

EL-052  ASC 16902 site #
NORTHWEST BAY (Eleanor Island)

ACE 1369538



EL-052 ASC 16902 site #
NORTHWEST BAY (Eleanor Island)

ACE 7237250
-L/AC/FF

Smead®

Prince William Sound

DOCUMENTS IN STREAM FILES

ASC# _____ Segment # _____

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

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

4-13-90 A

Pre-ANADSCAT-90

ADF&G MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS SS DS TS AVS SCHA MMS PTA2 REGION: PWS KP, CI K, APMETHOD: Aerial Ground Boat3 DATE: 4-13-9015 HIGH TIDE TIMES: 121 TEAM RECORDER: R. Gostin4 START TIME: 080116 HIGH TIDE HTS: 122 OBSERVERS: BOB LEMON5 STOP TIME: 081317 LOW TIDE TIMES: 123 AGENCY: EXXON / ADF&G ATW6 SEGMENT #: EL05218 LOW TIDE HTS: 124 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) Number12 SOURCE: Map Loran13 LOCATION: Eleanor Island14 DESCRIPTION: ADW BAY

Oil _____

Sediment _____

Biological _____

Water _____

EXTENT OF OIL

	SHORELINE				STREAM			
	L	W	M ²	%	L	W	M ²	%
27 SURFACE COVERAGE								
28 SURFACE THICKNESS								
29 PENETRATION								

36 CATALOGED ANAD. FISH STREAM? Y (N)37 CATALOG #: 296482-ATW

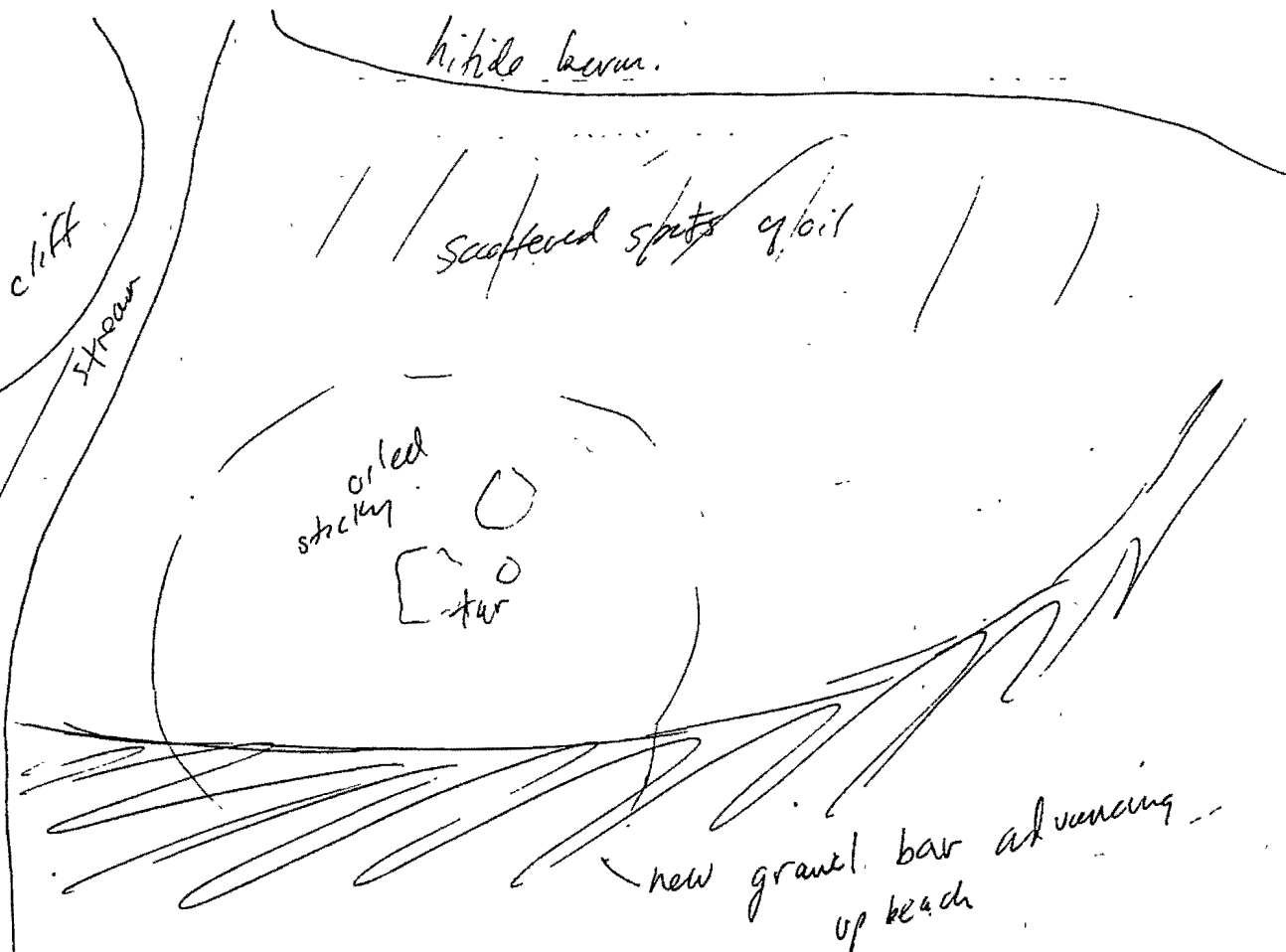
38 STREAM NAME: _____

39 OIL IN STREAM BED? Y (N)40 OIL ON STREAM BANKS? (N)41 OIL ON BEACH ADJACENT TO MOUTH? (N)
(within 50 meters)42 OIL WITHIN 1 MILE OF STREAM? (N)30 OVERALL OIL IMPACT: N VL L M H31 OIL TYPE: Pooled Mousse Tar Asphalt Sticky Stain32 OILED DEBRIS? (Y) N33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cove
Lagoon Marsh34 WAVE EXPOSURE: High Moderate Low35 SUBSTRATE TYPE: Bedrock _____ Boulder _____ Cobble /
Gravel / Sand _____ Mud/silt _____Where: upper inter-tidal upper to mid. inter43 ANADROMOUS FISH PRESENT? Y (N)44 ANADROMOUS FISH OBSERVATION
Species Aerial Ground

COMMENTS: large oiled section surrounding boulders near stream
in upper inter-tidal + mid inter-tidal. Somewhat covered by
new advancing storm generated gravel bar.
gravel + large boulders coated - 1"-2" deep in sediments
coated. shore / stream

ACE 7237207/HIS

NAME(S)	DESCRIPTION

46 OIL DISTRIBUTION DIAGRAM

4-13-90

EL 052
226-10-16902 AJW

Sample taken
Photo frame # and
shot direction.

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: 226-10-16702
 SURVEY TYPE:
 METHOD:
 DATE: 4/13/90
 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						2-5	AP/502
SITE 2							MS
SITE 3							CT
SITE 4							
SITE 5							

OVERALL OIL IMPACT:

OIL IN STREAM CHANNEL?

SUBSTRATE

Bedrock Granule
 Boulder Sand
 Cobble Silt
 Pebble Veget.

OIL ON BEACH WITHIN 50M OF STREAM MOUTH?

SPECIES					
COUNT					

COMMENTS:

Pre-ANADSCAT-90

scattered spots of oil upper intertidal

ANAD SCAT-90

ADF&G MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: ES (SS) CS TS AVS SC&A MM&S PTA

2 REGION: (FWS) KP,CI K,AP

METHOD: Aerial (Ground) Boat

3 DATE: 4/24/90

15 HIGH TIDE TIMES: 1

21 TEAM RECORDER: R. Gustin

4 START TIME: 1100

16 HIGH TIDE HTS: 1

22 OBSERVERS: A. Weisman

5 STOP TIME: 1138

17 LOW TIDE TIMES: 1

23 AGENCY: ADFG

6 SEGMENT #: EL 052

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: 400 466

9 STAT AREA:

20 USCG QUAD:

10 LAT:

11 LONG:

26 SAMPLES TAKEN? Y (N) Number

12 SOURCE: (Map) Loran

Oil

13 LOCATION: Eleman Is.

Sediment

14 DESCRIPTION: NW Bay

Biological

Water

EXTENT OF OIL

	SHORELINE				STREAM			
	L	W	M ²	%	L	W	M ²	%
27 SURFACE COVERAGE								
28 SURFACE THICKNESS	1cm							
29 PENETRATION	4-5cm							

36 CATALOGED ANAD. FISH SREAM? Y (N)

37 CATALOG #: 276 -10 -16902

38 STREAM NAME:

39 OIL IN STREAM BED? Y (N)

40 OIL ON STREAM BANKS? Y (N)

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

42 OIL WITHIN 1 MILE OF STREAM? (N)

Where:

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)

43 ANAOROMOUS FISH PRESENT? Y (N)

34 WAVE EXPOSURE: High (Moderate) (Low)

44 ANAOROMOUS FISH OBSERVATION
Species Aerial Ground

35 SUBSTRATE TYPE: Bedrock Boulder 5 Cobble 20

Gravel 75% Sand Mud/silt

COMMENTS: Upper intertidal is sporadically dotted with mousse patches some of which penetrate 2-3 cm. No oiled debris was noticed in the supratidal or above. The salmon stream edge & bank appeared uncoiled / no sheen was kicked up in stream sediments except a lightly sheened area in the lower section of the middle ITZ.

EL052

45 PHOTOLOG

226-10-16902

FRAME(S)

DESCRIPTION

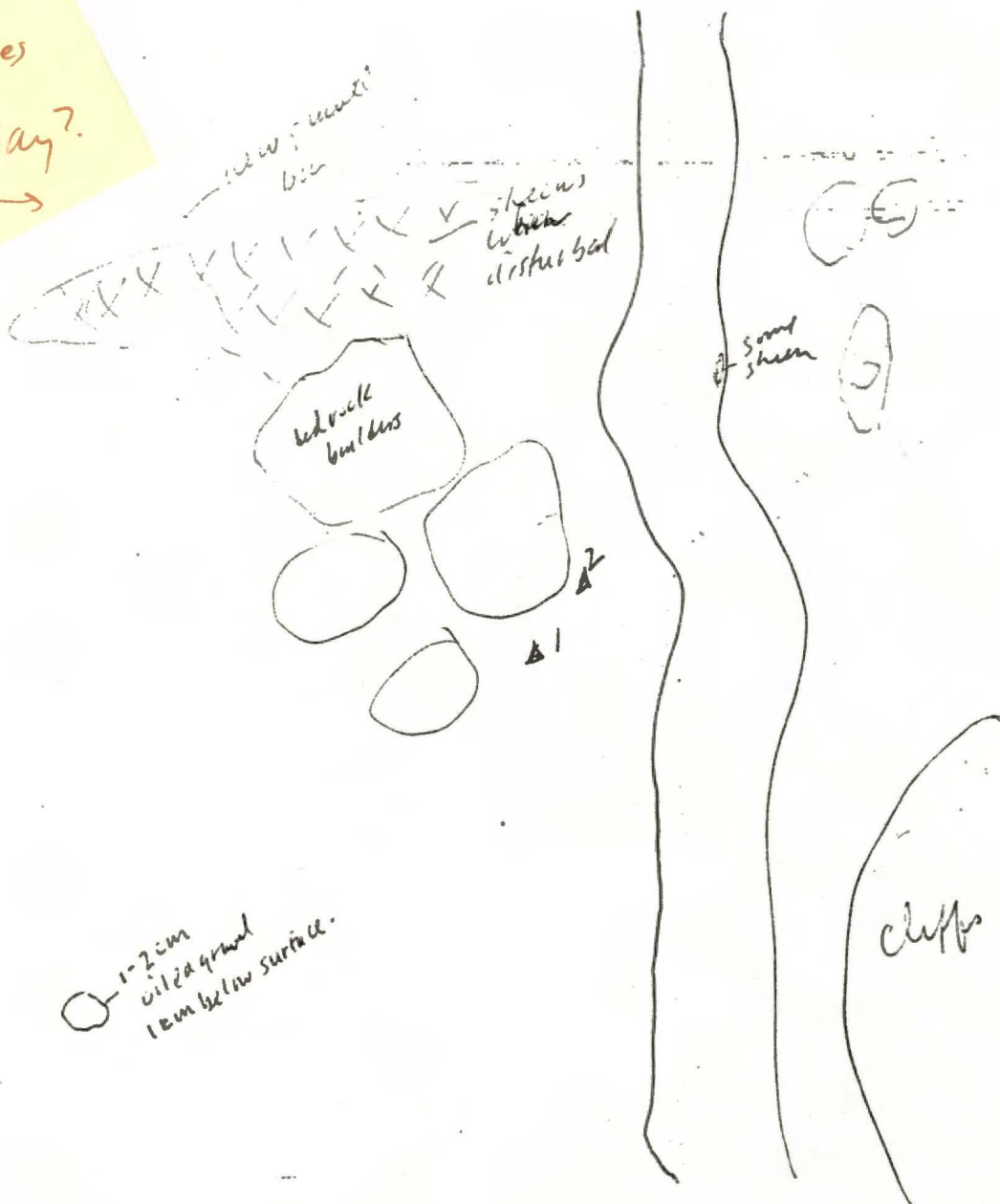
Pit #1 16 cm surface to 4 cm oil

Pit #2 22 cm (oil) ~~3 cm to 1 cm below surface~~ (5 cm to 10 cm deep oil)

The single largest area of oiling is in the middle upper tidal zone, near several large bedrock boulders. It appears a large segment of oil was deposited here and penetrated at least 4 cm possibly deeper in areas. This oil appears to be highly mobile and if disturbed puts out heavy sheen. Its nearness to the salmon spawning gravels is cause for concern.

46 OIL DISTRIBUTION DIAGRAM

what does
this say?
→



Sample taken
Photo frame # and
shot direction.

ACE 7237196

Recommendations *

Perform work using proper tidal window - (0 → -1.5)

Remove oiled sediments in heavily oiled section west of stream channel near bedrock boulders in Lower & middle ITZ, and upper & L.I.T.Z.

Survey & remove any other sporadic oiled segments found in Upper F.T.Z or middle, lower ITZ.

After removal till these areas and apply Bolting Process.

Remove sediments, gravels - anywhere sheening is noted.

Remove any oiled debris or vegetation found.

Oiled sediments / gravels can be hauled to whittier for composting (Bolting process) for use in road maintenance.

ASC NUMBER:

SEGMENT NUMBER:

YR CATALOGED:

LOCATION:

STREAM NAME:

KODIAK K-UNIT:

USGS QUADRANGLE:

SHORELINE TYPE:

WAVE EXPOSURE:

LATITUDE:

LONGITUDE:

LEGAL:

ALL SEGMENTS:

ASC NUMBER: 226-10-16902

SURVEY TYPE:

METHOD:

DATE: 4/24/90

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.

	LENGTH m	WIDTH m	M2	%	THICK cm	PEN cm	OIL TYPE
SITE 1						4	OR
SITE 2							ms/pt
SITE 3							
SITE 4							
SITE 5							

OVERALL OIL IMPACT:

OIL IN STREAM CHANNEL?

SUBSTRATE

Bedrock

Boulder

Cobble

Pebble

Granule

Sand

Silt

Veget.

OIL ON BEACH WITHIN 50M OF STREAM MOUTH?

SPECIES

COUNT

ANADSCAT 90

COMMENTS:

The single largest area of oiling is in ~~the~~ the middle intertidal zone, near several large bedrock boulders. It appears a large segment of oil was deposited here and penetrated at least 4 cm, possibly deeper in areas. This oil appears to be highly mobile and, if disturbed puts out a heavy sheen. It's nearness to the salmon spawning grounds is cause for concern.

continue comments on
3rd page

★

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: 4/27/91 16) HIGH TIDE TIME: _____ 22) TEAM RECORDER: Tom Crowe
- 5) START TIME: 1910 17) HIGH TIDE HTS: _____ 23) OBSERVERS: AMEE WISEMAN
- 6) STOP TIME: 2035 18) LOW TIDE TIMES: 1900-1930 24) AGENCY: ADF&G
- 7) SEGMENT #: EL52B 19) LOW TIDE HTS: +1.5 25) PHOTOS TAKEN: Y (N)
- 8) K-UNIT: _____ 20) TIDE HT AT SURVEY: +1.5 to 2.5 ROLL #: _____ FRAMES: _____
- 9) LAT: _____ Ebb Slack Flood Slack 26) VIDEO TAKEN: Y (N)
- 10) LONG: _____ 21) USCG QUAD: _____ TAPE #: _____
- 11) ASC #: 226-10-16402 START: _____ STOP: _____
- 12) STREAM NAME: _____ 27) SAMPLES TAKEN? Y (N)
- 13) LOCATION: NW BAY ELANOR IS SAMPLE I.D. _____
- 14) WAVE EXPOSURE: High Moderate Low
- 15) SHORELINE TYPE: Headland Low-lying Rocks Beach
- Cove Lagoon Marsh

28) EXTENT OF OIL

	DEPTH LENGTH cm	WIDTH m	M2	%	THICK cm	PEN cm	OIL TYPE
MT SITE 1	5 cm						HOR
Pt SITE 2	20 cm						NO OIL
Pt SITE 3	5 cm						HOR
SURF SITE 4	5 m	1 m	5	40	2 cm		LSOR
SITE 5							

- 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 10% Gravel 90% Sand _____ Cobble _____ Mud/Silt _____

- 35) COMMENTS: RECOMMEND MANUAL TILTING OF FURIED HOR IN SEEP ALONG WITH MAPPING OIL WITH POM POMS. RETURN TO THIS SEGMENT 4/28/90 TO FINISH OG MAPPING. VERY MINUTE AMOUNTS OF SURFACE OIL WAS VISIBLE. RETURN 4/30/91 YES. 1130 START

34) WILDLIFE OBSERVATION

Species	Number
Bald Eagle	1
Gulls	12
Harbor Seal	1

4/27/91

EL 52

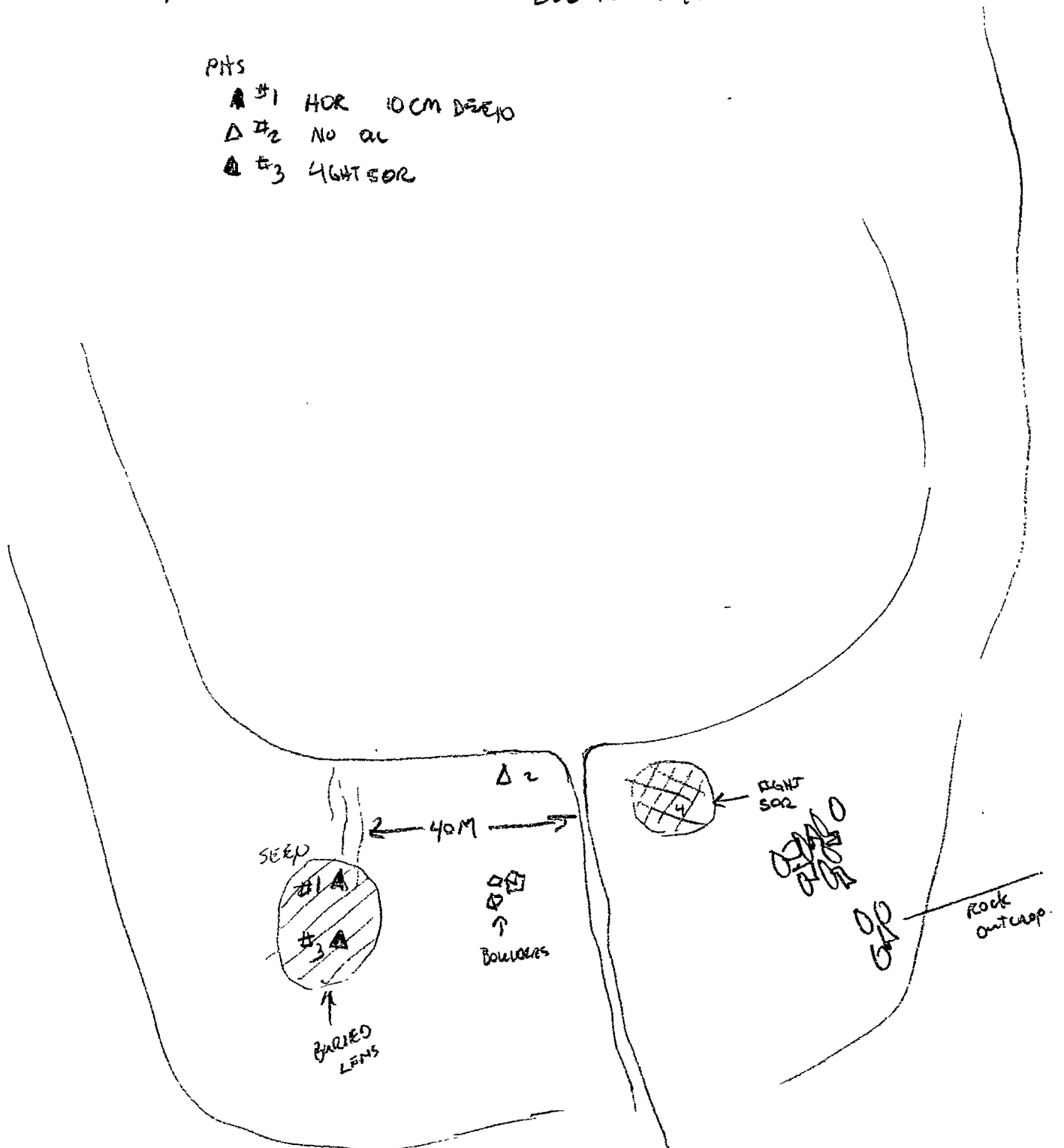
266-10-16402

PITS

#1 HOR 10CM DEEP

#2 NO AL

#3 LIGHT SOIL





ANADROMOUS FISH STREAMS/OILING CONDITION PWS

Segment # EL52 ASC# 226-10-16902 Location NW Bay

Date 8/6/90 Recorder/Observer Aimee Weseman

Oil in streambed None sighted Oil on streambanks NONE sighted

Oil within 50m of mouth yes Anadromous Fish present several
Picks seen jumping far off-shore

Description of oil and comments
West side of stream - a 11m long x 6m wide patch of Heavy to Mod
OR sediments in MITZ - 10m west of stream channel

62m west of channel - a 2m wide x 10m long area of OR sed in
MITZ in stream seep - gives off rainbow sheen when disturbed.

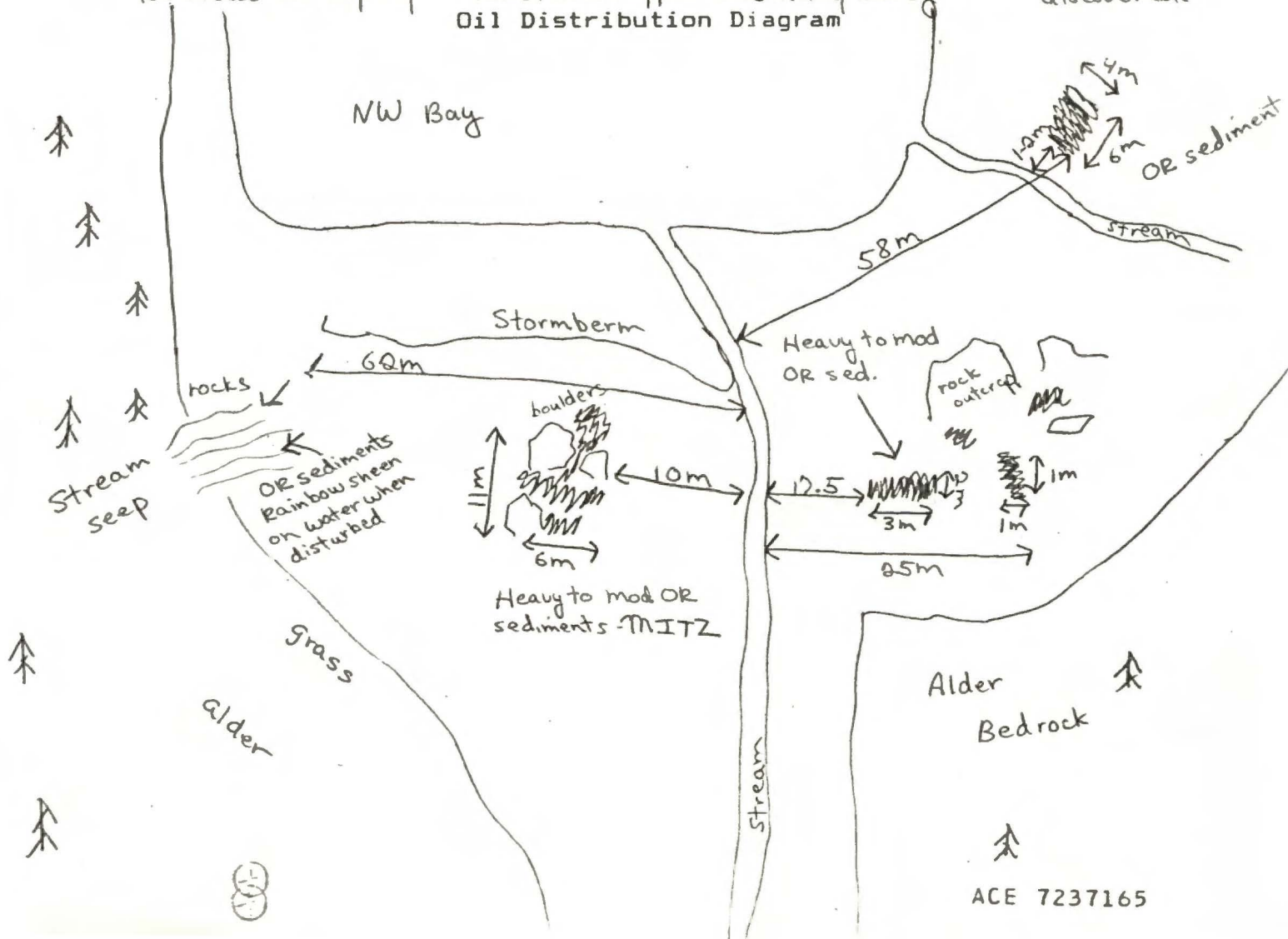
East side - a 3m long x 2m wide patch of OR sediment - 12.5m from stream
channel MITZ - several smaller patches same area

MITZ could contain a lense of oil, rubbing the length.

Per - manual removal OR sed & custom blen Mechanical till if oil lense

Re-assess next spring Pair of Heron appear to be nesting nearby discovered.

Oil Distribution Diagram



Duplicate.

ANADROMOUS FISH STREAMS/OILING CONDITION
PWS

Segment # EL52 ASC# 226-10-16902 Location NW Bay

Date 8/6/90 Recorder/Observer Aimee Weseman

Oil in streambed NONE Oil on streambanks NONE sighted

Oil within 50m of mouth yes Anadromous Fish present several

Picks seen jumping far off-shore

Description of oil and comments

West side of stream - a 11m long x 6m wide patch of Heavy to mod OR sediments in MITZ - 10m west of stream channel

62m west of channel - a 2m wide x 10m long area of OR sed in MITZ in stream seep - gives off rainbow sheen when disturbed.

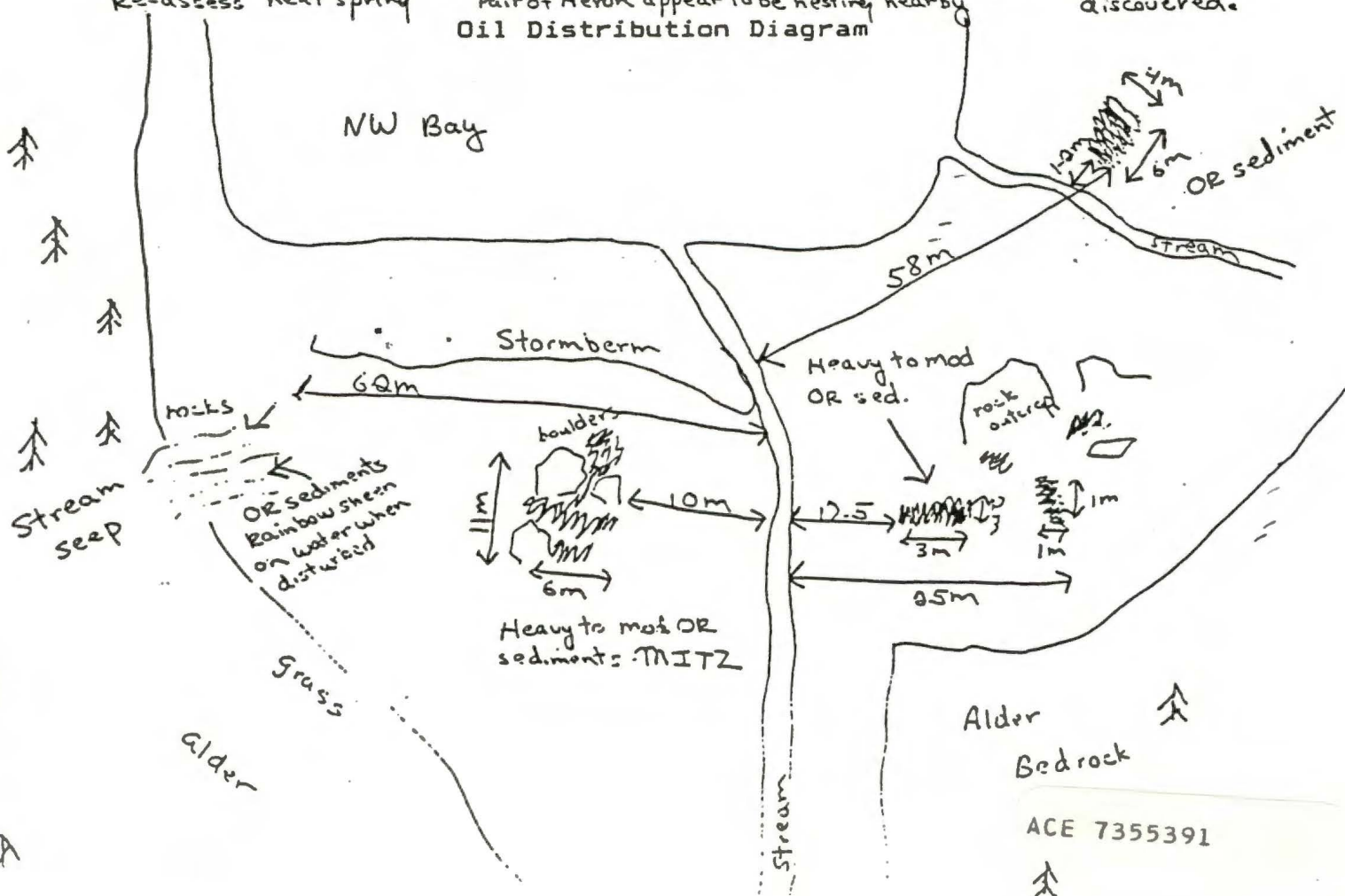
East side - a 3m long x 2m wide patch of OR sediment - 17.5m from stream channel MITZ - several smaller patches same area

MITZ could contain a lense of oil, running the length.

Rec - manual removal OR sed & custom blen Mechanical till if oil lense discovered.

Re-access next spring Pair of Heron appear to be nesting nearby

Oil Distribution Diagram



* Dup

ANADROMOUS FISH STREAMS/OILING CONDITION
PWS

Segment # EL52 ASC# 226-10-16902 Location NW Bay

Date 8/6/90 Recorder/Observer Aimee Weseman

Oil in streambed None sighted Oil on streambanks NONE sighted

Oil within 50m of mouth yes Anadromous Fish present several
Picks seen jumping far off-shore

Description of oil and comments

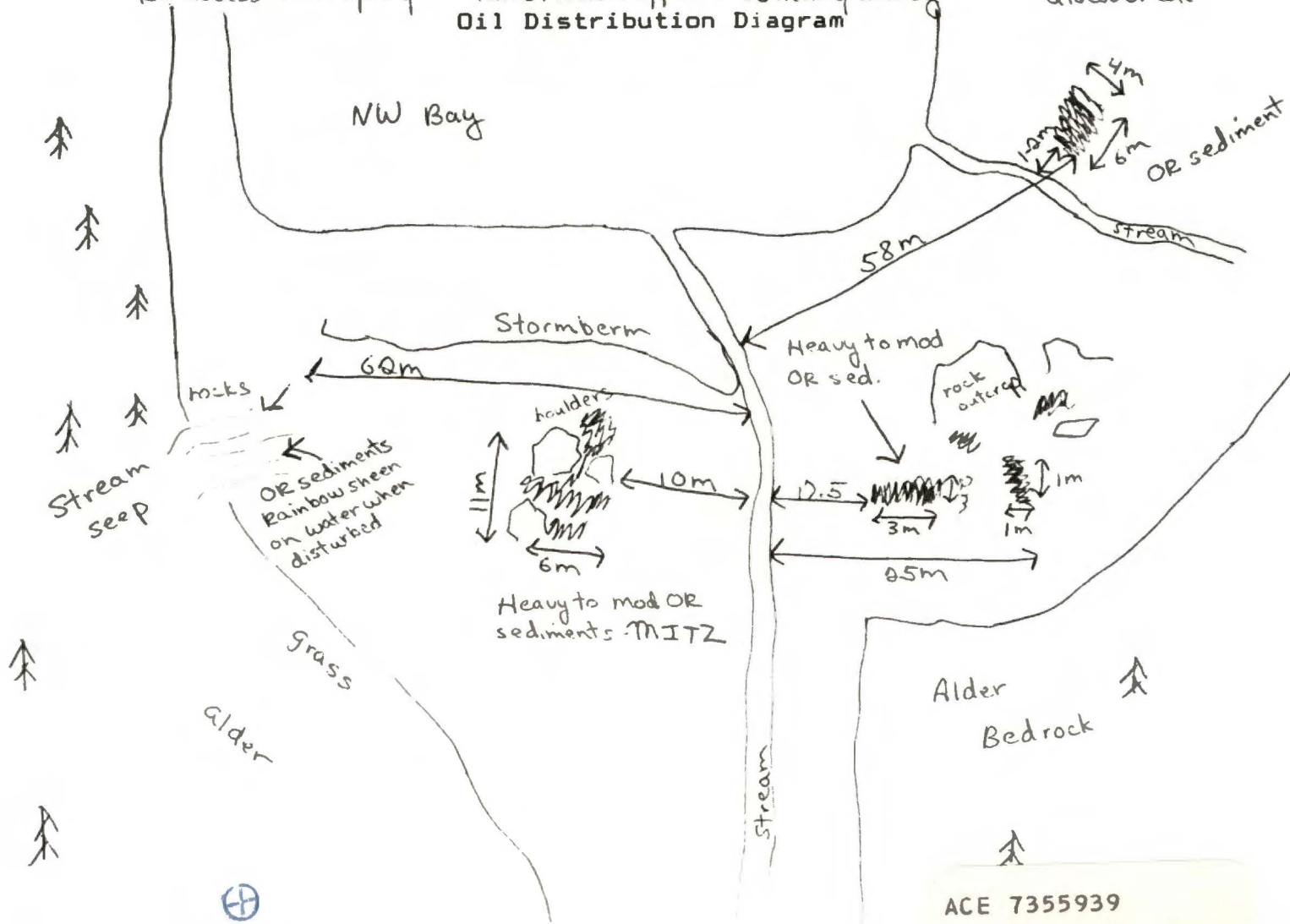
West side of stream - a 11m long x 6m wide patch of Heavy to Mod
OR sediments in MITZ - 10m west of stream channel

62m west of channel - a 2m wide x 10m long area of OR sed in
MITZ in stream seep - gives off rainbow sheen when disturbed.

