

IA-015C ASC 16782
NORTH EAST SIDE OF LA TOUCHE ISLAND

ACE 1369638



Pre ANADSCAT-90

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: [redacted]

4 START TIME: 0737 16 HIGH TIDE HTS: 1 22 OBSERVERS: Tom Crowl

5 STOP TIME: 0748 17 LOW TIDE TIMES: 1 23 AGENCY: ADF&G LSW

6 SEGMENT #: LA015C 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

13 LOCATION: LATOUCHER ISLAND

14 DESCRIPTION: _____

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 X
Gravel X Sand _____ Mud/silt _____

36 CATALOGED ANAD. FISH SREAM? (Y) N
226-40-LSW

37 CATALOG #: 16782

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

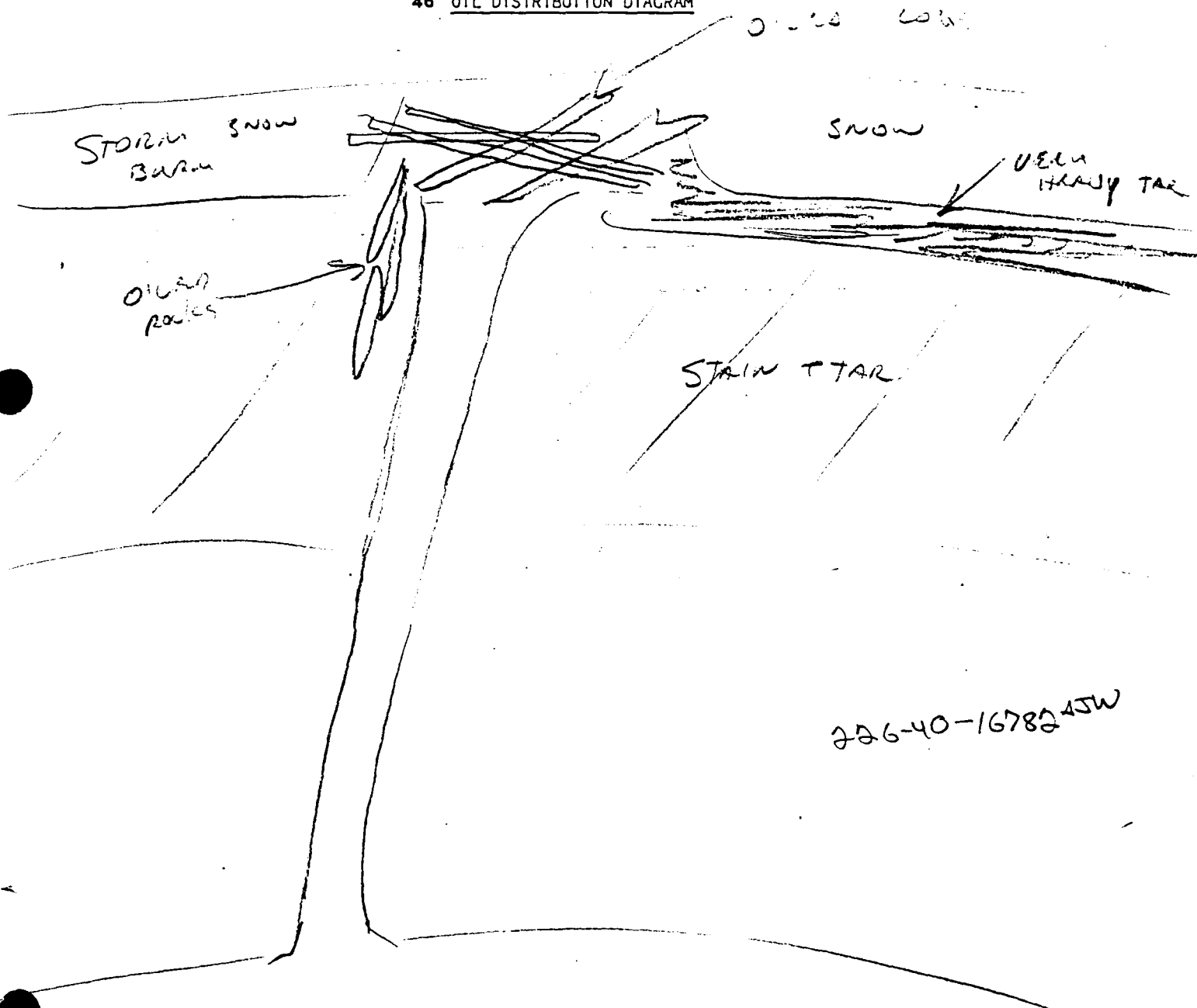
Species	Aerial	Ground

COMMENTS: SNOW GIVEN OFF INTO CREEK WHEN SUBSTRATE DISTURBED
OIL VERY HEAVY IS STORM BURN + AT MOUTH OF CREEK. STORM
BURN IS BURIED BY SNOW.

NAME(S)

DESCRIPTION

46 OIL DISTRIBUTION DIAGRAM



* Sample taken
 * Photo frame # and
 shot direction.

ACE 7379670

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

ASC NUMBER: 226-40-16782
 SURVEY TYPE:
 METHOD:
 DATE: 4/12/90
 START TIME:
 STOP TIME:

TEAM RECORDER:
 OBSERVERS:
 AGENCY(IES):
 PHOTOS TAKEN?
 Roll #: Frames:
 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 cm	OIL TYPE
SITE 1							AP/OP
SITE 2							
SITE 3							
SITE 4							
SITE 5							

OVERALL OIL IMPACT: H

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 banks.



ANASCAT-90

4

ADF&G MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: ES SS DS TS AVS SC&A 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: 1150 16 HIGH TIDE HTS: 9.0', 9.4' 22 OBSERVERS: T. CROWE

5 STOP TIME: 1320 17 LOW TIDE TIMES: 0400 11634 23 AGENCY: ADFG

6 SEGMENT #: LA-013 18 LOW TIDE HTS: 4.5' 11.6' 24 PHOTOS TAKEN: 11/1

7 STATION #: 19 TIDE HT AT SURVEY: 4.48' Roll #: Frame:

8 K-UNIT: Ebb Slack Flood Slack 25 VIDEO TAKEN: Y N TAPES: 90TWCOO1AN

9 STAT AREA: 20 USCG QUAD: SEWARD A-3 Start: 0421 End: 0708

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

12 SOURCE: Map Loran Oil

13 LOCATION: NE LATOUCHE Sediment

14 DESCRIPTION: E. OF SLEEPY BAY Biological

Water

EXTENT OF OIL

36 CATALOGED ANAD. FISH SREAM? Y N

37 CATALOG #: 226-40-16782

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: MOUTH

43 ANADROMOUS FISH PRESENT? Y N FRY

44 ANADROMOUS FISH OBSERVATION PRESUMED

Species Aerial Ground

27 SURFACE COVERAGE

SHORELINE				STREAM			
L	M	M2	%	L	M	M2	%
100	25		75	30	5		2

28 SURFACE THICKNESS

29 PENETRATION

20cm	80cm	10cm					
------	------	------	--	--	--	--	--

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 5 Cobble 60 Gravel 35 Sand Mud/silt

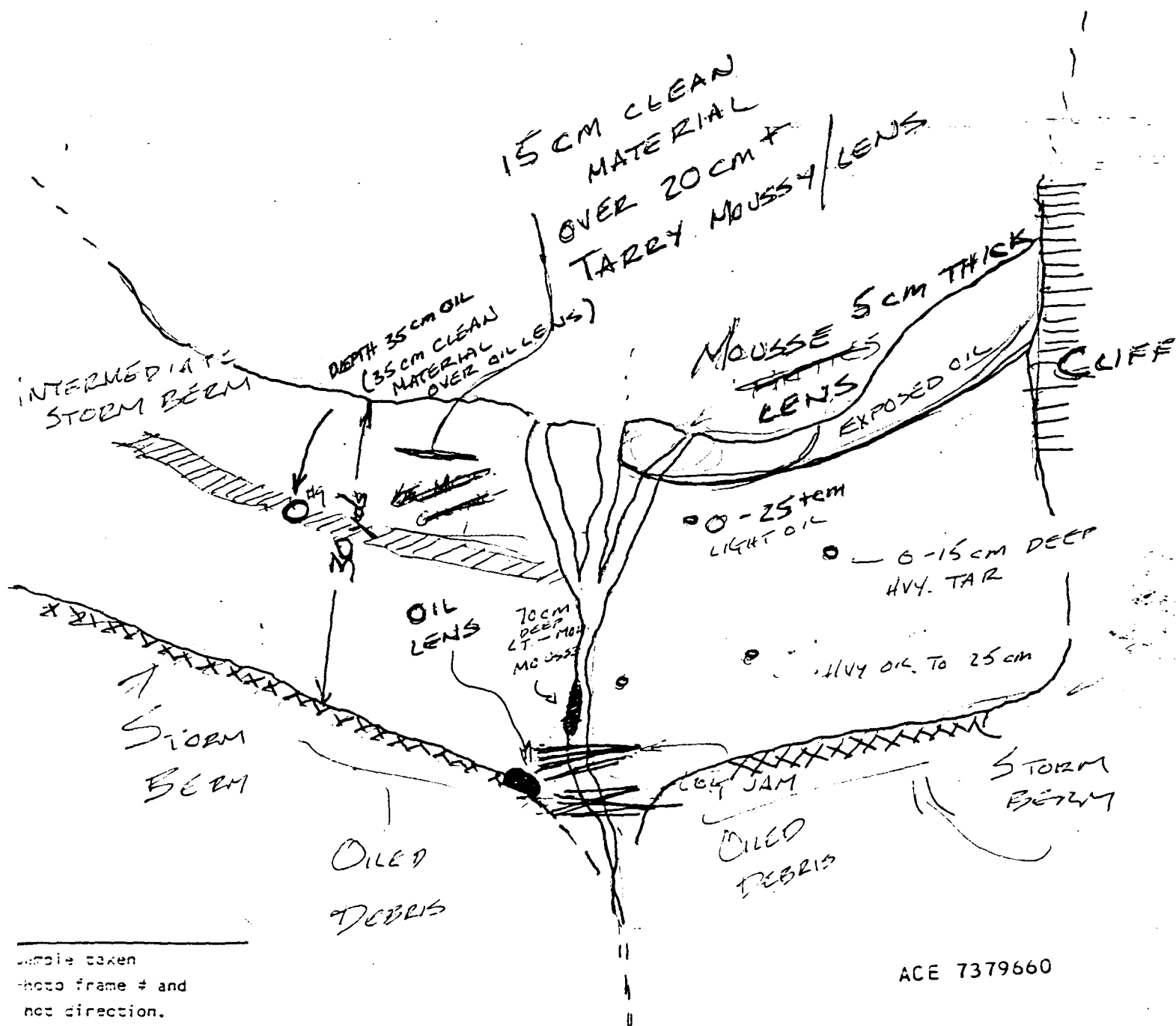
COMMENTS: BASED ON THE 10 PITS OUR GROUP DUG, IT IS MY JUDGEMENT THAT A LENS OF OIL EXTENDS THROUGH THE ZONE OF INTEREST. THIS LENS IS EXPOSED AT THE STORM BERM AND THE LOWER INTERTIDAL AND BURIED BY 15 CM + THICK COBBLE/GRAVEL IN THE MID-INTERTIDAL. MOUSSE/TAR IS IN THE STREAM CHANNEL @ THE LOWER INTERTIDAL.

ACE 7379659

DESCRIPTION

RECOMMENDATIONS: REMOVE OILED DEBRIS FROM STORM BERM. MANUALLY REMOVE ALL OIL FROM STREAM CHANNEL (CHANNEL IS MOBILE AND BROAD AT MOUTH. RMV OIL 15 YDS ON EITHER SIDE OF CURRENT CHANNEL).

48 OIL DISTRIBUTION DIAGRAM



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

ASC NUMBER: 226-40-16782	TEAM RECORDER:
SURVEY TYPE:	OBSERVERS:
METHOD:	
DATE: 4/20/90	AGENCY(IES):
START TIME:	
STOP TIME:	
	PHOTOS TAKEN?
	Roll #: Frames:
	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 cm	OIL TYPE
SITE 1						.35	OP MS lens
SITE 2						.05	MS lens
ITE 3						.15	OP
SITE 4							
SITE 5							

OVERALL OIL IMPACT: H

OIL IN STREAM CHANNEL?

SUBSTRATE

Bedrock	Granule
Boulder	Sand
Cobble	Silt
Pebble	Veget.

OIL ON BEACH WITHIN 50M OF STREAM MOUTH?

SPECIES					
COUNT					

COMMENTS:

lens of oil exposed irregularly along both banks of channel. Oiled debris under logs along storm berm.

Recommendation - Remove oiled debris from storm berm. Manually remove all oil from stream channel (Channel is mobile and broad at mouth. RMV oil 15 yds on either side of current channel.)

ADF&G MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS SS CS TS AVS SC-A MMS PTA

2 REGION: PWS KP,CI K,AP

METHOD: Aerial Ground Boat

3 DATE: 11-20-90

15 HIGH TIDE TIMES: 1

21 TEAM RECORDER: RLG

4 START TIME: 1200

16 HIGH TIDE HTS: 1

22 OBSERVERS: AW

5 STOP TIME: 1330

17 LOW TIDE TIMES: 1

23 AGENCY: ADFG

6 SEGMENT #: LAIS

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 TAPES: 90RLGSS

9 STAT AREA:

20 USCG QUAD:

Start: 0876 End: 1010

10 LAT:

11 LONG:

26 SAMPLES TAKEN? Y (N) Number

12 SOURCE: Map Loran

Oil

13 LOCATION: S A-3 Labrador Is.

Sediment

14 DESCRIPTION:

Biological

Water

EXTENT OF OIL

	SHORELINE				STREAM			
	L	W	M ²	%	L	W	M ²	%
27 SURFACE COVERAGE	<u>100</u>	<u>75</u>	<u>25</u>	<u>75</u>				
28 SURFACE THICKNESS	<u>Film in most cases</u>							
29 PENETRATION	<u>25 cm</u>	<u>75</u>	<u>10</u>	<u>10 cm</u>				

30 OVERALL OIL IMPACT: N VL L M H TL

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 ✓
Gravel ✓ Sand ✓ Mud/silt

36 CATALOGED ANAD. FISH SREAM? (Y) N

37 CATALOG #: 226-40-16782

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: 75% of area in 50yd either side of stream - from high tide to
mid-inter tidal is oiled. Deapest penetration 25 cm.
Surface rock - stained under side fins in some areas coated
thickly with pooled mobile oil.
Thin bands down to stream's edge on path seen as well
as upper stream berm bands.

Recommendations:

(or mid sized cat (bulldozer with rock ripper))

1. Shovel removal of mousse paddies/farmats in upper/middle/lower storm berms and any where else found.
2. removal of severely oiled logs in jam over creek
3. Pull down storm berms (upper 2) and wash with steam or hot water in addition to cold water deluge system.
4. Absorbent off stream while doing this to prevent re-oiling
5. Till & wash both sides of stream bank where oiled logs occur.
6. Till & wash oiled tongue which shears in center of stream
7. Rip up lower + middle storm berms with tracked cat and rock ripper to bring subsurface oiled gravel and rubble to surface and treat with steam or hot water with cold deluge.
8. No bio remediation recommended.
9. Boom site and collect oil with skimmer as necessary during washing.

Comments by Ken Critchlow:

I agree with ADFG's recommendations, except that bioremediation should be used as last step. KRC

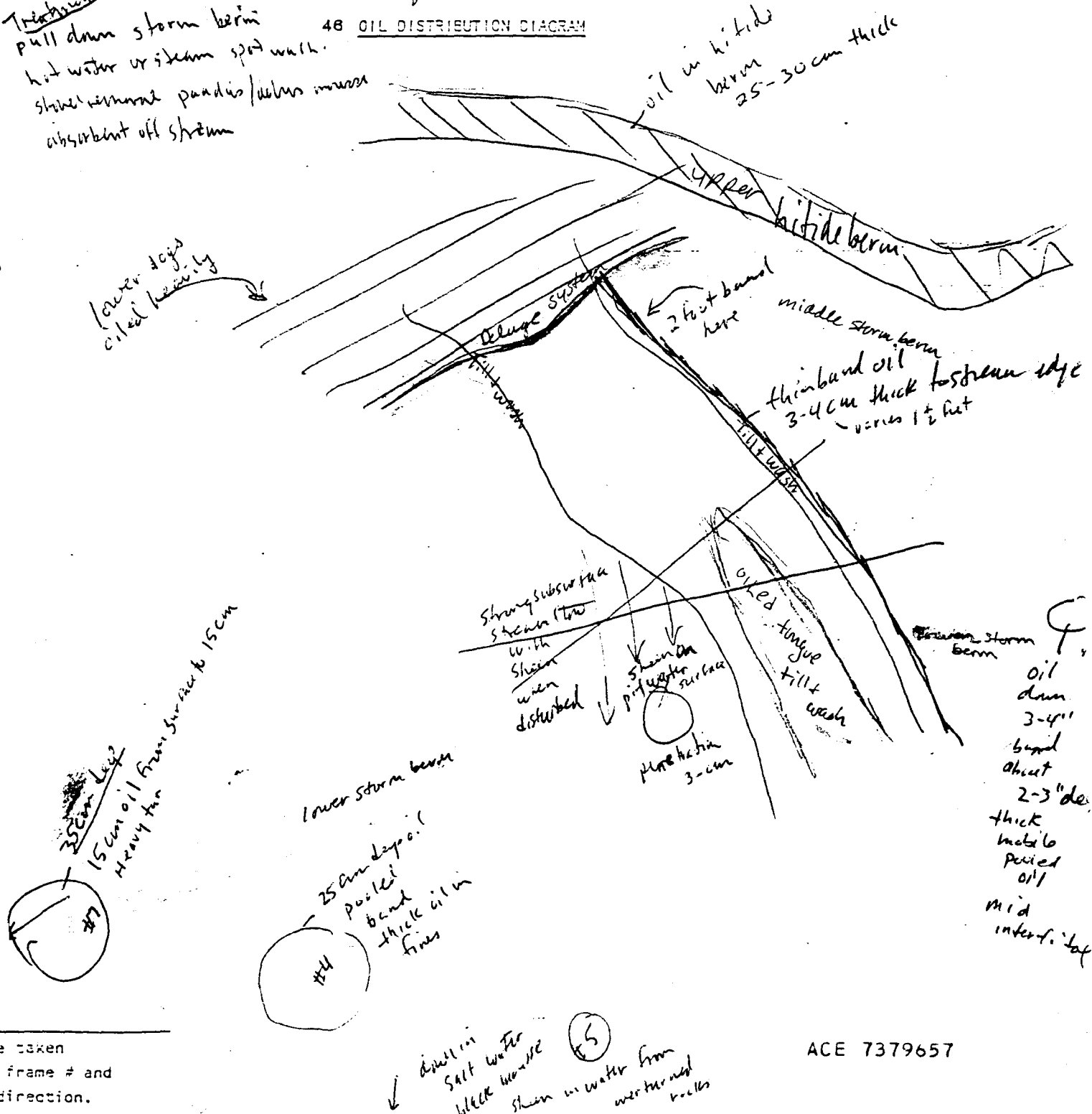
A 015
226-40-16782

45 PHOTOLOG

DESCRIPTION	DESCRIPTION
Recommendations	Brood areas of subsurface oil under armour coating of rock/cobble oil from 1" below surface to 4-5" penetration and deeper. Pull down storm berm hot water or steam wash with cold water deluge skinner remove paddles of inhouse and oiled debris (logs etc) absorbent off stream to prevent floating Rip up lower storm berm and other lower subsurface oil with rock ripper on cat (tracked) and wash with steam or hot water with cold water deluge / till wash both sides of stream bank See back page

Treatment
Pull down storm berm
hot water or steam spot wash.
skinner remove paddles/debris inhouse
absorbent off stream

48 OIL DISTRIBUTION DIAGRAM



sample taken
photo frame # and
spot direction.

ACE 7379657

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: 226-40-16782
 SURVEY TYPE:
 METHOD:
 DATE: 4/20/90
 START TIME:
 STOP TIME:

TEAM RECORDER:
 OBSERVERS:
 AGENCY(IES):
 PHOTOS TAKEN?
 Roll #: Frames:
 VIDEO TAKEN? Tape Number:
 Counter Start:

SAMPLES TAKEN?

SAMPLE I.D. NUMBERS: 1.
 4.

2.
 5.
 3.
 6.

3 cm?

	LENGTH m	WIDTH m	M2	%	THICK cm	PEN cm	OIL TYPE
SITE 1					.03		MS
SITE 2							OR/FL
SITE 3						.15	AP/OR
SITE 4							
SITE 5							

OVERALL OIL IMPACT: ~~X~~ H

OIL IN STREAM CHANNEL?

SUBSTRATE

Bedrock	Granule
Boulder	Sand
Cobble	Silt
Pebble	Veget.

OIL ON BEACH WITHIN 50M OF STREAM MOUTH?

SPECIES					
COUNT					

COMMENTS: 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: 0800 17) HIGH TIDE HTS: _____

6) STOP TIME: 1000 18) LOW TIDE TIMES: 1100

7) SEGMENT #: LA015C 19) LOW TIDE HTS: +5

8) K-UNIT: _____ 20) TIDE HT AT SURVEY: +5 to +.8 ROLL #: _____ FRAMES: _____

9) LAT: _____ ☒ EDD ☐ Slack ☐ Flood ☐ Slack

10) LONG: _____ 21) USCG QUAD: _____

11) ASC #: 226-40-16782

12) STREAM NAME: _____

13) LOCATION: _____

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

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	80	5		25	3-5 cm		HSOR/AP
SITE 2	35	15				0-25cm	HOR/OP
SITE 3	280	25				0-30cm	LOR
SITE 4	140	50				5-45cm	MOR
SITE 5	30	5				0-25cm	HOR

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 10 Boulder 10 Gravel 25 Sand 5 Cobble 50 Mud/Silt 1

33) ANADROMOUS FISH PRESENT: Y N

34) WILDLIFE OBSERVATION

Species	Number
cormorant	12
eagle (bald) bald eagle	3
goldeneye	15
widgeon	15
sandpiper	6
sea otter	1

35) COMMENTS: This beach/stream area still contains significant amounts of oil - both surface & subsurface. A definite lense can be viewed within the steep-sided stream banks. Located 20-35cm beneath the surface the edges of it slough off to the stream. Heavily oiled organics precariously reside on a log jam within the stream in the U/T & swash zone. 15 bags removed from log jam > 50% left. Heavy surface oiling in boulder field west of stream in site 1. Treatment should be comprehensive - Manual removal AP/HSOR sediments

over

FRAME(S)DESCRIPTION

Comments Cont. . .

Mechanical tilling on an incoming tide of sites Q, 445. It may need several tillings.

Since oil extends to stream banks - Title 16 permit needed to treat. Stream bank reconstruct[?]
Adequate sorbent & snare boom should be employed to recover released oil
& protect stream bed.

pit information

pit #	oil	zone
1	MOR 10-45cm	UITZ
2	MOR 5-45cm	MITZ
3	LOR 5-15cm	MITZ
4	MOR 0-25cm	MITZ
5	MOR 0-15cm	UITZ
6	TR	
7	MOR 20-40cm	MITZ
8	TR 18-20cm	MITZ
9	TR 25-30cm	MITZ
10	LOR 18-20	UITZ
11	OF 20-25m	UITZ
12	LOR " " MITZ	
13	OF 25-30	
14	MOR 0-10cm	
15	AP/OP 10-25cm	UITZ
15	MOR 5-20cm	

site 2
5-25cm

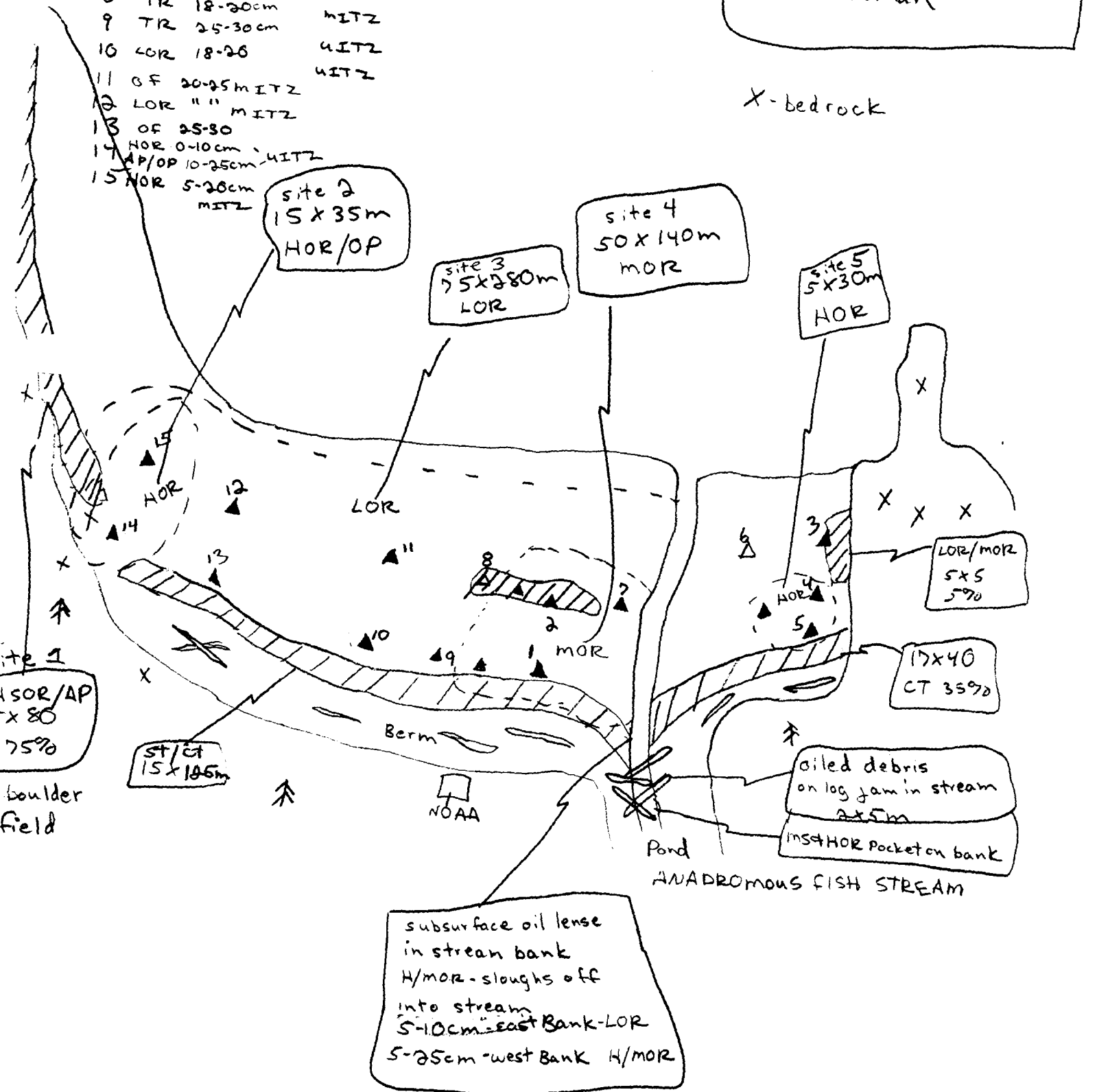
LAO15C

ASC# 226-40-16782
5/2/10

5/3/91 MAXSAP

A. Weseman

X-bedrock

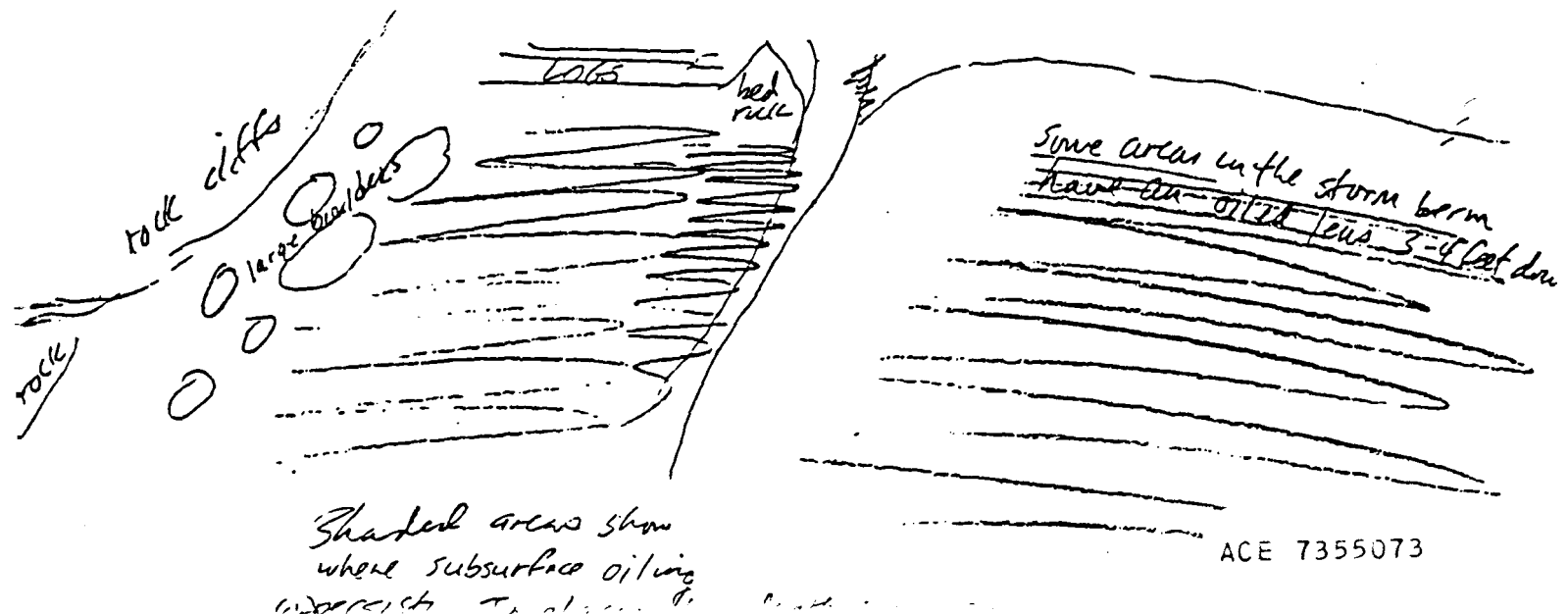


ANADROMOUS FISH STREAMS/OILING CONDITION
PWS

Segment # LA 015C ASC# 226-40-16782 Location La Roche Is.
Date 8/15/90 Recorder/Observer T. Curre / R. Curre
Oil in streambed Yes Oil on streambanks Yes
Oil within 50m of mouth Yes Anadromous Fish present jumping off shore

Description of oil and comments This stream still has some of the heaviest oiling of any salmon stream in the Sound. Oiling conditions on either side of the stream from Upr. ITZ to Upper 1/2 of LITZ consist of OP, Hvy OP, mudd. Due to a redistribution of oiling conditions, this heavy OP was left during the cleanup with the tracked backhoe. It could use further removal and/or washing such as LA 20B required.

Oil Distribution Diagram



ACE 7355073

CATALOG NUMBER: 2264016782 SEGMENT#: LA015 C LOCATION: LATOUCHE ISLAND, NORTHEAST SIDE							SEQ:
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-ANADSCAT	1	SURF/SUB			AP OR ST	WEST SIDE: VERY HEAVY TAR ON STORM BERM IN STZ, OILED LOGS ACROSS STREAM, STAIN AND TAR IN UITZ.
04/12/90	PRE-ANADSCAT	2	SURFACE			AP ST CT	EAST SIDE: OILED ROCKS ALONG STREAM BANK, STAIN AND TAR IN UITZ.

MAD vs. OG:
 COMMENTS:
 SHEEN GIVEN OFF INTO CREEK WHEN SUBSTRATE DISTURBED. OIL VERY HEAVY IN STORM BERM AND AT MOUTH OF CREEK. STORM BERM IS BURIED BY SNOW. OIL ON STREAM BANKS.

CATALOG NUMBER: 2264016782 SEGMENT#: LA015 C LOCATION: LATOUCHE ISLAND, NORTHEAST SIDE							SEQ:
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		5	MS	EAST SIDE: MS BAND EXTENDING INTO DELTA IN LITZ.
04/20/90	ANADSCAT	2	SUBSURF		15-25	OR	EAST SIDE: 2 PITS IN MITZ SHOW HOR AT 0-15CM, AND LOR AT 0-25CM.
04/20/90	ANADSCAT	3	SURFACE		>70	OL MS	EAST, WEST STREAM BANK AND STORM BERM: OIL LENSE AND MOUSSE.
04/20/90	ANADSCAT	4	SUBSURF			OL >35	WEST SIDE IN LITZ: OIL LENSE IN SWASH BERM UNDER 35CM OF CLEAN MATERIAL.
04/20/90	ANADSCAT	5	SURF/SUB		25	OR	EAST SIDE IN UMITZ: PIT #4 SHOWS HOR FROM 0-25CM.
04/20/90	ANADSCAT	6	SUBSURF		>20 35	OL 15-35	WEST SIDE: >20CM THICK MOUSSE/TAR LENSE UNDER 15CM CLEAN MATERIAL.
04/20/90	ANADSCAT	7	SURFACE			OILED DEBRIS	OILED DEBRIS IN SITZ AND UITZ ON STORM BERM IN BOTH SIDES OF STREAM.

MAD vs. OG:

COMMENTS:

BASED ON THE 10 PITS OUR GROUP DUG, IT IS MY JUDGEMENT THAT A LENSE OF OIL EXTENDS THROUGH THE ZONE OF INTEREST. THIS LENSE IS EXPOSED AT THE STORM BERM AND THE LOWER INTERTIDAL AND BURIED BY 15CM+ THICK COBBLE/GRAVEL IN THE MID INTERTIDAL. MOUSSE/TAR IS IN THE STREAM CHANNEL AT THE LOWER INTERTIDAL. LENSE OF OIL EXPOSED IRREGULARLY ALONG BOTH BANKS OF CHANNEL. OILED DEBRIS UNDER LOGS ALONG STORM BERM. OIL ON STREAM BANKS. RECOMMENDATIONS: REMOVE OILED DEBRIS FROM STORM BERM. MANUALLY REMOVE ALL OIL FROM STREAM CHANNEL (CHANNEL IS MOBILE AND BROAD AT MOUTH) REMOVE OIL 15 YARDS ON EITHER SIDE OF CURRENT CHANNEL.

CATALOG NUMBER: 2264016782

SEGMENT#: LA015 C

LOCATION: LATOUCHE ISLAND, NORTHEAST SIDE

SEQ:

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 Both SUBSURF		3-45 25cm (pen)	MS FI AP HOR/OP/MOR	EAST SIDE: PITS SHOW OIL LENSE IN MITZ AND STORM BERM.
04/20/90	ANADSCAT	2	Surface Both SUBSURF		25-30 (pen)	MS FI AP HOR/OP/MOR	WEST SIDE OF STREAM AND ON BANK: SKETCH SHOWS OIL LENSE IN MITZ AND UITS TO STREAM BANK, OL IN STORM BERM (25-30CM THICK).

MAD vs. OG:

COMMENTS: ~~for~~ *subsurface oil lense 1-2.5cm thick*
 75% OF AREA ON 50YD EITHER SIDE OF STREAM - FROM HIGH TIDE TO MID INTERTIDAL IS OILED. DEEPEST PENETRATION - 25CM (THIS REFERS TO THE THICKNESS OF THE OIL LENSE PER A. WESEMAN, 10/11/91). SURFACE ROCK STAINED UNDER SIDE FINES IN SOME AREAS COATED THICKLY WITH POOLED MOBILE OIL. THIN BANDS DOWN TO STREAM EDGE ON BOTH SIDES AS WELL AS UPPER STORM BERM BANDS. RECOMMENDATIONS: SHOVEL REMOVAL (OR MIDSIZED CAT - BULLDOZER WITH ROCK RIPPER) OF MOUSSE PATTIES/TARMATS IN UPPER MIDDLE LOWER STORM BERMS AND ANYWHERE ELSE FOUND. REMOVAL OF SEVERELY OILED LOGS IN JAM OVER CREEK. PULL DOWN STORM BERMS (UPPER 2) AND WASH WITH STEAM OR HOT WATER IN ADDITION TO COLD WATER DELUGE SYSTEM. ABSORBENT OFF STREAM WHILE DOING THIS TO PREVENT REOILING. TILL & WASH OILED TONGUE WHICH SHEENS IN CENTER OF STREAM. RIP UP LOWER & MIDDLE STORM BERMS WITH TRACKED CAT AND ROCK RIPPER TO BRING SUBSURFACE OILED GRAVEL AND COBBLE TO SURFACE AND TREAT WITH STEAM OR HOT WATER WITH COLD DELUGE. NO BIOREMEDIATION RECOMMENDED. BOOM SITE AND COLLECT OIL WITH SKIMMER AS NECESSARY DURING WASHING. COMMENTS BY KEN CRITCHLOW: I AGREE WITH ADFG'S RECOMMENDATIONS, EX

CATALOG NUMBER: 2264016782

SEGMENT#: LA015 C

LOCATION: LATOUCHE ISLAND, NORTHEAST SIDE

SEQ:

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	4 x 15 SURF/SUB	11-50	5cm	CT MS 5-10	PIT #8: OIL LENSE 5-10CM, LITZ - EAST SIDE OF STREAM, SILVER SHEEN WAS OBSERVED IN LITZ NEXT TO STREAM DISCHARGE. <i>East side - LITZ - Patchy mousse lense 5-10cm oiled interval</i>
04/20/90	OG'S ANADSCAT	2	2 x 4 SURFACE subsurface	91-100	2	CT AP / OR / OF 5-25 & 5-15	PIT #5: OF 5-25CM AND PIT #7: OR 5-15CM IN BETWEEN SITE 1 AND 2 EAST SIDE OF STREAM MITZ. <i>East side of stream - continuous AP-MITZ - oil lense between 10-20cm thick (larger area)</i>
04/20/90	OG'S ANADSCAT	3	SURF/SUB subsurface	91-100	50 45cm	CT CV MS 5-50cm	SITZ - PIT #6 WITHIN AREA, OR 5-50CM, LAYER OF DARK BROWN MOUSSE, PART OF IT CONTINUOUS UP TO STREAM MOUTH AND UNDER BEACH DRIFT/LOGS. WEST SIDE STORM BERM <i>moussey oil lense - part of it continuous to stream bank</i>
04/20/90	OG'S ANADSCAT	4	SUBSURF		35	OR	PIT #9: OR 5-35CM IN LOWER ITZ, WEST SIDE OF STREAM. <i>West side of stream - MITZ - oil lense 5-35cm oiled interval</i>
04/20/90	OG'S ANADSCAT	5	SUBSURF		45	OR	PIT #3 IN STORM BERM SITZ, EAST SIDE OR 5-45. PIT #1: NO OIL. PIT #2: OF UITS. PIT #4: LOWER DOWN, BUT ABOVE SITE 2, OR 5-20CM. OVER ALL SKETCH SHO

East side - storm berm & UITS - Oil lense - OR oiled interval 5-45 & 5-20cm

MAD vs. OG: CONFLICT - OG MISSES MS LENSE ON WEST SIDE L-MITZ.
COMMENTS:

CATALOG NUMBER: 2264016782				SEGMENT#: LA015 C LOCATION: LATOUCHE ISLAND, NORTHEAST SIDE			SEQ:
DATE	SURVEY	SITE	W x L (m) SITE TYPE	PERCENT OIL	THICKNESS & PENETR. (cm)	OIL TYPES, DEPTH INTERVAL (cm)	SITE SPECIFIC COMMENTS
08/12/90	PRE-ASAP	1	SURF/SUB			OP HOR MS	East side - SITZ - ULITZ - OP HOR MS DIVING CONDITIONS ON EITHER SIDE OF STREAM FROM UPPER UITZ TO UPPER QUARTER OF LITZ CONSIST OF OP, HOR, MS. PER SKETCH (VERY LITTLE DETAIL). EAST SIDE:
08/12/90	PRE-ASAP	2	SURF/SUB			OP HOR MS	West side - SITZ - ULITZ - OP HOR MS DIVING CONDITIONS ON EITHER SIDE OF STREAM FROM UPPER UITZ TO UPPER QUARTER OF LITZ CONSIST OF OP, HOR, MS. PER SKETCH (VERY LITTLE DETAIL). WEST SIDE:

MAD vs. OG:
COMMENTS: some of the heaviest oil of any salmon stream in the sound

CATALOG NUMBER: 2264016782				SEGMENT#: LA015 C LOCATION: LATOUCHE ISLAND, NORTHEAST SIDE			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	5 x 80 SURFACE	75	3-5	HSOR AP	west side of stream - UITZ - heavy tar mat in boulder field - 50+ meters from stream
05/03/91	MAYSAP	2	15 x 35 SURFACE + subsurface		15 thick 0-25 25	HOR/OP / AP 10-25 5-20	west side of stream - surface AP & HOR lense 15cm thick. oil depth intervals (cm) = 10-25, 5-20
05/03/91	MAYSAP	3	75 x 280 SURFACE subsurface		2-5 (thick) 0-30 30	LOR 18-20 20-25 25-30	west side of stream - L - UITZ - 2-5cm thick lense. oil depth intervals (cm) = 18-20, 20-25, 25-30.
05/03/91	MAYSAP	4	50 x 140 SURFACE subsurface		20-40 thick 5-45 45	MOR 10-45 5-45 20-40	west side of stream to stream bank - 20 to 40cm thick oil lense. oil depth intervals (cm) = 10-45, 5-45, 20-40.
05/03/91	MAYSAP	5	5 x 30 SURFACE subsurface		15-25 thick 0-25 25	HOR 0-15 0-25	east side of stream - HOR lense - m & UITZ from 15-25cm thick. oil depth intervals (cm) = 0-15, 0-25.

MAD vs. OG:

COMMENTS:

THIS BEACH/STREAM AREA STILL CONTAINS SIGNIFICANT AMOUNTS OF OIL - BOTH SURFACE ^{F+} & SUBSURFACE. A DEFINITE LENS CAN BE VIEWED WITHIN THE STEEP SIDED STREAM BANKS. LOCATED 20-35CM BENEATH THE SURFACE THE EDGES OF IT SLOUGH OFF INTO THE STREAM. HEAVILY OILED ORGANICS PRECARIOUSLY RESIDE ON A LOG JAM WITHIN THE STREAM IN THE UIT & SWASH ZONE. 15 BAGS REMOVED FROM LOG JAM >50% LEFT. HEAVY SURFACE OILING IN BOULDER FIELD WEST OF STREAM IN SITE #1. TREATMENT SHOULD BE COMPREHENSIVE - MANUAL REMOVAL 'AP/HSOR' SEDIMENTS. MECHANICAL TILLING ON AN INCOMING TIDE OF OF SITES 2, 4 & 5. IT MAY NEED SEVERAL TILLINGS. SINCE OIL EXTENDS TO STREAM BANKS - TITLE 16 PERMIT NEEDED TO TREAT. STREAM BANK RECONSTRUCT. ADEQUATE SORBENT & SNARE BOOM SHOULD BE EMPLOYED TO RECOVER RELEASED OIL & PROTECT STREAMBED. ALSO PRESENT WAS 1 SEA OTTER.

CATALOG NUMBER: 2264016782

SEGMENT#: LA015 C

LOCATION: LATOUCHE ISLAND, NORTHEAST SIDE

SEQ:

DATE	SURVEY	SITE	W x L (m) SITE TYPE	PERCENT OIL	THICKNESS & PENETR. (cm)	OIL TYPES, DEPTH INTERVAL(cm)	SITE SPECIFIC COMMENTS
08/03/91	POST TREATMENT	4	PIT			HOR OP 10-15	
08/03/91	POST TREATMENT	5	PIT			LOR U	
08/03/91	POST TREATMENT	A	16 x 8 SUBSUR		18	OP MOR	
08/03/91	POST TREATMENT	A1	PIT			MOR 1-15	contained within Area A. upper layer.
08/03/91	POST TREATMENT	A1	PIT			HOR OP 16-32	contained within Area A. lower layer.
08/03/91	POST TREATMENT	A2	PIT			LOR	contained within Area A.
08/03/91	POST TREATMENT	A3	PIT			HOR 15-19	contained within Area A.
08/03/91	POST TREATMENT	B	16 x 25 SUBSUR			HOR MOR LOR	
08/03/91	POST TREATMENT	B6	PIT			OP 15-27	BERM
08/03/91	POST TREATMENT	C	12 x 12 SUBSUR			LOR	

08/03/91	POST TREATMENT	C8	PIT			LOR TR 1-27	
08/03/91	POST TREATMENT	D	6 x 9 SUBSUR		30	HOR	
08/03/91	POST TREATMENT	D7	PIT			LOR 0-12	25M FROM STREAM
08/03/91	POST TREATMENT	D7	PIT			HOR 12-45	25M FROM STREAM
08/03/91	POST TREATMENT	D9	PIT			HOR 2-22	DISCONTINUOUS
08/03/91	POST TREATMENT	E	15 x 50 SUBSUR			MOR	
08/03/91	POST TREATMENT	G10	PIT			HOR OP 17-32	ON CUT EDGE OF STORM BERM-TOP OF TILLED AREA
08/03/91	POST TREATMENT	G11	PIT			HOR OP 0-18	ON CUT EDGE OF STORM BERM-TOP OF TILLED AREA
08/03/91	POST TREATMENT	G11	PIT			HOR MOR 18-60	ON CUT EDGE OF STORM BERM-TOP OF TILLED AREA

MAD vs. OG:

COMMENTS:

DUE TO RECENT TILLING OF SUBSURFACE OIL AREAS WE WERE UNABLE TO DETERMINE CURRENT OIL CONDITIONS IN AREAS A, B, E, F AND G. WE OBSERVED NEWLY EXPOSED OP/HOR SEDIMENTS ON THE SURFACE OF AREAS A, B, G AND MOR SEDIMENT ON THE SURFACE OF AREAS E AND F. PITS WERE DUG INTO STORM BERM WHERE OBVIOUS OIL LENSES WERE STILL INTACT. AREA D STILL CONTAINED A STRATIFIED LENS EXTENDING INTO STORM BERM. SOME 'LOR' SEDIMENTS HAD BEEN PULLED AWAY FROM STREAM BANK IN AREA C, BUT APPRECIABLE QUANTITIES REMAIN. OILED ORGANICS ARE STILL PRESENT IN LOG JAM IN STREAM. AREA OF AP/HSOR WEST OF TILLED AREAS WAS NOT SURVEYED. *SURVEY FOCUSED ON OILED AREAS TREATED IN 1991. REASSESS IN 1992.

OG SUPPLEMENTAL INFO TO MAD

RECORDER: Fink

RED-DATE: 10/4/91

PAGE

CATALOG NUMBER: 226-40-16782

STREAM NAME:

LOCATION: Latauche Is. east side

SEGMENT NUMBER: CA015C

SHORELINE TYPE:

DATE:

TIME:

OG vs. MAD: Conflict OG misses his lens on west side 1-MITZ

[illegible]

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

LA-15
AGREEMENT TO SET ASIDE
SPECIFIED OILED BEACHES FOR SCIENTIFIC STUDY

The Federal On Scene Coordinator (FOSC) on behalf of the Federal Government, the Commissioner of the Alaska Department of Environmental Conservation (ADEC) on behalf of the State of Alaska, and Exxon Company U.S.A. (Exxon), agree to set aside and leave untreated for up to ten years the beach sites identified on attachment "A", for the purpose of scientific study.

It is the expectation of all signatories that the State and Federal Government will establish in a separate agreement a Set Aside Committee to administer and coordinate all scientific studies conducted on these study sites and that all study results will be promptly made available to the public.

The FOSC, with the concurrence of the Commissioner of ADEC, will arrange for cleanup of the study sites to the extent he determines to be necessary at the conclusion of the study period or when deemed appropriate by the FOSC. Additionally, the FOSC, with the concurrence of the Commissioner of ADEC, will arrange for cleanup of any environments affected by oil which may be discharged from the study sites during the study period. The FOSC will provide Exxon the opportunity to conduct any such cleanup of study sites or affected environments and if Exxon adequately cleans up the study sites or affected environments the FOSC will not arrange for other cleanup.

Exxon will advance up to \$750,000.00 to the U.S. Coast Guard as needed for cleanup referred to in the preceding paragraph. The parties do not expect Exxon to furnish any further funds for this activity. Furthermore, it is agreed that, in consideration for the obligations assumed hereunder and other mutual benefits to be derived herefrom, Exxon will not be called upon to conduct cleanup operations at the specified study sites.

In consideration for the obligations assumed hereunder and other mutual benefits to be derived herefrom, Exxon will not be required by either the Coast Guard or the State of Alaska to conduct cleanup operations at the specified set-aside sites. Exxon agrees to indemnify and hold harmless the Coast Guard and ADEC for all liability for property damage to third parties resulting from the setting aside of the specified sites. The parties agree that the \$750,000 constitutes partial consideration for this agreement and does not represent or reflect the parties' agreement as to the exact amount necessary to clean the set-aside sites or environments impacted by the set-aside sites.

This Agreement does not obligate any signatory to fund any of the studies that may be conducted on the specified study sites.



This Agreement does not in any way modify or affect liability for actual damages resulting from discharge of oil onto or off of the set-aside sites. This agreement is for the sole purpose of providing for a formal setting aside of certain beaches for scientific study of the fate and effects of oil from the Exxon Valdez spill; it is not intended to have precedential effect or to constitute evidence with respect to cleanup of beaches or other areas outside the scope of this agreement.

AGREED AND ACCEPTED:

UNITED STATES OF AMERICA

DATE: 23 July 1990

By D. E. Ciancaglini
D.E. Ciancaglini
Federal On-Scene Coordinator
U.S. Coast Guard

AGREED AND ACCEPTED:

STATE OF ALASKA

DATE: January 11, 1990

By Dennis Keiso
Dennis Keiso
Commissioner, Department of
Environmental Conservation

AGREED AND ACCEPTED:

EXXON COMPANY, U.S.A.

DATE: Jan 23/1990

By O. R. Harrison
O. R. Harrison
General Manager

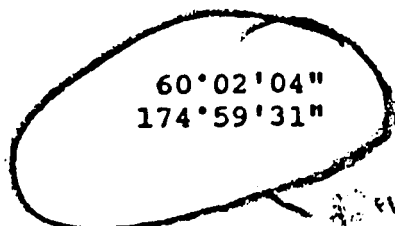
Mark
KAWAIA
2000
2000/01/11

ATTACHMENT A

<u>Site Name</u>	<u>Location</u>	<u>Length</u>	<u>Segment Number</u>
Knight Island Rocky West Site Herring Bay	60°28'23" 147°42'34"	100m	KN-5000
Knight Island Soft East Site Herring Bay	60°28'23" 147°42'34"	100m	KN-5000
Knight Island Rocky East Site Snug Harbor	60°15'52" 147°45'29"	100m	KN-401
Knight Island Soft West Site Snug Harbor	60°15'52" 147°45'29"	100m	KN-401
Knight Island EPA Control Snug Harbor	60°15'41" 147°43'55"	400m	KN-403
Knight Island EPA Study Site Snug Harbor	60°15'00" 147°44'32"	600m	KN-404
Knight Island Rocky and Soft Site Bay of Isles	60°23'07" 147°44'56"	100m	KN-208
Wilmington Island W - E Site	59°57'58" 148°10'03"	175m	ER-07
Matouche Island	60°02'04" 174°59'31"	300m	LA-15

Not
Cul
3/1/84

Attention
Mark
11/attach. 11
Fouling



Don't even on the island
let alone LA 15

ACE 7379684 -/S

If you plot this on a nautical chart
it will put you out in the western Aleutians.
⊕ If you reverse 174 to 147 it still misses Matouche.

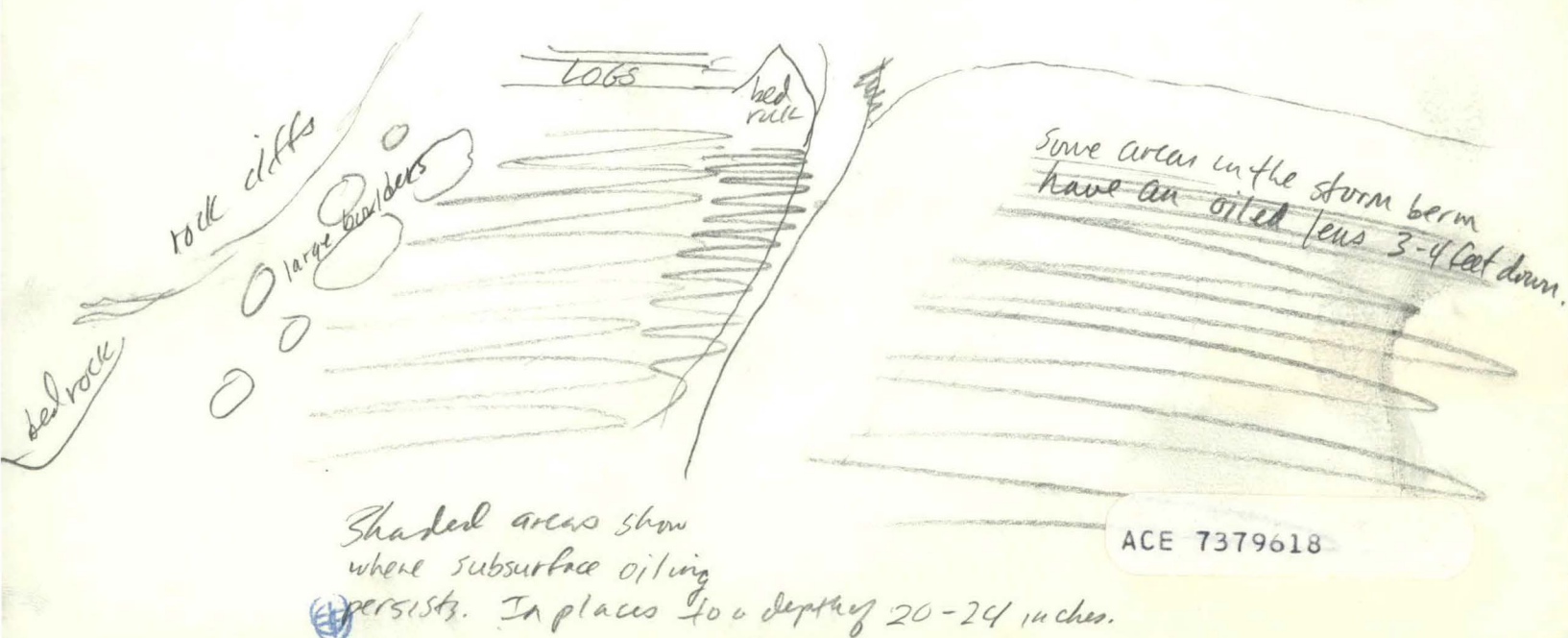
Pre-ASAP

ANADROMOUS FISH STREAMS/OILING CONDITION
PWS

Segment # LA015C ASC# 226-40-16782 Location Letcher Is.
Date 8/15/90 Recorder/Observer T. Crowe / R. Crowe
Oil in streambed Yes Oil on streambanks Yes
Oil within 50m of mouth Yes Anadromous Fish present jumping off shore.

Description of oil and comments This stream still has some of the heaviest oiling of any salmon stream in the Sound. Oiling conditions on either side of the stream from Upper ITZ to upper 1/4 of LITZ consist of OP, HVY OR, mudd. Due to a redefinition of oiling condition, this heavy OR was left during the cleanup with the tracked backhoe. It could use further removal and or washing such as LA20B required.

Oil Distribution Diagram



ANADROMOUS FISH STREAMS/OILING CONDITION
PWS

Segment # LA015C ASC# 226-40-16782 Location Lotriche Is.

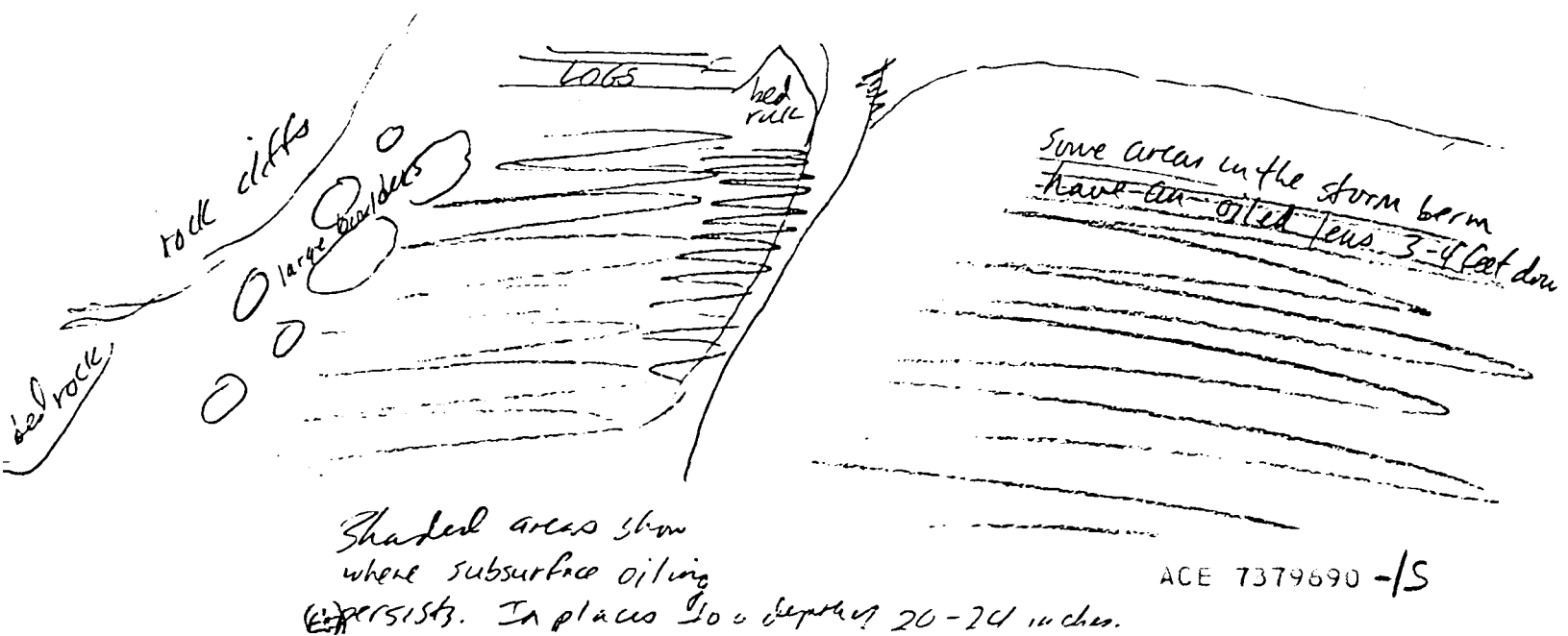
Date 8/15/90 Recorder/Observer T. Curre / R. Curre

Oil in streambed Yes Oil on streambanks Yes

Oil within 50m of mouth Yes Anadromous Fish present jumping off shore

Description of oil and comments This stream still has some of the heaviest oiling of any salmon stream in the Sound. Oiling conditions on either side of the stream from Upper I72 to Upper 14 of LIT2 consist of OP, HV4 OR, mure. Due to a redefinition of oiling conditions, this heavy OR was left during the cleanup with the tracked backhoe. It could use further removal and or washing such as LA20B required.

Oil Distribution Diagram



(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE June 17, 1989

SHORELINE SEGMENT LA-15

LOCATION: (see enclosed map) Latouche Island - East of Sleepy Bay

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 6-16-89

Recommended Cleanup Activity(ies):

- Manually remove contaminated drift material (fucus and drift-wood) and patches of mousse.
- Flood/flush with warm to hot water (up to 140 f) on low angle beaches.
- Use moderate to high pressure washing on rock and oiled logs.
- Use other approved methods as appropriate.

Priorities Considerations:

Class : 1 heavy oil/ time sensitive

Class : A subsistence resources present

This segment is the lowest priority in this block and should be left until last.

Ecological Constraints (from site survey):

Clean at midtide + or take appropriate measures to protect lower intertidal zone.

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: _____

ISCC: _____

Date: _____

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

ACE 7379672 +/S

DOCUMENTATION:

Map/Aerial photo marking segment boundaries Air-chop

VTR: Y/N (N) Tape Number(s) None

Photography: Y/N Roll Number(s) T1-SMP-16

Sample Numbers Collected: None

ACE 7379673

6/16 17:00

East Sleepy Bay - NE Latouche Isl.
SEGMENT LA-15

Wave cut platform w/ rocky promontories,
boulder-cobble beaches - v. exposed.
well rounded cobbles, subang. blks; -
blocky - stubby.

Heavily oiled beach; >20m wide
continuously plastered L → UHNL; as
free mouse, pooled @ strand line
and pooled w/ water ~ Mid tide level,
coated tar, ~0.5-1mm thk @ UHNL;
logs heavily oiled; pools >20cm deep
R 20 B 20 cob 50 P 4 20

bedrock platform exposed ~20%, boulder
cobble cover ≤ 1m thick except
@ storm berm.

(Vertically bedded conglom & gneiss)
jumbled boulders flank promontories w/
mouse & tar, free & coated, pervasive.
Bedrock exposure increases to ~40%
eastward w/ free mouse common -
tar coating can cover >60% of intertidal
zone, typically at higher levels; free
mouse >30cm deep common @
storm berm - both sides

wave cleaning @ LNL zone very
evident, - removes tar & mouse.
Westerly longshore drift / rip @
ebb tide.

(A) cobble beach 100m x 70m - well
washed / flush w/ mouse as light
coat & tar as light patchy coat.

steep cliff leads to boulder class w/
mouse & tar only in crevices and
deep slots between boulders.

(B) cobble beach - heavily oiled M → UHNL
self cleaning through L-Mid tide zone.
thick "wet mouse" in storm berm.
v. high water table - flushes mid-
lower beach; oily seaweed; in
berm logs oiled only on lower, seaward
scarp of berm. pooled mouse @ SE
end below rock bluff. Mouse coating
rocks @ underwater in stream; heavy
concentration of oiled debris @
stream exit thro' storm berm.

ACE 7379675

Heavy oily castings south thro' A 20E

ACE 7379674

topped in strata traps that are
parallel to the shore.

Oil lights to faint thin tars
line a HWL, then clean oil
free boulder stream cover of some
bedrock exposure & rock
promontories -

21:00

END of SEGMENT

ECOLOGICAL EVALUATION

LOCATION: Alauche Is SITE: Sleeper Bay OBSERVER: SM BAN
 LOCATION PREFIX: LA SEG. NO.: 15 LENGTH: 4050 (M)
 DATE: 6/16/89 TIME (HHMM): 1700 TIDE HT.: -1 to +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

Lower intertidal - very healthy on boulders. High intertidal heavily oiled. Sparse on cobble beaches. Holdfasts with no fronds in lower ITZ.

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

Dense on rocks - healthy in lower ITZ on boulders. Also found among gravel on beaches, coated even in lower ITZ. Abundant at FWS.

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

Continuous on boulders - many heavily oiled. Oiled mussels are dead. No Nucoria. Healthy adults and spat in lower intertidal.

Littorina

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

Many in oil zone with oiled Fucus, but alive.

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

Well attached deep in tidal pool with oil sheen. Many dead. Oiled in lower intertidal.

OTHER OBSERVATIONS: Pagurus in oiled pool - alive. Pisaster and

Scallop subtidal not oiled. Only bear tracks. Orchestoidea in unvegetated

gravel beaches - healthy. Bear skeleton. Cyanea in subtidal - healthy.

CLEANUP PRECAUTIONS: Take precautions to protect lower ITZ.

A Stream in the seg. is oiled within the stream bed. The RAT advisor must approve this cleanup.

MAMMALS: Otters X Harbor Seals X ^{↙ Haulout (see map)} Sea Lions Whales
 Other

BIRDS: snowpipers, two eagles nests (see map) eagles

GENERAL OBSERVATIONS: Heavy oiling in segment. Numerous

Boulders support a healthy lower intertidal community

CULTURAL RESOURCE EVALUATION

Date June 16, 1989 Location Lantau Island Site N/E shoreline

Location Prefix LA Segment # 15 Length 4,050 m

Survey Method:

Air _____ (A - indicate on map) Boat X (90%) (A - indicate on map)
Ground X (20%) (G - indicate on map)

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

Oil conditions/beach visibility heavy to moderate; fair to good visibility

Width of beach zone surveyed 8-15 m Tree fringe surveyed 5-100 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 steep bedrock shore with several moderate angle bays

Fresh Water Sources several small streams including 1 subterranean stream

Sea Exposure exposed

Access/Safety fair to fair depending on sea conditions

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 # JCH-1 Frames 24-27

Observer(s) Jim Haggerty / Peter Phippen

Time survey started 1700 Time survey ended 2100

Cultural resource considerations/restraints:

Standard constraints

SEGMENT LA-15

6/14/89 p.m.

NE. LATOUCHE IS.

Heavily oiled - u
of oil graphically det

Markedly oiled

Lightly oiled

* rock

segment boundary

(A) self cleaning
cobble beach

~100 m x 50 m
long wide

stream, porous
fec

CONSPICUOUS
Rock PROMONTORY
w/ eagle nest

SLEEPY
BAY

WAVE-CUT PLATFORM

mousse in
deep slots;
cliff is 60%
cleaned.

eagle
nest

E.P.D

steep cliff w/
boulder jumble @ base - at
this time 70% self cleaned

(B) broad cobble beach
200 m long x 25 m wide

rocky beach - clean

heavily oiled boulder field
w/ oil trapped in rock cuts
parallel to shore L → UHWL

boulders over exposed
bedrock; tar coated w/ mousse
in crevices & slots; packed w/
seaweed, pools > 15 cm deep.

oiled zone ~ 30 m wide w/ seal
heads

rock trenches parallel to shore

steeply shelving cobble beach, heavily
oiled - Low - UHWL,

DOE

mousse trapped in
rock trenches parallel
to shore.

% of cleaning estimated

by visual surface cover currently
washed of tar or mousse, where

oil traces indicating: once total coverage still exists

OIL FREE
COAST

1 MILE

SCAT 1

G. MACDONALD.

To Reatone
This note was
stapled to upper
left hand corner
of ACE # 7379631
(2)

The Exxon Rep on scene at the
time of treatment refused to sign

Aimee
Weesman

Original copy

ACE 7379630 +/S

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME

STEVE COWPER, GOVERNOR

333 RASPBERRY ROAD
ANCHORAGE, ALASKA 99518-1599
PHONE: (907) 344-0541

EXXON Valdez Oilspill Cleanup

Anadromous Fish Stream Authorization

Date 6/14/90

EXXON Authorized Representative _____

Shoreline Segment LA-15

Anadromous Fish Stream Number(s) 226-40-16782

Approved Cleanup Techniques are to be in accordance with the AnadScat stream work order approved by the FOSC with special emphasis on manual removal of all oil of any form within the stream channel and bottom substrate, and on the stream banks within the high water limits. Minimize removal of stream bank substrate and surface components to that required for removing oiled materials.

Approved Cleanup Period 5/15/90 to 7/10/90

Alaska Department of Fish and Game

[Signature]
Authorized Officer

[Signature]
Permittee's Signature

Approved Cleanup techniques have been reviewed and complied

with: _____
EXXON Authorized Field Representative

Date _____

ACE 7379631 -15

DEPARTMENT OF FISH AND GAME

333 RASPBERRY ROAD
ANCHORAGE, ALASKA 99518-1599
PHONE: (907) 344-0541

EXXON Valdez Oilspill Cleanup

Anadromous Fish Stream Authorization

Date 6/14/90

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Shoreline Segment LA-15

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Approved Cleanup Period 5/15/90 to 7/10/90

Alaska Department of Fish and Game

[Signature]
Authorized Officer

[Signature]
Permittee's Signature

Approved Cleanup techniques have been reviewed and complied

with: _____
EXXON Authorized Field Representative

Date _____

ACE 7379632 +/S&

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME

STEVE COWPER, GOVERNOR

333 RASPBERRY ROAD
ANCHORAGE, ALASKA 99518-1599
PHONE: (907) 344-0541

EXXON Valdez Oilspill Cleanup

Anadromous Fish Stream Authorization

Date 6/14/90

EXXON Authorized Representative _____

Shoreline Segment LA-15

Anadromous Fish Stream Number(s) 226-40-16782

Approved Cleanup Techniques are to be in accordance with the AnadScat stream work order approved by the FOSC with special emphasis on manual removal of all oil of any form within the stream channel and bottom substrate, and on the stream banks within the high water limits. Minimize removal of stream bank substrate and surface components to that required for removing oiled materials.

