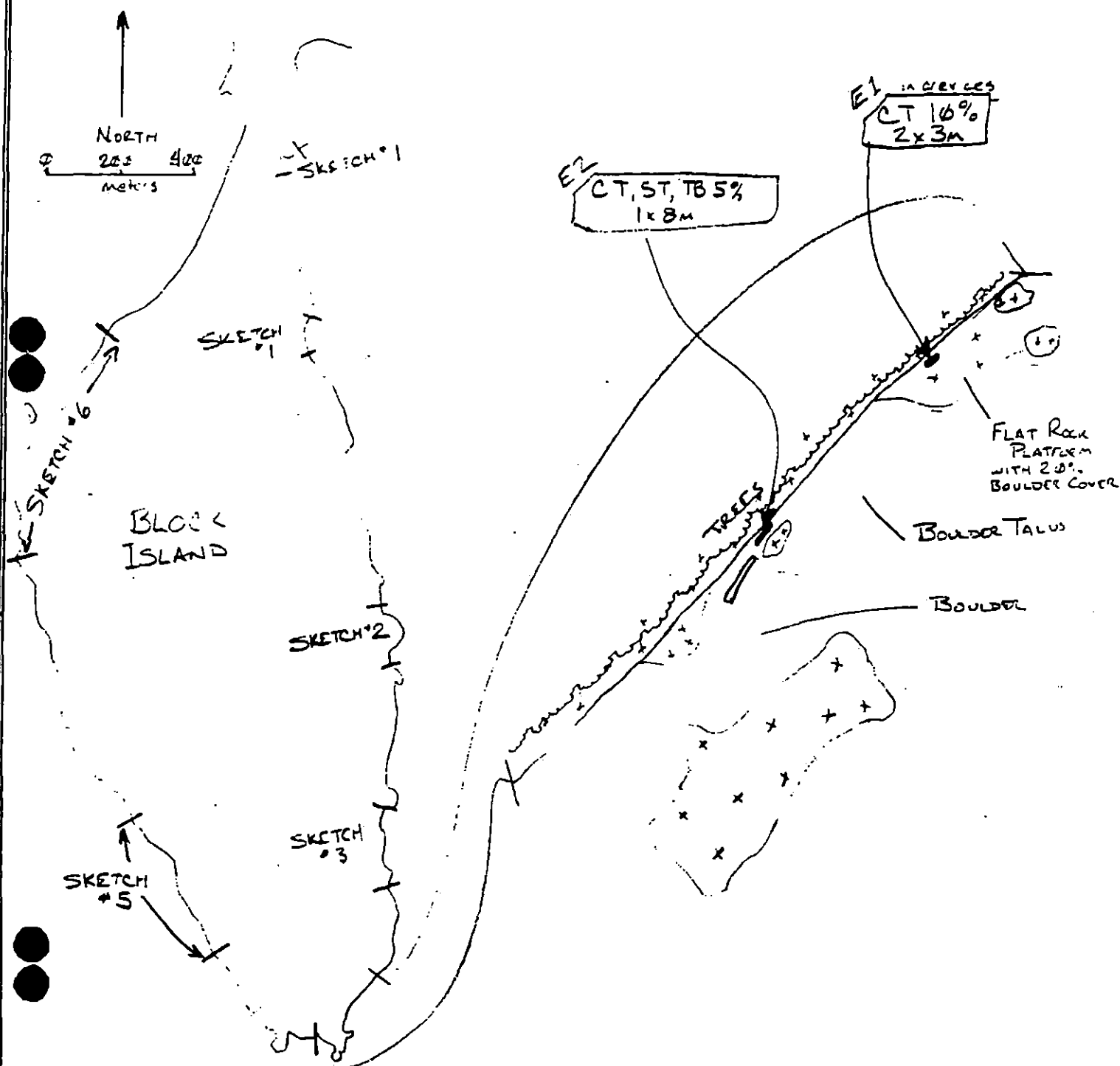
NORTH
 0 100 200
 meters

BLOCK
 ISLAND



REVIEWED: 5/8/91 MC
 REVISED: 5/7/91

09 SKETCH MAP #4
BLO 12-A
4 MAY - 91
0824-1214
BRYAN TRIMM
MAP 4 OF 6



REVIEWED: 5/8/91 AC
REVIEWED: 5/7

OG SKETCH MAP #5
BLØ12-A
4 MAY-91
ØB24-1214
BRYAN TRIMM
MAP 5 OF 6

UPPER
PASSAGE

BOULDER
TALUS

F4
SVR HV 45%
CT 45T 5%
TB 1%
5.23m

F2
CV, CT, 45T 5%
2x30m

AP 100%
1x1m

F1
AP 1%
1x15m

F3
CV & CT 2%
1x3m

TREE STUMP

BLOCK
ISLAND

0 200 400
meter

SKETCH
#1

SKETCH
#3

SKETCH
#2

SKETCH
#6

SKETCH
#4

NORTH

SKETCH #6

REVIEWED: 5/8/91 MC
REVIEWED: ETT

OG SKETCH MAP #6

BL012-A

4 MAY-91

0824-1214

BRYAN TRIMM

MAP 6 OF 6

UPPER
PASSAGE

G6 SOR HVY 5% CT 5%
1x7m

G5 SOR HVY 2%
1x4m

G4 SOR HVY 5%
1.5x4.5m

G2 SOR HVY 24%
3x10m

ANGULAR
BOULDER

BOULDER-COBBLE
TALUS

PEBBLE-BOULDER

G1 SOR MED 5%
3x10m

COBBLE-
BOULDER

G3 SOR HVY 15%
2x15m

PEBBLE

WATER
RUNOFF

OR (SOR under ... 5%
1x10m

BOULDER
TALUS

BOULDER-
COBBLE

MOR
1x3

DB Pom Pom PU

DB Pom Pom PU

0 200 400
meter

BLOCK
ISLAND

SKETCH
#2

SKETCH
#5

H CT 10%
2x500m

under talus
occasional rock faces
with boulder talus
high angle shores
also band of rock face

SKETCH
#3

SKETCH
#4

SKETCH
#6

SKETCH
#7

SKETCH
#8

SKETCH
#9

SKETCH
#10

SKETCH
#11

SKETCH
#12

SKETCH
#13

SKETCH
#14

SKETCH
#1

SKETCH
#15

SKETCH
#16

SKETCH
#17

SKETCH
#18

SKETCH
#19

SKETCH
#20

SKETCH
#21

SKETCH
#22

SKETCH
#23

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SKETCH
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SKETCH
#31

SKETCH
#32

SKETCH
#33

SKETCH
#34

SKETCH
#35

SKETCH
#36

Revised: 5/8/91

revised 5/7/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 4 May '91
 SEGMENT # BL 012 TIDAL HEIGHT(Range) +6' to +1'
 SUBDIVISION A BIOLOGIST John Benson
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

(A1) - (A5) —

I could not observe the LITZ. No biota grew on the oiled surfaces in the UITZ. In (A1), filamentous green algae (FGA) grew on the tops of boulders in the oiled area. In the MITZ, the boulders supported communities of moderate diversity & moderately-low biomass. There is evidence that many boulders have been turned over, which kills organisms on both sides of the rock. Barnacles are moderately abundant in this area. Littorina egg masses were observed.

(B) & Pits #1-3 — I could not observe the LITZ. No biota grew on the oiled surfaces. This location has low species diversity & low biomass. A thin veneer of FGA grew on the tops of rocks in the MITZ & LITZ. Barnacles (Balanus glandula & Semibalanus carissus) were moderately dense on the boulders & bedrock in the MITZ. Low-diversity tidepools lie in the MITZ bedrock. Fucus was dense only on the seaward side of the bedrock at the mouth of the cove.

(C) & Pits #6,7 — No biota grew on the oiled surfaces, but FGA was found below them & Verrucaria above them on boulders & cobbles. There is evidence again that boulders have been overturned (continued on next page)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	2	"blenny eel"
Seabirds	—	—	
Waterfowl	2	8	
Gulls/kittiwakes	3	22	
Shorebirds	—	—	
Corvids	2	2	
Other Birds	—	—	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	—	—	
Pinnipeds (specify)	1		
Sea lion			
Whales (specify)	—		

Shoreline subdivision map showing important biological features attached.

Reviewed: 5/10/91 me
 Rev'd 5/2/91 DM

Subdivision: BL 12 A

Team: 2

Cio: John Benson

Comments (cont.) -

② (cont.) - There is a large number of barnacles in zone 1 is well. Barnacles, particularly *B. glandula*, are moderately abundant. Nevertheless, and one of their predators, *Nucella*, is more abundant here than in A or B. This site is also more exposed to waves, which correlates with *Nucella* abundance. A cream-yellow mass of eggs was found with a "Larval" label. I could not observe the LITZ.

①, ② - FGA grew near, but not on, siled surfaces. *Fucus* grew in moderate density on top of boulders in the LITZ, but not on cobbles. There is evidence of rock overturning both on the more protected north, and the more exposed south, sides of each of the intertidal bedrock outcrops. Recent recruitment of *Mytilus*, *Notonemaea*, *Edmanus*, & *Fucus* was observed. Diversity is moderate. *Nucella* is low.

P49

③, ④, ⑤ - Similar to other ① Locations, except some of the boulders are surprisingly bare. *Mytilus* has recruited to some boulders, and since the upper LITZ is now available, % cover is moderately dense. Access to the ④, ⑤ locations would be biologically less destructive from the south side of the bedrock outcrop, because the pebble beach supports little macrobiota. From a safety standpoint, however, the north side is less wave-exposed and safer.

(continued on next page)

Subdivision: BL 12 A

Team: 2

Bio: John Benzon

Comments (cont.)

①, ② — I could not verify the presence of an eagle nest here. This appears to be the most exposed portion of BL 12 A. This location is comprised of three basic micro-habitat types: boulder-cobble fields, bedrock point, & bedrock tidepools. The boulder-cobble fields had moderate % cover comprised of the regionally common species *Mytilus*, *Balanus glandula*, *Semibalanus cariosus* (in exposed sites), & *Odonthalia* in the MITZ. The LITZ contained more regional diversity, & % cover as well as the starfish *Pycnopodia*. On the bedrock biotic % cover was high & diversity moderately high. Significant abundances of *Fucus* both barnacles *Mytilus*, *Rhodomecia*, *Ulva* & *Scytosiphon* were found. The tidepools in the MITZ just behind the bedrock point contained hermit crabs, coralline algae, *Littorina* & *Dermastris*. Location ②, on the whole, is diverse & has moderately high % cover. *Verrucaria* occurred near the oiled surfaces in the UITZ.

① - ⑤ — *Verrucaria* grows on the tops of rocks near oiled surfaces. The intertidal zonation pattern here is: UITZ: *Verrucaria* higher in zone & FGA lower in the zone; MITZ: FGA & *Balanus* higher in the zone & *Balanus* & *Fucus* lower in the zone; LITZ: diverse mixture of macroalgae (eg. *Fucus*, *Odonthalia*, *Palmaria*, *Scytosiphon*) & *Pycnopodia*. *Littorina* occurs throughout the MITZ & LITZ. Species diversity, abundance & % cover were moderately high. The only special biological sensitivities in Locations ② & ③ are eagle nests. (continued on next page)
 Remarks: 5/8/91 me

Subdivision: BL 12 A

Team: 2

Bio: John Benson

Comments (cont.)

⑥-⑦ - These sites were all boulder or boulder-cobble shores having low-to-moderate NW exposure. This shoreline orientation allows Filamentous & membranous algae to form relatively high % cover FGA forms nearly 100% cover in the lower MITZ where species diversity is lower. In the higher MITZ, FGA is dense but is replaced by high % cover of Fucus and moderate diversity of associated algae & invertebrates (limpets, Littorina, amphipods) on the bedrock in the MITZ, barnacles & Fucus are moderately dense. The bedrock outcrops, including the tidal island, contain tidepools that add little to the overall diversity of this location and are not, therefore, biologically sensitive habitats here.

⑧ - This shore bears the consistent zonation pattern described above for Location ⑥. Total biotic % cover here is approximately 100% in all 3 tidal zones. This location has two eagle nests mapped on it: the location of the more southerly nest was verified.

This subdivision has a fairly complex mixture of substrate types & wave exposures. Biotic cover ranges from very low on the pebble beach in Location ② to ~100% in ⑧. Diversity was highest at the southern point where diverse "microhabitats" were found. The major biological sensitivities here are eagle nests.

BIO SKETCH MAP #1
BL012-A
4 MAY - 91
0824-1214
John Benson.
MAP 1 OF 6

(A1)-(A5)

Moderate diversity &
moderately low biomass.
Boulders overturned.

DB SNARE BOOM - PU

Thin Boulder over Bedrock

ANGULAR BOULDER

NORTH
0 100 200
meters

(B)

low diversity,
low biomass.
Barnacles &
FGA most common.

BOAT WRECK

LOBE 2 TR

ANGULAR BOULDER

BLOCK ISLAND

SKETCH #2

SKETCH #3

SKETCH #5

SKETCH #4

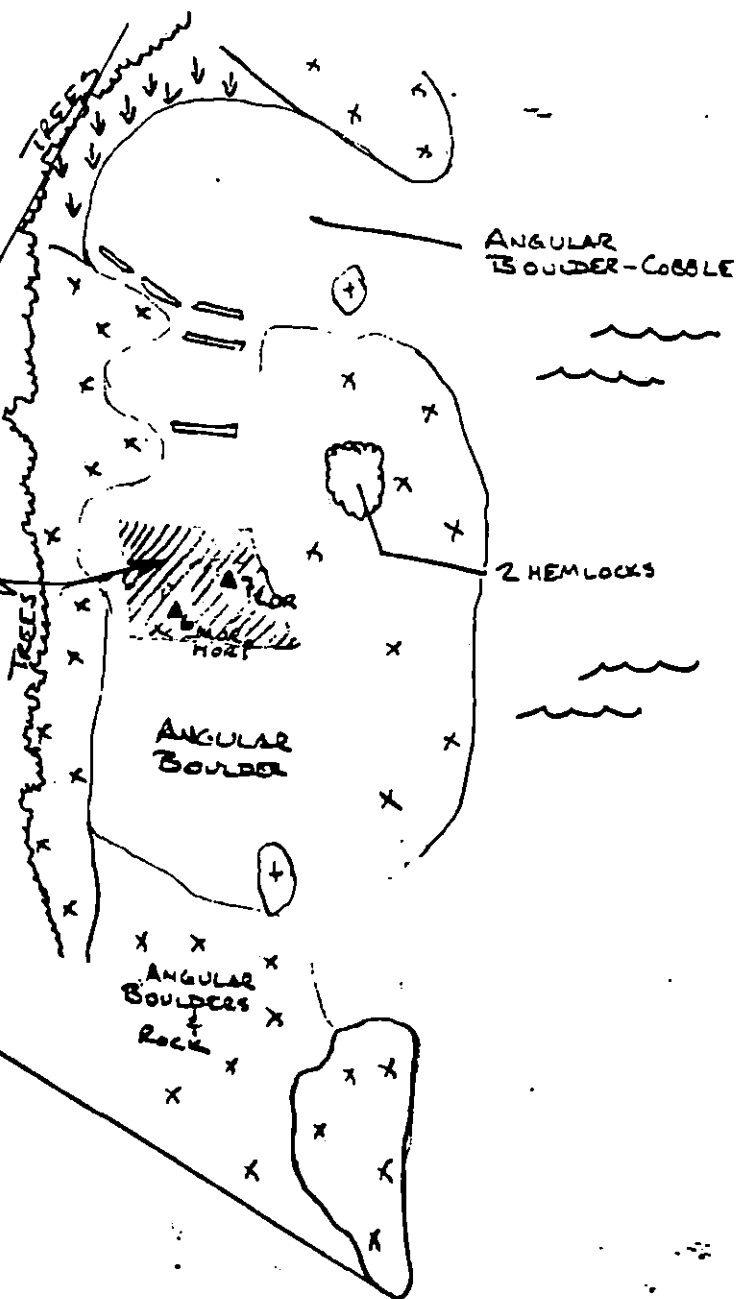
WATER RUNOFF

BIO SKETCH MAP #2
BL012-A
4-MAY-91
0824-1214
John Benson
MAP 2 of 6

NORTH
0 100 200
meters

(C)
No biota on oiled
surfaces. Blenny
eel(?) egg mass.
Balanus & Nucella
moderately dense

BLOCK
ISLAND

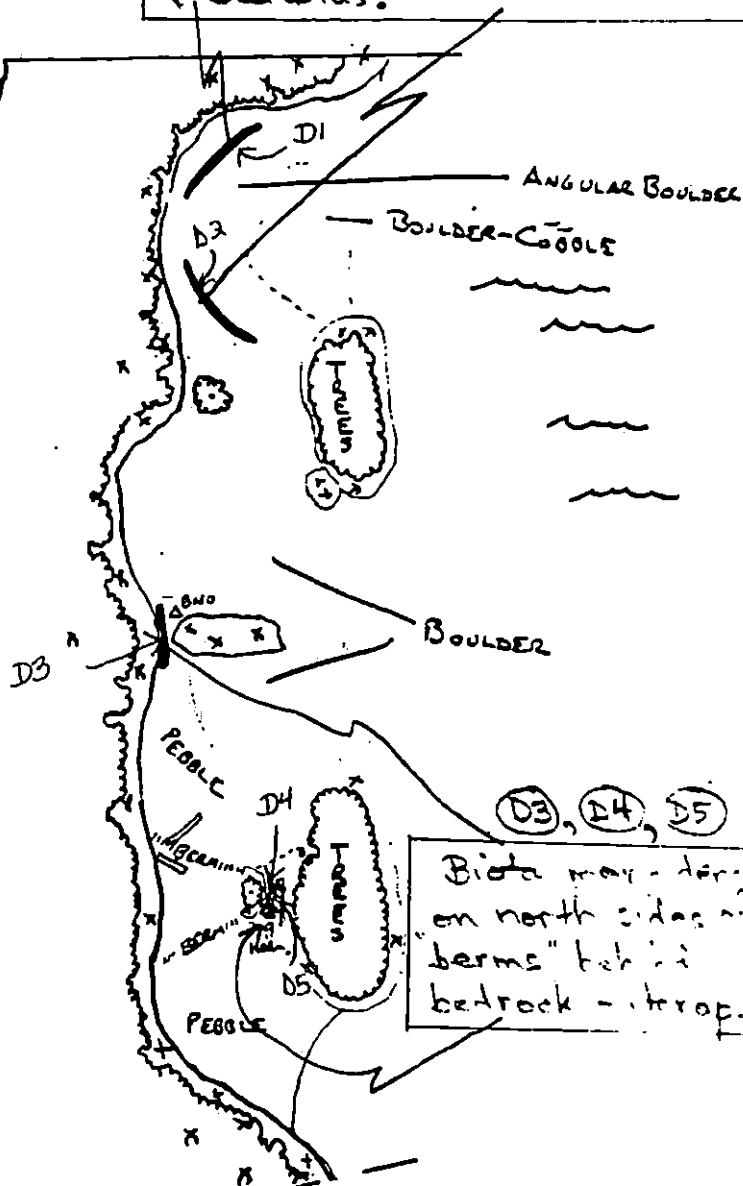


BIO SKETCH MAP #3
 BLO12-A
 4 MAY-91
 0024-1214
 John Benson
 MAP 3 of 6

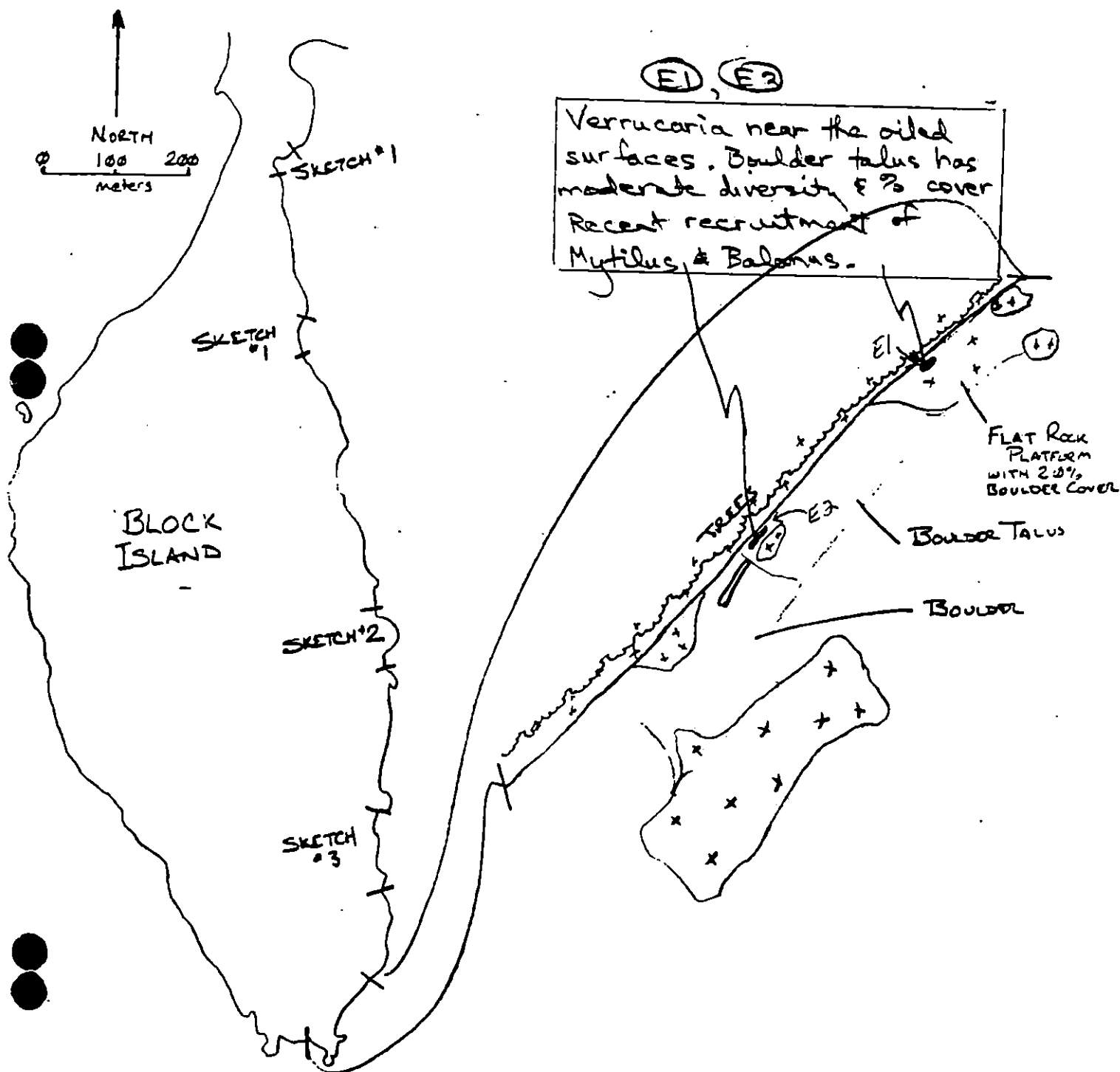
NORTH
 100 200
 meters

BLOCK
 ISLAND

(D1), (D2)
 Diversity is moderate. Nuclea
 is dense. Recent recruitment
 of Mytilus, Notacmaea, Fucus
 & Balanus.



BIO SKETCH MAP #4
BL012-A
4 MAY - 91
0824-1214
John Benson
MAP 4 OF 6



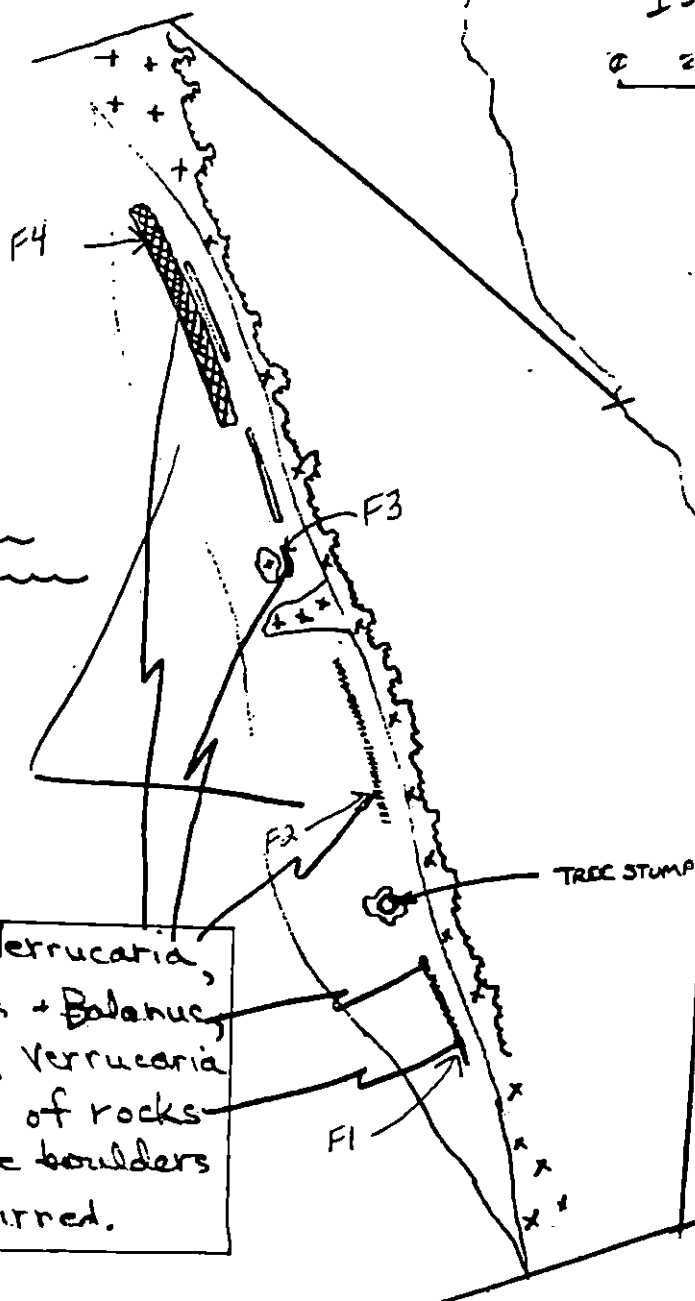
BIO SKETCH MAP #5
 BL012-A
 4 MAY-91
 0824-1214
 John Benson
 MAP 5 of 6

UPPER
 PASSAGE

BOULDER
 TALUS

(F1) - (F5)

Zonation pattern is Verrucaria,
 FGA, Balanus, Fucus + Balanus,
 + mixed macroalgae. Verrucaria
 FGA found on tops of rocks
 in oiled areas. Some boulders
 appear to be overturned.



BLOCK
 ISLAND

0 200 400
 meter

SKETCH
 #1

SKETCH
 #7

SKETCH
 #2

SKETCH
 #8

SKETCH
 #4

NORTH

BIO SKETCH MAP #6

BL012-A

4 MAY-91

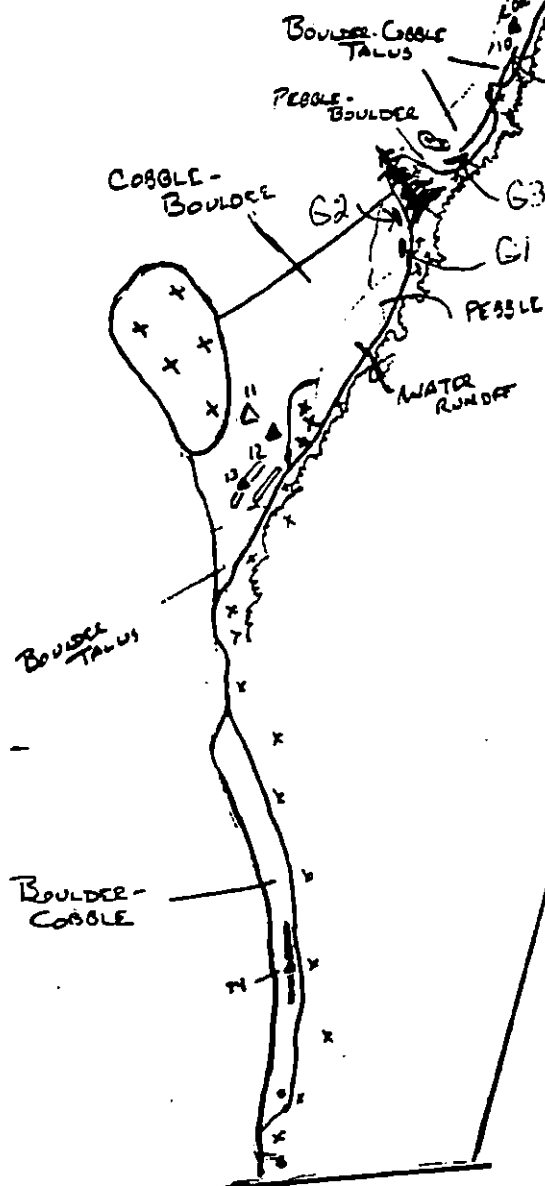
0824-1214

John Benson

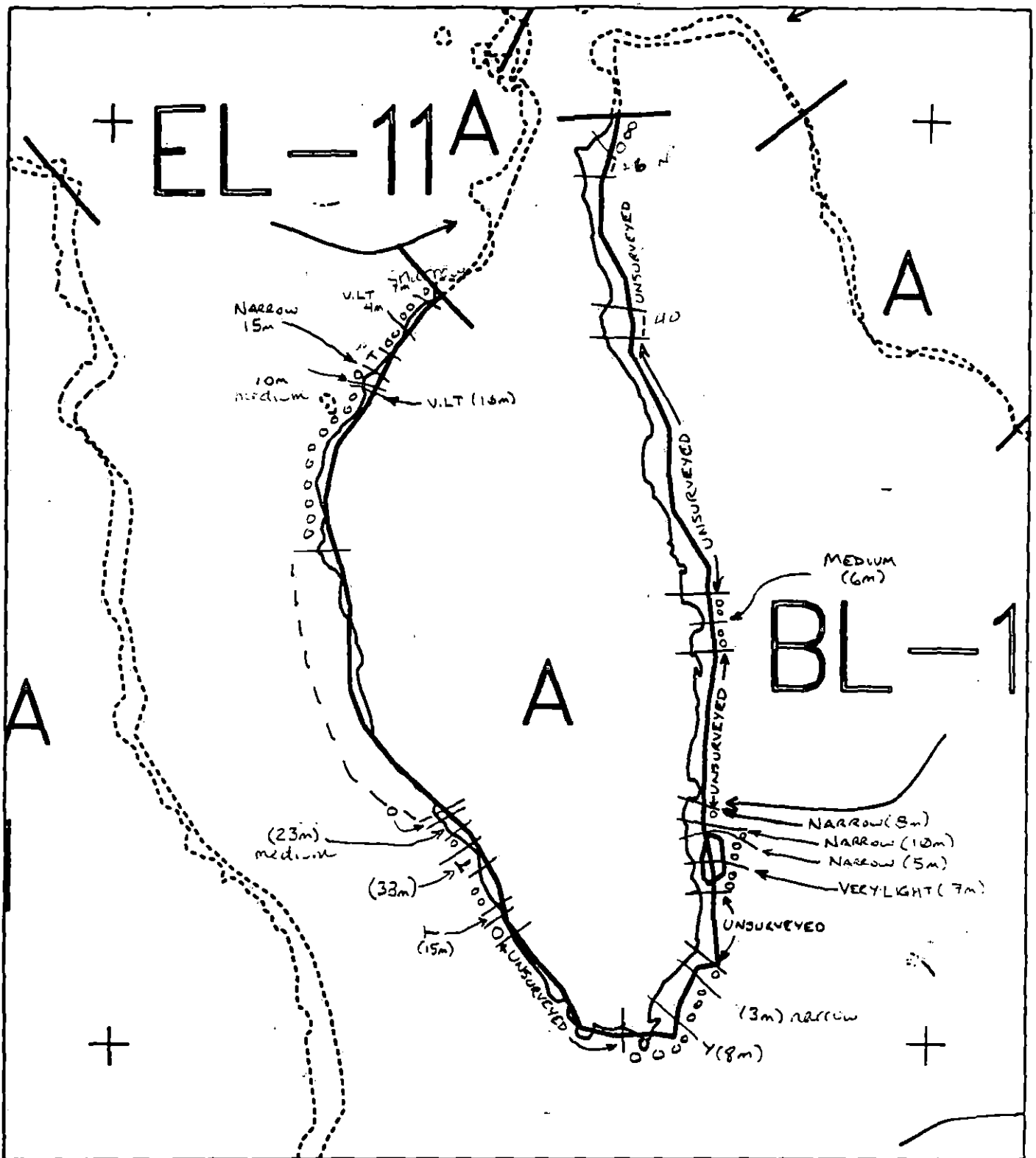
MAP 6 OF 6

(G1) - (G7)

Moderately low exposure:
macroalgal biomass dominated
by FGA, *Sargassum*, *Ulva*
in the upper MITZ & UITZ.
Nudibranch eggs & barnacle spots



Distinct zonation with
100% cover. Uniform
biota along this shore.



XXXX	Wide	BL012 A	Subdivision Field Map
////	Medium	ADEC Subsegment Length: 2947m	Map Key: KNIBL012A
----	Narrow	METERS	Name: TR:MM
TTTT	Very Light	5 200 400	Date: 4 MAY '91
0000	No Oil	AK State Plane Zone 4	Date Entered:
		660120	

- SURFACE OIL CATEGORY MAP -

revised 5/17/91 KG
Revised: 5/18/91 MC

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/BL-12

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ BL-12 SUBDIVISION A (1 OF 1) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
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 44 m: Medium 81 m: Narrow 787 m: V.Light 1668 m: No Oil 194 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pick up of oiled debris and trash, 2) bioremediation of surface and subsurface oil in areas shown on attached sketch maps. Work should be conducted after 6/1, with the approval of _____ USFWS regarding eagle nest.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST BL-12-A SUBDIVISION: A DATE 4/8/90

USCG NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider TSP/USCGR

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

MANUAL SCRAPPING & WIRE BRUSHING OF COATING ON LARGE BOULDERS AND ROCK FACES RECOMMENDED FOR 3 OILED BEACH AREAS IN THIS SUBDV. REMOVAL OF TAR STOTS AND MOUSSE PATTIES FROM ^{POCKET} BEACH IN NE QUADRA. OF ISLAND. ~~REMOVE~~ PICK UP OF OILED BOOM SEGMENT & OTHER DEBRIS AROUND SHORELINE.

ADEC NAME Peter Montesano SIGNATURE Peter Montesano

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS Description of Segment working way into Lower passage:
- on second Pocket Beach remove 4-5cm thick Mousse patty
- Beaches #3 + Beach #4 correspond to Pit 2 and Pit 3 on map. Handwipe scrape oil, on, under, + around faces, and surface sediments. on Beach #4 clean oil behind near shore Island and remove mousse matting.
- The west side is washable to remove loose oil trapped near surface. locations indicated on map give general areas. Area not easily washed when tide rips through channel
- NW side of Island has several pocket beaches which deserve gently handwiping and removal of oil sediments - penetrations to 5cm into surface sediments, Interstitial Rainbow silver shows among some boulders.

LAND MANAGER NAME Janetta Pritchard SIGNATURE Janetta Pritchard covered oil along NW Side.

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS Recommend manual pick up of Mousse patties, tar balls, asphalt and debris in this segment. Manual removal of pebbles depicted on sketch map #2 to remove coat.

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ B1-12
 BIO J. BARRY LAND REP J. PRITCHARD SUBDIVISION A (1 of 1)
 EXXON A. SNOOK ADEC P. MONTESANO TIME 07:45 to 09:45
 TEAM NO.: 6 TIDE LEVEL: +2 to +5.5 DATE 04/10/90
 EST. SUBDIVISION LENGTH: 3111 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: NE to S to N
 SURFACE SEDIMENTS: R 50 % B 40 % C 8 % P 2 % G 0 % S 0 % M 0 % V 0
 SLOPE: Long 15 % Hang 45 % Vert 40 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 40 m M 65 m N 775 m VL 1981 m NO 250

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	N	E	S	W	1	2	3	4	5	6	7	8	SU	U	M	L
ASPHALT PAVEMENT																
POOLED																
COVER			X		X									X		
COAT	✓	X	X	X		X							X	X		
STAIN	✓	X	X					X					X	X		
MOUSSE																
PATTIES				X			X						X			
TARBALLS				X		X							X			
FILM																
NO OIL																X

PAVEMENT: H F S 0 sq. m by 0

PATTIES / TARBALLS 1 BA

NEAR SHORE SHEEN? NO BR RW (SL) ?

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

DEBRIS COLLECT ☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. ST-6-5

Frames 1, 2

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR								PIT ZONE	A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	6	7	8			
1	25				X		0-10		X				X					X		C/P/G
2	10		X				0-7		X				X					X		C/P/G
3	12	X					0-7		X	X								X		C/P/G
4	8		X				0-5		X				X					X		C/P/G/M

COMMENTS MOST OF SUBDIVISION CONSISTS OF VERTICAL / HIGH ANGLE ROCK AND BOULDER WITH A BROKEN OR PATCHY STAIN AT THE HIGH TIDE LINE. WITHIN THE STAIN BAND (USUALLY 1-2 m WIDE) IS A SPORADIC OR PATCHY DULL BLACK COAT (VERY WEATHERED, ALMOST A THIN TAR COAT).

THERE ARE 3 OILED BEACH AREAS WHICH WERE SKETCHED ON THE TWO ATTACHED SKETCH MAPS.

OG C. Dillon
 SEGMENT ST/ BL-12
 SUBDIVISION A.
 DATE 07 April 90

●●● CH MAP #2

SEGMENT BL-12
 SUBDIVISION A.
 LENGTH = 325 METERS

CHECKLIST

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

LEGEND

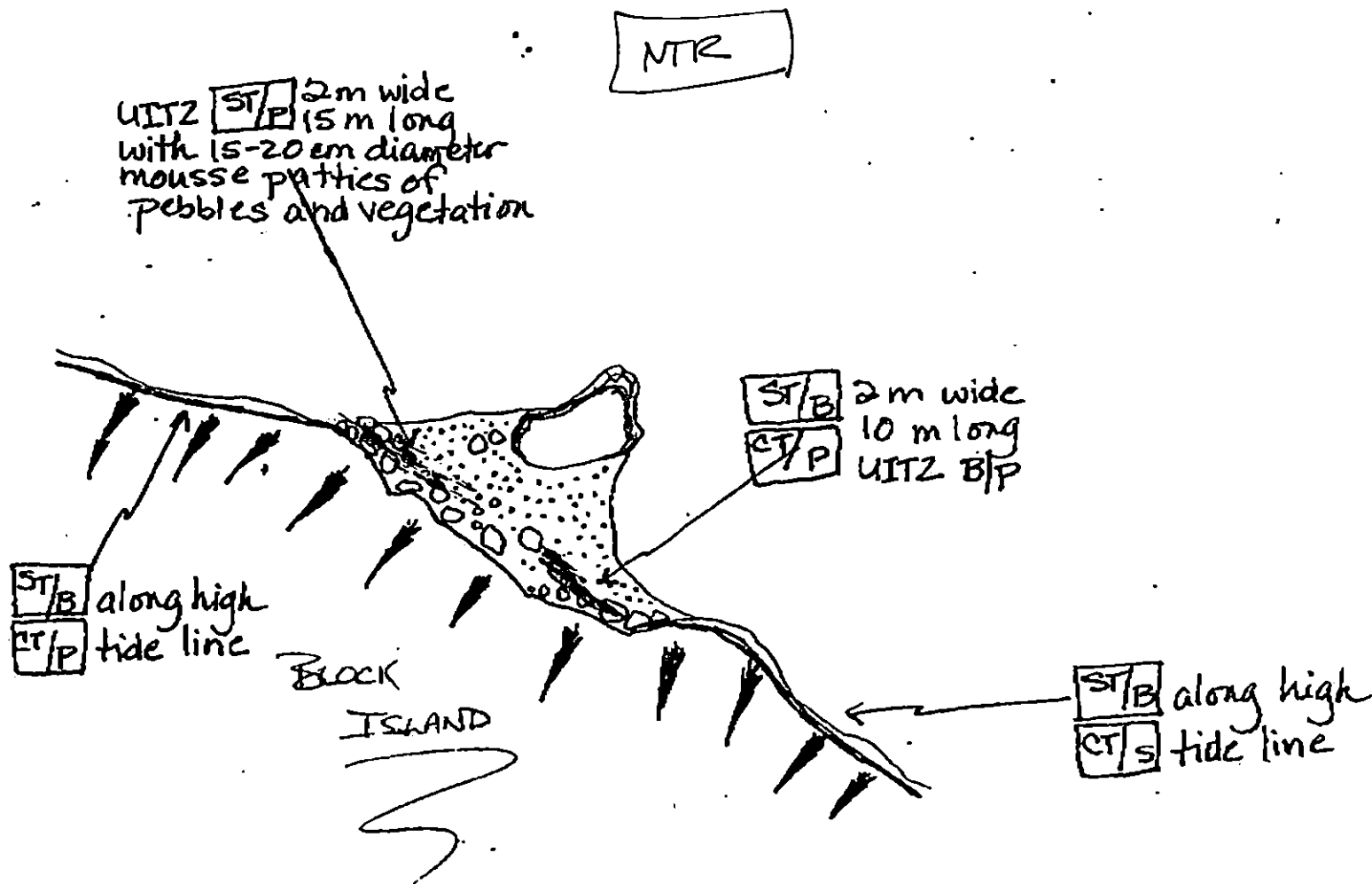
1
 Pit - No Subsurface Oil
 2
 Pit - Subsurface Oil

 Continuous Distribution

 Broken Distribution

 Patchy Distribution

 Splashed Distribution
 Oiled Vegetation
 1
 Photo location, direction, and number



(Oil lengths are for sketched area only)

Oil Character Length (m): AP 0 PO 0 CV 0 CT 10 ST 314 MS 0 PT 1 TB 0 FL 0 NO 0

SCHNEIDER

REVISION: 04/04/90

OG C. 2000N
 SEGMENT ST/BL-12

SUBDIVISION A

DATE 07 APRIL 00

CHECKLIST

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

LEGEND

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

 Continuous Distribution
- CT/B

 Broken Distribution
- CT/P

 Patchy Distribution
- CT/S

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

SKETCH MAP #1

SEGMENT BL-12

SUBDIVISION A

LENGTH = Approx. 700 METERS

CT/S

 on hangrock/boulders

ST/B

 along high tide line

Pit 3 photo 2

BIO

ST/B

 11m wide
 15m long
 M-UITZ

Pit 2

Small amt.
 oiled boom

MANUAL
 PICK UP

CT/C

 2-3m wide
 5m long

CV/P

 UITZ boulders
 photos: 1, 2

ST/B

 5m wide

CT/P

 25m long
 UITZ boulders

CT/B

 1-2 m wide
 at high tide line

CT/C

 1m wide
 10 m long
 with tar spots

ST/B

 along high tide line

CT/S

 on hang rock + boulders



(Oil lengths for sketched area only)

SCHNEIDER

Oil Character Length (m): AP 0 PO 0 CV 5 CT 40 ST 645 MS 0 PT 0 TB 10 FL 0 NO 0

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/91

Segment ST/ BL12 Subdivision A Date (mo/day/yr) April 6/7 1991
 1990-2000 April 6
 Time (24 hr) 0800-1000 Biologist Jim Barry Length - 3111 m

- (A) Substrate type and % of segments:
 (1) Bedrock 50 (2) Boulder 40 (3) Cobble 8 (4) Pebble 2 (5) Sand _____ (6) Silt _____
- (B) Overall % cover of biota (% of segment): Dense 25 Moderate 60 Low 15
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
 Roll No. ST-6-4

Frames 34-36

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:

BALD EAGLES - 3-4 (w/ nest material) - couldn't see nests (2)
 RAVENS - 2 common merganser - 2 Pelagic Cormorant - 3
 GULLS - 5 Sea Otter - 1 Pigeon Guillemot - 2

Ecological Considerations:

- ST-2 2 BALD EAGLE NESTS ARE SUPPOSED TO BE PRESENT
 we saw 1 eag. carrying nesting material, but did not see nests.
- Sea grass beds occur near the shore and may be used for spawning sites by herring.

Eel grass
in patches

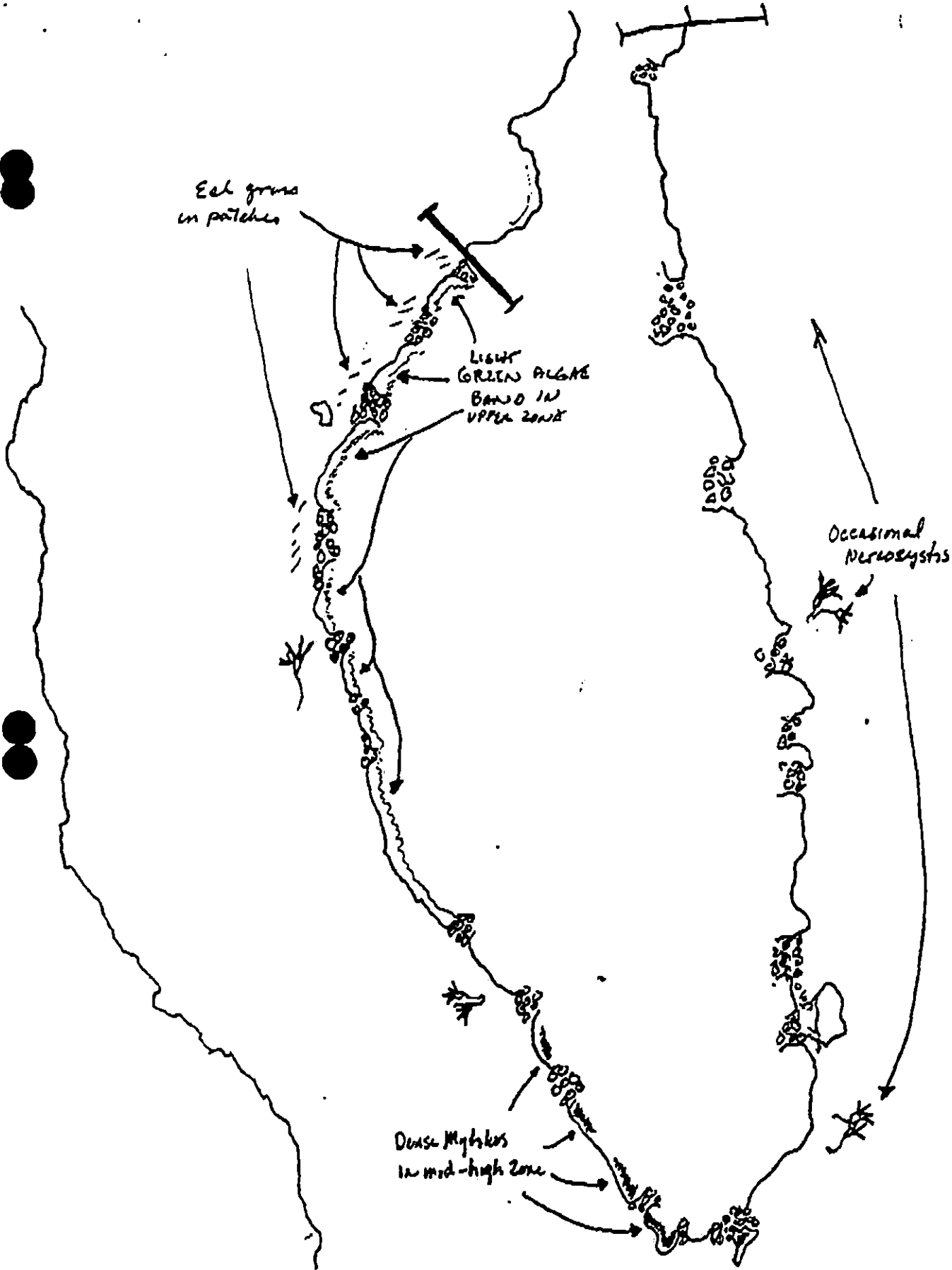
LIGHT
GREEN ALGAE
BAND IN
UPPER ZONE

Occasional
Nereocystis

Dense Mytilus
in mid-high zone

↑ N

BL-12 2775 m



BL12

April 7/1990

TIME 1930 - 2000 April 6
and 0800 - 1000 " 7TIDE +1 → +3
TIDE +2.5 → +6

I General Comments.

A. BL12 is a segment that contains high angle cliffs and cobble/boulder beaches. Biotas along the segment are generally moderate in density, with no outstanding features. Along the exposed cliffs at the south end of Block Island Mytilus and barnacles (*Semibalanus*) are quite abundant, even dense. Towards the north, no species are particularly dense, ~~and~~ except for a thick mat of green filamentous algae.

B. Ecological Consideration - No outstanding sensitivities. Nearshore eel grass beds ~~and~~ may be used by herring as a spawning substrate ~~and~~
Bald Eagle nests (2) are listed as special sensitivities, but were not observed, though an adult ~~sooty~~ eagle was observed carrying nesting materials.

II Major Species.

- A. Barnacles: Horn barnacles (*Semibalanus cariosus*) are moderate to dense in the middle zone at the exposed end of the segment. The Z; smaller species (*Balanus glandula* and *Chthamalus dalli*) are moderate to dense in some upper and middle zone sites. Spot are present on cobble in the mid to high zone.
- B. Mytilus: Mussels are most abundant at the exposed end of the transect, and scarce to moderate in protected sites.
- C. Gastropods: Pseudonittes (*Littorina*) were common in most rock types. Limpets were less abundant. Whelks were moderate.
- D. Fucus: Fucus was moderately abundant at protected sites and slightly more abundant at the south end of Block Island. Juveniles were present in moderate densities on mid to high intertidal rocks at several locations.

III Other species

Most of the species typical of other locations were present in this habitat, ~~to~~ with moderately lower abundances. Several ~~the~~ more rare species were not found at this site. Filamentous green algae were abundant.

IV Oil related Comments.

- 1) Dead Fucus adults were seen at several locations in the upper intertidal - these appear to have been killed by heat during cleaning operations. Juveniles ~~are~~ are present ~~to~~ and will replenish the adult population.

April 7, 1990

V Wildlife Observations

Several species of birds were observed in the area of IN32A

Common Merganser - 2

Glaucous-winged gulls - 5

Belted Goldeneye - 2

Pelagic Cormorants - 3

Crow - 6

Pigeon Guillemot - 2

Raven - 2

Sea Otter - 1

Bald Eagle - 3

VI Species List

A. MARINE PLANTS

1) DIATOMS / BLUE GREEN ALGAE M1214

2) Green Algae - CHLOROPHYTA

Acosiphonia / Spongomorpha D23

Cladophora S12

Enteromorpha M123

Ulva M123

Urospora D23

3) RED ALGAE - RHODOPHYTA

Bossiella sp. S12

Callianthron sp. S12

Corallina sp. S12

Endocladia muricata S12

Halosaccion glandiforme M123

Irionella sp. ? S M12

Cryptosiphonia sp. M12

Mastocarpus sp. S12

Membranoptera sp. M12

Microcladia ? M12

Lithothamnion pacificum S12

Pettoceles inddenortii S12

Porphyra sp. D23

Rhodomela larix M12

Rhodymenia palmata M12

* SPAT OR JUVENILES

D DENSE

M MODERATE

S SPARSE

R RARE

1 BEACH

2 BOULDER

3 CORALS

4 PEBBLE

5 SAND

VI SPECIES LIST (CONT)

4) BROWN ALGAE - PHAEOPHYTA (22-subtidal)

ALARIA MARGINATA M12 U

COSTARIA spp. S12 U

AGARUM spp. 0 U

Hedophyllum sessile S12 U

HILDENBRANDIA M1

LAMINARIA sp. MU

NERIOCYSTIS sp. SU

FUCUS DISTICHUS M12

SYSTOSIPHON lomentaria M12

Ralfsia S12

5) HIGHER PLANTS

ZOSTERA MARINA - eel grass SU

B MARINE INVERTEBRATES

1) Jellyfish / Anemones / Corals - Cnidaria

1) Hydrozoa - Order Hydroida

~~Scrubbea - Scrubbea? R1~~

2) Hydrozoa - Order Stylanderina

~~Altopora - Altopora? R12~~

3) Anemones - Class Anthozoa

Epinephelus ritteri? M12

Urticina crassicornis S12

Anthopleura elegantissima S12

A. artemesia S12

A. xanthogrammica S12

7) Ctenophores - ~~Beroë spp.?~~ R 00000000

4) FLATWORMS - PLATHELMINTHES -

2 unknown spp. R23

5) Annelid Worms

Polychaetes.

Nereidae M12

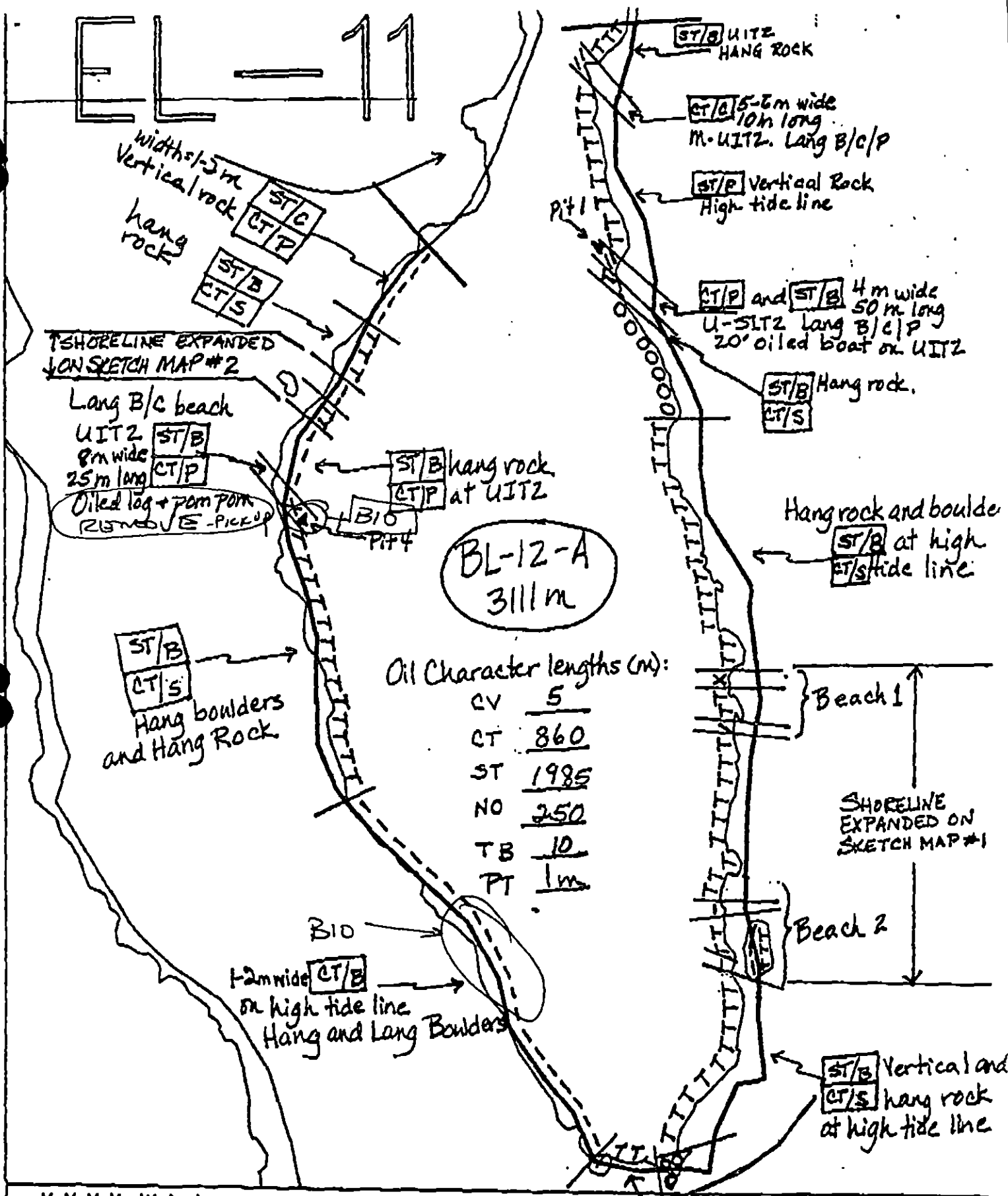
Nephtyidae M12

Serpulidae Serpula M123

Crucigera spp. M123

Spirorbidae - Spirorbis M123

EL-11



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

BL-12

Exxon Segment Length: 3111m
AOEC Segment Length: 2775m



Map Key: PWS-30a

Name: C. DILLON

Date: 4/7/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT BL-12 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup More Than 400m From Active Nest	OPEN
Manual Pickup Less Than 400m From Active Nest	CLOSED
Bioremediation and Manual Tilling More Than 400m From Active Nest	OPEN
Bioremediation and Manual Tilling Less Than 400m From Active Nest	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to manual pickup, bioremediation, and manual tilling within 400m of active nest. No constraint to manual pickup, bioremediation and manual tilling more than 400m from active nest.

OTHER ECOLOGICAL CONSIDERATIONS

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 unopened biota and substrate.

FOSC

Date

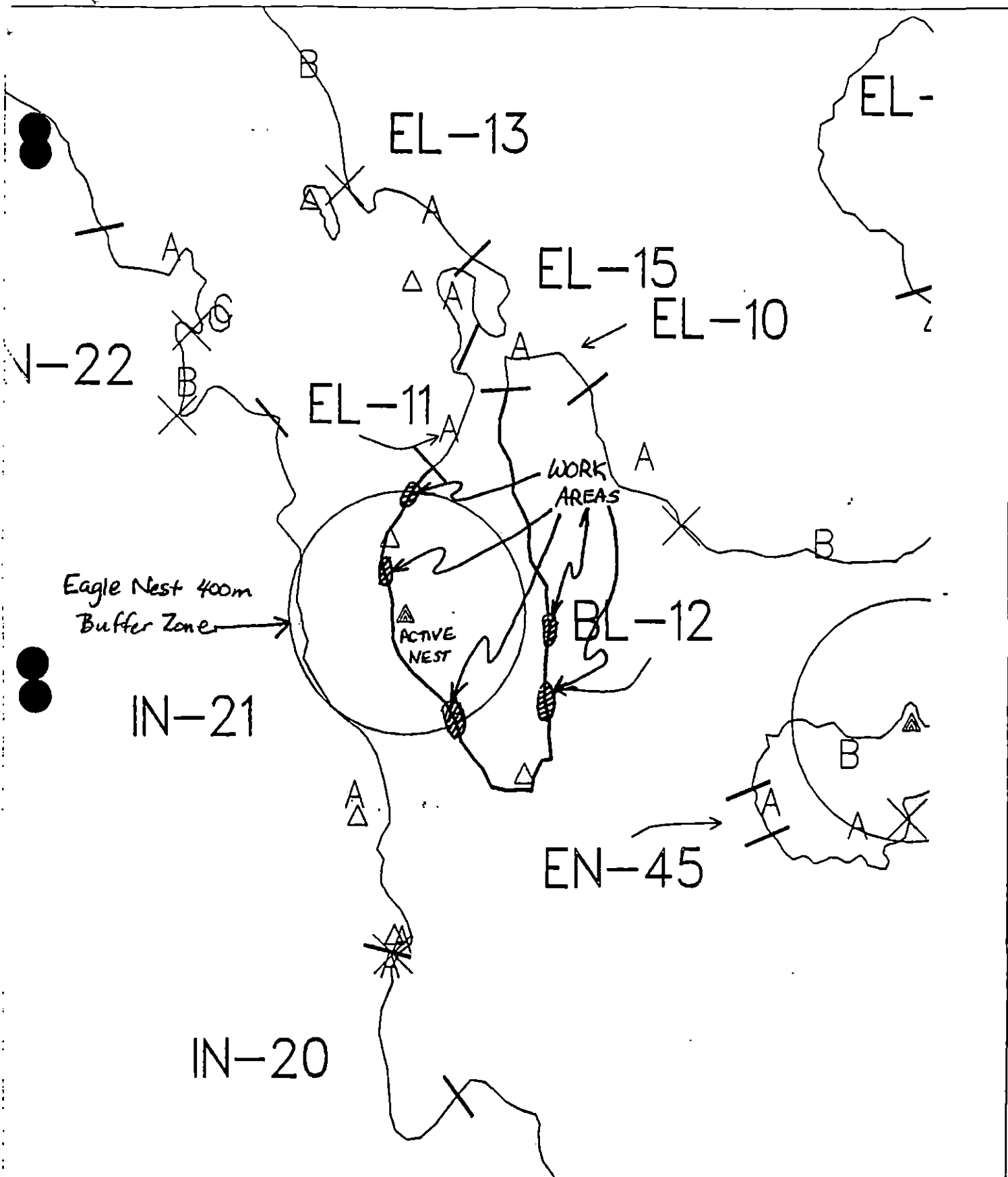
6-10-90

Prepared by

J. P. Phillips

Date

6-10-90
6/10/90

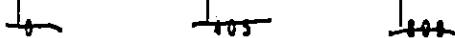


Exxon Company, USA
Map Key: PWS-BL-12
June 04, 1990

ECOLOGY MAP SEGMENT BL-12

SUBDIVISION A (1 of 1)

METERS



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

1 inch = 1328 feet

SHORELINE EVALUATION

SEGMENT ST/ BL-12 SUBDIVISION A (1 OF 1) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ST-2 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles J. [Signature] DATE: 4/25/90

OILING CATEGORIZATION:

Wide 44 m: Medium 81 m: Narrow 787 m: V. Light 1668 m: No Oil 194 m
Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pick up of oiled debris and trash. 2) bioremediation of surface and subsurface oil in areas shown on attached sketch maps. Work should be conducted after 6/1, with the approval of USFWS regarding eagle nest.