East side - a 3m long x 2m wide patch of OR sediment - 12.5m from stream
channel MITZ - several smaller patches same area
MITZ could contain a lense of oil, running the length.

Rec - manual removal OR sed & custom blen Mechanical till if oil lense
Re-assess next spring Pair of Heron appear to be nesting nearby discovered.

Oil Distribution Diagram



ACE 7355939

PWS

Segment # EL52 ASC# 226-10-16902 Location NW Bay

Date 8/6/90 Recorder/Observer Aimee Weseman

Oil in streambed NONE sighted Oil on streambanks NONE sighted.

Oil within 50m of mouth yes Anadromous Fish present several

Picks seen jumping far off-shore

Description of oil and comments _____

West side of stream - a 11m long x 6m wide patch of Heavy to mod
OR sediments in MITZ - 10m west of stream channel

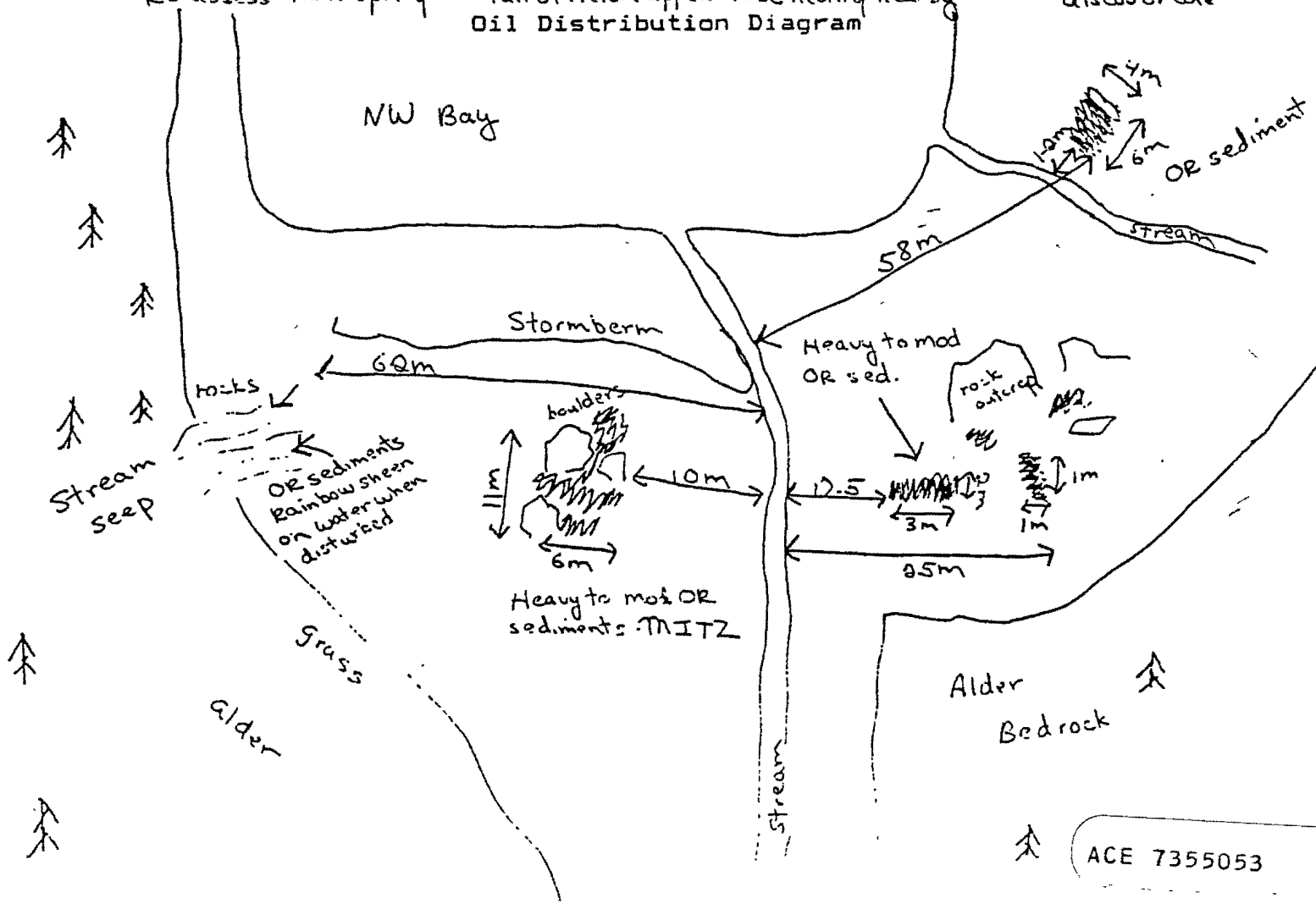
62m west of channel - a 2m wide x 10m long area of OR sed in MITZ in stream seep - gives off rainbow sheen when disturbed

East side - a 3m long x 2m wide patch of OR sediment - 17.5m from stream channel MIT2 - several smaller patches same area

MITZ could contain a hense of oil running the length.

Rec - manual removal OR sed & custom blen Mechanical till if oil lense
Re-assess next spring Pair of Heron appear to be nesting nearby discovered.

Oil Distribution Diagram



ACE 7355053

ANADROMOUS FISH STREAMS/OILING CONDITION
PWS

Segment # EL52 ASC# 226-10-16902 Location NW Bay

Date 8/6/90 Recorder/Observer Aimee Weseman

Oil in streambed none sighted Oil on streambanks NONE sighted

Oil within 50m of mouth yes Anadromous Fish present several
Picks seen jumping far off-shore

Description of oil and comments

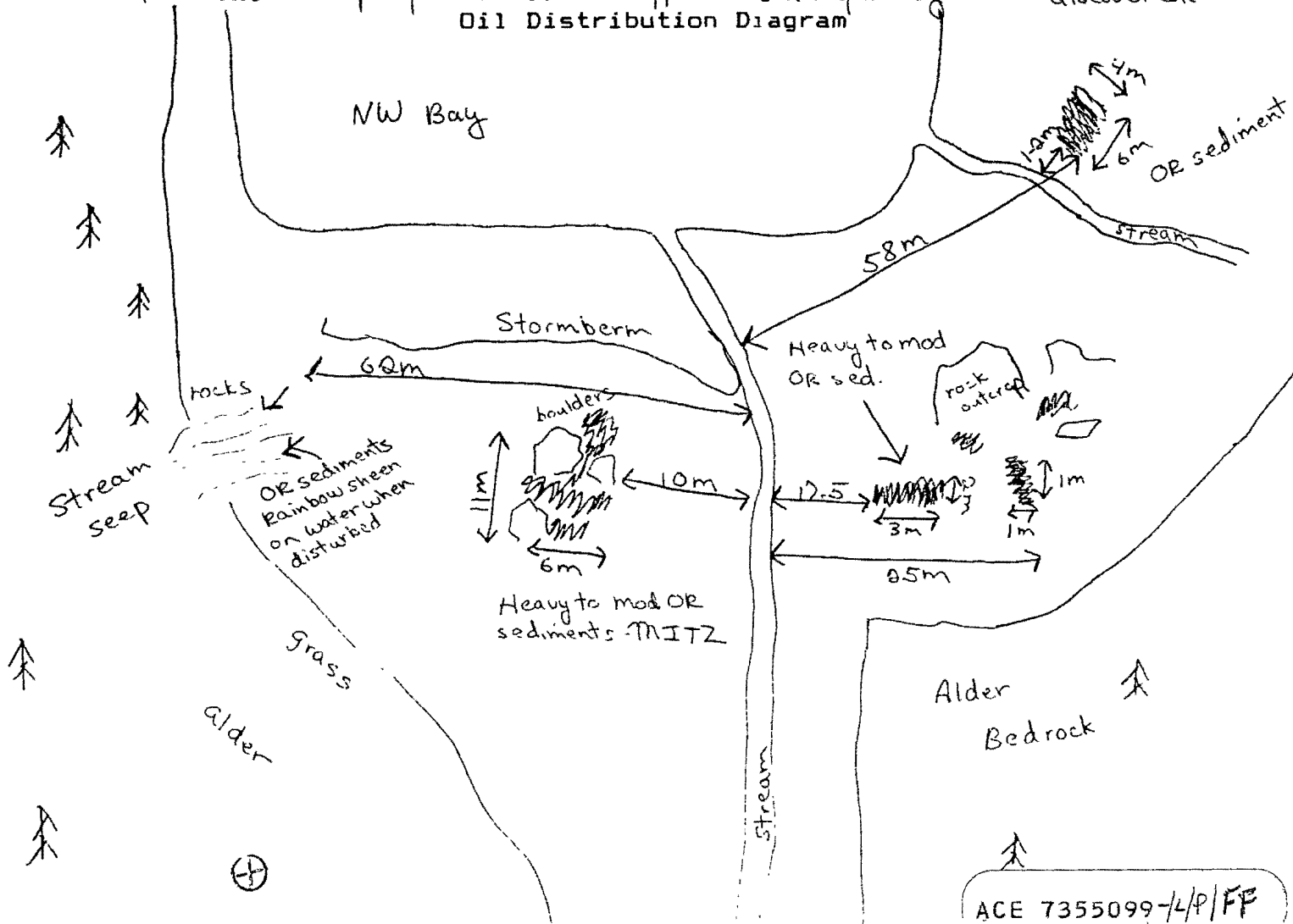
West side of stream - a 11m long x 6m wide patch of Heavy to Mod
OR sediments in MITZ - 10m west of stream channel

62m west of channel - a 2m wide x 10m long area of OR sed in
MITZ in stream seep - gives off rainbow sheen when disturbed.

East side - a 3m long x 2m wide patch of OR sediment - 12.5m from stream
channel MITZ - several smaller patches same area
MITZ could contain a hense of oil, running the length.

Rec - manual removal OR sed & custom blen Mechanical till if oil lense
Re-assess next spring Pair of Heron appear to be nesting nearby discovered.

Oil Distribution Diagram



CATALOG NUMBER: 2261016902
 STREAM NAME:
 LOCATION: ELEANOR ISLAND, NORTHWEST BAY

SEGMENT NUMBER: EL052 B
 SHORELINE TYPE:
 DATE: 04/13/90 TIME: COVE -0813

SITE	WIDTH (m)	LENGTH (m)	AREA (sqm)	PERCENT OIL	THICKNESS (cm)	PENETRATION (cm)	SURFACE SUBSURF	OIL TYPES	COMMENTS
1						2-5	SURFACE	sub MS SOR, OR	westside MITZ - large oiled section
2							SURFACE	MS	
3				11-50			SURFACE	GT SOR	small west side - scattered spots of oil - UITZ

COMMENTS:

LARGE OILED SECTION SURROUNDING BOULDERS NEAR STREAM IN UPPER INTERTIDAL AND MID INTERTIDAL. SOMEWHAT COVERED A NEW ADVANCING STORM GENERATED GRAVEL BAR. GRAVEL AND LARGE BOULDERS COATED 1" - 2" DEEP IN SEDIMENTS COATED. SHOVEL/STEAM. SCATTERED SPOTS OF OIL UPPER INTERTIDAL.

OIL ON STREAM BANKS: YES

YES, UPPER INTERTIDAL, UPPER & MID INTERTIDAL.

OIL WITHIN 1 MILE OF STREAM:

CATALOG NUMBER: 2261016902
 STREAM NAME:
 LOCATION: ELEANOR ISLAND, NORTHWEST BAY

SEGMENT NUMBER: EL052 B
 SHORELINE TYPE:
 DATE: 04/24/90 TIME: COVE -1138

SITE	WIDTH (m)	LENGTH (m)	AREA (sqm)	PERCENT OIL	THICKNESS (cm)	PENETRATION (cm)	SURFACE SUBSURF	OIL TYPES	COMMENTS
1					5 cm	10 cm	SURFACE	OR	MITZ westside near stream channel - highly mobile oil, heavy sheen
2							SURFACE	MS-PT	oiled interval 5-10 cm
							SURFACE		UITZ - under water - sheens when disturbed
							SURFACE		oil band in front of swash berm

COMMENTS:

UPPER INTERTIDAL IS SPORADICALLY DOTTED WITH MOUSSE PATTIES, SOME OF WHICH PENETRATE 2-3 CM. NO OILED DEBRIS WAS NOTICED IN THE SUPRATIDAL OR ABOVE. THE SALMON STREAM EDGE AND BANK APPEARED UNOILED/NO SHEEN WAS KICKED UP IN STREAM SEDIMENTS EXCEPT A LIGHTLY SHEENED AREA IN THE LOWER SECTION OF THE MIDDLE ITZ. THE SINGLE LARGEST AREA OF OILING IS IN THE MIDDLE INTERTIDAL ZONE. NEAR SEVERAL LARGE BEDROCK BOULDERS. IT APPEARS A LARGE SEGMENT OF OIL WAS DEPOSITED HERE AND PENETRATED AT LEAST 4 CM, POSSIBLE DEEPER IN AREAS. THIS OIL APPEARS TO BE HIGHLY MOBILE AND IF DISTURBED PUTS OUT HEAVY SHEEN. ITS NEARNESS TO THE SALMON SPAWNING GRAVELS IS CAUSE FOR CONCERN.

RECOMMENDATIONS: PERFORM WORK USING PROPER TIDAL WINDOW (0-1.5).

REMOVE OILED SEDIMENTS IN HEAVILY OILED SECTION WEST OF STREAM CHANNEL NEAR BEDROCK BOULDERS IN LOWER & MIDDLE ITZ, AND UPPER & ITZ. SURVEY & REMOVE ANY OTHER SPORADIC OILED SEGMENTS FOUND IN UPPER ITZ OR MIDDLE, LOWER ITZ. AFTER REMOVAL TILL THESE AREAS AND APPLY BOLISING PROCESS. REMOVE SEDIMENTS, GRAVELS - ANYWHERE SHEE

CATALOG NUMBER: 2261016902
 STREAM NAME:
 LOCATION: ELEANOR ISLAND, NORTHWEST BAY

SEGMENT NUMBER: EL052 B
 SHORELINE TYPE:
 DATE: 04/27/91 TIME: COVE -2035

SITE	WIDTH (m)	LENGTH (m)	AREA (sqm)	PERCENT OIL	THICKNESS (cm)	PENETRATION (cm)	SURFACE SUBSURF	OIL TYPES	COMMENTS
1							PIT	HOR	
2							PIT	NO OIL	
3							PIT	HOR	
4	1	5		<10	2		SURFACE	LSOR	
3							subsurf	OR	slight east stream bank - slight sheen MITZ
4				11-50%	1-3 cm		surface	ms/PT	West bank - UITZ - sporadic mousse patties

90 Data - continuation of sites

COMMENTS:
RECOMMEND MANUAL TILLING OF BURIED 'HOR' IN SEEP ALONG WITH MOPPING OIL WITH POMPOMS. RETURN TO THIS SEGMENT 4/28/91 TO FINISH OG MAPPING. VERY MINUTE AMOUNTS OF
SURFACE OIL WAS VISIBLE. RETURN 4/30/91 TUESDAY. 1130 START

4-13-90 A

Pre-ANADSCAT-90

ADF&G MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS SS DS TS AVS SCHA MMHS PTA2 REGION: PWS KP,CI K,APMETHOD: Aerial Ground Boat3 DATE: 4-13-9015 HIGH TIDE TIMES: 121 TEAM RECORDER: R. Gustin4 START TIME: 080116 HIGH TIDE HTS: 122 OBSERVERS: BOB LEMON5 STOP TIME: 081317 LOW TIDE TIMES: 123 AGENCY: EXXON/ADF&G ATW6 SEGMENT #: EL05218 LOW TIDE HTS: 124 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 Number12 SOURCE: Map Loran

Oil

13 LOCATION: Eleanor Island

Sediment

14 DESCRIPTION: NW BAY

Biological

Water

EXTENT OF OIL

SHORELINE

L W M² %

STREAM

L W M² %

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 Stain32 OILED DEBRIS? Y N33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cove
Lagoon Marsh34 WAVE EXPOSURE: High Moderate Low35 SUBSTRATE TYPE: Bedrock Boulder Cobble ✓Gravel ✓ Sand Mud/silt36 CATALOGED ANAD. FISH STREAM? Y N37 CATALOG #: 296702-ATW

38 STREAM NAME:

39 OIL IN STREAM BED? Y N40 OIL ON STREAM BANKS? Y N41 OIL ON BEACH ADJACENT TO MOUTH? Y N
(within 50 meters)42 OIL WITHIN 1 MILE OF STREAM? Y NWhere: upper inter-tidal upper & mid. inter.

43 ANADROMOUS FISH PRESENT? Y N

44 ANADROMOUS FISH OBSERVATION

Species Aerial Ground

COMMENTS: large oiled section surrounding boulders near stream
in upper inter-tidal + mid inter-tidal. Somewhat covered by
new advancing storm generated gravel bar.
gravel + large boulders coated - 1"-2" deep in sediments
coated. shore / stream

ACE 7237207/H.S.

FRAME(S)

DESCRIPTION

46 OIL DISTRIBUTION DIAGRAM

Sample taken
Photo frame # and
shot direction.

ACE 7237208-15

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: 4/24/90

15 HIGH TIDE TIMES: /

21 TEAM RECORDER: R. Gustin

4 START TIME: 1100

16 HIGH TIDE HTS: /

22 OBSERVERS: A. Weseman

5 STOP TIME: 1130

17 LOW TIDE TIMES: /

23 AGENCY: ADFG

6 SEGMENT #: EL 052

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: 400 End: 466

10 LAT:

11 LONG:

26 SAMPLES TAKEN? Y (N) Number

12 SOURCE: (Map) Loran

Oil

13 LOCATION: Glenn Is.

Sediment

14 DESCRIPTION: NW Bay

Biological

Water

EXTENT OF OIL

	SHORELINE				STREAM			
	L	W	M ²	%	L	W	M ²	%
27 SURFACE COVERAGE								
28 SURFACE THICKNESS	1cm							
29 PENETRATION	4-5cm							
30 OVERALL OIL IMPACT:	N	VL	L	M	H			

36 CATALOGED ANAD. FISH SREAM? (Y) N

37 CATALOG #: 226 -10 -16902

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:

31 OIL TYPE: Pooled Mousse (Tar) (Asphalt) Sticky Stain

32 OILED DEBRIS? (Y) N

33 SHORELINE TYPE: Headland Low-lying Rocks Beach (Cove)

43 ANADROMOUS FISH PRESENT? Y N

34 WAVE EXPOSURE: High (Moderate) (Low)

44 ANADROMOUS FISH OBSERVATION
Species Aerial Ground

35 SUBSTRATE TYPE: Bedrock Boulder 5 Cobble 20

Gravel 75% Sand Mud/silt

Species	Aerial	Ground

COMMENTS: Upper inter-tidal is sporadically dotted with mousse patches some of which penetrate 2-3 cm. No oiled debris was noticed in the supra-tidal or above. The salmon stream edge + bank appeared uncoiled/no sheen was kicked up in stream sediments except a lightly sheened area in the lower section of the middle ITZ.

Recommendations

Perform work using proper tidal window $-(0 \rightarrow -1.5)$..

Remove oiled sediments in heavily oiled section west of stream channel near bedrock boulders in Lower $\frac{1}{2}$ Middle I.T.Z., and upper $\frac{1}{2}$ L.I.T.Z.

Survey & remove any other sporadic oiled segments found in Upper F.T.Z or middle, lower I.T.Z. after removal till these areas and apply Bolson Process.

Remove sediments, gravels - anywhere sheening is noted.

Remove any oiled debris or vegetation found.

Oiled sediments / gravels can be hauled to Whittier for composting (Bolson Process) for use in road maintenance.

EL 052

45 PHOTOLOG

226-10-16902

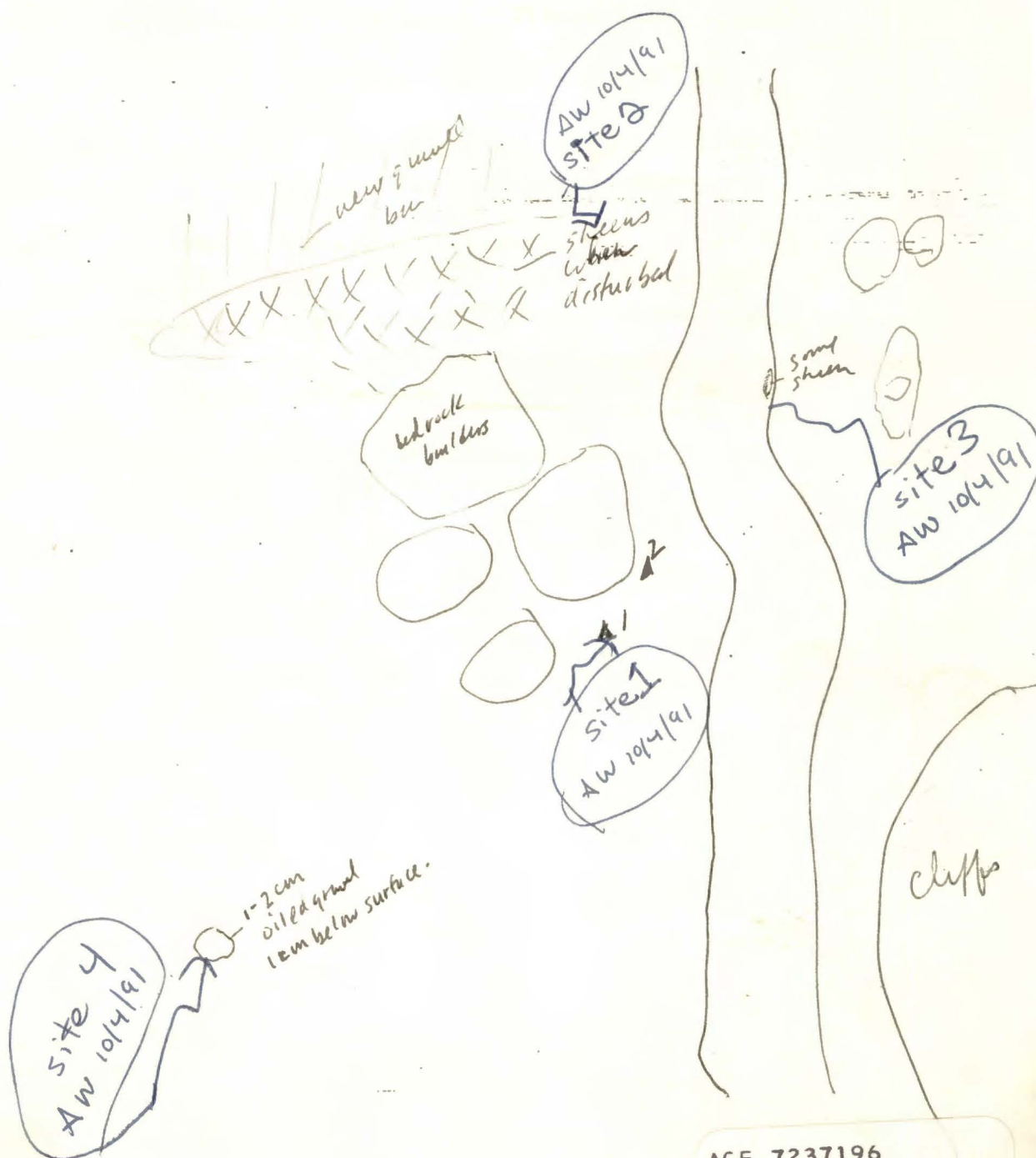
FRAME(S)

DESCRIPTION

Pit #1 16 cm surface to 4 cm oil

Pit #2 - 22 cm deep ~~3 cm oil from bottom~~ (5 cm to 10 cm deep oil)

The single largest area of oiling is in the middle intertidal zone, near several large bedrock boulders. It appears a large segment of oil was deposited here and penetrated at least 4 cm possibly deeper in areas. This oil appears to be highly mobile and if disturbed puts out heavy sheen. Its nearness to the salmon spawning gravels is cause for concern.

46 OIL DISTRIBUTION DIAGRAM

Sample taken
Photo frame # and
shot direction.

ACE 7237196

DATE 4, 24 90

CHECKLIST

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

LEGEND.

1 Δ

Pit - No Subsurface Oil

2 ▲

P11 - Subsurface Oil . .

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/5

Splashed Distribution

Oiled Vegetation

**Photo location, direction,
and number**

Oil Character Length (m): AP PO CV 4 CT ST MS PT TB FL NO

REVISION: 03/24/09

ACE 7237198

Seg ID: EL-052 Subdiv: 226-10-16902

Survey Date: 4/24/90

Comments by: Ken Critchlow

Oil cover was observed in a small area near the right stream bank in the upper LITZ. and sheen was seen along the left bank in the MITZ. Subsurface oil was present in one pit in the upper LITZ.

Oiled sediments can be removed by a small crew using shovels. It may be necessary to fill the subsurface sediments in the oiled LITZ followed by application of Inipol. The stream should be protected from contamination using snare booms.

KR Critchlow

40/48

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EL-052 SUBDIVISION: ^{ASC #} 226-10-16902 DATE 24 APR 90

USCG

NAME Kerwin L. Dreher SIGNATURE CWO K. L. Dreher

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

~~ADEC~~ → ADFG

NAME Rick Gustin SIGNATURE Richard J. Gustin

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Perform work using proper tidal window (0 - 1.5)
Remove oiled sediments in heavily oiled section
west of stream channel near bed rock boulders in
lower 1/2 of middle I.T.Z., and upper 1/2 of Lower I.T.Z.
Survey and remove any other sporadic oiled sediments

~~LAND MANAGER~~ → NONE

NAME Rick Gustin SIGNATURE Richard J. Gustin

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

found in the Upper ITZ or middle, lower ITZ.
After removal till these areas and apply Bolswig
Process.

Remove sediments, gravels - any where sheening is
noted.

Remove all oiled debris or vegetation found. 4/1/88
Oiled sediments could be hauled to Whittier
for composting.

OPERATIONS FIELD NOTES

See Back for Instructions

48
46
/ 48

SEGMENT ID ANAD EL-052
STREAM ID # 226-10-16902
ANNOTATED MAP INCLUDED YIN

DATE 4-24-90
NAME DARRYL JOE
TEAM # 14

SURFACE OIL	Treatment Recommendation									
	Quantities in Meters			None	Bioremediation		Tilling		Spot Hot Water	
	Length	Width	Area		Y/N	% Treat	Y/N	% Treat	Y/N	% Treat
Wide Band	4	4	16		N	—	Y	100	N	—
Medium Band										
Narrow Band										
Very Light										
TOTAL MANDAYS								5		

SUBSURFACE OIL

Other (Describe)?	5-10 CM OIL IN PIT 2 - SEE SKETCH

TARMATS	Quantities in Meters			Treatment Rec			# of Bags	Mandays Required	
	Length	Width	Thick(cm)	None	Breakup	Remove		Breakup	Remove
Area #1	NONE								
Area #2									
Area #3									
Area #4									
Sporadic Mats									

MANUAL PICKUP	Type of Debris			In Meters		# of Bags	Pickup Y/N	Manday Estimate
	Mousse Tarballs	Oiled Veget	Cleanup Debris	Length	Width			
"Pocket" #1	NONE							
"Pocket" #2								
"Pocket" #3								
Random/Continuous								

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

Is there Other Debris on the Beach? YIN How Many Bags? 2 Is it mingled with the Oiled Debris YIN
UNOILED LOGS

GENERAL Snow covering 0 % of the Supratidal Zone?
Wave Exposure H/M/L Access Limitations: GOOD ACCESS
Snare Boom/Pom Poms Recommended? YES - TO PROTECT STREAM DURING WORK
Would the production Craft have to be relocated to complete work on this subdivision? YIN, # of Times L
2 + TIDE CYCLES

COMMENTS: ALL WORK SHOULD BE PLANNED FOR PERIOD 5-15 → 7-10
NOTIFY ADF & G BEFORE STARTING WORK

SHORELINE OILING SUMMARY (ANAD)

REVISION NO. 04/13/90

OG CAL LARSON USCG DREHER, CWE SEGMENT ST/ EL 52 47/48
 BIO KEN CRITCHLOW LAND REP STREAM 226-10-16902 (OF)
 EXXON DARLYL YOE ADFG ELIK GUSTIN-AIMEE WESEMAN TIME 11:00 to 11:30
 TEAM NO. 14 TIDE LEVEL 1.4 FT DATE 4/24/90
 EST. SUBDIVISION LENGTH: 20 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 100 % B 10 % C 30 % P 30 % G 30 % S 1 % M 1 % V 1 %
 SLOPE: Lang 100 % Hang 100 % Vert 100 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 10 m M 10 m N 4 m VL 10 m NO 20 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	IC	IB	IP	IS	SBL BR	DBL RW	GY	S	DBR TL	LR	SU	U	M	L
ASPHALT PAVEMENT														
POOLED														
COVER		✓			✓								✓	✓
COAT														
STAIN														
MOUSSE														
PATTIES														
TARBALLS														
FILM														
NO OIL											✓	✓		

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

Did you COLLECT DEBRIS
☐ YES ☒ NO

TYPE 1#BAGS 1

Photographs:

Roll No. 1Frames 1

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	SBL BR	DBL RW	GY SC	DBR TL	LR	SU	U	M	L						
1	16					✓	-										✓					Y	Y	CB, GRSD CB, GRSD
2	22		✓				5-10	✓		✓							✓		✓		Y	Y	Y	CB, GRSD CB, GRSD
							.																	
							.																	
							.																	
							.																	

COMMENTS SURVEYED ON INCOMING TIDE / DID NOT SURVEY LOWER TIDAL ZONE / SHEENING IN LOWER MID TIDAL ZONE / I WALKED OUT INTO WATER - SHEENING WHEN SEDIMENTS WERE DISTURBED.

