

LA-021 ¹⁸ ASC 16774
SOUTH OF PORT CRAWFORD

ACE 1369640

DOCUMENTS IN STREAM FILES

ASC# _____ Segment # _____

____ '89 Intertidal Assessment Survey, Sport/Com. Fish
____ '89 Shoreline Clean-Up Program (SAT)
____ '89 Anadromous Fish Stream Authorization, for instream work
____ '89 Stream Treatment Reports
____ '89 Demobilization Reports ____ Bioremediation ____ other
____ '89 RLS Sheet ____ Oil sed. sample ____ Egg sample
____ '89 Fall Walk-a-thon Survey, ADEC
____ '89 Winter Assess. Study Site ____ Winter Stream Survey Form
____ '89 Other Documents _____

____ '90 Pre-Anadscat Survey, multi-assessment form
____ '90 Anadscat Survey
____ '90 Anadromous Fish Stream Evaluation (work order)
____ '90 Anadromous Fish Stream Addendum to work order
____ '90 Shoreline Evaluation, SAT and work order for segment
____ '90 Anadromous Fish Stream Authorization, Title 16 permit
____ '90 Stream Treatment Report
____ '90 ADEC Demobilization Report for Bio
____ '90 ADF&G Oiling Condition Survey, for ASAP use (Aug. 5, 1990)
____ '90 ASAP Survey ____ ASAP Rec. ____ ADEC Rec. (Feb. 1991)
____ '90 Other Documents _____



Pre-ANADSCAT-90 ^{ATW}

ADF&G MULTI-ASSESSMENT DATA FORM

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

METHOD: Aerial Ground Boat

3 DATE: 4/12/90 15 HIGH TIDE TIMES: 1 21 TEAM RECORDER: _____

4 START TIME: 0804 16 HIGH TIDE HTS: 1 22 OBSERVERS: Tom Crowe

5 STOP TIME: 0818 17 LOW TIDE TIMES: 1 23 AGENCY: ADFG ^{ATW}

6 SEGMENT #: LA 21 18 LOW TIDE HTS: 1 24 PHOTOS TAKEN: Y (N)

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

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

9 STAT AREA: _____ 20 USCG QUAD: _____ Start: _____ End: _____

10 LAT: _____ 11 LONG: _____ 26 SAMPLES TAKEN? Y (N) Number

12 SOURCE: Map Loran 011 _____

13 LOCATION: KATOUCHE Sediment _____

14 DESCRIPTION: _____ Biological _____

Water _____

EXTENT OF OIL

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

36 CATALOGED ANAD. FISH STREAM? (Y) N ^{226-40-ATW}

37 CATALOG #: 76744 ^{16774 ATW}

38 STREAM NAME: _____

39 OIL IN STREAM BED? (Y) N

40 OIL ON STREAM BANKS? (Y) N

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

42 OIL WITHIN 1 MILE OF STREAM? (Y) N

Where: _____

43 ANADROMOUS FISH PRESENT? Y (N)

44 ANADROMOUS FISH OBSERVATION

Species	Aerial	Ground

COMMENTS: EXTENSIVE OILING, 30 M WIDE BAND, OIL 1 FT DEPTH.
OILED AREAS COVERED BY 10 TO 1-2 FT OF NEW GRAVEL.

FRAME(S)	DESCRIPTION

46 OIL DISTRIBUTION DIAGRAM

206-40-41/12/90
~~16744~~ 16774

LA. 21

TWC

OIL
COVERED BY 1402 FT
OF NEWLY DEPOSITS OF
GRAVEL.

• Sample taken
• Photo frame # and
shot direction.

ACE 7379790 -/S

ASC NUMBER: SEGMENT NUMBER: YR CATALOGED:
 LOCATION:
 STREAM NAME: LATITUDE:
 KODIAK K-UNIT: LOCAL STREAM #: LONGITUDE:
 USGS QUADRANGLE: LEGAL:
 SHORELINE TYPE: ALL SEGMENTS:
 WAVE EXPOSURE:

ASC NUMBER: 226-40-16774 TEAM RECORDER:
 SURVEY TYPE: OBSERVERS:
 METHOD:
 DATE: / / AGENCY(IES):
 START TIME: PHOTOS TAKEN?
 Roll #: Frames:
 STOP TIME: VIDEO TAKEN? Tape Number:
 Counter Start:

SAMPLES TAKEN?

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

	LENGTH m	WIDTH m	M2	%	THICK cm	PEN ^m cm	OIL TYPE
SITE 1		20				30	A ²
SITE 2							
SITE 3							
SITE 4							
SITE 5							

OVERALL OIL IMPACT:

OIL IN STREAM CHANNEL?

SUBSTRATE

Bedrock	Granule
Boulder	Sand
Cobble	Silt
Pebble	Veget.

OIL ON BEACH WITHIN 50M OF STREAM MOUTH?

SPECIES					
COUNT					

COMMENTS: ⁽⁴⁰⁾ Oil on stream banks.

ADF&G MULTI-ASSESSMENT DATA FORM

- 1) SURVEY TYPE: BS ☒ SS
- 2) REGION: ☒ PWS KP, CI K, AP
- 3) METHOD: Aerial ☒ Ground ☐ Boat
- 4) DATE: 5/3/91 16) HIGH TIDE TIME: _____
- 5) START TIME: 1245 17) HIGH TIDE HTS: _____
- 6) STOP TIME: 1345 18) LOW TIDE TIMES: 1100
- 7) SEGMENT #: LA21B 19) LOW TIDE HTS: 1.5
- 8) K-UNIT: _____ 20) TIDE HT AT SURVEY: 1.8 to 3.8
- 9) LAT: _____ Ebb Slack ☒ Flood ☐ Slack
- 10) LONG: _____ 21) USCG QUAD: _____
- 11) ASC #: 226-40-16774
- 12) STREAM NAME: _____
- 13) LOCATION: NW LaTouche I
- 14) WAVE EXPOSURE: High ☒ Moderate ☐ Low
- 15) SHORELINE TYPE: Headland ☐ Low-lying Rocks ☒ Beach ☐
- Cove ☐ Lagoon ☐ Marsh
- 22) TEAM RECORDER: Aimee Weseman
- 23) OBSERVERS: Tom Crowe
- 24) AGENCY: ADF&G
- 25) PHOTOS TAKEN: Y ☒ N
- ROLL #: _____ FRAMES: _____
- 26) VIDEO TAKEN: Y ☒ N
- TAPE #: _____
- START: _____ STOP: _____
- 27) SAMPLES TAKEN? Y ☒ N
- SAMPLE I.D. _____

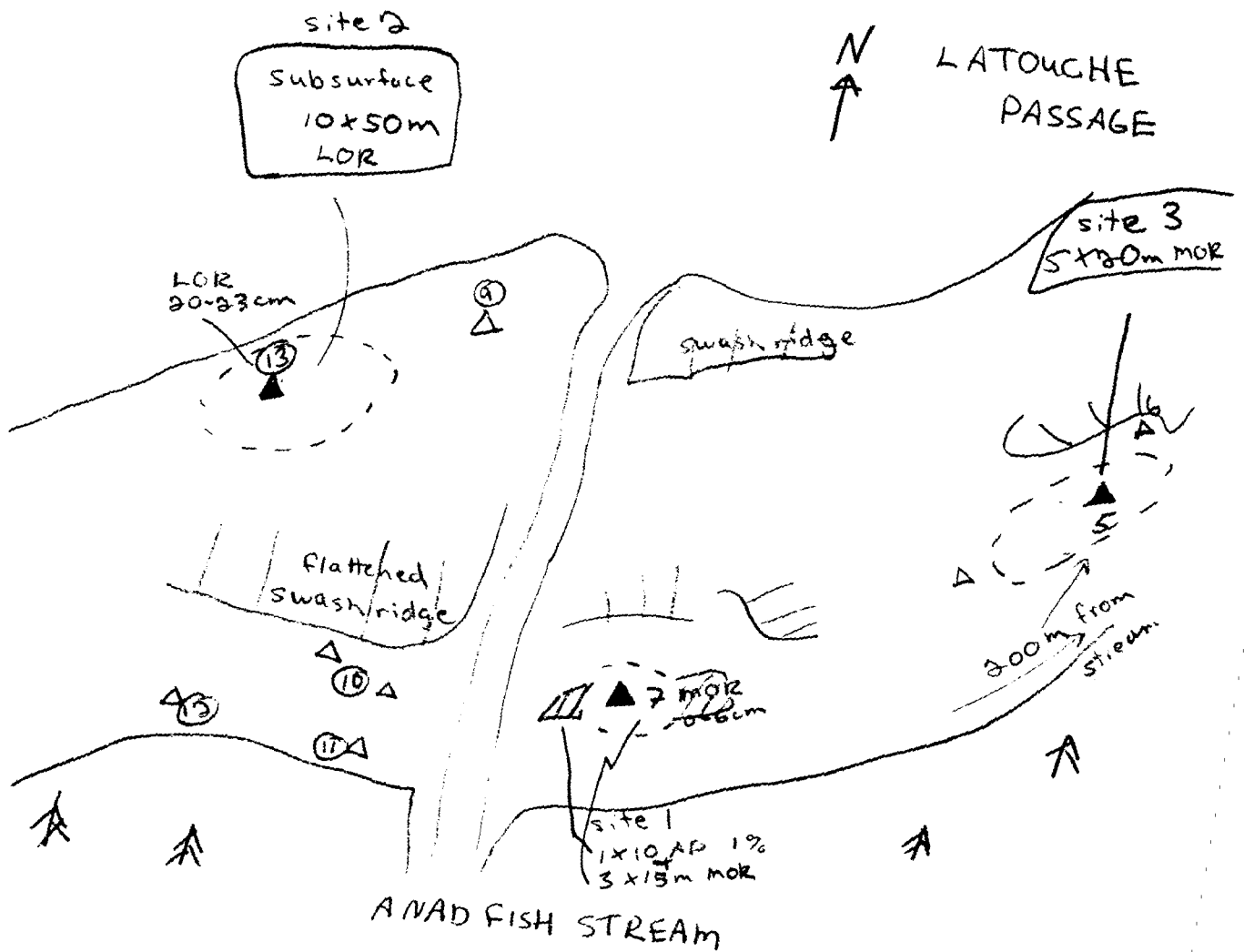
28) EXTENT OF OIL

	LENGTH m	WIDTH m	M2	%	THICK cm	PEN cm	OIL TYPE
SITE 1	15	3				0-6cm	MOR
SITE 2	50	10				20-23cm	LOR
SITE 3	20	5				16-30cm	MOR
SITE 4							
SITE 5							

- 29) OVERALL OIL IMPACT:
- H = >6m band with $\geq 50\%$ oil coverage
- M = >6m band with $\leq 50\%$ oil coverage or $\geq 3m$ to $\leq 6m$ with $\geq 10\%$ oil coverage
- ☒ L = <3m band with $> 10\%$ oil coverage
- VL = $\leq 10\%$ oil coverage regardless of band width
- N = No oil observed
- 30) OIL IN STREAMBED: Y ☒ N
- 31) OIL ON BEACH ADJACENT TO MOUTH: ☒ Y ☐ N
- 32) SUBSTRATE TYPE (PERCENT):
- Bedrock _____ Boulder _____ Gravel 45 Sand 10 Cobble 45 Mud/Silt _____
- 33) ANADROMOUS FISH PRESENT: Y ☐ N
- 34) WILDLIFE OBSERVATION
- | Species | Number |
|-------------|--------|
| Bald Eagle | 1 |
| Harbor Seal | 1 |
| merganser | 1 |
| Sand piper | 1 |

35) COMMENTS: This stream area contains 2 areas of subsurface oil in sites 1 & 2. Site 3 is located 200m from the stream. Ideally these 3 areas should be manually filled with any HSOR sediments removed. Stream not in imminent danger of contamination.

LAO 21B
ASC# 226-40-16774
5/3/91 MARKSAP
A. Weseman





ANADROMOUS FISH STREAMS/OILING CONDITION
PWS

Segment # LA 226-40-16724 Location NW La Touche I
Date 8/5/90 Recorder/Observer Aimee Weseman
Oil in streambed none sighted oil on streambanks none sighted
Oil within 50m of mouth yes Anadromous Fish present none sighted

Description of oil and comments

South side of stream - Heavy to moderate OR sediments in MITZ on back side of storm berm in MITZ - appears to extend beneath the berm. These sediments on the surface are in an area 10m long x 3m wide - 4 meters from the stream channel. Rec - manual removal of the heavier OR sediments. Possible mechanical tilling of storm berm relocation to expose buried oil

North side of stream - Less of heavy to med OR sediments 3-5cm thick in the MITZ corresponding to oil on South bank - large buried under 2-5cm clean gravel, surfacing in areas
Rec - mechanical tilling to expose for re-assessment in the spring.

Oil Distribution Diagram

AN

shoreline

storm berm

3m

Heavy OR sediment

10m

4m

15m

buried oil lens

MITZ

ACE 7355412

greens

olders

x Dup

ANADROMOUS FISH STREAMS/OILING CONDITION

LA

PWS

Segment # 101 ASC# 226-40-16724 Location NW LaTouche I

Date 8/5/90 Recorder/Observer Aimee Weseman

Oil in streambed none sighted oil on streambanks none sighted

Oil within 50m of mouth yes Anadromous Fish present none sighted

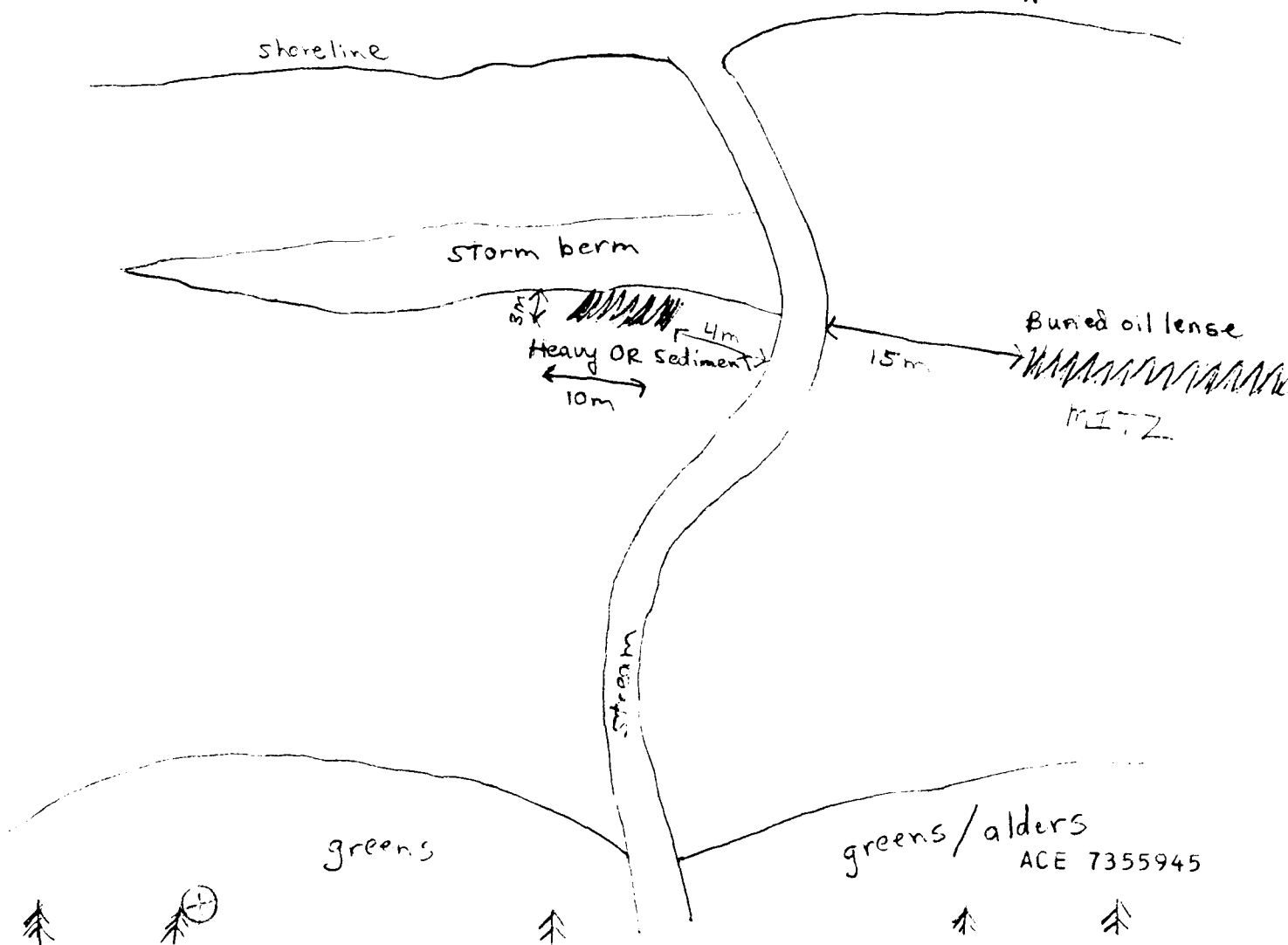
Description of oil and comments

South side of stream - Heavy to moderate OR sediments in MITZ on back side of storm berm in MITZ - appears to extend beneath the berm. These sediments on the surface are in an area 10m long x 3m wide - 4 meters from the stream channel. Rec - manual removal of the heavier OR sediments. Possible mechanical tilling of storm berm relocation to expose buried oil

North side of stream - Large of heavy to mod OR sediments 3-5cm thick in the MITZ corresponding to oil on south bank. Large buried under 2-5cm clean gravel, surfacing in areas. Rec - mechanical tilling to expose for re-assessment in the spring.

Oil Distribution Diagram

AN



ANADROMOUS FISH STREAMS/OILING CONDITION
PWS

Segment # LA 1501 ASC# 226-40-16724 Location NW La Touche I

Date 8/5/90 Recorder/Observer Aimee Weseman

Oil in streambed none sighted oil on streambanks none sighted

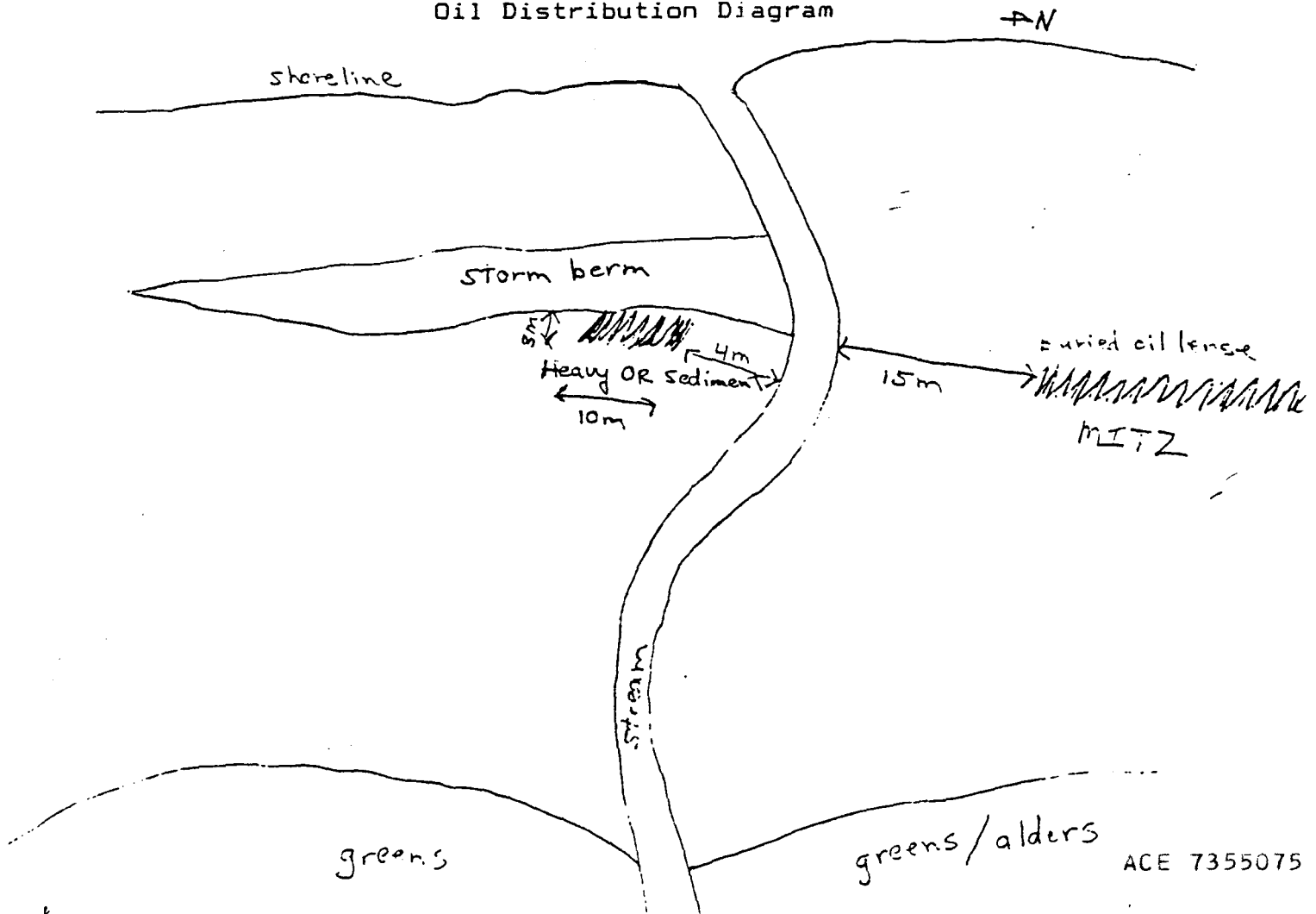
Oil within 50m of mouth yes Anadromous Fish present none sighted

Description of oil and comments

South side of stream - Heavy to moderate OR sediments in MITZ on back side of storm berm in MITZ - appears to extend beneath the berm. These sediments on the surface are in an area 10m long x 3m wide - 4 meters from the stream channel. Rec - manual removal of the heavier ^{OR} sediments. Possible mechanical tilling of storm berm relocation to expose buried oil

North side of stream - Lense of heavy to mod OR sediments 3-5cm thick in the MITZ corresponding to oil on south bank - large buried under 2-5cm clean gravel, surfacing in areas. Rec - mechanical tilling to expose for re-assessment in the spring.

Oil Distribution Diagram



Pre-ASAP

ANADROMOUS FISH STREAMS/OILING CONDITION
PWS

Segment # LA01 ASC# 226-40-16774 Location NW LaTouche I
Date 8/5/90 Recorder/Observer Aimee Weseman
Oil in streambed none sighted Oil on streambanks none sighted
Oil within 50m of mouth yes Anadromous Fish present none sighted

Description of oil and comments

South side of stream - Heavy to moderate OR sediments in MITZ on back side of storm berm in MITZ - appears to extend beneath the berm. These sediments on the surface are in an area 10m long X 3m wide - 4 meters from the stream channel. Rec - manual removal of the heavier OR sediments. Possible mechanical tilling of storm berm relocation to expose buried oil.

North side of stream - Lense of heavy to mod OR sediments 3-5cm thick in the MITZ corresponding to oil on south bank - lense buried under 2-5cm clean gravel, surfacing in areas. Rec - mechanical tilling to expose for re-assessment in the spring.

Oil Distribution Diagram



OG SUPPLEMENTAL INFO TO MAD

RECORDER: FINK

RED-DATE: 10/4/9.

PAGE

CATALOG NUMBER: 226-40-16774

SEGMENT NUMBER: 240213

STREAM NAME:

SHORELINE TYPE:

LOCATION: Latouche F5 1.2 side

DATE:

TIME:

OG vs. MAD: Agree

[illegible]

04/20/90	OG'S ANADSCAT	P3	SUBSURF			PITS 4, 5, 6, 7, 8 NO OIL. NORTH SIDE OF STREAM.
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MAD vs. OG: AGREE
COMMENTS:

CATALOG NUMBER: 2264016774 SEGMENT#: LA021 B LOCATION: LATOUCHE ISLAND, PORT CRAWFORD, SOUTH OF SEQ:

DATE	SURVEY	SITE	W x L (m) SITE TYPE	PERCENT OIL	THICKNESS & PENETR. (cm)	OIL TYPES, DEPTH INTERVAL(cm)	SITE SPECIFIC COMMENTS
08/05/90	PRE-ASAP	1	3 x 10 SURFACE			OR	SOUTH SIDE: HEAVY TO MODERATE 'OR' SEDIMENTS IN MITZ ON BACK SIDE OF STORM BERM UP TO 4M FROM STREAM CHANNEL, APPEAR TO EXTEND BENEATH BERM. DIMENSION
08/05/90	PRE-ASAP	2	SUBSURF		3-5	MOR HOR 2-5	NORTH SIDE: BURIED LENSE IN MITZ CORRESPONDING TO (MEANING POSSIBLE CONTINUATION) OILED AREA ON SOUTH BANK. LENSE BURIED UNDER 2-5CM CLEAN GRAV

MAD vs. OG:

COMMENTS:

SOUTH SIDE OF STREAM - HEAVY TO MODERATE 'OR' SEDIMENTS IN MITZ ON BACK SIDE OF STORM BERM IN MITZ - APPEARS TO EXTEND BENEATH THE BERM. THESE SEDIMENTS ON THE SURFACE ARE IN AN AREA 10M LONG X 3M WIDE, 4M FROM THE STREAM CHANNEL. REC - MANUAL REMOVAL OF THE HEAVIER OR SEDIMENTS. POSSIBLE MECHANICAL TILLING OF STORM BERM RELOCATION TO EXPOSE BURIED OIL. NORTH SIDE OF STREAM - LENSE OF HEAVY TO MODERATE 'OR' SEDIMENTS 3-5CM THICK IN THE MITZ CORRESPONDING TO OIL ON SOUTH BANK - LENSE BURIED UNDER 2-5CM CLEAN GRAVEL, SURFACING IN AREAS. REC - MECHANICAL TILLING TO EXPOSE AND OR REASSESSMENT IN THE SPRING. NO OIL OBSERVED ON STREAM BANKS.

CATALOG NUMBER: 2264016774 SEGMENT#: LA021 B LOCATION: LATOUCHE ISLAND, PORT CRAWFORD, SOUTH OF SEQ:

DATE	SURVEY	SITE	W x L (m) SITE TYPE	PERCENT OIL	THICKNESS & PENETR. (cm)	OIL TYPES, DEPTH INTERVAL(cm)	SITE SPECIFIC COMMENTS
05/03/91	MAYSAP	1	1 x 10 3 x 15 SURFACE subsurface		0-6	MOR 1AP	North side of stream - MITZ
05/03/91	MAYSAP	2	10 x 50 SURFACE subsurface		20-25	LOR 20-30cm	South side of stream - MITZ
05/03/91	MAYSAP	3	5 x 20 SURFACE subsurface		10-30	MOR 10-30	20cm North of stream - MITZ - 20cm thick lense. between the streams

MAD vs. OG:

COMMENTS:

THIS STREAM AREA CONTAINS 2 AREAS OF SUBSURFACE OIL IN SITES 1 & 2. SITE 3 IS LOCATED 200M FROM THE STREAM. IDEALLY THESE 3 AREAS SHOULD BE MANUALLY TILLED WITH ANY 'HSOR' SEDIMENTS REMOVED. STREAM NOT IN IMMINENT DANGER OF CONTAMINATION.

ve-ANADOCAT-90^{ATW}

ADF&G MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS SS DS TS AVS SCHA MMHS PTA

2 REGION: PWS KP,CI K,AP

METHOD: Aerial Ground Boat

3 DATE: 4/12/90

15 HIGH TIDE TIMES: 1

21 TEAM RECORDER: _____

4 START TIME: 0804

16 HIGH TIDE HTS: 1

22 OBSERVERS: Tom Crowe

5 STOP TIME: 0818

17 LOW TIDE TIMES: 1

23 AGENCY: ADF&G^{ATW}

6 SEGMENT #: LA 21

18 LOW TIDE HTS: 1

24 PHOTOS TAKEN: Y (N)

7 STATION #: _____

19 TIDE HT AT SURVEY: _____

Roll #: _____ Frame: _____

8 K-UNIT: _____

Ebb Slack Flood Slack

25 VIDEO TAKEN: Y (N) TAPE#: _____

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: LATOUCHÉ

Sediment _____

14 DESCRIPTION: _____

Biological _____

Water _____

EXTENT OF OIL

SHORELINE				STREAM			
L	W	M ²	%	L	W	M ²	%

27 SURFACE COVERAGE

28 SURFACE THICKNESS

29 PENETRATION

30 OVERALL OIL IMPACT: N VL L M H

31 OIL TYPE: Pooled Mousse Tar Asphalt Sticky Stain

32 OILED DEBRIS? Y (N)

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

34 WAVE EXPOSURE: High Moderate Low

35 SUBSTRATE TYPE: Bedrock _____ Boulder _____ Cobble (O)
Gravel _____ Sand _____ Mud/silt _____

36 CATALOGED ANAD. FISH STREAM? (Y) N

37 CATALOG #: 76744 16774^{ATW}

38 STREAM NAME: _____

39 OIL IN STREAM BED? (Y) N

40 OIL ON STREAM BANKS? (Y) N

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

42 OIL WITHIN 1 MILE OF STREAM? (Y) N

Where: _____

43 ANADROMOUS FISH PRESENT? Y (N)

44 ANADROMOUS FISH OBSERVATION
Species Aerial Ground

COMMENTS: EXTENSIVE OILING. 30 M WIDE BAND, OIL 1 FT DEPTH.

OILED AREAS COVERED BY 10 TO 1-2 FT OF NEW GRAVEL.

ACE 7379769 +15

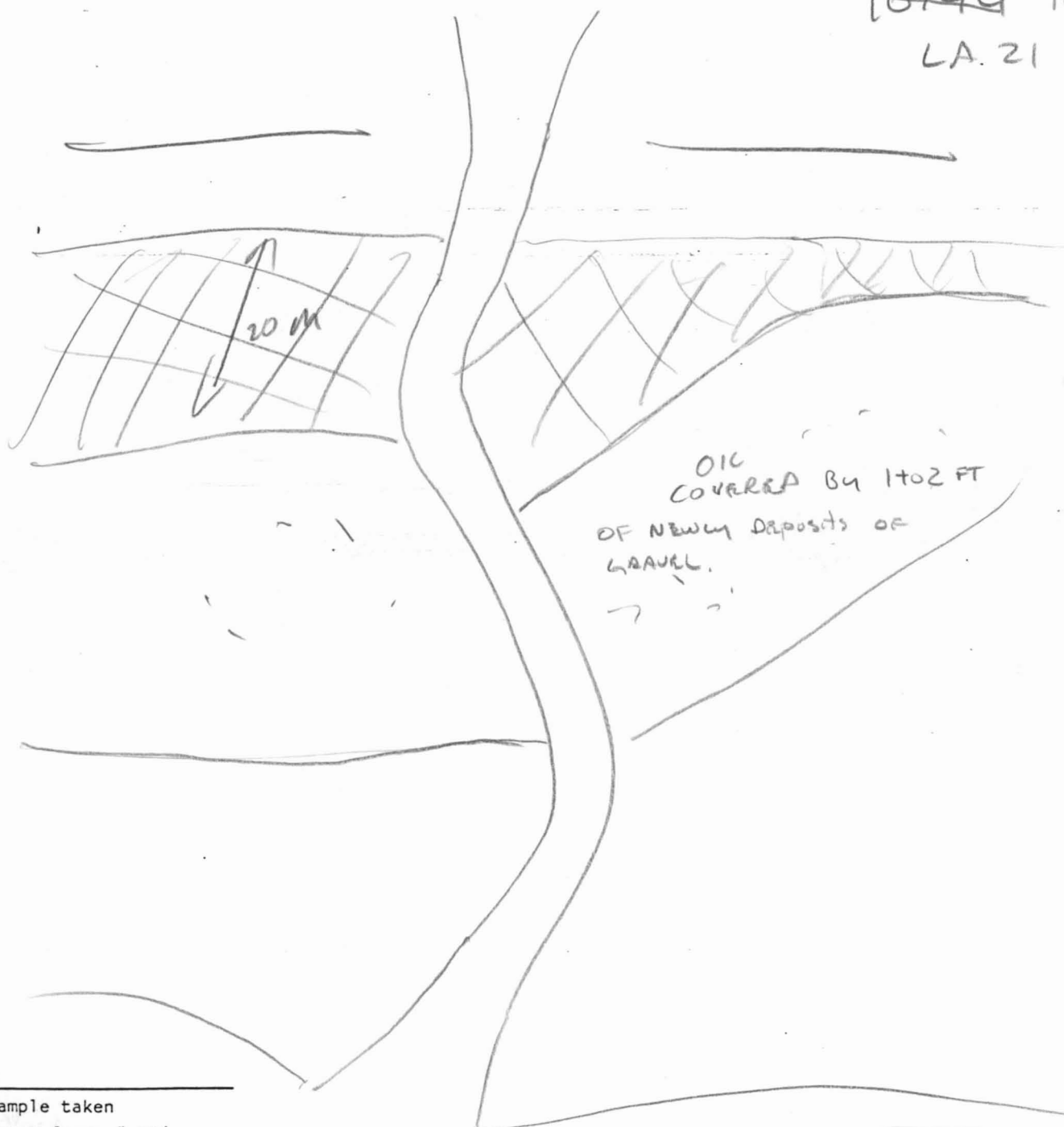
FRAME(S)	DESCRIPTION

46 OIL DISTRIBUTION DIAGRAM

226-40-4 / 12 / 90
~~16744~~ 16774

LA. 21

TWC



= Sample taken
 = Photo frame # and
 shot direction.

ACE 7379790 -/S

CATALOG NUMBER: 2264016774				SEGMENT NUMBER: LA021 B					
STREAM NAME:				SHORELINE TYPE:					
LOCATION: LATOUCHE ISLAND, PORT CRAWFORD, SOUTH OF				DATE: 04/12/90 TIME: BEACH-0818					

SITE	WIDTH (m)	LENGTH (m)	AREA (sqm)	PERCENT OIL	THICKNESS (cm)	PENETRATION (cm)	SURFACE SUBSURF	OIL TYPES	COMMENTS
1	20					30	SURFACE	AP	

COMMENTS:
EXTENSIVE OILING. 30M WIDE BAND. OIL 1 FT DEPTH. OILED AREAS COVERED BY UP TO 1-2 FT OF NEW GRAVEL.
OIL ON STREAM BANKS: YES
YES

OIL WITHIN 1 MILE OF STREAM:

CATALOG NUMBER: 2264016774				SEGMENT NUMBER: LA021 B					
STREAM NAME:				SHORELINE TYPE:					
LOCATION: LATOUCHE ISLAND, PORT CRAWFORD, SOUTH OF				DATE: 04/20/90 TIME: BEACH-1736					

SITE	WIDTH (m)	LENGTH (m)	AREA (sqm)	PERCENT OIL	THICKNESS (cm)	PENETRATION (cm)	SURFACE SUBSURF	OIL TYPES	COMMENTS
1					4-10	35	SURFACE	MS	
2						35	SURFACE	OR	

COMMENTS:
PATCH OF OILED SUBSTRATE IMMEDIATELY ADJACENT TO SW BANK OF STREAM. DEPTH OF PENETRATION TO 35CM THICK, SURFACE LINS 4-10CM THICK. SUGGESTED TREATMENT: MANUAL REMOVAL OF THICK SURFACE CONTAMINATION, REPLACEMENT OF HEAVY RIP-RAP ADJACENT TO CHANNEL TO PREVENT CHANNEL MIGRATION. OILED ZONE EXTENDS INTO STREAM CHANNEL AS DRAWN. RECOMMEND THAT DENSE SURFACE LENS (VARYING THICKNESS AVERAGE FROM 4 TO 10CM) BE MANUALLY REMOVED. TO PREVENT MIGRATION OF CHANNEL, SMALL BOULDERS FROM OPPOSITE BANK (SEE DIAGRAM) SHOULD BE PLACED ALONG CHANNEL MARGIN IN PLACE OF REMOVED MATERIAL. THIS LEVEE SHOULD MEASURE APPROXIMATELY 10 FEET WIDE. FRY PRESUMED.
OIL ON STREAM BANKS: YES
YES

OIL WITHIN 1 MILE OF STREAM:

CATALOG NUMBER: 2264016774				SEGMENT NUMBER: LA021 B					
STREAM NAME:				SHORELINE TYPE:					
LOCATION: LATOUCHE ISLAND, PORT CRAWFORD, SOUTH OF				DATE: 05/03/91 TIME: BEACH-1345					

SITE	WIDTH (m)	LENGTH (m)	AREA (sqm)	PERCENT OIL	THICKNESS (cm)	PENETRATION (cm)	SURFACE SUBSURF	OIL TYPES	COMMENTS
1	3	15				0-6	SURFACE	MOR	
2	10	50				20-23	SURFACE	LOR	
3	5	20				10-30	SURFACE	MOR	

COMMENTS:
THIS STREAM AREA CONTAINS 2 AREAS OF SUBSURFACE OIL IN SITES 1 & 2. SITE 3 IS LOCATED 200M FROM THE STREAM. IDEALLY THESE 3 AREAS SHOULD BE MANUALLY TILLED WITH ANY 'HSOR' SEDIMENTS REMOVED. STREAM NOT IN IMMINENT DANGER OF CONTAMINATION.