SEE CONSTRAINTS ADDENDUM dated 6/10/90 JPP

TAG COMMENTS: MANUAL TILLING IN AREA OF PIT 3 PRIOR TO BIO IF FEASIBLE

MANUAL PICKUP OF MOOSE HATTIES AS INDICATED ON SKETCH

TAG APPROVAL DATE: 4/24/90.

ADEC ART WEINER
EXXON ANDY GALT
NOAA Joseph Talbot
USCG M. J. Hall

FOSC: [Signature] DATE: 5-6-90

SHORELINE EVALUATION

SEGMENT ST/ BL-12 SUBDIVISION A (1 OF 1) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles J. Adams DATE: 4/25/90

OILING CATEGORIZATION:

Wide 44 m: Medium 81 m: Narrow 787 m: V.Light 1668 m: No Oil 194 m
Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pick up of oiled debris and trash, 2) bioremediation of surface and subsurface oil in areas shown on attached sketch maps. Work should be conducted after 6/1, with the approval of USFWS regarding eagle nest.

TAG COMMENTS: MANUAL TILLING IN AREA OF PIT 3 PRIOR TO BIO IF FEASIBLE

MANUAL PICKUP OF MOOSE PATIES AS INDICATED ON SKETCH

TAG APPROVAL DATE: 4/24/90.

ADEC ART WEINER
EXXON ANDY GALT
NOAA Joseph Talbot
USCG M. J. HALL

FOSC: [Signature] DATE: 5-6-90

OG C. Dillon
SEGMENT ST/BL-12

SUBDIVISION A

DATE 07 April 90

CHECKLIST

- ☐ M Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Body
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ P/L Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
P/L - No Subsurface Oil

2 Δ
P/L - Subsurface Oil

$\boxed{CT/C}$
Continuous Distribution

$\boxed{CT/B}$
Broken Distribution

$\boxed{CT/P}$
Patchy Distribution

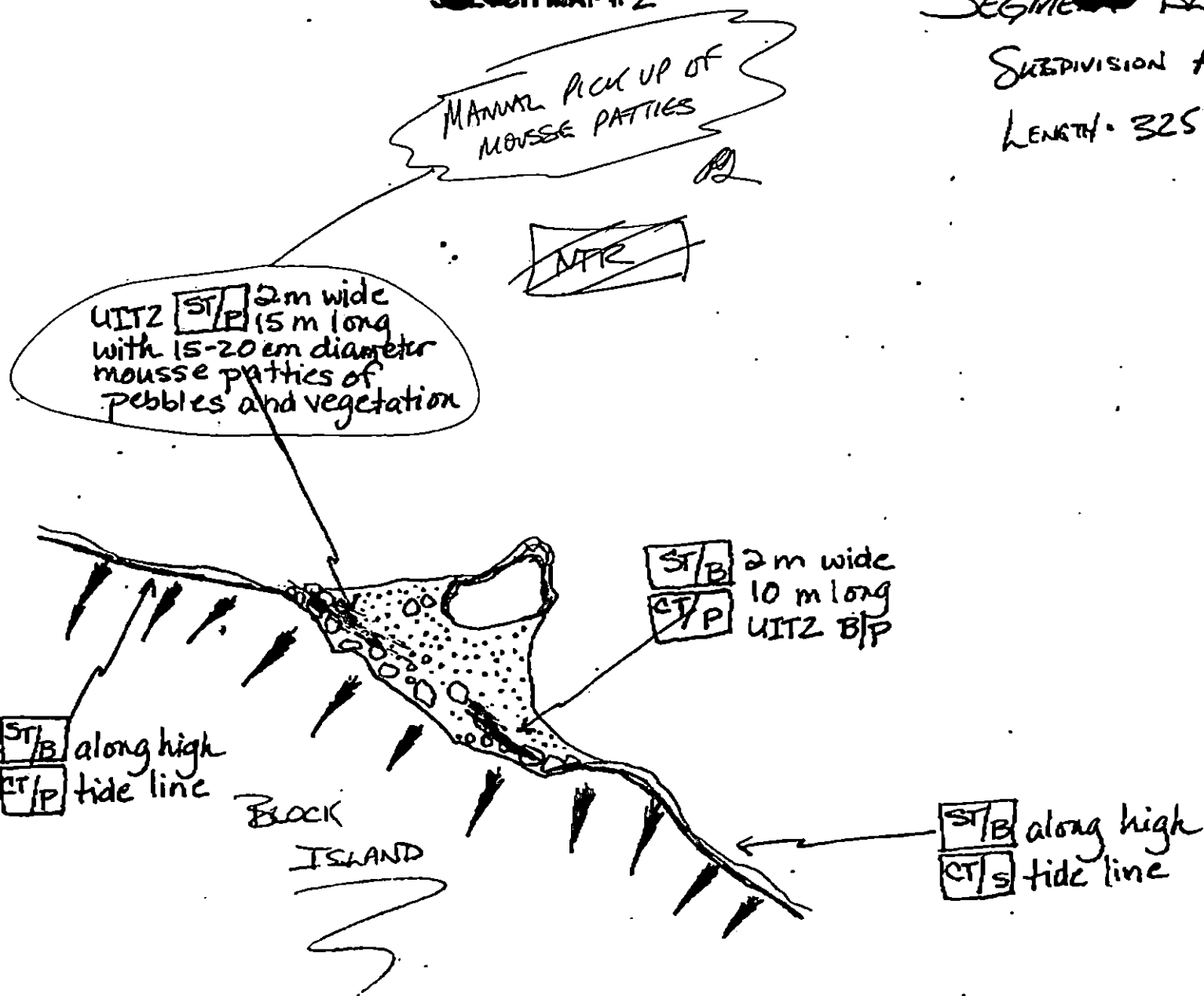
$\boxed{CT/S}$
Splashed Distribution

Oiled Vegetation

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

SEARCH MAP #2

SEGMENT BL-12
SUBDIVISION A
LENGTH 325 meters



(Oil lengths are for sketched area only)

Oil Character Length (m): AP 0 PO 0 CV 0 CT 10 ST 314 MS 0 PT 1 TB 0 FL 0 NO 0

SCHNEIDER

REVISED 02/04/90

OG C. N

SEGMENT ST/BL-12

SUBDIVISION A

DATE 07 APRIL 00

CHECKLIST

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

LEGEND

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

Continuous Distribution
- CT/B

Broken Distribution
- CT/P

Patchy Distribution
- CT/S

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

SKETCH MAP #1

SEGMENT BL-12

SUBDIVISION A

LENGTH - APPROX. 700 METERS

CT/S

 on hang rock/boulders

ST/B

 along high tide line

MANUAL TILL/RAKE
PRIOR TO BIO
(IF FEASIBLE)

Pit 3 photo 2

BIO

ST/B

 11m wide
15m long
M-UITZ

Pit 2

Small amt.
oiled boom

MANUAL
PICK UP

CT/C

 2-3m wide
5m long

CV/P

 UITZ boulders
photos: 1, 2

ST/B

 5m wide

CT/P

 25m long
UITZ boulders

CT/B

 1-2 m wide
at high tide line

CT/C

 1m wide
10 m long
with tar spots

ST/B

 along high tide line

CT/S

 on hang rock + boulders



(Oil lengths for sketched area only)

SCHNEIDER

Oil Character Length (m): AP 0 PO 0 CV 5 CT 40 ST 645 MS 0 PT 0 TB 10 FL 0 NO 0

Eel grass
in patches

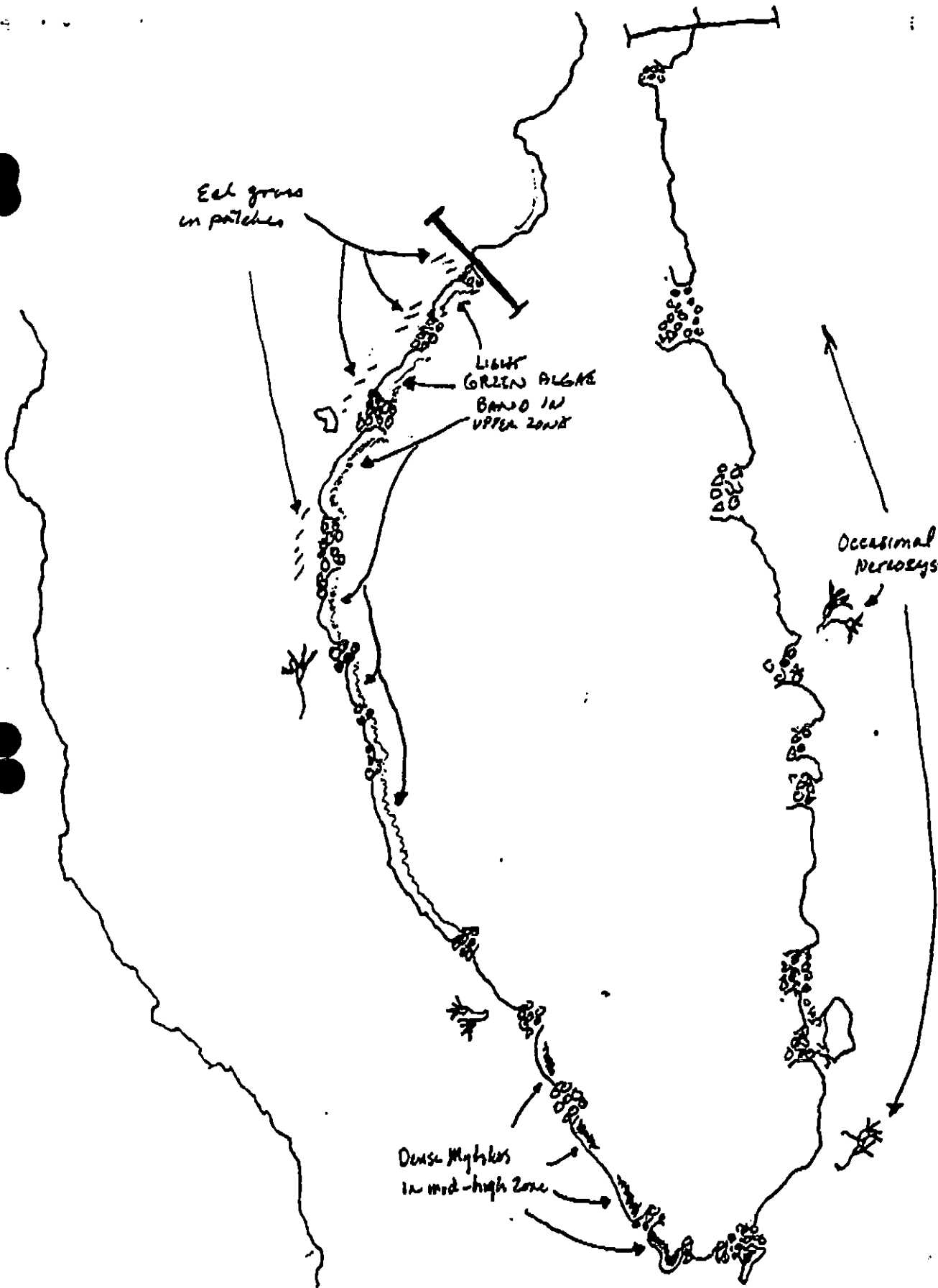
LIGHT
GREEN ALGAE
BAND IN
UPPER ZONE

Occasional
Pterocysts

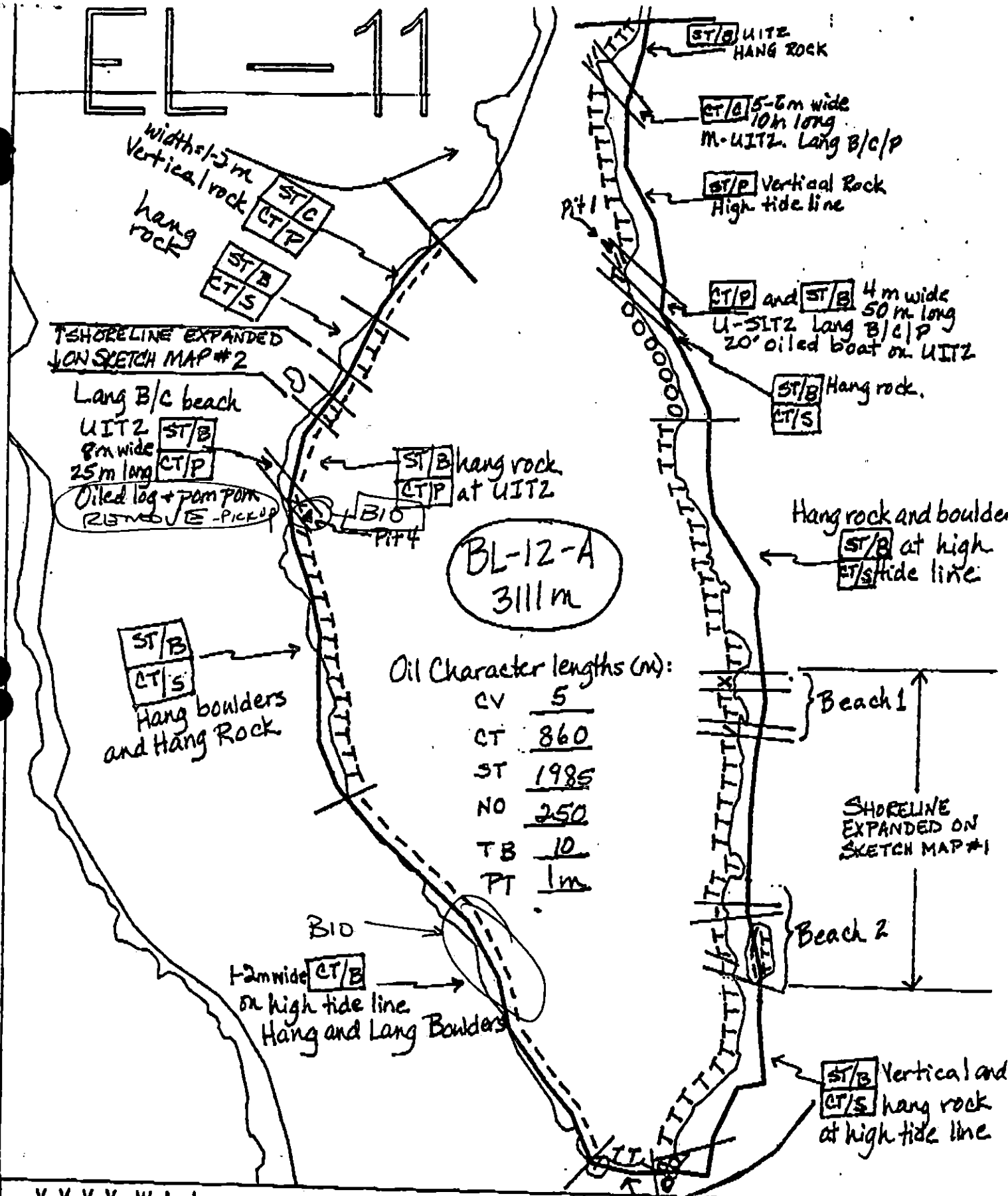
Dense Mytilus
in mid-high zone

↑ N

BL-12 2775 m



EL-11



BL-12-A
3111m

Oil Character lengths (m):

CV	5
CT	860
ST	1985
NO	250
TB	10
PT	1m

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

BL-12
 Exxon Segment Length: 3111m
 ADEC Segment Length: 2775m



Map Key: PWS-30a
 Name: C. DILLON
 Date: 4/7/90
 Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/BP-001

SUBDIVISIONS: C (3 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ BP-01 SUBDIVISION C (3 OF 3) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Active bald eagle nest (5T) - 3/1 to 6/1; recreation special use destination (6Y) - 6/1 to 9/15; Subsistence area for finfish harvesting (7HH).

SUBDIVISION ECOLOGICAL CONSTRAINTS:

(7HH) Contact ADF&G and Chenega Corp. for dates, locations, constraints.

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 496 m: No Oil 788 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ BP-1 SUBDIVISION: C DATE 4/1/90USCG
NAMEGARY OTT

SIGNATURE

☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

ADEC

NAME

MICHAEL J. EBEL

SIGNATURE

☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTEDBP-1-C

LAND MANAGER - U.S.D.A. FOREST SERVICE

NAME

DON J. BREITINGER

SIGNATURE

☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 06/28/90

OG Randy McBride ^{North} Gary Ott SEGMENT ST/ BP-1
 BIO Lewis Shannon LAND REP Dan Breitingen SUBDIVISION C
 EXXON Lemard Harbor ADEC M. R. E. Ltd TIME 12:31 to 12:40
 TEAM NO.: 12 TIDE LEVEL: 0.0 to +0.1 DATE 4/1/90
 EST. SUBDIVISION LENGTH: 1129 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: South to North
 SURFACE SEDIMENTS: R 45 % B 40 % C 15 % P _____ % G _____ % S _____ % M _____ % V _____ %
 SLOPE: Long _____ % Hang _____ % Vert _____ % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W _____ m M _____ m N _____ m VL 470 m NO 659 m

SURFACE OIL

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

PAVEMENT: H F S _____ sq. m by _____ cm

PATTIES / TARBALLS _____ BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. No photosFrames No photos

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM/CM)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	1	2	3	4	5	SU	U	M	U		

COMMENTS

Subdivision BP-1-C alternated between no oiling and very light oiling. The very light oiling was characterized by an oil mark (blocky and patchy coat) that was 10-15 cm wide with drip marks in most places. This oil mark was hard to recognize in some cases. Sketch map not appropriate - see Page 1 of _____ computer maps.

REVIEWED _____ DATE _____

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/25/77

Segment ST / BP-2 Subdivision C Date (mo / day / yr) 4/1/90Time (24 hr) 1231-1240 Biologist SHARMAN(A) Substrate type and % of segments: SUBDIV.(1) Bedrock 45 (2) Boulder 40 (3) Cobble 15 (4) Pebble (5) Sand (6) Silt (B) Overall % cover of biota (% of segment): Dense Moderate X Low
SUBDIV.(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:

Roll No. ST-12-2Frames None

BARNACLES

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

NOT PRESENT

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

NOT PRESENT

GASTROPODS (Nucella, Littorina, Limpata)

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	X	X	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: 3 cormorants, Stellar's jay, fox sparrow, 4 pairs goldeneyes, 4 pairs harlequin ducks. Intertidal community is typical of semi-protected high angle rock walls & large boulders/cobbles. Appellans normal. Observed. VLT - no fishing.

Ecological Considerations:

Please see BP-2-A.

Sensitivity Code 7HH (substantive finding).

B

PWS
31b

1236

BP-1-C

BP-1-B

BP-1-A

Important

N = O
VL = T

Test pit
no oil
~40cm

White P
red
black

RC

RC

Tract

NNNN

VL

N

NN

1148

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

N

11:15

1153

1157

1231

12:10

VL

VL

N

N

N

N

N

N

N

N

N

N

N

N

N

N

XXXX Wide

BP-1

/// Medium

--- Narrow

ADEC Segment Length: 3899m

TTTT Very Light

0000 No Oil



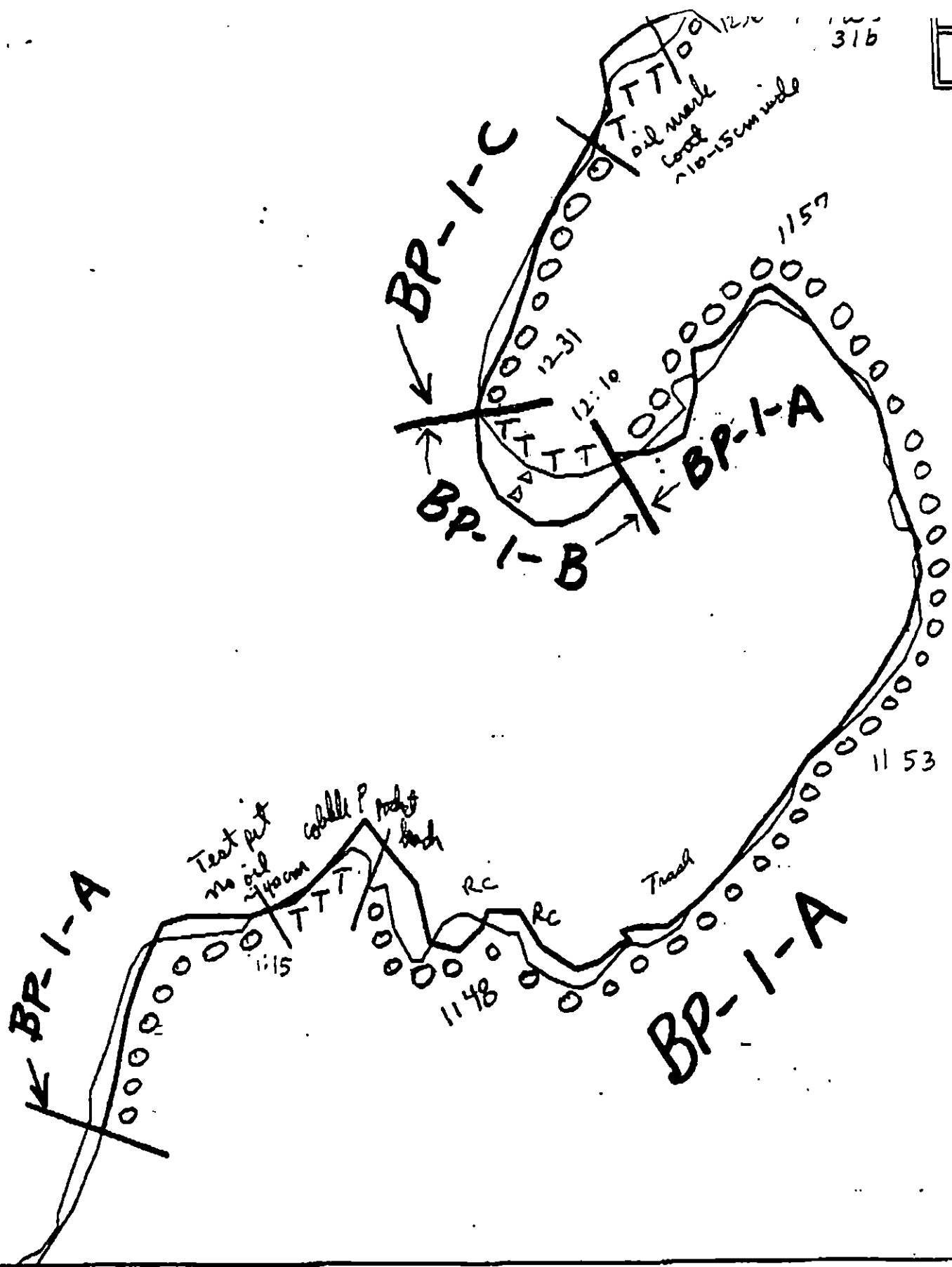
Map Key: PWS-31a

Name: Randy McBride

Date: 4/1/90

Date Entered:

B



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

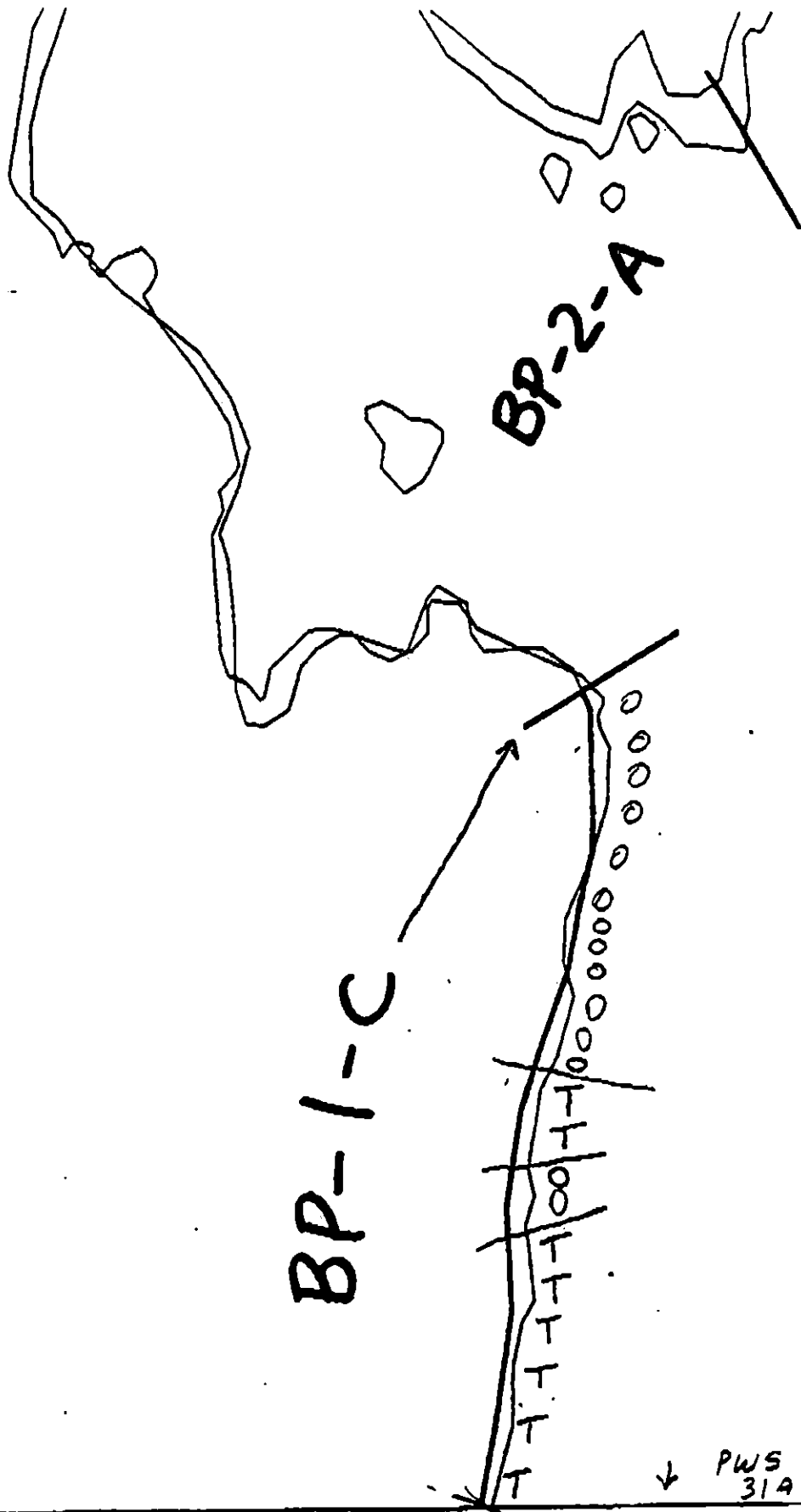
BP-1

ADEC Segment Length: 3699m



Map Key: PWS-31a
Name: Randy McB
Date: 4/1/90
Date Entered:

(4/5 Page 22 of 24) 23 of 30



BP-1-C

BP-2-A

↓ PWS
31A

BP-1

ADEC Segment Length: 3699m



Map Key: PWS-31b

Name: Randy McBride

Date: 4/1/90

Data Entered:

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

SHORELINE EVALUATION

SEGMENT ST/ BP-01 SUBDIVISION A (1 OF 3) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Active bald eagle nest (5T) - 3/1 to 6/1; recreation special use destination (6Y) - 6/1 to 9/15; Subsistence area for finfish harvesting (7HH).

SUBDIVISION ECOLOGICAL CONSTRAINTS:

(7HH) Contact ADF&G and Chenega Corp. for dates, locations, constraints. (5T) Restrict air traffic to essential minimum. Air approach and takeoff from and to seaward only. Contact USFWS prior to treatment for confirmation of dates and avoidance minimums.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Homan DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 170 m: No Oil 1966 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

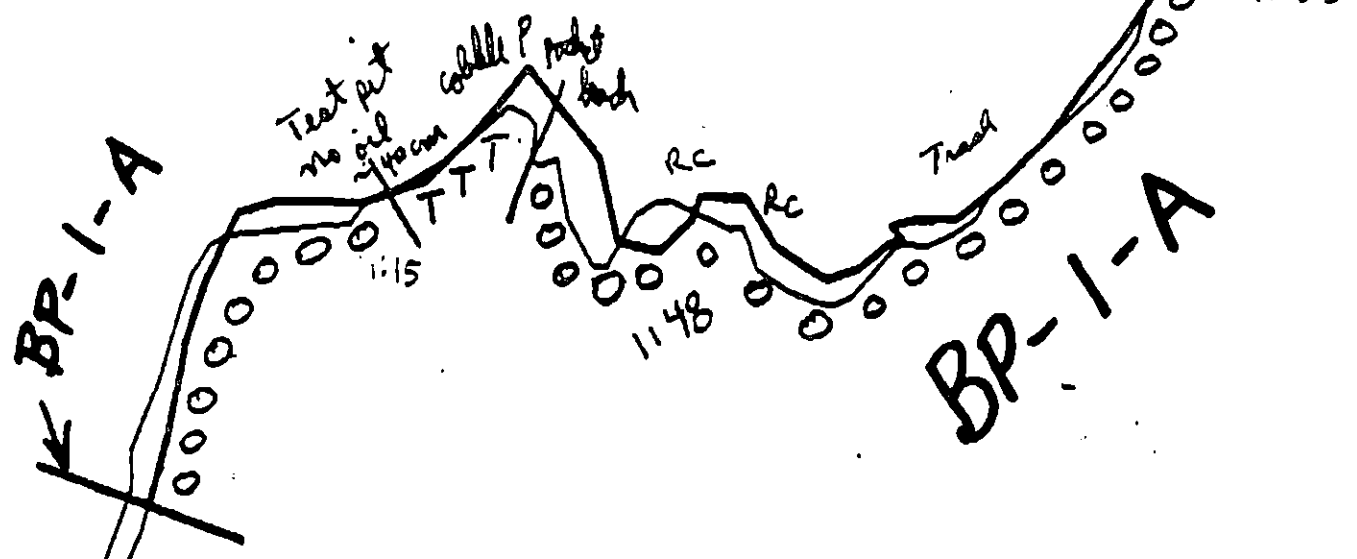
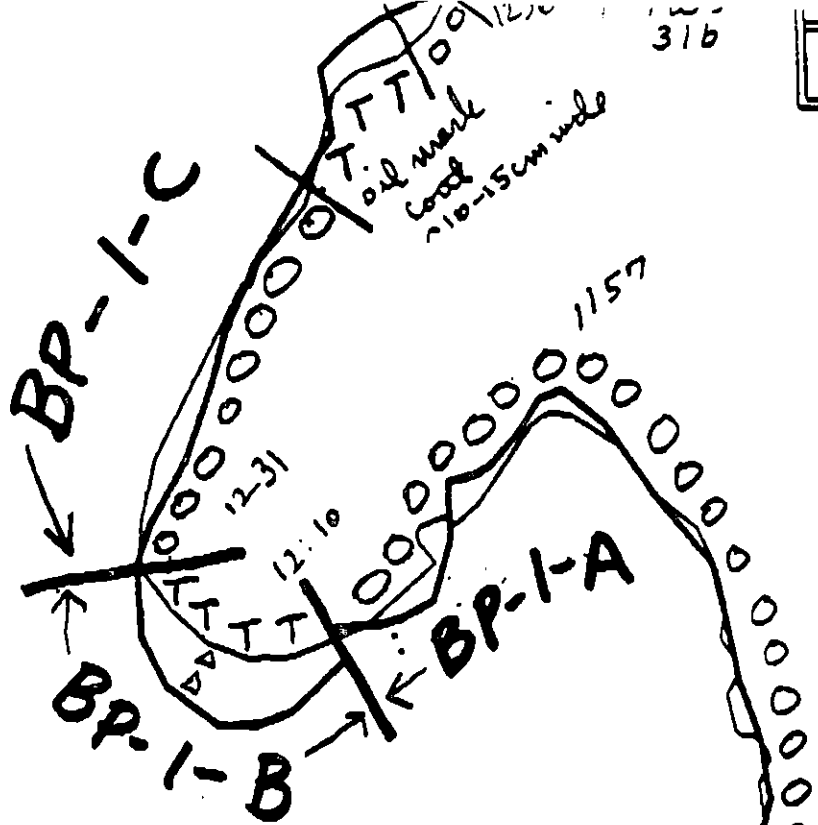
TAG COMMENTS:

TAG APPROVAL DATE:

4/16/90
ADEC AL KETTER
EXXON ANDY TEAL
NOAA Bar/Wescroft
USCG G.A. REITER
FOSC: E. W. L. DATE: 4-20-90

B

316



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

BP-1

ADEC Segment Length: 3699m



Map Key: PWS-31a
 Name: Randy McBride
 Date: 4/1/90
 Date Entered:

(4/5 PWS 228 24/2 3.4 36

SHORELINE EVALUATION

SEGMENT ST/ BP-01 SUBDIVISION B (2 OF 3) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Active bald eagle nest (5T) - 3/1 to 6/1; recreation special use destination (6Y) - 6/1 to 9/15; Subsistence area for finfish harvesting (7HH).

SUBDIVISION ECOLOGICAL CONSTRAINTS:

(7HH) Contact ADF&G and Chenega Corp. for dates, locations, constraints.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles Zeff DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 279 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

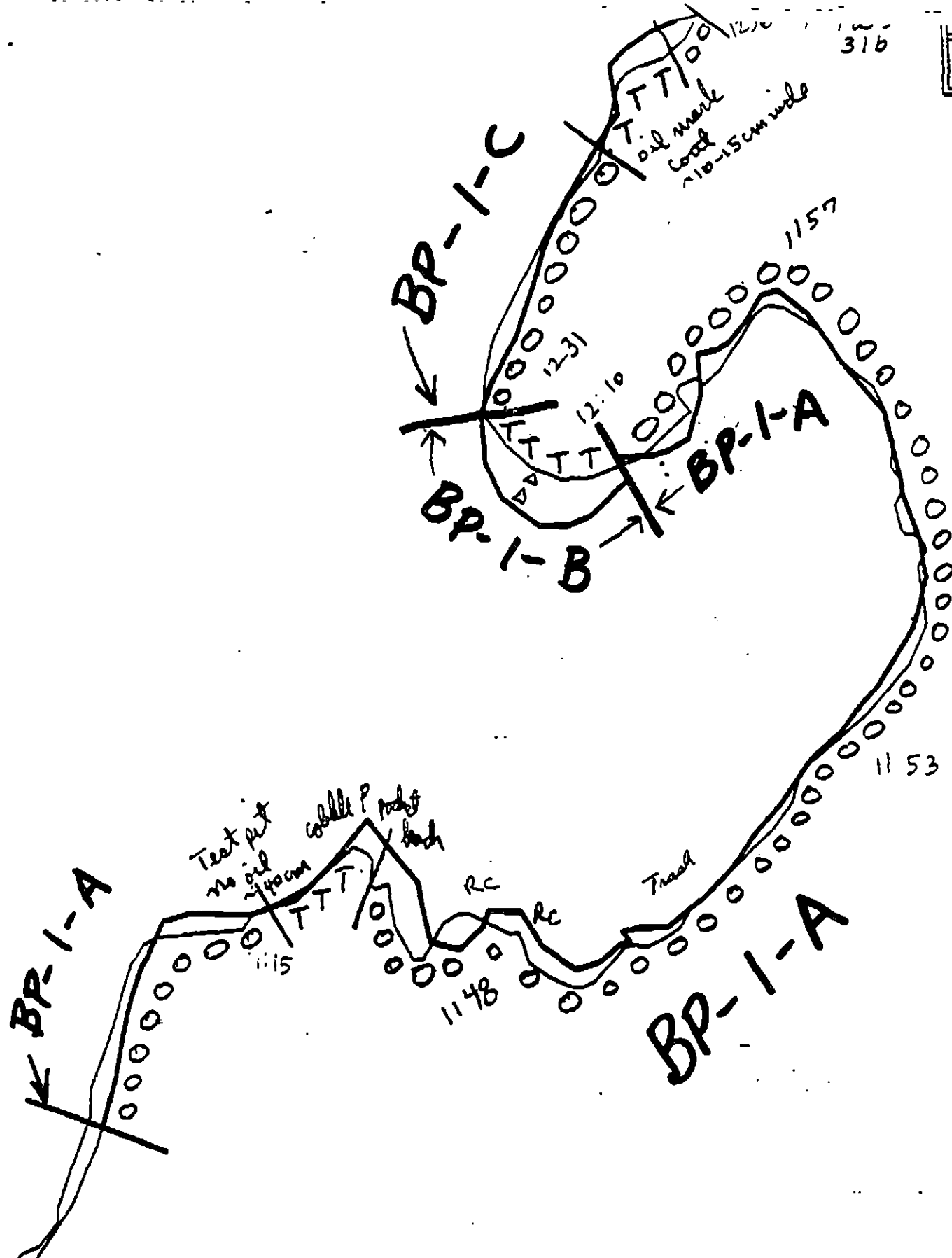
COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/16/90

ADEC AL KETZLER
EXXON JOY TET FOSC: My L DATE: 4-20-90
NOAA Burt W. Wright
USCG G.A. REITER G.A. Reiter

B



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

BP-1

ADEC Segment Length: 3699m



Map Key: PWS-31a
Name: Randy McBride
Date: 4/1/90
Date Entered:

(4/5 PWS 22 of 24) 23 of 30

SHORELINE EVALUATION

SEGMENT ST/ BP-01 SUBDIVISION C (3 OF 3) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Active bald eagle nest (5T) - 3/1 to 6/1; recreation special use destination (6Y) - 6/1 to 9/15; Subsistence area for finfish harvesting (7HH).

SUBDIVISION ECOLOGICAL CONSTRAINTS:

(7HH) Contact ADF&G and Chenega Corp. for dates, locations, constraints.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Hume DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 496 m: No Oil 788 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/16/90

ADEC AL HEGGEL
EXXON ANDY TEAL
NOAA Burt Wescott
USCG G.H. BEITER
FOSC: ML DATE: 4-20-90

B

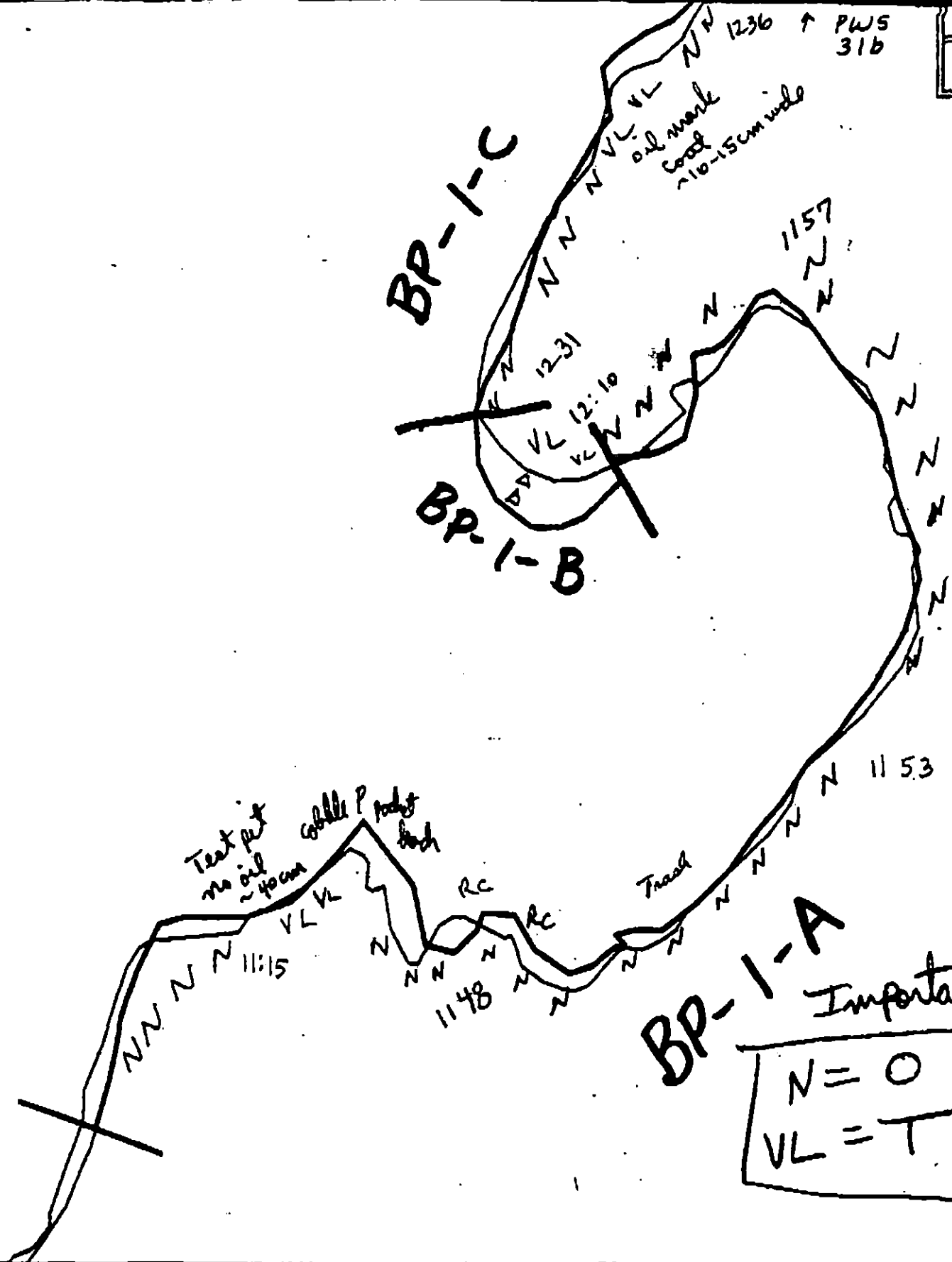
BP-1-C

BP-1-B

BP-1-A

Important

N = O
VL = T



XXXX Wide

BP-1

//// Medium

---- Narrow

TTTT Very Light

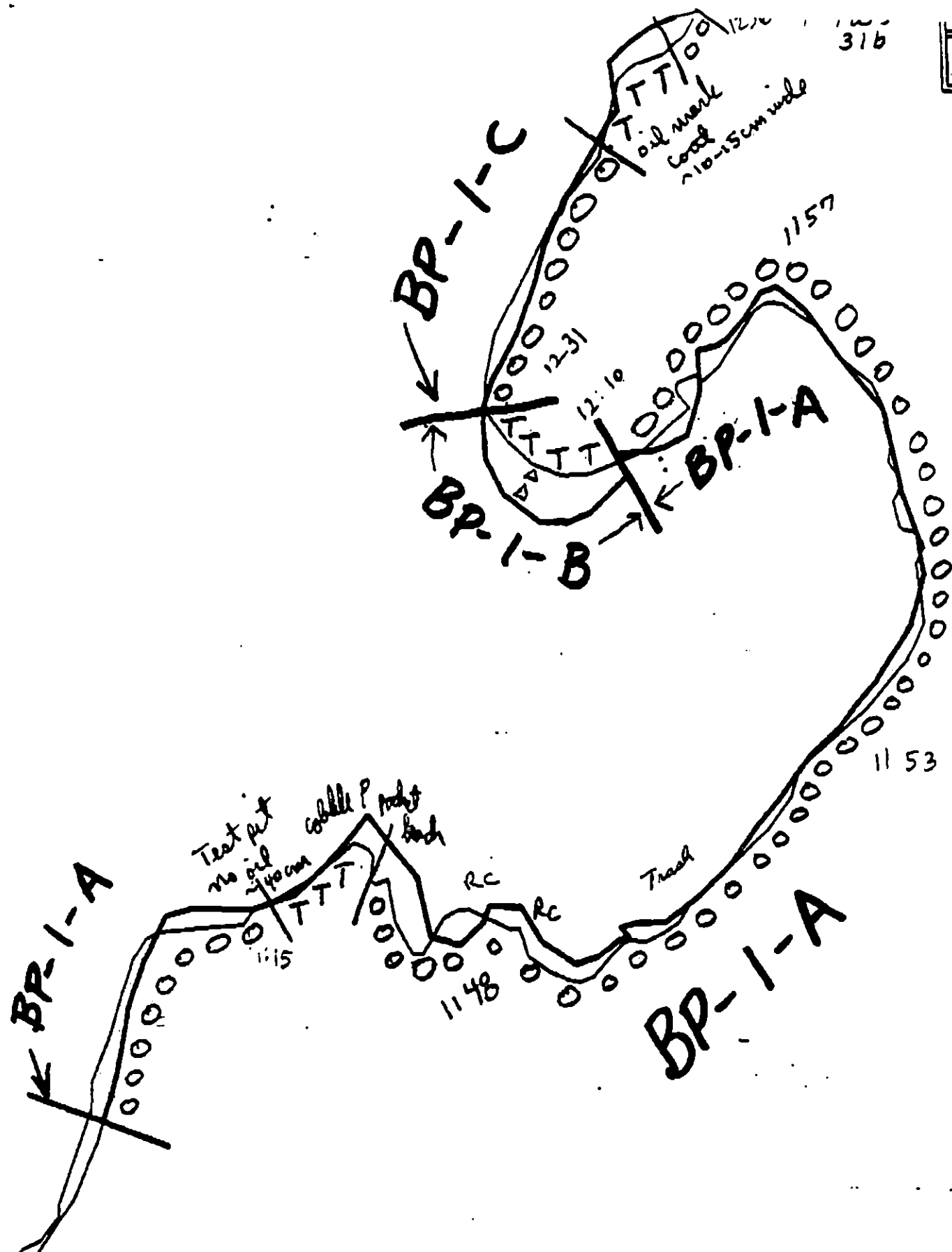
0000 No Oil

ADEC Segment Length: 3699m



Map Key: PWS-31a
Name: Randy McBride
Date: 4/1/90
Data Entered:

B



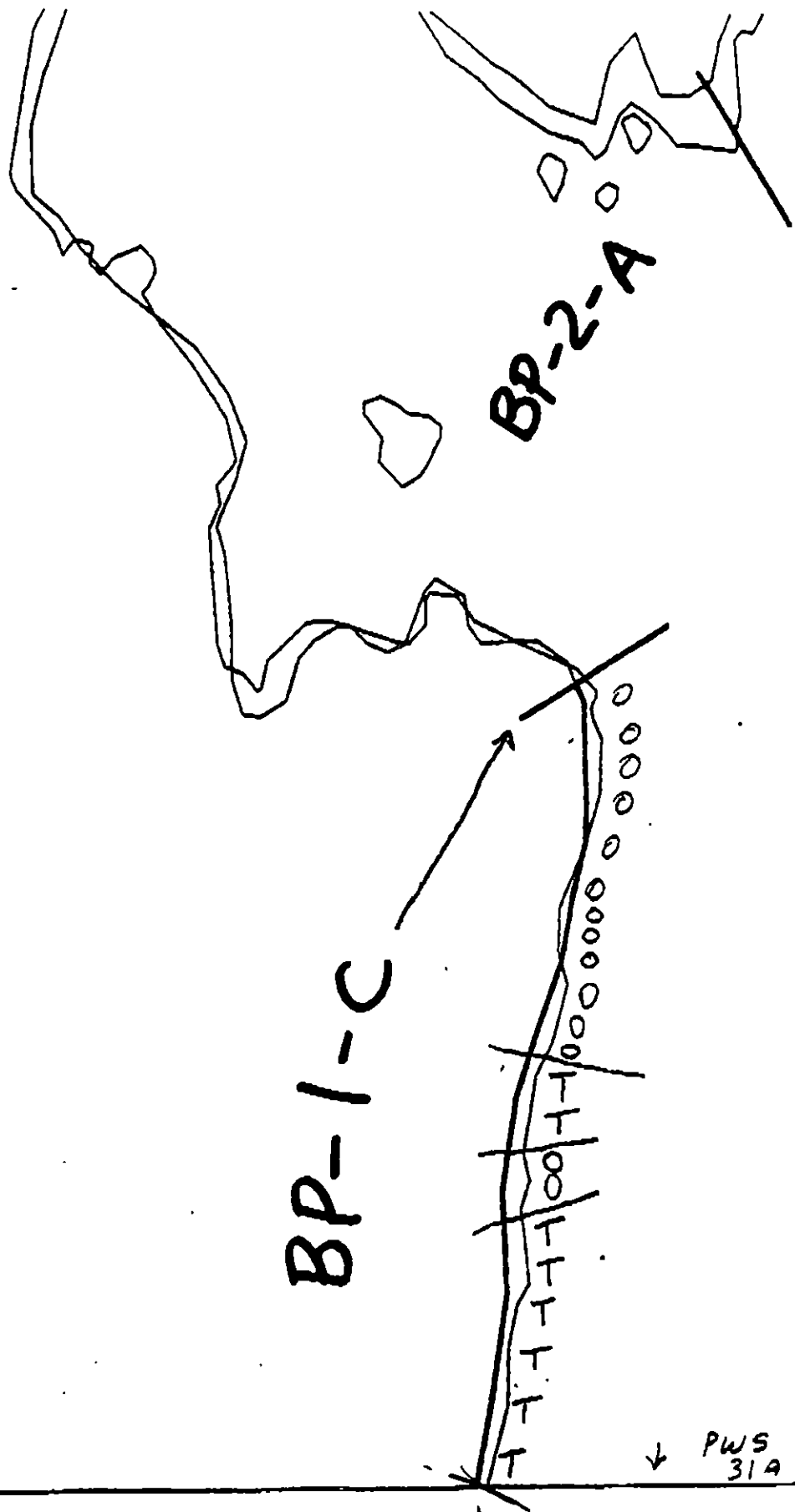
XXXX Wide
//// Medium
--- Narrow
TTTT Very Light
0000 No Oil

BP-1

ADEC Segment Length: 3699m

0 100 200 300
METERS

Map Key: PWS-310
Name: Randy McBride
Date: 4/1/90
Date Entered:



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

BP-1

ADEC Segment Length: 3699m



Map Key: PWS-31b

Name: Randy McBride

Date: 4/1/90

Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/BP-001

SUBDIVISIONS: A (1 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ BP-01 SUBDIVISION A (1 OF 3) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Active bald eagle nest (5T) - 3/1 to 6/1; recreation special use destination (6Y) - 6/1 to 9/15; Subsistence area for finfish harvesting (7HH).

SUBDIVISION ECOLOGICAL CONSTRAINTS:

(7HH) Contact ADF&G and Chenega Corp. for dates, locations, constraints.
(5T) Restrict air traffic to essential minimum. Air approach and takeoff from and to seaward only. Contact USFWS prior to treatment for confirmation of dates and avoidance minimums.

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 170 m: No Oil 1966 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / BP-1 SUBDIVISION: A DATE 4/1/90**USCG**

NAME

GARY OTT

SIGNATURE

☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED**ADEC**

NAME

MICHAEL J. EBEL

SIGNATURE

☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTEDBP-1-A**LAND MANAGER - U.S.D.A. - FOREST SERVICE**

NAME

DON J. BREITINGER

SIGNATURE

☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 08/28/88

OG Randy McBride NOAA USCG Gary Ott SEGMENT ST/ BP - 1
 BIO Lewis Shannon LAND REP Don Breitinges SUBDIVISION A
 EXXON Leonard Herliot ADEC Mike Ebel TIME 11:05 to 12:10
 TEAM NO.: 12 TIDE LEVEL: +1.8 to +0.2 DATE 4/1/90
 EST. SUBDIVISION LENGTH: 1854 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: South to north
 SURFACE SEDIMENTS: R 40 % B 40 % C 15 % P 5 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 5 % Hang 60 % Vert 35 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 60 m NO 1794 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	IC	IS	IP	IR	1	2	3	4	5	6	7	8	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL																

PAVEMENT: H F S _____ sq. m by _____ cm

PATTIES / TARBALLS _____ BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. No photosFrames No photos

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM OR)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS		
		OP	OR	OL	OF	NO		VO	UC	1	2	3	4	5	6	7	8	SU	U			M	L
1	~40					X	-		X									X					C, P, G
							.																
							.																
							.																
							.																
							.																
							.																

COMMENTS

Overall, BP-1-A was dominated by no oiling (1794 m) or 97% while very light oiling occurred along only 60 m or 3% of the subdivision. This light oiling was characterized by an oil mark (sporadic coat) along the high water mark as well as some patties (>10 cm wide) along the upper intertidal zone. Had to hunt hard to find the oil. Sketch map not appropriate.

REVIEWED

D.L.

DATE 4/8/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/28/90

Segment ST / BP-1 Subdivision A Date (mo / day / yr) 4/1/90Time (24 hr) 1105-1210 Biologist SHARMAN(A) Substrate type and % of segments: SUBDIV.
(1) Bedrock 40 (2) Boulder 40 (3) Cobble 15 (4) Pebble 5 (5) Sand (6) Silt (B) Overall % cover of biota (% of segment): Dense Moderate X Low
SUBDIV.

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

Photographs:
Roll No. ST-12-2Frames None

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 (Nucella, Littorina, Limpeta)

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: 1 cormorant, 2 pair goldeneyes, 2 adult eagles, 6 pair mergansers, 8 assorted gulls (mostly glaucous-winged), 2 ospreys, 1 deer lim. Intertidal community here is typical of semi-protected high angle rock walls and large boulders. Appears natural.

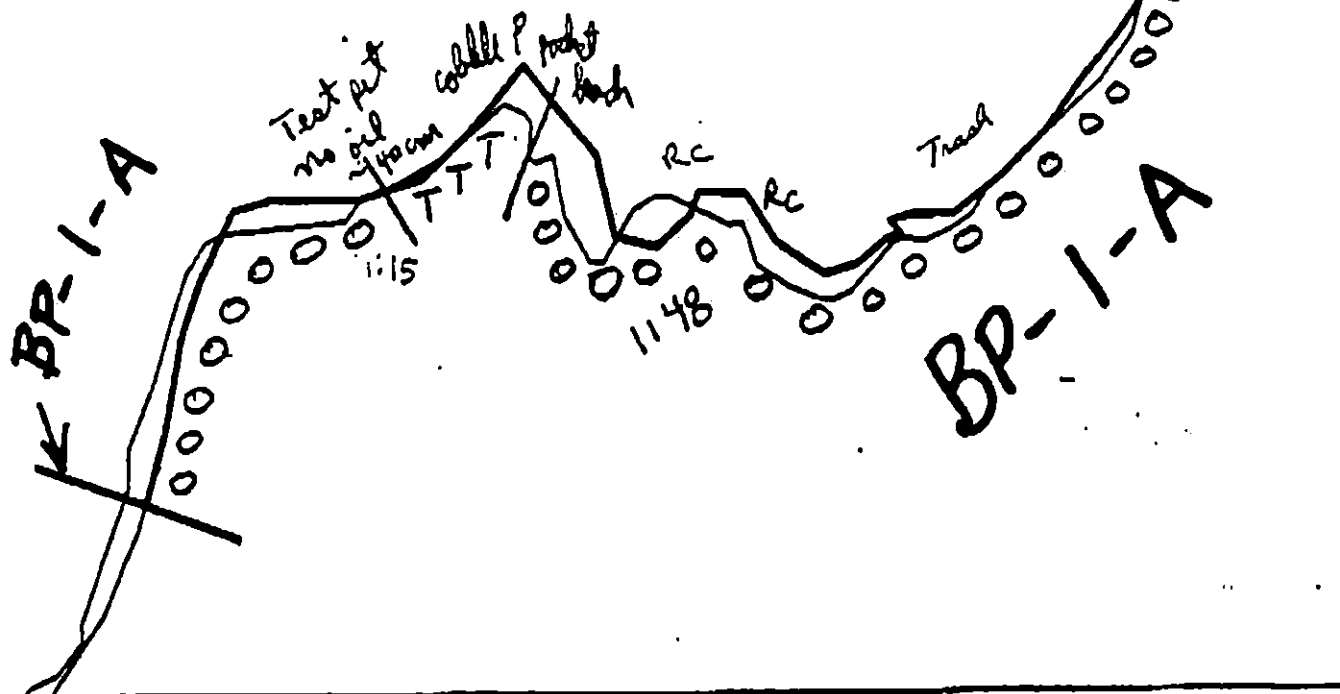
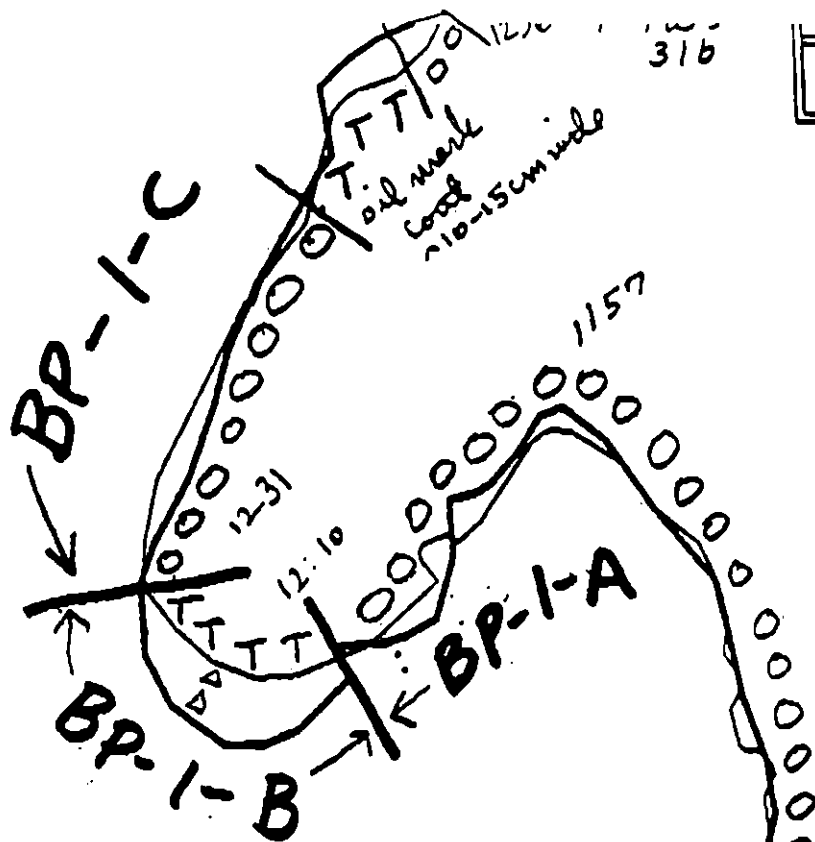
Ecological Considerations:

According to the Priorities and Windows table, the entire BP-1 segment is Environmental Priority 3 with VLT oiling and no penetration. In this subdivision we found None / VLT. The only listed ecological constraint is subsistence finfish (high constraints 1-2) giving an overall treatment priority of 4. Sensitivity code = 7HH.