REVIEWED 1 DATE 1

ACE 7237203

ANAD

SSAT DATA ENTRY FORM

PAGE 1 OF 2

GENERAL DATA

SEG ID: EL-052 SUBDIV: 226-10 TEAM: 14 SURVEY DATE: 4/24/90
PAVEMENT: CHAR — AREA — THICKNESS — TARBALLS —
OILED: LGS — VEG — TRH — DBR — WAVE EXP: LW X MD — HG —
FAX RCVD: — DT: — AGENCY DISAGREE: —
EST SUBDIV LGTH: 30 OIL CATEGORY: W — M — N X VL — NO 26 U —

SURFACE DATA

SURFACE SEDIMENT: BRK — BLD 10 COB 30 PEB 30 GRN 30 SAN — MUD — VEG —

CHAR #: 1 OIL CHAR: CV OIL DIST: CONT — BRKN X PTCH — SPLH —
OIL CLR: SBL FILM CLR: BR TIDAL ZONE: SU — UI — MI X 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 —

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

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

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

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

ACE 7237204

46
48

ANAD
SSAT DATA ENTRY FORM

SUBSURFACE DATA

PAGE 2 OF 2

SEGMENT ID: EL-052 SUBDIV: 226-10
16902

PIT # 1 PIT DEPTH 16 OIL CHARACTER NO OIL INTVAL: FROM — TO —
QUANT: — OIL CLR: — FLM CLR: — ZONE: SU — UI — MI X LI —
SUBSURF SEDIMENT: BRK — BLD — COB X PEB — GRN X SAN X MUD — VEG —

— PIT # 2 PIT DEPTH 22 OIL CHARACTER — OIL INTVAL: FROM 5 TO 10
— QUANT: 40 OIL CLR: — FLM CLR: — ZONE: SU — UI — MI X LI —
SUBSURF SEDIMENT: BRK — BLD — COB X PEB — 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 —

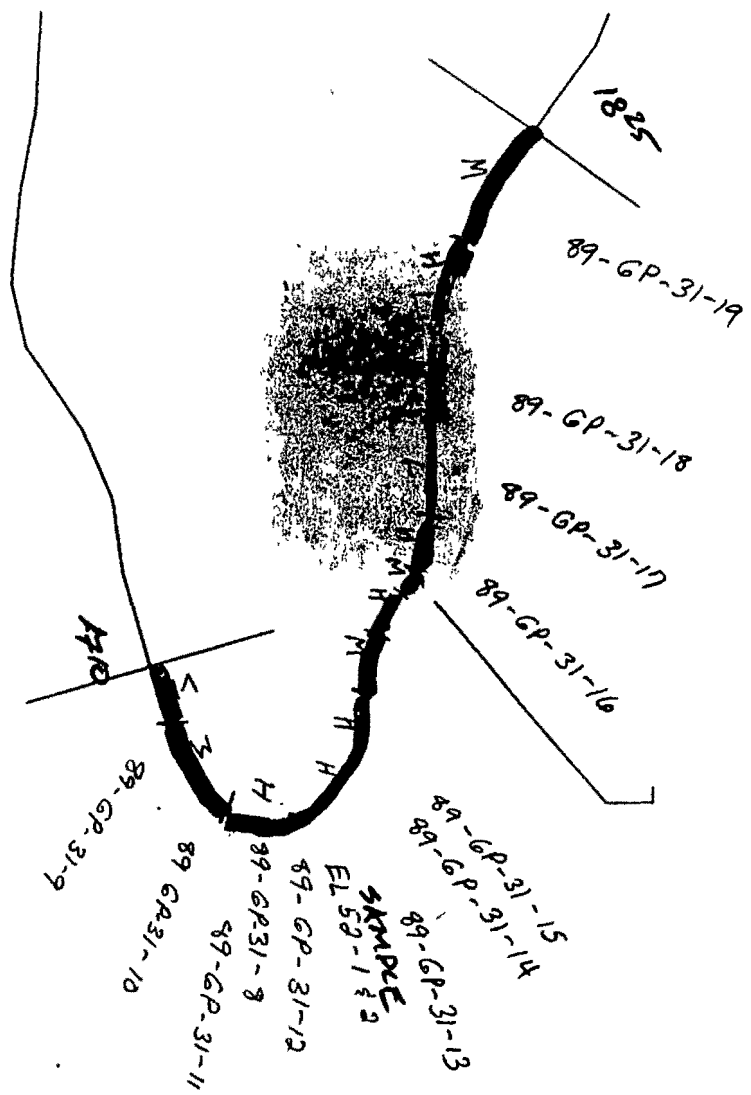
PIT # — PIT DEPTH — OIL CHARACTER — OIL INTVAL: FROM — TO —
QUANT: — OIL CLR: — FLM CLR: — ZONE: SU — UI — MI — LI —
SUBSURF SEDIMENT: BRK — BLD — COB — PEB — GRN — SAN — MUD — VEG —

PROBLEMS: —

DEC
Fall walk-a-thon

EL 052

500.0



Dan Zahant
9-14-89

ADEC Post-Treatment Survey Form

SEGMENT SURVEY (# FL052)

Date: 9-14-89 Time: 17⁰⁰-18²⁵ Location: W. ^{ARM} ~~SHORE~~ OF N.W. BAY

Team members G. PAVIA, D. ZORBIT, MEBEL
Survey type: boat / ground / helicopter / floatplane

WEATHER / SEA CONDITIONS

Low tide: (time/height) _____ High tide: (time/height) _____
Weather: (sunny - cloudy - rain - fog - snow)
Sea: (rough - moderate - calm) Wave height: < / _____ ft.
Wind direction: (N-NE-E-SE-S-SW-W-NW) Knots: (0-15 16-30 30+)

SHORELINE DESCRIPTION

Type: (headland - low lying rocky beach - cove - lagoon - marsh)
Exposure to waves: (high - medium - low)
Sediment type: (bedrock - boulder - cobble - gravel - sand - silt)

OIL CHARACTERISTICS

Degree of oiling:
heavy = > 50% coverage of the intertidal zone | > 5m
moderate = 10 - 50% | 3-5m
light = < 10% | 1-3m
very light = < 1% | < 1m
none

Area of impact: (supratidal - high - mid - low - subtidal)
Surface coverage, continuous: (y/n) IN PLACES YES
Max. thickness: 2 1/2 mm Max. penetration: H 10 cm M 45 cm L _____ cm
Average oil coverage: 50 % Oiled drift debris: (y/n)
Oil type: pooled - mousse - sticky - tarry - asphalt - stain

BIOLOGICAL DAMAGE

Fucus (algae): (oiled - damaged - cooked - normal)
Mytilus (mussels): (dead / live - oiled - tarred - stained - normal)
Balanus (barnacles): (dead / live - oiled - tarred - stained - normal)
Mammals: (dead) _____ Birds: (dead) _____

SOLID WASTE LEFT ON SHORE:

(none - one locality - few localities - many localities)
(boom - cleanup debris - garbage - signs - paint marks - other)
Number of bags collected: 0

SEGMENT ELO52

SAMPLE INFORMATION

station # (i.e. KN012/1; Knight Island, segment 012, sample 1)
 ((oss = oil surface sediment obs = oil bulk sediment))

1. ELO52-1 (oss-obs) IN
2. ELO52-2 (oss-obs) ID
3. _____ (oss-obs)
4. _____ (oss-obs)

PHOTO INFORMATION

station# (i.e. KN012/01) 89//who//s/p//roll#/frame(89GPs23/1-8)

- | | |
|-------------------------|-----------|
| 1. <u>89 GP 31/9-19</u> | 11. _____ |
| 2. _____ | 12. _____ |
| 3. _____ | 13. _____ |
| 4. _____ | 14. _____ |
| 5. _____ | 15. _____ |
| 6. _____ | 16. _____ |
| 7. _____ | 17. _____ |
| 8. _____ | 18. _____ |
| 9. _____ | 19. _____ |
| 10. _____ | 20. _____ |

COMMENTS (Be specific, where, what, etc.)

Direction walking along segment: Water on (left) - right)

Distance: (if pacing - who, and #)

ALL OF THIS SEGMENT HAS AT LEAST
 SOME SORT OF SURFACE COVERING -
 SOME IS LIGHT BUT STILL ALTERS ORIGINAL
 SUBSTRATE COLORATION. AREAS OF
 HEAVY IMPACT ARE MODERATE TO LOW
 ANGLE SHORELINES WITH SMALLER
 SUBSTRATE, COBBLE TO GRAVEL. THE
 HEADLANDS ARE LESS OILED IN GENERAL
 THOUGH IN MANY PLACES THERE ARE BANDS
 FROM 2-6 METERS WITH OILED CLIFFS
 & BARNACLES.

Signature

Gene Penna

Date

9-14-89

3.2 Station 5, Northwest Bay, Eleanor Island

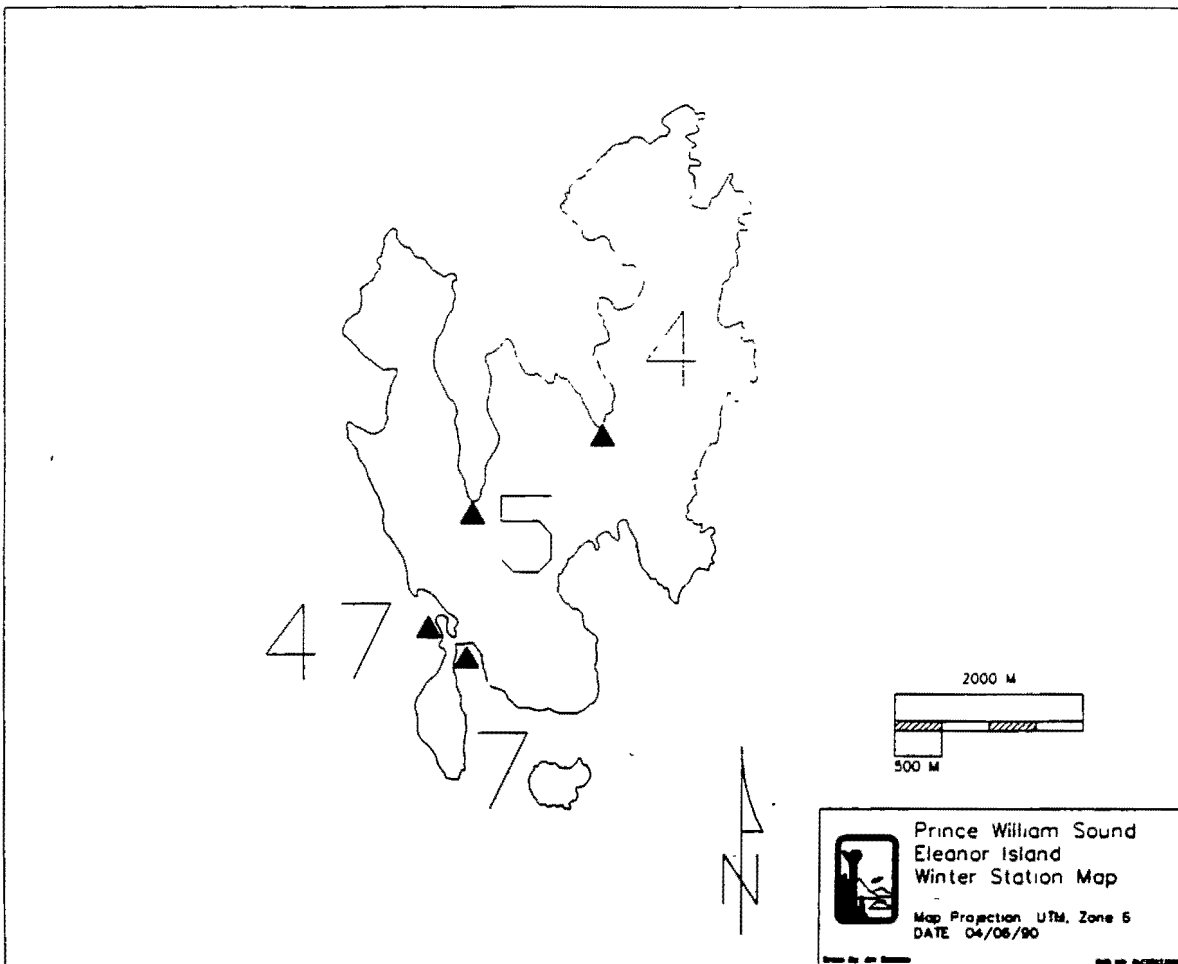
This site in the west arm of Northwest Bay was heavily oiled during the first days of the oil spill. The profile crosses a delta outwash formed by the deposition of coarse sands and fine gravels carried by a small stream that enters along the eastern edge of the site. A few large boulders and cobbles occupy the mid-intertidal zone. This site was treated with an extensive high-pressure and deluge operation. The transects selected for comparison are from 31 August, 7 November and 7 December 1989, and 20 March 1990.

In August 1989 after mechanical treatment, a thin surface coating was evident along much of the transect. A light sheen occurred in sampling and penetration pits. Surface oil consisted primarily as a light sheen but some wet, brown oil was present. Oil penetration ranged from 4 to 22 cm.

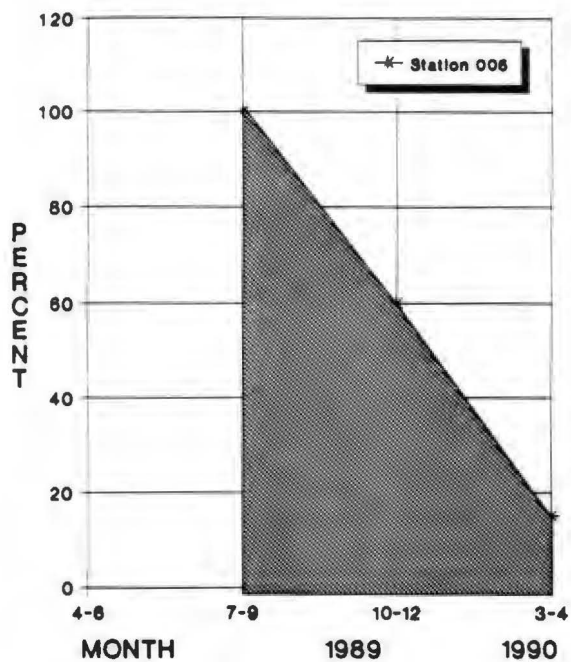
In November 1989 the supra, upper and middle intertidal zone was frozen for the top 10 cm, interfering with penetration studies. The surface coverage appeared somewhat reduced. The low intertidal zone was flooded during the survey and, therefore, not measured. The lower middle intertidal zone had a fair amount of weathered oil at depth. A rainbow sheen was observed to be bleeding off the beach.

The December 1989 transect shows substantial surface coverage, actually increased over that from November but still less than present in August. Penetration was also quite deep in December, especially along the lower intertidal zone where it extended 30 to 50 cm below the surface. A gravel berm had been deposited on the original impacted beach surface which accounts for the increase in penetration.

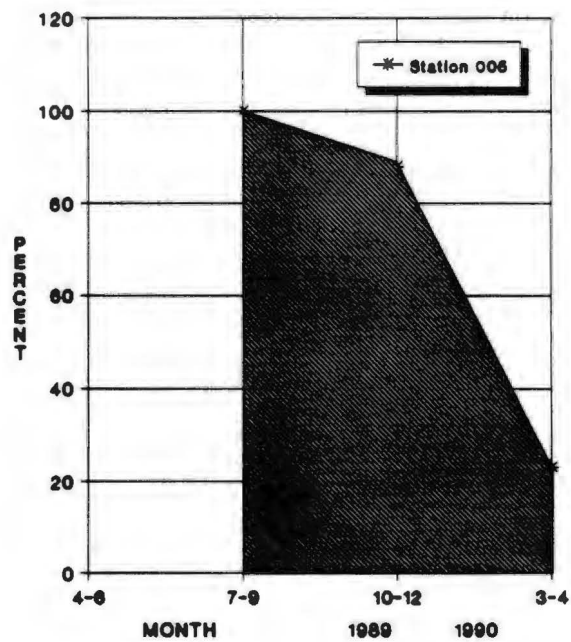
The March 1990 transect shows substantially reduced surface coverage and depth of oil penetration. Surface coverage dropped to 15 percent of that observed in August 1989; depth of penetration was less than 20 cm compared to over 50 cm the previous November. The primary area of oil coverage was in the central portion of the profile partially sheltered by some large boulders.



CUMULATIVE SURFACE OIL COVERAGE



CUMULATIVE VOLUME OF SUBSURFACE OILED SEDIMENT



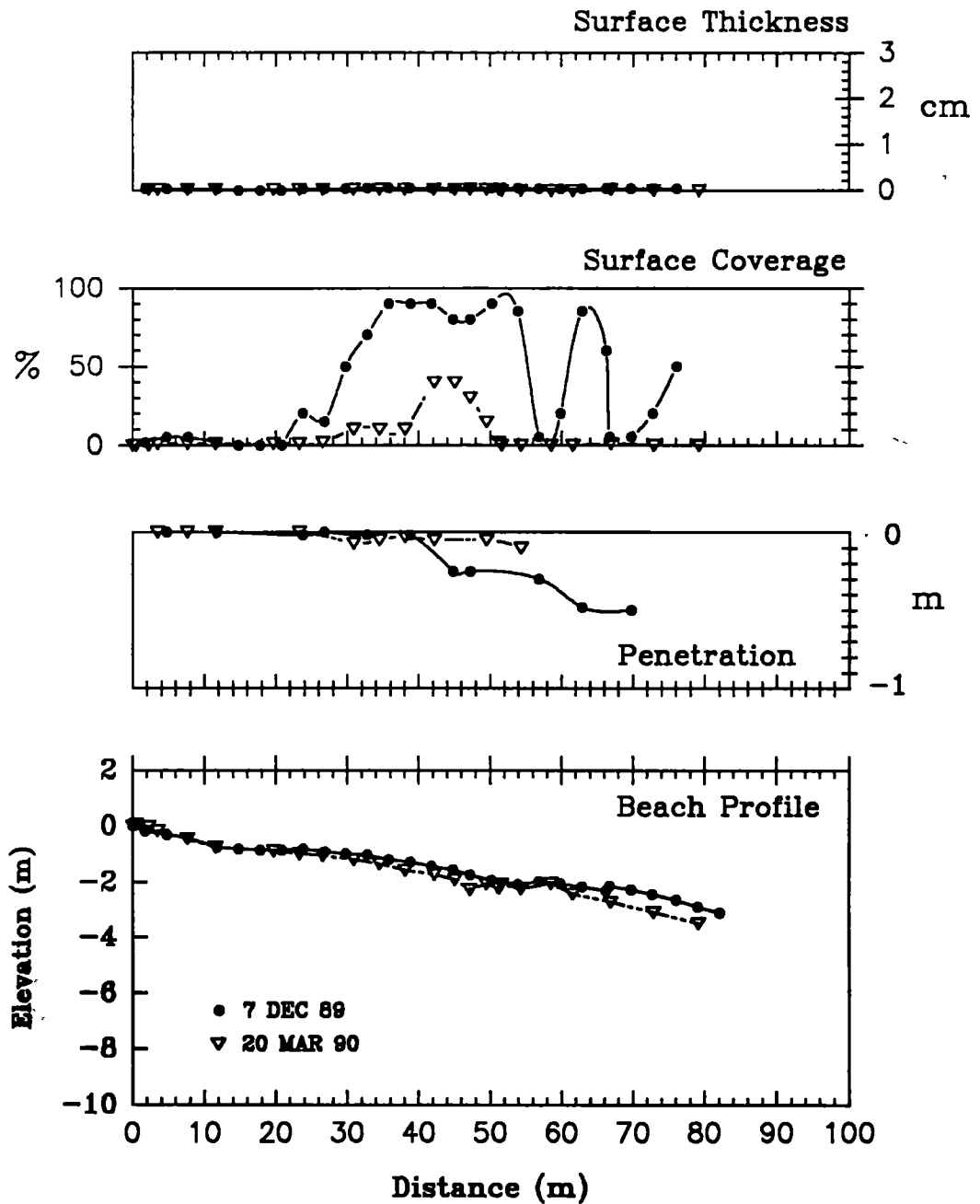
* Values are set to 100 percent for the first survey to enable comparisons on a percentage basis.

Alaska Department of Environmental Conservation
BEACH TRANSECT DATA

NORTHWEST BAY ELEANOR ISLAND

Segment EL052

Station 005

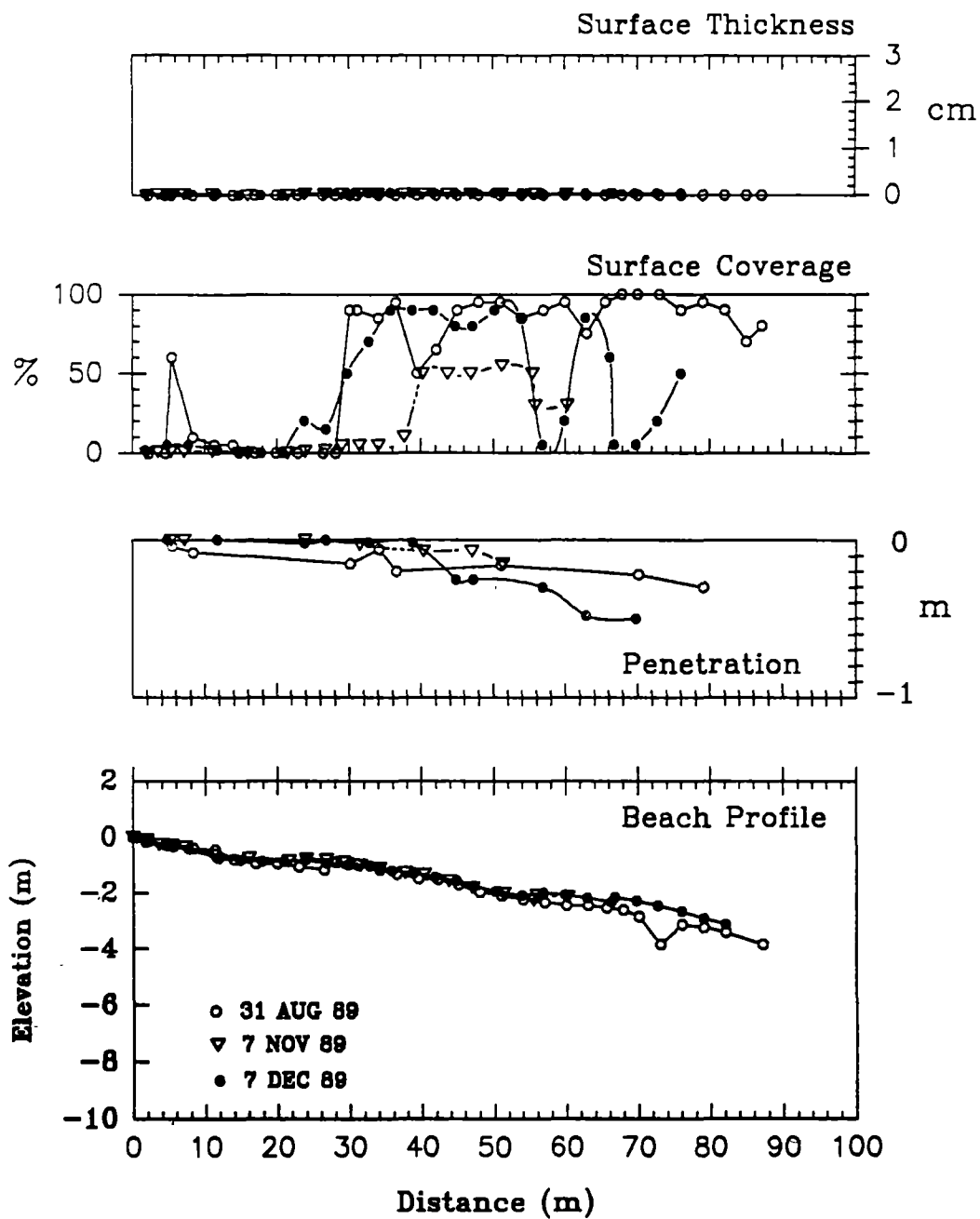


Alaska Department of Environmental Conservation
BEACH TRANSECT DATA

NORTHWEST BAY ELEANOR ISLAND

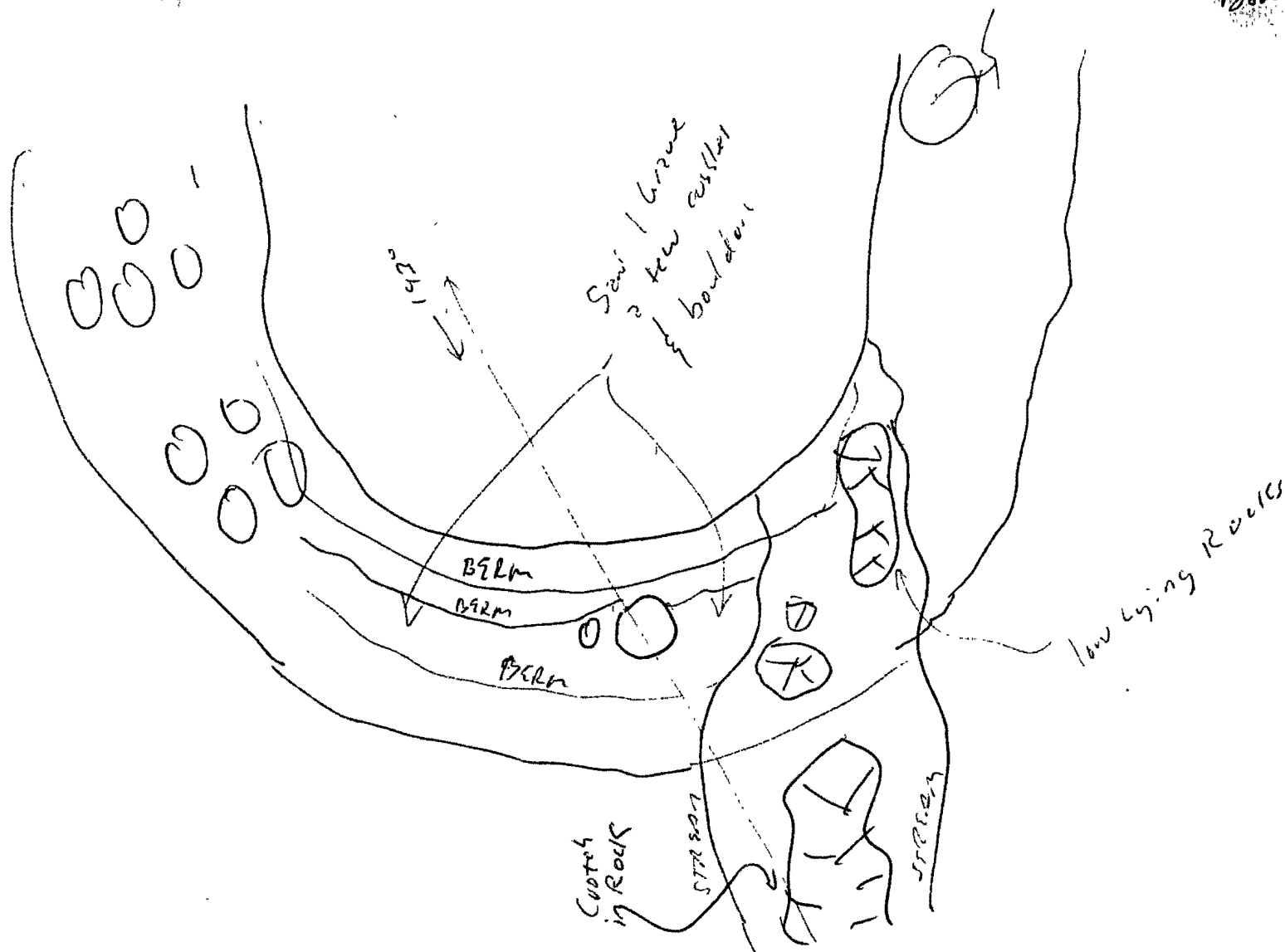
Segment EL052

Station 005



PROFILE 5 LOCATION N Elearer DATE 4-13-89
RECORDERS MS RW PHOTOGRAPHS _____ TIME 14:15
TIDE STAGE _____ WEATHER _____ WIND SPEED _____ WIND DIRECTION _____
PROFILE ANGLE _____ WAVE HT. 1 1/2 m SAMPLES TAKEN: BIO _____ CHEM _____ SED 89RW005
SEDIMENT TYPE _____

OR RS5 ^{BRW}
BRW



DATE APRIL 13, 1989PROFILE RSS, 143°START 1330FINISH 1401TIDAL STAGE Low Tide

FRONT STAKE HT

LOCATION N. Eleanor

LOW TIDE

BACK STAKE HT

HORIZONTAL (M)

VERTICAL (CM)

% OIL COVER

OIL THICKNESS (CM)

COMMENTS

8.0	5.0	6.0	3.0		3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
-14.0	-9.0	-6.5	4.5		-1.0	-3.0	-5.0	-3.5	-3.25	-12.0	-13.0	-8.5	+5.5	-7.0	-9.25	-9.0
			5%	5%	20%	30	30	55	70	80	90	95	95	95	95	95
			0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Crunch in Rock Plane to High Middle of beach 100% - 70% 100% - 50% Gravel Across stream Sand without light house 10% mud 5m west of Tide gauge Marine concrete on same side Start of detrital oiling A few large Rocks Surface oiling 0 - 100% Fulld in 2m Low lying Rock Area 0.1 - 1.0m 0.1 - 1.0m Sand, Gravel 1 Cobble Gravel 1 Cobble Berm one water Sand / Gravel Gravel Gravel																

Per

Penetr. cm

Sinter

1.0

1.0

10

10

4

2

10

CHECK LIST

2.6	6.7															
-1.5	-11.5															
95	25															
0.1	0.1															
Top of Berm, Gravel TO WATER LINE																

SAMPLES TAKEN -

depth of oil burial -

layer thickness -

oil penetration =

grain size -

BIOLOGICAL IMPACT

CLEANUP: # men -

equipment type & # -

DATE April 13. '89PAGE PROFILE R55START FINISH TIDAL STAGE FRONT STAKE HT LOCATION N. ElmerLOW TIDE BACK STAKE HT Cumulative Totals

R55 saw
 (SIRWOOD) Bio
 Cum m
 ↓

HORIZONTAL (M)	8.0	13.0	19.0	22.0	25.0	28	31	34	37	42	47	52	57	62	67	72	
VERTICAL (M)	-14.0	-23	-29.5	-30	-31	-34	-39	-42.5	-45.7	-57.7	-60.7	-79.2	-84.7	-91.7	-100.9	-109.9	
% OIL COVER	0	0	0	5	20	30	30	55	70	80	90	95	95	95	95	95	
OIL THICKNESS (cm)	0	0	0	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	
Vert (cm)	-35.56	-58.42	-74.93	-76.2	-18.74	-86.36	-99.06	-107.95	-116.08	-146.56	-179.58	-201.7	-215.14	-238.92	-256.29	-279.15	
COMMENTS																	

CHECK LIST

Hor (m)	74.6	81.3															
Vert (m)	-111.4	-130.9															
% cover	95	25															
Thick (cm)	.1	.1															
Vert (cm)	-282.90	-332.49															

SAMPLES TAKEN -

depth of oil burial -

layer thickness -

oil penetration =

grain size -

BIOLOGICAL IMPACT

CLEANUP: # men -

equipment type & # -

A hand-drawn sketch map of a coastal area. The map includes several labels and features:

- oil ST.**: Located at the top center, pointing to a small structure on a hill.
- oil deal burn area**: Located in the middle left, pointing to a shaded area.
- line is split in R/C**: Located in the middle left, pointing to a dashed line.
- 70-80% oil in**: Located in the middle left, pointing to a shaded area.
- 80% in cobbles boulder**: Located in the bottom left, pointing to a shaded area.
- hok**: Located on the left side, pointing to a line.
- ridge**: Located on the left side, pointing to a line.
- Stream**: Located in the middle right, pointing to a line.
- Algae + Hoil**: Located in the middle right, pointing to a line.
- Rock**: Located on the right side, pointing to a small structure.
- Small pine**: Located on the right side, pointing to a small structure.
- lt Swales**: Located in the bottom right, pointing to a shaded area.

DATE

4/29/89

PAGE

PROFILE

S

START

FINISH

TIDAL STAGE

FRONT STAKE HT

LOCATION

NW BAN ELEMAN

LOW TIDE

BACK STAKE HT

HORIZONTAL (M)

VERTICAL (CM)

% OIL COVER

OIL THICKNESS

COMMENTS

	2.55	4.56	4.4	4.03	5.05	6.35	6.08	4.07	4.87	2.32	4.75	5.48	1.5	4.92	3.13		
	-7.75	-7.5	-6.8	-9.2	-5.3	-1.4	-10	-6.4	-10	-8.4	-9	-6.0	+3.8	-3.0	6.8		
			1	0	0	1	15	50	80	70	80	SS	80 Gravel	75 vel R	50 DUB		
			ft swath			15	1	1	1	1	1	1	1	1	1		
	Mixed gravel	off oil in swath	off oil in swath		Stream			Fine gravel overlies clay	to cobble	billed killed bannock	RE	CLEANED SECTION	Cranial Ridge	buried oil	These under ch		

REMARKS: cm

S S RK 0 0 S 15 12 CHECK LIST

	3.43	2.54	1.08	5.29	7.24												
	-10.5	-13.6	-14.5	-10.2	-21												
	60	5	5	60	35												
	1	1	1	1	1												
	deep hole			Signe gravel													

SAMPLES TAKEN -

depth of oil burial

layer thickness -

oil penetration = 30+

grain size -

BIOLOGICAL IMPACT

CLEANUP: # men -

equipment type & # -

end 30 ART: - ad: 11-23

DATE 29 APR 89

PAGE _____

PROFILE RSS

START _____

FINISH _____

TIDAL STAGE _____

FRONT STAKE HT _____

LOCATION NW Bay Eleanor

LOW TIDE _____

BACK STAKE HT _____

HORIZONTAL (M)

VERTICAL (CM)

% OIL COVER

OIL THICKNESS (M)

COMMENTS

2.55	7.11	11.51	15.54	21.19	27.59	33.62	37.69	42.56	44.88	49.63	55.11	56.61	61.56	64.69
------	------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------

7.75	8.25	15.05	24.25	29.55	30.95	40.9	47.35	57.35	65.75	74.75	80.75	76.95	79.95	86.75
------	------	-------	-------	-------	-------	------	-------	-------	-------	-------	-------	-------	-------	-------

0	0	1	0	0	1	15	50	80	70	80	55	80	70	50
---	---	---	---	---	---	----	----	----	----	----	----	----	----	----

		.0005			.0005	.001								
--	--	-------	--	--	-------	------	--	--	--	--	--	--	--	--

							PIT A						PIT B	
--	--	--	--	--	--	--	-------	--	--	--	--	--	-------	--

PENETR (M)

0	0	0	0	0	0	0	0	.05	.05	0	0	0	.05	.15	.12
---	---	---	---	---	---	---	---	-----	-----	---	---	---	-----	-----	-----

 CHECK LIST

SAMPLES TAKEN -

depth of oil burial -

layer thickness -

oil penetration -

grain size -

BIOLOGICAL IMPACT

CLEANUP: # men -

equipment type & # -

68.12	70.66	71.74	77.03	84.27
-------	-------	-------	-------	-------

97.25	110.8	125.3	135.5	156.5
-------	-------	-------	-------	-------

60	5	5	60	35
----	---	---	----	----

--	--	--	--	--

--	--	--	--	--

0.30	0	0	.06	0
------	---	---	-----	---

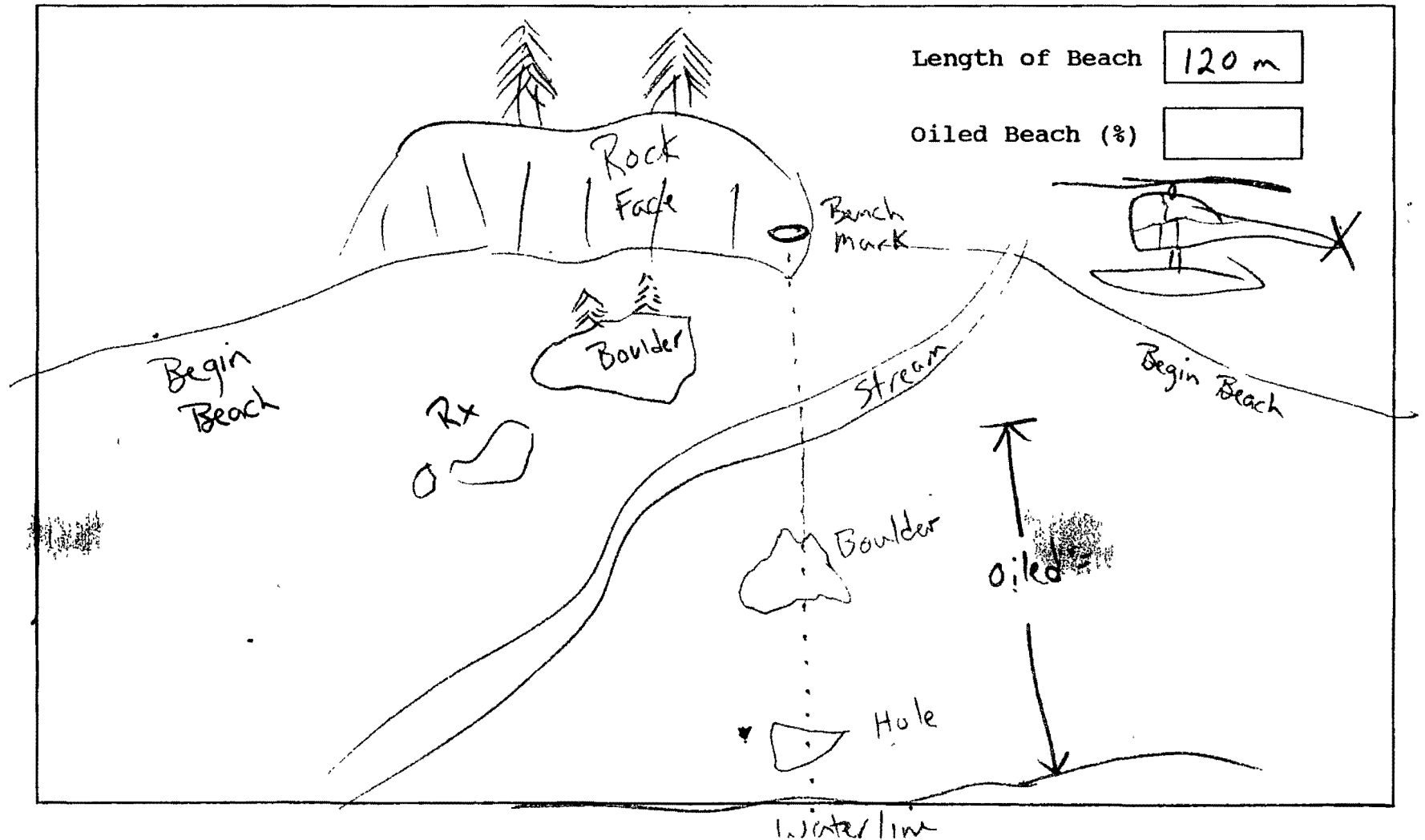
Shoreline Impact Survey Form

Site # Date Location Bench Mark Ang *

Low Tide Time Start Finish Recorders Photos

Weather Predominant Sediment Type

Sketch of Survey Site



Pg 2

seastar
Pycnopodia
10 cm

Shoreline Impact Survey Form



Date	5-19	Site #	5	Location	NW Bay														
Horiz. (m)	2.4	1.0	3.6	6.6															
Vert. (in)	-17.3	+19.6	-2.1	-22.4															
% Coverage	70	70	90	8															
Flora	+	+	-	ulva															
Fauna	-		-	+															
Oil Thickness	stained 2 mm	stained	1 mm																
Comments	Mussel & Fucus shells washed into hole				To water 9:20 am														

9 m. wide band of deep penetration in mid-lower tidal area.