ADEC EXXON VALDEZ POST-TREATMENT SURVEY REPORT

SEGMENT#: LA021
LOCATION: NW LATOUCHE ISLAND

DATE: 09/28/89
TIME: 8:45

Survey Type: Boat, Ground
Team: T. Langdon, P. Montesano

WEATHER AND SEA CONDITIONS

Weather: Sunny, Cloudy Wind Direction: NW
Sea State: Calm Knots: 0-15

Low Tide: 19:35 Feet: 0.88 High Tide: 1:07 Feet: 11.8
Low Tide: 7:16 Feet: 0.51 High Tide: 13:33 Feet: 12.1

SHORELINE DESCRIPTION

Shoretypes: B
(H=headland, LR=low-lying rock, B=beach, C=cove, L=lagoon, M=marsh)

Wave Exposure: H,M (H=high, M=moderate, L=low)
Shoreline Composition: R,B,C,G
(R=bedrock, B=boulder, C=cobble, G=gravel, S=sand, M=silt)

OIL CHARACTERISTICS

Degree of Oiling: L,H
(N=none, VL=very light, L=Light, M=moderate, H=heavy)
Area of Impact: S,H,M
(S=supratidal, H=high intertidal, M=mid tidal, L=low intertidal)

Max. Oil Thickness: 1 mm (1 = 1 mm or less, 0 = no oil)
Max. Oil Penetration: 30 cm (35 = 35 cm or greater)

Percent Segment Categorized as Oiled: 100%
Presence of Oiled Driftwood (y/n): n
Oil Types: M,T
(P=pooled, M=mousse, SY=sticky, T=tar, A=asphalt, ST=stain)
Samples: LA021-1 / LA021-2 / none / none

DAMAGED OR OILED ORGANISMS

Fucus (y/n): n Barnacles (y/n): n Mussels (y/n): n
Dead Mammals: 0 Dead Birds: 0

SOLID WASTE FOUND

Type: None
Bags Collected: 0

Draft

Printed: 12/12/89 11:43

Walk-a-thon

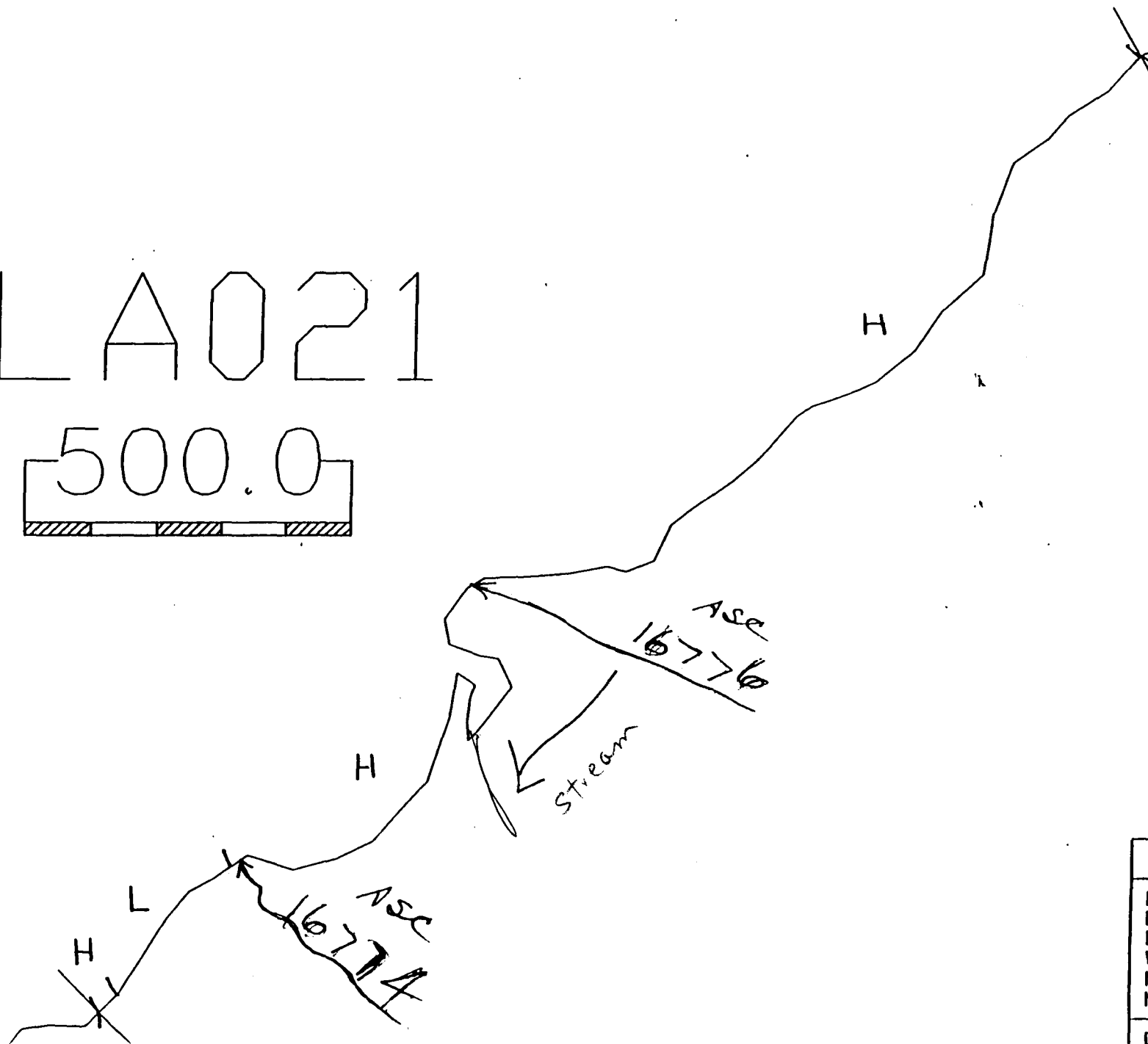
ACE 7379718

LA021

500.0



ACE 7379791



1989
walk a river

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

N



SUMMARY SHEET
FOR DIFFICULT-TO-COPY ITEMS

ALASKA/CIVIL EXXON

Folder ACE # 1369640

CDP BOX # 12,306

Begin ACE Number 7379715 End ACE Number _____ *Bien*

DOCUMENT TYPE:

_____ BOOK

_____ BLUEPRINT

X PHOTOS

_____ VIDEO

_____ SLIDES

_____ AUDIO CASSETTE

_____ MAP OR CHART

_____ OTHER-Identify document type

_____ COMPUTER PRINTOUT

MARGINALIA: YES ✓ NO _____

AUTHOR: Tom Crowe

DATE OF PUBLICATION: 9/9/89

VERBATIM TITLE: _____

INFERRED TITLE: Official Photograph AD Feb. - Exxon
Valdez Oil Spill - Office: Valdez, Time: -0-
Station #: -0- Location: SW Port Crawford
Roll #: 89TWC004V, Frame #: 24
Evidence #D#: 10204

ADDITIONAL INFORMATION: Reason for taking Photo: Aerial
Photo - Documenting Undocumented Salmon Stream
(147°52'54"/60°04'01").

extra copies

30/49

ADF&G MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS SS CS TS AVS SCHA MMS PTA

2 REGION: PWS KP, CI K, AP

METHOD: Aerial Ground Boat

3 DATE: 4/20/90

15 HIGH TIDE TIMES: 1007 12304

21 TEAM RECORDER: M. WIEDMER

4 START TIME: 1700

16 HIGH TIDE HTS: 9.0 9.4'

22 OBSERVERS: T. CROWE

5 STOP TIME: 1736

17 LOW TIDE TIMES: 0400 11634

23 AGENCY: ADF&G

6 SEGMENT #: LA-021-A

18 LOW TIDE HTS: 4.5' 11.6'

24 PHOTOS TAKEN: Y N

7 STATION #:

19 TIDE HT AT SURVEY: 1.72'

Roll #: Frame:

8 K-UNIT:

Ebb Slack Flood Slack

25 VIDEO TAKEN: Y N TAPE#:

9 STAT AREA:

20 USCG QUAD: SEWARD A3

Start: End:

10 LAT:

11 LONG:

26 SAMPLES TAKEN? Y N Number

12 SOURCE: Map Loran

13 LOCATION: N.W. LATOUCHE IS.

14 DESCRIPTION:

Oil

Sediment

Biological

Water

EXTENT OF OIL

	SHORELINE				STREAM			
	L	W	M ²	%	L	W	M ²	%
27 SURFACE COVERAGE	100	75	1	15	75	3		2

36 CATALOGED ANAD. FISH SREAM? Y N

37 CATALOG #: 226-40-16774

38 STREAM NAME:

	SURFACE THICKNESS				PENETRATION			
	0	1mm	2mm	0.5cm	35		5cm	
28 SURFACE THICKNESS								
29 PENETRATION								

39 OIL IN STREAM BED? Y N

40 OIL ON STREAM BANKS? Y N

30 OVERALL OIL IMPACT: N VL L M H

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

31 OIL TYPE: Pooled Mousse Tar Asphalt Sticky Stain

42 OIL WITHIN 1 MILE OF STREAM? Y N

32 OILED DEBRIS? Y N

Where:

33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cove

43 ANADROMOUS FISH PRESENT? Y N

Lagoon Marsh

44 ANADROMOUS FISH OBSERVATION

34 WAVE EXPOSURE: High Moderate Low

Species Aerial Ground

35 SUBSTRATE TYPE: Bedrock Boulder 5 Cobble 90

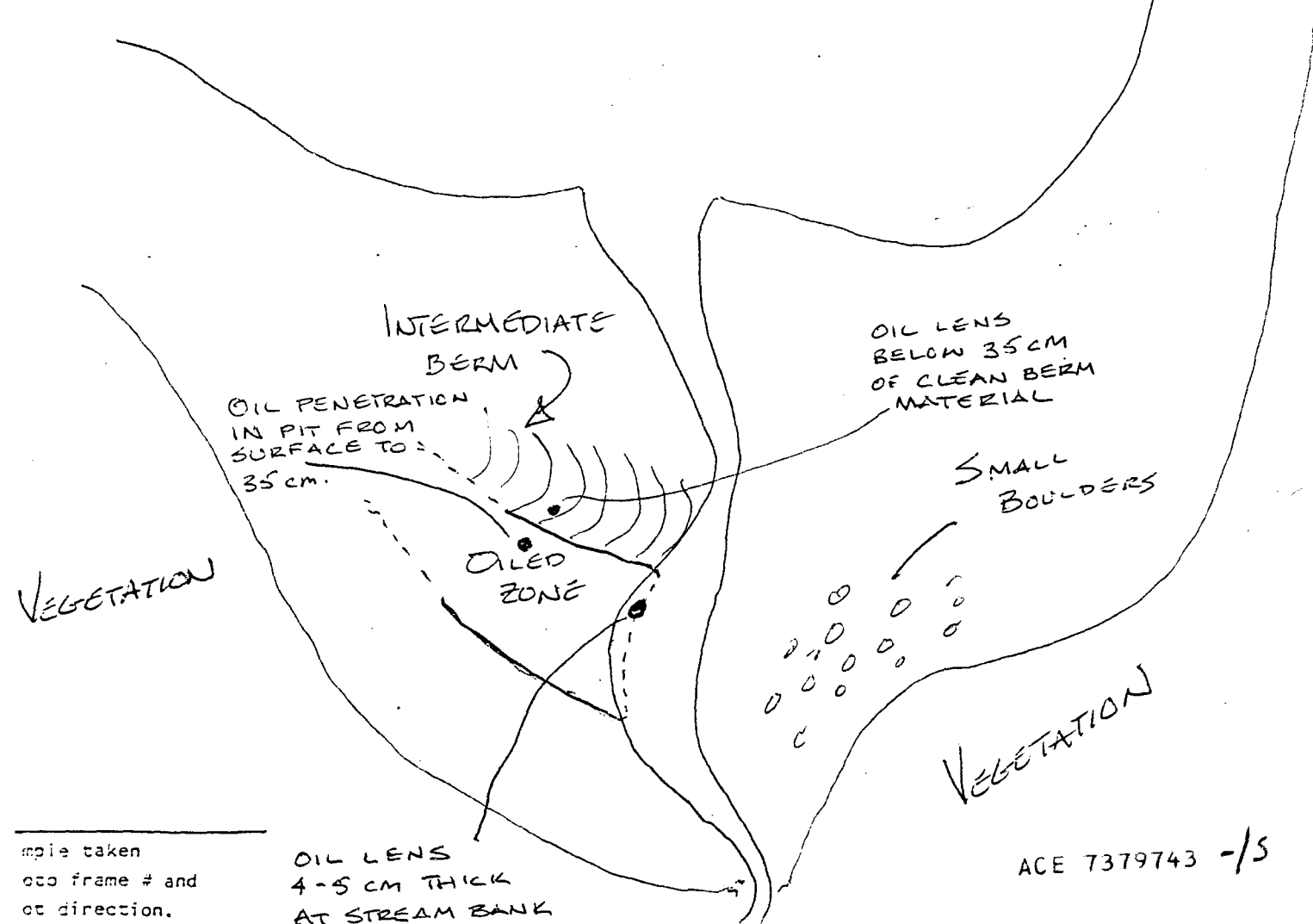
Gravel 5 Sand Mud/silt

COMMENTS: PATCH OF OILED SUBSTRATE IMMEDIATELY ADJACENT TO SW BANK OF STREAM. DEPTH OF PENETRATION TO 35 CM. THICK ~~SS~~ SURFACE LENS 4-10 CM THICK. SUGGESTED TREATMENT: MANUAL REMOVAL OF THICK SURFACE CONTAMINATION, REPLACEMENT OF HEAVY RIP-RAP ADJACENT TO CHANNEL TO PREVENT CHANNEL MIGRATION.

ACE 7379742 +/S

DESCRIPTION

OILED ZONE EXTENDS INTO STREAM CHANNEL AS DRAWN. RECOMMEND THAT DENSE SURFACE LENS (VARYING THICKNESS AVERAGE FROM 4 TO 10 CM) BE MANUALLY REMOVED. TO PREVENT MIGRATION OF CHANNEL, SMALL BOULDERS FROM OPPOSITE BANK (SEE DIAGRAM) SHOULD BE PLACED ALONG CHANNEL MARGIN IN PLACE OF REMOVED MATERIAL. THIS LEVEE SHOULD MEASURE APPROXIMATELY 10 FEET WIDE.



OG WILLIAM REID

SEGMENT ST/ 6121

STREAM 16774

DATE 20 / APR 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWL/LWL
- ☐ SL
- ☐ Profile Location(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

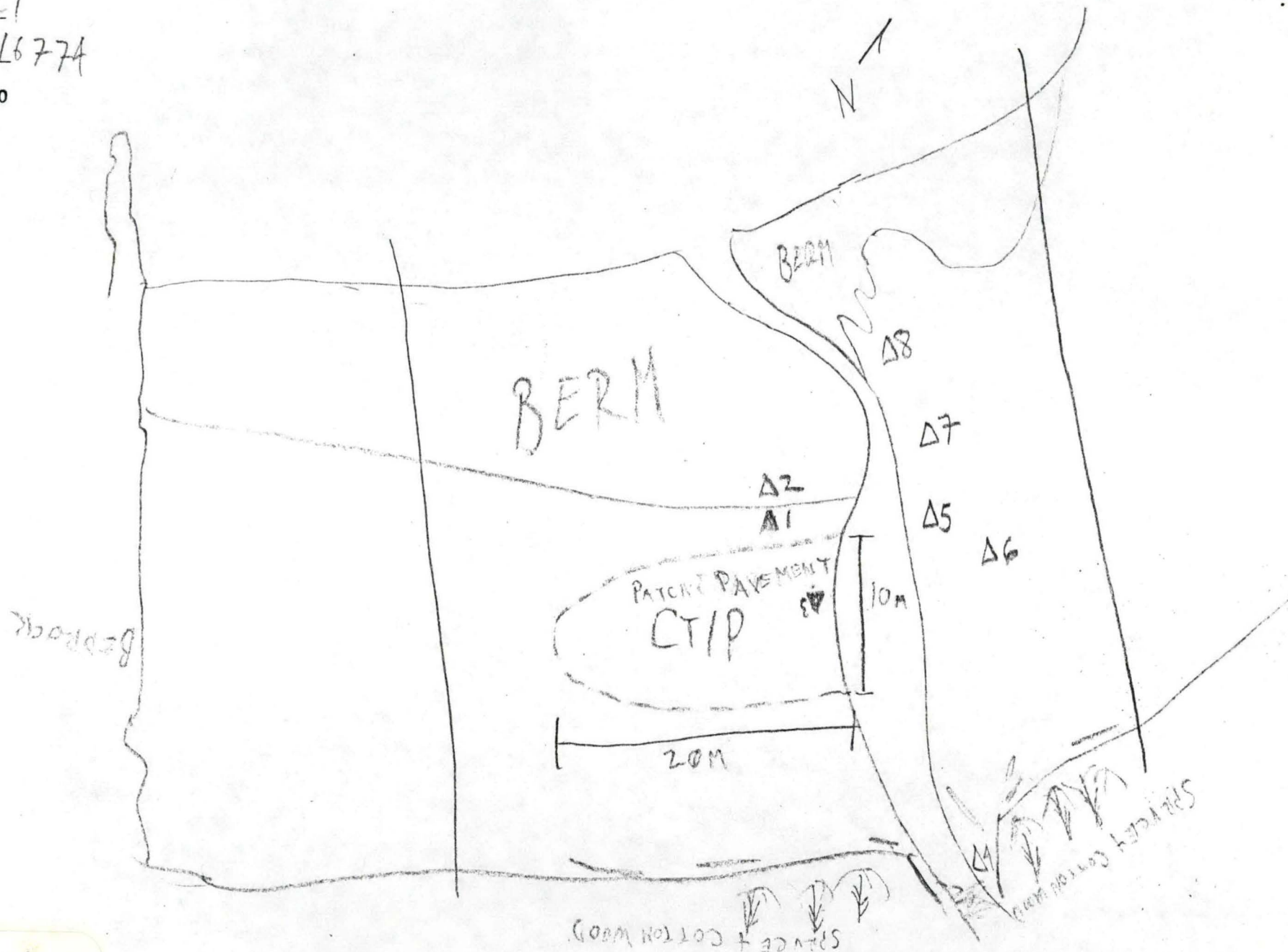
Oil Vegetation

1 →

Photo location, direction,
and number

ACE 7379775 +/S

SKETCH MAP



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

REVISION: 03/24/00

SHORELINE OILING SUMMARY (ANAD.)

REVISION NO. 04-13/9

OG WILLIAM LEID USCG McMAHON SEGMENT ST/ LA 21
 BIO MICHAEL FAWCETT LAND REP TOM GROVE - ADEG STREAM 225-40-16774 (OF)
 EXXON GUS GARCIA ADFG MIKE VIEDMER TIME to
 TEAM NO. 15 TIDE LEVEL LOW DATE 20 / APR / 90
 EST. SUBDIVISION LENGTH: 50 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R % B % C 60 % P 40 % G % S % M % V %
 SLOPE: Lang 100 % Hang % Vert % WAVE EXPOSURE: ☐ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W m M 20x10 m N m VL m NO m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES				
	TC	TS	TP	TD	SL	ORL	GY	SL	ORL	TL	LR	SU	U	M	LI
ASPHALT PAVEMENT			X			X								X	
POOLED															
COVER															
COAT															
STAIN															
MOUSSE															
PATTIES															
TARBALLS															
FILM															
NO OIL															

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

Did you collect
 DEBRIS
☐ YES ☐ NO

TYPE #BAGS

Photographs:

Roll No. Frames

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CK)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SHEEN (Y/N)	T	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SL BR	OR FW	GY SL	DR TR	LR	SU	U	M	L					
1	50			X			0-35		X		X					X					N		G/C
2	40					X	.									X					N		P/G
3	15			X			0-4		X		X					X					N		G/C
4	40					X	.								X						N		G/H/C
5	30					X	.									X					N		G/H/C
6	30					X	.									X					N		G/D

COMMENTS

REVIEWED DATE

ACE 7379777

REVISION 04/13/90

SUBSURFACE OIL (CONTINUED)

[illegible]

COMMENTS

ACE 7379776

REVIEWED _____ DATE _____

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ LA-21 STREAM NO: 226-40-16774 DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Subject stream and 226-40-16676, Ps, 12/89 also located within Subdivision B.

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-3 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
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 unopened biota and substrate. Subject stream located within Subdivision B.

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. David McManis DATE: 5/10/90

Subsurface Oil Observed: Yes X No Maximum Depth 35 cm

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u> X </u> Treatment Recommended	<u> </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> X </u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of tarmat and 2) bioremediation of areas with subsurface oil shown on attached sketch map. Work should be conducted between 6/1 and 7/10 with approval of ADF&G regarding bioremediation of stream banks.

See Constraint Addendum
6/9/90 WRK

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/10/90
ADEC Art Weimer Art Weimer
EXXON Andy Andy
NOAA Burt Wescott Burt Wescott
USCG D.D. Rome A.H. Rome

ACE 7379829

FOSC: WJL DATE: 5-18-90

NOTIFY CVC 24 HRS. IN ADVANCE OF WORK

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ LA-21 STREAM NO: 226-40-16774 DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Subject stream and 226-40-16676, Ps, 12/89 also located within Subdivision B.

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

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

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

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 unopened biota and substrate. Subject stream located within Subdivision B.

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. David McManis DATE: 5/10/90

Subsurface Oil Observed: Yes X No Maximum Depth 35 cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

 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: Recommended treatment includes 1) manual removal of tarmat and 2) bioremediation of areas with subsurface oil shown on attached sketch map. Work should be conducted between 6/1 and 7/10 with approval of ADF&G regarding bioremediation of stream banks.

TAG COMMENTS:

TAG APPROVAL DATE: 5/10/90

ADEC Art Weiner Duf Weiner

EXXON Andy Carter Steve

NOAA Burl Wescott Burl Wescott

USCG D.D. Rome A.D. Rome

ACE 7379830

FOSC: WJL DATE: 5-18-90

NOTIFY CVC 24 HRS. IN ADVANCE OF WORK

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-40-16774

SEGMENT LA-21 SUBDIVISION B

WORK WINDOW

Tarmat Removal	OPEN
Bioremediation More Than 100m From Stream	OPEN
Bioremediation Less Than 100m From Stream	WORK PRIOR TO 7/10 (ADF&G MONITOR REQ.)

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous streams (226-40-16774 and -16776) are in Subdivision B. 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 tarmat removal.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS bald eagle impact assessment conducted on 5/12/90 by Mike Lockhart indicates no active nests within 400m of the work area.
7II	Subsistence: Deer Harvesting	Closed to bioremediation after 8/15. No constraint to tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. No flushing of pollutants or sediments into stream drainage; do not allow Inipol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM LA-21B
FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC G.A. Reiter DATE 6/10/90
for
ACE 7379831 +/S

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ LA-21 STREAM NO: 226-40-16774 DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Subject stream and 226-40-16676, Ps, 12/89 also located within Subdivision B.

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

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

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

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 unhoiled biota and substrate. Subject stream located within Subdivision B.

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: A. David M. Mahan DATE: 5/10/90

Subsurface Oil/Observed: Yes X No Maximum Depth 35 cm

RECOMMENDATIONS:

No Treatment Recommended

X Treatment Recommended

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: Recommended treatment includes 1) manual removal of tarmat and 2) bioremediation of areas with subsurface oil shown on attached sketch map. Work should be conducted between (6/1) and (7/10) with approval of ADF&G regarding bioremediation of stream/banks.

See Constraint Addressed
6/9/90 WNK

TAG COMMENTS:

TAG APPROVAL DATE: 5/10/90

ADEC ART WGN Art WGN

EXXON *ANDY [unclear] [unclear]*

NOAA Rue/Wescott Rue/Wescott

USCG D. D. Rome A. D. Rome

ACE 7379832

FOSC: W L DATE: 5-18-90

NOTIFY CVC 24 HRS. IN ADVANCE OF WORK

COMMENTS: THE NORTHERN END OF THE SITE CONSISTED OF CT/ST IN 2 AREAS
GIVING RISE TO A WIDE CATEGORY. THE SOUTHERN END OF THE
SITE CONSISTED OF ST/CT & SOME SOR/K & AP/P-E (10X5M).
THE VERY LIGHT CT/ST WERE SPLASHES/DROPS ON BOULDER/20
CORROSE SURFACES AND IRRETRIEVABLE.

01

SEGMENT ST. LAZ1

SUBDIVISION A

DATE 8/1/90

CHECKLIST

N Arrow
 Approx. Scale
 Sep/Sub Bdry
 Oil Dist
 Width
 Length
 % Cover
 Substrate Character
 Est. HMA/LAR
 SS
 Profile Location(s)
 Profile(s)
 Pit Location(s)
 Photo Location(s)

LEGEND

'A
 PU No Subsurface Oil

'A
 PU Subsurface Oil

LT/C
 Continuous Distribution

LT/B
 Broken Distribution

LT/P
 Patchy Distribution

LT/S
 Splashed Distribution

LT/V
 Open Vegetation

LT/D
 Photo location, direction, and number

LT/E
 Photo location, direction, and number

LT/F
 Photo location, direction, and number

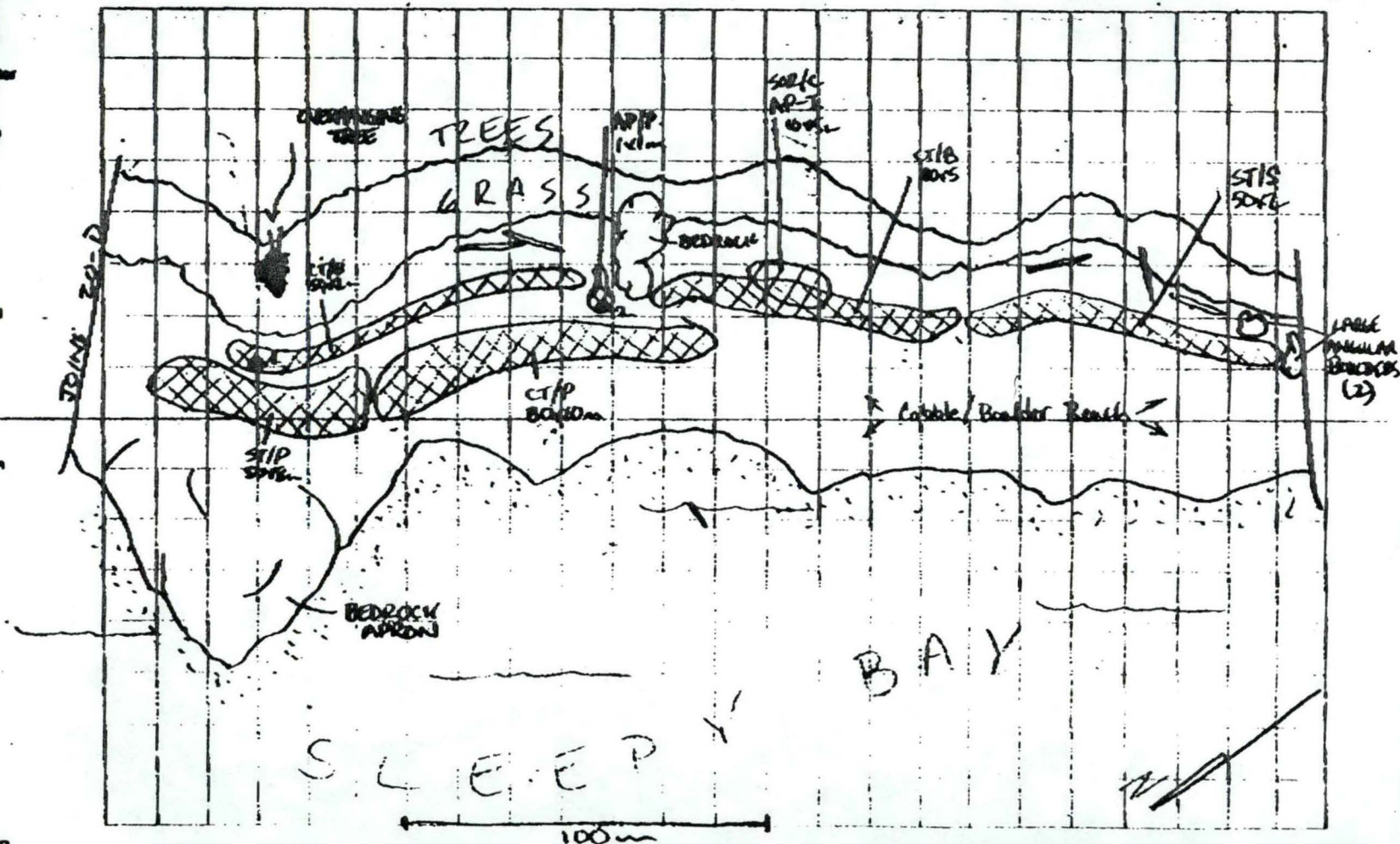
LT/G
 Photo location, direction, and number

LT/H
 Photo location, direction, and number

LT/I
 Photo location, direction, and number

LT/J
 Photo location, direction, and number

SKETCH MAP



ACE 7379735

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

CLINE 4

HUG-21-1990 22:48 FUM ALBERTA TIDE TO 14-----0019075643771# P.01

FIELD SHORELINE COMMENT SHEET

AX. 226-40-16774

SEGMENT AS/ LA-21 SUBDIVISION: A SITE: 1 DATE 8-21-90USCG NOAA REPRESENTS USCGNAME DONALD W. CLINE SIGNATURE [Signature]☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Manually remove AP/P. Apply biotreatment to CT,
ST, and SOR areas

ADECNAME Bob McCreeshy SIGNATURE [Signature]☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Manual removal of all AP, MS, in the small boulder and
cobble beach. Following manual treatment, mechanically relocate
OP and OR submersed oil in HITZ band, moving oiled sediments down
beach face to L-HITZ. Following mech. and manual treatment,
bioremediation.

LAND MANAGERNAME Carol K. Evanoff SIGNATURE [Signature]☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

High Resp. Priority. CVC concurs with ADEC's comments
on further treatment required. Recommend followup
work cont. in '90. Reassess in '91.

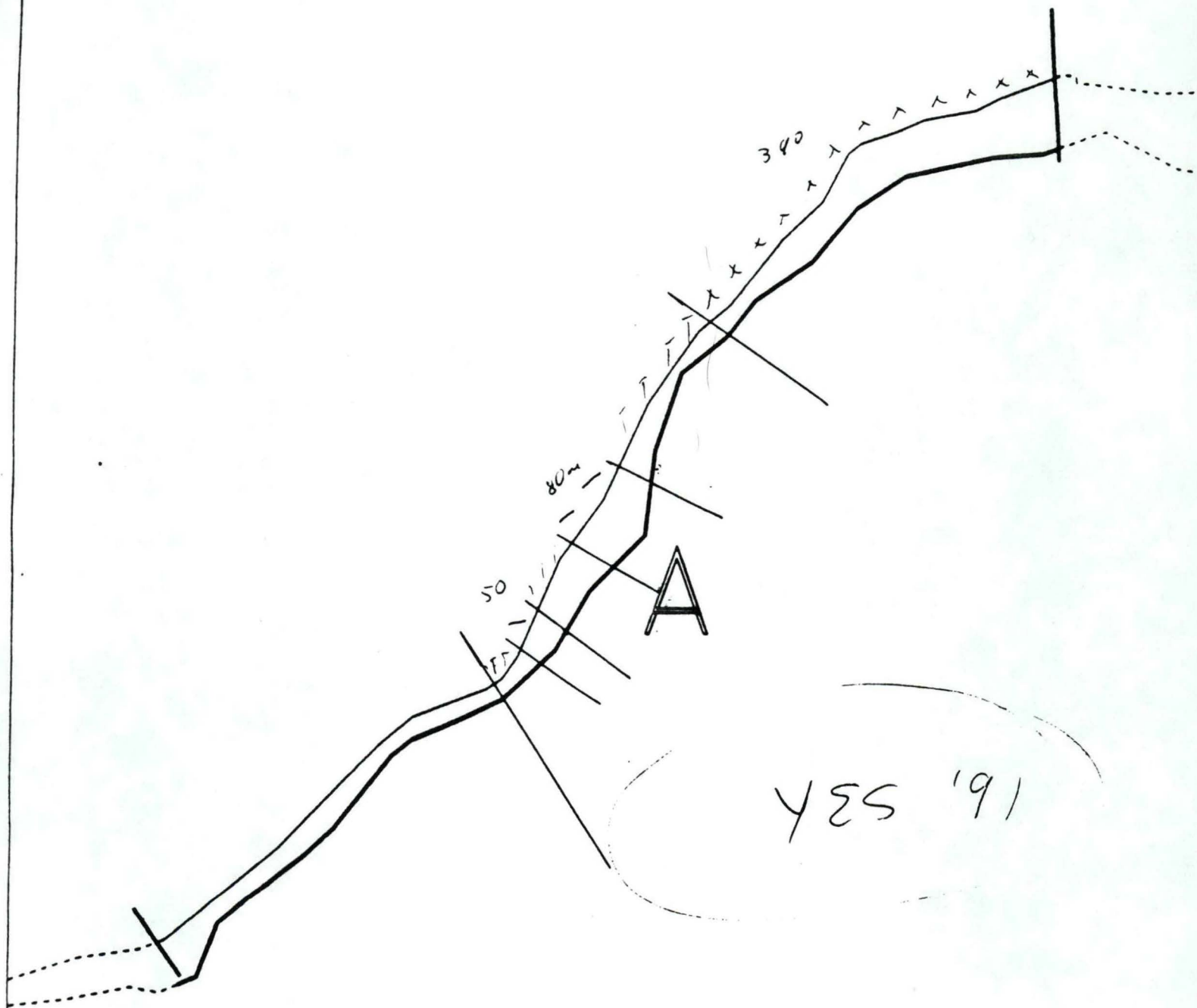
EXXONNAME Al Snook SIGNATURE [Signature]☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

CONTINUE BIO TREATMENTS THRU SUMMER. RAKE AREAS
WHERE SOR REMAINS PRIOR TO BIO. REASSESS IN 1991.

(NOTE: CVC REP. WAS NOT ON SITE DURING SURVEY, BUT GAVE TEAM 3
PERMISSION TO DO SURVEY IN HER ABSENCE)



ACE 7379723

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

LA-21 A
 ADEC Subsegment Length: 1350m
 METERS

0 157 314
 AK State Plane Zone 4 1:6180
 pla-21a



Subdivision Field Map
 Map Key: PWSLA-21A
 Name: NAKASHIMA
 Date: 8/21/90
 Data Entered:

DRAFT

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/ LA-21 Subd.: A Site: 1 Date: 8-21 1990

Conditions Observed: REMAINING OIL IS PRIMARILY SURFACE COATS WITH SPORADIC, PATCHY & BROKEN DIST. SOME SOR & AP (UNDER BOULDERS) REMAINS IN UPPER ITZ. SUBSURFACE OIL IS PRIMARILY OR.

Followup Recommendations: SEE COMMENTS BELOW:

Completed by Pickup Crew: ☐ YES ☒ NO

Priority for Addressing in 1990: ☐ High ☐ Med ☒ Low

ADEC

Bob McCreary
(name)

Robert B. McCreary
(signature)

Comments: Mechanically relocate OP and OR oil in the HITZ to the L-MITZ level of the beach face. Prior treatment should be manually removed fall AP and MS. Reinitiate all treatment areas

Exxon

Al Snook
(name)

Al Snook
(signature)

Comments: CONTINUE BIO TREATMENTS THRU SUMMER. RAKE AREAS WHERE SOR REMAINS PRIOR TO BIO. REASSESS IN 1991.

~~NOAA~~ DONALD W. CLINE
(name)

[Signature]
(signature)

NOAA REPRESENTS
USCG

Comments: Manually remove AP/OP (1x/m). Apply bio treatment to CT, ST, and SOR areas.

and Rep. Gail K. Evanoff
(name)

[Signature]
(signature)

Comments: Cont. Work in '90. Reassess in '91. CIX concurs with ADEC's treatment request

ACE 7379725 -/SK

TOTAL P.O.