Approved Cleanup Period 5/15/90 to 7/10/90

Alaska Department of Fish and Game

[Signature]
Authorized Officer

[Signature]
Permittee's Signature

Approved Cleanup techniques have been reviewed and complied with: _____

EXXON Authorized Field Representative

Date _____

ACE 7379639 158 2

ADEC EXXON VALDEZ POST-TREATMENT SURVEY REPORT

SEGMENT#: LA015
LOCATION: NE LATOUCHE ISLAND

DATE: 10/03/89
TIME: 8:20

Survey Type: Boat, Ground
Team: D. Munson, E. Meggart, D. Harwood

WEATHER AND SEA CONDITIONS

Weather: Cloudy, Rain, Fog Wind Direction: SE
Sea State: Calm Knots: 0-15

Low Tide: 22:19	Feet: 0.35	High Tide: 3:57	Feet: 10.8
Low Tide: 9:41	Feet: 3.06	High Tide: 15:37	Feet: 12.6

SHORELINE DESCRIPTION

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

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

OIL CHARACTERISTICS

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

Max. Oil Thickness: 3 mm (1 = 1 mm or less, 0 = no oil)
Max. Oil Penetration: 9 cm (35 = 35 cm or greater)

Percent Segment Categorized as Oiled: -0-%
Presence of Oiled Driftwood (y/n): n
Oil Types: M,SY,T,A,ST
(P=pooled, M=mousse, SY=sticky, T=tar, A=asphalt, ST=stain)
Samples: LA15-1 / LA15-2 / none / none

DAMAGED OR OILED ORGANISMS

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

SOLID WASTE FOUND

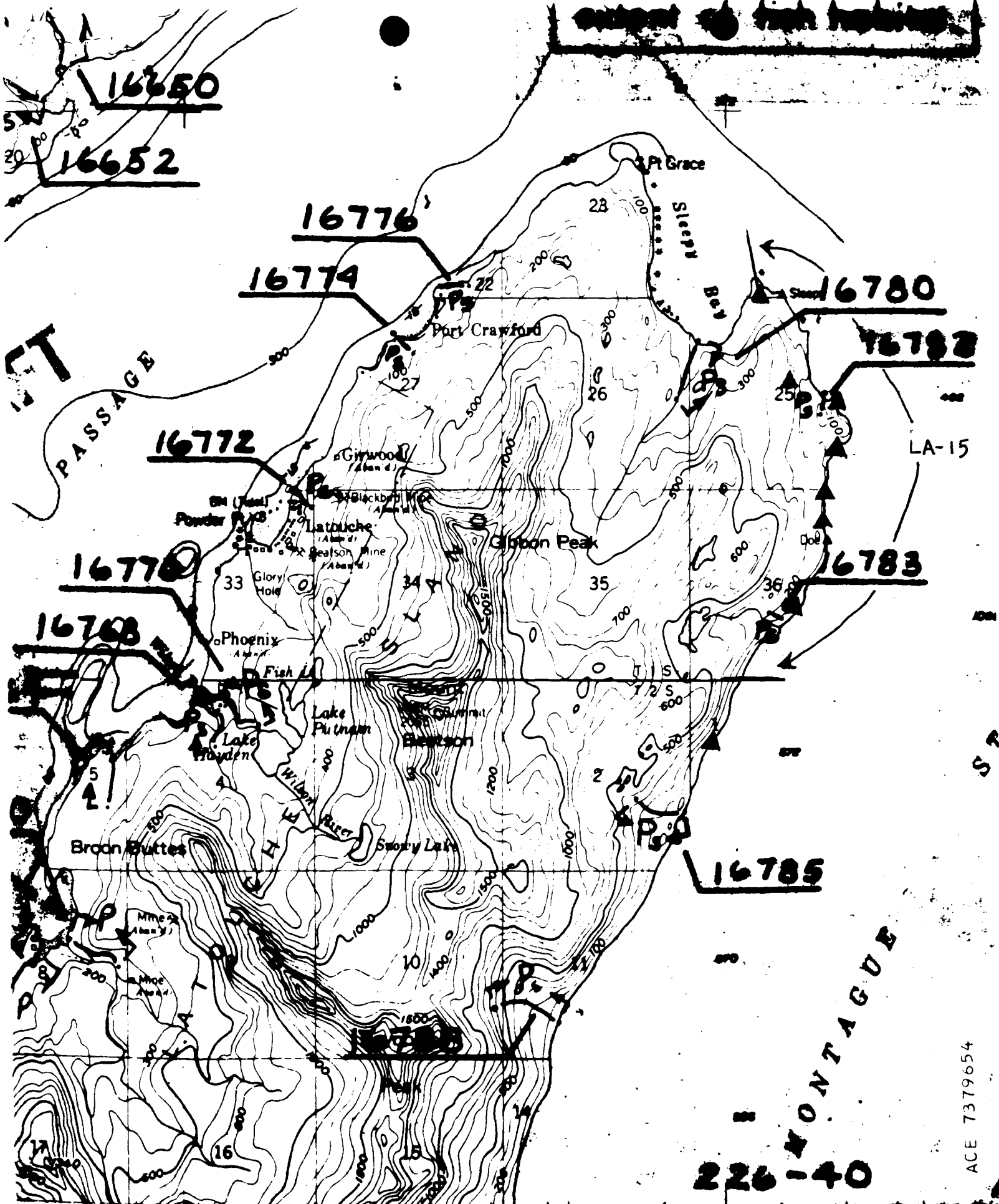
Type: None
Bags Collected: 0

Draft

Printed: 12/12/89 11:43

Walk-a-thon

ACE 7379685
+14C/RT



contour of fish habitat

PASSAGE

MONTAGUE

LA-15

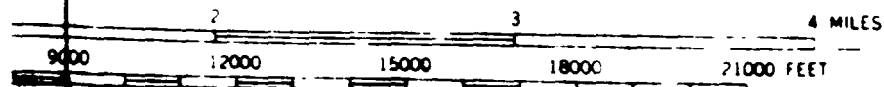
VS SOUND D-31 55'

890 000 FEET (ZONE 4)

50'

INTERIOR REGIONAL SURVEY

ALE 163360



ECOLOGY MAP

▲ = Bald Eagle Nest

ACE 7379654

Rick Gustin
July 13, 1990
LA015C Latouche
ASC#226-40-16782
Stream Report

Tilling began here at 0630 on July 3. Again we had to wait on boom to be deployed before we could work the lower areas of beach. This was unfortunate as it created more work to prevent covering the lower beach areas while still keeping the tracked hoe busy. We began by removing the oiled logs in the stream channel and taking the heavily oiled sediments out of the stream channel and scattering them over the storm berm. After this was completed we proceeded to relocate the upper storm berm which was oiled, down onto the upper ITZ. About this time the boom crew arrived and began setting up the 700 feet of skirt boom and snare boom across the mouth of the stream and the adjacent beach being worked. About the time this boom was nearly complete word came from Exxon to remove it. This seemed odd, but stranger things have happened. Several days later it would have been nice to have had it deployed. The Hitachi then scraped the surface covering of semi clean cobble from the subsurface tarmats and OP, OR, and mousse on the east bank of the stream channel. This surface covering was pulled into windrows so that crews could shovel remove the oiled sediments beneath.

July 4

While work crews continued on manual removal on the east bank, the tiller began windrowing the surface cobble on the ^{west} east bank down beach 50 meters. Oiling on this beach was much more severe than the east side. The layer of oil was 2 to 6 inches beneath the surface and varied in thickness from 6 to 30 inches. It was primarily heavy OR, OP, and mousse. From initial visual surveys it looked like we were going to do some serious removal here. This thick layer continued up beach under a newly deposited storm berm from last winter, and was buried under 3 to 4 feet of large loose pea gravel cobble. It was decided to leave this unexcavated as it was buried so deeply and would be very difficult to remove. Later this day the great debate concerning the definitions of OR, OP and mousse took place. Because of the newly defined terms describing OR, we were unable to remove heavy OR from the salmon stream and immediate stream area because the USCG and Exxon said they were OF not OR.

July 5

Today 3 and 1 1/2 work crews were on site to remove the heavy OR, OP, and mousse on both beaches. Super sacks were set up on the beach and oil was shoveled directly into the sacks. There was little debate over degree of oiling as it was obvious even to Exxon that this was serious oil. Manual removal continued on until July 8 when work was finally finished. More debate was necessary however to get some areas of OP cleaned up on the east bank. As usual the USCG and Exxon were looking for excuses not to clean up the oil.

Totals for oiled sediment removed LA015C:

7\03	1 s.s. oiled debris	5 s.s. oiled sediment
7\04	2 s.s. oiled debris	10 s.s. oiled sediment
7\05	5 s.s. oiled debris	46.5 s.s. oiled sediment
7\06	17 s.s. oiled sediment	
7\07	13 s.s. oiled sediment	
7\08	16 s.s. oiled sediment	

100 pounds of customblen were applied over 450 sq. meters.

A super sack averages 3000 pounds in weight. Some of these may have gone 4000 to 4500 pounds.

Arctic Salvor / Bat Team 2



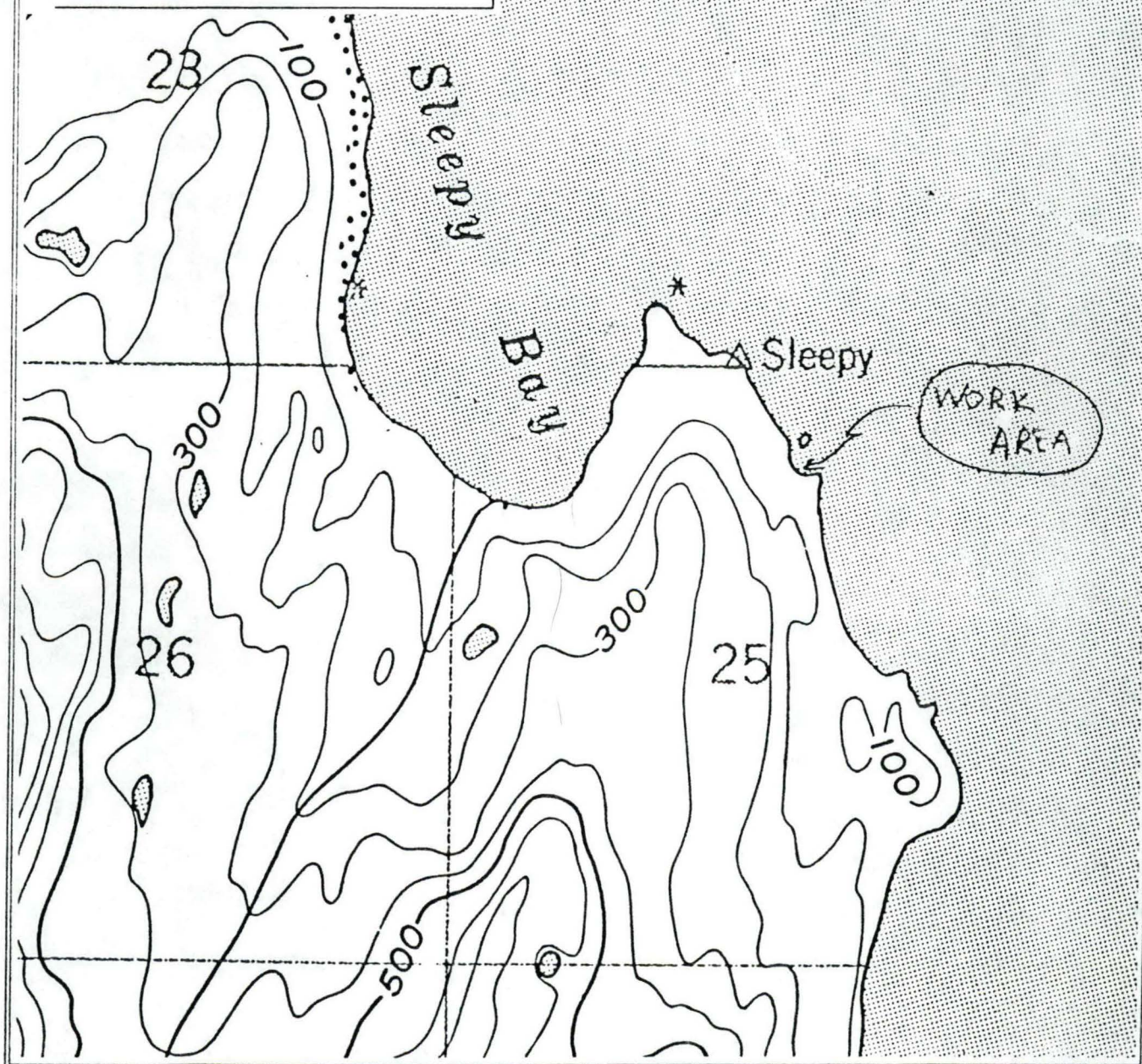
Location: Montague Strait

Segment: LA-15c

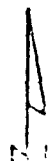
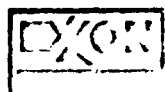
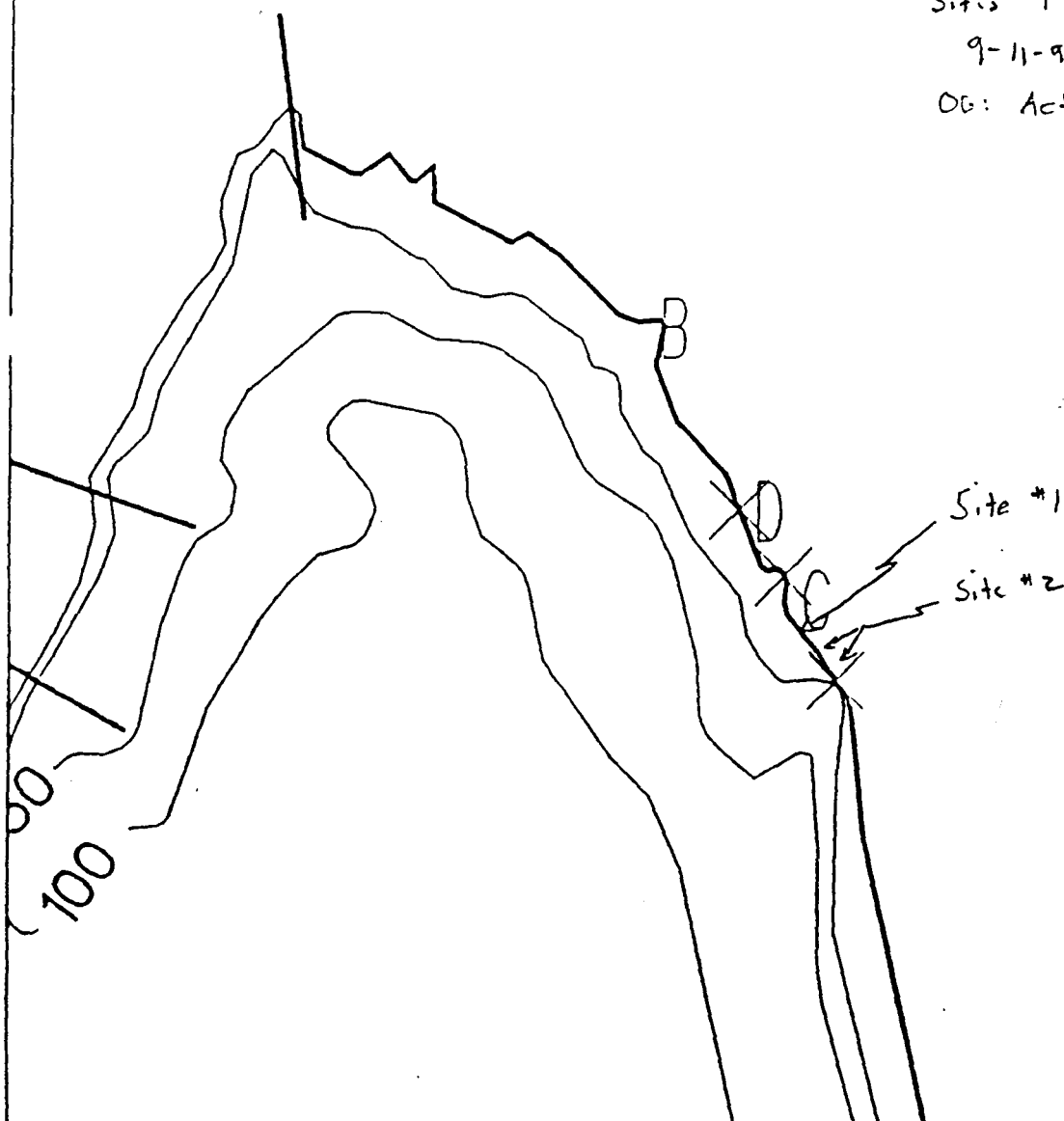
Sites: #1, #2

Date: 2-11-90

O.G. Acton



Treatment #1
LA-15C
Sites #1, #2
9-11-90
OG: Acton



SEGMENT LA-15
Exxon Segment Length: 4517m

VE1000

Map Key: FWS-LA-15e
Exxon Company, USA
Nov 14, 1990

ACE 7379610

INIPOL/CUSTOMBLEN APPLICATION REPORT

Segment: LA-15C Subdivision: 3 of 5 Site: 1 of 2

OG: Acton BAT No. 2 Date: 9/11/90

Exxon: Katsimpulis Time: 0930 to 1130 Tide: +8 to +4

Wind: NE knots from 2-5 Air Temp: 12 C Water Temp: 12 C

type of oil treated: CT, CV, MS, PO previously tilled? YES (NO)
OF OR

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

area treated: splash patchy broken ✓ continuous

area treated with Inipol: 150 m X 20 m X 100% = 300 sq.m. treated

gallons of Inipol applied: 150 250 calculated Inipol dosage 0.80 gals/sq m

emulsification observed? YES NO

area treated with Customblen: 150 m X 20 m X 100% = 300 sq.m. treated

pounds of Customblen applied: 120 calculated Customblen dosage 0.04 lbs/sq m

comments: This application marked Treatment #1 for this site. Manual and mechanical storm berm relocation had been completed on this site. Site is primarily cobble/small boulder beach w/ some pebbles, large boulders, and rock platform. Surface oiling is evident over almost all of the site, with these oiled cobbles/boulders having been redistributed over the site from the storm berm. Surface oil comprised of CT, CV, MS, PO; Subsurface oil comprised of OF and OR. Treatment #1 included Inipol and customblen. Inipol treated to w/in 25m of stream. See sketch map.

INIPOL/CUSTOMBLLEN APPLICATION REPORT

Segment: LA-15c Subdivision: 3 of 5 Site: 2 of 2

OG: Acton BAT No. 2 Date: 9/11/90

Exxon: Katsimpalis Time: 0900 to 1130 Tide: +8 to +4

Wind: NE knots from 2-5 Air Temp: 12 C Water Temp: 12 C

type of oil treated: CT CV MS PO previously tilled? YES NO
OF OR

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: 25 m X 10 m X 100% = 250 sq.m. treated

pounds of Customblen applied: 50 calculated Customblen dosage 0.20 lbs/sq m

comments: Inipol not sprayed due to proximity of stream. See sketch map.
Site #2 is comprised of a small section on each side of stream.
This application is Treatment #1

Segment #'s

Bioremediation (inopol or granual fertilizer)

field work or meeting.

Correctsit - Chemical used } great deal of
BP1100X - (British petroleum) } controversy =

LogBook #

Page #

Segment #

Station #

Subject [salmon stream, bioremediation (Fripol or granular)

Date corexit, BP1100X, booming - offshore dispersants

Comments. "more damage than good" "fishery closures or

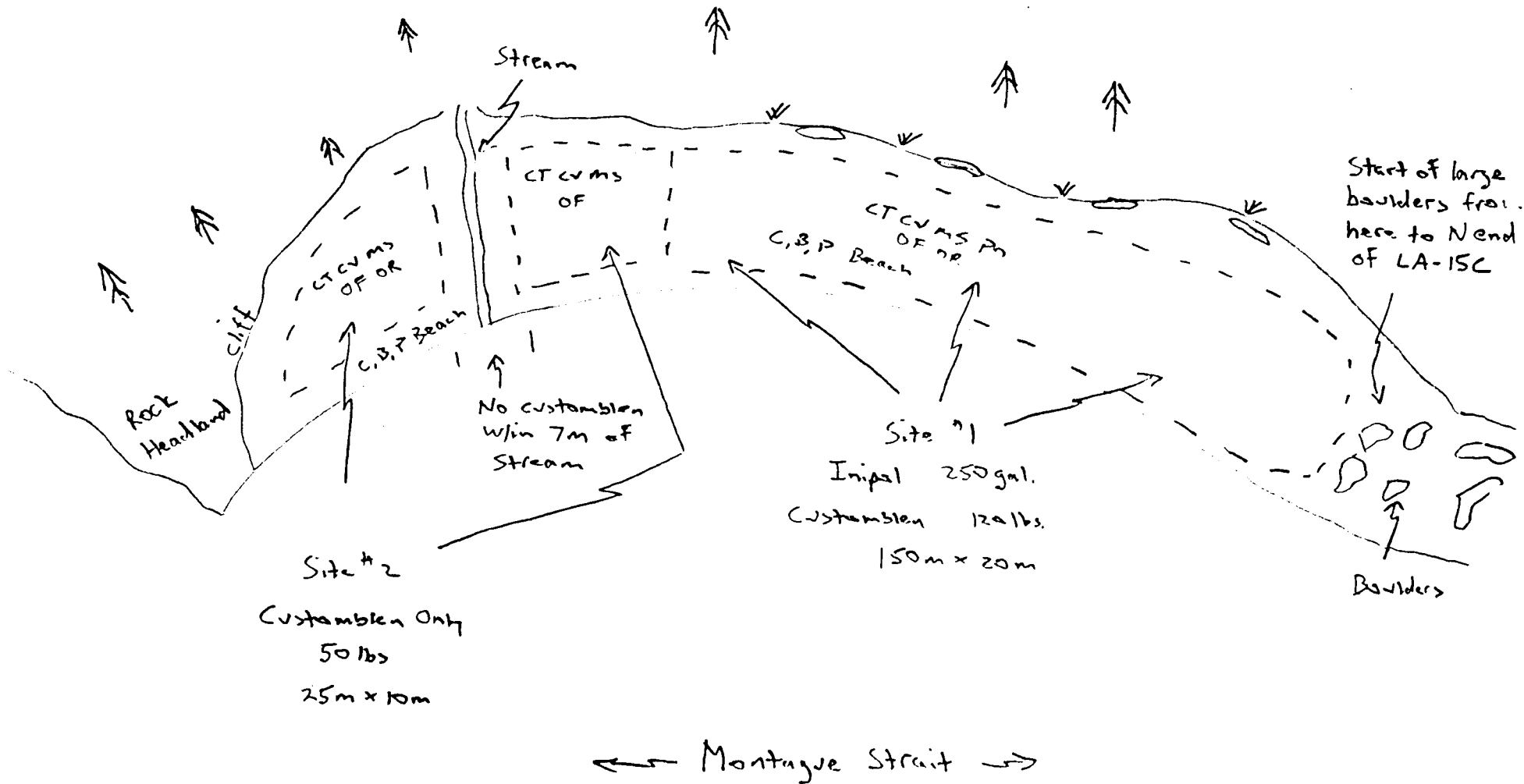
Author restrictions, damage assessment

8- 338.27

7- 484.68

Treatment #1
 LA-15c Sites #1-#2
 9-11-90
 OG: Acton

N →
 30m



ADEC DEMOBILIZATION REPORT FOR INIPOL AND CUSTOMBLEN TREATMENT

788
\$

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-15 SUBSEGMENT NUMBER C

ADEC REP JEFF GUALIAS

USCG REP JOHN DOWD

EXXON REP CHRIS KATSIMPALIS

BOAT NAME/SQUAD NUMBER ARCTIC SALVOR

CG: MIKE ACTON

OOPS: DAVID BELLON

ADF&G: RICK GUSTIN SQUAD #4

Site #	Length (along shore m)	Area m ²	Inipol (gallons)	Customblen (lbs.)
--------	---------------------------	------------------------	---------------------	----------------------

1	150 x 20 @ 100%	3000	250	120
---	-----------------	------	-----	-----

2	25 x 10 @ 100%	250	-	50
---	----------------	-----	---	----

corrected
per JG

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 - BIO APPLICATION following manual
TREATMENT & MECHANICAL TILLING

Describe the amount of oil remaining (type, size of area and location). STAIN / COAT ON COBBLES FROM STORM BERM DOWN

TO MITZ. SURFACE COVER ALMOST ENTIRE LENGTH OF SEGMENT;
INCLUDES SOME MOUSSE, TAR BALLS. SUBSURFACE OIL - O/R entire segment

- Inipol on north end of segment to with 25 m of stream per approval
of ADF&G. Customblen only south side. Both sides Customblen stopped
Additional Comments (keep objective) 20 ft from stream bed. No fish
in stream

Area could use refilling w/ incoming tides to adequately
flush and repeated bio applications. Plenty of remaining oil,
but question whether manual ~~work~~ would be adequate. Winter
storms should redistribute - but may bury some

signature

Date and time of demobilization from segment

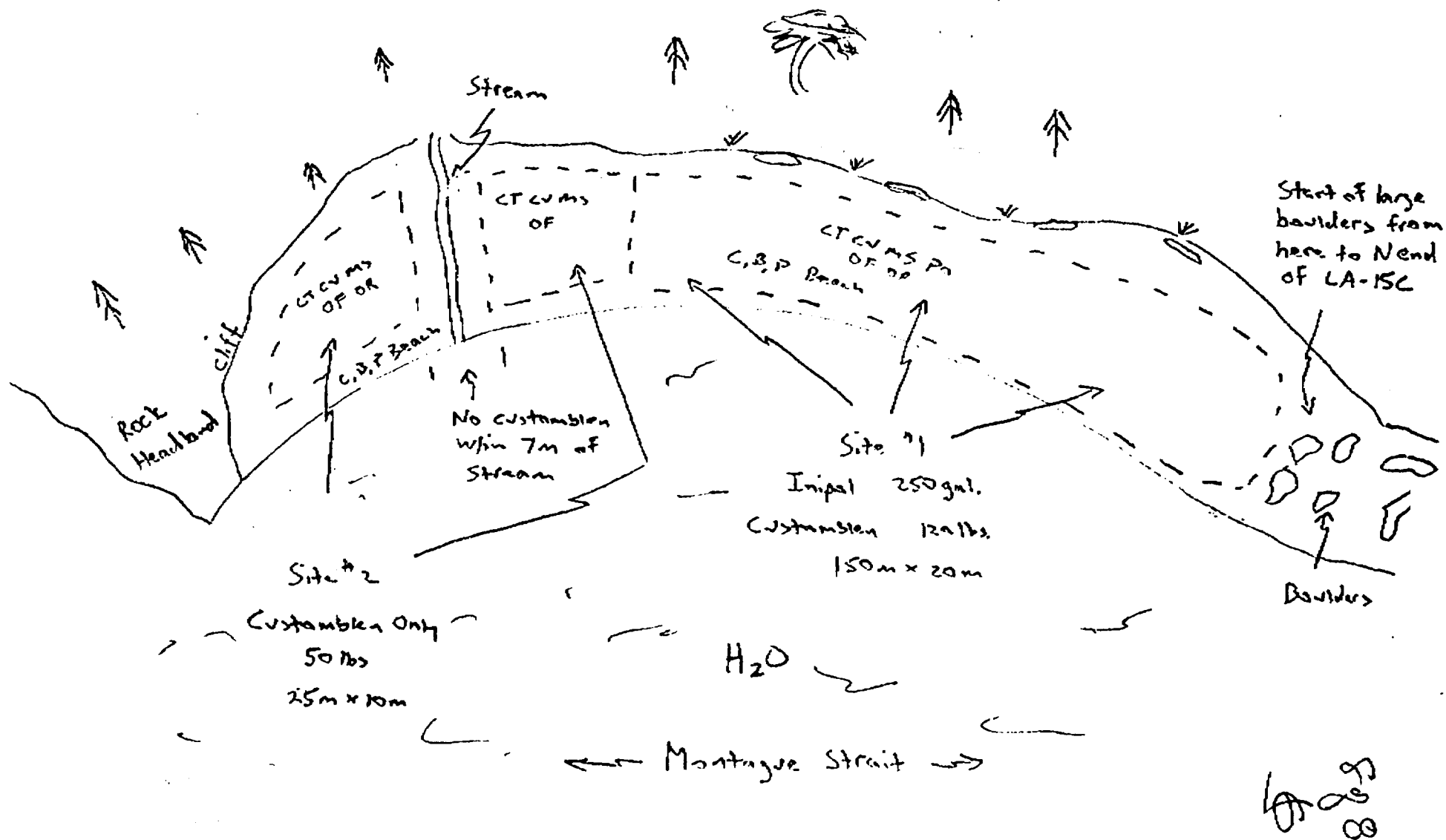
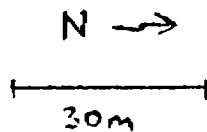
Shoremon/Demob.bio 55/30/90

9-11-90

- Definite reassessment in 1991

ACE 7379614 +/S

Treatment #1
LA-ISC Sites #1-#2
9-11-90
OG: Acton



ADEC BIOREMEDIATION DAILY REPORT

DATE: 9.11.90

ADEC Monitor: JEFF GINALIAS

TIDES:	TIME:	HEIGHT:
Low	<u>0:22</u>	<u>0.4</u>
High	<u>7:01</u>	<u>9.3</u>
Low	<u>12:13</u>	<u>4.4</u>
High	<u>18:30</u>	<u>12.5</u>

WEATHER: Cloudy Rain Fog Sun
TEMP: 52° SEA COND: choppy 1 ft
WIND DIR: N-NE-E-SE-S-SW-W-NW
WIND SPEED 0-15 16-30 30+

USCG John Dawd

Exxon Chris Katsimodalis

oops Mike Acton

other ADF&G : Rick Gustin

OGS Mike Acton: Dale Parent

UECO Foreman: Rod Reynolds

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

LA-15 C

1

150

120

2

Abstract

50

Heavy tilling remains;
Both surface & subsurface
could use additional mechanical
tilling and berm relocation
w/ incoming tide for flushing
- repeated tilling & bio in 1991
- definite reassessment

\shorelin\rowann\biorept 8/7/90

ACE 7379691

[illegible]

SEGMENT LA-15 SUBDIVISION C(226-40-16792) ^{Arroyo Stream #} DATED 13 July 90

MODIFICATION CLASS I ✓ CLASS II CLASS III

1. REASON FOR MODIFICATION

EXXON & USCG recommend application of Inipol in addition to custamblen. ADFEG has requested that inipol not be applied.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

Apply Customblen only to the AREAS where manual/mechanical work was completed.

3. TIMING ISSUES

None

Apply Customizer

ADEC

EXXON

USCÉ

LAND MANAGER

(If field rep is on scene)

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT LA15 SUBDIVISION C DATED 8/15/90

MODIFICATION

1. REASON FOR MODIFICATION

Significant contamination of OP and MS under armor layer in MITZ with lens buried in HITZ and continuing up into and behind storm berm.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

- ① Mechanically rake aside cobble armor layer to expose oil lens from MITZ into SVITZ.
- ② Use HWHF fire hose wash with deluge to wash exposed lens.
- ③ Use mechanical tilling, agitation, and/or relocation to expose lens in areas where it is too deep or high to be washed in place.

3. TIMING ISSUES

CVC has lifted the subsistence fisheries and deer harvesting constraints for manual/mechanical work.

ADEC Peter S. Frantz

EXXON Allen

USCG [Signature]

LAND MANAGER Leigh Carlson (If field rep is on scene)
ADNR

TAG going out Fri 8/24
Call Ray Morris - can we set
Anad stream area included

→ surveyed on 7/24/90

7/25/90

LA-15C - I checked this one out on two separate occasions. Once with Mike Eleshnske (CVC) and later with Brian Fitzsimons (DEC) and Leigh Carlson (DNR). Mike watched as I dug - he said the decision is not his and that he would give Gail Ebenoff ~~the~~ his report and let her make the decision from what he passes on to her. Mike also said he's not into beach excavation. Mike was not as ~~not~~ interested in being at LA-15C as he was in getting to the Columbia for lunch --- and getting out of the bugs. Regardless, I later returned with Leigh + Brian. We dug several pits and found a significant subsurface lens of OP/mousse ~~west~~ of the stream channel. Also found light OR in stream channel.

- I believe Brian plans to get a WORK MOD. on the beach portion (subst. OP)
- You should contact him about this.
 - You should also pass on ~~the~~ what we found when Mike (CVC) was not present to Gail (CVC).

* SEE Attached MAP and Pit Observations

7/25/90 - 0900 hrs - Visited KN701B with Daryl Yoes (EXXON) and Larry Smith (URS) - Also present were Jeff Ginalas and Jan Krieger (ADEG) and a USCG monitor.

- The Work Plan Addendum only calls for work on the west side of the east stream
- Daryl says he can only apply Customblen and till the portion of beach addressed (and "of course" he told me it is a perfect place to apply Friopol).
- I told him no Friopol and that I was hesitant about applying customblen in such tight quarters. ~~and~~ I made an attempt at getting them to pick up more of the oiled sediment from the area addressed in the work addendum. Daryl + Larry said NO - not without a full blown re-evaluation (TAGG).
- ~~Daryl found out by radio that the east shore of the east stream has not to be work~~
- Daryl found out that the workorder has not been closed out - hence he will pursue

Surveyed $\rightarrow$ 7/24/90

////// = Stain/Coat w 
 Δ = pits

Mono of Cobble
Light to Med O
in Stream
channel

- very light ^{or}
(10-12" deep holes)

#5

#6

Enrich/BEADOCK

王

✓ #8

Significantly Oiled
Drift (keep)

✓ 1/11 ✓ BEACON
Cajal base of
Rocks (or - staying
central)

10m

2010 2011/2012

~~LOGS~~

ACE 7379688

#	Substrate	Thickness	oil Type
#1	Cob, Peb, Grav	18"	Stain
	Peb, Grav	6"	OP, Mousse
	Grav	4"	OR
	Grav	?	Clean

LA15C

#9 — Dug $\approx 3'$
 - V. light OR at depth
 - Possibly more oil below

#2 Same as #1

#3	Cob	2'	Stain
	Peb/Grav	6"	OP/mousse
	Sand/Grav	3"	OP
	Peb/Sand/Grav	2"	OP/mousse
	Peb/Sand/Grav	?	OR, OFilm

#10 — Dug $\approx 2.5'$
 - V. light OR at depth
 - Possibly more oil below

Surveiled $\approx 7/24/90$

4 —> Surface clean - cobble
 Sand Gravel below cobble
 Pit Exposed 2' + of Medium OR

5 —> Surface clean
 Cobble/Sand/Gravel below cobble surface
 Pit exposed 8" of light OR

6 —> Cobble surface - clean
 Cobble/Sand/Gravel below surface
 Pit exposed 8" of Light OR

7 —> Cobble surface ~~clean~~ stained
 Pit exposed 15" of Med/Light OR
 (Cobble sand gravel)

8 —> Cobble Surface/stained
 Cobble/sand/gravel below
 Pit exposed 18" Hvy to Med OR

ACE 7379689

Mike Elchanskey (CVC) was present for pits #3, 4, 5, 6, 7, 8 (pit #3 was redug from existing pit)
 Brian Fitzsimons (ADRC) and Leigh Carlson (ADNR) were present for pits #1, 2, 3, 9 + 10

Dana Hill (AOF 4)

Pr. ^{ASW} WADSCAT-90

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: /

21 TEAM RECORDER: /

4 START TIME: 0737

16 HIGH TIDE HTS: /

22 OBSERVERS: Tom Crowe

5 STOP TIME: 0748

17 LOW TIDE TIMES: /

23 AGENCY: ADF&G ASW

6 SEGMENT #: LAOISC

18 LOW TIDE HTS: /

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: LATOUCHES ISLAND

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 /
Gravel / Sand / Mud/silt /

36 CATALOGED ANAD. FISH SREAM? Y N

37 CATALOG #: 226-40-ASW 16782

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: SAND GIVEN OFF INTO CREEK WHEN SUBSTRATE DISTURBED.

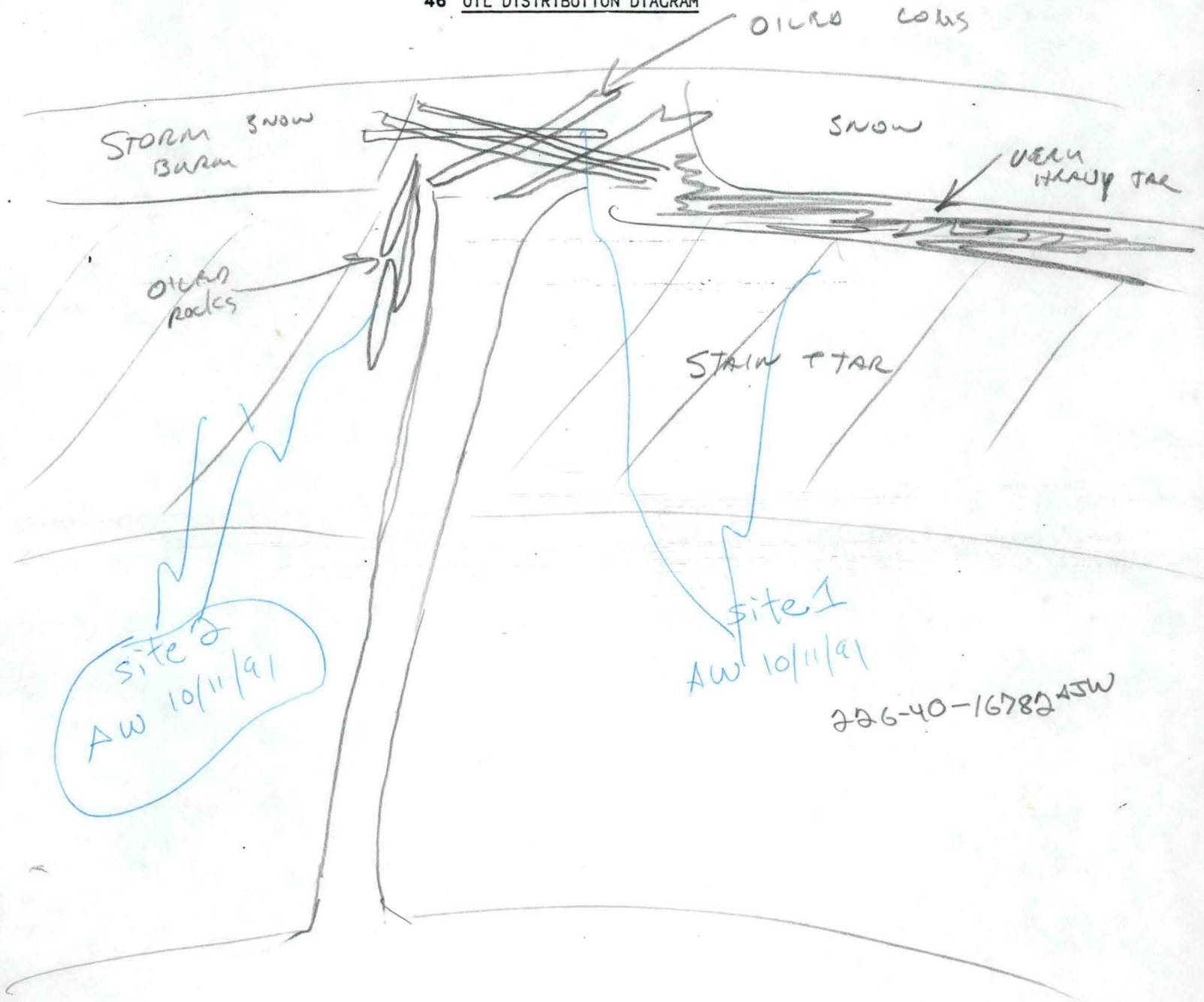
OIL VERY HEAVY ⁱⁿ STORM BURN + AT MOUTH OF CREEK. STORM

BURN IS BURIED BY SNOW.

ACE 7379669

FRAME(S)	DESCRIPTION

46 OIL DISTRIBUTION DIAGRAM



= Sample taken
 = Photo frame # and
 shot direction.

ACE 7379670

SHORELINE OILING SUMMARY (AD)

OG CAL LARSON USCG 22REMER, CWE SEGMENT ST/ LA-015
BIO KEN CLECHMAN LAND REP STREAM 22-40-10782 (OF)
EXXON DARLHL YVES ADFG RAK DUSTIN-AIMEE WEZEMAN TIME 11:45 10/19:15
TEAM NO. 14 TIDE LEVEL X6 FT DATE 4 / 20 / 90
EST. SUBDIVISION LENGTH: 40 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☐ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
SURFACE SEDIMENTS: R 10 % B 10 % C 40 % P 40 % G % S % M % V
SLOPE: Long 50 % Hang 50 % Vert % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W m M 15 m N m VL 25 m NO m

SURFACE OIL

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

PAVEMENT H F 3 0 sq. m by 2 or
PATTIES / TARBALLS BAGS
NEAR SHORE SHEEN? NO BR RW SD TL

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

Did You Collect DEBRIS
☐ YES ☒ NO
TYPE
#BAGS

Photographs:
Roll No.
Frames

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SHEEN (Y/N)	V	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	VO	1	2	3	4	S	U	M	U				
1	45					✓			✓					✓				✓	N		CB, PB / CB, PE
2	30				✓				✓		✓			✓				✓	Y	✓	CS PB GR / CS, P
3	45		✓				5-45	✓				✓		✓					N		CS PB GR / CS, P
4	25		✓				5-20	✓						✓					Y	✓	CS, PB GR / CS, P
5	25				✓		5-25	✓			✓			✓					Y	✓	CS, PB GR / CS, P
6	50		✓				5-50	✓			✓			✓				✓	N		CS, PB / CS, PB GR

COMMENTS NOTED OIL STAIN SPREADING FROM SITE. UPPER STORM BERM NEXT TO STREAM MOUTH WAS AN OIL LAYER OF DARK BROWN MOUSSE 50CM IN DEPTH. PART OF IT CONTINUOUS UPTO STREAM MOUTH AND UNDER BEACH DRIFT / LOGS. PIT NO. 2 HAD LIGHT SHEEN PURKALTING THRU SEDIMENTS. SILVER SHEEN WAS OBSERVED IN LITZ NEXT TO STREAM DISCHARGE.

REVIEWED JW DATE 4-24-90

SHORELINE OILING SUMMARY (PAGE 2)
SEGMENT ST/ LA 015 STREAM 226-40-1670 OF

[illegible]

REVIEWED fw DATE 4-24-90

STREAM 226-40-16782

DATE 4/20/90

CHECKLIST

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

LEGEND

1 ▲

Pit - No Subsurface Oil

2 ▲

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

B. Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

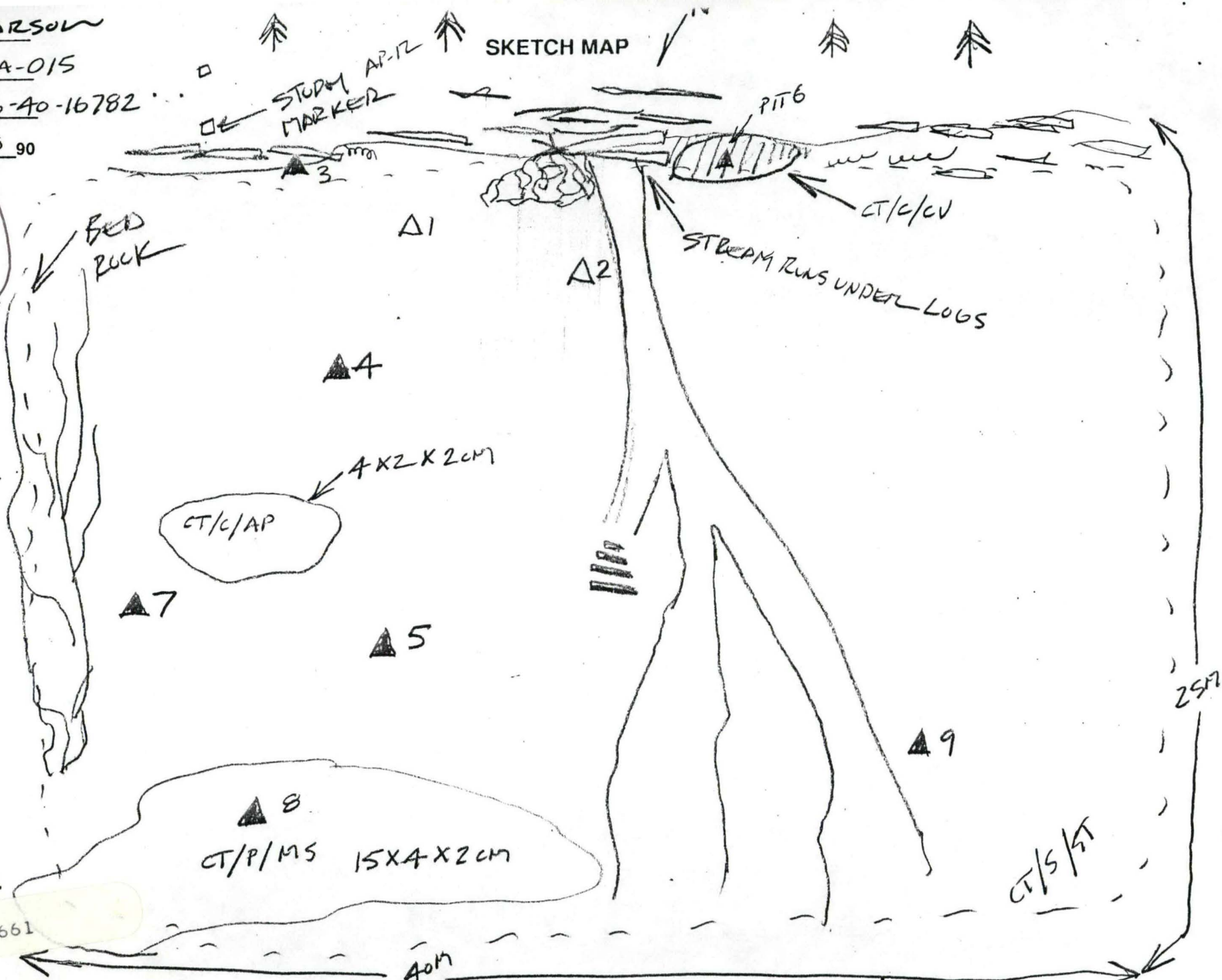
Oil Vegetation

1 ➔

Photo location, direction, and number

ACE 7379661

SKETCH MAP



Oil Character Length (m): AP 8 PO 8 CV 8 CT 8 ST 8 MS 8 PT 8 TB 8 FL 8 NO 8

REVISION: 03/24/90

ADFG MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: SS SS DS TS AVS SCM MMS PTA

2 REGION: PNS NP, CI KAP

METHOD: Aerial Ground Boat

3 DATE: 11-20-90

15 HIGH TIDE TIMES: 1

21 TEAM RECORDER: RLB

4 START TIME: 1200

16 HIGH TIDE HTS: 1

22 OBSERVERS: AW

5 STOP TIME: 1330

17 LOW TIDE TIMES: 1

23 AGENCY: ADFG

6 SEGMENT #: LAIS

18 LOW TIDE HTS: 1

24 PHOTOS TAKEN: Y N

7 STATION #:

19 TIDE HT AT SURVEY:

Roll #: Frames:

8 K-UNIT:

Sho Shoek Flood Shoek

25 VIDEO TAKEN: Y N TAPER: 90RL6555

9 STAT AREA:

20 USGS QUAD:

Start: 0876 End: 1010

10 LAT:

11 LONG:

26 SAMPLES TAKEN: Y N Number

12 SOURCE: Map Loran

13 LOCATION: S A-3 Labouche Is.

14 DESCRIPTION:

Oil

Sediment

Biological

Water

EXTENT OF OIL

27 SURFACE COVERAGE

SHORELINE				STREAM			
L	W	H	S	L	W	H	S
<u>75</u>	<u>25</u>		<u>75</u>				

28 SURFACE THICKNESS

<u>Film</u>	<u>in most</u>	<u>places</u>					
<u>25 cm</u>	<u>75</u>		<u>10 cm</u>				

29 PENETRATION

30 OVERALL OIL IMPACT: N VL L N N

31 OIL TYPE: Pooled House Tar Asphalt Spills 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 Gravel Sand Mud/silt

36 CATALOGED ANAD. FISH BREAST: Y N

37 CATALOG #: 226-40-167 H2

38 STREAM NAME:

39 OIL IN STREAM BED: Y N

40 OIL ON STREAM BANKS: Y N

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

42 OIL WITHIN 1 MILE OF STREAM: Y N

Where:

43 ANADROMOUS FISH PRESENT: Y N

44 ANADROMOUS FISH OBSERVATION

Species	Aerial	Ground

COMMENTS: 75% of area on sand either side of stream - from high tide to

midwater tidal is oiled. Deeper penetration 25 cm

Surface redd - stained under side lines in some areas coated
thickly with pooled mobile oil.

Thin bands down to stream edge on path sides as well
as upper stream berm bands.

48 PHOTOLOG

FRAME(S)

DESCRIPTION

Recommendations

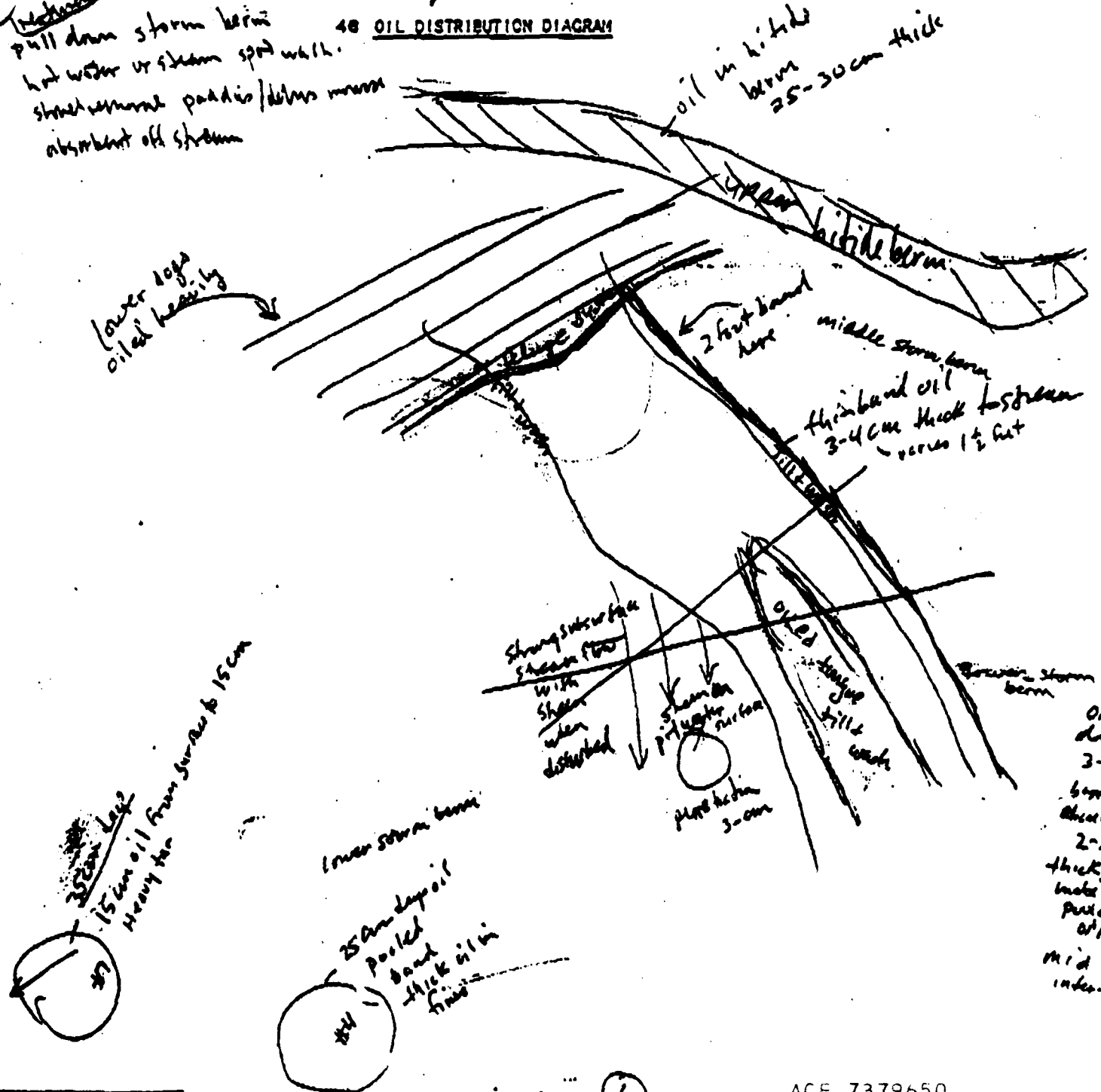
Large broad area of subsurface oil under narrow embay of rock/valley
oil from 1" below surface to 4.5" penetration and depth.

pull down storm berm hot water or steam wash with cold water del
shovel remove paddles of moraine and oiled debris (logs etc)
absorbent off stream to prevent floating
dig up lower storm berm and other lower subsurface oil with rock
washer on cat (tracked) and wash with steam or hot water with
cold water deluge / till wash both sides of stream bank See back page

Instructions

pull down storm berm
hot water or steam spot wash.
shovel remove paddles/debris moraine
absorbent off stream

48 OIL DISTRIBUTION DIAGRAM



Sample taken
Photo frame # and
shot direction.

1 inch in
salt water
- waste

3

water from
wound...

ACE 7379650

ADFG MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS SS DS TS AVS SCHA HPHS PTA2 REGION: PWS KP, CI K, APMETHOD: Aerial Ground Boats3 DATE: 4/20/9015 HIGH TIDE TIMES: 1007 1230421 TEAM RECORDER: M. WIEDMER4 START TIME: 115016 HIGH TIDE HTS: 9.0' 9.4'22 OBSERVERS: T. CROWE5 STOP TIME: 132017 LOW TIDE TIMES: 0400 163423 AGENCY: ADFG6 SEGMENT #: LA-01518 LOW TIDE HTS: 4.5' 1.6'24 PHOTOS TAKEN: 1100

7 STATION #:

19 TIDE HT AT SURVEY: 4.48'

Roll #: Frame:

8 K-UNIT:

Ebb Slack Flood Slack25 VIDEO TAKEN: Y TAPE: 90TWC001

9 STAT AREA:

20 USCG QUAD: SWARP A-3Start: 0421 End: 0708

10 LAT:

11 LONG:

26 SAMPLES TAKEN: Y N Number

12 SOURCE: Map Loran

011

13 LOCATION: NE LATOUCHE

Sediment

14 DESCRIPTION: E. OF SLEEPY BAY

Biological

Water

EXTENT OF OIL

Horizontal
27 SURFACE COVERAGE

SHORELINE				STREAM			
L	V	H	N	L	V	H	N
100%	25%			75%	5%		2

28 CATALOGED ANAD. FISH SKELET? Y N27 CATALOG #: 226-40-16782

28 STREAM NAME:

28 SURFACE THICKNESS

				0	0	1cm
--	--	--	--	---	---	-----

29 OIL IN STREAM BED? Y N

29 PENETRATION

2cm	80cm	10cm			
-----	------	------	--	--	--

40 OIL ON STREAM BANKS? Y N30 OVERALL OIL IMPACT: N VL L N N41 OIL ON BEACH ADJACENT TO MOUTH? Y N31 OIL TYPE: Pooled Mousse Tar Asphalt Sticky Seoin

(within 50 meters)

42 OIL WITHIN 1 MILE OF STREAM? Y N32 OILED BEACH? Y NWhere: MOUTH33 SHORELINE TYPE: Headland Low-lying Rocks Beach Carve43 ANADROMOUS FISH PRESENT? Y N34 WAVE EXPOSURE: High Moderate Low

44 ANADROMOUS FISH OBSERVATION

35 SUBSTRATE TYPE: Bedrock Boulder S Cobble Co

Species Aerial Ground

Gravel 35 Sand Mud/silt

COMMENTS: BASED ON THE 10 PITS OUR GROUP DUG, IT IS MY JUDGEMENT THAT A LENS OF OIL EXTENDS THROUGH THE ZONE OF INTEREST. THIS LENS IS EXPOSED AT THE STORM BERM AND THE LOWER INTERTIDAL AND BURIED BY 15 CM+ THICK CORAL/GRAVEL IN THE MID-INTERTIDAL. MOUSSE/TAR IS IN THE STREAM CHANNEL @ THE LOWER INTERTIDAL

~~ADFG~~ ADFG

NAME RICK GUSTIN

SIGNATURE

Richard J. Gustin

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

1. Shovel removal of mousse paddies/tar mats in upper/middle/lower storm berms and anywhere else found. Use of tracked bulldozer with rock ripper to pull down berms and fill submerged oil to surface in berms.
2. removal of severely oiled logs in jam over creek and disposal.
3. Pull down storm berms (upper 2) and wash with steam or hot water in addition to coldwater deluge system.
4. Absorbent off stream edge while washing to prevent reiling.
5. Till + wash both sides of stream bank where oiled lens occurs.
6. Till + wash oiled tongue which sheens in center of stream
7. Rip up lower + middle storm berms with tracked cat + rock ripper to bring subsurface oiled gravel and cobble to surface and treat with steam or hot water and cold deluge.
8. No bioremediation recommended
9. Burn site and collect oil with skimmers as necessary during washing.

comment (It appears there is a large relatively thick at times lens of subsurface oil on both sides of the stream in the entire intertidal area (upper, middle, lower intertidal) This in our opinion needs to be filled and treated.)

LAND MANAGER

NAME

SIGNATURE

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ LA-15 STREAM NO: 226-40-16782 DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Two anadromous streams in LA-15: 226-40-16782, 226-40-16783 (in Subdivision E)

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
- 1B Salmon stream mouth - spawning (7/10 to 8/31)
- 5T-7 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
- 6U Recreation: Tent sites (6/1 to 9/15)
- 7HH Subsistence area: Finfish harvesting
- 9EE Set aside

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. There is one and possibly two bald eagle nests within 400 M of stream 226-40-16782. See ecology map. Subject stream is located within Subdivision C (3 of 5).

ARCHAEOLOGICAL CONSTRAINTS:

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

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

Subsurface Oil Observed: Yes X No Maximum Depth 45+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmat, 2) manual pickup of mousse patties, 3) manual tilling of storm berm down to MITZ, 4) spot washing using sorbents, 5) bioremediation of tilled and washed area and other areas shown on attached sketch map. Work should be conducted between 6/1 and 7/10 based on eagle nest and salmon constraints after approval of USFWS regarding eagle nest and ADF&G regarding tilling and bioremediation of stream banks.

TAG COMMENTS: MANUAL TILLING PRIOR TO BCO IN AREAS OF TEST PITS 3 & 6 (STORM BERM). MANUAL RAKING OF REMAINDER OF AREA WITH SUBSURFACE OIL AS INDICATED PRIOR TO BCO.

TAG APPROVAL DATE: 5/10/90.

ACE 7379635 -/S

ADEC [Signature]
 EXXON [Signature]
 NOAA [Signature]
 USCG [Signature]

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

NOTIFY CVC 24HRS. IN ADVANCE OF WORK

FIELD SHORELINE COMMENT SHEET

ANADROMOUS STREAM CATALOG

SEGMENT ST / LA-015SUBDIVISION: 226-20-70588DATE 4-20-90

226-40-16782

USCG

NAME CWO2 Kerwin L. Dreher SIGNATURE CWO2 K. L. Dreher☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

ADFG

NAME RICK GUSTIN

SIGNATURE

Richard J. Gustin☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

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 4. Pull down storm berms (upper 2) and wash with steam or hot water in addition to coldwater deluge system.
 5. Absorbent off stream edge while washing to prevent reoiling.
 6. Till + wash both sides of stream bank where oiled lens occurs.
 7. Till + wash oiled tongue which extends in center of stream.
 8. Rip up lower + middle storm berms with tracked cat + rock ripper to bring subsurface oiled gravel and cobble to surface and treat with steam or hot water and cold deluge.
 9. No bioremediation recommended.
 10. Boom site and collect oil with skimmers as necessary during washing.
- ment (It appears there is a large relatively thick at times lens of subsurface oil on both sides of the stream noiling in the entire intertidal area (upper, middle, lower intertidal) This in our opinion needs to be filled and treated.

LAND MANAGER

NAME

SIGNATURE

☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

ACE 7379645

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ LA-15 STREAM NO: 226-40-16782 DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Two anadromous streams in LA-15: 226-40-16782, 226-40-16783 (in Subdivision C)

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
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- 5T-7 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
- 6U Recreation: Tent sites (6/1 to 9/15)
- 7HH Subsistence area: Finfish harvesting
- 9EE Set aside

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. There is one and possibly two bald eagle nests within 400 M of stream 226-40-16782. See ecology map. Subject stream is located within Subdivision C (3 of 5).

ARCHAEOLOGICAL CONSTRAINTS:

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

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

Subsurface Oil Observed: Yes X No Maximum Depth 45+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmat,
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down to MITZ, 4) spot washing using sorbents, 5) bioremediation of
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OF REMAINDER OF AREA WITH SUBSURFACE OIL AS INDICATED
PRIOR TO BCO.

TAG APPROVAL DATE: 5/10/90.

ADEC ART WENGER

EXXON ANDY TEAL

NOAA Bill Wiercott

USCG D.D. Rome

FOSC: [Signature] DATE: 5-18-90

NOTIFY CVC 24HRS. IN ADVANCE OF WORK

ACE 7379641/SN 4

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ LA-15 STREAM NO: 226-40-16782 DATE 4/20/90

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PRIOR TO BIO.

TAG APPROVAL DATE: 5/10/90.

ADEC ART WILSON

EXXON ANDY TEAL

NOAA Jim Wiercott

USCG D.D. Rome

ACE 73796404/S& 3

FOSC: [Signature] DATE: 5-18-90

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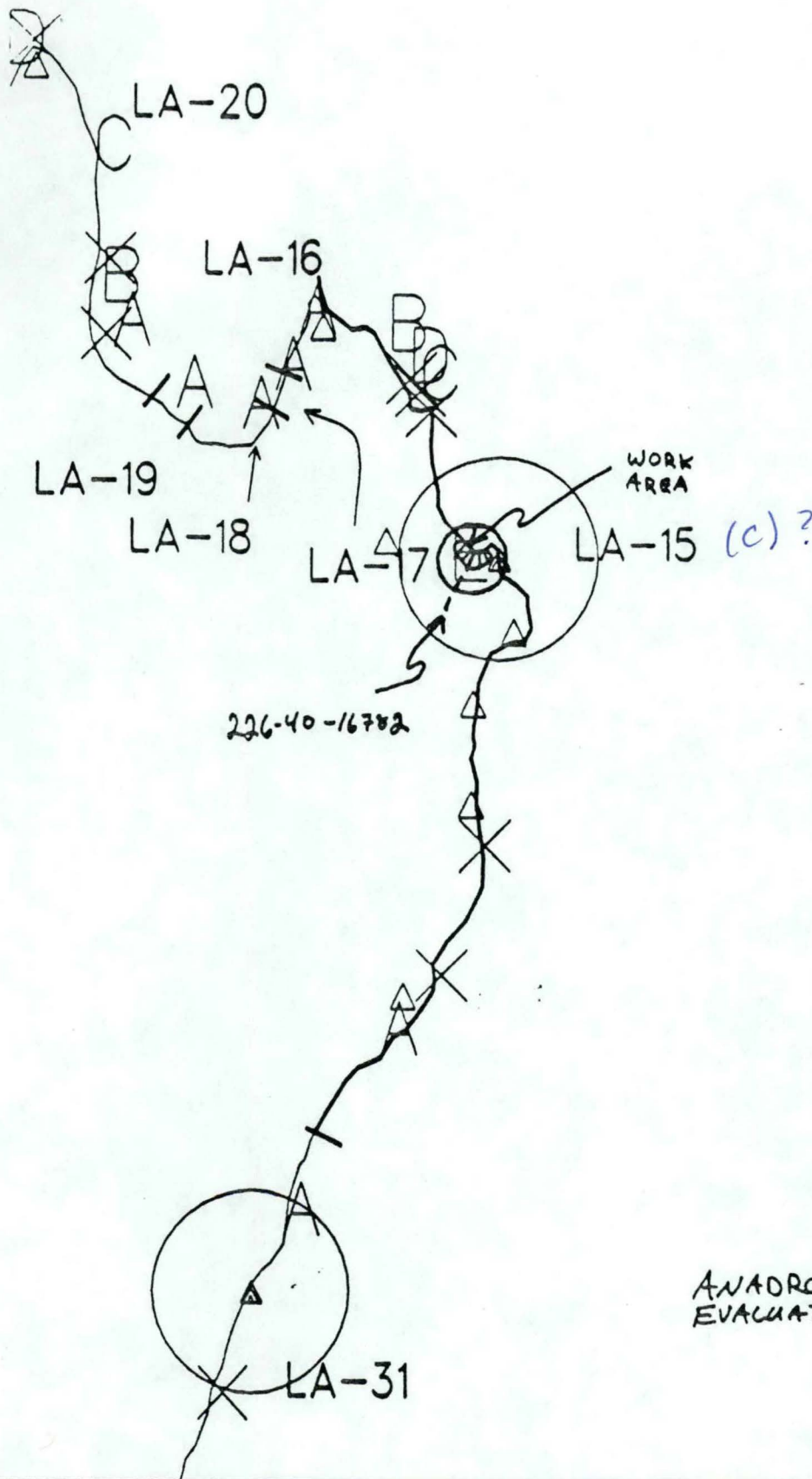
TAG APPROVAL DATE: 5/10/90.

ADEC ART WENGE
EXXON ANDY TEAL
NOAA BILL WENGE
USCG D.D. ROME

ACE 7379638

FOSC: [Signature] DATE: 5-18-90

NOTIFY CVC 24 HRS. IN ADVANCE OF WORK



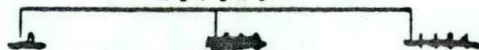
ACE 7379634



Exxon Company, USA
Map Key: P-S-LA-15
June 04, 1990



ECOLOGY MAP
SEGMENT LA-15
SUBDIVISION E (3 of 5)
METERS



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

1 inch = 1000 feet

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-20-16782

SEGMENT LA-15 SUBDIVISION ~~X~~ E

THIS STREAM IN
SUBDIVISION E NOT
C. MAP IS CORRECT
PP
6/23/90

WORK WINDOW

Manual Pickup
Tarmat Removal

CLOSED

Bioremediation
Spot Washing
Manual Tilling
Other Approved Treatment

CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (226-40-16782) is in Subdivision ~~E~~. This subdivision is closed to bioremediation, spot washing, manual tilling, and other approved treatment less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation, spot washing, manual tilling, and other approved treatment are permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation, spot washing, manual tilling, and other approved treatment more than 100m from stream. No constraint to manual pickup and tarmat removal.

5T Bald Eagle Nest

USFWS 6/1/90 map indicates an active nest in Subdivision ~~E~~. Closed to manual pickup, tarmat removal, bioremediation, spot washing, manual tilling, and other approved treatment within 400m of active nest. No constraint to manual pickup, tarmat removal, bioremediation, spot washing, manual tilling and other approved treatment more than 400m from active nest.

7HH Subsistence:
Finfish Harvesting

Closed to bioremediation, spot washing, manual tilling, and other approved treatment after 7/1. No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

If eagle nest constraint is removed, other ecological considerations will apply.

SEE SUBDIVISION CONSTRAINT ADDENDUM LA-15E
FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC

Date

Prepared by

Date

ACE 7379633 H/S





OFFICIAL PHOTOGRAPH ADF&G EXXON VALDEZ OIL SPILL

OFFICE: VALDEZ DATE: 08/05/89 TIME: -0-

SEGMENT#: LA 15
LOCATION: LATOUCHE ISLAND

STATION#: -0-

REASON FOR TAKING PHOTO: OILED POTENTIAL ANADOMOUS FISH STREAM.

TAKEN BY: AIMEE WESEMAN

INITIALS: _____

ROLL #: 89AW012V FRAME #: 17

EVIDENCE ID#: 10191

ACE 7379582



OFFICIAL PHOTOGRAPH ADF&G EXXON VALDEZ OIL SPILL

OFFICE: VALDEZ

DATE: 08/05/89

TIME: -0-

SEGMENT#: LA 15

STATION#: -0-

LOCATION: LATOUCHE ISLAND

REASON FOR TAKING PHOTO: OILED POTENTIAL ANADROMOUS FISH STREAM.

TAKEN BY: AIMEE WESEMAN

INITIALS: _____

ROLL #: 89AW012V FRAME #: 18

EVIDENCE ID#: 10191

ACE 7379583



OFFICIAL PHOTOGRAPH ADF&G EXXON VALDEZ OIL SPILL

OFFICE: VALDEZ

DATE: 08/05/89

TIME: -0-

SEGMENT#: LA 15

STATION#: -0-

LOCATION: LATOUCHE ISLAND

REASON FOR TAKING PHOTO: OILED POTENTIAL ANADOMOUS FISH STREAM.

TAKEN BY: AIMEE WESEMAN

INITIALS: _____

ROLL #: 89AW012V FRAME #: 19

EVIDENCE ID#: 10191

ACE 7379584



OFFICIAL PHOTOGRAPH ADF&G EXXON VALDEZ OIL SPILL

OFFICE: VALDEZ

DATE: 08/05/89

TIME: -0-

SEGMENT#: LA 15

STATION#: -0-

LOCATION: LATOUCHE ISLAND

REASON FOR TAKING PHOTO: OILED POTENTIAL ANADROMOUS FISH STREAM.