Station

A			
Sediment		Oil	
Type	Depth	Type	Depth
	0	BL	0
	5		5
	10		10
	15		15
	20		20
	30		30
	40		40
	50		50
	60		60

B			
Sediment		Oil	
Type	Depth	Type	Depth
G	0	Bo	0
CS	5		5
	10		10
G	15		15
D	20		20
	30		30
	40		40
	50		50
	60		60

C			
Sediment		Oil	
Type	Depth	Type	Depth
G	0	Bo	0
CS	5		5
	10		10
G	15		15
	20		20
	30		30
	40		40
	50		50
	60		60

D			
Sediment		Oil	
Type	Depth	Type	Depth
G	0	Bo	0
CS	5		5
	10		10
	15		15
	20		20
CG	20		20
	30		30
	40		40
D	50		50
	60		60

E			
Sediment		Oil	
Type	Depth	Type	Depth
G/CS	0		0
	5		5
	10		10
	15		15
	20		20
	30		30
	40		40
	50		50
	60		60

KEY

S- sand	LO- lite oil
G- gravel	BO- blk oil
C- cobble	M- mousse
B- boulder	S- sheen
P- peat	GW- Ground water

Strong
smell
not accurate
bringing sample back

Pg 3

Shoreline Impact Survey Form

Date 5-19 Site # 5 Location NW Bay Shattered Cove

Horiz. (m)														
Vert. (in)														
% Coverage														
Flora														
Fauna														
Oil Thickness														
Comments														

Station

K

Sediment		Oil	
Type	Depth	Type	Depth
G	0	Bo	0
	5	Lo	5
	10		10
	15		15
	20	Bo	20
	30		30
	40		40
	50		50
	60		60

L

Sediment		Oil	
Type	Depth	Type	Depth
CS w/g	0	LO	0
	5		5
	10		10
	15		15
	20		20
G	30	water level	30
	40		40
	50		50
	60		60

C

Sediment		Oil	
Type	Depth	Type	Depth
	0		0
	5		5
	10		10
	15		15
	20		20
	30		30
	40		40
	50		50
	60		60

D

Sediment		Oil	
Type	Depth	Type	Depth
	0		0
	5		5
	10		10
	15		15
	20		20
	30		30
	40		40
	50		50
	60		60

E

Sediment		Oil	
Type	Depth	Type	Depth
	0		0
	5		5
	10		10
	15		15
	20		20
	30		30
	40		40
	50		50
	60		60

KEY

S- sand	LO- lite oil
G- gravel	BO- blk oil
C- cobble	M- mousse
B- boulder	S- sheen
P- peat	GW- Ground water

faint oil
smell w/
but no
sheen

DATE 5/19/89

PAGE _____

PROFILE 5

START _____

FINISH _____

TIDAL STAGE _____

FRONT STAKE HT _____

LOCATION Northwest Bay

LOW TIDE _____

BACK STAKE HT _____

Cumulative

HORIZONTAL (M)	2.50	3.93	11.85	16.80	20.23	28.56	37.76	40.06	45.26	49.16	54.86	56.76	65.06	67.16	69.56	71.96	72.91
VERTICAL (X) in	7.50	3.00	-6.90	-19.10	-24.00	-22.00	-36.20	-41.20	-55.80	-64.10	-68.50	-63.00	-74.20	-75.7	-88.00	-105.30	-85.7
% OIL COVER			0	0	0	0	40	80	85	90	50	75	80	80	90	70	70
OIL THICKNESS ^M (CM)							.001	.001	.001	.001	.001	.001	.001	.001	.001	stained	stain
COMMENTS Penetration			PIT A	PIT B			PIT D		PIT E	PIT F		PIT G	PIT H		PIT I	PIT K	
Vertical (cm)	19.05	7.62	-17.53	-48.51	-60.96	-55.80	-91.95	-104.65	-141.73	-162.81	-173.99	-160.02	-188.47	-192.28	-223.52	-267.46	-217.68

CHECK LIST

Vert (in) →	76.56	83.16															
	87.8	-110.2															
	90	8															
	.001																
Vert (cm)	-223.01	-279.91															
	.20																
	PIT L																

SAMPLES TAKEN -

depth of oil burial -

layer thickness -

oil penetration =

grain size -

BIOLOGICAL IMPACT

CLEANUP: # men -

equipment type & # -

DATE 5/19/89PAGE PROFILE 5START FINISH TIDAL STAGE FRONT STAKE HT LOCATION Northwest BayLOW TIDE BACK STAKE HT Cumulative

HORIZONTAL (M)	2.50	3.93	11.85	16.80	20.23	28.56	37.76	40.06	45.26	49.16	54.86	56.76	65.06	67.16	69.56	71.96	72.96
VERTICAL (X) in	7.50	3.00	-6.90	-19.10	-24.00	-22.00	-36.20	-41.20	-55.80	-64.10	-68.50	-63.00	-74.20	-75.7	-88.00	-105.30	-89.50
% OIL COVER			0	0	0	0	40	80	85	90	50	75	80	80	90	70	70
OIL THICKNESS ^M (cm)							.001	.001	.001	.001	.001	.001	.001	.001	.001	stained	stained
COMMENTS Penetration			PIT A	PIT B			PIT D		PIT E	PIT F		PIT G	PIT H		PIT I	PIT K	
Vertical (cm)	19.05	7.62	-17.53	-48.51	-60.96	-55.88	-91.95	-104.65	-141.73	-162.81	-173.99	-160.02	-188.47	-192.28	-223.52	-267.46	-217.68

CHECK LIST

Vert (in) →	76.56	83.16															
	87.8	-110.2															
	90	8															
	.001																
Vert (cm)	-223.01	-279.91															
	.20																
	PIT L																

SAMPLES TAKEN -

depth of oil burial -

layer thickness -

oil penetration =

grain size -

BIOLOGICAL IMPACT

CLEANUP: # men -

equipment type & # -

GR 10 STATION
PROFILE 5

LOCATION NORTHWEST 1/4, ELANDOR I. PWS

DATE 8-31-7

RECORDERS G. PAVIA, M. BAER

PHOTOGRAPHS 5896P 16/16-28

TIME 900

TIDE STAGE LOW

WEATHER WIND, RAIN, FOG

WIND SPEED 5-10 knots WIND DIRECTION NE

PROFILE ANGLE 119°

WAVE HT. 1 FT

SAMPLES TAKEN: BIO

CHEM

SED

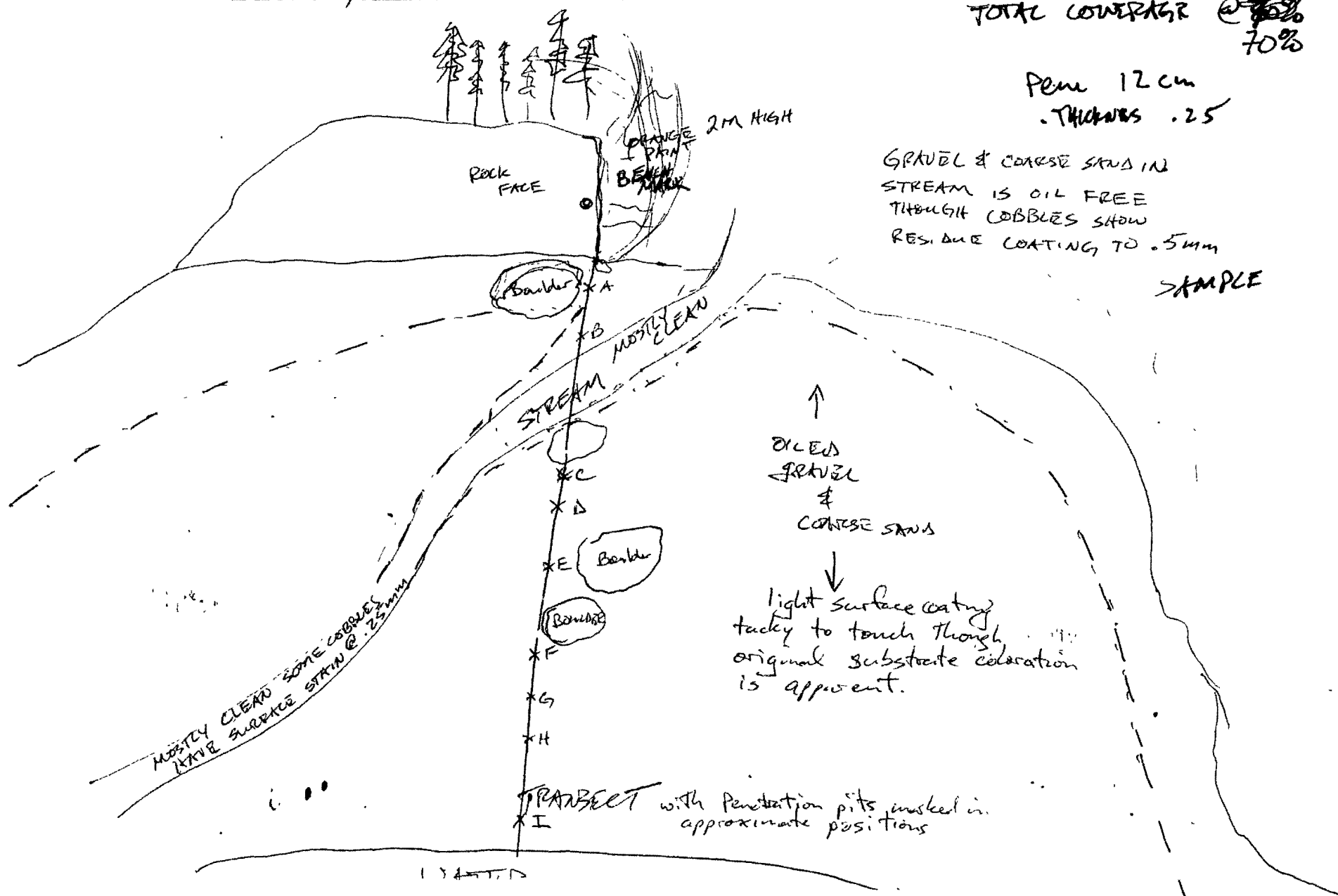
SEDIMENT TYPE GRAVEL, COARSE SAND

TOTAL COVERAGE @ 75%
70%

PEN 12 cm
THICKNESS .25

GRAVEL & COARSE SAND IN
STREAM IS OIL FREE
THOUGH COBBLES SHOW
RESIDUE COATING TO .5 mm

SAMPLE



DATE 8-31-89

PAGE 2

PROFILE 5

START 9⁰⁰FINISH 10³⁰

TIDAL STAGE LOW

FRONT STAKE HT

LOCATION NORTHWEST BAY, ELAHEI. PWS

LOW TIDE 8:16

BACK STAKE HT 2M

FROM BACK STAKE TO
BASE OF BUTTCROP FOR
SURVEY POLE

BAG #116

BAG #117

HORIZONTAL (M)

VERTICAL (CM)

% OIL COVER

OIL THICKNESS (mm)

COMMENTS

PENETRATION (cm)

2.7	2.88	3.0	3.0	3.0	3.0	3.0	3.0	2.6	2.3	2.18	3.0	3.0
-3	-18	-27	-13	-12	-11	-11	-5	-4	-7	-25	-16	-13
65	90	95	95	85	90	95	75	95	100	100	100	90
.25	.25- .5	.25	.5	.25	.25	.25	.25	.25	.25	.25	.25	.25
LG BOUNDER COARSE SAND GRAVEL RESIDUE STAIN	CS, G, C HEAVIER BROWN MUDSOME SOME WET	CS, G, C LG, CS, G STAINING BARKLES	CS, G, C IT STAIN WET BROWN MUDSOME BARKLES	WET BROWN MUDSOME LT RESIDUE	LT BROWN G, G, CS, B LT RESIDUE STAIN MUDSOME C, G, CS	MUDSOME CS, G, SM C	SM C MUDSOME CS, SM G MUDSOME BROWN & WET	TOP OF FRESH GRAVEL BARK ALL LT RESIDUE ON SAND LESS THAN DEEPER / UNBURNED	EDGE OF GRAVEL BARK CS, LG G	CS, G LT STAIN	CS, G LT STAIN	LT STAIN 30% LT RESIDUE OIL

PENETRATION (cm)

16

1st layer 10 THICK
clean 6 THICK
2nd layer 1st cm THICK

22

CHECK LIST

SAMPLES TAKEN: -

depth of oil burial -

layer thickness -

oil penetration =

grain size -

BIOLOGICAL IMPACT

CLEANUP: # men -

equipment type & # -

DATE 8-31-89

PROFILE 5

START 900

FINISH 10³⁰

TIDAL STAGE Low

FRONT STAKE HT

LOCATION NORTHWEST BAY, FLORIDA. PWS

LOW TIDE 8¹⁶

BACK STAKE HT 2M

896P118

Y

J W.L.

HORIZONTAL (M)

3.0

3.0

3.0

2.1

VERTICAL (CM)

-10

-17

-17

-27

% OIL COVER

95

90

70

80

100

OIL THICKNESS (mm)

.25

.25

.25

.25

1000

COMMENTS

27.5% OIL
CS, g
27.5% OIL
CS, g

CS, g

CS, g

WATER TABLE

30

WATER TABLE
INTERFERENCE

CHECK LIST

SAMPLES TAKEN -

depth of oil burial -

layer thickness -

oil penetration -

grain size -

BIOLOGICAL IMPACT

CLEANUP: # men -

equipment type & # -

DATE 8-31-89 (CONT'D)

PAGE

PROFILE 5 (CONT'D) START FINISH TIDAL STAGE FRONT STAKE HT

LOCATION LOW TIDE BACK STAKE HT

HORIZONTAL (M)																			
VERTICAL (CM)																			
% OIL COVER																			
OIL THICKNESS																			
COMMENTS																			

CHECK LIST

79.14	82.14	85.14	87.24																
-323	-340	-357	-384																
95	90	70	80																
.0003	←	→																	
-.3																			
Part I																			

SAMPLES TAKEN -
 depth of oil burial -
 layer thickness -
 oil penetration -
 grain size -
 BIOLOGICAL IMPACT

CLEANUP: # men -
 equipment type & # -

DATE 11/7/89PAGE PROFILE 5START FINISH TIDAL STAGE FRONT STAKE HT LOCATION LOW TIDE BACK STAKE HT

CUM:

HORIZONTAL (M)	1.9	3.57	5.37	7.17	11.08	16.01	21.49	23.94	26.7	29.02	31.49	34.09	37.64	40.3	43.75	46.97	57.3
VERTICAL (CM)	.07	.24	.26	.32	.63	.74	.83	.77	.80	.88	.99	1.11	1.26	1.32	1.55	1.80	2.01
% OIL COVER	0	1	1	1	1	0	0	1	2	5	5	5	10	50	50	50	55
OIL THICKNESS	0	.0003	—	—	—	0	0	.0003	—	—	—	—	—	—	—	—	—
COMMENTS			0	0				0			.03			.07		.07	.15
			A	B				C			D			E		F	G

CHECK LIST

55.54	55.94	60.26											
-2.24	-2.06	-2.12											
50	30	30											
.0003	—	—											

SAMPLES TAKEN: -

depth of oil burial -

layer thickness -

oil penetration -

grain size -

BIOLOGICAL IMPACT

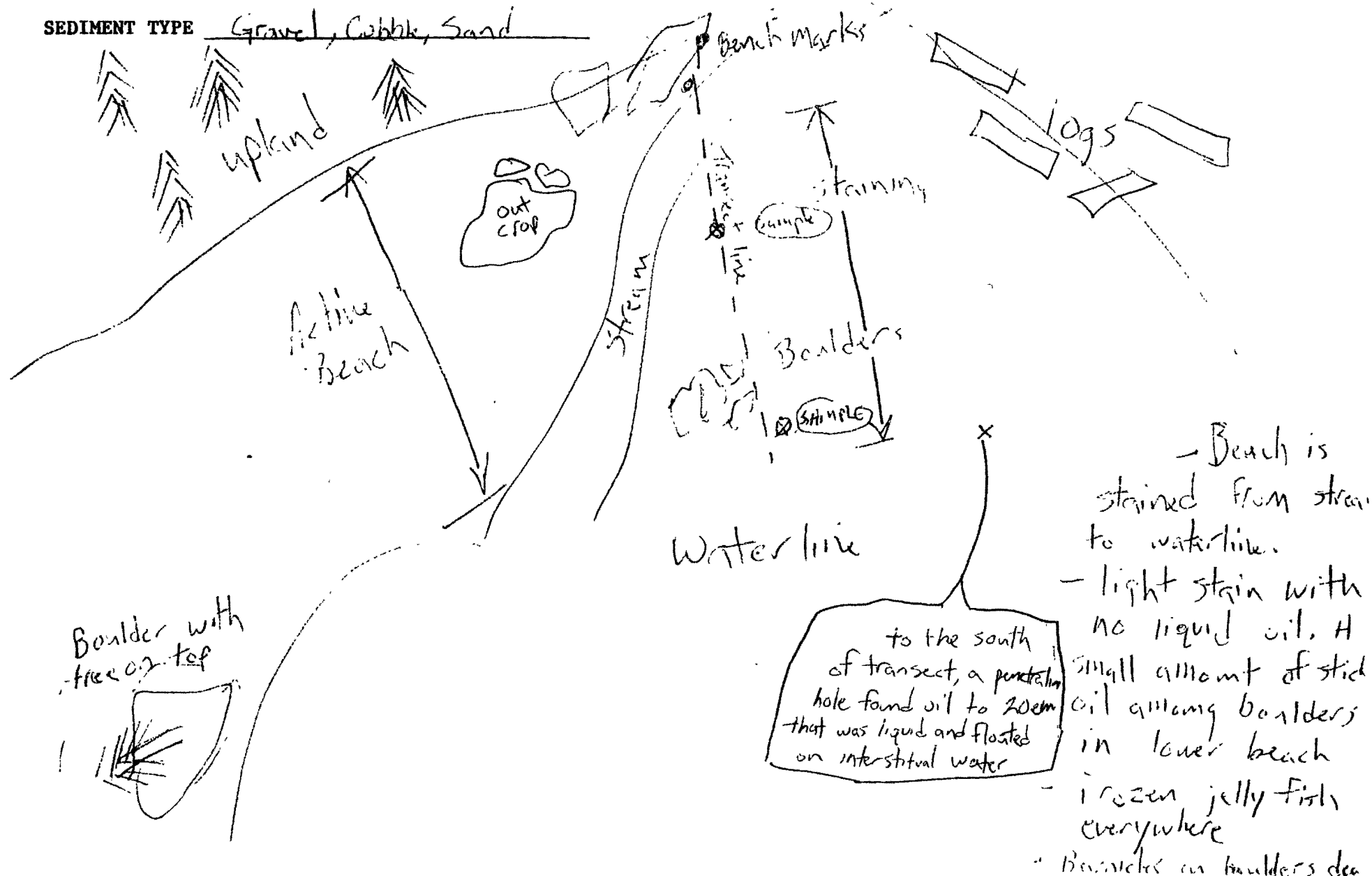
CLEANUP: # men -

equipment type & # -

ENTERED

C-1-T R 1'

PROFILE 5 LOCATION NW Bay DATE 11/7/89
RECORDERS CR, GP PHOTOGRAPHS CR #3/17-24, #3.2/1-7 GP #52/25-27 TIME 2, 1430
TIDE STAGE Low WEATHER clear, cold WIND SPEED _____ WIND DIRECTION _____
PROFILE ANGLE _____ WAVE HT. _____ SAMPLES TAKEN: BIO _____ CHEM _____ SED X
SEDIMENT TYPE Gravel, Cobble, Sand



DATE 11/7/89 PROFILE 5 START 1440 FINISH 1543 ^{GW} 1643 TIDAL STAGE Low FRONT STAKE HT
 LOCATION NW Bay LOW TIDE 1349 BACK STAKE HT 2M

HORIZONTAL (M)

VERTICAL (CM)

% OIL COVER

OIL THICKNESS

COMMENTS

1.90	1.67	1.8	1.8	3.91	4.93	5.48	2.45	2.76	2.32	2.47	2.60	3.55	2.66	3.45	3.22	4.3
-7	-17	-2	-6	-31	-11	-9	+6	-3	-8	-11	-12	-15	-6	-23	-25	-2
0	1	1	1	0	0	0	1	2	5	5	5	10	50	50	50	55
0	.25	.25	.25	.25	0	0	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25
EDGE OF SWASH	STREAM BANK			EDGE OF CREEKS	MID FLOWEN CREEK	EDGE CREEK	EDGE OF SWASH	STREAM BANK	EDGE OF SWASH	STREAM BANK	EDGE OF SWASH	STREAM BANK	EDGE OF SWASH	STREAM BANK	EDGE OF SWASH	STREAM BANK

PENETR:

4.19	.40	4.32														
-18	+18	-6														
50	30	30														
.25	.25	.25														
up gravel bar	gravel	Shore in H ₂ O	waterline	1643												

CHECK LIST

SAMPLES TAKEN -

depth of oil burial -

layer thickness -

oil penetration -

grain size -

BIOLOGICAL IMPACT

CLEANUP: # men -

equipment type & # -

very

PROFILE

5

LOCATION

NW BAY RUMOUR SARM

DATE

12-7-89

RECORDERS

G.P., G.W.

PHOTOGRAPHS

896P63 1-24

TIME

1530

TIDE STAGE

LOW

WEATHER

PRY CLOUDY

WIND SPEED

< 5

WIND DIRECTION

ENR

PROFILE ANGLE

146

WAVE HT.

< .5'

SAMPLES TAKEN: BIO

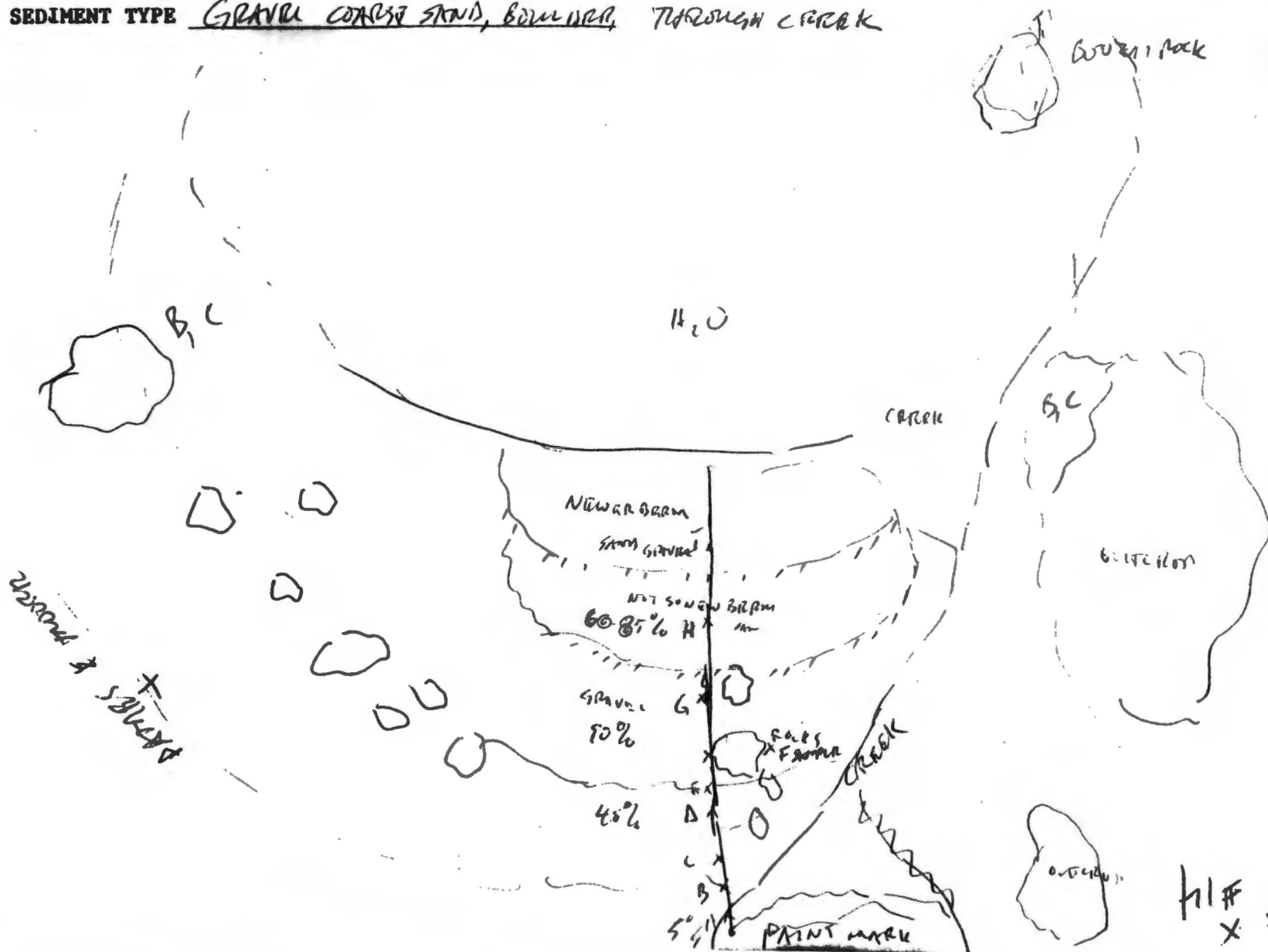
CHEM

SED

896W5122

SEDIMENT TYPE

GRAVEL COARSE SAND, BOUNDED, THROUGH CRACK



DATE 12/7/89PROFILE 5 START 1445 FINISH 1534TIDAL STAGE NEAR LowFRONT STAKE HT 0LOCATION NW BAY ELEANORLOW TIDE 1434 / 2.5 ft.BACK STAKE HT 194

	PT. MARK ✓	PT. MARK ✓	②	③		④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	
HORIZONTAL (M)	1.75	3.0	3.0	4.03	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.45	
VERTICAL (CM)	-18	-12	-12	-34	-7	-3	0	+4	-8	-8	-5	-7	-7	-16	-12	-19	
% OIL COVER	2	5	5	2	0	0	0	20	15	50	70	90	90	90	80	80	
OIL THICKNESS	0.25	0.25	0.25	0.25	0.25	0	0	0.25	0.25	0.25	0.5	0.5	0.5	0.5	0.5	0.5	
COMMENTS	GRAVEL COARSE SAND BANK FACE GR, CS, SWASH, STICKY TAR ON GRAVEL	"	"	BULGED BOULDER GR, CS, CREEK, STREAM BANK	MIDDLE OF STREAM COB, GR, CS.	"	STREAM BANK	GRAY, CS	TAR STAIN	"	ADJ. TO OUTCROP CS, GL COB, BULGE TAR STAIN, BANDING	"	OIL COATED GR. IN MAT SURFACE OIL IN GR TO STICKY TAR ON COB, CS.	"	BRANIELLS ADJ. TO LARGE BOULDER GROUP	"	BACK OF LARGE BOULDER IN GROUP MIDDLE OF GROUP SHARP POINTS

PENETR:

	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯	⑰	⑱	⑲
3.0	3.64	3.0	3.0	3.0	3.38	0.48	3.0	3.0	3.36	3.0	3.0					
-20	-15	+11	-8	-11	-15	+17	-11	-19	-20	-25	-22					
90	85	5	20	85	60	5	5	20	50	-	-					
0.5	0.5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	-	-	-					
BRANIELLS BUT PRINTS LEFT ON BOULDER.	GR, CS, FINE, SAND STICKY OIL, BRANIELLS SH, GL, CS, OIL ON GR	"	"	GRAVEL EDGE OF BAY FROM MIDDLE DITCHES	TOP OF FRESH GRAVEL BAY TAR STAIN	"	GR, CS TAR STAIN	"	RAINBOW SHEEN	SHEEN	SHEEN					
30	48					50										

SAMPLES TAKEN -

depth of oil burial -

layer thickness -

oil penetration -

grain size -

BIOLOGICAL IMPACT

CLEANUP: # men -

equipment type & # -

DATE 12/7/89PAGE PROFILE 5START FINISH TIDAL STAGE FRONT STAKE HT LOCATION LOW TIDE BACK STAKE HT *Cumulative*

HORIZONTAL (M)	1.75	4.75	7.75	11.78	14.78	17.78	20.78	23.78	26.78	29.78	32.78	35.78	38.78	41.78	44.78	47.23
VERTICAL (M)	-1.8	-3	-4.2	-7.6	-8.3	-8.6	-8.6	-8.2	-9	-9.8	-1.03	-1.2	-1.27	-1.43	-1.55	-1.74
% OIL COVER	2	5	5	2	0	0	0	20	45	50	70	90	90	90	80	80
OIL THICKNESS	0.0003	—	—	—	0	0	0	0.0003	—	—	0.0005	—	—	—	—	—
PEN. (M)		0		0				0.02			0.02		0.02		0.25	0.25
COMMENTS	A		B				C		D		E		F	G		

CHECK LIST

50.23	53.87	56.87	59.87	62.87	66.25	66.73	69.73	72.73	76.09	79.09	82.09	
-1.94	-2.09	-1.98	-2.06	-2.17	-2.32	-2.15	-2.26	-2.45	-2.65	-2.9	-3.12	
90	85	5	20	85	60	5	5	20	50			
0.0005	—	0.0003	—	—	—	—	—	—	—	—	—	
		-0.30		-0.48			-0.50					
H		I					J					

SAMPLES TAKEN: -

depth of oil burial -

layer thickness -

oil penetration -

grain size -

BIOLOGICAL IMPACT

CLEANUP: # men -

equipment type & # -

DATE 8-31-89 (CONT'D)

PAGE

PROFILE 5 (CONT'D) START FINISH TIDAL STAGE FRONT STAKE HT

LOCATION LOW TIDE BACK STAKE HT

HORIZONTAL (M)

VERTICAL (CM)

% OIL COVER

OIL THICKNESS

COMMENTS

CHECK LIST

SAMPLES TAKEN -

depth of oil burial -

layer thickness -

oil penetration -

grain size -

BIOLOGICAL IMPACT

CLEANUP: # men -

equipment type & # -

79.14	82.14	85.14	87.24																
-323	-340	-357	-384																
95	90	70	80																
.0003	←	→																	
-.3																			
PER I																			



OFFICIAL PHOTOGRAPH

ADEC

Date: 10/11/89 206-10-16902 Time: _____

Location (segment #): EL 52B

Eleanor Island

Reason for taking photo: Aerial intertidal.

undoc salmon stream

Taken by: Rick Gustin

Roll # 89RLG010 Frame #: 00

ACE 7237145 +/- /pkt

EL1

ELEANOR ISLAND 9/14/89

NORTHWEST BAY

UNCAT A/S

Moderately oiled
TO
HEAVY?

2-P. Carcasses
NO live Salmon
Present

Northwest
BAY

D&M
SITE →

Run cat A/S

EL052

500.0

ACE 6725618

VIDEO 89ME005V

JAB

ASAP survey - 90

SEGMENT AS/EL 52B SUBDIVISION: 8 SITE: 1 DATE 8-8-90

USCG / NOAA PSI Leo Bersalong Leo Bersalong

NAME ART WEINER SIGNATURE Art Weiner

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

PROPOSED WORK, AS SPECIFIED IN THE ASAP FOLLOWUP RECOMMENDATIONS,
SHOULD REMOVE ALL OIL.

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: - Due to the area containing Anad Stream #
226-10-16902 I believe a reassessment is in
order to ~~determine~~ determine if any oil remains.

LAND MANAGER

NAME John Ebel SIGNATURE John Ebel

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: To evaluate effectiveness of treatment,

EXXON

NAME Ray Sotelo SIGNATURE Ray Sotelo

☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: This site should not be a priority for reassessment in '91, my
recommendation is that it not be assessed at all.

ACE 7237159 +1S

SHORELINE OILING SUMMARY

TEAM NO. ASAP #2 EAXON SO TELC SEGMENT AS E-52
 OG CHATEAU USCG WEINER/SPSALONA SUBDIVISION B
 ADEC GORMLEY LAND REP ERL. JOHN (DNR) TOTAL NO. SITES 1
 DATE Aug 18 190 TIME 0735 to 0835 TIDE LEVEL 2.5 to -0.3
 TOTAL EST. LENGTH OF SHORELINE SURVEYED: 627 m
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 OIL CATEGORY LENGTH: W 15 m M 100 m N - m VL 512 m NO - m US 0 m

SURFACE OIL

SITE 1

SITE 2

SITE 3

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT								
S.O.R.		X	X			X	X	
POOLED								
COVER				X		X		
COAT			X	X		X		
STAIN			X	X		X	X	
MOUSSE								
PATTIES/T.B.								
FILM				X			X	
NO OIL					X			X
EST. SITE LENGTH					627			

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

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

SUBSURFACE OIL

SITE NO.	PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER				OILED INTERVAL (cm)	CLEAN BELOW (Y/N)	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS
			OP	OR	OF	NO			SU	UI	MI	LI	
1	1	30				X	.	Y			X		GPM-GPM
1	2	25	X	X			0-10	Y			X		GPM-GPM
1	3	20		X	X		0-10	Y			X		GPM-GPM
1	4	30			X		5-10	Y		X			GP-GP
1	5	15				X	.	Y			X		GP-GP
1	6	15		X			0-10	Y		X			BPG-BPG
1	7	20		X	X		5-10	Y			X		BPG-BPG
1	8	20		X			0-20	N		X			GP-GPB
							.						
							.						
							.						
							.						