22

LIST OF ASAP REPORTS and TAG RECOMMENDATIONS
CONTAINING ANDROMOUS STREAMS

9/10/90

<u>SEGMENT</u>	<u>CATALOG #</u>	<u>TAG RECOMMENDATION</u>
BA002A	226-40-16450	
BP004	226-20-16392	
BP004	226-20-16397	Bio/Customblen
BP004	226-20-16388	
BP004	226-20-16395	
CH002A	226-20-16180	
CH009B	226-20-16182	Tarmat removal/Bio
CH900A	226-20-16200	
CU014A	224-20-13036	
CU013A	224-20-13030	
EL052B	226-10-16902	NTR
EV014A	226-40-16640	
EV017A	226-40-16620	
EV025A	226-40-16613	
EV071B	228-40-16484	
GR007A	NOT CATALOGED	
GR103A	227-20-17880	
KN213B	226-30-16853	NTR
KN129A	226-10-16975	
KN129B	NOT CATALOGED	
KN132B	226-10-16982	
KN135A	226-30-16285	
KN211E	226-10-16875	NTR
KN401A	226-30-16820	
KN500A	226-10-16992	NTR
KN701B	226-30-16840	NTR
LA018A	226-40-16780	
LA021B	226-40-16776	
LA021A	226-40-16774	

**ASAP Follow-Up Recommendations
TAG Recommendations - August 27, 1990**

SEGMENT

PWS

DI-69	A Site 1	Manual rake area of test pit 1 followed by bioremediation (M.P.)
IN-31	B Site 1	Manual rake 10 x 10 patch on north side of spit. Reapply bioremediation (M.P.)
IN-32	A Site 1	Reapply bioremediation and reassessment in 1991
KN-209	A Site 1	Reapply bioremediation and reassessment in 1991
KN-401	B Site 1	Recover AP remaining outside of the set-aside followed by bioremediation. Reapply bioremediation to remaining oiling conditions outside the set-aside.
KN-402	A Site 1	Manual pickup of mousse and re-bioremediation
LA-16	A Site 1	Manual pickup of accessible mousse and AP followed by reapplication of bioremediation (H.P.)
LA-17	A Site 1	Manual removal of accessible mousse and AP followed by reapplication of bioremediation (H.P.)
LA-20	A Site 1	NTR - Reassessment in 1991
LA-20	B Site 1	Reapply bioremediation and reassessment in 1991
LA-20	D Site 1	Reapply bioremediation and reassessment in 1991
LA-21	A Site 1	Manual pickup of AP - 1 x 1 m patch indicated on sketch and reapply bioremediation
NA-06	C Site 1	Manual pickup of AP patch as indicated on sketch and reapply bioremediation to all oiled areas
SP-19	A Site 1	Reapply bioremediation and reassessment in 1991
EL-106	C Site 1	NTR - Reassessment in 1991
	Site 2	NTR - Reassessment in 1991
EL-109	A Site 2	Manual till band of subsurface oil 10m x 3m and re-bioremediate
	Site 4	Reapply customblen and reassessment in 1991
BL-12	A Site 1	NTR - Reassessment in 1991
EL-54	A Site 2	NTR - Reassessment in 1991
EL-57	A Site 1	Manually rake down the storm berm where oil present and reapply bioremediation. Pickup two small patches of OP sediment in SUITZ at the southern most end of the site. (M.P.)
EL-11	A Site 1	NTR
	Site 2	Manual or mechanical relocation of oiled berm material and bioremediate
KN-500	A Site 4	Reapply bioremediation and reassessment in 1991
KN-113	B Site 1	NTR - Reassessment in 1991

KODIAK

K10-05-AS-003	A Site 1	Completed by ASAP - NTR
K10-04-AS-005	A Site 1	NTR - Reassessment in 1991
	Site 2	NTR - Reassessment in 1991
K10-02-AS-008	B Site 1	NTR - Reassessment in 1991
	Site 2	NTR - Reassessment in 1991
	Site 4	NTR - Reassessment in 1991
	Site 6	NTR - Reassessment in 1991

TAG APPROVAL DATE Aug 27 - 90 SHPO _____

EXXON ANDY TAYLOR

ADEC Larry Mann's

USCG G.A. REITER

NOAA Burt Wescott

FOSC _____

DATE _____

ACE 7379717

Final Anadromous Stream Treatment Information

Segment ID - Stream ID	NTR	Bio	Bio Start	Bio End	Man	Man Start	Man End
K0911-CD020 262-10-10080					X	6/28/90	6/28/90
K0911-CD020 262-10-10092					X	6/28/90	6/28/90
K0917-CC100 262-15-10040	X						
K0919-HB001 262-20-10040					X	6/12/90	6/14/90
K0919-HB004 262-20-10030	X						
K1002-AB002 262-65-655					X	7/7/90	7/8/90
K1007-PB001 262-70-10025					X	6/23/90	6/24/90
K1007-PB016 262-70-10010					X	7/10/90	7/10/90
K1009-DB008 262-75-10020	X						
KN0103 226-10-16922		X	7/7/90	9/1/90	X	7/7/90	7/7/90
KN0106 226-10-16890					X	6/30/90	6/30/90
KN0110 226-10-16928	X						
KN0120 226-10-16940	X						
KN0129 226-10-16975					X	5/30/90	5/30/90
KN0129 KN0129-UNCAT		X	6/19/90	6/19/90	X	5/30/90	5/30/90
KN0132 226-10-16982		X	6/19/90	9/11/90	X	5/26/90	5/29/90
KN0134 226-30-16865		X	6/23/90	6/23/90	X	6/23/90	6/23/90
KN0201 226-30-16872					X	6/1/90	6/1/90
KN0205 226-30-16860					X	6/1/90	6/3/90
KN0211 226-10-16875		X	7/1/90	7/9/90	X	7/1/90	7/9/90
KN0211 226-10-16880					X	7/1/90	7/1/90
KN0213 226-30-16853		X	7/1/90	7/6/90	X	7/1/90	7/6/90
KN0401 226-30-16820					X	6/30/90	6/30/90
KN0500 226-10-16992		X	7/5/90	9/11/90	X	7/5/90	7/7/90
KN0500 226-10-16996		X	7/7/90	9/11/90	X	7/5/90	7/7/90
KN0601 226-40-16855	X						
KN0602 226-40-16851	X						
KN0602 226-40-16853	X						
KN0701 226-30-16840		X	6/30/90	9/13/90	X	6/30/90	7/27/90
KN0704 226-30-16844	X						
LA015 226-40-16782		X	7/3/90	7/8/90	X	7/3/90	7/8/90
LA018 226-40-16780		X	7/3/90	8/26/90	X	6/15/90	7/4/90
LA021 226-40-16774		X	6/17/90	6/17/90	X	6/13/90	6/14/90
LA021 226-40-16776	X						
LA023 226-40-16772	X						
LA029 226-40-16788	X						
LA031 226-40-16785	X						
MA009 226-20-15044	X						
MN001 227-20-17570	X						
NA026 226-40-12950	X						
NK001 232-21-10230		X	7/3/90	7/4/90	X	7/3/90	7/4/90
PD002 242-42-10450					X	6/21/90	6/23/90
PD003 242-42-10460					X	6/21/90	6/23/90
TB002 232-10-10340					X	7/1/90	7/1/90
TB003 232-10-10342					X	6/20/90	7/1/90
WB001 242-32-10155					X	6/19/90	6/19/90
WB003 242-32-10160					X	6/19/90	6/19/90
WH003 226-40-16322		X	7/8/90	7/8/90	X	7/8/90	7/8/90

John Morrison
Field Monitor Supervisor
Alaska Dept. of Fish & Game
Anchorage Alaska

Rick Gustin
FWT3
ADFG
Corinthian

ASC#226-40-16774
Latouche Is. 021 segment - A
June 14, 1990

Work began on this stream at 0700 on June 13. It was a fairly straight forward job of manual removal. The complicating factor was that quite a bit of the tar mat and oiled sediments have been covered by an advancing berm of sand and gravel. In places it is 2 to 3 feet deep. The manual removal went fairly smoothly with Bill Bale's crew doing a good job. The first day was cut short due to bad weather, but 2 and 1\2 supersacks were removed. The oil runs right down into the stream on the south side but there is no oiling problem on the north. The tarmat is primarily in the upper and middle ITZ. June 14 brought good weather and less rain, which made spotting the oil much easier. As the crew worked south on the tarmat, I diverted stream water into the heavily oiled stream edge and rake tilled and washed the sediments for several hours. Finally it became apparent that more removal was necessary, so I began shoveling buckets. We had been removing 6 inches to 1 and 1\2 feet of oiled gravel from the stream edge south, but I ended up removing another 6 to 8 inches till I hit clean substrate. There were areas where the oiled gravels dove deeper and ran under the storm berm.

DEC BIOREMEDIATION DAILY REPORT

5917
\$

DATE: 9.10.90

ADEC Monitor: JEFF GINALIAS

TIDES: TIME: HEIGHT:
Low - -
High 5:45 10.3
Low 11:21 3.1
High 17:23 13.3

WEATHER: Cloudy Rain Fog Sun
TEMP: 53° SEA COND: CHOPPY 1-2 FT SWELLS
WIND DIR: N-NE-E-SE-S-SW-W-NW
WIND SPEED 0-15 16-30 30+

USCG John Dowd

Exxon Chris Katsimpalis

OOPS Dave Bellow

Other DECO Foreman: Rod Reynolds

OGS Mike Acton

DECO SAFETY: David Crosby
CREW EMT: Arturo Vasquez

Segment Sub No. Inipol Custom Comments
sites (gal) (lbs.)

EV-18	A	1	4	10.5	-3rd TREATMENT STAINS ON BOULDERS, RESIDUAL O/R ALONG UIZ BAND. FAIRLY ISOLATED AREA OF TREATMENT, HOPEFULLY WILL WEATHER OVER WINTER
		2	5.5	14	
		3	-	258	
EV-39	A	1	31	15	-3RD TREATMENT -OIL IN MID O/R IN SEDIMENTS BELOW BEDROCK UIZ. CONTINUES IN BAND ACROSS SEGMENT WITH STAINS ON BOULDERS RESIDUAL OR IN SEDIMENTS.
		2	-	252	
		3	13	62	
LA-16	A	1	-	70	-3rd TREATMENT -LA 16-17-18 ADJACENT SITES, SUMMARIZED TOGETHER: OIL IN BAND ALONG UIZ. 1-2 METERS IN WIDTH AT BEGINNING OF LA-16, EXTENDING TO 3 METERS NEAR STREAM SEGMENT OF LA-18. AREA WOULD BENEFIT FROM INIPOL APPLICATION BUT WITHIN 30 DAY RETREAT PERIOD FOR RETREATMENT.
		1	-	40	
LA-17	A	1	-	60	- Reassess in 1991
LA-18	A	1	-	300	-3RD TREATMENT -OILING SPORADIC, BUT GENERALLY LIGHT ACROSS SEGMENT, IN BAND ALONG UIZ. NORTHERN EXPOSURE, HIGH ENERGY -SHOULD BENEFIT FROM WINTER STORMS - SAME SUMMARY FOR LA-20 AND LA-21 OILING A BIT HEAVIER AT LA-20
LA-20	D	1	-	300	
LA-21	A	1	-	300	

\shorelin\rowann\biorept 8/7/90

[Handwritten signature]
ACE 7379726
+1AC/AT

Arctic Salvor / Bat Team 2



TREATMENT #3



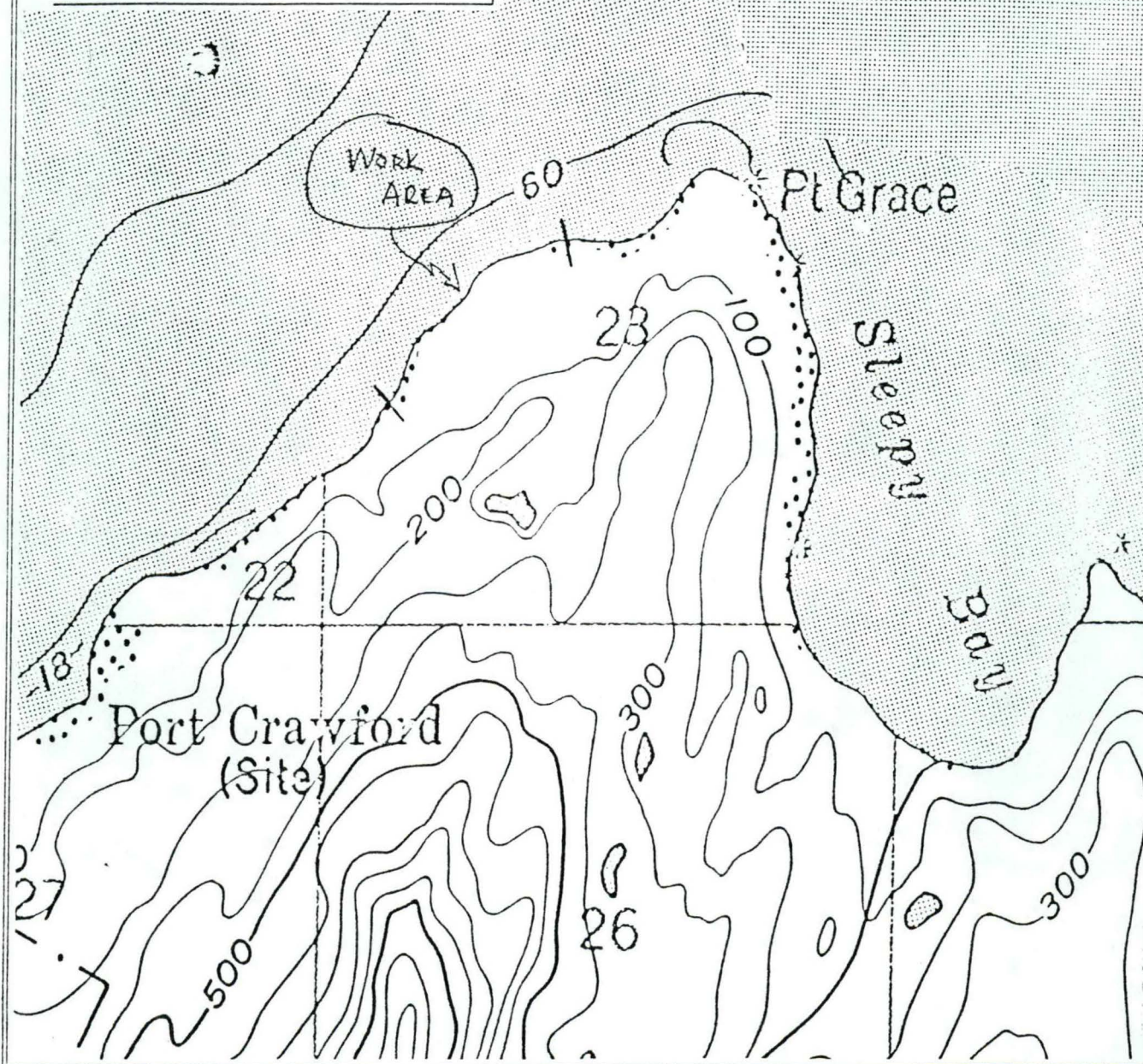
Location: Point Grace

Segment: LA-21A

Sites: #1 + #2

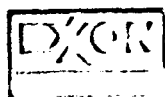
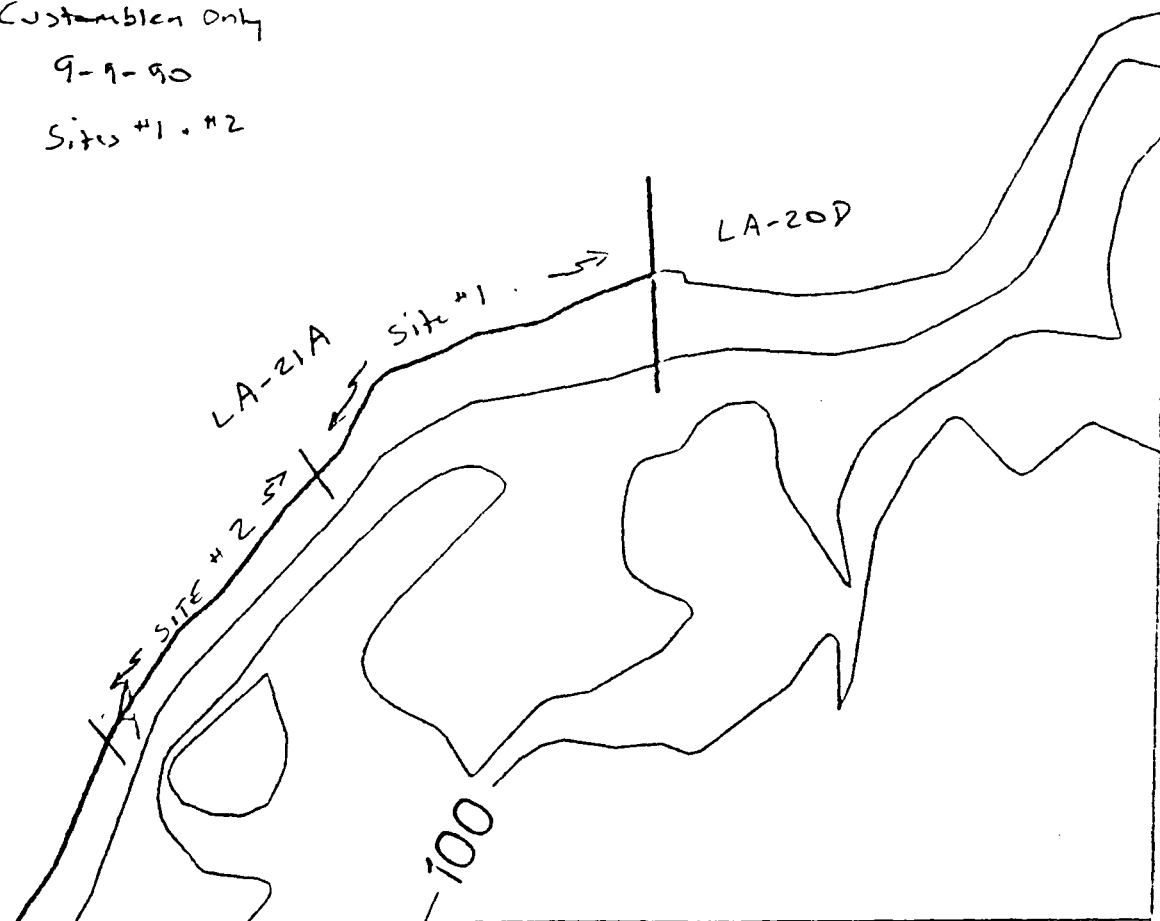
Date: 9-9-90

O.G. Acton



LA-21A
Bioremediation
Treatment # 3
Customblen only
9-9-90
Sites #1, #2

Point $\rightarrow$
Grace



SEGMENT LA-21
Exxon Segment Length: 2658m

100000

Map Key: PMS-LA-21d
Exxon Company, USA
Key 14, 1990

1 inch = 500 feet

ACE 7379728

INIPOL-CUSTOMBLEN APPLICATION REPORT

Segment: LA-21A Subdivision: 1 of 2 Site: 1 of 2

OG: Acton BAT No. 2 Date: 9/19/90

Exxon: Katsimpelis Time: 1230 to 1300 Tide: 5 to 6

Wind: NE knots from 15 Air Temp: 11 C Water Temp: 12 C

type of oil treated: CT CV MS PA/P previously tilled? YES (NO)
OF OP

zone treated: SUTZ UITZ ✓MITZ LITZ asphalt removed? YES (NO)

area treated: splash patchy ✓ broken continuous

area treated with Inipol: m² m² sq. m. treated

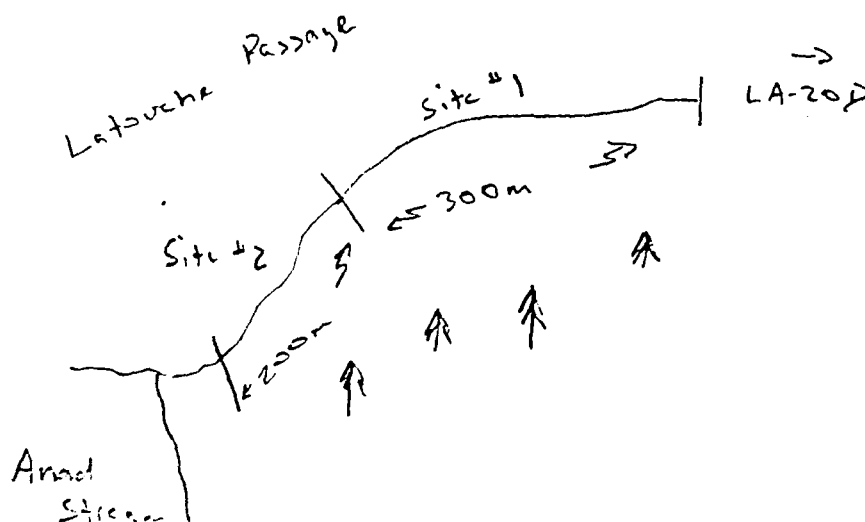
gallons of Inipol applied: calculated Inipol dosage gal/sq m.

emulsification observed? YES NO

area treated with Customblen: 300 m² 5 m² 100 sq. m. treated

pounds of Customblen applied: 300 calculated Customblen dosage 0.20 lbs/sq m.

comments:



INIPOL/CUSTOMBLLEN APPLICATION REPORT

Segment: LA-21A Subdivision: 1 of 2 Site: 2 of 2

OG: Acton BAT No. 2 Date: 9 / 9 / 90

Exxon: Katsimpalis Time: 1320 to 1330 Tide: 6 to 7

Wind: NE knots from 15 Air Temp: 11 C Water Temp: 12 C

type of oil treated: CT CV MS PA previously tilled? YES ☒ NO
OF OP

zone treated: SUTZ UITZ ☒ MITZ LITZ asphalt removed? YES ☒ NO

area treated: splash patchy ☒ broken continuous

area treated with Inipol: m X m X % = sq.m. treated

gallons of Inipol applied: calculated Inipol dosage gals/sq m

emulsification observed? YES NO

area treated with Customblen: 200 m X 5 m X 100 % = 1000 sq.m. treated

pounds of Customblen applied: 200 calculated Customblen dosage 0.20 lbs/sq m

comments: See sketch for Site #1

ADEC DEMOBILIZATION REPORT FOR INIPOL AND CUSTOMBLEN TREATMENT

12817
\$

To: Alaska Department of Environmental Conservation
Oil Spill Response Center
Anchorage, Alaska
Attn: John Bauer
FAX 265-4666

From: _____ (please print)

RE: SEGMENT NUMBER LA-21 SUBSEGMENT NUMBER A

ADEC REP. JEFF GIVALLIAS

USCG REP. JOHN DOWD

EXXON REP. Chris Katsimpalis

BOAT NAME/SQUAD NUMBER ARCTIC SALVOR

CG: MIKE Acton

OOPS: DAVID Bellow

SQUAD # 4

Site #	Length (along shore m)	Area m ²	Inipol (gallons)	Customblen (lbs.)
1	300 x 5 @ 100%	1500	—	300

Has work been completed as stated on the work order? If your answer is no please explain in detail how the work performed was different from the work order language.

Yes ASAR work order

Describe the amount of oil remaining (type, size of area and location).

Residual along UITE SAND. No extensive oiling;
VARIES in width .5 to 2 meters, occasionally disappearing
for stretches then reappearing. Penetration not exceeding 3 cm.
Insufficient surface coat/stain to justify Inipol application
Additional Comments (keep objective)

High energy northern exposure beach, mostly boulder.
Should weather well over winter.

Customblen application stopped about 100 meters east from aerial stream.

signature _____

Date and time of demobilization from segment _____

9.9.90 @ 1300

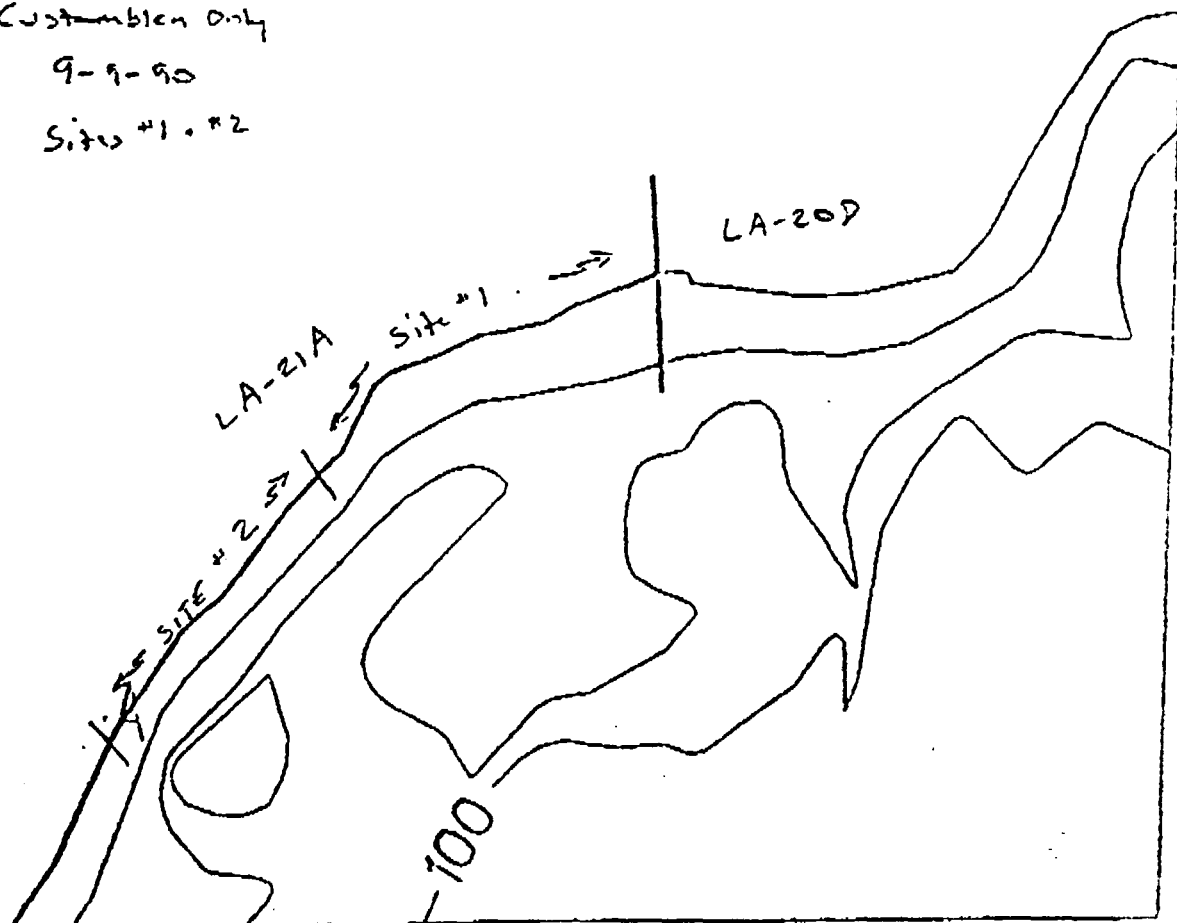
Shoremon/Demob.bio 55/30/90

13717

2

J. Givens ADEC
 LA-21A
 Bioremediation
 Treatment # 3
 Customben only
 9-9-90
 Sites #1, #2

Point 20
 Grace



SEGMENT LA-21
 Exxon Segment Length: 2658m

Map Key: PVS-LA-216
 Exxon Company, USA
 May 14, 1991

ACE 7379732

ADEC BIOREMEDIATION DAILY REPORT

DATE: Chris Strand - 8/17/90

ADEC Monitor: Chris Strand

TIDES: TIME: HEIGHT:

Low Tides - see DSA LA-20A

High

Low

High

WEATHER: Cloudy Rain Fog Sun

TEMP: ~60°F SEA COND: Calm - 6"

WIND DIR: N-NE-E-SE-S-SW-W-NW

WIND SPEED 0-15 16-30 30+

USCG Dan Parry, Cmdr. Parry ^(LA-20A)

Exxon Frank Box

OOPS James Byars

Other CVC - Gail Evencoff

OGS Bill Barstow, Dan Mann

ADNR - Leigh Carlson,

ADEC - Peter Montesano

} LA-20A

Segment	Sub	TOTAL No. Sites	Inipol (gal)	Custom (lbs.)	Comments
---------	-----	-----------------------	-----------------	------------------	----------

EV-50	C	③	14.3	7.3	
-------	---	---	------	-----	--

EV-52	A	②	—	35	
-------	---	---	---	----	--

EV-54	A	⑨	54.5	29.5	
-------	---	---	------	------	--

LA-20	A	①	480	400	
-------	---	---	-----	-----	--

LA-20	B	①	400	280	
-------	---	---	-----	-----	--

LA-20	D	①	400	392	
-------	---	---	-----	-----	--

LA-21	A	②	320	740	
-------	---	---	-----	-----	--

← LA-20A

This beach was subject to debate between ADEC, ADNR, CVC, and Exxon, on site preparedness for bio treatment. 2 modifications are presently in works for partial beach filling, and upper berm work. USCG Cmdr. Parry finalized issue by directing Exxon not to treat areas affected by these modifications. Monitors consented to bio treatment after Exxon agreed to further re-fill beach to loosen surface matrix. Central beach bund (~13m wide) was subsequently re-filled with tractor.

\shorelin\rowann\biorept 8/7/90

ACE 7379737

ADEC DEMOBILIZATION R RT
FOR INIPOL AND CUSTOMBLEN TREATMENT

Date: 8/17/90

To: Alaska Department of Environmental Conservation
Oil Spill Response Center
Anchorage, Alaska

Attn: John Bauer
FAX 265-4666

From: Chris Strand (please print)

RE: SEGMENT NUMBER LA-21 SUBSEGMENT NUMBER A

ADEC REP Chris Strand

USCG REP Don Pracey

EXXON REP Frank Box

BOAT NAME/SQUAD NUMBER Don Bollinger / Squad

Site #	Length (along shore m)	Area m	Inipol (gallons)	Customblen (lbs.)
--------	---------------------------	-----------	---------------------	----------------------

See Attached

Has work been completed as stated on the work order? If your answer is no please explain in detail how the work performed was different from the work order language. Yes.

Areas of previous treatment generally included as one large area, with additional Customblen only area, ^{revised} as per original work order and monitor consensus.

Describe the amount of oil remaining (type, size of area and location). Upper intertidal zone has heaviest oiling, tapering down into middle intertidal zone. Generally coat/cover in sporadic patches on boulder/cobble beach with pocket moderate-heavy residue, firm on surface, especially in shallow areas of previous manual removal atop bedrock. Also in bedrock nooks and cracks, firm collections of oil. One pocket of mousse located and removed. Accessible areas broken up with shovels prior to bio.

Additional Comments (keep objective)

signature C. Strand

Date and time of demobilization from segment 8/17/90, 2037
Shoremon/Demob.bio 55/30/90

ACE 7379738

*Processed
4/21
RH*

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/LA-21

SUBDIVISIONS: A (1 OF 2)

*noncommence
Culm. & m'cl.*

SHORELINE EVALUATION

SEGMENT ST/ LA-21 SUBDIVISION A (1 OF 2) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous streams no. 226-40-16774, 16776.

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

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

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

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. Subdivision A - 1 eagle nest; 2 more eagle nests within 400 m of subdivision A.

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 215 m: Medium 483 m: Narrow 51 m: V.Light 442 m: No Oil 161 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 30+ 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) pick up all oiled vegetation and debris, 2) Spot wash area "A" using snares and pom poms to control sheening, 3) bioremediate areas shown on attached sketch map but not within 100m of anadromous fish stream. Work should be conducted between 6/1 and 7/10 based on eagle nest and salmon constraints, after approval of USFWS regarding eagle nest.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

ACE 7379745

PWS, SE RD AND HOMER ECOLOGICAL CONSTRAINTS

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

ACE 7379746

FIEL SHORELINE COMMENT ST ET

SEGMENT ST / LA-21 SUBDIVISION: A DATE 4/07/90

USCG
NAME R. Hubbard SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

1. I suggest a good oil removing solution to flush oil spot from beaches.

ADEC
NAME J. LYNN MARTIN SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

AGREE WITH EXXON OPS. RECOMMENDATION FOR A HOT WASH IN AREA "A" (SEE ATTACHED MAP) FOLLOWED BY BIOREMEDIATION. I ALSO AGREE THAT AREA "B" (SEE ATTACHED MAP) SHOULD BE A SPOT BIOREMEDIATED HOWEVER I WOULD SUGGEST MANUAL REMOVAL OF POOLED AREAS BEFORE THIS ACCURES

LAND MANAGER
NAME PATRICK SELANOFF SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

ALL TO OIL GRASS & DEBRIS WILL HAVE TO BE MANUALLY REMOVED BEFORE WASH BEGINS OR BIOREMEDIATION.

SHORELINE OILING SUMMARY

REVISION NO. 00/00/00

OG Reimer USCG Hulbert SEGMENT ST/ LA-21
 BIO Zamora LAND REP Selenoff (cvc) SUBDIVISION A
 EXXON Garcia ADEC Martin TIME 15:30 to 16:46
 TEAM NO.: 16 TIDE LEVEL: +3 to +1 DATE 4/7/90
 EST. SUBDIVISION LENGTH: 1425 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock ☐ Snow
 SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo WORKING DIRECTION: North to South
 SURFACE SEDIMENTS: R 1 % B 30 % C 40 % P 29 % G - % S - % M - % V - %
 SLOPE: Long 100 % Hang - % Vert - % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 220 m M 525 m N 80 m VL 475 m NO 125 m

SURFACE OIL

CHARACTER	DISTRIBUTION	OIL / FILM COLOR	IMPACTED ZONES
ASPHALT PAVEMENT			
POOLED	X	X	X X
COVER	X	X	X X X
COAT	X	X	X X
STAIN			
MOUSSE			
PATTIES			
TARBALLS			
FILM			
NO OIL			X

PAVEMENT: H F S 0 sq. m by 0 cm

PATTIES/TARBALLS 0 BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

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

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE 0
 #BAGS 0

Photographs:

Roll No. ST-16-4

Frames 12-23

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-cm)	BELOW		OIL / FILM COLOR	PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC		SU	UI	MI	U		
1	40	X					0 - 15		X	X			X			OSP organics
2	30		X				5 - 30	X		X		X				PC
3	15		X				5 - 15	X		X		X				PC
4	15				X		5 - 15	X		X		X				PC
5	15				X		0 - 10	X	X	X		X				OSP

ACE 7379748

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	OP	OR	OL	NO	10M-15M	15M-20M	20M-25M	25M-30M	30M-35M	35M-40M	40M-45M	45M-50M
ASPHALT PAVEMENT												
POOLED			X		X		X		X	X		
COVER	X	0	✓		X				X	X	X	
COAT				X			X		X	X		
STAIN												
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL												X

PAVEMENT: H F S 0 sq. m by 0 cm

PATTIES/TARBALLS 0 BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

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

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. 5T-16-4

Frames 2-23

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	10M-15M	15M-20M	20M-25M	25M-30M	30M-35M	35M-40M	40M-45M	45M-50M	SU	UI	MI	U		
1	40	X					0 - 15		X					X						X			GSP organics
2	30		X				5 - 30	X					X						X				PC
3	15		X				5 - 15	X					X						X				PC
4	15				X		5 - 15	X		X									X				PC
5	15				X		0 - 10		X	X										X			BPC
6	20					X	-													X			G-PSC

COMMENTS Long ebb/boulder beach, forest and grass bushes, mostly snow covered. The majority of the oil is along the east end of the sub-segment. A sandstone cover 20-35 m wide with patchy pooled oil around boulders extends for the first 220 meters. oiled grasses and debris are found in super-shallow along this section. The oil grade is a patchy even (20-30%) 5-15 m wide for the next 530 meters. the remainder of the sub-segment has sporadic coats (1-5%) on cobbles and boulders, except for the coastline around the freshwater stream which is clean.