Add eagle nest
from USFWS map 418
Am

B

316



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

BP-1

ADEC Segment Length: 3699m



Map Key: PWS-31a

Name: Randy McBri

Date: 4/1/90

Date Entered:

14/E PWS 220124/23.5.50

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/BP-001

SUBDIVISIONS: B (2 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ BP-01 SUBDIVISION B (2 OF 3) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Active bald eagle nest (5T) - 3/1 to 6/1; recreation special use destination (6Y) - 6/1 to 9/15; Subsistence area for finfish harvesting (7HH).

SUBDIVISION ECOLOGICAL CONSTRAINTS:

(7HH) Contact ADF&G and Chenega Corp. for dates, locations, constraints.

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 279 m: No Oil 0 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ BP-1 SUBDIVISION: B DATE 4/1/90**JSCG**NAME GARY OTTSIGNATURE *Gary Ott*☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED**ADEC**NAME MICHAEL J. EBELSIGNATURE *Michael J. Ebel*☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTEDBP-1-B**LAND MANAGER - U.S.D.A. - FOREST SERVICE**NAME DON J. BREITINGERSIGNATURE *Don J. Breiting*4/1/90☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 03/28/90

OG Randy M. Bride NOAA 10066 Gary Ott SEGMENT ST/ BP-1
 BIO Lewis Sherman LAND REP Don Breitinger SUBDIVISION 3
 EXXON Leonard Herbst ADEC Mike Ebel TIME 12:10 to 12:31
 TEAM NO.: 12 TIDE LEVEL: 0.07' to 0' DATE 4/1/90
 EST. SUBDIVISION LENGTH: 164 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: _____ to _____
 SURFACE SEDIMENTS: R 7 % B 3 % C 5 % P 40 % G 40 % S 5 % M _____ % V _____ %
 SLOPE: Long 40 % Hang 60 % Vert _____ % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W _____ m M _____ m N _____ m VL 164 m NO _____ m

SURFACE OIL

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

PAVEMENT: H F S _____ sq. m by _____ cr

PATTIES / TARBALLS _____ 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 _____

Photographs:

Roll No. ST-12-2Frames 8-12 (*11 is incorrect - should read BP-1-8)

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-cm)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UO	30	35	40	45	50	55	60	65	SU	U	ME	U		
1	47.5					X	---		X										X				P, G
2	45					X	---		X											X			G, S
							.																
							.																
							.																
							.																

COMMENTS 140' W
131' 1st P:-
450 F

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/8

Segment ST / BP-2 Subdivision B Date (mo / day / yr) 4/1/90Time (24 hr) 1200-1300 Biologist SHARMAN(A) Substrate type and % of segments: SUBDIV.
(1) Bedrock 7 (2) Boulder 3 (3) Cobble 5 (4) Pebble 40 (5) Sand 45 (6) Silt + granules(B) Overall % cover of biota (% of segment): Dense SUBDIV. Moderate Low X(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (⊙)Photographs:
Roll No. ST-12-2Frames 7-12

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments: Some tar among HTZ boulders on S. side of surveyed beach, but intertidal community appears normal. Observed 2 deer in forest edge, 5 pairs goldeneyes, 5 pairs harlequin ducks, 2 harbor seal. A normally sparse intertidal community of pebble/cobble pocket beaches.

Ecological Considerations:

Please see BP-2-A.

Sensitivity Code FHH (substantive finding).

OG MCB
 SEGMENT STA 1
 SUBDIVISION B
 DATE 4 / 1 / 90

CHECKLIST

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

LEGEND

1 Δ
 Pit - No Subsurface Oil

2 Δ
 Pit - Subsurface Oil

CT/C
 Continuous Distribution

CT/B
 Broken Distribution

CT/P
 Patchy Distribution

CT/S
 Splashed Distribution

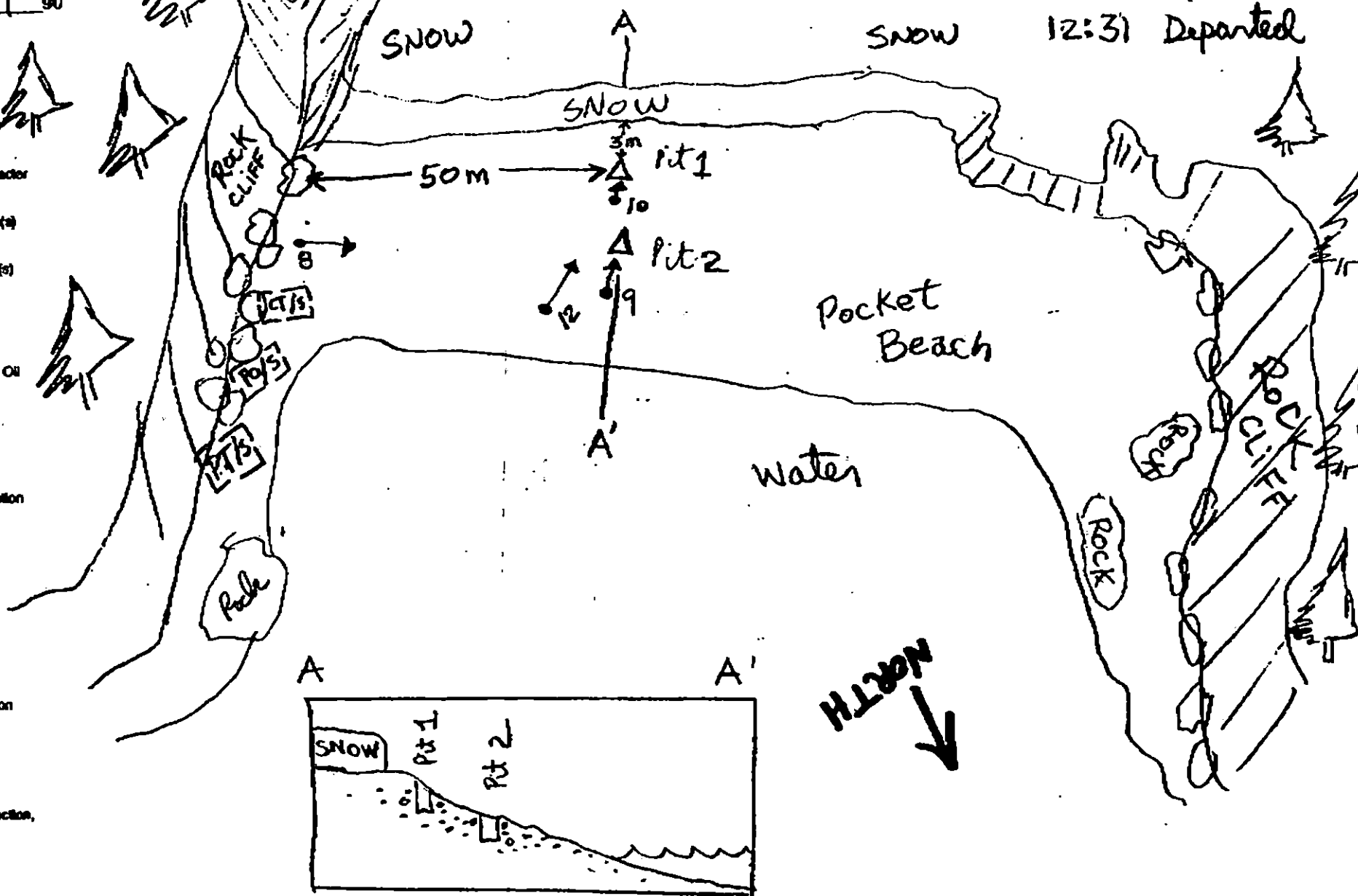
Oiled Vegetation

1 →
 Photo location, direction,
 and number

SKETCH MAP

BP-1-B

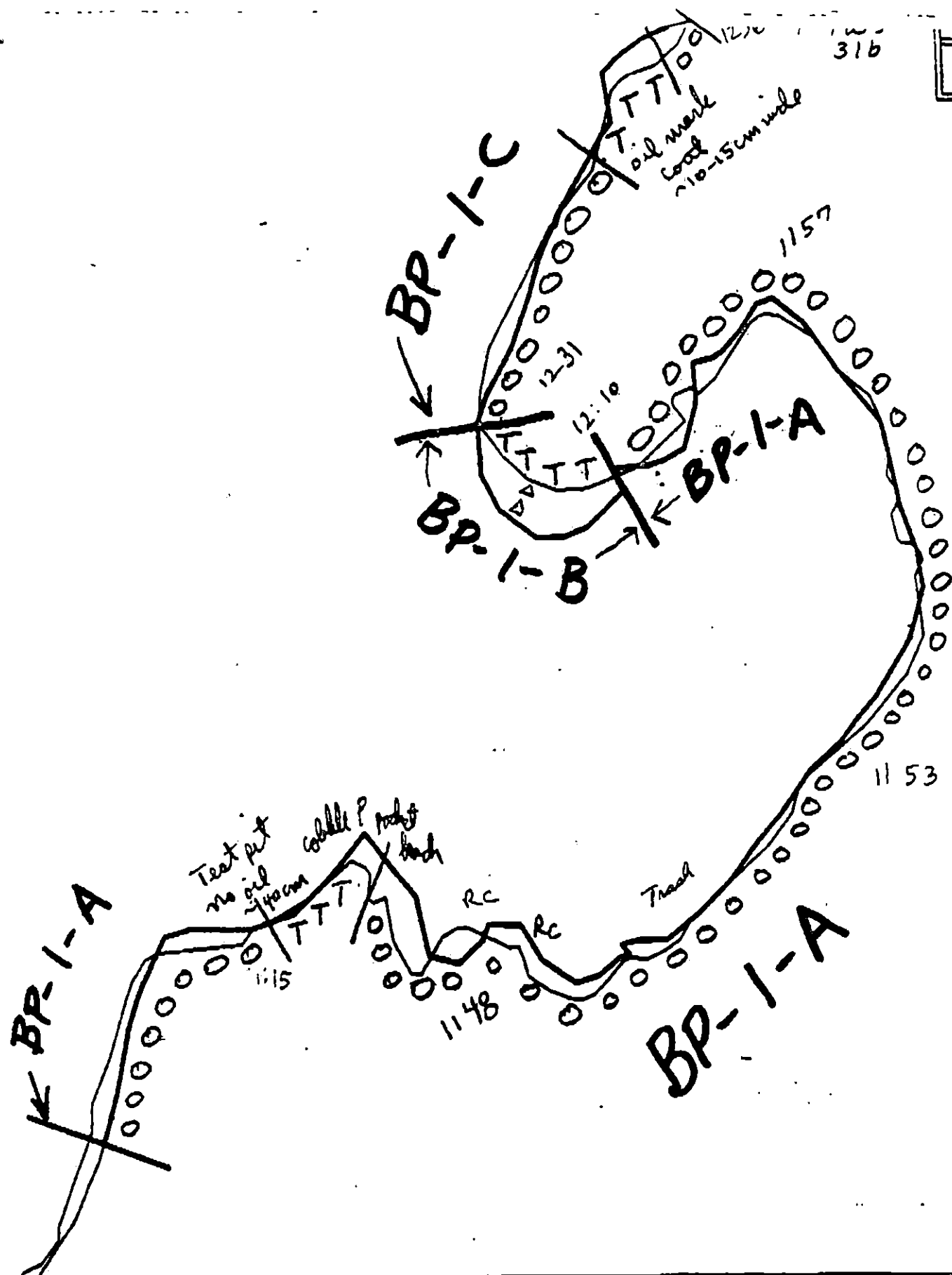
12:10 Arrived
 12:31 Departed



Oil Character Length (m): AP 15 CV 8 ST 3 MS 3 TB 3 FL 3 NO 3

REVISION 02/24/00

B



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

BP-1

ADEC Segment Length: 3699m



Map Key: PWS-31a
Name: Randy McBride
Date: 4/1/90
Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/BP-02

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Salmon stream mouth (ADF&G catalogue no. 226-40-16181 rev. 12/89)

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

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

6Y Recreation: Special use destination (6/1 to 9/15)

7HH Subsistence area: Finfish harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 2745 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

PWS ECOLOGICAL CONSTRAINTS

BP-2

- 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 unopened intertidal and subtidal algae and seagrass.
Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
- 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
- 6V Anchorages (6/1 to 9/15)
- 6W Forest Service cabins (6/1 to 9/15)
- 6X Lodge (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 / BP-2 SUBDIVISION: A (ENTIRE SEGMENT) DATE 4/1/90

USCG
NAME GARY OTT SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC
NAME MICHAEL J. EBEL SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

BP-2-A

LAND MANAGER - U.S.D.A. - FOREST SERVICE
NAME DON J. BREITINGER SIGNATURE [Signature] 4/1/90

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

4/5 Page 20 of 24

REVISION NO. 03/21/90

LAST PAGE 32 of 32

SHORELINE OILING SUMMARY

REVISION NO. 03/28/90

OG Pandy McBride NOAA Gary Ott SEGMENT ST/ BP-2
 BIO Lewis Shannon LAND REP Don Breitinges SUBDIVISION A
 EXXON Leonard Herbst ADEC Mike Ebel TIME 12:40 to 13:14
 TEAM NO.: 12 TIDE LEVEL: 0.0 to +0.2 DATE 4/1/90
 EST. SUBDIVISION LENGTH: 2994 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: north to south
 SURFACE SEDIMENTS: R 15 % B 20 % C 40 % P 20 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Long 5 % Hang 75 % Vert 20 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 2994 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	NO	NR	PR	IR	SP	BR	OR	GR	BL	PK	WH	OT	SU	UI	ME	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X	X	X	X

PAVEMENT: H F S 0 sq. m by 0 cr

PATTIES / TARBALLS 0 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. 0 No photos

Frames 0 No photos

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS		
		OP	OR	OL	OF	NO		BO	UC	SP	BR	OR	GR	BL	PK	SU	UI	ME	U				
1	30					X	- - -		X								X						CPG
							.																
							.																
							.																
							.																
							.																
							.																

COMMENTS

No surface or subsurface oiling found along entire BP-2 segment.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/8

Segment ST / BP-2 Subdivision A Date (mo / day / yr) 4/1/90Time (24 hr) 1240-1320 Biologist SHARMAN(A) Substrate type and % of segments: SUBDIV.
(1) Bedrock 15 (2) Boulder 20 (3) Cobble 40 (4) Pebble 20 (5) Sand 5 (6) Silt gender(B) Overall % cover of biota (% of segment): Dense SUBDIV. Moderate X Low

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

Photographs:
Roll No. ST-12-2Frames None

BARNACLES

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

MYTILUS

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

GASTROPODS (*Nucella*, *Littorina*, *Lingula*)

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

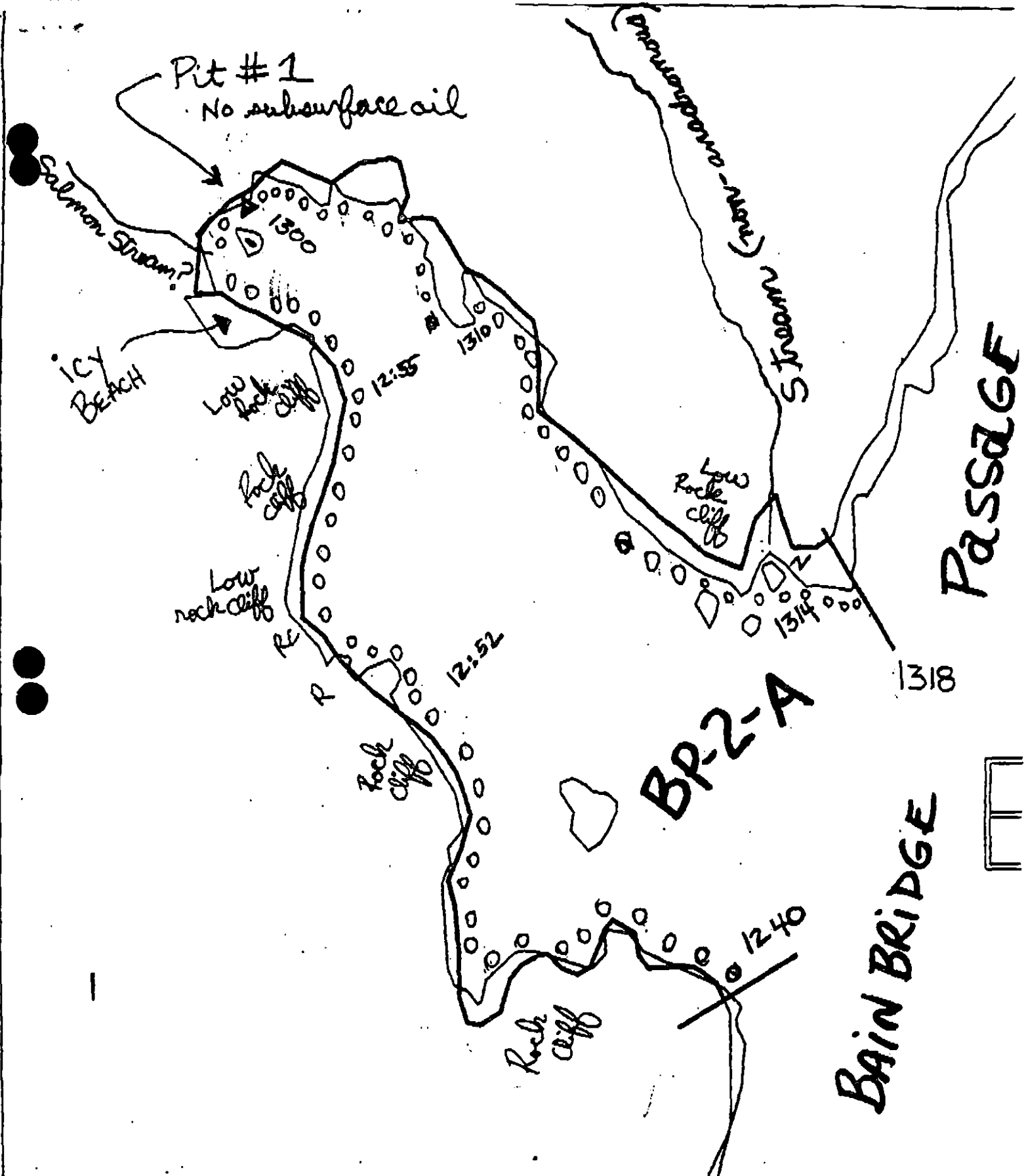
FUCUS

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

Wildlife Observations/ General Comments: 1 harbor seal, 1 sea otter, 11 pairs gullweys, 1 sea otter, 5 pairs murrelets, 2 cormorants, 1 pair adult eagles (no nest visible). Spawning stream (see sketch map) is clear and unobstructed. This area is quite rich and diverse generally (very similar to BP-2), with numerous protected covelets, small islands, etc. Appears to be a normal and healthy intertidal community.

Ecological Considerations:

According to the Priorities and Windown table, this segment is given Environmental Priority 2 with a pre-7/10 work window. It was listed as having VLT oiling, but we observed no oil. Sensitivities are finfish harvest (code = 7HH) with high constraints (1-2) and treatment priority 4, and salmon spawning stream (code = 1B) with high constraints (1-2) and treatment priority 1.



● XXX Wide

●/// Medium

---- Narrow

TTTT Very Light

0000 No Oil

BP-2

ADEC Segment Length: 2754m



Map Key: PWS-32

Name: Randy McBride

Date: 4/1/90

Date Entered:

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Salmon stream mouth (ADF&G catalogue no. 226-40-16181 rev. 12/89)

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

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

6Y Recreation: Special use destination (6/1 to 9/15)

7HH Subsistence area: Finfish harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles J. H. Smith DATE: 4/18/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 2745 m
Subsurface Oil Observed: Yes No X Maximum Depth

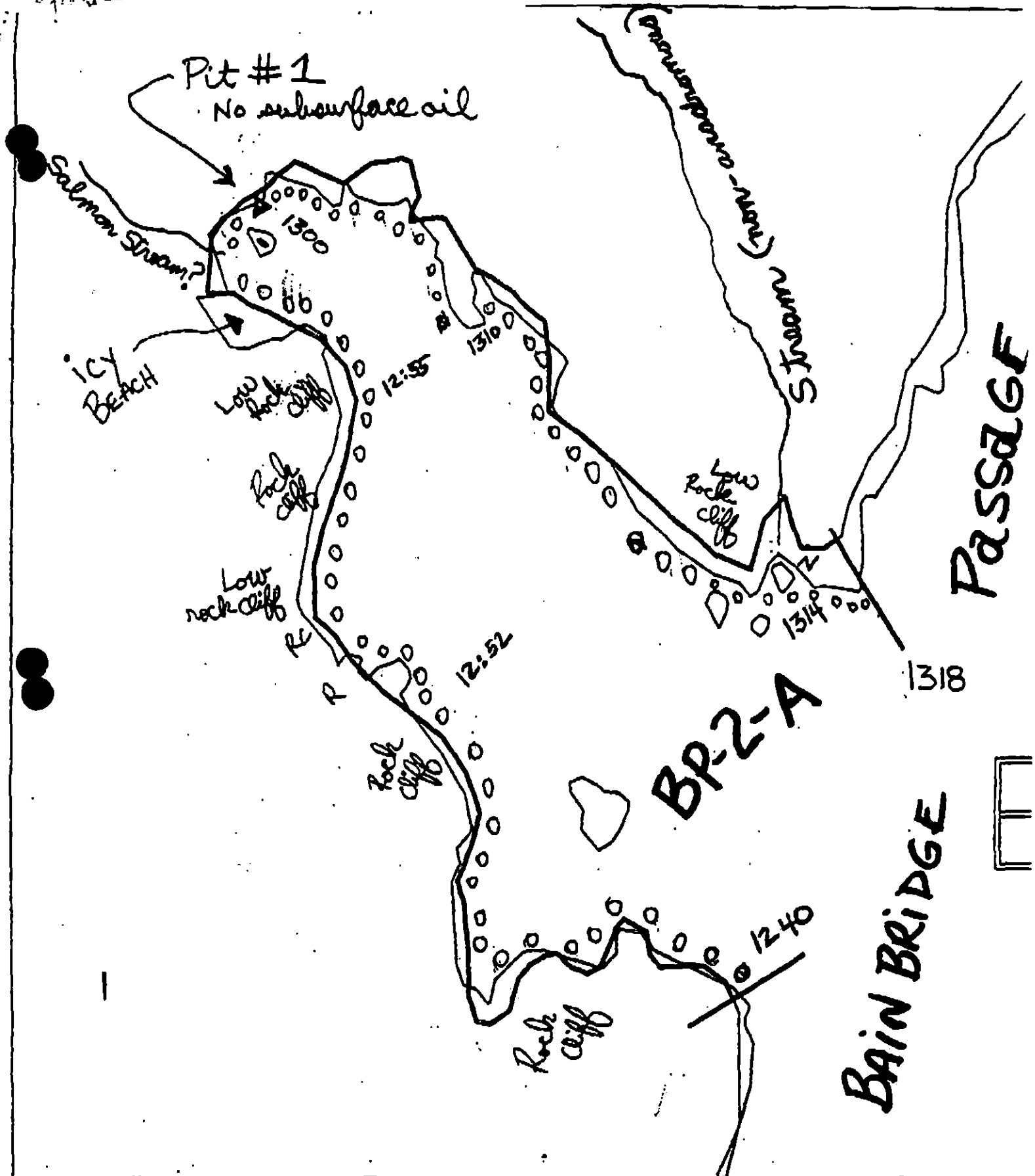
RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/18/90
ADEC ART WEINER Art Weiner
EXXON ANDY BIR Real FOSC: h DATE: 4-22-90
NOAA Burl Wescott Burl Wescott
USCG G.A. HEITER G.A. Heiter



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

BP-2

ADEC Segment Length: 2754m



Map Key: PWS-32

Name: Randy McBride

Date: 4/1/90

Date Entered:

SUPPLEMENTAL

1991 MAYSAP EVALUATION

SEGMENT: BP 04 SUB: A REGION: PWS SURVEY DATE: EXXON SURVEY - 6/1
ADEC SURVEY 6/1

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) _____

RECEIVED

Ecological/Constraints (see page two for details) _____
JUL 18 1991

ARCHAEOLOGICAL CONSTRAINTS:

ANCHORAGE-A00/A

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

Timothy A. Smith for SHPD July 2, 1991

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

COMMENTS:
INITIAL: _____

TAG: MANUAL PICKUP OF AP AT LOCATION B FOLLOWED BY MECHANICAL
TILLING WITH THE RISING TIDE USE SARES TO RECOVER MOBILIZED
OIL FOLLOWED BY BIO.
LOCATIONS E + I - MANUAL PICKUP OF AP ALSO LOCATIONS D + C.

FOSC: _____ *A*

TAG APPROVAL DATE: July 2 1991 FOSC APPROVAL DATE: 7-6-91

ADEC John Bauer FOSC Mark

EXXON Deal

USCG T. J. Mung

NOAA Long

SUPPLEMENTAL

1991 MAYSAP EVALUATION

SEGMENT: BP 04 SUB: A REGION: PWS SURVEY DATE: EXXON SURVEY-6, ADEC SURVEY-6

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) _____

Ecological/Constraints (see page two for details) _____

ARCHAEOLOGICAL CONSTRAINTS:

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

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N) _____

Manual Pickup (Check as Req.) _____

Spot Washing _____

Bio-Customblen Only _____

Bio-Inipol/Customblen _____

Other MECHANICAL TILL _____

Other _____

INITIAL

TAG

FOSC

Y

X

X

X

COMMENTS:

INITIAL: _____

TAG: MANUAL PICKUP OF AP AT LOCATION B FOLLOWED BY MECHANICAL TILLING WITH THE RISING TIDE USE SARES TO RECOVER MOBILIZED OIL FOLLOWED BY BIO.

LOCATIONS E+I - MANUAL PICKUP OF AP ALSO LOCATIONS D+C

FOSC: _____

TAG APPROVAL DATE: July 2 1991

FOSC APPROVAL DATE: _____

ADEC

FOSC

EXXON

USCG

NOAA

TEAM NO. A/1 Redoubt State #1SEGMENT BP004SUBDIVISION ADATE 06.13.91

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	ILOR	OF	TR	NO					S	UI	MI	LI		
6	15		X					5-12	Y	-	N			X		PC-PC	Location B
7	25		X					10-18	Y	-	N		X			P-PG	" "
8	45		X					25-27	Y	-	N		X			P-PGC	" "
9	25		X					10-20	Y	-	N		X				" "
10	8	X	X					5-8	Y?	-	N		X			P-PB	" "
11	30						X	-	Y	-	N		X			PC-PCG	" "
12	9	X	X					4-6	Y?	-	N		X			P-PC	" "
13	30	X	X					8-23	Y	-	N		X			PG-PG	" "
14	20		X					6-11	Y	-	N		X			P-PG	" "
15	20		X					5-12	Y	-	N			X		PC-PC	" "
16	18						X	-	Y	-	N			X		PCB-PC	Location C
17	20						X	-	Y	-	N			X		PG-PG	" "
18	40						X	-	Y	-	N		X			P-PGC	Location D
19	20						X	-	Y	-	N		X			P-PGS	" "
20	35						X	-	Y	-	N		X			P-PGS	" "
21	20						X	-	Y	-	N		X			P-PGS	" "
22	10						X	-	Y	-	N			X		CP-PSM	" "
23	15						X	-	Y	-	N			X		CP-GSMC	" "
24	10		X					0-2	Y	-	N			X		PC-SM	surface oil
25	10	X	X					3-6	Y	-	N		X			PC-PSM	
26	12	X	X					3-7	Y	-	N		X			P-PGSM	
27	35						X	-	Y	-	N	X	X			PG-GP	
28	10		X					0-5	Y	8	R,B		X	X		CPG-GPS	surface oil
								-									
								-									
								-									
								-									

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

OG COMMENTS:

TO BE IN THE PROCESS OF HARDENING INTO AN ASPHALT TARMAT
 NE ORIENTATION OF SEGMENT SEEMS TO HAVE PROVIDED FOR
 HEAVY IMPACT IN 1989 AND SEDIMENTS SEEM TO BE HOLDING
 OIL.

RECOMMEND MANUAL REMOVAL AP/MS/TB AS WELL AS OP/HOR
 LENS. IF SUBSURFACE REMOVAL BECOMES IMPRACTICAL, SHOULD CONTINUE
 WITH TILLING, WITH CONTAINMENT. ACCESSIBILITY NO PROBLEM

- SHOULD CONSIDER SURVEY OF REMAINDER OF SEGMENT (CLEAR EYE
 CONSTRAINT). MOSTLY VERTICAL SHORELINE REMAINS, BUT A COUPLE
 OF POCKET BEACHES EXIST.

PAGE 1 OF 1

BIO _____

SUBDIVISION A

LANDMANAGER L. Carlson for APNR

DATE 06 113 191

USCG/NOAA _____

ENERGY LEVEL: ☐ H ☒ M ☐ L

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

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

EST. OIL CATEGORY LENGTH: W_____m M_____m N_____m VL_____m NO_____m US_____m

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

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

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

SURVEYED BEACHES BETWEEN ANADROMOUS STREAMS NOT SURVEYED DURING NA-5CAP. DID NOT SURVEY NORTH END OF SLEIGHT DUE TO EAGLE CONCENTRATION. SURVEYED AREAS ENCOMPASSED ANADROMOUS STREAMS 226-20-16392, 226-20-16393 AND 226-20-16397. ASPIRANT LOCATED CONTINUOUS PLANTS ALONG UFFZ, AS WELL AS AN ASSOCIATED SUBSURFACE LENS OF OIL AND GAS NEAR THE SURFACE. LENS APPEARS

MAYSAP SHORELINE OILING SUMMARY

PAGE OF

TEAM NO. M/V Renown - State #1

SEGMENT BP004

OG

BIO M. Hall

SUBDIVISION A

EC J. Vincent, J. Matthews LANDMANAGER L. Carlson for ADNR

DATE 6/24/91

CON USCG/NOAA

TIME 06:03 to 13:00

TIDE LEVEL +0.1 ft. to +5.0 ft.

ENERGY LEVEL: ☒ H ☒ M ☐ L

SURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: m

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

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

LOC	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE V H M L	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
H			T								RBC	M	1	440		X			few patties picked up
B				T							BC	M	2	10		X			grass
G				T						P	P.C.R	M	3	40	X	X			oiled vegetation & logs in stream bed
H				T						T		M							see site map
F	P	P									PR	M	6	8		X			oiled grass & vegetation

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

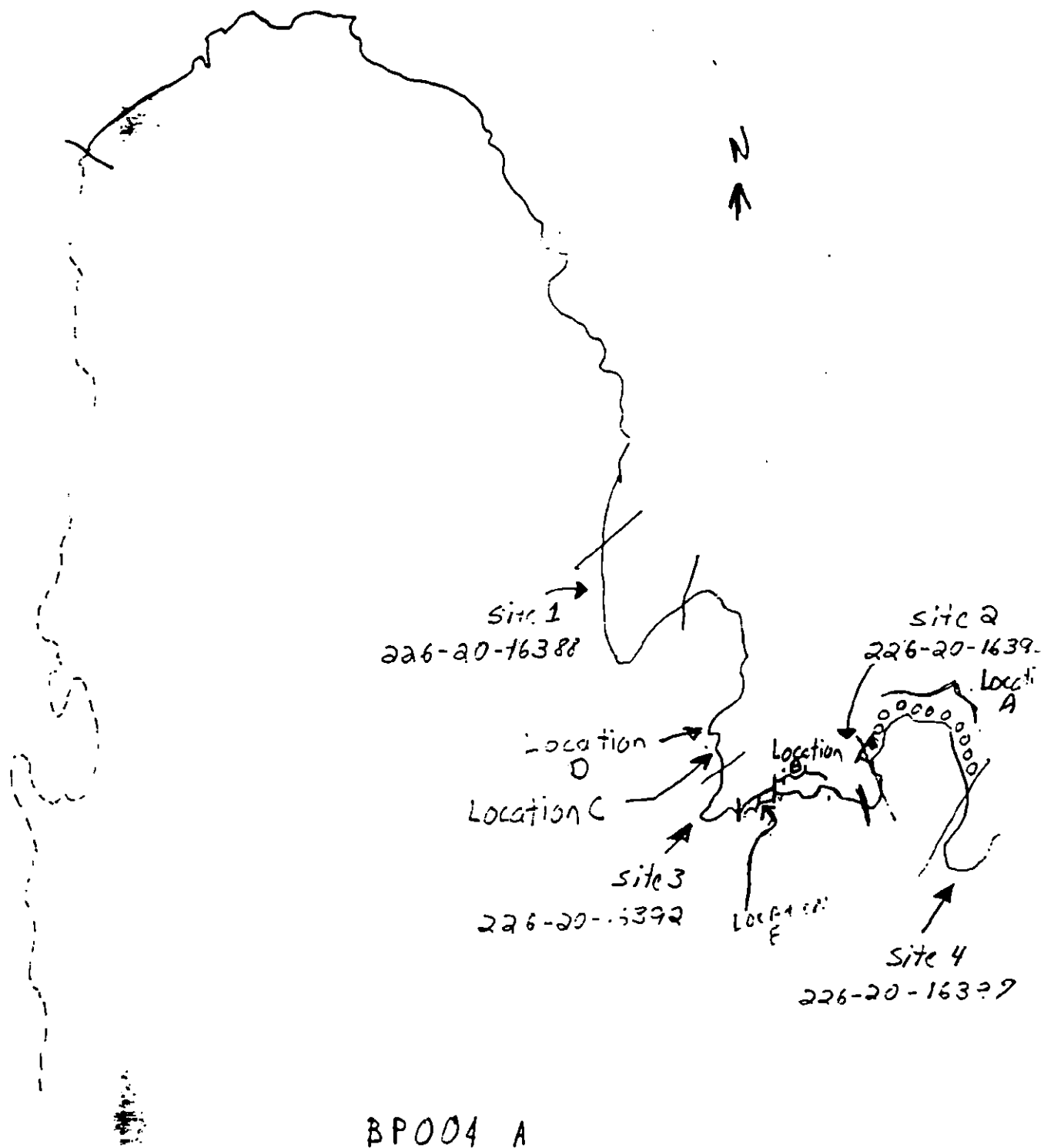
PHOTO ROLL # MAYSAP-

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		
29	20		X						15-17	V	-	N		X			P-P6	pit #1 on sketch
30	30							X	-	V	-	N	X				P-P6	" " 2 " "
31	25							X	-	V	-	N		X			P-P6	" " 3 " "
32	25							X	-	V	-	N			X		P-P6	" " 4 " "
33	25						X		18-22	V	-	N		X			P-P6	" " 5 " "
34	25					X			18-20	V	-	N		X			P-P6	" " 6 " "
35	30							X	-	V	-	N		X			P-P6	" " 7 " "
36	60							X	-	V	-	N		X			P-P6	" " 8 " "

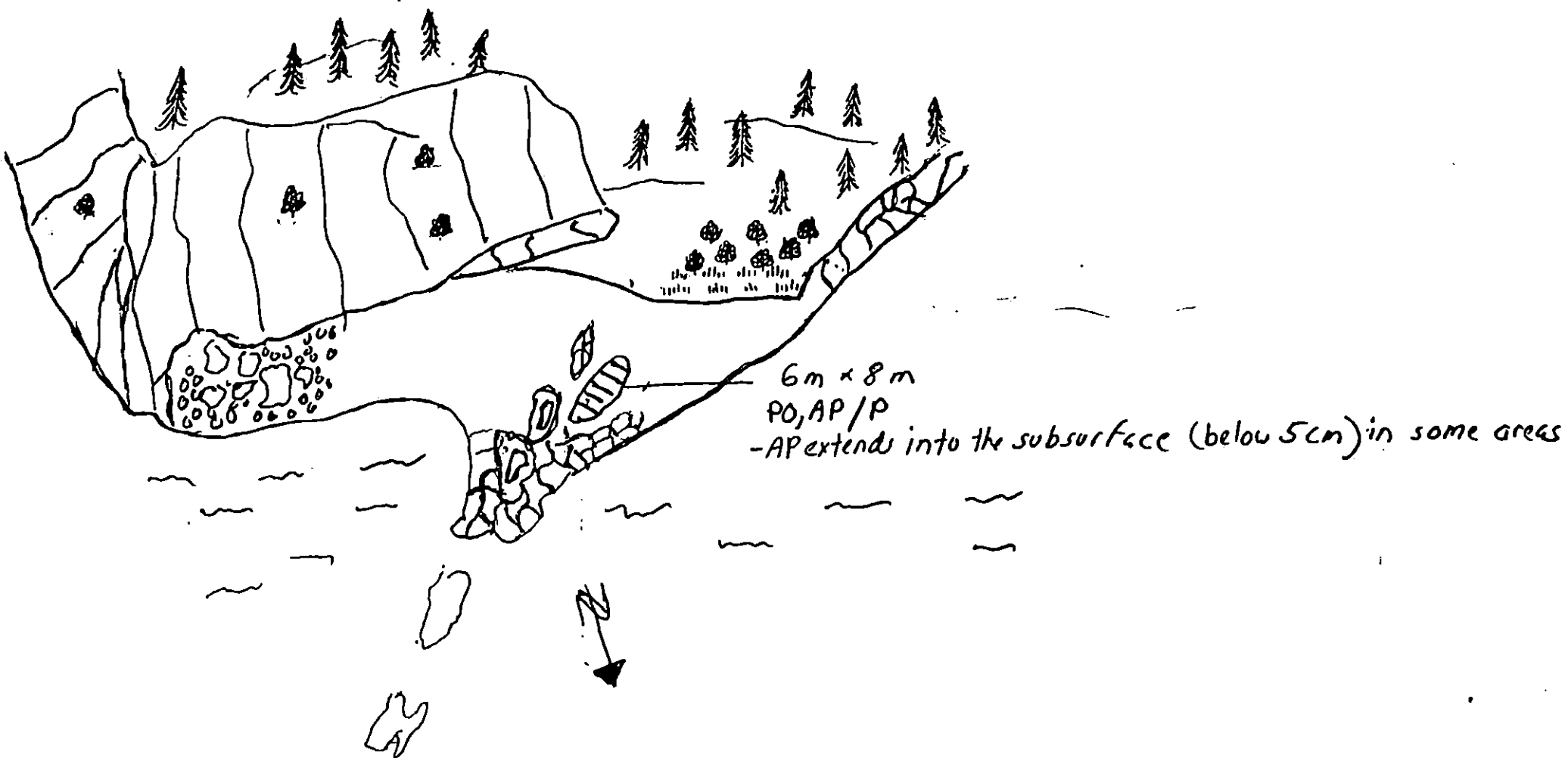
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS: This survey involved the assessment of those areas unsurveyed by the Renown Crew on 6/13/91. The areas of significant oiling in this survey are found at site 6 (subsurface) and site I (surface oiling & easily accessible). For detailed information, see pit data and sketch map.



Note: Sites 1, 2, 3 & 4 were surveyed during the 1991 Maysap
for anadromous stream portions only
6/13/91.
Aly Parker

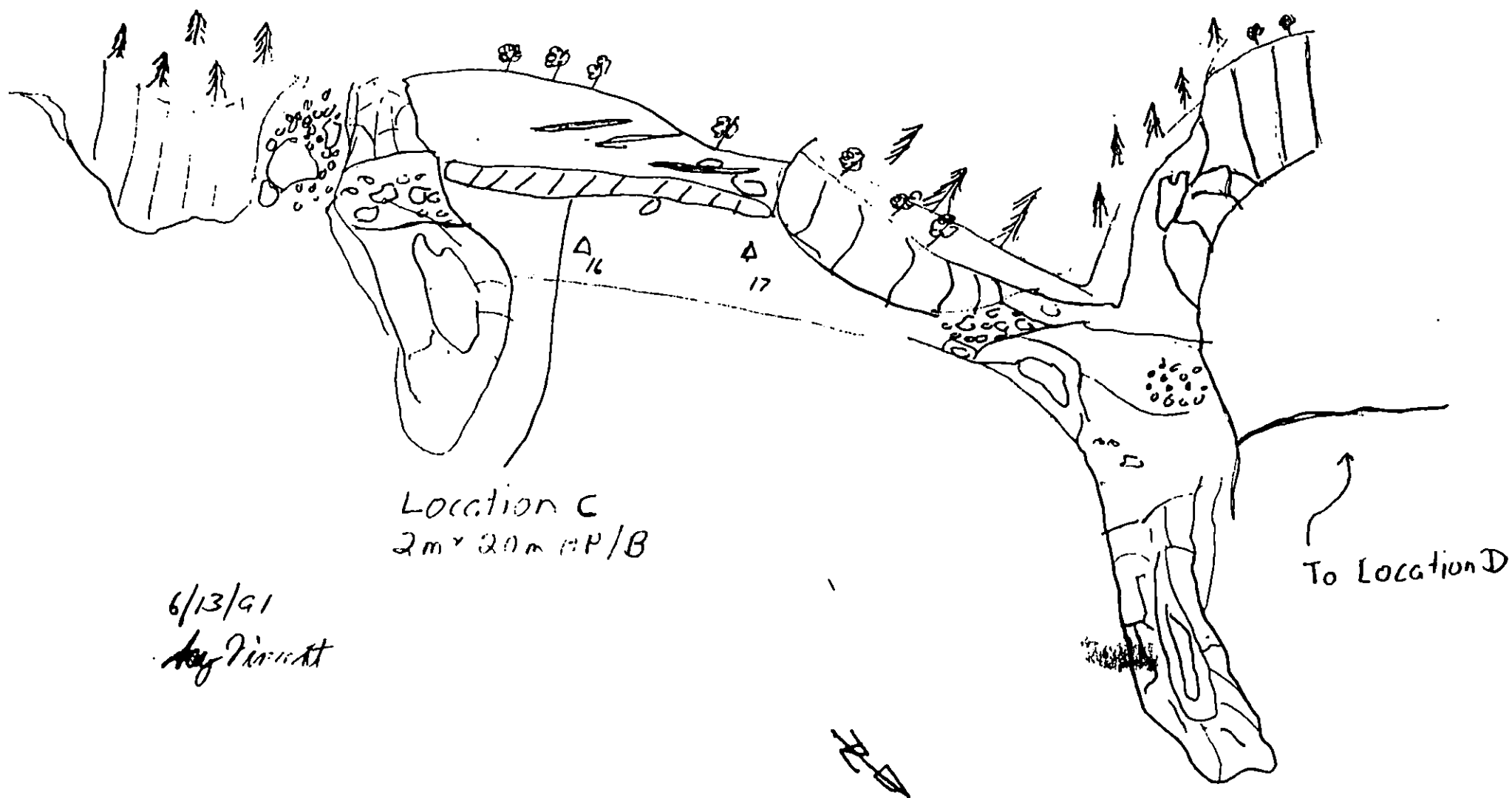
BP004A
Site I



6/24/91
Aly Finest



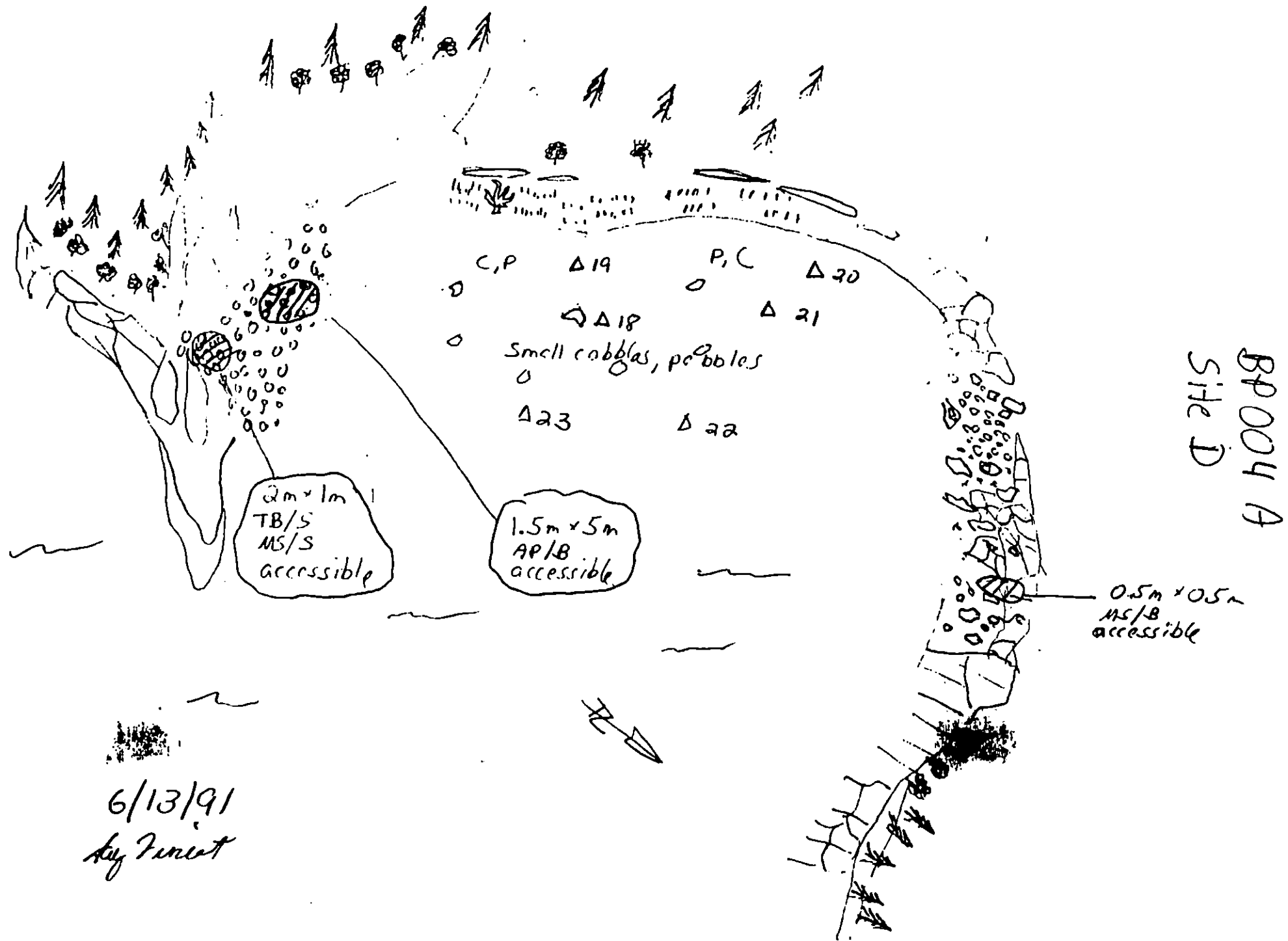
BP 004 A
Location C



Location C
2m x 20m BP/B

6/13/91

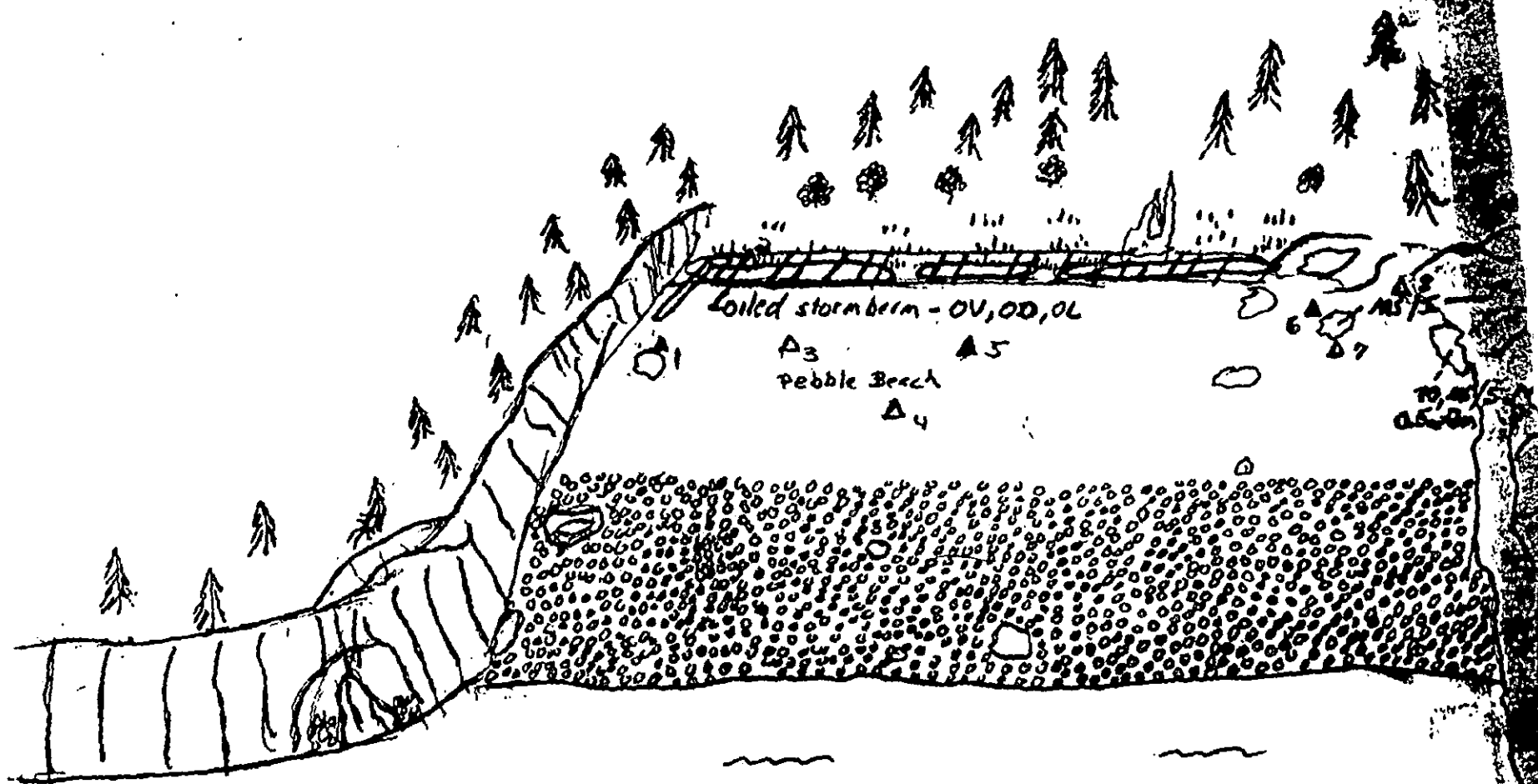
Ray Vincent



BP004 A
Site D

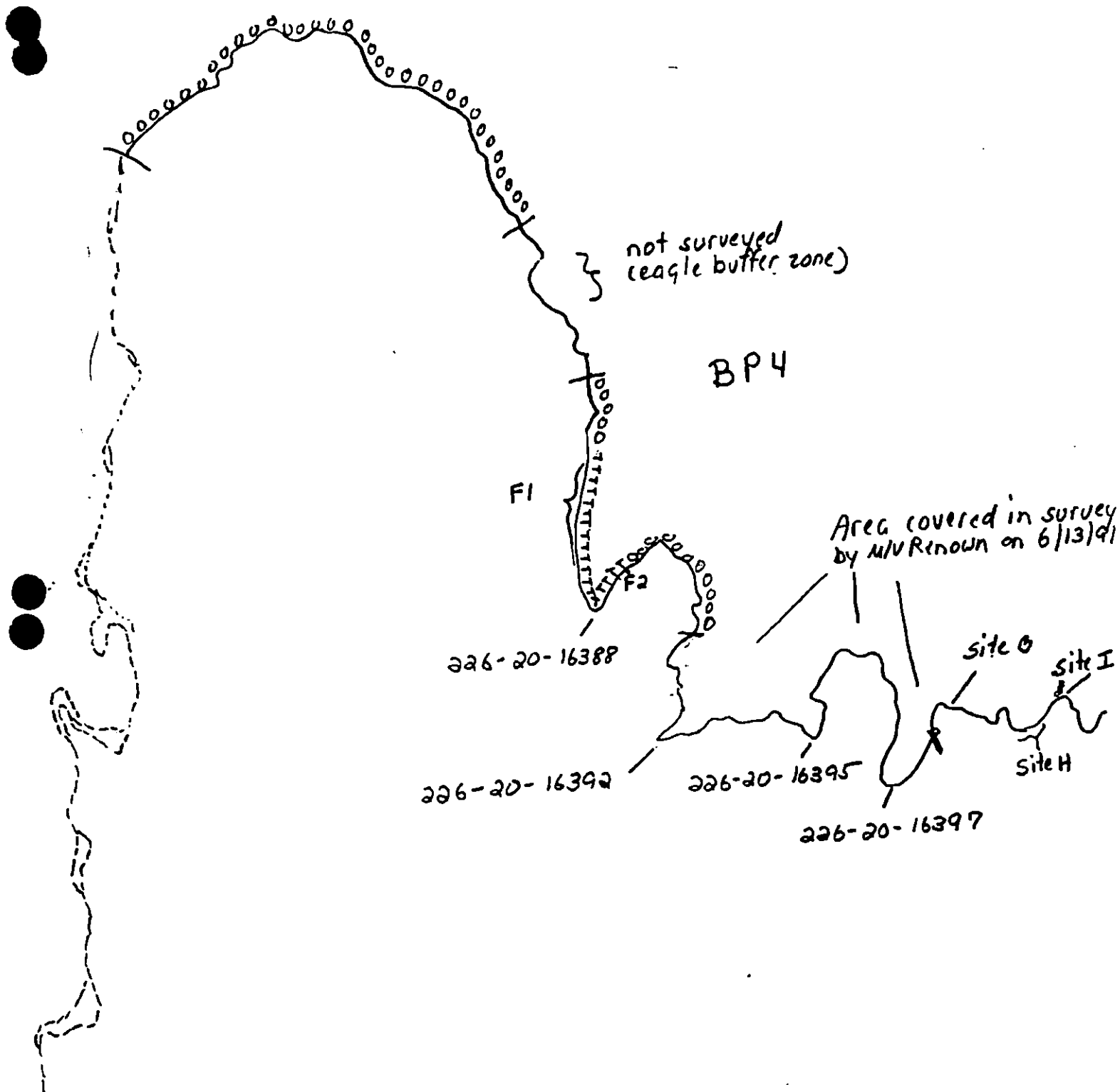
6/13/91
by T. Hunt

BP OIL A Site G



6/24/91
Ray Vincent

Extended Pit#	Pit#	Depth	Oiled Interval	Oil type
29	1	20	15-18	HOR
30	2	30	—	NO
31	3	25	—	NO
32	4	25	—	NO
33	5	25	18-22	OP
34	6	25	18-20	LOR
35	7	30	—	NO
36	8	60	—	NO



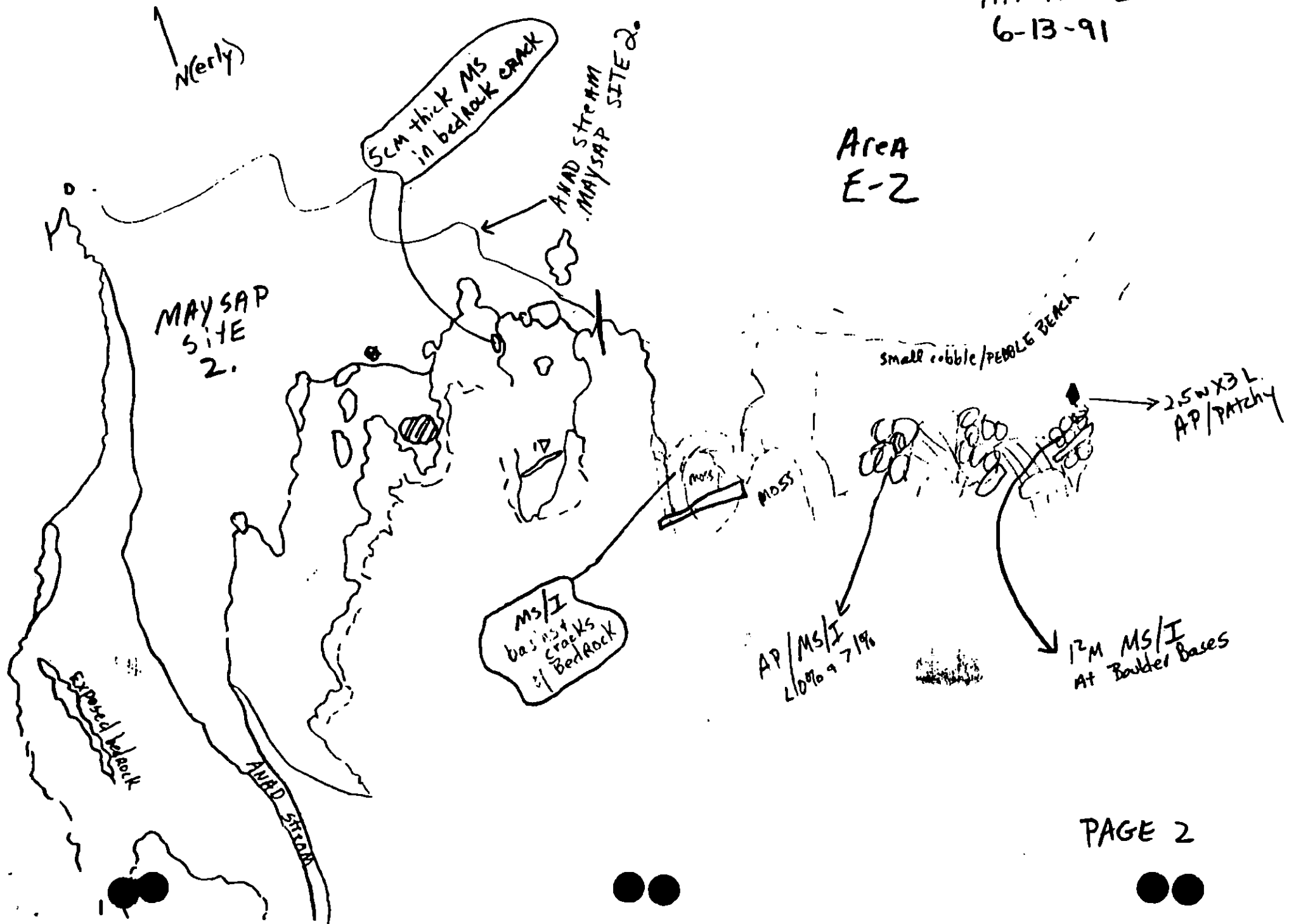
xxxx Wide
 ●/// Medium
 ●--- Narrow
 TTTT Very Light
 0000 No oil.