TAKEN BY: AIMEE WESEMAN

INITIALS: _____

ROLL #: 89AW012V FRAME #: 20

EVIDENCE ID#: 10191

ACE 7379585



OFFICIAL PHOTOGRAPH ADF&G EXXON VALDEZ OIL SPILL

OFFICE: VALDEZ

DATE: 08/05/89

TIME: -0-

SEGMENT#: LA 15

STATION#: -0-

LOCATION: LATOUCHE ISLAND

REASON FOR TAKING PHOTO: SWASH ZONE OF POTENTIAL ANADROMOUS FISH
STREAM.

TAKEN BY: AIMEE WESEMAN

INITIALS: _____

ROLL #: 89AW012V FRAME #: 15

EVIDENCE ID#: 10191

ACE 7379580



OFFICIAL PHOTOGRAPH ADF&G EXXON VALDEZ OIL SPILL

OFFICE: VALDEZ

DATE: 08/05/89

TIME: -0-

SEGMENT#: LA 15

STATION#: -0-

LOCATION: LATOUCHE ISLAND

REASON FOR TAKING PHOTO: OILED POTENTIAL ANADROMOUS FISH STREAM.

TAKEN BY: AIMEE WESEMAN

INITIALS: _____

ROLL #: 89AW012V FRAME #: 16

EVIDENCE ID#: 10191

ACE 7379581



Segment No LA 15 Subdivision C

Date 5/3/91 Log Frame No 1

Photographer Rebecca Hoff

Location _____

Comments Looking upstream to logjam
from upper intertidal

Roll No MAYSAP- 6-06 Neg. No 0

Control No 853 (Office Use Only)

SUMMARY SHEET
FOR DIFFICULT-TO-COPY ITEMS

ALASKA/CIVIL EXXON

Folder ACE # 1369638

CDP BOX # 12,306

Begin ACE Number 7379579

End ACE Number 7379588 *ben*

DOCUMENT TYPE:

____ BOOK

____ BLUEPRINT

X PHOTOS

____ VIDEO

____ SLIDES

____ AUDIO CASSETTE

____ MAP OR CHART

____ OTHER-Identify document type

____ COMPUTER PRINTOUT

MARGINALIA: YES ____ NO ✓

AUTHOR: Aimee Weseman

DATE OF PUBLICATION: 8/5/89

VERBATIM TITLE: _____

INFERRED TITLE: Official Photograph AD 7 & 8,
Exxon Valdez Oil Spill - Office: Valdez,
Time -0-, Segment #: LA 15, Station #: -0-,
Roll # 89AW012V, Evidence ID #: 10191

Reason for Taking Photos: ACE # 7379579 Oiled
Upper Reaches of Potential Anadromous Fish Stream.

Frame #: 14, ACE # 7379580: Swash Zone of Potential

Anadromous Fish Stream, Frame #: 15 ACE # 7379581,

Oiled Potential Anadromous Fish Stream, Frame #:

ADDITIONAL INFORMATION: 16 ACE # 7379582 Oiled Potential

Anadromous Fish Stream, Frame #: 17 ACE # 7379583,

Oiled Potential Anadromous Fish Stream, Frame #: 18,

ACE # 7379584, Oiled Potential Anadromous

Fish Stream, Frame #: 19, ACE # 7379585, Oiled

Potential Anadromous Fish Stream, Frame #: 20,

ACE # 7379586, Oiled Potential Anadromous Fish

Stream, Frame #: 21, ACE # 7379587, Oiled. Gravels under

storm Berm by Potential Anadromous Fish stream,

Frame #: 22, ACE # 7379588 Explosion

of phosphorous flare by Navy Team,

Frame #: 23.

H:\ZMCL\SUMMARY.FRM
Revised 1/30/91

ACE 7379578

ADEC DEMOBILIZATION REPORT

To: Alaska Department of Environmental Conservation
Oil Spill Response Center
Anchorage, Alaska
Attn: John Bauer
FAX 265-4666, 265-4656

TODAY'S DATE 7-8-90

RE: SEGMENT NUMBER 2A15 SUBSEGMENT NUMBER C

DEC REP Brian K. Fitz Simons USCG REP Bill Farmer / Tom Reilly

EXXON REP Craig Levine BOAT NAME/SQUAD NUMBER Columbia-Sg #2

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. NO: No "spot washing" was performed as recommended by TAG. East side of stream underwent both "tilling and mixing" and exposure + removal. Much OR with some OP sediments were left. West side of stream oiled lens was exposed in parallel trenches - oiled lens was removed and recovered by Boulder armour. Lower part of trenches/berms were agitated w/ dozers/ripper & tide H₂O releasing heavy Dark Brown Oil Mousse & Black oil droplets. Is there additional oil remaining? If yes then describe amount of oil remaining (type, size of area and location). Yes.

SUITZ: OR/OF sediments with some oiled logs/debris left.

East side Anad Stream: OR/OF sediments mixed with clean from Tilling

West side Anad Stream: Small pockets OR/OF left and buried under boulder/cobble armour - High OR sediments throughout area - Heavy Cover following release of oil into H₂O then not sweeping with snare allowing oil to redispurse over face of beach.

Date and Time of demobilization from segment. 7-8-90
1830 hours

COMPLETE THIS FORM AND FAX TO ANCHORAGE AFTER DEMOBILIZATION FROM EACH SEGMENT.

Additional Comments (keep objective)

The method of using track hoe to expose oiled lens in parallel rows perpendicular to beach face is most effective method I have observed for treating beaches heavily oiled and covered with B/C armour.

Brian K. Fitz Simons
signature

1. Allows for easy manual removal
2. Allows free access for tidal flux
3. Allows easy setup for HT/HP wash with header

Placed

4. Easy to rehabilitate beach following treatment

ACE 7379617-15

Revised 5/8/90

ADEC DEMOBILIZATION REPORT

To: Alaska Department of Environmental Conservation
Oil Spill Response Center
Anchorage, Alaska
Attn: John Bauer
FAX 265-4666, 265-4656

TODAY'S DATE 9-9-90

RE: SEGMENT NUMBER LALS SUBSEGMENT NUMBER C

DEC REP Brian K. FitzSimons USCG REP Red Glade

EXXON REP Ray Sutela BOAT NAME/SQUAD NUMBER Beulah Cardies

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

Is there additional oil remaining? If yes then describe amount of oil remaining (type, size of area and location). yes. Boulder area to west of CPG beach retains MS/OP/PO sediments. Still MS & OP sediments in storm berm near stream -

Date and Time of demobilization from segment 9-9-90 1900

COMPLETE THIS FORM AND FAX TO ANCHORAGE AFTER DEMOBILIZATION FROM EACH SEGMENT.

Additional Comments (keep objective) I DO NOT recommend demobilization of this segment - Too much treatable oil remains in place.

Brian K. FitzSimons
signature

Revised 5/8/90

ACE 7379616 +15

ALBU DAILY SHORELINE ASSESSMENT

LOCATION: Lanouch Island SEG LA 15 SUBSEG CMONITOR(S): Marianne ProfitaDATE: 9/7/90TIME: BEGIN 0700 END 1830

TIDES: TIME: HEIGHT:

LOW 9:20 -0.3HIGH 3:22 13.0LOW 9:49 -1.1HIGH 3:34 14.12WEATHER: CLOUDY RAIN FOG SUNTEMP: 59°F SEA COND: CalmWIND DIR: N-NE-E-SE-S-SW-W-NWWIND SPEED (KNOTS): 0-15 16-30 30+

ENVIRONMENTAL CONSTRAINTS: (SEAL HAULOUTS, EAGLE NESTS, MUSSEL BEDS, ETC.)

WAVE EXPOSURE: LOW MED HIGH
ACROSS SHORE ZONE: SU UITZ MITZ LITZSURFACE SEDIMENTS: R 1 B 1 C 1 P 1 G 1 S 1
SUBSURFACE SEDIMENTS: R 1 B 1 C 1 P 1 G 1 S 1

OIL CHARACTERISTICS

SURFACE: POOLED - MOUSSE - TARBALL - COVER - COAT - STAIN
SUBSURFACE: OP - OR - OF Mousse

TREATMENT TECHNIQUES

MechanicalMANUAL RAKING/TILLINGMANUAL REMOVAL: PO-MS-AP-TB

SPOT WASHING

OTHER John Deere 350-B

HEADER FLOOD (HOT/COLD)

BIOREMEDIATION

MECHANICAL

EQUIPMENT USED:

NAMES OF REPS & OTHER AGENCIES: EXXON Ray SoteloUSCG Red SladeOTHER: David Chado OOPSWORKERS ON SITE: ORTS 9OTHER: Mike Reers VCCO

WASTE HANDLING/DISPOSAL

ITEMS USED TO ABSORB/CONTAIN OIL Spare - Sausage Boom

OF BAGS COLLECTED:

OILED DEBRIS 208OIL & SEDIMENTS 0OILED VEG. 0OILED LOGS PRESENT: Y N# OF LOGS REMOVED 2

4/20/90

oiled Spare +
Sausage BoomSmall pieces of
oiled wood

ACE 7379692 +15

PHOTO/VIDEO DOCUMENTATION LA 15-C 9/7/90

PHOTOGRAPHS: ROLL # 1 FRAME(S): 21-32 REASON: Filling -
oiled water & cable.VIDEO: TAPE # 0 REASON: 0

COMMENTS

PROBLEMS: ENFORCEMENT ACTIVITIES, UPLAND CONT., ETC.

(PLEASE NOTE IF PROBLEM WAS DISCUSSED WITH PROPER AUTHORITY,
AND SUBSEQUENT RESPONSE.)

OBSERVATIONS: TREATMENT EFFICIENCY, POSSIBLE IMPROVEMENTS, ETC.

- Extra Snare added to contain filled up oil.
- Scott Nauman, Andy Teal (EXXON) & Ray Morris visit segment. EXXON gives the go ahead to start relocation of stray boom on East side of segment to Bradman's Stream.
- Rick Gustin AKF16 - Gives OK for AKF16 John Deere 350 - Starts job.
- Relocation started with John Deere 350 - slow but working.
- Bagging small pieces of oiled wood.
- Two lenses of House 10P -
first lens 4 to 6 inches from surface
second at 2 feet.

SIGNATURE

Marianne Perfita

ACE 7379693 -15

ADEC DAILY SHORELINE ASSESSMENT

LOCATION: Latoache Island SEG L115 SUBSEG C
 MONITOR(S): Gustin (F+G), Fitzsimons, + Montesano
 DATE: 7-4-90 TIME: BEGIN 0630 END 1930

TIDES: TIME: HEIGHT: WEATHER: CLOUDY RAIN NO FOG NO SUN
 LOW 0607 0.6 TEMP: 55 SEA COND: —
 HIGH 1242 8.5 WIND DIR: N-NE-E-SE-S-SW-W-NW Variable
 LOW 1744 4.9 WIND SPEED (KNOTS): 0-15 16-30 30+
 HIGH 1141 11.8

ENVIRONMENTAL CONSTRAINTS: (SEAL HAULOUTS, EAGLE NESTS, MUSSEL BEDS, ETC.) Anaol Stream, Eagle nest, Deer Harvesting,
FIN fish harvesting, + Purse Seine hook-off

WAVE EXPOSURE: LOW MED HIGH
 ACROSS SHORE ZONE: SU UETZ WITZ LITZ

SURFACE SEDIMENTS: R 70 % B 40 % C 40 % P 10 % G — % S — %
 SUBSURFACE SEDIMENTS: R 10 % B 5 % C 50 % P 20 % G 15 % S — %

OIL CHARACTERISTICS

SURFACE: POOLED - MOUSSE - TARBALL - COVER - COAT - STAIN
 SUBSURFACE: OP - OR - OF

TREATMENT TECHNIQUES

MANUAL RAKING/TILLING — HEADER FLOOD (HOT/COLD) —
 MANUAL REMOVAL: PE-MS-AP-TB BIOREMEDIATION Costumchen before moving back
 SPOT WASHING — MECHANICAL Boels has piled clean sed away
 OTHER —

EQUIPMENT USED: Trackhoe, 4 wheeler, LCU Alsek, Shovels, + buckets
 NAMES OF REPS & OTHER AGENCIES: EXXON Nauman + Levine
 USCG Farmer + Kielly OTHER: COPS R. Miller, ADNR Carlson
 WORKERS ON SITE: ORTS 17 OTHER: Supervisors Gabrielli + and Ambon

WASTE HANDLING/DISPOSAL

ITEMS USED TO ABSORB/CONTAIN OIL Swane line in front of work area
 # OF BAGS COLLECTED: 255
 OILED DEBRIS 255 OIL & SEDIMENTS 1055 OILED VEG. —
 OILED LOGS PRESENT: 0 N # OF LOGS REMOVED —
2 Pom-poms

4/20/90



ACE 7379596 +15

ADEC DAILY SHORELINE ASSESSMENT

LOCATION: Latucke Island/Sleepy Bay/RNS SEG LA 15 SUBSEG C
 MONITOR(S): Brian K. Fitz Simons
 DATE: 6-28-90 TIME: BEGIN 0 END 0

TIDES: TIME: HEIGHT: WEATHER: CLOUDY RAIN FOG SUN
 LOW 0 0 TEMP: 50 SEA COND: Calm
 HIGH 0558 10.6' WIND DIR: N-NE-E-SE-S-SW-W-NW
 LOW 1213 0.2' WIND SPEED (KNOTS): 0-15 16-30 30+ Calm
 HIGH 1950 11.0'

ENVIRONMENTAL CONSTRAINTS: (SEAL HAULOUTS, EAGLE NESTS, MUSSEL BEDS, ETC.) 7II, 1A, 1B, 1K, 5T, 7H, 11

WAVE EXPOSURE: LOW MED HIGH
 ACROSS SHORE ZONE: SU UITZ MITZ LITZ

SURFACE SEDIMENTS: R 5 % B 35 % C 50 % P 0 % G 0 % S 0 %
 SUBSURFACE SEDIMENTS: R 5 % B 10 % C 75 % P 40 % G 0 % S 0 %

OIL CHARACTERISTICS

SURFACE: POOLED - MOUSSE - TARBALL - COVER - COAT - STAIN AD
 SUBSURFACE: OP - OR - OF

TREATMENT TECHNIQUES Recommended

MANUAL RAKING/TILLING HEADER FLOOD (HOT/COLD)

MANUAL REMOVAL: PO-MS-AP-TB BIOREMEDIATION

SPOT WASHING MECHANICAL

OTHER Agitation/Raking in conjunction with Spot Wash

EQUIPMENT USED: None

NAMES OF REPS & OTHER AGENCIES: EXXON Craig Levine

USCG Tom Reiley OTHER: Ross Miller ODPs

WORKERS ON SITE: ORTS OTHER: Rick Gustafson Tom Crow

WASTE HANDLING/DISPOSAL

ITEMS USED TO ABSORB/CONTAIN OIL None

OF BAGS COLLECTED:

OILED DEBRIS 0 OIL & SEDIMENTS 0 OILED VEG. 0

OILED LOGS PRESENT: Y N # OF LOGS REMOVED 0

4/20/90

ACE 7379590

LA 15C



6-28-90

PHOTO/VIDEO DOCUMENTATION

PHOTOGRAPHS: ROLL # 0 FRAME(S): 0 REASON: 0

VIDEO: TAPE # 0 REASON: 0

COMMENTS

PROBLEMS: ENFORCEMENT ACTIVITIES, UPLAND CONT., ETC.

(PLEASE NOTE IF PROBLEM WAS DISCUSSED WITH PROPER AUTHORITY,
AND SUBSEQUENT RESPONSE.)

Inspect beach with Tom Crow and Rick Gustin
prior to mobilization and treatment. We discovered "No
Treatment" signs for this segment including the Anad.
Stream. These were not mentioned on the TAG reports.
Tom Crow contacted his superiors to get this
treatment ban lifted if possible.

OBSERVATIONS: TREATMENT EFFICIENCY, POSSIBLE IMPROVEMENTS, ETC.

Much oil: Mousse, Asphalt, OP & OR in the
Storm Berm - Oiled Debris in Supra Tidal -
needs treatment and not set aside.

SIGNATURE Brian K. Pytkowski

424-4114-Rm
424-5941-hanger

LA 15 C

7-3-90

PHOTO/VIDEO DOCUMENTATION

PHOTOGRAPHS: ROLL # 0 FRAME(S): 0 REASON: 0

VIDEO: TAPE # 0 REASON: 0

COMMENTS

PROBLEMS: ENFORCEMENT ACTIVITIES, UPLAND CONT., ETC.

(PLEASE NOTE IF PROBLEM WAS DISCUSSED WITH PROPER AUTHORITY,
AND SUBSEQUENT RESPONSE.)

None

OBSERVATIONS: TREATMENT EFFICIENCY, POSSIBLE IMPROVEMENTS, ETC.

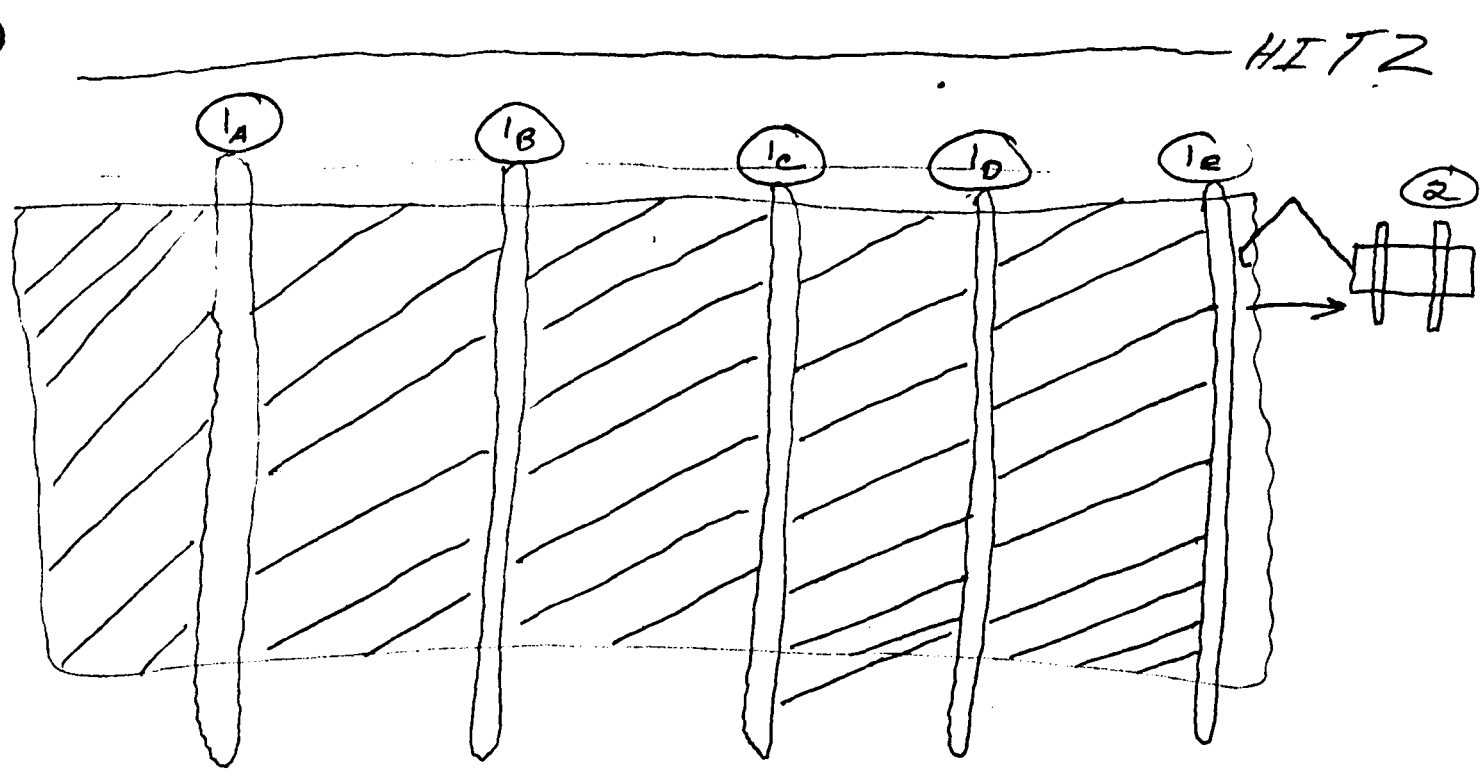
Rick Gustin has been given permission to direct work in the Anadscot area of LA 15C. After observing the random use of the trackhoe and inefficiency of procedure for exposing oiled sediments I proposed a systematic plan for working across the beach exposing the oiled lens for removal or washing. See Attached:

With this setup, the operator can maintain parallel berms perpendicular to tideline. Manual removal of oiled sediments can follow as soon as one row is exposed and machine and crew can progress smoothly across face of beach.

SIGNATURE Brian K. Tidline

Following manual removal, tides can flush the exposed areas. With this method an alternative to removal would be to use the Twin Pack with HP/HT wash and header floods.

LA. 15C
7-3-90



Key:
 : Oiled Lens
 : Trackhoe

Tideline
 1_A through 1_E : Berms Caused by raking overburden to Trackhoe
 2. Hitachi Trackhoe with tracks parallel to overburden berms

ACE 7379594

ADEC DAILY SHORELINE ASSESSMENT



LOCATION: Latche Island/Sleepy Bay/PWS SEG LA 15 SUBSEG C

MONITOR(S): Brian K. FitzSimons

DATE: 7-2-90

TIME: BEGIN 0530 END 1830

TIDES: TIME: HEIGHT:

LOW 0519 1.4'

HIGH 1142 8.0'

LOW 1645 4.9'

HIGH 2253 11.4'

WEATHER: CLOUDY RAIN ~~FOG~~ SUN

TEMP: 25 SEA COND: Calm

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

WIND SPEED (KNOTS): 0-15 16-30 30+ Calm

ENVIRONMENTAL CONSTRAINTS: (SEAL HAULOUTS, EAGLE NESTS, MUSSEL BEDS, ETC.) 1A+B, 1K, 5T, 7HH, 7IL

WAVE EXPOSURE: LOW MED HIGH
ACROSS SHORE ZONE: SO UITZ MITZ LITZ

SURFACE SEDIMENTS: R 5 % B 65 % C 30 % P % G % S %
SUBSURFACE SEDIMENTS: R 5 % B 15 % C % P % G % S %

80%

OIL CHARACTERISTICS

SURFACE: POOLED - MOUSSE - TARBALL - COVER - COAT - STAIN
SUBSURFACE: OP - OR - OF

Storm Berm

TREATMENT TECHNIQUES

MANUAL RAKING/TILLING
MANUAL REMOVAL POAMS AP-TB
SPOT WASHING
OTHER

HEADER FLOOD (HOT/COLD)
BIOREMEDIATION
MECHANICAL Tilling or Exposure

EQUIPMENT USED: Hitch Track Hoe

NAMES OF REPS & OTHER AGENCIES: EXXON Craig Levine

USCG Tom Reilly OTHER: Boss Miller

WORKERS ON SITE: ORTS 6 OTHER: Val Amborn

WASTE HANDLING/DISPOSAL

ITEMS USED TO ABSORB/CONTAIN OIL Pom Poms, Soare Line

OF BAGS COLLECTED:

OILED DEBRIS Yes OIL & SEDIMENTS Yes OILED VEG. Yes

OILED LOGS PRESENT: Y N # OF LOGS REMOVED 0

2 supersacks Oiled Debris

7 supersacks Oiled Sediments

4/20/90

LA15C P3m

7-4-90



PHOTO/VIDEO DOCUMENTATION

PHOTOGRAPHS: ROLL # _____ FRAME(S): _____ REASON: _____

VIDEO: TAPE # _____ REASON: _____

COMMENTS

PROBLEMS: ENFORCEMENT ACTIVITIES, UPLAND CONT., ETC.

 (PLEASE NOTE IF PROBLEM WAS DISCUSSED WITH PROPER AUTHORITY,
AND SUBSEQUENT RESPONSE.)

OBSERVATIONS: TREATMENT EFFICIENCY, POSSIBLE IMPROVEMENTS, ETC.

The area around the Stream has been
 divided into 5'6m wide sections where the
 clean sediments have been piled into rows
 dividing them. The crew is taking out the
 surface oil in these sections. They have been
 instructed to only remove the ~~surface~~^{3m} moussey
 brown oiled seds and are leaving the
 gray - "OP" behind. The Trucks have ~~back~~ filled
 part of a section today after Costumblers wa
 spread atop the remaining oil. F+6 rep bustin.
 would like to see more
 of the oiled seds, SIGNATURE *Pat Wether*
 but Exxon Levine has given the foremen strict
 instruction to only take what shines (which is
 less on a cloudy day like today).

Handworking crew is careful, but has its orders. (B) ^{3m}

ADEC DAILY SHORELINE ASSESSMENT

LOCATION: Latoache Island SEG LA15 SUBSEG C
 MONITOR(S): Gustin (F+G), Fitzsimons, + Montesano
 DATE: 7-4-90 TIME: BEGIN 0630 END 1930

TIDES: TIME: HEIGHT: WEATHER: CLOUDY RAIN NO FOG NO SUN
 LOW 0607 0.6 TEMP: 55 SEA COND: —
 HIGH 1242 8.5 WIND DIR: N-NE-E-SE-S-SW-W-NW Variable
 LOW 1744 4.9 WIND SPEED (KNOTS): 0-15 16-30 30+
 HIGH 1141 11.8

ENVIRONMENTAL CONSTRAINTS: (SEAL HAULOUTS, EAGLE NESTS, MUSSEL BEDS, ETC.) Anad Stream, Eagle nest, Deer Harvesting, Fin fish harvesting, + Purse Seine hook-off

WAVE EXPOSURE: LOW MED HIGH
 ACROSS SHORE ZONE: SU LITZ LITZ LITZ

SURFACE SEDIMENTS: R 70 % B 40 % C 40 % P 10 % G — % S — %
 SUBSURFACE SEDIMENTS: R 10 % B 5 % C 50 % P 20 % G 15 % S — %

OIL CHARACTERISTICS

SURFACE: POOLED - MOUSSE - TARBALL - COVER - COAT - STAIN
 SUBSURFACE: OP - OR - OF

TREATMENT TECHNIQUES

MANUAL RAKING/TILLING —
 MANUAL REMOVAL: PB-MS-AP-TB
 SPOT WASHING —
 OTHER —

HEADER FLOOD (HOT/COLD) —
 BIOREMEDIATION Costumbler before moving back clean
 MECHANICAL Boats have piled clean sed away

EQUIPMENT USED: Trackhoe, 4 wheeler, LCV Alsek, Shovels, + buckets
 NAMES OF REPS & OTHER AGENCIES: EXXON Nauman + Levine
 USCG Farmer + Rielly OTHER: COPS R. Miller, ADNR Carlson
 WORKERS ON SITE: ORTS 17 OTHER: Suparbeco Gabrielli

WASTE HANDLING/DISPOSAL

ITEMS USED TO ABSORB/CONTAIN OIL Swave line in front of work area
 # OF BAGS COLLECTED: 255
 OILED DEBRIS — OIL & SEDIMENTS 10SS OILED VEG. —
 OILED LOGS PRESENT: Y N # OF LOGS REMOVED —

at Port-Forms

4/20/90

ACE 7379598

LAISC PSM

7-4-90

PHOTO/VIDEO DOCUMENTATION

PHOTOGRAPHS: ROLL # FRAME(S): REASON: VIDEO: TAPE # REASON:

COMMENTS

PROBLEMS: ENFORCEMENT ACTIVITIES, UPLAND CONT., ETC.

(PLEASE NOTE IF PROBLEM WAS DISCUSSED WITH PROPER AUTHORITY, AND SUBSEQUENT RESPONSE.)

OBSERVATIONS: TREATMENT EFFICIENCY, POSSIBLE IMPROVEMENTS, ETC.

The area around the Stream has been divided into 5'6m wide sections where the clean sediments have been piled into rows dividing them. The crew is taking out the surface oil in these sections. They have been instructed to only remove the ~~surface~~^{top} mussy brown oiled sedgs and are leaving the non-"op" behind. The Trucks have back filled part of a section today after Costumblen was spread atop the remaining oil. F+G rep budwin would like to see more of the oiled sedgs, SIGNATURE Pete Miller but Exxon Levine has given the foreman strict instruction to only take what shines (which is less on a cloudy day like today).

ACE 7379599

Hardworking crew is careful, but has its orders. (B ^{PSM})

ADEC DAILY SHORELINE ASSESSMENT

LOCATION: Latche Island/Sleepy Bay/PWS SEG LA-75 SUBSEG C

MONITOR(S): Brian K. FitzSimons

DATE: 7-6-90

TIME: BEGIN 0530 END 1900

TIDES: TIME: HEIGHT:

LOW 0727 -0.6'

HIGH 0027 12.2'

LOW 1912 4.2'

HIGH 1410 9.6'

WEATHER: CLOUDY RAIN FOG SUN

TEMP: 50° SEA COND: Calm

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

WIND SPEED (KNOTS): 0-15 16-30 30+Calm

ENVIRONMENTAL CONSTRAINTS: (SEAL HAULOUTS, EAGLE NESTS, MUSSEL BEDS, ETC.) 1A 1B 1K 5T 7HH 7IT

WAVE EXPOSURE: LOW MED HIGH
ACROSS SHORE ZONE: SU UITZ MITZ LITZ

SURFACE SEDIMENTS: R 5 % B 65 % C 30 % P % G % S %

SUBSURFACE SEDIMENTS: R 5 % B 15 % C % P % G % S %

OIL CHARACTERISTICS

SURFACE: POOLED - MOUSSE - TARBALL - COVER - COAT - STAIN

SUBSURFACE: OP - OR - OF

80%

Storm berm

TREATMENT TECHNIQUES

MANUAL RAKING/TILLING

MANUAL REMOVAL PD MS AP TB

SPOT WASHING

OTHER

HEADER FLOOD (HOT/COLD)

BIOREMEDIATION

MECHANICAL Excavation to expose
oiled lens

EQUIPMENT USED: Hitachi Track Hoe

NAMES OF REPS & OTHER AGENCIES: EXXON Craig Levine

USCG Tam Reilly Bill Farmer OTHER: Ross Miller: OOPS

WORKERS ON SITE: ORTS 36 OTHER: Joe Gabriellie, Zack Kozelnikoff,
Jerry Noyes, Val Ambon

WASTE HANDLING/DISPOSAL

ITEMS USED TO ABSORB/CONTAIN OIL Spore Line Sorbent Boom Containment Bo.

OF BAGS COLLECTED: PomPoms

OILED DEBRIS yes OIL & SEDIMENTS yes OILED VEG. yes

OILED LOGS PRESENT: Y N # OF LOGS REMOVED 0

178 super sacks oiled sediments

4/20/90

ACE 7379600



7-6-90
PHOTO/VIDEO DOCUMENTATION

PHOTOGRAPHS: ROLL # 0 FRAME(S): 0 REASON: 0

VIDEO: TAPE # 0 REASON: 0

COMMENTS

PROBLEMS: ENFORCEMENT ACTIVITIES, UPLAND CONT., ETC.

(PLEASE NOTE IF PROBLEM WAS DISCUSSED WITH PROPER AUTHORITY, AND SUBSEQUENT RESPONSE.)

1) located continuing gross contamination (Mousse/Heavy OP/
leaked oil) east of stream bed adjacent to area exposed
for manual removal - Needs removal or relocation and
spot washing (Per Tag recommendations) - Pointed this out
to Jerry Reilly and he was reluctant to have Craig do any more -
Told him this was TAG recommended & I would not demobe
nor sign off segment without work performed.

Showed area to Craig later and he said they had worked
this area and were not coming back. Informed him this
area had not been worked and did not meet TAG recommendations
on State Standards and I would not approve Demobe nor
sign off the segment. Craig became angry and verbally abusive

OBSERVATIONS: TREATMENT EFFICIENCY, POSSIBLE IMPROVEMENTS, ETC. —

The method of exposing oiled lens by pulling back
clean overburden into windrows leaving oiled sediments
in shallow trench is working excellent. Crews don't waste
time moving non-oiled boulders to gain access to oiled lens.
Supersacks are filled in the trenches eliminating need
for buckets and method to haul them to LCU.
46 1/2 SSacks were filled yesterday and 17 today - All
OP or very high OR sediments. This is effective
and efficient and could be applied to many
oiled beach situations.

SIGNATURE Brian K. Tipton

LA 15 C

7-6-90

stating he had about been pushed to his limit and was not going to perform any more work in described area - I told him I did not know what his limit is but I know what the State standard is and what TAG recommends and the debated area did not come into compliance with either - because of this I could not approve demobe but must insist on further work. I again pointed out the pooled oil gathering at the base of the area of contention and the pits exposing the OP/Mousse just a few inches below the surface - Craig backed down and said he'd get a hand crew to expose the oiled lens and manually remove it - Told him that was acceptable but since the Trackhoe was on the beach he'd do well to bring it over and complete the task in relatively short time. Told him he could expose the sediments as done with the rest of the Anad stream area and manual removal could occur with relative ease. Craig is reluctant to do this and said so - He said what was done with the exposure trenches followed by manual removal will never occur again - Amazing! The most effective and efficient method yet observed is threatened with demise. He agreed to make a plan to do this.

compliance with either - because of this I could not approve demobe but must insist on further work. I again pointed out the pooled oil gathering at the base of the area of contention and the pits exposing the OP/Mousse just a few inches below the surface - Craig backed down and said he'd get a hand crew to expose the oiled lens and and manually remove it - Told him that was acceptable but since the Trackhoe was on the beach he'd do well to bring it over and complete the task in relatively short time. Told him hoe could expose the sediments as done with the rest of the Anad stream area and manual removal could occur with relative ease. Craig is reluctant to do this and said so - He said what was done with the exposure trenches followed by manual removal will never occur again - Amazing! The most effective and efficient method yet observed is threatened with demise. He agreed to mechanical removal of clean sediments and then relocate (scatter) the oiled lens across the already worked area seaward of contended area. We'll see what happens.

⊕

LA 15C - 7-6-90

2) Painted out to Reilley need to relocate part of storm berm (Per Anadscat TAG)
He again hedged on this saying area had been worked - It had not been worked - A test hole was dug to determine depth of oiling in storm berm but not tilling or relocation took place. Rick Gustin and myself decided this step should follow the excavation/removal of oiled lens in the MITZ and HETZ which is yet to be completed. Reilley just wants to hand rake it and Custom blen it completely ignoring the TAG recommendations.

I am keeping WCG and Exxon informed of needed work prior to Demobe well in advance of their completion of this segment and receiving much resistance from both of them.

We'll see what transpires tomorrow!

ADEC DAILY SHORELINE ASSESSMENT

LOCATION: Latche Island/Sheep Bay/PHS SEG LA15 SUBSEG C

MONITOR(S): Brian K. FitzSimons

DATE: 7/5/90

TIME: BEGIN 0500 END 1900

TIDES: TIME: HEIGHT:

LOW 0650 0.0'

HIGH 0 0

LOW 1831 4.6'

HIGH 1829 9.0'

WEATHER: CLOUDY RAIN FOG SUN

TEMP: 70 SEA COND: Calm

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

WIND SPEED (KNOTS): 0-15 16-30 30+ Calm

ENVIRONMENTAL CONSTRAINTS: (SEAL HAULOUTS, EAGLE NESTS, MUSSEL BEDS, ETC.) 1A, 1B, 1K, 5T, 7HH, 7II

WAVE EXPOSURE: LOW MED HIGH
ACROSS SHORE ZONE: SU UITZ MITZ LITZ

SURFACE SEDIMENTS: R S % B 65 % C 30 % P % G % S %

SUBSURFACE SEDIMENTS: R S % B 15 % C % P % G % S %

OIL CHARACTERISTICS

SURFACE: POOLED - MOUSSE - TARBALL - COVER - COAT - STAIN

SUBSURFACE: OP - OR - OF

Storm Berm

TREATMENT TECHNIQUES

MANUAL RAKING/TILLING

MANUAL REMOVAL: PO MS AP TB

SPOT WASHING

OTHER

HEADER FLOOD (HOT/COLD)

BIOREMEDIATION Custom bler

MECHANICAL Hitachi Trackhoe for

Oiled Lens Exposure

EQUIPMENT USED: Hitachi Track Hoe

NAMES OF REPS & OTHER AGENCIES: EXXON Craig Levine

USCG Bill Farmer

OTHER: Ross Miller: ODPS

WORKERS ON SITE: ORTS

OTHER: Rick Gustin ADETG

WASTE HANDLING/DISPOSAL

ITEMS USED TO ABSORB/CONTAIN OIL Pan Perns

OF BAGS COLLECTED:

OILED DEBRIS

OIL & SEDIMENTS Yes

OILED VEG. Yes

OILED LOGS PRESENT: Y N

OF LOGS REMOVED 0

4/20/90

46.5 Super sacks oiled Sediments

LA 15 C

7-5-90

⊕

PHOTO/VIDEO DOCUMENTATION

PHOTOGRAPHS: ROLL # 0 FRAME(S): 0 REASON: 0

VIDEO: TAPE # 0 REASON: 0

COMMENTS

PROBLEMS: ENFORCEMENT ACTIVITIES, UPLAND CONT., ETC.

(PLEASE NOTE IF PROBLEM WAS DISCUSSED WITH PROPER AUTHORITY,
AND SUBSEQUENT RESPONSE.)

None

OBSERVATIONS: TREATMENT EFFICIENCY, POSSIBLE IMPROVEMENTS, ETC.

Rather than place oiled sediments into buckets
and hand carry to the LCU to dump into supersacks
Supersacks were set up in the exposure trenches
and filled in place. This expedited tremendously
the task of removing gross sediments from the
exposure Trenches. The Trackhoe will load
Supersacks on to the LCU.

SIGNATURE

Brian K. Fitzhums

ADEC DAILY SHORELINE ASSESSMENT

LOCATION: Latoache Island SEG LA15 SUBSEG C

MONITOR(S): Gustin (F+G), Fitzsimons, + Montesano

DATE: 7-4-90

TIME: BEGIN 0630 END 1930

TIDES: TIME: HEIGHT:
 LOW 0607 0.6
 HIGH 1242 8.5
 LOW 1744 4.9
 HIGH 1141 11.8

WEATHER: CLOUDY RAIN FOG SUN

TEMP: 55 SEA COND: —

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

WIND SPEED (KNOTS): 0-15 16-30 30+

ENVIRONMENTAL CONSTRAINTS: (SEAL HAULOUTS, EAGLE NESTS, MUSSEL BEDS, ETC.) Anad Stream, Eagle nest, Deer Harvesting, Fin Fish harvesting, + Purse Seine hook-off

WAVE EXPOSURE: LOW MED HIGH
 ACROSS SHORE ZONE: SU UITS MITZ LITZ

SURFACE SEDIMENTS: R 70 % B 40 % C 40 % P 10 % G — % S — %
 SUBSURFACE SEDIMENTS: R 10 % B 5 % C 50 % P 20 % G 15 % S — %

OIL CHARACTERISTICS

SURFACE: FOILED - MOUSSE - TARBALL - COVER - COAT - STAIN
 SUBSURFACE: OP - OR - OF

TREATMENT TECHNIQUES

MANUAL RAKING/TILLING —
 MANUAL REMOVAL: PD-MS-AP-TB
 SPOT WASHING —
 OTHER —

HEADER FLOOD (HOT/COLD) —
 BIOREMEDIATION Costumblers before moving back clean
 MECHANICAL Boats have piled clean sed away

EQUIPMENT USED: Trackhoe, 4 wheeler, LCV Alsek, Shovels, + buckets
 NAMES OF REPS & OTHER AGENCIES: EXXON Nauman + Levine
 USCG Farmer + Rielly OTHER: COPS R. Miller, ADNR Carlson
 WORKERS ON SITE: ORTS 17 OTHER: Supervisors Gabrielli + and Ambon

WASTE HANDLING/DISPOSAL

ITEMS USED TO ABSORB/CONTAIN OIL Saware line in front of work area
 # OF BAGS COLLECTED: 255
 OILED DEBRIS — OIL & SEDIMENTS 1055 OILED VEG. —
 OILED LOGS PRESENT: Y N # OF LOGS REMOVED —
* Penn-Penns

4/20/90



ACE 7379607

LAISC PBM

7-4-90



PHOTO/VIDEO DOCUMENTATION

PHOTOGRAPHS: ROLL # _____ FRAME(S): _____ REASON: _____

VIDEO: TAPE # _____ REASON: _____

COMMENTS

PROBLEMS: ENFORCEMENT ACTIVITIES, UPLAND CONT., ETC.

(PLEASE NOTE IF PROBLEM WAS DISCUSSED WITH PROPER AUTHORITY,
AND SUBSEQUENT RESPONSE.)

OBSERVATIONS: TREATMENT EFFICIENCY, POSSIBLE IMPROVEMENTS, ETC. _____

The area around the Stream has been divided into 5*6m wide sections where the clean sediments have been piled into rows dividing them. The crew is taking out the surface oil in these sections. They have been instructed to only remove the ~~surface~~^{BM} mossy brown oiled sedg and are leaving the NON-"OP" behind. The Tracts has back filled part of a section today after Costumblers was spread atop the remaining oil. F+6 rep bustin.

would like to see more

of the oiled sedg, SIGNATURE Pete Miller

but Exxon Levine has given the foreman Street instruction to only take what shines (which is less on a cloudy day like today).

ACE 7379608

Handworking crew is careful, but has its orders. (B ^{PBM})

*Mechanical
Tilling*

ADF&G OIL SPILL RESPONSE MONITORING

ASC# 226-40-16782

Date: 7/13/91

Stream Name: _____

Observer: Doug Hill

Segment-Sub Unit LA-~~204~~ 156

Location: Latauche Island, Sleepy Bay

Anad. Stream Permit Issued? Y ☒ N

Date: _____

Work Order Issued: ☒ Y ☒ N

Date: 5/14/91

Demob Date: 7/15/91

Oil Characteristics (circle appropriate ones)

Surface: AP, ☒ MS, TB, ☒ SOR, ☒ CV, ☒ CT, ☒ SD, FL, DB, None
Subsurface: ☒ OB, ☒ NOR, ☒ MOR, ☒ LOR, ☒ OF, TR, None

Treatment Techniques:

Manual Removal
Manual Raking
Spot Wash
Other

Bioremediation & Type
Mechanical Tilling
Header Flood (Hot/Cold)

Crew Size: 1

Lbs. or Bags of Oil/Sediment Removed 0

Other Agency Reps, and Names: RANDY BOYER & CHRIS KASTIMPALIS
(EXXON), Jerry Schultz (USCG), Newt Rft Berthing Vessel
Graham MacDonald (OG)

Photos

Y ☒ N

Roll #

Frames

Video

Tape #

Start End

Sediment/Oil Samples (Y ☒ N) Collection Number

Purpose of Trip * MANUAL Crew working the west end LA-156, Backhoe on site

* Form designed primarily for cleanup inspection trips, but should be used for any field trips, i.e., to check on bird rookeries, seal haulouts, special habitat areas, etc.

Describe extent of remaining oil (any comments on expected completion of cleanup).

Oil of concern to the stream still remains to be dealt with on the east side of the stream (the area tilled on 7/11/91) and the lightly oiled area on the west side just below the log pile - Oiled cobble gravel is rolling into the stream channel. Sheen comes off the beach at each tide - Further tilling w/ tide would continue to release globules of oil. ~~at~~ The larger tilled area to the west of the stream is approximately 22m from the stream - what A MESS.

Comments: (Are work order procedures being followed?, etc.)

Requested that the area on the east side of the stream be mechanically tilled again before the backhoes were loaded on to the LCM. This request was partially met by Exxon Randy Beyer - As, a 22m x 6m and a 15m x 6m in the UMITZ and UITZ were tilled. Beyer would not even consider speculating on taking the oil in the LMITZ which had been tilled 2 days previous.

The afternoon hi tide did not reach the area tilled today.

Repeated tilling would be in order - tilling with tide - As, ^(7/11/91) the recent tilling did not occur with tide - the boom was relatively clean when removed today.

A:OPRESP
April 2, 1991

SEGMENT LA156 MONITOR Montesano DATE 7-13-91

PHOTOGRAPHS: Roll # Frames Reason

VIDEO TAPE # Reason

COMMENTS. (Observations, problems & efforts made to correct, etc)

When we began work this morning the booms ~~were~~ and 2 trackhoes were still on site. The booms were pulled in the morning and the trackhoes were pulled in the afternoon. ADFRG Hill requested that the tilled area E of the stream be retilled before the equipment was pulled, his request was partially met by the berm being raised - a 4x13m area. Exxon Boyer was hesitant to do anything more w/ the equipment since the mechanical was demob'd. The manual crew worked the boulder field west of the relocation area removing large amounts of gross contamination. Tomorrow is to be the last day on site before the crew heads to town and it looks doubtful that the site will be adequately prepared for fertilizers.

OIL CHARACTERISTICS After Treatment

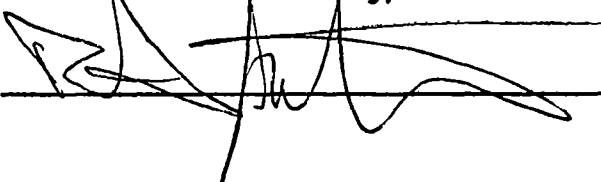
Surface: Mousse Tarball/Patty Pavement Cover Coat Stain

Subsurface: ~~OP~~ ~~HOR~~ ~~MOR~~ LOR OF Depth: 0 Thickness: 11/18 cm

TAG WORK ORDER COMPLETED? ☒ NO YES COMMENTS

WORK ORDER MODIFICATION REQUESTED? ☒ NO YES DATE

RECOMMEND FOR FUTURE REASSESSMENT? NO ☒ YES (include map identifying treatment performed and oil remaining)

SIGNATURE 

ADF&G OIL SPILL RESPONSE MONITORING

ASC# 226-40-16782

Date: 7/13/91

Stream Name: _____

Observer: Darryl Hill

Segment-Sub Unit LA-15C

Location: Latauche Island, Sleepy Bay

Anad. Stream Permit Issued? Y ☒ N

Date: _____

Work Order Issued: ☒ N

Date: 5/14/9

Demob Date: 7/15/91

Oil Characteristics (circle appropriate ones)

Surface: AP, ☒ MS, ☒ PB, ☒ SOR, ☒ CV, ☒ CT, ☒ ST, ☒ FL, DB, None
 Subsurface: ☒ OP, ☒ HOR, ☒ MOR, ☒ LOR, ☒ OF, TR, None

Treatment Techniques:

☒ Manual Removal
 Manual Raking
 Spot Wash
 Other

Bioremediation & Type
 Mechanical Tilling
 Header Flood (Hot/Cold)

Crew Size: 6

Lbs. or Bags of Oil/Sediment Removed ~1355 lbs / 9 SS

Other Agency Reps, and Names: Peter Montesano (ADEC), Chris Katsimpalis (EXXON), Terry Schultz (USCG - did not leave boat -> Don Bollinger), GRAHAM MacDonald (OG)

Photos Y ☒ N

Roll #

Frames

Video

Tape #

Start

End

Sediment/Oil Samples (Y ☒ N)

Collection Number

Purpose of Trip * Cleanup Monitoring - Manual Removal

* Form designed primarily for cleanup inspection trips, but should be used for any field trips, i.e., to check on bird rookeries, seal haulouts, special habitat areas, etc.

Describe extent of remaining oil (any comments on expected completion of cleanup).

Boulder/Cobble
west end

MS, OP, HOR-LOR remaining in tough to get at locations (beneath large boulders etc.). MS oozing from periphery of worked areas into area where heavily oiled sediment & MS removed. HSOP "^{1°}SOP" remains at site east of ^{ANAD} creek, on bank of creek and on the 3 oiled areas to west of creek (Cobble portion of beach). TB, ST, CT in log jam.

Comments: (Are work order procedures being followed?, etc.)

Crew of 6 manually removed OP, HOR-LOR, MS from amongst cobbles & boulders at west end of segment. The crew works steady - this a good crew. The Exxon Rep. is the best I've worked with - I think this guy genuinely wants to pick up oil.

Area should be reassessed in the future.

A:OPRESP
April 2, 1991



ADF&G OIL SPILL RESPONSE MONITORING

ASC# 226-40-16782

Date: 7/2/91

Stream Name: _____

Observer: Mark Fink

Segment-Sub Unit LAISC

Mark Kowalski

Location: NE LaTouche Is.

Aimee Wesman

Anad. Stream Permit Issued? ☒ Y ☐ N

Date: 6/30/91

Work Order Issued: ☒ Y ☐ N

Date: 6/25/91

Demob Date: W.O. Mechanical completed 7/1/91

Oil Characteristics (circle appropriate ones)

Surface: AP, MS, TB, SOR, CV, CT, ST, FL, DB, None
Subsurface: ☒ OP, ☒ HOR, ☒ MOR, ☒ LOR, OF, TR, None

Treatment Techniques:

Manual Removal
Manual Raking
Spot Wash
Other

Bioremediation & Type
Mechanical Tilling
Header Flood (Hot/Cold)

Crew Size: _____

Lbs. or Bags of Oil/Sediment Removed _____

Other Agency Reps, and Names: Nick Martinez - Exxon
Vince Mulligan - USCG

Photos

Y ☒ N

Roll #

Frames

Video

☒

Tape #

Start

End

Sediment/Oil Samples (Y ☒ N) Collection Number

Purpose of Trip * Assess Treatment

* Form designed primarily for cleanup inspection trips, but should be used for any field trips, i.e., to check on bird rookeries, seal haulouts, special habitat areas, etc.

★

Describe extent of remaining oil (any comments on expected completion of cleanup).

Tilled areas east and west of the stream had not been pushed by the tide. Exposed HOF/OP sediments remain. Oil lens along west edge of stream bank remains. Oil lens in tilled area east of stream runs further up into storm berm.

Comments: (Are work order procedures being followed?, etc.)

Mark, Aimee, and I talked with Nick Martinez and Vince Mulligan about the inability to collect oil from tilled areas. Tides did not reach UFTZ and booms had been removed on at least one of the tilled areas. They maintained that the work order did not state tilling with the tide, or relocation to LITZ. Intent of TAG in work order is not evident to these two monitors (so they say). A work order modification has been submitted by Aimee, requesting mechanical tilling with the incoming tide in areas previously tilled. Booms should collect any released oil. Also mechanical removal of oiled sediments along north end of stream bank was requested.

A:OPRESP
April 2, 1991

Describe extent of remaining oil (any comments on expected completion of cleanup).

Advise further assessment

Comments: (Are work order procedures being followed?, etc.)

20 Supercaks stored ~~at~~ above tide line from previous two days work were sling loaded on to M/V Adele Candies. Tripol Application began at approx. 1300 hrs. ~~No~~ Tripol applied within 100 m of stream. Inpol applications ~~on west side of stream~~ began at a point approx. 180 m to the west of the ANAD stream. $\approx$ 8 bags of MS& oiled sediment were scheduled to be removed from extreme North end of segment after my departure.

A:OPRESP
April 2, 1991

ADF&G OIL SPILL RESPONSE MONITORING

ASC# 226-40-16782

Date: 7/14/91

Stream Name: _____

Observer: Doug Hill

Segment-Sub Unit LA-15C

Location: Latauche Island, Sleepy Bay

Anad Stream Permit Issued? Y ☒ N

Date: _____

Work Order Issued: ☒ N

Date 5/14/91

Demob Date: 7/15/91

Oil Characteristics (circle appropriate ones)

Surface: AP, ☒ MS, TB, ☒ SOR, ☒ CV, ☒ CT, ☒ ST, ☒ FL, DB, None
 Subsurface: ☒ OP, ☒ HOR, ☒ MOR, ☒ LOR, ☒ OF, TR, None

Treatment Techniques:

☒ Manual Removal
☒ Manual Raking
 Spot Wash
 Other

☒ Bioremediation & Type Customblend
 Mechanical Tilling
 Header Flood (Hot/Cold)

Crew Size 3

Lbs. or Bags of Oil/Sediment Removed 11 Super sacks

Other Agency Reps, and Names: Peter Montesano (ADFC), Chris Katsimpalis (Exxon), Graham MacDonald (Log), Terry Schultz (USCG)

<u>Photos</u>	Y ☒ N	<u>Roll #</u>	<u>Frames</u>
		_____	_____
		_____	_____

<u>Video</u>	<u>Tape #</u>	<u>Start</u>	<u>End</u>
	_____	_____	_____
	_____	_____	_____

Sediment/Oil Samples (Y ☒ N) Collection Number

Purpose of Trip * Bioremediation Monitoring (Customblend)

* Form designed primarily for cleanup inspection trips, but should be used for any field trips, i e , to check on bird rookeries, seal haulouts, special habitat areas etc

Describe extent of remaining oil (any comments on expected completion of cleanup).

Comments: (Are work order procedures being followed?, etc.)

≈ 200 lbs of Customblen applied to oiled/mechanically tilled area on east side of Anad. Stream.

≈ 80 lbs of Customblen applied to oiled/mech. tilled area on west bank of creek at log jam/VZTZ. Ols reports 320 lbs of Customblen cumulative for these area - I observed only 200 at east side side. No Triptol Applied within 100 m. of stream. 4 sacks/≈ 60 lbs of oiled sediment removed from east side of stream prior to customblen applic. ≈ 30 minutes of manual tilling and spreading of MOR/LOE prior to customblen applic.

A:OPRESP
April 2, 1991



ADF&G OIL SPILL RESPONSE MONITORING

ASC# 226-40-16782

Date: 7/13/91

Stream Name: _____

Observer: Doug Hill

Segment-Sub Unit LA-15C

Location: Latorche Island, Sleepy Bay

Anad. Stream Permit Issued? Y ☒ N

Date: _____

Work Order Issued: ☒ N

Date: 5/14/9

Demob Date: 7/15/91

Oil Characteristics (circle appropriate ones)

Surface: AP, ☒ MS, ☒ SOR, ☒ CV, ☒ CT, ☒ ST, ☒ FL, DB, None
Subsurface: ☒ OP, ☒ HOR, ☒ MOR, ☒ LOR, ☒ OF, TR, None

Treatment Techniques:

☒ Manual Removal
Manual Raking
Spot Wash
Other

Bioremediation & Type
Mechanical Tilling
Header Flood (Hot/Cold)

Crew Size: 6

Lbs. or Bags of Oil/Sediment Removed 21355 lb / 9 SS

Other Agency Reps, and Names: Peter Montesano (ADEC), Chris Katsimpalis (EXXON), Terry Schulte (USCG - did not leave boat -> Don Bollinger), GRAHAM MacDonald (OG)

Photos Y ☒ N

Roll #

Frames

Video

Tape #

Start

End

Sediment/Oil Samples ☒ Y ☒ N Collection Number

Purpose of Trip * Cleanup Monitoring - Manual Removal

* Form designed primarily for cleanup inspection trips, but should be used for any field trips, i.e., to check on bird rookeries, seal haulouts, special habitat areas, etc.

Describe extent of remaining oil (any comments on expected completion of cleanup).

boulder/cobble
west end.

MS, OP, HOR-LOR remaining in tough to get at locations (beneath large boulders etc.). MS cozing from periphery of worked areas into area where heavily oiled sediment + MS removed. HCOP "¹⁰SOP" remains at site east of ^{ANAA} creek, on bank of creek and on the 3 oiled areas to west of creek (cobble portion of beach). TB, ST, CT in log jam.

Comments: (Are work order procedures being followed?, etc.)

Crew of 6 manually removed OP, HOR-LOR, MS from amongst cobbles + boulders at west end of segment. The crew works steady - this a good crew. The Exxon Rep. is the best I've worked with - I think this guy genuinely wants to pick up oil.

Area should be reassessed in the future.

A:OPRESP
April 2, 1991

*Mechanical
Tilling*

ADF&G OIL SPILL RESPONSE MONITORING

ASC# 226-40-16782

Date: 7/13/91

Stream Name:

Observer: Doug Hill

Segment-Sub Unit LA-150

Location Lafourche Island, Sleepy Bay

Anad Stream Permit Issued? Y ☒

Date:

Work Order Issued: ☒

Date: 5/14/91

Demob Date: 7/15/91

Oil Characteristics (circle appropriate ones)

Surface: AP, ☒ MS, TB, ☒ SOR, ☒ CV, ☒ CT, ☒ ST, FL, DB, None
Subsurface: ☒ OB, ☒ NOR, ☒ MOR, ☒ LOR, ☒ OF, TR, None

Treatment Techniques:

Manual Removal
Manual Raking
Spot Wash
Other

Bioremediation & Type
Mechanical Tilling
Header Flood (Hot/Cold)

Crew Size: 1

Lbs. or Bags of Oil/Sediment Removed 0

Other Agency Reps, and Names: RANDY BOYER & CHRIS KASTAMPALIS
(EXXON), JERRY SCHULTZ (USCG), NEVER LEFT BERTHING VESSEL
Graham MacDonald (DLG)

Photos

Y ☒

Roll #

Frames

Video

Tape #

Start

End

Sediment/Oil Samples (Y ☒ N) Collection Number

Purpose of Trip * MANUAL Crew working the west end LA-150, Backhoe on site

* Form designed primarily for cleanup inspection trips, but should be used for any field trips, i.e., to check on bird rookeries, seal haulouts, special habitat areas, etc.

Describe extent of remaining oil (any comments on expected completion of cleanup).

Oil of concern to the stream still remains to be dealt with on the east side of the stream (the area tilled on 7/11/91) and the lightly oiled area on the west side just below the log pile - Oiled cobble gravel is rolling into the stream channel. Sheen comes off the beach at each tide - Further tilling w/tide would continue to release globules of oil. ~~the~~ The larger tilled area to the west of the stream is approximately 22m from the stream - what A MESS
Comments: (Are work order procedures being followed?, etc)

Requested that the area on the east side of the stream be mechanically tilled again before the backhoes were loaded on to the LCM. This request was partially met by Exxon Randy Boyer - As, a 22m x 6m and a 15m x 6m in the UMITZ and UITZ were tilled. Boyer would not even consider speculating on taking the oil in the LMITZ which had been tilled 2 days previous.

The afternoon hi tide did not reach the area tilled today.

Repeated tilling would be in order - tilling with tide - As, ^(7/11/91) the recent tilling did not occur with tide - the boom was relatively clean when removed today.

Supplemental III

1991 MAYSAP EVALUATION

Y 226 4016782

16783

SEGMENT: LA 15 SUB: C REGION: PWS SURVEY DATE: JULY 8 - TAG

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) SAME

Ecological/Constraints (see page two for details) SAME

ARCHAEOLOGICAL CONSTRAINTS:

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

Timothy J. Smith for SHPO 7/9/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL:

TAG: ADDITIONAL TILLING RECOMMENDED AS PRESCRIBED ON ATTACHED SKETCHES

RELOCATE SMALL AREA (Approx 20 X 2 yds) AT THE BASE OF THE BERM JUST EAST OF THE STREAM.

FOSC:

TAG APPROVAL DATE: 1/9/91

FOSC APPROVAL DATE:

ADEC

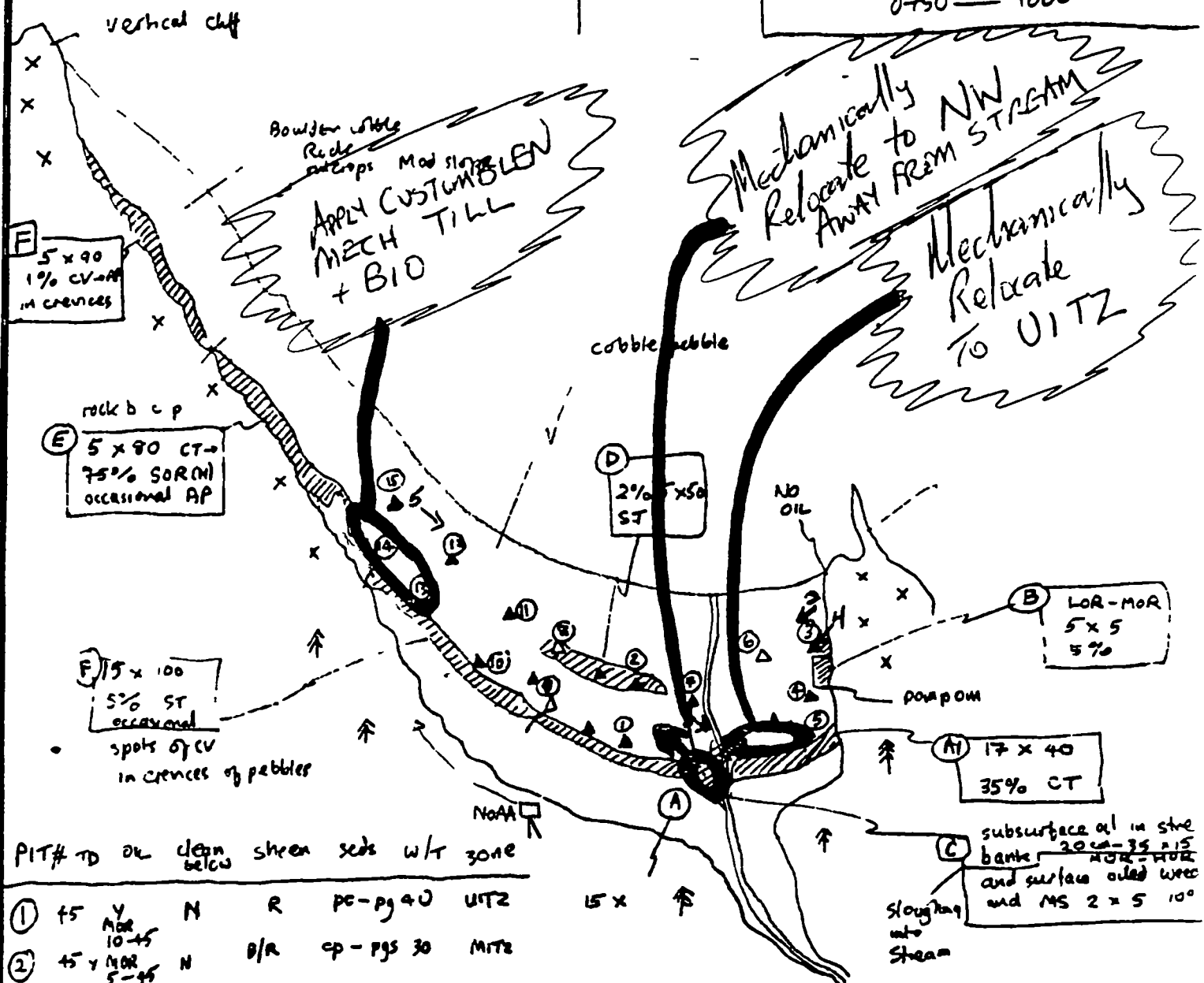
FOSC

EXXON

USCG

NOAA

LA-015-C 05/03/91
OG. Map D1 Little
0750 — 1000



ANADROMOUS
STREAM

Location A extends both sides of stream

PIT#	TD	OR	down below	screen	sets	w/r	zone
①	45	Y	N	R	PC-Pg 40		MITZ
		MOR 10-45					
②	45	Y	N	B/R	CP-Pgs 30		MITZ
		MOR 5-45					
③	15	Y	N	B/R	C-gs 5		MITZ
		5-15 MOR					
④	25	Y	N	B/R	CP-PCg 20		MITZ
		0-25 MOR					
⑤	10	Y	N	B/R	CBP-gp 5		UITZ
		0-15 MOR					
⑥	30	TR	Y	—	CP-Pg 20		MITZ
⑦	40	Y MOR	N	R/B	PC-SPg 30		MITZ
		20-40					
⑧	30	TR	Y	R	CP-PC 20		MITZ
⑨	55	Y TR	Y	N	PC-P	—	UITZ
⑩	35	Y MOR	Y	R	PC-PC 30		UITZ
⑪	30	Y OF	Y	R	PC-CP 10		MITZ
⑫	35	Y MOR	N	R	PC-CP 20		MITZ

on org same

(14) 25 Y (H) OR 0-10 N - CP-PGS MITZ
 AT/OP 10-25

(15) 20 Y (H) OR 5-20 N PG MITZ



ADF&G OIL SPILL RESPONSE MONITORING

ASC# 226-40-16782

Date: 7/1/91

Stream Name: _____

Observer: Aimee Weseman

Segment-Sub Unit LA15C

Location: N.E. LaTouche I

Anad. Stream Permit Issued? ☒ Y ☐ N

Date: 6/30/91

Work Order Issued: ☒ Y ☐ N

Date: 6/25/91

Demob Date: mechanical tilling portion of WO complete 7/1/91, not manual

Oil Characteristics (circle appropriate ones)

(rest into comments) 7/9/91

Surface: ☒ AP, ☒ MS, ☐ TB, ☒ SOB, ☒ CV, ☒ CT, ☒ ST, FL, DB, None
Subsurface: ☒ OP, ☒ HOR, ☒ MOR, ☒ LOR, ☒ OF, TR, None

Treatment Techniques:

- X Manual Removal
- X Manual Raking
- Spot Wash
- Other

- Bioremediation & Type
- X Mechanical Tilling - In place
- Header Flood (Hot/Cold)

Crew Size: 6 + Hitachi

Lbs. or Bags of Oil/Sediment Removed 0

Other Agency Reps, and Names: Nick Martinez - Exxon
Vince Mulligan - USCG, Dale Gardner - ADEC

Photos ☒ Y ☐ N

Roll #

Frames

91A5W02

19, 20, 21

Video ☒ Tape #

Start _____ End _____

DEC91DWG01

Dale Gardner - ADEC

Sediment/Oil Samples ☒ Y ☐ N

Collection Number

Purpose of Trip * treatment

* Form designed primarily for cleanup inspection trips, but should be used for any field trips, i.e., to check on bird rookeries, seal haulouts, special habitat areas, etc.

✱

Describe extent of remaining oil (any comments on expected completion of cleanup).

Lots of work yet to do - retilling with the tide, mechanical pulling back of oil lense on stream bank & manual removal oiled material in UITZ North of stream - AP/tarmat/HSOR trapped in boulder interstices, Touch up work - completion of removal of oiled organics in log jam

Comments: (Are work order procedures being followed?, etc.)

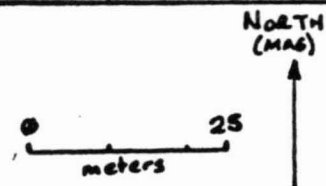
Areas of OP/HOR along transect lines 4, 5, 6, 7, 8 & 9 were filled in place. Oil lense not as thick as previous days oil = area received treatment in 90. Thin OP/HSOR lense, near the surface, continues into storm berm

Tilled areas 50m long x 15m wide & 20m long x 5m wide from east to west

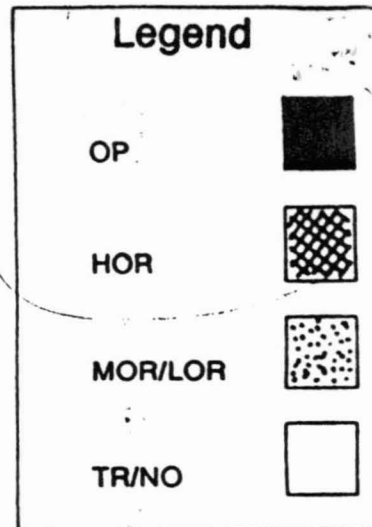
Some manual removal of oiled lense on stream bank was accomplished, but the effort was largely futile - mechanical help needed.

Mechanical tilling in place without the tide & agitation is an irresponsible treatment. Release of oil occurs with high tides & storms after protective booming is removed. Very little, if any oil is recovered immediately after tilling, if oil is located in UITZ and tides do not cover the area.