Photographs:

Roll No. NONE

Frames _____

Dark Sheen w/ Brown Oil Drops

COMMENTS The region within 200 meters of the stream retained most of the surface oil however the low angle beach on the subdivision's N.E. side holds the majority of

ACE 7237160

REVISION NO. 7/27/70

U. DILLON

REGIMENT BT/ EL-54

SUBDIVISION B

DATE OF 1 APR 90

CHECKLIST

- ☐ M Area
- ☐ Approx. Size
- ☐ Sub/Div. Size
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ E. of MAREL
- ☐ S.S.
- ☐ Photo Location(s)
- ☐ Profile(s)
- ☐ Photo Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
PT - No Substrate Oil

1 Δ
PT - Substrate Oil

CT/C
Coastal Distribution

CT/B
Broken Distribution

CT/P
Paddy Distribution

CT/S
Splashed Distribution

CT/S
Splashed Distribution

CT/S
Splashed Distribution

CT/S
Splashed Distribution

CT/S
Splashed Distribution

CT/S
Splashed Distribution

STILL VALID, NO MODIFICATION
WAS MADE

SKETCH MAP

M-UITZ H/C/P
patchy coat with tar spots
20m wide by
25m long
Less Than 1%
Splattered
& CT/S/U

DAMES
& MOORE

CUSTOM BLEN

LARGE
STREAM

NOAA
STUDY
#14

UITZ 2m wide
x 8m long
broken coat
NOT OBSERVED

CUSTOM BLEN
IN AREA

MITZ 10m wide x 16m long
broken surface coat on E/B/P
patchy

M-UITZ bedrock-patchy
stain on rock surface and
seeping in crevices.

M-UITZ 10m wide
x 8m long broken
coat on surface

CT/P/U

CT/P/U

CT/P/U

CT/P/U

CT/P/U

CT/P/U

EL-54-A

1-2m wide
Boulder slope 30m long

SOR/H/B

MANUAL
REMOVAL
HAS TAKEN
PLACE

LARGE
ROCK

SITE 1
WHOLE
BEACH

No customblen over major
of area. Rainbow sheen
on MITZ flats. Black oil
film up to 10cm deep

UITZ patchy stain
and boulder coast
1-2m wide x 300m long

UITZ patchy stain
on E/C

GREEN TAPERS OUT

CT/S

CT/S

CT/S

CT/S

CT/S

ALSO
CV/S
MITZ 6m wide
x 8m long area
with sporadic spots
of consolidated clay/pebble
cement. May have inclusive oil film

SCHNEIDER

ASAP #2
AUG 8 1990
FROM SSAT
MAP
CHANEY

Oil Character: High Int. AP 8 PO CV CT 73 ST 365 MS PT TB 50 FL NO 310

ACE 7237161

A.S.A.P.

EL 52-b
site 1

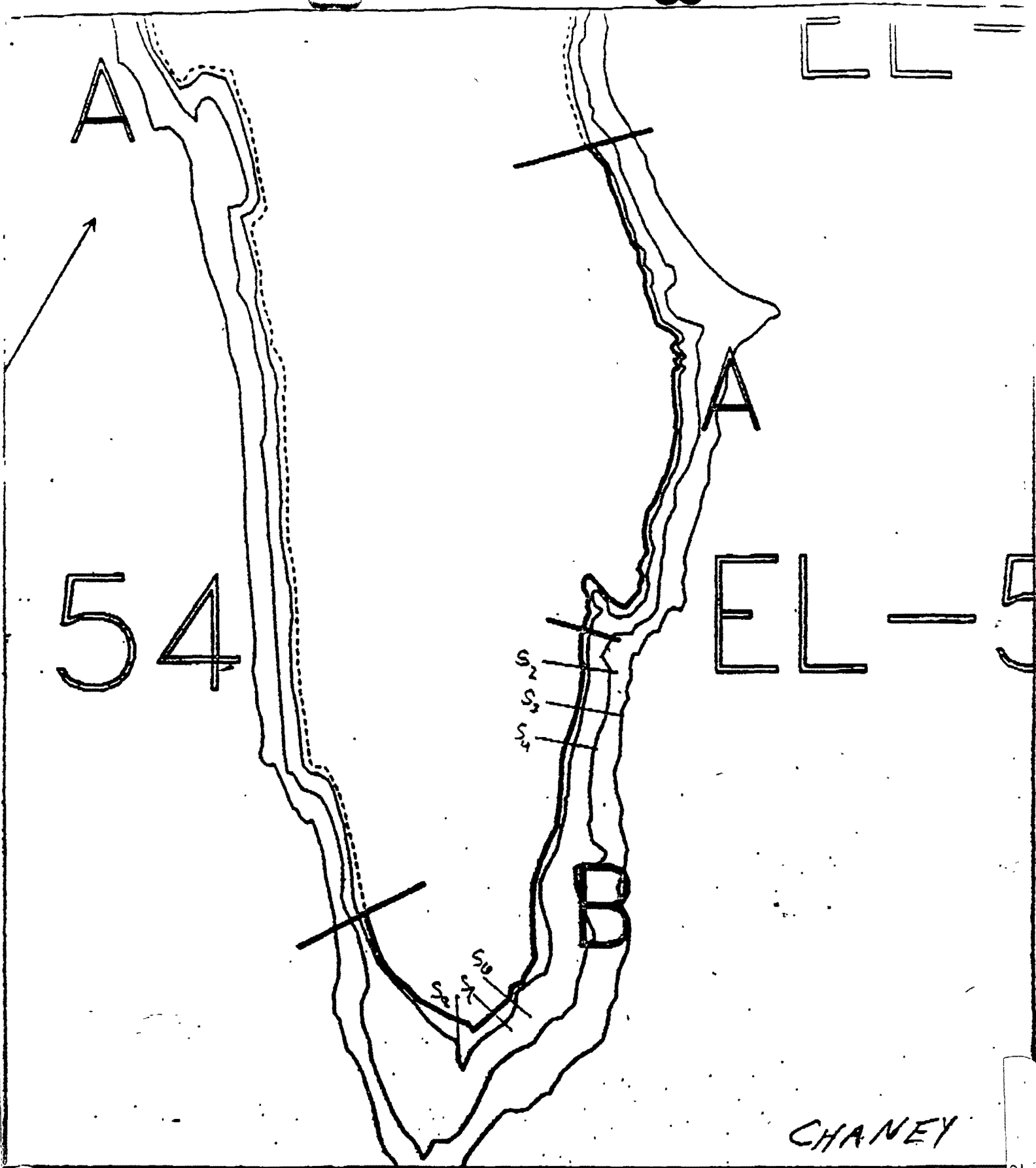
August 10, 1990

ADEC recommends the following treatment:

- 1) Aggitate sediment with rakes and retrieve oil with snare booms - heavy amounts of PO present
- 2) Work at minus tide or extremly low tide due to the location of subsurface oil
- 3) Confer with a biologist due to the presence of rich intertidal community at LITZ
- 4) Monitor during 1991

For the anadromous stream portion of the segment:

- 1) Remove SOR sediments
- 2) Manually till and add customblen with ADF&G approval
- 3) Possibly use snare booms depending on oil remaining



SEGMENT EL-52

Segment Location Map

Map Key: KHIEL-52

July 19, 1990

ACE 7237162

ASAP FOLLOWUP RECOMMENDATIONS

Segment: ASV FL-52 SSM: B Site: 1 Date: 8/8 1990
 ALSO INCLUDES ANAD STREAM # 226-10-10902

Conditions Observed: Pooled oil present at the LITZ along boulder/cobb beach on the East Side of bays. Subsurface oil extends up to 500
Continuous at the LITZ. SOR Sediments present in stream a
SNEENING OBSERVED.

Followup Recommendations: Pooled oil present thru-out LITZ should be
manually removed. Work will have to be delayed at either mine
tide or very low tide due to the location of the oil. Strong shore boom ab
intire shore to contain oil. Remove SOR sediments from stream
area, manually till and custom blind. Remove oil log around
stream. No evidence of custom blind is present in work site.

Completed by Pickup ☐ YES ☒ NO
 Crew:

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

ADRC: Wesley Ghormley Wesley Ghormley
(signature)

Comments: I totally agree with above recommendation. Most import
is shore boom must be used due to the condition of the oil

BOON: RAY SETH Ray Seth
(signature)

Comments: I don't agree with this recommendation, instead I suggest
the area be exposed by taking and applying controlled. This should
be a low priority problem for 90.

USCG: PSI Leo Barcelona Leo Barcelona
(signature)

NOAA: Art WEINER Art Weiner
(signature)

Comments: AGREE 3 RECOMMENDATIONS

AP: This is a low priority problem for 1990?

LEAD: John Ebel John Ebel
(signature)

Comments: Shore boom along traverse. Salmon spawning + contamination sediments a
for work plans. Skin off top mmm (thin coat 90) Remove oiled sediments
Monitor the Operational schedule. Recommend mechanical & manual removal
of site due to tide zone.

Pre-ASAP

ANADROMOUS FISH STREAMS/OILING CONDITION PWS

Segment # EL52 ASC# 226-10-16902 Location NW Bay

Date 8/6/90 Recorder/Observer Aimee Weseman

Oil in streambed none sighted Oil on streambanks NONE sighted

Oil within 50m of mouth yes Anadromous Fish present several

Picks seen jumping far off-shore

Description of oil and comments

West side of stream - a 11m long x 6m wide patch of Heavy to Mod OR sediments in MITZ - 10m west of stream channel

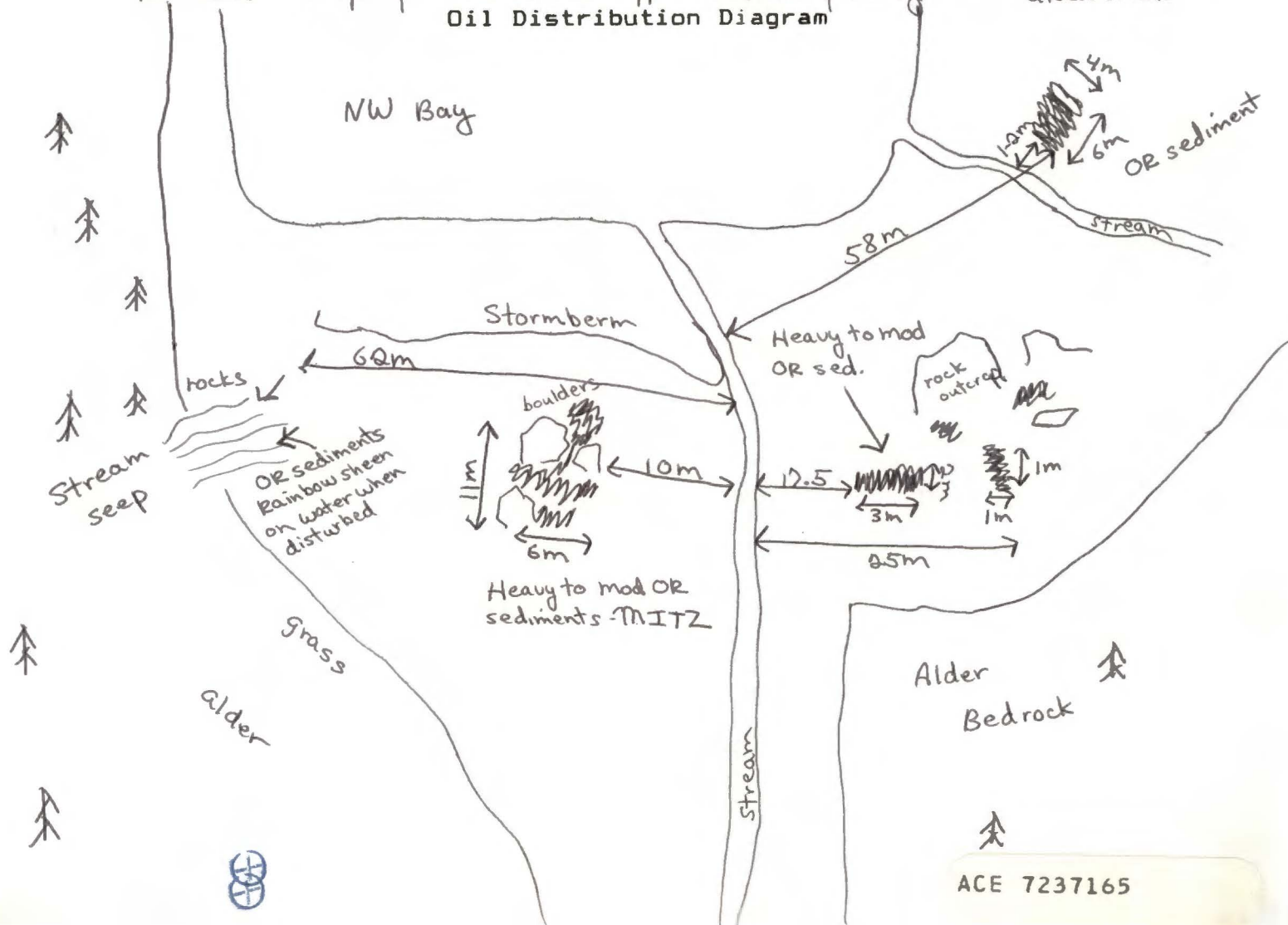
62m west of channel - a 2m wide x 10m long area of OR sed in MITZ in stream seep - gives off rainbow sheen when disturbed.

East side - a 3m long x 2m wide patch of OR sediment - 17.5m from stream channel MITZ - several smaller patches same area

MITZ could contain a lense of oil, running the length.

Rec - manual removal OR sed & custom blen Mechanical till if oil lense discovered.
Re-assess next spring Pair of Heron appear to be nesting nearby

Oil Distribution Diagram



ADEC EXXON VALDEZ POST-TREATMENT SURVEY REPORT

SEGMENT#: EL052

DATE: 09/14/89

LOCATION: NORTHWEST BAY, ELEANOR I.

TIME: 17:10

Survey Type: Boat, Ground

Team: G. Pavia, D. Zobrist, M. Ebel

WEATHER AND SEA CONDITIONS

Weather: Cloudy, Rain

Wind Direction: NE

Sea State: Calm

Knots: 0-15

Low Tide: 7:16

Feet: -1.

High Tide: 13:35

Feet: 12.2

Low Tide: 19:29

Feet: 0.48

High Tide: 0:50

Feet: 13.

SHORELINE DESCRIPTION

Shoretypes: H,LR,B,C

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

Wave Exposure: H,M,L (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: VL,L,M,H

(N=none, VL=very light, L=Light, M=moderate, H=heavy)

Area of Impact: S,H,M

(S=supratidal, H=high intertidal, M=mid tidal, L=low intertidal)

Max. Oil Thickness: 2 mm (1 = 1 mm or less, 0 = no oil)

Max. Oil Penetration: 10 cm (35 = 35 cm or greater)

Percent Segment Categorized as Oiled: 100%

Presence of Oiled Driftwood (y/n): y

Oil Types: M,SY,T,ST

(P=pooled, M=mousse, SY=sticky, T=tar, A=asphalt, ST=stain)

Samples: EL052-1 / EL052-2 / none / none

DAMAGED OR OILED ORGANISMS

Fucus (y/n): y

Barnacles (y/n): y

Mussels (y/n): y

Dead Mammals: 0

Dead Birds: 0

SOLID WASTE FOUND

Type: One locality, Cleanup debris

Bags Collected: 0

Draft

Printed: 12/12/89 11:09

Walk-a-thon

ACE 7237146

LIST OF ASAP REPORTS and TAG RECOMMENDATIONS
CONTAINING ANDROMOUS STREAMS

9/10/90

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

T.W.
9/10/90

LIST OF ASAP REPORTS and TAG RECOMMENDATIONS
CONTAINING ANDROMOUS STREAMS

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

Final Anadromous Stream Treatment Information

Segment ID - Stream ID	NTR	Bio	Bio Start	Bio End	Man	Man Start	Man End
BA002 226-40-16450	X						
BA002 226-40-16451		X	6/22/90	6/23/90	X	6/22/90	6/23/90
BP004 226-20-16388					X	7/1/90	7/2/90
BP004 226-20-16392					X	7/2/90	7/3/90
BP004 226-20-16395					X	7/3/90	7/4/90
BP004 226-20-16397		X	7/7/90	8/27/90	X	7/4/90	7/7/90
CB003 242-20-10190					X	6/14/90	6/14/90
CH001 226-20-16280					X	6/16/90	6/16/90
CH002 226-20-16180		X	7/3/90	9/12/90	X	6/16/90	6/16/90
CH009 226-20-16182		X	7/4/90	9/12/90	X	7/4/90	7/4/90
CH014 226-20-16255					X	6/20/90	6/20/90
CH016 226-20-16258	X						
CH0900 226-20-16200					X	7/3/90	7/3/90
CU001 224-20-12995					X	5/18/90	5/23/90
CU007 224-20-13010	X						
CU013 224-20-13030					X	6/3/90	6/3/90
CU014 224-20-13034					X	6/21/90	6/21/90
CU014 224-20-13036					X	6/21/90	6/21/90
EI001 242-10-10270					X	7/1/90	7/1/90
EL015 226-10-16906					X	6/30/90	6/30/90
EL052 226-10-16902		X	6/28/90	9/4/90			
ER005 226-50-16432					X	6/21/90	6/21/90
ER006 226-50-16430					X	6/20/90	6/20/90
ER007 226-50-16428					X	6/20/90	6/20/90
ER019 226-50-16406	X						
EV003 226-40-16590					X	6/10/90	6/10/90
EV007 226-40-16559	X						
EV012 EV012-UNCAT		X	6/22/90	6/23/90	X	6/22/90	6/23/90
EV014 226-40-16640					X	6/23/90	6/23/90
EV017 226-40-16620					X	6/19/90	6/19/90
EV017 226-40-16630					X	6/19/90	6/19/90
EV025 226-40-16613		X	7/1/90	7/1/90	X	6/9/90	6/9/90
EV027 226-40-16610					X	7/8/90	7/8/90
EV070 226-40-16509		X	6/12/90	9/1/90	X	6/12/90	6/12/90
EV071 226-40-16484		X	7/5/90	9/1/90	X	6/21/90	6/21/90
FL002 226-40-16390	X						
FL005 226-40-16400	X						
GR007 GR007-UNCAT					X	6/27/90	6/27/90
GR013 227-20-17890	X						
GR103 227-20-17880					X	6/24/90	6/26/90
IN031 226-10-16916					X	7/5/90	7/5/90
K0101-SI008 251-81-10010	X						
K0101-SI014 251-82-10090					X	7/3/90	7/3/90
K0112-SS009 251-50-10045					X	7/2/90	7/2/90
K0201-SI013 251-81-812	X						
K0302-IB005 252-31-10020					X	6/5/90	6/5/90
K0911-CD018 262-10-10100					X	7/5/90	7/7/90
K0911-CD020 262-10-10040					X	7/3/90	7/8/90
K0911-CD020 262-10-10070	X						

ADEC BIOREMEDIATION DAILY REPORT

DATE: 9/4/90ADEC Monitor: Rowann Hudnall

TIDES: TIME: HEIGHT:

Low _____

High _____

Low _____

High _____

WEATHER: Cloudy Rain Fog Sun

TEMP: 60 SEA COND: 1 ft

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

WIND SPEED 0-15 16-30 30+

USCG Scott Rainsford

OOPS James Byars

Exxon Al Snook

Other _____

OGS Jim Conner

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

<u>ELO52</u>	B	2	0	32	3rd treat
ELO55	A	2	3	69	3rd treat
ELO55	B	4	10	31	3rd treat
ELO55	C	1	0	50	3rd treat
ELO56	A	1	0	32	3rd treat
ELO57	A	5	98	310	3rd treat
ELO58	B	7	26	147	3rd treat
ELO54	A	3	13	352	3rd treat

\shorelin\rowann\biorept 8/7/90

ACE 7237150+1AC

ADEC BIOREMEDIATION DAILY REPORT

DATE:

8/21/90

ADEC Monitor:

Rowann Hudnall

TIDES:

TIME:

HEIGHT:

WEATHER: Cloudy Rain Fog

Sun

Low

04:30

-2.0

TEMP: 60°F SEA COND: Calm

High

15:00

13.0

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

Low

21:00

1.0

WIND SPEED 0-15 16-30 30+

High

02:00

14.0

USCG

Dan Percy

Exxon

Frank Cox

OOPS

James Byars

Other

OGS

Dan Mann, Bill Barstow

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

EL053	A	7	0	85	Deer Harvesting constraint for no bio after 8/15 lifted for Eleanor Island by Chenega Village Corp. according to Exxon rep.
EL058	A	1	0	14	
EL106	B	36	122	111	
SM06	C	14	0	803	
LN01	A	1	0	150	
EL052	B	3	0	44	

\shorelin\rowann\biorept 8/7/90

ACE 7237151

ASC 24-10-16902

ASAP TAG REVIEW SHEET

Segment: EL52 Subd: B Site: 1 Date 11 AUG 90
PRE-Review

Priority For Addressing In 1990

HIGH

MEDIUM

LOW

~~NTR~~

Treatment
Recommended:

~~NTR~~ based on OG & SKETCH

Rec. sheet
indicates high

Recommendation / Comments Sheets
do not agree with OG & SKETCH.
which indicates Pooled Oil / SOR (high)
ANAD. STREAM present.

Priority Site For Reassessment In 1991

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

TAG 13 AUG

Manual Rake and BIO after Removal of Pooled Oil.

Remove HIGH SOR, • LOW ITZ. in VICINITY OF
ANAD STREAM.

see sketch

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/ FL-52 Subd.: B Site: 1 Date: 8/8 1990
 ALSO INCLUDES ANAD STREAM # 226-10-10902

Conditions Observed: Pooled oil Present at the LITZ along boulder/cobble beach on the East Side of bay. Subsurface oil extends up to 50cm continuous at the LITZ. SOR sediments present in stream area SNEENING OBSERVED.

Followup Recommendations: Pooled oil present thru-out LITZ should be manually removed. Work will have to be delayed at either minus tide or very low tide due to the location of the oil. Strong snare boom along entire shore to contain oil. Remove SOR sediments from stream area, manually till and custom blend. Remove oiled log around stream. No evidence of custom blend is present in work site.

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

ADDC: Wesley Gharmlay Wesley Gharmlay
 (name) (signature)

Comments: I totally agree with above recommendation. Most important is snare boom must be used due to the condition of the oil.

BOON: REY SOTELO Rey Sotel
 (name) (signature)

Comments: I don't agree with this recommendation, instead I suggest the area be exposed by raising and applying concentrated. This should be a low priority problem for 90.

USCG: PS1 Leo Bersalona Leo Bersalona
 NOAA: Art Weiner Art Weiner
 (name) (signature)

Comments: AGREE W RECOMMENDATIONS

AP: This is a low priority problem for 1990

Lead Rep: John Ebel John Ebel
 (name) (signature)

Comments: Shore observed along traverse. Salmon spawning & fertilization occurred a while for work plans. Skin off top armor (thin coat of oil). Remove oiled sediments. Minus tide. Operational schedule. Recommend mechanical, not manual removal of site due to tide zone.

SEGMENT AS/EL 52B SUBDIVISION: 8 SITE: 1 DATE 8-8-90USCG / NOOA PSI Leo Bersalona Leo Bersalona
NAME ART WEINER SIGNATURE Art Weiner☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:PROPOSED WORK, AS SPECIFIED IN THE ASAP FOLLOWUP RECOMMENDATIONS,
SHOULD REMOVE ALL OIL.ADEC
NAME Wesley Ghormley SIGNATURE Wesley Ghormley☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:- Due to the area containing Anad Stream #.
226-10-16902 I believe a reassessment is in
order to ~~we~~ determine if any oil remains.LAND MANAGER
NAME John Ebel SIGNATURE John Ebel☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:

To evaluate effectiveness of treatment.

EXXON
NAME Ray Sotelo SIGNATURE Ray Sotelo☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:This site should not be a priority for reassessment in '91, my
recommendation is that it not be assessed at all.

ASAP SHORELINE SURVEY SUMMARY
 TEAM NO. ASAP #2 EXXON SOTELO SEGMENT AS/ EL 52
 OG CHAVEY SCG WEINER/DEPSALONA DIVISION B
 ADEC GORMLEY LAND REP ERCL, JOHN (DNR) TOTAL NO. SITES 1
 DATE Aug 18 / 90 TIME 0735 to 0835 TIDE LEVEL 2.5 to -0.3
 TOTAL EST. LENGTH OF SHORELINE SURVEYED: 627 m
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 OIL CATEGORY LENGTH: W 15 m M 100 m N - m VL 512 m NO - m US 0 m

SURFACE OIL

SITE 1

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT								
S.O.R.		X	X			X	X	
POOLED								
COVER				X		X		
COAT			X	X		X		
STAIN			X	X		X	X	
MOUSSE								
PATTIES/T.B.								
FILM				X		X		
NO OIL					X			X
EST. SITE LENGTH					<u>627</u>			

SITE 2

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

SITE 3

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

SUBSURFACE OIL

SITE NO.	PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER				CLEAN BELOW (Y/N)	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS
			OP	OR	OF	NO		SU	UI	MI	LI	
1	1	30				X	Y			X		GPM-GPM
1	2	25	X	X			Y			X		GPM-GPM
1	3	20		X	X		Y			X		GPM-GPM
1	4	30			X		Y		X			GP-GP
1	5	15				X	Y			X		GP-GP
1	6	15		X			Y		X			BPG-BPG
1	7	20		X	X		Y			X		BPG-BPG
1	8	20		X			N		X			GP-GPB

Photographs:

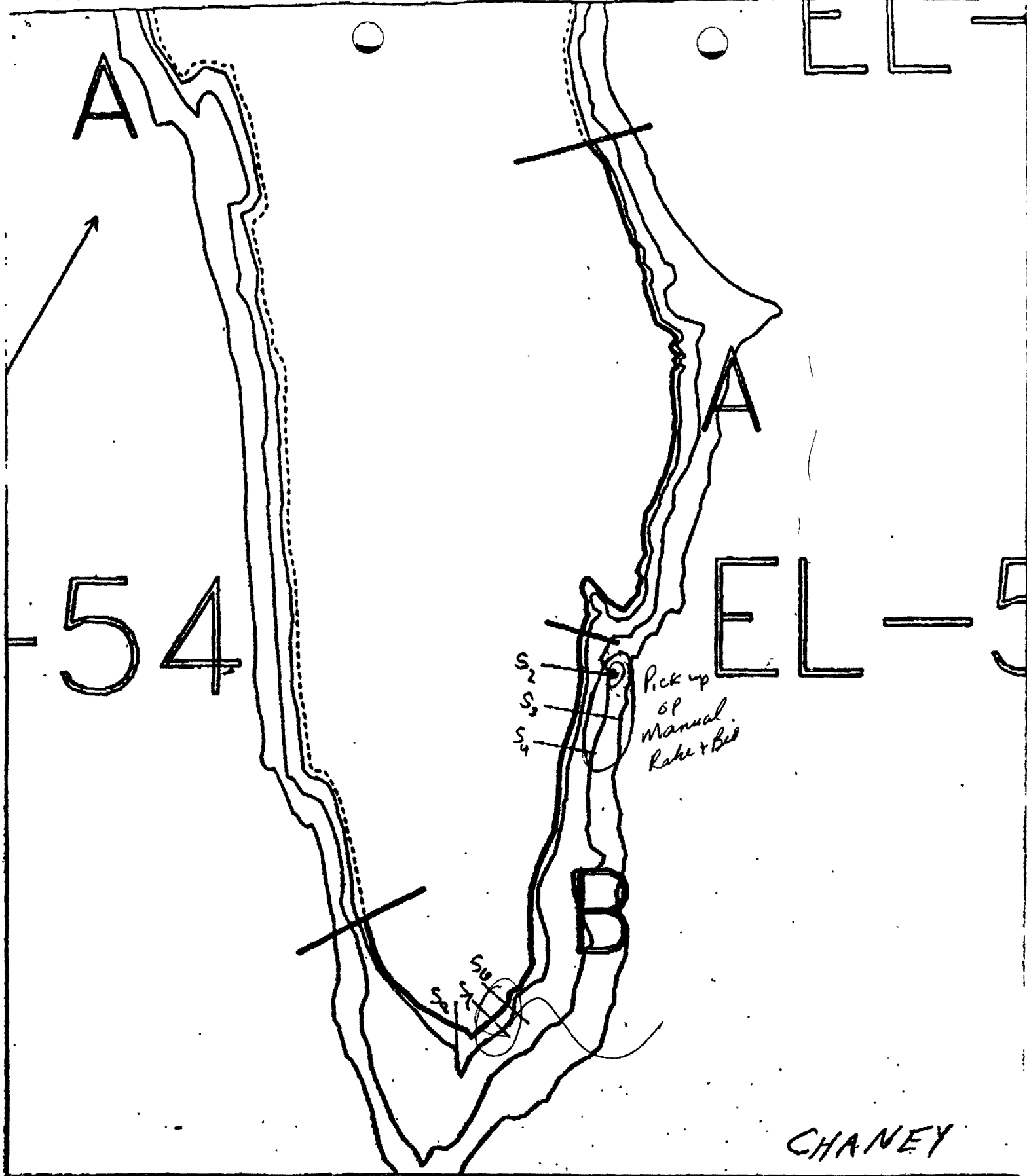
Roll No. NONE

Frames _____

Dark Sheen w/ Brown Oil Drops

COMMENTS The region within 200 meters of the stream retained most of the surface oil however the low angle beach on the subdivision's N.E. side holds the majority of the region's mobile subsurface oil. Black oil sheen at

XXXXXXXXXXXX-XXXX



SEGMENT EL-52

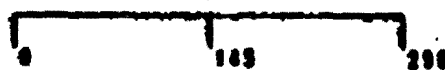
Segment Location Map
Map Key: KNIEL-52

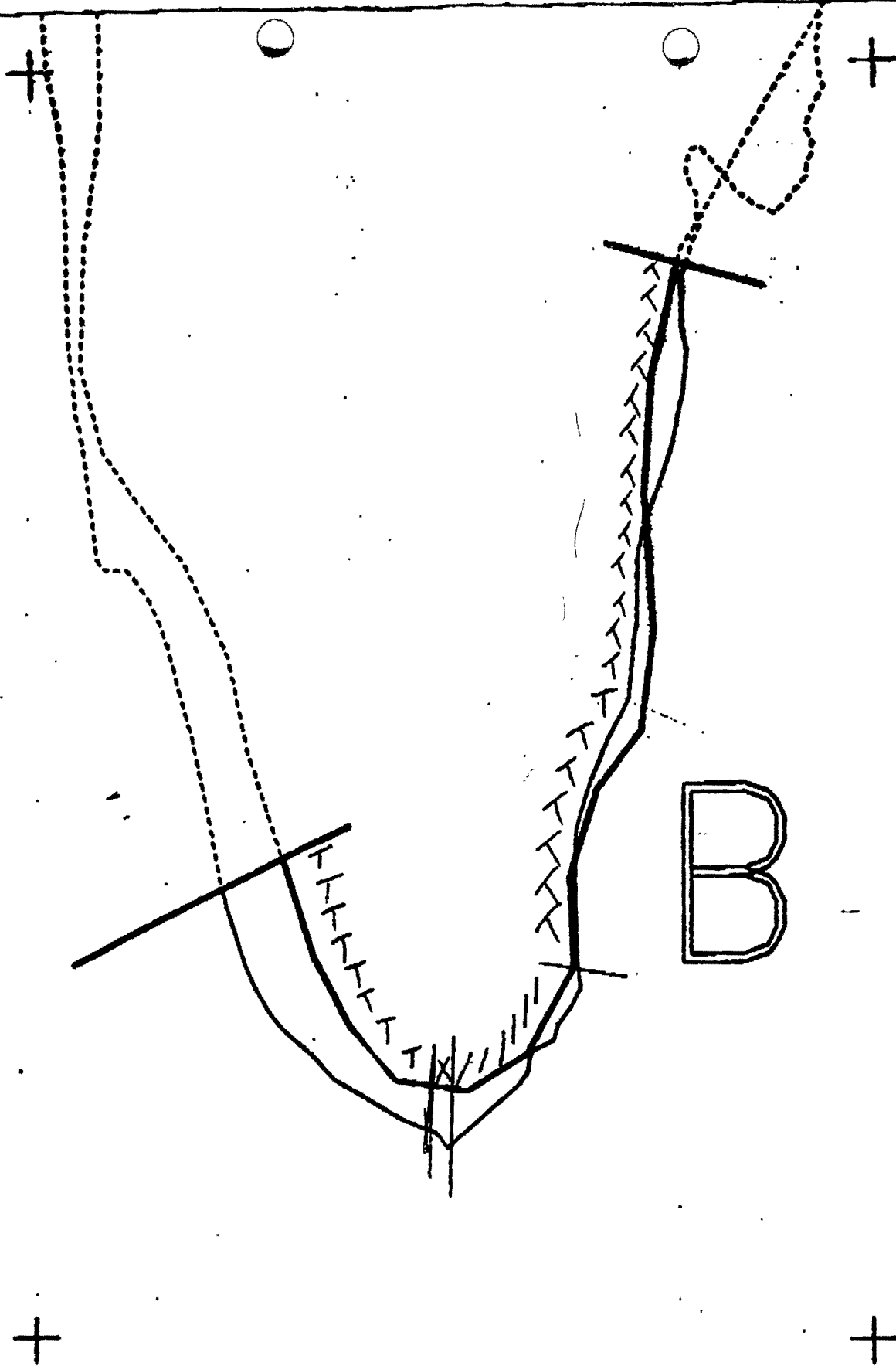
July 19, 1990

1:5707

ACE 7237157

METERS





XXXX Wide
///// Medium
---- Narrow
TTTT Very Light
OOOO M - 0.1

EL-52 B
ADEC Subsegment Length: 627m
METERS



at State Plane Zone 4 1:3103



Subdivision Field Map
Map Key: KNIEL-52B
Name: CHANEY

Date: AUG 8 1990
ACE 7237158 -JS

Aimee Weseman
ADF&G/Habitat
Fish and Wildlife Tech
Oil Spill Response
M/V Corinthian

July 3, 1990

Re: Stream Report
ASC# 226-10-16902 Seg. EL 052 N.W. Bay, Eleanor I.