BP-4

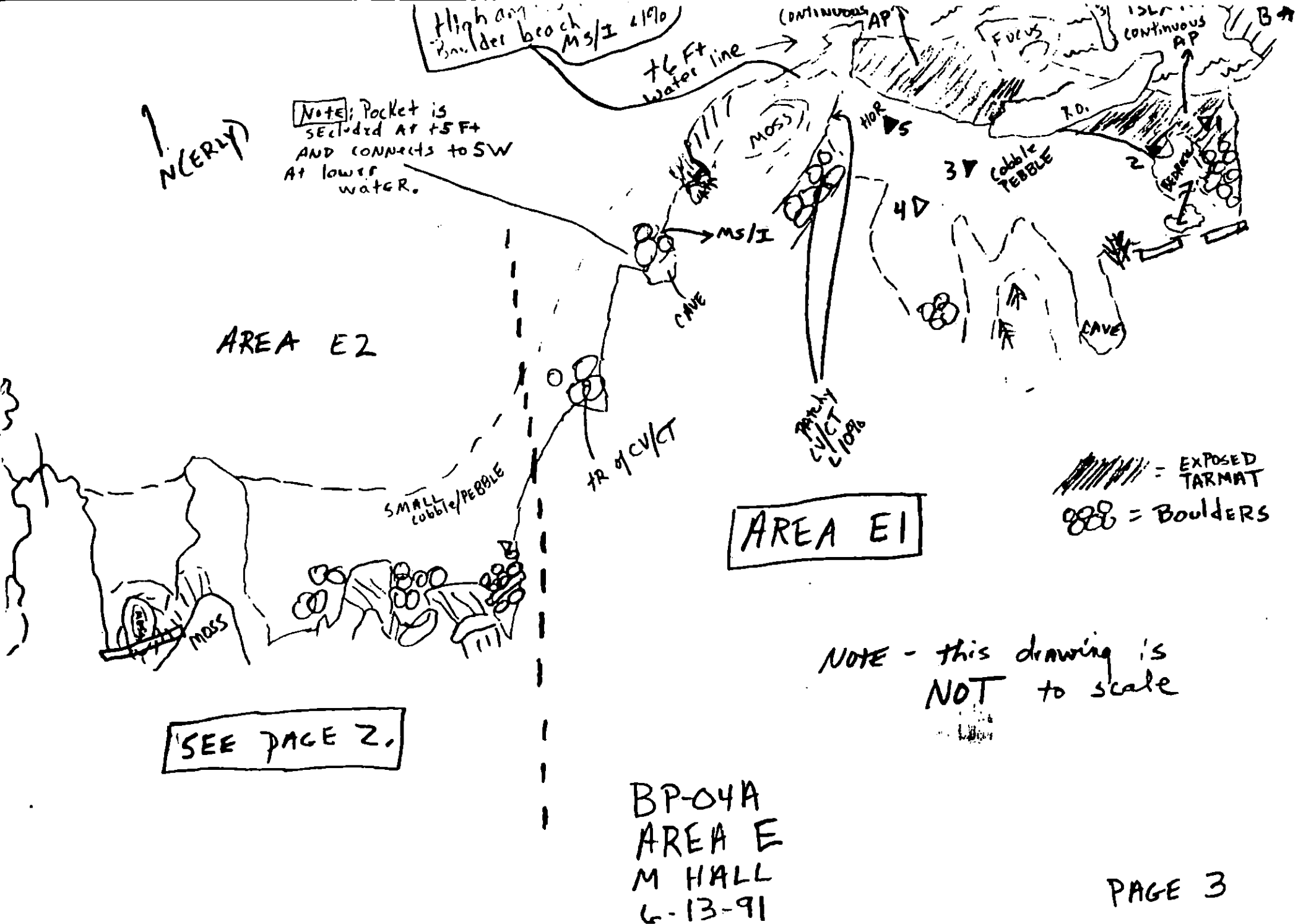
0 457 914



BP-04A
M. HALL
6-13-91



PAGE 2



SUPPLEMENTAL

1991 MAYSAP EVALUATION

SEGMENT: BP 04 SUB: A REGION: PWS SURVEY DATE: EXXON SURVEY-6
ADEC SURVEY-6

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) _____

Ecological/Constraints (see page two for details) _____

ARCHAEOLOGICAL CONSTRAINTS:

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

RECOMMENDATIONS:

Timothy A. Smith for SHPO July 2, 1991

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

COMMENTS:

INITIAL: _____

TAG: MANUAL PICKUP OF AP AT LOCATION B FOLLOWED BY MECHANICAL TILLING WITH THE RISING TIDE USE SARES TO RECOVER MOBILIZED OIL FOLLOWED BY BIO.

LOCATIONS E + I - MANUAL PICKUP OF AP ALSO LOCATIONS D + C.

FOSC: _____

TAG APPROVAL DATE: July 2 1991

FOSC APPROVAL DATE: _____

ADEC John Bane

FOSC _____

EXXON Beal

USCG T.M. Mung

NOAA Ray

TEAM NO. M/V Rendown State #1SEGMENT BP004SUBDIVISION ADATE 06.13.91

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	AP	LR	OF	TR	NO					S	UI	MI	LI		
6	15		X						5-12	Y	-	N			X		PC-PC	Location B1
7	25		X						10-18	Y	-	N		X			P-PG	" "
8	45		X						25-27	Y	-	N		X			P-PGC	" "
9	25		X						10-20	Y	-	N		X				" "
10	8	X	X						5-8	Y?	-	N		X			P-PB	" "
11	30							X	-	Y	-	N		X			PC-PCG	" "
12	9	X	X						4-9	Y?	-	N		X			P-PC	" "
13	30	X	X						8-23	Y	-	N		X			PG-PG	" "
14	20		X						6-11	Y	-	N		X			P-PG	" "
15	20		X						5-12	Y	-	N			X		PC-PC	" "
16	18							X	-	Y	-	N			X		PCB-PC	Location C
17	20							X	-	Y	-	N			X		PG-PG	" "
18	40							X	-	Y	-	N		X			P-PGC	Location D
19	20							X	-	Y	-	N		X			P-PGS	" "
20	35							X	-	Y	-	N		X			P-PGS	" "
21	20							X	-	Y	-	N		X			P-PGS	" "
22	10							X	-	Y	-	N			X		CP-GSM	" "
23	15							X	-	Y	-	N			X		CP-GSMC	" "
24	10		X						0-2	Y	-	N			X		PC-SM	surface oil
25	10	X	X						3-6	Y	-	N		X			PC-PJM	
26	12	X	X						3-7	Y	-	N		X			P-PGSM	
27	35							X	-	Y	-	N	X	X			PG-GP	
28	10		X						0-5	Y	8	R,B	X	X			CPG-GPS	surface oil
									-									
									-									
									-									

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

OG COMMENTS:

TO BE IN THE PROCESS OF HARDENING INTO AN ASPHALT TARMAT
 NE ORIENTATION OF SEGMENT SEEMS TO HAVE PROVIDED FOR
 HEAVY IMPACT IN 1989 AND SEDIMENTS SEEM TO BE HOLDING
 OIL.

RECOMMEND: MANUAL REMOVAL AP/MS/TB AS WELL AS OP/HOR
 LENS. IF SUBSURFACE REMOVAL BECOMES IMPRACTICAL, SHOULD CONTINUE
 WITH TILLING, WITH CONTAINMENT. ACCESSIBILITY NO PROBLEM

- SHOULD CONSIDER SURVEY OF REMAINDER OF SEGMENT (CLEAR EYE
 CONSTRAINT). MOSTLY VERTICAL SHORELINE REMAINS, BUT A COUPLE
 OF POCKET BEACHES EXIST.

MAYSAP SHORELINE OILING SUMMARY

PAGE ____ OF ____

TEAM NO. ____

SEGMENT BP 004

OG ____

BIO M. HallSUBDIVISION ADEC J. Vincent, J. Gindles LANDMANAGER L. Carlson for APNRDATE 06/13/91

EXXON ____

USCG/NOAA ____

TIME 10:05 to 19:10TIDE LEVEL -2.0 ft. to +8.0 ft.ENERGY LEVEL: ☐ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☒ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOW

TOTAL LENGTH SHORELINE SURVEYED: ____ m

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

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

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE V H M L	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A			T			T					RPCG	H				X			
B1	P	T				P	P				PG	M	12	40		X			45 ft
B2	P	T				P	P				PGB	M	5	15		X			
C	B										CP	M	2	20		X			
D	B	S									BC	M	1.5	3		X			
E1	C	T		P	T	T					CPG	L	16	21		X	X		
E2	P	P									CBP	M	2.5	3		X			1m x 1m 45 ft & base of 3 slides.

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-____

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	HOB	MOR	LOR	OF	TR	NO	S					UI	MI	LI			
1A	20		X						5-8	N	-	N		X			PGB-PGB	Location B2	
1B		X							8-11	N	-	N		X			" "	" "	
1C			X						11-15	Y	-	N		X			" "	" "	
2A	18		X						6-8	N	-	N		X			PGB-PGB	" "	
2B		X							8-11	N	-	N		X			" "	" "	
2C			X						11-14	Y	-	N		X			" "	" "	
3	30							X	-	Y	-	N		X			P-PB	Location B1	
4	20	X	X					X	3-12	Y	-	N			X		P-PB	" "	
5	20							X	-	Y	-	N			X		CB-CP	" "	

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

OG COMMENTS:

SURVEYED BEACHES BETWEEN ANADROMOUS STREAMS NOT SURVEYED DURING
 IHA MAP. DID NOT SURVEY NORTH END OF DELTA DUE TO EAGLE CONSTRAINT
 SURVEYED AREAS ENCOMPASSED ANADROMOUS STREAMS 226-20-16392, 226-20-16393
 AND 226-20-16397. ASPHALT LOCATED CONTINUOUS RAILS ALONG U/I, AS WELL AS
 AN ASSOCIATED SUBSURFACE LENS OF OR A LENS NEAR THE SURFACE. LENS APPEARS

TEAM NO. M/V Renown - State #1

SEGMENT BP004

03 _____

BIO _____

EC J. Vincent, J. Matthews

M. Hc1

LANDMANAGER L. Carlson

for ADNRSUBDIVISION A

DATE 6, 24, 91

TIME 06:03 to 13:00

TIDE LEVEL +0.1 n. to +5.0 n.

ENERGY LEVEL: ☒ H ☒ M ☐ L

SURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: _____ m.

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

EST. OIL CATEGORY LENGTH: W____m M____m N____m VL____m NO____m US____m

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

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

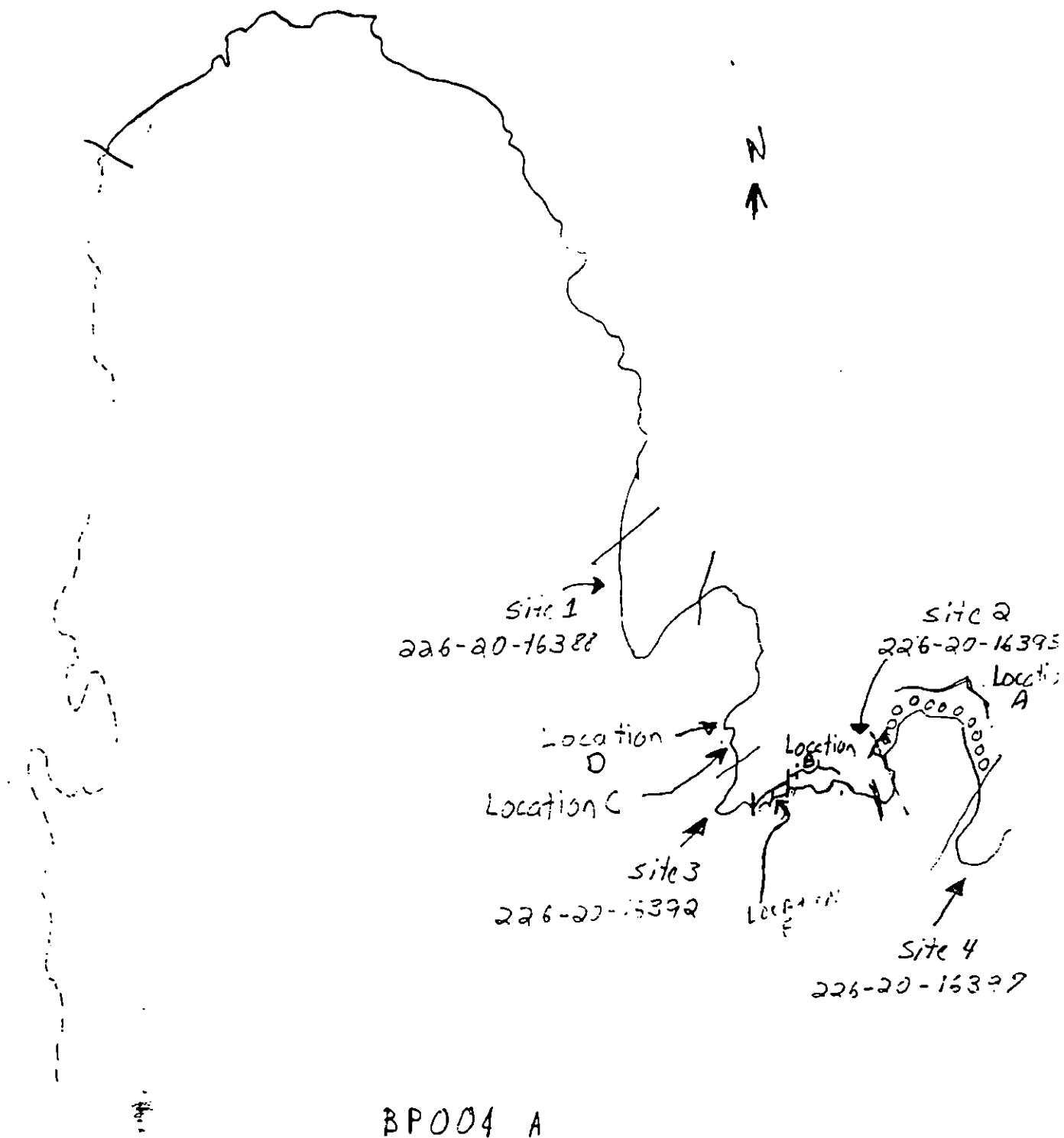
PHOTO ROLL # MAYSAP-

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		
29	20		X						15-18	Y	-	N		X			P-P6	pit #1 on sketch
30	30							X	-	Y	-	N	X				P-P6	
31	25							X	-	Y	-	N		X			P-P6	
32	25							X	-	Y	-	N			X		P-P6	
33	25					X			18-22	Y	-	N		X			P-P6	
34	25				X	X			18-20	Y	-	N		X			P-P6	
35	30							X	-	Y	-	N		X			P-P6	
36	60							X	-	Y	-	N		X			P-P6	

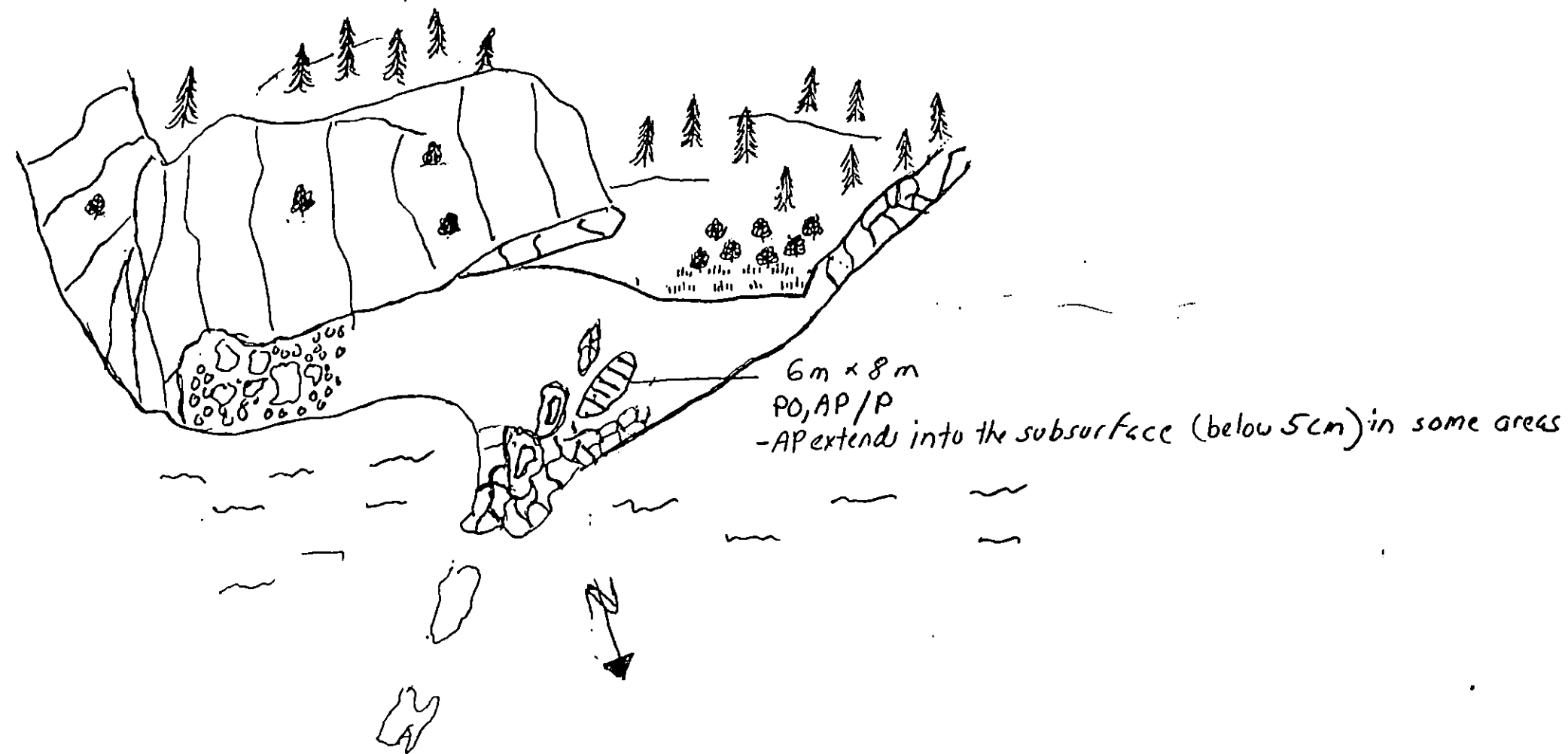
SHEEN COLOR: B = BROWN: R = RAINBOW: S = SILVER: N = NONE

OG COMMENTS: This survey involved the assessment of those areas unsurveyed by the Renown Crew on 6/13/91. The areas of significant oiling in this survey are found at site 6 (subsurface) and site I (surface oiling & easily accessible). For detailed information, see pit data and sketch maps.



Note: Sites 1, 2, 3 & 4 were surveyed during the 1991 Maysap
for anadromous stream portions only
6/13/91.
Aly Finkler

BPO04A
Site I



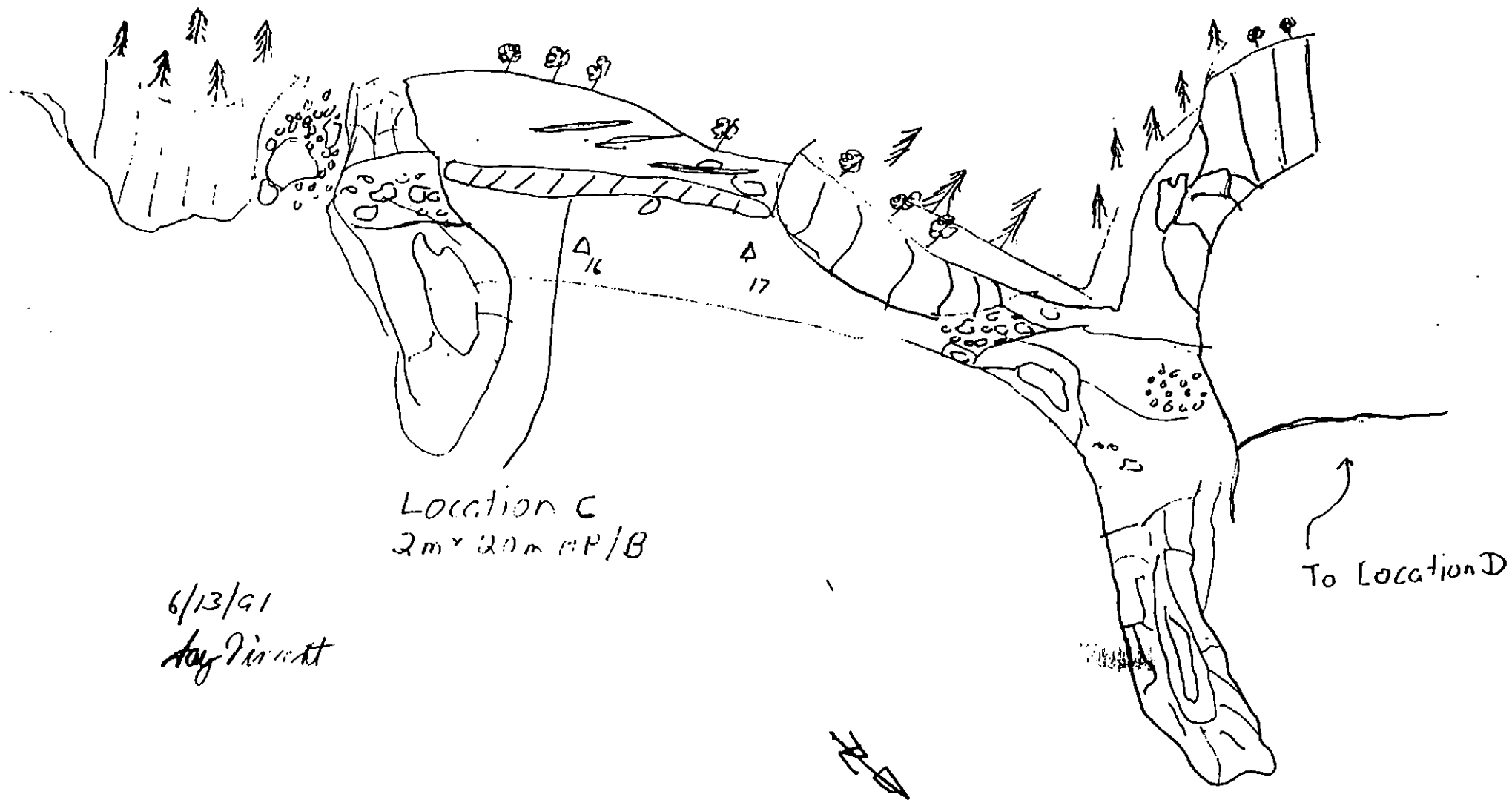
6/24/91
Amy P. Smith



BP 4 A
Location B

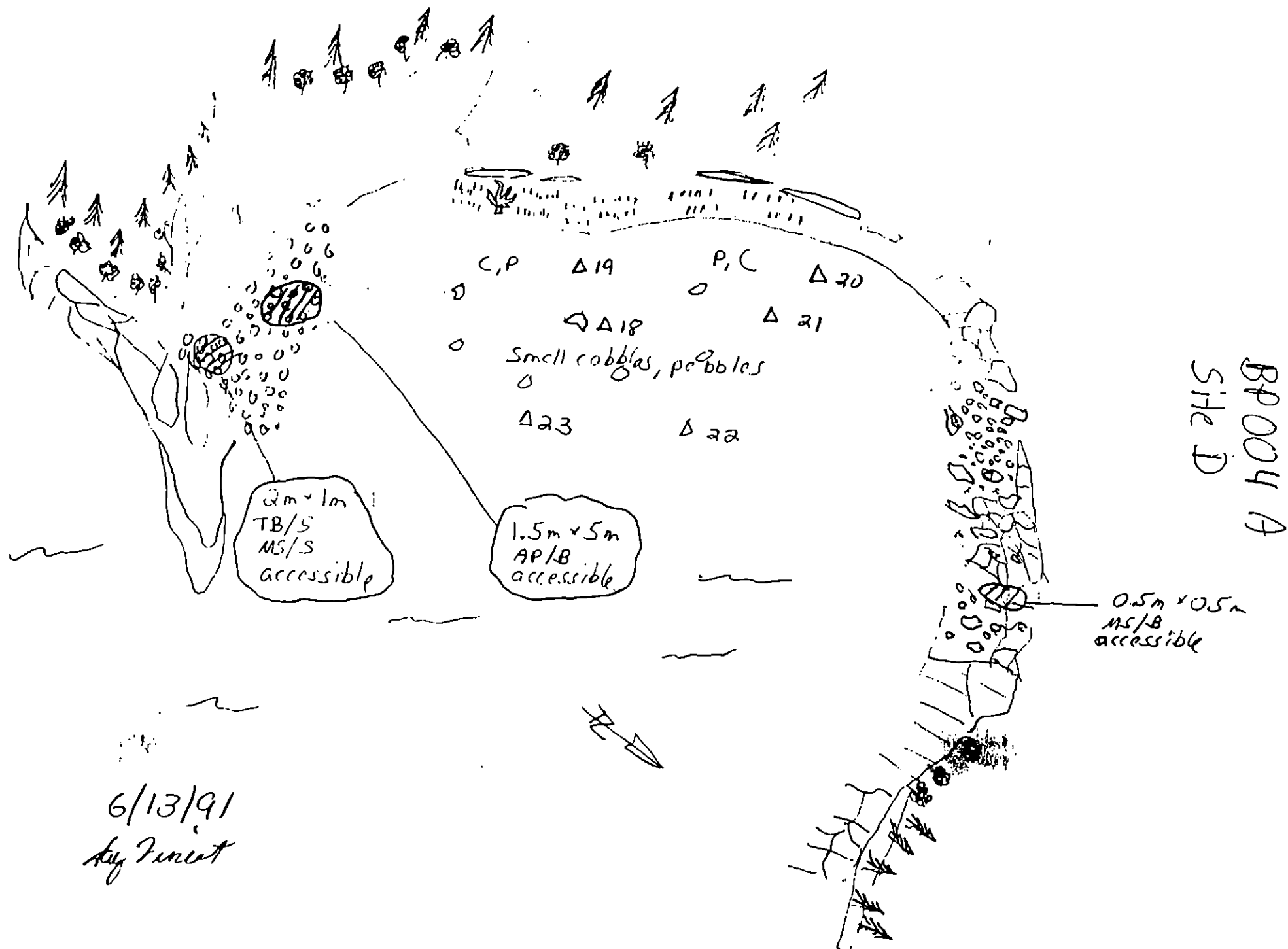
6/13/91
Day 7/10/91

BP 004 A
Location C

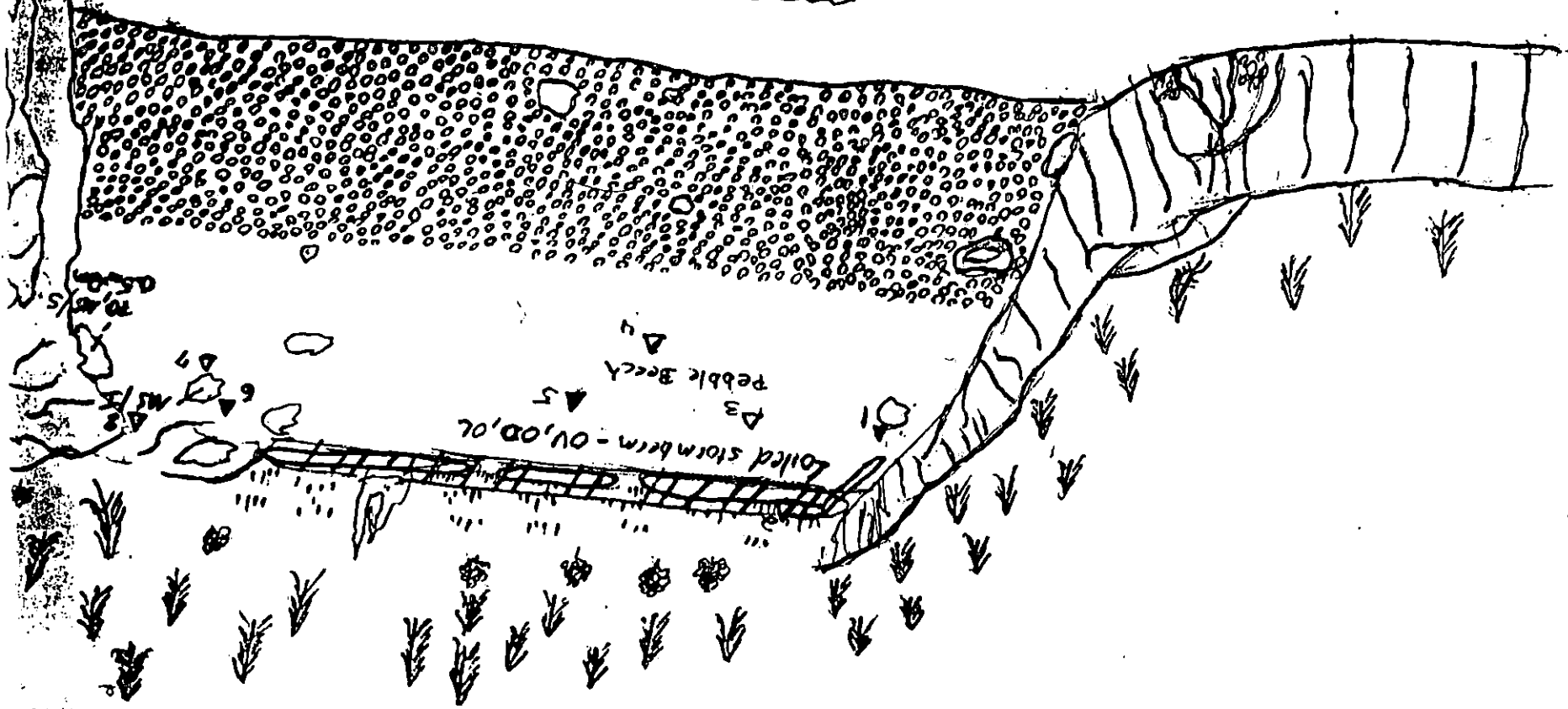


Location C
2m x 20m BP/B

6/13/91
Aly Vincent



BRUAY A
SIT 6



6/24/91
Ray J. J. J.
Extended Pits
29
30
31
32
33
34
35
36

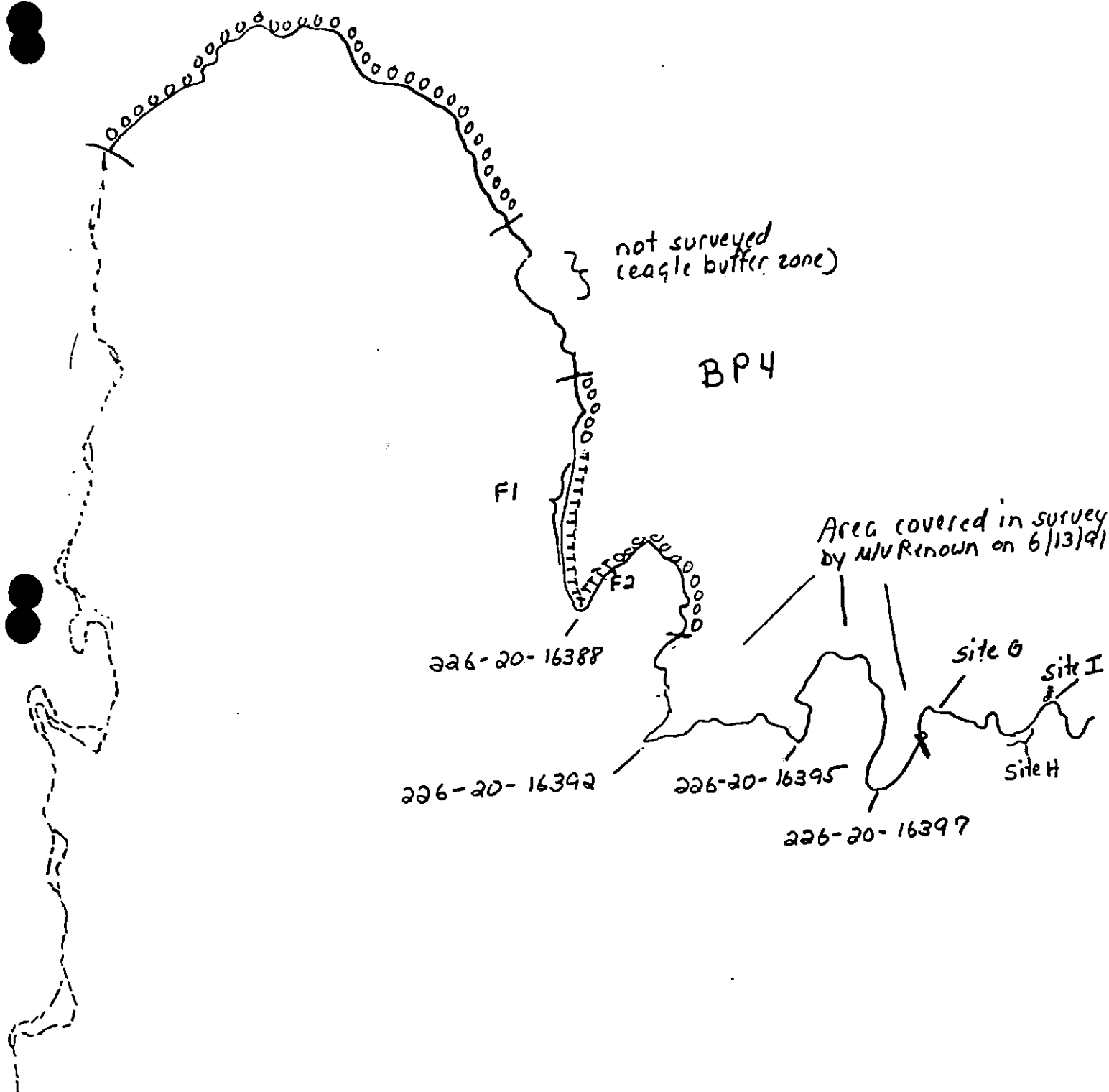
Pits
1
2
3
4
5
6
7
8

Depth
20
30
35
45
55
60

Oiled Interval
15-18
18-22
28-30

O.I. Type
HOR
NO
NO
NO
NO
NO
NO
NO
NO





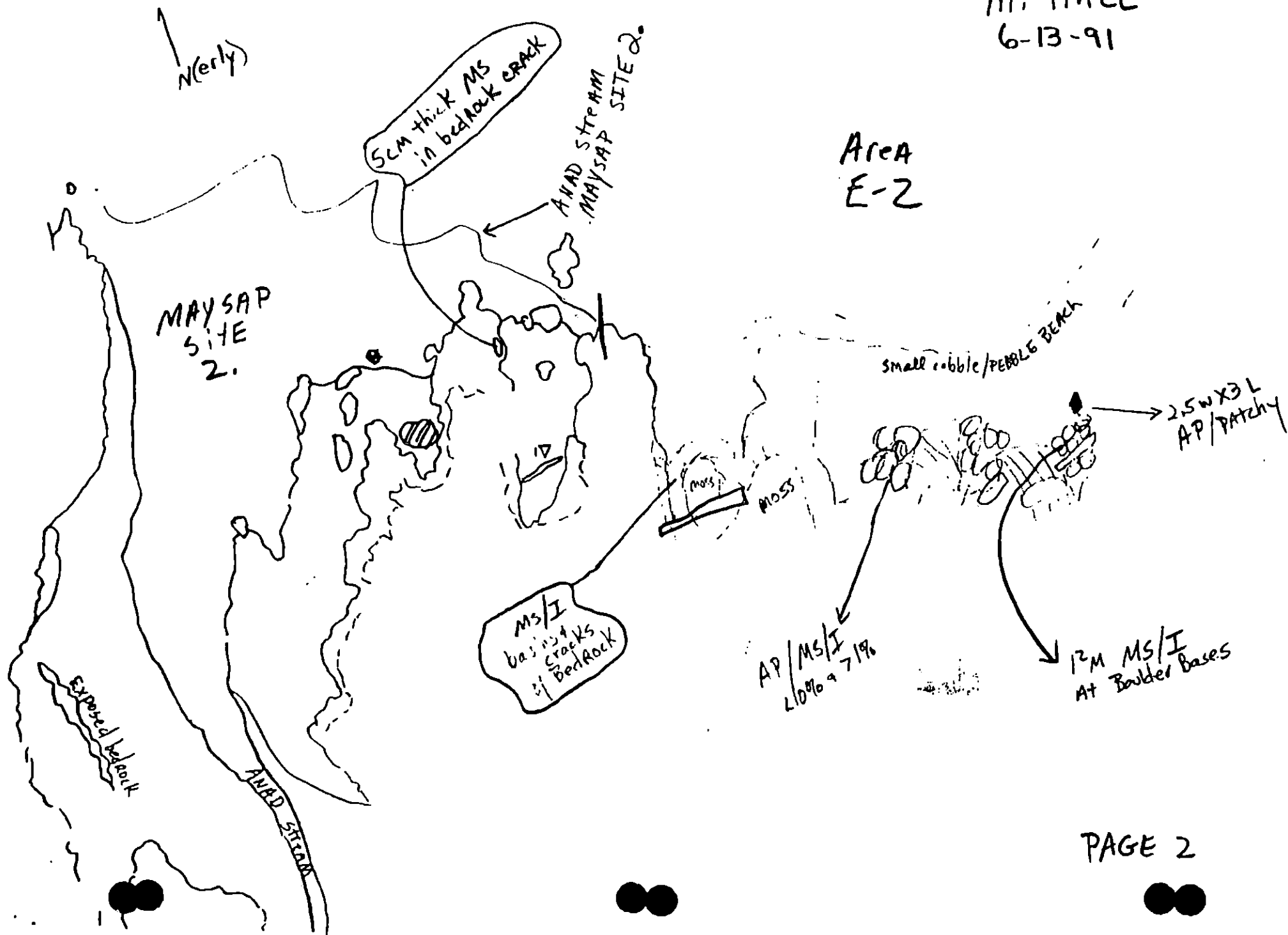
XXXX Wide
 // Medium
 - Narrow
 TTTT Very Light
 0000 No Oil

BP-4

0 457 914



BP-04A
M. HALL
6-13-91





5

2/10/98

True

AREA E2

✓ N/1000

46 ft line

37883d
2/9907

(continuous AP)

1991 MAYSAP EVALUATION

SEGMENT: BP 004 SUB: A REGION: PWS SURVEY DATE: 5/5/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Rachel Dan Oan Date: 5/21/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL:

TAG:

FOSC: DUE TO PROXIMITY TO ANADROMOUS
FISH STREAMS + REPORTED SUBSISTENCE FISHING
OIL IN FORM OF ASPHALT + MOXIE IN SITES 2 + 4
SHALL BE REMOVED/COLLECTED - RCD

TAG APPROVAL DATE: MAY 21 1991 FOSC APPROVAL DATE: 5/21/91

ADEC [Signature]

EXXON [Signature]

USCG [Signature]

NOAA [Signature]

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

→ The state will evaluate the need
for further treatment

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

ADEC

NAME _____ SIGNATURE _____

☐ NTR

EXXON

NAME _____ SIGNATURE _____

☐ NTR

LANDMANAGER

NAME CHARLES SELANOFF OF Chenega Bay SIGNATURE Charles Selanoff

☐ NTR Treatment recommended

a lot of oily debris, rocks and pebbles. This area can be manually worked over with shovels, rakes and tilled by hand. Also this area is consistantly oiled in spots but with a lot of manual work this area can be greatly improved. Heavily used subsistence area.

USCG/NOAA

NAME _____ SIGNATURE _____

☐ NTR

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 6 SEGMENT BP 004 SUBDIVISION A DATE 5/5/91

ADEC/ADF46

NAME Aimee Weseman

SIGNATURE Aimee Weseman

☐ NTR ☒ Treatment Recommended. 4 Anad fish streams Resource Uses-Commercial Fishing & Recreation. Survey was rushed due to incoming tide & full extent of oiling may not have been documented.

ASC# 226-20-16397-site 4 = This beach stream area still contains AP/HSOR deposits which should be manually removed & tilled. Areas of concern are in the vicinity of sites C, D, E & F. Some PU occurred but not enough.

ASC# 226-20-16395-site 2 = due to short survey & injury, ADF46 monitor unable to determine extent of oiling & how much was removed. A quick inspection of area with removal of AP sediments & or tilling is in order.

EXXON

NAME Scott A. Nauman

SIGNATURE Scott A. Nauman

☒ NTR

All four streams on this subdivision were surveyed. No subsurface oil was found. AP/SOR was either picked up or broken up by the survey team. This subdivision and the four streams are in very good shape - no further work is warranted.

LANDMANAGER

NAME _____ OF _____ SIGNATURE _____

☐ NTR

USCG/NOAA

NAME CWO SPURR / R. Hoff

SIGNATURE R. Hoff

☒ NTR This segment with 4 anadromous streams had little remaining oil. Some asphalt patches were found, and these were mostly picked up or broken apart. The small areas of remaining coat or oil in crevices of boulders is largely inaccessible. The segment requires no further treatment.

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 2

TEAM NO. 6

OG D.I. LITTLE

BIO T. SCHROEDER

SEGMENT BP-004

ADEC A. WESCHMANN / T. CROWE

LANDMANAGER C. SELANOFF for CVC

SUBDIVISION A

EXXON SCOTT NAUMAN

USCG/NOAA CWO SPURR / R. HOFF

DATE 05 / 05 / 91

TIME 14 : 30 to 17 : 40

TIDE LEVEL 3 1/2 ft. to 7 ft.

ENERGY LEVEL: ☐ H ☒ M ☒ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: _____ m

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

EST. OIL CATEGORY LENGTH: W _____ m M _____ m N 3.5 m VL 97 m NO 2000 m US 6187 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE V H M L	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A		P									boulder	VH	0.5	1	X				80% PU moss on bd.
B				P							pcg	L	0.5	5		X			heavy (most PU). site 3
C		P									rock	H	2	3	X				in moss in bedrock site 4
D	S										pg	M	10	30		X			PU " "
E	S										g (frag)	M	2	10	X				PU " "
F	S										pg	L	2	15		X			broken up " "
G		S									B	H	3	10	X	X			in rock crevices " "
H					T	T					BC	H	1	10	X	X			" " site 1
J				T							pg	L	1	20		X			PU > 50% site 1
K	T				T						pcg	M	1	15	X	X			site 1
L					S						b rock	M	0.1	0.1	X	X			SITE 2 site 2
M					S						b rock	M	0.5	1		X			" "
N	P												1	2		X			PU (all) " "
O	S			S							pg	M	0.5	20		X			Broken up HSOR " "
P	B			B							pgc	L	0.1	0.1			X		Broken up HSOR " "
Q					B						rock	HV	0.5	0.5		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		
1	20							X	—	Y	10	N			X		gc/g	Site 3
2	25							X	—	Y	—	N			X		pg/g	" "
3	25							X	—	Y	—	N		X			gp/gs	site 4
4	30							X	—	Y	—	N			X		pc/gp	" "
5	20							X	—	Y	—	N			X		p/gsp	" "
6	15							X	—	Y	—	N			X		gp/gp	site 1
7	25							X	—	Y	—	N		X			gp-gs	" "
8	25							X	—	Y	—	N			X		p-gp	" "
9	30							X	—	Y	—	N		X			pg-gp	" "

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

OG COMMENTS:

Surface oil was found in very sporadic patches, usually in the UITZ and occasionally in the SUTZ., however, much was picked up or broken up in situ/stranding (L) SOR at most. No intact sediments were found in the MITZ which were not treated. By wading and puddling LITZ sediments underwater, it is unlikely that oil is present there because no oil sheens were seen.

No subsurface oil was observed in a total of eleven pits.

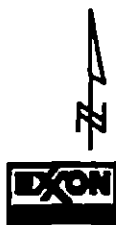
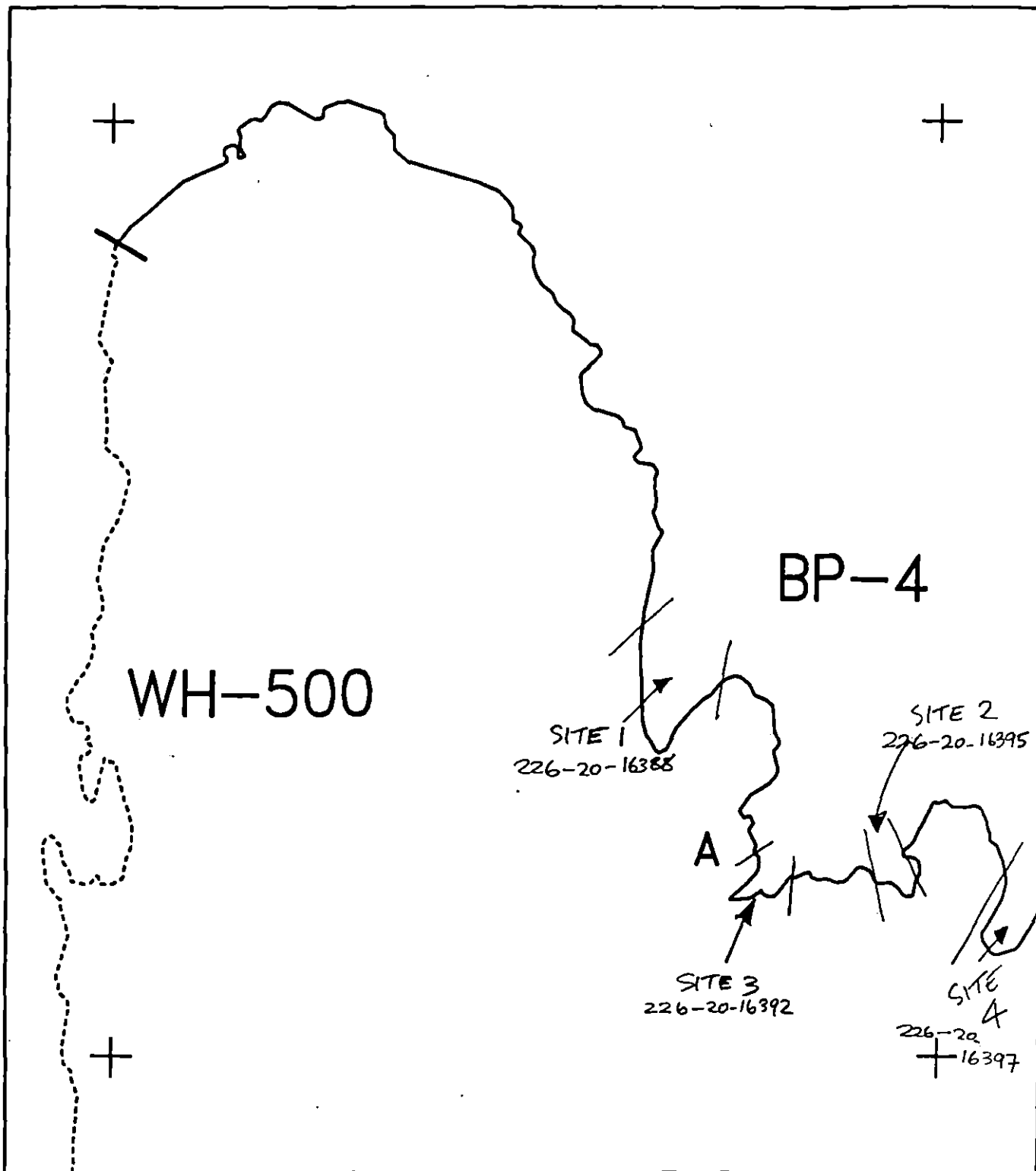
revised 5/10/91 CG
revised 5/1

PAGE 2 OF 2

DATE 05 / 05 / 91

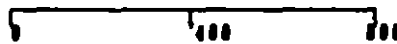
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

reviewed 5/10/91 LG
ET reviewed 5/11



BP004 A

METERS



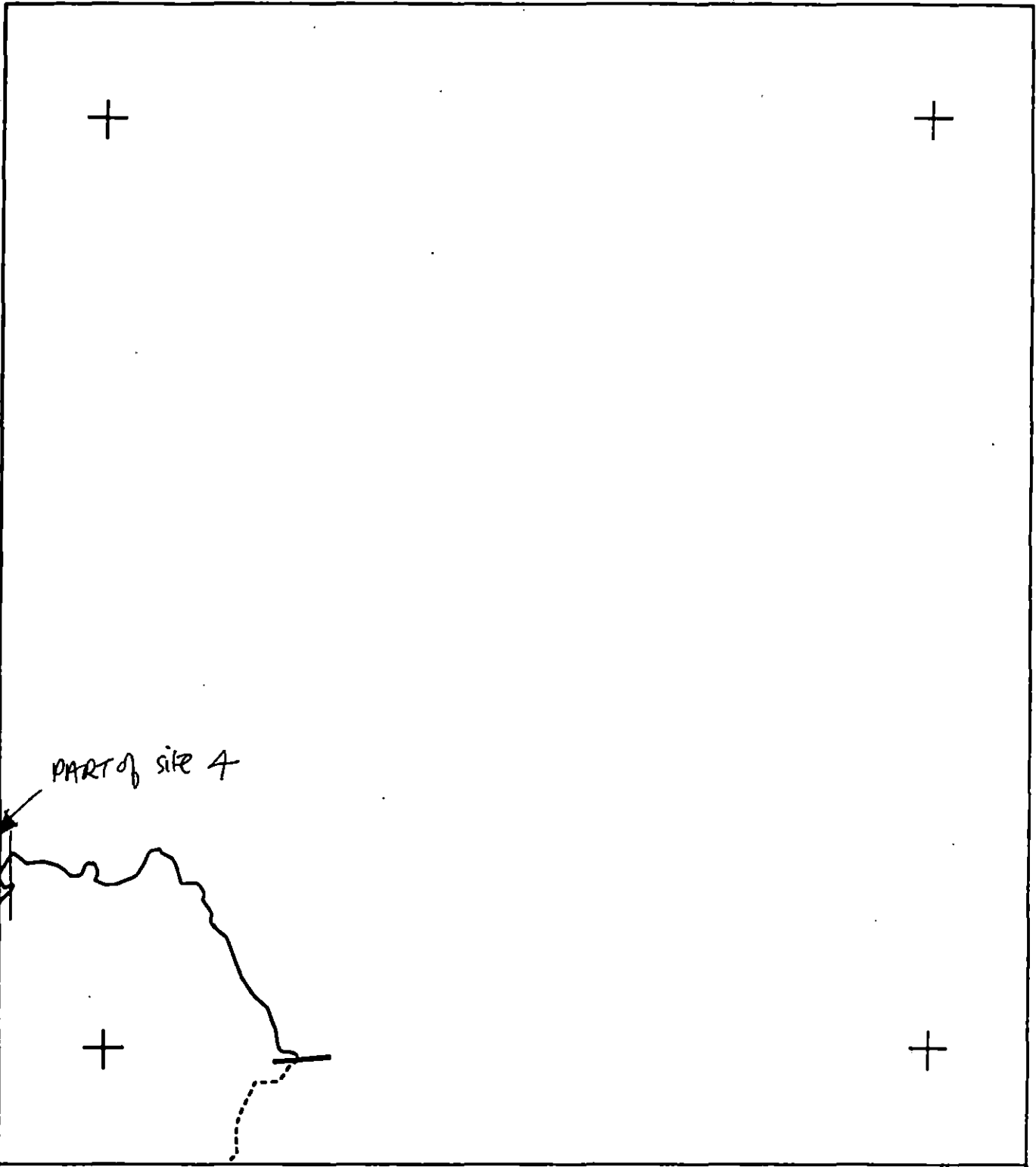
AK State Plane Zone 4
8300400

Subdivision Field Map

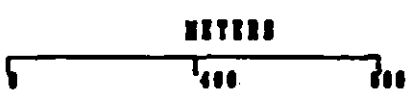
Map Key: PWSBP004Aa

Name: DAVID LITTLE

Date: 05/05/91



BP004 A



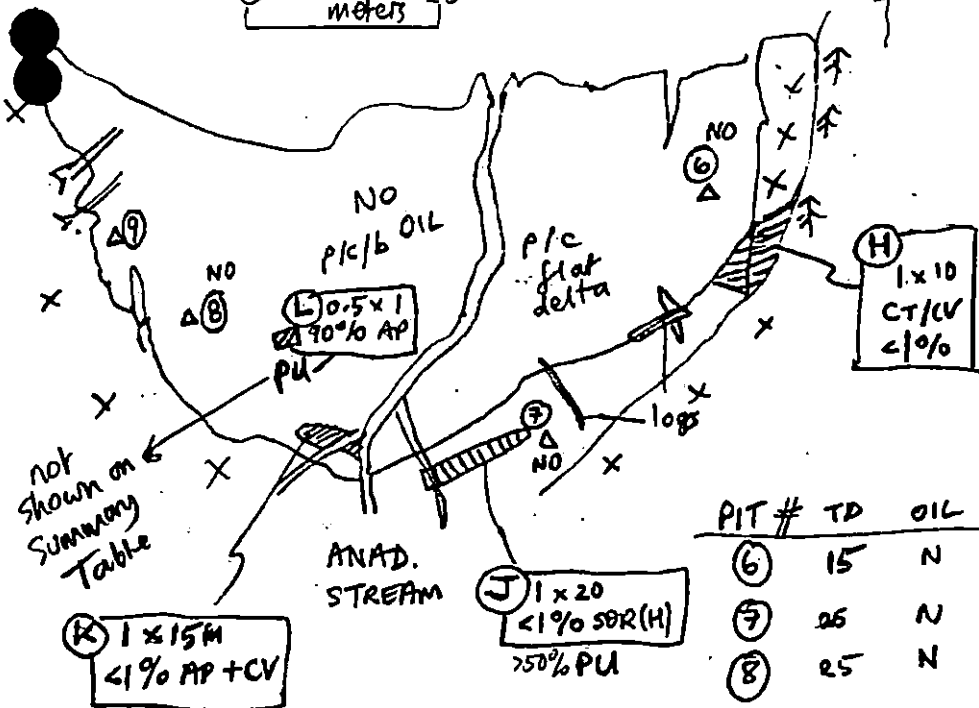
AK State Plane Zone 4
850994ab

Subdivision Field Map
Map Key: PWSBP004AB
Name: DAVID LITTLE
Date: 05/05/91

SITE 1 226-20-16388

0 meters 25

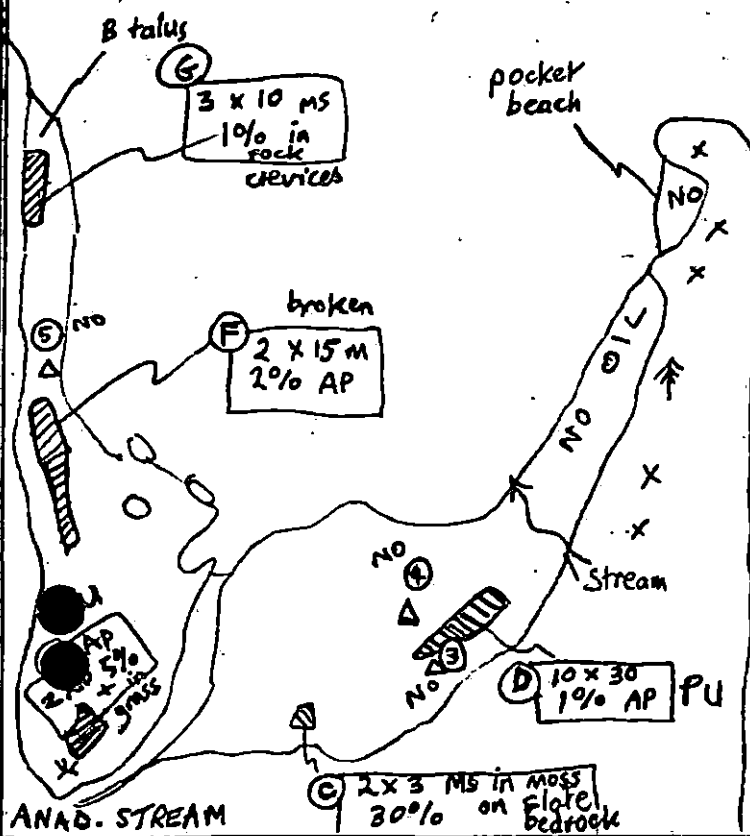
BP-004-A 05/05/91
OG. map D. I. Little
1430-1630



PIT #	TD	OIL	clean below	sheen	seeds	H ₂ O	zone
⑥	15	N	Y	N	gp-gp	-	MITZ
⑦	25	N	Y	N	gp-gs	-	UITZ
⑧	25	N	Y	N	p-gp	-	MITZ
⑨	30	N	Y	N	pg-gf	-	UITZ

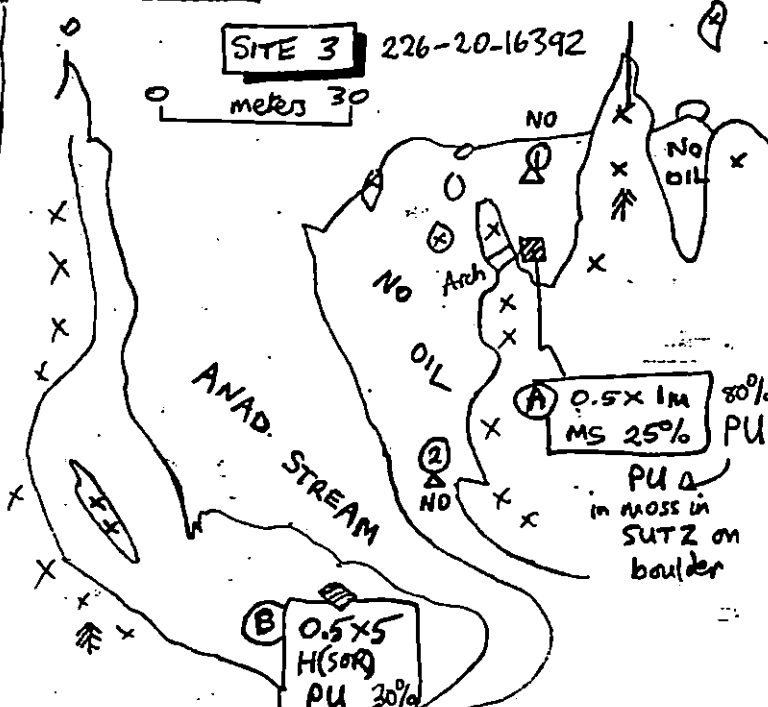
SITE 4 226-20-16397

0 20



SITE 3 226-20-16392

0 meters 30



# PIT	TD	OIL	clean below	sheen	seeds	H ₂ O	Zone
①	20	N	Y	N	gc/g 10	-	MITZ
②	25	N	Y	N	pg/sg	-	MITZ
③	25	N	Y	N	gp/gs	-	UITZ
④	30	N	Y	N	p/gp	-	MITZ
⑤	20	N	Y	N	p-gp	-	MITZ

ET reviewed 5/11
reviewed 5/10/91 K6

SITE 2

226-20-16395

BP-004-A

05/05/91

OG. map

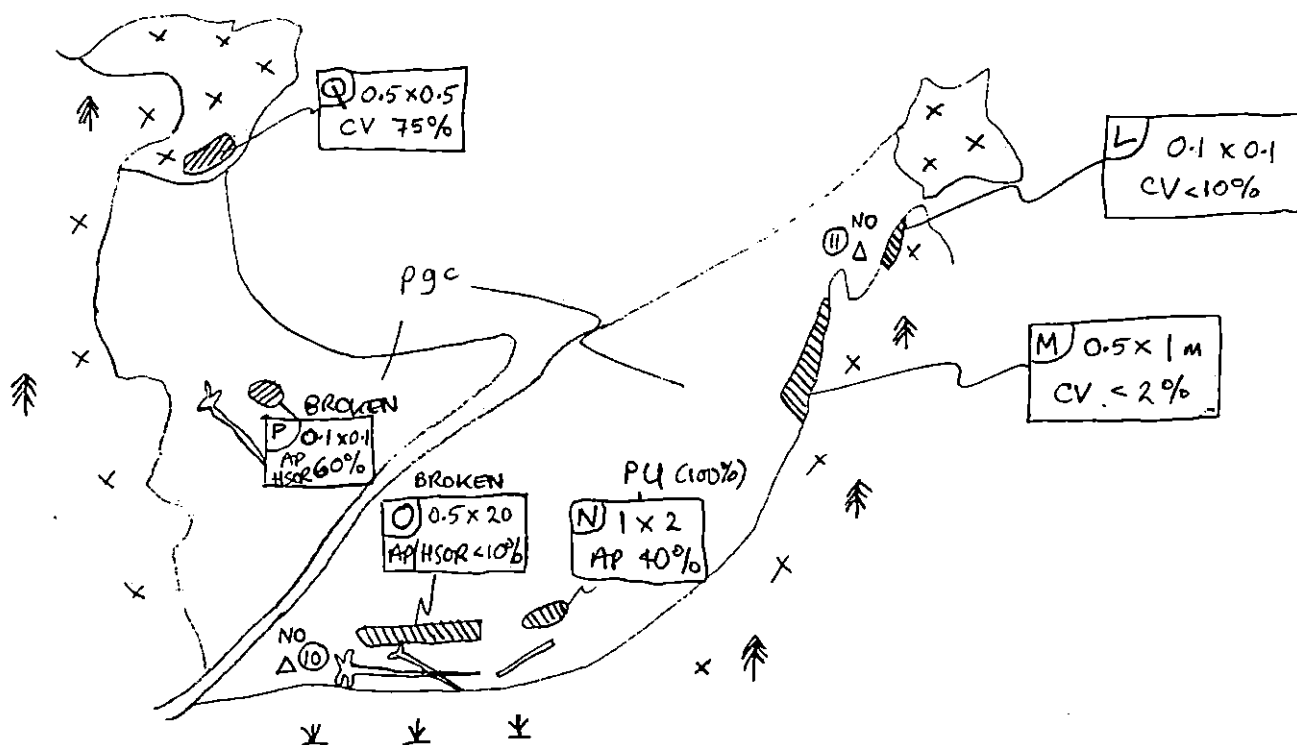
D.J. Little

1700-1740

Continued from
BP-004 sites 1, 3 & 4.