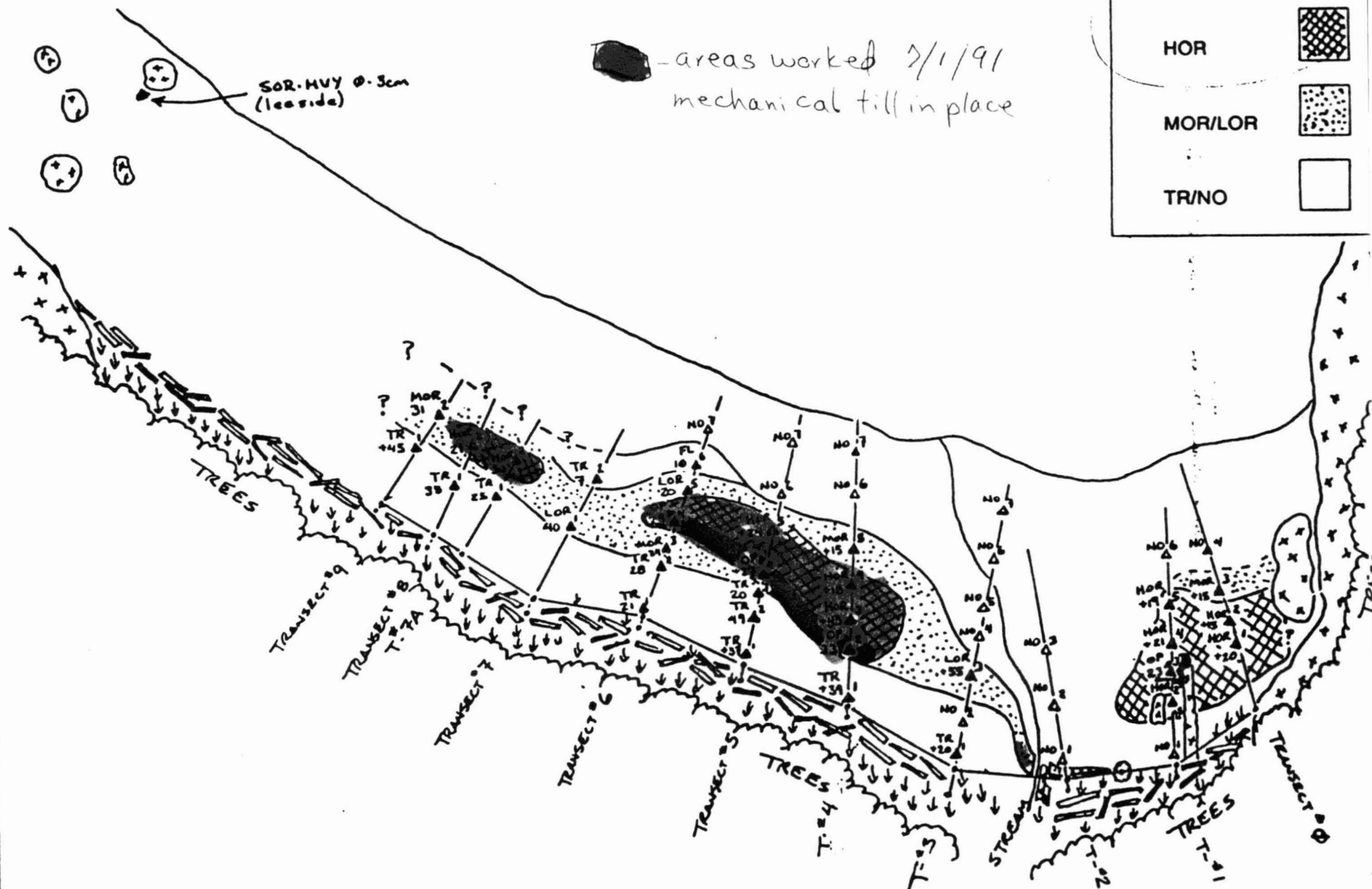
A OPRESP
April 2, 1991



LA015-C Maximum Subsurface Oil Character 14-June-1991



- areas worked 7/1/91
mechanical till in place



pits 14+15

**NORTH
(MAS)**

25
meters

$\Delta = \text{pitstop}$

LA015-C

Maximum Subsurface Oil Character

14-June-1991

SOR. MUY 0.3cm
(leaf side)

- areas treated
6/30 & 2/1/1991
mechanical & manual.

Legend

OP

HOR

MOR/LOR

TR/NO

thick OP/HOR
lense extends
into storm berm

not as heavily
oiled as area of
pits # 4 & 5 and 14 & 15

thin, near surface
optical lens extends
into storm berm

Dits 4th

oil lease
extends int
storm be

DAT 17-J

Post-It™ brand fax transmittal memo 7671		# of pages > 1
To	Nick Martinez	From S Nauman
Co		Co Opns
Dept		Phone # 3416
Fax #		Fax #

TO: Nick Martinez

FROM: Scott Nauman

SUBJECT: LA-15C

I've just returned from hours of unsuccessful helicopter attempts. Since I was unable to personally visit, and since I'm unable to establish contact over the phone, I'll try the fax. .

In answer to your question about LA-15C, I believe I'm probably more confused than you are. Apparently a survey done by an Exxon team recently showed more HOR/OP oil at LA-15C than did the MAYSAP survey I participated in. This Exxon survey is not attached to the paperwork we have here in Operations, nor is it attached to the paperwork in the SCAT group files. Leaving no stone unturned, however, I called Andy Teal and he explained that the HOR/OP oil identified in this subsequent Exxon survey should in fact be our guide for treatment. Therefore, to the extent that it shows this level of oiling in the middle portion of the beach, go ahead and till it up. I'm assuming (based on your question) that you have this subsequent survey that I do not. Andy said that this area was about 50 yards long and shouldn't take a whole day, so it sounds like you and he are referencing the same material.

I'm still trying to sort out the paperwork on LA-15D and LA-15E. Both the Admiral and Otto have told me personally that we're o.k.'d to use mechanical equipment, but I haven't seen anything that says specifically what and where we're to do. If you need to do something else after LA-15C, go to LA-15E and work with Larry. He apparently was there for the TAG visit and knows exactly what we're supposed to do. I'll be the last one to know.

I have a toothbrush and pocketful of cough drops to bring out. I'll try to get out tomorrow, but first I need to straighten out the helicopter schedule. Have a good evening - hope your day was better than mine. subdivisions we're supposed to do wha

→ Tilling us Removing Armor GIV E

ADF&G MULTI-ASSESSMENT FORM
1991 GENERAL ENTRY CHECKLIST

STREAM#: 2264016782
SEGMENT: LA015

PAGE 13

DATE PRINTED: 08/26/91

LOCATION: LATOUCHE ISLAND, NORTHEAST SIDE

SURVEY TYPE: 91 POST TREATMENT - SS

METHOD: GROUND

DATE: 08/03/91

TEAM RECORDER: WESEMAN

START TIME: 1000

OBSERVERS: FINK KUWADA MIDDLETON

END TIME: 1210

TIDES: ~~4~~ 5.7-3.1 ~~ebb/stack~~

AGENCY: FG

OG/HAB DISCREPANCIES: -

PHOTOS TAKEN: N

STATION: 2264016782

ROLL#: -0-

FRAME: -0-

VIDEO TAKEN: N

TAPE#: -0-

START: -0-

END: -0-

SAMPLES TAKEN: N

SAMPLE NUMBERS: -0-

-0-

-0-

-0-

-0-

-0-

OIL IN STREAM BED: Y

OVERALL OIL IMPACT: -0-

OIL ON BEACH BY MOUTH: Y

WAVE EXPOSURE: HIGH

SHORELINE TYPE: BEACH COVE

SUBSTRATE TYPE: BEDROCK Y

BOULDER Y

COBBLE Y

VEGETAT -0-

GRAVEL Y

SAND Y

MUD/SILT Y

GRANULE -0-

ANADROMOUS FISH PRESENT: N

SPECIES: -0-

COUNT: -0-

-0-

-0-

-0-

-0-

-0-

-0-

-0-

-0-

ADF&G MULTI-ASSESSMENT FORM
1991 OILING ENTRY CHECKLIST

PAGE 19

DATE PRINTED: 08/26/91

STREAM# : 2264016782
SEGMENT#: LA015

SURVEY TYPE : 91 POST TREATMENT - SS LOCATION: LATOUCHE ISLAND, NORTHEAST
DATE: 08/03/91
TIMES: 1000 - 1210
SIDE
TEAM RECORDER: WESEMAN

-- OILING EXTENT --

SITE#	SITE TYPE	DEPTH (cm)	LENGTH (m)	WIDTH (m)	AREA (m)	%	THICK (cm)	PEN (cm)	OIL TYPE CODES
A	SUBS	-0-	8	16	-0-	-0-	18	-0-	AP MOR
B	SUBS	-0-	25	16	-0-	-0-	-0-	-0-	HOR LOR
C	SUBS	-0-	12	12	-0-	-0-	-0-	-0-	LOR
D	SUBS	-0-	9	6	-0-	-0-	30	-0-	HOR
E	SUBS	-0-	50	15	-0-	-0-	-0-	-0-	MOR

HOR MOR LOR

ADF&G MULTI-ASSESSMENT FORM
1991 OILING ENTRY CHECKLIST

PAGE 20

DATE PRINTED: 08/26/91

COMMENTS:

DUE TO RECENT TILLING OF SUBSURFACE OIL AREAS WE WERE UNABLE TO DETERMINE CURRENT OIL CONDITIONS IN AREAS A, B, E, F AND G. WE OBSERVED NEWLY EXPOSED OP/HOR SEDIMENTS ON THE SURFACE OF AREAS A, B, G AND MOR SEDIMENT ON THE SURFACE OF AREAS E AND F. PITS WERE DUG INTO STORM BERM WHERE OBVIOUS OIL LENSES WERE STILL INTACT. AREA D STILL CONTAINED A STRATIFIED LENS EXTENDING INTO STORM BERM. SOME 'LOR' SEDIMENTS HAD BEEN PULLED AWAY FROM STREAM BANK IN AREA C, BUT APPRECIABLE QUANTITIES REMAIN. OILED ORGANICS ARE STILL PRESENT IN LOG JAM IN STREAM. AREA OF AP/HSOR WEST OF TILLED AREAS WAS NOT SURVEYED. *SURVEY FOCUSED ON OILED AREAS TREATED IN 1991. REASSESS IN 1992.

ADF&G MULTI-ASSESSMENT FORM
1991 POST TREATMENT PIT INFO

PAGE 10

STREAM# : 2264016782
SEGMENT#: LA015

DATE PRINTED: 08/26/91

SURVEY TYPE : 91 POST TREATMENT - SS LOCATION: LATOUCHE ISLAND, NORTHEAST SIDE
DATE:
TIMES: 1000 - 1210

TEAM RECORDER: -0-

-- PIT DETAILS ---

SITE#	SITE TYPE	TOT DP (cm)	OIL DP (cm)	CLEAN BELOW	SHEEN	W/T (cm)	SEDIM CODES	TIDE ZONE	OIL TYPE CODES	PIT-SPECIFIC COMMENTS
4	PIT	16	10-15	U	BLACK	14	GPS	LITZ	HOR OP	-0-
5	PIT	13	0-7	-	RAINBOW	10	GPS	LITZ	LOR	-0-
A1	PIT	32	1-15	U	BLACK	32	GPS	MITZ	MOR	-0-
A1	PIT	32	16-32	U	BLACK	32	GPS	MITZ	HOR OP	-0-
A2	PIT	22	-0-	U	BLACK	19	GPS	MITZ	LOR	-0-
A3	PIT	20	15-19	-	BLACK	19	GPS	MITZ	HOR	-0-
B6	PIT	29	15-27	Y	N	-0-	GSP	SITZ	OP	BERM
C8	PIT	27	1-27	U	N	-0-	CPG	UITZ	LOR TR	-0-
D7	PIT	45	0-12	U	N	-0-	CPG	UITZ	LOR	25M FROM STREAM
D7	PIT	45	12-45	U	N	-0-	CPG	UITZ	HOR	25M FROM STREAM
D9	PIT	24	2-22	-	N	-0-	CPG	UITZ	HOR	DISCONTINUOUS
G10	PIT	44	17-32	-	N	-0-	PGSC	UITZ	HOR OP	ON CUT EDGE OF STORM BERM-TOP OF TILLED AREA
G11	PIT	60	0-18	-	N	-0-	PGSC	UITZ	HOR OP	ON CUT EDGE OF STORM BERM-TOP OF TILLED AREA
G11	PIT	60	18-60	-	N	-0-	PGSC	UITZ	HOR MOR	ON CUT EDGE OF STORM BERM-TOP OF TILLED AREA

ADF&G OIL SPILL RESPONSE MONITORING

ASC# 226-40-16782

Date: 7/15/91

Stream Name: _____

Observer: Doug Hill

Segment-Sub Unit LA-15C

Location: Catche Island, Sleepy Bay

Anad. Stream Permit Issued? Y (N)

Date: _____

Work Order Issued: (Y) N

Date: 5/14/91

Demob Date: 7/15/91

Oil Characteristics (circle appropriate ones)

Surface: AP, (MS), TB, (SOR), (CV), (CT), (ST), (FL), DB, None
 Subsurface: (OP), (HOR), (MOR), (LOR), (OF), TR, None

Treatment Techniques:

Manual Removal
 Manual Raking
 Spot Wash
 Other

Bioremediation & Type
 Mechanical Tilling
 Header Flood (Hot/Cold)

Crew Size: 6

Lbs. or Bags of Oil/Sediment Removed ---

Other Agency Reps, and Names: Alfon Montecano (ADP), Chris Katsimanolis (EXXON), Graham MacDonald (OG), Terry Schultz (USCB)

<u>Photos</u>	Y <u>(N)</u>	<u>Roll #</u>	<u>Frames</u>
		_____	_____
		_____	_____
<u>Video</u>	<u>Tape #</u>	<u>Start</u>	<u>End</u>
	_____	_____	_____
	_____	_____	_____

Sediment/Oil Samples (Y (N)) Collection Number

Purpose of Trip * Bioremediation Monitoring

* Form designed primarily for cleanup inspection trips, but should be used for any field trips, i.e., to check on bird rookeries, seal haulouts, special habitat areas, etc.





Segment No LA 15 Subdivision C

Date 5/3/91 Log Frame No 1

Photographer Rebecca Hoff

Location _____

Comments Looking upstream to logjam
from upper intertidal

Roll No MAYSAP- 6-06 Neg. No 0

Control No 853 (Office Use Only)



Segment No LA 15 Subdivision C

Date 5/3/91 Log Frame No 2

Photographer Rebecca Hoff

Location _____

Comments Overview of site from near

rocky outcrop at east end of cove

Roll No MAYSAP- 6-06 Neg. No 1

Control No 853 (Office Use Only)



Segment No LA 15 Subdivision C

Date 5/3/91 Log Frame No 3

Photographer Rebecca Hoff

Location _____

Comments Layer of subsurface oil
along stream bank (on west bank)

Roll No MAYSAP- 6-06 Neg. No 2

Control No 853 (Office Use Only)



Segment No LA 15 Subdivision C

Date 5/3/91 Log Frame No 4

Photographer Rebecca Hoff

Location _____

Comments View of pit # 3 in upper
intertidal at east end of site

Roll No MAYSAP- 6-06 Neg. No 3

Control No 853 (Office Use Only)



Segment No LA 15 Subdivision C
Date 5/3/91 Log Frame No 5
Photographer Rebecca Hoff
Location _____
Comments View from boulders at
west end of beach

Roll No MAYSAP- 6-06 Neg. No 4
Control No 853 (Office Use Only)

MAYSAP
stream



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

PRINCE WILLIAM SOUND

SEGMENT: LA015 SUBDIVISION: C SITE:
anadromous fish stream, commercial fishing area, recreation
area, subsistence use area

226-40-16782

RECOMMENDED TREATMENT:

In areas around the stream:

- Mechanically till MOR and HOR sediments during an incoming tide.
- Deploy snare/sorbents to control and collect sheens.

→ In area C:

- Relocate subsurface oiled sediments to the mid intertidal zone. Relocation will occur after the tilling described above.

In areas of pits 14 and 15:

- Remove OP.
- Mechanically till HOR during an incoming tide.
- Deploy sorbents/snare to control and collect sheen.

In area E:

- Manually remove AP and SOR.

Recommend TAG visit JB

ENVIRONMENTAL SENSITIVITIES:

anadromous fish stream

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

CLEANUP PLAN AND COST ESTIMATE DUE:

DATE SUBMITTED: 05/21/91

STATE ON SCENE COORDINATOR:

John Bauer for Elyse

1991 MAYSAP EVALUATION

mechanical approved
6/17/91SEGMENT: LA 015 SUB: C REGION: PWS SURVEY DATE: 5/3/91ENVIRONMENTAL SENSITIVITIES:Work Window(s) RESTRICTED 3/1 - 9/15Ecological/Constraints (see page two for details) Eagle nest,
Anadromous stream, Subsistence - Deer harvestingARCHAEOLOGICAL CONSTRAINTS:Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time. PHONE 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.). *CEH**In SHPO**Charles Z. Hoffman**5/30/91*RECOMMENDATIONS:

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

COMMENTS:INITIAL: Apply Customblen and Inipol at locations C and F. On
site TAG evaluation is recommended.TAG: MANUAL PICKUP OF OILED ORGANICS IN AREA C AROUND THE
LOGS, MAN. P/U OF HSOR IN AREA B AND PITS 4 + 5.
MANUALLY RAKE OILED LENSE AWAY FROM STREAM BANK AT C
AND APPLY CUSTOMBLEN. PICKUP HSOR IN AREA E. BIOREMEDIATE *WHERE*
SOR REMI

FOSC: _____

TAG APPROVAL DATE: MAY 29 91

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON *Real*ADEC: The state disagrees with
Exxon work orders. Please see
state work orders.USCG *Ed M...*NOAA *...*

SCAT 2

1991 MAYSAP EVALUATION

SEGMENT: LA 015 **SUB:** C **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>Y</u>	_____	_____
Manual Pickup (Check as Req.)	_____	_____	_____
Spot Washing	_____	_____	_____
Bio-Customblen Only	_____	_____	_____
Bio-Inipol/Customblen	<u>X</u>	_____	_____
Other _____	_____	_____	_____
Other _____	_____	_____	_____

COMMENTS:

INITIAL: Apply Customblen and Inipol at locations C and F. On
site TAG evaluation is recommended.

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____ FOSC APPROVAL DATE: _____

ADEC _____ FOSC _____

EXXON _____

USCG _____

NOAA _____

SCAT 1

**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.

226-40-16782

ADEC/ADETS

NAME TOM CROWE

SIGNATURE

[Signature]

☐ NTR ☒ TREATMENT RECOMMENDED

ANADROMOUS STREAM / SUBSURFACE US2 AREA

MOST EVERY PIT DUG IN THIS BEACH AREA REVEALED SOME DEGREE OF OILING. THE ANADROMOUS STREAM HAD SIGNIFICANT OILING ADJACENT TO THE STREAM ITSELF AND HEAVILY OILED DEBRIS ON BOTH BANKS IN THE LITZ. THE METZ ON BOTH SIDES PITS REVEALED MOR DEBRIS. ^{STREAM ITSELF IS NOT PIT FOR SPAWNING} LACK OF MARINE LIFE SUGGESTS THAT NOT MUCH CAN BE MORE INTRUSIVE THAT TO LEAVE THIS BEACH HEAVILY OILED. THE BOULDER AREA NORTH OF THE BEACH UNWORKED LAST YEAR CONTAINS LARGE AMOUNTS OF OPA AND AP IN THE MID AND UPPER ETZ. PIT #15 AND #4 ARE PRIME EXAMPLES. MECHANICAL TILLING, AND WHIPPING IS SUGGESTED FOR BOTH THE STREAM AREA AND NORTH BEACH BOULDER AREAS.

EXXON

NAME Scott A. Nauman

SIGNATURE

[Signature]

☒ NTR Although subsurface residues are still present in most of the pits, the concentrations have been reduced significantly as a result of last year's work. The LOR/MOR concentrations due not warrant further mechanical intrusion. The higher subsurface concentrations away from the stream are beyond the practical limits of tilling due to bedrock and boulders, and should be left alone. Surface stain and coat will weather naturally over the summer as it did last summer. Areas of AP/SOR are in hard to access boulder fields that preclude safe treatment. Observed 3 eagles, 100+ other birds - recommend this beach be left to them.

LANDMANAGER

NAME CHARLES SELANOFF OF CHENEBA BAY

SIGNATURE

[Signature]

☐ NTR HEAVY oiling at the mouth of the stream with a lot of oily debris on the storm berm. This oily substance is so close to the stream that it will effect the returning salmon wildstock. Oil sheen is visible where the wave action is. I strongly recommend manual work with a lot of tilling done. Plus the removal of oily logs.

USCG/NOAA

NAME CWO SPURR / Rebecca Hoff

SIGNATURE

[Signature] / Rebecca Hoff

☐ NTR

This segment is problematic and certainly contains the most oil of those we have surveyed this year on team 6. The upper portion of the stream bank contains medium to heavy subsurface oil (Area C). An additional area (E) has heavy surface oil lodged between large boulders high in the upper intertidal. Both areas will be difficult to treat without extensive excavation, and treatment, especially near the stream, would be intrusive. Careful evaluation of the trade-offs and potential to be gained from further treatment at this site needs to be made.

revised 5/9/91
E reviewed 5/11

5. 10. 1941

DATE 5, 3 / 91

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

cont'd. (MOR + HOR) was restricted to the area of the stream and also the extreme northern end of the open beach - tucked in before the first large bedrock outcrop. Each of these areas had a "centre" of HOR and one, around pit (14), was OP beneath a cobble veneer, verging on AP consistency at its uppermost edge. This prevented excavations beneath the log piles in the SUTZ.

revised 5/9/91 W.
25 revised 5/4

LA-015-D

PWS

LA-015-C

05/03/91

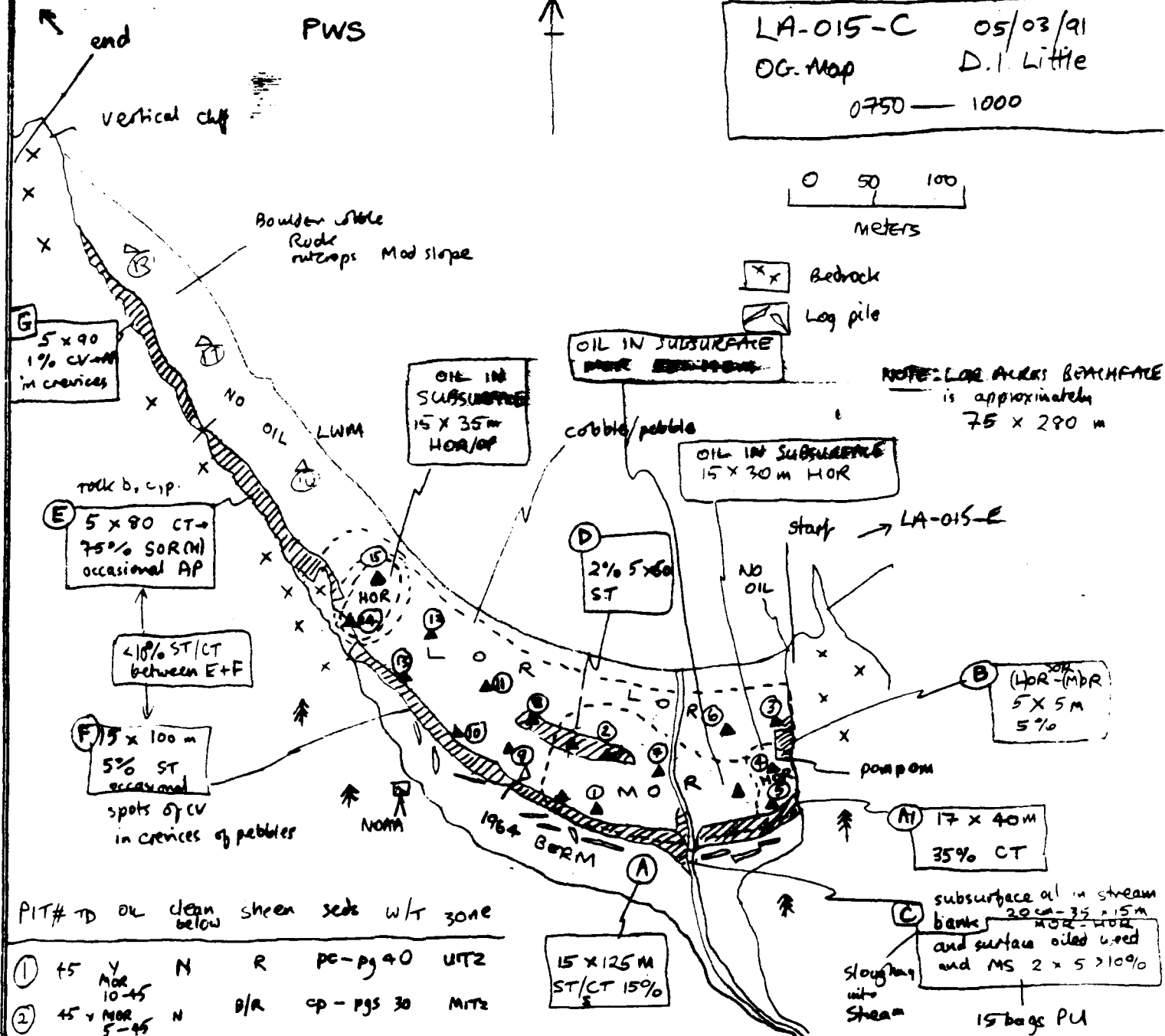
OG. Map

D.I. Little

0750 — 1000



0 50 100
METERS



PIT# TD OIL clean shren seeds w/t zone

①	45	Y	N	R	PC-pg 40	UITZ
		MOR 10-45				
②	45	Y	N	B/R	CP-PGS 30	MITZ
		MOR 5-45				
③	15	Y	N		S-gs 5	MITZ
		5-15 MOR				
④	25	Y	N		SP-PCg 20	MITZ
		0-25 MOR				
⑤	10	Y	N	B/R	ibp-gp 5	UITZ
		0-15 MOR				
⑥	30	TR	Y	—	CP-pg 20	MITZ
		10-20				
⑦	40	Y	N	R/B	PC-SPg 30	MITZ
		MOR 20-40				
⑧	30	TR	Y	R	CP-PC 20	MITZ
		20				
⑨	55	Y	Y	N	PC-P	UITZ
		TR 30				
⑩	35	Y	Y	R	PC-PC 30	UITZ
		TR 30				
⑪	30	Y	Y	R	PC-CP 10	MITZ
		TR 30				
⑫	35	Y	N	R	PC-CP 20	MITZ
		TR 30				
⑬	40	Y	N	—	CPg-Pg	UITZ
		TR 30				

ANADROMOUS STREAM

Note: Location A extends both sides of stream
A to to west, A1 to east

PIT#	TD	OIL	clean	seeds	zone
⑭	25	Y (H) OR 0-10	N	—	CP-PCgs 20 MITZ
		AP/OP 10-25			
⑮	20	Y (H) OR 5-20	N	pg-pg-	MITZ
⑯	40	N OIL ~ 20 cm TD			

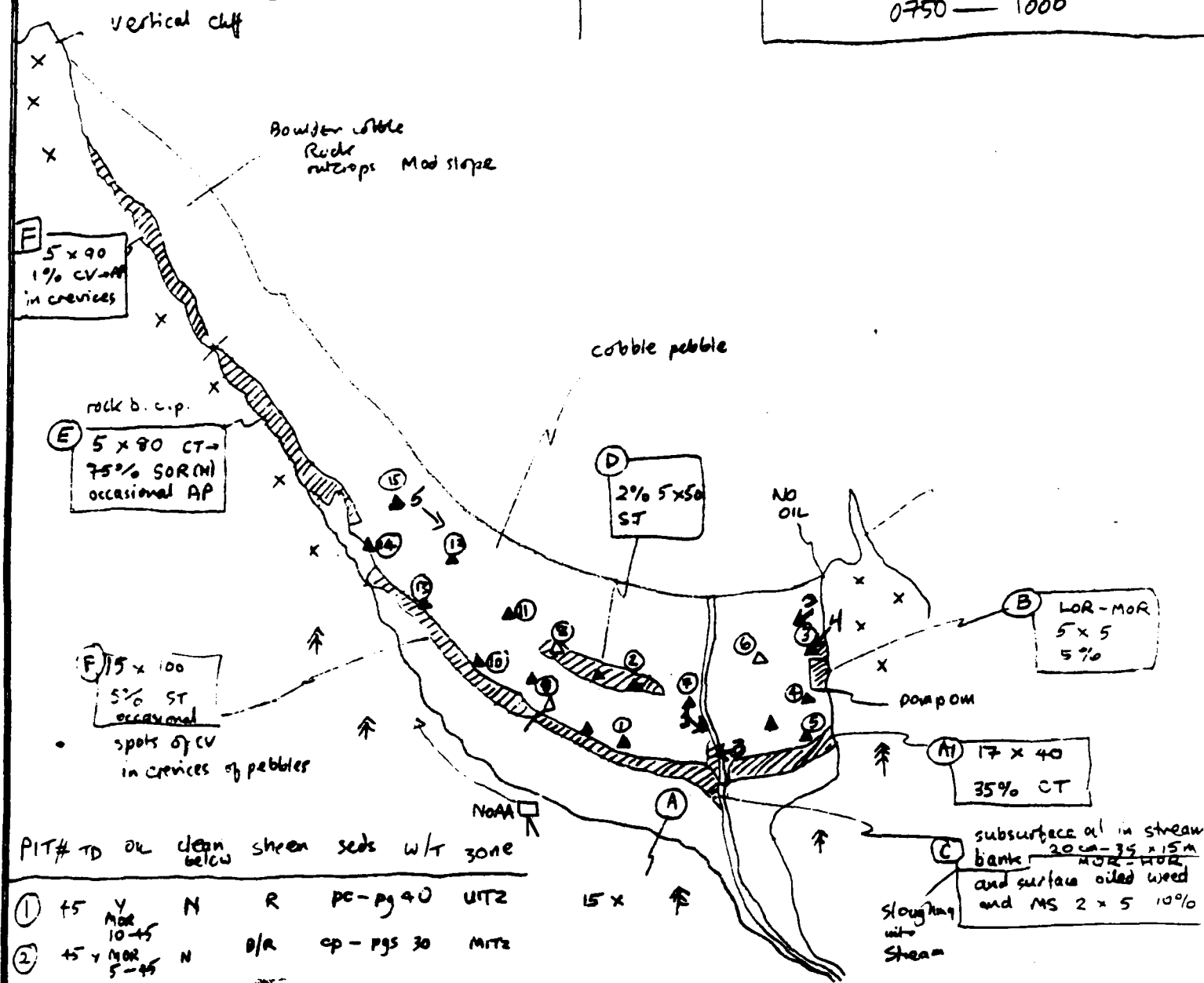
revised 5/91
25 returned 5/11

#1-5

PWS



LA-015-C 05/03/91
OG. Map D.I. Little
0750 — 1000



PIT# TD OL clean shren seeds w/r zone

①	45	Y	N	R	PC-Pg 40	UITZ
②	45	Y	N	B/R	CP-Pgs 30	MITZ
③	15	Y	N		C-gs 5	MITZ
④	25	Y	N		CP-Pg 20	MITZ
⑤	20	Y	N	B/R	CBP-gp 5	UITZ
⑥	30	TR	Y	—	CP-Pg 20	MITZ
⑦	40	Y	N	R/B	PC-SPg 30	MITZ
⑧	30	TR	Y	R	CP-PC 20	MITZ
⑨	55	Y	Y	N	PC-P	UITZ
⑩	35	Y	Y	R	PC-PC 30	UITZ
⑪	30	Y	Y	R	PC-CP 10	MITZ

⑫ 35 Y LOR N R PC-CP 20 MITZ

ANADROMOUS
STREAM

Location A extends both sides of stream

⑭ 25 Y (H) OR 0-10 N — CP-Pgs UITZ
AP/OP 10-25
⑮ 20 Y (H) OR 5-20 N PG MITZ

NAVSAP BIOLOGICAL SUMMARY FORM

TEAM # 6

DATE 5/3/91

SEGMENT # LA-015

TIDAL HEIGHT (Range) +5 to +3/4 ft.

SUBDIVISION C

BIOLOGIST T.R. Schroeder

SEA STATE 1-2 foot chop

WIND SPEED/DIRECTION 77E 10-15

PHOTOGRAPHS: ROLL #

FRAME #

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

Only biological community on this beach is of the southern end along the rocky point. Fucus and red algae are thick and mussels and barnacles are present. Mussel bed extends out into large cable rock beach about 5 meters. Littorine snails and egg masses were present but not numerous.

95% of beach is basically sterilized from through the MITZ to LITZ. High energy beach is emphasized by rounded, smooth cable rocks.

Any recommendations for treatments should protect the southern rock area as this provides the greatest potential for repopulating this beach area. No significant biological impact will result from any form of treatment on the remainder of beach.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1 (bald)	3 (3 birds)	
Seabirds	1 Cormorant	12	
Waterfowl	2 grebes	30	
Gulls/Kittiwakes	2 Kittiwakes	80	
Shorebirds	1 sandpiper	6	
Corvids	1 Steller jay	1	
Other Birds	1 ?	1	

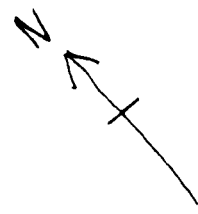
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	1	Lots of deer sign	
Pinnipeds (specify)			
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

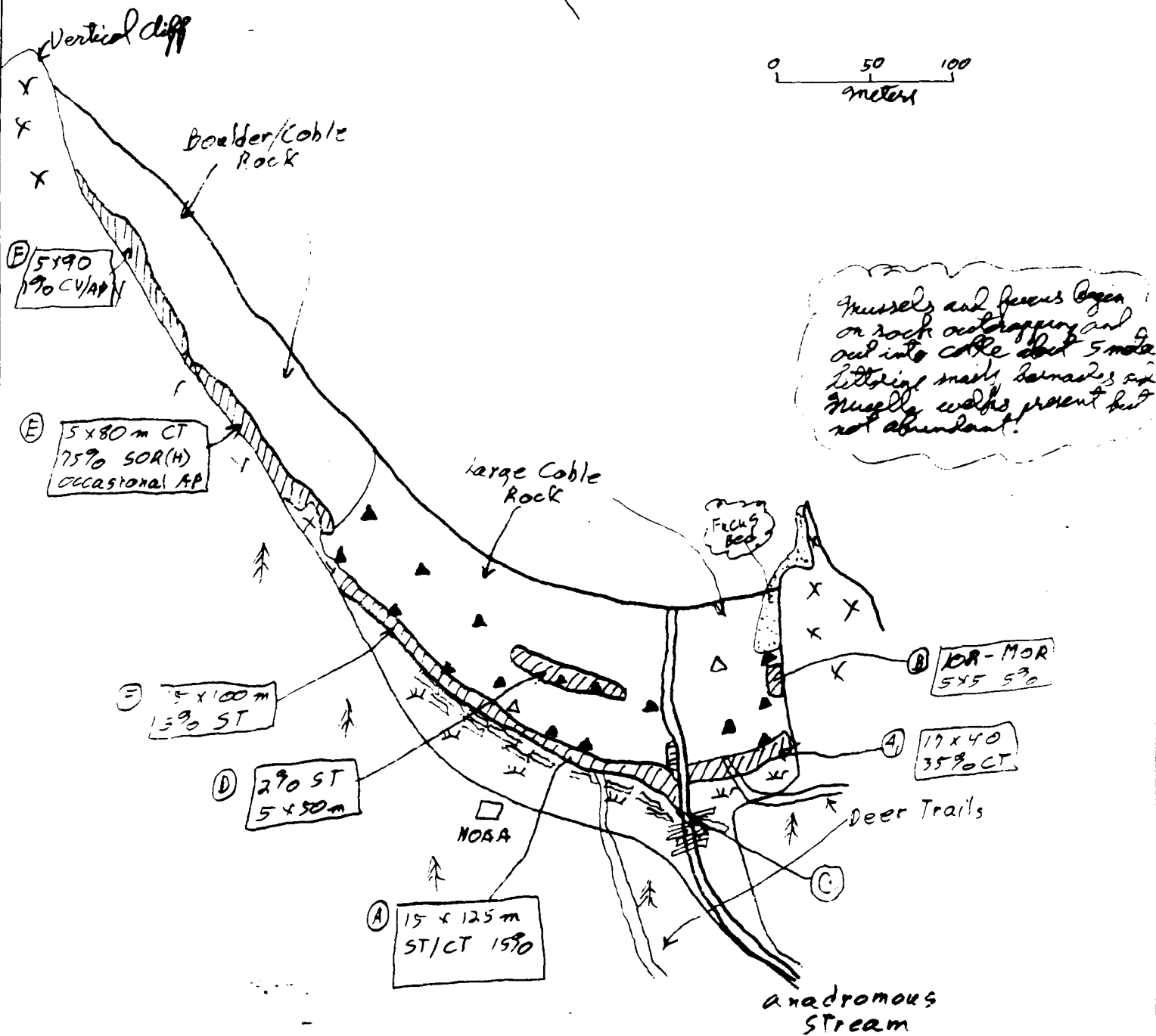
ES reviewed 5/11

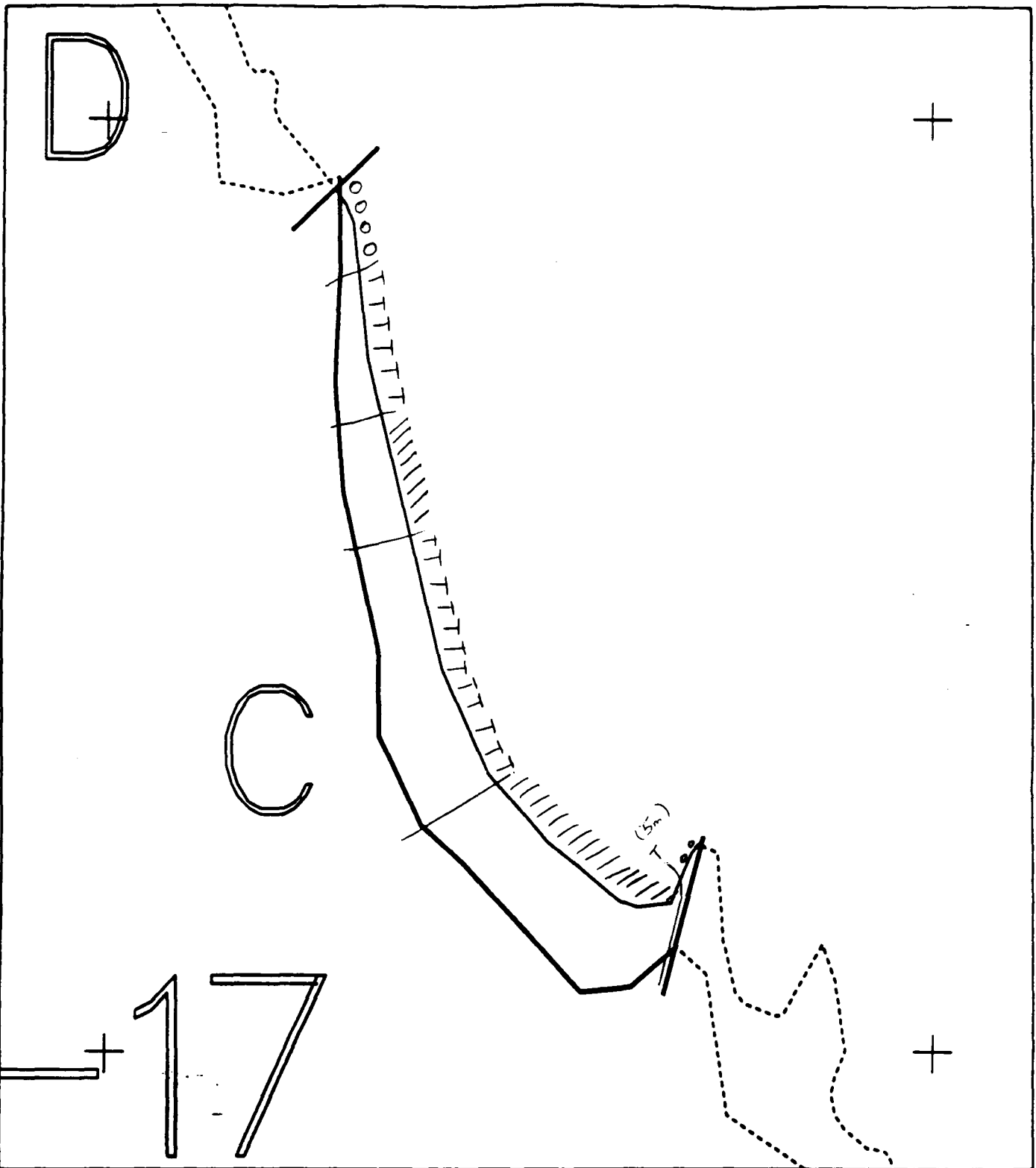
Revised 5/10

LA-015-C 5/3/91
 Bio. Map T.R. Schroeder
 0750-1000



0 50 100
 meters





XXXX	Wide	LA015 C ADEC Subsegment Length: 715m METERS AK State Plane Zone 4 140150	 	Subdivision Field Map
////	Medium			Map Key: PWSLA015C
----	Narrow			Name: <u>DAVID LITTLE</u>
TTTT	Very Light			Date: <u>05/03/91</u>
0000	No Oil			Date Entered:

revised 5/9/91

ES revised 5/11

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

May 29 - 4
2264016782

PRINCE WILLIAM SOUND

SEGMENT: LA015 **SUBDIVISION:** C **SITE:**
anadromous fish stream, commercial fishing area, recreation
area, subsistence use area

RECOMMENDED TREATMENT:

- In areas B and around pits 1, 2, 4, 5, 7, 14, and 15:
- Mechanically till MOR and HOR sediments during an
incoming tide. - Deploy snare/sorbents to control and
collect sheens. In area C:
- Mechanical excavation of oiled sediments. Remove all
OP/HOR sediments encountered. Redistribute the remaining
oiled sediments to the mid intertidal zone. Replace with
clean gravel from the storm berm.
In area up the stream:
- Manually remove oiled debris.

ENVIRONMENTAL SENSITIVITIES:

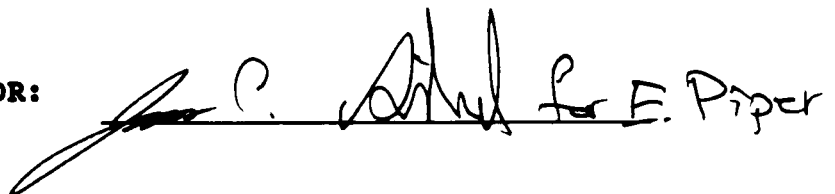
- anadromous fish stream
Eagle nest must be cleared prior to work.

WORK WINDOW: 05/29/91 - 07/10/91

CLEANUP PLAN AND COST ESTIMATE DUE:

DATE SUBMITTED: 05/29/91

STATE ON SCENE COORDINATOR:

 C. W. F. Piper

CATALOG NUMBER: 2264016782				SEGMENT NUMBER: LA015 C					
STREAM NAME:				SHORELINE TYPE:					
LOCATION: LATOUCHE ISLAND, NORTHEAST SIDE				DATE: 04/12/90 TIME: BEACH-0748					
SITE	WIDTH (m)	LENGTH (m)	AREA (sqm)	PERCENT OIL	THICKNESS (cm)	PENETRATION (cm)	SURFACE SUBSURF	OIL TYPES	COMMENTS
1							sub SURFACE	AP OR ST	west side Both sides of stream - very heavy tar on storm berm STZ - oiled logs across stream, stain & tar in MITZ

COMMENTS:
SHEEN GIVEN OFF INTO CREEK WHEN SUBSTRATE DISTURBED. OIL VERY HEAVY IN STORM BERM & AT MOUTH OF CREEK. STORM BERM IS BURIED BY SNOW. OIL WITHIN 1 MILE OF STREAM:
OIL ON STREAM BANKS: YES
YES

surf AP CT ST!

east side of stream - oiled rocks along streambank, stain & tar in MITZ

CATALOG NUMBER: 2264016782				SEGMENT NUMBER: LA015 C					
STREAM NAME:				SHORELINE TYPE:					
LOCATION: LATOUCHE ISLAND, NORTHEAST SIDE				DATE: 04/20/90 TIME: BEACH-1320					
SITE	WIDTH (m)	LENGTH (m)	AREA (sqm)	PERCENT OIL	THICKNESS (cm)	PENETRATION (cm)	SURFACE SUBSURF	OIL TYPES	COMMENTS
1					5	25	SURFACE	MS LENS	east side, extending into delta - MITZ - MS Band. 11 MITZ - 2 pits 0-15 - Hwy 0-25 - light west streambank storm berm - MITZ - oil lense - mousse
2					5	15-25 sub	SURFACE	MS LENS OR -	
3					15	sub	SURFACE	OP OL - MS	

COMMENTS:
BASED ON THE 10 PITS OUR GROUP DUG, IT IS MY JUDGEMENT THAT A LENS OF OIL EXTENDS THROUGH THE ZONE OF INTEREST. THIS LENS IS EXPOSED AT THE STORM BERM AND THE LOWER INTERTIDAL AND BURIED BY 15CM+ THICK COBBLE/GRAVEL IN THE MID INTERTIDAL. MOUSSE/TAR IS IN THE STREAM CHANNEL AT THE LOWER INTERTIDAL. LENS OF OIL EXPOSED IRREGULARLY ALONG BOTH BANKS OF CHANNEL. OILED DEBRIS UNDER LOGS ALONG STORM BERM. FRY PRESUMED.
RECOMMENDATIONS: REMOVE OILED DEBRIS FROM STORM BERM. MANUALLY REMOVE ALL OIL FROM STREAM CHANNEL (CHANNEL IS MOBILE AND BROAD AT MOUTH) REMOVE OIL 15 YARDS ON EITHER SIDE OF CURRENT CHANNEL.
BANKS: YES
STREAM: YES, MOUTH

see additional sheet

OIL ON STREAM
OIL WITHIN 1 MILE OF

CATALOG NUMBER: 2264016782				SEGMENT NUMBER: LA015 C					
STREAM NAME:				SHORELINE TYPE:					
LOCATION: LATOUCHE ISLAND, NORTHEAST SIDE				DATE: 04/20/90 TIME: BEACH-1330					
SITE	WIDTH (m)	LENGTH (m)	AREA (sqm)	PERCENT OIL	THICKNESS (cm)	PENETRATION (cm)	SURFACE SUBSURF	OIL TYPES	COMMENTS
1					3	15cm	sub SURFACE	MS OL	east side of stream - pits show oil lense in MITZ & storm berm west side of stream & bank - sketch shows oil lense in MITZ - to stream bank - OL in storm berm 25-30cm thick
2							SURFACE	OR FL OL	
3					15		SURFACE	AP OR	

COMMENTS:
75% OF AREA ON 50YD EITHER SIDE OF STREAM - FROM HI TIDE TO MID INTERTIDAL IS OILED. DEEPEST PENETRATION - 25CM. SURFACE ROCK-STAINED UNDER SIDE FINES IN SOME AREAS COATED THICKLY WITH POOLED MOBILE OIL. THIN BANDS DOWN TO STREAM EDGE ON BOTH SIDES AS WELL AS UPPER STORM BERM BANDS.
RECOMMENDATIONS: SHOVEL REMOVAL (OR MIDSIZED CAT - BULLDOZER WITH ROCK RIPPER) OF MOUSSE PATTIES/TARMATS IN UPPER MIDDLE LOWER STORM BERMS AND ANYWHERE ELSE FOUND. REMOVAL OF SEVERELY OILED LOGS IN JAM OVER CREEK. PULL DOWN STORM BERMS (UPPER 2) AND WASH WITH STEAM OR HOT WATER IN ADDITION TO COLD WATER DELUGE SYSTEM. ABSORBENT OFF STREAM WHILE DOING THIS TO PREVENT REOILING. TILL & WASH OILED TONGUE WHICH SHEENS IN CENTER OF STREAM. RIP UP LOWER & MIDDLE STORM BERMS WITH TRACKED CAT AND ROCK RIPPER TO BRING SUBSURFACE OILED GRAVEL AND COBBLE TO SURFACE AND TREAT WITH STEAM OR HOT WATER WITH COLD DELUGE. NO BIOREMEDIATION RECOMMENDED. BOOM SITE AND COLLECT OIL WITH SKIMMER AS NECESSARY DURING WASHING. COMMENTS BY KEN CRITCHLOW: I AGREE WITH ADFG'S RECOMMENDATIONS, EXCEPT THAT BIORE

Refers to thickness of oil lense

CATALOG NUMBER: 2264016782						SEGMENT NUMBER: LA015 C			
STREAM NAME:						SHORELINE TYPE:			
LOCATION: LATOUCHE ISLAND, NORTHEAST SIDE						DATE: 05/03/91 TIME: BEACH-1000			
SITE	WIDTH (m)	LENGTH (m)	AREA (sqm)	PERCENT OIL	THICKNESS (cm)	PENETRATION (cm)	SURFACE SUBSURF	OIL TYPES	COMMENTS
1	5	80		75	3-5		SURFACE	HSOR AP	
2	15	35				0-25	SURFACE	HOR OP	
3	75	280				0-30	SURFACE	LOR	
4	50	140				5-45	SURFACE	MOR	
5	5	30				0-25	SURFACE	HOR	

COMMENTS:

THIS BEACH/STREAM AREA STILL CONTAINS SIGNIFICANT AMOUNTS OF OIL - BOTH SURFACT & SUBSURFACE. A DEFINITE LENS CAN BE VIEWED WITHIN THE STEEP SIDED STREAM BANKS. LOCATED 20-35CM BENEATH THE SURFACE THE EDGES OF IT SLOUGH OFF INTO THE STREAM. HEAVILY OILED ORGANICS PRECARIOUSLY RESIDE ON A LOG JAM WITHIN THE STREAM IN THE UIT & SWASH ZONE. 15 BAGS REMOVED FROM LOG JAM >50% LEFT. HEAVY SURFACE OILING IN BOULDER FIELD WEST OF STREAM IN SITE #1. TREATMENT SHOULD BE COMPREHENSIVE - MANUAL REMOVAL 'AP/HSOR' SEDIMENTS. MECHANICAL TILLING ON AN INCOMING TIDE OF OF SITES 2, 4 & 5. IT MAY NEED SEVERAL TILLINGS. SINCE OIL EXTENDS TO STREAM BANKS - TITLE 16 PERMIT NEEDED TO TREAT. STREAM BANK RECONSTRUCT. ADEQUATE SORBENT & SNARE BOOM SHOULD BE EMPLOYED TO RECOVER RELEASED OIL & PROTECT STREAMBED. ALSO PRESENT WAS 1 SEA OTTER.

CATALOG NUMBER: 2264016782						SEGMENT NUMBER: LA015 C			
STREAM NAME:						SHORELINE TYPE:			
LOCATION: LATOUCHE ISLAND, NORTHEAST SIDE						DATE: 08/03/91 TIME: BEACH-1210			
SITE	WIDTH (m)	LENGTH (m)	AREA (sqm)	PERCENT OIL	THICKNESS (cm)	PENETRATION (cm)	SURFACE SUBSURF	OIL TYPES	COMMENTS
4							PIT	HOR OP	
5							PIT	LOR	
A1							PIT	HOR OP	
A1							PIT	MOR	
A2							PIT	LOR	
A3							PIT	HOR	
B6							PIT	OP	BERM
C8							PIT	LOR TR	
D7							PIT	LOR	25M FROM STREAM
D7							PIT	HOR	25M FROM STREAM
D9							PIT	HOR	DISCONTINUOUS
G10							PIT	HOR OP	ON CUT EDGE OF STORM BERM-TOP OF TILLED AREA
G11							PIT	HOR MOR	ON CUT EDGE OF STORM BERM-TOP OF TILLED AREA
G11							PIT	HOR OP	ON CUT EDGE OF STORM BERM-TOP OF TILLED AREA
A	16	8			18		SUBSUR	OP MOR	
B	16	25					SUBSUR	HOR MOR LOR	
C	12	12					SUBSUR	LOR	
D	6	9			30		SUBSUR	HOR	
E	15	50					SUBSUR	MOR	

COMMENTS:

DUE TO RECENT TILLING OF SUBSURFACE OIL AREAS WE WERE UNABLE TO DETERMINE CURRENT OIL CONDITIONS IN AREAS A, B, E, F AND G. WE OBSERVED NEWLY EXPOSED OP/HOR SEDIMENTS ON THE SURFACE OF AREAS A, B, G AND MOR SEDIMENT ON THE SURFACE OF AREAS E AND F. PITS WERE DUG INTO STORM BERM WHERE OBVIOUS OIL LENSES WERE STILL INTACT. AREA D STILL CONTAINED A STRATIFIED LENS EXTENDING INTO STORM BERM. SOME 'LOR' SEDIMENTS HAD BEEN PULLED AWAY FROM STREAM BANK IN AREA C, BUT APPRECIABLE QUANTITIES REMAIN. OILED ORGANICS ARE STILL PRESENT IN LOG JAM IN STREAM. AREA OF AP/HSOR WEST OF TILLED AREAS WAS NOT SURVEYED. *SURVEY FOCUSED ON OILED AREAS TREATED IN 1991. REASSESS IN 1992.

Cont 000

site	thickness	Pen	surf sub	oil type	comments
4			sub	OL	- west side of stream - LITZ - Swash Berm - lense under 35cm clean material
5		25cm	surf & subsurf	OR	- east side of stream - LITZ - pit 4 - Heavy oil 0-25cm
6	20cm +	35cm	sub	OL	- west side - LITZ - mousse/tar lense - 15cm clean over 20cm + lense
7			surf	oiled debris	both sides of stream - SQUITZ - oiled debris on storm berm



ADF&G OIL SPILL RESPONSE MONITORING

ASC# 226-40-16782

Date: 6/30/91

Stream Name: _____

Observer: Aimee Weseman

Segment-Sub Unit LA15C

Location: NE LaTouche I

Anad. Stream Permit Issued? ☒ Y ☐ N

Date: 6/30/91

Work Order Issued: ☒ Y ☐ N

Date: 6/25/91

Demob Date: _____

Oil Characteristics (circle appropriate ones)

Surface: ☒ AP, ☒ MS, ☐ TB, ☒ SOR, ☒ CV, ☒ CT, ☒ ST, ☐ FL, ☐ DB, ☐ None
Subsurface: ☒ OP, ☒ HOR, ☒ MOR, ☒ LOR, ☒ OF, ☐ TR, ☐ None

Treatment Techniques:

- ☒ Manual Removal
- ☒ Manual Raking
- Spot Wash
- Other

- ☒ Bioremediation & Type
- ☒ Mechanical Tilling - In place
- Header Flood (Hot/Cold)

Crew Size: 6 + Hitachi EX100

Lbs. or Bags of Oil/Sediment Removed 1 1/2 super sacks oily sediments removed
mostly from log jam area

Other Agency Reps, and Names: Vince Mulligan - USGG, Dale Gardner - ADEC
Vicki Martinez - Exxon

Photos ☒ Y ☐ N

Roll #

Frames

91AJW02

6-17

Video ☒ X Tape #

Start _____ End _____

Dale Gardner - ADEC

DEC 91 DWG01

Sediment/Oil Samples (Y-N) ☒ Y ☐ N

Collection Number

Purpose of Trip * treatment

* Form designed primarily for cleanup inspection trips, but should be used for any field trips, i.e., to check on bird rookeries, seal haulouts, special habitat areas, etc.

Describe extent of remaining oil (any comments on expected completion of cleanup).

Work Modification submitted to change treatment to mechanical relocation & wash with the tide instead of ineffectual "tilling in place" June 29, 1991 - submitted.

Lots & Lots on manual removal needs to be done in boulder field. UITZ west of stream

Oil lense on east stream bank needs mechanical removal.

Comments: (Are work order procedures being followed?, etc.)

Exxon Rep mistakenly working off of MAXSAP oil sketch & not newer "Subsurface Oil Review of LA15-C," June 15, 1991. Two areas of HOR were mechanically filled-in place; an ^{approx. matley} 25x25m patch in the vicinity of pits 14 & 15 on the west side of the stream in a Boulder/Cobble area and a 25x40m patch on the east side of the stream continuing up to the rocky headland. Heavy OR sediments were brought to the surface, predominantly along the top third of the areas - in the UITZ. A OP/HOR lense continues into the storm berm, but Exxon Rep would not allow removal or tilling of the area because it wasn't specified in the work order.

Manual removal of oiled organics in stream log jam was begun. Some SOR was removed near pit 5 (Maysap)

Very poor communication between state & Exxon reps.

on this one. DEC & DFG monitors felt ostracized from the process.

Exxon & USCG unaware of oil review until I pointed it out at the end of the day. I assumed they had it. Martinez refused to work central oiled area until
A: OPRESP he received word from Exxon Anch.
April 2, 1991

LA-015-C 05/03/91
OG. Map D.I. Little
0750 — 1000

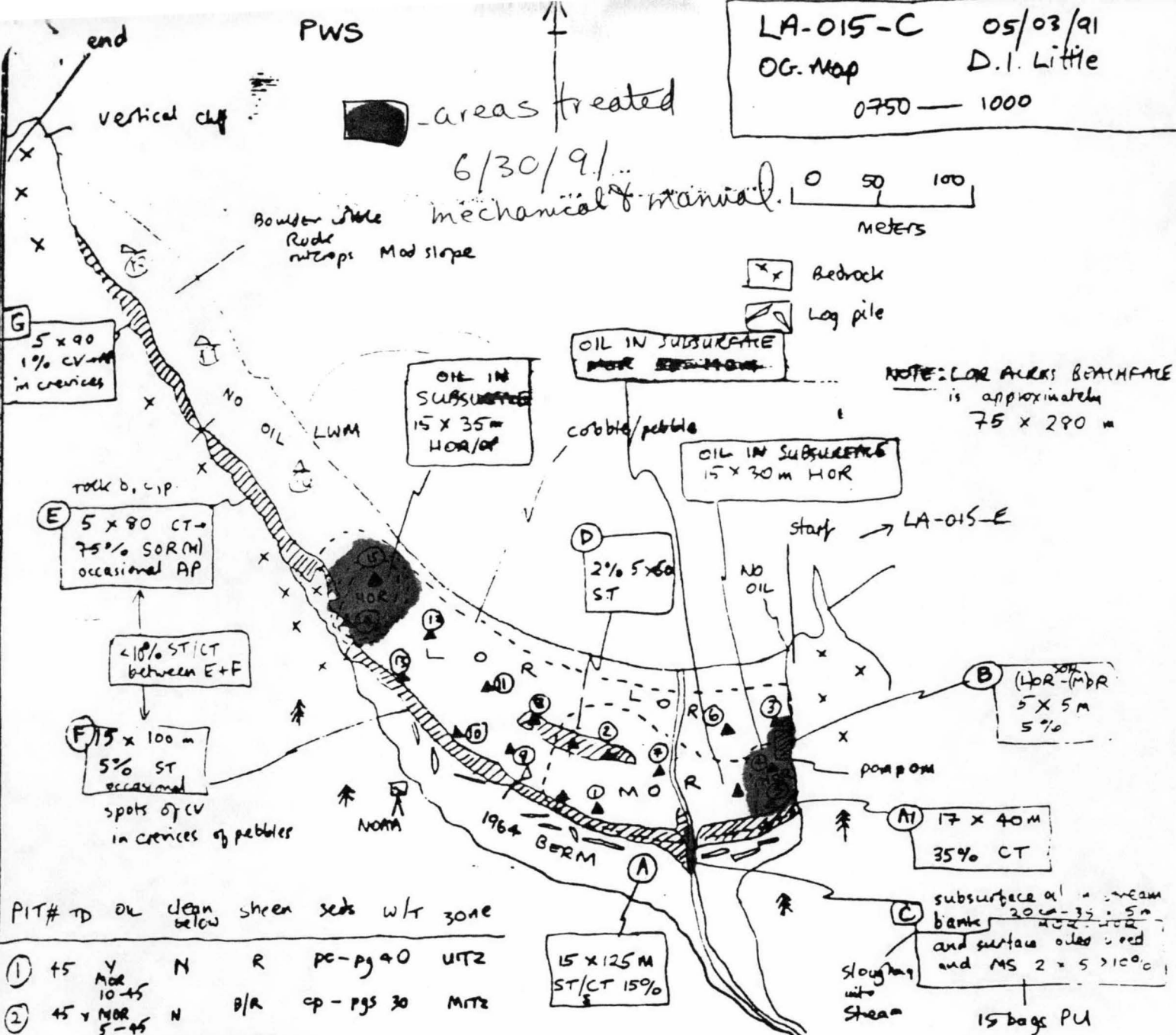
PWS

areas treated

6/30/91...

mechanical & manual.

0 50 100
meters



PIT# TO OL clean shreen sets w/r zone

PIT#	TO	OL	clean	shreen	sets	w/r	zone
①	45	Y	N	R	PC-Pg	40	UITZ
②	45	Y	N	B/R	CP-Pg	30	MITZ
③	15	Y	N		S-gs	5	MITZ
④	25	Y	N		SP-PCg	20	MITZ
⑤	20	Y	N	B/R	ibp-gp	5	UITZ
⑥	30	TR	Y		CP-Pg	20	MITZ
⑦	40	Y	N	R/B	PC-SPg	30	MITZ
⑧	30	TR	Y	R	CP-PC	20	MITZ
⑨	55	Y	Y	N	PC-P	-	UITZ
⑩	35	Y	Y	R	PC-PC	30	UITZ
⑪	30	Y	Y	R	PC-CP	10	MITZ

⑫	35	Y	N	R	PC-CP	20	MITZ
⑬	40	Y	N	-	CPg-Pg	-	UITZ

Note: Location A extends both sides of stream
A - to to west, A1 to east

PIT#	TO	OL	clean	sets	zone
⑭	25	Y	N	CP-PCg	MITZ
⑮	20	Y	N	Pg-Pg	MITZ
⑯	40	N			

revised
25 returned 5/11

EXXON Valdez Oilspill Cleanup

Anadromous Fish Stream Authorization

Date June 30, 1991

EXXON Authorized Representative Nick Martinez

Shoreline Segment LA15C

Anadromous Fish Stream Number(s) 226-40-16782

Approved Cleanup Techniques Manual Removal & Relocation
of oiled sediments and debris. Mechanical filling
of oiled sediments is a remediation IMPACT
UNACCEPTABLE

Approved Cleanup Period May 15-July 10, 1991

Alaska Department of Fish and Game

Aimee Zeeman
Authorized Officer

Nick Martinez
Permittee's Signature

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT LA15 SUBDIVISION C DATED June 29, 1991

MODIFICATION CLASS I _____ CLASS II _____ CLASS III _____

1. REASON FOR MODIFICATION - Current mechanical treatment slated to occur on June 30 calls only for mechanical tilling - in place of OP/HOR lense. Due to the large amount of oil present, this alone is inadequate & will release only a small portion of the oil. Mechanical relocation to the LMITZ followed by tilling on the rising tide has proven highly effective in moving a large portion of the oil to the surface where it can be contained & recovered by snare boom.

2. SUGGESTED ADJUSTMENT TO WORK PLAN - It is recommended that the areas of OP/HOR identified on the Subsurface Oil Review & MARSAP receive the above treatment. A series of 10-11 foot tides occur in the evenings July 1-6 & treatment would be more effective during these higher tidal levels.

The oiled lense on the stream bank should be "pulled back" mechanically if manual pulling back is deemed too difficult.

3. TIMING ISSUES Due to the presence of an Anadromous Fish Stream, treatment should occur within the first 2 weeks of July. IF this is logistically impossible due to scheduling,

4. OTHER the treatment period could most likely be extended because the salmon run returns later in the summer to this stream.

ADFG Aimee Weseman 6-29-91

ADNR Leigh Carlson 6-29-91

ADEC Dale W. Dardner 6-29-91

Aimee Weseman
ADFG

EXXON _____

USCG _____

CVC LAND MANAGER [Signature] (If field rep is on scene)

These streams and especially LA-15-C because of location to Chenequa are extremely sensitive. Every effort should be made to clean this one as thoroughly as possible. High use Subsistence Stream, high use for berries in area, and very high use for hunting geese and deer - S.W.

1

FAX FROM

M/V AURIGA TEAM 3

DATE: June 29 1991

TO: Cuswada Middleton Funk FAX# 309-1223

FROM: Aimee Wosman FAX# 9 011 872 150-0667

NUMBER OF PAGES(including cover page) ~~5~~ 6

COMMENTS: Hi everyone.

-- Well, the battle continues -- tell you about it when I get back -- Please submit this work order Mod to TAG as soon as possible for their approval.

-- You wouldn't believe how effective tilling with the tide is. Mechanical tilling in place without tide will occur Sun June 30 so you'll miss it. Don't know when manual will happen. The Beulah crew will probably be on LAISC for quite a while so I may have a plane to Arch in-between mechanical & manual on LAISC. I'll try to call on Monday sometime -- morning or fully.

Take care

Aimee

Also enclosed - ADEC/ADNR survey

PAGE 1 OF 5 1

DATE 6 / 28 / 91

USCG/NOAA _____

ENERGY LEVEL: ☐ H ☐ M ☐ L

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

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

EST. OIL CATEGORY LENGTH: W_____m M_____m N_____m VL_____m NO_____m US_____m

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

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

PHOTO ROLL # MAYSAP-

FRAME8

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

OG COMMENTS:

COMMENTS: Oiling at cobble/boulder transition beach is OPA
HOR and much closer to the SURFACE. Within a 30
METER length there are a few big rocks which may need
hoisting. Around these rocks are cobbles - manageable to
access the OP.