REVISION 03/22/90

SUBSURFACE OIL (CONTINUED)

[illegible]

COMMENTS

ACE 7379750

REVIEWS

DATE _____

DATE 4/12/98

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST / LA 21 Subdivision A Date (mo / day / yr) 4 / 7 / 90
 Time (24 hr) 1515 ON Biologist TONY ZAMORA

- (A) Substrate type and % of segments:
 (1) Bedrock 1 (2) Boulder 20 (3) Cobble 40 (4) Pebble 29 (5) Sand — (6) Silt —
- (B) Overall % cover of biota (% of segment): Dense 5 Moderate 70 Low 25
- (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-16-4

Frames 12-23

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments: OBSERVED: 2 OTTERS, 2 SEA LIONS, DEER & DEER SC
 - 2 EAGLES, GULLS. FOUND DEAD OTTER - DECOMPOSED, NO VISIBLE OIL.
 - GRASSES ABOVE BEACH ARE OIL COATED.
 - SCATTERED NEREOCYSTIS KELP OFFSHORE

Ecological Considerations: 7II, 1A/B

- FILAMENTOUS GREEN COVERS CORBLE IN UI & MZ

OG Reimer

SEGMENT ST/ LA-21

SUBDIVISION A

DATE 4 / 7 90

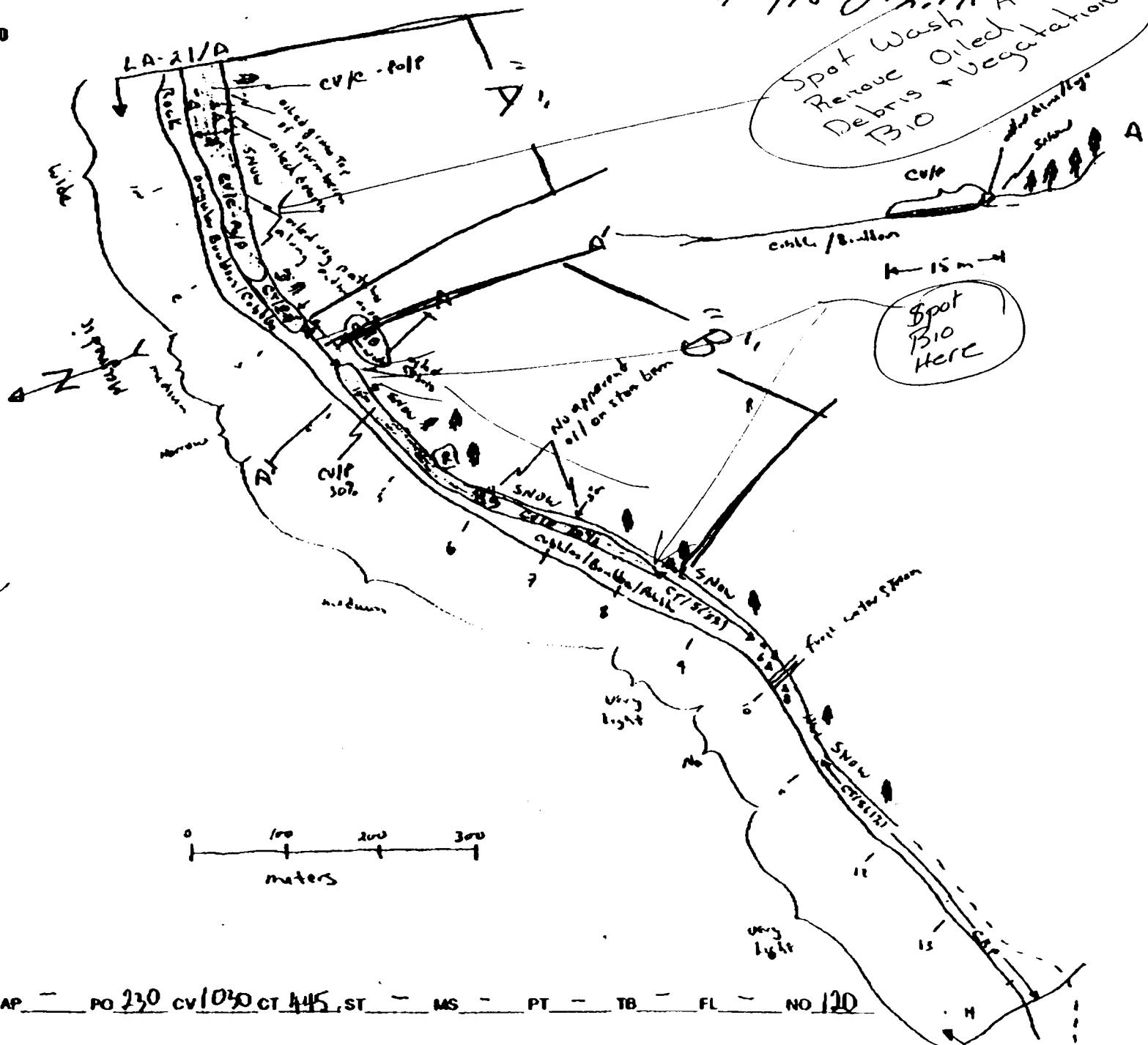
SKETCHMAP
MAP FOR ADEC
LA-21A COMMENTS
4/07/90 D. J. N. "A"

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Sp. Sub Entry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HML/VL
- ☒ SSI
- ☒ Profile Location(s)
- ☒ Photo(s)
- ☒ Photo Location(s)

LEGEND

- 1 Δ
P1 - No Subsurface Oil
- 2 Δ
P1 - Subsurface Oil
- CT/C
Continuous Distribution
- CT/D
Broken Distribution
- CT/P
Patchy Distribution
- CT/S
Splashed Distribution
- Oiled Vegetation
- 1 $\rightarrow$
Photo location, direction, and number



ACE 7379752

Oil Character Length (m): AP — PO 230 CV 1030 CT 445 ST — MS — PT — TB — FL — NO 120

REVISION: 02/04/00

DATE 4 / 7 90

SKETCH MAP

CHECKLIST

- ☒ N Arrow
- ☐ Approx. Scale
- ☐ Sex/Sub Body
- ☒ Oil Dist.
- ☐ Width
- ☐ Length
- ☒ % Cover
- ☐ Substrate Character
- ☐ Est. HMLA/WL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ FH Location(s)
- ☐ Photo Location(s)

LEGEND

- PA - No Subsurface Oil**

- 2 ▲**
Plt - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

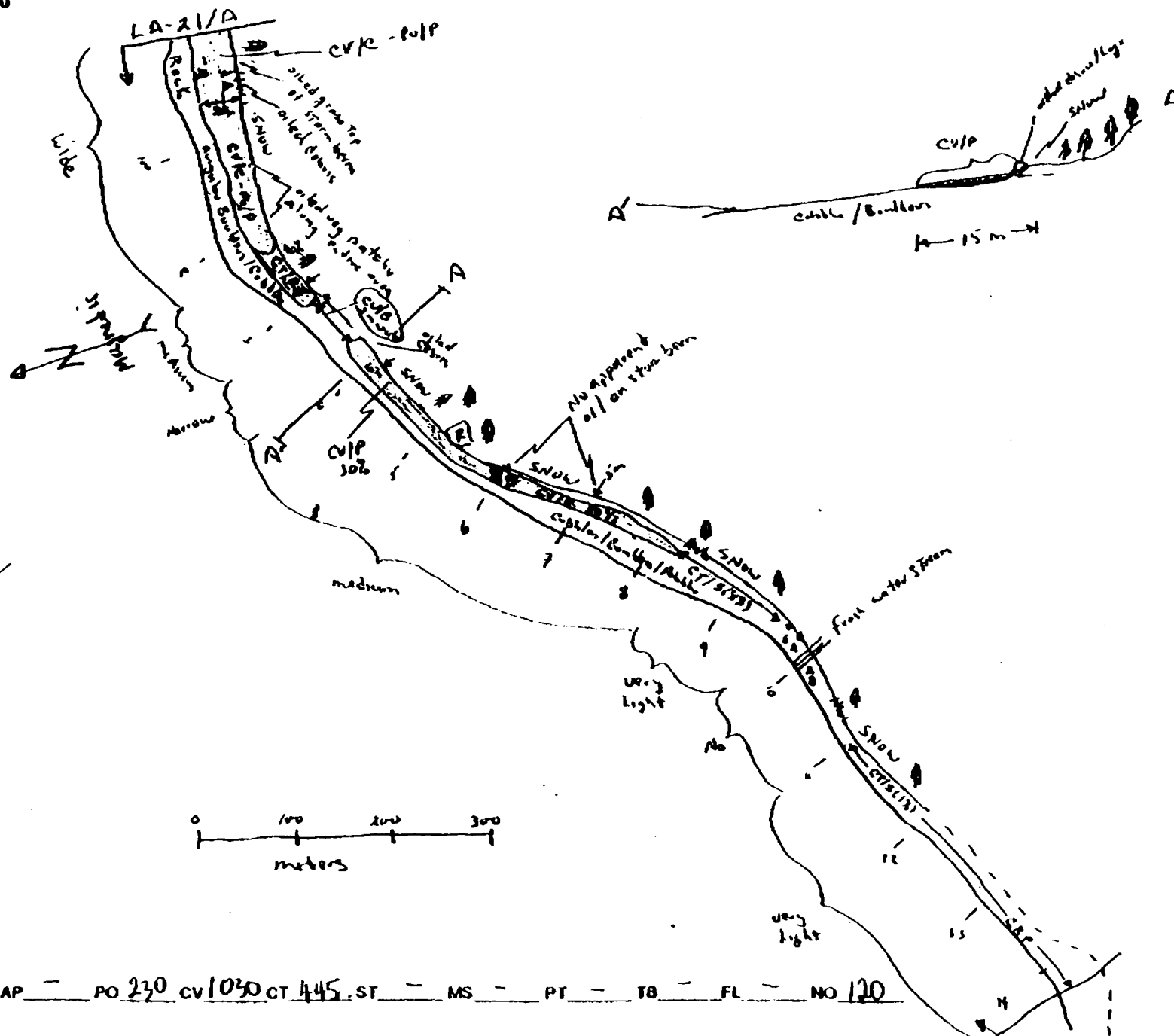
CT/P
Patchy Distribution

CT/S
Spliced Distribution

Oiled Vegetation

1 

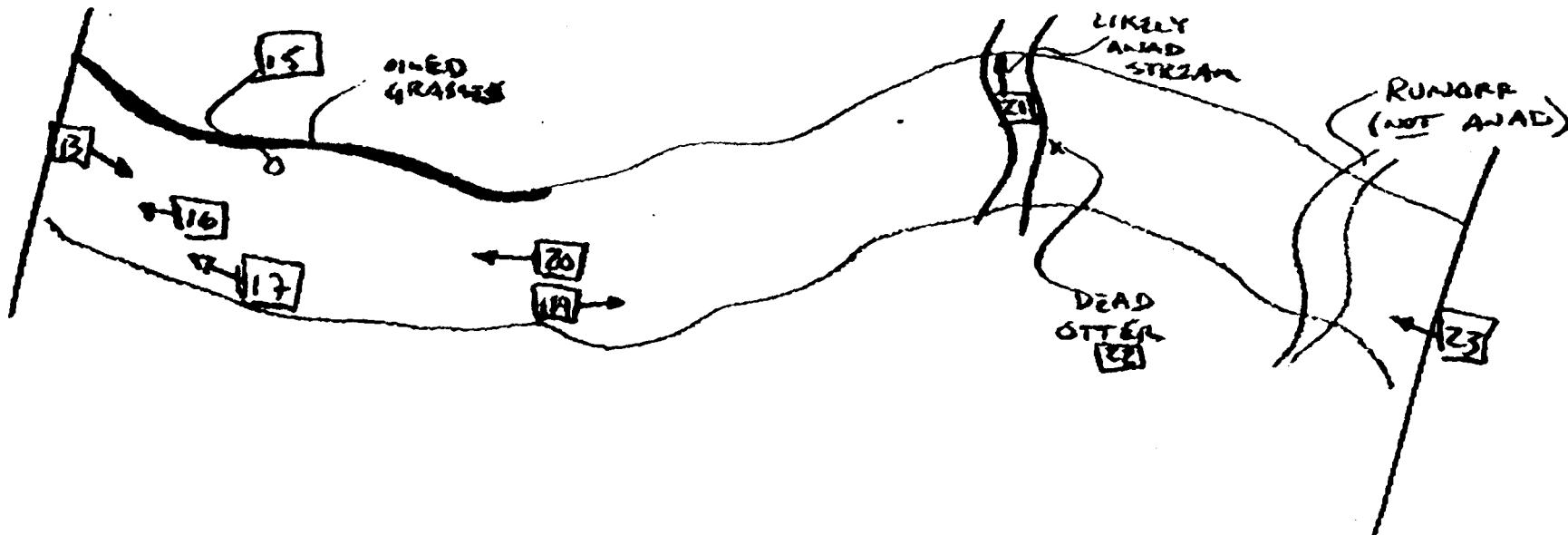
**Photo location, direction,
and number**

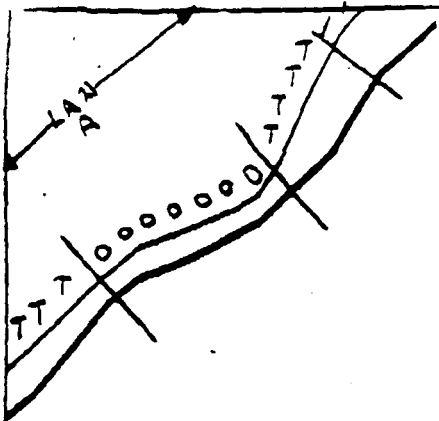


ACE 7379753

REVISION: 02/24/00

LAZI-A
PHOTO LOCATIONS





↑ PWS 427D

← PWS 427A

ACE 7379755

XXXX Wide

//// Medium

--- Narrow ADEC Segment Length: 3057m

TTTT Very Light

0000 No Oil

LA-21

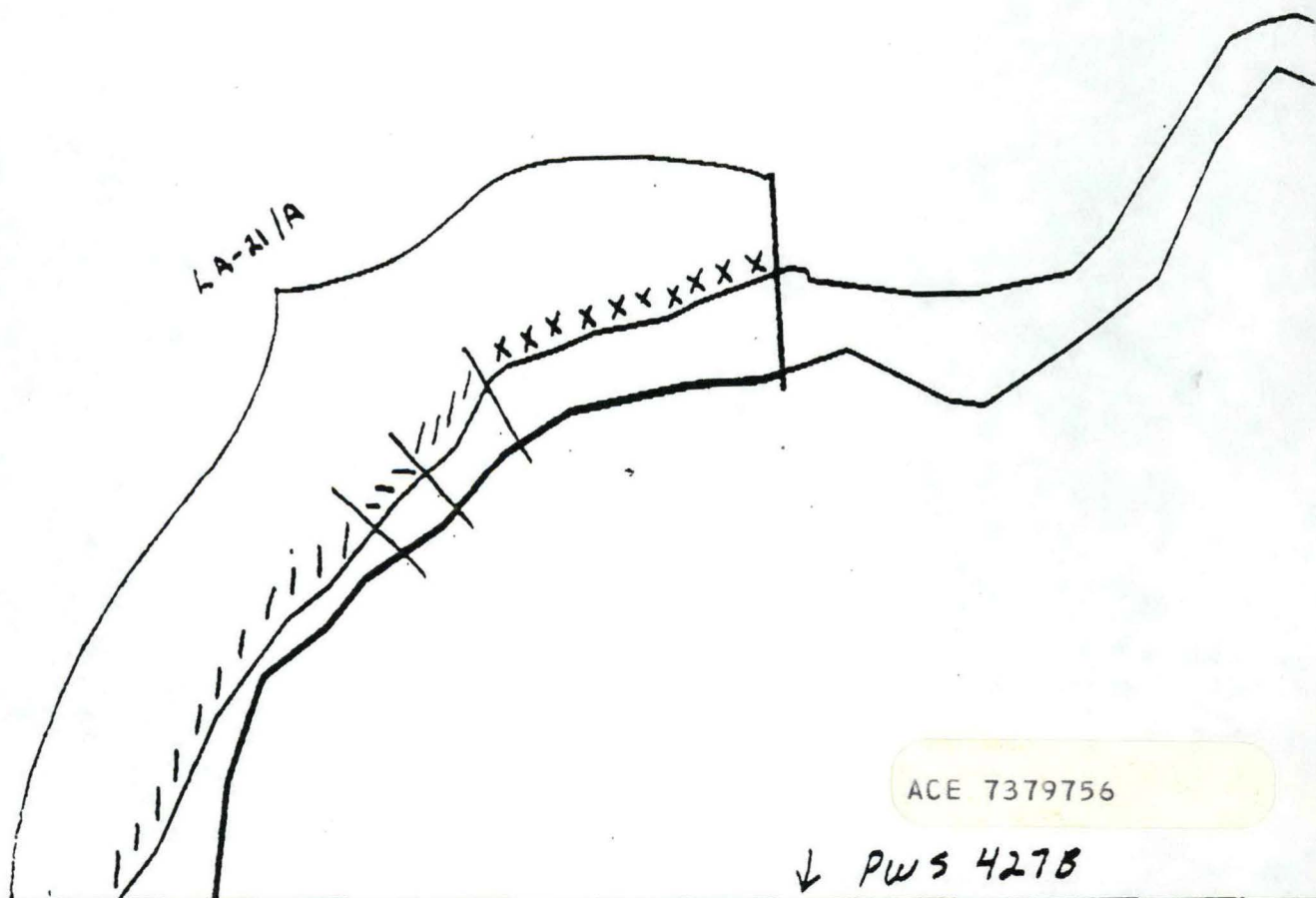


Map Key: PWS-427b

Name: Belmer

Date: 4/7/90

Date Entered:



ACE 7379756

↓ PWS 427B

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

LA-21

ADEC Segment Length: 3057m



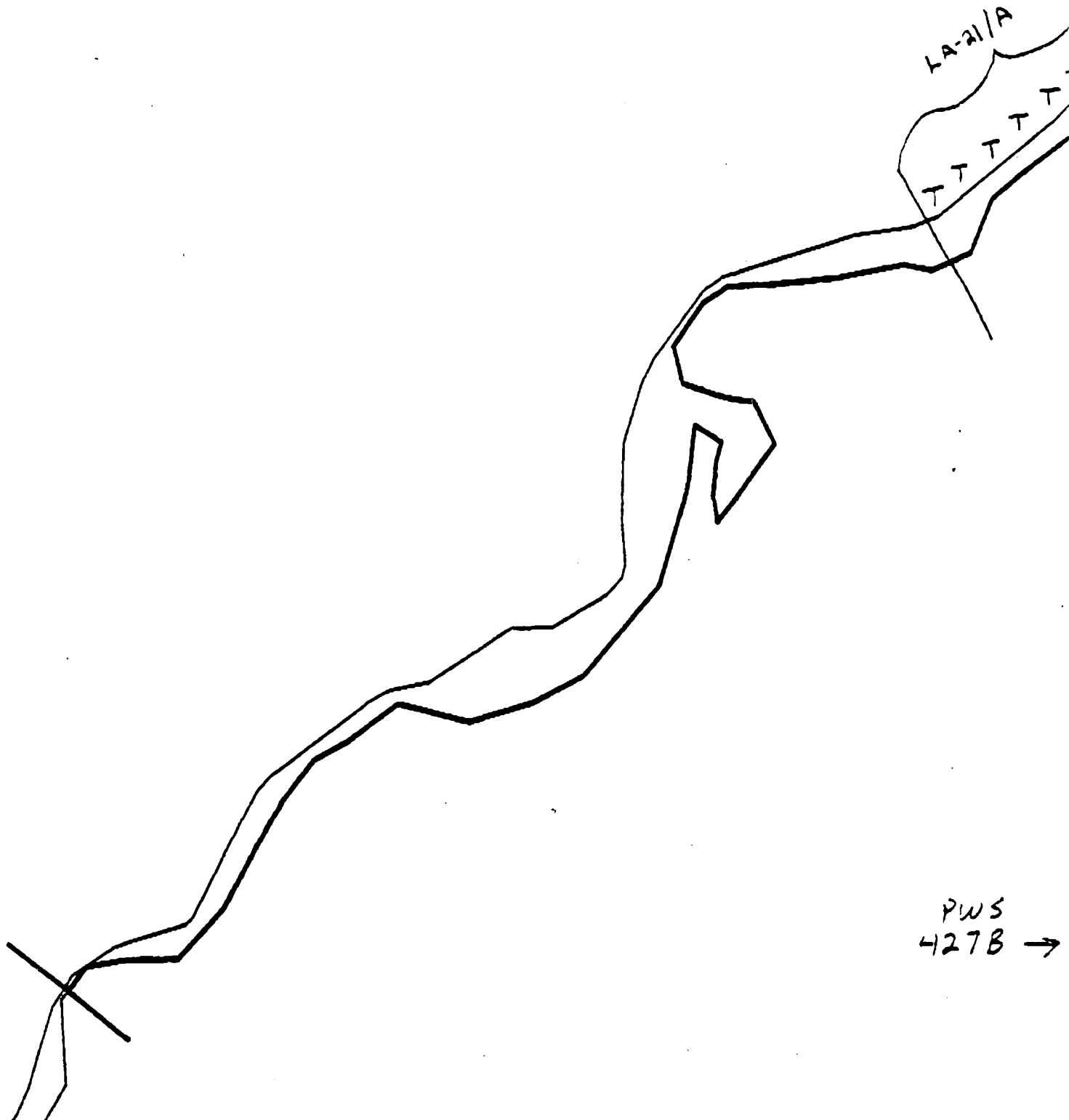
Map Key: PWS-427d

Name: Reimer

Date: 4/7/90

Data Entered:

LA-21



PWS
427B →

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

LA-21

ADEC Segment Length: 3057m



ACE 7379757

Map Key: PWS-427a

Name: Reimer

Date: 4/7/90

Date Entered:

ECOLOGY
MAP

1A, 1B

5T-3

711

LA-21

LA-21/A

Anadromous
Stream
226-40-16776

Eagle
Nest

Eagle
Nest

Stream

Anadromous
Stream
226-40-16774

PWS
427B →

ACE 7379758

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

LA-21

ADEC Segment Length: 3057m

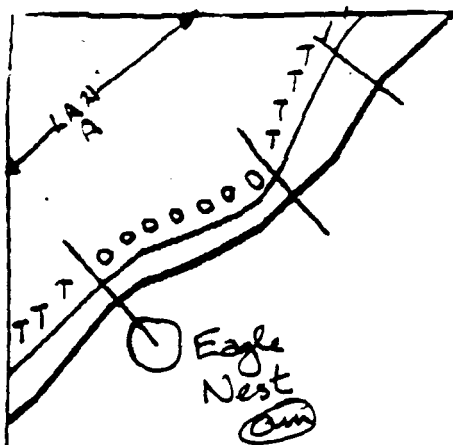


Map Key: PWS-427a

Name: Reimer

Date: 4/7/90

Data Entered:



↑ PWS 427D

Eagle
Nest
(Am)

← PWS
427A

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

LA-21

ADEC Segment Length: 3057m



ACE 7379759

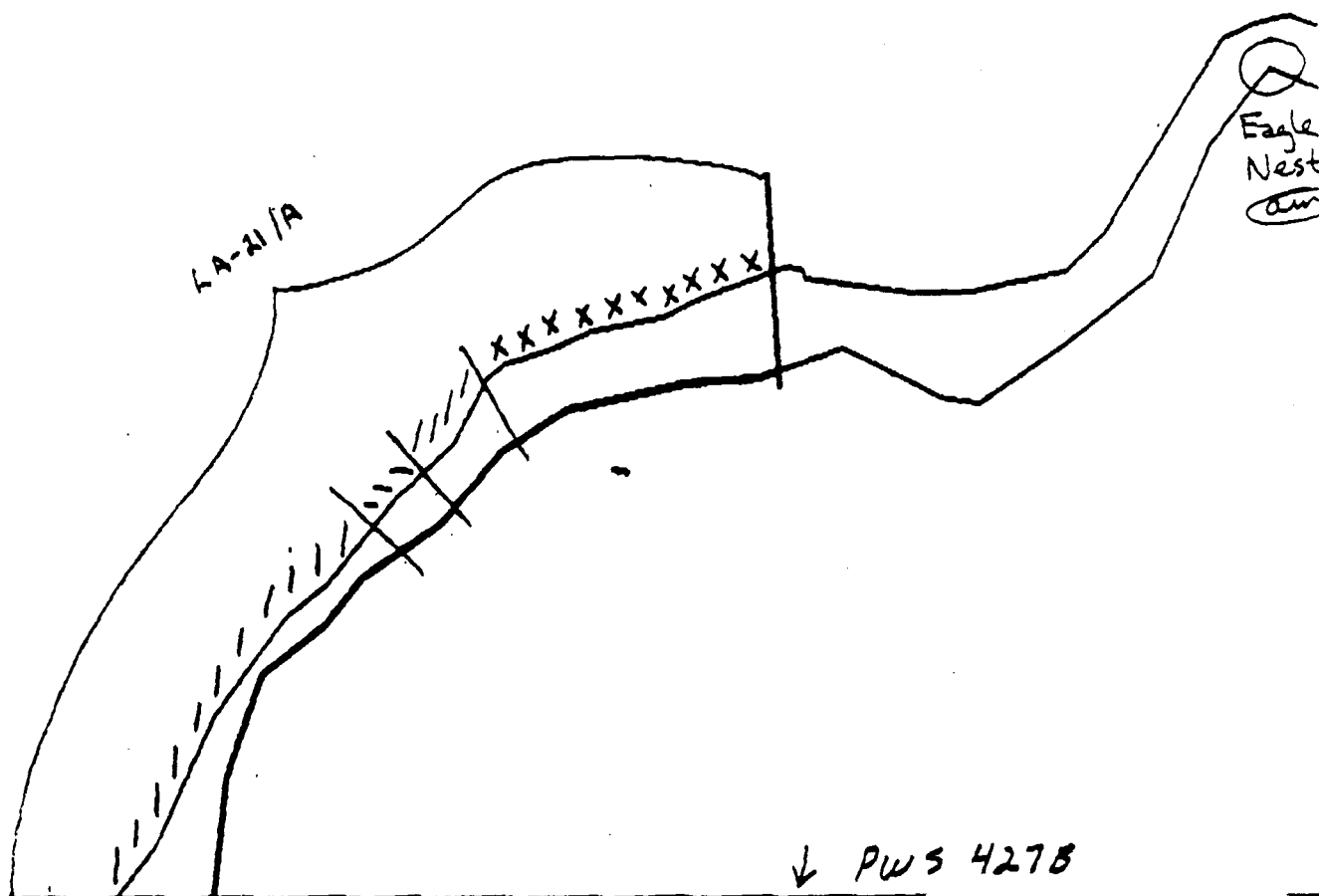
Map Key: PWS-427b

Name: Reimer

Date: 4/7/90

Date Entered:





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

LA-21

ADEC Segment Length: 3057m



↓ PWS 427B



ACE 7379760 -/S

Map Key: PWS-421a

Name: Reimer

Date: 4/7/90

Date Entered:

Process
4/21
RIT

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/LA-21

SUBDIVISIONS: B (2 OF 2)

*Concurs with
memorandum for
full review of
current situation
before for*

up all in area B -

SHORELINE EVALUATION

SEGMENT ST/ LA-21 SUBDIVISION B (2 OF 2) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous streams no. 226-40-16774, 16776.

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

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

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

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. Subdivision B - two anadromous streams present; 2 eagle nests and one more eagle nest within 400m of subdivision B.

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 142 m: Medium 636 m: Narrow 90 m: V.Light 70 m: No Oil 769 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 45+ 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, 2) bioremediation of areas shown on attached sketch map but not within 100m of anadromous fish stream. Work should be conducted between 6/1 and 7/10 after approval of USFWS regarding eagle nest.
Streams to be surveyed during ANAD SCAT.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

ACE 7379762

PWS, SEV RD AND HOMER ECOLOGICAL ONSTRAINTS

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

ACE 7379763

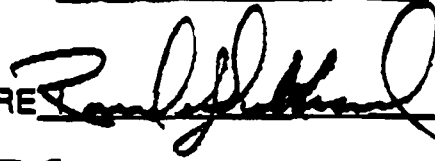
SEGMENT ST/ LA-21 SUBDIVISION: B DATE 4/07/90

USCG

NAME

R. Hubbard

SIGNATURE

☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

ADEC

NAME

J. LYNN MARTIN

SIGNATURE

☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

AGREE WITH EXXON OPS. RECOMMENDATION FOR SPOT
BIOREMEDIATION OF AREA "B" (SEE ATTACHED MAP) AND
MANUAL REMOVAL OF SMALL POOLED AREAS.

AREA "A" (SEE ATTACHED MAP) SHOULD BE REVIEWED
FURTHER BY ANAD SCAT DUE TO THE BROKEN OIL
COVER THAT ACCURED ON THE NORTH SIDE OF THE STREAM.

LAND MANAGER

NAME

Patrick Selanoff

SIGNATURE

☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

SHORELINE OILING SUMM. Y

REVISION NO. 08/23/90

OG Reimer USCG Hulward SEGMENT ST/ LA-21
 BIO Zamora LAND REP Salanoff (CVR) SUBDIVISION B (2 of 2)
 EXXON Garcia ADEC Martin TIME 16:47 to 18:11
 TEAM NO.: 16 TIDE LEVEL: +1 to +1.5 DATE 4/7/90
 EST. SUBDIVISION LENGTH: 1273 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock snow
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: North to South
 SURFACE SEDIMENTS: R 2 % B 20 % C 50 % P 28 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 98 % Hang 2 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 100 m M 450 m N 100 m VL 120 m NO 503 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	R	P	B	SP	BP	OP	BP	TP	LP	UP	LP	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER		✓	X			X	✓						X	X	✓	
COAT			X	✓		X	✓						X	✓	X	
STAIN			X			X							X	X		
MOUSSE																
PATTIES																
TARBALLS																
FILM		X						X					X	X		
NO OIL																X

PAVEMENT: H F S 0 sq. m by 0 cmPATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. 16-4Frames 24-36

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	SP	BP	OP	BP	TP	LP	UP	LP	SU	U	M	U		
1	30					X	-											X					G P C
2	30					X	-											X					C P G
3	20				X		5-20	X					X						X				G P
4	45				X		5-45	X					X					X					G P
5	35	X					5-35	X					X						X				G P C
6	20					X	-											X					G P C

COMMENTS Long rubble, pebble scattered boulder beach. The north end of the subsegment has medium oiling 20% patchy coating on cobbles and boulders for 200 m. The following 100 m has patchy cover on rock and boulder around headland. The next 200 meters is clean. The area around the stream 5-600 meters has wide oiling in the form of patchy stain on the north side of the stream, however shows subsurface oiling in pits 10 meters above access to beach. The south side of the stream has a 12 m x 45 m patch of broken glass (60%) a section of film in granite sediments extends for 46 m + 140 m, followed by a patchy cover (15%) 5 m band. The last 300 meters of subsegment is clean.

SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 03/22/90

SEGMENT ST/ LA-21 SUBDIVISION B

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	BR	DR	FR	GR	OR	TR	LR		SU	U	M	U		
7	30					X	-											X					PG
							-																
							-																
							-																
							-																
							-																
							-																
							-																
							-																
							-																
							-																
							-																
							-																
							-																
							-																

COMMENTS

ACE 7379766

REVIEWED ZW DATE 4/17/90

PRELIMINARY ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST / LA 21 Subdivision B Date (mo / day / yr) 4 / 7 / 90
 Time (24 hr) 1645 on 1825 off Biologist TONY ZAMORA

- (A) Substrate type and % of segments:
 (1) Bedrock 2 (2) Boulder 20 (3) Cobble 50 (4) Pebble 28 (5) Sand — (6) Silt —
- (B) Overall % cover of biota (% of segment): Dense 5 Moderate 40 Low 25
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs: ST-16-4

Frames 24-36

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:

- OBSERVED: 1 OTTER, 2 GULLS, FOUND DEAD OTTER.
- LARGE AMPHIPODS IN MI.
- EGGS: GUNNEL, NUCLEA, UNID FISH (ON CBL IN MI)
- Ecological Considerations: 7II, 1A/B, 7SS

- GUNNELS UNDER COBBLE IN LI.
- LI: ACARIA, PALMARIA, ULVA, POLYSIPHONIA, NUCLEA CAN.

DATE 4 / 7 90

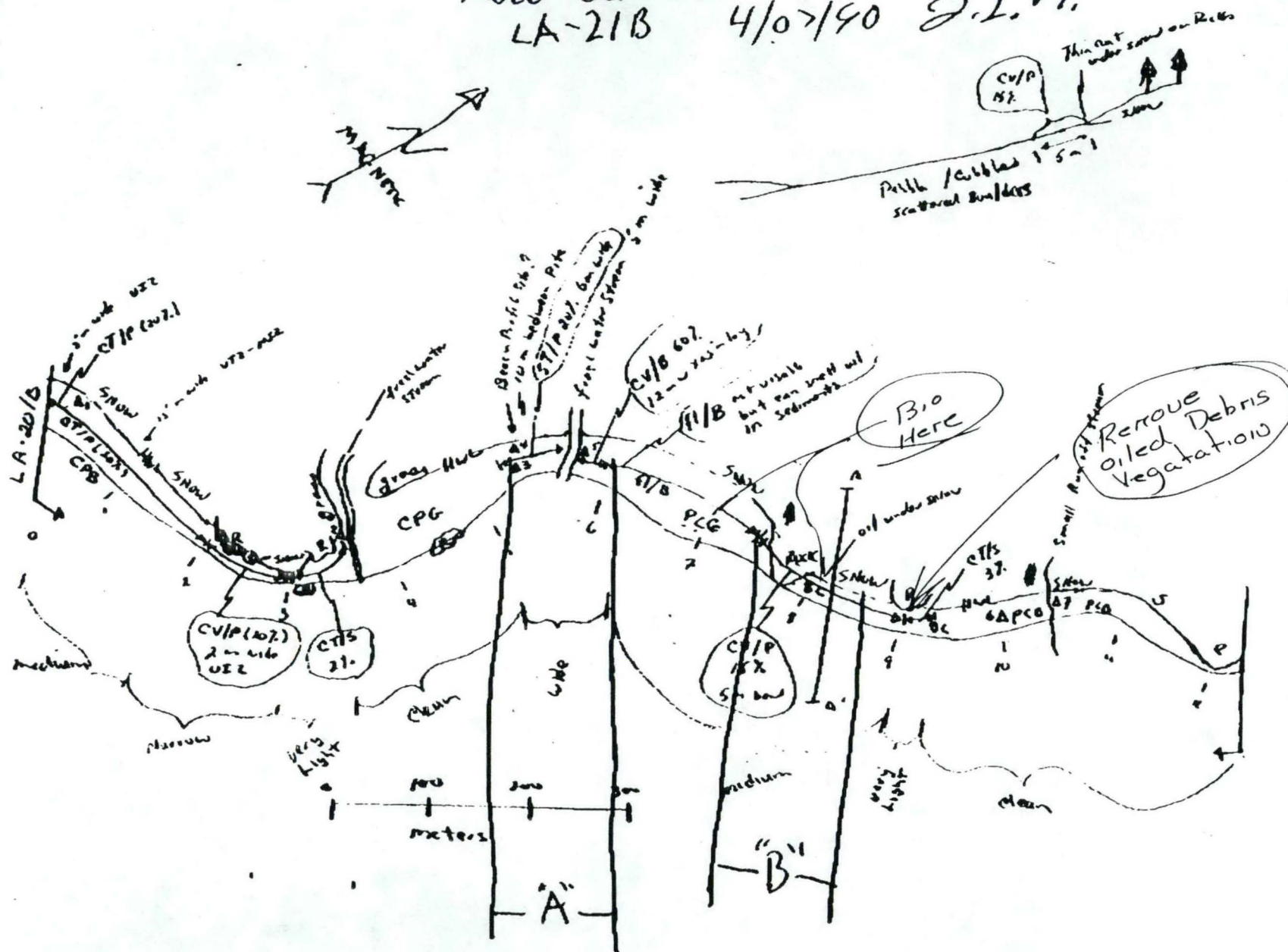
CHECKLIST

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

LEGEND

- 1 ▲
Plt - No Subsurface Oil
- 2 ▲
Plt - Subsurface Oil
- CT/C
Continuous Distribution
- CT/O
Broken Distribution
- [CT/P]
Patchy Distribution
- [CT/S]
Splashed Distribution
- Old Vegetation
- 1 ➡
Photo location, direction
and number

~~SECRET MAP~~
ADEC COMMENT MAPS
LA-21B 4/07/90 J.2.m.