0 18 M

KNIGHT ISLAND
PASSAGE



ANADROMOUS
STREAM

226-20-16395

PIT # To oil clean below sheer H₂O Seds zone

⑩	20	NO	4	N	—	g-g	SUTZ
⑪	25	NO	4	N	—	pg-gpm	UITZ

ES reviewed 5/11

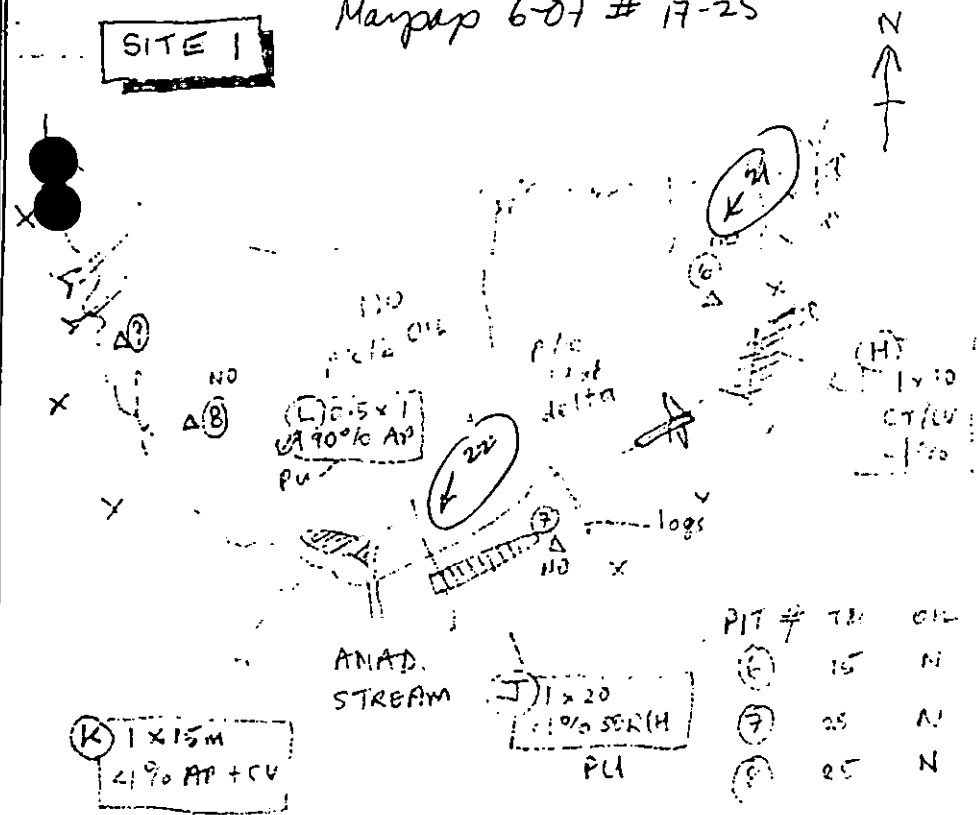
reviewed 5/10/91 KG

Photo locations

Mapap 6-07 # 17-25

SITE 1

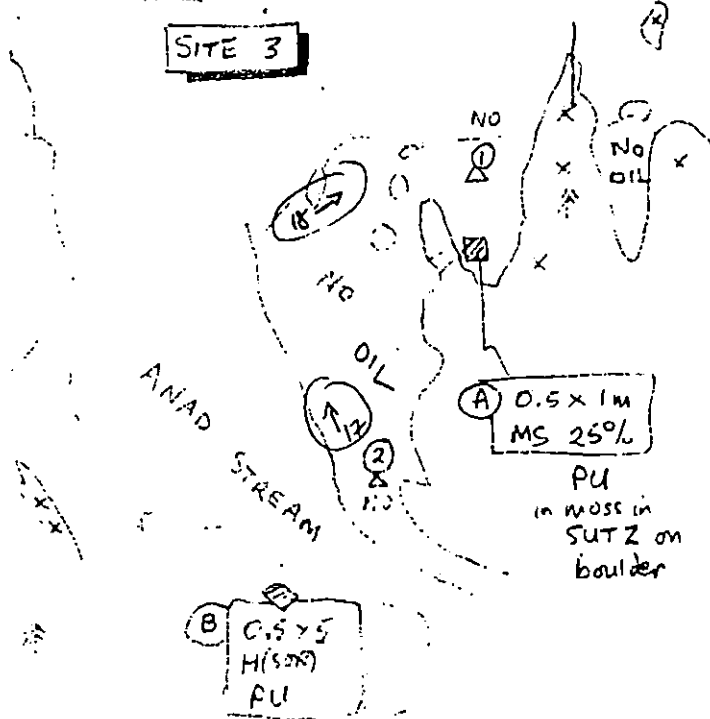
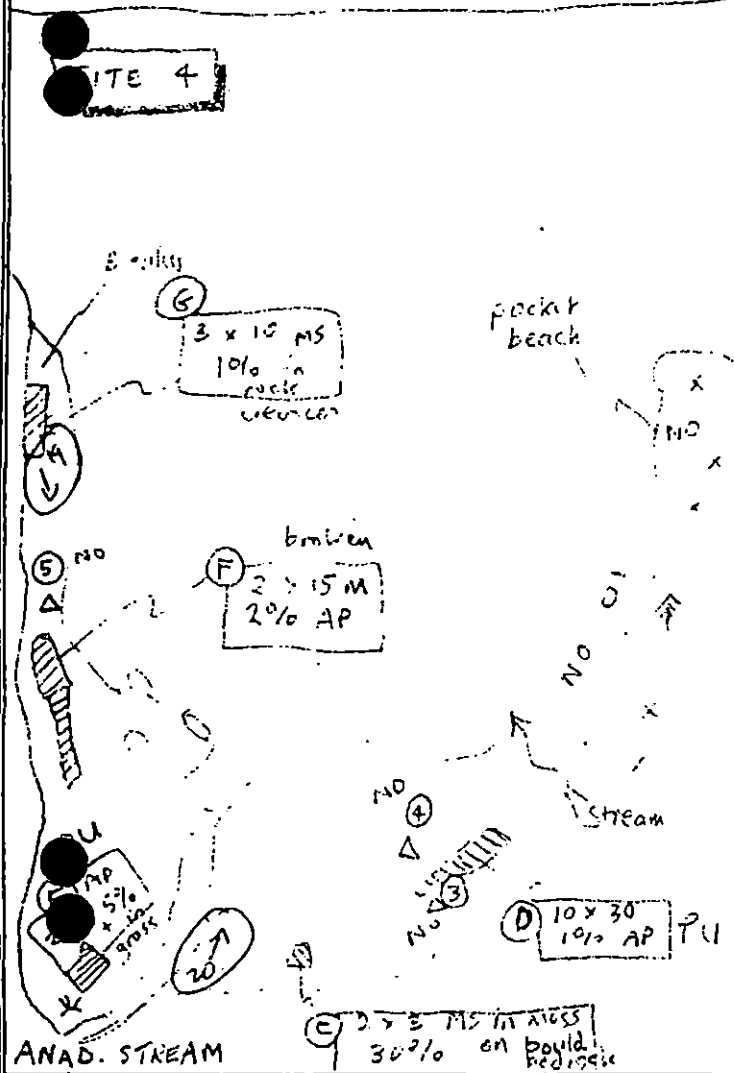
BP-004-A 05/05/91
OG. map D.I. Little
1430-1630



PIT #	TD	OIL	clean below	clean	soils	H ₂ O	zone
(K)	15	N	Y	N	gp-gp	-	MITZ
(J)	25	N	Y	N	gp-gc	-	UITZ
(L)	25	N	Y	N	P-gp	-	MITZ
(H)	20	N	Y	N	Pg-Yf	-	UITZ

SITE 4

SITE 3



#PIT	TD	OIL	clean below	sheen	soils	H ₂ O	zone
(1)	20	N	Y	N	gc/g 10	-	MITZ
(2)	25	N	Y	N	Pg/sg	-	MITZ
(3)	25	N	Y	N	gp/js	-	UITZ
(4)	30	N	Y	N	pc/gp	-	MITZ
(5)	20	N	Y	N	P-gp	-	MITZ

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6

DATE 5/5/91

SEGMENT # BP-004

TIDAL HEIGHT(Range) +5½ to +6¼ ft

SUBDIVISION A (Site 1)

BIOLOGIST T. R. Schroeder

SEA STATE calm

WIND SPEED/DIRECTION calm

PHOTOGRAPHS: ROLL #

FRAME #

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

Tide level was quite high, but water visibility was good. Beach is a high energy area and only light fines help beds could be seen in M1T2 and W1T2. W1T2 bed on eastern portion of beach could be seen extending out to 5-6 feet below water surface.

Main part of beach was clean sand and pebbles. Some cleanup methods should avoid the two success beds, but would probably have little effect on biological communities.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBS. SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl	2	2 teal; 12 goldeneye	
Gulls/Kittiwakes			
Shorebirds			
Corvids			
Other Birds	1	4	

MARINE MAMMALS

OBSERVED

LAND MAMMALS

SPECIES

OBSERVED

Sea Otters			
Manipeds (specify)			
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

HAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6

DATE 5/5/91

SEGMENT # BP-004

TIDAL HEIGHT (Range) +6 1/4 to +7 ft

SUBDIVISION A (Site 2)

BIOLOGIST T.R. Schroeder

SEA STATE calm

WIND SPEED/DIRECTION calm

PHOTOGRAPHS: ROLL #

FRAME #

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

Tides were high when we reached this beach but again water clarity allowed observation down to about the zero tide level. Only one buoy barge had been beached along the entire shoreline. Main portion of beach made loose gravel and rubble with little algal growth except in the anadromous stream bed where filamentous algae was very thick. Most oil treated area broken up or picked up.

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	1		
Pinnipeds (specify)			
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 DATE 5/5/91
 SEGMENT # BP-004 TIDAL HEIGHT(Range) $+3\frac{1}{2}$ to $+4$ ft.
 SUBDIVISION A (Site 3) BIOLOGIST T.R. Schroeder
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # FRAME #

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

(A + B) = Tide gauge did not allow a close look at the LITZ in this area. The eastern side of the stream had good barnacle growth and abundant eel on the rocks. Only one small bed of fucus held was observed. West side of stream channel had excellent fucus growth but the bank dropped off steeply into the stream.

Little oil observed and it was picked up.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1 (bald)	1	1 pink sd. fry
Seabirds			
Waterfowl	2	2 ^{1 wilson} ^{2 mergansers}	
Gulls/Kittiwakes	1 gulls	2	
Shorebirds			
Corvids	1	1 raven	
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 DATE 5/5/91
 SEGMENT # BP-004 TIDAL HEIGHT(Range) +4 to +5 1/2 ft.
 SUBDIVISION A (Site 4) BIOLOGIST T.A. Schroeder
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # FRAME #

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

Tide level was quite high which prevented observation of LITZ. Only two small patches of fucox were observed. Fucox, mussels and barnacles were present on large rocks but were sparse in LITZ.

Most oil observed was either picked up or broken up.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

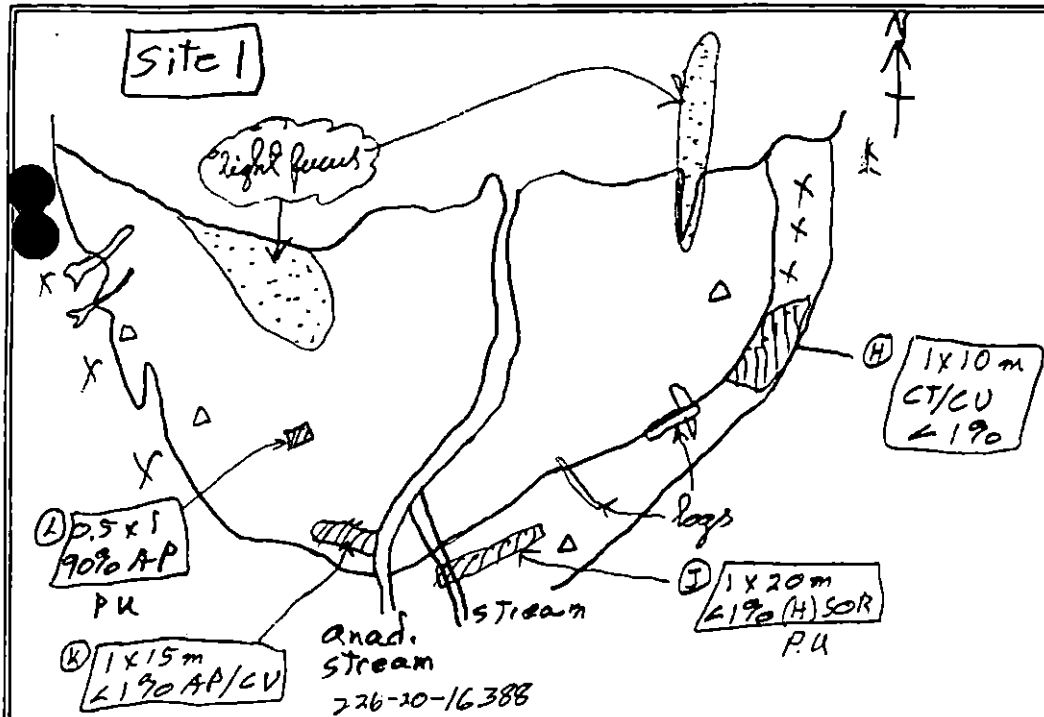
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl	1	1 golden eye	
Gulls/Kittiwakes			
Shorebirds			
Corvids	1	1 raven	
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters		1 Deer	
Carnivores(specify)			
Whales(specify)			

Shoreline subdivision map showing important biological features attached.

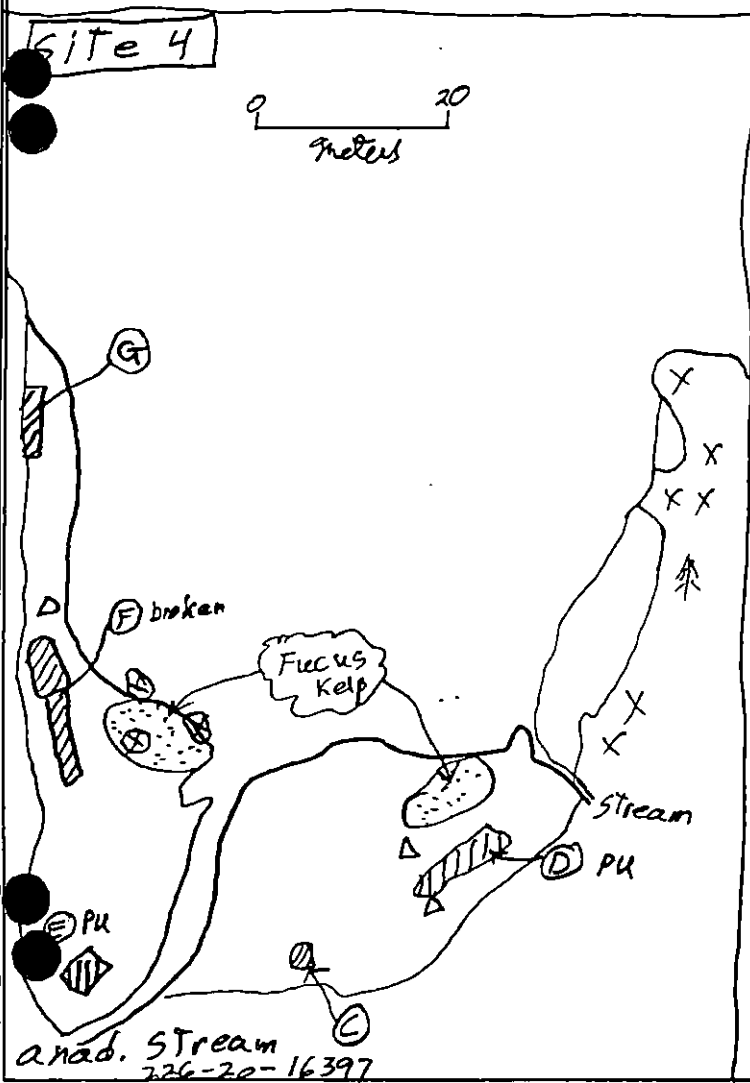
Site 1

BP-004-A 5/5/91
Bio. Map T.R. Schroeder
1430-1630



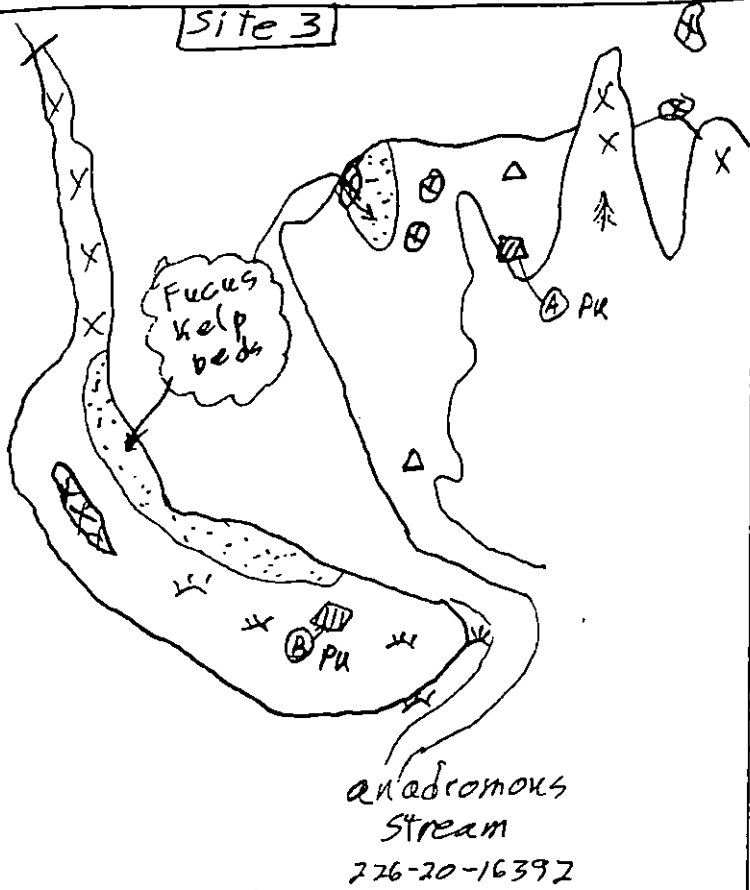
Site 4

0 20
meters

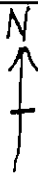


Site 3

0 30
meters

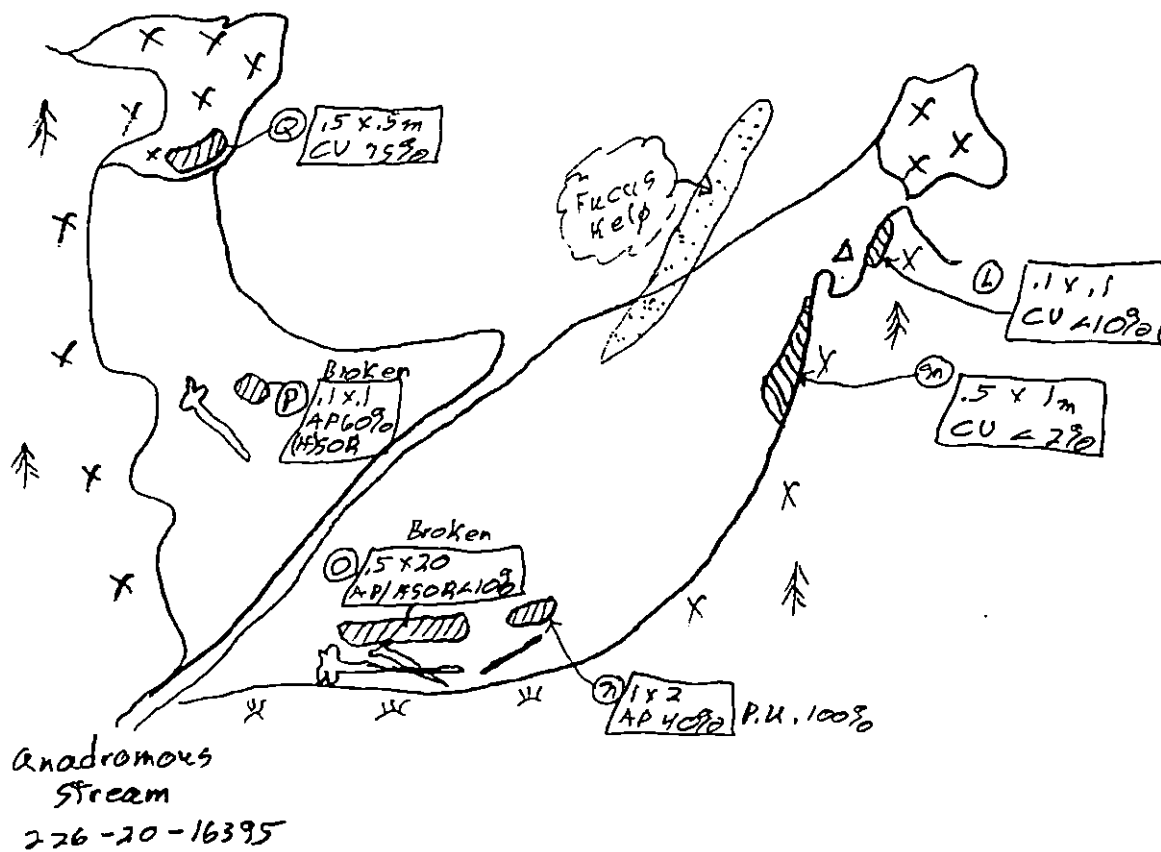


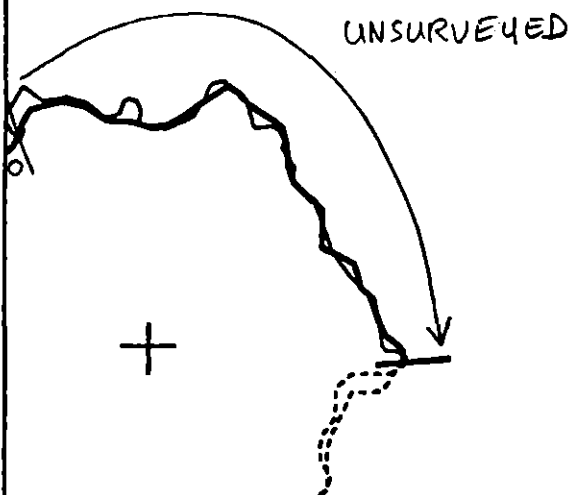
site 2



BP-004-A 5/5/91
Bio. Map(42) T.R. Schroeder
1700 - 1740

0 15
meters





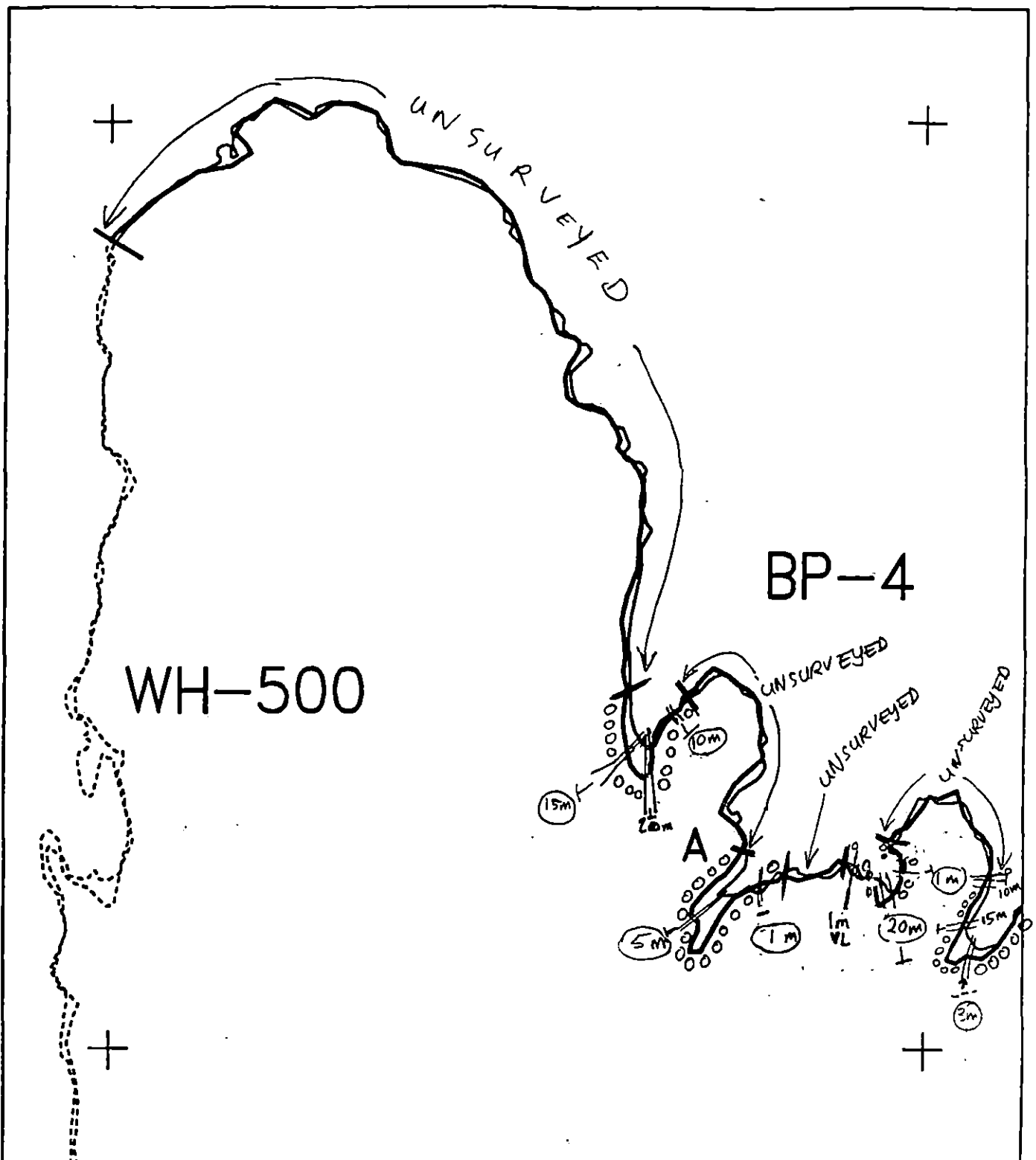
XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

BP004 A
 ADEC Subsegment Length: 8287m
 METERS

AK State Plane Zone 4
 p5p004ab



Subdivision Field Map
 Map Key: PWSBP004Ab
 Name: DAVID LITTLE
 Date: 05/05/91
 Date Entered:



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

BP004 A
 ADEC Subsegment Length: 8287m
 METERS
 0 400 800
 AK State Plane Zone 4
 pbg004a



Subdivision Field Map
 Map Key: PWSBP004Aa
 Name: DAVID LITTLE
 Date: 05/05/91
 Date Entered:

revised 5/10/91 KG
 ESR revised 5/11

1991 MAYSAP EVALUATION

SEGMENT: BP 004 **SUB:** A **REGION:** PWS **SURVEY DATE:** 5/5/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ **Date:** _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 6 SEGMENT BP 004 SUBDIVISION A DATE 5/5/91

ADEC/ADF46

NAME Aimee WesemanSIGNATURE Aimee Weseman

☐ NTR ☒ Treatment Recommended. 4 Anad fish streams Resource Uses - Commercial Fishing & Recreation
 Survey was rushed due to incoming tide & full extent of oiling may not have been documented.

ASC# 226-20-16397-site 4 = This beach stream area still contains AP/HSOR deposits which should be manually removed & tilled. Areas of concern are in the vicinity of sites C, D, E & F. Some PU occurred but not enough.

ASC# 226-20-16395-site 2 = due to short survey & injury, ADF46 monitor unable to determine extent of oiling & how much was removed. A quick inspection of area with removal of AP sediments & or tilling is in order.

EXXON

NAME Scott A. NaumanSIGNATURE Scott A. Nauman☒ NTR

All four streams on this subdivision were surveyed. No subsurface oil was found. AP/SOR was either picked up or broken up by the survey team. This subdivision and the four streams are in very good shape - no further work is warranted.

LANDMANAGER

NAME _____ OF _____ SIGNATURE _____

☐ NTR

USCG/NOAA

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

☒ NTR This segment with 4 anadromous streams had little remaining oil. Some asphalt patches were found, and these were mostly picked up or broken apart. The small areas of remaining coat or oil in crevices of boulders is largely inaccessible. The segment requires no further treatment.

TEAM NO. 6SEGMENT BP-04

SUBDIVISION _____

DATE 5/5/91

ADEC

NAME _____

SIGNATURE _____

☐ NTR

EXXON

NAME _____

SIGNATURE _____

☐ NTR

LANDMANAGER

NAME

CHARLES SELANOFF OF Chenega Bay

SIGNATURE

Charles Selanoff☐ NTRTreatment recommended

A lot of oily debris, rocks and pebbles. This area can be manually worked over with shovels, rakes and tilled by hand. Also this area is consistently oiled in spots but with a lot of manual work this area can be greatly improved. Heavily used subsistence area.

USCG/NOAA

NAME _____

SIGNATURE _____

☐ NTR

TEAM NO. 6OG D.I. LITTLEBIO T. SCHROEDERSEGMENT BP-004ADEC A. WESEMAN / T. CROWELANDMANAGER C. SELANOFF for CVCSUBDIVISION AEXXON SCOTT NAUMANUSCG/NOAA CWO SPURR / R. HOFFDATE 05 / 05 / 91TIME 14 : 30 to 17 : 40TIDE LEVEL 3 1/2 ft. to 7 ft.ENERGY LEVEL: ☐ H ☒ M ☒ LSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☒ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 2100 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W — m M — m N 3.5 m VL 97 m NO 2000 m US 6187 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A		P									boulder	VH	0.5	1	X				20% PU moss on bd.
B				P							pcg	L	0.5	5		X			heavy (most PU) site 3
C		P									rock	H	2	3	X				in moss in bedrock site 4
D	S										pg	M	10	30		X			PU
E	S										g (veg)	M	2	10	X				PU
F	S										pg	L	2	15		X			broken up
G		S									B	H	3	10	X	X			in rock crevices
H					T	T					BC	H	1	10	X	X			" " site 1
J				T							pg	L	1	20		X			PU > 50% site 1
K	T				T						pcg	M	1	15	X	X			site 1
L					S						b rock	M	0.1	0.1	X	X			SITE 2 site 2
M					S						b rock	M	0.5	1		X			" "
N	P												1	2		X			PU fall
O	S			S							pg	M	0.5	20	X				Broken up ASOR " "
P	B			B							pgc	L	0.1	0.1			X		Broken up ASOR " "
Q					B						rock	HV	0.5	0.5		X			" "

DISTRIBUTION: C = 91-100%; B = 81-90%; P = 11-80%; 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		
1	20							X	—	Y	10	222			X		gc/g	Site 3
2	25							X	—	Y	—	222			X		pg/sg	" "
3	25							X	—	Y	—	222		X			gp/gs	Site 4
4	30							X	—	Y	—	222			X		pc/gp	" "
5	20							X	—	Y	—	222			X		p/gsp	" "
6	15							X	—	Y	—	222			X		gp/gp	Site 1
7	25							X	—	Y	—	222		X			gp-gs	" "
8	25							X	—	Y	—	222			X		p-gp	" "
9	30							X	—	Y	—	222		X			pg-gp	" "

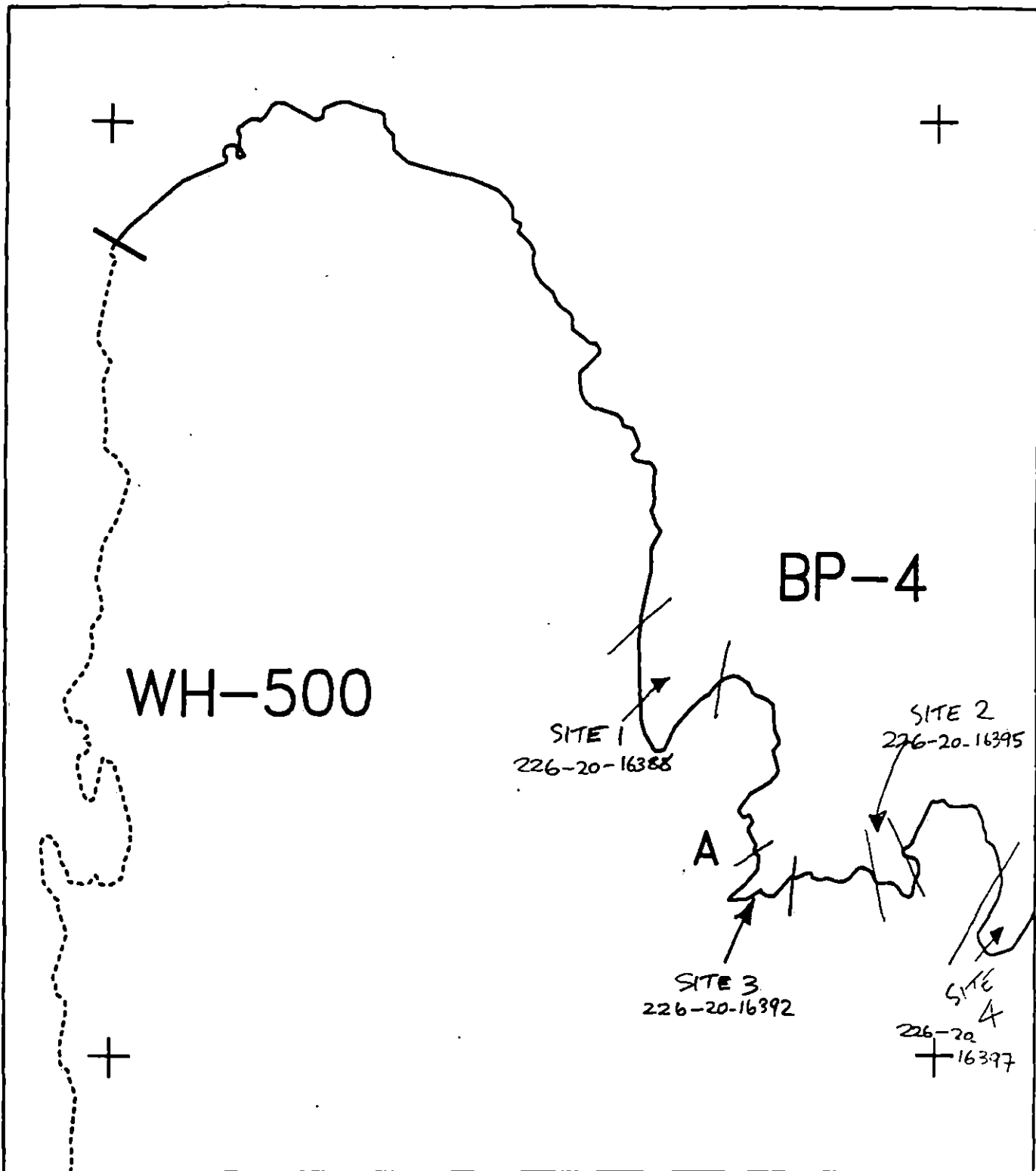
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

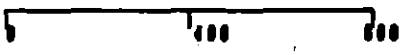
OG COMMENTS:

Surface oil was found in very sporadic patches, usually in the UITZ and occasionally in the SUTZ., however, much was picked up or broken up in situ, (L) SOR at most. No intact sediments were found in the MITZ which were not intact. By wading and puddling LITZ sediments underwater, it is unlikely that oil is present there because no oil sheens were seen.

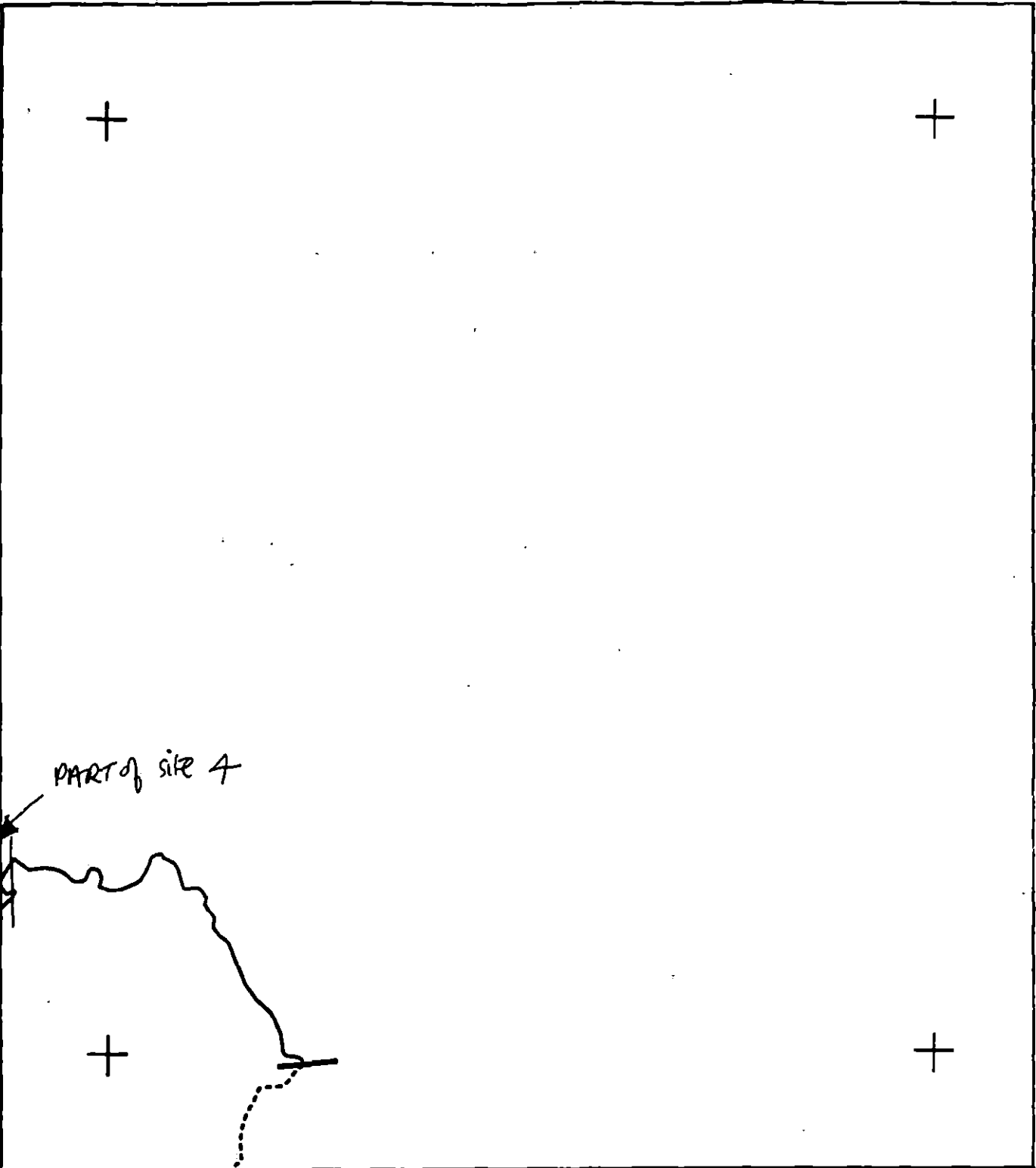
No subsurface oil was observed in a total of eleven pits.

revised shoreline
extended 5/.



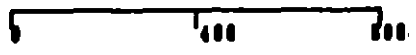
	BP004 A	Subdivision Field Map
	METERS	Map Key: PVSBP004Aa
		Name: <u>DAVID LITTLE</u>
	AK State Plane Zone 4 8308440	Date: <u>05/05/91</u>

Ex reviewed 5/11



BP004 A

METERS



AK State Plane Zone 4
NAD 83

Subdivision Field Map

Map Key: PVSDP004A5

Name: DAVID LITTLE

Date: 05/05/91

SITE 1. 226-20-16388

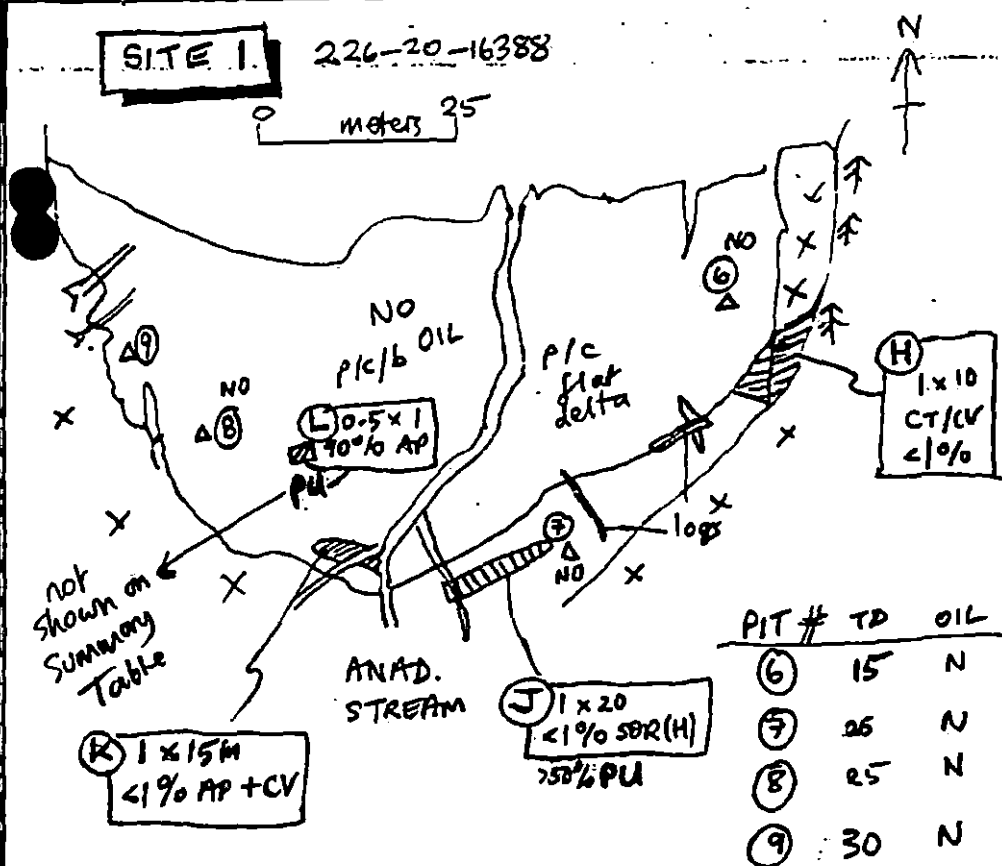
226-20-16388

meters 25

BP-004-A 05/05/91
OG map D. I. Little
1430-1630

BP-004-A 05/05/91
OG, map D. I. Little
1430-1630

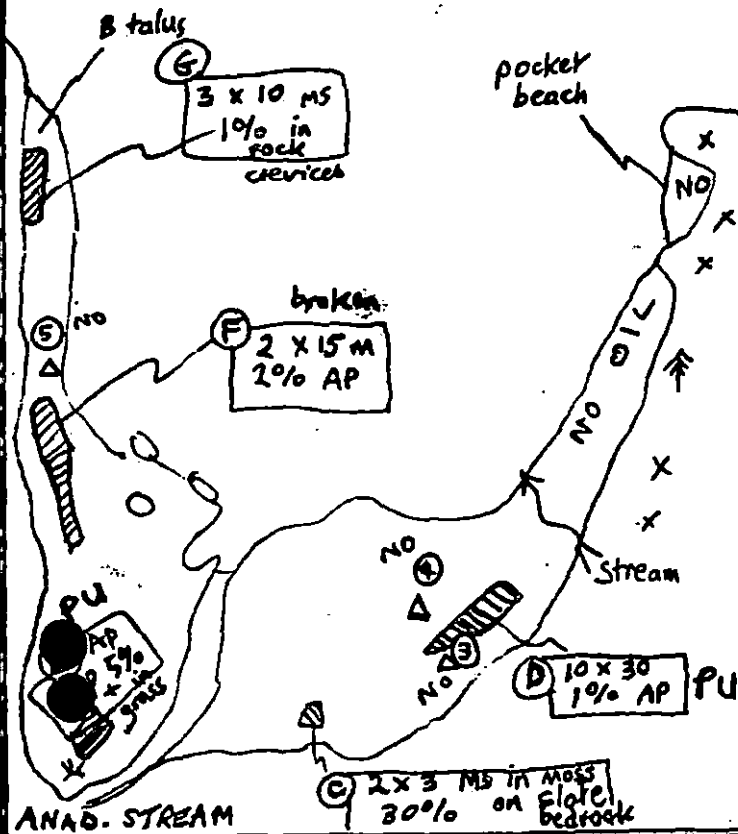
1430-1630



PIT #	TD	oil	clean (below)	sheen	seeds	H ₂ O	zone
(6)	15	N	y	N	gp-gp	-	MITZ
(7)	26	N	y	N	gp-gs	-	UITZ
(8)	25	N	y	N	p-gp	-	MITZ
(9)	30	N	y	N	pg-gp	-	UITZ

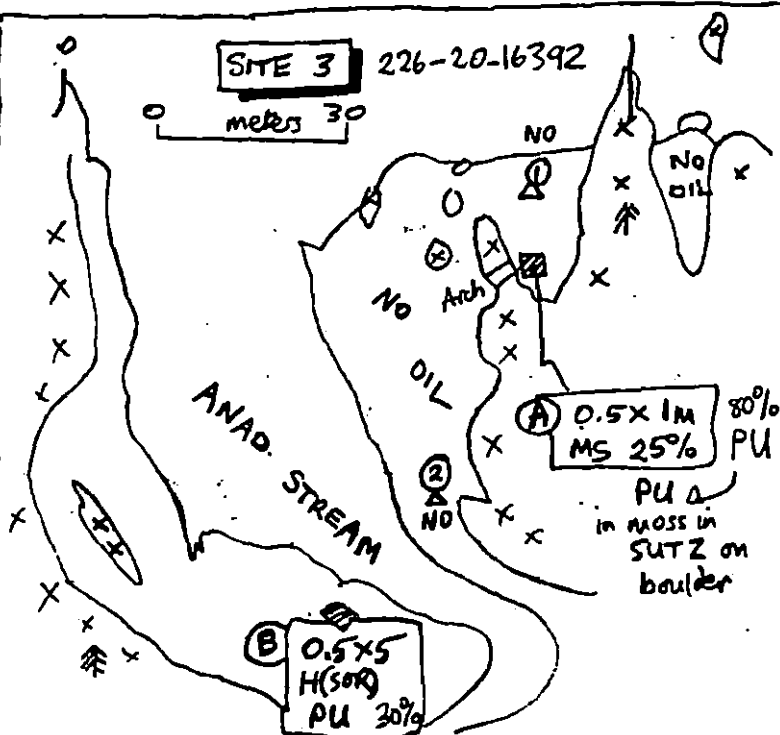
SITE 4 226-20-16397

0 20



SITE 3 226-20-16392

meters 30



#	PIT	TD	OIL	cream/below	sheen	cods	H ₂ O	Zone
①	20	N	Y	N	gc/g	10		MITZ
②	25	N	Y	N	pg/sg			MITZ
③	25	N	Y	N	gp/gs			MITZ
④	30	N	Y	N	rc/gp			MITZ
⑤	20	N	Y	N	p-gp			MITZ

ΣΤ γενικές 5/11

Reviewed 5/10/01

SITE 2

226-20-16395

BP-004-A

OG. map

05/05/91

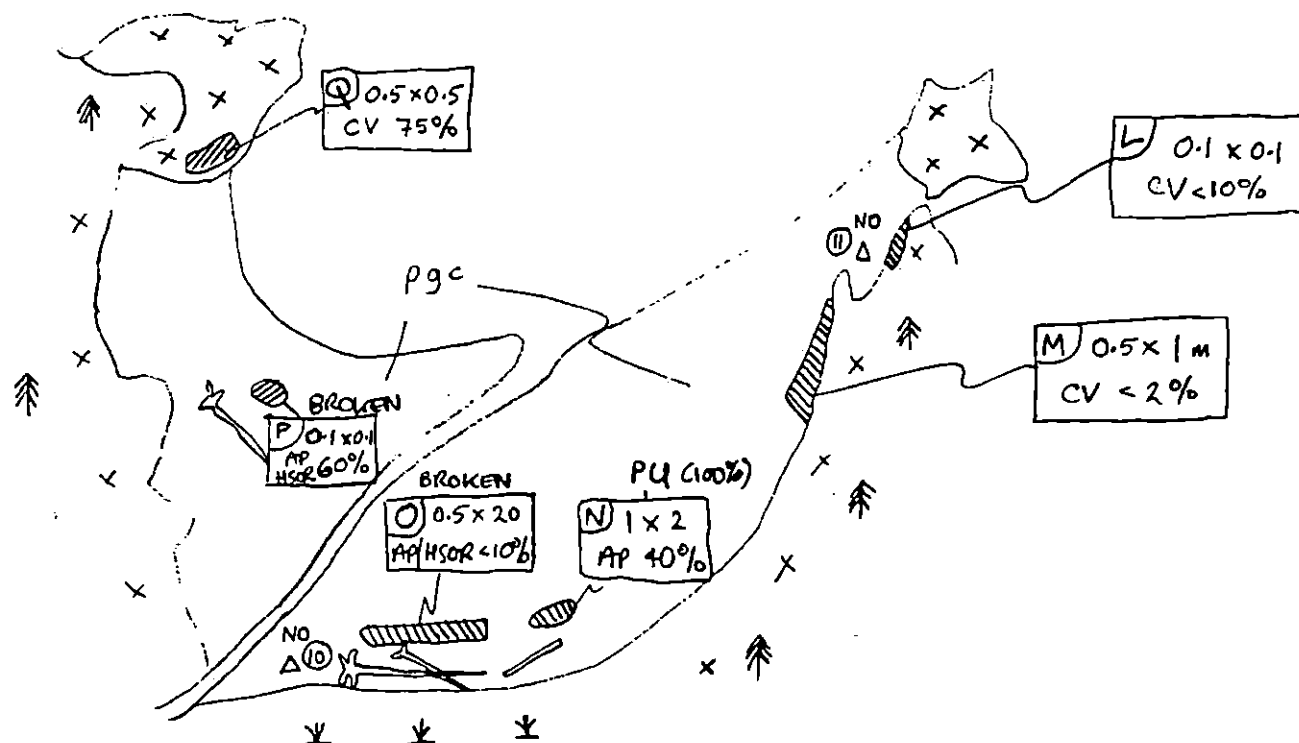
D.I. Little

1700-1740

Continued from
BP-004 sides 1, 3 & 4.

0 15M

KNIGHT ISLAND
PASSAGE



ANADROMOUS
STREAM

226-20-16395

PIT # To oil clean below sheer H₂O sed zone

⑩	20	NO	4	N	—	g-g	SUTZ
⑪	25	NO	4	N	—	pg-gpm	uitz

ES reviewed 5/11

reviewed 5/11

SITE 1

Map 607 # 17-25

BP-004-A 05/05/91
OG. map D. I. Little
1430-1630

N

PIT #	TD	oil	clean below	clean	seeds	H ₂ O	zone
(6)	15	N	Y	N	gp-gp	—	MITZ
(7)	25	N	Y	N	gp-gp	—	MITZ
(8)	25	N	Y	N	p-gp	—	MITZ
(9)	30	N	Y	N	pg-yp	—	MITZ

ANAD. STREAM

1 x 20
10% SEEDS
PU

(K) 1 x 15M
21% AP + CV

SITE 3

ANAD. STREAM

(A) 0.5 x 1M
MS 25%

PU
in moss in
SUTZ on
boulder

(B) 0.5 x 5
H(500)
PU

# PIT	TD	oil	clean below	sheen	seeds	H ₂ O	zone
(1)	20	N	Y	N	gc/g 10	—	MITZ
(2)	25	N	Y	N	pg/sg	—	MITZ
(3)	25	N	Y	N	gp/gs	—	MITZ
(4)	30	N	Y	N	pg/gp	—	MITZ
(5)	30	N	Y	N	p-gp	—	MITZ

SITE 4

rocky beach

(G) 3 x 10 MS
10% AP
crucifer

(F) 2 x 15M
20% AP
broken

(D) 10 x 30
10% AP
PU

(E) 3 x 5 MS in moss
30% on bould.

ANAD. STREAM

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6

DATE 5/5/91

SEGMENT # BP-004

TIDAL HEIGHT(Range) +5 1/2 to +6 1/4 ft

SUBDIVISION A (Site 1)

BIOLOGIST T. A. Schroeder

SEA STATE calm

WIND SPEED/DIRECTION calm

PHOTOGRAPHS: ROLL #

FRAME #

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

Tide level was quite high, but water visibility was good. Beach is a high energy area and only light furus beds could be seen in MITZ and LITZ. LITZ bed on eastern portion of beach could be seen extending out to 5-6 feet below water surface.

Main part of beach was clean sand and rubble. Only cleanup methods should avoid the two furus beds, but would probably have little effect on biological communities.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBS. SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl	2	2 total; 12 gulls	
Gulls/Kittiwakes			
Shorebirds			
Corvids			
Other Birds	1	4	

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

Shoreline subdivision map showing important biological features attached.

Revised sheet

MAVSAP BIOLOGICAL SUMMARY FORM

TEAM # 6

DATE 5/5/91

SEGMENT # BP-004

TIDAL HEIGHT(Range) +6 1/4 to +7 ft

SUBDIVISION A (Site 2)

BIOLOGIST T.R. Schroeder

SEA STATE calm

WIND SPEED/DIRECTION calm

PHOTOGRAPHS: ROLL #

FRAME #

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

Tides were high when we reached this beach but again water clarity allowed observation down to about the zero tide level. Only one fungus hole bed was observed along the entire shoreline. Main portion of beach was loose gravel and rubble with little algal growth except in the anadromous stream bed where filamentous algae was very thick. Most oil material was broken up or picked up.

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	1		
Pinnipeds(specify)			
Whales(specify)			

Shoreline subdivision map showing important biological features attached.

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 DATE 5/5/91
 SEGMENT # BP-004 TIDAL HEIGHT (Range) $+3\frac{1}{2}$ to $+4$ ft.
 SUBDIVISION A (Site 3) BIOLOGIST T.R. Schroeder
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # FRAME #

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

(A + B) = Tide levels did not allow a close look at the LITZ in this area. The eastern side of the stream had good barnacle growth and abundant eel on the rocks. Only one small bed of fungus felt was observed. West side of stream channel had excellent fungus growth but the bank dropped off steeply into the stream.
 Little oil observed and if were picked up.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1 (Bald)	1	1 pink sh. fry
Seabirds			
Waterfowl	2	2 ^{1 wilson} ^{2 merganser}	
Gulls/Kittiwakes	1 gulls	2	
Shorebirds			
Corvids	1	1 raven	
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 DATE 5/5/91
 SEGMENT # BP-004 TIDAL HEIGHT(Range) +4 to +5 1/2 ft
 SUBDIVISION A (Site 4) BIOLOGIST T.A. Schroeder
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # FRAME #

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

Tide level was quite high which prevented observation of MITZ. Only two small patches of fuusalg were observed. Fuus mussels and barnacles were present on large rocks but were scarce in MITZ.

Most oil observed was either picked up or broken up.