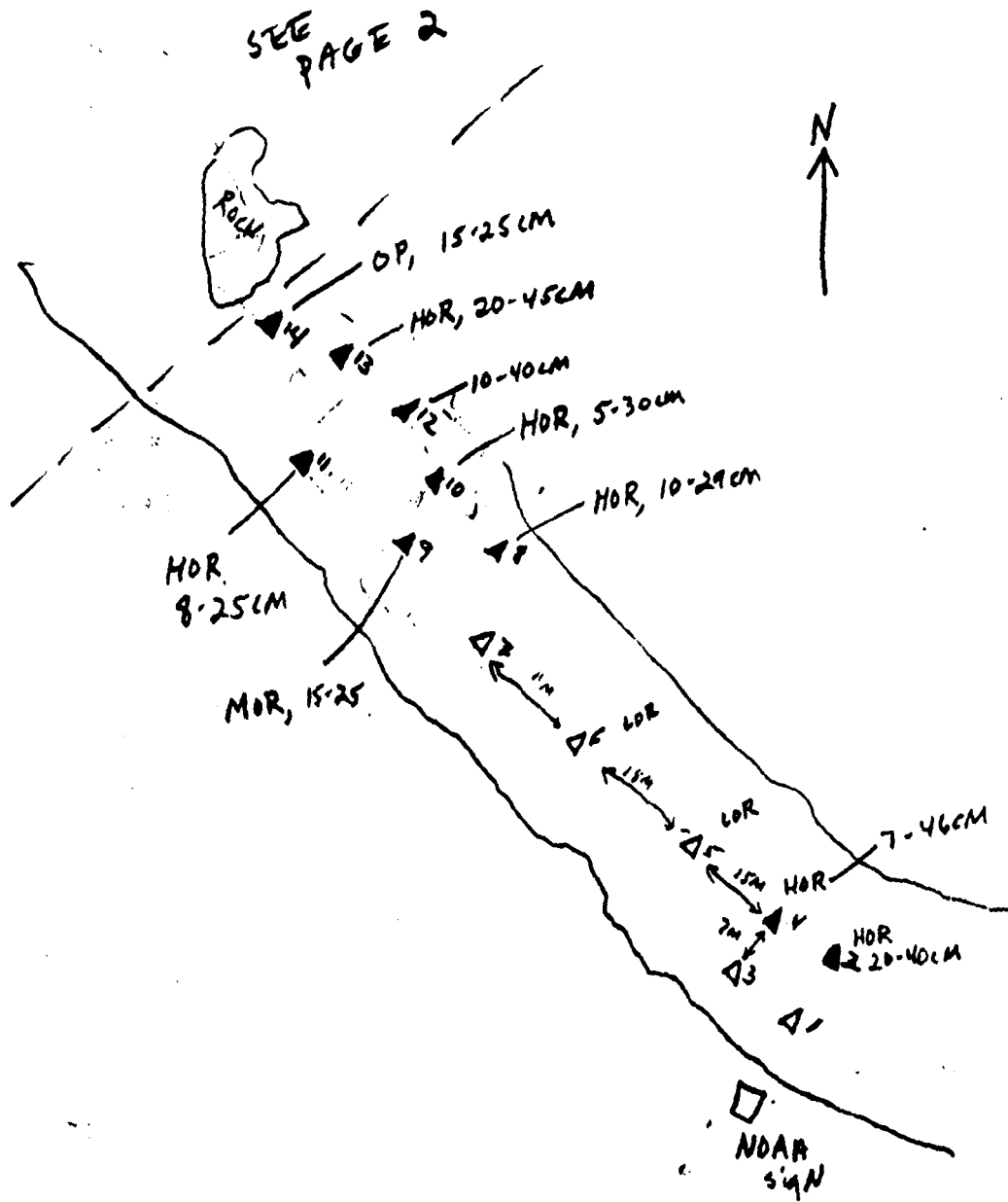
state survey - supplemental

DATE: 6-1-28/91

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

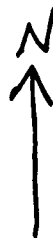
OG COMMENTS:

State survey - supplemental



PAGE 1
LA-15 C
6-28-91
M. HALL
RENEWAL crew

state survey
supplemental



PAGE 2
LA-15C
cobble/boulder
transition bench

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 Wesema
- 5) START TIME: 0800 17) HIGH TIDE HTS: _____ 23) OBSERVERS: Tom Crowe
- 6) STOP TIME: 1000 18) LOW TIDE TIMES: 1100 24) AGENCY: ADF&G
- 7) SEGMENT #: LA01SC 19) LOW TIDE HTS: +1.5 25) PHOTOS TAKEN: Y N
- 8) K-UNIT: _____ 20) TIDE HT AT SURVEY: +5 to +.8 ROLL #: _____ FRAMES: _____
- 9) LAT: _____ EDD Slack Flood Slack 26) VIDEO TAKEN: Y N
- 10) LONG: _____ 21) USCG QUAD: _____ TAPE #: _____
- 11) ASC #: 226-40-16782 START: _____ STOP: _____
- 12) STREAM NAME: _____ 27) SAMPLES TAKEN? Y N
- 13) LOCATION: _____ 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	80	5		25	3-5 cm		HSOR/AP
SITE 2	35	15				0-25 cm	HOR/OP
SITE 3	280	25				0-30 cm	LOR
SITE 4	140	50				5-45 cm	MOR
SITE 5	30	5				0-25 cm	HOR

29) OVERALL OIL IMPACT:

33) ANADROMOUS FISH PRESENT: Y N

H = >6m band with $\geq 50\%$ oil coverageM = >6m band with $\leq 50\%$ oil coverage or $\geq 3m$ to $\leq 6m$ with $\geq 10\%$ oil coverageL = <3m band with $> 10\%$ oil coverageVL = $\leq 10\%$ oil coverage regardless of band width

N = No oil observed

30) OIL IN STREAMBED: Y N31) OIL ON BEACH ADJACENT TO MOUTH: Y N

32) SUBSTRATE TYPE (PERCENT):

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

34) WILDLIFE OBSERVATION

Species	Number
Bird Eagle	3
cormorant	12
golden eye	15
widgeon	15
sand piper	6

35) COMMENTS: This beach/stream area still contains significant amounts of oil - both surface & subsurface. A definite lense can be viewed within the steep-sided stream banks. Located 20-35 cm beneath the surface the edges of it slough off into the stream. Heavily oiled organics precariously reside on a log jam within the stream in the 4:17 swash zone. 15 bags removed from log jam > 50% left. Heavy surface oiling in boulder field west of stream in site 1. Treatment should be comprehensive - manual removal AP/HSOR sediments

over

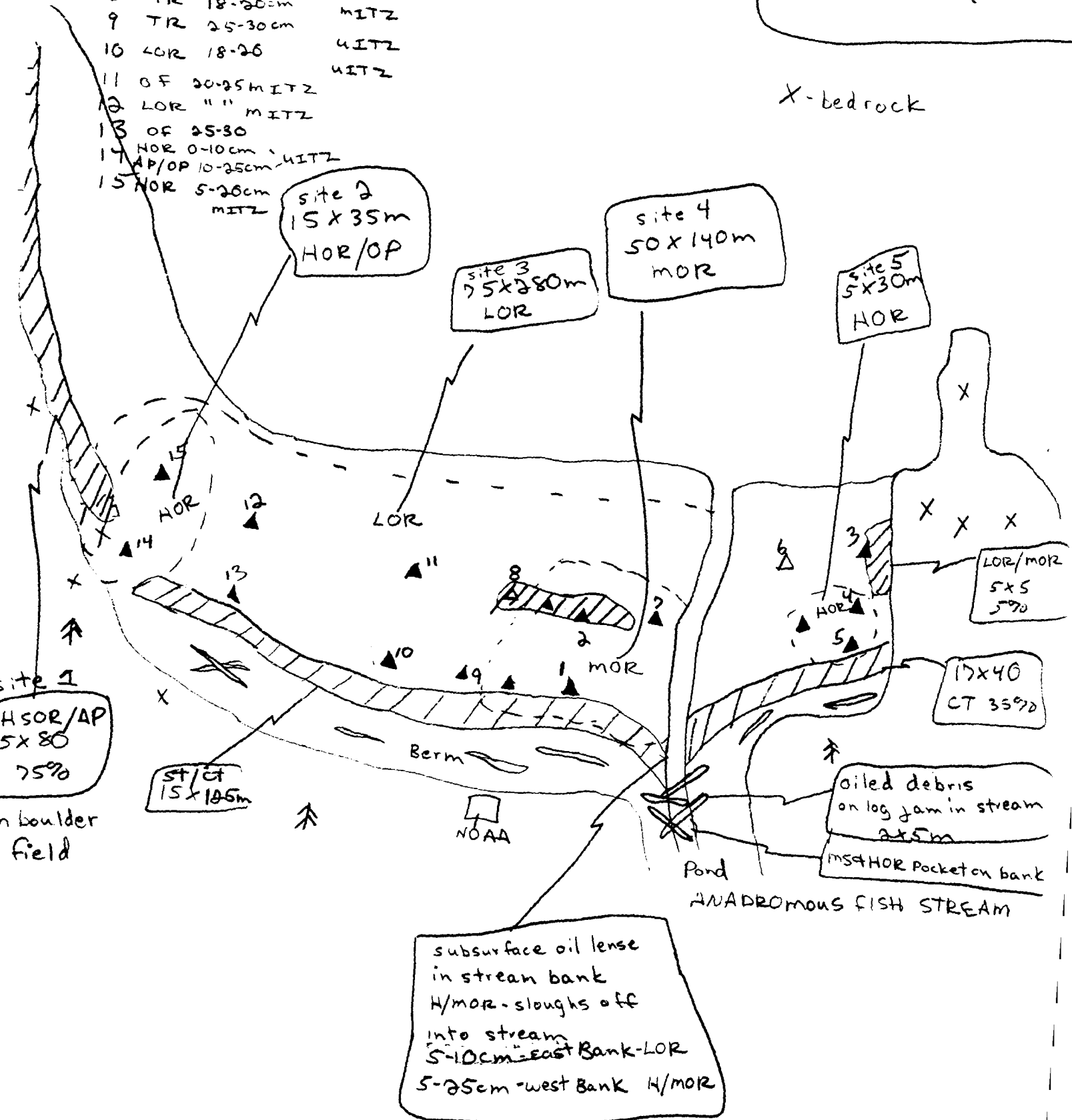
pit information

pit#	oil	zone
1	MOR-10-45cm	MITZ
2	MOR 5-45cm	MITZ
3	LOR 5-15cm	MITZ
4	MOR 0-25cm	MITZ
5	MOR 0-15cm	MITZ
6	TR	MITZ
7	MOR 20-40cm	MITZ
8	TR 18-20cm	MITZ
9	TR 25-30cm	MITZ
10	LOR 18-20	MITZ
11	OF 20-25	MITZ
12	LOR " "	MITZ
13	OF 25-30	MITZ
14	MOR 0-10cm	MITZ
15	AP/OP 10-25cm	MITZ
16	MOR 5-20cm	MITZ



LAO15C
ASC# 226-40-1678
5/3/91 INARSAP
A. Weseman

X-bedrock



SEGMENT LA-015

ADEC T. CROWE / A. WEZEMAN

LANDMANAGER CHARLES SELANOFF for CVC

SUBDIVISION C

EXXON SCOTT NAUMANN

USCG/NOAA CWO SPURR/REBECCA HOPE

DATE 05 / 03 / 91

TIME 07 : 50 to 10 : 00

TIDE LEVEL 0.5 ft. to 0.75 ft.

ENERGY LEVEL: ☒ H ☐ M ☐ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 715 m

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

EST. OIL CATEGORY LENGTH: W — m M 245 m N — m VL 190 m NO 280 m US — m

[illegible]

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

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

PHOTO ROLL # MAYSAP-

6.06 FRAMES 1-5

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE S U I M I L I				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO										
1	45			X					10 - 45	N	40	R		X			pc - pg	
2	45			X					5 - 45	N	30	BR			X		ca - pgs	
3	15				X				5 - 15	N	5	BR			X		c - gs	
4	25		X						0 - 25	N	20	BR			X		cp - pcg	
5	20		X						0 - 15	N	5	BR		X			cbp - gp	
6	30						X		10 - 20	Y	20	N			X		cp - pg	
7	40								20 - 40	N	30	BR			X		pc - spg	
8	30						X		18 - 20	Y	20	R			X		cp - pc	
9	55						X		25 - 30	Y	1	N		X			pc - p	organic slime

↓ cont'd.

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

2017

OG COMMENTS:

Surface oil was found in several locations, the most significant of which was among the boulders at the northern end of the site in the U1T2. Storm berm deposits across the main part of the bay were also thinly-coated or stained with oil, though not adjacent to the vegetation, as before. Some SOR was also found in the midshore at eastern end of the subdivision near the Rock headland.

Subsurface oil was widespread (LOR) across the whole MITZ/UITZ beachface. H₂O₂ = R

revised 5/9/91 x
E6 reviewed 5/11

PAGE 2 OF 2

DATE ____/____/91

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

cont'd. (MOR + HOR) was restricted to the area of the stream and also the extreme northern end of the open beach > tucked in before the first large bedrock outcrop. Each of these areas had a "centre" of HOR and one, around pit (14), was OP beneath a cobble veneer, verging on AP consistency at its uppermost edge. Time prevented excavations beneath the log piles in the SUTZ.

LA-015-D

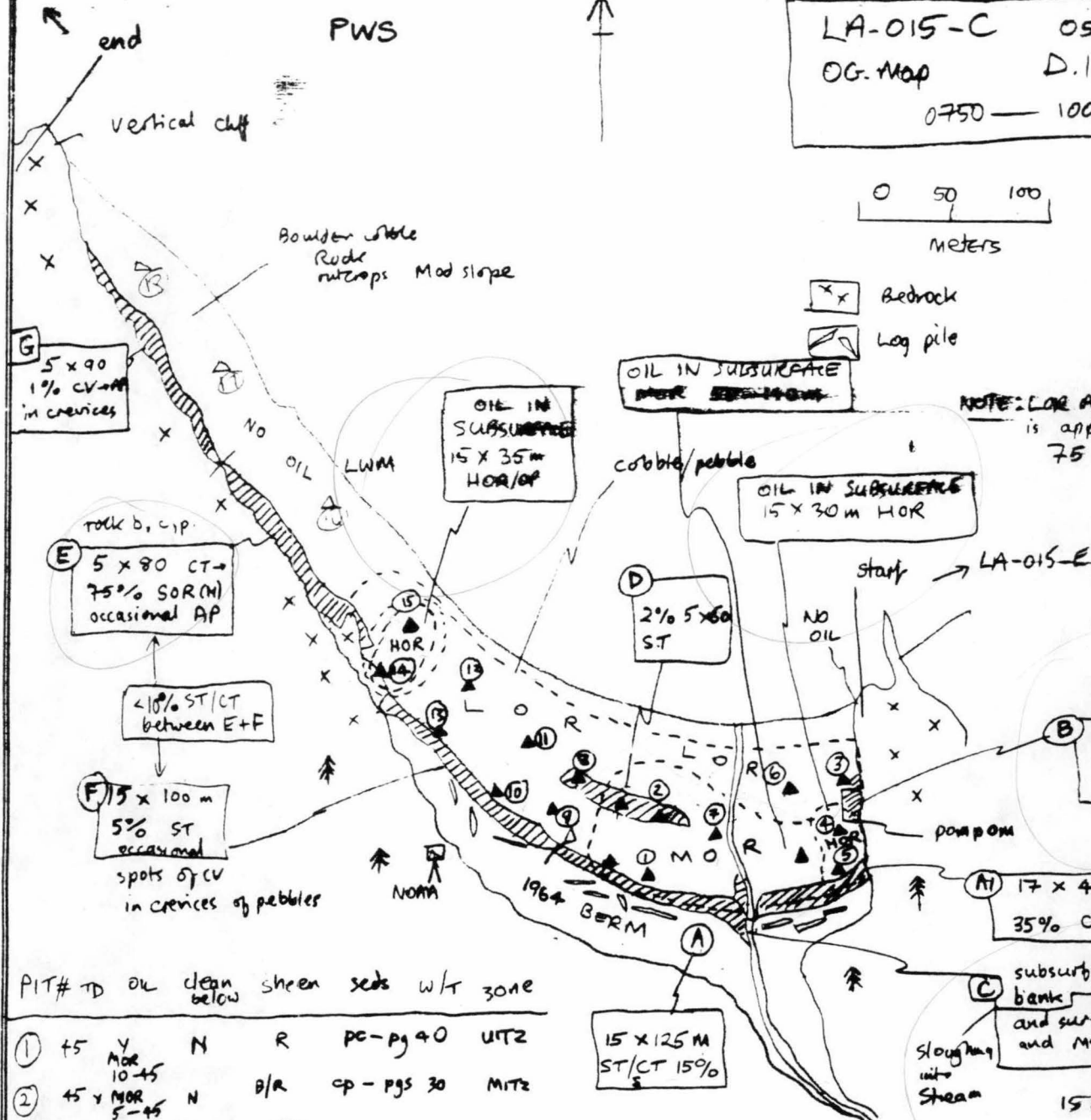
PWS

LA-015-C 05/03/91
OG. Map D.I. Little
0750 — 1000

0 50 100
METERS

xx Bedrock
Log pile

NOTE: LOR ACROSS BEACHFACE
is approximately
75 x 280 m



PIT# TO OIL clean shren sets w/t zone

PIT#	TO	OIL	clean	shren	sets	w/t	zone
①	45	Y MOR 10-45	N	R	PC-pg 40	UITZ	
②	45	Y MOR 5-45	N	B/R	CP-pgs 30	MITZ	
③	15	Y 5-15 LOR	N		E-gs 5	MITZ	
④	25	Y 0-25 HOR	N		SP-pg 20	MITZ	
⑤	10	Y 0-15 HOR	N	B/R	ibp-gp 5	UITZ	
⑥	30	TR 10-20	Y		CP-pg 20	MITZ	
⑦	40	Y MOR 20-40	N	R/B	PC-spq 30	MITZ	
⑧	30	TR 20	Y	R	CP-PC 20	MITZ	on org. slime
⑨	55	Y TR 30	Y	N	PC-P	UITZ	
⑩	35	Y LOR	Y	R	PC-PC 30	UITZ	
⑪	30	Y OF	Y	R	PC-CP 10	MITZ	
⑫	35	Y LOR	N	R	PC-CP 20	MITZ	
⑬	40	Y OF TR	N		CPg-Pg	UITZ	

Note: Location A extends both sides of stream
A-to to west, A₁ to east

PIT#	TO	OIL	clean	shren	sets	w/t	zone
⑭	25	Y (H) OR 8-10	N		CP-pgs 30	MITZ	
⑮	20	Y (H) OR 5-20	N		Pg-pg	MITZ	
⑯	18	N O OIL ~ 20 cm TD					

revised 5/11
25 retained 5/11

LA-015-D

N

PWS

LA-015-C

05/03/91

OG. Map

D.I. Little

0750 — 1000

0 50 100

METERS

x x Bedrock

Log pile

Bowling stone
Rude
nutcracks Mod slope

Vertical cliff

cobble pebble

5 x 90
1% CV-AP
in crevices

rock b. c. p.

5 x 80 CT
75% SOR(N)
occasional AP15 x 100 m
5% ST
occasional
spots of CV
in crevices of pebbles2% 5 x 60
ST

stump → LA-015-E

NO OIL

LOR-MOR
5 x 5 m
5%

pump out

17 x 40 m
35% CTsubsurface oil in stream
bank 20 cm - 35 x 15 m
MOR-MOR
and surface oiled weed
and MS 2 x 5 10%sloughing
into
stream

PIT# TO OIL clean shren seeds w/t zone

PIT#	TO	OIL	clean below	shren	seeds	w/t	zone
①	15	Y MOR 10-15	N	R	PC-Pg 40	UITZ	
②	45	Y MOR 5-15	N	B/R	CP-Pgs 30	MITZ	
③	15	Y 5-15 LOR	N	B/R	C-gs 5	MITZ	
④	25	Y 0-25 MOR	N	B/R	CP-PCg 20	MITZ	
⑤	20	Y 0-15 MOR	N	B/R	CBP-gp 5	UITZ	
⑥	30	TR	Y	—	CP-Pg 20	MITZ	
⑦	40	Y MOR 20-40	N	R/B	PC-SPg 30	MITZ	
⑧	30	TR	Y	R	CP-PC 20	MITZ	
⑨	55	Y TR	Y	N	PC-P	UITZ	
⑩	35	Y LOR	Y	R	PC-PC 30	UITZ	
⑪	30	Y OF	Y	R	PC-CP 10	MITZ	

⑫ 35 Y LOR R R PC-CP 20 MITZ

15 x 125 M
ST/CT 15%ANADROMOUS
STREAMNote: Location A extends both sides of stream
A to to west, A₁ to east.

PIT#	TO	oil	below clean	seeds	w/t	zone
⑬	25	Y (H) OR AP/OP 10-25	0-10 N	—	CP-Pgs 20	UITZ
⑭	20	Y (H) OR	5-20 N	pg	—	MITZ

on org. slime

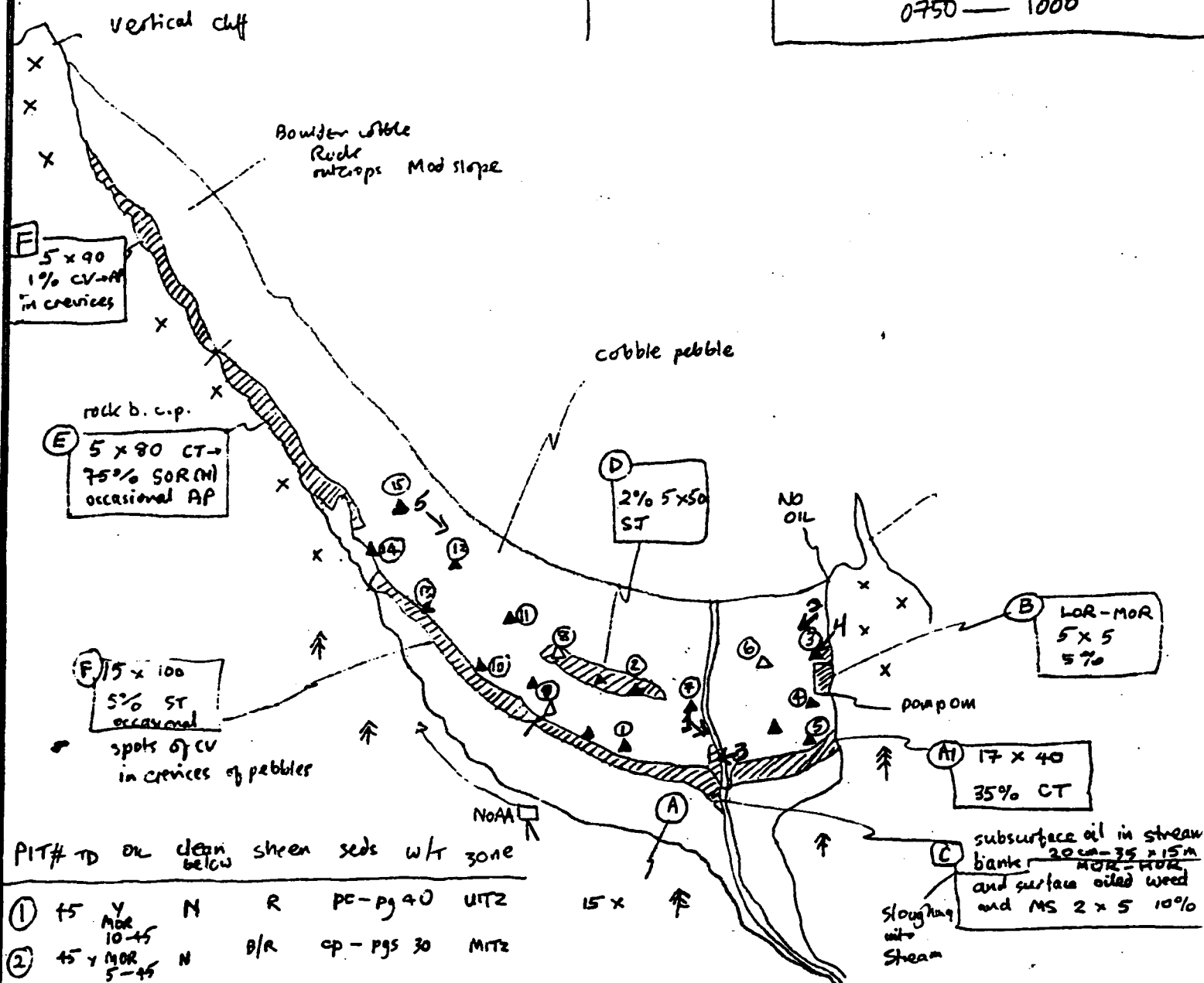
Photo Locations 6-06

#1-5

PWS



LA-015-C 05/03/91
OG. Map D.I. Little
0750 — 1000



PIT# TD OR clean shreen seeds w/t zone

①	15	Y	N	R	PC-Pg	40	UITZ
		MOR 10-15					
②	45	Y MOR	N	B/R	CP-Pgs	30	MITZ
		5-45					
③	15	Y	N	B/R	C-gs	5	MITZ
		5-15 LOR					
④	25	Y	N	B/R	CP-PCg	20	MITZ
		0-25 MOR					
⑤	20	Y	N	B/R	CBP-gp	5	UITZ
		0-15 MOR					
⑥	30	TR	Y	—	CP-Pg	20	MITZ
⑦	40	Y MOR	N	R/B	PC-SPg	30	MITZ
		20-40					
⑧	30	TR	Y	R	CP-PC	20	MITZ
							on org. slime
⑨	55	Y TR	Y	N	PC-P	—	UITZ
⑩	55	Y LOR	Y	R	PC-PC	30	UITZ
⑪	30	Y OF	Y	R	PC-CP	10	MITZ

ANADROMOUS STREAM

Location A extends both sides of stream

⑭ 25 Y (H) OR 0-10 N — CP-PCgs UITZ
AP/OP 10-25
⑮ 20 Y (H) OR 5-20 N PG MITZ

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6
 DATE 5/3/91
 SEGMENT # LA-015
 TIDAL HEIGHT(Range) +5 to +3/4 ft.
 SUBDIVISION C
 BIOLOGIST T.R. Schroeder
 SEA STATE 1-2 foot chop
 WIND SPEED/DIRECTION 7-15 10-15
 PHOTOGRAPHS: ROLL #
 FRAME #

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

Only biological community on this beach is at the southern end along the rocky point. Fucus and red algae are thick and mussels and barnacles are present. Mussel bed extends out into large cobble rock beach about 5 meters. Littorine snails and egg masses were present but not numerous.

95% of beach is basically sterile down through the MITZ to LITZ. High energy beach is emphasized by rounded, smooth cobble rocks.

Any recommendations for treatment should protect the southern rock area as this is the greatest potential for repopulating this beach area. No significant biological impact will occur from any form of treatment on the remainder of beach.

WILDLIFE OBSERVATIONS

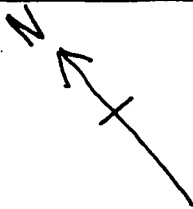
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1 (bald)	3	
Seabirds	1 Cormorant	12	
Waterfowl	2 Goldeneye	30	
Gulls/Kittiwakes	2 Kittiwake	20	
Shorebirds	1 Sandpiper	6	
Corvids	1 Steller jay	1	
Other Birds	1 ?		

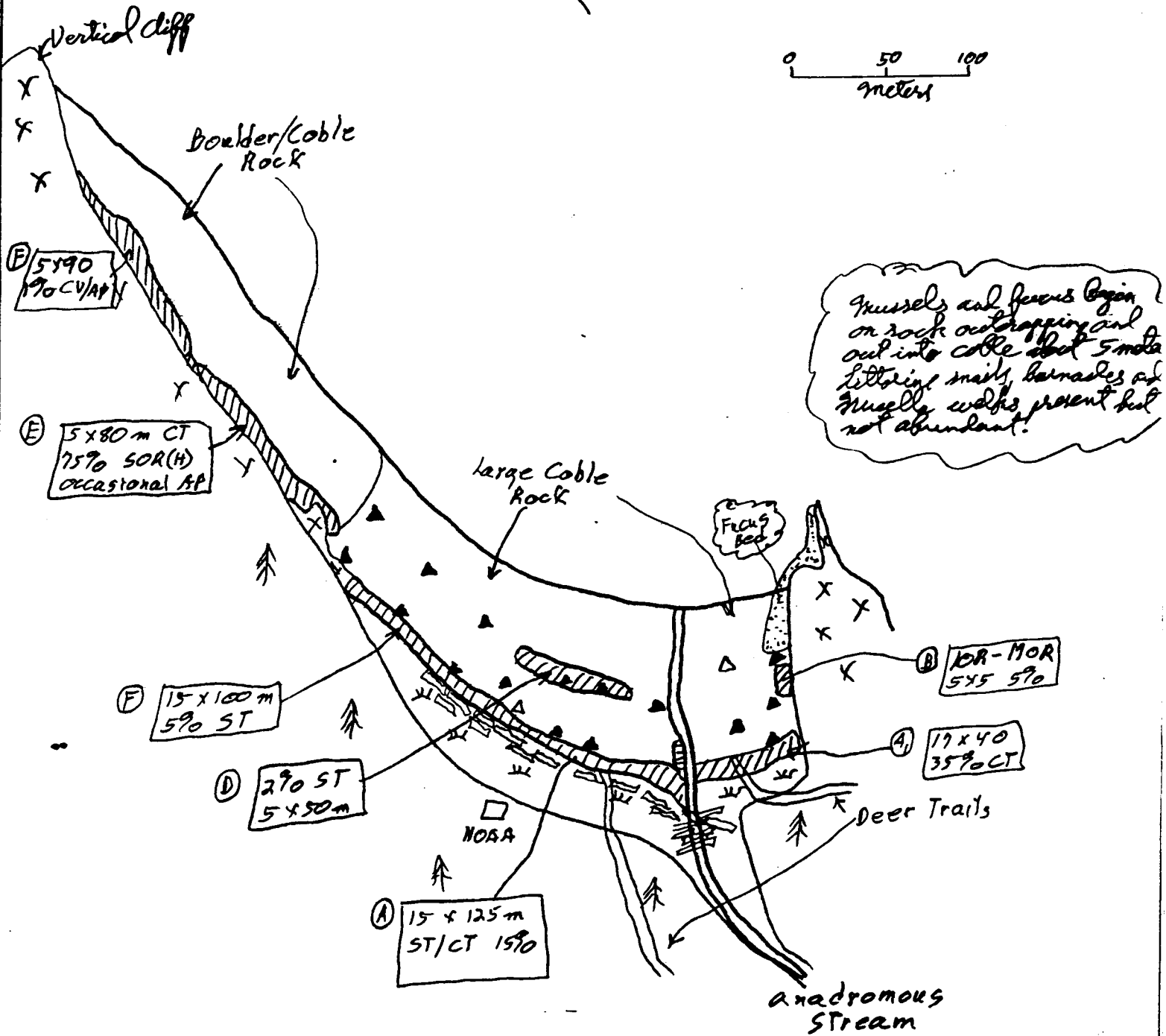
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	1	10' + 10' deep	
Pinnipeds(specify)			
Whales(specify)			

Shoreline subdivision map showing important biological features attached.

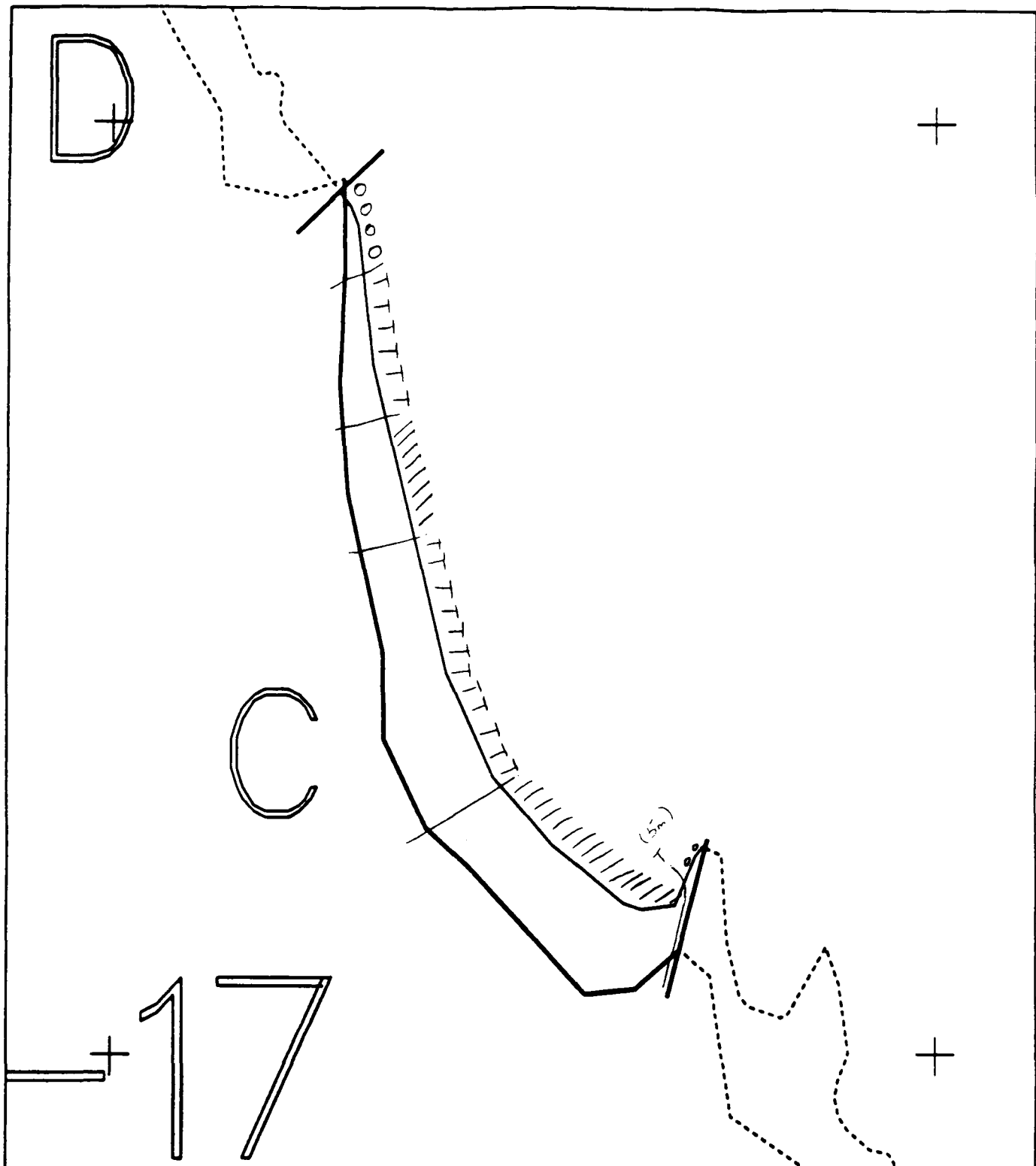
LA-015-C 5/3/91
 Bio. Map T.R. Schroeder
 0750-1000



0 50 100
 meters



Mussels and fucus begin on rock outcroppings and out into cobbles about 5 m downstream. Littorine snails, barnacles and Musella worms present but not abundant.

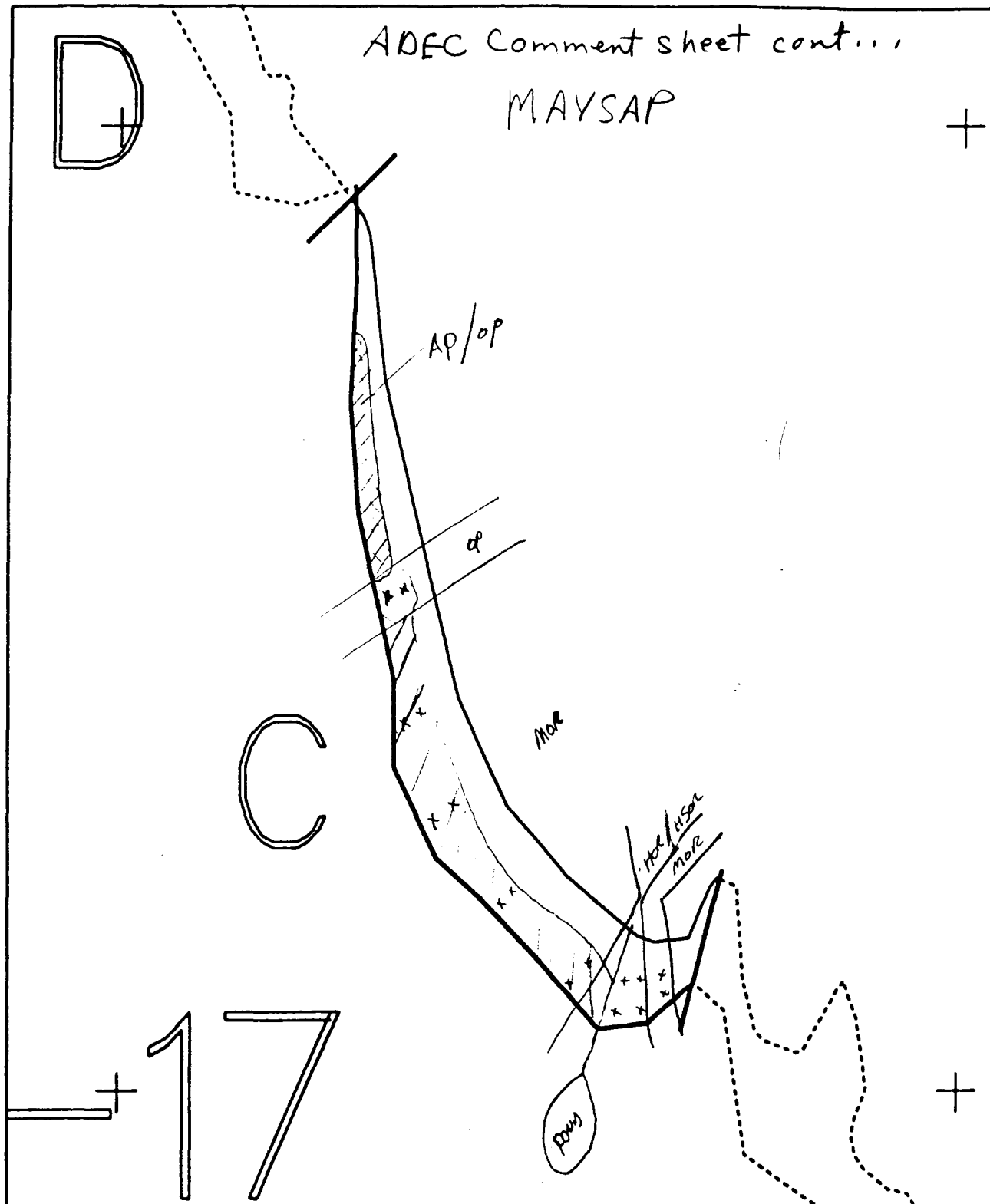


XXXX	Wide	LA015 C	Subdivision Field Map
////	Medium	ADEC Subsegment Length: 715m	Map Key: PWSLA015C
----	Narrow	METERS	Name: DAVID LITTLE
TTTT	Very Light	0 100 200	Date: 05/03/91
0000	No Oil	AK State Plane Zone 4 plc015c	Data Entered:

revised 5/91
 ES revised 5/11

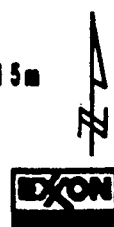
ADEC Comment sheet cont...

MAYSAP



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

LA015 C
 ADEC Subsegment Length: 715m
 METERS
 0 100 200
 AK State Plane Zone 4
 plot15c



Subdivision Field Map
 Map Key: PWSLA015C
 Name: Tom Crowe
 Date: 5/3/91
 Date Entered:

5/13/91 Discrepancies

(HAB + OG complement)

LA 015 C

226 40 16782

HAB

OG

Site 1

- AGREE -

Site E

Site 2 (around pits 14, 15)

No site # or demarcation.

15 x 35 m

HOR / UP

- agrees with OG comments -

0-25 cm penetr.

Pits H, 15 5-20, 10-25 cm

Site 3

No site # or demarcation

75 x 280 m

LOR

0-30 cm penetr.

(seems to extend from wind
of site 2 to stream.)

Site 4

Site D (within site "4")

50 x 140 m

5 x 60 m

MOR

2%

Site 5

No site # or demarcation

5 x 3 m

HOR

0-25 cm

Summary: HAB primarily 'subsurface'
OG = surface sites.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 6 SEGMENT LA 15 SUBDIVISION C DATE 5/3/91

ADEC/ADFG

NAME TOM CROWE

SIGNATURE [Signature]

☐ NTR ☒ TREATMENT RECOMMENDED

ANADROMOUS STREAM / SUBSURFACE USE AREA

MOST EVERY PIT DUG IN THIS BEACH AREA REVEALED SOME DEGREE OF OILING. THE ANADROMOUS STREAM HAD SIGNIFICANT OILING ADJACENT TO THE STREAM ITSELF AND HEAVILY OILED DEBRIS ON BOTH BANKS IN THE MITZ. THE MITZ ON BOTH SIDES PITS REVEALED MOR DEPOSITS. ^{STREAM GRAVEL IS NOT FIT FOR SPAWNING} LACK OF MARINE LIFE SUGGESTS THAT NOT MUCH CAN BE MORE INTRUSIVE THAT TO LEAVE THIS BEACH HEAVILY OILED. THE BOULDER AREA NORTH OF THE BEACH UNWORKED LAST YEAR CONTAINS LARGE AMOUNTS OF OP AND AP IN THE MID AND UPPER ITZ. PIT #15 AND #4 ARE PRIME EXAMPLES. MECHANICAL TILLING AND WASHING IS SUGGESTED FOR BOTH THE STREAM AREA AND NORTH BEACH BOULDER AREAS.

EXXON

NAME Scott A. Nauman

SIGNATURE [Signature]

☒ NTR Although subsurface residues are still present in most of the pits, the concentrations have been reduced significantly as a result of last year's work. The LOR/MOR concentrations due not warrant further mechanical intrusion. The higher subsurface concentrations away from the stream are beyond the practical limits of tilling due to bedrock and boulders and should be left alone. Surface stain and coat will weather naturally over the summer as it did last summer. Areas of AP/SOR are in hard to access boulder fields that preclude safe treatment. Observed 3 eagles, 100+ other birds so far this beach be left to them.

LANDMANAGER

NAME _____

OF _____

SIGNATURE _____

☐ NTR

USCG/NOAA

NAME CWO SPURR / Rebecca Hoff

SIGNATURE [Signature]

☐ NTR

This segment is problematic and certainly contains the most oil of those we have surveyed this year on team 6. The upper portion of the stream bank contains medium to heavy subsurface oil (Area C) In littoral area (E) has heavy surface oil lodged between large boulders back in the upper intertidal. Both areas will be difficult to treat without extensive excavation, and treatments especially near the stream would be intrusive. A careful evaluation of the trade-offs and potential to be gained from further treatment at this site needs to be made.

Mech. treatment
prescribed 6/17/91

1991 MAYSAP EVALUATION



SEGMENT: LA 015 SUB: C 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:

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

In SHPO

Charles E. Holman

5/30/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: Apply Customblen and Inipol at locations C and F. On
site TAG evaluation is recommended.

TAG: MANUAL PICKUP OF OILED ORGANICS IN AREA C AROUND THE
LOGS, MAN. P/U OF HSOR IN AREA B AND PITS 4 + 5.
MANUALLY RAKE OILED LENSE AWAY FROM STREAM BANK AT C
AND APPLY CUSTOMBLEN. PICKUP HSOR IN AREA E. BIOREMEDIATE

*WHERE
SOR REMOV*

FOSC: CLOSELY EVALUATE EFFECTIVENESS OF
MANUAL TILLING TO RELEASES / REMOVING REMAINING
OIL. IF NOT SUCCESSFUL, REVISIT USE OF MECHANICAL
EQUIPMENT. *eeh*

TAG APPROVAL DATE: MAY 29 91

FOSC APPROVAL DATE: 6/11/91

ADEC

FOSC

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

EXXON *Real*

ADEC: The state disagrees with
Exxon work order. Please see
state work orders.

USCG *E. E. Page*

NOAA *Gregg*

**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.

MAYEAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 6 SEGMENT LA 15 SUBDIVISION C DATE 5/3/91

ADEC/ADFG

NAME TOM CROWE

SIGNATURE

[Signature]

☐ NTR ☒ TREATMENT RECOMMENDED

ANADROMOUS STREAM / SUBSURFACE US-2 AREA

MOST EVERY PIT DUG IN THIS BEACH AREA REVEALED SOME DEGREE OF OILING. THE ANADROMOUS STREAM HAD SIGNIFICANT OILING ADJACENT TO THE STREAM ITSELF AND HEAVILY OILED DEBRIS ON BOTH BANKS IN THE MUD. THE MUD ON BOTH SIDES PITS REVEALED MOR DEBRIS. ^{STREAM GRAVEL IS NOT FIT FOR SPAWNING} LACK OF MARINE LIFE SUGGESTS THAT NOT MUCH CAN BE MORE INTRUSIVE THAT TO LEAVE THIS BEACH HEAVILY OILED. THE BOULDER AREA NORTH OF THE BEACH UNWORKED LAST YEAR CONTAINS LARGE AMOUNTS OF OIL AND AP IN THE MUD AND UPPER ETC. PIT #15 AND #14 ARE PRIME EXAMPLES. MECHANICAL TILLING AND WASHING IS SUGGESTED FOR BOTH THE STREAM AREA AND NORTH BEACH BOULDER AREA.

EXXON

NAME Scott A. Nauman

SIGNATURE

[Signature]

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LANDMANAGER

NAME CHARLES SELANDOFF OF CHENECA BAY

SIGNATURE

[Signature]

☐ NTR HEAVY oiling at the mouth of the stream with a lot of oily debris on the storm berm. This oily substance is so close to the stream that it will effect the returning salmon wildstock. Oil sheen is visible where the wave action is. I strongly recommend manual work with a lot of tilling done. Plus the removal of oily logs.

USCG/NOAA

NAME CWO SPURR / Rebecca Hoff

SIGNATURE

[Signature]

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PAGE 1 OF 1

revised 5/9/91 KG
5500 1 5/11

cont d

MAYSAP SHORELINE OILING SUMMARY (cont.)

PAGE 2 OF 2

TEAM NO. 6

SEGMENT LA-015

SUBDIVISION C

DATE 5, 3 / 91

[illegible]

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

OG COMMENTS:

cont'd. (MOR + HOR) was restricted to the area of the stream and also the extreme northern end of the open beach > tucked in before the first large bedrock outcrop. Each of these areas had a "centre" of HOR and one, around pit (14), was OP beneath a cobble veneer, verging on AP consistency at its uppermost edge. Time prevented excavations beneath the log piles in the SUTZ.

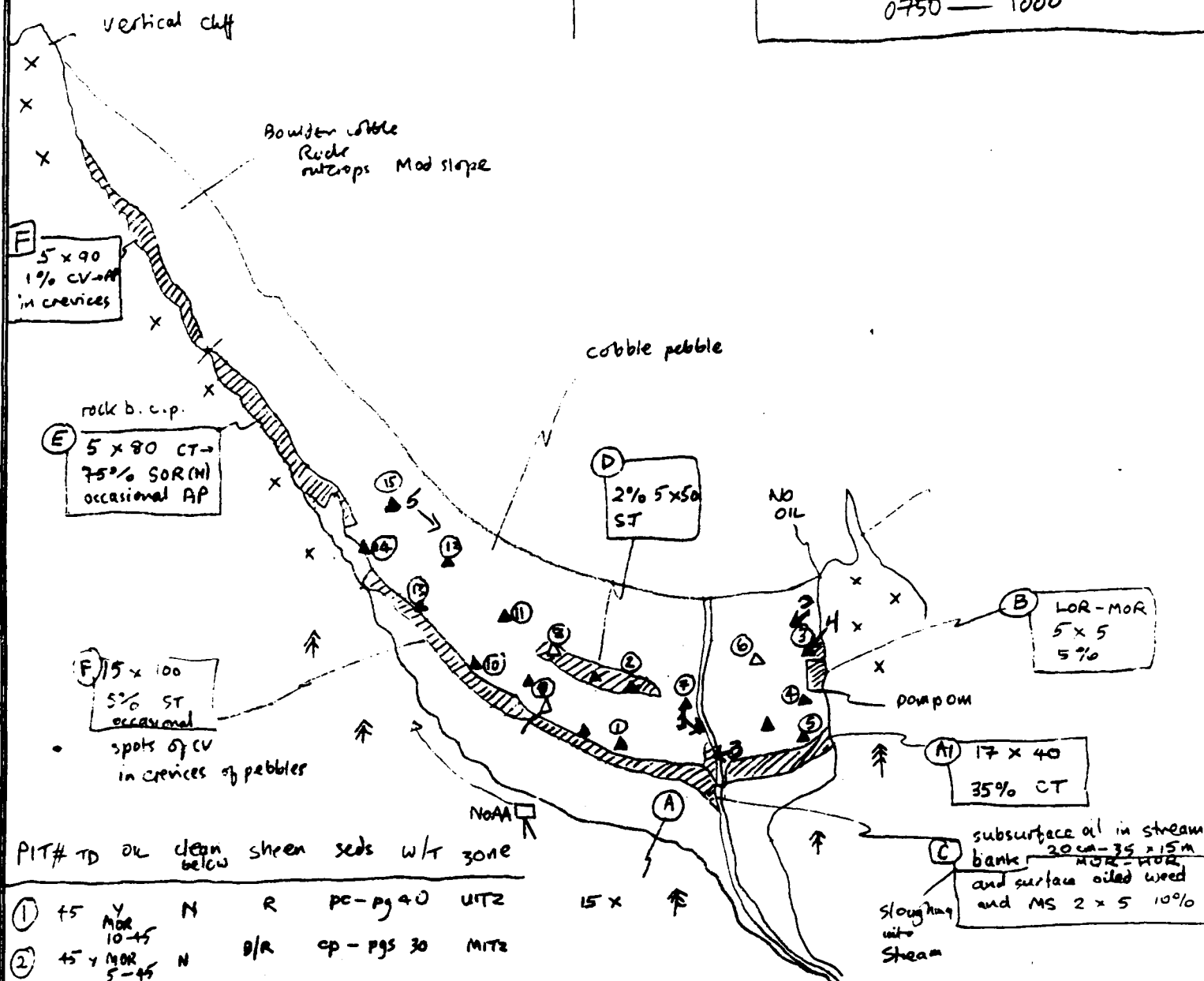
revised 5/9/91 100
25 revised 6/4

#1-5

PWS



LA-015-C 05/03/91
OG. Map D.I. Little
0750 — 1000



PIT# TD OL clean below shreen seeds w/r zone

①	45	Y	N	R	pc-pg 40	UITZ
		MOR 10-45				
②	45	Y	N	B/R	cp-pgs 30	MITZ
		MOR 5-45				
③	15	Y	N		c-gs 5	MITZ
		5-15 LOR				
④	25	Y	N		cp-pcg 20	MITZ
		0-25 MOR				
⑤	20	Y	N	B/R	cbp-gp 5	UITZ
		0-15 MOR				
⑥	30	TR	Y	—	cp-pg 20	MITZ
⑦	40	Y	N	R/B	pc-spq 30	MITZ
		MOR 20-40				
⑧	30	TR	Y	R	cp-pc 20	MITZ
					on org. slime	
⑨	55	Y	Y	N	pc-p	UITZ
		TR				
⑩	35	Y	Y	R	pc-pc 30	UITZ
		LOR				
⑪	30	Y	Y	R	pc-cp 10	MITZ
		OF				
⑫	35	Y	N	R	pc-cp 20	MITZ
		LOR				

ANADROMOUS
STREAM

Location A extends both sides of stream

⑭ 25 Y (H) OR 0-10 N — cp-pgs UITZ
AP/OP 10-25
⑮ 20 Y (H) OR 5-20 N pg MITZ

LA-015-D

PWS

LA-015-C

05/03/91

OG-Map

D.I. Little

0750 — 1000



0 50 100
meters

X Bedrock

Log pile

NOTE: LOR ACROSS BEACHFACE
is approximately
75 x 280 m

OIL IN SUBSURFACE
MOR 50-140M

OIL IN
SUBSURFACE
15 x 35 m
HOR/OP

OIL IN SUBSURFACE
15 x 30 m HOR

D 2% 5x60
ST

B (HOR-MOR)
5 x 5 m
5%

A1 17 x 40 m
35% CT

C subsurface oil in stream
bank 20 cm - 35 x 15 m
MOR-HOR
and surface oiled weed
and MS 2 x 5 > 10%

sloughing
into
stream

15 bags PU

ANADROMOUS
STREAM

Note: Location A extends both sides of stream
A to to west, A1 to east

Vertical cliff
Boulder waste
Rude
outcrops Mod slope

G 5 x 90
1% CV-AP
in crevices

E 5 x 80 CT
75% SOR(M)
occasional AP

< 10% ST/CT
between E+F

F 5 x 100 m
5% ST
occasional
spots of CV
in crevices of pebbles

PIT# TO OIL clean below shren seeds w/t zone

①	45	Y	N	R	PC-Pg 40	UITZ
②	45	Y	N	B/R	CP-Pgs 30	MITZ
③	15	Y	N		E-gs 5	MITZ
④	25	Y	N		SP-PCg 20	MITZ
⑤	20	Y	N	B/R	CBP-gp 5	UITZ
⑥	30	TR	Y		CP-Pg 20	MITZ
⑦	40	Y	N	R/B	PC-SPg 30	MITZ
⑧	30	TR	Y	R	CP-PC 20	MITZ
⑨	55	Y	Y	N	PC-P	UITZ
⑩	35	Y	Y	R	PC-PC 30	UITZ
⑪	30	Y	Y	R	PC-CP 10	MITZ

on org. slime

PIT#	TO	OIL	below clean	seeds	w/t	zone
⑭	25	Y	(H)OR 0-10 AP/OP 10-25	N	CP-Pgs 20	UITZ
⑮	20	Y	(H)OR 5-20	N	Pg-Pg-	MITZ
⑯	18	N	OIL ~ 20 cm TD			

⑫ 35 Y LOR N R PC-CP 20 MITZ

revised 5/9/91 KC

revised 5/9/91 K.C.
 ES revised 5/11

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6
 SEGMENT # LA-015
 SUBDIVISION C
 SEA STATE 1-2 foot chop
 PHOTOGRAPHS: ROLL #
 DATE 5/3/91
 TIDAL HEIGHT(Range) +5 to +3/4 ft.
 BIOLOGIST T.A. Schroeder
 WIND SPEED/DIRECTION 7-15 10-15
 FRAME #

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

Only biological community on this beach is at the southern end along the rocky point. Fucus and rock algae are thick and mussels and barnacles are present. Mussel bed extends out into large cable rock beach about 5 meters. Littorine snails and egg masses were present but not numerous.

95% of beach is basically sterilized down through the MITZ to LITZ. High energy beach is emphasized by rounded, smooth cable rocks.

Any recommendations for treatments should protect the southern rock area as this provides the greatest potential for repopulating this beach area. No significant impact will result from any form of treatment on the remainder of beach.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1 (bald)	3 (1 bald)	
Seabirds	1 (sanderling)	12	
Waterfowl	2 (green-winged teal)	30	
Gulls/Kittiwakes	2 (Laysan)	80	
Shorebirds	1 (sandpiper)	6	
Corvids	1 (Steller jay)	1	
Other Birds	1 (?)	1	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	1	Lots of deer sign	
Marine Mammals (specify)			
Whales (specify)			

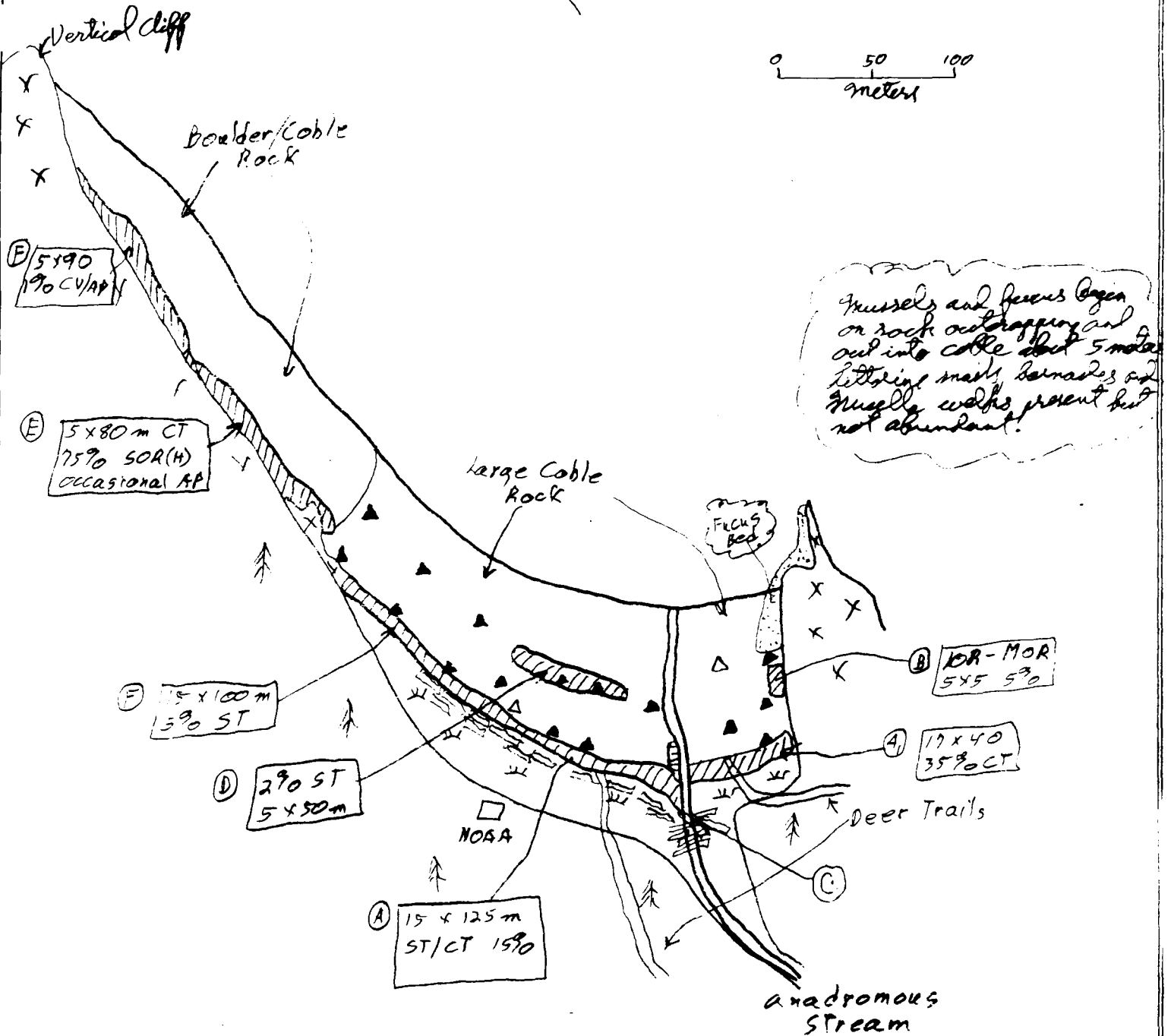
Shoreline subdivision map showing important biological features attached.

ES reviewed 5/11

LA-015-C 5/3/91
 Bio. Map T.R. Schroeder
 0750-1000



0 50 100
 meters





**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.

1991 MAYSAP EVALUATION

SEGMENT: LA 015 **SUB:** C **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>Y</u>	_____	_____
Manual Pickup (Check as Req.)	_____	_____	_____
Spot Washing	_____	_____	_____
Bio-Customblen Only	_____	_____	_____
Bio-Inipol/Customblen	<u>X</u>	_____	_____
Other _____	_____	_____	_____
Other _____	_____	_____	_____

COMMENTS:

INITIAL: Apply Customblen and Inipol at locations C and F. On *force*
site TAG evaluation is recommended. *Mechanical filling of sediments*

5/20 M OR/DO around stream and Hor/PP NW end of beach (pits 144/15)
Use sorbents on incoming tide. Relocate area C to MITZ
after filling. P.V. sor in area E.

TAG: TAG to review in field

FOSC: _____

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

ADEC _____ FOSC _____

EXXON _____

USCG _____

NOAA _____

1991 STREAM FILE LOG HABITAT

STREAM CATALOG # : 226-40-16782
STREAM NAME : Latorche Island

LOCATION : P.W.S
SEGMENT : LA-015C

[illegible]

Post-treatment assessment
ADF&G MULTI-ASSESSMENT DATA FORM

226-40-16782
LAISC

- 1) SURVEY TYPE: BS SS 2) REGION: PWS KP, CI K, AP
- 3) METHOD: Aerial Ground Boat
- 4) DATE: 8/3/91 16) HIGH TIDE TIME: 718 22) TEAM RECORDER: A. Weseman
- 5) START TIME: 1000 17) HIGH TIDE HTS: 2.6 ft 23) OBSERVERS: MFink, MKuwada, KMiddleton
- 6) STOP TIME: 1210 18) LOW TIDE TIMES: 1246 24) AGENCY: ADF&G
- 7) SEGMENT #: LAISC 19) LOW TIDE HTS: 3.1 25) PHOTOS TAKEN: Y N
- 8) K-UNIT: _____ 20) TIDE HT AT SURVEY: ts.7-+3.1 ROLL #: _____ FRAMES: _____
- 9) LAT: _____ Ebb Slack Flood Slack 26) VIDEO TAKEN: Y N
- 10) LONG: _____ 21) USCG QUAD: _____ TAPE # _____
- 11) ASC #: 226-40-16782 START: _____ STOP: _____
- 12) STREAM NAME: _____ 27) SAMPLES TAKEN? Y N
- 13) LOCATION: NF 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 A	8	16			18		OPMOR 1-32
SITE 2 B	25	16					HOR-LOR on surface
SITE 3 C	12	12			?		oiled organics
SITE 4 D	9	6			30		LOR on stream bank
SITE 5 E	50	15					HOR - into berm 2-45
							MOR on surface

29) OVERALL OIL IMPACT:

- H = >6m band with ≥50% oil coverage
- M = >6m band with ≤50% oil coverage or ≥3m to ≤6m with ≥10% oil coverage
- L = <3m band with >10% oil coverage
- VL = ≤10% oil coverage regardless of band width
- N = No oil observed

33) ANADROMOUS FISH PRESENT: Y N

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 ✓

34) WILDLIFE OBSERVATION

Species _____ Number _____

35) COMMENTS: Due to recent filling of subsurface oil areas, we were unable to determine current oil conditions in area's ABF F&G. We observed newly exposed OP/HOR sediments on the surface of areas ABF&G and MOR sed on the surface of area's E&F. Pits were dug into storm berm where obvious oil lenses were still intact. Area D still contained a stratified lense extending into storm berm. Some HOR sediments had been pulled away from stream bank in area C, but appreciable quantities remain. Oiled organics are still present in log jam in stream. Area of AP/HOR west of filled areas was not surveyed. survey focused on oiled areas treated in '91. Re-assess in '92

DESCRIPTION

This image shows a blank sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

MOR on surface
OP/MOR on surface

ADFGS
AS.C.NO. 226-40-16782

AS.C.NO. 226-40-16782

Team Recorder: A. Weseman

Observers: M Fink, M Kuwada.

DATE 8 / 3 / 91

K Middleton

TIME 10 : 00 to 12 : 10

TIDE LEVEL +5.7 ft. to +3.1 ft.

ENERGY LEVEL: ☒ H ☐ M ☐ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: _____ m

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

EST. OIL CATEGORY LENGTH: W_____m M_____m N_____m VL_____m NO_____m US_____m

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

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

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

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

Due to recent tilling of subsurface oil areas, we were unable to determine current oil conditions in areas ABE & FG. We observed newly exposed OP-HOR sediments on the surface of areas AB & G and HOR sediments on the surface of areas E & F. Pits were dug into storm berm where obvious oil lenses were still intact. Area D still contained a stratified lense continuing into berm. Some HOR sediments had been pulled away from stream bank in area C, but appreciable quantities remain. Oiled organics are present in log jam in stream area of AP/HOR west of tilled area's was not surveyed. Survey focused on known oil, treated in 1991. Area should be re-assessed in '92

SEGMENT LA 15

SUBDIVISION C

DATE 8 / 3 / 91

ASC 226-40-16782

[illegible]

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

OG COMMENTS:

pit# ^{cm} TO OIL clean Sheen sed w/T zone below

0 50 100
meters

LA015-C

post-treatment assessment

8/3/91 1000-1210

A Weseman.

Due to recent tilling of areas A B E F + G, we were unable to determine the current subsurface oiling condition for these areas. Pits were dug were an obvious oil lense continued up into the storm berm, having been missed by the tilling process. Observations were made on newly exposed oil now residing on the surface.

LA-015-E



1)	32	1-15-MOR 16-32- HOR/OP	Black GPS 32	MITZ	
2)	22	LOR ?	Black GPS 19	MITZ	
3)	20	15-19 HOR	Black GPS 19	MITZ	
4)	16	10-15 ? HOR/OP	Black GPS 14	LITZ	
5)	13	0-3 LOR	R GPS 10	LITZ	
6)	29	15-27 Y OP	N GSP N	SITZ -Berm	
7)	45	0-12-LOR ? 12-45 HOR	N CPG N	UITZ -25m from stream	
8)	27	1-27 ? LOR/TR	N CPG N	UITZ	
9)	24	2-28 HOR discontinuous	N CPG N	UITZ	
10)	44	17-32 HOR/OP N	PGSC N	UITZ - on cut edge of storm berm - top of filled area	" " "
11)	60	0-18 HOR/OP N 18-60 H/MOR	PGSC N	UITZ	" " "

ADF&G OIL SPILL RESPONSE MONITORING

ASC# 226-40-16782

Date: 7/11/91

Stream Name: _____

Observer: Mark Fink

Segment-Sub Unit LAISC

Location: NE LaTouche Island

Anad. Stream Permit Issued? ☒ Y ☐ N

Date: 7/11 - 7/14/91

Work Order Issued: ☒ Y ☐ N

Date: 7/9/91 (TAG)

Demob Date: 7/11/91 (Ch. given to Marianne Prosta DEC to sign off on work order)

Oil Characteristics (circle appropriate ones)

Surface: ☒ AP ☒ MS ☐ TB ☒ SOR ☒ CV ☒ CT ☒ ST ☐ FL ☐ DB ☐ None
 Subsurface: ☒ OP ☒ HOR ☒ MOR ☒ LOR ☒ OF ☐ TR ☐ None

Treatment Techniques:

Manual Removal
 Manual Raking
 Spot Wash
 Other

☒ Bioremediation & Type (Custom blend)
☒ Mechanical Tilling ~ 75 lbs.
 Header Flood (Hot/Cold)

Crew Size: 4 + 2 Caterpillars

Lbs. or Bags of Oil/Sediment Removed 0

Other Agency Reps, and Names: Randy Boyer, Rex Coulter - EXXON,
Coop - USCG, Marianne Prosta - DEC

Photos Y ☒ N

Roll #

Frames

Video ☒ N Tape #

Start End

Sediment/Oil Samples (Y ☒ N) Collection Number

Purpose of Trip * Treatment (third work order)

* Form designed primarily for cleanup inspection trips, but should be used for any field trips, i.e., to check on bird rookeries, seal haulouts, special habitat areas. etc.

Describe extent of remaining oil (any comments on expected completion of cleanup).

2nd go-around still did not fill with the tide. Area around transect lines 4, 5, 6 HOR/CP not retilled. Some LOR in west stream bank near log jam AP/SOR in boulder field west end of subdivision. Some touch-up work removing oiled organics in log jam as reported 7/1.

Comments: (Are work order procedures being followed?, etc.)

Work order did not address mechanical tilling with the tide. Contact with both DEC and F&G did not provide the push needed to get Exxon monitor to adjust WO. Area at far west end previously tilled (~30m x 13m) was bided and retilled. Boom was strung out hoping to contain on evening's high tide, (1:40 AM). Upper 1/3 of area around transects C+1 was mechanically relocated to lower UITS. Previously tilled area of OP/HOR was expanded landward ~2m into toe of storm berm, and ~8m to the west (following OP lens) for a total relocated area of ~12m x 6m at 40-45cm deep. Four to six bucket loads of sediment from west stream bank at log jam was relocated NW to UITS. LOR mixed with organics was relocated (~2m x 5m). HOR/HOR at location C (OG map) not found. Boom was strung out along the 3 areas of relocation and tilling. Exxon and USCG reps were cooperative. Exxon rep stated that he would pick up boom at the end of the "Sovereigns" tour of duty (Friday or Saturday). State monitor had hoped tilling with the tide and manual removal would have

A:OPRESP
April 2, 1991 been addressed on work order.

SUPPLEMENTAL III

1991 MAYSAP EVALUATION

SEGMENT: LA 15 SUB: C REGION: PWS SURVEY DATE: JULY 8 - TAG

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) SAME

Ecological/Constraints (see page two for details) SAME

ARCHAEOLOGICAL CONSTRAINTS:

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

Timothy J. Smith for SHPO 7/9/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: _____

TAG: ADDITIONAL TILLING RECOMMENDED AS PRESCRIBED ON ATTACHED SKETCHES

RELOCATE SMALL AREA (Approx 20 x 2 yds) AT THE BASE OF THE BERM JUST EAST OF THE STREAM.

FOSC: _____

TAG APPROVAL DATE: July 9 1991

FOSC APPROVAL DATE: _____

ADEC [Signature]

FOSC _____

EXXON [Signature]

USCG T. M. Murphy et

NOAA _____

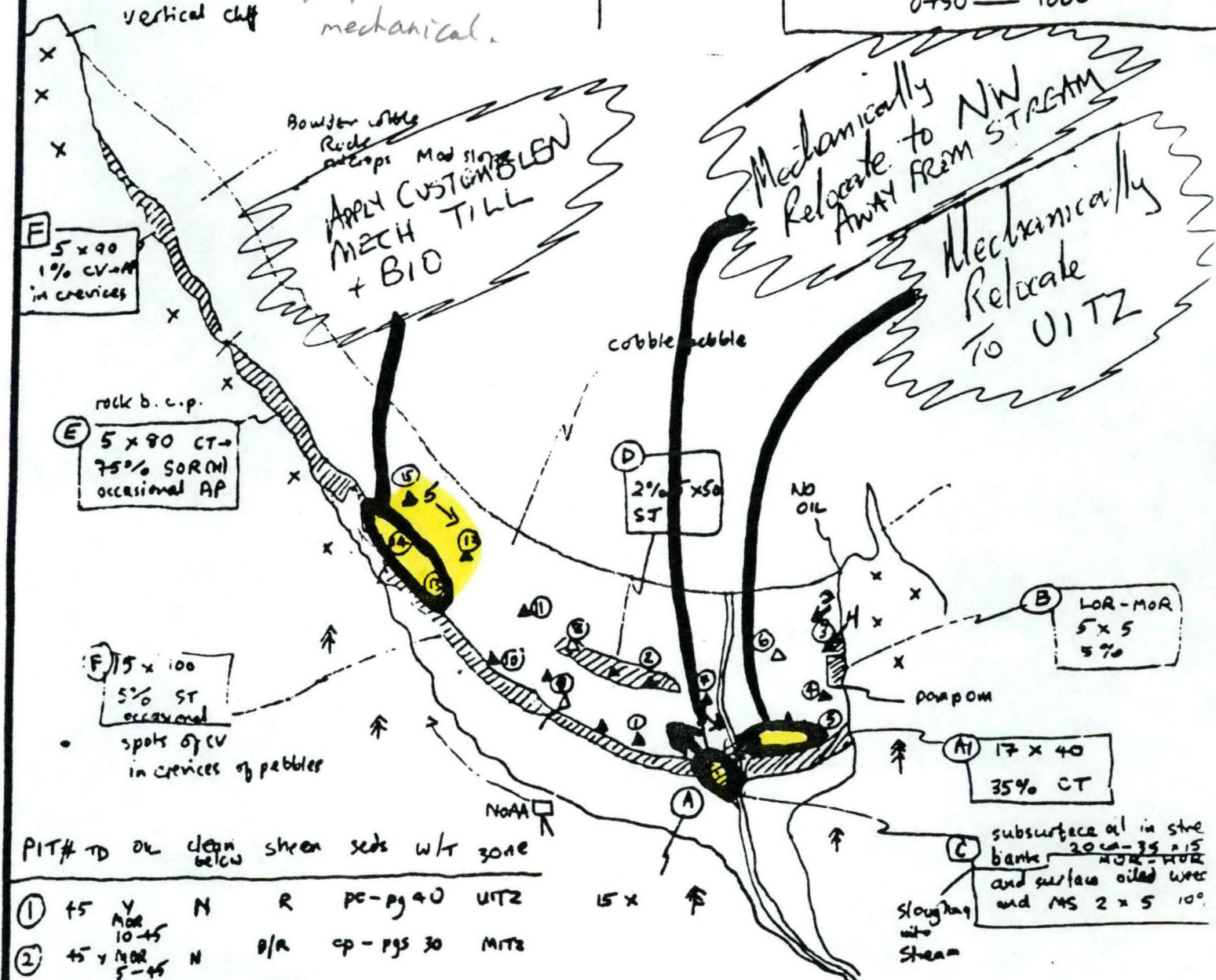
#1-5



PWS
Areas treated
7/11/91
mechanical.