Though manual removal was the anadscat recommendation, the TAG workplan for this stream called for bioremediation only. A workplan modification was put in to TAG with nothing coming of it. Manual tilling of the oiled areas and Custom Blen application occurred on June 28, 1990. Approximately 32 pounds were applied to 4 patches of OR to OP sediments on the stream site.

Aimee Weseman

Aimee Weseman

Date 6/28/90ADEC DEMOBILIZATION REPORT
FOR INIPOL AND CUSTOMBLEN TREATMENTTo: Alaska Department of Environmental Conservation
Oil Spill Response Center
Anchorage, Alaska

Attn: John Bauer

FAX 265-4666

From: Chris Strand (please print)RE: SEGMENT NUMBER EL-52SUBSEGMENT NUMBER BADEC REP Chris StrandUSCG REP Dan PearceyEXXON REP Al SnookBOAT NAME/SQUAD NUMBER Don Bollinger/squad

Site #	Length (along shore m)	Area m ²	Inipol (gallons)	Customblen (lbs.)
① A	35	9	=	2
B	15	128	=	26
C	3	15	=	3
② -	7	42	3	1.5
③ A	11	33	0.1	7
B	1	1	0.1	0.05

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

areas marked on map, inside and out of anadromous stream area, binned as per work order and monitor requests.

Describe the amount of oil remaining (type, size of area and location). 3 patches of residual oil, subsurface east of stream, 12m, 18m, and 33m distant were located. Larger exposed patches to west of stream, similar in nature as residual in pebble/granule/sand, under boulder/cobbles. Further stretches north of stream area consisted of long areas of subsurface film/residue behind 'Flower Pot Rock' and minor circular exposed areas poking through cobbles in pebble/granule/sand matrix.

Additional Comments (keep objective)

Area to west of stream was originally slated for Inipol, but upon review by Fish & Game, this area was requested to be customblended only, which was done.

signature

Chris Strand 6/28/90Date and time of demobilization from segment 6/29/90, 0940

Shoremon/Demob.bio 55/30/90

ADEC DEMOBILIZATION REPORT
FOR INIPOL AND CUSTOMBLEN TREATMENT

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

Attn: John Bauer
FAX 265-4666

From: _____ (please print)

RE: SEGMENT NUMBER EL052 SUBSEGMENT NUMBER B

ADEC REP Rouann Hudnall USCG REP Scott Rainsford

EXXON REP Al Snook BOAT NAME/SQUAD NUMBER Don Bollinger
Squad 3

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

See Daily report and OG report for details

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 reapplication. 3rd treatment. ADF-G
Doug Hill radioed approval for treatment of
Anad stream.

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

1 area of tar mat removal w/ OF oiling
remaining on surface. Rest of segment
oiling is insignificant.

Additional Comments (keep objective)

signature Rouann T. Hudnall
Date and time of demobilization from segment 9/4/90
Shoremon\Demob.bio 55/30/90

ADEC DEMOBILIZATION REPORT
FOR PHYSICAL/MECHANICAL TREATMENT AND CUSTOMER

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

Attn: John Bauer
FAX 265-4666, 265-4656

RE: SEGMENT NUMBER EL 52 SUBSEGMENT NUMBER B

DEC REP Marianne Profit USCG REP David Sylvester

EXXON REP Daryl Jones BOAT NAME/SQUAD NUMBER HLV Corinthian
Squad #1

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 which can be removed with further physical/mechanical treatment? If yes what is the recommended treatment method.

Yes - manual removal w/ shovels, trowels.

~~HLV 16 Field Crew~~

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

10m X 15m patchy 6-8cm Deep OR IN MITZ
West of Anadromous stream

Additional Comments (keep objective)

Follow up with Bio. Bio crew should rake before application. Annee Wesman (ADFAC) will talk with her supervisor about constraints and eventual manual removal.

signature Marianne Profit
Date and time of demobilization from segment 5/22/90 1000
Shoremon\55 5-12-90

ACE 7237169 -/S

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-10-16902

SEGMENT EL-52 SUBDIVISION B

WORK WINDOW

Bioremediation and Manual Raking
Less Than 100m From Stream

WORK PRIOR TO 7/10
(ADF&G MONITOR REQ.)

Bioremediation and Manual Raking
More Than 100m From Stream

WORK PRIOR TO 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (226-10-16902) is in Subdivision B. This subdivision is closed to bioremediation and manual raking less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation and manual raking are permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation and manual raking more than 100m from stream.

7II Subsistence: Deer
Harvesting

Closed to manual raking and bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

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

SEE SUBDIVISION CONSTRAINT ADDENDUM EL-52B
FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC

R. J. Janssen

Date

6-16-90

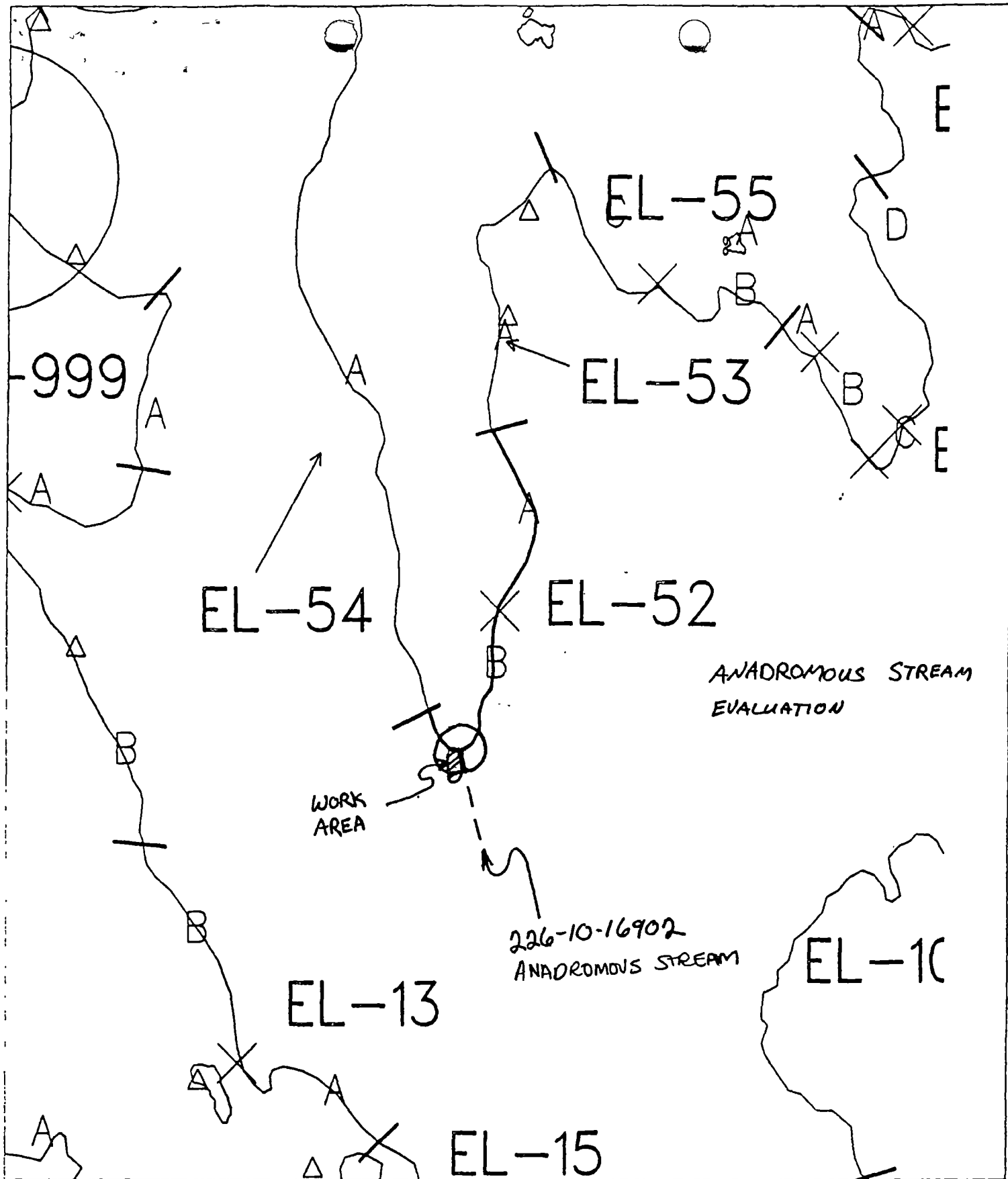
Prepared by

J. A. Phillips

Date

6/15/90

ACE 7237170 +15156



Exxon Company, USA

Map Key: PWS-EL-52

June 04, 1990

ECOLOGY MAP
SEGMENT EL-52
SUBDIVISION B (2 of 2)
METERS



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

ACE 7237171

ANADROMOUS FISH STREAM EVALUATION

6

SEGMENT ST/ EL-52 STREAM NO: 226-10-16902 DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
6Y Recreation: Special use destination
6U Recreation: Tent sites (6/1 to 9/15)
6V Recreation: Anchorages (6/1 to 9/15)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncolled biota and substrate. Subject stream is located in Subdivision B (2 of 2).

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: 5/1/90

Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes bioremediation of area of surface cover shown on attached sketch map. Work should be conducted between 7/10 and 8/15 based on salmon constraints with approval of ADF&G regarding bioremediation of stream banks.

SEE CONSTRAINTS ADDENDUM date 6/15/90

TAG COMMENTS: MINUTELY RAKE PRIOR TO BIO.

TAG APPROVAL DATE: 5/10/90.
ADEC Art Warner Dist. Warner
EXXON Andy Ben
NOAA Barbara Scott
USCG D.D. Rome

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

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 6-27-90

EXXON Authorized Representative _____

Shoreline Segment EL-52 B

Anadromous Fish Stream Number(s) 226-10-16902

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 TO - 7/10/90

Alaska Department of Fish and Game

Mark H. Sewade
Authorized Officer

R. H. D. D. D.
Permittee's Signature

Approved Cleanup techniques have been reviewed and complied with: _____

EXXON Authorized Field Representative

ACE 7237173-15

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ EL-52 ⁸ STREAM NO: 226-10-16902 DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 6Y Recreation: Special use destination
 6U Recreation: Tent sites (6/1 to 9/15)
 6V Recreation: Anchorages (6/1 to 9/15)
 7II Subsistence area: Deer harvesting (8/15 to 2/28)
 See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Subject stream is located in Subdivision B (2 of 2).

ARCHAEOLOGICAL CONSTRAINTS:

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

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

Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes bioremediation of area of surface cover shown on attached sketch map. Work should be conducted between 7/10 and 8/15 based on salmon constraints with approval of ADF&G regarding bioremediation of stream banks.

TAG COMMENTS: Minutely RAKE PRIOR TO BIO.

TAG APPROVAL DATE: 5/10/90
 ADEC Art Weiner Det. Weiner
 EXXON Andrew P. P.
 NOAA Bert Weissert
 USCG D.D. Rome

FOSC: h L DATE: 5-15-90

DATE 4, 24 90

CHECKLIST

- ___ N Arson
- ___ Appx. Sc's
- ___ Exp. Sub. Study
- ___ On Line
- ___ Misc
- ___ Long's
- ___ T. Conner
- ___ Suburban Character
- ___ Ltr. HIRSHAW
- ___ STL
- ___ Fresh Locatn (q)
- ___ Freshly (q)
- ___ FH Locatn (q)
- ___ Phone Locatn (q)

LEGEND

PR - Mr. Subscriptions CUB

24

PM - Substitution 107

CTAC

CONFIDENTIAL INFORMATION

CTSD

Broken Overhead

STOP

Ready Observers

Revised Chapter

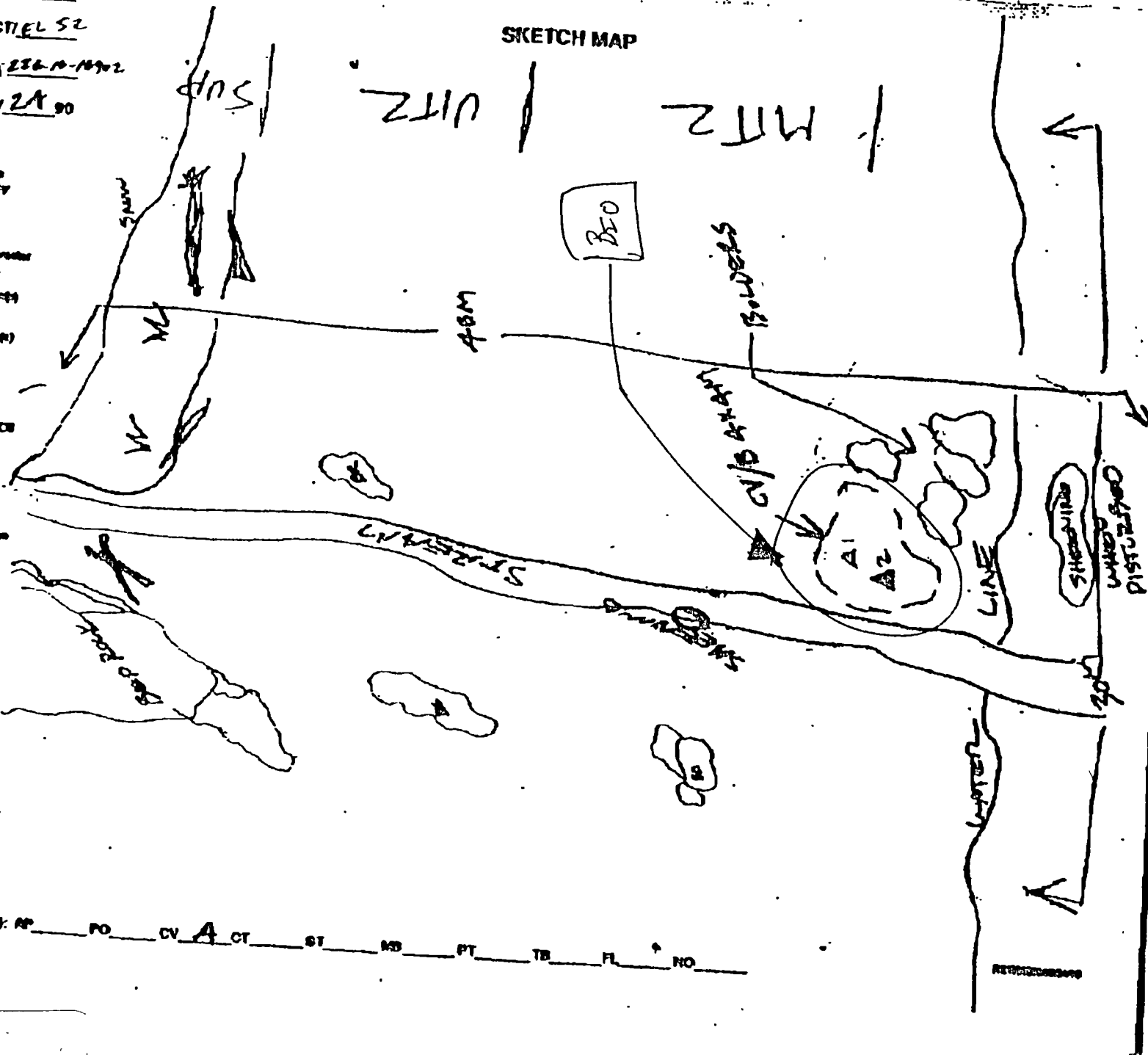
ALL
Other Vegetables

1

**Photo location, elevation,
and number**

OS Character Length (adj): AP _____ PO _____ CV A CT _____ ST _____ MB _____ PT _____ TB _____ FL _____ NO _____

SKETCH MAP



EL -

page 3 of 3

EL-52-A
690m

EL-52-B
696m

EL -

SUBJECT
SALMON STREAM
LOCATED IN
EL-52-B (25-2)

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

EL-52

ADEC Segment Length: 1224m

0 100 200 300

Map Key: PWS-135

Name: C. DILLON

EL-52-A 3/31/90

Date: EL-52-B 4/4/90

ACE 7237177

4348
 SEGMENT ST/EL 52 B
 STREAM 226-10-16902
 DATE 4/24/90

CHECKLIST

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

LEGEND

1 Δ
 Pit - No Subsurface Oil

2 Δ
 Pit - Subsurface Oil

CT/C
 Continuous Distribution

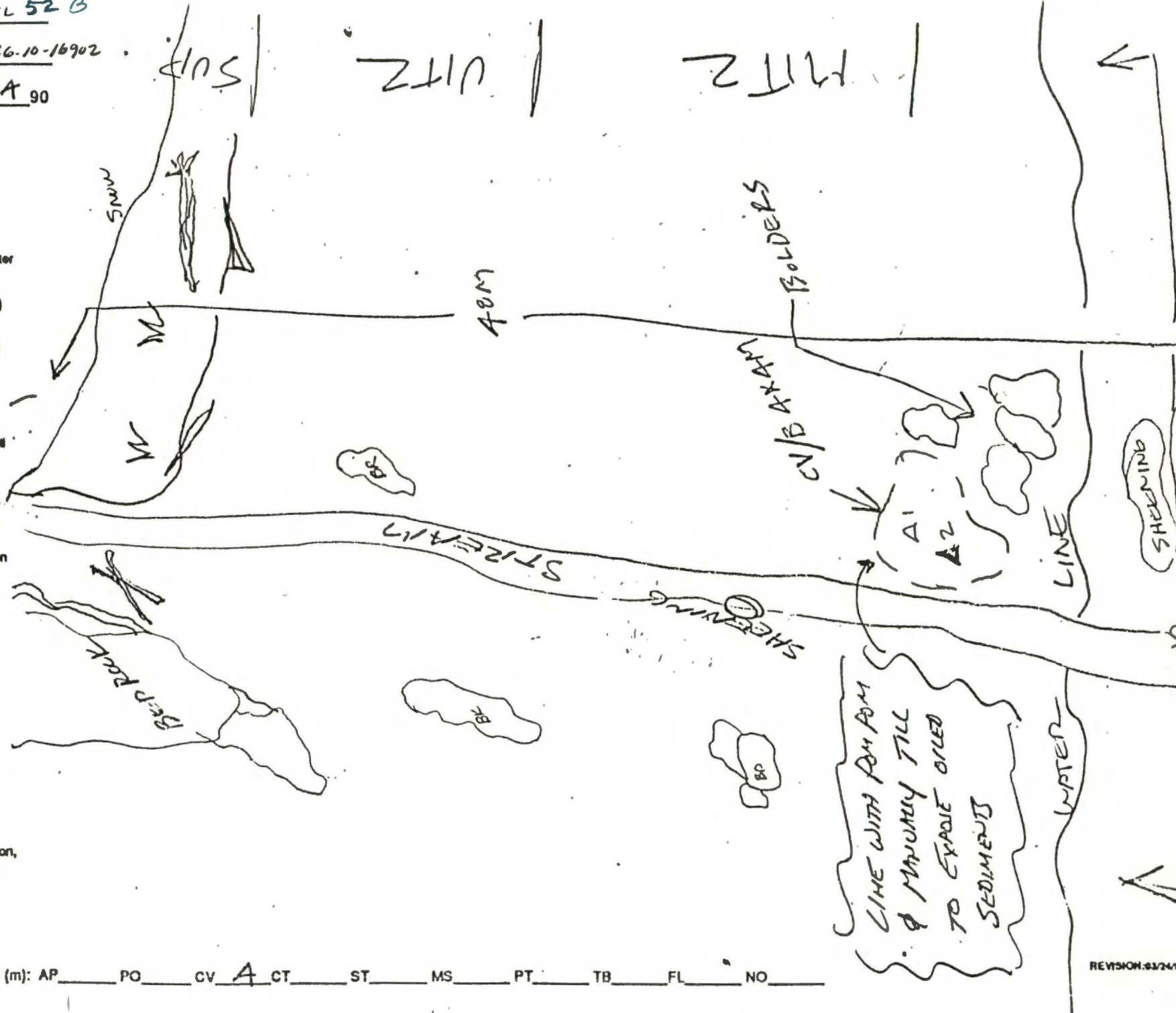
CT/B
 Broken Distribution

CT/P
 Patchy Distribution

CT/S
 Splashed Distribution

eee
 Oiled Vegetation

1 →
 Photo location, direction,
 and number



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

RECEIVED
MAY 07 1990

U.S. DEPT. OF
ENVIRONMENTAL CONSERVATION

ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND

SEGMENT: EL-52 *B*

STREAM NO: 226-10-16902

*ORIGINAL FIELD MAP HAS BEEN
ALTERED*

*no mention is made of manual removal of oiled sediments
where?
why not indicated anywhere?*

Refer to DF+G recommendations

ACE 7237179

ANONYMOUS FISH STREAM EVALUATION

SEGMENT ST/ EL-52 A STREAM NO: 226-10-16902 DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 6Y Recreation: Special use destination
 6U Recreation: Tent sites (6/1 to 9/15)
 6V Recreation: Anchorages (6/1 to 9/15)
 7II Subsistence area: Deer harvesting (8/15 to 2/28)
 See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. Subject stream is located in Subdivision B (2 of 2).

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

Subsurface Oil Observed: Yes X No _____ Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes bioremediation of area of surface cover shown on attached sketch map. Work should be conducted between 7/10 and 8/15 based on salmon constraints with approval of ADF&G regarding bioremediation of stream banks.

TAG COMMENTS: _____

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

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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

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

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

1C Salmon fry nursery area (4/31 to 7/31)

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

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

1D Esther Hatchery release (4/15 to 6/15)

1E Main Bay Hatchery release (4/20 to 6/15)

1F Sawmill Bay Hatchery release (4/15 to 6/1)

1G Cannery Creek Hatchery release (4/21 to 6/1)

1H Remote release site

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

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

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

1I Gill net area (6/7 to 8/31)

1J Purse seine area (7/20 to 9/30)

1K Purse seine hook-off (7/20 to 9/30)

1L Set net sites (6/11 to 7/25)

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

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

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

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

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

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)

3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)

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

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

ADF&G Don Calkins 267-2403

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Rothy 267-2206

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

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

Recreation:

Tent sites (6/1 to 9/15)

Anchorage (6/1 to 9/15)

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

Lodge (6/1 to 9/15)

Special use destination

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

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 7237181

FIELD SHORELINE COMMENT SHEET

37/4E

SEGMENT ST/ EL-052 SUBDIVISION: ASC # 226-10-16902 DATE 24 APR 90

USCG

NAME Kevin L. Dreher

SIGNATURE

Kevin L. Dreher☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED~~ADFC~~ ADFC

NAME

Rick Gustin

SIGNATURE

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

Perform work using proper tidal window (0 - 1.5)
 Remove oiled sediments in heavily oiled section
 west of stream channel near bed rock boulders in
 lower 1/2 of middle I.T.Z., and upper 1/2 of lower I.T.Z.
 Survey and remove any other sporadic oiled sediments

~~LAND MANAGER~~ NONE

NAME

Rick Gustin

SIGNATURE

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

found in the Upper ITZ or middle, lower ITZ.
 After removal fill these areas and apply Bolson
 Process.
 Remove sediments, gravels - any where sheening is
 noted. cover

ADFG
COMMENTS
CONT.

Remove oiled sediments in heavily oiled section
west of stream channel near bedrock boulders in
Lower & middle I.T.Z., and upper & L.I.T.Z.

32/
48

Survey & remove any other sporadic oiled segments
found in Upper I.T.Z. or middle, lower I.T.Z.
after removal till these areas and apply
Bolsing Process.

Remove sediments, gravels - anywhere sheening
is noted.

Remove any oiled debris or vegetation found.

Oiled sediments/gravels can be hauled to
whichever for composting (Bolsing process) for
use in road maintenance.

SHORELINE OILING SUMMARY (ANAO)

REVISION NO. 04/288

OG CAL LARSEN USCG ZEPHUS, CME SEGMENT BT/ EL 52 21/42
 BIO REN CRITCHLOW LAND REP STREAM 224-10-1602 (OP)
 EXXON DARIN YOUNG ADR 224-10-1602 WESTMAN TIME // :00 :01 :30
 TEAM NO. 19 TIDE LEVEL 1.4 FT DATE 4/24/90
 EST. SUBDIVISION LENGTH: 20 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 100 % B 0 % O 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 4 m VL 0 m NO 26 m

SURFACE OIL

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

PAVEMENT H P S 0 sq. m by 0 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? NO BR (RW) SL TL

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

Did You Collect DEBRIS NO ?
☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. 0

Frames 0

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERNAL	BELOW		OIL / FILM COLOR				PIT ZONE				A	N	A	SHEEN (cm)	Y	Y	SURFACE SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	OD		US	US	1	2	3	4	S	M	M	U							
1	16																							CB, CB SD
2	22																							CB, CB SD
																								CB, CB SD

COMMENTS SUBMERGED OR IMMERSED TUBE / DID NOT SURVEY LOWER TIDAL ZONE / SHEENING IN LOWER TIDAL ZONE / I WALKED OUT INTO WATER - SHEENING WHEN SEDIMENT WERE DISTURBED.

REVIEWED JW DATE 4-25-90

03 CAL LARSON

SEGMENT STEEL 52

STREAM 236.0-1092

DATE 4/24/90

SKETCH MAP

CHECKLIST

- ☐ M Area
- ☐ Approx. Scale
- ☐ Map/Tab Body
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ E. Color
- ☐ Substrate Character
- ☐ E. of HWA/LPR
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Path(s)
- ☐ PH Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
PB - No Substrate Oil

2 Δ
PB - Substrate Oil

CT/C
Oil Distribution

CT/B
Broken Distribution

CT/P
Paddy Distribution

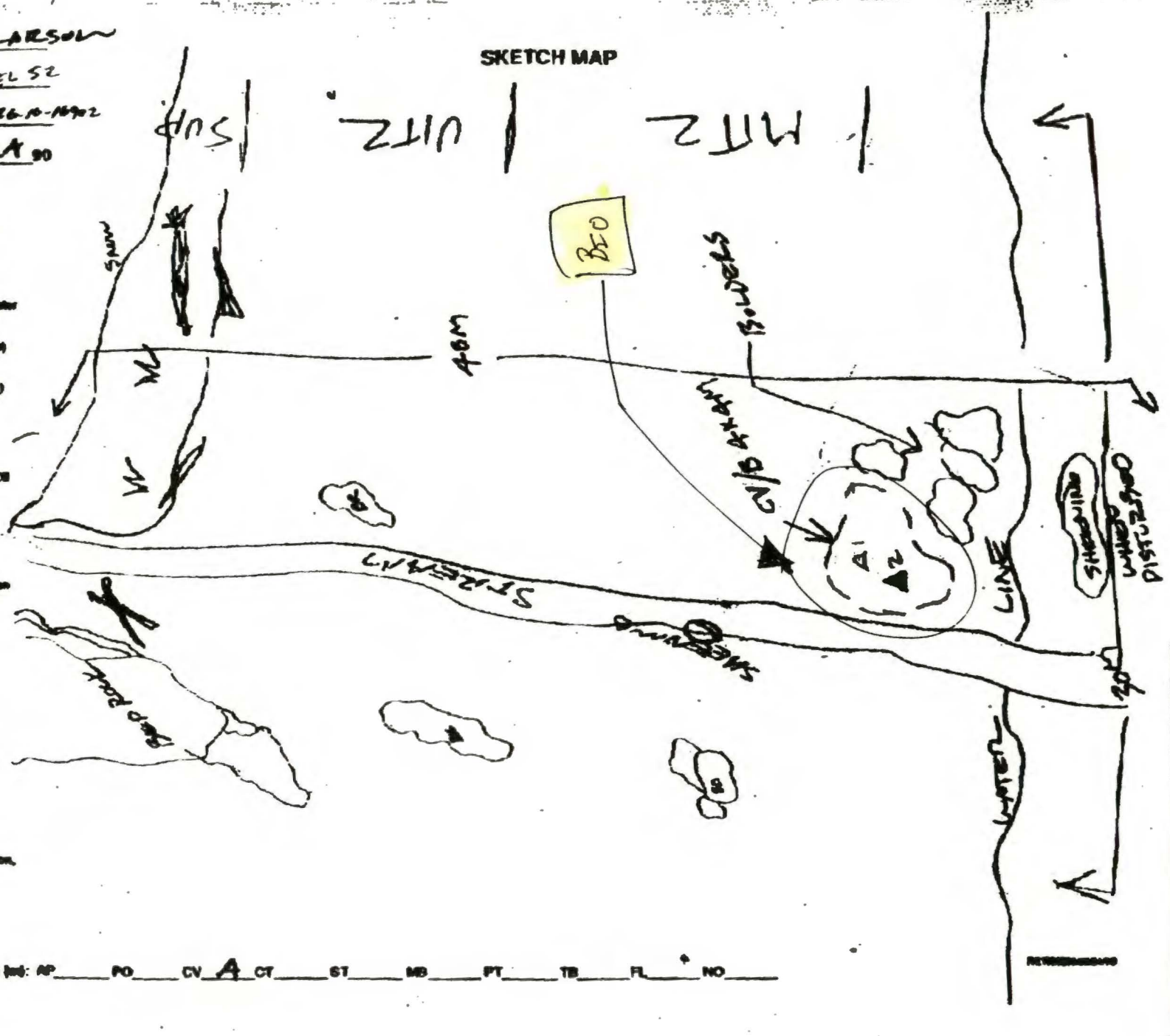
CT/S
Spotted Distribution

lll
Other Vegetation

•••
Photo location, direction,
and number

Oil Character Length (in): AP PO CV A CT ST MB PT TB FL NO

ACE-7237185



31/4E

2 REGION, DP, CI K, AF

METHOD	Aerial	Ground	Cost
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21 TEAM RECORDER: R. Gustin

cc: Mr. A. W. ...

23 AGENCY: ADFB

24. MATCH TAKEN: Y NO

Roll 4: 1948-1950

20. VIKTOR TATY. H. TIGER.

Arm Bellale

... ..

244

1000

100

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30 CATALOGED AMAD. FIVE SEVEN? (Y)

37 CATALOG # 226 -10 -16102

00 STREAM NAME: _____

20 OIL IN STREAM NOT Y 10

40 OIL ON STREAM DANGER 7 00

41. OIL ON BEACH ADJACENT TO MOUNT 42

40. OIL WITHIN 1 MILE OF STREAM 20

Keywords: child sexual abuse; disclosure; social support

[illegible][illegible]

Species	Aerial	Ground
1. <i>Phalaena</i>		
2. <i>Phalaena</i>		
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37 CATALOG # 226 -10 -16102

28 OIL IN STREAM NOT Y 12

41. OIL ON BEACH ADJACENT TO MOUNT 40

40. OIL WITHIN 1 MILE OF STREAM 20

Keywords: child sexual abuse; disclosure; social support

[illegible][illegible]

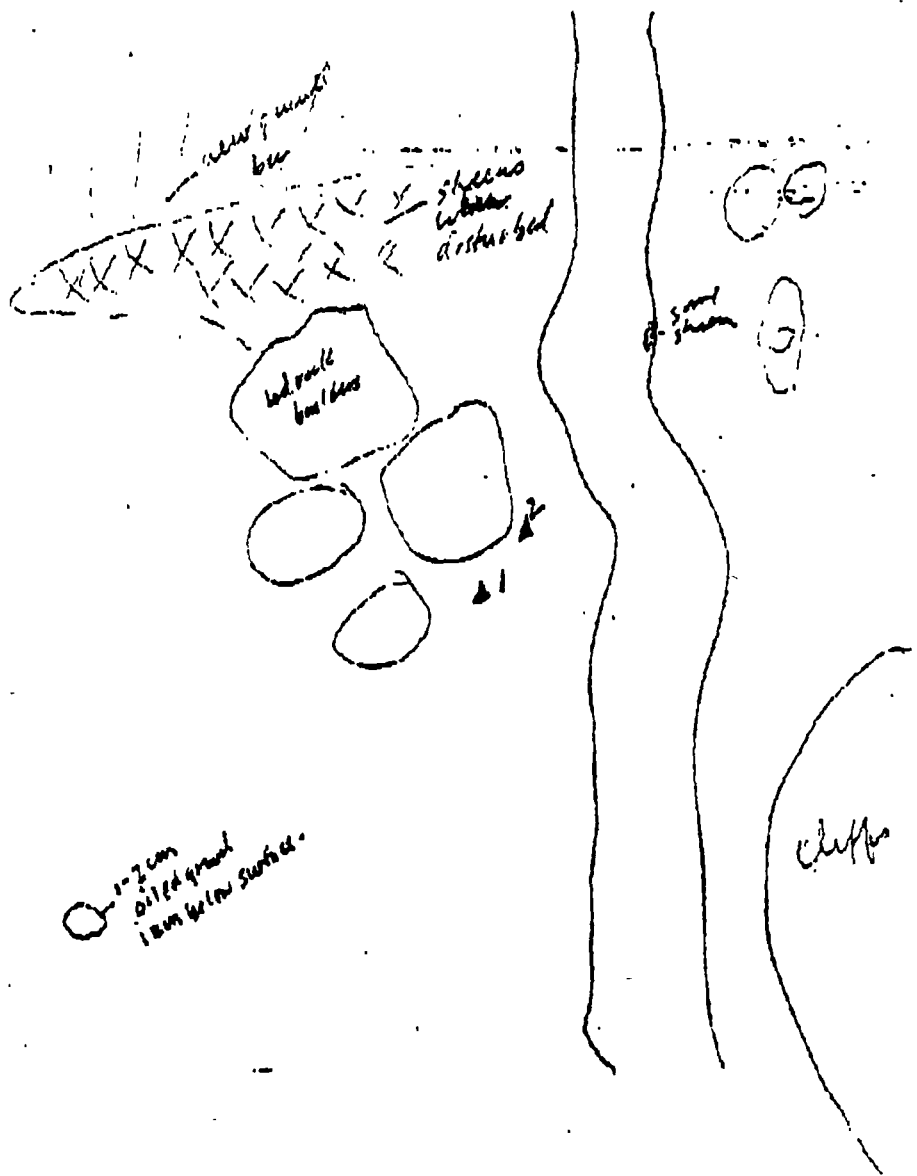
Species	Aerial	Ground
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96. <i>Phalaena</i>		
97. <i>Phalaena</i>		
98. <i>Phalaena</i>		
99. <i>Phalaena</i>		
100. <i>Phalaena</i>		

--	--	--

~~Common~~ Upper intertidal is sparsely dotted with mussel patches some of which penetrate 2-3 cm. No oiled debris was noticed in the supratidal or above. The salmon stream edge & bank appeared corroded/ashen was broken up in stream sediments except a lightly shamed area in the lower section of the middle ITZ.