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

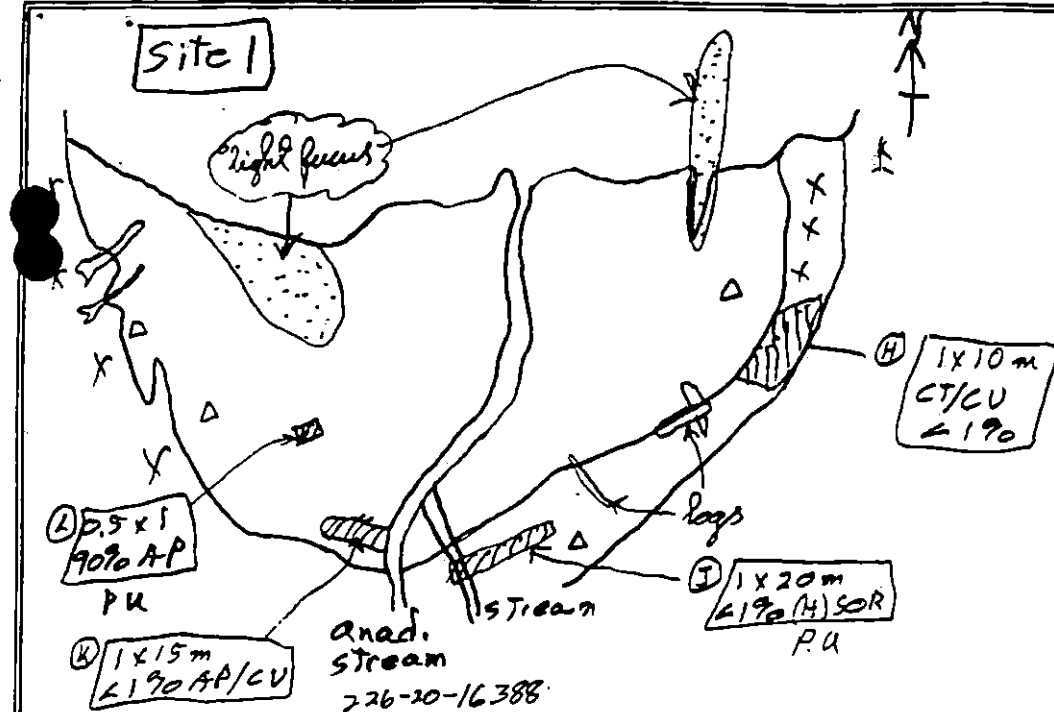
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl	1	1 goldeneye	
Gulls/kittiwakes			
Shorebirds			
Corvids	1	1 raven	
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

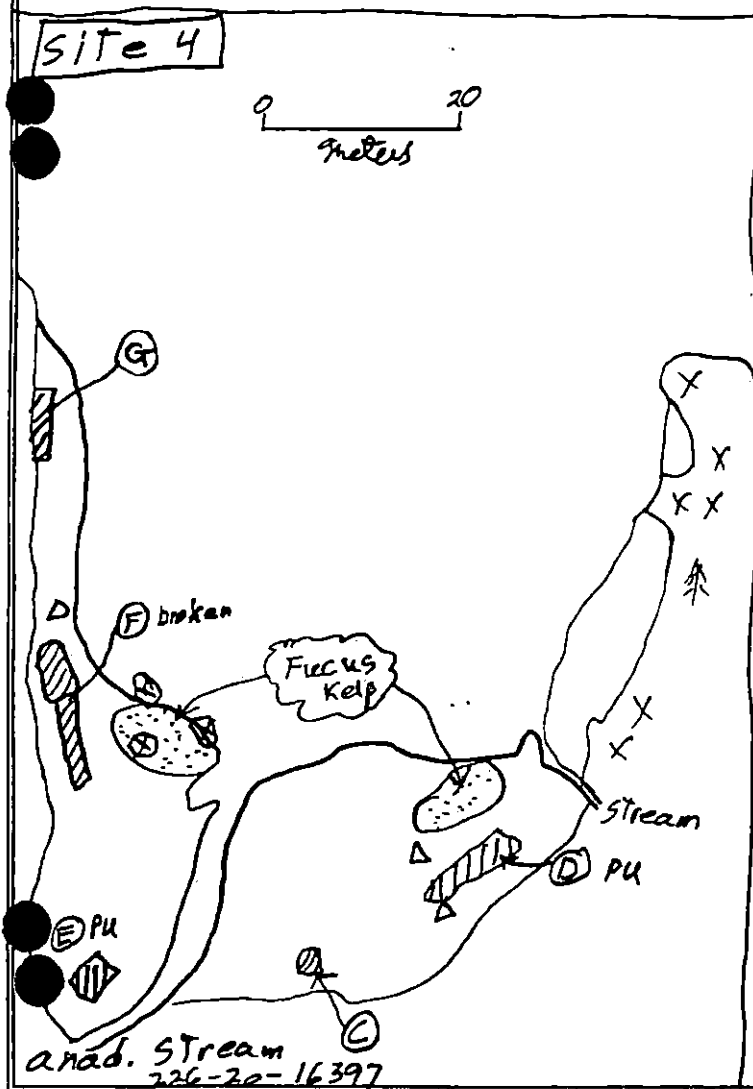
Site 1

BP-004-A 5/5/91
Bio. Map T.R Schroeder
1430-1630

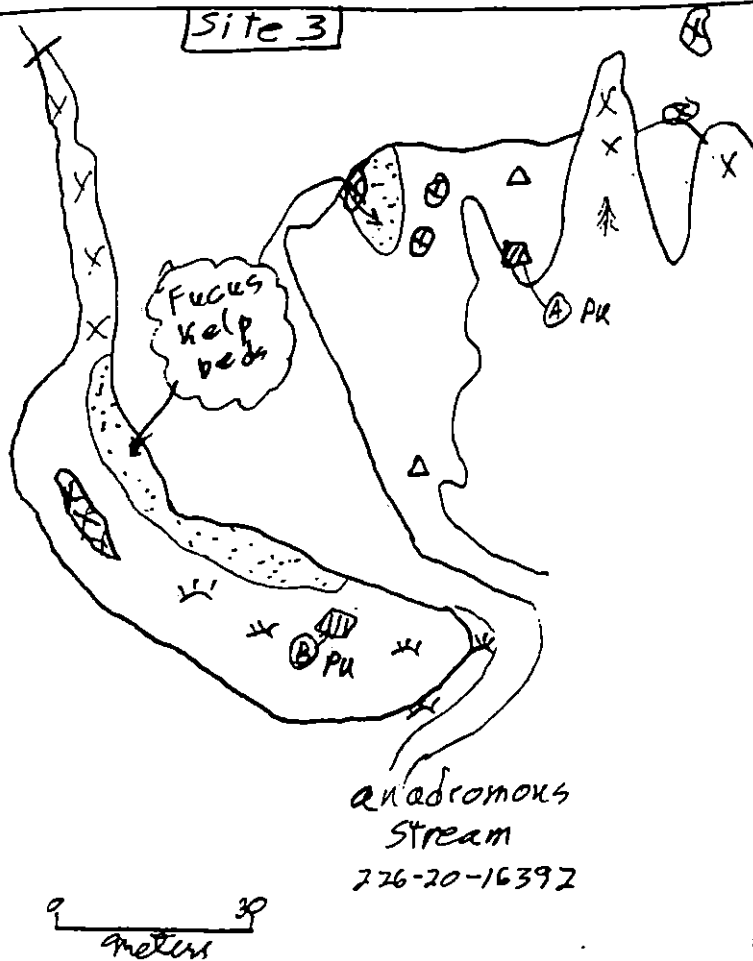


Site 4

0 20
meters



Site 3



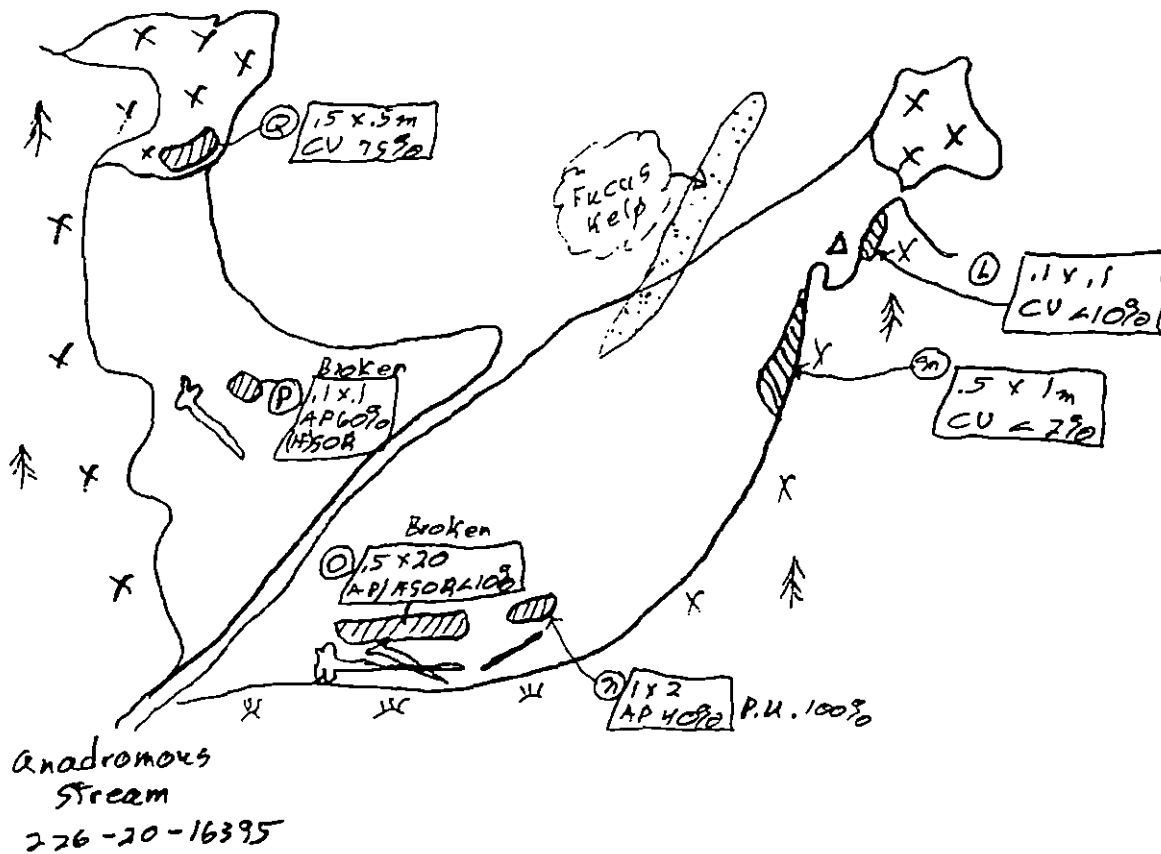
anadromous
Stream
726-20-16392

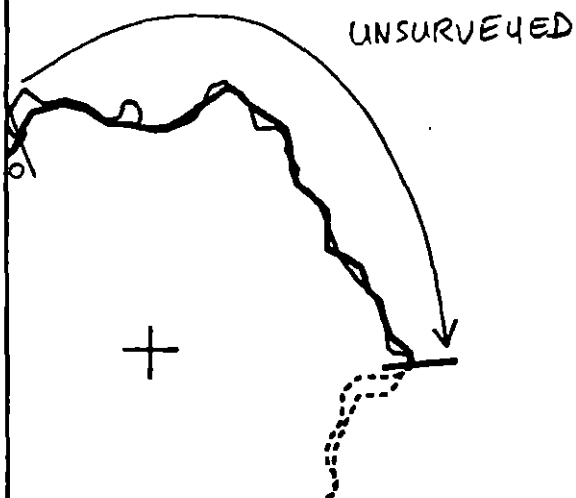
Site 2



BP-004-A 5/5/91
Bio. Map(42) T.R. Schroeder
1700 - 1740

0 15
meters





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

BP004 A

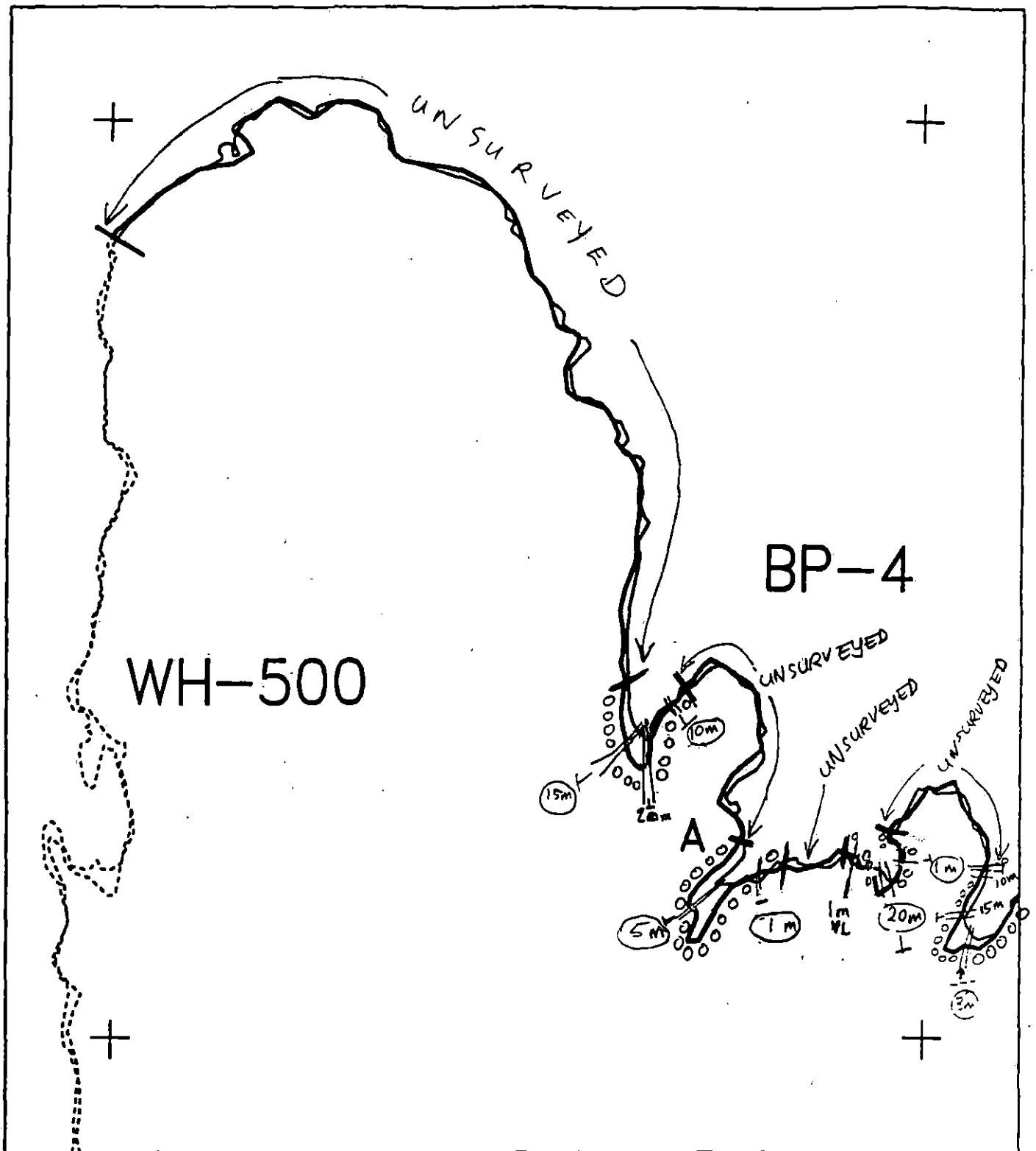
ADEC Subsegment Length: 8287m
 METERS

AK State Plane Zone 4
 850804ab



Subdivision Field Map
 Map Key: PWSBP004Ab
 Name: DAVID LITTLE
 Date: 05/05/91
 Date Entered:

ES reviewed 5/11



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

BP004 A
 ADEC Subsegment Length: 8287m
 METERS
 0 400 800
 AK State Plane Zone 4
 8698400



Subdivision Field Map
 Map Key: PWSBP004Aa
 Name: DAVID LITTLE
 Date: 05/05/91
 Date Entered:

revised 5/10/91
 ES revised 5/11

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ BP-04 STREAM NO: 226-20-16388 DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Four catalogued anadromous streams in BP-04: 226-20-16388, 226-20-16392, 226-20-16397, 226-20-16395.

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

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

5T-4 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. There are no ecological constraints re: cleanup. Eagle nests > 400 M from area, manual pickup with 10 man crew.

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 McMahon DATE: 5/8/90

Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

 No Treatment Recommended

 X Treatment Recommended

 X 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 1) manual removal of debris,
2) manual pickup of tarmat, tarballs and patties in areas shown on
attached sketch map.

TAG COMMENTS:

TAG APPROVAL DATE: 5/7/90

ADEC Art Weimer Art Weimer

EXXON Andy Van Dyke

NOAA Gary Petrac Gary Petrac

USCG G.A. Reiter G.A. Reiter

FOSC: W L DATE: 5-18-90

NOTIFY CVE 24 HRS PRIOR TO WORK.

15/3 OG WILLIAM KEID
 SEGMENT 25
 STREAM 226-1388

DATE 24 / 11 / 90

CHECKLIST

☐ N Arrow
☐ Approx. Scale
☐ Seg/Sub Entry
☐ Oil Desc.
☐ Width
☐ Length
☐ % Cover
☐ Sediment Character
☐ Est. H/W/L/V/L
☐ SCL
☐ Profile Location(s)
☐ Profile(s)
☐ Pt Location(s)
☐ Photo Location(s)

LEGEND

1 Δ
 Pt - No Subsurface Oil

2 Δ
 Pt - Subsurface Oil

CT/C
 Continuous Distribution

CT/B
 Broken Distribution

CT/P
 Patchy Distribution

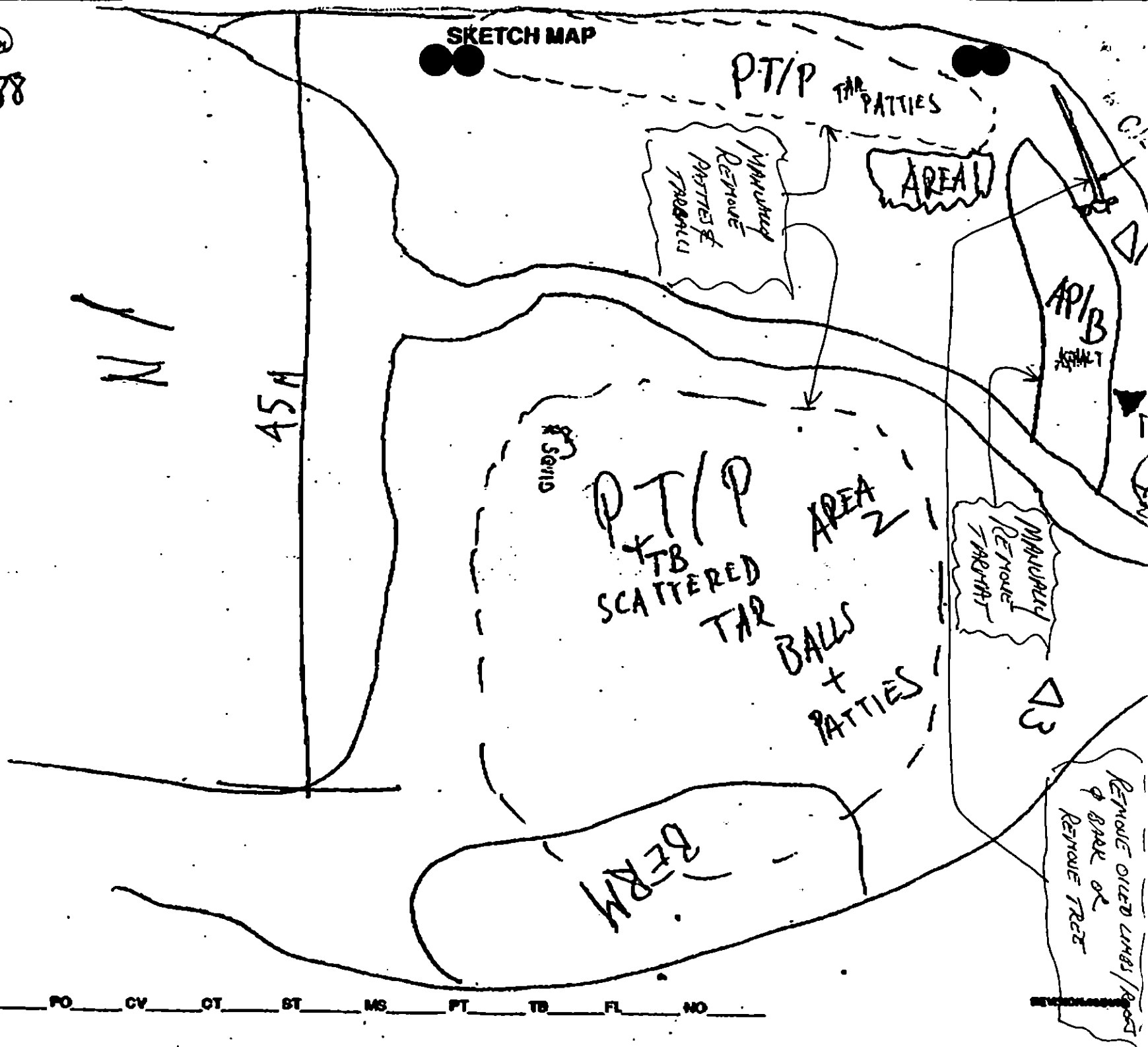
CT/S
 Splashed Distribution

eee
 Other Vegetation

1 →
 Photo location, direction,
 and number

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

SKETCH MAP



48 PHOTOLOG

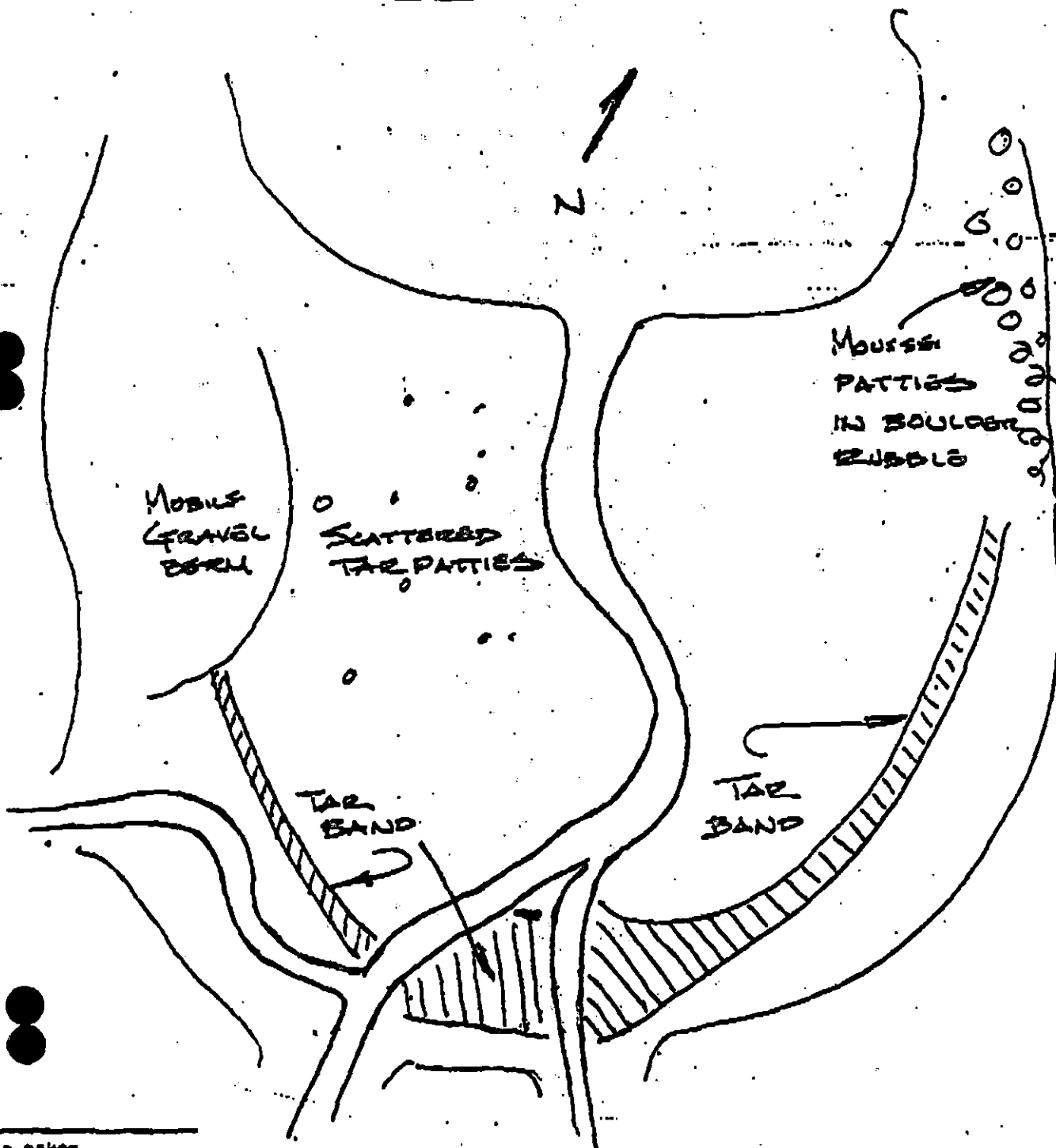
NAME(S)

DESCRIPTION

RECOMMENDATIONS: MANUALLY REMOVE TAR MATS AND
PATTIES THROUGHOUT AREA INCLUDING STREAM CHANNELS
AND BANKS. REMOVE MOUSSE DEPOSITS FROM
BOULDER RUBBLE ON EAST SIDE OF CHANNEL.
MOUSSE REMOVAL MAY REQUIRE TRAWLS AND
ACCESSORIES.

I agree with recommendations. M. H. Smith

48 OIL DISTRIBUTION DIAGRAM



ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-20-16388

SEGMENT BP-004 SUBDIVISION A

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 stream (226-20-16388) is in Subdivision A. No constraint to manual pickup and 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

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

SEE SUBDIVISION CONSTRAINT ADDENDUM BP-004A
FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC

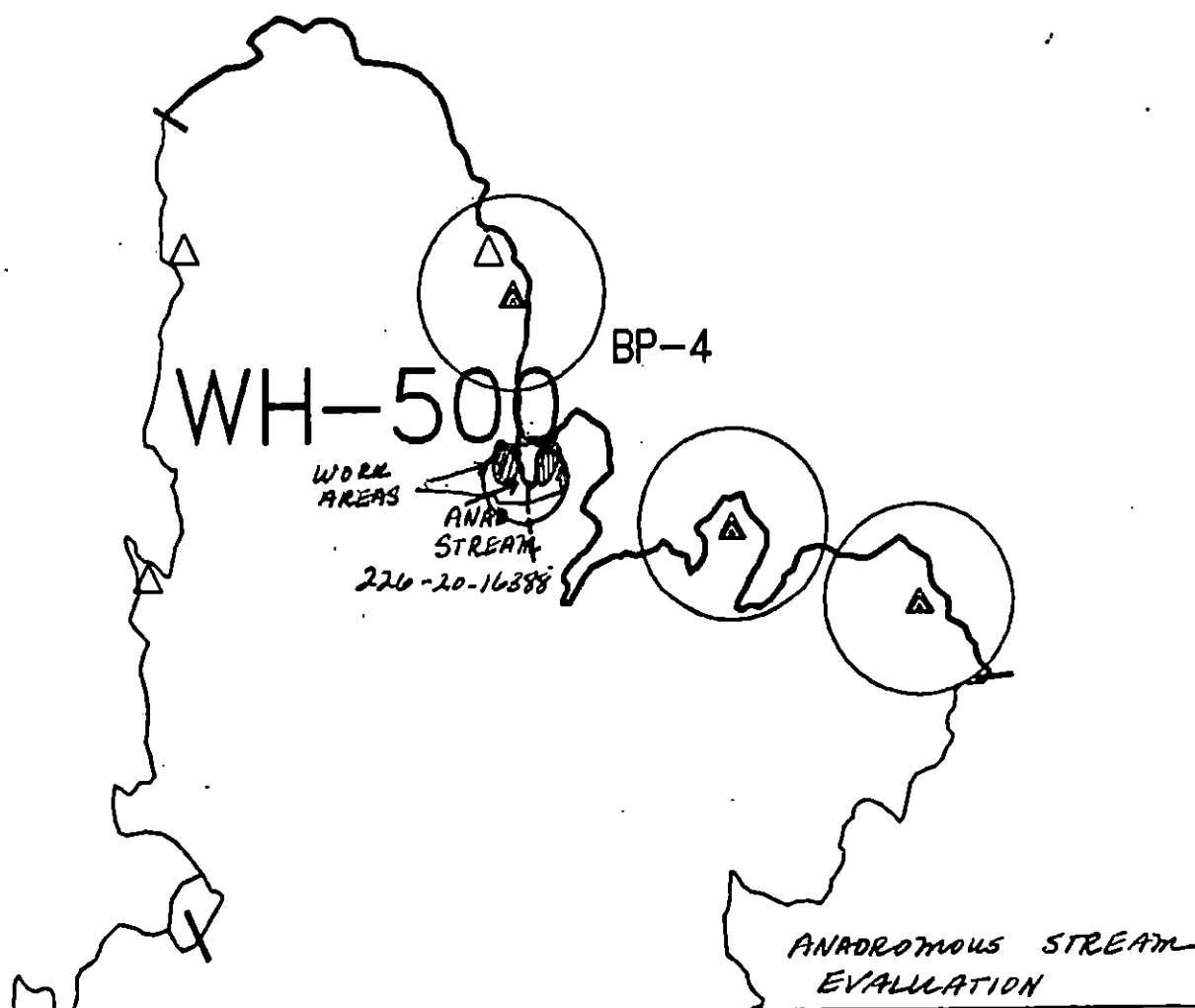
Date

6-18-90

Prepared by

Date

6/16/90

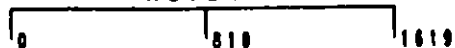


Exxon Company, USA

Map Key: PWS-BP-4

June 12, 1990

ECOLOGY MAP
SEGMENT BP-4
SUBDIVISION A (1 of 1)
METERS



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

1 inch = 2656 feet

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ BP-04 STREAM NO: 226-20-16388 DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Four catalogued anadromous streams in BP-04: 226-20-16388, 226-20-16392, 226-20-16397, 226-20-16395.

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

5T-4 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. There are no ecological constraints re: cleanup. Eagle nests > 400 M from area, manual pickup with 10 man crew.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature] DATE: 5/8/90

Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X 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 1) manual removal of debris,
2) manual pickup of tarmat, tarballs and patties in areas shown on
attached sketch map.

SEE CONSTRAINTS ADDENDUM DATED 6/16/90. [Signature]

TAG COMMENTS:

TAG APPROVAL DATE: 5/7/90

ADEC Art Weimer Art Weimer

EXXON Arvo Loh Arvo Loh

NOAA Gary Petrac Gary Petrac

USCG G.A. Reiter G.A. Reiter

FOSC: [Signature] DATE: 5-18-90

NOTIFY CVC 24 HRS PRIOR TO WORK.

ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND

SEGMENT: BP-04

STREAM NO: 226-20-16388

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ BP-04 STREAM NO: 226-20-16388 DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. There are no ecological constraints re: cleanup. Eagle nests > 400 M from area, manual pickup with 10 man crew.

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: _____

Subsurface Oil Observed: Yes X No _____ Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of debris,
2) manual pickup of tarmat, tarballs and patties in areas shown on
attached sketch map.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD and HOMER ECOLOGICAL CONSTRAINTS

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

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

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

AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

Salmon fry nursery area (4/31 to 7/31)

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Esther Hatchery release (4/15 to 6/15)

1E Main Bay Hatchery release (4/20 to 6/15)

1F Sawmill Bay Hatchery release (4/15 to 6/1)

1G Cannery Creek Hatchery release (4/21 to 6/1)

1H Remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.

AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214

1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511

1I Gill net area (6/7 to 8/31)

1J Purse seine area (7/20 to 9/30)

1K Purse seine hook-off (7/20 to 9/30)

1L Set net sites (6/11 to 7/25)

Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

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

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

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

30, 30 Harbor seal and sea lion pupping (5/15 to 7/1)

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

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

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235

ADF&G Don Calkins 267-2403

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Roth 267-2206

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

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

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

6V Anchorages (6/1 to 9/15)

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

6X Lodge (6/1 to 9/15)

6Y Special use destination

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

Finfish harvesting

Deer harvesting (8/15 to 2/28)

Invertebrate harvesting

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

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ BP 004 SUBDIVISION: 16B88 DATE 4/24/90

USCG

NAME CWO MC NATION

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

1. MANUAL TREATMENT; REMOVE TAR BATS
RIGHT + LEFT SIDES PER MAP.

ADFG
ABEC

NAME NO TEAM MEMBER

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

MANUAL REMOVAL OF ALL TARMATS INDICATED BY MAP. REMOVE
OIL LOGS IN POCKET COVES TO GAIN ACCESS TO THICK TAR
MATS.

LAND MANAGER

NAME NO TEAM MEMBER

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ASC # 226-20-16388

Segment BP-004

Observations This is a well-protected, gravelly beach bordered by boulders to the northwest. A heavy tar band rings the high tide line across the entire head of the cove. This band is quite broad and thick where it extends to and through several branches of the anadromous stream. On the west side of the cove, a mobile gravel berm covers a portion of the tar band with more than a meter of clean material. However, the tar band is fairly light at the point where it is covered by the berm. Tar patties are scattered throughout the mid- and lower-intertidal zone west of the channel. The boulders on the east side of the cove have trapped deposits of mobile mousse.

Treatment Recommendations Manually remove all tar mats and patties from the site, including those on the stream bank and in the stream channel. Manually remove mousse deposits from protected coves. Removal of mousse may require trowels and absorbents.

SHORELINE OILING SUMMARY (ANAD.)

OG WILLIAM LEID USCG McMAHON SEGMENT ST/ 8 P004 14
 BIO MICHAEL FAWCETT LAND REP STRAH 22882-8388 OF
 EXXON Gus GARCIA ADFG MIKE WILSON TIME 10:25
 TEAM NO. 15 TIDE LEVEL 4.5 FT DATE 24 / 10 / 90
 EST. SUBDIVISION LENGTH: 45 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 0 % B 0 % C 35 % P 55 % G 0 % S 0 % M 0 % V 0
 SLOPE: Long 0 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ Hi
 OIL CATEGORY LENGTH: W 0 m M 2.5 m N 20 m VL 0 m NO 0

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	N	E	S	W	1	2	3	4	5	SW	M	NE	U
ASPHALT PAVEMENT		X				X					X		
POOLED													
COVER													
COAT													
STAIN													
MOUSSE													
PATTIES			X			X	X			X	X		
TARBALLS			X			X	X			X	X		
FILM													
NO OIL										X			X

PAVEMENT (H) (F) 8 200 sq. m by 6

PATTIES / TARBALLS 1

NEAR SHORE SHEEN? (NO) BR RW SL

OILED DEBRIS	AMOUNT			Did you Co DEBRIS
	SM	MD	LG	
Logs		X		☐ YES ☒ NO
Vegetation				
Trash				TYPE <u> </u>
Debris				#BAGS <u> </u>

Photographs:

Roll No.

Frame

SUBSURFACE OIL *OILED INTERVAL < 5 cm IN PIT NO. 2 DOES NOT CONSTITUTE SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN	CUM	Y	SURF/ SUBSUR SEDIMENT
		OP	OR	OL	OF	NO		NO	NO	1	2	3	4	5	SW	M	NE	U					
1	35					X	.								X					N			P/C
* 2	25	X	X				4-10	X				X			X					N			P/G
3	45					X	.								X					N			P/G
							.																
							.																
							.																
							.																

COMMENTS

REVIEWED JW DATE 4-25

15/3 OG WILLIAM KEID
 SEGMENT 25
 STREAM 226-451388

DATE 24 / 10 / 80

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Tab Entry
- ☐ Oil Out
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HMLA/VL
- ☐ SBL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ P/L Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
 P/L - No Subsurface Oil

2 Δ
 P/L - Subsurface Oil

CT/C
 Continuous Distribution

CT/B
 Broken Distribution

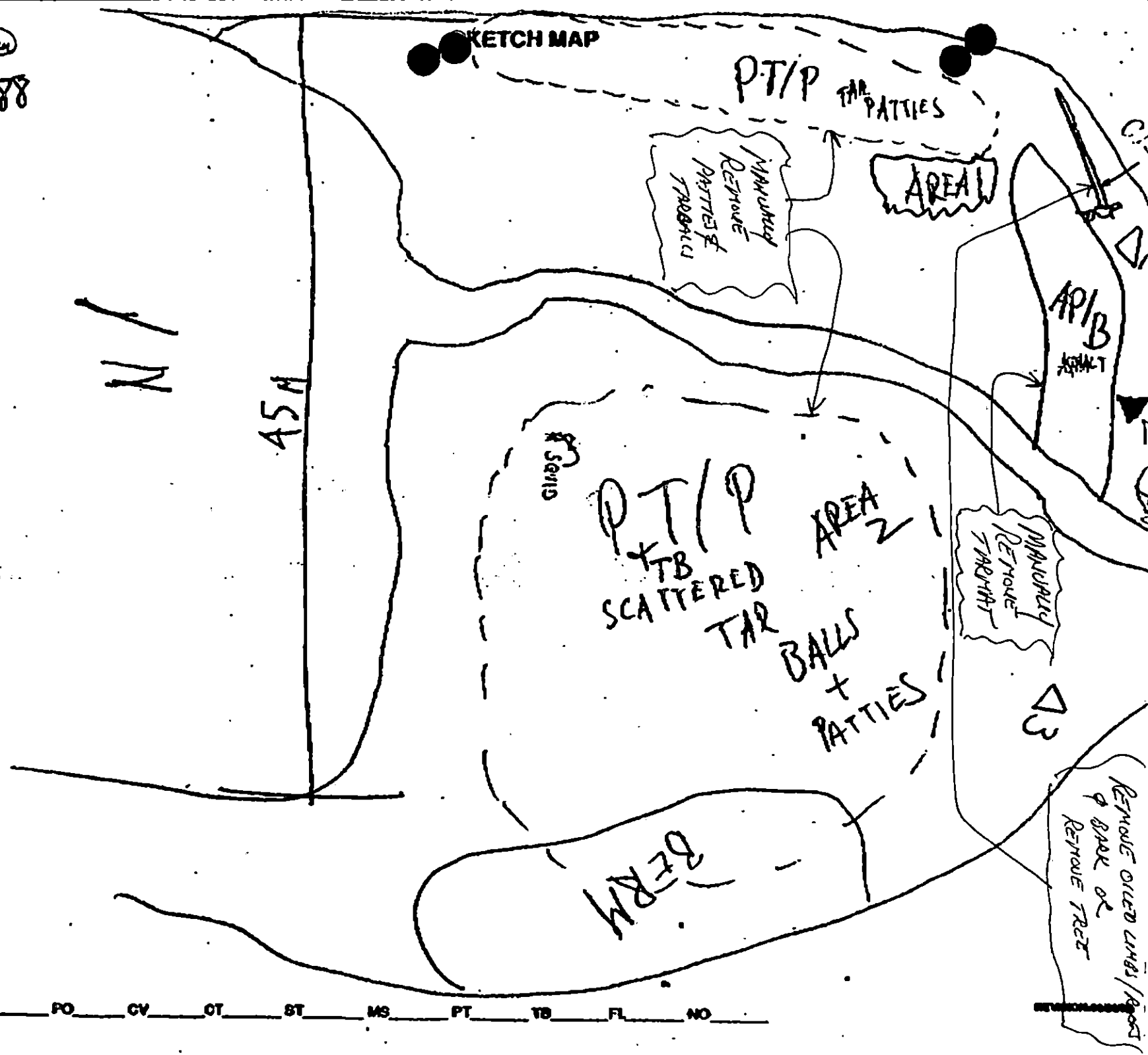
[CT/P]
 Patchy Distribution

[CT/S]
 Splashed Distribution

lll
 Old Vegetation

1 →
 Photo location, direction,
 and number

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



17/30

ADFG MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS SS DS TS AVS SCHA MOHS PTA2 REGION: PWS KP,CI K,APMETHOD: Aerial Ground Boat3 DATE: 4/24/9015 HIGH TIDE TIMES: 0059 1134721 TEAM RECORDER: M. W. WENNER4 START TIME: 102516 HIGH TIDE HTS: 12.6 10.922 OBSERVERS: T. CROWL5 STOP TIME: 104517 LOW TIDE TIMES: 0731 193523 AGENCY: ADFG6 SEGMENT #: BP-00418 LOW TIDE HTS: -2.2 10.724 PHOTOS TAKEN: Y N7 STATION #: 226-20-1638819 TIDE HT AT SURVEY: 4.12'

Roll #: _____ Frames: _____

8 K-UNIT: _____

ebb Slack Flood Slack25 VIDEO TAKEN: Y N TAPES: _____

9 STAT AREA: _____

20 USCG QUAD: _____

Starts: _____ Ends: _____

10 LAT: _____

11 LONG: _____

26 SAMPLES TAKEN: Y N NUMBER12 SOURCE: Map Loran13 LOCATION: POINT COUNTRY

14 DESCRIPTION: _____

Oil _____

Sediment _____

Biological _____

Water _____

EXTENT OF OIL

	SHORELINE				STREAM			
	L	V	H	S	L	V	H	S
27 SURFACE COVERAGE	100	75		5	75	2		1

	SHORELINE				STREAM			
	L	V	H	S	L	V	H	S
28 SURFACE THICKNESS	2cm	1cm	5mm	1mm	2mm			
29 PENETRATION	5cm	2cm	7cm	2cm	4cm			

30 OVERALL OIL IMPACT: N VL L H N31 OIL TYPE: Pooled House Tar Asphalt Sticky Stain32 OILED DEBRIS: Y N33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cave34 WAVE EXPOSURE: High Moderate Low35 SUBSTRATE TYPE: Bedrock Boulder 5 Cobble 45Gravel 50 Sand Med/silt36 CATALOGED ANAD. FISH STREAM: Y N37 CATALOG #: 226-20-16388

38 STREAM NAME: _____

39 OIL IN STREAM BED: Y N40 OIL ON STREAM BANKS: Y N41 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 N

44 ANADROMOUS FISH OBSERVATION

Species Aerial Ground

COMMENTS: BAND OF TAR MATS - RATTIES RINGING COVEAT HIGHER TIDE LINE. MODERATE GRAVEL BEACH COVERING PORTOF BAND ON WEST SIDE OF CHANNEL. POOLS OF HOUSESON SAND BETWEEN BOULDER RUGALG EAST OF CHANNEL.TAR BAND AT HIGHER TIDE LINE COVERING THE SAND

48 PHOTOLOG

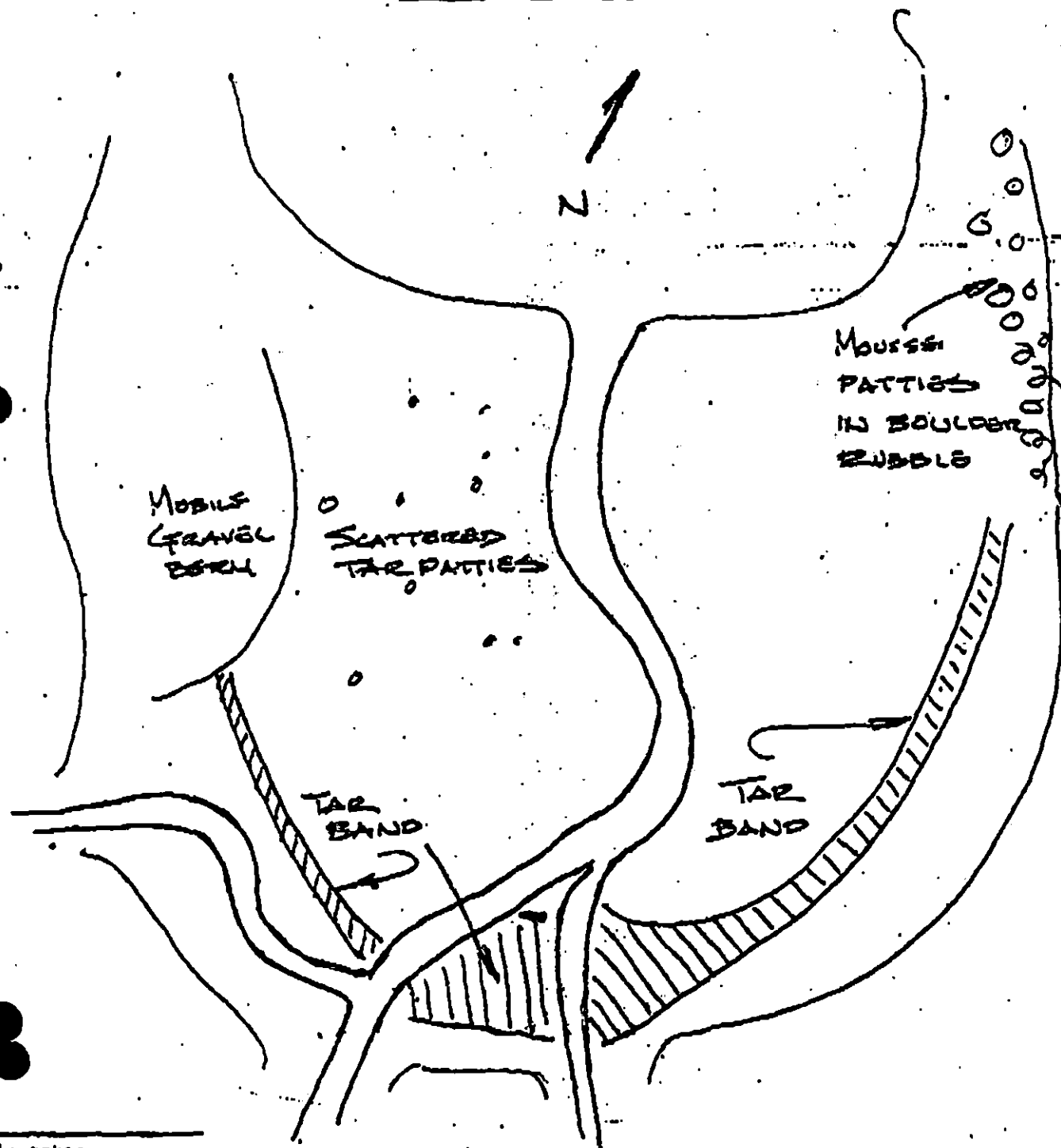
FRAME(S)

DESCRIPTION

RECOMMENDATIONS: MANUALLY REMOVE TAR MATS AND
PATCHES THROUGHOUT AREA INCLUDING STREAM CHANNEL
AND BANKS. REMOVE MOUSSE DEPOSITS FROM
BOULDER RUBBLE ON EAST SIDE OF CHANNEL.
MOUSSE REMOVAL MAY REQUIRE TOWELS AND
ACCESSORIES.

I agree with recommendations. M. H. [Signature]

48 OIL DISTRIBUTION DIAGRAM



Segment BP004
Stream 226-20-16388
Ecological Summary

4/23/90
Michael Fawcett

This small stream enters a small cove via an unconsolidated pebble/gravel beach, with isolated cobbles and boulders. Fucus are sparse overall, dense in small patches. Littorine and barnacles are also patchy, dense in places. New barnacle spat are dense in places. There is a moderately dense, mature mussel bed among pebbles at the stream mouth in MTZ. Two mink were seen foraging on the beach. There are no ecological constraints re: cleanup.

M. Fawcett

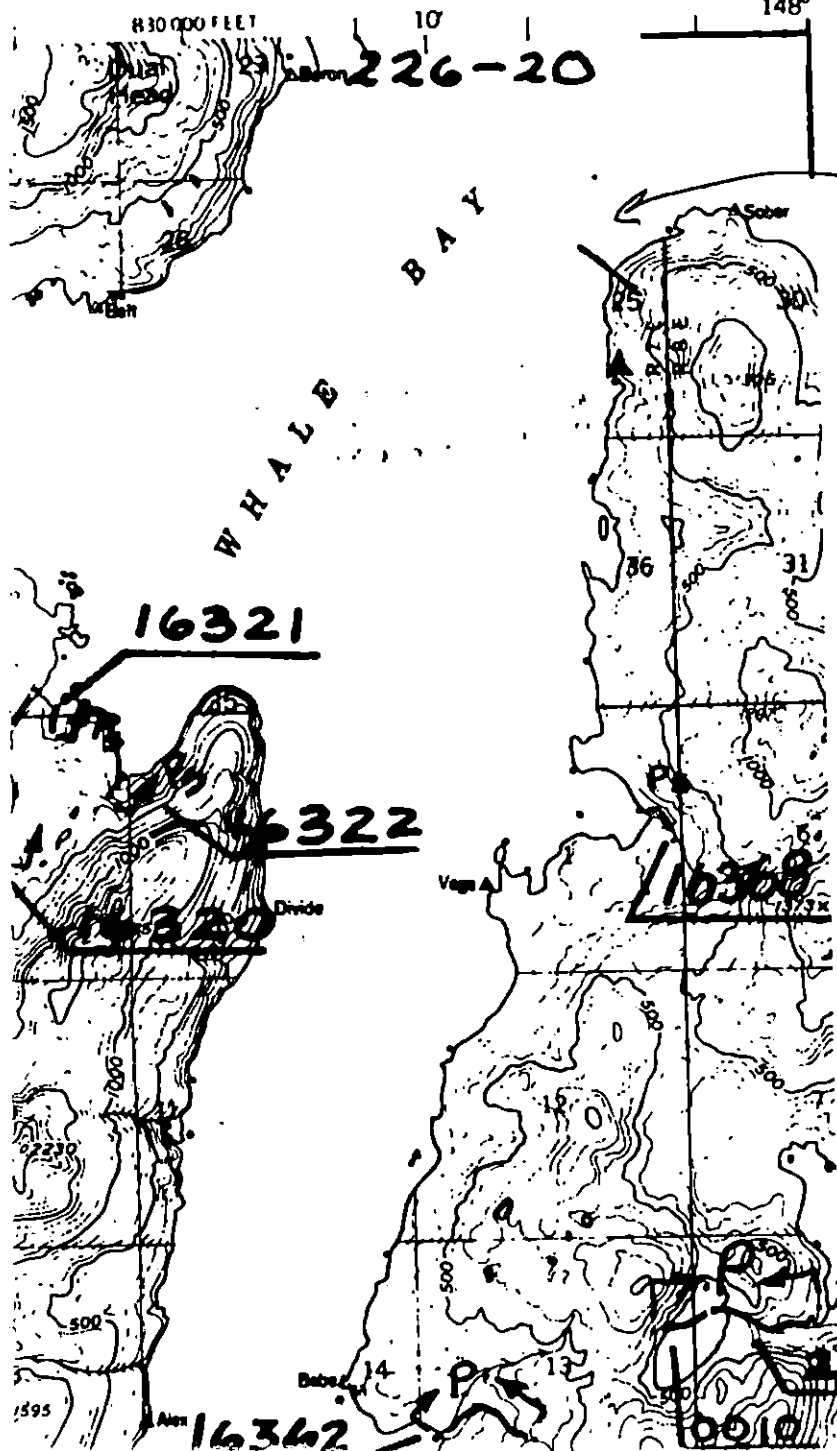
SEWARD (A-4) QUADRANGLE

ALASKA

1:63,360 SERIES (TOPOGRAPHIC)

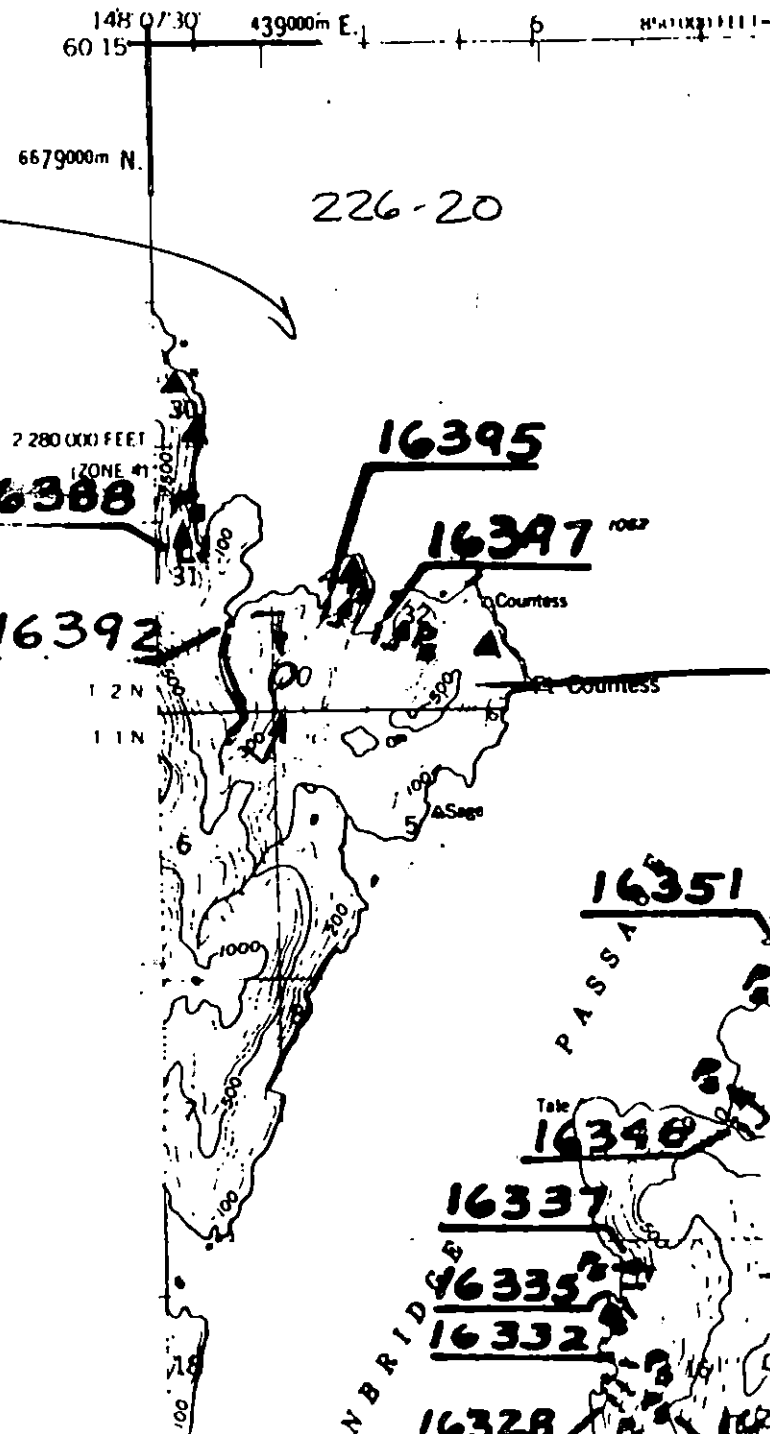
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

ECOLOGY MAP



▲ = Eagle Nests

BP-4



SUBJECT
-IN-711

PASSA

N BRIDGE

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ BP-04 STREAM NO: 226-20-16392 DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Subject salmon stream and 226-20-16388 (Ps, 12/89), 226-20-16395 (Ps, 12/89), 226-20-16397 (Ps, 12/89)

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

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

5T-4 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. Eagle nest > 400 M from work area - manual pickup with 10 man crew.

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: *P. David McWhorter* DATE: 5/8/90

Subsurface Oil Observed: Yes X No Maximum Depth 6 cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X 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 and pickup of mousse in areas shown on attached sketch map.

TAG COMMENTS:

TAG APPROVAL DATE: 5/7/90

ADEC *Art Wainner* *Art Wainner*

EXXON *Arny Ten* *Arny Ten*

NOAA *Gary Petras* *Gary Petras*

USCG *G.A. Reiter* *G.A. Reiter*

FOSC: *W L*

DATE: 5-7-90

Assess need for Customblend following TARMAT removal. notify CVC 24 hours prior to work.

5/3

SEGMENT ST/

STRENGTH 40-6392

DATE 24 APR 90

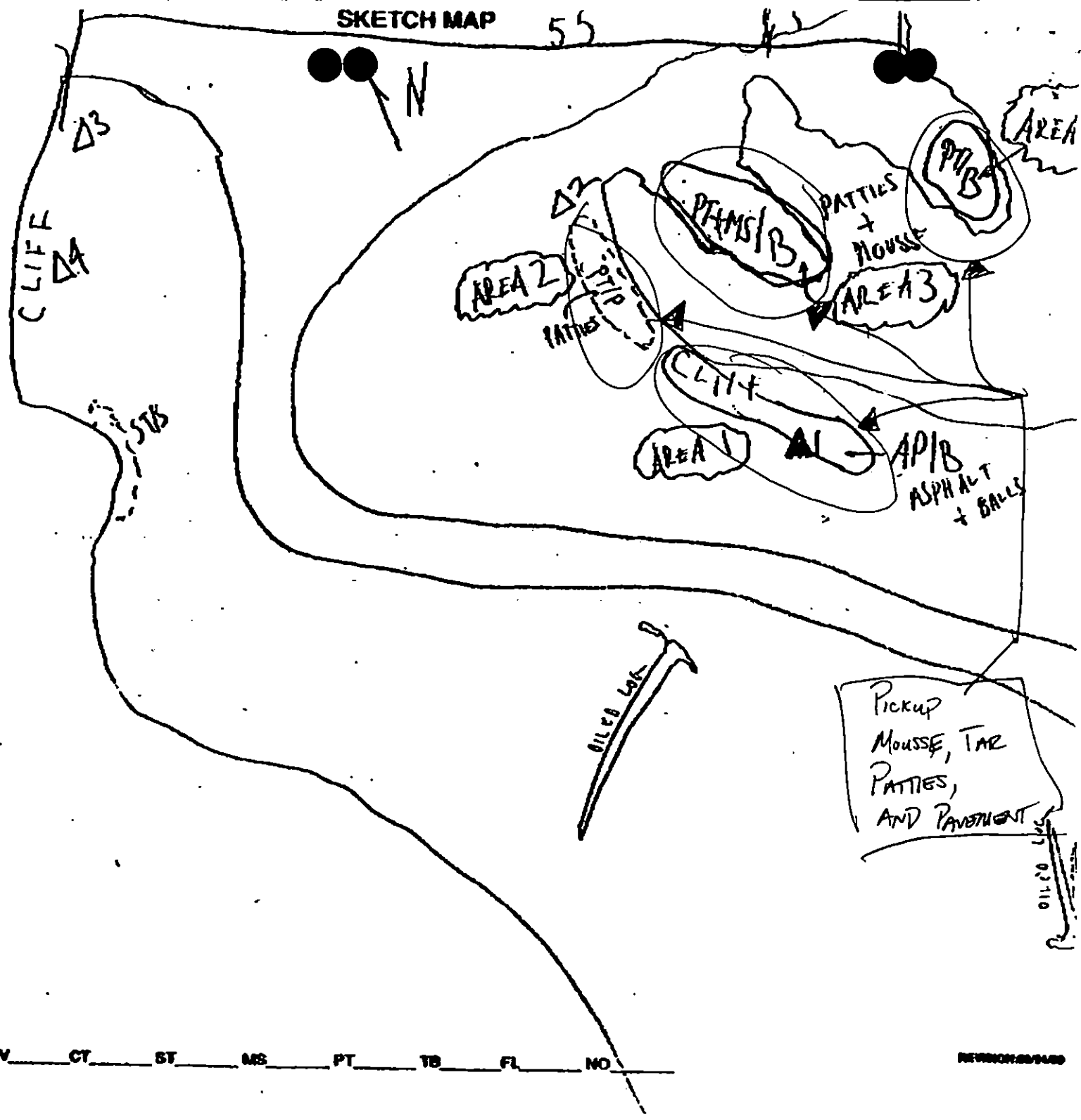
CHECKLIST

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

LEGEND

- 1 Δ
Pt - No Subsurface Oil
- 2 Δ
Pt - Subsurface Oil
- CT/C
Continuous Distribution
- CT/D
Broken Distribution
- CT/P
Patchy Distribution
- CT/S
Splashed Distribution
- eee
Old Vegetation
- 1 ●
Photo location, direction, and number

SKETCH MAP



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

REVISION 201408

8/32

45 PHOTOLOG

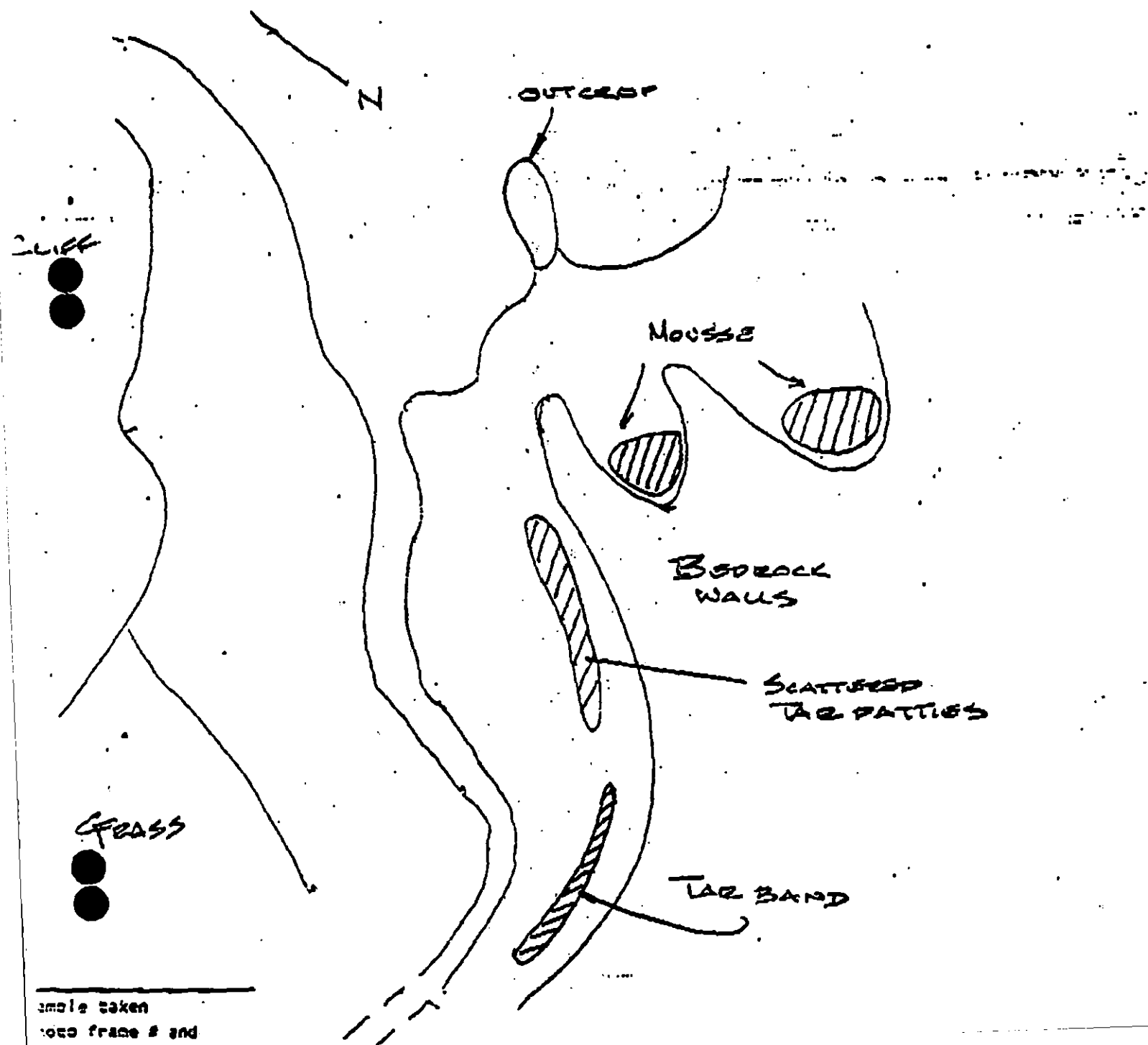
FRAME(S)

DESCRIPTION

RECOMMENDATIONS: MANUALLY REMOVS ALL SURFAC
TAR MATS AND PATTIES AND MOUSSE. REMOVE
OF MOUSSE FROM BETWEEN BOULDER MAT
REQUIRES TOOLS AND ASSORTMENTS.