LA-015-C 05/03/91
OG. Map D.I. Little
0750 — 1000



PIT# TO OIL clean shren sets w/t zone

①	45	Y	N	R	PC-Pg 40	UITZ
②	45	Y	N	B/R	CP-Pgs 30	MITZ
③	15	Y	N	B/R	C-gs 5	MITZ
④	25	Y	N	B/R	CP-Pg 20	MITZ
⑤	20	Y	N	B/R	ibp-gp 5	UITZ
⑥	30	TR	Y	—	CP-Pg 20	MITZ
⑦	40	Y	N	R/B	PC-spg 30	MITZ
⑧	30	TR	Y	R	CP-PC 20	MITZ
⑨	55	Y	Y	N	PC-P	UITZ
⑩	55	Y	Y	R	PC-PC 30	UITZ
⑪	30	Y	Y	R	PC-CP 10	MITZ
⑫	35	Y	N	R	PC-CP 20	MITZ

on org. slime

⑭ 25 Y (H) OR 0-10 N — CP-Pgs UITZ

⑮ 20 Y (H) OR 5-20 N PG MITZ

NORTH
(MAS)

0 25
meters

LA015-C
Maximum Subsurface Oil Character
14-June-1991

Legend

OP



HOR



MOR/LOR

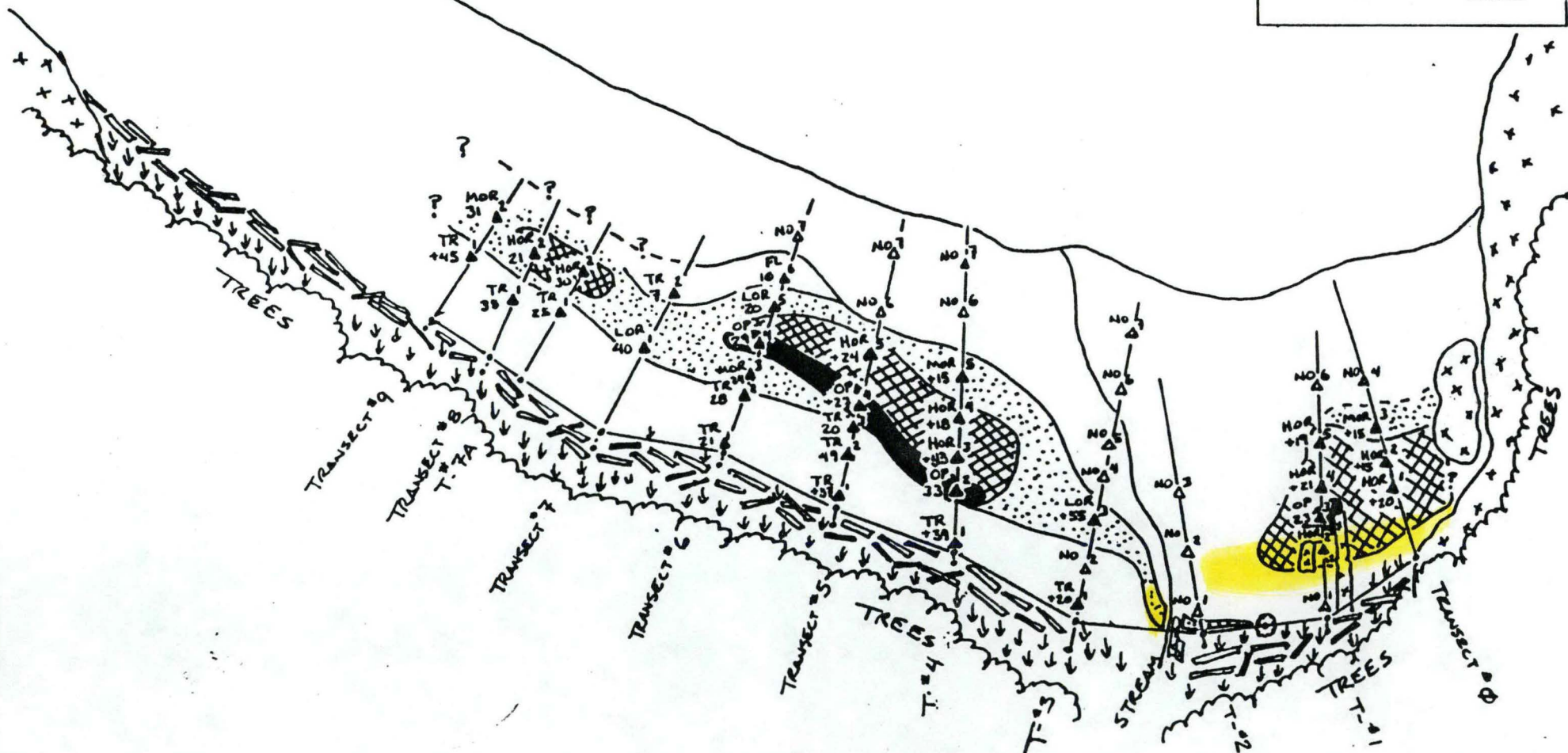


TR/NO



Areas treated 7/11/91
Mechanical.

SOR-HUY 0.3cm
(leaside)



EXXON Valdez Oilspill Cleanup

Anadromous Fish Stream Authorization

Date 7/11/91

EXXON Authorized Representative Randy Boyer

Shoreline Segment LAISC

Anadromous Fish Stream Number(s) 226-40-16782

Approved Cleanup Techniques Mechanical tilling, manual
removal of oiled sediments Use of custom built
approved

Approved Cleanup Period 7/11 - 7/14/91

Alaska Department of Fish and Game

Mark Fink
Authorized Officer

Randall K Boyer
Permittee's Signature

ADF&G OIL SPILL RESPONSE MONITORING

ASC# 226-40-16782

Date: 7/2/91

Stream Name: _____

Observer: Mark Fink

Segment-Sub Unit LAISC

Mark Kuwaka
Aimee Wesman

Location: NE LaTouche Is.

Anad. Stream Permit Issued? ☒ Y ☐ N

Date: 6/30/91

Work Order Issued: ☒ Y ☐ N

Date: 6/25/91

Demob Date: NO Mechanical completed 7/1/91

Oil Characteristics (circle appropriate ones)

Surface: AP, MS, TB, SOR, CV, CT, ST, FL, DB, None
Subsurface: ☒ OP, ☒ HOR, ☒ MOR, ☒ LOR, OF, TR, None

Treatment Techniques:

Manual Removal
Manual Raking
Spot Wash
Other

Bioremediation & Type
Mechanical Tilling
Header Flood (Hot/Cold)

Crew Size: _____

Lbs. or Bags of Oil/Sediment Removed _____

Other Agency Reps, and Names: Nick Martinez - Exxon
Vince Mulligan - USCG

Photos

Y ☒ N

Roll #

Frames

Video

☒

Tape #

Start

End

Sediment/Oil Samples

(Y ☒ N)

Collection Number

Purpose of Trip *

Assess Treatment

* Form designed primarily for cleanup inspection trips, but should be used for any field trips, i.e., to check on bird rookeries, seal haulouts, special habitat areas, etc.

Describe extent of remaining oil (any comments on expected completion of cleanup).

Tilled areas east and west of the stream had not been pushed by the tide. Exposed HOC/OP sediments remain. Oil lens along west edge of stream bank remains. Oil lens in tilled area east of stream runs further up into storm berm.

Comments: (Are work order procedures being followed?, etc.)

Mark, Aimee, and I talked with Nick Martinez and Vince Mulligan about the inability to collect oil from tilled areas. Tides did not reach LITZ and booms had been removed on at least one of the tilled areas. They maintained that the work order did not state tilling with the tide, or relocation to LITZ. Intent of TAC in work order is not evident to these two monitors (so they say). A work order modification has been submitted by Aimee, requesting mechanical tilling with the incoming tide in areas previously tilled. Booms should collect any released oil. Also mechanical removal of oiled sediments along north end of stream bank was requested.

ADF&G OIL SPILL RESPONSE MONITORING

ASC# 226-40-16782

Date: 7/1/91

Stream Name: _____

Observer: Aimee Weseman

Segment-Sub Unit LA15C

Location: N.E. LaTouche I

Anad. Stream Permit Issued? ☒ Y N

Date: 6/30/91

Work Order Issued: ☒ Y N

Date: 6/25/91

Demob Date: mechanical tilling portion of WO complete 7/1/91, not manual

Oil Characteristics (circle appropriate ones)

Surface: ☒ AP, ☒ MS, TB, ☒ SOB, ☒ CV, ☒ CT, ☒ ST, FL, DB, None
 Subsurface: ☒ OP, ☒ HOR, ☒ MOR, ☒ LOR, ☒ OF, TR, None

Treatment Techniques:

- X Manual Removal
- X Manual Raking
- Spot Wash
- Other

- Bioremediation & Type
- X Mechanical Tilling - In place
- Header Flood (Hot/Cold)

Crew Size: 6 + Hitachi

Lbs. or Bags of Oil/Sediment Removed 0

Other Agency Reps, and Names: Nick Martinez - Exxon
Vince Mulligan - USCG, Dale Gardner - ADEC

Photos ☒ Y N

Roll #

Frames

91AJW02

19, 20, 21

Video ☒ Tape #

Start End

91DWG01

Dale Gardner - ADEC

Sediment/Oil Samples (Y-N) ☒ Y ☒ N

Collection Number

Purpose of Trip * treatment

* Form designed primarily for cleanup inspection trips, but should be used for any field trips, i.e., to check on bird rookeries, seal haulouts, special habitat areas, etc.

Describe extent of remaining oil (any comments on expected completion of cleanup).

Lots of work yet to do - retilling with the tide, mechanical pulling back of oil lense on stream bank & manual removal oiled material in UITZ North of stream. - AP/tarmat/HSOR trapped in boulder interstices, Touch up work - completion of removal of oiled organics in log jam.

Comments: (Are work order procedures being followed?, etc.)

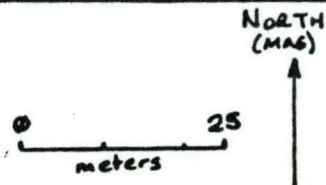
Areas of OP/HOR along transect lines 4, 5, 6, 7, 8 & 9 were tilled in place. Oil lense not as thick as previous days oil = area received treatment in 90. Thin OP/HSOR lense, near the surface, continues into storm berm.

Tilled areas 50m long & 15m wide & 20m long & 5m wide from east to west.

Some manual removal of oiled lense on stream bank was accomplished, but the effort was largely futile - mechanical help needed.

Mechanical tilling in place without the tide & agitation is an irresponsible treatment. Release of oil occurs with high tides & storms after protective booms are removed. Very little, if any oil is recovered immediately after tilling, if oil is located in UITZ and tides do not cover the area.

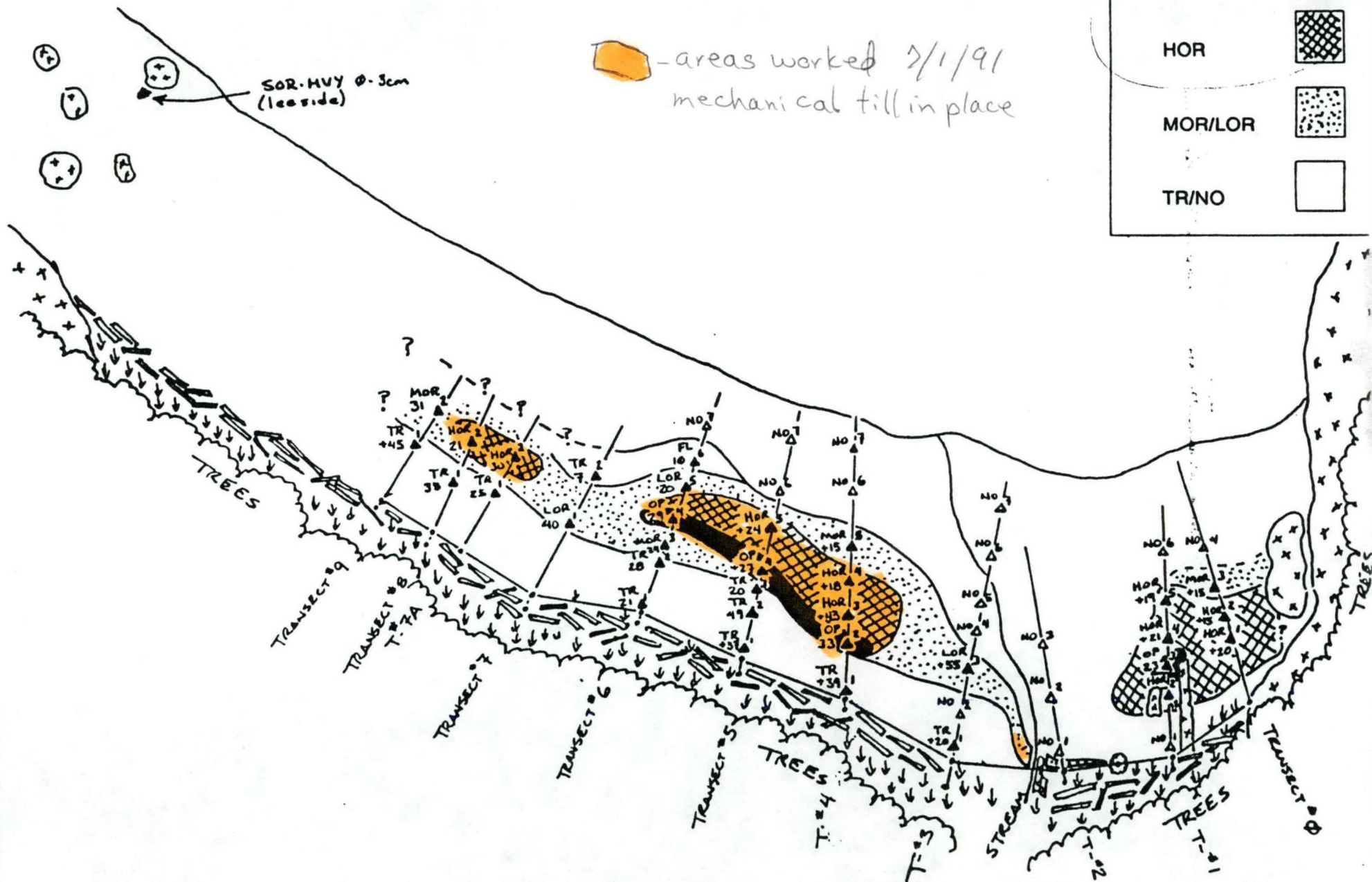
A:OPRESP
April 2, 1991



LA015-C Maximum Subsurface Oil Character 14-June-1991

Legend	
OP	
HOR	
MOR/LOR	
TR/NO	

- areas worked 2/1/91
mechanical till in place



pits 14 & 15

NORTH
(Mag)

25
meters

▲ = pit stop

LA015-C Maximum Subsurface Oil Character 14-June-1991

Legend

OP



HOR



MOR/LOR

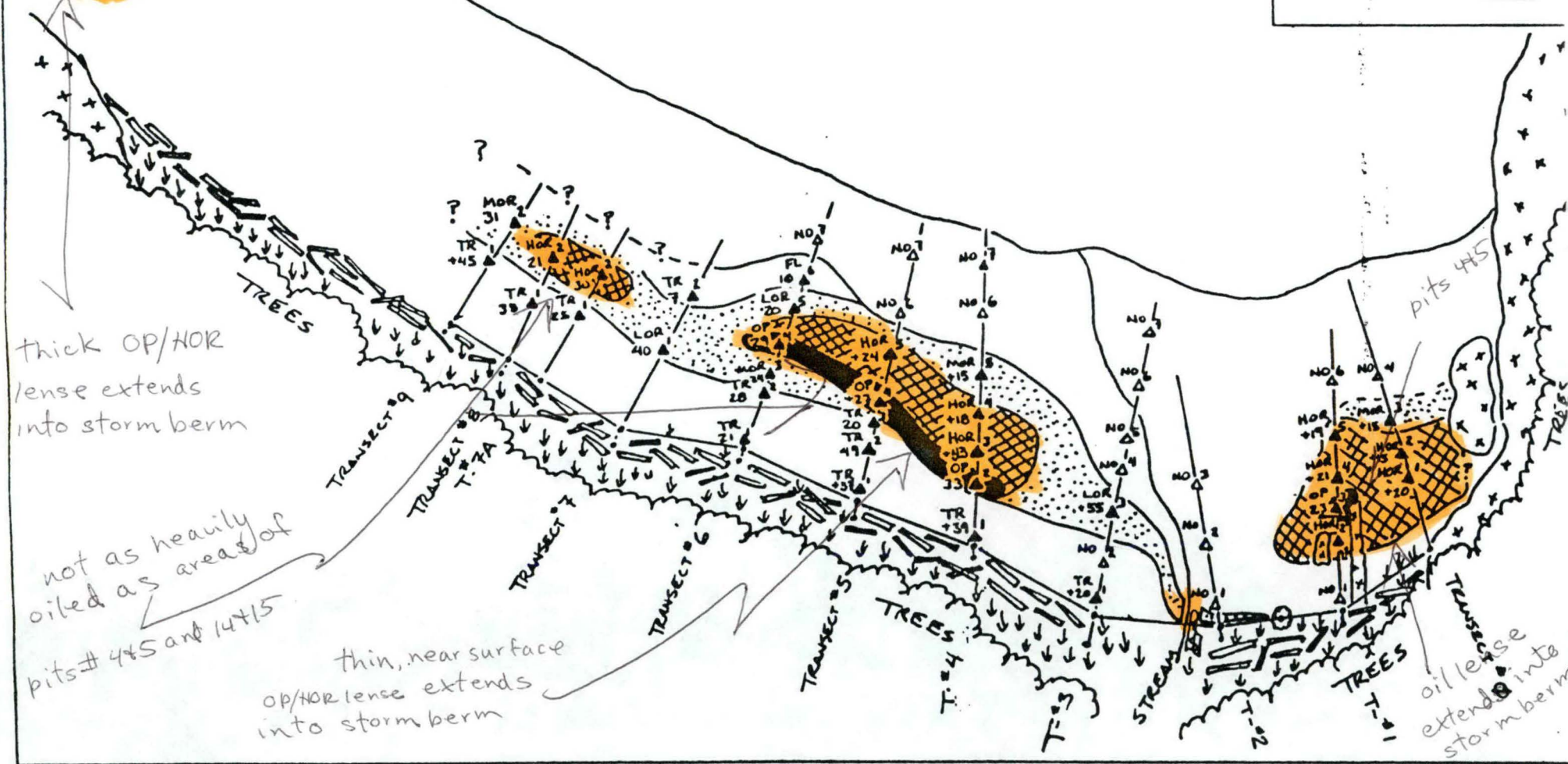
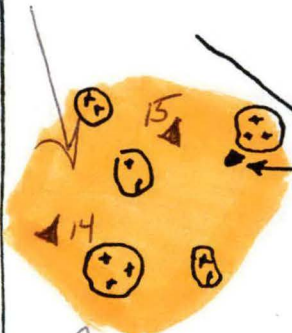


TR/NO



- areas treated
6/30 & 7/1/1991
mechanical & manual.

SOR-HVY @ 3cm
(lee side)



Post-It™ brand fax transmittal memo 7671		# of pages ▶ 1
To Nick Martinez	From S. Nauman	
Co.	Co. Ops	
Dept.	Phone # 3416	
Fax #	Fax #	

TO: Nick Martinez

FROM: Scott Nauman

SUBJECT: LA-15C

I've just returned from hours of unsuccessful helicopter attempts. Since I was unable to personally visit, and since I'm unable to establish contact over the phone, I'll try the fax...

In answer to your question about LA-15C, I believe I'm probably more confused than you are. Apparently a survey done by an Exxon team recently showed more HOR/OP oil at LA-15C than did the MAYSAP survey I participated in. This Exxon survey is not attached to the paperwork we have here in Operations, nor is it attached to the paperwork in the SCAT group files. Leaving no stone unturned, however, I called Andy Teal and he explained that the HOR/OP oil identified in this subsequent Exxon survey should in fact be our guide for treatment. Therefore, to the extent that it shows this level of oiling in the middle portion of the beach, go ahead and till it up. I'm assuming (based on your question) that you have this subsequent survey that I do not. Andy said that this area was about 50 yards long and shouldn't take a whole day, so it sounds like you and he are referencing the same material.

I'm still trying to sort out the paperwork on LA-15D and LA-15E. Both the Admiral and Otto have told me personally that we're o.k.'d to use mechanical equipment, but I haven't seen anything that says specifically what and where we're to do. If you need to do something else after LA-15C, go to LA-15E and work with Larry. He apparently was there for the TAG visit and knows exactly what we're supposed to do. I'll be the last one to know...

I have a toothbrush and pocketful of cough drops to bring out. I'll try to get out tomorrow, but first I need to straighten out the helicopter schedule. Have a good evening - hope your day was better than mine.

→ Tilling vs Removing Arrot. 610 E

ADF&G OIL SPILL RESPONSE MONITORING

ASC# 226-40-16782

Date: 6/30/91

Stream Name: _____

Observer: Aimee Weseman

Segment-Sub Unit LA15C

Location: NE LaTouche I

Anad. Stream Permit Issued? ☒ Y N

Date: 6/30/91

Work Order Issued: ☒ Y N

Date: 6/25/91

Demob Date: _____

Oil Characteristics (circle appropriate ones)

Surface: ☒ AP, ☒ MS, TB, ☒ SOR, ☒ CV, ☒ ST, FL, DB, None
 Subsurface: ☒ OP, ☒ HOR, ☒ MOR, ☒ LOR, ☒ OF, TR, None

Treatment Techniques:

- ☒ Manual Removal
- ☒ Manual Raking
- Spot Wash
- Other

- ☒ Bioremediation & Type
- ☒ Mechanical Tilling - In place
- Header Flood (Hot/Cold)

Crew Size: 6 + Hitachi EX100

Lbs. or Bags of Oil/Sediment Removed 1 1/2 super sacks oily sediments removed
mostly from log jam area

Other Agency Reps. and Names: Nick Martinez - Exxon
Vince Mulligan - USGG, Dale Gardner - ADEC

Photos ☒ Y N Roll # 91AJW02 Frames 6-17

Video ☒ Tape # 91DWG01 Start _____ End _____
 Dale Gardner-ADEC

Sediment/Oil Samples (Y-N) Collection Number _____

Purpose of Trip * treatment

* Form designed primarily for cleanup inspection trips, but should be used for any field trips, i.e., to check on bird rookeries, seal haulouts, special habitat areas, etc.

Describe extent of remaining oil (any comments on expected completion of cleanup).

Work Modification submitted to change treatment to mechanical relocation & wash with the tide instead of ineffectual "tilling in place" June 29, 1991 - submitted.

Lots & Lots on manual removal needs to be done in boulder field. UITZ west of stream
Oil lense on east stream bank needs mechanical removal.

Comments: (Are work order procedures being followed?, etc.)

Exxon Rep mistakenly working off of MAXSAP oil sketch & not newer "Subsurface Oil Review of LA15-C," June 15, 1991. Two areas of HOR were mechanically tilled-in place; ^{approximately} a 25x25m patch in the vicinity of pits 14 & 15 on the west side of the stream in a Boulder/Cobble area and a 25x40m patch on the east side of the stream continuing up to the rocky headland. Heavy OR sediments were brought to the surface, predominantly along the top third of the areas - in the UITZ. A OP/HOR lense continues into the storm berm, but Exxon Rep would not allow removal or tilling of the area because it wasn't specified in the work order.

Manual removal of oiled organics in stream log jam was begun. Some SOR was removed near pit 5 (Maysap)

Very poor communication between state & Exxon Reps.

on this one. DEC & DFG monitors felt ostracized from the process. Exxon & USCG unaware of oil review until I pointed it out at the end of the day. I assumed they had it. Martinez refused to work central oiled area until
A: OPRESP he received word from Exxon Anch.
April 2, 1991

0750 — 1000

6/30/91
mechanical & manual

A horizontal number line with tick marks at 0, 50, and 100. The word "meters" is written below the tick mark at 50.

Boulder stable me
Rude
nutcraps Mod slope

 Log pile

NOTE: LOR ALERS BEACHFACE
is approximately
 75×280 m

Note: Location A extends both sides of stream
A- to the west, A₁ to east

DIT#	TO	on	very	Solar beam	code	zone
(14)	25	Y	(H) OR 0-10 N AP/10P 10-25		CP-PGS	1 TZ
(15)	20	Y	(H) OR 5-20 N		pg-pg-	1 TZ
(16)	(18)	N	σ	OTL ~ 20 cm TD		

revised 8/11

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT LA 15 SUBDIVISION C DATED June 29, 1991

MODIFICATION CLASS I CLASS II CLASS III

1. REASON FOR MODIFICATION - Current mechanical treatment slated to occur on June 30 calls only for mechanical tilling - in place of OP/HOR lense. Due to the large amount of oil present, this alone is inadequate & will release only a small portion of the oil. Mechanical relocation to the LMITZ followed by tilling on the rising tide has proven highly effective in moving a large portion of the oil to the surface where it can be contained & recovered by snare boom.

2. SUGGESTED ADJUSTMENT TO WORK PLAN - It is recommended that the areas of OP/HOR identified on the Subsurface Oil Review & MAYSAAP receive the above treatment. A series of 10-11 foot tides occur in the evenings, July 1-6 & treatment would be more effective during these higher tidal levels.

The oiled lense on the stream bank should be "pulled back" mechanically if manual pulling back is deemed too difficult.

3. TIMING ISSUES Due to the presence of an Anadromous Fish Stream, treatment should occur within the first 12 weeks of July. If this is logistically impossible due to scheduling,

4. OTHER the treatment period could most likely be extended because the salmon run returns later in the summer to this stream.

ADFG Jimiee Weseman 6-29-91

Jimiee Weseman

ADNR Leigh Carlson 6-29-91

ADFG

ADEC Dale W. Dardner 6-29-91

EXXON

USCG

CVC LAND MANAGER (If field rep is on scene)

these streams and especially LA-15.C because of location to Chenequa are extremely sensitive. Every effort should be made to clean this one as thoroughly as possible. High use Subsistence Stream, high use for berries in Area 1, and Very High use for hunting seals and deer - SW.

1

FAX FROM

M/V AURIGA TEAM 3

DATE: June 29 1991

TO: Kuwada Middleton Fink FAX# 349-1723

FROM: Aimee Weseman FAX# 9 011 872 150-0667

NUMBER OF PAGES (including cover page) ~~5~~ 6

COMMENTS: Hi everyone.

Well, the battle continues - tell you about it when I get back. Please submit this work order mod to TAG as soon as possible for their approval

You wouldn't believe how effective tilling with the tide is. Mechanical tilling in place without tide will occur sun June 30 so you'll miss it. Don't know when manual will happen. The Beulah crew will probably be on LAISC for quite a while so I may hop a plane to Anch in-between mechanical & manual on LAISC. I'll try to call on Monday sometime - morning ops fully

Take care

Aimee

Also enclosed - ADEC/ADNR survey

PAGE 1 OF 5

DATE 6 / 28 / 91

USCG/NOAA _____

ENERGY LEVEL: ☐ H ☐ M ☐ L

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

EST. OIL CATEGORY LENGTH: W_____m M_____m N_____m VL_____m NO_____m US_____m

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

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

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

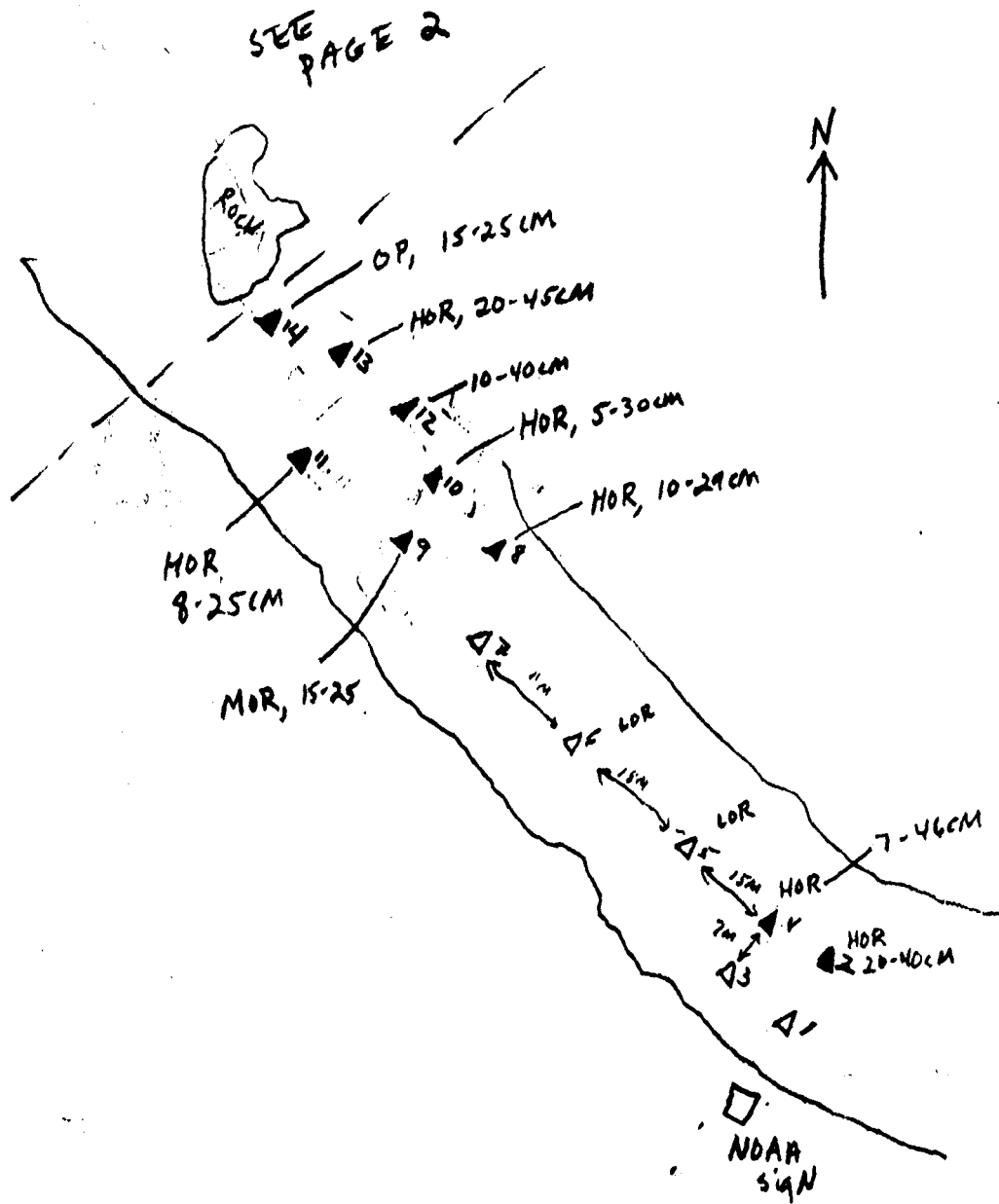
OG COMMENTS: Oiling at cobble/boulder transition beach is OPA
HOR And much closer to the surface. Within a 30
meter length there are a few big rocks which may need
hoisting. Around these rocks are cobbles - manageable to
access the OP.

data may be supplemental

DATE: 6-1-28 191

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

OG COMMENTS:



PAGE 1
LA-15 C
6-28-91
M. HALL
RENOVN crew

state survey
supplemental



PAGE 2
LA-15C
cobble/boulder
transition bench

EXXON Valdez Oilspill Cleanup

Anadromous Fish Stream Authorization

Date June 30, 1991

EXXON Authorized Representative Nick Martinez

Shoreline Segment LA15C

Anadromous Fish Stream Number(s) 226-40-16782

Approved Cleanup Techniques Manual Removal & Relocation
of oiled sediments and debris. Mechanical tilling
of oiled sediments Bio remediation I NIPCH &
CUSTOMBLEN

Approved Cleanup Period May 15-July 10, 1991

Alaska Department of Fish and Game

Aimee Weseman
Authorized Officer

Nick Martinez
Permittee's Signature

EXXON Valdez Oilspill Cleanup

ANNUALIZED FISH CATCH REPORT

Date 3-1-84

Initial Authorized Representative 11-1-1

Shoreline Segment 141C

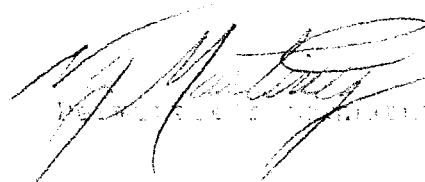
ANNUALIZED FISH CATCH REPORT

Approved Cleanup Techniques

Approved Cleanup Period

Alaska Department of Natural Resources

Authorized Officer



STATE OF ALASKA

DEPT. OF ENVIRONMENTAL CONSERVATION

OIL SPILL RESPONSE CENTER
4241 "B" ST., SUITE 304
ANCHORAGE AK 99503

KUWADA
WALTER J. HICKEL, GOVERNOR

(907) 563-1126

July 1, 1991

Andy Teal
Exxon
P.O. Box 240409
Anchorage, AK 99524-0409

Dear Mr. Teal:

The enclosed work order modification recommendation for LA015 C, is needed because the in-place mechanical tilling on the present work order is not going to be sufficient to release the OP/HOR oil contained in the beach sediments.

We request an expedited review so mechanical relocation to the LMITZ can occur within the July 1-6 tide period. Mechanical relocation followed by tilling on the rising tide and collecting the oil in snare boom has proven effective before. We recommend this modification so LA015 C can be signed off this year.

Representatives from ADF&G and ADNR agree that the work is needed. The area is very important to the people of Chenega and includes an anadromous fish stream.

Sincerely,


John Bauer

cc. Lt. Terry Murphy, USCG
Jim Frechione, ADNR
Mark Kuwada, ADF&G

FAX FROM

M/V AURIGA TEAM 3

DATE: 6-30-91TO: John Bauer FAX# 907-563-3541FROM: Dale Gardner FAX# 9 011 872 150-0667NUMBER OF PAGES(including cover page) 6COMMENTS: John,

Here is the work mod. for LA-15C. This is being
submitted after inspecting the site. The Exxon rep. does
not wish to follow our recommendations and broaden the scope
of the work order. Relocation and tilling with the flood
tide would definitely be the quickest and most effeciant way to
remove this OP/HOR oiling. Included with the work mod. is
the survey done by the state team on the Renown.

Also, when you fly out on Monday, can you bring a couple
of blank video tapes with you.

Thanks,
Dale

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT LA15 SUBDIVISION C DATED June 29, 1991MODIFICATION CLASS I CLASS II CLASS III

1. REASON FOR MODIFICATION - Current mechanical treatment slated to occur on June 30 calls only for mechanical tilling-in place of OP/HOR lense. Due to the large amount of oil present, this alone is inadequate & will release only a small portion of the oil. Mechanical relocation to the LMITZ followed by tilling on the rising tide has proven highly effective in moving a large portion of the oil to the surface where it can be contained & recovered by snare boom.

2. SUGGESTED ADJUSTMENT TO WORK PLAN. It is recommended that the areas of OP/HOR identified on the Subsurface Oil Review & MAYSAF receive the above treatment. A series of 10-11 foot tides occur in the evenings, July 1-6 & treatment would be more effective during these higher tidal levels.

The oiled lense on the stream bank should be "pulled back" mechanically if manual pulling back is deemed too difficult.

3. TIMING ISSUES. Due to the presence of an Anadromous Fish Stream, treatment should occur within the first 2 weeks of July. IF this is logistically impossible due to scheduling,

4. OTHER the treatment period could most likely be extended because the salmon run returns later in the summer to this stream.

ADFG Aimee Weerman 6-29-91

Aimee Weerman

ADNR Leigh Carlson 6-29-91

ADFG

ADEC Dale W. Davidson 6-29-91EXXON USCG CVC LAND MANAGER [Signature] (If field rep is on scene)

These streams and especially LA-15-C because of location to Chenequa are extremely sensitive. Every effort should be made to clean this one as thoroughly as possible. High use Subsistence Stream, High use for berries in area, and very high use for hunting seals and deer. -S.W.

MAYSAP SHORELINE OILING SUMMARY:

PAGE 1 OF 3

TEAM NO. Renown

SEGMENT LA-15

OG Dennis Harwood
EC Dianne Munson

BIO Leigh Carlson
LANDMANAGER Marsha Hall for DNR

SUBDIVISION C

DATE 6 128 / 97

EXXON _____

USCG/NOAA _____

TIME _____ : _____ to _____ : _____

TIDE LEVEL _____ ft. to _____ ft.

ENERGY LEVEL: ☐ H ☐ M ☐ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: _____ m

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

EST. OIL CATEGORY LENGTH: W_____m M_____m N_____m VL_____m NO_____m US_____m

[illegible]

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

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

PHOTO ROLL # MAYSAP-

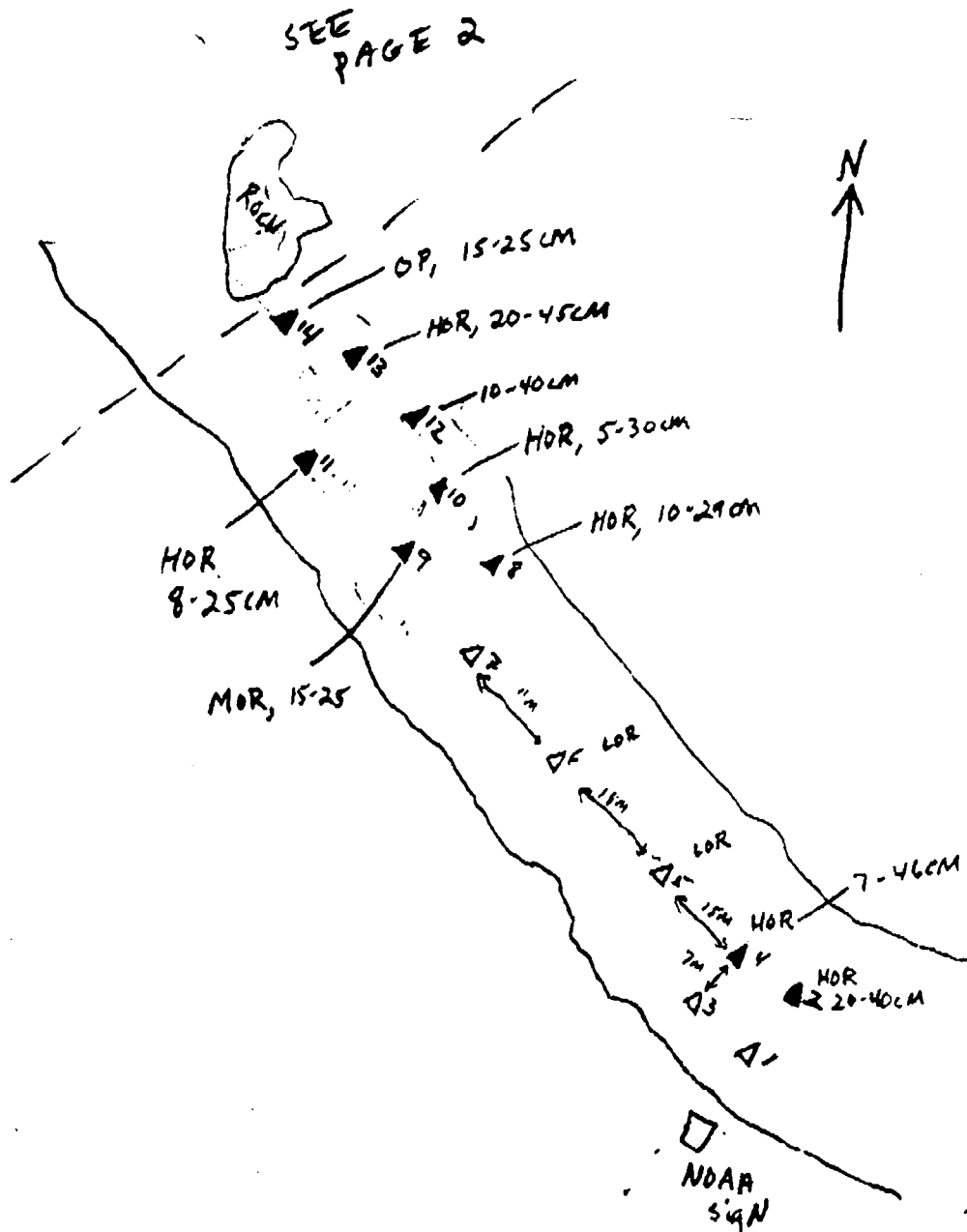
FRAMES

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	50				X				15-50	N	-	-		X			B.C/B.C.P.M	
2	40				X				0-20	N				X			B.C, B.C.P.S	
			X						20-40	N				X				
3	55				X				40-55	N				X			I.B/B.C.P.6	
4	46				X				0-7	N				X			C.B.P.G.S.	
			X						7-46	N				X				
5	35				X				5-35	N				X			B.C.P/C.B.P.G	
6	35				X				20-35	N				X			B.C.P/C.B.P.S	
7	31				X				20-31	N				X			B.C/C.B.P.S	

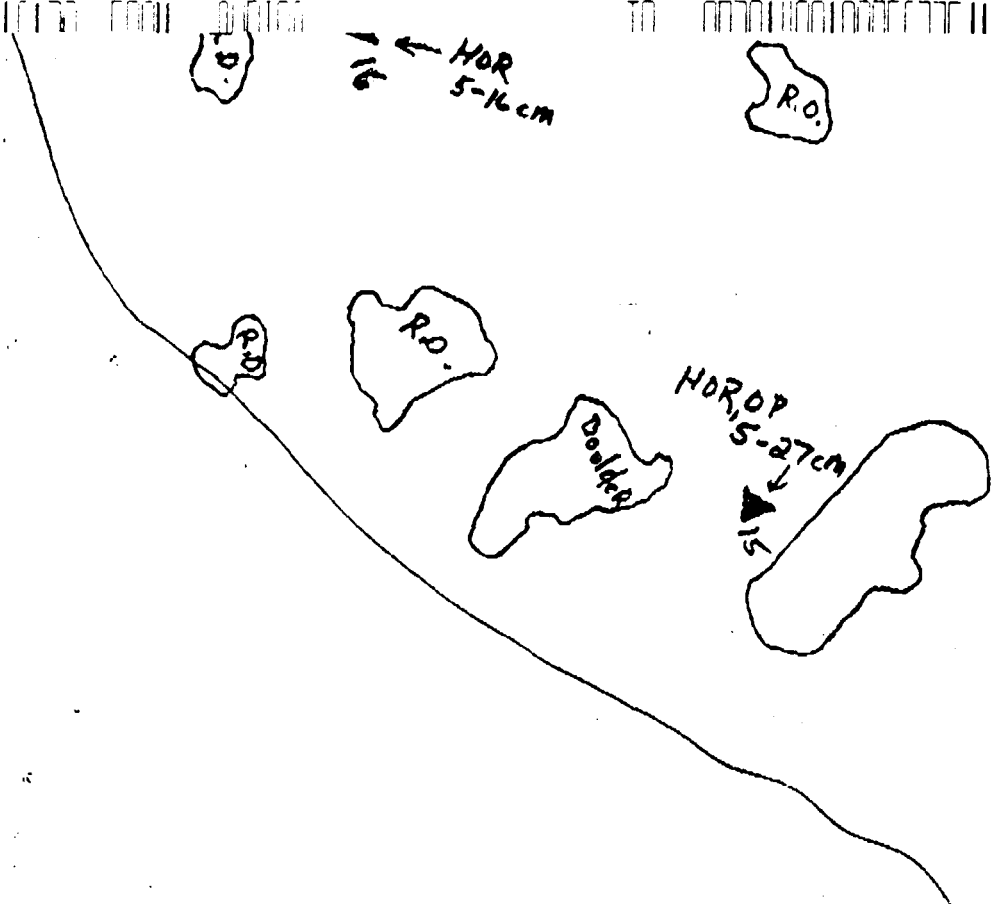
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS:

COMMENTS: Oiling at cobble/boulder transition beach is OPA
HOR and much closer to the surface. Within a 30
METER length there are a few big rocks which may need
hoisting. Around these rocks are cobbles - manageable to
access the OP.



PAGE 1
LA-15C
6-28-91
M. HALL
RENOVN crew



PAGE 2
LA-15C
cobble/boulder
transition bench

TOTAL P.06

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: 0800 17) HIGH TIDE HTS: _____ 23) OBSERVERS: Tom Crowe
- 6) STOP TIME: 1000 18) LOW TIDE TIMES: 1100 24) AGENCY: ADF&G
- 7) SEGMENT #: LA015C 19) LOW TIDE HTS: +1.5 25) PHOTOS TAKEN: Y N
- 8) K-UNIT: _____ 20) TIDE HT AT SURVEY: +5 to +.8 ROLL #: _____ FRAMES: _____
- 9) LAT: _____ Ebb Slack Flood Slack 26) VIDEO TAKEN: Y N
- 10) LONG: _____ 21) USCG QUAD: _____ TAPE # _____
- 11) ASC #: 226-40-16782 START: _____ STOP: _____
- 12) STREAM NAME: _____ 27) SAMPLES TAKEN? Y N
- 13) LOCATION: _____ 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	80	5		75	3-5 cm		HSOR/AP
SITE 2	35	15				0-25cm	HOR/OP
SITE 3	280	25				0-30cm	LOR
SITE 4	140	50				5-45cm	MOR
SITE 5	30	5				0-25cm	HOR

29) OVERALL OIL IMPACT:

33) ANADROMOUS FISH PRESENT: Y N

H = >6m band with ≥50% oil coverage

M = >6m band with ≤50% oil coverage or ≥3m to ≤6m with ≥10% oil coverage

L = <3m band with >10% oil coverage

VL = ≤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 _____

34) WILDLIFE OBSERVATION

Species	Number
cormorant	12
eagle (bald)	3
goldeneye	15
widgeon	15
sandpiper	6
sea otter	1

35) COMMENTS: This beach/stream area still contains significant amounts of oil-both surface & subsurface. A definite lense can be viewed within the steep-sided stream banks. Located 20-35cm beneath the surface the edges of it slough off into the stream. Heavily oiled organics precariously reside on a log jam within the stream in the 4279 swash zone. 15 bags removed from log jam >50% left. Heavy surface oiling in boulder field west of stream in site 1. Treatment should be comprehensive-Manual removal AP/HSOR sediments

over

36) PHOTOLOG

FRAME(S)

DESCRIPTION

Comments cont. . .

Mechanical tilling on an incoming tide of sites 2, 445. It may need several tillings.

Since oil extends to stream banks - Title 16 permit needed to treat. Stream bank reconstruction?
Adequate sorbent & snare boom should be employed to recover released oil & protect stream bed.

pit information

pit#	oil	zone
1	MOR 10-45cm	UITZ
2	MOR 5-45cm	MITZ
3	LOR 5-15cm	MITZ
4	HOR 0-25cm	MITZ
5	HOR 0-15cm	UITZ
6	TR	MITZ
7	MOR 20-40cm	MITZ
8	TR 18-20cm	MITZ
9	TR 25-30cm	UITZ
10	LOR 18-20	UITZ
11	OF 20-25	MITZ
12	LOR " "	MITZ
13	OF 25-30	
14	HOR 0-10cm	UITZ
15	AP/OP 10-25cm	UITZ
15	HOR 5-20cm	MITZ



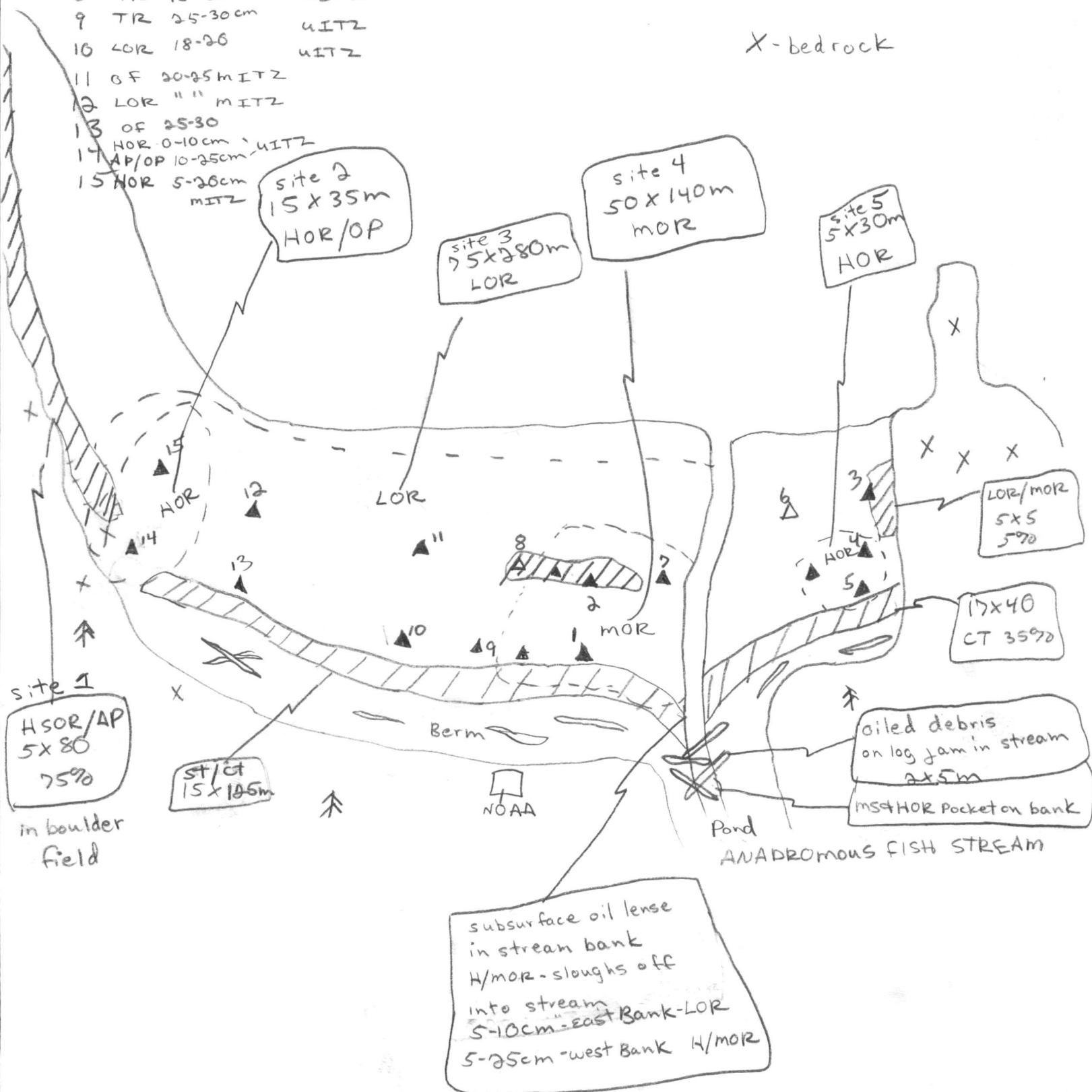
LA015C

ASC# 226-40-16782

5/3/91 MAXSAP

A. Weseman

X-bedrock



PAGE 1 OF 2

DATE 05 / 03 / 91

cont'd

PAGE 2 OF 2

DATE ____/____/91

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

cont'd. (MOR + HOR) was restricted to the area of the stream and also the extreme northern end of the open beach, tucked in before the first large bedrock outcrop. Each of these areas had a "centre" of HOR and one, around pit ①+, was OP beneath a cobble veneer, verging on AP consistency at its uppermost edge. Time prevented excavations beneath the log piles in the SUTZ.

LA-015-D

PWS

LA-015-C

05/03/91

OG. Map

D. I. Little

0750 — 1000

vertical cliff

Boulder stable
Rock outcrops Mod slope

A horizontal number line with tick marks at 0, 50, and 100. The word "meters" is written below the line.

 Bedrock

 Log pile

OIL IN SUBSURFACE

OIL IN
SUPPLY
15 X 35
HOR/OA

OIL IN SUBSEQUENCE
15 x 30 m HOR

NOTE: LOR ALKES BEACHFACE
is approximately
 75×280 m

take b, c, p.

5 x 80 CT →
75% SORM
occasional AP

$< 10\%$ ST/CT
between E+F

F15 x 100 m
5% ST
occasional
spots of CV
in crevices

D
2% 5x50
ST

stnd. → LA-015-E

(B) (LOR^{OR} - MBR)
5 x 5 m
5%

Ч р Ож

A1 $17 \times 40 \text{ m}$
35% CT

subsurface at a stream bank $20m \times 35 \times 5m$ and surface oiled weed and MS $2 \times 5 \times 10\%$

15 bags PU

ANADROWOUS
STREAM

Note: Location A extends both sides of stream
A- to west, A₁ to east

PIT#	TD	OR	clean below	shreen	seeds	w/t	zone	
①	45	Y HOR 10-45	N	R	PC-Pg	40	UITZ	
②	45	Y HOR 5-45	N	B/R	CP-Pgs	30	MITZ	
③	15	Y 5-15	LOR		CP-Pgs	5	MITZ	
④	25	Y 0-25	HOR		CP-PCg	20	MITZ	
⑤	10	Y 0-15	HOR	B/R	CBP-gp	5	UITZ	
⑥	30	TR 10-20	Y	—	CP-Pg	20	MITZ	
⑦	40	Y 20-40	HOR	N	R/B	PC-SPg	30	MITZ
⑧	30	TR 20	Y	R	CP-PC	20	MITZ	
⑨	55	Y 30	TR	Y	N	PC-P	—	UITZ
⑩	35	Y LOR	TR	Y	R	PC-PC	30	UITZ
⑪	30	Y OR	TR	Y	R	PC-CP	10	MITZ
⑫	35	Y LOR	TR	Y	R	PC-CP	20	MITZ
⑬	40	Y OR	TR	N	—	CPg-Pg	—	UITZ

DIT#	TO	oil	below lean	code	zone
(14)	25	Y (H) OR 8-10 N AP/1P 10-25		CP-PGS	ITZ
(15)	20	Y (H) OR 5-20 N		pg-pg-	ITZ
(16)	18	N O OIL ~ 20 CM TD			

revised 5/11
25 revised 5/11

LA-015-D

PWS



LA-015-C

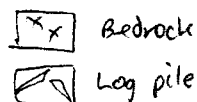
05/03/91

OG. Map

D.I. Little

0750 — 1000

0 50 100
METERS



Boulder rubble
Rock
outcrops Mod slope

5 x 90
1% CV-AP
in crevices

rock b. c.p.

5 x 80 CT
75% SOR(H)
occasional AP

15 x 100 m
5% ST
occasional
spots of CV
in crevices of pebbles

cobble pebble

2% 5 x 60
ST

stump → LA-015-E

NO OIL

LOE-MOR
5 x 5 m
5%

pump out

17 x 40 m
35% CT

subsurface oil in stream
bank 20 cm - 35 x 15 m
MOR-HOR
and surface oiled weed
and MS 2 x 5 10%

sloughing
into
Stream

PIT# TO OIL clean below stream sed. w/t zone

PIT#	TO	OIL	clean below	stream	sed.	w/t	zone
①	45	Y MOR 10-45	N	R	PC-Pg 40	UITZ	
②	45	Y MOR 5-45	N	B/R	CP-Pgs 30	MITZ	
③	15	Y 5-15 MOR	N	B/R	C-gs 5	MITZ	
④	25	Y 0-25 MOR	N	B/R	CP-PCg 20	MITZ	
⑤	10	Y 0-15 MOR	N	B/R	CBP-gp 5	UITZ	
⑥	30	TR	Y	—	CP-Pg 20	MITZ	
⑦	40	Y MOR 20-40	N	R/B	PC-SPg 30	MITZ	
⑧	30	TR	Y	R	CP-PC 20	MITZ	on org. slime
⑨	55	Y TR	Y	N	PC-P	UITZ	
⑩	35	Y MOR	Y	R	PC-PC 30	UITZ	
⑪	30	Y OF	Y	R	PC-CP 10	MITZ	

ANADROMOUS
STREAM

Note: Location A extends both sides of stream
A to to west, A₁ to east

PIT#	TO	oil	below clean	sed.	w/t	zone
⑪	25	Y (H) OR 0-10 AP/OP 10-25	N	—	CP-PCgs 20	UITZ
⑫	20	Y (H) OR 5-20	N	Pg	—	MITZ

⑫ 35 Y MOR N R PC-CP 20 MITZ

⑬ 40 Y OF MOR N CPg-Pg — MITZ

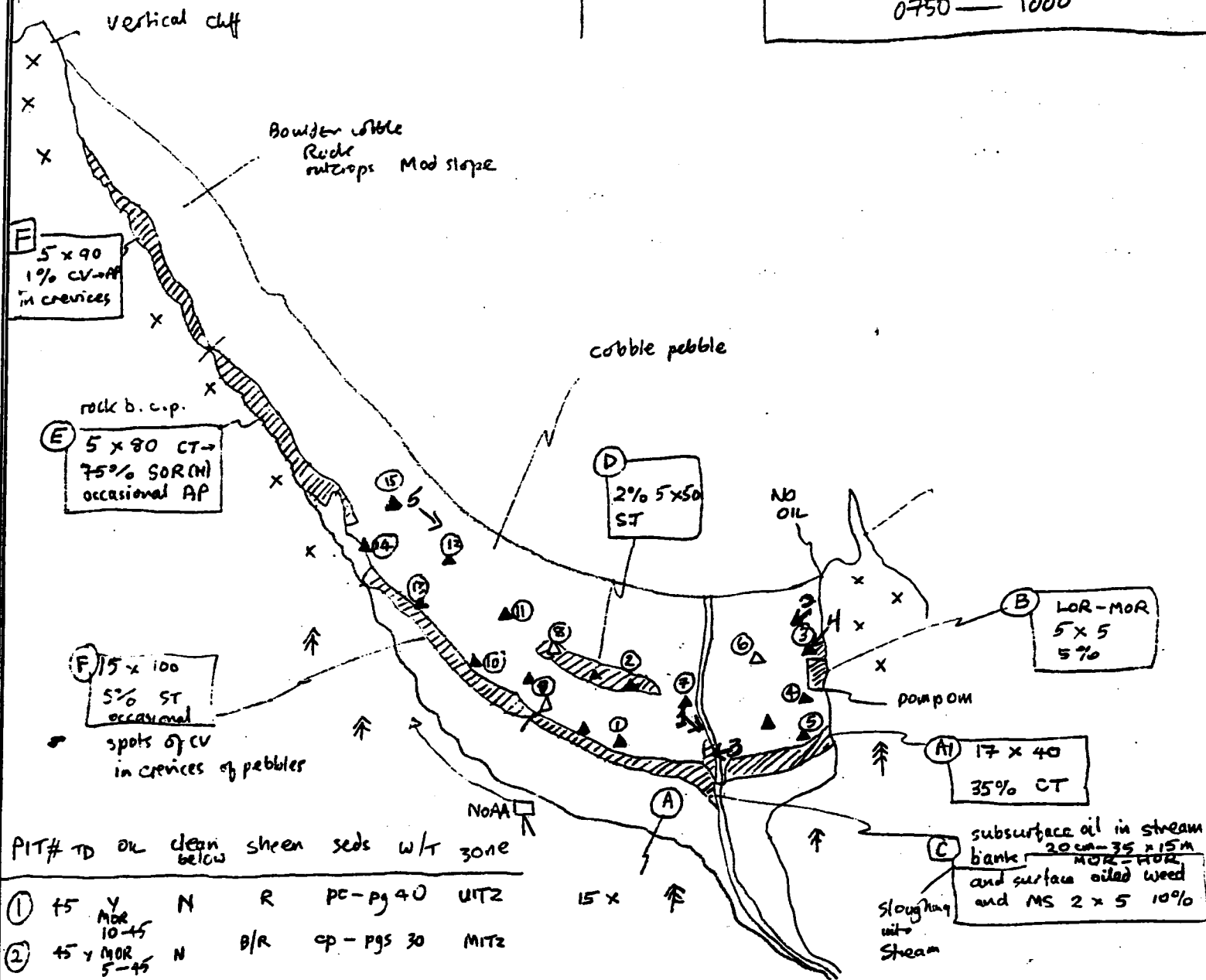
Photo Locations 6-06

#1-5

PWS



LA-015-C 05/03/91
OG. Map D.I. Little
0750 — 1000



PIT# TD OL clean below sheen seeds w/t zone

①	15	Y	N	R	PC-pg	40	UITZ
		MOR					
		10-45					
②	45	Y	N	B/R	CP-PGS	30	MITZ
		MOR					
		5-45					
③	15	Y	N	B/R	C-gs	5	MITZ
		5-15 LOR					
④	25	Y	N	B/R	CP-PCg	20	MITZ
		0-25 MOR					
⑤	20	Y	N	B/R	CBP-gp	5	UITZ
		0-15 MOR					
⑥	30	TR	Y	—	CP-pg	20	MITZ
⑦	40	Y	N	R/B	PC-SPg	30	MITZ
		MOR					
		20-40					
⑧	30	TR	Y	R	CP-PC	20	MITZ
							on org. slime
⑨	55	Y	Y	N	PC-P	—	UITZ
⑩	35	Y	Y	R	PC-PC	30	UITZ
		LOR					
⑪	30	Y	Y	R	PC-CP	10	MITZ
		OF					

ANADROMOUS STREAM

Location A extends both sides of stream

⑫ 25 Y (H) OR 0-10 N — CP-PCGS UITZ
AP/OP 10-25
⑬ 20 Y (H) OR 5-20 N pg MITZ

⑭ 25 Y LOR N R PC-CP 20 MITZ

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6

DATE 5/3/91

SEGMENT # LA-015

TIDAL HEIGHT(Range) +5 to +3/4 ft.

SUBDIVISION C

BIOLOGIST T.R. Schroeder

SEA STATE 1-2 foot chop

WIND SPEED/DIRECTION NNE 10-15

PHOTOGRAPHS: ROLL #

FRAME #

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

Only biological community on this beach is at the southern end along the rocky point. Eucos and rock algae are thick and mussels and barnacles are present. Mussel bed extends out into large cable rock beach about 5 meters. Littorine snails and egg masses were present but not numerous.

95% of beach is basically sterile from through the MITZ to LITZ. High energy beach is emphasized by rounded, smooth cable rocks.

Any recommendations for treatment should protect that southern rock area as this is the greatest potential for repopulating this beach area. No significant biological impact will result from any form of treatment on the remainder of beach.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1 (bald)	3	
Seabirds	1 Cormorant	12	
Waterfowl	2 Goldeneye	22	
Gulls/kittiwakes	2 Kittiwake	20	
Shorebirds	1 sandpiper	6	
Corvids	1 Steller jay	1	
Other Birds	1 ?		

LAND MAMMALS

MARINE MAMMALS

OBSERVED

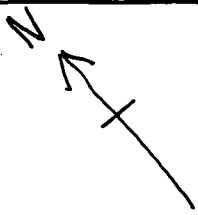
SPECIES

OBSERVED

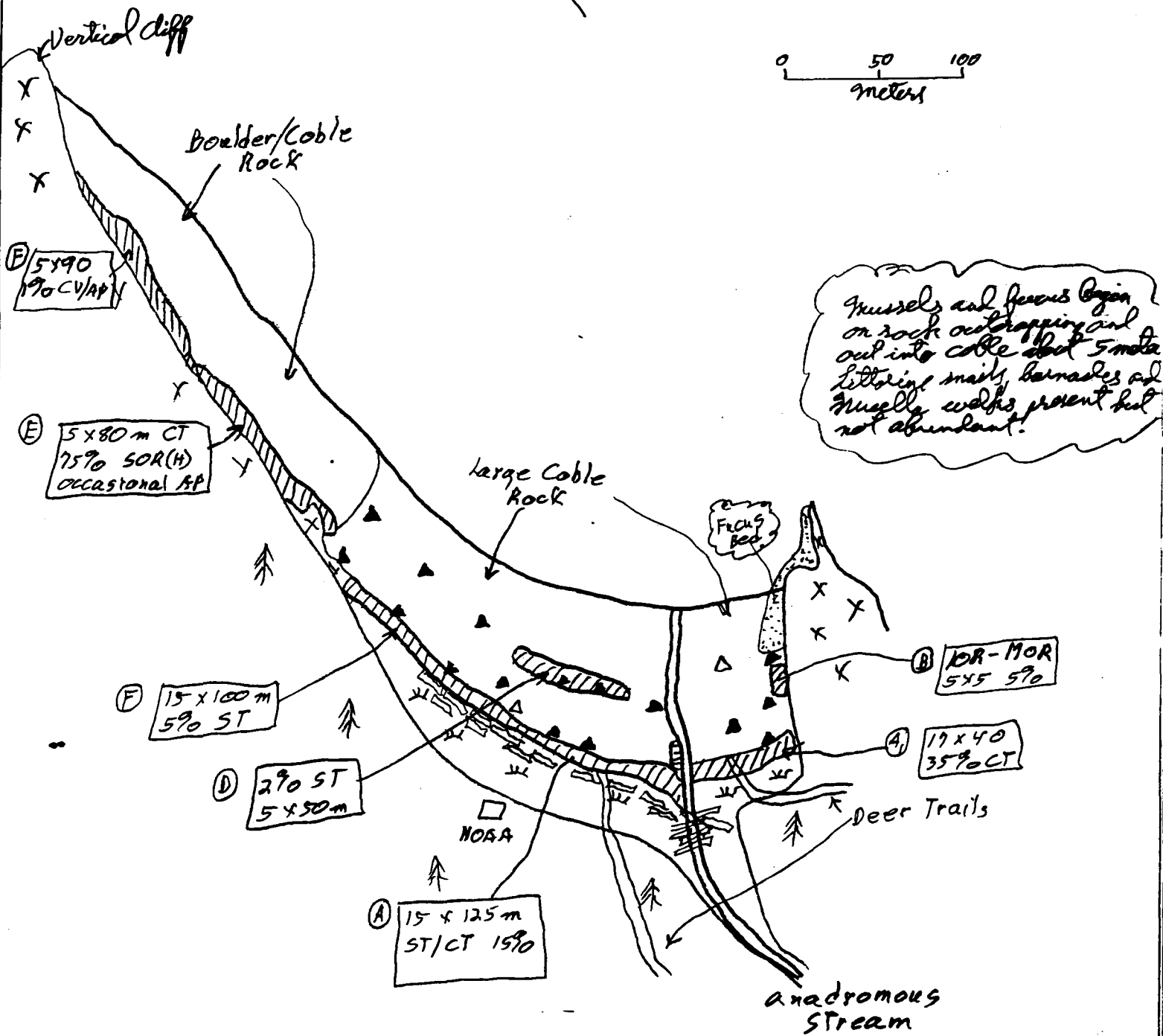
Sea Otters	1	100% + 100% seen	
Pinnipeds(specify)			
Whales(specify)			

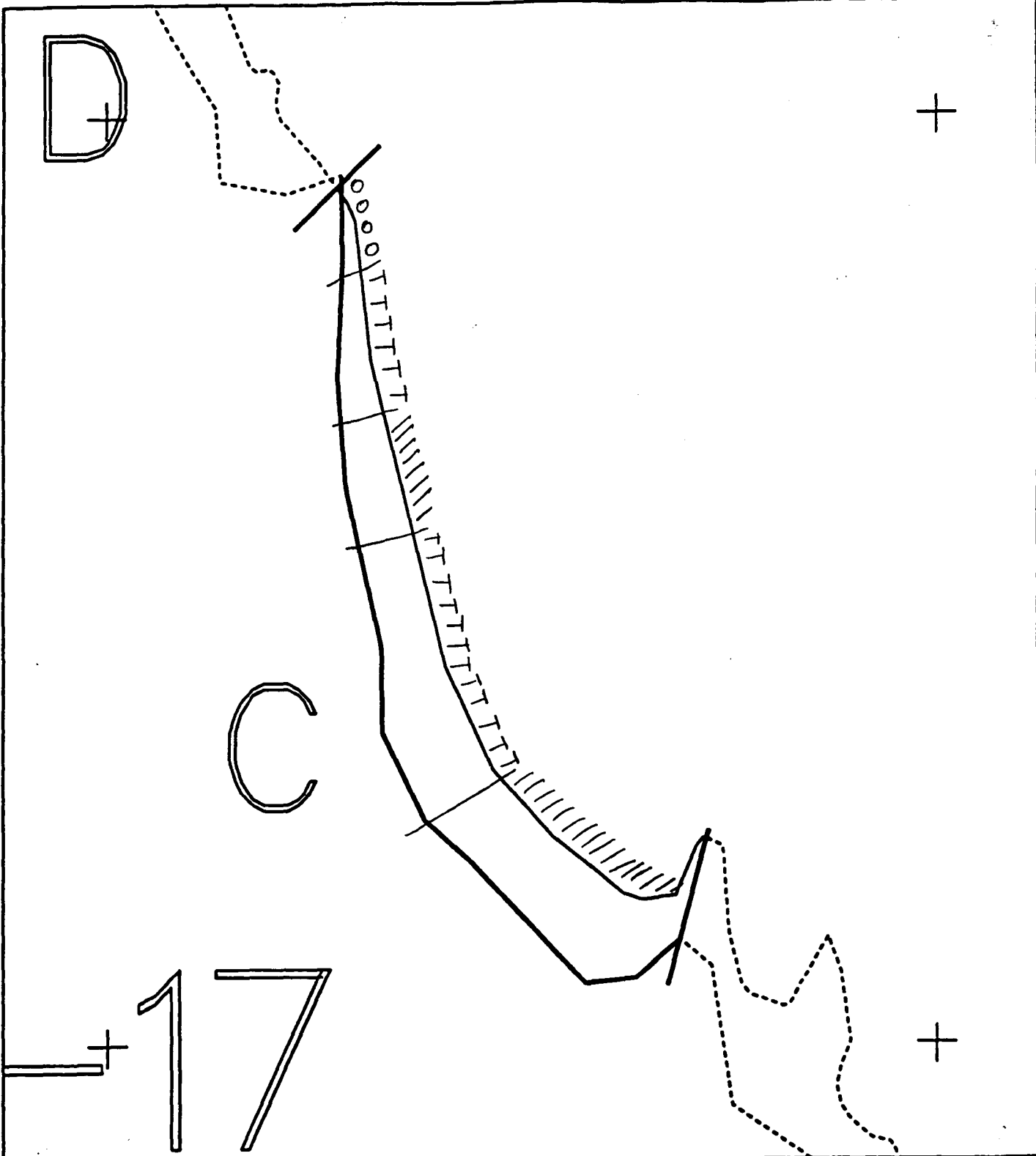
Shoreline subdivision map showing important biological features attached.