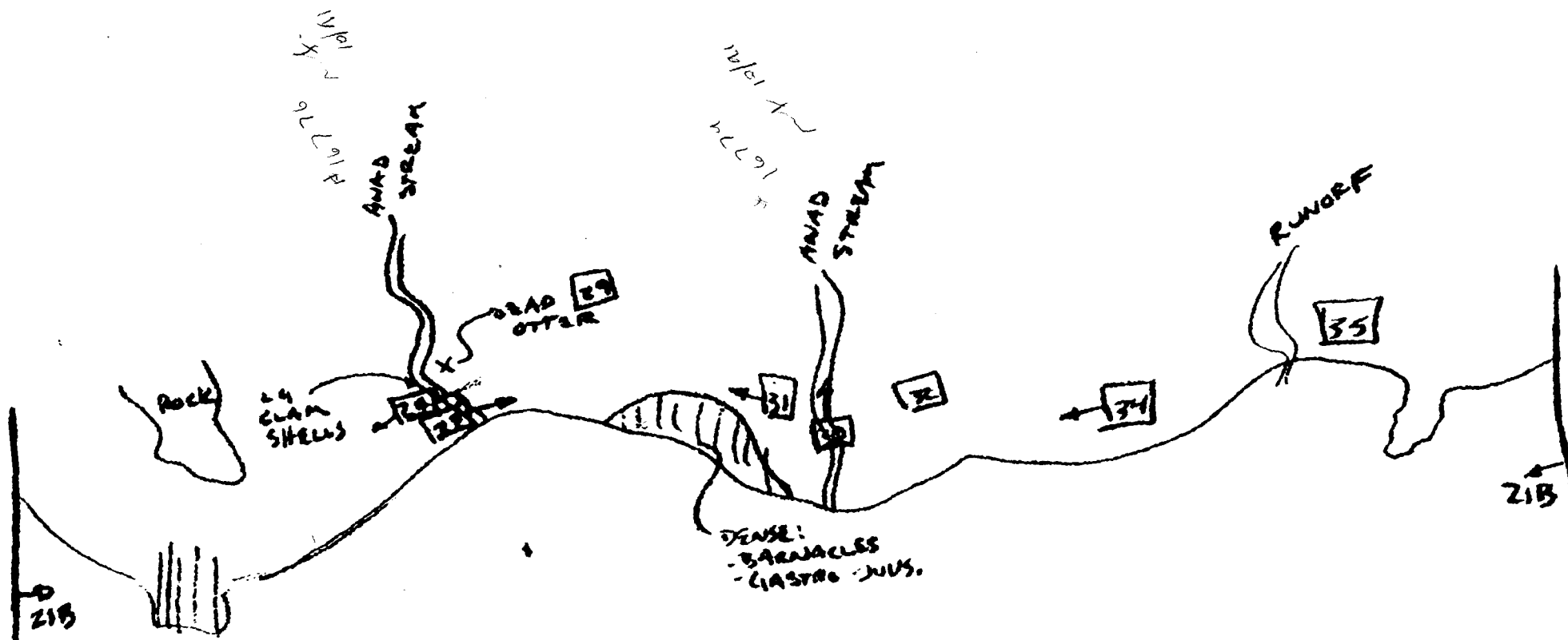


ACE 7379769

Oil Character Length (m): AP — PO — CV 365 CT 200 ST 65 MS — PT — TB — FL 140 NO 503

REVISION 2/2000

LAZIB



OG Reimer

SEGMENT ST/ LA-21

SUBDIVISION B

DATE 4 / 7 90

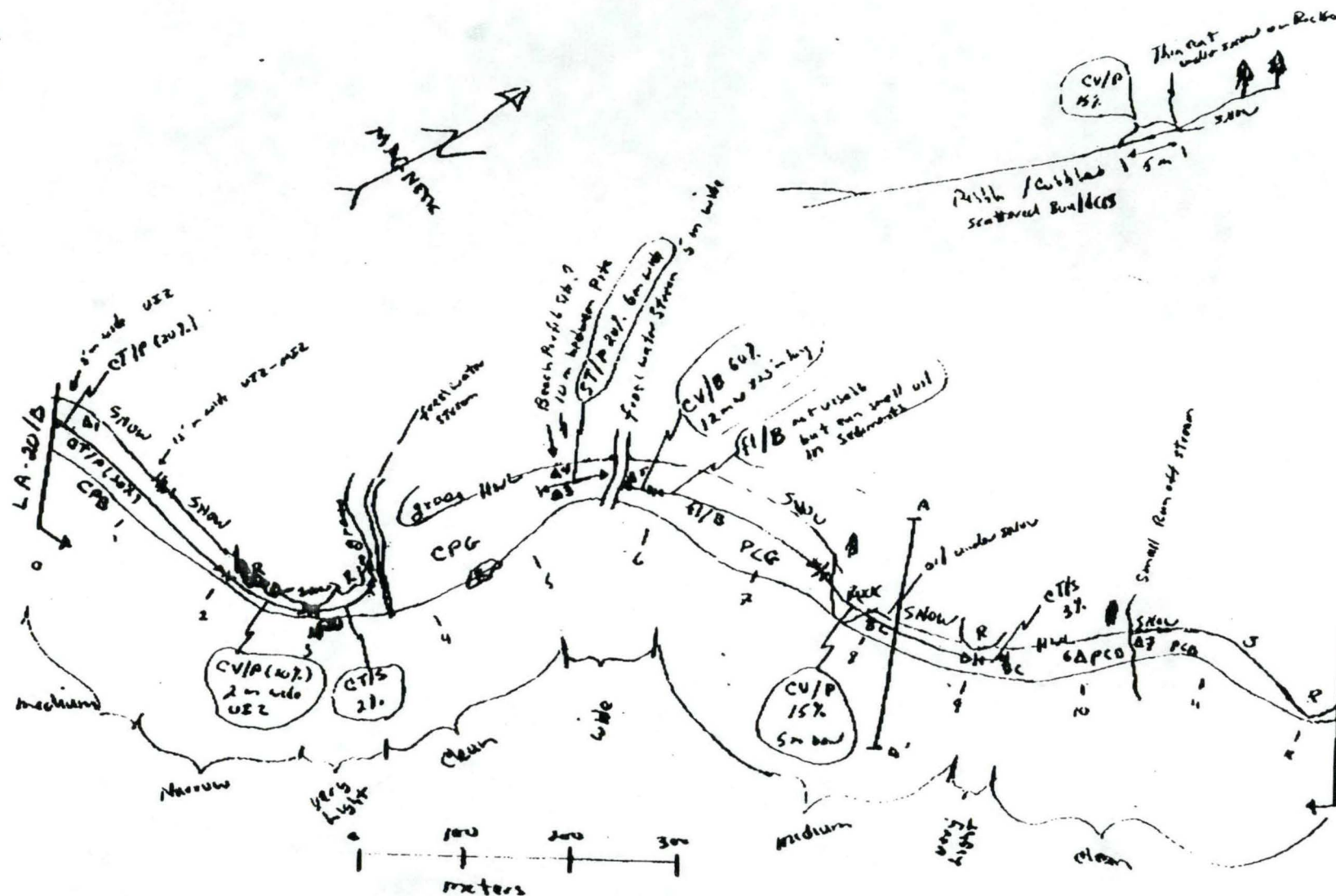
CHECKLIST

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

LEGEND

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

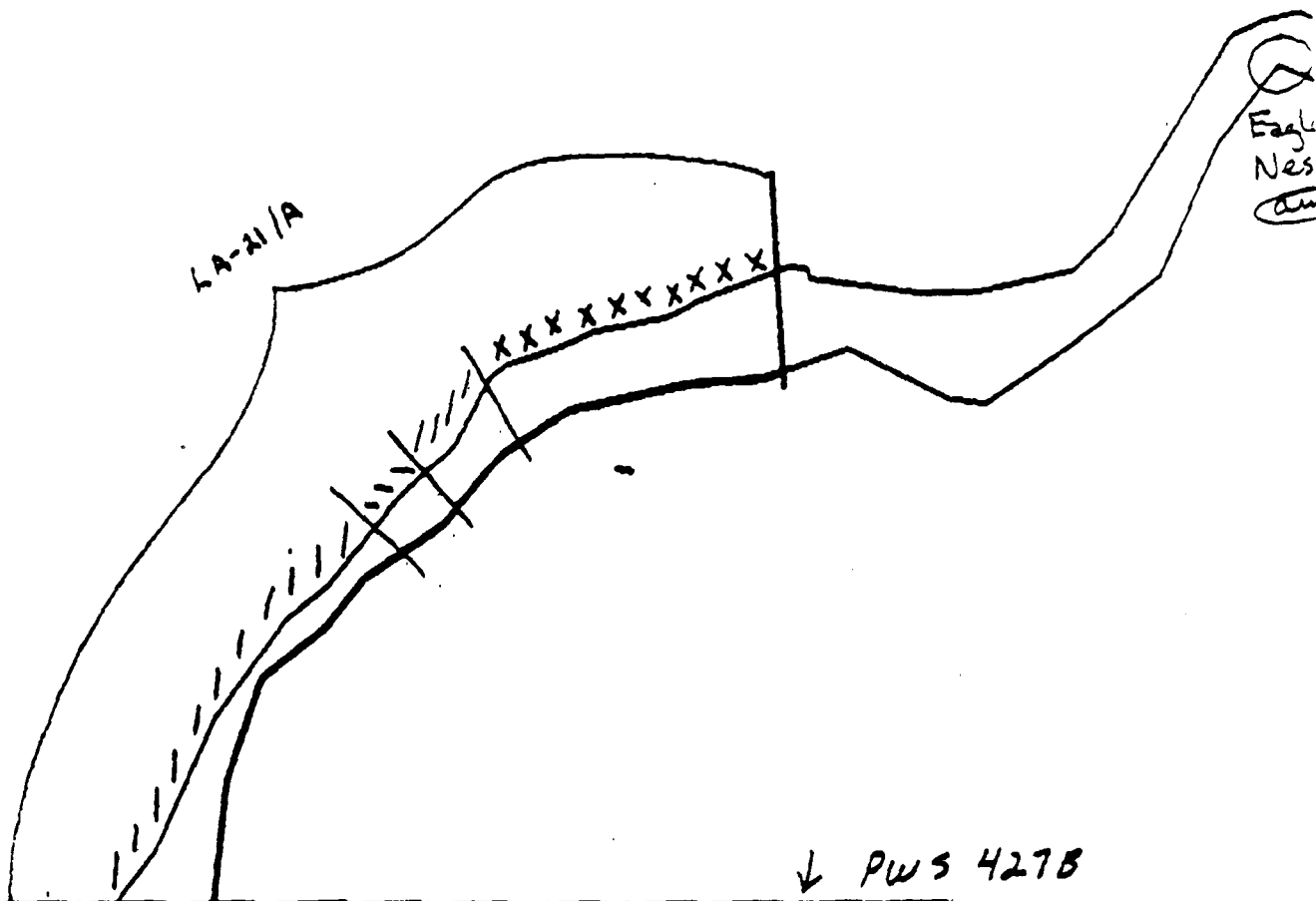
SKETCH MAP



ACE 7379770

Oil Character Length (m): AP — PO — CV 365 CT 200 ST 65 MS — PT — TB — FL 140 NO 503

REVISION 03/24/90



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

LA-21

ADEC Segment Length: 3057m



↓ PWS 427B



ACE 7379773

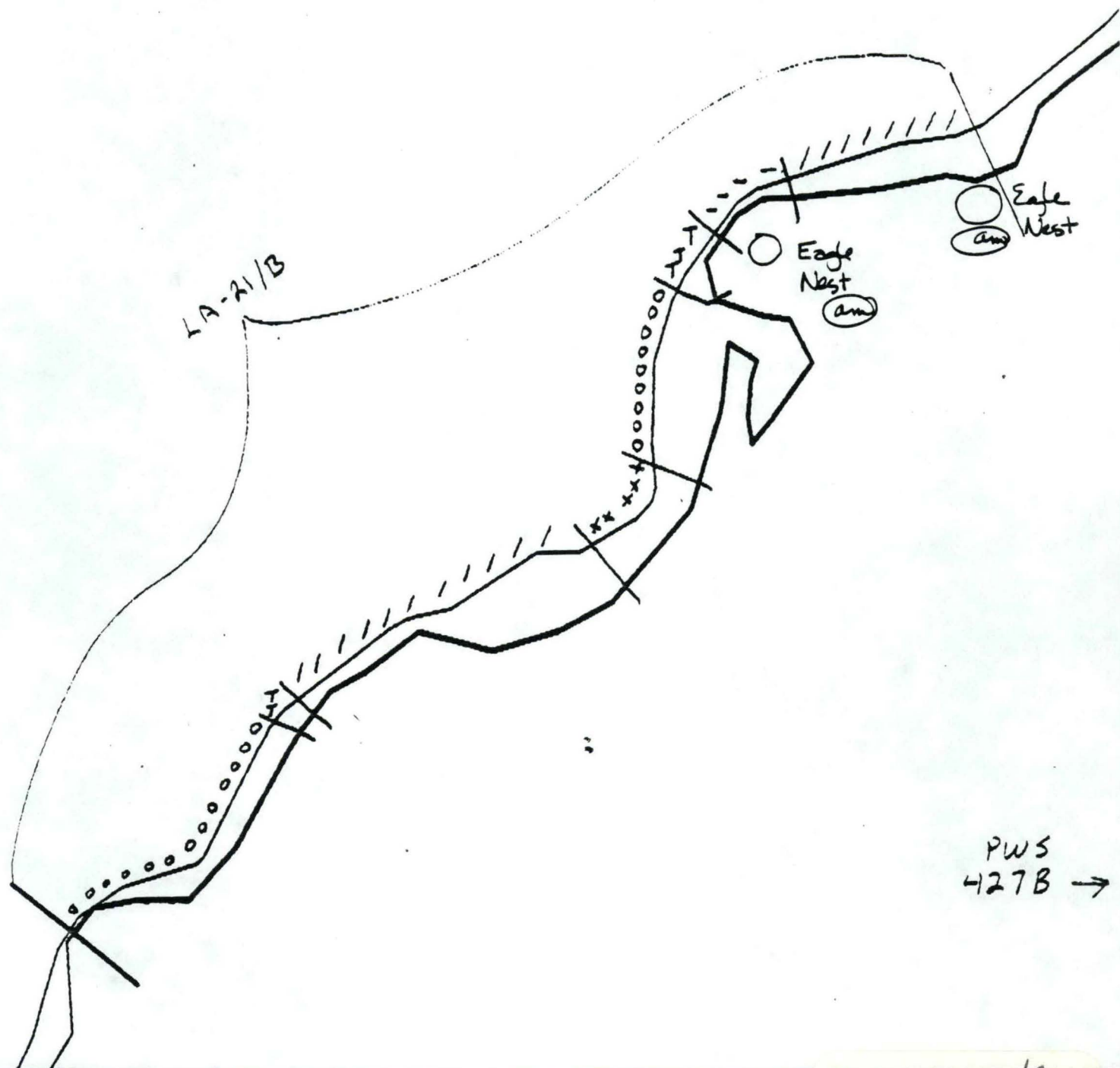
Map Key: PWS-427d

Name: Reimer

Date: 4/7/90

Data Entered:

LA-21



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

LA-21

ADEC Segment Length: 3057m



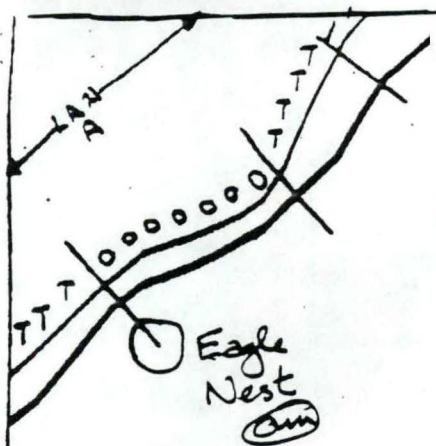
ACE 7379774 -/S

Map Key: PWS-427a

Name: Reimer

Date: 4/7/90

Date Entered:



↑ PWS 427D

← PWS 427A

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

LA-21

ADEC Segment Length: 3057m



ACE 7379772

Map Key: PWS-427b

Name: Reimer

Date: 4/7/90

Date of ...

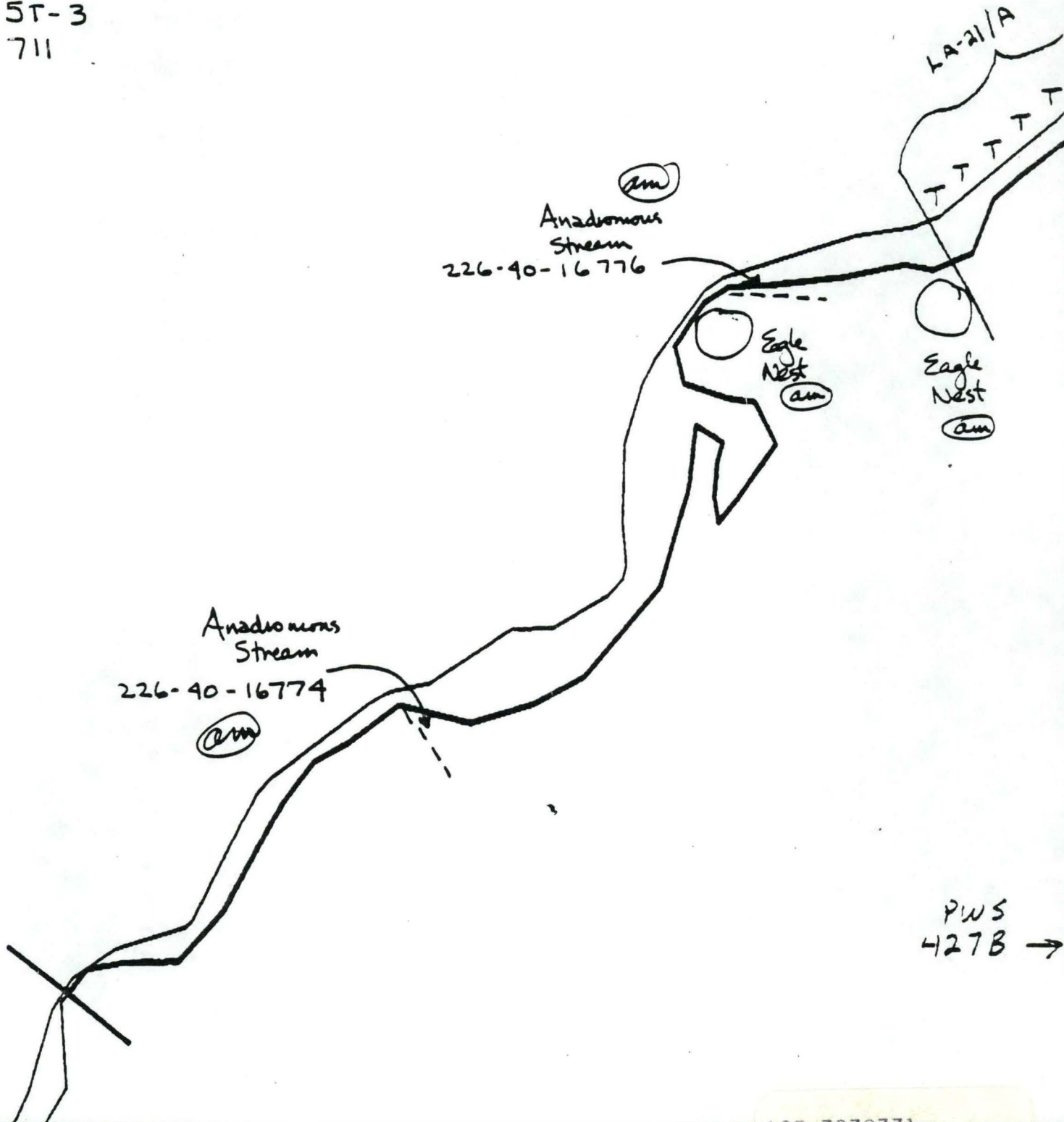
ECOLOGY
MAP

1A, 1B

5T-3

711

LA-21



PWS
427B →

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

LA-21

ADEC Segment Length: 3057m



ACE 7379771

Map Key: PWS-427a

Name: Reimer

Date: 4/7/90

Data Entered:

11-0-30 16714
22-0-30 5720

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

ARCHAEOLOGICAL CONSTRAINTS:

SHPO Signature:

T. Timothy O'Smith

Date:

5/30/91

FOSC

N

N



INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE MAY 29 1991

FOSC APPROVAL DATE: 6/11/9

ADEC

FOSC

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

EXXON

USCG

NOAA



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

PRINCE WILLIAM SOUND

maysaf-y

2264016774

16776

SEGMENT: LA021

SUBDIVISION: B

SITE: -0-

anadromous fish stream, subsistence use area

RECOMMENDED TREATMENT:

~~In area E:~~

~~Till MOR sediments to the depth of the oil.~~

SLC No treatment recommended at this time.

ENVIRONMENTAL SENSITIVITIES:

Eagle nest must be cleared before work begins.
Anadromous fish stream.

WORK WINDOW: 05/21/91 - 07/10/91

CLEANUP PLAN AND COST ESTIMATE DUE: -0-

DATE SUBMITTED: 05/29/91

STATE ON SCENE COORDINATOR:

[Signature] for E. Piper

H:\SHORELIN\WORKORD:WORKORD:PWSORD

1991 MAYSAP EVALUATION

SEGMENT: LA 021 SUB: B REGION: PWS SURVEY DATE: 5/3/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest, Anadromous stream, Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: Manual Hitting 5/20/91

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.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 6 SEGMENT LA-021 SUBDIVISION B DATE 5/3/91

226-40-16774

ADEC/AOF19

NAME TOM CROWE

SIGNATURE Tom Crowe

ANADROMOUS STREAMS / SUBSISTANCE USE AREA

☐ NTR ☒ TREATMENT RECOMMENDED

VERY LITTLE OILING WAS OBSERVED AT THE ^(BOTH) STREAM AREAS. VERY LITTLE OR WAS DISCOVERED IN A PIT ON THE LEFT SIDE FACING DOWNSTREAM 4 METERS FROM THE STREAM 226-40-16774 NOT LOGGED ON OG MAP. ON THE RIGHT SIDE OF THIS STREAM A 3X15 METER BAND OF BURIED OIL WAS DISCOVERED (PIT #7). VARIOUS OTHER SMALL PATCHES OF SOIL AND MUD WERE DISCOVERED ALONG THIS SUBSEGMENT. THESE AREAS SHOULD ALL BE MANUALLY TILLED WITH SOIL SEDIMENTS REMOVED.

EXXON

NAME Scott A. Nauman

SIGNATURE Scott A. Nauman

☒ NTR

This is a subdivision where its very difficult to see any evidence of oil having ever been there. Surface oiling is almost non-existent. Subsurface oil is very patchy and represents no threat to the streams. The intertidal community is healthy and we observed a eagle, a pair of seals and hundreds of birds. I see absolutely no rational basis for treatment.

LANDMANAGER

NAME _____ OF _____

SIGNATURE _____

☐ NTR

(no entry on form)

USCG/NOAA

NAME CWO Spurr / Rebecca Hoff

SIGNATURE RT Spurr / Rebecca Hoff

☒ NTR

This segment was largely free of oil, especially areas near the two streams. One area with subsurface oil (Area A) was found, + this should be left to weather naturally, since it presents no obvious source of contamination to biological resources



5/03/91 NO.853 LA021B





LA 21
Segment No LA 21 Subdivision B
Date 5/3/91 Log Frame No 13
Photographer Rebecca Hoff
Location _____
Comments View of pit # 2 in upper
intertidal below storm berm showing
subsurface oil
226-40-1677 4
Roll No MAYSAP- 6-06 Neg. No 12
Control No 853 (Office Use Only)



Segment No LA02.1 Subdivision B
Date 5/3/91 Log Frame No 12
Photographer Rebecca Hoff
Location _____
Comments View of eastern shoreline
beyond 1st arad. stream looking at
bottom and upper intertidal
between south of
226-40-16776 74
Roll No MAYSAP- 606 Neg. No 11
Control No 853 (Office Use Only)



Segment No LA21 Subdivision B
Date 5/3/91 Log Frame No 16
Photographer Rebecca Hoff
Location _____
Comments Overview of segment
from west side of second stream
226-40-677#46
Roll No MAYSAP- 606 Neg. No 15
Control No 853 (Office Use Only)



LA 21
Segment No EV 21 Subdivision B
Date 5/3/91 Log Frame No 15
Photographer Rebecca Hoff
Location _____
Comments View upstream of 2nd
and stream
226-40-1677 4
Roll No MAYSAP- 606 Neg. No 14
Control No 853 (Office Use Only)

ADF&G MULTI-ASSESSMENT DATA FORM

- 1) SURVEY TYPE: BS (SS) 2) REGION: (PWS) KP, CI K, AP
- 3) METHOD: Aerial (Ground) Boat
- 4) DATE: 5/3/91 16) HIGH TIDE TIME: _____ 22) TEAM RECORDER: Aimee Weseman
- 5) START TIME: 1245 17) HIGH TIDE HTS: _____ 23) OBSERVERS: Tom Crowe
- 6) STOP TIME: 1345 18) LOW TIDE TIMES: 1100 24) AGENCY: ADF&G
- 7) SEGMENT #: LA21B 19) LOW TIDE HTS: 1.5 25) PHOTOS TAKEN: Y (N)
- 8) K-UNIT: _____ 20) TIDE HT AT SURVEY: 1.8 to 3.8 ROLL #: _____ FRAMES: _____
- 9) LAT: _____ Ebb Slack (Flood) Slack 26) VIDEO TAKEN: Y (N)
- 10) LONG: _____ 21) USCG QUAD: _____ TAPE #: _____
- 11) ASC #: 226-40-16774 START: _____ STOP: _____
- 12) STREAM NAME: _____ 27) SAMPLES TAKEN? Y (N)
- 13) LOCATION: NW LaTouche I SAMPLE I.D. _____
- 14) WAVE EXPOSURE: High (Moderate) Low _____
- 15) SHORELINE TYPE: Headland Low-lying Rocks (Beach) _____
- Cove Lagoon Marsh

28) EXTENT OF OIL

	LENGTH m	WIDTH m	M2	%	THICK cm	PEN cm	OIL TYPE
SITE 1	15	3				0-6cm	MOR
SITE 2	50	10				20-23cm	LOR
SITE 3	20	5				16-30cm	MOR
SITE 4							
SITE 5							

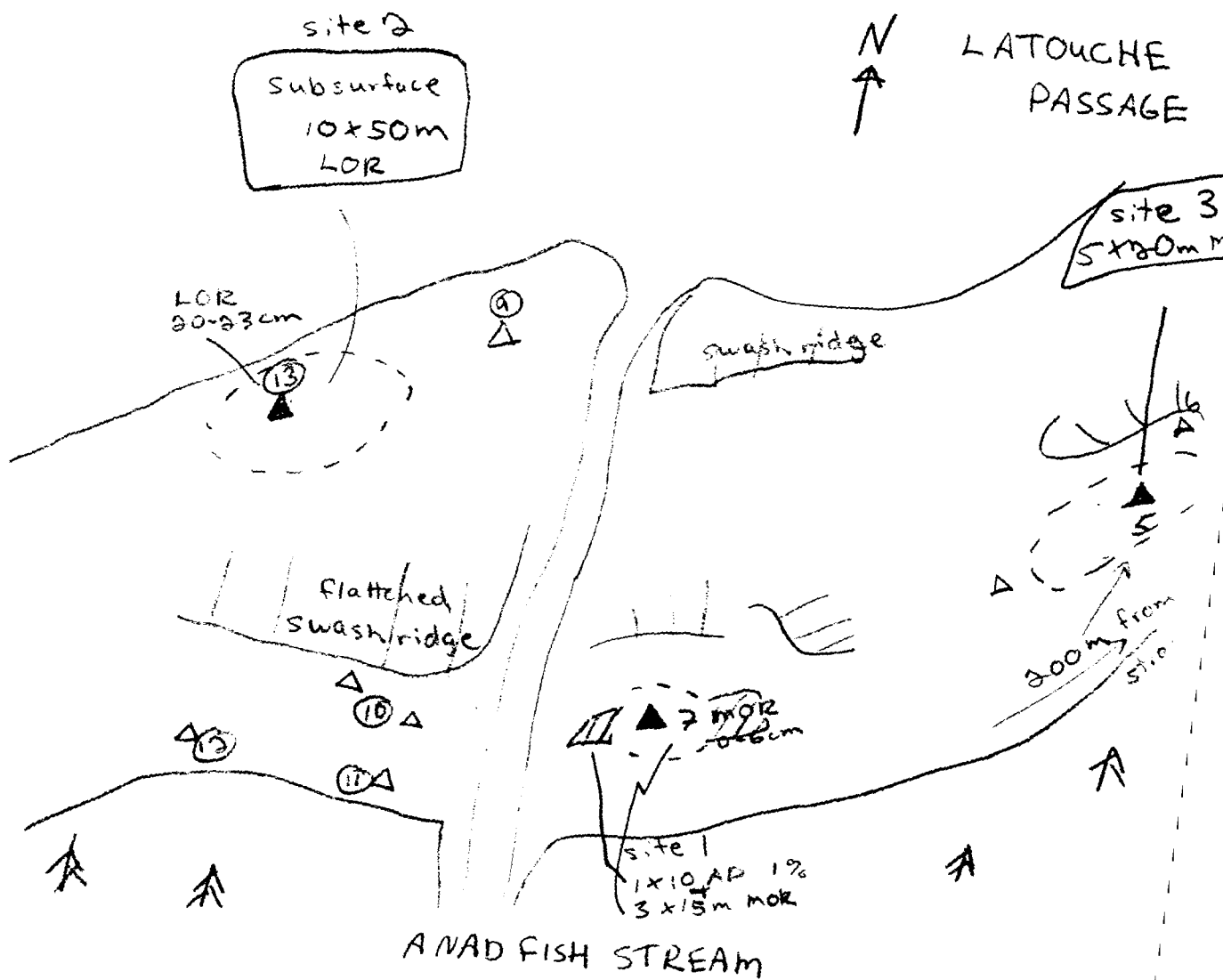
- 29) OVERALL OIL IMPACT: 33) ANADROMOUS FISH PRESENT: Y N
- H = >6m band with $\geq 50\%$ oil coverage
- M = >6m band with $\leq 50\%$ oil coverage or $\geq 3m$ to $\leq 6m$ with $\geq 10\%$ oil coverage
- (L) = <3m band with $> 10\%$ oil coverage
- VL = $\leq 10\%$ oil coverage regardless of band width
- N = No oil observed
- 34) WILDLIFE OBSERVATION
- 30) OIL IN STREAMBED: Y (N)
- 31) OIL ON BEACH ADJACENT TO MOUTH: (Y) N
- 32) SUBSTRATE TYPE (PERCENT):

Species	Number
Bald Eagle	1
merganser	4
sandpiper	12
karen	2

Bedrock _____ Boulder _____ Gravel _____ Sand _____ Cobble _____ Mud/Silt _____

35) COMMENTS: This stream area contains 2 areas of subsurface oil in sites 1 & 2. Site 3 is located 200m from the stream. Ideally these 3 areas should be manually filled with any HSOR sediments removed. Stream not in imminent danger of contamination.

LAB 21B
ASC# 226-40-1677
5/3/91 MAXSAP
A. Weseman



PAGE 1 OF 2

Subsurface oil was limited to three patches (see map). The northernmost patch was to 35 cm (M-HOR) in LITZ, whereas the other two were in MITZ/LITZ with M-HOR to < 30 cm depths.

PAGE 2 OF 2

SEGMENT LA-021-B

SUBDIVISION C

DATE 05 / 03 / 91

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

LOG COMMENTS:

LA-021-A

LA-021-B

05/03/91

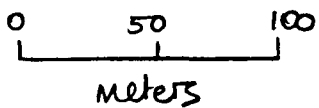
OG. Map

D. Little

1200 - 1340

XX Bedrock

↑ ↑ Trees



LATOUCHE
PASSAGE

SUBSURFACE OIL
10 X 50 m
HOR/MOR

B 1 x 10
HOR 1%
AP 1%

A 3 x 70 m
5% ST
OCC. AP/SOR
4%

Large
Fallen Tree

ANAD.
STREAM

Alders

SUBSURFACE OIL
10 X 50 m
LOR

Swash
ridges

'normal'
ridge much
flattened

Bedrock

5 x 20 m MOR
OR SUBSURFACE

SUBSURFACE
OIL 3 X 15 m
MOR

LATOUCHE
ISLAND

LA-22

Bedrock

ANAD. STREAM

D1+D2 1 x 2 m
each
4% AP

PIT# TD OIL clean below sheer seds w/T zone

PIT#	TD	OIL	clean below	sheer	seds	w/T	zone
1	40	MOR 4 25-35	4	R	pgs-sg	-	UITZ
2	35	4 HOR 0-35	N	B/R	cp-gps	20	UITZ
3	35	N	4	N	pg-gs	30	MITZ
4	25	N	4	N	pg-gps	-	UITZ
5	30	MOR 10-30	N	B/R	cp-gps	30	MITZ
6	25	N	4	N	cp-gs	20	MITZ
7	20	4 OR(M) 0-6	4	R	cgr-spg	-	MITZ
8	30	N	4	N	p-gp	-	LITZ
9	25	N	4	N	p-gsp	-	LITZ
10	35	N	4	N	p-gsp	-	MITZ
11	30	N	4	N	p-gs	-	UITZ

PIT#	TD	OIL	clean below	sheer	seds	w/T	zone
12	30	4 LOR 20-23	4	R	pc-gs	-	LITZ
13	30	N	4	N	sg-gsc	-	UITZ
14	25	N	4	N	psg-gsc	-	MITZ
15	10	N	4	N	cbp-pg	-	LITZ

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6

DATE 5/3/91

SEGMENT # LA-021

TIDAL HEIGHT (Range) +1 1/2 to +3 1/2 feet

SUBDIVISION B

BIOLOGIST T. R. Schroeder

SEA STATE 2-3 ft.

WIND SPEED/DIRECTION NE. 20 mph

PHOTOGRAPHS: ROLL #

FRAME #

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

(A, B & C) = Biological community very limited throughout entire beach segment. Upper to mid intertidal zone very low in productivity. Thin line of fucus belt was present in LITZ on a rising tide north of the first stream (A). Mussels, littorine snails, sand fleas and barnacles were present but not abundant.

(D, E, & F) = Large seaweed berms or ridges along stream (B) at mouth. Area had very little vegetation.

Again, this beach segment appeared to be generally low in productivity in the intertidal area. A fair growth of fucus belt with barnacles, littorine snails, hermits and hermit crabs was located in a reef outcropping between the two streams. The tide was rising and prevented an adequate observation of the LITZ above the +1 foot tide level. Any cleanup considered for this area should minimize the impact to this reef area and the LITZ north of stream (A).

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1 (Bald)	1	
Seabirds			
Waterfowl	1 (Merganser)	4	
Gulls/kittiwakes	2 (Flaukous Kittiwake)	300+	
Shorebirds	1 (Sanderling)	12	
Corvids	1 (Raven)	2	
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)	2 Sea Lions		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

LA-021-B 5/3/91
 Bio. Map T.A. Schroeder
 1200-1340



0 50 100
 Meters

Even lot, many yet,
 letting in... in this
 area of 2172 some
 feet present.

(B) 1 x 10m
 SOA/AP
 190

(A) 5 x 10m
 5% ST
 100 AP/SOA

anadromous
 stream
 (A)

(C) Trace 1x1
 190

muscle cells, barnacles
 and fungus present. Several
 other littorine snails
 and rock blenny present

Sparse vegetation. Some
 fungus, mussels, barnacles
 and littorine snails.