I agree with recommendations. M. S. FURR

46 OIL DISTRIBUTION DIAGRAM



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

(SEW) B-4)

148° 07' 30" 439000m. E. 850 000 FEET - ZONE 4 148°

226-20

6679000m N.

BALD EAGLE
NESTS

2 280 000 FEET
16388

16395

16397

BP-Q4

226-2

226-4

12 N
11 N

Countess

Pt. Countess

Sage

16351

Bainbridge Pt

Tate

16348

16337

16335

16332

16328

16359

16330

16390

16388

16384

16372 Fleming

Gage I

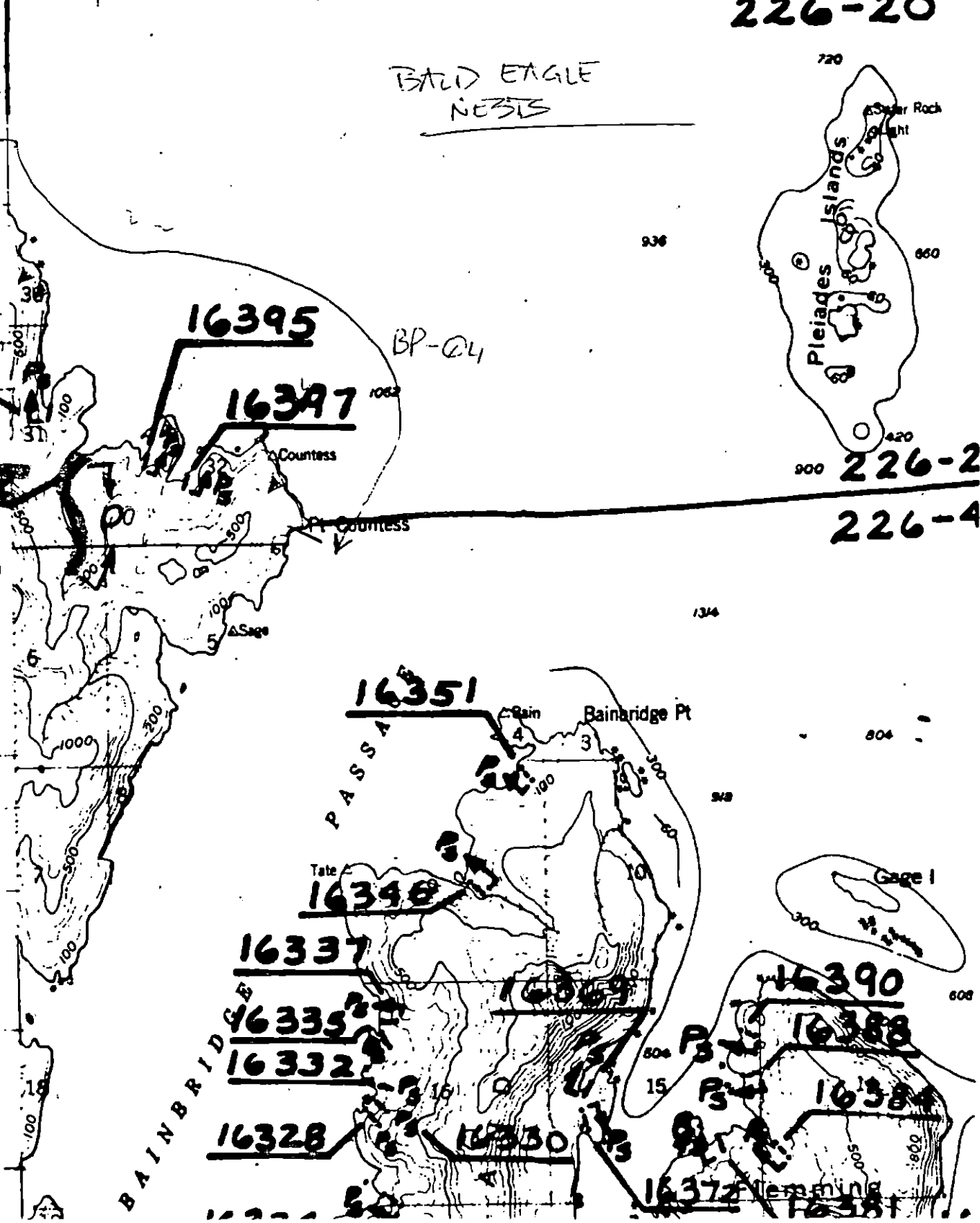
BAINBRIDGE

PASSA

16388

16384

16381



FINAL

ECOLOGICAL MAP 4153

ALASKA

63 360 SERIES (TOPOGRAPHIC)

148°07'

830 000 FEET

10

226-20

01-04

16240

PCH

WHALE BAY

BLVD
EXGLE
NEST

16321

16322

16320

16368

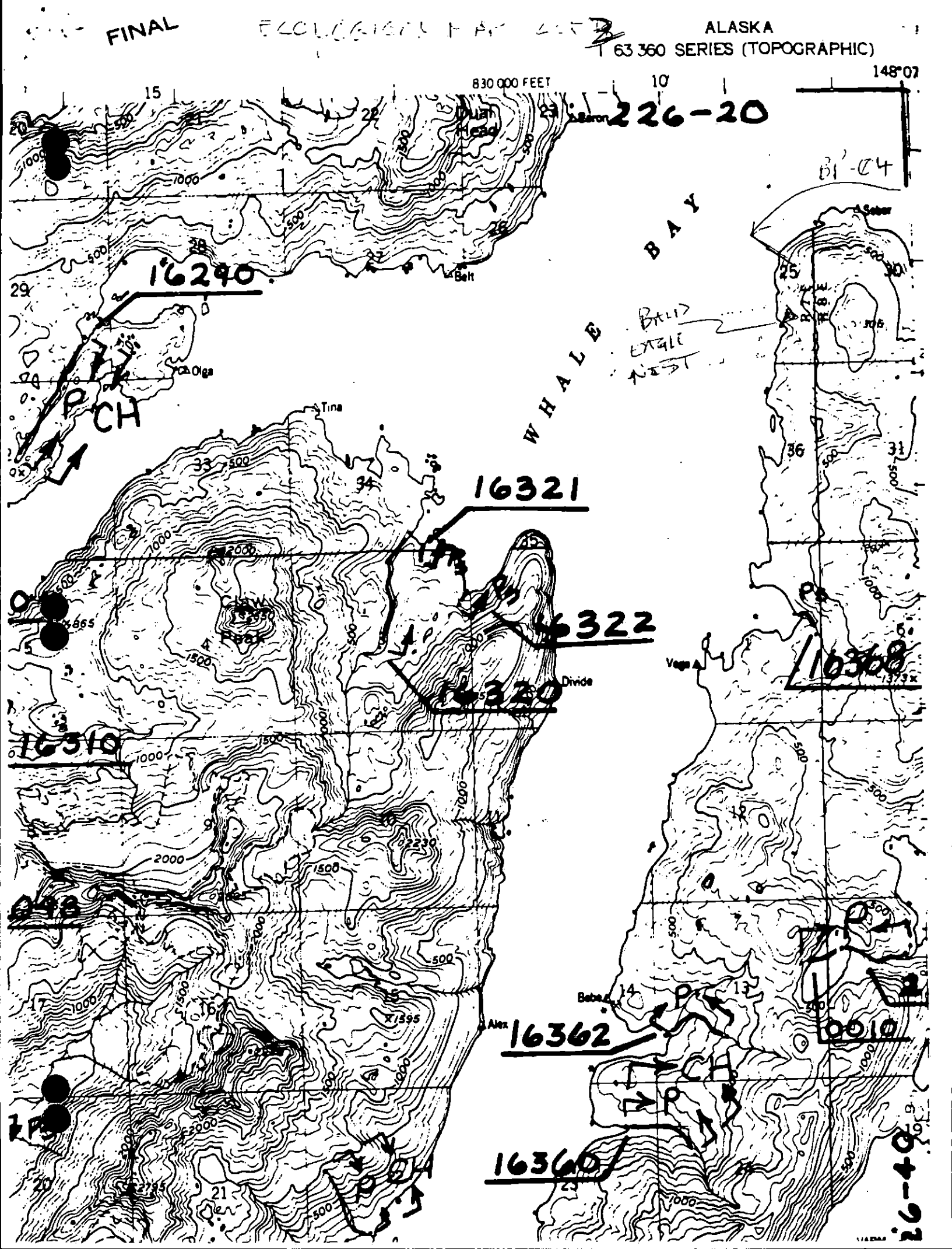
16310

16362

16360

16360

26-40



ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-20-16392

SEGMENT BP-004 SUBDIVISION A

WORK WINDOW

Manual Pickup Tarnat Removal	OPEN
Bioremediation Less Than 100m From Stream	WORK PRIOR TO 7/10 (ADF&G MONITOR REQ.)
Bioremediation More Than 100m From Stream	OPEN

*No Inpol - Use Customblen Only

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream	ADF&G catalogued anadromous stream (226-20-16392) is in Subdivision A. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream. No constraint to manual pickup and tarnat 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

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 disturbance to stream bed or banks. No flushing of pollutants or sediments into stream drainage; do not allow Inpol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Avoid any unnecessary disturbance or damage to uncolled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM BP-004A
FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC

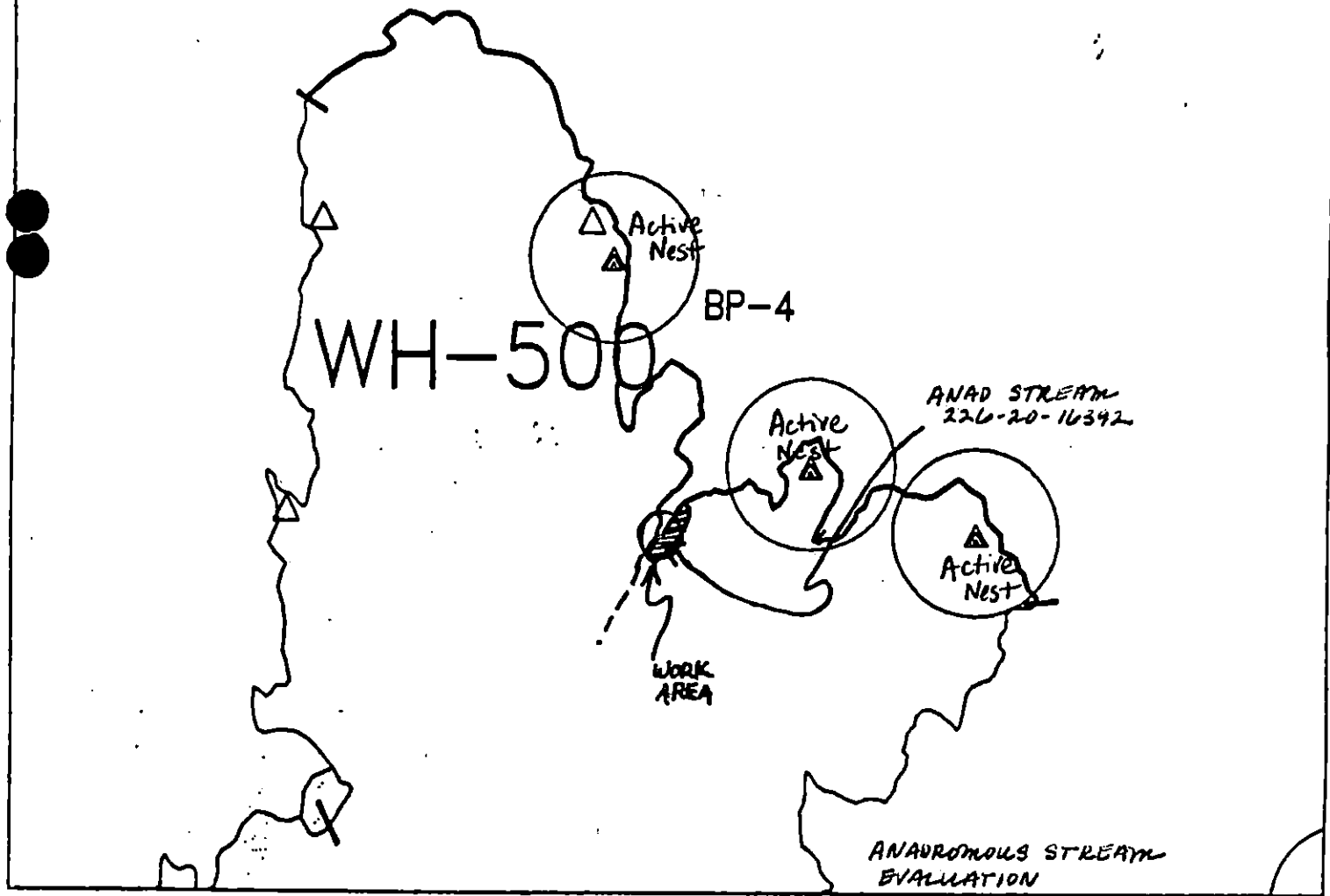
Date

6-14-90

Prepared by

Date

6/16/90

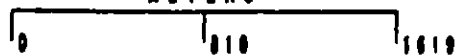


Exxon Company, USA

Map Key: PWS-BP-4

June 12, 1990

ECOLOGY MAP
SEGMENT BP-4
SUBDIVISION A (1 of 1)
METERS



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

1 inch = 2656 feet

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ BP-04 A STREAM NO: 226-20-16392 DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Subject salmon stream and 226-20-16388 (Ps, 12/89), 226-20-16395 (Ps, 12/89), 226-20-16397 (Ps, 12/89)

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

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

5T-4 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. Eagle nest > 400 M from work area - manual pickup with 10 man crew.

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: *David M. Wilson*

DATE: 5/8/90

Subsurface Oil Observed: Yes X No Maximum Depth 6 cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X 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 and pickup of mousse in areas shown on attached sketch map.

 SEE CONSTRAINTS ADDENDUM DATED 6/16/90. *JP*

TAG COMMENTS:

TAG APPROVAL DATE: 5/7/90

ADEC *Art Winters*

EXXON *Andy Tamm*

NOAA *Gary Petras*

USCG *G.A. Heiter*

FOSC: *W L*

DATE: 5-8-90

Assess need for Customblend following TARMAT removal. notify CVC 24 hours prior to work.

ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND

SEGMENT: BP-04

STREAM NO: 226-20-16392

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ BP-04 STREAM NO: 226-20-16392 DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Subject salmon stream and 226-20-16388 (Ps, 12/89), 226-20-16395 (Ps, 12/89), 226-20-16397 (Ps, 12/89)

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

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

5T-4 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. Eagle nest > 400 M from work area - manual pickup with 10 man crew.

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: _____

Subsurface Oil Observed: Yes X No _____ Maximum Depth 6 cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X 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 and pickup of mousse in areas shown on attached sketch map.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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

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

AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

1C

Salmon fry nursery area (4/31 to 7/31)

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D

Esther Hatchery release (4/15 to 6/15)

1E

Main Bay Hatchery release (4/20 to 6/15)

1F

Sawmill Bay Hatchery release (4/15 to 6/1)

1G

Cannery Creek Hatchery release (4/21 to 6/1)

1H

Remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.

AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214

1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511

1I

Gill net area (6/7 to 8/31)

1J

Purse seine area (7/20 to 9/30)

1K

Purse seine hook-off (7/20 to 9/30)

1L

Set net sites (6/11 to 7/25)

Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M

Herring spawning (4/1 to 6/15)

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

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

3N, 3P
3O, 3Q

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

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

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

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

5R

Seabird colony (5/1 to 9/1)

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S

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

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

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

✓ 6J

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

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U

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

6V

Anchorage (6/1 to 9/15)

6W

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

6X

Lodge (6/1 to 9/15)

6Y

Special use destination

7Z

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

Finfish harvesting

Deer harvesting (8/15 to 2/28)

Invertebrate harvesting

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

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

6/3

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 DP004 SUBDIVISION: 16392 DATE 4/24/90

USCG

NAME CMD MCMAHON

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

1. MANUAL TREATMENT; REMOVE TAR BALLS
AND MOUSSE PER MAP LEFT SIDE (LOOKING ONSHORE)

ADP
ADEG

TOM CRONE

NAME NO TEAM MEMBER

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

MANUAL TREATMENT; REMOVE TAR MATS WITH SPECIAL
CONSIDERATION TO POCKET COVES.

LAND MANAGER

NAME NO TEAM MEMBER

SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

2/3

Alaska Department of Fish and Game

ANADSCAT Observations and Recommendations
Team 15 - Michael Wiedmer and Tom Crowe

24 April 1990

ASC # No numberSegment BA-002

Observations This site supports a very rich intertidal flora and fauna. The intertidal zone is bordered by bedrock walls north and south of the stream channel. The bases of these walls are littered with boulder rubble. Two tar patties were found in the boulder rubble south of the channel and two to three tar splatters were found in the boulders north of the channel. No buried oil was observed at the site.

Treatment Recommendations Manually remove tar patties. This was done by the ANADSCAT crew, therefore no further treatment is required.

ASC # 226-20-16392Segment BP-004

Observations A long, protected intertidal zone borders this stream channel. North and south of the channel, bedrock walls confine the intertidal zone. South of the stream mouth, bedrock outcrops protect two small beach pockets. The upper portions of each of these protected pockets contain mobile mousse deposits trapped between boulders. Further up the south side of the stream channel, tar mats and patties ring the high tide line. No significant quantities of buried mousse were identified.

Treatment Recommendations Manually remove surface tar mats and patties. Manually remove mousse deposits from protected coves. Removal of mousse may require trowels and absorbents.

OG William Reid USCG McMAHON SEGMENT ST/ 870004
 BIO MICHAEL FAWCETT LAND REP STRAIT 225-242721 OF
 EXXON Gus Garcia ADFG Mike Wimmer TIME 09:25 to
 TEAM NO. 15 TIDE LEVEL 0 ft DATE 24 / 12 / 90
 EST. SUBDIVISION LENGTH: 5.5 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 8 % B 5 % C 35 % P 60 % G 8 % M 8 % V
 SLOPE: Long 80 % Hang 20 % Van 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ Hi
 OIL CATEGORY LENGTH: W 8 m M 2 m N 2 m VL 0 m NO 45

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	W	M	P	N	SW	W	M	N	VL	SW	W	M	N
ASPHALT PAVEMENT		X				X					X		
POOLED													
COVER													
COAT													
STAIN		X				X					X		
MOUSSE		X						X			X		
PATTIES		X				X		X			X		
TARBALLS													
FILM													
NO OIL										X		X	X

PAVEMENT H (F) (S) 150 sq. m by 7

PATTIES / TARBALLS _____

NEAR SHORE SHEEN? NO BR RW SL

OILED DEBRIS	AMOUNT			
	SM	MD	LG	
Logs				Did You Go DEBRIS ☐ YES ☒ NO
Vegetation				
Trash				
Debris				
				TYPE _____
				#BAGS _____

Photographs: _____
 Roll No. _____
 Frames _____

SUBSURFACE OIL * BOILED INTERVAL < 5cm IN PIT NO. 1 DOES NOT CONSTITUTE SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					BOILED INTERVAL	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	OILED SHEET (Y/N)	Y	SURF/ SUBSURF SEDIM
		OF	OR	OL	OF	NO		W	U	SW	W	M	N	VL	SW	W	M	N	U						
* 1	40	X					0-6	X		X						X						N		P/G	
2	35					X	.									X						N		P/G	
3	30					X	.											X				N		P/G	
4	30					X	.											X				N		P/G	
5	35					X	.									X						N		P/G	
6	25					X	.									X						N		P/G	

COMMENTS

5/30

SEGMENT ST/

STRAH 28-40-6392

DATE 24 APR 90

CHECKLIST

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

LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/D

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

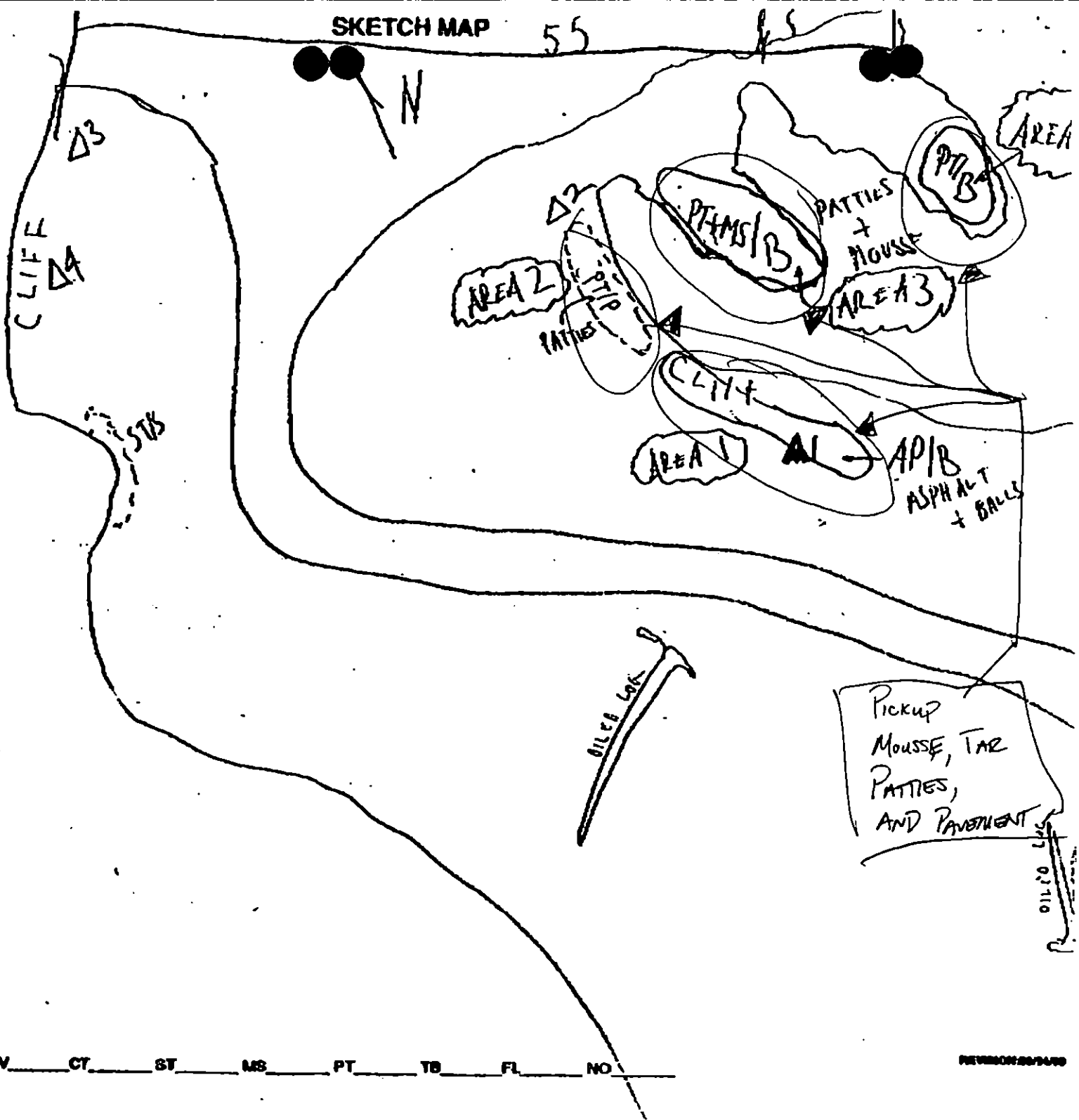
lll
 Old Vegetation

1 →

Photo location, direction, and number

SKETCH MAP

55



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

REVISION: 20/04/90

ADFG MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: SS DS TS AVS SCH MMS PTA

2 REGION: PTS NP,CI K,AP

METHOD: Aerial Ground Sea

3 DATE: 4/24/90

16 HIGH TIDE TIMES: 0059, 1347

21 TEAM RECORDER: M. WIEDNER

4 START TIME: 0920

18 HIGH TIDE HTS: 12.5, 10.9

22 OBSERVERS: T. CROWE

5 STOP TIME: 1005

17 LOW TIDE TIMES: 0731, 1935

23 AGENCY: ADFG

6 SEGMENT #: BP-004

19 LOW TIDE HTS: -2.2, 10.7

24 PHOTOS TAKEN: Y N

7 STATION #: 226-20-16392 10 TIDE HT AT SURVEY: 0.71'

Roll #: _____ Frames: _____

8 X-UNIT: _____ Ebb Slack Flood Slack

25 VIDEO TAKEN: Y N TAPES: _____

9. STAT AREA: _____ 20 USCG QUAD: _____

Start: _____ End: _____

10 LAT: _____ 11 LONG: _____

26 SAMPLES TAKEN: Y N Number _____

12 SOURCE: Map Loran

Oil _____

13 LOCATION: POINT CANTRESS

Sediment _____

DESCRIPTION: _____

Biological _____

Water _____

EXTENT OF OIL

	SHORELINE				STREAM			
	L	V	N	S	L	V	N	S
27 SURFACE COVERAGE	75	200		3	200	4		<1

36 CATALOGED ANAD. FISH STREAM: Y N

37 CATALOG #: 226-20-16392

38 STREAM NAME: _____

	2cm	1cm	3cm			
	4cm	5cm	6cm			
28 SURFACE THICKNESS						
29 PENETRATION						

39 OIL IN STREAM BED: Y N

40 OIL ON STREAM BANK: Y N

30 OVERALL OIL IMPACT: N VL L N H

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

31 OIL TYPE: Pooled Mousse Tar Asphalt Sticky Slain

42 OIL WITHIN 1 MILE OF STREAM: Y N

32 OILED DEBRIS: Y N

Where: _____

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

43 ANADROMOUS FISH PRESENT: Y N

34 WAVE EXPOSURE: High Moderate Low

44 ANADROMOUS FISH OBSERVATION
Species ALEVINUS PESCEOLUS
Species Aerial Ground

35 SUBSTRATE TYPE: Bedrock 2 Boulder 10 Cobble 44
Gravel 44 Sand _____ Mud/silt _____

COMMENTS: ASPHALT BAND ALONG HIGH TIDE LINE EAST OF CHANNEL
SCATTERED ASPHALT PATCHES SEAWARD FROM CONTINUOUS BAND
AREAS OF POOLED MOUSSE IN SMALL PROTECTED POCKETS

48 PHOTOLOG

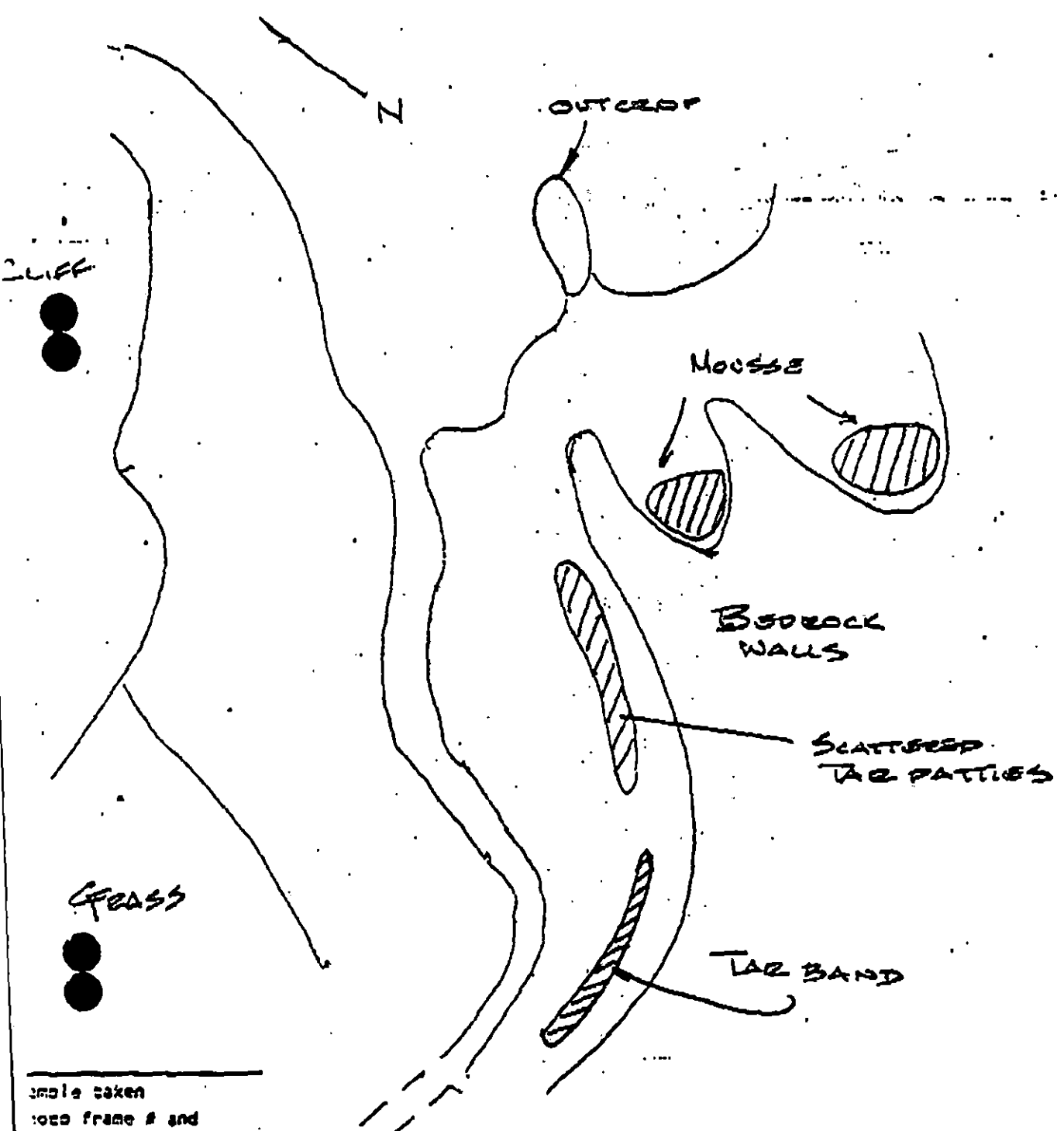
FRAMES

DESCRIPTION

RECOMMENDATIONS: MANUALLY REMOVS ALL SURFACE TAR MATS AND PATTIES AND MOUSSE. REMOVAL OF MOUSSE FROM BETWEEN BOULDERS MAY REQUIRE TOOLS AND ABSORBENTS.

I agree with recommendations. M. E. FURR

49 OIL DISTRIBUTION DIAGRAM



FINAL

ECOLOGICAL MAP

ALASKA

63360 SERIES (TOPOGRAPHIC)

830 000 FEET

148°07'

226-20

01-04

WHALE BAY

ENTRANCE
LITTLE
NEST

16290

16321

16322

16320

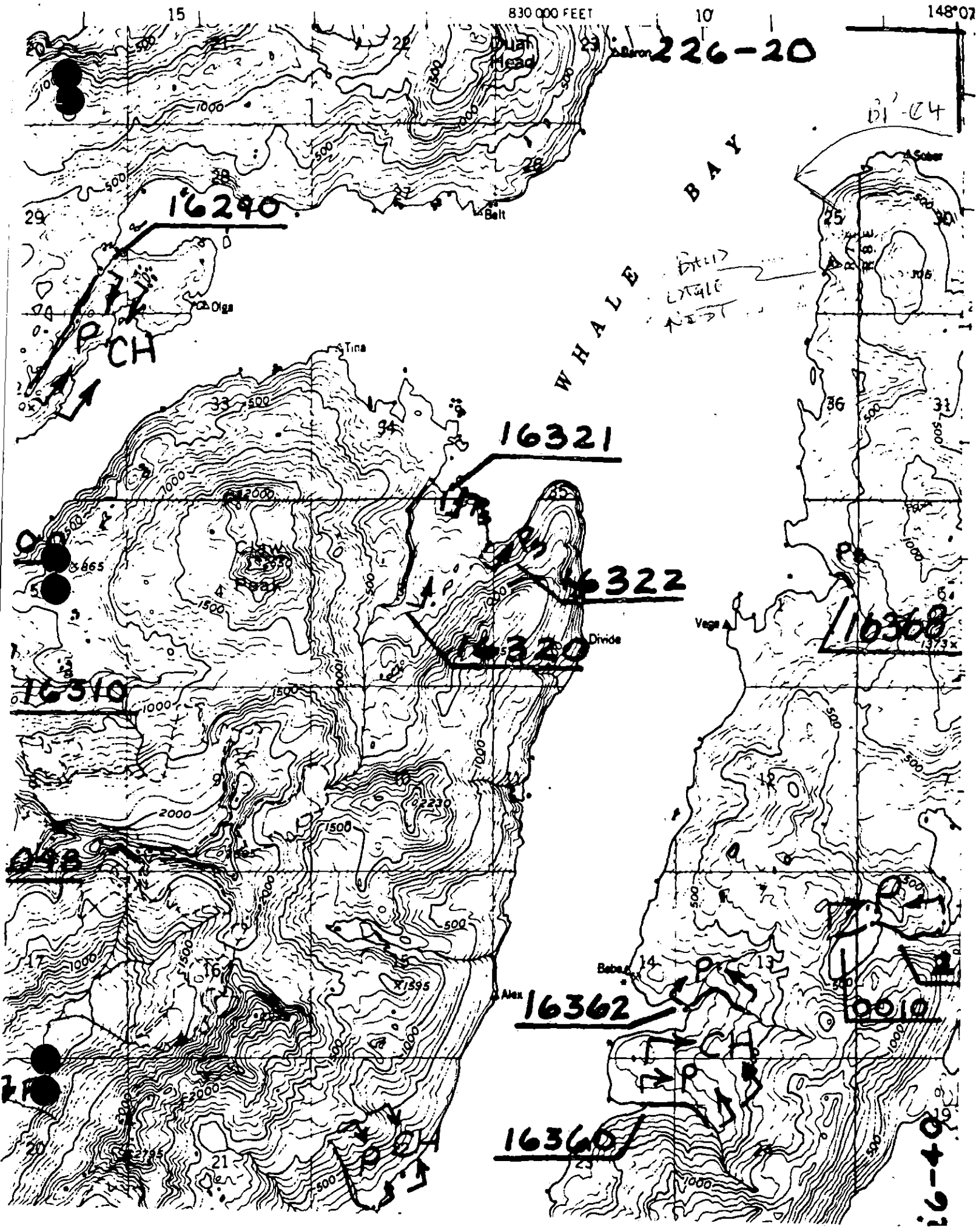
16368

16310

16362

16360

16-40



ASAP TAG REVIEW SHEET

Segment: Bp04 Subd: 4 Site: 1 Date PRE-Review 22 Aug

Priority For Addressing In 1990

 HIGH

X MEDIUM

X LOW

 NTR

Treatment Recommended:

m/p

Pit 2 Op Oil

10cm surface
could only be
a mowle or Asphalt
patch

Spoil Asphalt
Mowle
Tar patch

Priority Site For Reassessment In 1991

YES NO
CG

YES NO
ADEC

YES NO
EXXON

YES NO
LAND MGR

TAB 23 AUG 90

Reapply CUSTOMER w/
ADEC Approval
& Release 9/

DRAFT

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/ BP-04 Subd.: ANAD STREAM 226-20-16399 Site: 4 Date: 8/15 1990

Conditions Observed: ON BOTH SIDES OF ANAD STREAM IN SUPRA & UPPER
ITZ, SPORADIC COATS, STAINS, AP, PT & SOR EXIST. SMALL AMOUNT
OF FILM ON TOP OF PEAT AT HEAD OF STREAM. LGNS OF OP WAS FOUND
IN SUPRA ITZ IN AREA EAST OF STREAM IN VICINITY OF PITS #2 & 3.
SUBSURFACE OR FOUND IN SUPRA ITZ ON BOTH SIDES OF ANAD STREAM.

Followup Recommendations: SEE COMMENTS BELOW:

Completed by Pickup Crew: ☐ YES ☒ NO

Priority for Addressing in 1990: ☐ High ☒ Mod. ☐ Low

SEC B. McCreary B. McCreary
 (name) (signature)
 Comments: Manually remove all AP, SOR, Patten. In addition, some of OP/AP
require manual exposure and removal. In addition, the removal
of all other OP and OR subsurface oil is required.

Exxon AL Snook AL Snook
 (name) (signature)

Comments: MANUAL REMOVAL OF SPORADIC AP & PT. MANUAL REMOVAL
OF OP IN AREA OF PITS 2 & 3. RAKE AREAS WHERE SOR EXISTS & APPLY
CUSTOMBLEN. RAKE & APPLY CUSTOMBLEN TO SUPRA ITZ WHERE OR EXISTS.

USCG Don Cline Don Cline
 (name) (signature)

Comments: MANUAL REMOVAL OF HEAVY OILS, SOR, PATTEN, SOR AND RAKING OF
REMOVING OILS ALONG "BIG" APPLICATIONS. PATTEN, ASSISTANT AND REMOVAL OF
USE EG. MODERATE TO HIGH PRIORITY FOR 1990.

NCA
 Lead Rep. DON CLINE DON CLINE
 (name) (signature)

Comments: I Agree w/ RECOMMENDATIONS ABOVE.

226-28-16397

SEGMENT AS / 30-004 SUBDIVISION: Anonymous SITE: 4 DATE: 15 AUG 90

SCG

AME Don Cline, USCG SIGNATURE [Signature]

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

ASON:

SEMI-LARGE SWELING POCKET BEACH WITH ANOMALOUS STREAM AT UPPER RIGHT CORNER. DISCONTINUOUS BANDS OF TAIL PATCHES, COAT, STAIN, "SOE", AND ASPHALT ALONG U/I. FROM OLD SKETCH MAP, THIS AREA APPEARS TO HAVE BEEN ASPHALT COAT. TWO PITS DUG FOUND AN ASPHALT/MOUSE COAT APPROX. 2-3CM THICK, UNDER GRAVEL COATING GIVEN VEGETATION NOTED AT GLASSLINE TOWARD STREAM. AN ADDITIONAL BAND OF SCATTERED TAIL PATCHES / ASPHALT / SOE NOTED ALONG RIGHT BANK OF COVE. REASSESSED IN 1991.

DEC

ME Bob McCaskey SIGNATURE [Signature]

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

ASON:

ANAL. Segment with U/I 2-50 along own most frequent diking ranges from PT/S, AP, SOR, CT, ST. An isolated & lens of an undetermined size along both W & E shorelines. Lens of OP and (which appears to have been AP covered during SSAT '90 and buried under storm berm) is present along West shoreline and will require manual exposing followed by removal. Manual removal of all AP, SOR, MS, OP, and OR is recommended.

ME NOAA

ME DON CLINE SIGNATURE [Signature]

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

ASON:

OP LENS EXISTS IN THE STORM BERM. IN BAY MOUTH, API OCCURS ON EXPOSED BEDROCK. WEATHERED COAT & STAIN IS COMMON.

XON

ME Al Snook SIGNATURE [Signature]

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

ASON:

SUBSURFACE DILING IN SUPRA & UPPER IT2 SHOULD BE REASSESSSED IN 1991; ESPECIALLY ON EAST SIDE OF ANAD STREAM.

8-15-90

Re: QVC REP. FOR ASAP INSPECTION
OF BP-04 ANAD STREAMS

To: ASAP Files

FROM: AL SNOOK

EXXON REP. TERM #3

ARRANGEMENTS WERE MADE WITH GAYLE EVANS ON THE

MORNING OF 8/14/90 TO PICK UP QVC REP, STEVE WARD, THE

AFTERNOON OF 8/14/90 TO DO ASAP INSPECTION OF BP-04

ANAD STREAMS ON THE MORNING OF 8/15/90. TEAM #3 ARRIVED

IN SAWMILL BAY, EVANS ISLAND, AROUND 10:15 PM TO PICK

UP STEVE WARD. STEVE WOULD NOT RESPOND TO TEAM #3 LEAVE

CONTACTS ON MARINE CHANNEL 8 AND 10, SO EXXON REP. AL

SOOK, VECU CREW MEMBERS MIKE REAVIS & ~~LOUIS NATHAN~~ WERE

STEVE WARD'S HOME IN CHEDAGA VILLAGE STEVE MET

AT HIS HOME & EXPLAINED THAT HE HAD A JOB OFFERING A

DUMP TRUCK FOR THE CHEDAGA VILLAGE WHICH STARTED ON 8/15/90

& LASTED FOR A WEEK, PAYING \$275 PER HOUR. HE ALSO STATED

THAT HE WAS NOT AWARE OF ANY OIL ON THE BRANBIDGE PASS

SEGMENT & "THIS WAS A LOW PRIORITY" TO HIM. DUE TO THE

LIGHT DEGREE OF OILING, STEVE TOLD EXXON REP. "TO GO

AWAY & DO THE INSPECTION & REPORT THE FINDINGS THAT ALL

THE MONITORS FIND. THE EXXON REP. & VECU CREW MEMBERS

LEFT STEVE WARD'S HOME & RETURNED TO THE BRANBIDGE

VESSEL, ALBERTA TLE, & MOTORED TO THE NORTH END OF WAHLE

BAY FOR A MORNING INSPECTION OF BP-04 ANAD STREAMS

THE ASAP INSPECTION OF BP-04 ANAD STREAMS WAS

COMPLETED THE MORNING OF 8/15/90. TEAM #3

AL SNOOK - SNOOK
FROM: ALBERTA TLE

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ BP-04 STREAM NO: 226-20-16395 DATE 4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Four catalogued anadromous streams in BP-04: 226-20-16395, 226-20-16397, 226-20-16392, and 226-20-16388.

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

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

5T-4 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. 5T - one bald eagle nest is within 400M of stream 226-20-16395. Cleanup activities should be conducted with as little disturbance as possible to the diverse lower tidal area.

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: *David M. McMan* DATE: 5/8/90

Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

Bioremediation

 Tarmat Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pickup of mousse and tarballs, and 2) bioremediation of area shown on attached sketch map. Work should be conducted between 6/1 to 7/10 based on eagle nest and salmon constraints with approval of USFWS regarding eagle nest.

TAG COMMENTS: MONITORS TO ASSESS LOGS IN FIELD TO DETERMINE THE SIGNIFICANCE OF THE OIL STAINING.

TAG APPROVAL DATE: 5/7/90.

ADEC *Art Weber* *Art Weber*

EXXON *Andy Tate* *Andy Tate*

NOAA *Gary Patney* *Gary Patney*

USCG *G.A. Renter* *G.A. Renter*

FOSC: *W L* DATE: 5-18-90

NOTIFY CVC 24 HRS PRIOR TO WORK.

50/53 00 WILLIAM REID
SEGMENT ST-13000A

STREAM 226-20-16395

DATE 23 / 10 90

CHECKLIST

☐ N Area
☐ Approx. Scale
☐ Seg/Sub Entry
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HW/LA/WL
☐ SBL
☐ Profile Location(s)
☐ Profile(s)
☐ PI Location(s)
☐ Photo Location(s)

LEGEND

1 Δ

PI - No Subsurface Oil

2 Δ

PI - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

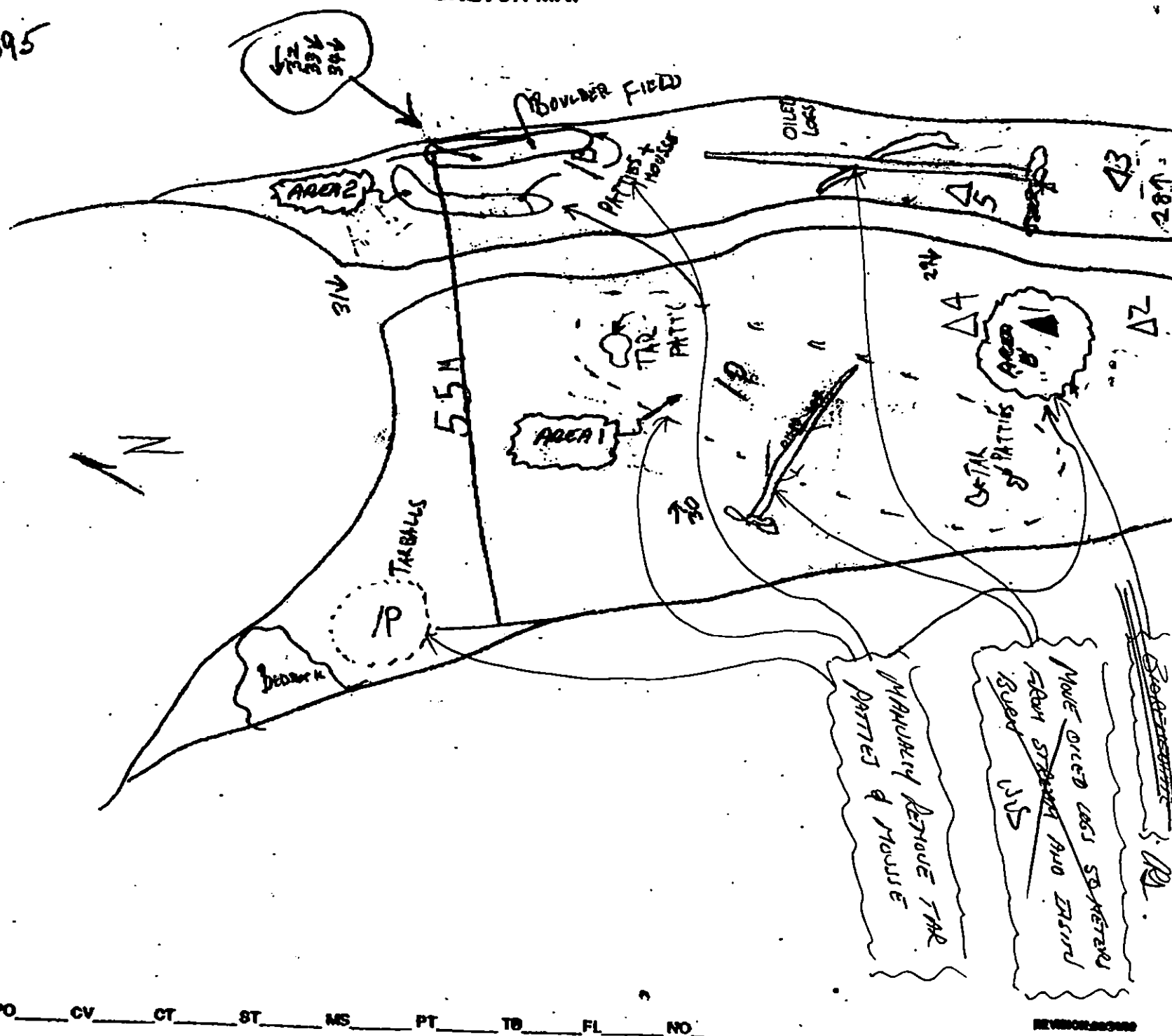
Splashed Distribution

Oil Vegetation

1 ●→

Photo location, direction, and number

SKETCH MAP



Film AS-15-4, Frames 28-39.

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

NEWBOROUGH

48 PHOTOLOG

5(5)

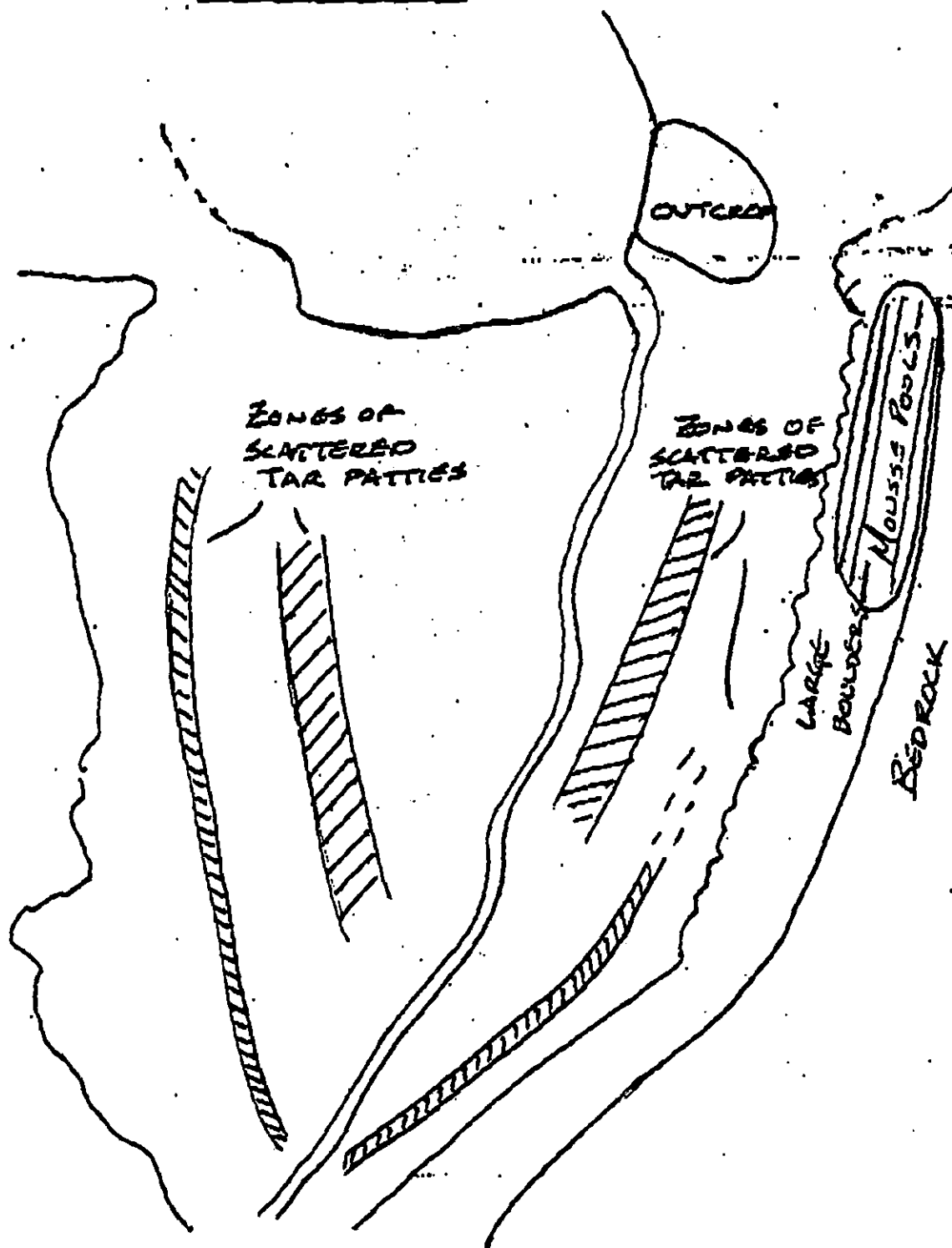
DESCRIPTION

RECOMMENDATIONS: MANUAL REMOVAL OF ALL TAR PATTIES.
MANUAL REMOVAL OF MOUSSE POOLS BETWEEN BOULDERS -
WILL REQUIRE TROWELS ETC.
REMOVE OILED LOGS.

I agree with recommendations.

W. H. F. 10/10/88

48 OIL DISTRIBUTION DIAGRAM



BEDROCK

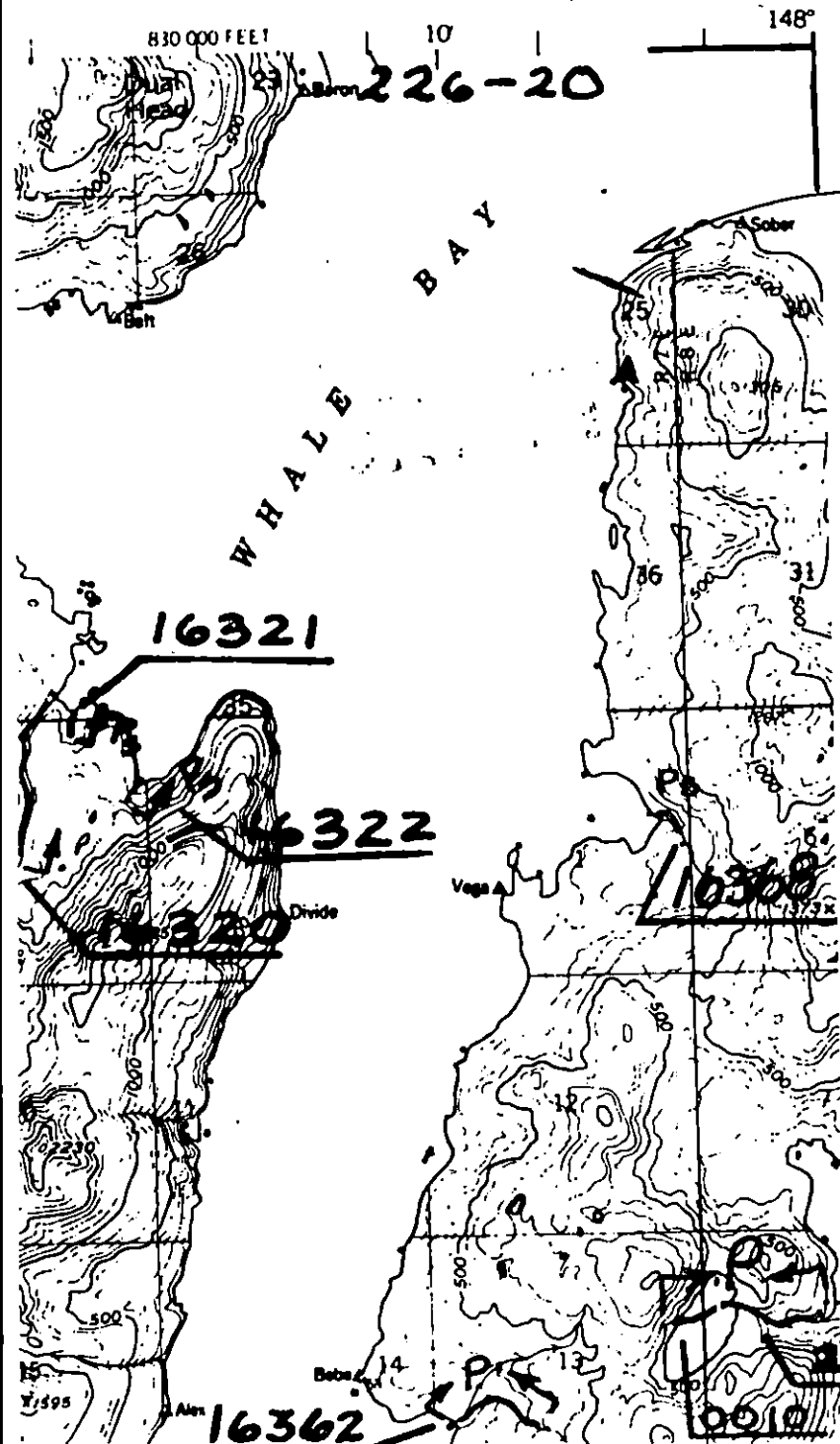
SEWARD (A-4) QUADRANGLE

ALASKA

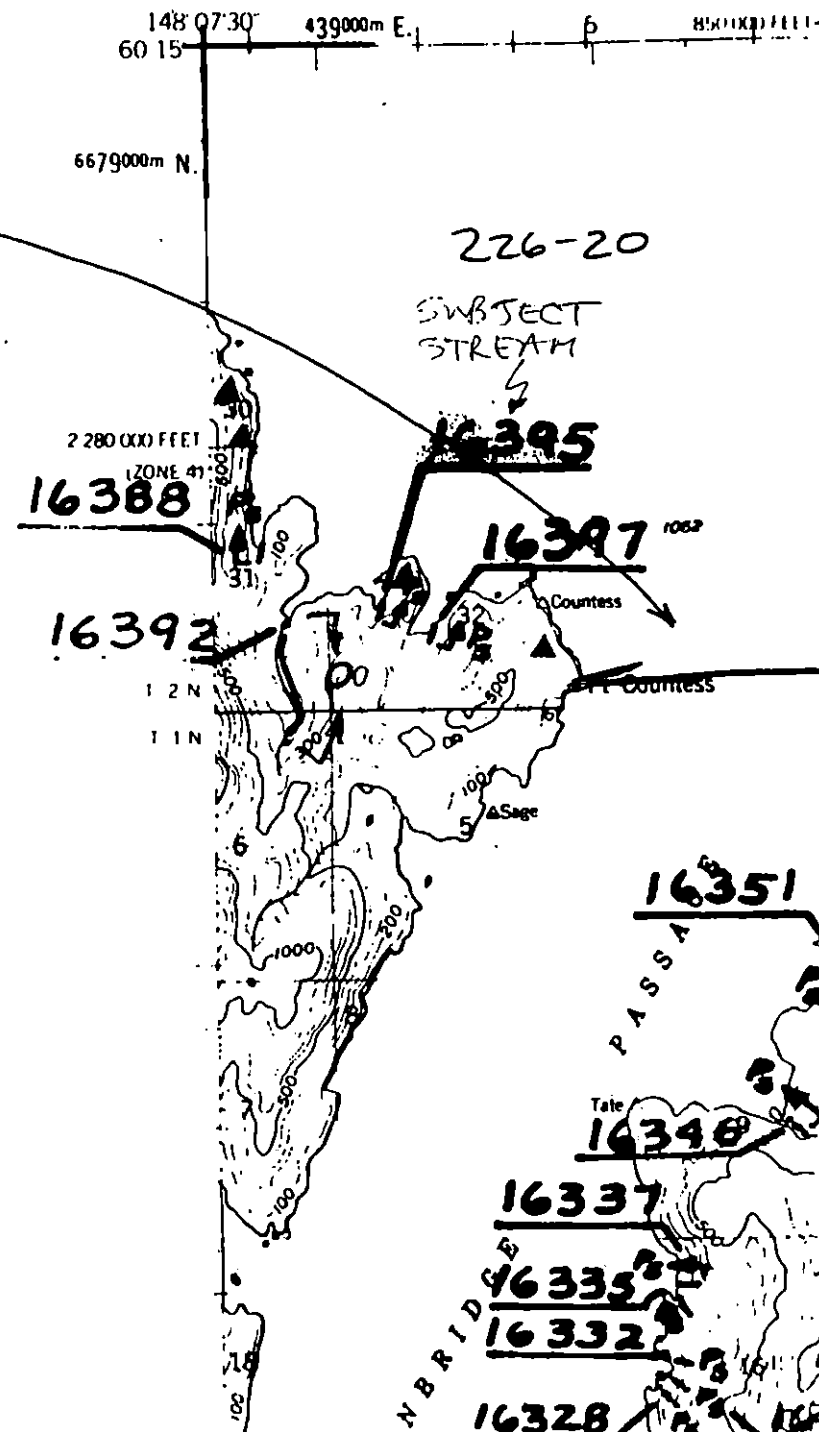
1 63 360 SERIES (TOPOGRAPHIC)

ECOLOGY MAP

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



▲ = Eagle Nests



ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-20-16395

SEGMENT BP-004 SUBDIVISION A

WORK WINDOW	
Manual Pickup	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (226-20-16395) is in Subdivision A. No constraint to manual pickup.

5T Bald Eagle Nest

USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to manual pickup within 400m of active nest.

OTHER ECOLOGICAL CONSIDERATIONS

If eagle nest constraint is removed, other ecological considerations will apply.