LA-015-C 5/3/91
 Bio. Map T.R. Schroeder
 0750-1000



0 50 100
 meters





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

LA015 C
 ADEC Subsegment Length: 715m
 METERS

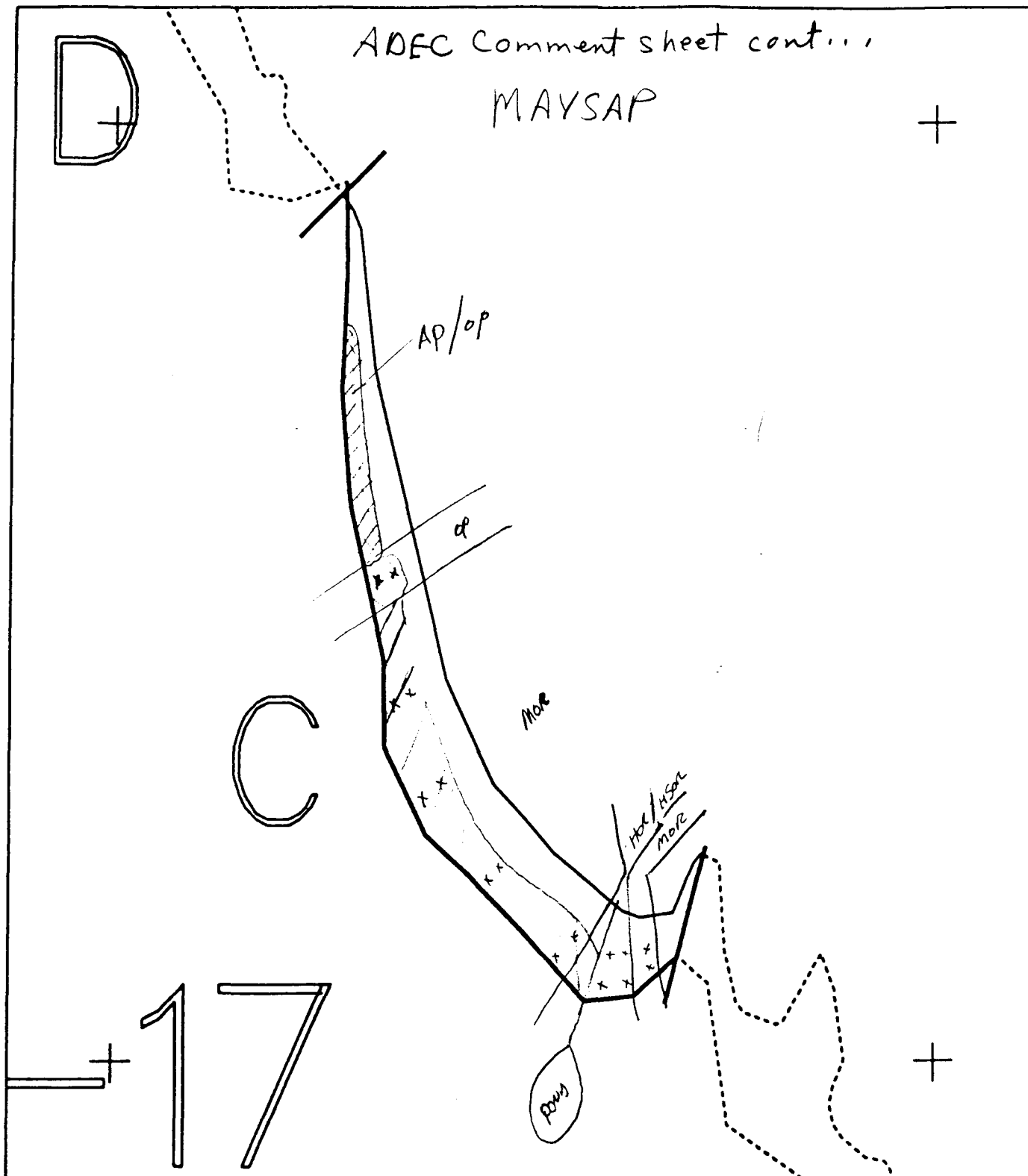
0 100 200
 AK State Plane Zone 4
 plc015c



Subdivision Field Map
 Map Key: PWSLA015C
 Name: DAVID LITTLE
 Date: 05/03/91
 Date Entered:

ADEC Comment sheet cont...

MAYSAP

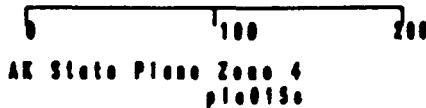


XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

LA015 C

ADEC Subsegment Length: 715m

METERS



Subdivision Field Map

Map Key: PWSLA015C

Name: Tom Crowe

Date: 5/3/91

Date Entered:

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 6 SEGMENT LA 15 SUBDIVISION C DATE 5/3/91

ADEC/ADFTG

NAME TOM CROWE

SIGNATURE

[Signature]

☐ NTR ☒ TREATMENT RECOMMENDED

ANADROMOUS STREAM / SUBSURFACE USE AREA

MOST EVERY PIT DUG IN THIS BEACH AREA REVEALED SOME DEGREE OF OILING. THE ANADROMOUS STREAM HAD SIGNIFICANT OILING ADJACENT TO THE STREAM ITSELF AND HEAVILY OILED DEBRIS ON BOTH BANKS IN THE MITZ. THE MITZ ON BOTH SIDES PITS REVEALED MOR DEPOSITS. ^{STREAM GRAVEL IS NOT FIT FOR SPAWNING} LACK OF MARINE LIFE SUGGESTS THAT NOT MUCH CAN BE MORE INTRUSIVE THAN TO LEAVE THIS BEACH HEAVILY OILED. THE BOULDER AREA NORTH OF THE BEACH UNWORKED LAST YEAR CONTAINS LARGE AMOUNTS OF OP AND AP IN THE MID AND UPPER ITZ. PIT #15 AND #4 ARE PRIME EXAMPLES. MECHANICAL TILLING AND WASHING IS SUGGESTED FOR BOTH THE STREAM AREA AND NORTH BEACH BOULDER AREAS.

EXXON

NAME Scott A. Nauman

SIGNATURE

[Signature]

☒ NTR Although subsurface residues are still present in most of the pits, the concentrations have been reduced significantly as a result of last year's work. The LOR/MOR concentrations due not warrant further mechanical intrusion. The higher subsurface concentrations away from the stream are beyond the practical limits of tilling due to bedrock and boulders and should be left alone. Surface stain and coat will weather naturally over the summer as it did last summer. Areas of AP/SOR are in hard to access boulder fields that preclude safe treatment. Observed 3 eagles, 100+ other birds on beach. This beach be left to them.

LANDMANAGER

NAME

OF

SIGNATURE

☐ NTR

USCG/NOAA

NAME CWO SPURR / Rebecca Hoff

SIGNATURE

[Signature]

☐ NTR

This segment is problematic and certainly contains the most oil of those we have surveyed this year on team 6. The upper portion of the stream bank contains medium to heavy subsurface oil (Area C) In littoral area (E) has heavy surface oil lodged between large boulders back in the upper intertidal. Both areas will be difficult to treat without extensive excavation, and treatments especially near the stream would be intrusive. A careful evaluation of the trade-offs and potential to be gained from further treatment at this site needs to be made.

ADF&G MULTI ASSESSMENT DATA FORM (1992-A)

ANAD-fin

ASC#: 226-40-16782DATE: 5/19/92RECORDER: WesemanSEGMENT#: La015 SUB#: CTIME: 1305 - 1405OBSERVERS: Fink, KuwadaLOCATION: NE LaTouche I PWSWAVE EXPOSURE: (H) M LAGENCIES: ADF&GPHOTOS ? : (Y) N ROLL#: P92MF001VFRAMES: #12413OIL W/I 50M OF STREAM ? : (Y) NVIDEOS ? : Y (N) TAPE#:

METER#:

OIL IN STREAM ? : Y (N)SAMPLES ? : (Y) N ID#: 092AW002VANADROMOUS FISH ? : Y (N)SUBSTRATE %: BEDROCK ✓ BOULDER ✓ GRAVEL ✓ SAND ✓ COBBLE ✓ MUD/SILT ✓

SITE#	TYPE	L (m)	W (m)	DEPTH INT (cm)	%	THICK (cm)	OIL TYPE	SITE COMMENTS
A	surface	0.5	0.5	—	75	—	Hsor	Small patch of Hsor amongst gravel, in U1T2
B	surface	0.5	0.5	—	75		MP/Hsor	U1T2
C	subsurface	2	2	15-15	—	10-20	OP/Hsor	Small pocket, ~25 m west of stream into storm berm. Photos, 13414 taken of pit #7

COMMENTS: Little surface oiling within 50 m of stream. Hsor/op area identified in August, 1991 survey as area D is still present, but reduced in size. No attempt was made to delineate previously tilled areas outside of 50 m from stream. Some M/Hsor located in boulder areas on east and west sides of the segment. Lor previously observed in the west bank of stream (area C in 8/91) was not observed. Some stain remains on logjam in stream. Manual tilling to the depth of the subsurface oil in area C could be considered. However, due to the small area affected, treatment is not recommended.

SKETCH:

0 50 100
meters

LA015-C

ASC# 226-40-16782

5/19/92 1305-1405

M. Fink - ADF+G

Anad Fin

pit#	TD	Oil Int.	Clean below	sheen	sed	WT	ZONE
1	24 cm	None	-	N	GPS		"
2	20 cm	None	-	N	GPS		"
3	35 cm	25-30 cm MOR	Y	N	GPS		WIT2
4	30 cm	None	-	N	GPS		"
5	35 cm	trace	-	N	GPS		"
6	40 cm	none	-	N	GPS		"
C-7	25 cm	5-25 OP/HOR	N	N	GPS		"
C-8	30 cm	10-30 cm AP/MOR	Y	N	GPS		"
9	30 cm	15-20 cm MOR	Y	N	GPS		"
10	35 cm	none	-	N	GPS		"
C-11	25 cm	15-25 cm OP/MOR	N	N	GPS		"
12	25 cm	trace	-	N	GPS		"
13	25 cm	none	-	N	GPS		"

Survey focused on areas previously oiled w/ 50 m of the stream. Some SOR was noted in boulders to the east of the stream, and in boulders to the west of the stream.

Banks of stream were not oiled, or contained trace oiling.

Photos 12+13 taken of oiling at pit #7

[X] Boulders, bedrock

[#] log

NOAA

C. Subsurface
2m x 2m
HOR/OP
~25 m from stream

A 0.5 x 0.5 HSOR
75% coverage

B 0.5 x 0.5 m AP/HSOR
75% coverage

ADF&G MULTI ASSESSMENT DATA FORM (1992-A)

ANAD-fin

rec'd 5/19/92

C ok. ks.

ASC#: 226-40-16782

DATE: 5/19/92

RECORDER: Weseman

SEGMENT#: La015 SUB#: C

TIME: 1305 - 1405

OBSERVERS: Fink, Kuwada

LOCATION: NE LaTouche I PWS

WAVE EXPOSURE: (H) M L

AGENCIES: ADF&G

PHOTOS?: (Y) N ROLL#: P92MF001V

FRAMES: #1213

OIL W/I 50M OF STREAM?: (Y) N

VIDEOS?: Y (N) TAPE#:

METER#:

OIL IN STREAM?: Y (N)

SAMPLES?: (Y) N ID#: 092AW002V

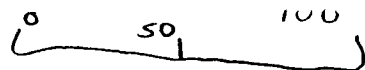
ANADROMOUS FISH?: Y (N)

SUBSTRATE %: BEDROCK ☒ BOULDER ☒ GRAVEL ☒ SAND ☒ COBBLE ☒ MUD/SILT ☐

SITE#	TYPE	L (m)	W (m)	DEPTH INT (cm)	%	THICK (cm)	OIL TYPE	SITE COMMENTS
A	surface	0.5	0.5	—	75	—	Hsor	Small patch of Hsor amongst gravel in U12
B	surface	0.5	0.5	—	75		HP/Hsor	U12
C	subsurface	2	2	5-15	—	10-20	CP/HOR	Small pocket, ~25 m west of stream into storm berm. Photos, 13 & 14 taken of pit #7

COMMENTS: Little surface oiling within 50 m of stream. HOR/OR area identified in August, 1991 survey as area D is still present, but reduced in size. No attempt was made to delineate previously tilled areas outside of 50 m from stream. Some M/Hsor located in boulder areas on east and west sides of the segment. LOR previously observed in the west bank of stream (area C in 8/91) was not observed. Some stain remains on logjam in stream. Manual tilling to the depth of the subsurface oil in area C could be considered. However, digging in the stream area is not recommended.

SKETCH:



meters

LA015-C

ASC# 226-40-16782

5/19/92 1305-1405

M. Fink - ADF+G

Anad Fin

pit #	TD	Oil Int.	Clean below	sheen	sed	WT	ZONE
1	24cm	None	-	N	OPX		"
2	20cm	None	-	N	GPS		"
3	35cm	25-30cm MOR	Y	N	GPS		WITZ
4	30cm	None	-	N	GPS		"
5	35cm	trace	-	N	GPS		"
6	40cm	none	-	N	GPS		"
C-7	25cm	5-25' OP/HOR	N	N	GPS		"
C-8	30cm	10-30cm H/MOR	Y	N	GPS		"
9	30cm	15-20cm MOR	Y	N	GPS		"
10	35cm	none	-	N	GPS		"
C-11	25cm	15-25cm OP/MOR	N	N	GPS		"
12	25cm	trace	-	N	GPS		"
13	25cm	none	-	N	GPS		"

Survey focused on areas previously oiled w/ 50 m of the stream. Some SOR was noted in boulders to the east of the stream, and in boulders to the west of the stream.

Banks of stream were not oiled, or contained trace oiling.

[X] Boulders, bedrock

[Hatched Box] log

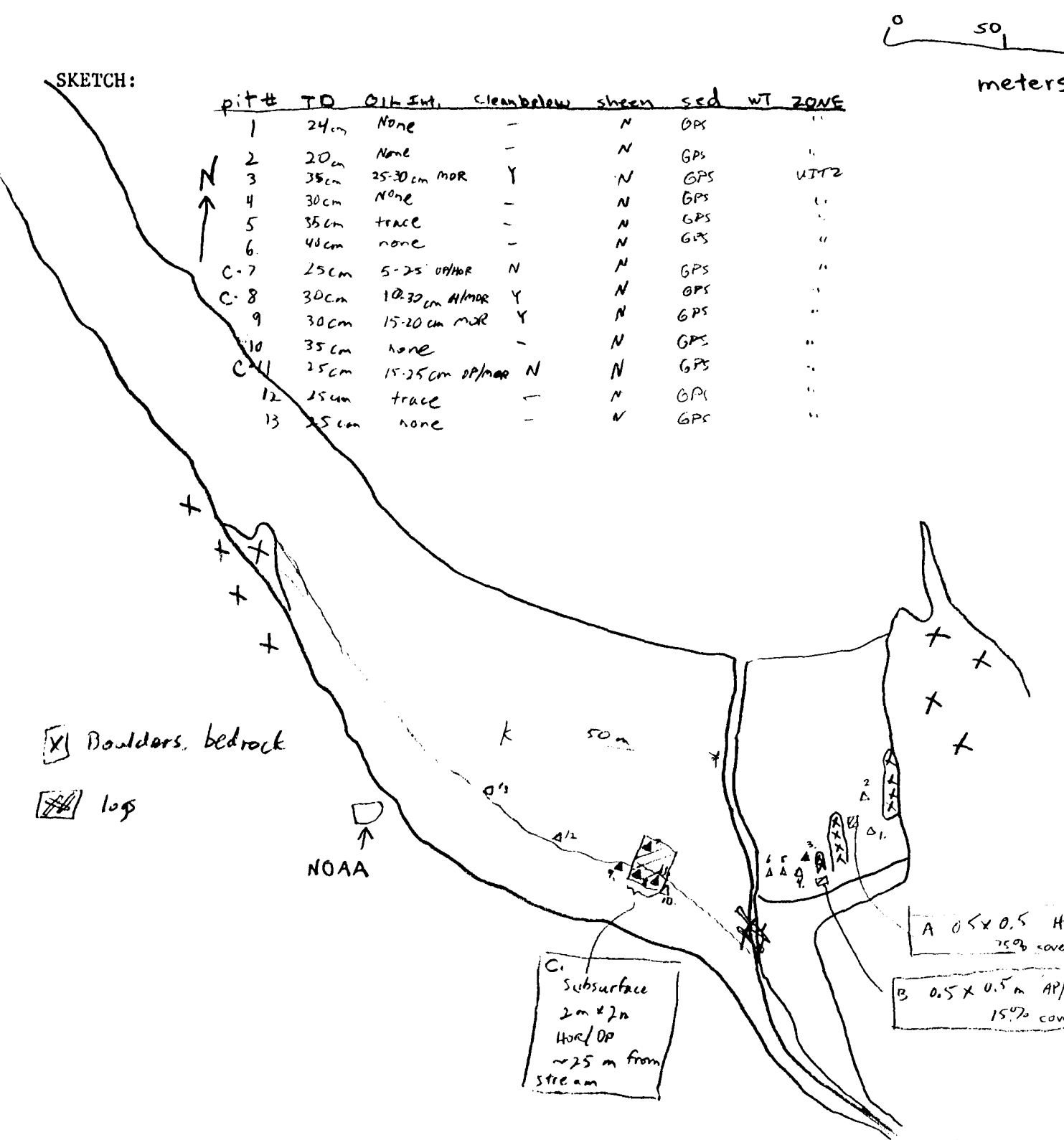
NOAA

C. Subsurface
2m x 2m
Hor/Op
~25 m from stream

A 0.5 x 0.5 m HSDR
75% coverage

B 0.5 x 0.5 m AP/HSDR
15% coverage

Photos 12+13 taken of oiling at pit #7



2264016782 segment: LA015 C location: LATOUCHE ISLAND, NORTHEAST SIDE
 H89: H SCAT 89: H DEC Fall Walk: H
 H90: H
 H91: H

05/19/92		ANADFIN		agency: HAB		WESEMAN		OIL w/i 50m: Y	OIL IN STREAM: N
record#	SITE	W x L (m) SITE TYPE	PERCENT OIL	THICKNESS & PENETR. (cm)	OIL TYPES, DEPTH INTERVAL(cm)	SITE SPECIFIC COMMENTS			
4051	01	PIT			NONE				
4052	02	PIT			NONE				
4053	03	PIT			MOR 25-30				
4054	04	PIT			NONE				
4055	05	PIT			TRACE				
4056	06	PIT			TRACE				
4059	09	PIT			MOR 15-20				
4060	10	PIT			NONE				
4062	12	PIT			TRACE				
4063	13	PIT			NONE				
4048	A	.5 x.5 SURFACE	75		HSOR	SMALL PATCH OF HSOR AMONGST GRAVEL IN UITZ.			

2264016782

LA015 C

LATOUCHE ISLAND, NORTHEAST SIDE

4049	B	.5 x.5 SURFACE	75		AP HSOR	UITZ
4050	C	2 x2 SUBSURF		10-20	OR HOR 5-15	SMALL POCKET ~25M WEST OF STREAM INTO STORM BERM. PHOTOS 13 AND 14 TAKEN OF PIT 7.
4057	C07	PIT			OP HOR 5-25	
4058	C08	PIT			HOR MOR 10-30	
4061	C11	PIT			OP MOR 15-25	

OG/HAB COMPARISON:

COMMENTS:

LITTLE SURFACE OILING WITHIN 50M OF THE STREAM. HOR/OP AREA IDENTIFIED IN AUGUST 1991 SURVEY AS AREA D IS STILL PRESENT, BUT REDUCED IN SIZE. NO ATTEMPT WAS MADE TO DELINEATE PREVIOUSLY TILLED AREAS OUTSIDE 50M RADIUS FROM THE STREAM. SOME M/HSOR LOCATED IN BOULDER AREAS ON EAST AND WEST SIDES OF THE SEGMENT. LOR PREVIOUSLY OBSERVED IN THE WEST BANK OF THE STREAM (AREA C IN 8/91) WAS NOT OBSERVED. SOME STAIN REMAINS ON LOG JAM IN STREAM. MANUAL TILLING TO THE DEPTH OF THE SUBSURFACE OIL IN AREA C COULD BE CONSIDERED. HOWEVER, DUE TO THE SIZE OF THE AREA AFFECTED, TREATMENT IS NOT RECOMMENDED.

2264016782

LA015 C

LATOUCHE ISLAND, NORTHEAST SIDE

STREAM#: 2264016782
PURPOSE: TREATMENT

SEGMENT#: LA015 C

LOCATION: LATOUCHE ISLAND, NORTHEAST SIDE

STREAM NAME:

DATE	OBSERVER OTHER REPS	WORK ORDER DATE	DEMOLIL. DATE	SURFACE OIL SUBSURFACE OIL	TREATMENTS	AMOUNT REMOVED	REMAINING OIL
06/30/91	AIMEE WESEMAN EXX MARTINEZ, USCG MULLIGAN, ADE	06/25/91		AP MS SOR CV CT ST OP HOR MOR LOR OF	MANUAL REMOVAL MANUAL RAKING BIOREMEDIATION MECHANICAL TILLING	12 SUPER S	WORK MODIFICATION SUBMITTED TO CHANGE TREATMENT TO MECHANICAL RELOCATION & WASH WITH THE TIDE INSTEAD OF INEFFECTUAL "TILLING IN PLACE" JUNE 29, 1991 - SUBMITTED. LOTS AND LOTS ON MANUAL REMOVAL NEEDS TO BE DONE IN BOULDER FIELD. UITZ WEST OF STREAM. OIL LENS ON EAST STREAM BANK NEEDS MECHANICAL REMOVAL.

COMMENTS:

EXXON REP MISTAKENLY WORKING OFF OF MAYSAP OIL SKETCH & NOT NEWER "SUBSURFACE OIL REVIEW OF LA15-C", JUNE 15, 1991. TWO AREAS OF 'HOR' WERE MECHANICALLY TILLED IN PLACE; AN APPROXIMATE 25 X 25M PATCH IN THE VICINITY OF PITS 14 & 15 ON THE WEST SIDE OF THE STREAM IN A BOULDER COBBLE AREA AND A 25 X 40M PATCH ON THE EAST SIDE OF THE STREAM CONTINUING UP TO THE ROCKY HEADLAND. HEAVY 'OR' SEDIMENTS WERE BROUGHT TO THE SURFACE, PREDOMINANTLY ALONG THE TOP THIRD OF THE AREAS IN THE UITZ. AN 'OP/HOR' LENS CONTINUES INTO THE STORM BERM, BUT EXXON REP WOULD NOT ALLOW REMOVAL OR TILLING OF THE AREA BECAUSE IT WASN'T SPECIFIED IN THE WORK ORDER. MANUAL REMOVAL OF OILED ORGANICS IN STREAM LOG JAM WAS BEGUN. SOME 'HSOR' WAS REMOVED NEAR PIT 5 (MAYSAP). VERY POOR COMMUNICATION BETWEEN STATE & EXXON REPS ON THIS ONE. DEC & ADF&G MONITORS FELT OSTRACISED FROM THE PROCESS. EXXON & USCG UNAWARE OF OIL REVIEW UNTIL I POINTED IT OUT AT THE END OF THE DAY. I ASSUMED THEY HAD IT. MARTINEZ REFUSED TO WORK CENTRAL OILED AREA UNTIL HE RECEIVED WORD FROM EXXON-ANCHORAGE.

STREAM#: 2264016782
PURPOSE: TREATMENT

SEGMENT#: LA015 C

LOCATION: LATOUCHE ISLAND, NORTHEAST SIDE

STREAM NAME:

DATE	OBSERVER OTHER REPS	WORK ORDER DATE	DEMOLIL. DATE	SURFACE OIL SUBSURFACE OIL	TREATMENTS	AMOUNT REMOVED	REMAINING OIL
07/01/91	AIMEE WESEMAN EXX MARTINEZ, USCG MULLIGAN, ADE	06/25/91	07/01/91	AP MS SOR CV CT ST OP HOR MOR LOR OF	MANUAL REMOVAL MANUAL RAKING MECHANICAL TILLING	0	LOTS OF WORK YET TO DO - RETILLING WITH THE TIDE, MECHANICAL PULLING BACK OF OIL LENS ON STREAM BANK & MANUAL REMOVAL OILED MATERIAL IN UITZ NORTH OF STREAM - 'AP'/TARMAT/'HSOR' TRAPPED IN BOULDER INTERSTICES. TOUCH UP WORK, COMPLETION OF REMOVAL OF OILED ORGANICS IN LOG JAM.

COMMENTS:

MECHANICAL TILLING PORTION OF WORK ORDER COMPLETE, NOT MANUAL. AREAS OF 'OP/HOR' ALONG TRANSECT LINES 4, 5, 6, 7, 8, & 9 WERE TILLED IN PLACE. OIL LENS NOT AS THICK AS PREVIOUS DAYS OIL. AREA RECEIVED TREATMENT IN 1990. THIN 'OP/HSOR' LENS, NEAR THE SURFACE, CONTINUES INTO STORM BERM. TILLED AREAS 50M LONG X 18M WIDE AND 10M LONG X 5M WIDE FROM EAST TO WEST. SOME MANUAL REMOVAL OF OILED LENS ON STREAM BANK WAS ACCOMPLISHED, BUT THE EFFORT WAS LARGELY FUTILE - MECHANICAL HELP NEEDED. MECHANICAL TILLING IN PLACE WITHOUT THE TIDE & AGITATION IS AN IRRESPONSIBLE TREATMENT. RELEASE OF OIL OCCURS WITH HIGHER TIDES & STORMS AFTER PROTECTIVE BOOMING IS REMOVED. VERY LITTLE, IF ANY OIL IS RECOVERED IMMEDIATELY AFTER TILLING, IF OIL IS LOCATED IN UITZ AND TIDES DO NOT COVER THE AREA.

STREAM#: 2264016782
PURPOSE: ASSESS TREATMENT

SEGMENT#: LA015 C

LOCATION: LATOUCHE ISLAND, NORTHEAST SIDE

STREAM NAME:

DATE	OBSERVER OTHER REPS	WORK ORDER DATE	DEMOBIL. DATE	SURFACE OIL SUBSURFACE OIL	TREATMENTS	AMOUNT REMOVED	REMAINING OIL
07/02/91	FINK KUWADA WESEMAN EXX MARTINEZ, USCG MULLIGAN	06/25/91	07/01/91	OP HOR MOR LOR			TILLED AREAS EAST AND WEST OF THE STREAM HAD NOT BEEN FLUSHED BY THE TIDE. EXPOSED 'HOR/OP' SEDIMENTS REMAIN. OIL LENS ALONG WEST EDGE OF STREAM BANK REMAINS. OIL LENS IN TILLED AREA EAST OF STREAM RUNS FURTHER UP INTO STORM BERM.

COMMENTS:

MARK, AIMEE, AND I TALKED WITH NICK MARTINEZ AND VINCE MULLIGAN ABOUT THE INABILITY TO COLLECT OIL FROM TILLED AREAS. TIDES DID NOT REACH UITZ AND BOOMS HAD BEEN REMOVED ON AT LEAST ONE OF THE TILLED AREAS. THEY MENTIONED THAT THE WORK ORDER DID NOT STATE TILLING WITH THE TIDE, OR RELOCATION OF LITZ. INTENT OF TAG IN WORK ORDER IS NOT EVIDENT TO THESE TWO MONITORS (SO THEY SAY). A WORK ORDER MODIFICATION HAS BEEN SUBMITTED BY AIMEE, REQUESTING MECHANICAL TILLING WITH THE INCOMING TIDE IN AREAS PREVIOUSLY TILLED. BOOMS SHOULD COLLECT ANY RELEASED OIL. ALSO MECHANICAL REMOVAL OF OILED SEDIMENTS ALONG NORTH END OF STREAM BANK WAS REQUESTED.

STREAM#: 2264016782

SEGMENT#: LA015 C

LOCATION: LATOUCHE ISLAND, NORTHEAST SIDE

STREAM NAME:

PURPOSE: TREATMENT (THIRD WORK ORDER)

DATE	OBSERVER OTHER REPS	WORK ORDER DATE	DEMOBIL. DATE	SURFACE OIL SUBSURFACE OIL	TREATMENTS	AMOUNT REMOVED	REMAINING OIL
07/11/91	FINK EXX BOYER COULTER, USCG COOP, ADEC PROFITA	07/09/91	07/11/91	AP MS SOR CV CT ST OP HOR MOR LOR OF	BIO/CUSTOMBLEN 75# MECHANICAL TILLING		2ND GO ROUND STILL DID NOT TILL WITH THE TIDE. AREA AROUND TRANSECT LINES 4, 5, 6 'HOR/OP' NOT RETILLED. SOME 'LOR' IN WEST STREAM BANK NEAR LOG JAM. 'AP/SOR' IN BOULDER FIELD WEST END OF SUBDIVISION. SOME TOUCH UP WORK REMOVING OILED ORGANICS IN LOG JAM AS REPORTED 7/1.

COMMENTS:

WORK ORDER DID NOT ADDRESS MECHANICAL TILLING WITH THE TIDE. CONTACT WITH BOTH DEC AND F&G DID NOT PROVIDE THE PUSH NEEDED TO GET EXXON MONITOR TO ADJUST WO. AREA AT FAR WEST END PREVIOUSLY TILLED (APPROX 30M X 13M) WAS BIO'ED AND RETILLED. BOOM WAS STRUNG OUT HOPING TO CONTAIN ON EVENINGS HIGH TIDE, 1:40 AM. UPPER 1/3 OF AREA AROUND TRANSECTS 0 & 1 WAS MECHANICALLY RELOCATED TO LOWER UITZ. PREVIOUSLY TILLED AREA OF 'OP/HOR' WAS EXPANDED LANDWARD APPROX 2M INTO TOE OF STORM BERM, AND APPROX 8M TO THE WEST (FOLLOWING 'OP' LENS) FOR A TOTAL RELOCATED AREA OF APPROX 17M X 6M AT 40-45CM DEEP. FOUR TO SIX BUCKET LOADS OF SEDIMENT FROM WEST STREAM BANK AT LOG JAM WAS RELOCATED NW TO UITZ. 'LOR' MIXED WITH ORGANICS WAS RELOCATED (APPROX 2M X 5M). 'MOR/HOR' AT LOCATION C (OG MAP) NOT FOUND. BOOM WAS STRUNG OUT ALONG THE 3 AREAS OF RELOCATION AND TILLING. EXXON AND USCG REPS WERE COOPERATIVE. EXXON REP STATED THAT HE WOULD PICKUP BOOM AT THE END OF THE "SOVEREIGNS" TOUR OF DUTY (FRIDAY & SATURDAY). STATE MONITORS HAD HOPED TILLING WITH THE TIDE AND MANUAL REMOVAL WOULD HAVE BEEN ADDRESSED ON WORK ORDER.

STREAM#: 2264016782 SEGMENT#: LA015 C LOCATION: LATOUCHE ISLAND, NORTHEAST SIDE STREAM NAME:
PURPOSE: CLEANUP MONITORING - MECHANICAL TILLING

DATE	OBSERVER OTHER REPS	WORK ORDER DATE	DEMOBIL. DATE	SURFACE OIL SUBSURFACE OIL	TREATMENTS	AMOUNT REMOVED	REMAINING OIL
07/13/91	HILL EXX BOYER KASTIMPALIS, USCG SCHULTZ, OG MACDONALD	05/14/91	07/15/91	MS SOR CV CT ST OP HOR MOR LOR OF	MECHANICAL TILLING		OIL OF CONCERN TO THE STREAM STILL REMAINS TO BE DEALT WITH ON THE EAST SIDE OF THE STREAM (THE AREA TILLED ON 7/11/91) AND THE LIGHTLY OILED AREA ON THE WEST SIDE JUST BELOW THE LOG PILE - OILED COBBLE GRAVEL IS ROLLING INTO THE STREAM CHANNEL. SHEEN COMES OFF THE BEACH AT EACH TIDE- FURTHER TILLING W/TIDE WOULD CONTINUE TO RELEASE GLOBULES OF OIL. THE LARGER TILLED AREA TO THE WEST OF THE

COMMENTS:

REQUESTED THAT THE AREA ON THE EAST SIDE OF THE STREAM BE MECHANICALLY TILLED AGAIN BEFORE THE BACKHOES WERE LOADED ON THE LCM. THIS REQUEST WAS PARTIALLY MET BY EXXON RANDY BOYER. AS, A 22M X 6M AND A 15M X 6M IN THE UMITZ AND UITZ WERE TILLED. BOYER WOULD NOT EVEN CONSIDER SPECULATING ON RAKING THE OIL IN THE LMITZ WHICH HAD BEEN TILLED 2 DAYS PREVIOUS. THE AFTERNOON HI TIDE DID NOT REACH THE AREA TILLED TODAY. REPEATED TILLING WOULD BE IN ORDER - TILLING WITH TIDE. AS, THE RECENT TILLING (7/11/91) DID NOT OCCUR WITH TIDE - THE BOOM WAS RELATIVELY CLEAN WHEN REMOVED TODAY.

STREAM#: 2264016782 SEGMENT#: LA015 C LOCATION: LATOUCHE ISLAND, NORTHEAST SIDE STREAM NAME:
PURPOSE: CLEANUP MONITORING - MANUAL REMOVAL

DATE	OBSERVER OTHER REPS	WORK ORDER DATE	DEMOBIL. DATE	SURFACE OIL SUBSURFACE OIL	TREATMENTS	AMOUNT REMOVED	REMAINING OIL
07/13/91	HILL ADEC MONTESANO, EXX KATSIMPALIS,	05/14/91	07/15/91	MS SOR CV CT ST FL OP HOR MOR LOR OF	MANUAL REMOVAL	1355 LBS	BOULDER/COBBLE WEST END - MS, OP, HOR-LOR REMAINING IN TOUGH TO GET AT LOCATIONS (BENEATH LARGE BOULDERS, ETC). 'MS' Oozing FROM PERIPHERY OF WORKED AREAS INTO AREA WHERE HEAVILY OILED SEDIMENT & 'MS' REMOVED. 'HSOR-SOR' REMAINS AT SITES: EAST OF ANAD CREEK, ON BANK OF CREEK AND ON THE 3 OILED AREAS TO WEST OF CREEK (COBBLE PORTION OF BEACH). TB, ST, CT IN LOG JAM.

COMMENTS:

CREW OF 6 MANUALLY REMOVED OP, HOR-LOR, MS FROM AMONGST COBBLES & BOULDERS AT WEST END OF SEGMENT. THE CREW WORKS STEADY, THIS IS A GOOD CREW. THE EXXON REP IS THE BEST I'VE WORKED WITH. I THINK THIS GUY GENUINELY WANTS TO PICK UP OIL. AREA SHOULD BE REASSESSED IN THE FUTURE.

STREAM#: 2264016782 SEGMENT#: LA015 C LOCATION: LATOUCHE ISLAND, NORTHEAST SIDE STREAM NAME:
PURPOSE: BIOREMEDIATION MONITORING (CUSTOMBLEN)

DATE	OBSERVER OTHER REPS	WORK ORDER DATE	DEMObIL. DATE	SURFACE OIL SUBSURFACE OIL	TREATMENTS	AMOUNT REMOVED	REMAINING OIL
07/14/91	HILL ADEC MONTESANO, EXX KATSIMPALIS,	05/14/91	07/15/91	MS SOR CV CT ST FL OP HOR MOR LOR OF	MANUAL REMOVAL MANUAL RAKING BIO/CUSTOMBLEN	11 SUPER S	

COMMENTS:

APPROX 200 LBS OF CUSTOMBLEN APPLIED TO OILED/MECHANICALLY TILLED AREA ON EAST SIDE OF ANAD STREAM. APPROX 80 LBS OF CUSTOMBLEN APPLIED TO OILED MECHANICALLY TILLED AREA ON WEST BANK OF CREEK AT LOG JAM/UITZ. OG REPORTS 320 LBS OF CUSTOMBLEN CUMULATIVE FOR THESE AREA - I OBSERVED ONLY 200 AT EAST SIDE SITE. NO INIPOL APPLIED WITHIN 100M OF STREAM. 4 SACKS/APPROX 60 PDS OF OILED SEDIMENT REMOVED FROM EAST SIDE OF STREAM PRIOR TO CUSTOMBLEN APPLICATION. APPROX 30 MINUTES OF MANUAL TILLING AND SPREADING OF 'MOR/LOR' PRIOR TO CUSTOMBLEN APPLICATION.

STREAM#: 2264016782 SEGMENT#: LA015 C LOCATION: LATOUCHE ISLAND, NORTHEAST SIDE STREAM NAME:
PURPOSE: BIOREMEDIATION MONITORING

DATE	OBSERVER OTHER REPS	WORK ORDER DATE	DEMObIL. DATE	SURFACE OIL SUBSURFACE OIL	TREATMENTS	AMOUNT REMOVED	REMAINING OIL
07/15/91	HILL ADEC MONTESANO, EXX KATSIMPALIS,	05/14/91	07/15/91	MS SOR CV CT ST FL OP HOR MOR LOR OF	BIOREMEDIATION		ADVISE FURTHER ASSESSMENT.

COMMENTS:

20 SUPER SACKS STORED ABOVE TIDE LINE FROM PREVIOUS TWO DAYS WORK WERE SLING LOADED ONTO M/V ADELE CANDIES. INIPOL APPLICATION BEGAN AT APPROX 1300 HOURS. NO INIPOL APPLIED WITHIN 100M OF STREAM. INIPOL APPLICATION BEGAN AT A POINT APPROX 180M TO THE WEST OF THE ANAD STREAM. APPROX 8 BAGS OF 'MS' & OILED SEDIMENT WERE SCHEDULED TO BE REMOVED FROM EXTREME NORTH END OF SEGMENT AFTER MY DEPARTURE.

ADF&G OIL SPILL RESPONSE MONITORING

ASC# 226-40-16782

Date: 7/11/91

Stream Name: _____

Observer: Mark Fink

Segment-Sub Unit LAISC

Location: NE LaTouche Island

Anad. Stream Permit Issued? ☒ Y N

Date: 7/11 - 7/14/91

Work Order Issued: ☒ Y N

Date: 7/9/91 (TAG)

Demob Date: 7/11/91 (ok. given to Marianne Profta DEC to sign off on work order)

Oil Characteristics (circle appropriate ones)

Surface: ☒ AP ☒ MS ☐ TB ☒ SOR ☒ CV ☒ CT ☒ ST FL DB None
Subsurface: ☒ OP ☒ HOR ☒ MOR ☒ LOR ☒ OF TR None

Treatment Techniques:

Manual Removal
Manual Raking
Spot Wash
Other

☒ Bioremediation & Type (Custom blend)
☒ Mechanical Tilling ~ 75 lbs.
Header Flood (Hot/Cold)

Crew Size: 4 + 2 Caterpillars

Lbs. or Bags of Oil/Sediment Removed 0

Other Agency Reps. and Names: Randy Boyer, Rex Coulter - Exxon,
Coop - USCG, Marianne Profta - DEC

Photos Y ☒ N

Roll #

Frames

Video N Tape #

Start End

Sediment/Oil Samples (Y ☒ N) Collection Number

Purpose of Trip * Treatment (third work order)

* Form designed primarily for cleanup inspection trips, but should be used for any field trips, i.e., to check on bird rookeries, seal haulouts, special habitat areas, etc.

Describe extent of remaining oil (any comments on expected completion of cleanup).

2nd go-around still did not till with the tide. Area around transect lines 4, 5, 6 HOR/CP not retilled. Some LOR in west stream bank near log jam. AP/SOR in boulder field west end of subdivision. Some touch-up work removing oiled organics in log jam as reported 7/1.

Comments: (Are work order procedures being followed?, etc.)

Work order did not address mechanical tilling with the tide. Contact with both DEC and F&G did not provide the push needed to get Exxon monitor to adjust W.O. Area at far west end previously tilled (~30m x 13m) was bidded and retilled. Boom was strung out hoping to contain on evening's high tide, 1:40 AM. Upper 1/3 of area around transects 0+1 was mechanically relocated to lower UITS. Previously tilled area of OP/HOR was expanded landward ~2m into toe of storm berm, and ~8m to the west (following OP lens) for a total relocated area of ~12m x 6m at 40-45cm deep. Four to six bucket loads of sediment from west stream bank at log jam was relocated NW to UITS. LOR mixed with organics was relocated (~2m x 5m). HOR/HOR at location C (OG map) not found. Boom was strung out along the 3 areas of relocation and tilling. Exxon and USCG reps were cooperative. Exxon rep stated that he would pick up boom at the end of the "Sovereigns" tour of duty (Friday or Saturday). State monitors had hoped tilling with the tide and manual removal would have been addressed in work order.

A:OPRESP

April 2, 1991

NORTH
(MAG)

0 25
meters

LA015-C

Maximum Subsurface Oil Character

14-June-1991

Legend

OP

HOR

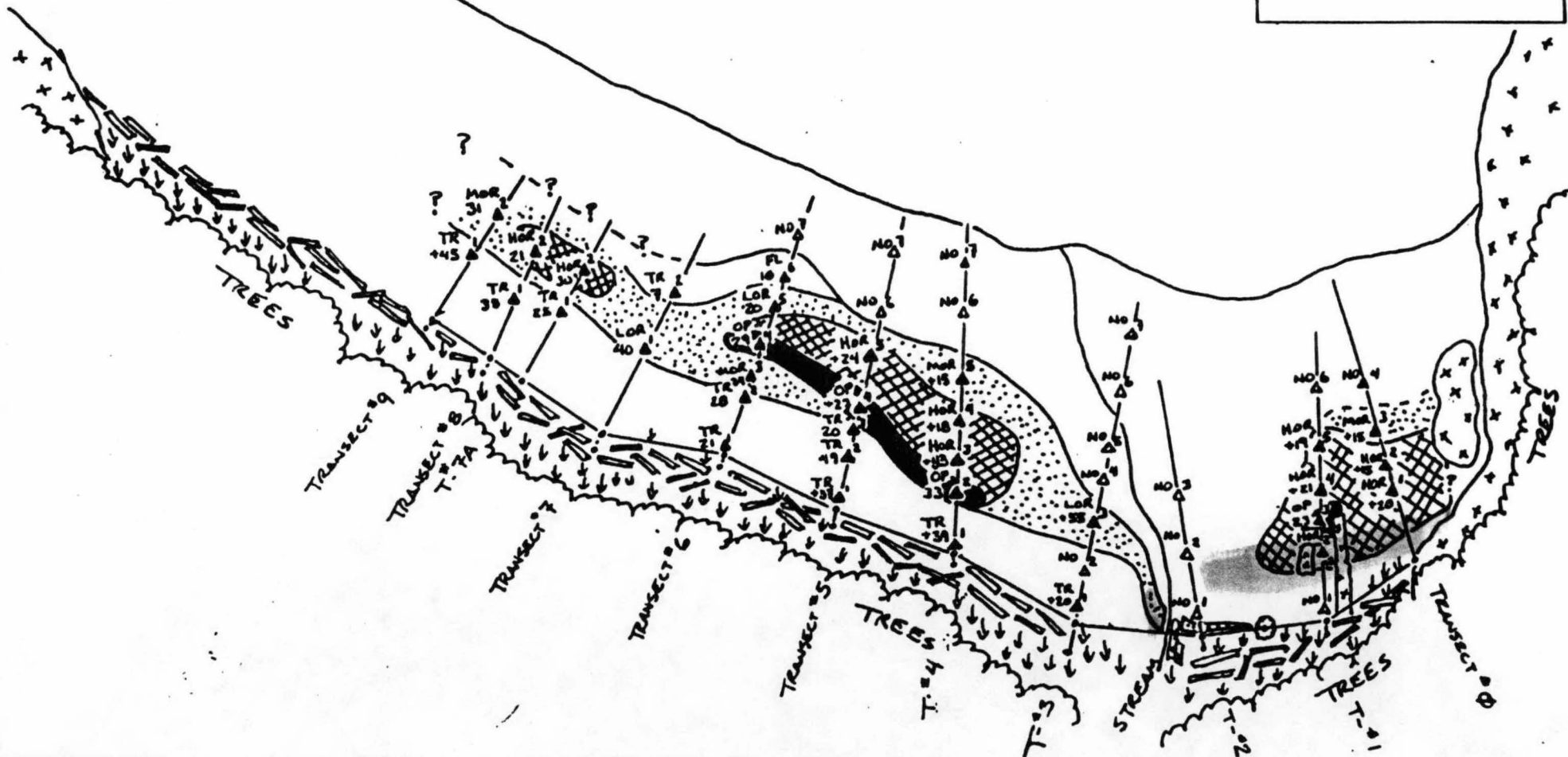
MOR/LOR

TR/NO



Areas treated 7/11/91
Mechanical.

SOR-HUY 0.3cm
(1cc side)



DAT 17-JUN-91

EXXON Valdez Oilspill Cleanup

Anadromous Fish Stream Authorization

Date 7/11/91

EXXON Authorized Representative Randy Royer

Shoreline Segment CA15C

Anadromous Fish Stream Number(s) 226-40-16782

Approved Cleanup Techniques Mechanical tilling, manual
removal of oiled sediments. Use of custom built
approved

Approved Cleanup Period 7/11 - 7/14/91

Alaska Department of Fish and Game

Mark Frick
Authorized Officer

Randall Beys
Permittee's Signature

SUPPLEMENTAL III

1991 MAYSAP EVALUATION

SEGMENT: LA 15 SUB: C REGION: PWS SURVEY DATE: JULY 8 - TAG

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) SAME

Ecological/Constraints (see page two for details) SAME

ARCHAEOLOGICAL CONSTRAINTS:

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

Timothy A. Smith for SHPO 7/9/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: _____

TAG: ADDITIONAL TILLING RECOMMENDED AS PRESCRIBED ON ATTACHED SKETCHES

RELOCATE SMALL AREA (Approx 20 x 2 yds) AT THE BASE OF THE BERM JUST EAST OF THE STREAM.

FOSC: _____

TAG APPROVAL DATE: 7/9/91

FOSC APPROVAL DATE: _____

ADEC [Signature]

FOSC _____

EXXON [Signature]

USCG T. M. Murphy et

NOAA _____

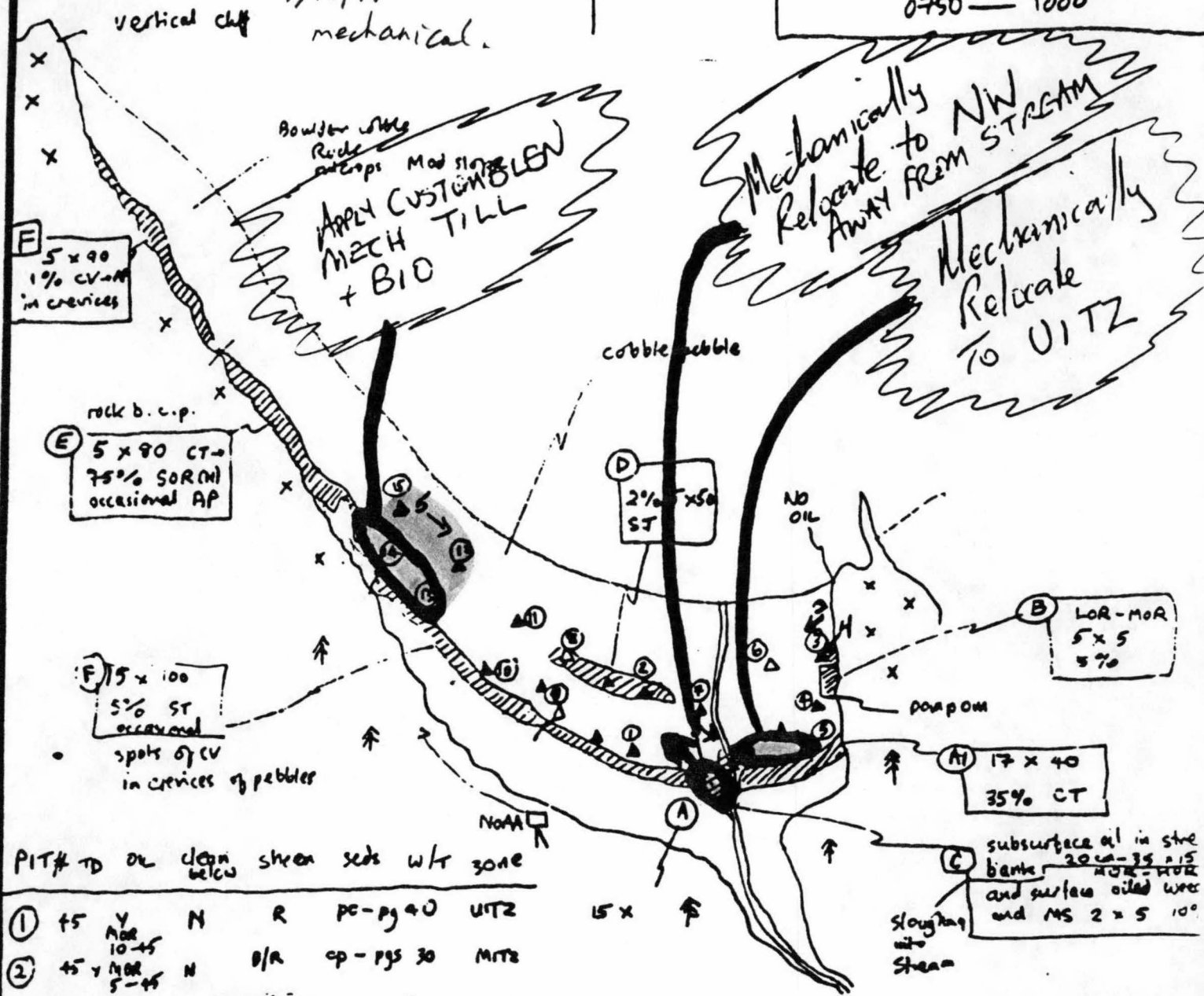
#1-5



PWS
Areas treated
7/11/91
mechanical.



LA-015-C 05/03/91
OG. Map D.I. Little
0750 — 1000



PIT# TO DL clean shren sets w/r zone

①	45	Y	N	R	pc-pg 40	UITZ
②	45	Y	N	B/R	cp-pgs 30	MITZ
③	15	Y	N	B/R	c-gs 5	MITZ
④	25	Y	N	B/R	cp-pg 20	MITZ
⑤	20	Y	N	B/R	ibp-gp 5	UITZ
⑥	30	TR	Y	—	cp-pg 20	MITZ
⑦	40	Y	N	R/B	pc-spg 30	MITZ
⑧	30	TR	Y	R	cp-pg 20	MITZ
⑨	55	Y	Y	N	pc-pg	UITZ
⑩	55	Y	Y	R	pc-pg 30	UITZ
⑪	30	Y	Y	R	pc-cp 10	MITZ
⑫	35	Y	N	R	pc-cp 20	MITZ

ANADROMOUS
STREAM

Location A extends both sides of stream

very
⑭ 25 Y (H) OR 0-10 N -- cp-pgs UITZ
AP/OP 10-25
⑮ 20 Y (H) OR 5-20 N pg MITZ

OG information 4
is missing for this
survey
OG was William Reid

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: 4/20/90 15 HIGH TIDE TIMES: 1007 12304 21 TEAM RECORDER: M. WIEDMER
4 START TIME: 1150 16 HIGH TIDE HTS: 9.0', 9.4' 22 OBSERVERS: T. CROWE
5 STOP TIME: 1320 17 LOW TIDE TIMES: 0400 11634 23 AGENCY: ADFG
6 SEGMENT #: LA-015 18 LOW TIDE HTS: 4.5' 11.6' 24 PHOTOS TAKEN: ~~Y~~ N
7 STATION #: 19 TIDE HT AT SURVEY: 4.48' Roll #: Frame:
8 K-UNIT: Ebb Slack Flood Slack 25 VIDEO TAKEN: Y N TAPE#: 90TWCOOLAND
9 STAT AREA: 20 USCG QUAD: SEWARD A-3 Start: 0421 End: 0708
10 LAT: 11 LONG: 26 SAMPLES TAKEN? Y N Number
12 SOURCE: Map Loran
13 LOCATION: NE LATOUCHE
14 DESCRIPTION: E. OF SLEEPY BAY

EXTENT OF OIL

HORIZONTAL
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 5 Cobble 60
Gravel 35 Sand Mud/silt
36 CATALOGED ANAD. FISH SREAM? Y N
37 CATALOG #: 226-40-16782
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: MOUTH
43 ANADROMOUS FISH PRESENT? Y N FRY
44 ANADROMOUS FISH OBSERVATION
Species Aerial Ground
PRESUMED

COMMENTS: BASED ON THE 10 PITS OUR GROUP DUG, IT IS MY JUDGEMENT
THAT A LENS OF OIL EXTENDS THROUGH THE ZONE OF INTEREST. THIS
LENS IS EXPOSED AT THE STORM BERM AND THE LOWER INTERTIDAL
AND BURIED BY 15 CM + THICK COBBLE/GRAVEL IN THE MID-INTERTIDAL.
MOUSSE/TAR IS IN THE STREAM CHANNEL @ THE LOWER INTERTIDAL.

ACE 7379659

FRAMES(S)

COMMENTS

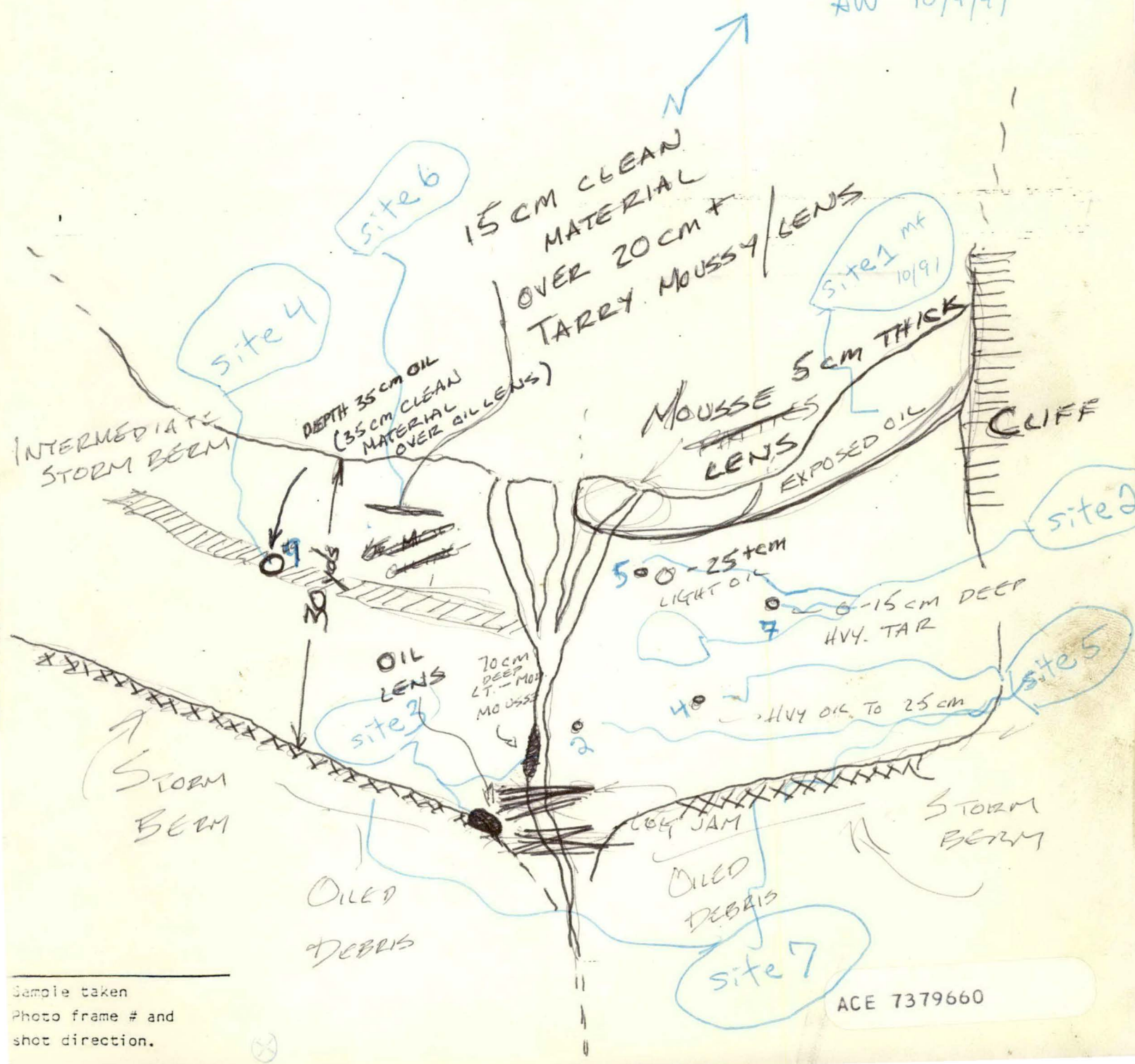
DESCRIPTION

LENS OF OIL EXPOSED IRREGULARLY ALONG BOTH BANKS OF CHANNEL. OILED DEBRIS UNDER LOGS ALONG STORM BERM.

RECOMMENDATIONS: REMOVE OILED DEBRIS FROM STORM BERM, MANUALLY REMOVE ALL OIL FROM STREAM CHANNEL (CHANNEL IS MOBILE AND BROAD AT MOUTH. RMV OIL IS YDS ON EITHER SIDE OF CURRENT CHANNEL).

48 OIL DISTRIBUTION DIAGRAM

labels provided by
AW 10/9/91



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: 4-20-90 15 HIGH TIDE TIMES: 1 21 TEAM RECORDER: RLG

4 START TIME: 1200 16 HIGH TIDE HTS: 1 22 OBSERVERS: AW

5 STOP TIME: 1330 17 LOW TIDE TIMES: 1 23 AGENCY: ADFG

6 SEGMENT #: LAIS 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#: 90RLG555

9 STAT AREA: 20 USCG QUAD: Start: 0876 End: 1010

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

12 SOURCE: Map Loran Oil

13 LOCATION: S A-3 Lobache Is. Sediment

14 DESCRIPTION: Biological

Water

EXTENT OF OIL

	SHORELINE				STREAM			
	L	W	M ²	%	L	W	M ²	%
27 SURFACE COVERAGE	<u>100</u>	<u>75</u>	<u>25</u>	<u>75</u>				
28 SURFACE THICKNESS	<u>Film in most cases</u>							
29 PENETRATION	<u>25 cm</u>				<u>10 cm</u>			

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 ✓
Gravel ✓ Sand ✓ Mud/silt

36 CATALOGED ANAD. FISH STREAM? Y N

37 CATALOG #: 226-40-16782

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

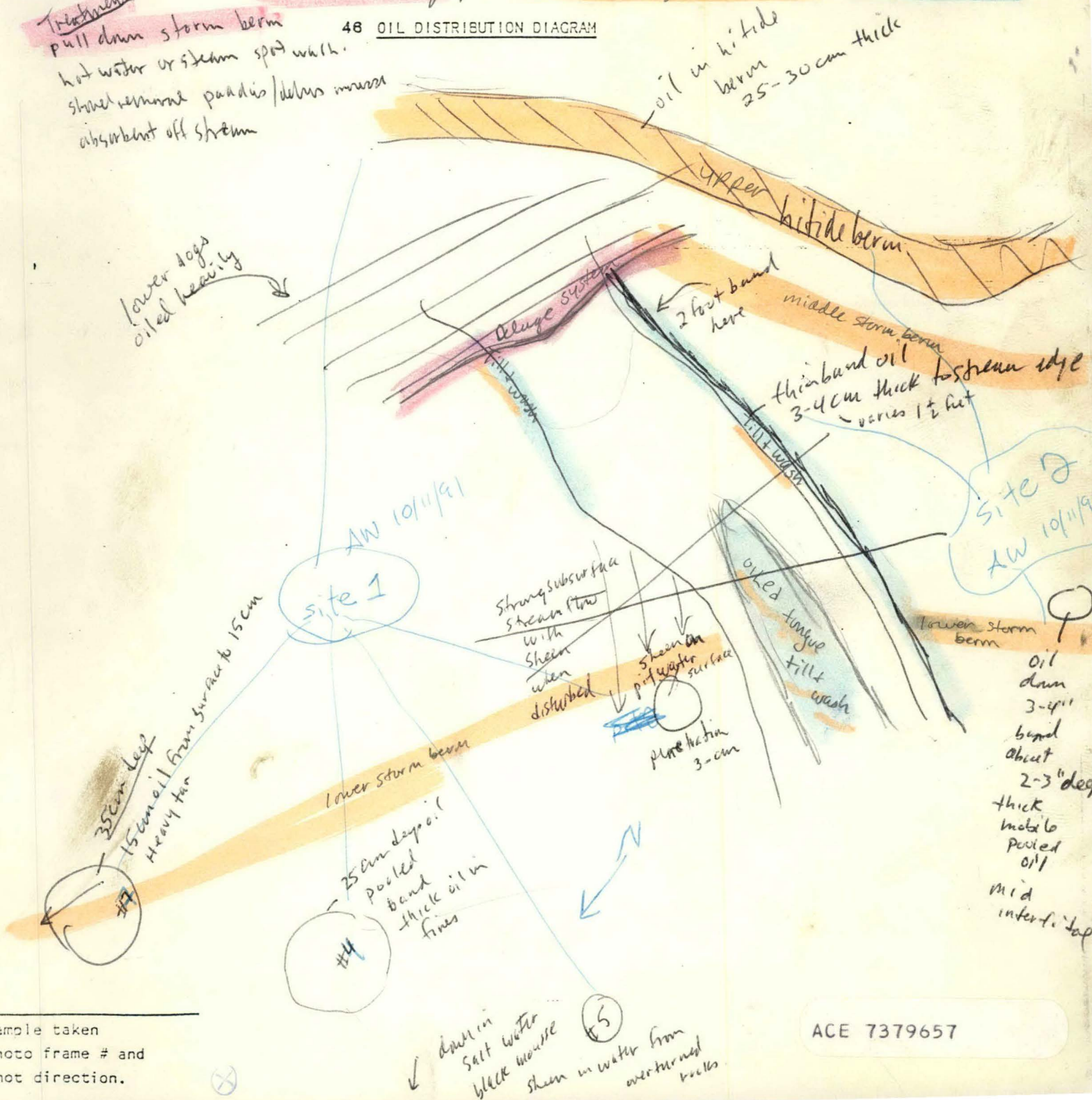
COMMENTS: 75% of area on 50yd either side of stream - from high tide to
mid intertidal is oiled. Deepest penetration 25 cm. Refers to thickness of
surface rock - stained under side fines in some areas coated
thickly with pooled mobile oil. dense AW 10/10/91
Thin bands down to stream's edge on both sides as well
as upper storm berm bands.

ACE 7379656 H/S

FRAME(S)	DESCRIPTION
	Brood areas of subsurface oil under armour crusting of rock/cobble oil from 1" below surface to 4-5" penetration and deeper.
Recommendations	pull down storm berm hot water or steam wash with cold water deluge shovel remove paddies of muck and oiled debris (logs etc) absorbent off stream to prevent seeping Rip up lower storm berm and other lower subsurface oil with rock ripper on cat (tracked) and wash with steam or hot water with cold water deluge / Till wash both sides of stream bank See back page

Treatment
pull down storm berm
hot water or steam spot wash.
shovel remove paddies/debris muck
absorbent off stream

48 OIL DISTRIBUTION DIAGRAM



Sample taken
Photo frame # and
shot direction.

ACE 7379657

Recommendations.

(or mid sized cat (bulldozer with rock ripper))

1. Shovel removal of mousse paddies/farmaths in upper/middle/lower storm berms and anywhere else found.
2. removal of severely oiled logs in jam over creek
3. Pull down storm berms (upper 2) and wash with steam or hot water in addition to cold water deluge system
4. Absorbent off stream while doing this to prevent reoiling
5. Till + wash both sides of stream bank where oiled logs occur.
6. Till + wash oiled tongue which sheens in center of stream
7. Rip up lower + middle storm berms with tracked cat and rock ripper to bring subsurface oiled gravel and cobbles to surface and treat with steam or hot water with cold deluge.
8. No bio remediation recommended
9. Boom site and collect oil with skimmer as necessary during washing.

Comments by Ken Critchlow:

I agree with ADFG's recommendations, except that bioremediation should be used as last step. KRC

OG CAL LARSON UFG DREHER, CWE SEGM LA-015 33
 BIO KEN CRITCHLOW LI REP ST M226-40-16782 (OF)
 EXXON DARRELL YOE ADFG ELK GUSTIN-AIMEE WESEMAN TIME 11:45 to 13:15
 TEAM NO. 14 TIDE LEVEL X6 FT DATE 1/19/90
 EST. SUBDIVISION LENGTH: 40 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 10 % B 10 % C 40 % P 40 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 50 % Hang 50 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 15 m N 0 m VL 25 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR							IMPACTED ZONES			
	/C	/B	/P	/S	BL BR	DBL RW	GY	SL DBR	TL LRR	SU	U	M	L		
ASPHALT PAVEMENT	✓					✓							✓		
POOLED															
COVER	✓							✓			✓				
COAT															
STAIN			✓			✓				✓	✓	✓	✓		
MOUSSE		✓						✓				✓	✓		
PATTIES															
TARBALLS															
FILM			✓				✓						✓		
NO OIL															

PAVEMENT H F S 8 sq. m by 2 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? NO BR RW SD TL

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

Did you collect DEBRIS
☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. 0

Frames 0

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SB BR	DEL RW	GY	SL DEBR	TL	LR	SU	U	M	U					
1	45					✓	-								✓				✓		N		CB, PB / CB, PB	
2	30				✓		-		✓			✓			✓				✓		Y	✓	CB PB GR / CB, PB	
3	45		✓				5-45	✓					✓		✓						N		CB PB GR / CB PB GR	
4	25		✓				5-20		✓						✓						Y	✓	CB, PB GR / CB, PB GR	
5	25				✓		5-25	✓				✓					✓				Y	✓	CB, PB GR / CB PB GR	
6	50		✓				5-50	✓					✓		✓					✓	N		CB, PB / CB PB GR	

COMMENTS NOTED OIL STAIN SPORADIC THRUOUT SITE. UPPER STORM BERM NEXT TO STREAM MOUTH WAS AN OIL LAYER OF DARK BROWN MOUSSE 50CM IN DEPTH. PART OF IT CONTINUOUS UPTO STREAM MOUTH AND UNDER BEACH DRIFT/LOGS. PIT NO. 2 HAD LIGHT SHEEN PURKALATING THRU SEDIMENTS. SILVER SHEEN WAS OBSERVED IN LITZ NEXT TO STREAM DISCHARGE.