PROBE(S)	DESCRIPTION
	Pit #1 11 cm Surface to 4 cm oil
	Pit #2 22 cm deep 5 cm oil from bottom (5 cm to 10 cm deep oil)
	The sample largest piece of oil lying in the middle of the pit.
	The oil is very large and dark. It appears a large amount
	of oil was deposited here and penetrated at least 4 cm into the gravel in
	places. The oil appears to be highly viscous and is distributed
	in patches of heavy sheets. The reason for the heavy spreading
	gravel is cause for concern.

48 OIL DISTRIBUTION DIAGRAM



Sample taken
from frame 7 and
shot direction.

18/40

Seg ID: EL-052 Subdiv: 226-10-16902
Survey Date: 4/24/90
Comments by: Ken Critchlow

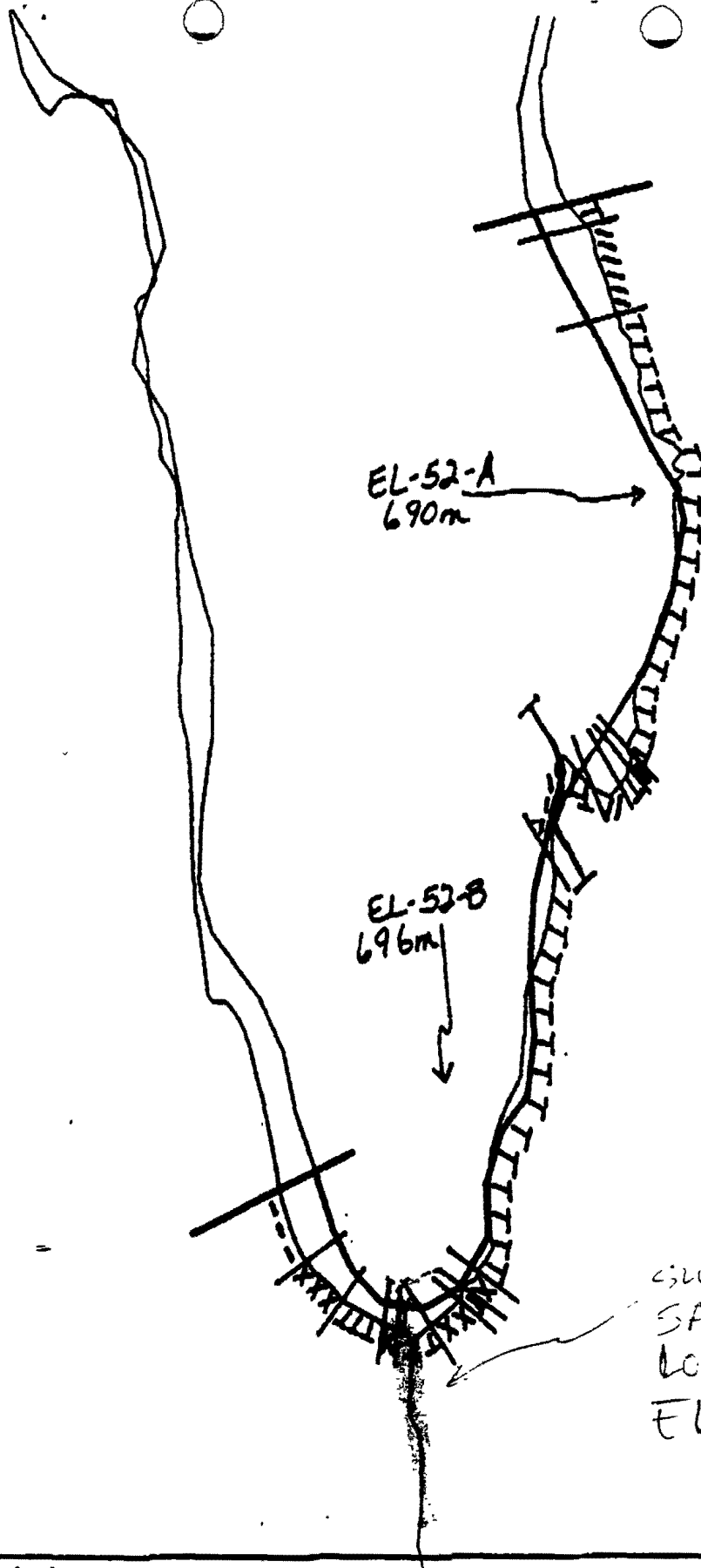
Oil cover was observed in a small area near the right stream bank in the upper LITZ and sheen was seen along the left bank in the MITZ. Subsurface oil was present in one pit in the upper LITZ.

Oiled sediments can be removed by a small crew using shovels. It may be necessary to fill the subsurface sediments in the oiled LITZ followed by application of Inipol. The stream should be protected from contamination using snare booms.

KR Critchlow

EL -

page 3 of 3



EL -

SUBJECT
SALMON STREAM
LOCATED IN
EL-52-B (2002)

XXXX Wide

//// Medium

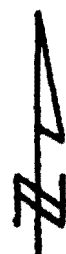
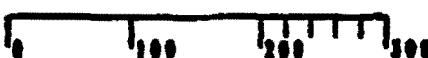
--- Narrow

TTTT Very Light

0000 N - 0:1

EL-52

ADEC Segment Length: 1224m



Map Key: PWS-135

Name: C. DILLON

Date: EL-52-A 3/31/90

Date: EL-52-B 4/4/90

ACE 7237189 -/S

Date Entered:

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ EL-52 ⁶ STREAM NO: 226-10-16902 DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
- 1B Salmon stream mouth - spawning (7/10 to 8/31)
- 6Y Recreation: Special use destination
- 6U Recreation: Tent sites (6/1 to 9/15)
- 6V Recreation: Anchorages (6/1 to 9/15)
- 7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Subject stream is located in Subdivision B (2 of 2).

ARCHAEOLOGICAL CONSTRAINTS:

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

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

Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes bioremediation of area of surface cover shown on attached sketch map. Work should be conducted between 7/10 and 8/15 based on salmon constraints with approval of ADF&G regarding bioremediation of stream banks.

TAG COMMENTS: MANUALLY RAKE PRIOR TO BIO.

TAG APPROVAL DATE: 5/10/90.
ADEC Art Warner Art Warner
EXXON Andy Enz Andy Enz
NOAA Barb Wexcott Barb Wexcott
USCG D.D. Rome D.D. Rome

FOSC: DATE: 5-15-90

ACE 7237190+15

SEGMENT STEEL 52

STREAN-226-10-10902

DATE 4, 24 90

CHECHEN

- ☐ Hi Arrow
- ☐ Apprais. Study
- ☐ Sup/Job Study
- ☐ On Obs.
- ☐ Watch
- ☐ Length
- ☐ T. Count
- ☐ Subjective Character
- ☐ Ex or Visual
- ☐ SSI
- ☐ Profile Low/high
- ☐ Position
- ☐ FN Locating(s)
- ☐ FTR Locating(s)

LEGEND

14

FB - No Subsurface CH

24

PR - Informations des CRP

CTAC

CONFIDENTIAL

CTA

Bookers Over Budget

STOP

Faculty Clusters

54

Expanded Workstation

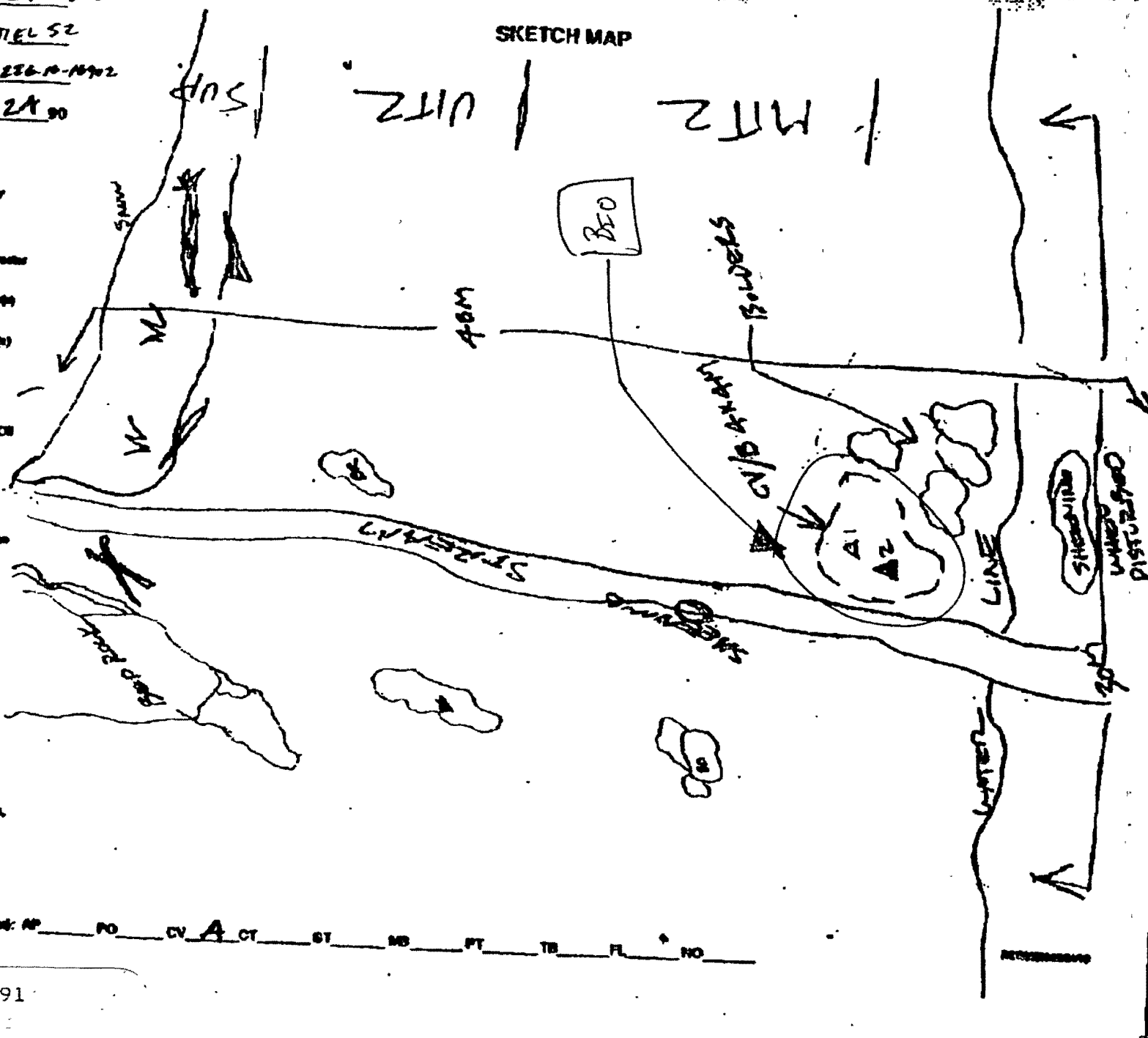
Other Vegetation

- Photo transfers, stickers, and more

CB Character Length (in): AP _____ PO _____ CV 4 CT _____ ST _____ MB _____ PT _____ TB _____ FL _____ NO _____

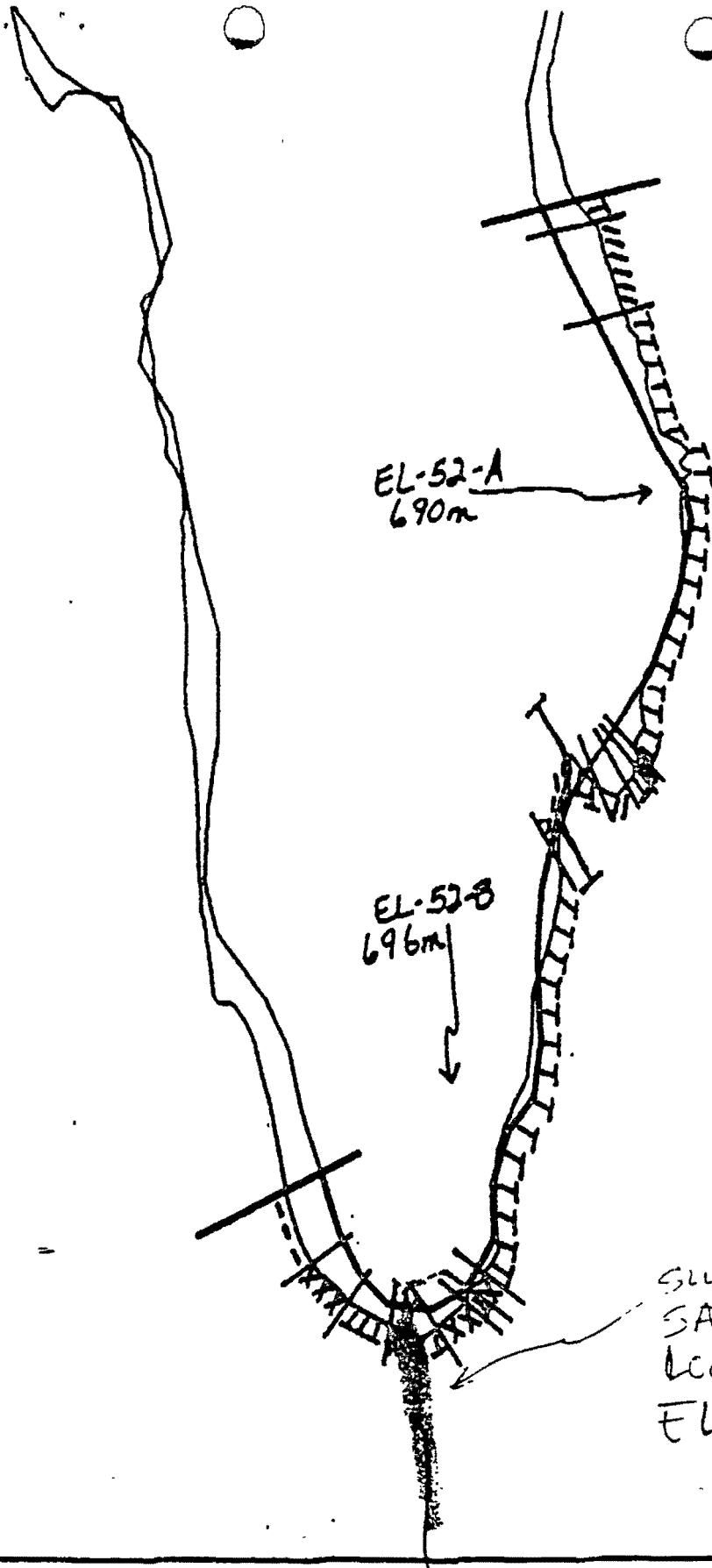
ACE 7237191

SKETCH MAP



EL -

page 3 of 3



EL -

SUBJECT
SALMON STREAM
LOCATED IN
EL-52-B (2052)

XXXX Wide

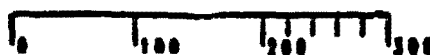
//// Medium

--- Narrow

TTTT Very Light

EL-52

ADEC Segment Length: 1224m



Map Key: PWS-135

Name: C. DILLON

EL-52-A 3/31/90

Date: EL-52-B 4/4/90

ACE 7237193 -15/SG/SG'

ANONYMOUS FISH STREAM EVALUATION

6

SEGMENT ST/ EL-52 STREAM NO: 226-10-16902 DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 6Y Recreation: Special use destination
 6U Recreation: Tent sites (6/1 to 9/15)
 6V Recreation: Anchorages (6/1 to 9/15)
 7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Subject stream is located in Subdivision B (2 of 2).

ARCHAEOLOGICAL CONSTRAINTS:

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

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

Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes bioremediation of area of surface cover shown on attached sketch map. Work should be conducted between 7/10 and 8/15 based on salmon constraints with approval of ADF&G regarding bioremediation of stream banks.

TAG COMMENTS: MANUALLY RAKE PRIOR TO BIO.

TAG APPROVAL DATE: 5/10/90.
 ADEC Art Weiner
 EXXON Andy Katz
 NOAA Barbara
 USCG D.D. Rome

FOSC: DATE: 5-15-90

DATE 4, 24 90

CHECKLIST

- ☐ **Hi Armor**
- ☐ **Appear. Style**
- ☐ **Snap/Safe Mode**
- ☐ **On Dial**
- ☐ **Flash**
- ☐ **Length**
- ☐ **T. Color**
- ☐ **Seems to Character**
- ☐ **E.G. MURRAY**
- ☐ **SM**
- ☐ **Profile Location(s)**
- ☐ **Profile(s)**
- ☐ **PH Location(s)**
- ☐ **PH's Location(s)**

LEGEND

1 A
PG - No Subsurface Oil

2A
PR - Suburban OW . . .

CTC

CT/D
Broken On the Bottom

CT/2
Party Distribution

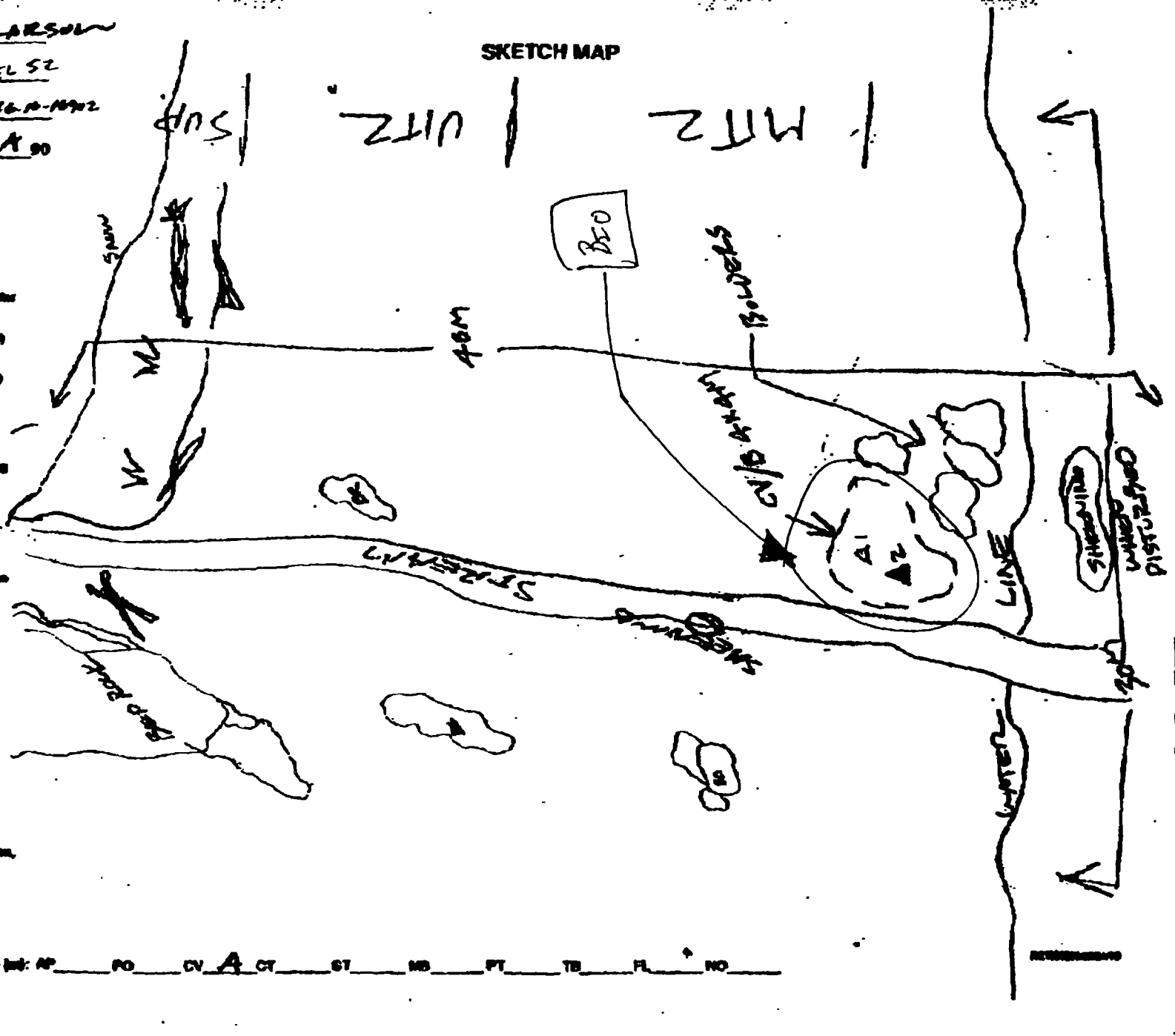

McGraw-Hill
 Higher Education

lll
Oiled Vegetation

From location, direction,
and number

OS Character Length (in): AP PO CV A CT ST MB FT TB FL NO

SKETCH MAP



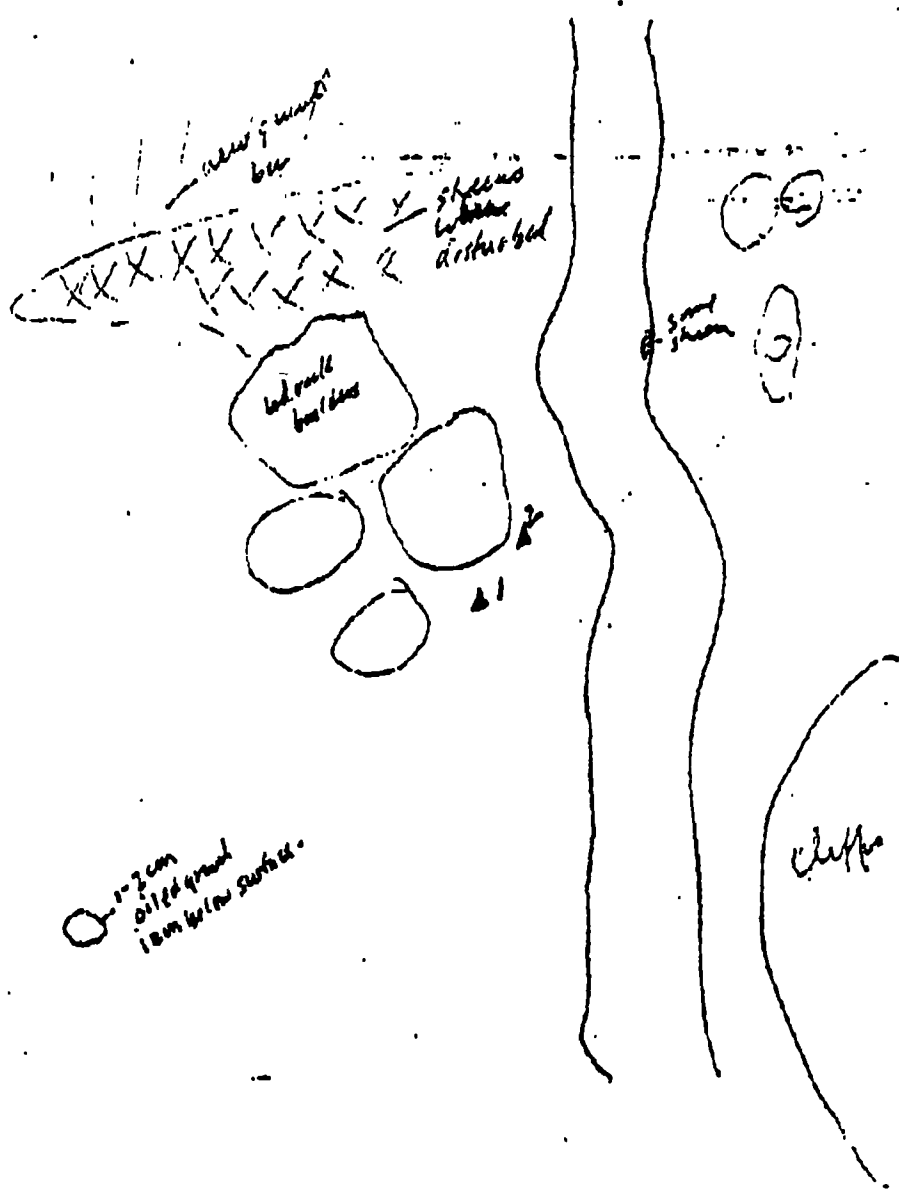
PROVE(S)

DESCRIPTION

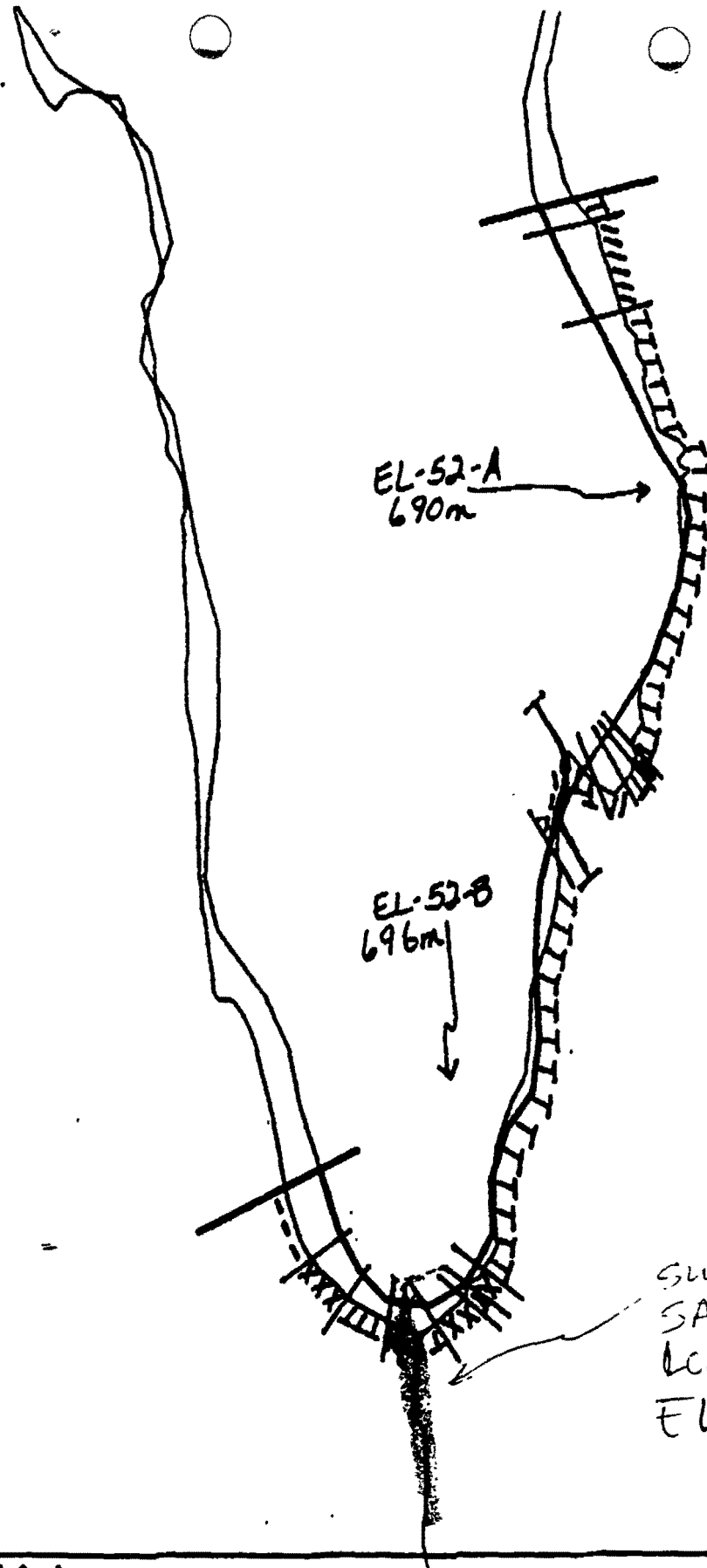
Pit #1 11 cm Surface to 4 cm oil
Pit #3 23 cm deep 4 cm oil from bottom (5 cm to 17 cm deep oil)

The single largest piece of oil in the middle lake field was a large sample large blackish-brown. It appears a large amount of oil was deposited here and penetrated at least 4 cm possibly deeper in places. This oil appears to be highly mobile and is disturbed puts out heavy steam. Its reaction to the Salomon spraying grounds is cause for concern.

48 OIL DISTRIBUTION DIAGRAM



Sample taken
whose frame 8 and
shot direction.



EL-

SUBJECT
SALMON STREAM
LOCATED IN
EL-52-B (2:12)

XXXX Wide

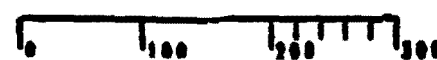
//// Medium

--- Narrow

TTTT Very Light

EL-52

ADEC Segment Length: 1224m



Map Key: PWS-135

Name: C. DILLON

Date: EL-52-A 3/31/90
EL-52-B 4/4/90

ANADROMOUS FISH STREAM EVALUATION

6

SEGMENT ST/ EL-52 STREAM NO: 226-10-16902 DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

6Y Recreation: Special use destination

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

6V Recreation: Anchorages (6/1 to 9/15)

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. Subject stream is located in Subdivision B (2 of 2).

ARCHAEOLOGICAL CONSTRAINTS:

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

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

Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

 Manual Pickup

X Bioremediation

 Tarmat Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommended treatment includes bioremediation of area of surface cover shown on attached sketch map. Work should be conducted between 7/10 and 8/15 based on salmon constraints with approval of ADF&G regarding bioremediation of stream banks.

TAG COMMENTS: MANUALLY RAKE PRIOR TO BIO.

TAG APPROVAL DATE: 5/10/90.

ADEC Art Weiner Art Weiner

EXXON Andy Lee Andy Lee

NOAA Bar Weissott Bar Weissott

USCG D.D. Rome D.D. Rome

FOSC: DATE: 5-15-90

ACE 7237206

RECEIVED
1971

SECTION 10
CONSENM 121

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-52

SUBDIVISIONS: A (1 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ EL-52 SUBDIVISION A (1 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Salmon stream mouth (ADF&G catalogue no. 226-10-16902 Rev. 12/89) - fry outmigration (1A) - 3/1 to 5/15 and spawning (1B) - 7/10 to 8/31; Recreation tent sites (6U) - anchorages (6V) and special use destination (6Y) - 6/1 to 9/15; Subsistence area for deer harvesting (7II) - 8/15 to 2/28).

SUBDIVISION ECOLOGICAL CONSTRAINTS:

(1A)(1B) No disturbance of stream bed or banks unless authorized by ADF&G. Contact ADF&G Habitat Division prior to treatment for permits.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 100 m: Narrow 37 m: V.Light 451 m: No Oil 9 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 15 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of tar balls and oiled logs if oiled more than splash and 10% coverage, and bioremediate coat and stain and subsurface oil as shown on attached sketch map. Work should be conducted between 5/16 and 7/9 based on above salmon constraints.

TAG COMMENTS:

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

ACE 7237210

FIELD SHORELINE COMMENT SHEET

125015ED
4/4/90SEGMENT ST / ^{52.A} EL 53-B SUBDIVISION: B A DATE 4/1/90

USCG

NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider

783/USCG

☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

MANUAL TREATMENT APPROPRIATE FOR THIS SUBDIVISION. TAR SPLATTERS, SPOTS AND OIL COATING ON EXPOSED Boulders & ROCK FACES AND IN BOULDER SHADOWS SHOULD BE WIRE BRUSHED AND SCRUBBED BY MANUAL WORK CREW. BEACH AT SOUTH END OF SUBDIV WARRANTS CONSIDERATION AS A POTENTIAL SITE FOR RECREATION. LARGE TIDE POOLS ALONG LITE TIDAL FLATS SHOULD NOT BE DISRUPTED. ~~WATER-BASED~~ EFFORT SHOULD BE MADE BY WORKERS TO AVOID MUSSEL BEDS AND EELGRASS BEDS ALONG THESE FLATS DUE TO THEIR ~~BEING~~ BEING POTENTIAL SPAWNING AREAS FOR HERRING. ~~(MS)~~

ADEC

NAME Peter Montesano SIGNATURE Peter Montesano☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS ~~The~~ Central area of "B" has an extended Rich intertidal community which should be considered/protected relative to treatment. This area showed stringy sheens at low tide. Brown oil droplets appeared in the Penetration pits. The "Boulder Shadow Oiling" and penetration type makes Bioremediation not practical, except on the S beach of "B". This beach has 5cm Penetration, OR, under the ~~clean~~ ~~sediments~~ ~~of the~~ extreme surface. Hand Scraping, removal ~~of the~~ practical along "B" of trapped coating and random tar splatters. Additionally, the oiled, felled tree ~~at~~ toward the S end and oiled debris (nets) should be removed.

LAND MANAGER

NAME Janetta Pritchard SIGNATURE Janetta Pritchard☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Concur with USCG and ADEC. I'd like to reemphasize the need to protect the tidal flats during the clean-up.

REVISION NO. 05/1/90

ACE 7237211

OG C. DILLON USCG D. SCHNEIDER SEGMENT STI EL-5352
 BIO J. BARRY LAND REP J. PRITCHARD DIVISION B A (1 of 2)
 EXXON A. SNOOK ADEC P. MONTESANO TIME 10:00 to 13:45
 TEAM NO.: 6 TIDE LEVEL: -1 to +5 DATE 03/31/90
 EST. SUBDIVISION LENGTH: 760 m 90 ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 15 % B 50 % C 25 % P 10 % G 0 % S 0 % M 0 % V 0
 SLOPE: Lang 80 % Hang 20 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 70 m N 15 m VL 40 m NO 5 m
600

SURFACE OIL

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

PAVEMENT: H F S 0 sq. m by 0

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

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

DEBRIS COLLECTED
☒ YES ☐ NO

TYPE Small trash

#BAGS < 1

Photographs:

Roll No. ST-6-2

Frames 15-16

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	VC	1	2	3	4	SU	U	M	V		
1	10					X	0-0							X					P/G/S
1	10		X				5-10		X			X		X					S/M
2	15		X				5-10					X			X				P/G/S
2	15				X		10-15		X	X					X				P/G/S
							.												
							.												