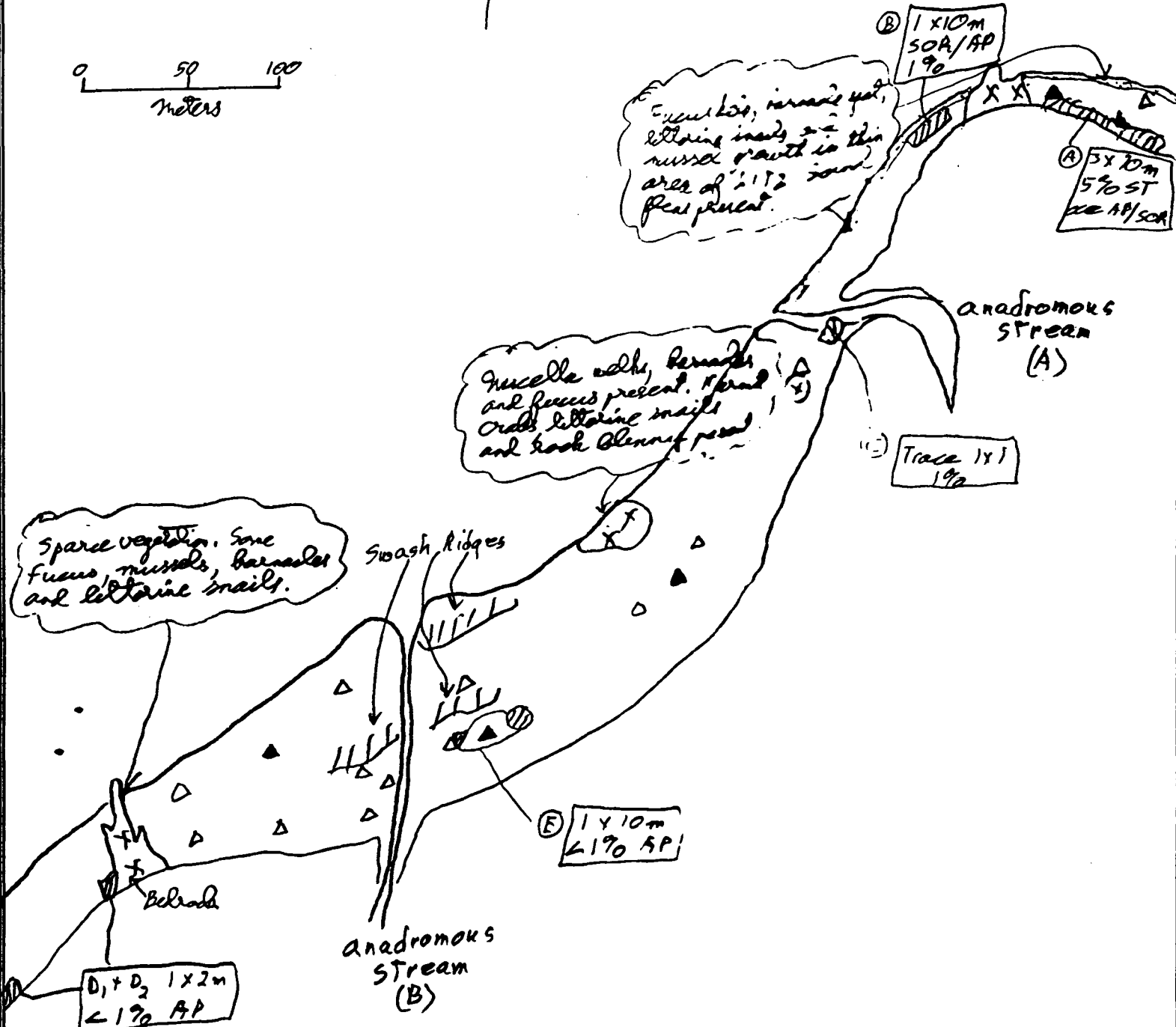
Swash Ridges

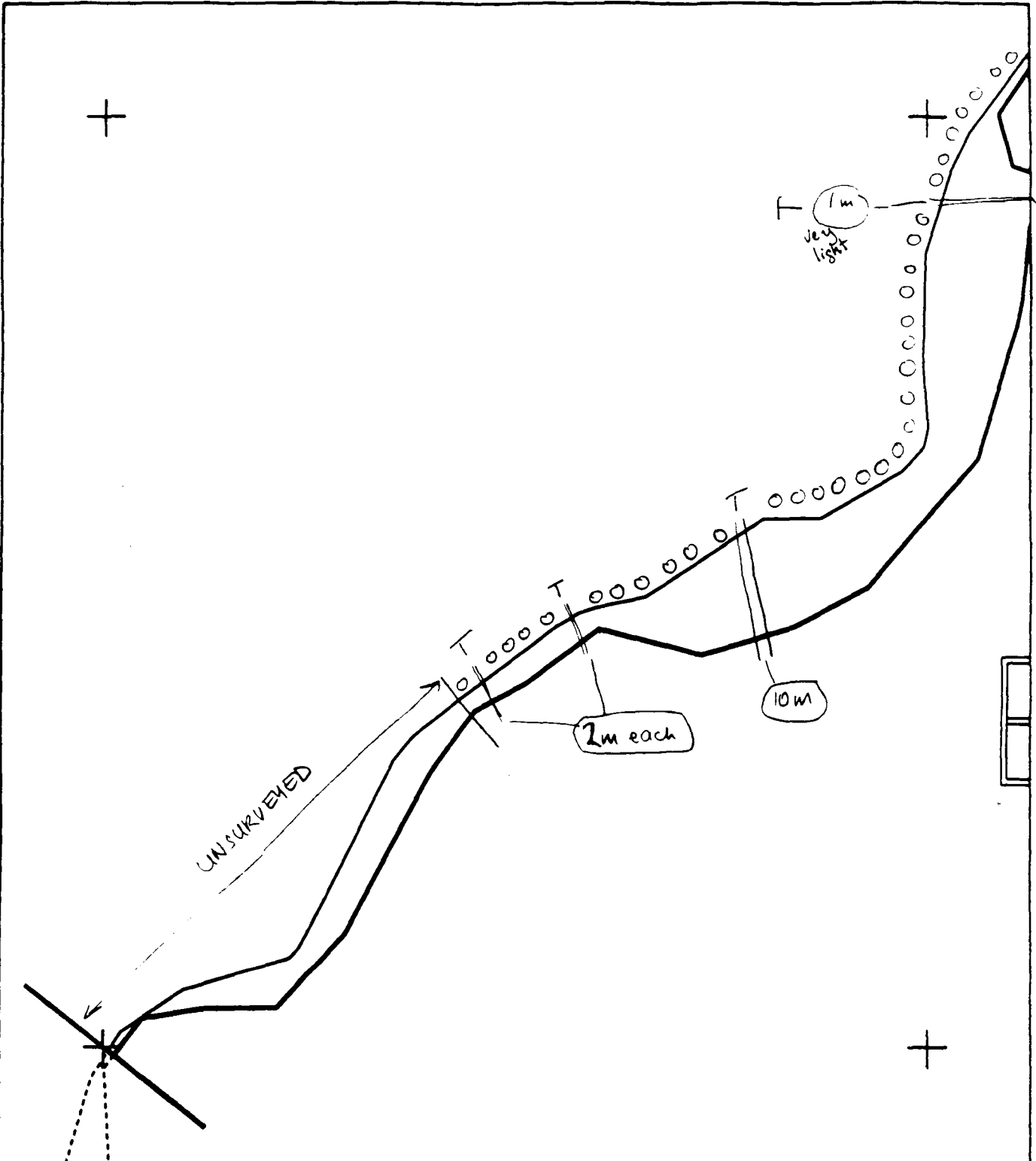
(E) 1 x 10m
 190 AP

anadromous
 stream
 (B)

D₁ + D₂ 1 x 2m
 190 AP

Belrock

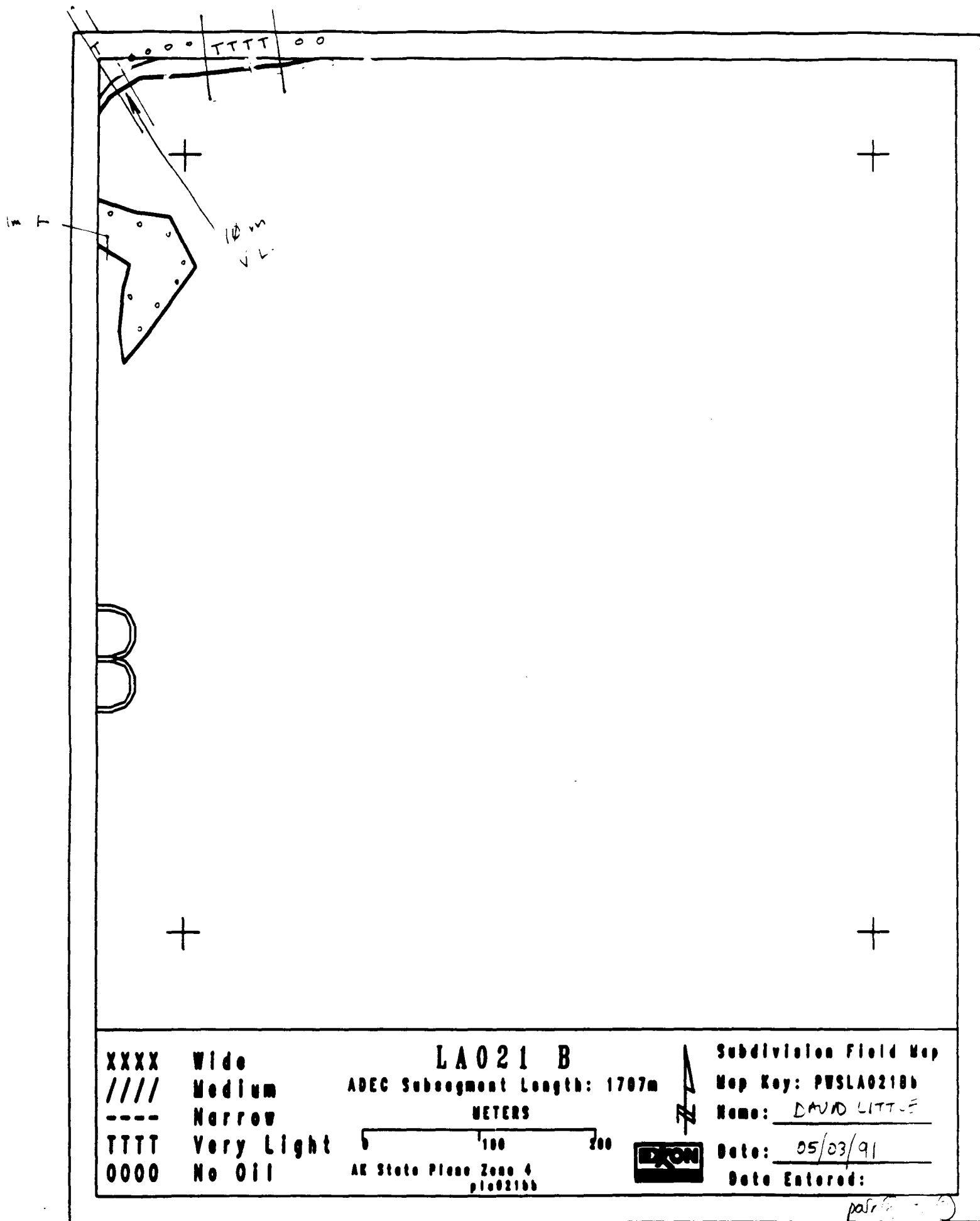




XXXX	Wide	LA021 B ADEC Subsegment Length: 1707m METERS 0 100 200 AK State Plane Zone 4 1402100	Subdivision Field Map Map Key: PWSLA021Bc Memo: DAVID LITTE Date: 05/03/91 Date Entered:
////	Medium		
----	Narrow		
TTTT	Very Light		
0000	No Oil		

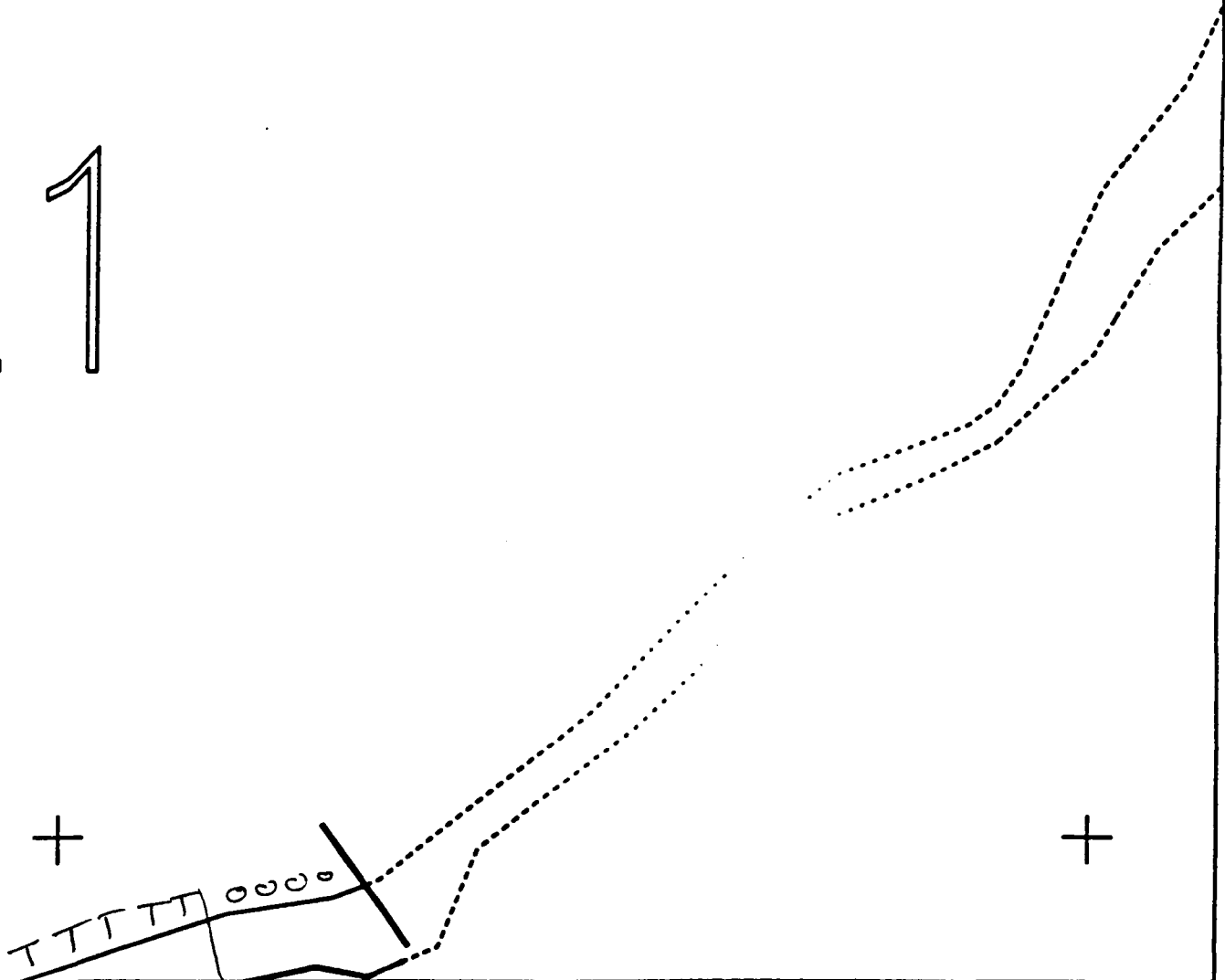
part of 3

ET revised, May 9
REVIEWED



ET revised, May 9
 REVIEWED LA 11/24

21



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

LA021 B

ADEC Subsegment Length: 1707m
METERS

5 100 200

AK State Plane Zone 4
pl021b



Subdivision Field Map

Map Key: PWSLA021Bc

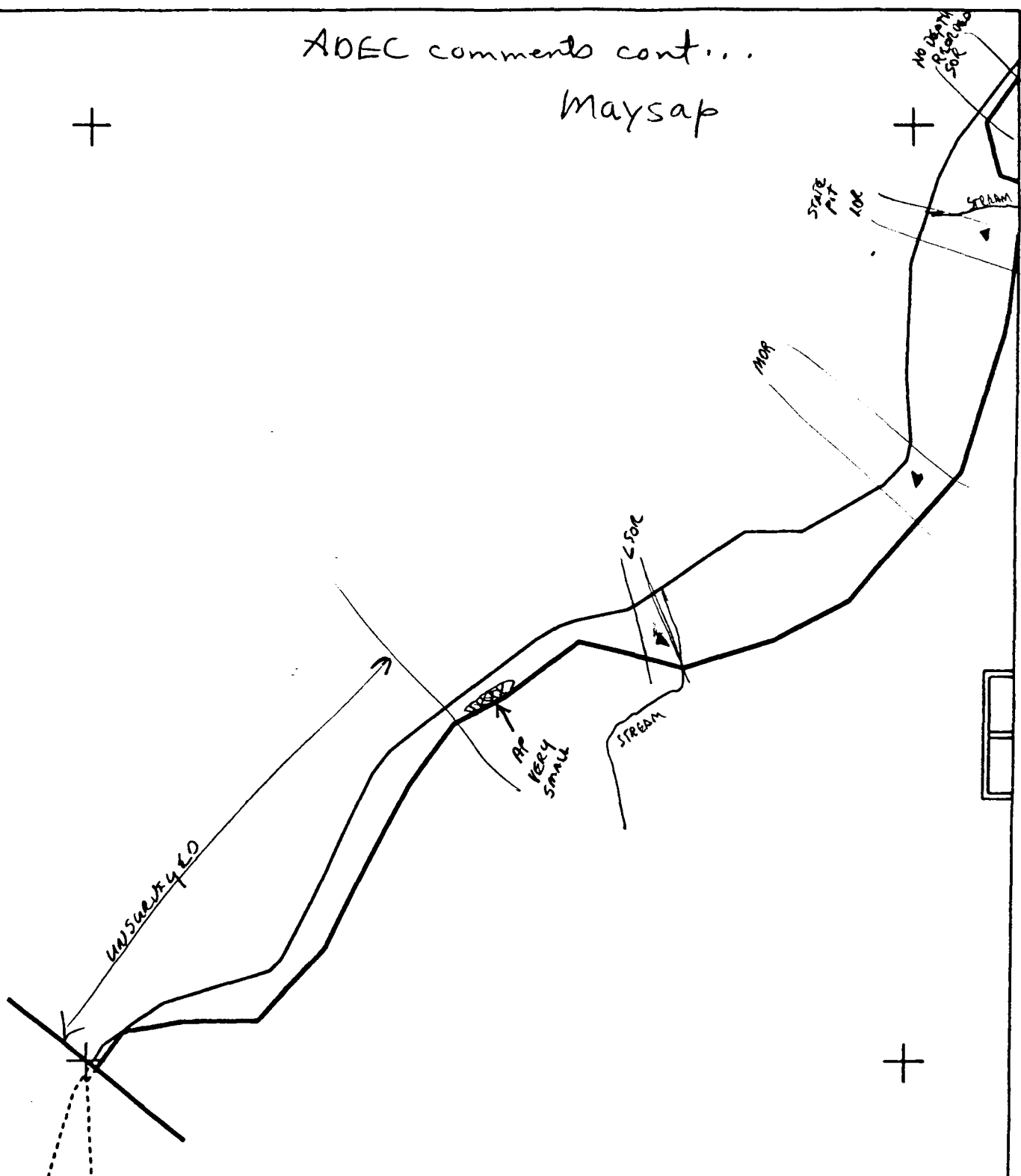
Name: DAVID LITTLE

Date: 05/03/91

Date Entered:

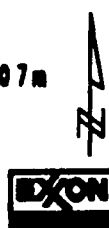
part 3 of 3

ADEC comments cont... Maysap



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

LA021 B
 ADEC Subsegment Length: 1707m
 METERS
 0 100 200
 AK State Plane Zone 4
 1402100

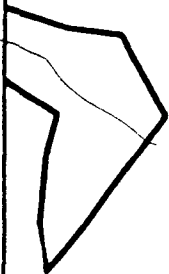


Subdivision Field Map
 Map Key: PWSLA021Bc
 Name: Tom Crowe
 Date: 5/3/91
 Date Entered:

WSEP

ADEC comments cont...

MAYSAP



XXXX

Wide

////

Medium

Narrow

TTTT

Very Light

0000

No Oil

LA021 B

ADEC Subsegment Length: 1707m

METERS

0 100 200

AK State Plane Zone 4
plc021bb



Subdivision Field Map

Map Key: PWSLA021Bb

Name: Tom Crowe

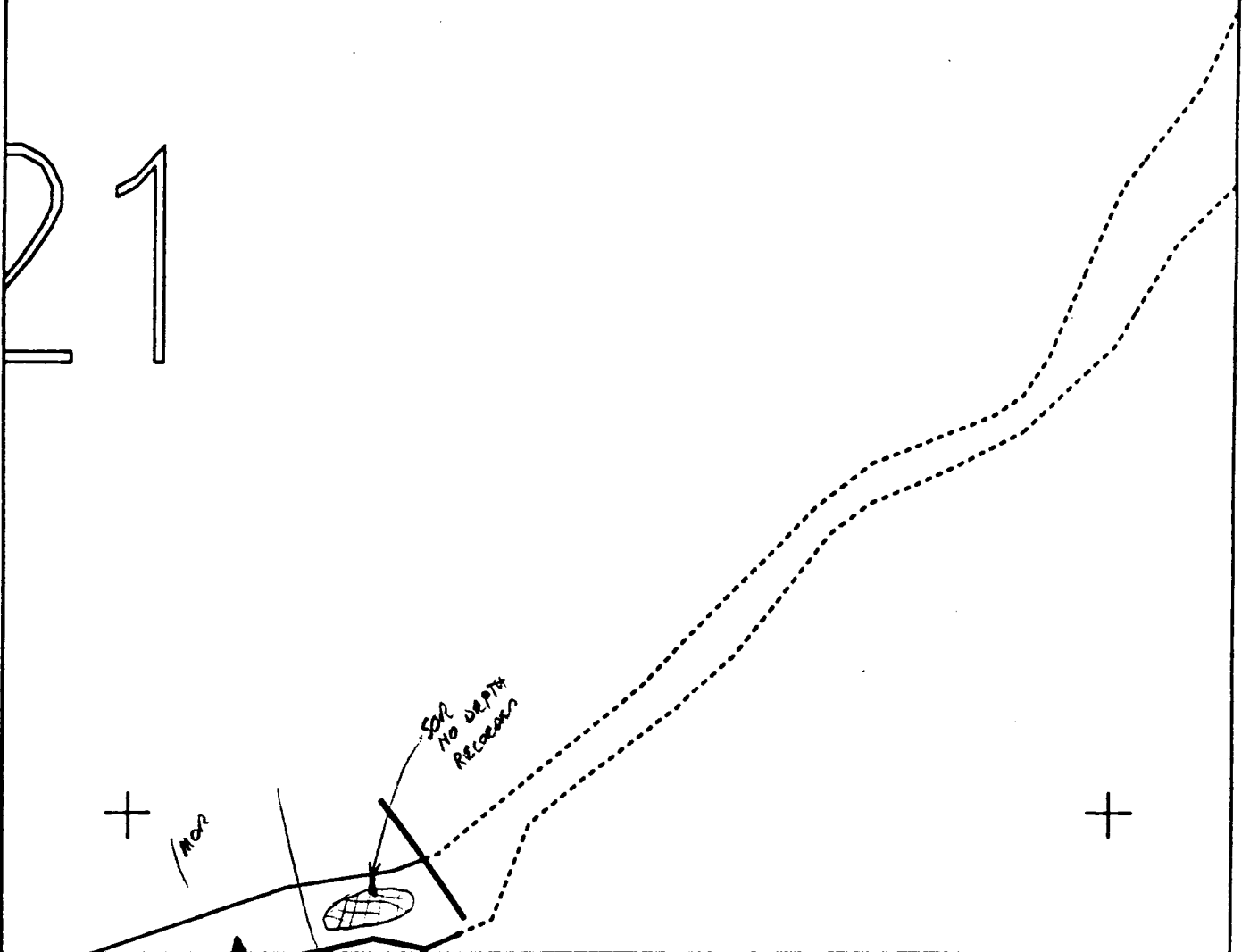
Date: 5/3/91

Date Entered:

ADEC comments cont...

MAYSAP

21



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

LA021 B

ADEC Subsegment Length: 1707m

METERS

0 100 200

AK State Plane Zone 4
plc021b



Subdivision Field Map

Map Key: PWSLA021Bc

Name: TOM CROWE

Date: 5/3/91

Date Entered:

5/13/91 Discrepancy notes.

LA#213 - 226 40 16774 - Agree

HAB

Site 1 - AGREE -
3*15 m, (1*10)
0-6 cm penetr.
MOR

Site 2 - AGREE -
10*50 m
20-23 cm penetr.
LOR

Site 3 - AGREE -
20*5
10-30 cm penetr.
MOR

OG

Site E
3*15, (1*10)
0-6 cm penetr. (pit 7)
MOR

no corresp. site name (subsurf.)
10*50
20-23 cm pen (pit 13)
LOR

no name (subsurface)
20*5
10-30 (pit 5)
MOR



ANADSCAT-90

30/49

ADF&G MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS SS CS TS AVS SC&A MMHS PTA2 REGION: FWS KP, CI K, APMETHOD: Aerial Ground Boat3 DATE: 4/20/9015 HIGH TIDE TIMES: 1007 1230421 TEAM RECORDER: M. WIEDMER4 START TIME: 170016 HIGH TIDE HTS: 9.0 9.4'22 OBSERVERS: T. CROWE5 STOP TIME: 173617 LOW TIDE TIMES: 0400 1163423 AGENCY: ADF&G6 SEGMENT #: LA-02118 LOW TIDE HTS: 4.5' 11.6'24 PHOTOS TAKEN: Y N

7 STATION #:

19 TIDE HT AT SURVEY: 1.72'

Roll #: Frame:

8 K-UNIT:

Ebb Slack Flood Slack25 VIDEO TAKEN: Y N TAPE#:

9 STAT AREA:

20 USCG QUAD: SEWARD A3

Start: End:

10 LAT:

11 LONG:

26 SAMPLES TAKEN? Y N Number

12 SOURCE: Map Loran

13 LOCATION: N.W. LATOUCHE IS.

14 DESCRIPTION:

Oil

Sediment

Biological

Water

EXTENT OF OIL

27 SURFACE COVERAGE

SHORELINE				STREAM			
L	W	M ²	%	L	W	M ²	%
100%	75%		15	75	3		2

28 SURFACE THICKNESS

0	1mm	2mm	0.5cm		
---	-----	-----	-------	--	--

29 PENETRATION

35			5cm		
----	--	--	-----	--	--

30 OVERALL OIL IMPACT: N VL L M H31 OIL TYPE: Pooled Mousse Tar Asphalt Sticky Stain32 OILED DEBRIS? Y N33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cove

Lagoon Marsh

34 WAVE EXPOSURE: High Moderate Low35 SUBSTRATE TYPE: Bedrock Boulder 5 Cobble 90Gravel 5 Sand Mud/silt

36 CATALOGED ANAD. FISH SREAM? Y N

37 CATALOG #: 226-40-16774

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 NFRI PRESUMED

44 ANADROMOUS FISH OBSERVATION

Species Aerial Ground

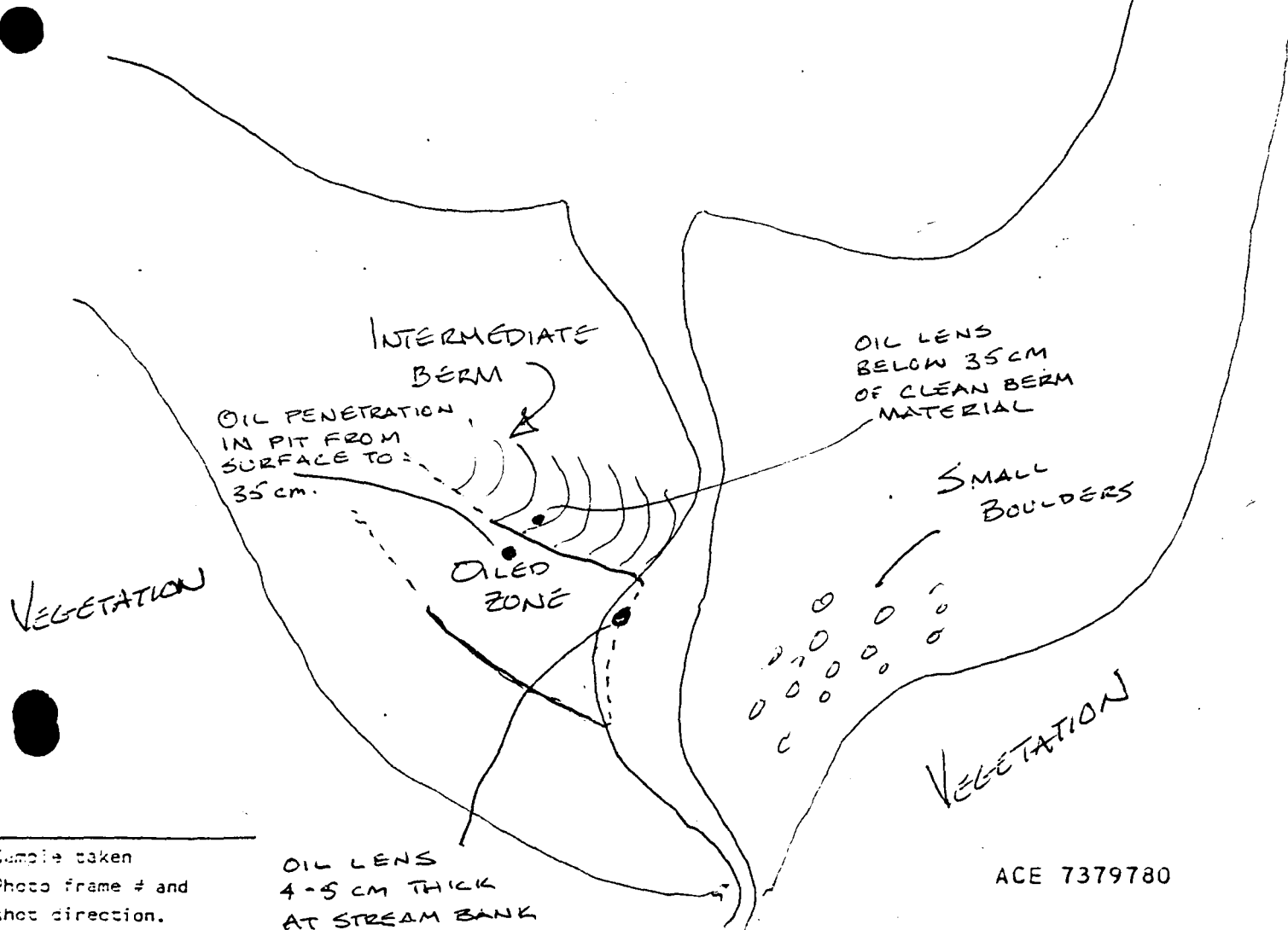
COMMENTS: PATCH OF OILED SUBSTRATE IMMEDIATELY ADJACENT TOSW BANK OF STREAM. DEPTH OF PENETRATION TO 35 CM.THICK SURFACE LENS 4-10 CM THICK. SUGGESTED TREATMENT:MANUAL REMOVAL OF THICK SURFACE CONTAMINATION, REPLACEMENTOF HEAVY RIP-RAP ADJACENT TO CHANNEL TO PREVENT CHANNELMIGRATION.

ACE 7379779 +1/52

DESCRIPTION

46 OIL DISTRIBUTION DIAGRAM

OILED ZONE EXTENDS INTO STREAM CHANNEL AS DRAWN.
RECOMMEND THAT DENSE SURFACE LENS (VARYING THICKNESS AVER-
AGE FROM 4 TO 10 CM) BE MANUALLY REMOVED. TO PREVENT MIGRATION
OF CHANNEL, SMALL BOULDERS FROM OPPOSITE BANK (SEE DIAGRAM)
SHOULD BE PLACED ALONG CHANNEL MARGIN IN PLACE OF
REMOVED MATERIAL. THIS LEVEE SHOULD MEASURE APPROXIMATELY
10 FEET WIDE.



LEGAL:

Counter Start:

6.

	LENGTH m	WIDTH m	M2	%	THICK cm	PEN cm	OIL TYPE
SITE 1					.04		MS
SITE 2						.35	OR
SITE 3							
SITE 4							
SITE 5							

SPECIES					
COUNT					

Oiled zone extends into stream channel as drawn. Recommend that dense surface lens (varying thicknesses average from 4-10 cm) be manually removed. To prevent migration of oil into channel, small boulders from opposite bank (see diagram) should be placed along channel margin in place of removed material. This levee should measure approximately 10 feet wide.

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 6-18-89

SHORELINE SEGMENT LA-21

LOCATION: (see enclosed map) Latouche Island - Northwest End

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6-15-89

Recommended Cleanup Activity(ies):

- Manually remove contaminated drift material (fucus and small driftwood)
- Flood/flush with warm to hot water (up to 140°F) on low angle beaches.
- Use moderate to high pressure washing on rock.
- Use other approved methods as appropriate.

Priorities Considerations:

Class: 1 heavy to moderate oil

Class: A Subsistence resources present

Ecological Constraints (from site survey):

Work at mid tide + or take appropriate measures to protect lower intertidal zone. Stakes present at Port Crawford Beach may be indicative of a study site. Treat unless otherwise advised by Coast Guard. Particular attention should be paid to containing sheen.

Archeological Constraints (from site survey):

If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.



State Historic Preservation Officer *

Date: June 20, 1989

ISCC: _____

Date: _____

EXXON: _____

Date: _____

FOSC: _____

Date: _____

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands .

ACE 7379792 +/S

DOCUMENTATION:

Map/Aerial photo rking segment boundaries 1 Hatched

VTR: Y/N Tape Number(s) None

Photography: Y/N Roll Number(s) T1-SMB-15

Sample Numbers Collected: None

6/15 06.30 HRS

SEGMENT LA-21

mod. angled, mod. exposed cobble peb blr
beach; uniform grade w/ conspicuous
storm berm,

oil as mod. lt. thickness (≤ 2 mm) but -
20 m wide - as far coast on upper
beach & far / mature mouss mid-low
tide zone. Penetration appears ≤ 10 cm -
there may be a buried oil layer here: -
v. permeable, easy for fresh mouss / oil
to percolate thro' cobble layer.

no debris - occas. log (clean) &
sawed (clean & oily); oil @ H $\rightarrow$ L tide zone.
cob 60 peb 30 grl 10 blr trace

Heavier oiling @ H tide zone
asphalt w/ grl forming thin "barrier"
@ HWL. 2' wide x 1" thick x 2' long -
also in spaces between cobbles
Some oil @ splash zone grls.

Oil becoming lighter @ Port Crawford
site area, mostly is mature
mouss - far @ M-HWL & occas. UHWL
mod / light w/ rive grl outwash @ main
creek exit @ Pt Crawford site bay -

- also stakes on storm beach ~ 25m apart

Pt. Crawford Bay = cob-gvl beach,
oil as light coat tar & old mounds
but mod. in extent - UHWC-M zone;

segment ends @ rocky outcrop

08.10

penetration of tar coat (< 0.5 mm thick)
≥ 25 cm.

08.30

END

SEGMENT

ECOLOGICAL EVALUATION

LOCATION: Latauche Is SITE: Sleepy Bay OBSERVER: SM B+W
 LOCATION PREFIX: LA SEG. NO.: 21 LENGTH: 1300 2250 (M)
 DATE: 6/15/89 TIME (HHMM): 0635 TIDE HT.: 0-1 (M)
 OILED ZONE: Splash High Medium Low
 SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Non-existent on gravel beaches, Clumps on boulders in lower ITZ. Extremely sparse

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Several small patches in boulder, cobble crevices. Some were gaping. Individuals are small, possibly stressed environmentally

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Spot dense on boulders at water line. Adults sparse mostly unopened.

Littorina

Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Dense on boulders at water line - in Barnacle zone - mostly unopened

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Also seen in Barnacle zone. Genus Notoacmea

OTHER OBSERVATIONS: Beach at Port Cranford has been staked at about 25 m intervals as a transect - possibly transect sites

CLEANUP PRECAUTIONS: Stream at Port Cranford beach may be anachronous - Avoid. Do not disturb stakes. No constraints on gravel beach areas.

MAMMALS: Otters _____ Harbor Seals _____ Sea Lions _____ Whales ORCAS 46
 Other _____

BIRDS: Dead murre ~~at~~, eagles (alive)

GENERAL OBSERVATIONS: This segment does not contain many intertidal organisms. Few constraints to cleaning.

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date June 15, 1989 Location Lantau Island Site V shore
Location Prefix LA Segment # 21 Length 2,250 m.