REVIEWED 0 DATE 0

ACE 7379663

OG CALLALSON

SEGMENT ST/ LA-015

STREAM 226-A0-16782

DATE 4/20/90

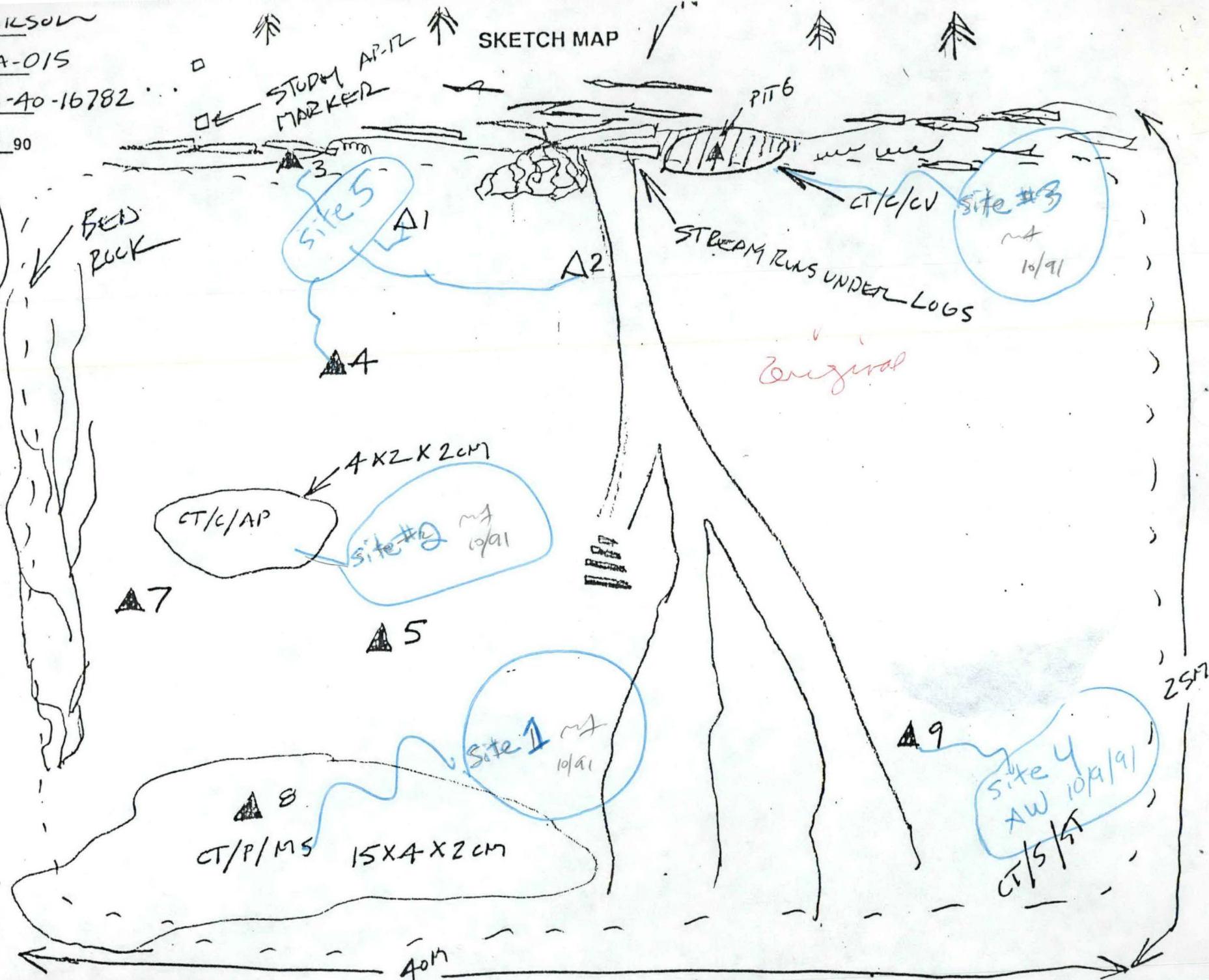
CHECKLIST

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

LEGEND

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

SKETCH MAP



Factor Length (m): AP 8 PO CV CT ST MS 8 PT TB FL NO

-15X/5X 1,2,3,4
ACE 7379655

REVISION: 03/24/90

GENERAL DATA

226-40
SEG ID: LA-015 SUBDIV: 16782 TEAM: 14 SURVEY DATE: 4/20/90
PAVEMENT: CHAR S AREA 8 THICKNESS 2 TARBALLS —
OILED: LGS MD VEG SM TRH SM DBR SM WAVE EXP: LW — MD X HG —
FAX RCVD: — DT: — AGENCY DISAGREE: —
EST SUBDIV LGTH: 70 OIL CATEGORY: W — M 15 N — VL 25 NO — U —

SURFACE DATA

SURFACE SEDIMENT: BRK 10 BLD 10 COB 40 PEB 40 GRN — SAN — MUD — VEG —

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

CHAR #: 2 OIL CHAR: CV OIL DIST: CONT X BRKN — PTCH — SPLH —
OIL CLR: DBR FILM CLR: TL TIDAL ZONE: SU — UI X MI — LI —

CHAR #: 3 OIL CHAR: ST OIL DIST: CONT — BRKN — PTCH X SPLH —
OIL CLR: DBL FILM CLR: RW TIDAL ZONE: SU X UI X MI X LI X

CHAR #: 4 OIL CHAR: MS OIL DIST: CONT — BRKN X PTCH — SPLH —
OIL CLR: DBR FILM CLR: TL TIDAL ZONE: SU — UI — MI X LI X

CHAR #: 5 OIL CHAR: FL OIL DIST: CONT — BRKN — PTCH X SPLH —
OIL CLR: BY FILM CLR: SL TIDAL ZONE: SU — UI — MI — LI X

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 —

^ NAD
SSAT DATA ENTRY FORM

32

SUBSURFACE DATA

PAGE 1 OF 2

SEGMENT ID: 1A-015 SUBDIV: 226-40
16782

PIT # 1 PIT DEPTH 45 OIL CHARACTER NO OIL INTVAL: FROM — TO —
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 # 2 PIT DEPTH 30 OIL CHARACTER OE OIL INTVAL: FROM — TO —
QUANT: UC OIL CLR: GY FLM CLR: SL ZONE: SU — UI X MI — LI —
SUBSURF SEDIMENT: BRK — BLD — COB X PEB X GRN X SAN — MUD — VEG —

PIT # 3 PIT DEPTH 45 OIL CHARACTER OR OIL INTVAL: FROM 5 TO 45
QUANT: UC OIL CLR: LBR FLM CLR: — ZONE: SU — UI X MI — LI —
SUBSURF SEDIMENT: BRK — BLD — COB X PEB X GRN X SAN — MUD — VEG —

PIT # 4 PIT DEPTH 25 OIL CHARACTER OR OIL INTVAL: FROM 5 TO 20
QUANT: UC OIL CLR: — FLM CLR: — ZONE: SU — UI X MI — LI —
SUBSURF SEDIMENT: BRK — BLD — COB X PEB X GRN X SAN X MUD — VEG —

PIT # 5 PIT DEPTH 25 OIL CHARACTER OF OIL INTVAL: FROM 5 TO 25
QUANT: UC OIL CLR: GY FLM CLR: SL ZONE: SU — UI — MI X LI —
SUBSURF SEDIMENT: BRK — BLD — COB X PEB X GRN X SAN — MUD — VEG —

PIT # 6 PIT DEPTH 50 OIL CHARACTER OR OIL INTVAL: FROM 5 TO 50
QUANT: UC OIL CLR: DBR FLM CLR: TL ZONE: SU X UI — MI — LI —
SUBSURF SEDIMENT: BRK — BLD — COB X PEB X GRN X SAN — MUD — VEG —

PIT # 7 PIT DEPTH 35 OIL CHARACTER OR OIL INTVAL: FROM 5 TO 15
QUANT: UC OIL CLR: SBL FLM CLR: BR ZONE: SU — UI — MI X LI —
SUBSURF SEDIMENT: BRK — BLD — COB X PEB X GRN X SAN X MUD — VEG —

PIT # 8 PIT DEPTH 20 OIL CHARACTER OL OIL INTVAL: FROM 5 TO 10
QUANT: UC OIL CLR: DBR FLM CLR: TL ZONE: SU — UI — MI — LI X
SUBSURF SEDIMENT: BRK — BLD — COB X PEB X GRN X SAN X MUD — VEG —

PROBLEMS: _____

PAGE 2 OF 2

PIT # 9 PIT DEPTH 35 OIL CHARACTER OR OIL INTVAL: FROM 5 TO 35
QUANT: - OIL CLR: DBR FLM CLR: TL ZONE: SU - UI - MI - LI X
SUBSURF SEDIMENT: BRK - BLD - COB X PEB X GRN X SAN X MUD - VEG -

PIT # _____ PIT DEPTH _____ OIL CHARACTER _____ OIL INTVAL: FROM _____ TO _____
 QUANT: _____ OIL CLR: _____ FLM CLR: _____ ZONE: SU _____ UI _____ MI _____ LI _____
 SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # _____ PIT DEPTH _____ OIL CHARACTER _____ OIL INTVAL: FROM _____ TO _____
 QUANT: _____ OIL CLR: _____ FLM CLR: _____ ZONE: SU _____ UI _____ MI _____ LI _____
 SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # _____ PIT DEPTH _____ OIL CHARACTER _____ OIL INTVAL: FROM _____ TO _____
 QUANT: _____ OIL CLR: _____ FLM CLR: _____ ZONE: SU _____ UI _____ MI _____ LI _____
 SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # _____ PIT DEPTH _____ OIL CHARACTER _____ OIL INTVAL: FROM _____ TO _____
 QUANT: _____ OIL CLR: _____ FLM CLR: _____ ZONE: SU _____ UI _____ MI _____ LI _____
 SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # _____ PIT DEPTH _____ OIL CHARACTER _____ OIL INTVAL: FROM _____ TO _____
 QUANT: _____ OIL CLR: _____ FLM CLR: _____ ZONE: SU _____ UI _____ MI _____ LI _____
 SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # _____ PIT DEPTH _____ OIL CHARACTER _____ OIL INTVAL: FROM _____ TO _____
 QUANT: _____ OIL CLR: _____ FLM CLR: _____ ZONE: SU _____ UI _____ MI _____ LI _____
 SUBSURF SEDIMENT: BRK _____ BLD _____ COB _____ PEB _____ GRN _____ SAN _____ MUD _____ VEG _____

PIT # _____ PIT DEPTH _____ OIL CHARACTER _____ OIL INTVAL: FROM _____ TO _____
 QUANT: _____ OIL CLR: _____ FLM CLR: _____ ZONE: SU _____ UI _____ MI _____ LI _____
 SUBSURF SEDIMENT: BRK _____ BLD _____ COB _____ PEB _____ GRN _____ SAN _____ MUD _____ VEG _____

PROBLEMS: _____

FIELD SHORELINE COMMENT SHEET

ANADROMOUS STREAM CATALOG#

SEGMENT ST / LA-015

SUBDIVISION: 226-20-16388

DATE 4-20-90

USCG

NAME CWO2 Kerwin L. Dreher SIGNATURE CWO2 K. L. Dreher

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

ADFG

NAME RICK GUSTIN

SIGNATURE Richard J. Gustin

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

1. Shovel removal of mousse paddies/tar mats in upper/middle/lower storm berms and anywhere else found. Use of tracked bulldozer with rock ripper to pull down berms and fill submerged oil to surface in berms.
2. removal of severely oiled logs in jam over creek and disposal.
3. Pull down storm berms (upper 2) and wash with steam or hot water in addition to coldwater deluge system.
4. Absorbent off stream edge while washing to prevent reiling.
5. Till + wash both sides of stream bank where oiled lens occurs.
6. Till + wash oiled tongue which sheens in center of stream
7. Rip up lower + middle storm berms with tracked cat + rock ripper to bring subsurface oiled gravel and cobble to surface and treat with steam or hot water and cold deluge.
8. No bioremediation recommended.
9. Burn site and collect oil with skimmers as necessary during washing.

comment on oiling (It appears there is a large relatively thick at times lens of subsurface oil on both sides of the stream in the entire intertidal area (upper, middle, lower intertidal) This in our opinion needs to be filled and treated.

LAND MANAGER

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Recommendation.

(or mid sized cat (bulldozer with rock ripper))

1. Shovel removal of monase paddings/farm matts in upper/middle/lower storm berms and any where else found.
2. removal of severely oiled logs in jam over creek
3. Pull down storm berms (upper 2) and wash with steam or hot water in addition to cold water deluge system
4. Absorbent off stream while doing this to prevent reoiling
5. Till + wash both sides of stream bank where oiled debris occurs.
6. till + wash oiled tongue which sheens in center of stream
7. Rip up lower + middle storm berms with tracked cat and rock ripper to bring subsurface oiled gravel and rubble to surface and treat with steam or hot water with cold deluge.
8. No bio remediation recommended.
9. Beam site and collect oil with skimmer as necessary during washing.

Comments by Ken Critchlow:

I agree with ADFB's recommendations, except that bioremediation should be used as last step. KRC

RECEIVED
MAY 07 1990

DEPT. OF
ENVIRONMENTAL CONSERVATION

ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND

SEGMENT: LA-15

STREAM NO: 226-40-16782

Refer to A.D.F.+G's Recommendations regarding suggested treatment. Exam map does not refer to oiled berron at creek bank or between upper inter-tidal & lower inter-tidal.

They don't mention filling the subsurface oil buried in middle & lower inter-tidal beach on both sides of the creek with cat & washing. Read A.D.F.+G

Comments very closely.

NO BIOREMEDIATION.

TILL ON BOTH SIDES OF STREAM

ORIGINAL FIELD MAP ALTERED

ACE 7379642

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ LA-15 STREAM NO: 226-40-16782 DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Two anadromous streams in LA-15: 226-40-16782, 226-40-16783 (in Subdivision A)

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
- 1B Salmon stream mouth - spawning (7/10 to 8/31)
- 5T-7 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
- 6U Recreation: Tent sites (6/1 to 9/15)
- 7HH Subsistence area: Finfish harvesting
- 9EE Set aside

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiiled biota and substrate. There is one and possibly two bald eagle nests within 400 M of stream 226-40-16782. See ecology map. Subject stream is located within Subdivision C (3 of 5).

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

Subsurface Oil Observed: Yes X No _____ Maximum Depth 45+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmat,
2) manual pickup of mousse patties, 3) manual tilling of storm berm
down to MITZ, 4) spot washing using sorbents, 5) bioremediation of
tilled and washed area and other areas shown on attached sketch map.
Work should be conducted between 6/1 and 7/10 based on eagle nest and
salmon constraints after approval of USFWS regarding eagle nest and
ADF&G regarding tilling and bioremediation of stream banks.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-20-16782

SEGMENT LA-15 SUBDIVISION C

WORK WINDOW	
Manual Pickup Tarmat Removal	CLOSED
Bioremediation Spot Washing Manual Tilling Other Approved Treatment	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (226-40-16782) is in Subdivision C. This subdivision is closed to bioremediation, spot washing, manual tilling, and other approved treatment less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation, spot washing, manual tilling, and other approved treatment are permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation, spot washing, manual tilling, and other approved treatment more than 100m from stream. No constraint to manual pickup and tarmat removal.

5T Bald Eagle Nest

USFWS 6/1/90 map indicates an active nest in Subdivision C. Closed to manual pickup, tarmat removal, bioremediation, spot washing, manual tilling, and other approved treatment within 400m of active nest. No constraint to manual pickup, tarmat removal, bioremediation, spot washing, manual tilling and other approved treatment more than 400m from active nest.

7HH Subsistence: Finfish Harvesting

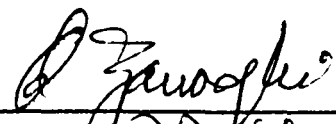
Closed to bioremediation, spot washing, manual tilling, and other approved treatment after 7/1. No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

If eagle nest constraint is removed, other ecological considerations will apply.

SEE SUBDIVISION CONSTRAINT ADDENDUM LA-15C
FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC



Date

6/12/90

Prepared by



Date

6/12/90

ACE 7379636 +1581

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

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

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

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

1C Salmon fry nursery area (4/31 to 7/31)

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

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

1D Esther Hatchery release (4/15 to 6/1)

1E Main Bay Hatchery release (4/20 to 6/10)

1F Sawmill Bay Hatchery release (4/15 to 6/1)

1G Cannery Creek Hatchery release (4/21 to 6/1)

1H Remote release site

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

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

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

1I Gill net area (6/7 to 8/31)

1J Purse seine area (7/20 to 9/30)

1K Purse seine hook-off (7/20 to 9/30)

1L Set net sites (6/11 to 7/25)

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

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

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

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

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

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

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

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

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

ADF&G Don Calkins 267-2403

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Roth 267-2206

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

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

Recreation:

Tent sites (6/1 to 9/15)

Anchorage (6/1 to 9/15)

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

Lodge (6/1 to 9/15)

Special use destination

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

Finfish harvesting

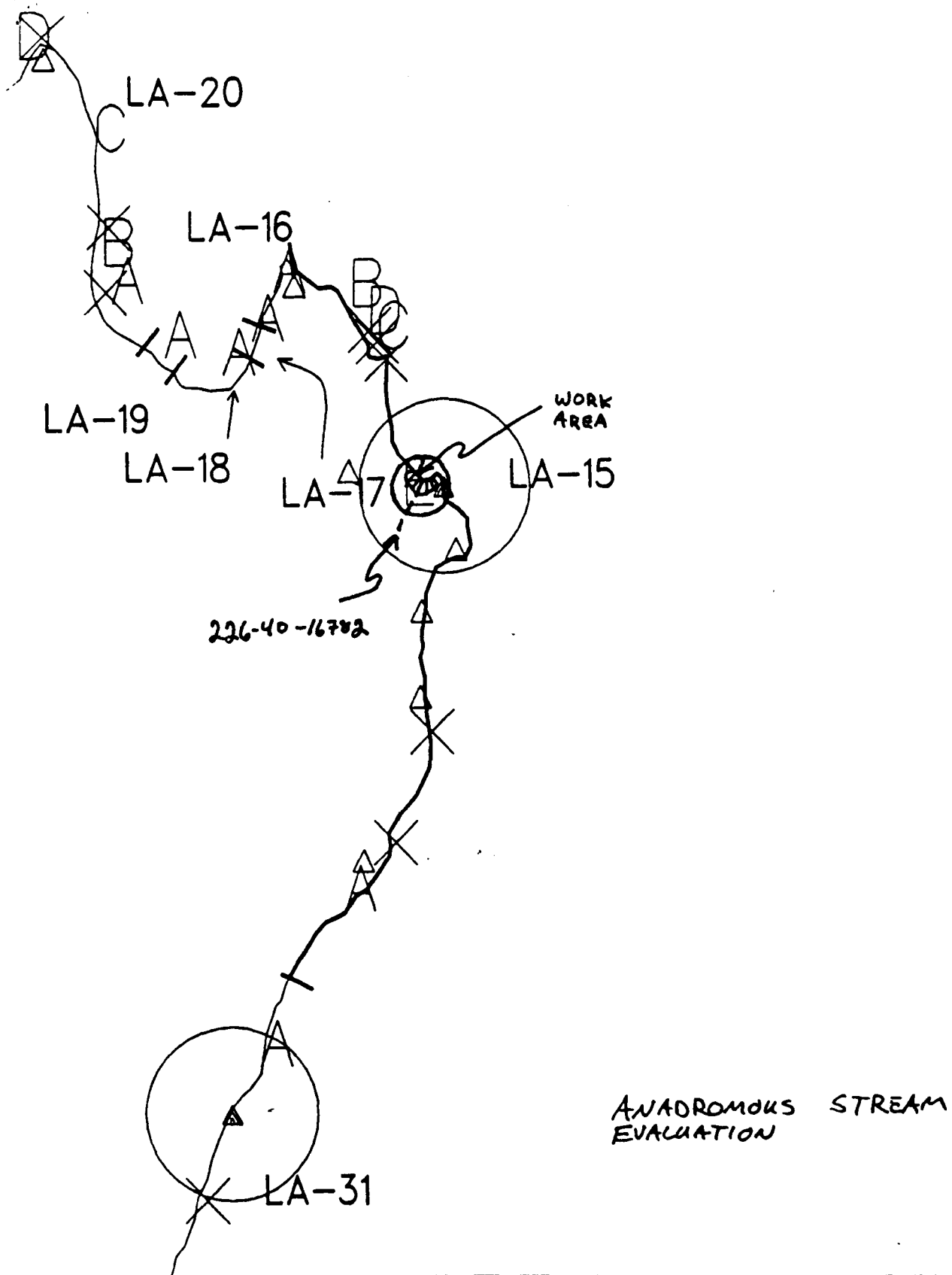
Deer harvesting (8/15 to 2/28)

Invertebrate harvesting

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

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

ACE 7379644



Exxon Company, USA
 Map Key: PWS-LA-15
 June 04, 1990



ECOLOGY MAP SEGMENT LA-15 SUBDIVISION C (3 of 5)

METERS



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

~~1 inch = 1000 feet~~

ACE 7379637

U.S. Department
of Transportation
United States
Coast Guard



Memorandum

Subject:

PRIORITY ASSESSMENT - PWS

Date:

13 Jul 89
16465

From:

AOSC PWS

Reply to
Attn. of:

fosc
835-5905

To:

FOSC
Via: COS

1. Exxon, by enclosed memo, has proposed a plan to balance several competing interests impacted by cleanup operations in Prince William Sound. The plan as submitted is what I believe to be a good balance, and I recommend it's adoption taking into consideration my comments in this memo. The shoreline committee, on 12 July 1989 debated this issue very heavily and could not come to an agreement on how to proceed. There was however what I feel to be a majority opinion that endorsed Exxon's basic approach.

2. As part of this puzzle, but not mentioned in Exxon's proposal, is the concern for the seal haulouts at Seal Island and Smith Island. NMFS has recently opened the timing window to allow work to be done in these areas from now until 10 August, when the molting period is expected to begin. In discussions with Exxon and the shoreline committee, I believe the consensus position was that the ideal treatment for these areas would require a major task force redeployment. While this approach would allow Exxon to retrieve the maximum amount of oil from the segments concerned, it may not help the seals at all. There appears to be a pumping action working, particularly on Seal Island in the vicinity of the haulouts, which is redepositing new oil on the shoreline. A major treatment of this area may remove much of the oil but if the pumping action continued after the crews were required to move on, then the seals would see absolutely no benefit. As an alternative to this, Exxon is presently considering all alternatives to stabilize these areas by passive / manual means (e.g. sorbents). In addition, prior to the Aug 10 deadline it will be determined if a generous amount of peat moss would be beneficial on key shorelines to help protect the seals. The more heavily impacted areas of Smith Island, with the exception of the haulout areas, could be treated after 15 August when Task Forces II and IV are expected to move out of Northern Knight Island / Eleanor Island / Ingot Island area.

agree

ACE 7379621
+15

FILE
#920

16465
13 Jul 89

Subj: PRIORITY ASSESSMENT - PWS

2. (Cont'd) NMFS has stated that this would not disturb the seals if activities were about one half mile away. However, this activity would have to be weighed against other priorities at that time.

3. The Chenega subsistence issue is minimized with Exxon's approach, especially if some of the areas on the northeast side of Evans Island are treated in mid July, as indicated by the dotted line on Exxon's attached map. This would be against the wishes of the Sawmill Bay Hatchery, but as the attached chart of the expected salmon catch shows, the peak for the hatchery occurs in the second week of August. I would expect Exxon to be clear ^{wa} of that area ^{clear} before August 1st, thereby minimizing any possible ^{Avak} effects on the hatchery. With the continued cooperation of Exxon ^{this} in maintaining the protection strategy for Sawmill Bay, and with the third RAT boat coming on line, I feel this risk can be managed. A further subsistence issue is Elrington Island. The ^{Essex} Chenega Village people would like that lightly to moderately impacted area treated before the end of the season. When Task Force #1 completes their work on the heavily oiled sections of the southern part of the sound, I would recommend a decision be made as to whether some of the task force could be employed in manual treatment of the area.

Concur
4. The compelling objective continues to be to treat as many segments as possible before operations have to be secured this fall. To completely close the Sawmill Bay area as they desire is not a viable option. This approach minimizes their risk to fisheries and allows Exxon the opportunity to proceed with operations. I recommend you endorse it.


W. H. FELS

FM ELKOW

LTR: FM BILL TO FOSC - FIND

To: Commander Bill Fels

Re: Cleanup Priorities Assessment - Terminal Fisheries Sawmill Bay/Subsistence Land Use

AUG 15 PROPOSED BY ELKOW AS COORDINATED

A recently raised priorities conflict in southern PWS has emerged over the need to protect the Terminal Fisheries at Sawmill Bay (July 15 - Sept. 1) and a conflicting need raised by the Chenega residents to clean their lands & subsistence lands during this time period and preferably prior to August 1st. An additional conflict is also associated with the previously established priorities of treating the heavily oiled areas of PWS, and the restriction requested by PWSAC (Sawmill Bay Hatchery) not to clean areas on southeastern Knight Island. Cleanup operations here may create a sheen that could move towards the hatchery and terminal fisheries in Sawmill Bay. These conflicting priorities were discussed extensively in the Shoreline Committee without reaching a consensus on the desired approach.

The two positions proposed by the interested parties are as follows:

1. Protection of the Sawmill Bay Terminal Fisheries

Requested that cleanup activities not be allowed west of Sleepy Bay, east of Evans Point, south of Northern Snug Harbor through the passages to Danger Island. Their concerns are that possible sheen resulting from cleanup operations in these areas could threaten the integrity of the fish caught at Sawmill Bay (based on zero-tolerance). Vessels moving through cleanup areas could be contaminated and carry sheen into Sawmill Bay resulting in the closure of the fisheries.

The consequences of their request are:

- o No cleanup of heavily oiled areas in Snug Harbor and Point Helens until after Sept. 1.
- o No cleanup of oiled Subsistence areas identified.

2. Chenega Subsistence

The residents of Chenega have requested that cleanup in subsistence areas on Evans/LaTouche/Montague Island Region be completed before the middle of August when hunting activities begin in earnest. This "Region" includes portions of Southern Knight Island.

The consequences of their request are:

- o Cleanup activity would be in close proximity to the Sawmill Bay fisheries and may create a high

risk to the fisheries in Sawmill Bay resulting in closure and disposal of approximately 7 million pink salmon.

3. Proposed Compromise Position

- o Move TFl from northern LaTouche July 15 to NW Evans and concentrate on NW Evans and Flemming Island.
- o Double check the potential for pushing the fisheries "window" (due to late run) to July 22 allowing 1 week to treat the high use subsistence areas on NE Evans before NW Evans.
- o Treat areas on NW Evans and Flemming Island region from July 22 to mid August.
- o Move Task Fore II +/- or IV to SE Knight approximately mid August to address the heavily oiled areas.

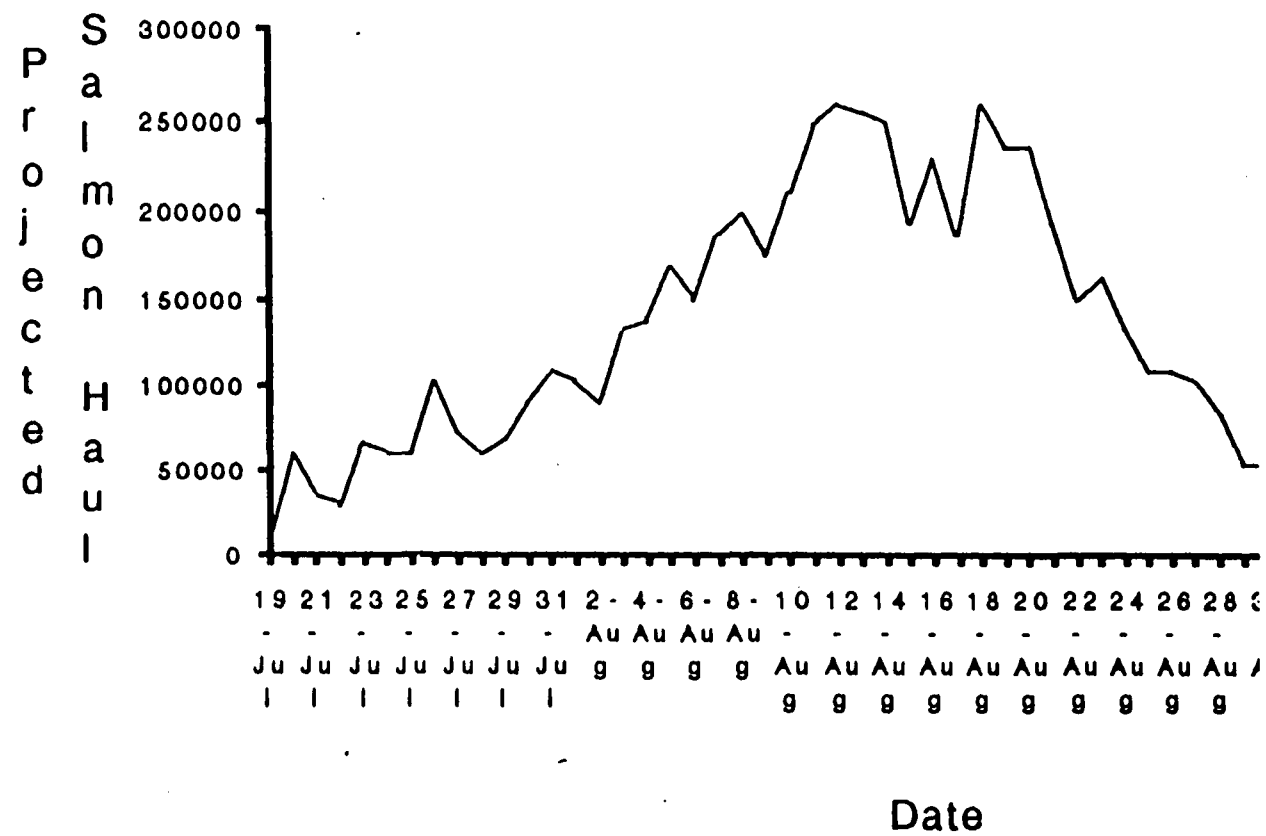
Result

- Minimize risk to the terminal fisheries between the critical/peak fishing window (see attachment I) of July 20 to August 20.
- Allow for as much cleanup as possible of key subsistence areas to mid August.
- Maintain a reasonable logistics window for treatment of SE Knight (August 15 to September 15).

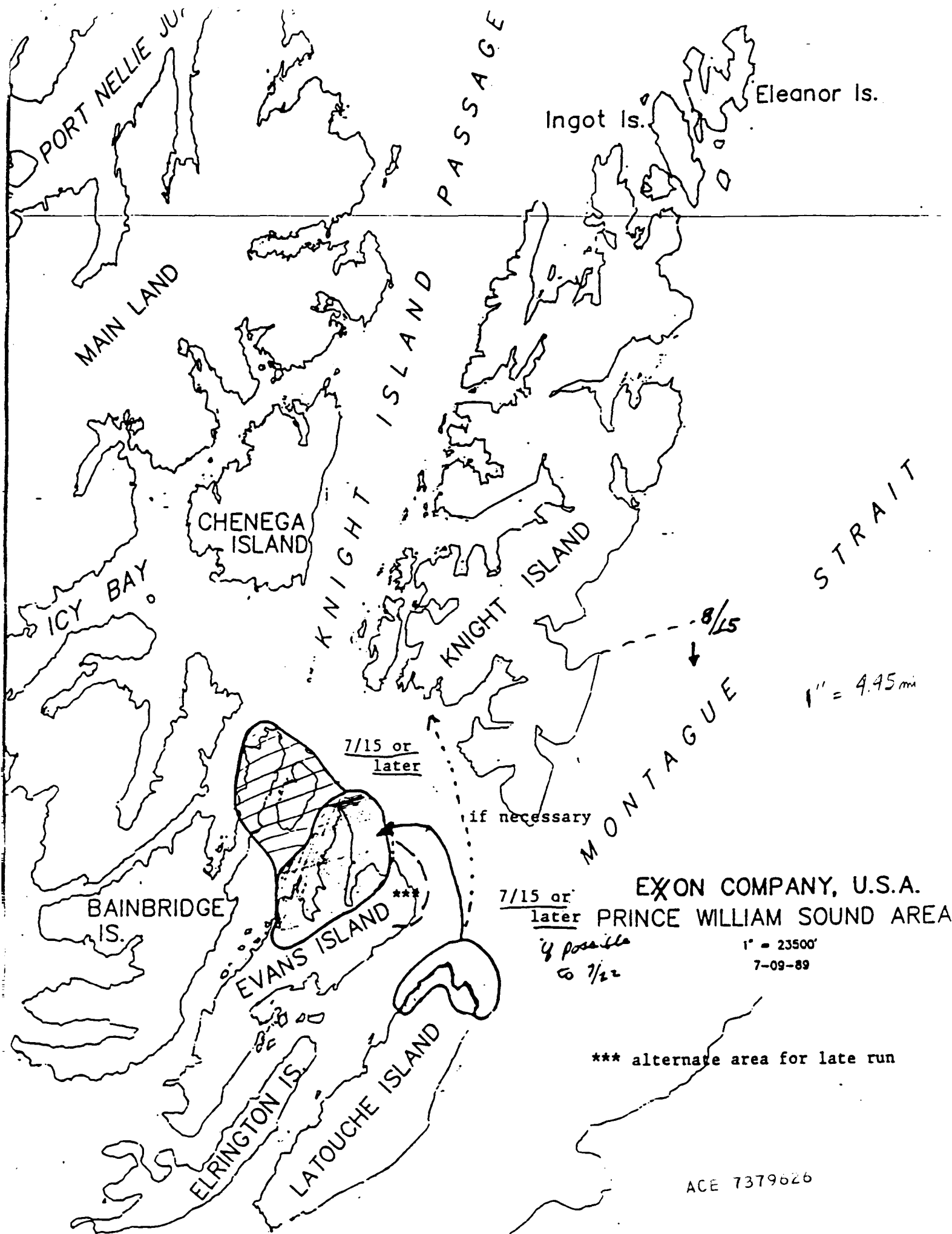
The proposed compromise approach has been worked with Operations input and we feel is a workable logistically supportable plan that will accommodate to the best of our ability the priority of the affected groups.



A.R. Teal
S.C.A.T. Manager



ACE 7379625

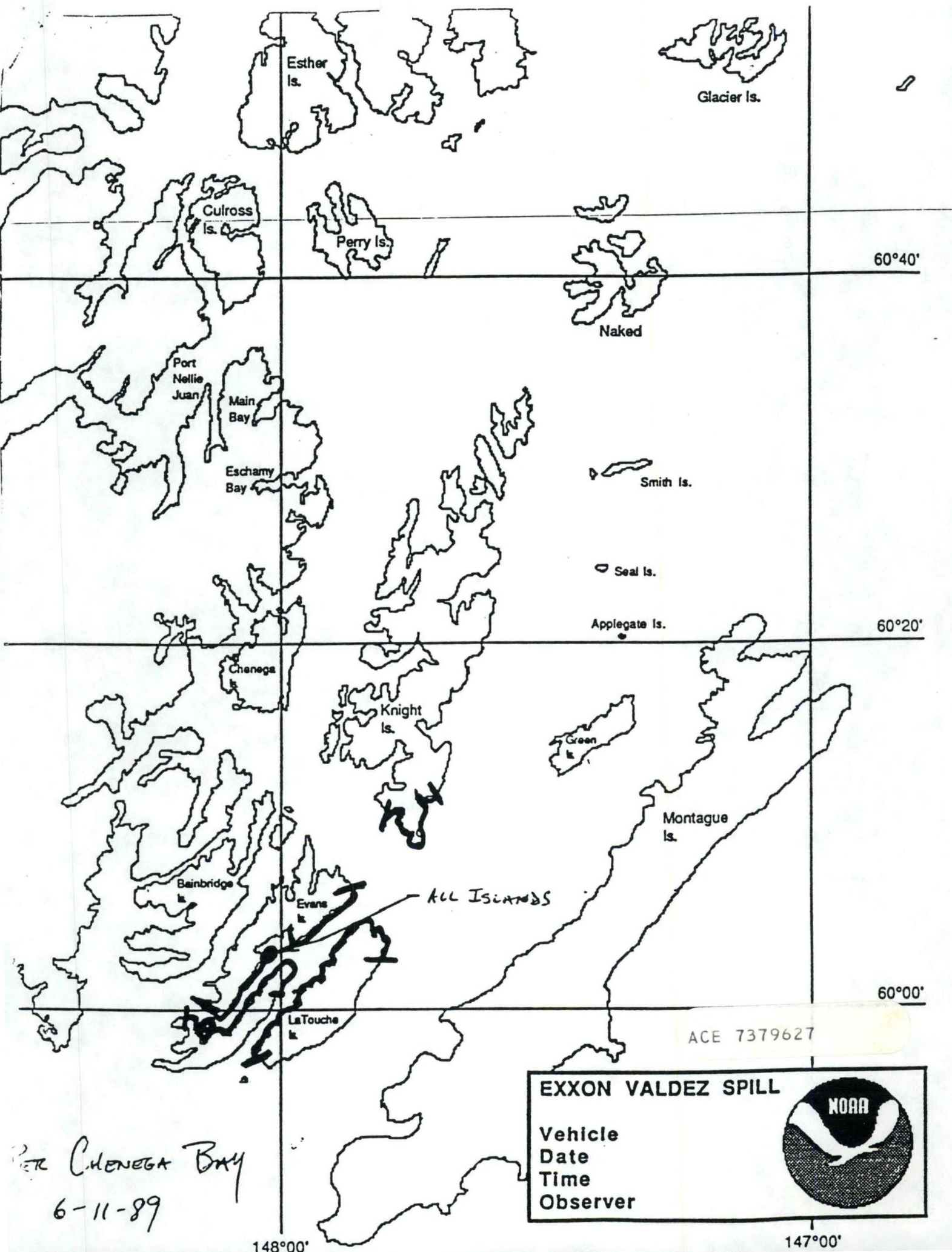


EXON COMPANY, U.S.A.
PRINCE WILLIAM SOUND AREA

1" = 23500'
7-09-89

*** alternate area for late run

ACE 7379626



MEMORANDUM

DATE: 13 JULY 1989

TO: CDR. BILL FELS
AOSC, PRINCE WILLIAM SOUND

FROM: R.V. MILLER, NMFS *R. V. Miller*
NATIONAL MARINE MAMMAL LABORATORY

SUBJECT: IMPACT OF OIL ON MOLTING SEALS

The process of fall molting in harbor seals, Phoca vitulina, involves shedding the old hair and growing a new, thicker coat of hair for the winter. As the old hair falls out in clumps and the new peltage grows, the animal is subject to additional physiological stress. Furthermore, they generally do not go in the water during this 2-3 week period because their thermal insulation is somewhat decreased until the new peltage grows in fully. Phocid seals are not as vulnerable to peltage-related thermal problems as are fur seals, e.g., because they maintain a thick blubber layer for thermal insulation, whereas fur seals and sea otters rely almost entirely on dense underfur for thermal insulation. Nevertheless, the animals are under additional stress during the molt and it can affect them in at least two ways:

1. chemical effects - the oil will more easily and more directly reach the skin and cause added irritation;
2. thermal effects - if the animals do go in the water, they may get wet to the skin, and even with their blubber layer, may suffer some thermal stress.

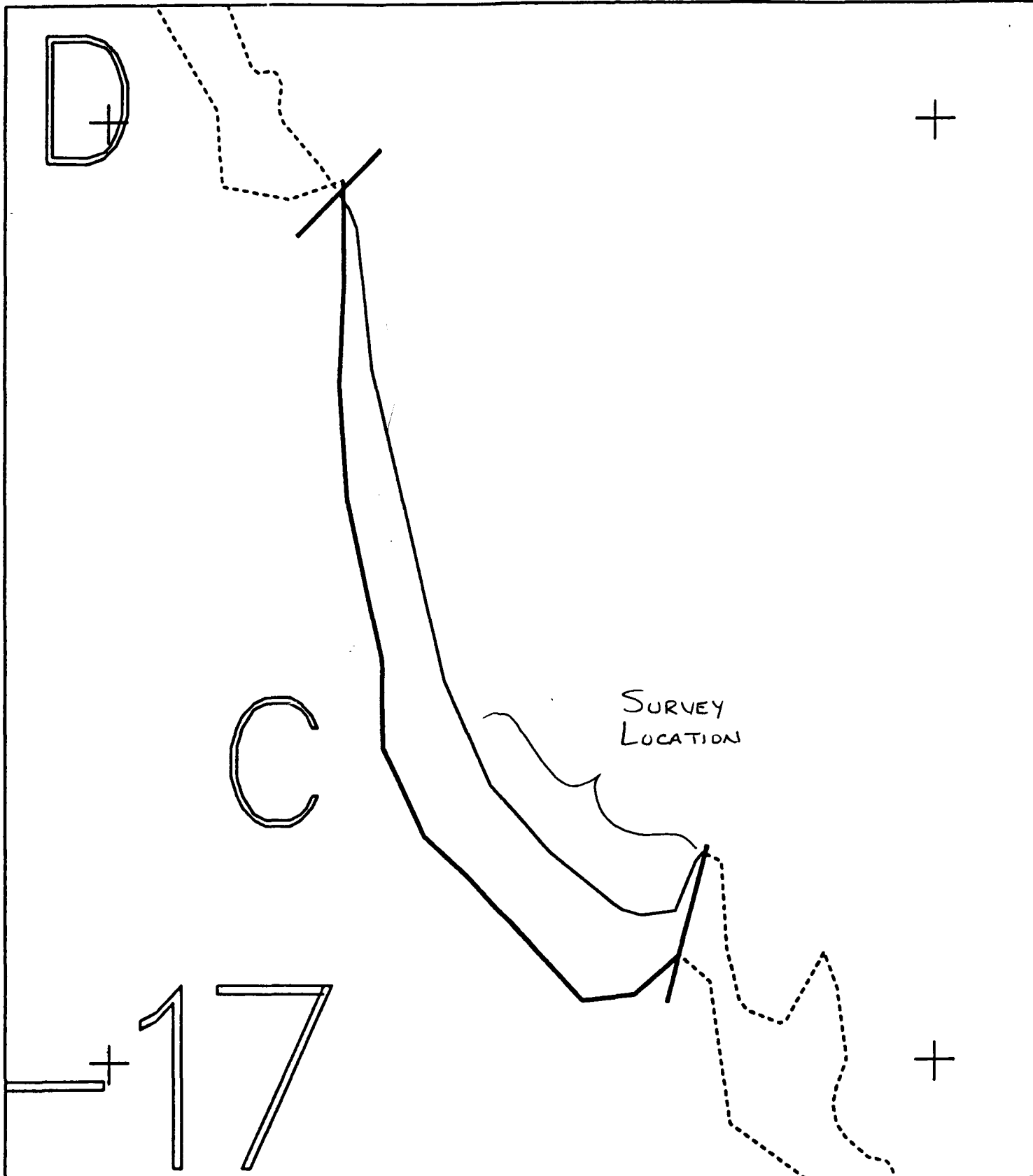
Therefore, although we cannot predict the degree of additional physiological stress the animals may undergo, it would be highly desirable to remove as much oil as possible from the haul-out areas now in order to minimize the possible oil-related trauma during the molt.

SUBSURFACE OIL REVIEW LA015-C

15-June-1991

FIELD TEAM

**Aimee Weseman - ADF&G
CWO Spurr - USCG
Rex Coulter - EXXON
Chris Dash - EXXON
Bryan Trimm - WCC**

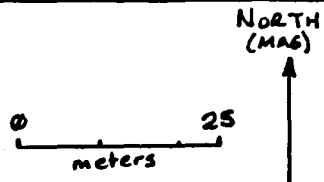


XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

LA015 C
 ADEC Subsegment Length: 715m
 METERS
 0 100 200
 AK State Plane Zone 4
 plc015c

Subdivision Field Map
 Map Key: PWSLA015C
 Name: _____
 Date: _____
 Date Entered: _____

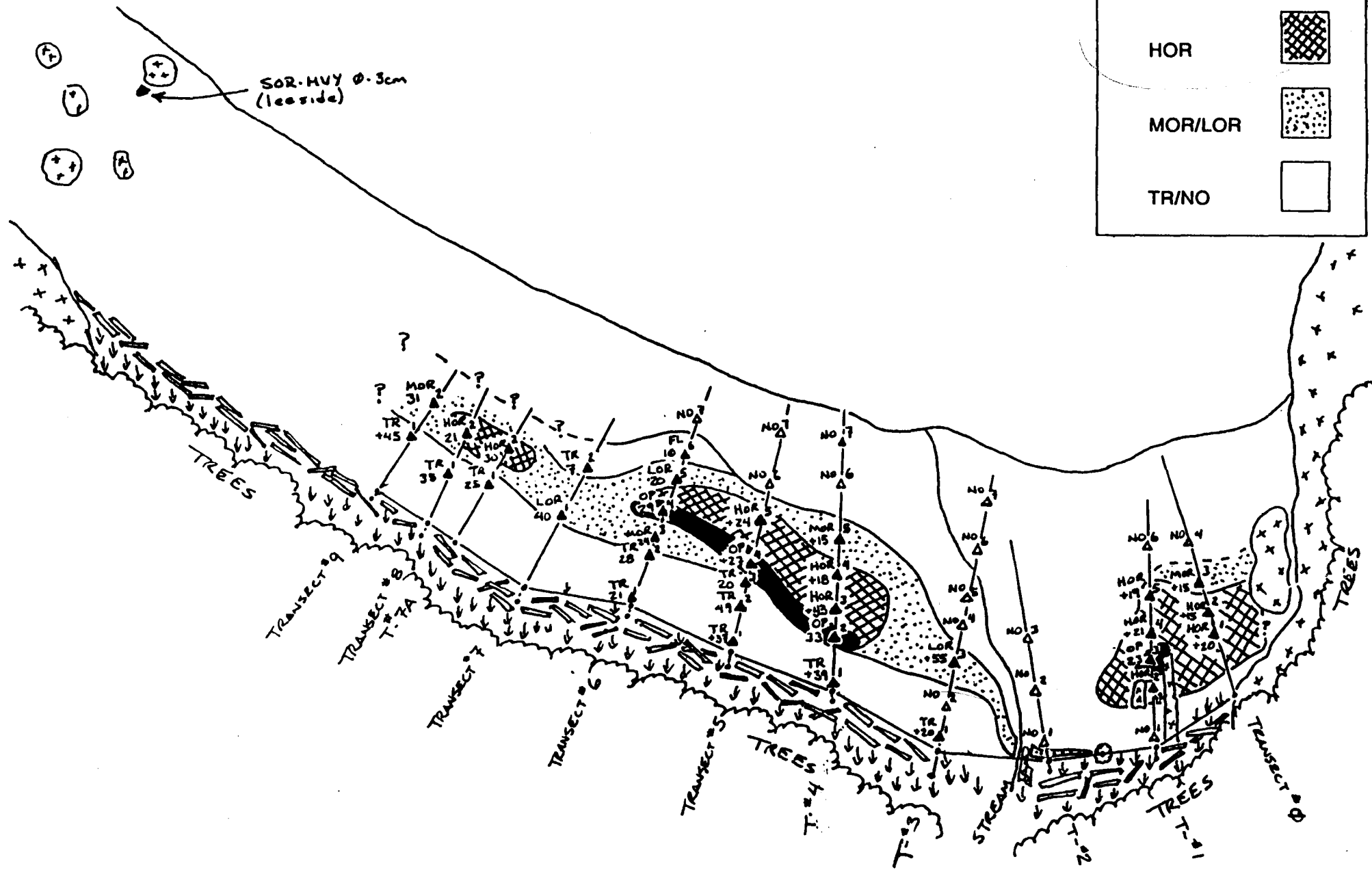
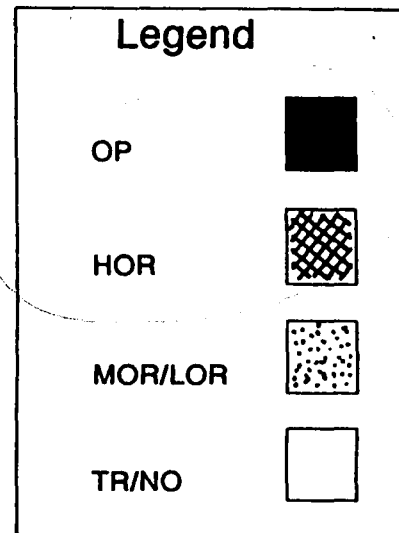




LA015-C

Maximum Subsurface Oil Character

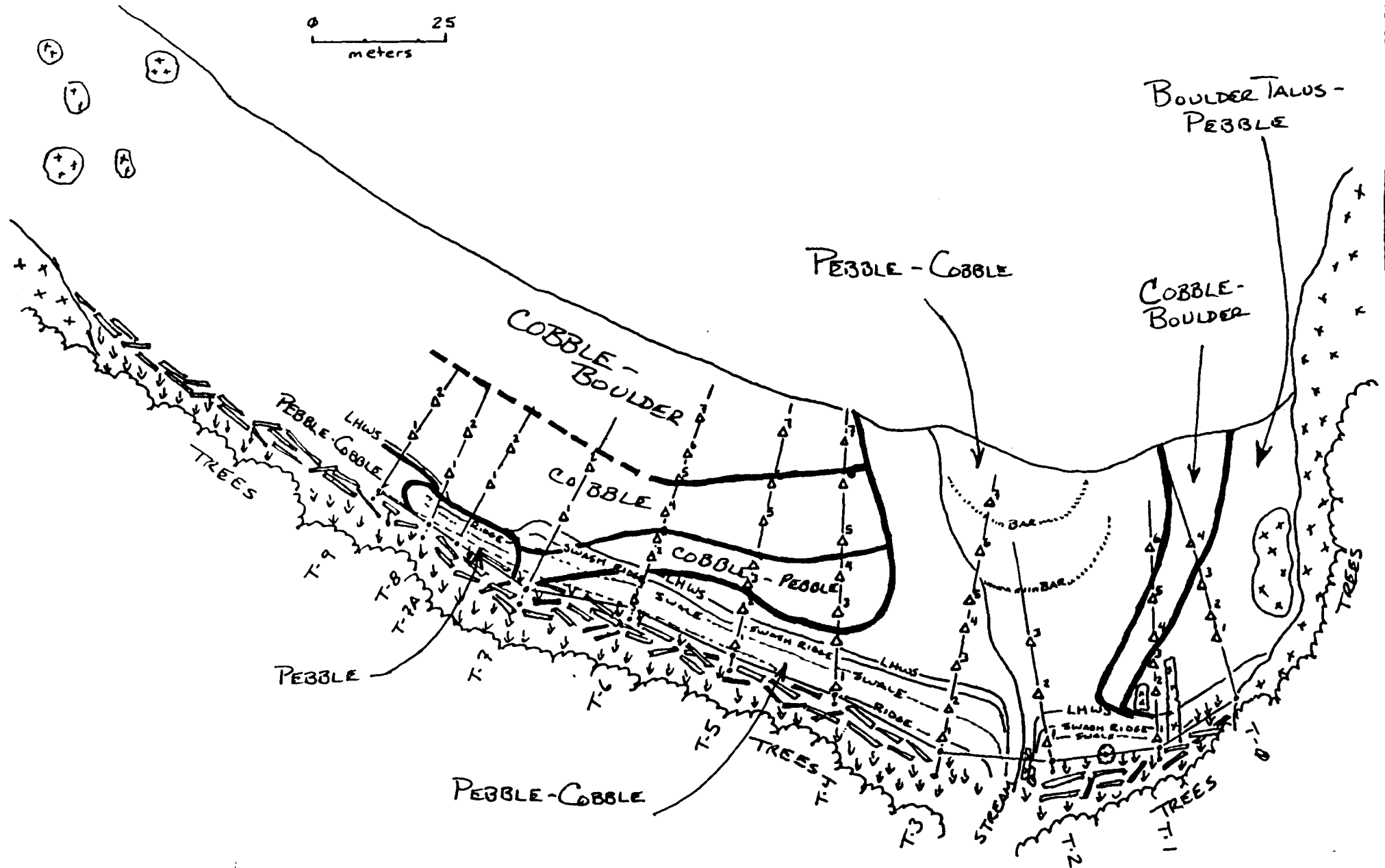
14-June-1991



LA015-C
Surface Grain Size
14-June-1991

NORTH
(MAG.)

0 25
meters



BAT 17 JUN 91

LA015-C

LEGEND

Grain Size	Surface Oil Characters	Subsurface Oil Characters
r - rock	ST - Stain	NO - No Oil
b - boulder	CT - Coat	LOR - Light Oil Residue
c - cobble	CV - Cover	MOR - Medium Oil Residue
p - pebble	SOR - Surface Oil Residue	HOR - Heavy Oil Residue
g - granule		OP - Oil Filled Pores
s - sand		
m - mud		
org - organics		
sh - shell hash		
bt - boulder talus		
Miscellaneous		
LHWS - Last high water swash		

LA015-C Base Line Transect

bearing varies from Transect to Transect

0.0m	rock headland; alders-seasonal grass-logs
12.5m	pebble-seasonal grass-logs
16.9m	Transect #1
18.7m	crest of storm berm base line transect parallel to log drift
26.7m	small spruce tree (2m high); CT & ST
37.4m	Transect #2; CT & ST
38.0m	upturned sandstone/shale; ST & CT
40.0m	edge of stream channel upturned sandstone/shale-pebble; ST & CT
43.0m	center line of stream channel upturned sandstone/shale-pebble-rare cobble; NO oil
46.4m	edge of stream channel pebble-cobble; swash ridge
50.5m	begin continuous log drift-pebble
52.4m	log drift-pebble-seasonal grass

LA015-C Transect #0

bearing of 344 degrees (magnetic)

- 0.0m intersection with 0.0m on base line transect
rock-alders-seasonal vegetation
- 1.0m pebble-boulder talus-seasonal vegetation
- 3.9m pebble-boulder talus
- 4.5m Last High Water Swash; CT & ST at 10%, CV on lee side of boulders
- 5.0m boulder talus-pebble

	Depth (cm)	Grain Size	Oil Character	Comments
Pit #1 12.5m	0 - 0	bt-p	CT & ST at 10%	
	0 - 10	g-p	LOR	
	10 - 20	g-p-c	HOR	high water content
	20 - 20	watertable	brown sheen	

Pit #2 16.3m	0 - 0	bt-p		
	0 - 3	p-g	LOR	
	3 - 15	g-p-c	MOR/HOR	
	15 - 15	watertable	brown sheen	

Pit #3 22.7m	0 - 0	bt-p	ST at 2%	
	0 - 4	g-p-c-b	LOR	
	4 - 15	c-p-b-g	MOR	
	15 - 15	watertable	brown sheen	
rock face is approximately 18.0m to the east & 10m from large talus				

Pit #4 29.5m	0 - 0	c-b-p	NO	
	0 - 17	g-p-sh-c	NO	
	17 - 17	watertable	NO	
	17 - 21	g-p-sh-c	NO	

LA015-C Transect #1
bearing of 358 degrees (magnetic)

0.0m back stake
logs-seasonal vegetation

2.1m front stake
logs-pebbles

2.55m pebble-rare cobble; ST <1%

	Depth (cm)	Grain Size	Oil Character	Comments
Pit #1	0 - 0	p	NO	
3.9m	0 - 10	g-org	NO	org = roots
	10 - 23	p-c-g-org	NO	org = roots
	23 - 30	g-p-c-org	NO	org = roots

7.0m swash line; pebble-rare boulder talus; ST at 2%

9.0m Last High Water Swash; drift debris-pebble-cobble-rock
drift debris-pebble-cobble-rock; ST at 10%

9.4m start of parallel 1.5m wide outcrop west of transect

11.3m pebble-cobble-boulder talus

13.2m end of parallel 1.5m wide outcrop west of transect

Pit #2	0 - 0	p-c-bt	ST at 15%	
13.7m	0 - 2	p-c-b	TR	TR = ST at 15%
	2 - 12	g-p-s-c-b	HOR	
	12 - 30	g-p-s-c-b	NO	

Pit #3	0 - 0	p-c-bt	NO	
18.8m	0 - 3	g-p-s-c-b	TR	TR = ST at 3%
	3 - 13	g-p	TR	
	13 - 23	g-p-c	HOR/OP	
	23 - 30	g-p-c	NO?	close to watertable
	30 - 30	watertable	brown sheen	bailed water level

pit is 2m west of 2m wide outcrop

22.0m cobble-pebble

LA015-C Transect #1
bearing of 358 degrees (magnetic)

Pit #4 24.0m	0 - 0	c-p	NO	
	0 - 3	p	NO	
	3 - 9	g-p-c	NO	
	9 - 15	p-c-g	NO	
	15 - 15	watertable	brown sheen	
	15 - 21	g-s-p-c	HOR	
	21 - 21	water level	brown sheen	bailed water level
could not lower watertable below 21cm, however, clean sediments were found beneath the water level				

26.0m cobble-pebble-boulder
bedrock ends to the east

Pit #5 30.7m	0 - 0	c-p-b	NO	
	0 - 2	p	NO	
	2 - 4	g-p	NO	
	4 - 17	g-s-p	HOR	
	17 - 19	p-c	MOR	
	19 - 19	watertable	brown sheen	
could not lower watertable below 19cm, however, clean sediments were found at approximately 25cm				

32.0m cobble-pebble

Pit #6 40.0m	0 - 0	c-p	NO	
	0 - 2	p	NO	
	2 - 17	g-p-sh	NO	
	17 - 34	g-p-c-sh	NO	
	34 - 34	watertable	NO	

LA015-C Transect #2

bearing of 351 degrees (magnetic)

- 0.0m back stake
logs-seasonal vegetation-upturned ss/sh bedrock
- 2.3m front stake
pebble-rare cobble-upturned ss/sh bedrock-logs-vegetation
ST at 30%
- 3.2m found LOR under pebbles at 10cm
- 5.4m pebble

	Depth (cm)	Grain Size	Oil Character	Comments
Pit #1	0 - 0	p-org	ST at 20%	
6.1m	0 - 12	p-c-org	NO	
	12 - 34	p-c-g	NO	rare granule

- 7.6m swale behind swash ridge; drift debris; pebble
- 9.5m swash ridge crest; pebble; NO oil
- 10.8m swale between swash ridges; seaweed drift
pebble; NO oil
- 13.0m Last High Water Swash; pebble-rare cobble; NO oil

Pit #2	0 - 0	p-c	NO	rare cobble
15.6m	0 - 4	p-c	NO	rare cobble
	4 - 34	p-c	NO	

Pit #3	0 - 0	p-c	NO	rare cobble
25.4m	0 - 5	p-c	NO	rare cobble
	5 - 28	p	NO	
	28 - 36	c-p	NO	
	36 - 60	p-c	NO	

- 35.0m face of tidal bar (approximately 15cm elevation rise)
- 47.0m face of tidal bar

LA015-C Transect #3

bearing of 011 degrees (magnetic)

- 0.0m back stake; pre-1964 beach terrace
cobble-pebble-seasonal vegetation
- 1.2m cobble-pebble-seasonal vegetation-logs
- 4.95m front stake
- 6.7m cobble-pebble-logs
- 7.0m crest of swash ridge

	Depth (cm)	Grain Size	Oil Character	Comments
Pit #1	0 - 0	p-c-logs	ST at 35%	
8.0m	0 - 17	p-c	TR	TR = CT at 85%
	17 - 20	c-p	TR	TR = CT at 20%

- 8.7m pebble-rare cobble; NO oil
- 12.4m swale behind swash ridge
pebble-rare cobble-few logs; NO oil

Pit #2	0 - 0	p-c	NO	seaweed drift
13.7m	0 - 13	p-c-org	NO	
	13 - 22	g-p-org	NO	
	22 - 25	p-g-org	NO	

- 15.7m pebble-cobble; NO oil
- 17.0m crest of swash ridge
- 18.4m Last High Water Swash (LHWS); seaweed drift
swash ridge face
- 20.0m base of swash ridge face

Pit #3	0 - 0	p-c	NO	
22.0m	0 - 20	p-c-g	NO	
	20 - 35	g-p-c-org	NO	
	35 - 55	g-c-p-org	LOR	

Pit #4	0 - 0	c-p	NO	
29.0m	0 - 1	c-p	NO	
	1 - 31	g-p-c-org	NO	
	31 - 41	p-g-org	NO	
	41 - 50	g-p-org	NO	

stream channel center is 4.5m to the east

LA015-C Transect #3
bearing of 011 degrees (magnetic)

Pit #5 34.7m	0 - 0	c-p	NO	
	0 - 23	p-g-c	NO	
	23 - 23	<i>watertable</i>	<i>NO</i>	
	23 - 35	p-g-c	NO	
stream channel center is 2.1m to the east				

36.8m edge of stream channel; pebble-cobble; NO oil

41.4m edge of stream channel; pebble-cobble; NO oil

Pit #6 43.4m	0 - 0	p-c	NO	
	0 - 13	p-g-c	NO	
	13 - 13	<i>watertable</i>	<i>NO</i>	
	13 - 23	c-p	NO	
	23 - 34	p-g-c	NO	

50.0m tidal bar face (approximately 15cm)

Pit #7 53.0m	0 - 0	p-c	NO	top of tidal bar
	0 - 11	p	NO	
	11 - 19	c-p	NO	
	19 - 21	p-g	NO	
	21 - 21	<i>watertable</i>	<i>NO</i>	<i>perculating from stream</i>
	21 - 29	c-p-g	NO	

66.5m end of tidal bar; cobble

LA015-C Transect #4

bearing of 003 degrees (magnetic)

0.0m back stake
logs-pebble-cobble-seasonal vegetation; NO oil

1.95m front stake
pebble-cobble

	Depth (cm)	Grain Size	Oil Character	Comments
Pit #1	0 - 0	p-c	NO	
3.0m	0 - 39	p-c-g-org	TR	TR = ST at 2%

7.0m swale behind swash ridge
pebble-cobble-logs-seaweed drift

9.4m crest of swash ridge

10.9m Last High Water Swash (LHWS)

Pit #2	0 - 0	p-c	NO	face of swash ridge
11.8m	0 - 12	p-c-org	NO	
	12 - 22	p-c	NO	rare cobble
	22 - 30	g-p	OP/HOR	
	30 - 33	s-g-p	HOR	
	33 - 38	s-m-p-g	NO	

13.5m cobble-pebble

Pit #3	0 - 0	c-p	NO	
16.8m	0 - 1	c-p	NO	
	1 - 12	p	NO	
	12 - 18	g-p-s-org	LOR	
	18 - 43	g-s-p-c-org	HOR	

Pit #4	0 - 0	c-p	NO	
23.4m	0 - 11	p-c	TR	TR = ST at 5%; rare cobble
	11 - 14	c-p-g-org	LOR	
	14 - 18	c-p-g	MOR/HOR	
	18 - 18	watertable	brown sheen	

Pit #5	0 - 0	c	NO	
30.0m	0 - 7	p	NO	
	7 - 15	s-g-p	MOR	
	15 - 15	watertable	brown sheen	

LA015-C Transect #4

bearing of 003 degrees (magnetic)

Pit #6 40.2m	0 - 0	c	NO	
	0 - 11	p-g-c	NO	
	11 - 11	watertable	silver sheen	possibly from shovel
	11 - 17	p-g-c	NO	

42.5m cobble-pebble-boulder

Pit #7 48.5m	0 - 0	b-c	NO	
	0 - 2	p-org	NO	
	2 - 12	g-p-sh-org	NO	
	12 - 13	c-p-g-sh	NO	
	13 - 13	watertable	NO	
	13 - 18	c-p-g-sh	NO	

LA015-C Transect #5

bearing of 013 degrees (magnetic)

- 0.0m back stake
seasonal vegetation-logs
- 2.87m front stake
pebble-cobble-seasonal vegetation-logs
- 4.2m pebble-cobble; NO oil
mechanical berm cut (40cm height change)

	Depth (cm)	Grain Size	Oil Character	Comments
Pit #1 5.0m	0 - 0	p-c	NO	
	0 - 1	p-c	NO	
	1 - 27	p-c-org	TR	TR = CT & ST at 25%
	27 - 37	p-g-org	TR	TR = ST at 2%

- 7.3m swale behind swash ridge; drift debris-pebble-cobble
- 9.1m swash ridge crest; pebble-cobble
- 10.7m Last High Water Swash (LHWS); pebble-cobble

Pit #2 12.2m	0 - 0	p-c	NO	
	0 - 1	p-c	NO	
	1 - 12	p-org	NO	
	12 - 32	p-c-org	TR	TR = ST at 40%
	32 - 49	g-p-c	TR	TR = ST at 40%
	49 - 51	s-p	NO	

- 15.2m cobble-pebble

Pit #3 16.7m	0 - 0	c-p	NO	
	0 - 2	p	NO	
	2 - 15	g-s-p-c	NO	
	15 - 20	s-g-p	TR	
	20 - 25	s-g-p	NO	

Pit #4 20.0m	0 - 0	c-p	NO	
	0 - 5	p	NO	
	5 - 15	g-s-p-c	LOR	
	15 - 27	g-p-c	OP	
	27 - 27	watertable	brown sheen	

- 21.7m cobble

LA015-C Transect #5
bearing of 013 degrees (magnetic)

Pit #5 28.0m	0 - 0	c	NO	
	0 - 4	p	NO	
	4 - 12	p-g-c	NO	
	12 - 17	p-c	NO	
	17 - 19	g-s-p	HOR/MOR	
	19 - 19	watertable	brown sheen	
	19 - 24	g-s-p	HOR/MOR	

Pit #6 35.2m	0 - 0	c	NO	
	0 - 5	p	NO	
	5 - 6	p-g-s-org	NO	
	6 - 11	s-p-sh-c	NO	
	11 - 11	watertable	brown sheen	possibly from shovel
	11 - 20	s-p-sh-c	NO	

42.0m cobble-boulder

Pit #7 45.2m	0 - 0	c-b	NO	
	0 - 6	p-c-g	NO	
	6 - 6	watertable	silver sheen	possibly from shovel
	6 - 19	p-c-g	NO	

LA015-C Transect #6

bearing of 020 degrees (magnetic)

0.0m back stake
seasonal grass-logs

1.6m logs

2.35m front stake
pebble-cobble; edge of mechanical berm cut

	Depth (cm)	Grain Size	Oil Character	Comments
Pit #1	0 - 0	p-c	ST at 5%	rare cobble
3.1m	0 - 21	p-c-org	TR	TR = CT & ST at 75%
	21 - 39	g-p-c-roots	NO	

6.7m swale behind swash ridge
drift debris-logs-pebble-cobble

8.3m crest of swash ridge

10.0m Last High Water Swash

Pit #2	0 - 0	p-c	ST <1%	
12.2m	0 - 1	p-c	TR	TR = ST at 45%
	1 - 28	c-p	TR	TR = ST at 45%
	28 - 38	s-g-p	NO	

Pit #3	0 - 0	p	NO	
15.7m	0 - 3	p	NO	
	3 - 11	g-s-p-c	TR/LOR	
	11 - 24	p-g	MOR	
	24 - 30	s-g-p	NO	

17.0m cobble

Pit #4	0 - 0	c	ST at 20%	ST on undersides of c
20.8m	0 - 5	p	TR	TR = ST at 15%
	5 - 20	s-g-p-m	LOR	
	20 - 29	p-g	HOR/OP	
	29 - 29	brown sheen		
	29 - 36	p-g	NO?	bailed water to 36cm

26.5m cobble-boulder

LA015-C Transect #6

bearing of 020 degrees (magnetic)

Pit #5 27.2m	0 - 0	c-b	NO	
	0 - 10	p-c	NO	
	10 - 20	g-s-p-c	LOR	
	20 - 20	<i>watertable</i>	<i>brown sheen</i>	
	20 - 27	p-g	NO	

30.0m cobble-pebble-rare boulder

Pit #6 32.3m	0 - 0	c-p-b	NO	rare boulder
	0 - 2	p	NO	
	2 - 4	g-s-p-org	NO	
	4 - 7	g-p	FL (slv)	
	7 - 7	<i>watertable</i>	<i>brown sheen</i>	
	7 - 10	g-p	FL (slv)	
	10 - 20	p-g-c	NO	

35.5m cobble-boulder

Pit #7 39.0m	0 - 0	c-b	NO	
	0 - 3	p-c-b	NO	
	3 - 3	<i>watertable</i>	<i>NO</i>	
	3 - 22	p-c-b	NO	

LA015-C Transect #7

bearing of 028 degrees (magnetic)

- 0.0m back stake
cobble-pebble-seasonal vegetation
pre-1964 beach terrace
- 1.6m cobble-pebble-seasonal vegetation-logs
- 3.5m front stake
- 6.8m pebble-cobble
edge of mechanical cut (35cm elevation drop)
- 8.1m cobble-pebble; NO oil
- 10.2m drift debris-cobble; ST at 5%
- 13.0m swash ridge crest (start of ridge to the east)
- 15.7m Last High Water Swash; drift debris (seaweed & sticks)-cobble

	Depth (cm)	Grain Size	Oil Character	Comments
Pit #1 18.5m	0 - 0	c	ST at 1%	
	0 - 35	c	TR	TR = ST at 20%
	35 - 40	s-p-org	LOR	
	40 - 50	s-p-org	NO	
	50 - 55	m-p	NO	iron oxide stained
Pit #2 28.7m	0 - 0	c	NO	
	0 - 4	p	NO	
	4 - 7	s-g-p-c	TR	
	7 - 37	s-g-p-c-org	NO	

LA015-C Transect #7A

bearing of 030 degrees (magnetic)

- 0.0m intersection at 54.7m of the second base line transect
logs-seasonal grass
- 2.0m pebble
edge of mechanical cut (35cm drop)
- 3.6m swale behind swash ridgel; drift debris
- 4.5m swash ridge crest
- 7.0m Last High Water Swash; drift debris (seaweed-sticks)
cobble-pebble

	Depth (cm)	Grain Size	Oil Character	Comments
Pit #1 13.0m	0 - 0	c-p	ST at 15%	ST on undersides of clasts
	0 - 5	p-c-org	TR	TR = ST at 30%
	5 - 25	c-p-g-s-org	TR	TR = ST
	25 - 37	s-g-p-org	NO	
Pit #2 20.6m	0 - 0	c	NO	
	0 - 5	p	NO	
	5 - 20	c-p-g		
	20 - 25	s-g-p-c	LOR	
	25 - 30	s-g-p-c	HOR	
	30 - 37	s-m	NO	iron oxide stain

LA015-C Transect #8

bearing of 024 degrees (magnetic)

- 0.0m back stake
logs-seasonal vegetation
- 3.4m pebble-seasonal vegetation
- 6.0m swale behind swash ridge; drift debris
- 7.0m swash ridge crest
- 10.2m Last High Water Swash; cobble-pebble

	Depth (cm)	Grain Size	Oil Character	Comments
Pit #1	0 - 0	c-p	ST at <1%	
13.6m	0 - 35	c-p	TR	TR = ST at 20%
	35 - 45	g-s-p-c	NO	iron oxide stain

- 14.0m cobble

Pit #2	0 - 0	c	ST at <1%	
21.9m	0 - 2	p	NO	
	2 - 17	g-s-p-c	NO	
	17 - 21	g-s-p	HOR	
	21 - 32	g-s-p	NO	
	32 - 40	m-s-p-c	NO	iron oxide stain

LA015-C Transect #9
bearing of 033 degrees (magnetic)

0.0m back stake
 logs-pebble

1.7m pebble-logs

2.0m front stake
 pebble-cobble-logs

10.7m Last High Water Swash
 cobble

	Depth (cm)	Grain Size	Oil Character	Comments
Pit #1	0 - 0	c	ST at 5%	
14.0m	0 - 45	c-p-org	TR	TR = CT & ST at 70%
Pit #2	0 - 0	c	ST at 2%	
21.3m	0 - 15	g-s-p	LOR	
	15 - 31	p-g-s-c	MOR	
	31 - 45	g-s-p	NO	
	45 - 45	watertable	NO	