**SEE SUBDIVISION CONSTRAINT ADDENDUM BP-004A
FOR ADDITIONAL CONSTRAINT INFORMATION.**

FOSC

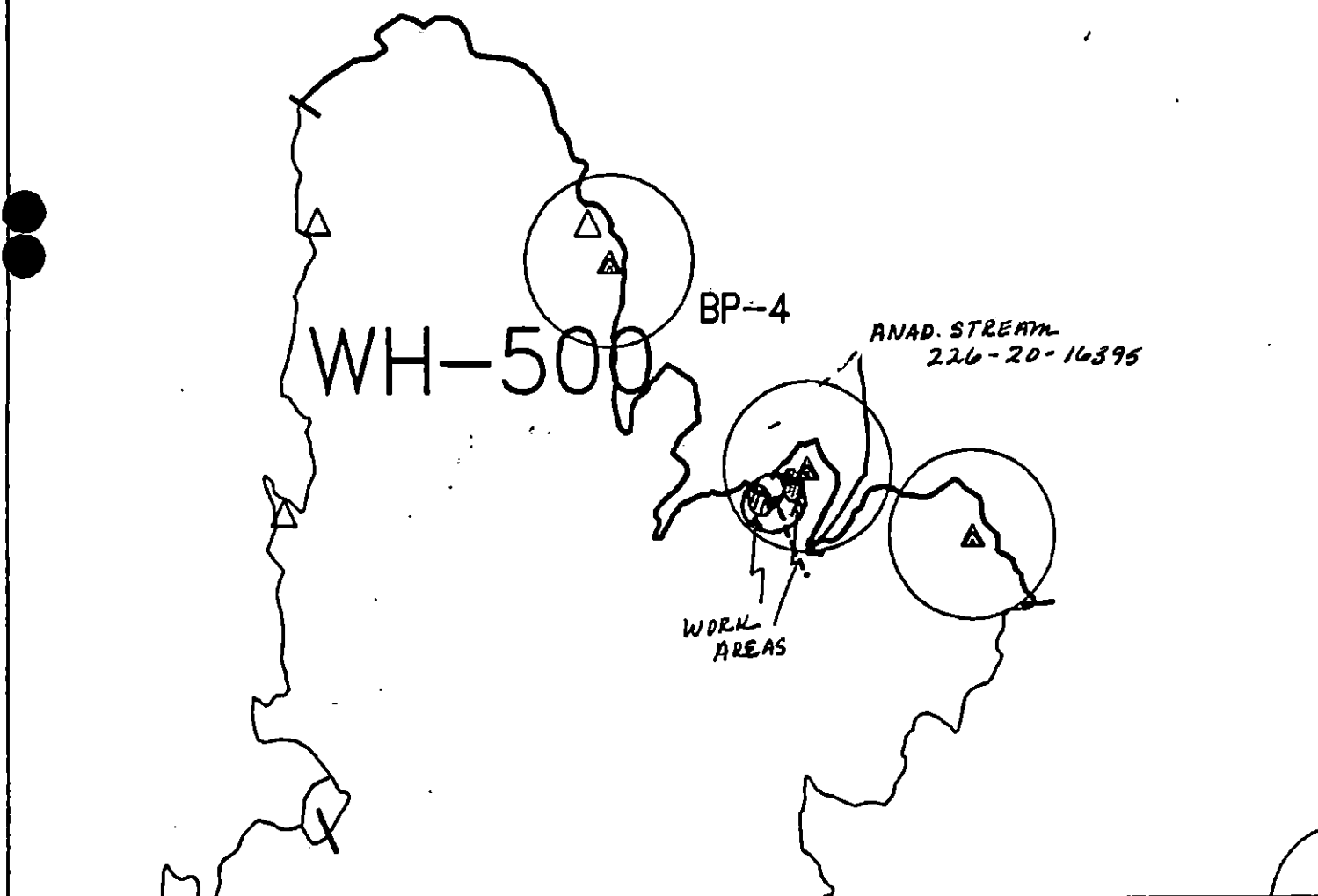
Date

6-14-90

Prepared by

Date

6/16/90



Exxon Company, USA
 Map Key: PWS-BP-4
 June 12, 1990

ECOLOGY MAP
 SEGMENT BP-4
 SUBDIVISION A (1 of 1)
 METERS
 0 610 1619

★	Seabird Colony
▲	Active Eagle Nest
△	Inactive Eagle Nest

1 inch = 2656 feet

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ BP-04 STREAM NO: 226-20-16395 DATE 4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Four catalogued anadromous streams in BP-04: 226-20-16395, 226-20-16397, 226-20-16392, and 226-20-16388.

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

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

5T-4 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. 5T - one bald eagle nest is within 400M of stream 226-20-16395. Cleanup activities should be conducted with as little disturbance as possible to the diverse lower tidal area.

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: David M. McLean DATE: 5/8/90Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

 No Treatment RecommendedX Treatment RecommendedX Manual Pickup Bioremediation Tarmat Removal Snare/Absorbent Booms Oil Snares (pom poms) Absorbents (pads, rolls, etc) Spot Washing: Wands Beach Cleaner Other (see comments)COMMENTS: Recommended treatment includes 1) manual pickup of mousse and tarballs, and 2) bioremediation of area shown on attached sketch map. Work should be conducted between 6/1 to 7/10 based on eagle nest and salmon constraints with approval of USFWS regarding eagle nest.SEE ADDENDUM dated 6/16/90CONSTRAINTSTAG COMMENTS: MONITORS TO ASSESS LOGS IN FIELD TO DETERMINE THE SIGNIFICANCE OF THE OIL STAINING.TAG APPROVAL DATE: 5/7/90ADEC Art WeirEXXON Art WeirNOAA Gary PatenaUSCG G.A. PETERFOSC: DATE: 5-14-90NOTIFY EVC 24 HRS PRIOR TO WORK.

ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND

SEGMENT: BP-04

STREAM NO: 226-20-16395

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ BP-04 STREAM NO: 226-20-16395 DATE 4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Four catalogued anadromous streams in BP-04: 226-20-16395, 226-20-16397, 226-20-16392, and 226-20-16388.

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

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

5T-4 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. 5T - one bald eagle nest is within 400M of stream 226-20-16395. Cleanup activities should be conducted with as little disturbance as possible to the diverse lower tidal area.

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: _____

Subsurface Oil Observed: Yes X No _____ Maximum Depth 10 cm

RECOMMENDATIONS:

_____ No Treatment Recommended

X Treatment Recommended

X Manual Pickup

X Bioremediation

_____ Tarmat Removal

_____ Snare/Absorbent Booms

_____ Oil Snares (pom poms)

_____ Absorbents (pads, rolls, etc)

_____ Spot Washing: _____ Wands

_____ Beach Cleaner

_____ Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pickup of mousse and tarballs, and 2) bioremediation of area shown on attached sketch map. Work should be conducted between 6/1 to 7/10 based on eagle nest and salmon constraints with approval of USFWS regarding eagle nest.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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

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

AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

Salmon fry nursery area (4/31 to 7/31)

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

Esther Hatchery release (4/15 to 6/15)

Main Bay Hatchery release (4/20 to 6/15)

Sawmill Bay Hatchery release (4/15 to 6/1)

Cannery Creek Hatchery release (4/21 to 6/1)

Remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.

AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214

1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511

Gill net area (6/7 to 8/31)

Purse seine area (7/20 to 9/30)

Purse seine hook-off (7/20 to 9/30)

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

Herring spawning (4/1 to 6/15)

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

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

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

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

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

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235

ADF&G Don Calkins 267-2403

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

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Roth 267-2206

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

Recreation:

Tent sites (6/1 to 9/15)

Anchorage (6/1 to 9/15)

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

Lodge (6/1 to 9/15)

Special use destination

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

Finfish harvesting

Deer harvesting (8/15 to 2/28)

Invertebrate harvesting

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

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

46/53

FIELD SHORELINE COMMENT SHEET

PWS

226-20^(2m)

SEGMENT ST 1 BP 004 SUBDIVISION: 16395 DATE 1/23/90

USCG

NAME CWO MC NATION SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

1. MANUAL TREATMENT: REMOVE TAR MATS LEFT RIGHT

ADEC

ADF44

NAME NO TEAM member SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

MANUALLY REMOVE TARMATS BETWEEN LARGE BOULDERS AND
TIDAL BANDS OF SCATTERED TAR PATCHES. TROWELS MAY BE
REQUIRED TO REMOVE TAR/MOSS BETWEEN BOULDERS.

LAND MANAGER

NAME NO TEAM member SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

OG WILLIAM LEID USCG McMAHON SEGMENT ST/ BP004 49/53
 BIO MICHAEL FAWCETT LAND REP. TOM G. EDWARDS ADFG STRATA 22420-16315 OF
 EXXON CUS GARCIA ADFG MIKE WIDMER TIME 18:48
 TEAM NO. 15 TIDE LEVEL 0.5 ft DATE 23 / APR / 90
 EST. SUBDIVISION LENGTH: 55A m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 9 % B 10 % C 20 % P 70 % G 5 % M 5 % V
 SLOPE: Long 90 % Hang 10 % Vert 5 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 35 m M 35 m N 0 m VL 15 m NO 15

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	N	E	S	W	1	2	3	4	5	BU	ME	ML	U
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT													
STAIN													
MOUSSE			X					X			X		
PATTIES		X	X					X			X	X	
TARBALLS			X					X			X		
FILM													
NO OIL										X			X

PAVEMENT H F S 1 sq. m by 1

PATTIES / TARBALLS 1 BAG

NEAR SHORE SHEEN? ☒ NO BR RW SL TI

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs		X	
Vegetation			
Trash			
Debris			

Did you COLLECT DEBRIS
☐ YES ☒ NO

TYPE

#BAGS

Photographs:

Roll No.

Frames

SUBSURFACE OIL * OILED INTERVAL IN PIT NO. 1 < 5 cm DOES NOT CONSTITUTE SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	2 L E E T H E R S C A L E S C A L E S	Y	SURFACE SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		CO	BO	1	2	3	4	5	BU	ME	ML	U				
* 1	30		X				3-10		X		X				X					N		P/G/C
2	35					X	.								X					N		P/G/C
3	40					X	.								X					N		P/G
4	35					X	.								X					N		P/G/C
5	20					X	.								X					N		P/G/C

COMMENTS

REVIEWED JW DATE 4-25-90

Film AS-15-4, frames 28-39.

SKETCH MAP

DATE 12/1/88 90

_____ H. Jones
 _____ Address, State
 _____ Telephone Entry
 _____ CH. Dist.
 _____ Width
 _____ Length
 _____ % Cover
 _____ Substrate Character
 _____ Est. HAP/LA WA
 _____ SWL
 _____ Profile Location(s)
 _____ Profile(s)
 _____ PM Location(s)
 _____ Photo Location(s)

7. Δ

Fig. 1. No Subsurface Oil

2

PI - Surface Oil

3/13

Continuing Education

013

Section Description

18

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1

**Photo location, direction,
and number**

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

ADPFC MULTI-ASSESSMENT DATA FORM

SURVEY TYPE: ☒ BS ☒ SS ☐ CS ☐ TS ☐ AVS ☐ SCW ☐ MMS ☐ PTA2 REGION: ☒ PWS ☐ KP, CI ☐ K, APMETHOD: ☐ Aerial ☒ Ground ☐ Boat3 DATE: 4/23/90 15 HIGH TIDE TIMES: 0021 / 125721 TEAM RECORDER: M. WIEDMER4 START TIME: 1850 16 HIGH TIDE HTS: 11.5' / 10.5'22 OBSERVERS: T. CROWE5 STOP TIME: 1915 17 LOW TIDE TIMES: 0648 / 185523 AGENCY: ADPFC6 SEGMENT #: BP-004 18 LOW TIDE HTS: -0.8' / 0.5'24 PHOTOS TAKEN: Y ☒ N7 STATION #: 235-40-1639 TIDE HT AT SURVEY: 0.5'

Roll #: _____ Frames: _____

8 K-UNIT: 226-20-16395 ☐ Ebb ☒ Slack ☐ Flood ☐ Slack25 VIDEO TAKEN: Y ☒ N TAPE#: _____

9 STAT AREA: _____ 20 USGS QUAD: _____

Starts: _____ Ends: _____

10 LAT: _____ 11 LONG: _____

26 SAMPLES TAKEN: Y ☒ N Number: _____12 SOURCE: ☐ Map ☐ Loran

Oil: _____

13 LOCATION: Point Countess

Sediment: _____

14 DESCRIPTION: _____

Biological: _____

Water: _____

EXTENT OF OIL

	SHORELINE				STREAM			
	L	Y	N		L	Y	N	
27 SURFACE COVERAGE	100	75			75	1		0

36 CATALOGED ANAD. FISH BREAST ☒ Y ☐ N

	SURFACE THICKNESS					
	5mm	1mm	2cm	0	0	0
28 SURFACE THICKNESS	5mm	1mm	2cm	0	0	0
	PENETRATION					
	5cm	5cm	10cm	0	0	0
29 PENETRATION	5cm	5cm	10cm	0	0	0

37 CATALOG #: 226-20-16395

38 STREAM NAME: _____

30 OVERALL OIL IMPACT: ☐ N ☐ VL ☐ L ☒ M ☐ H39 OIL IN STREAM BED? Y ☒ N31 OIL TYPE: ☐ Pooled ☐ House ☒ Tar ☐ Asphalt ☐ Sticky ☐ Stain40 OIL ON STREAM BANK? ☒ Y ☐ N32 OILED DEBRIS? ☐ Y ☐ N41 OIL ON BEACH ADJACENT TO MOUTH? ☒ Y ☐ N

(within 50 meters)

42 OIL WITHIN 1 MILE OF STREAM? ☒ Y ☐ N33 SHORELINE TYPE: ☐ Headland ☐ Low-lying Rocks ☐ Beach ☒ Cove43 ANADROMOUS FISH PRESENT? ☒ Y ☐ N

44 ANADROMOUS FISH OBSERVATION

34 WAVE EXPOSURE: ☐ High ☐ Moderate ☒ Low

Species: _____

35 SUBSTRATE TYPE: ☐ Bedrock ☐ Boulder 10 ☐ Cobble 45Aerial ☐ Ground ☐Gravel 45 ☐ Sand ☐ Mud/silt

Species	Aerial	Ground

REMARKS: Tar patties in two rings along mid and upper

tidal zones (in gravels & small cobbles). Some patties
are partially to completely buried. Pools of house in large
boulders east of channel.

48 PHOTOLOG

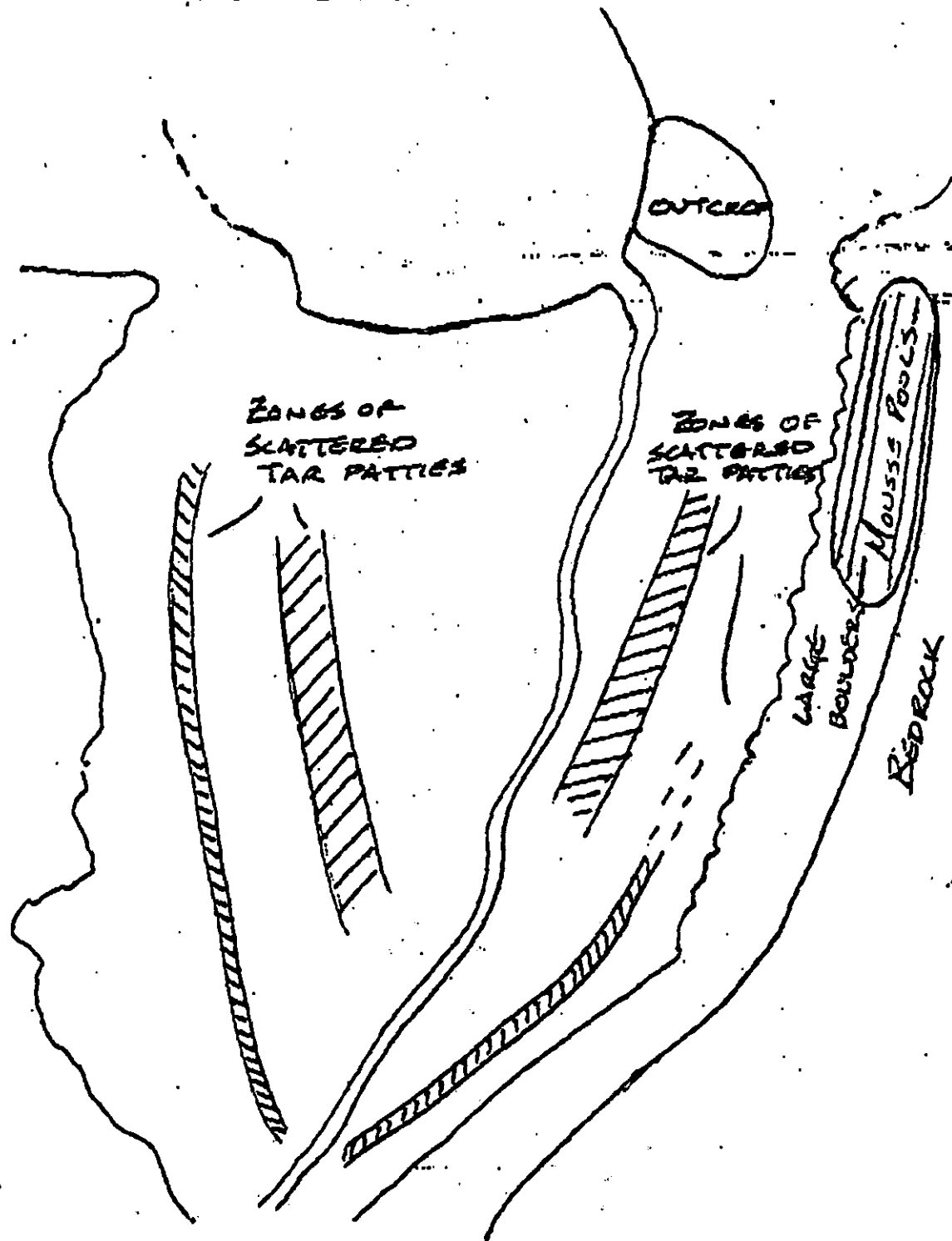
5(5)

DESCRIPTION

RECOMMENDATIONS: MAJOR REMOVAL OF ALL TAR PATTIES.
MAJOR REMOVAL OF MOUSS POOLS BETWEEN BOULDERS -
WILL REQUIRE TROWELS, ETC.
REMOVE OILED LOGS.

I agree with recommendations. M. S. FANTON

48 OIL DISTRIBUTION DIAGRAM



3 BEDROCK

147

Segment BP004
Stream 226-20-16395
Ecological Summary

4/23/90
Michael Fawcett

This small stream enters a sheltered cove via a cobble/gravel/pebble delta, with bedrock at the ends. Patchy dense Fucus occurs along the stream on cobbles and bedrock. Dense barnacles, Fucus, mussels (including recently settled 3-5mm juveniles), and littorines (also including new juveniles) occur on bedrock outcrops in MTZ & UTZ. Large old barnacles (Balanus cariosus) are sparsely distributed in LTZ. The sand/gravel beach in LTZ has a surface and infaunal community similar to that at 226-20-16397 (clams, worms, gunnels, etc.) One sea otter watched our activities. Numerous otter holes (from clam-digging) were seen in LTZ. About 12 Pycnopodia (sun stars) were observed in an LTZ tidepool on bedrock. Cleanup activities should be conducted with as little disturbance as possible to LTZ area.

M. Fawcett

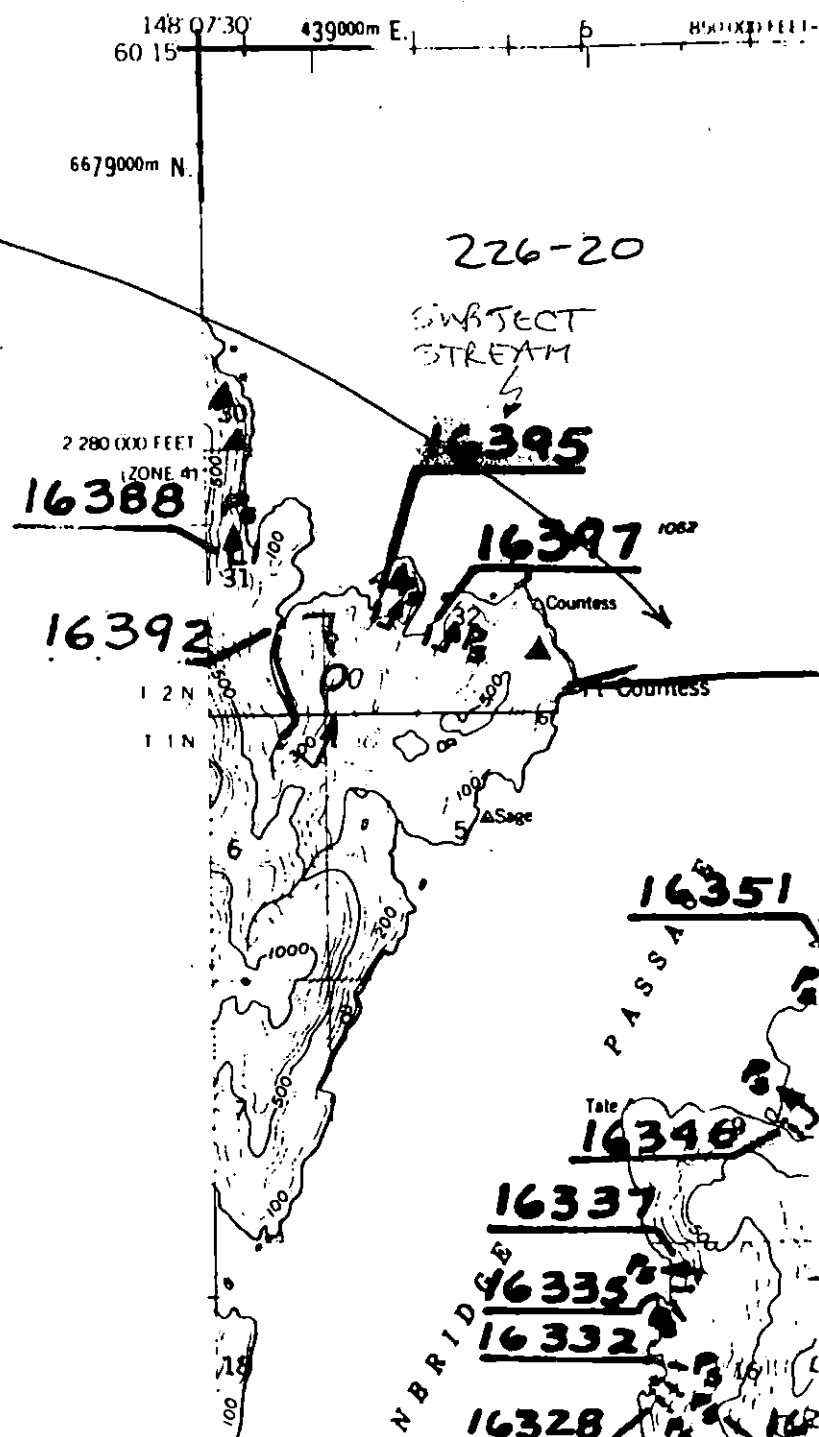
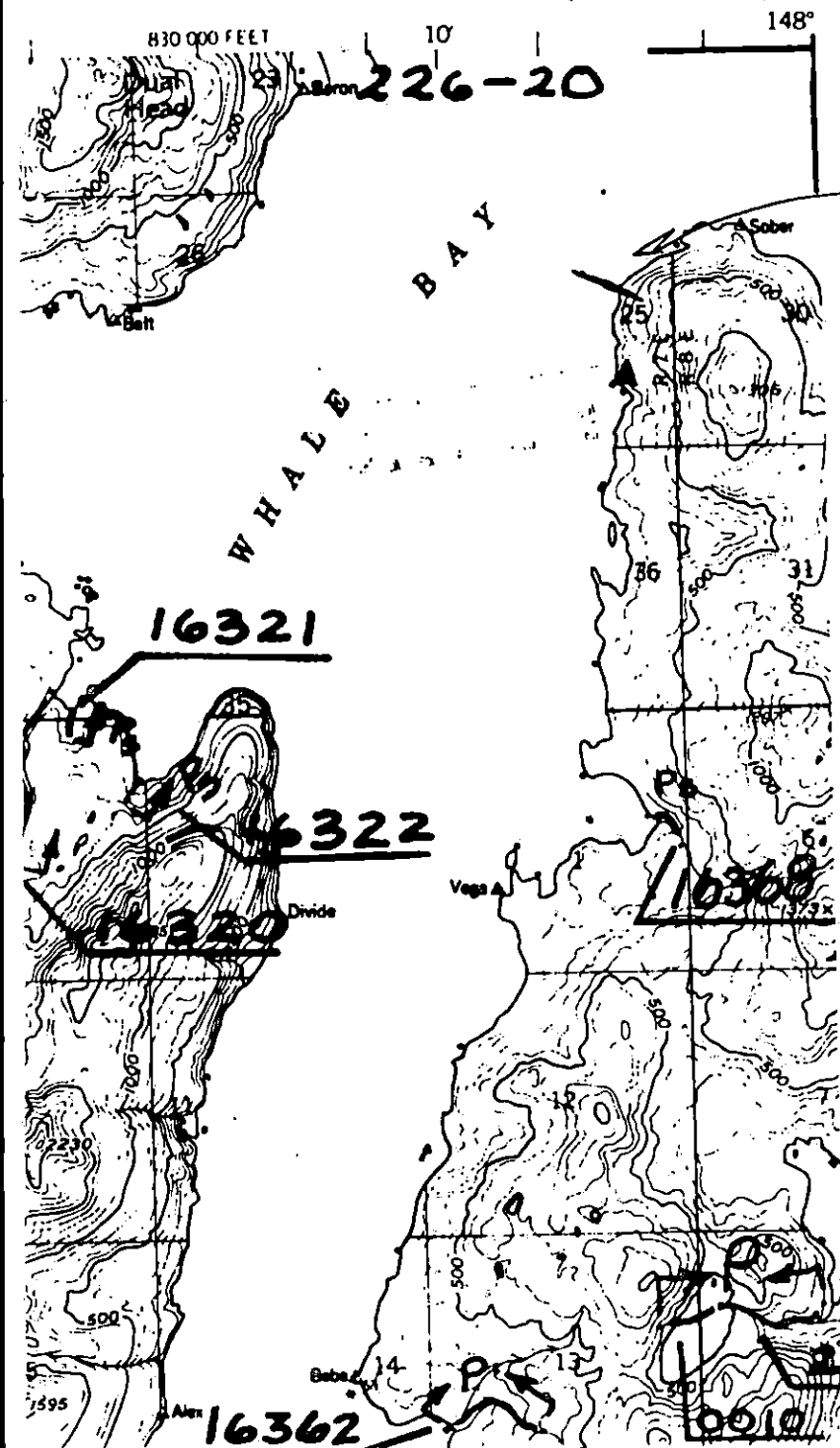
SEWARD (A-4) QUADRANGLE

ALASKA

1 63 360 SERIES (TOPOGRAPHIC)

ECOLOGY MAP

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



▲ = Eagle Nests

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ BP-004 STREAM NO: 226-20-16397 DATE 4/23/90

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-4 All bald eagle nests (3/1 to 6/1)
Active eagle nests (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Subject stream is located in an unsurveyed segment. No additional ecological constraints.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3276 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: Rachelean Dae DATE: 5/22/90

Subsurface Oil Observed: Yes X No Maximum Depth 15 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend manual removal of tarmat and patties in the MITZ and
2) removal of oiled grass (if dead and > 10% splash) as indicated on the
attached sketch map. Work from 6/2 to 7/9 with approval from USFWS
regarding eagle nests.

TAG COMMENTS: BIOREMEDIATION (CUSTOMER) FOLLOWING TARMAT REMOVAL
IF REQUIRED. MONITORING TO ASSESS OILED LOGS.

NO WORK WITHIN THE STREAM CHANNEL PRIOR TO JUNE 1.

TAG APPROVAL DATE: 5/18/90.

ADEC ART WEINER Art Weiner

EXXON ANDY GIL Andy Gil

NOAA GARY PETRAE Gary Petrae

USCG G.A. REITER G.A. Reiter

FOSC: DATE: 6-8-90

Notify CVC 24 hrs prior to cleanup

SEGMENT ST/ 8300A

STREAM 226-20-16397

DATE 23 / APR 80

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Body
- ☐ CR Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWA/LRE
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PT Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
PT - No Subsurface Oil

2 Δ
PT - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

eee
Oiled Vegetation

Photo location, direction, and number

SKETCH MAP

Film A5-15-4
frames 19-27

PAGE

SHORT TERM

TO

ENVOI AND CORDON

FROM

18:33

1985-1990

GRASS AP/B ASPHALT

AREA 4

AP/B

25 M X 10 M

PAVE NEARS

AREA 2

MANUALLY REMOVE PAVEMENT

MANUALLY REMOVE PATCHES

PTIC TAR MAT

AREA 3

MANUALLY REMOVE OILED GRASS > 10% > SPLASH

PAVE. 3X45M

AP/C

AREA 1

75M

26V

Δ 5

Δ 4

Δ 6

Δ 7

Δ 2

Δ 1

Δ 3

Δ 2

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

REVISION 000000

27/53

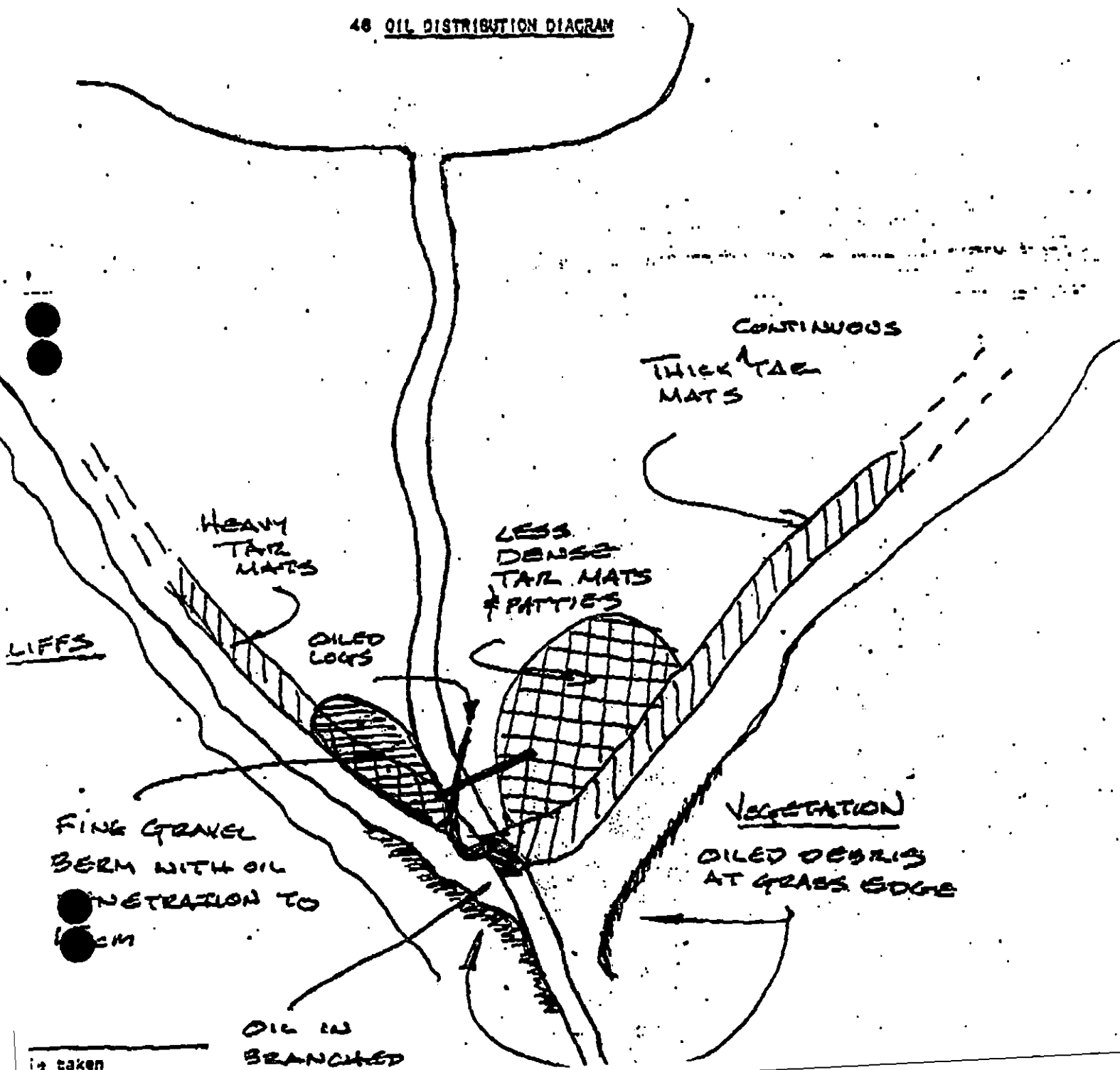
45 PHOTOLOG

DESCRIPTION

RECOMMENDATIONS: MANUAL REMOVAL OF ALL SURFACE TAR MATS. REMOVAL OF OILED DEBRIS FROM GRASS AT EDGE OF STREAM - BOTH BANKS - SUPRATIDAL. REMOVAL OF OILED LOGS IN STREAM CHANNEL - UPPER INTERTIDAL. REMOVAL OF OILED SUBSTRATE WITHIN STREAM CHANNEL.

I agree with recommendations, but suggest adding bioremediation. M. Fawell

46 OIL DISTRIBUTION DIAGRAM



ECOLOGICAL PART

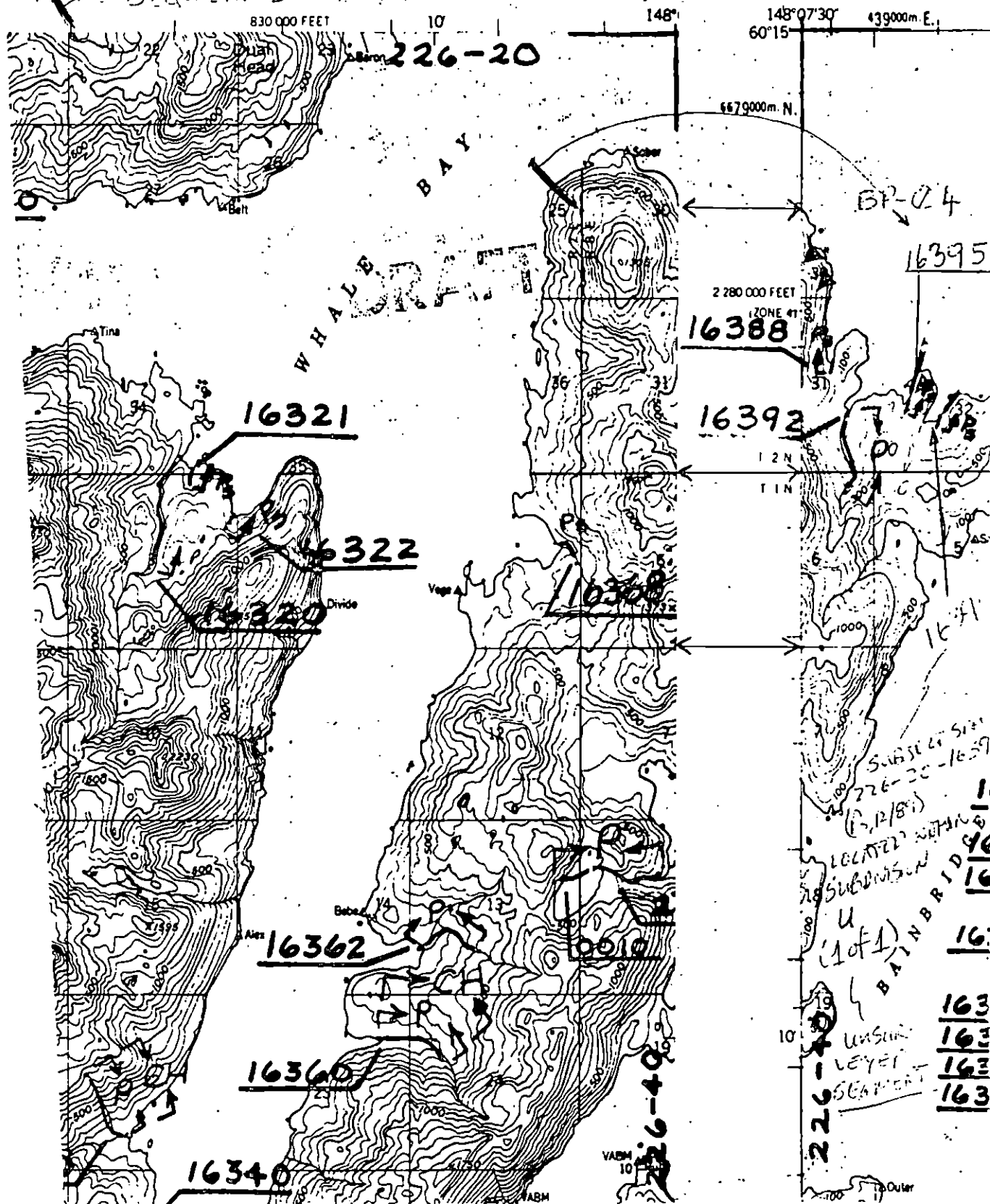
1A, 1B
5T-4
6U

Δ = BANDWIDTH TEST

SEWARD (A-4) QUADRANGLE
ALASKA

UNITED STATES
DEPARTMENT OF
GEOLOGICAL SURVEY

SEGMENT BOUNDARY 63360 SERIES (TOPOGRAPHIC)



ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-20-16397

SEGMENT BP-004 SUBDIVISION A

WORK WINDOW	
Manual Pickup and Tarmat Removal Less Than 400m From Active Nest	CLOSED
Bioremediation Less Than 400m From Active Nest	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (226-20-16397) is in Subdivision A. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream. No constraint to manual pickup and tarmat removal.

5T Bald Eagle Nest

USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to manual pickup, tarmat removal, and bioremediation within 400m of active nest.

OTHER ECOLOGICAL CONSIDERATIONS

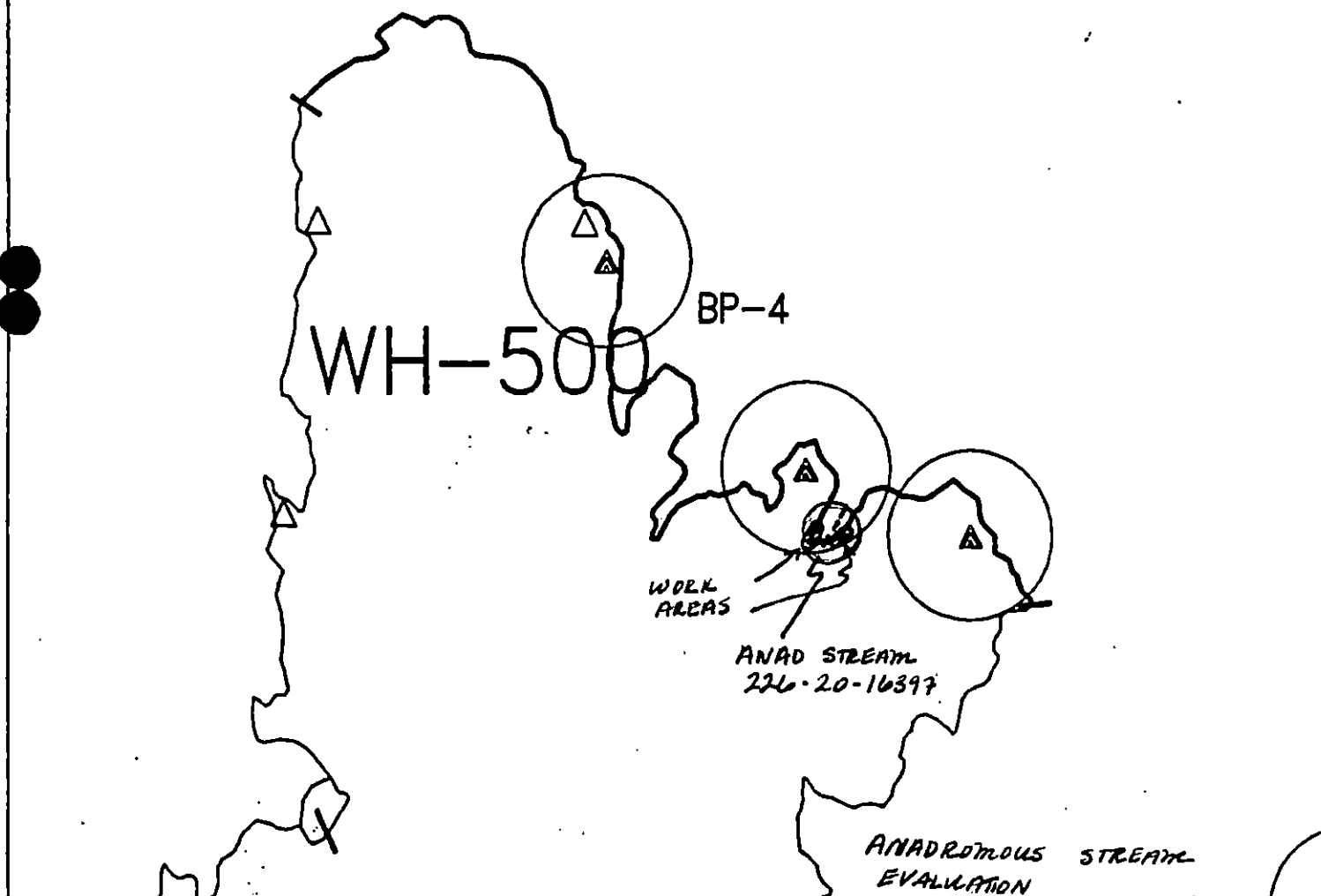
If eagle nest constraint is removed, other ecological considerations will apply.

SEE SUBDIVISION CONSTRAINT ADDENDUM BP-004A
FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC

Date

6-19-90



Exxon Company, USA
Map Key: PWS-BP-4
June 12, 1990

ECOLOGY MAP
SEGMENT BP-4
SUBDIVISION A (1 of 1)
METERS
0 810 1619

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

1 Inch = 2656 feet

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ BP-004 STREAM NO: 226-20-16397 DATE 4/23/90

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-4 All bald eagle nests (3/1 to 6/1)

Active eagle nests (3/1 to 9/1)

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Subject stream is located in an unsurveyed segment. No additional ecological constraints.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3276 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: Lucie Jan Darr DATE: 5/22/90

Subsurface Oil Observed: Yes X No Maximum Depth 15 cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

X Bioremediation

X Tarmat 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 tarmat and patties in the MITZ and
2) removal of oiled grass (if dead and > 10% splash) as indicated on the
attached sketch map. (Work from 6/2 to 7/9) with approval from USFWS
regarding eagle nests.

SEE CONSTRAINTS ADDENDUM DATED 6/16/90

TAG COMMENTS: BIOREMEDIATION (CUSTOMER) FOLLOWING TARMAT REMOVAL
IF REQUIRED, MONITORING TO ASSESS OILED LOGS

NO WORK WITHIN THE STREAM CHANNEL PRIOR TO JUNE 1.

TAG APPROVAL DATE: 5/18/90.

ADEC Art Weiner Art Weiner

EXXON Andy GHL

NOAA Gary Petrac

USCG G.A. REITER

FOSC: DATE: 6-8-90

Notify CVC 24hrs prior to cleanup

ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND

SEGMENT: BP-004

SUBDIVISION: A

STREAM NO: 226-20-16397

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ BP-004 STREAM NO: 226-20-16397 DATE 4/23/90

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-4 All bald eagle nests (3/1 to 6/1)
Active eagle nests (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Subject stream is located in an unsurveyed segment. No additional ecological constraints.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3276 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: _____ DATE: _____

Subsurface Oil Observed: Yes X No _____ Maximum Depth 15 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend manual removal of tarmat and patties in the MITZ and
2) removal of oiled grass (if dead and > 10% splash) as indicated on the
attached sketch map. Work from 6/2 to 7/9 with approval from USFWS
regarding eagle nests.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- ✓ 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 ✓ 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/15)
 1E Main Bay Hatchery release (4/20 to 6/15)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3H 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, 6V Recreation: Tent sites (6/1 to 9/15)
 6W Anchorages (6/1 to 9/15)
 6X Forest Service cabins (6/1 to 9/15)
 6Y Lodge (6/1 to 9/15)
 Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 Finfish harvesting
 Deer harvesting (8/15 to 2/28)
 Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

25/53

SEGMENT ST BP004 SUBDIVISION: 16397 DATE 4/23/90

USCG

NAME AND NO MENTION SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

1. MANUAL TREATMENT, REMOVE TAR MATS (SEE AED)
2. Remove debris.
3. Promediate v-side (looking onshore) By log area #4

ADEC

NAME ADF+4 SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

MANUAL REMOVAL OF ALL SURFACE AND BURIED TAR MATS.
REMOVE TAR MATS FROM GRASS AT ^(SUPRATIDAL) STORM BERM ON THE RIGHT AND LEFT SIDE OF THE STREAM. REMOVE OILED LOGS CROSSING THE MOUTH OF THE STREAM. REMOVE ALL OILED/TARED SUBSTRATE WITHIN THE STREAM CHANNEL.

LAND MANAGER

NAME NO TEAM MEMBER SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY (ANAD.)

REVISION NO. 0

OG WILLIAM LEID USCG McMAHON SEGMENT ST/ BP004 28/5
 BIO MICHAEL FAWCETT LAND REP Tom CROWE 1:5 STREAM 2250D163971- OF
 EXXON CUS GARCIA ADPC MIKE WIDMER TIME 17:45 to 18:15
 TEAM NO. 15 TIDE LEVEL 1 FT DATE 23 / APR / 90
 EST. SUBDIVISION LENGTH: 25 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R % B 10 % C 40 % P 50 % G % S % M % V
 SLOPE: Long % Hang % Vert % WAVE EXPOSURE: ☐ Low ☒ Med ☐ Hig
 OIL CATEGORY LENGTH: W m M m N 50 m VL m NO 25

SURFACE OIL

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

PAVEMENT H (F) S 400 sq. m by 7PATTIES / TARBALLS B

NEAR SHORE SHEEN? (NO) BR RW SL

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

Did You Col
DEBRIS ☐ YES ☒ NOTYPE #BAGS

Photographs:

Roll No. Frames

SUBSURFACE OIL * OILED INTERVAL < 5cm IN PITS 1 AND 3 DOES NOT CONSTITUTE SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	Z U M S (cm)	Y	SURFA SUBSUR SEDIME
		OP	OR	OL	OF	NO		NO	UC	1	2	3	4	SU	M	N	U				
* 1	35		X				0.5	X		X				X					N		P/G/L
* 2	35					X	.							X					N		P/G/L
* 3	35		X				0.5	X				X		X					N		P/G/L
4	35					X	.								X				N	25	P/G/L
5	30					X	.									X			N	25	P/G/L
6	15					X	.								X				N		G/P

COMMENTS

REVIEWED SWDATE 4-25-9

24/53

REVISION 04/12/2011

SHORELINE OILING SUMMARY (PAGE 2)

SEGMENT ST/ STREAM 183971 OF

SUBSURFACE OIL (CONTINUED)

[illegible]

COMMENTS

4-25-90
DATE

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SEGMENT ST/ 83004

STREAM 226-20-16397

DATE 23 / APR 90

CHECKLIST

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

LEGEND

1 Δ
PR - No Subsurface Oil

2 Δ
PR - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

eee
Oiled Vegetation

1 →
Photo location, direction, and number

AP 20M (25)
(24) 23 23
22

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

SKETCH MAP

Film AS-15-4
frames 19-27

CRASS / AP/B ASPHALT

AREA 4

AP/B

25 M X 10 M

PAVE HEAPS

AREA 2

AP/B

AREA 3

PTIC

MANUALLY REMOVE PATCHES

PTIC TAR MAT

MANUALLY REMOVE oiled GRASS > 10% > SPLASH

PAVE 3X45M
AP/C AREA 1

75M

(27)

Δ 5

264

Δ 4

Δ 6

Δ 7

26/53

OBSERVY

ADFCG MULTI-ASSESSMENT DATA FORM

SURVEY TYPE: SS SS OS TS AVE SCH MMB PTA2. REGION: PNS KP,CI K,APMETHOD: Aerial Ground Boat3 DATE: 4/23/9015 HIGH TIDE TIMES: 0021 125721 TEAM RECORDER: M. WIEDNER4 START TIME: 174516 HIGH TIDE HTS: 11.5' 10.5'22 OBSERVERS: T. CROWL5 STOP TIME: 183017 LOW TIDE TIMES: 0648 185523 AGENCY: ADFCG6 SEGMENT #: BT-00418 LOW TIDE HTS: -9.8' 0.5'24 PHOTOS TAKEN: Y N7 STATION #: 226-30-1639719 TIDE HT AT SURVEY: 0.68'

Roll #: _____ Frames: _____

8 K-UNIT: _____

Obs Stack Flood Stack25 VIDEO TAKEN: Y N TAPES: _____

9 STAT AREA: _____

20 USGS QUAD: _____

Start: _____ End: _____

10 LAT: _____

11 LONG: _____

26 SAMPLES TAKEN: Y N Number: _____12 SOURCE: Map Loran

Oil: _____

13 LOCATION: POINT COUNTRY

Sediment: _____

14 DESCRIPTION: _____

Biological: _____

Water: _____

EXTENT OF OIL

	SHORELINE				STREAM			
	L	N	H	S	L	N	H	S
27 SURFACE COVERAGE	100	100		10	100	3		2

36 CATALOGED ANAD. FISH BREAST: Y N

28 SURFACE THICKNESS	5	7	10	1mm	5mm	3cm
29 PENETRATION	10	15	8	1cm	5cm	2mm

37 CATALOG #: 226-30-16397

38 STREAM NAME: _____

30 OVERALL OIL IMPACT: N VL L N H39 OIL IN STREAM BED: Y N31 OIL TYPE: Pooled House Tar Asphalt Sticky Stain40 OIL ON STREAM BANKS: Y N32 OILED DEBRIS: Y N41 OIL ON BEACH ADJACENT TO MOUTH: Y N

(within 50 meters)

42 OIL WITHIN 1 MILE OF STREAM: Y N33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cove

Shore: _____

34 WAVE EXPOSURE: High Moderate Low43 ANADROMOUS FISH PRESENT: Y N35 SUBSTRATE TYPE: Bedrock Boulder 3 Cobble 15

44 ANADROMOUS FISH OBSERVATION

Species: _____ Aerial: _____ Ground: _____

COMMENTS: VERY HEAVY BAND OF THICK TAR RINGING THE HIGH TIDE
LINE ON BOTH SIDES OF CHANNEL & THROUGH CHANNEL. OILED
LOGS IN CHANNEL. OILED DEBRIS IN GRASS AT STREAM EDGE.
FINE GRAVELLED BEACH ON W. BANK OF STREAM W/ SLIGHT TO MODERATE
OIL PENETRATION TO MINIMUM OF 10 CM.

27/53

48 PHOTOLOG

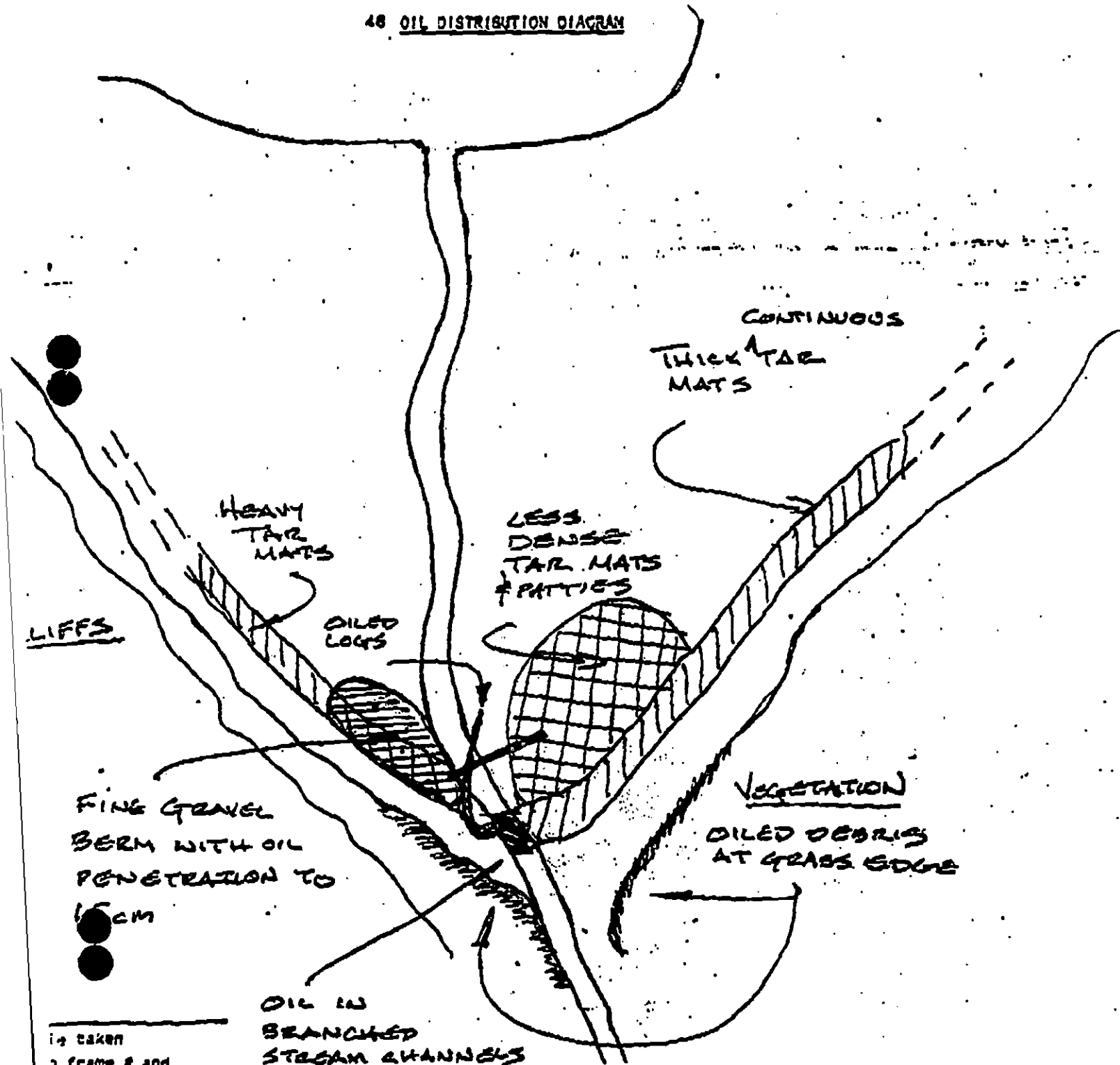
ME(S)

DESCRIPTION

RECOMMENDATIONS: MANUAL REMOVAL OF ALL SURFACE TAR MATS. REMOVAL OF OILED DEBRIS FROM GRASS AT EDGE OF STREAM - BOTH BANKS - SUPRATIDAL. REMOVAL OF OILED LOGS IN STREAM CHANNEL - UPPER INTERTIDAL. REMOVAL OF OILED SUBSTRATE WITHIN STREAM CHANNEL.

I agree with recommendations, but suggest adding bio remediation. M. J. F. 1/1/88

48 OIL DISTRIBUTION DIAGRAM



Segment BP004
Stream 226-20-16397
Ecological Summary

4/23/90
Michael Fawcett

This stream crosses a shallow shale cobble/pebble/gravel beach at the end of a sheltered cove. Buried oil was found in the stream banks in UTZ area, along with surface tar mats, some still partially under snow. The beach is fairly long (about 80m from waterline to snowbank) and consists mostly of stable gravel sediments. A mature, healthy mudflat-sandflat type community exists in the MTZ-LTZ, 60-80m away from the oiled area. In addition to patchy Fucus, barnacles, and mussels, other observations include abundant littorines (including this year's young), limpets, breeding Thais emarginata, juvenile green urchins, breeding dorid nudibranchs, gunnels, chitons, hermit crabs, and infaunal clams, worms, etc. One harbor seal was seen, and one mature bald eagle. The LTZ community would be sensitive to trampling and disturbance, but is far enough away from the oiled areas that cleanup procedures should not cause any problems.

M H Fawcett

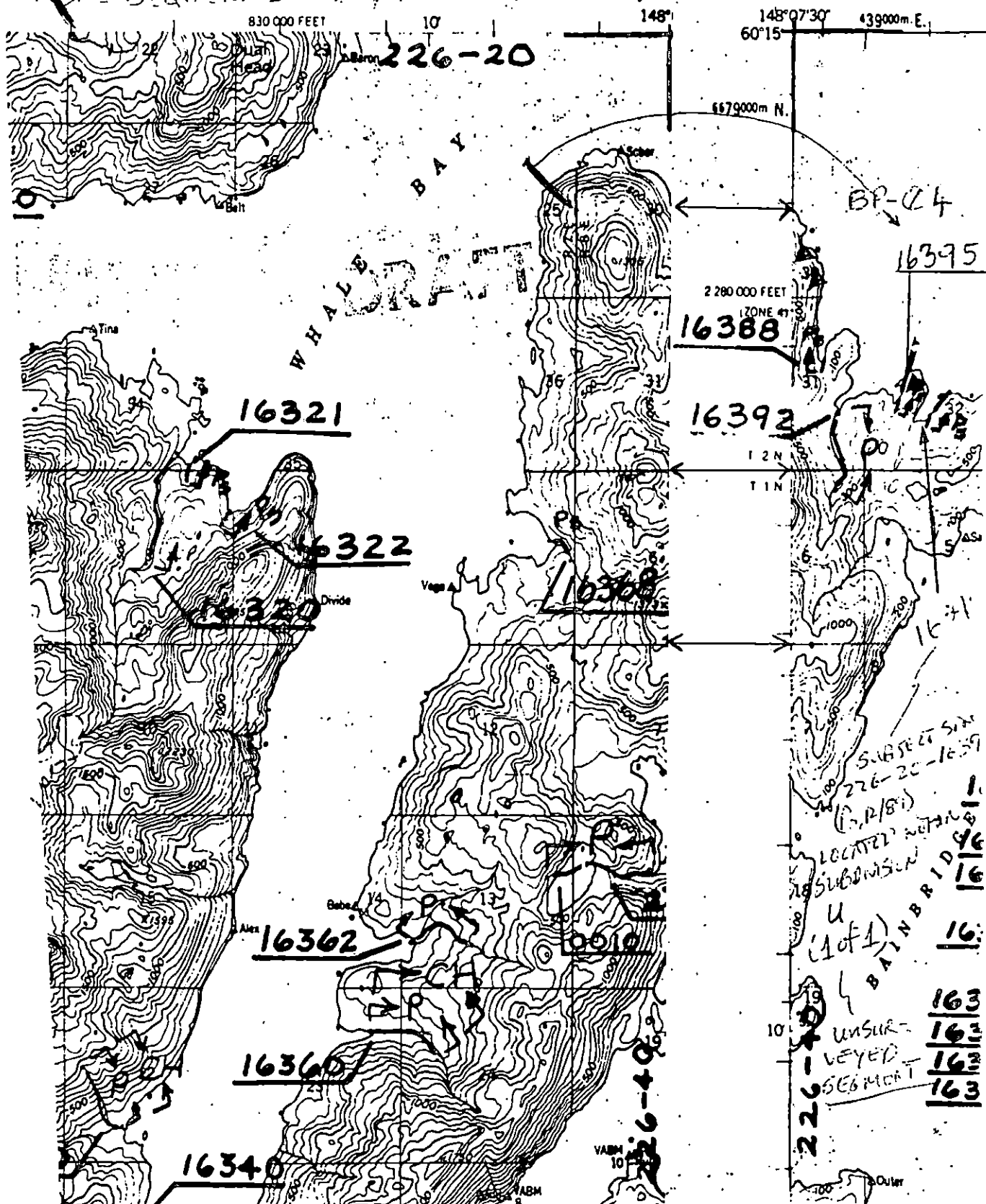
BP-24

ECOLOGICAL MAP

1A, 1B
5T-4
6U

▲ = BAND CABLE TEST SEWARD (A-4) QUADRANGLE
ALASKA
7 = SEGMENT BOUNDARY 63360 SERIES (TOPOGRAPHIC)

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