Survey Method:

Air _____ (A - indicate on map) Boat X (90%) (A - indicate on map)
Ground X (10%) (G - indicate on map)

Known cultural resources (AHRS #) none Data Source N/A

Oil conditions/beach visibility light to moderate w/ good visibility

Width of beach zone surveyed 5-12 m Tree fringe surveyed 5 m

Cultural resources observed in beach zone (AHRS code) none

Cultural resources observed in tree fringe (AHRS code) none

General observations justifying survey method and segment's site probability:

Shore Profile Moderate to low angle border-cobble beach, some bedrock

Fresh Water Sources several small streams

Sea Exposure semi-exposed to exposed

Access/Safety good; may be difficult due to weather

Probability of undiscovered sites in beach zone (circle one) 1 2 3 4 5

Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # none Frames N/A

B/W Roll # none Frames N/A

Observer(s) Peter Phippen / Jim Haggerty

Time survey started 0600 Time survey ended 0805

Cultural resource considerations/restraints:

Standard constraints

6/15/89 a.m.
LaTouche Island NW coast.
SEAT 1

Heavy oil
Moderate oil
Light oil

creek / stream

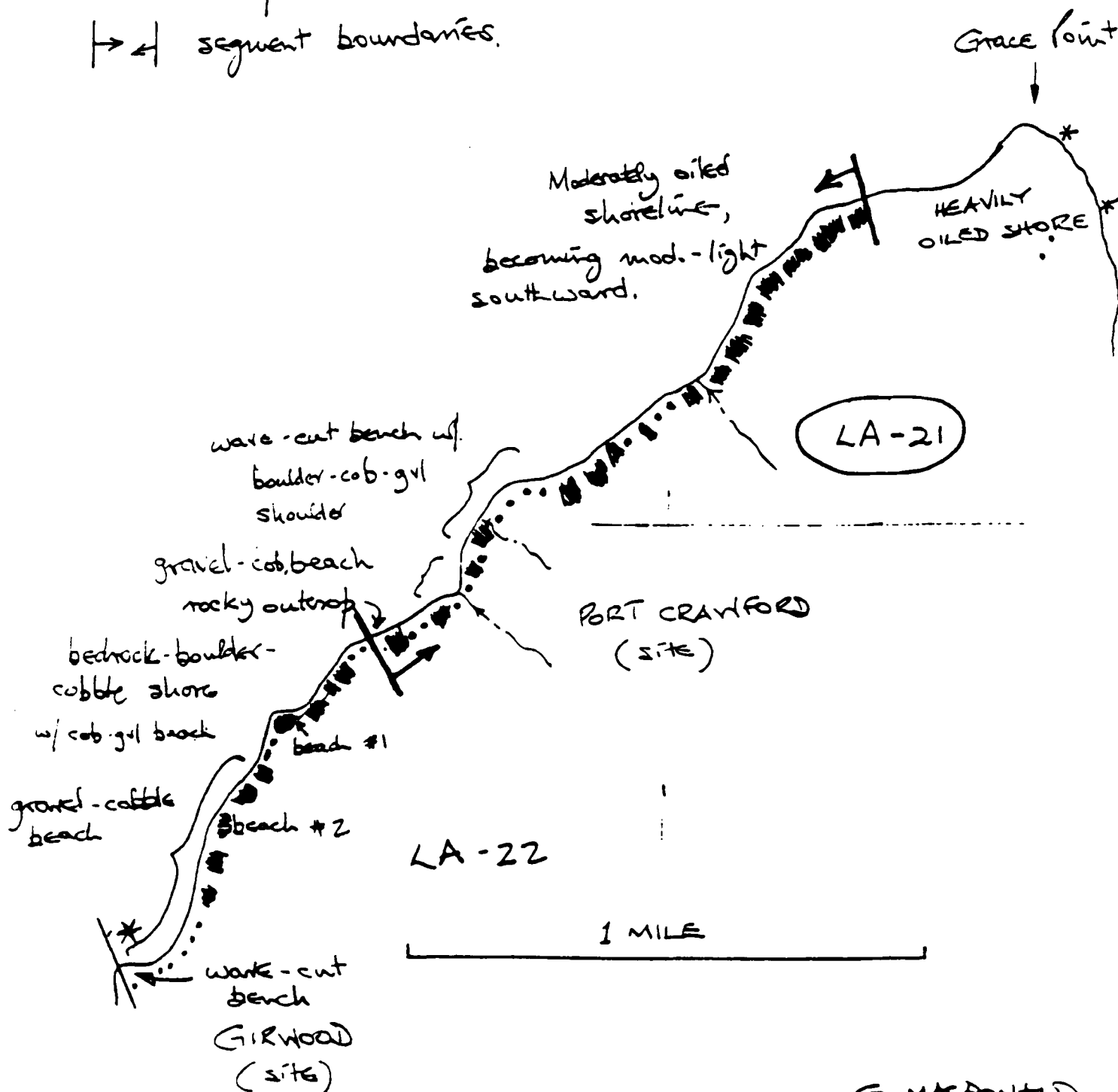
segment boundaries.

SEGMENTS :

LA-21

LA-22

HIGHEST PRIORITY AREA



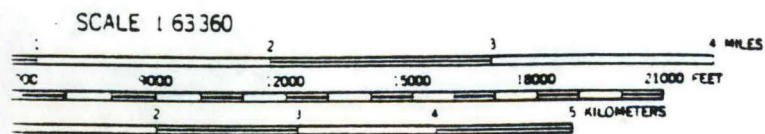
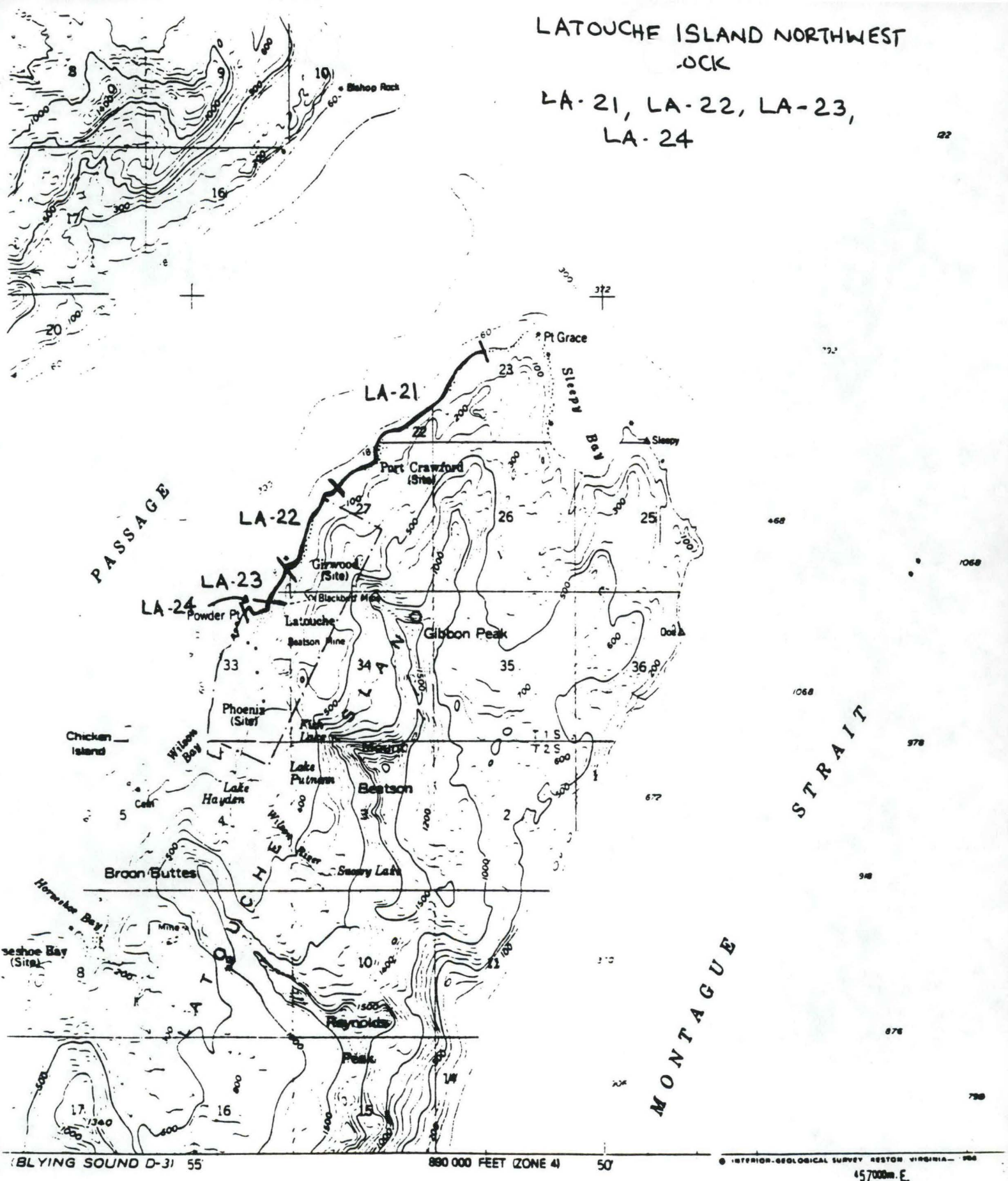
G. MARDONIS.

ACE 7379798

LATOUCHE ISLAND NORTHWEST DOCK

LA-21, LA-22, LA-23,
LA-24

22

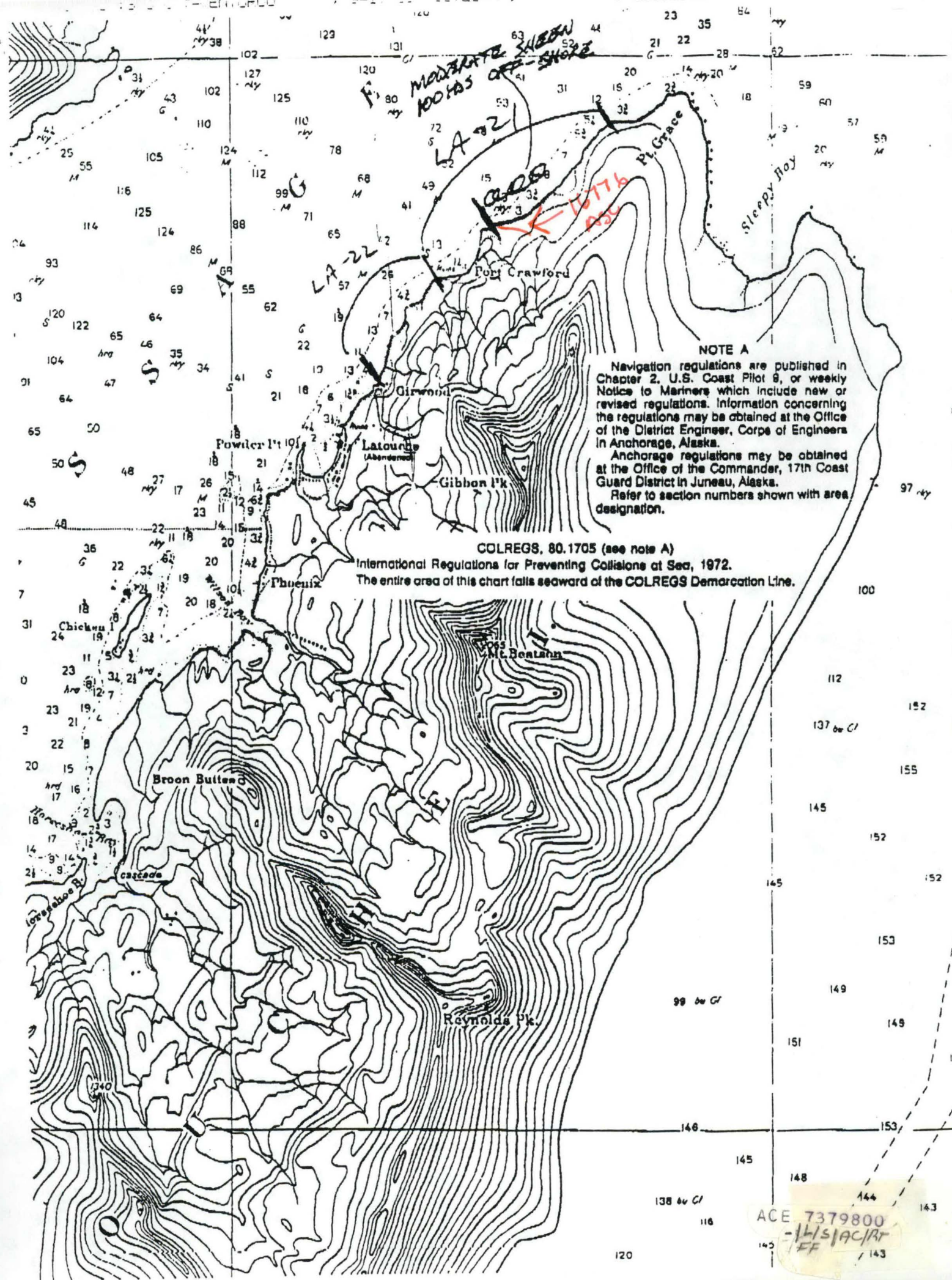


FOUR INTERVAL 100 FEET
GEODETIC VERTICAL DATUM OF 1929
SOUNDINGS IN FEET - DATUM IS MEAN LOWER LOW WATER



ACE 7379799

SEWARD (A-3). ALASKA



MODERATE SHOWN
100 YDS OFF SHORE

LA-22

LA-21

Port Crawford

Latouche
(Abandoned)

Gibbon I.

Phoenix

Mt. Benlann

Brook Bullen

Reynolds Pk.

NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 8, or weekly Notice to Mariners which include new or revised regulations. Information concerning the regulations may be obtained at the Office of the District Engineer, Corps of Engineers in Anchorage, Alaska.

Anchorage regulations may be obtained at the Office of the Commander, 17th Coast Guard District in Juneau, Alaska.

Refer to section numbers shown with area designation.

COLREGS, 80.1705 (see note A)

International Regulations for Preventing Collisions at Sea, 1972.
The entire area of this chart falls seaward of the COLREGS Demarcation Line.

ACE 7379800
-14151AC/RT
FF

30/49

ADF&G MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS SS DS TS AVS SCBA MMHS PTA2 REGION: PWS KP, CI K, APMETHOD: Aerial Ground Boat3 DATE: 4/20/9015 HIGH TIDE TIMES: 1007 1230421 TEAM RECORDER: M. WIEDMER4 START TIME: 170016 HIGH TIDE HTS: 9.0 9.4'22 OBSERVERS: T. CROWE5 STOP TIME: 173617 LOW TIDE TIMES: 0400 1163423 AGENCY: ADF&G6 SEGMENT #: LA-02118 LOW TIDE HTS: 4.5' 11.6'24 PHOTOS TAKEN: Y N

7 STATION #:

19 TIDE HT AT SURVEY: 1.72'

Roll #: _____ Frame: _____

8 K-UNIT:

Ebb Slack Flood Slack25 VIDEO TAKEN: Y N TAPE#: _____

9 STAT AREA:

20 USCG QUAD: SEWARD A3

Start: _____ End: _____

10 LAT:

11 LONG:

26 SAMPLES TAKEN? Y N Number _____

12 SOURCE: Map Loran

Oil _____

13 LOCATION: N.W. LATOUCHE IS.

Sediment _____

14 DESCRIPTION:

Biological _____

Water _____

EXTENT OF OIL

27 SURFACE COVERAGE

SHORELINE				STREAM			
L	W	M ²	%	L	W	M ²	%
100y	75yd		15	75	3		2

36 CATALOGED ANAD. FISH SREAM? Y N

37 CATALOG #: 226-40-16774

38 STREAM NAME: _____

28 SURFACE THICKNESS

<u>0</u>	1mm	2mm	0.5cm		
35			5cm		

39 OIL IN STREAM BED? Y N

29 PENETRATION

40 OIL ON STREAM BANKS? Y N30 OVERALL OIL IMPACT: N VL L M H41 OIL ON BEACH ADJACENT TO MOUTH? Y N
(within 50 meters)31 OIL TYPE: Pooled Mousse Tar Asphalt Sticky Stain42 OIL WITHIN 1 MILE OF STREAM? Y N32 OILED DEBRIS? Y N

Where: _____

33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cove
Lagoon Marsh43 ANADROMOUS FISH PRESENT? Y N34 WAVE EXPOSURE: High Moderate Low

44 ANADROMOUS FISH OBSERVATION

35 SUBSTRATE TYPE: Bedrock _____ Boulder 5 Cobble 90Gravel 5 Sand _____ Mud/silt _____

Species	Aerial	Ground

COMMENTS: PATCH OF OILED SUBSTRATE IMMEDIATELY ADJACENT TOSW BANK OF STREAM. DEPTH OF PENETRATION TO 35 CM.THICK SURFACE LENS 4-10 CM THICK. SUGGESTED TREATMENT:MANUAL REMOVAL OF THICK SURFACE CONTAMINATION, REPLACEMENTOF HEAVY RIP-RAP ADJACENT TO CHANNEL TO PREVENT CHANNELMIGRATION.

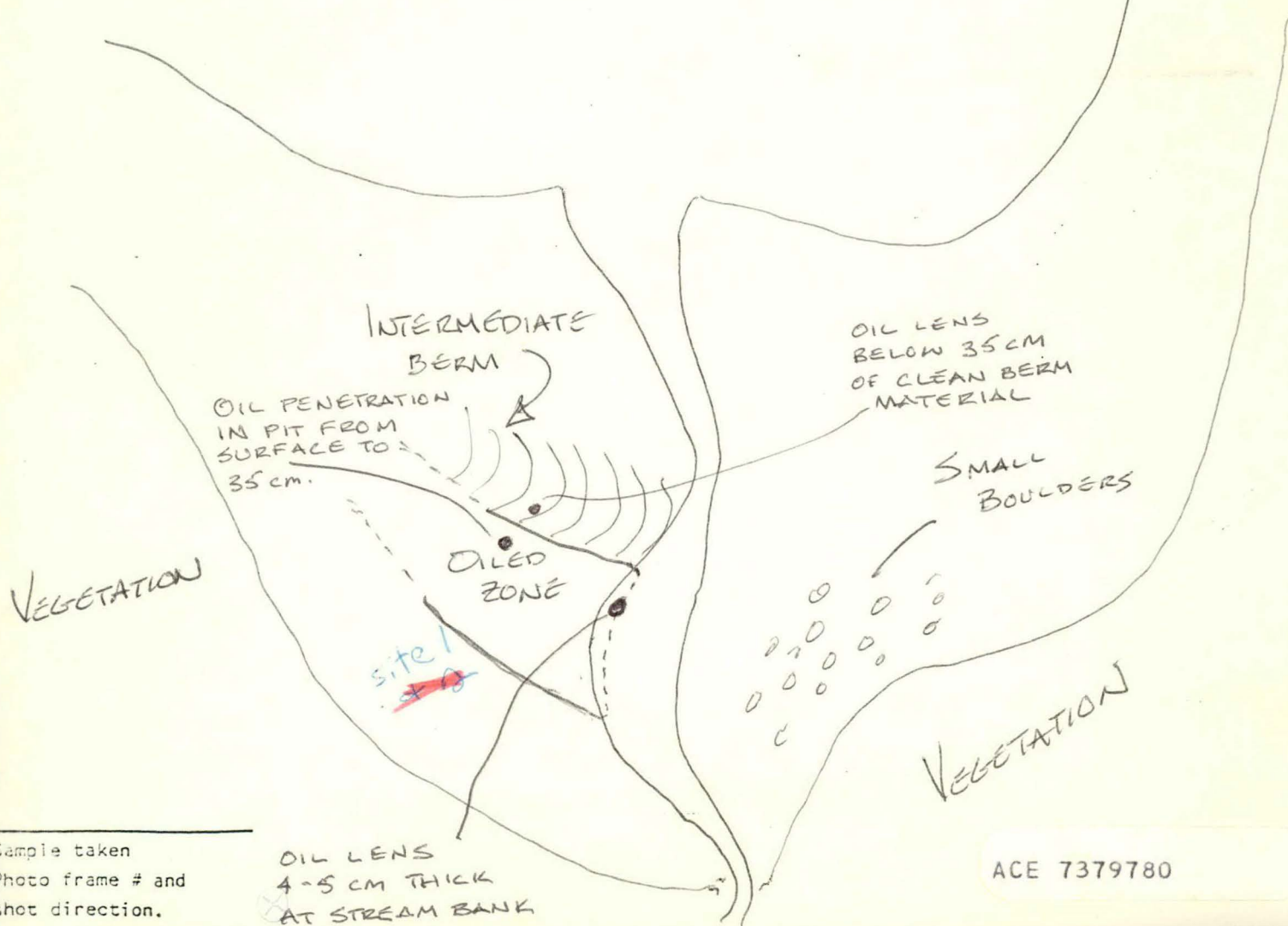
ACE 7379779 +/5%

FRAME(S)

DESCRIPTION

46 OIL DISTRIBUTION DIAGRAM

OILED ZONE EXTENDS INTO STREAM CHANNEL AS DRAWN. RECOMMEND THAT DENSE SURFACE LENS (VARYING THICKNESS AVERAGE FROM 4 TO 10 CM) BE MANUALLY REMOVED. TO PREVENT MIGRATION OF CHANNEL, SMALL BOULDERS FROM OPPOSITE BANK (SEE DIAGRAM) SHOULD BE PLACED ALONG CHANNEL MARGIN IN PLACE OF REMOVED MATERIAL. THIS LEVEE SHOULD MEASURE APPROXIMATELY 10 FEET WIDE.



2/49

ASC # 226-40-16774

Segment LA-021

Observations A deposit of heavy oil penetrates the substrate immediately adjacent to the upper-mid intertidal portion of the stream. This area has a surface armor of large cobble overlying small gravels. A high tide berm may be advancing over this oil deposit. Tar from this deposit is exposed in the stream channel along the southwest bank and is leaking sheen into the stream. Tarry/moussy oil penetrates the sediment approximately 4 cm at the present stream bank. Oil penetration may be deeper further from the stream.

3
Treatment Recommendations The complete layer of oiled substrate within this deposit should be manually removed, bagged, and taken from the site for safe disposal. Four-wheelers should be used to facilitate removal of material from beach. Excavation should begin on the side of the patch most distant from the stream channel. Clean material from the adjacent berm should be backfilled into the excavated area soon after oiled material is removed. In no circumstances should clean material be deposited over any remaining oiled substrate. Immediately after removal of the oiled substrate adjacent to the stream, boulders from the opposite shore (see ADF&G Multi-Assessment Data Form diagram for general location) should be placed along the bank to prevent migration of the channel into the treated area. All activities must occur between 15 May and 15 July, 1990.

ASC # 226-40-16772

Segment LA-023

Observations Only lightly stained logs in storm berm.

W / Treatment Recommendations If future observations do not reveal significant quantities of buried oil, no treatment is recommended.

OG WILLIAM RE USCG McMAHON SEGMENT ST/ LA 21
 BIO MICHAEL FAWCETT LAND REP TOM CROWE - ADEG STREAM 225-90-16774 (OF)
 EXXON GUS GARCIA ADFG MIKE WIEDMER TIME 10 : 00 : 00
 TEAM NO. 15 TIDE LEVEL +1 FT DATE 20 APR 1990
 EST. SUBDIVISION LENGTH: 50 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 60 % B 40 % C 0 % P 0 % G 0 % S 0 % M 0 % V
 SLOPE: Lang 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 20 m M 20 x 10 m N 0 m VL 0 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	TC	TS	TP	TR	BR	DEL	FW	GL	SL	TL	TR	BR	SU	U	M	U
ASPHALT PAVEMENT			X			X									X	
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL																

PAVEMENT H F S 100 sq. m by 4 cPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

Did you collect DEBRIS
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. AS-15-1Frames 26-29

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	T	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	BR	DEL	FW	GL	SL	TL	TR	BR	SU	U	M	U				
1	50			X			0-35		X	X									X				N		G/C
2	40					X	.												X				N		P/G
3	15			X			0-4		X	X									X				N		G/C
4	40					X	.											X					N		G/P/C
5	30					X	.												X				N		G/P/C
6	30					X	.												X				N		G/P

COMMENTS

REVIEWED _____ DATE _____

ACE 7379785

SEGMENT ST/ 4421 STREAM 16779 (OF)

SUBSURFACE OIL (CONTINUED)

[illegible]

COMMENTS

REVIEWED _____ DATE _____

ACE 7379786

DATE 20 / APR 90

SKETCH MAP

CHECKLIST

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

LEGEND

1 Δ

Plt - No Subsurface Off

2 ▲

Plt - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

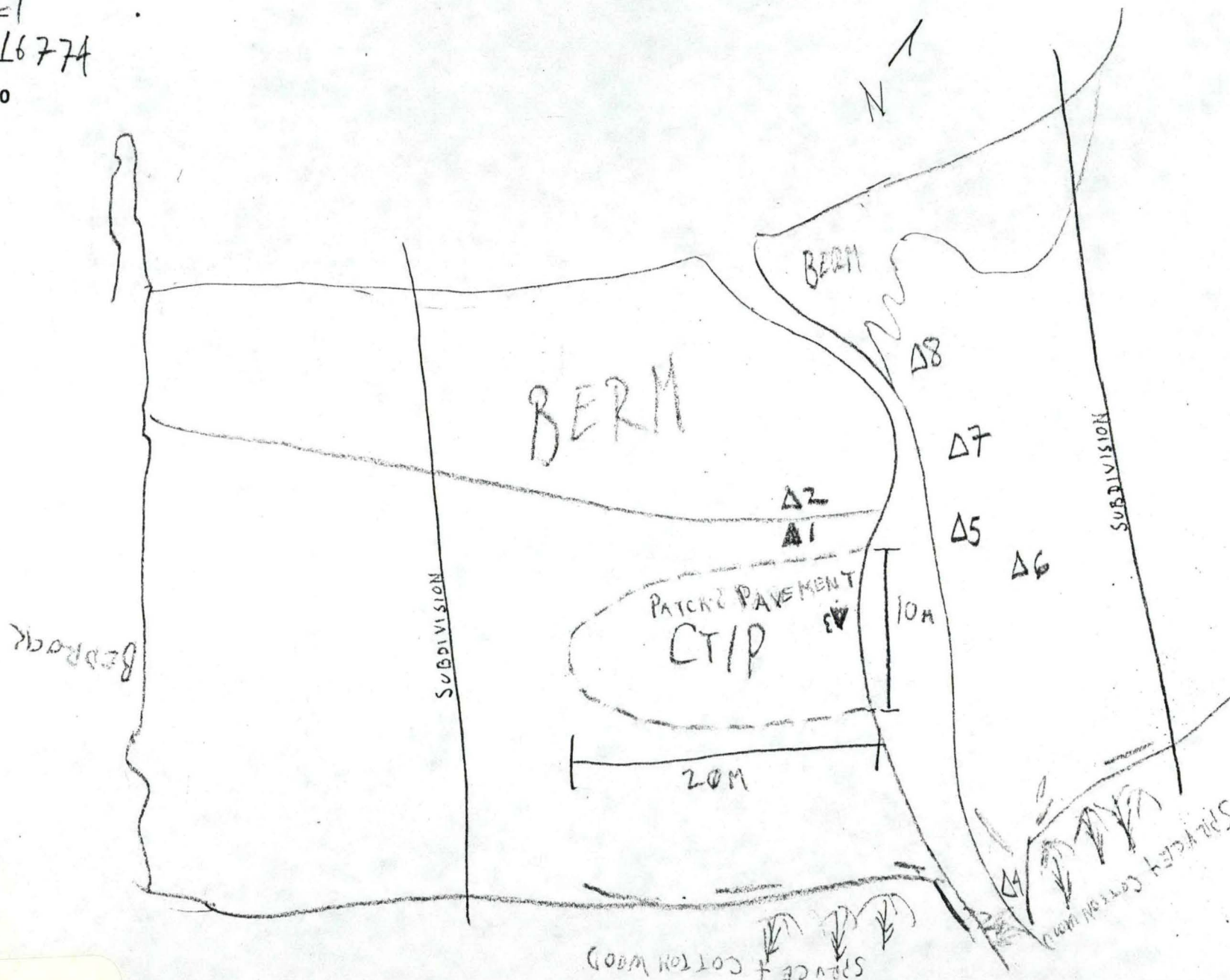
try Distribution

CT/S

Splashed Distribution

eee
Oiled Vegetation

1

Photo location, direction,
and number

ACE 7379787

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

REVISION:03/24/90

29/49

Ecologist's Summary
Segment LA 21
Stream 226-40-16774

4/20/90

Michael Fawcett

The stream mouth lies on a cobble/boulder beach, unstable, with sparse biota. A 20x10' area on west side of stream had a fairly heavy covering of weathered tar-asphalt extending to the stream bank. Disturbing sediment at stream edge produced sheen on water. Manual cleanup and possibly bioremediation suggested. No ecological constraints on cleanup methods are indicated owing to poorly developed community (mainly a film of green algae) that exists on the unstable sediments at this site.

M Fawcett

OPERATIONS FIELD NOTES

See Back for Instructions

21/49

SEGMENT ID ANAD-LA-21
 STREAM ID # 226-40-16774
 ANNOTATED MAP INCLUDED YIN

DATE 4-20-90
 NAME GARCIA
 TEAM # 15

SURFACE OIL	Treatment Recommendation									
	Quantities in Meters			None	Bioremediation		Tilling		Spot Hot Water	
	Length	Width	Area		Y/N	% Treat	Y/N	% Treat	Y/N	% Treat
Wide Band										
Medium Band <u>AREA 1</u>	<u>20</u>	<u>10</u>	<u>200</u>		<u>Y</u>	<u>100</u>			<u>Y</u>	<u>100</u>
Narrow Band										
Very Light										
TOTAL MANDAYS						<u>2</u>				<u>20</u>

SUBSURFACE OIL YES - 0-35 CM IN DEPTH IN AREA 1 ONLY

Other (Describe)?	

TARMATS	Quantities in Meters			Treatment Rec			# of Bags	Mandays Required	
	Length	Width	Thick(cm)	None	Breakup	Remove		Breakup	Remove
Area #1 <u>REFER TO MAP</u>	<u>20</u>	<u>10</u>	<u>±5</u>			<u>✓</u>	<u>250</u>		<u>30</u>
Area #2									
Area #3									
Area #4									
Sporadic Mats									

MANUAL PICKUP	Type of Debris			In Meters		# of Bags	Pickup Y/N	Manday Estimate
	Mousse Tarballs	Oiled Veget	Cleanup Debris	Length	Width			
"Pocket" #1								
"Pocket" #2								
"Pocket" #3								
Random/Continuous								

NONE

OILED LOGS <u>YIN</u>	OILING <u>H/M/L</u>	QUANTITY <u>L/M/S</u>	BURN <u>YIN</u>
-----------------------	---------------------	-----------------------	-----------------

Is there Other Debris on the Beach? YIN How Many Bags? _____ Is it mingled with the Oiled Debris YIN

GENERAL Snow covering 10 % of the Supratidal Zone?

Wave Exposure H/M/L Access Limitations: NONE

Snare Boom/Pom Poms Recommended? YES

Would the production Craft have to be relocated to complete work on this subdivision? YIN # of Times N/A

COMMENTS:

ACE 7379781 +/S

* AREA 1 ONLY - MANUALLY REMOVE TARMATS (±5 CM THICK) AS PER ATTACHED MAP, HOT WASH, AND BIOREMEDIATE.

* RELOCATE MATERIAL FROM INTERTIDAL STORM BERM RIGHT NEXT TO THE SOUTHWEST SIDE OF STREAM 20 FEET IN WIDTH TO PREVENT STREAM FROM CHANGING COURSE AFTER OILY MATERIAL REMOVAL. TOTAL MANDAYS-52.

22/49

FIELD SHORELINE COMMENT SHEET

SEGMENT ST LA 021 SUBDIVISION: 16774 DATE 4/20/90

USCG

NAME CWO2 J. McMAHON SIGNATURE J. McMahon☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

1. APPROX. A 10 X 20M ZONE ADJACENT TO RIGHT SIDE OF STREAM (LOOKING ON SHORE), 4-6cm DEEP NEAR PIT 1 TO BE REMOVED AND BAGGED.
2. THE OUTER PROPORTION OF THE ABOVE, APPROX ALL EXCEPT A 2 FOOT BUFFER TO BE BIOREMEDIATED.

ADFC

ADEC

NAME Michael WiedmerNAME NO Team memberSIGNATURE Michael Wiedmer☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

NOTES: OIL PENETRATION MAY BE DEEPER THAN THE 4-6 CM STATED ABOVE. ONE PIT REVEALED OIL FROM THE SURFACE TO 35 CM. ALL OILED MATERIAL, REGARDLESS OF DEPTH OF PENETRATION, SHOULD BE MANUALLY REMOVED, BAGGED, AND TAKEN FROM SITE. ATTENTION MUST BE PAID TO THE BERM IMMEDIATELY ADJACENT TO THE SURFACE OIL. CURRENTLY ~~IS~~ A LAYER OF 35 CM OF CLEAN MATERIAL IN THIS BERM COVERS A LENS OF OIL.

LAND MANAGER

NAME NO Team member SIGNATURE _____☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

AS THIS BERM APPEARS UNSTABLE, ~~IT~~ BY THE TIME TREATMENT BEGINS AT THIS SITE, SIGNIFICANT PORTIONS OF THE OIL AT THIS SITE MAY BE BURIED.

ACE 7379782/A

GENERAL DATA

Stream # 226-40-16774

SEG ID: LA 21 SUBDIV: TEAM: 15 SURVEY DATE: 4/20/90
PAVEMENT: CHAR F AREA 100 THICKNESS 4 TARBALLS 0
OILED: LGS — VEG — TRH — DBR — WAVE EXP: LW — MD X HG —
FAX RCVD: DT: AGENCY DISAGREE:
EST SUBDIV LGTH: 20 OIL CATEGORY: W 0 M 20 N 0 VL 0 NO 30 U 0

SURFACE DATA

SURFACE SEDIMENT: BRK 0 BLD 0 COB 60 PEB 40 GRN 0 SAN 0 MUD 0 VEG 0

CHAR #: 1 OIL CHAR: AP OIL DIST: CONT — BRKN — PTCH X SPLH —
OIL CLR: DBL FILM CLR: — TIDAL ZONE: SU — UI — MI X LI —

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
OIL CLR: FILM CLR: TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
OIL CLR: FILM CLR: TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
OIL CLR: FILM CLR: TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
OIL CLR: FILM CLR: TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
OIL CLR: FILM CLR: TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
OIL CLR: FILM CLR: TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
OIL CLR: FILM CLR: TIDAL ZONE: SU UI MI LI

25/49

SSAT DATA ENTRY FORM

SUBSURFACE DATA Stream No. 226-40-16774 PAGE 2 OF 2

SEGMENT ID: LA 21 SUBDIV: _____

PIT # 1 PIT DEPTH 60 OIL CHARACTER OL OIL INTVAL: FROM 0 TO 35
 QUANT: UC OIL CLR: DBL FLM CLR: — ZONE: SU — UI — MI X LI —
 SUBSURF SEDIMENT: BRK — BLD — COB X PEB — GRN X SAN — MUD — VEG —

PIT # 2 PIT DEPTH 40 OIL CHARACTER NO OIL INTVAL: FROM 0 TO 0
 QUANT: — OIL CLR: — FLM CLR: — ZONE: SU — UI — MI X LI —
 SUBSURF SEDIMENT: BRK — BLD — COB — PEB X GRN X SAN — MUD — VEG —

PIT # 3 PIT DEPTH 15 OIL CHARACTER OL OIL INTVAL: FROM 0 TO 4
 QUANT: UC OIL CLR: DBL FLM CLR: — ZONE: SU — UI — MI X LI —
 SUBSURF SEDIMENT: BRK — BLD — COB X PEB — GRN X SAN — MUD — VEG —

PIT # 4 PIT DEPTH 40 OIL CHARACTER NO OIL INTVAL: FROM 0 TO 0
 QUANT: — OIL CLR: — FLM CLR: — ZONE: SU — UI X MI — LI —
 SUBSURF SEDIMENT: BRK — BLD — COB X PEB X GRN X SAN — MUD — VEG —

PIT # 5 PIT DEPTH 30 OIL CHARACTER NO OIL INTVAL: FROM 0 TO 0
 QUANT: — OIL CLR: — FLM CLR: — ZONE: SU — UI — MI X LI —
 SUBSURF SEDIMENT: BRK — BLD — COB X PEB X GRN X SAN — MUD — VEG —

PIT # 6 PIT DEPTH 30 OIL CHARACTER NO OIL INTVAL: FROM 0 TO 0
 QUANT: — OIL CLR: — FLM CLR: — ZONE: SU — UI — MI X LI —
 SUBSURF SEDIMENT: BRK — BLD — COB — PEB X GRN X SAN — MUD — VEG —

PIT # 7 PIT DEPTH 25 OIL CHARACTER NO OIL INTVAL: FROM 0 TO 0
 QUANT: — OIL CLR: — FLM CLR: — ZONE: SU — UI — MI X LI —
 SUBSURF SEDIMENT: BRK — BLD — COB — PEB X GRN X SAN — MUD — VEG —

PIT # 8 PIT DEPTH 25 OIL CHARACTER NO OIL INTVAL: FROM 0 TO 0
 QUANT: — OIL CLR: — FLM CLR: — ZONE: SU — UI — MI X LI —
 SUBSURF SEDIMENT: BRK — BLD — COB X PEB X GRN X SAN — MUD — VEG —

PROBLEMS: _____

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ LA-21-1 STREAM NO: 226-40-16774 DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Subject stream and 226-40-16676, Ps, 12/89 also located within Subdivision B.

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

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

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

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 unhoiled biota and substrate. Subject stream located within Subdivision B.

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: A. David M. Makin DATE: 5/10/90

Subsurface Oil/Observed: Yes ☒ No ☐ Maximum Depth 35 cm

RECOMMENDATIONS:

No Treatment Recommended

X Treatment Recommended

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 removal of tarmat and 2) bioremediation of areas with subsurface oil shown on attached sketch map. Work should be conducted between 6/1 and 7/10 with approval of ADF&G regarding bioremediation of stream banks.

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/10/90
ADEC Art Weiner Art Weiner
EXXON Andy Tate Andy Tate
NOAA Burt Wescott Burt Wescott
USCG D. D. Rome D. D. Rome

FOSC:  DATE: 5-18-90

NOTIFY CVC 24 HRS. IN ADVANCE OF WORK

ACE 7379741

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-40-16774

SEGMENT LA-21 SUBDIVISION B

WORK WINDOW	
Tarmat Removal	OPEN
Bioremediation More Than 100m From Stream	OPEN
Bioremediation Less Than 100m From Stream	WORK PRIOR TO 7/10 (ADF&G MONITOR REQ.)

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

- | | | |
|-------|------------------------------|--|
| 1A,1B | Salmon Stream | ADF&G catalogued anadromous streams (226-40-16774 and -16776) are in Subdivision B. 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 tarmat removal. |
| 5T | Bald Eagle Nest | NO CONSTRAINT. USFWS bald eagle impact assessment conducted on 5/12/90 by Mike Lockhart indicates no active nests within 400m of the work area. |
| 7II | Subsistence: Deer Harvesting | Closed to bioremediation after 8/15. No constraint to tarmat removal. |

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. No flushing of pollutants or sediments into stream drainage; do not allow Inipol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unopened biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM LA-21B
FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC G.A. Reiter DATE 6/10/90
for
ACE 7379827 +15%
Prepared By: W. Kellen Date 6/9/90

CATALOG NUMBER: 2264016774 SEGMENT#: LA021 B LOCATION: LATOUCHE ISLAND, PORT CRAWFORD, SOUTH OF							
DATE	SURVEY	SITE	W x L (m) SITE TYPE	PERCENT OIL	THICKNESS & PENETR. (cm)	OIL TYPES, DEPTH INTERVAL(cm)	SITE SPECIFIC COMMENTS
04/12/90	PRE-ANADS CAT	1	20 SURFACE		30	AP	
MAD vs. OG: COMMENTS: EXTENSIVE OILING. 30M WIDE BAND. OIL 1 FT DEPTH. OILED AREAS COVERED BY UP TO 1-2 FT OF NEW GRAVEL. OIL ON STREAM BANKS.							

CATALOG NUMBER: 2264016774 SEGMENT#: LA021 B LOCATION: LATOUCHE ISLAND, PORT CRAWFORD, SOUTH OF							
DATE	SURVEY	SITE	W x L (m) SITE TYPE	PERCENT OIL	THICKNESS & PENETR. (cm)	OIL TYPES, DEPTH INTERVAL(cm)	SITE SPECIFIC COMMENTS
04/20/90	ANADSCAT	1	 SURFACE		4-10 35	MS	ADJACENT TO SOUTHWEST STREAM BANK.
04/20/90	ANADSCAT	2	 SUBSURF		35	OR	BENEATH 35CM OF CLEAN STORM BERM ADJACENT OT SITE 1.
MAD vs. OG: COMMENTS: PATCH OF OILED SUBSTRATE IMMEDIATELY ADJACENT TO SW BANK OF STREAM. DEPTH OF PENETRATION TO 35CM THICK, SURFACE LENSE 4-10CM THICK. OIL LENSE 4-5CM THICK AT STREAM BANK. SUGGESTED TREATMENT: MANUAL REMOVAL OF THICK SURFACE CONTAMINATION, REPLACEMENT OF HEAVY RIP-RAP ADJACENT TO CHANNEL TO PREVENT CHANNEL MIGRATION. OILED ZONE EXTENDS INTO STREAM CHANNEL AS DRAWN. RECOMMENDTHAT DENSE SURFACE LENS (VARYING THICKNESS AVERAGE FROM 4 TO 10CM) BE MANUALLY REMOVED. TO PREVENT MIGRATION OF CHANNEL, SMALL BOULDERS FROM OPPOSITE BANK (SEE DIAGRAM) SHOULD BE PLACED ALONG CHANNEL MARGIN IN PLACE OD REMOVED MATERIAL. THIS LEVEE SHOULD MEASURE APPROXIMATELY 10 FEET WIDE. FRY PRESUMED.							

CATALOG NUMBER: 2264016774 SEGMENT#: LA021 B LOCATION: LATOUCHE ISLAND, PORT CRAWFORD, SOUTH OF							
DATE	SURVEY	SITE	W x L (m) SITE TYPE	PERCENT OIL	THICKNESS & PENETR. (cm)	OIL TYPES, DEPTH INTERVAL(cm)	SITE SPECIFIC COMMENTS
04/20/90	OG'S ANADSCAT	1	10 x 20 SURFACE	11-50	5 OFN	AP	PATCHY PAVEMENT, SOUTH SIDE OF STREAM MITZ.
04/20/90	OG'S ANADSCAT	P2	 SUBSURF		4	OL	PIT 3 WITHIN SITE 1 0-4. PIT 1 ADJACENT TO SITE 1 0-35CM LENSE.

04/20/90	OG'S ANADSCAT	P3	SUBSURF				PITS 4, 5, 6, 7, 8 NO OIL. NORTH SIDE OF STREAM.
MAD vs. OG: AGREE COMMENTS:							

CATALOG NUMBER: 2264016774 SEGMENT#: LA021 B LOCATION: LATOUCHE ISLAND, PORT CRAWFORD, SOUTH OF							
DATE	SURVEY	SITE	W x L (m) SITE TYPE	PERCENT OIL	THICKNESS & PENETR. (cm)	OIL TYPES, DEPTH INTERVAL(cm)	SITE SPECIFIC COMMENTS
08/05/90	PRE-ASAP	1	3 x 10 SURFACE			OR	SOUTH SIDE: HEAVY TO MODERATE 'OR' SEDIMENTS IN MITZ ON BACK SIDE OF STORM BERM UP TO 4M FROM STREAM CHANNEL, APPEAR TO EXTEND BENEATH BERM. DIMENSIONS FOR SURFACE OIL ONLY.
08/05/90	PRE-ASAP	2	SUBSURF		3-5	MOR HOR 2-5	NORTH SIDE: BURIED LENSE IN MITZ CORRESPONDING TO (MEANING POSSIBLE CONTINUATION) OILED AREA ON SOUTH BANK. LENSE BURIED UNDER 2-5CM CLEAN GRAVEL, SURFACING IN AREAS. PER SKETCH, THIS LENSE WAS DOCUMENTED TO WITHIN
MAD vs. OG: COMMENTS: SOUTH SIDE OF STREAM - HEAVY TO MODERATE 'OR' SEDIMENTS IN MITZ ON BACK SIDE OF STORM BERM IN MITZ - APPEARS TO EXTEND BENEATH THE BERM. THESE SEDIMENTS ON THE SURFACE ARE IN AN AREA 10M LONG X 3M WIDE, 4M FROM THE STREAM CHANNEL. REC - MANUAL REMOVAL OF THE HEAVIER OR SEDIMENTS. POSSIBLE MECHANICAL TILLING OF STORM BERM RELOCATION TO EXPOSE BURIED OIL. NORTH SIDE OF STREAM - LENSE OF HEAVY TO MODERATE 'OR' SEDIMENTS 3-5CM THICK IN THE MITZ CORRESPONDING TO OIL ON SOUTH BANK - LENSE BURIED UNDER 2-5CM CLEAN GRAVEL, SURFACING IN AREAS. REC - MECHANICAL TILLING TO EXPOSE AND OR REASSESSMENT IN THE SPRING. NO OIL OBSERVED ON STREAM BANKS.							

CATALOG NUMBER: 2264016774 SEGMENT#: LA021 B LOCATION: LATOUCHE ISLAND, PORT CRAWFORD, SOUTH OF							
DATE	SURVEY	SITE	W x L (m) SITE TYPE	PERCENT OIL	THICKNESS & PENETR. (cm)	OIL TYPES, DEPTH INTERVAL(cm)	SITE SPECIFIC COMMENTS
05/03/91	MAYSAP	1	3 x 15 SURFACE		0-6	MOR	
05/03/91	MAYSAP	2	10 x 50 SURFACE		20-23	LOR	
05/03/91	MAYSAP	3	5 x 20 SURFACE		10-30	MOR	

MAD vs. OG:

COMMENTS:

THIS STREAM AREA CONTAINS 2 AREAS OF SUBSURFACE OIL IN SITES 1 & 2. SITE 3 IS LOCATED 200M FROM THE STREAM. IDEALLY THESE 3 AREAS SHOULD BE MANUALLY TILLED WITH ANY 'HSOR' SEDIMENTS REMOVED. STREAM NOT IN IMMINENT DANGER OF CONTAMINATION.

1991 STREAM FILE LOG HABITAT

STREAM CATALOG # : 226-40-16774
STREAM NAME : Satouche Island

LOCATION : P.W.S.
SEGMENT : LA-021B

[illegible]

ADF&G MULTI-ASSESSMENT DATA FORM

- 1) SURVEY TYPE: BS (SS) 2) REGION: (PWS) KP, CI K, AP
- 3) METHOD: Aerial (Ground) Boat
- 4) DATE: 5/3/91 16) HIGH TIDE TIME: _____ 22) TEAM RECORDER: Aimee Weseman
- 5) START TIME: 1245 17) HIGH TIDE HTS: _____ 23) OBSERVERS: Tom Crowe
- 6) STOP TIME: 1345 18) LOW TIDE TIMES: 1100 24) AGENCY: ADF&G
- 7) SEGMENT #: LA21B 19) LOW TIDE HTS: 1.5 25) PHOTOS TAKEN: Y (N)
- 8) K-UNIT: _____ 20) TIDE HT AT SURVEY: 1.8 to 3.8 ROLL #: _____ FRAMES: _____
- 9) LAT: _____ Ebb Slack (Flood) Slack 26) VIDEO TAKEN: Y (N)
- 10) LONG: _____ 21) USCG QUAD: _____ TAPE # _____
- 11) ASC #: 226-40-16774 START: _____ STOP: _____
- 12) STREAM NAME: _____ 27) SAMPLES TAKEN? Y (N)
- 13) LOCATION: NW LaTouche I SAMPLE I.D. _____
- 14) WAVE EXPOSURE: High (Moderate) Low
- 15) SHORELINE TYPE: Headland Low-lying Rocks (Beach)
- Cove Lagoon Marsh

28) EXTENT OF OIL

	LENGTH m	WIDTH m	M2	%	THICK cm	PEN cm	OIL TYPE
SITE 1	<u>15</u>	<u>3</u>				<u>0-6cm</u>	<u>MOR</u>
SITE 2	<u>50</u>	<u>10</u>				<u>20-23cm</u>	<u>LOIR</u>
SITE 3	<u>20</u>	<u>5</u>				<u>16-30cm</u>	<u>MOR</u>
SITE 4							
SITE 5							

- 29) OVERALL OIL IMPACT:
- H = >6m band with $\geq 50\%$ oil coverage
- M = >6m band with $\leq 50\%$ oil coverage or $\geq 3m$ to $\leq 6m$ with $\geq 10\%$ oil coverage
- (L) = <3m band with $> 10\%$ oil coverage
- VL = $\leq 10\%$ oil coverage regardless of band width
- N = No oil observed
- 30) OIL IN STREAMBED: Y (N)
- 31) OIL ON BEACH ADJACENT TO MOUTH: (Y) N
- 32) SUBSTRATE TYPE (PERCENT):
- Bedrock _____ Boulder _____ Gravel _____ Sand _____ Cobble _____ Mud/Silt _____
- 33) ANADROMOUS FISH PRESENT: Y N
- 34) WILDLIFE OBSERVATION
- | Species | Number |
|--------------------|----------|
| <u>Bald Eagle</u> | <u>1</u> |
| <u>Harbor Seal</u> | <u>1</u> |
| <u>Merganser</u> | <u>1</u> |
| <u>Sand piper</u> | <u>1</u> |

35) COMMENTS: This stream area contains 2 areas of subsurface oil in sites 1 & 2. Site 3 is located 200m from the stream. Ideally these 3 areas should be manually filled with any HSOR sediments removed. Stream not in imminent danger of contamination.

36) PHOTOLOG

FRAME(S)

DESCRIPTION

[illegible]

2/

==

Sample Taken
Photo Frame # and
Shot Direction

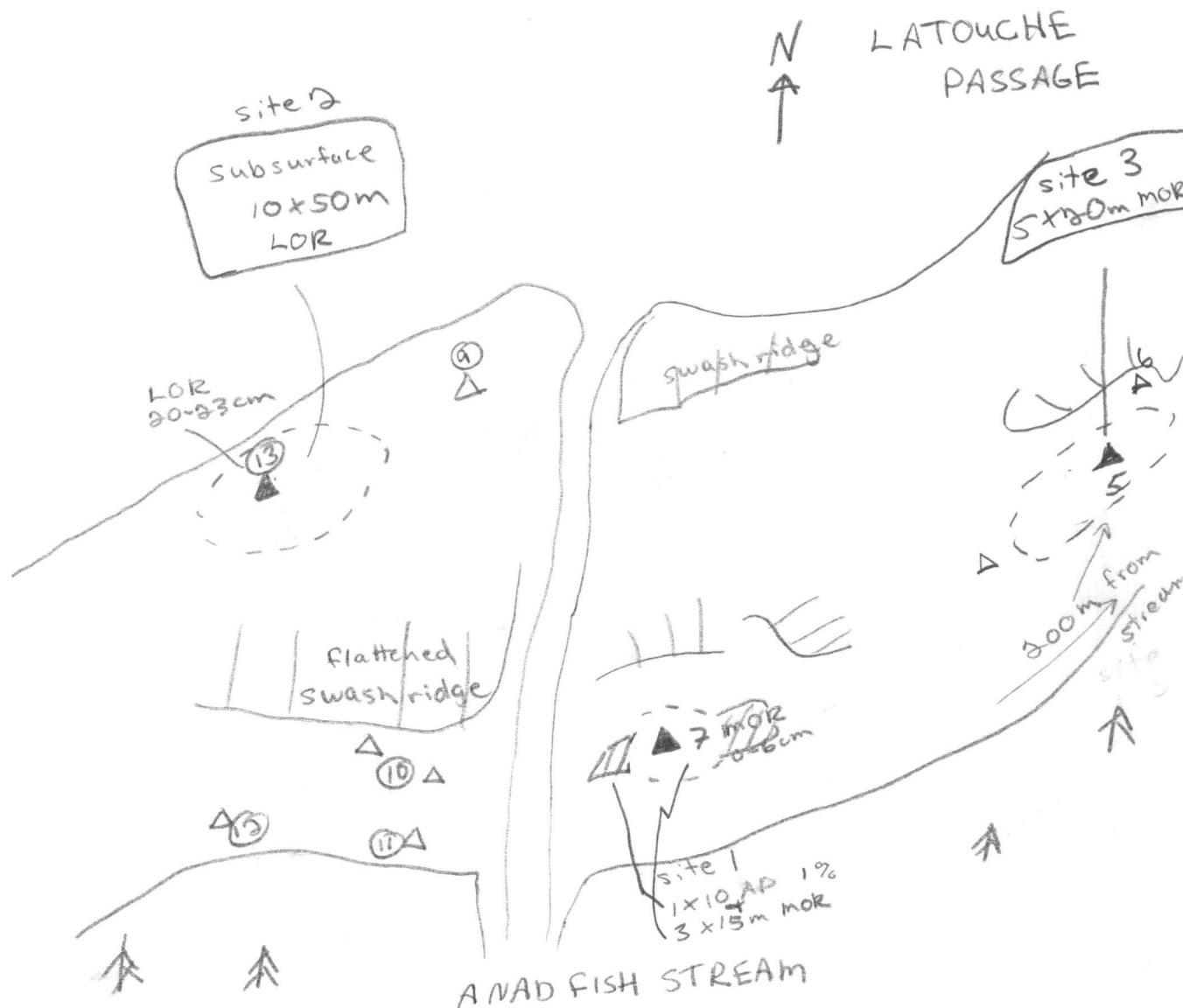
A:EDDATFO
April 3, 1991

LAB 21B

ASC# 226-40-16774

5/3/91 MARSA P

A. Weseman



PAGE 1 OF 2

Subsurface oil was limited to three patches (see map). The northernmost patch was to 35 cm (M-LOR) in LITZ, whereas the other two were in MITZ/LITZ with M-LOR to < 30 cm depths.

PAGE 2 OF 2

DATE 05 / 03 / 91

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

LOG COMMENTS:

LA-021-A

XX Bedrock

↑↑ Trees

0 50 100
Meters

LATOUCHE
PASSAGE

LA-021-B

05/03/91

OG. Map

D. Little

1200 - 1340

SUBSURFACE OIL
10 X 50 M
HOR/MOR

B 1 x 10
HOR 1%
AP 1%

A 3 x 70 m
5% ST
occ. AP/SOR
4%

Large
Fallen Tree

ANAD.
STREAM

226-40-1677b

Alders

SUBSURFACE OIL
10 X 50 M
LOR

Swash
ridges

'normal'
ridge much
flattened

Bedrock

5 x 20 m MOR
OR SUBSURFACE

LATOUCHE
ISLAND

SUBSURFACE
OIL 3 X 15 M
MOR

Alders

Bedrock

ANAD. STREAM

226-40-16774

D1+D2 1 x 2 m
each
41% AP

	TD	OIL	clean below	shreen	seeds	w/T	zone
13	30	4 LOR 20-23	Y	R	pc-gs	-	LITZ
14	30	N	Y	N	sg-gsc	-	UITZ
15	25	N	Y	N	psg gsc	-	MITZ
16	10	N	Y	N	cbp-pg	-	LITZ

PIT#	TD	OIL	clean below	shreen	seeds	w/T	zone
1	40	4 MOR 25-35	Y	R	pgs-sg	-	UITZ
2	35	4 HOR 0-35	N	B/R	cp-gps	20	UITZ
3	35	N	Y	N	pg-gs	30	MITZ
4	25	N	Y	N	pg-gps	-	UITZ
5	30	4 MOR 10-30	N	B/R	cp-g-gps	30	MITZ
6	25	N	Y	N	cp-gs	20	MITZ
7	20	4 OR(M) 0-6	Y	R	cgp-spg	-	MITZ
8	30	N	Y	N	p-gp	-	LITZ
9	25	N	Y	N	p-gsp	-	LITZ
10	35	N	Y	N	p-gsp	-	MITZ
11	30	N	Y	N	p-gs	-	UITZ

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6
 SEGMENT # LA-021
 SUBDIVISION B
 SEA STATE 2-3 ft.
 PHOTOGRAPHS: ROLL #
 DATE 5/3/91
 TIDAL HEIGHT (Range) +1 1/2 to +3 1/2 feet
 BIOLOGIST T. R. Schroeder
 WIND SPEED/DIRECTION NE. 20 mph
 FRAME #

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

(A, B & C) = Biological community very limited throughout entire beach segment. Upper to mid intertidal zone very low in productivity. Thin line of fucus belt was present in LITZ on a rising tide north of the first stream (A). Mussels, Littorine snails, sand fleas and barnacles were present but not abundant.

(D, E, & F) = Large scrubber berms or ridges along stream (B) at mouth. Area had very little vegetation.

Again, this beach segment appeared to be generally low in productivity in the intertidal area. A fair growth of fucus belt with barnacles, Littorine snails, hermit crabs and limpet trails were located in a reef outcropping between the two streams. The tide was rising and prevented an adequate observation of the LITZ above the +1 foot tide level. Any cleanup considered for this area should minimize the impact to this reef area and the LITZ north of stream (A).

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1 (Bald)	1	
Seabirds			
Waterfowl	1 (Merganser)	4	
Gulls/Kittiwakes	2 (Herring Gull, Kittiwake)	300+	
Shorebirds	1 (Sanderling)	12	
Corvids	1 (Raven)	2	
Other Birds			

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)	2 Sea Lions		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

LA-021-B 5/3/91
 Bio. Map T.A. Schroeder
 1200-1340

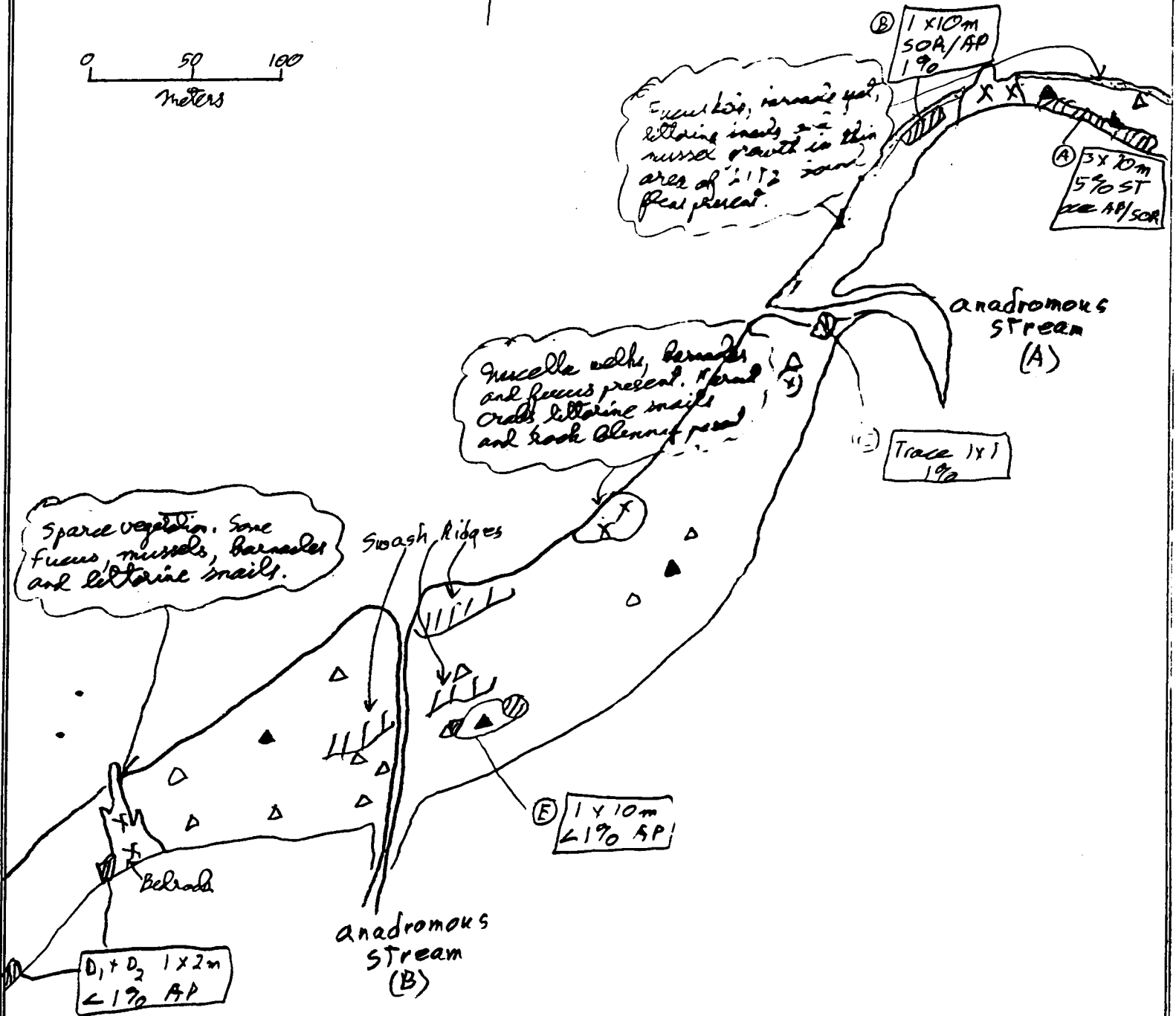
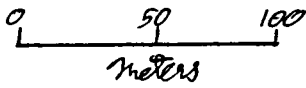


Photo Locations

#12 - 16



LA-021-B

05/03/91

OG. Map

D. I. Little

1200 - 1340

LATOUCHE
PASSAGE

E 1 x 10
SOR 10%
AP 10%

A 3 x 70m
5% ST
OCC. AP/SOR

C TR 1 x 1
10%

ANAD.
STREAM

Large
Fallen Tree

Swash
ridges

Bedrock

flattened

LATOUCHE
ISLAND

Bedrock

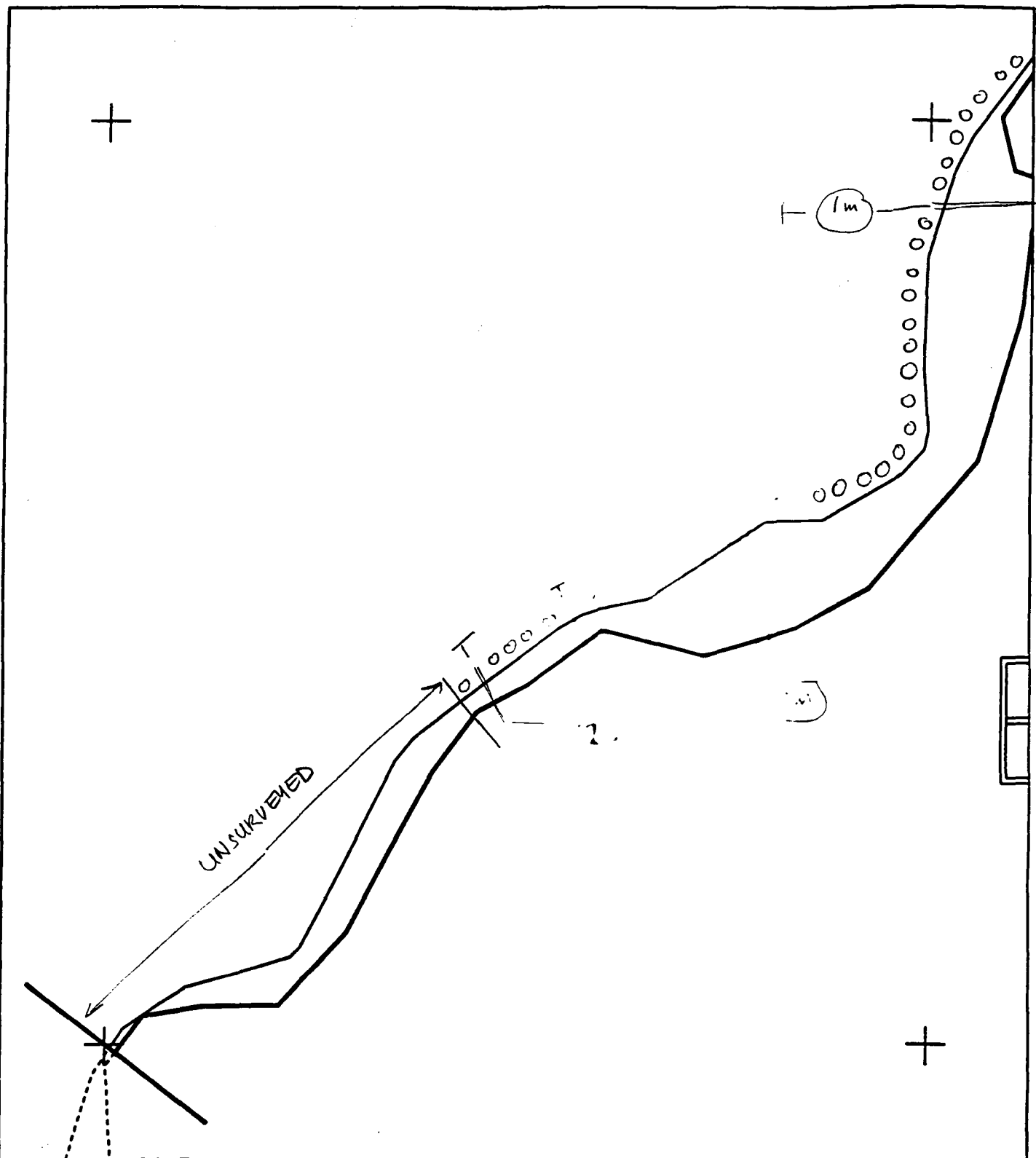
ANAD. STREAM

D1 + D2 1 x 2 m
4 1/6 AP each

	TD	OIL	clean below	shewn	seeds	w/T	zone
13	30	4 LOR 20-23	4	-	pc-gs	-	LITZ
14	30	N	4	N	sq-gsc	-	UITZ
15	25	N	4	N	ssg gsc	-	MITZ

PIT#	TD	OIL	clean below	shewn	seeds	w/T	zone
1	40	4 MOR 25-35	4	N	pgs-sg	-	UITZ
2	35	4 MOR	N	B/R	cp-gps	20	UITZ
3	35	N	4	N	pg-gs	30	MITZ
4	25	N	4	N	pg-gps	-	UITZ
5	30	MOR 10-30	N	B/R	cp-gps	30	MITZ
6	25	N	4	N	cp-gs	20	MITZ
7	20	4 OR(M) 0-6	4	N	cgp-spg	-	MITZ
8	30	N	4	N	p-gp	-	LITZ
9	25	N	4	N	p-gsp	-	LITZ
10	35	N	4	N	p-gsp	-	MITZ
11	30	N	4	N	p-gs	-	UITZ

12 75 N 4 N 0 ss MITZ

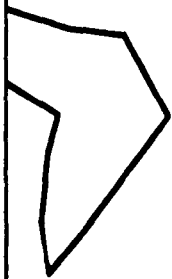


XXXX	Wide	LA021 B ADEC Subsegment Length: 170'± METERS 0 100 200 AK State Plane Zone 4 plu021ba	Subdivision Field Map Map Key: PWSLA021Ba Name: <u>DAVID LITTLE</u> Date: <u>05/03/91</u> Date Entered:
////	Medium		
----	Narrow		
TTTT	Very Light		
0000	No Oil		

00
| | | | 000

+

+



B

+

+

XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

LA021 B

ADEC Subsegment Length: 1707m

METERS

100 200

AK State Plane Zone 4
pld021bb



Subdivision Field Map

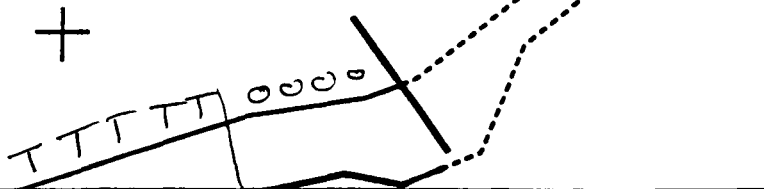
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Name: DAVID LITTLE

Date: 05/03/91

Date Entered:

21

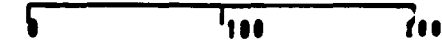


XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

LA021 B

ADEC Subsegment Length: 1707m

METERS



AK State Plane Zone 4
pl0021b0



Subdivision Field Map

Map Key: PWSLA021Bc

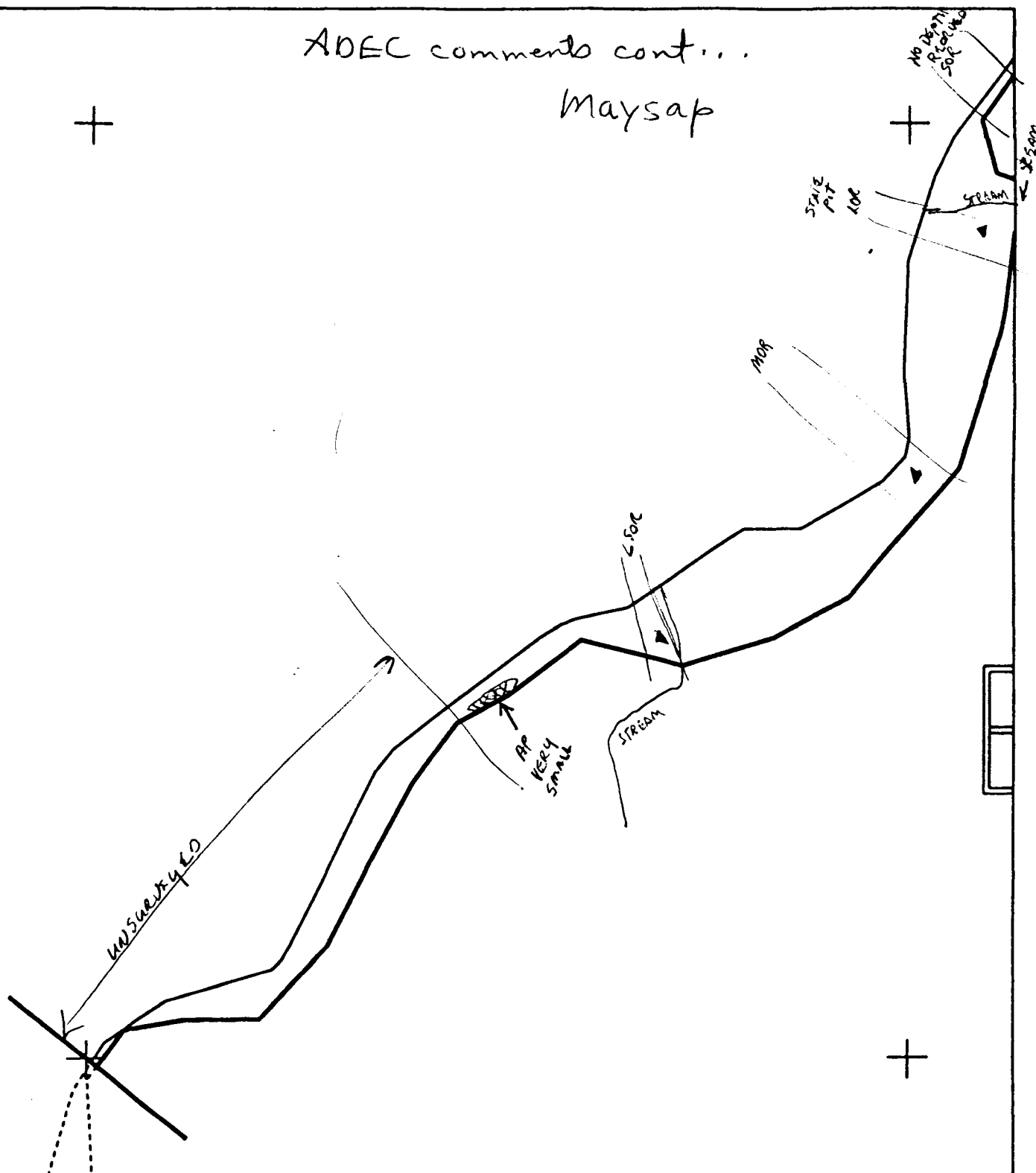
Name: DAVID LITTLE

Date: 05/03/91

Date Entered:

part (3) of (3)

ADEC comments cont... Maysap



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

LA021 B

ADEC Subsegment Length: 1707m

METERS

5 100 200
 AK State Plane Zone 4
 plot21b



Subdivision Field Map

Map Key: PWSLA021B

Name: Tom Crowe

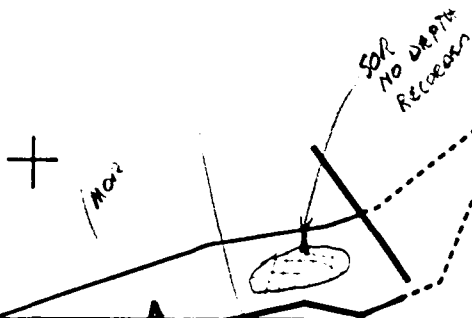
Date: 5/3/91

Date Entered:

ADEC Comments cont...

MAYSAP

21



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

LA021 B

ADEC Subsegment Length: 1707m

METERS

0 100 200

AK State Plane Zone 4
140216c



Subdivision Field Map

Map Key: PUSLA021Bc

Name: Tom Crave

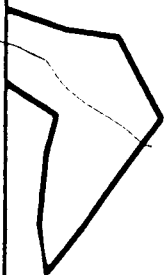
Date: 5/3/91

Date Entered:

use

ADEC comments cont...

MAYSAP



B

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

LA021 B

ADEC Subsegment Length: 1707m

METERS

0 100 200

AK State Plane Zone 4
pl0021bb



Subdivision Field Map

Map Key: PWSLA021Bb

Name: Tom Crave

Date: 5/3/91

Date Entered:

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 6 SEGMENT LA-021 SUBDIVISION B DATE 5/3/91

ADEC/AOF+9

NAME TOM CROWE

SIGNATURE Tom Crowe

AUSTRORIPARIAN STREAMS / SUBSISTANCE USE AREA

☐ NTR ☒ TREATMENT RECOMMENDED

VERY LITTLE OILING WAS OBSERVED AT THE ^(BOTH) STREAM AREAS. VERY LITTLE OR WAS DISCOVERED IN A PIT ON THE LEFT SIDE FACING DOWNSTREAM 4 METERS FROM THE STREAM 226-40-16774 NOT LOGGED ON OG MAP. ON THE RIGHT SIDE OF THIS STREAM A 3X15 METER BAND OF BURIED OIL WAS DISCOVERED (PIT #7). VARIOUS OTHER SMALL PATCHES OF SO2 AND MOR WERE DISCOVERED ALONG THIS SUBSEGMENT. THESE AREAS SHOULD ALL BE MANUALLY TILLED WITH SO2 SEDIMENTS REMOVED.

EXXON

NAME Scott A. Nauman

SIGNATURE Scott A. Nauman

☒ NTR

This is a subdivision where its very difficult to see any evidence of oil having ever been there. Surface oiling is almost non-existent. Subsurface oil is very patchy and represents no threat to the streams. The intertidal community is healthy and we observed a eagle, a pair of seals and hundreds of birds. I see absolutely no rational basis for treatment.

LANDMANAGER

NAME _____ OF _____

SIGNATURE _____

☐ NTR

USCG/NOAA

NAME CWO SPURR / Rebecca Hoff

SIGNATURE RT Spurr / Rebecca Hoff

☒ NTR

This segment was largely free of oil, especially areas near the two streams. One area with subsurface oil (Area A) was found, + this should be left to weather naturally, since it presents no obvious source of contamination to biological resources