COMMENTS N' most PORTION BEGINS WITH HANG B/C/R SLOPE GRADING INTO A
 LANG, WIDE B/C/P BEACH AND TIDAL POOL IN THE CENTER, THEN TO A
 LANG C/P/B BEACH AT THE SOUTH END OF THE SUBDIVISION. THE N' most
 15m HAS A PATCHY STAIN AND COAT WITH SPORADIC TAR SPOTS ALONG THE LITZ
 WIDENING TO 5-6m WIDE INTO THE MITZ AND A SPORADIC FILM AT THE TOP OF THE LI.
 FOR 60m. SUBSURFACE OILING VARIES HERE BETWEEN 5 AND 15 CM. THE R/B OF
 THE LITZ ALONG THE CENTER 15m OF SUBDIV. HAS A VL SPORADIC AND PATCHY
 COAT AND STAIN. S' most C/P/B BEACH HAS 6m WIDE X 10m LONG BROWN AND
 TRANSLUCENT FILM ON TOP 5cm OF MITZ. REVIEWED MH DATE 4-7-90
 BROKEN COAT

CORELINE ECOLOGICAL SUMMARY

1680
414190

REVISION 12/79

Segment ST / ELQ55 Subdivision B A Date (mo / day / yr) March 31 1990
 Time (24 hr) 1330 Biologist Jim Barry 1100 m length
690

- (A) Substrate type and % of segments:
 (1) Bedrock 15 (2) Boulder 50 (3) Cobble 25 (4) Pebble 10 (5) Sand (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 60 Moderate 30 Low 10
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (O)
- Photographs: ST-6-2
 Roll No.
 Frames 12, 13, 17

BARNACLES														
Dense 61-100%			Moderate 26-60			Sparse 5-25			Rare 4-5					
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
												NOT PRESENT		
MYTILUS														
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
												NOT PRESENT		
GASTROPODS														
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
												NOT PRESENT		
FUCUS														
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
												NOT PRESENT		

Wildlife Observations/ General Comments: TIDE WINDOW -1.0 → +5

Ecological Considerations: 6V, 711, 5-T2, 2M

See attached pages

ACE 7237213

ELOS3-B
52-A

MARCH 31, 1990

1CEU120/6
4/4/90

START TIME: 1010

TIDE WINDOW - -1.0 → +5.0

STOP TIME: 1330

ADDITIONAL COMMENTS

MAJOR SPECIES

I BARNACLES - same comments as ELOS3-A

II MYTILUS -

A. Generally the same comments as ELOS3-B, ~~except~~.

B. Mussel beds are present on 2 or 3 sand/cobble flats. Important characteristics are:

1) Beds contain large numbers of dead mussels, many with small holes indicating that predatory gastropods contribute a large portion of their mortality.

2) Beds are discontinuous / "broken", with large & small gaps between ~~and~~ groups.

3) Juveniles are abundant and spat are dense ~~in~~ at the base of juveniles & adults.

C. Mussel beds appear to be developing ~~in~~ in a cobble beach where recruiting mussels (dense spat & moderate juveniles) are consolidating the rock ~~as~~ & filling in gaps.

III Gastropods - same comment as ELOS3-A, plus

1) *Nummella lamellosa* appear to prey heavily on mussels.

IV Fucus - same as ELOS3-A

V Other species.

Most or all of the species listed in ELOS3-A are present, plus several species found on the sand flat detailed below

VI SAND/COBBLE FLAT

1) This subdivision included a sand/cobble flat ~ 100 m long x 30, containing a mussel bed, eel grass bed, and sand/pebble flat.

2) Important Characteristics

a) Mussel Bed - described above

b) Eel grass bed (*Zostera marina*) - This plant forms a small "marsh-like" plant association containing clams, worms & other sediment-dwelling species.

Eel grass is an important plant on which herring deposit eggs during spawning. This small isolated bed should not be heavily disturbed.

c) Sand Flat Community.

Several species of clams & other worms are present, including,

- * Benthose Clams (*Macoma* spp.)
- * Steamer Clams (*Protothaca staminea*)
- * *Hiatella* pretiosa
- ? Butter Clams (*Saxidomus giganteus*)
- * Moon trails (*Natica clausa*)
- ? Cockles ... (*Chorocardium nuttallii*)

* indicates juveniles or eggs present
? " probably present.

Worms (*Echiura echiura*)

Nereidae

VII WILDLIFE

River Otter - on bank adjacent to sand flat

- dropping adjacent to beach - contain clam shells.

Barnacles Goldeneye - 2

Bald Eagle

Seagull - 2

Raven

Pelagic Cormorant - 1

White winged scoter - 1

Ecological Considerations

- 1) Eel grass community may be important (locally) for herring spawn & should not be destroyed.
- 2) Mined beds show evidence of disturbance on sand flat & cobble bar. This disturbance appears to be recovering, as indicated by dense or moderate recruitment of new individuals.
- 3) Sand/cobble flat appears to be recovering (see above)

Ecological Considerations

EL053-B
52-A

EL053-B
52-A

FW TO 15 PS in Beach 1
PIT 1

LOW ZONE under rock

Small *Conus*

7 *Spirorbis*

2 *Brachyopora*

Small *Spongia*

Small *Protopoda* 25cm

NO Barnacles

WITHERED *FUCUS* STORM

a little regrowth

10% of *Conus* in

High zone

Can find *Mytilus*

Barnacles *acervatus* & juveniles

as far as high

Gastropoda *Spongia* in sand

2 *Scallop*

ACE 7237217

LITTORINIDS moderate far mid to high

Conus 1 specimen rare in
mid to high zone

Mid to high zone present as juveniles

1 *Spongia* in upper zone

Conus

BARNACLES density - mod (5)

- mod (5)

Protopoda

SANDY BEACH

ROCK

Small *Conus*

> *Littorina* under rubble mod

moderate *Mytilus* so sparse

few *Sto* no adults

0 *FUCUS*

LOW ZONE

moderate *Littorina* mod

Small *Conus* - NOT too

much in sand - 0

ACE 7237218

REVIEWED
4/4/90

9053-B
EL-52-A

CUCUS regrowth

High zone sand under rock

7m2110

Macoma ? live in sand

SAND / COBBLE FLAT

near outlet stream

ZOSTERA BED -

ETHIOPIA Bed in flat

Macoma { NO large - ~ 2cm
? Clean - ~ 3cm

Muscle beds pebbles & broken,
but has dense settlement
of Nephthys - > Dead (A)

- also Citharus, Lygia, Oedipoda
in bed

Headlands missing - Muscles mostly
> Dead (A)

Barnacles too (8P=5) ACE 7237219

EL-52-A

Eastern at about
same level as - nearby
Fucus bed

Mid flat has moon shell egg
cases ~ 5-10/50m

PHOTO 12 ? Recruitment
of Nephthys on headland

PHOTO 12 - Recruitment of STARS
Cusms on underside
of rock from sand
pitlike flat

STILL near outlet stream

> Fucus A

Upper to mid zone

Boulders of Muscles/Barnacles

River otter tracks, Seat = C/Am
shells

Old tracks on beach

MACOMA 3cm live

ACE 7237220

REVISOR 4/4/90

ELOS3-B
52-A

6 pricklybacks under
1 sec 0.5m dense rock
Plant water

Not a new section
PHOTO TAKEN OF ROCK

BOULDERS AT EDGE OF
BEACH

- Dense Barnacles
(- SPAT, juveniles (Ad.)

Mytilus Spat JUV
Limpets moderate
L. Horrea dense

Fucus regrowth, slight

NOT TOO MUCH FUCUS recolonizing
on Beach Flat Cobbles.

LUNCH

ACE 7237221

ELOS3-B
52-A

FLAT - Mussels dead
mostly & drilled - 8/10

Black P 5 and 11 segment
(small core + black)

> Mussels & JUV - Spat Moderate
Beach-Coring Rock

> N. cells

> P. yards

> Bryophytes

> Bunnies

Upper -
Rock Pocks

> Fucus adults

Dense spat (Mytilus)

Moderate juveniles

Dense Limpets

new Dense L. Horrea Spat JUV.

Boulders/Cobbles

> Fucus Spatlings in cobbles

> Limpet spat

> Barnacles (B5)

SANDY BEACH

EPIACTIS 7

CLAMBS - Another

ACE 7237222

DAVID 4/9/50

OG C. DILLON

SEGMENT ST/ CL-5352

SUBDIVISION BA

DATE 31 / Apr / 90

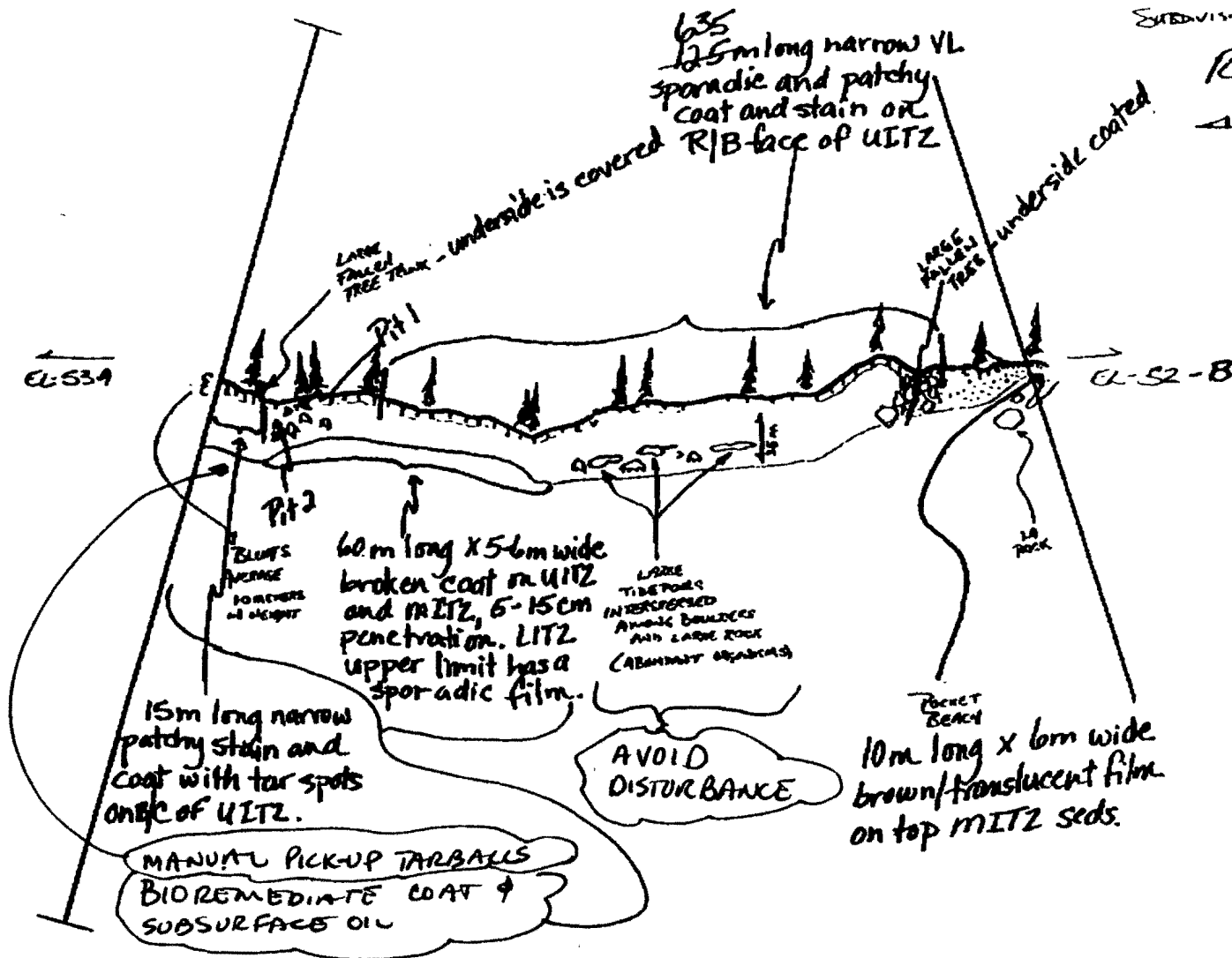
CHECKLIST

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

LEGEND

- 1
 Pit - No Subsurface Oil
- 2
 Pit - Subsurface Oil
- Continuous Distribution
- Broken Distribution
- Patchy Distribution
- Splashed Distribution
- Old Vegetation
- 1
 Photo location, direction, and number

SKETCH MAP



SEGMENT EL-5352
SUBDIVISION BA
SUBDIVISION LENGTH 1.60m

REVISION 4/14/90

← N

SCHNEIDER

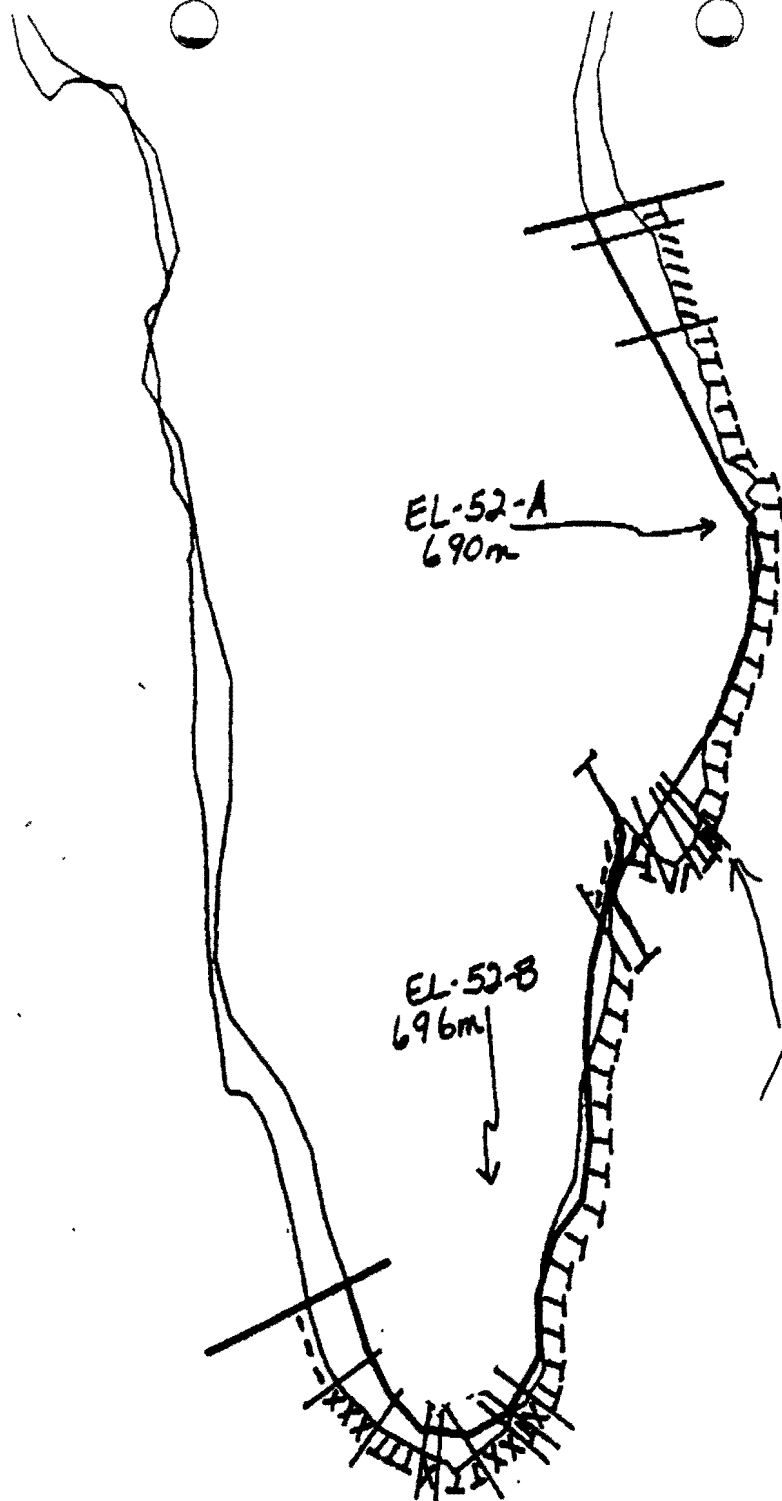
Oil Character Length (m): AP 130 PO 635 CV MS PT 3 TB 10 NO 5

REVISION 03/24/90

ACE 7237223

P9202

EL-



EL-

No oil ~5m

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EL-52

ADEC Segment Length: 1224m



Map Key: PWS-135

Name: C. DILLON

EL-52-A 3/31/90

Date: EL-52-B 4/4/90

Date Entered:

ACE 7237224 -15

RECEIVED
APR 1 1964

DEPT. OF
FISH AND WILDERNESS
CONSERVATION

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-52

SUBDIVISIONS: B (2 OF 2)

ALL INFORMATION CONTAINED
HEREIN IS UNCLASSIFIED
DATE 10/1/01 BY 1043

SHORELINE EVALUATION

SEGMENT ST/ EL-52 SUBDIVISION B (2 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-10-16902

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

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

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

6V Anchorages (6/1 to 9/15)

6Y Special use destination

7II Subsistence area: Deer harvesting

See attached Ecological Constraint Sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 98 m: Medium 16 m: Narrow 59 m: V.Light 454 m: No Oil 0 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 20 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend break up and removal of tarmat, pick up of tar balls, and Bioremediation of areas shown on sketch map, but not within 100m of stream. Work should be conducted from 5/16 to 7/9 based on above salmon constraints.

TAG COMMENTS:

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

ACE 7237226

OLD SHORELINE COMMENT SHEET

SEGMENT ST / EL-52-B SUBDIVISION: B DATE 4/6/90

USCG NAME David A. Schneider SIGNATURE David A. Schneider

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Manual breakup and removal of tar/asphalt mat in UITE.
Manual scrapping and removal of tar spots and coat in MITE and
UITE along eastern stretch of subdivision and in MITE & UITE
along south western corner of subdivision. SITE reassessed
after snowmelt.

ADEC NAME Peter Montesano SIGNATURE Peter Montesano

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS OF CONCERN to ADFG is a 2x8m patch of Asphalt to West side of
The Small drainage in the South East corner of B. This should be manually removed
Seemap.

There is some additional Asphaltting to the North (on map) and some cementing which
appears to be oil related. These should be broken and/or removed.

The Rock outcrop at the Southern has oil in cracks to be wiped &
removed.

The area is not bro'able due to the primary clean surface sediments. I
recommend that ADFG examine the stream at the Southern end, and to
check the Supratidal, snow covered grasses and if necessary dig additional
Pits by stream.

LAND MANAGER

NAME JANETTA PRITCHARD SIGNATURE Janetta Pritchard

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Nice recreational beach. Overall treatment recommendation
is manual clean up of tar & asphalt, hand wiping
by sited Crews. Possible removal of some cobbles
adjacent to stream. Care needs to be taken to not
disturb the mouth of the stream used by spawning
Salmon. Reassess the SUPRA after the snow melt.

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ EL-52
 BIO J. BARRY LAND REP J. PRITCHARD SUBDIVISION B (242)
 EXXON A. SNOOK ADEC P. MONTESANO TIME 15:45 to 17:00
 TEAM NO.: 6 TIDE LEVEL: +1.75 to +1.5 DATE 04/04/90
 EST. SUBDIVISION LENGTH: 696 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: NW to SE
 SURFACE SEDIMENTS: R 5 % B 30 % C 40 % P 20 % G 5 % S 0 % M 0 % V 0
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 75 m M 0 m N 150 m VL 261 m NO 210

SURFACE OIL

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

PAVEMENT: H ☒ S 6 sq. m by 2

PATTIES TARBALLS 1 BA

NEAR SHORE SHEEN? NO BR RW ☒ (SL) (T)

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECT ☐ YES ☒ NO

TYPE 0

#BAGS C

Photographs:

Roll No. ST-64

Frames 12

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		NO	UC	1	2	3	4	5	SU	U	M	U		
1	30		X				0-12							X		X				C/P/G
1	30	X					12-20	X				X				X				P/G
							.													
							.													
							.													
							.													

COMMENTS

SHORELINE ECOLOGICAL SUMMARY

REVISION 10/22/90

Segment ST / EL052 Subdivision B Date (mo / day / yr) April 4 1990

Time (24 hr) 1445 Biologist Jim Barry Length 696

(A) Substrate type and % of segments:
(1) Bedrock 5 (2) Boulder 30 (3) Cobble 40 (4) Pebble 20 (5) Sand 5 (6) Silt

(B) Overall % cover of biota (% of segment): Dense 20 Moderate 70 Low 10

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

Photographs: ST-6-4
Roll No.

Frames 13-17

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

SEAL TAGS DEAD SEA OTTER ON BEACH - NO OIL, HEAVILY OILCONTAMINATED.
PLASTIC CORMORANT
BARROW'S GULLS
RAVENS.

Ecological Considerations: 1B, 644V 711

- 1) Salmon Spawning Stream mouth (1B). Clean up activities should avoid this area stream mouth due to salmon spawning.
- 2) SANDY / PEBBLE BEACH HAS AREAS WITH RECOVERING MUSSEL BEDS - AVOID HEAVY foot traffic or machinery.

ACE 7237229

PWS ECOLOGICAL CONSTRAINTS

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

II MAJOR SPECIES

- A. BARNACLES - MODERATE densities were found overall, as would be expected in this habitat. *Balanus glandula* was the primary species.
- B. MYTILUS - mussels were moderate to sparse overall, but were very patchy, with occasionally high densities. Boulders and cobble on the flat frequently had patches of mussels. Spat or small juveniles also were found in most areas. On the beach (pbbble), mussels were scarce overall, but were dense in patches where mussel beds were developing.
- C. GASTROPODS - Rare or occasionally dense on the pbbble (mostly), and otherwise moderate.
- D. FUCUS - Except on the pbbble beach, where fucus was absent, fucus was dense on cobble & boulders in the mid to low zones.

III Species List.

A. MARINE PLANTS

1) DIATOMS / BLUE GREEN ALGAE

2) Green algae - CHLOROPHYTES

SPERMATOPHYTES / ACROSSIPHONIA D12

ULVA M12

UROSPORA M12

CLADOPHORA S12

STYTEROMORPHA S12

3) RED ALGAE - RHODOPHYTES

PORPHYRA S12

PETROCELLUS S1

RHODOMELA LARIX S1

RHODYMENIA palmata M12

BOSSIELLA spp R1

CALLIARTHON R1

CORALLINA R1

EYDOLLARIA R1

HALOSACCUS S12 *

IRIDARIA S12

* SPAT OR JUVENILES PRESENT

D Dense

M Moderate

S Sparse

R Rare

1 Bedrock

2 Boulder

3 Cobble

4 Pbbble

5 Sand

ELOS2-B

START

VARIABLE
STOP

APRIL 6 1990

TIDE WINDOW

2

I GENERAL COMMENTS.

A. THIS subdivision has 2 major features, 1) a stream mouth/beach and 2) a cobble/boulder flat.

1) The stream mouth/beach has important biological features. First this is a spawning stream for salmon (designated by special restrictions). As such care should be taken to avoid disturbance to the stream's outlet area during and after the salmon spawn. In addition, the fluvial beach has a patchy cover of mussels; some areas appear to be forming mussel beds. Heavy foot traffic or machinery traffic could disrupt this recovery and should be avoided.

2) The Cobble/Boulder flat, a low angle beach, has a large proportion of sands and pebbles used by infaunal species such as clams and worms. Several species of clam shells are found on this beach, but I was unable to find live individuals of each species.

Clam Shells	Live Clams
Scallop (<i>Chlamys</i> spp.)	NO
Jingle (<i>Pododemus</i> spp)	YES (juveniles)
Cockle (<i>Clinocardium</i> spp)	NO
Clam (<i>Macoma</i> spp)	YES (juveniles)
Steamer Clam (<i>Protothaca</i>)	YES (juveniles)
Butter Clam (<i>Saxidomus</i>)	NO
? Clam (<i>Hyatella</i>)	YES - juveniles

The "missing species" may have been present, but undetected, or may live in slightly deeper water and wash ashore as empty shells, or may have been killed by oil and have yet to recover.

Other species found on the flat that are typical and important in sand flat habitats are the wren worm (*Eteone* spp.), large infaunal worms (*Nephtyidae*, *Urechidae*), and crabs (*Hemigrapsus oregonensis*).

Overall, this a cobble/sand flat appears to be healthy, or

ACE 7237232



3) Red Algae (cont)

Lithothamnion R1
MEMBRANOPTERA S12
CRYPTOSIPHONIA S12
MICROCLADIA/PTEROCADIA (S12)
MASTOCARPUS S1

4) BROWN ALGAE - PHAEOPHYTA

FUCUS DISTICHTUS - D12
LAMINARIA spp - S12
HILDEBRANDIA - S1
RUEFIA SY
COSTARIA S1
ALARIA S12
SCYTOSIPHON S12

13) ANIMALS

A) BARNACLES

Semibalanus cariosus * S1
Balanus glandula * M12
CISTHOMALUS DALLI * M12

2) Crabs

PAGURIDAE - Hermit Crabs : * M123
Hemigrapsus oregonensis * M123
HAPLOGASTER R23

3) Amphipoda

Orchestra? spp. M-D 23
Anonyx spp.? R2

4) BEACH HOPPERS - ISOPODA - S12

5) MUSSELS - Mytilus edulis M12 *

6) SNAILS

Littorina scutulata M123*
L. sitkana * M123
Nucella lamellosa S12*
N. emarginata S12
Scutellaria dira S12*

7) Limpets

Tectura scutum S123*
T. peruviana S12
Siphonaria R12

7) Continuum - Linguals

Lottia pinnata S12*
L. digitalis S12*

8) CHITONS

Katharina tunicata R12*

9) Sea Stars

Pyrenopoda spp. S12*
Leptasterias M123*
Pentasterias S12

10) Scallops / Clams

Pododesmus S123*
Hiatella spp S123*
Prototheca spp S23*
Macoma spp S23

11) WORMS

ECHINURAN WORMS
Echinurus echinurus M3
GIBBERIUM
Pseudoscoloplosoma spp. M3*
POLYCHAETES
Nereidae S34
Nereidae S34
Others
Sipuncularia M23*

12) Anemones

Antheopsis spp R12

13) FISH

PHOLIDAE M123*
COTTIDAE R23.

00 C. DILLON

SEGMENT ST/ EL-52

SUBDIVISION B

DATE 04 APRIL 80

CHECKLIST

- ☐ M Area
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HMAA/VL
- ☐ SCL
- ☐ Photo Location(s)
- ☐ Photo(s)
- ☐ Photo Location(s)
- ☐ Photo Location(s)

LEGEND

1 ▲
Pit - No Subsurface Oil

2 ▲
Pit - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Sporadic Distribution

Oil Vegetation

1 ●●
Photo location, direction, and number

SKETCH MAP

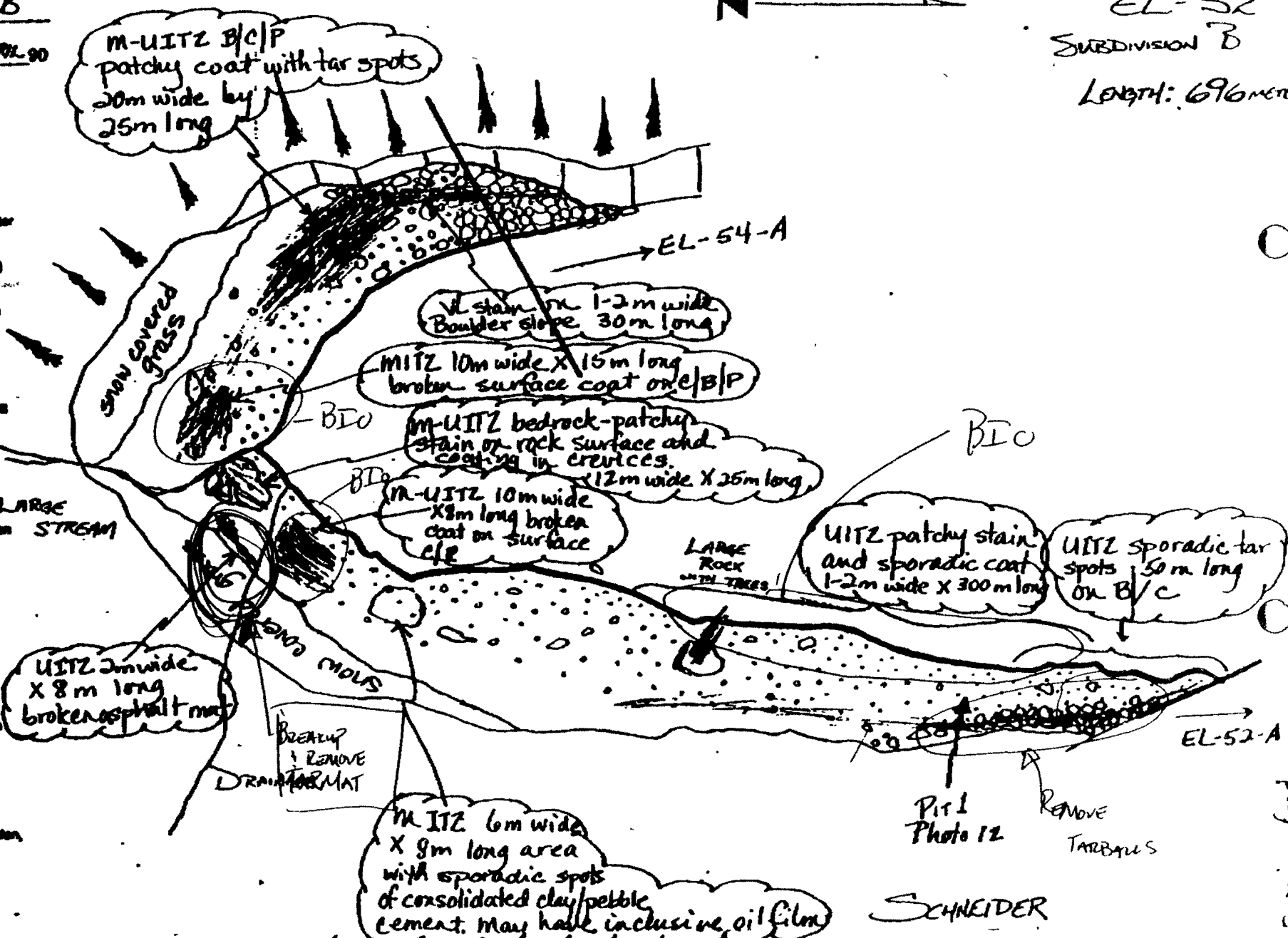


SEGMENT

EL-52

SUBDIVISION B

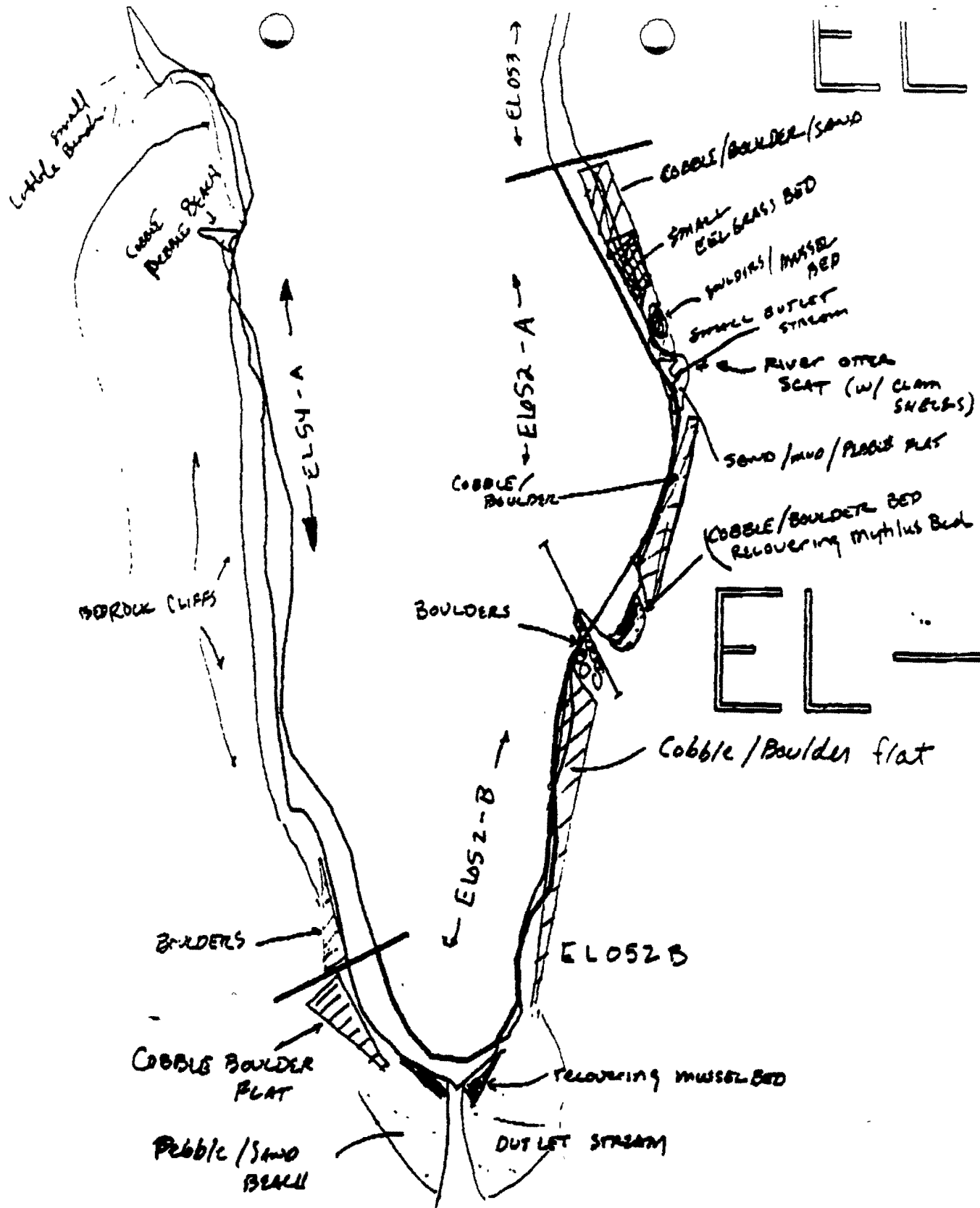
Length: 696 meters



ACE 7237234

Oil Character Length (m): AP 8 PO CV CT 73 ST 365 MS PT TB 50 FL NO 2/0

REVISION 00/04/00



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

EL-52

ADEC Segment Length: 1224m



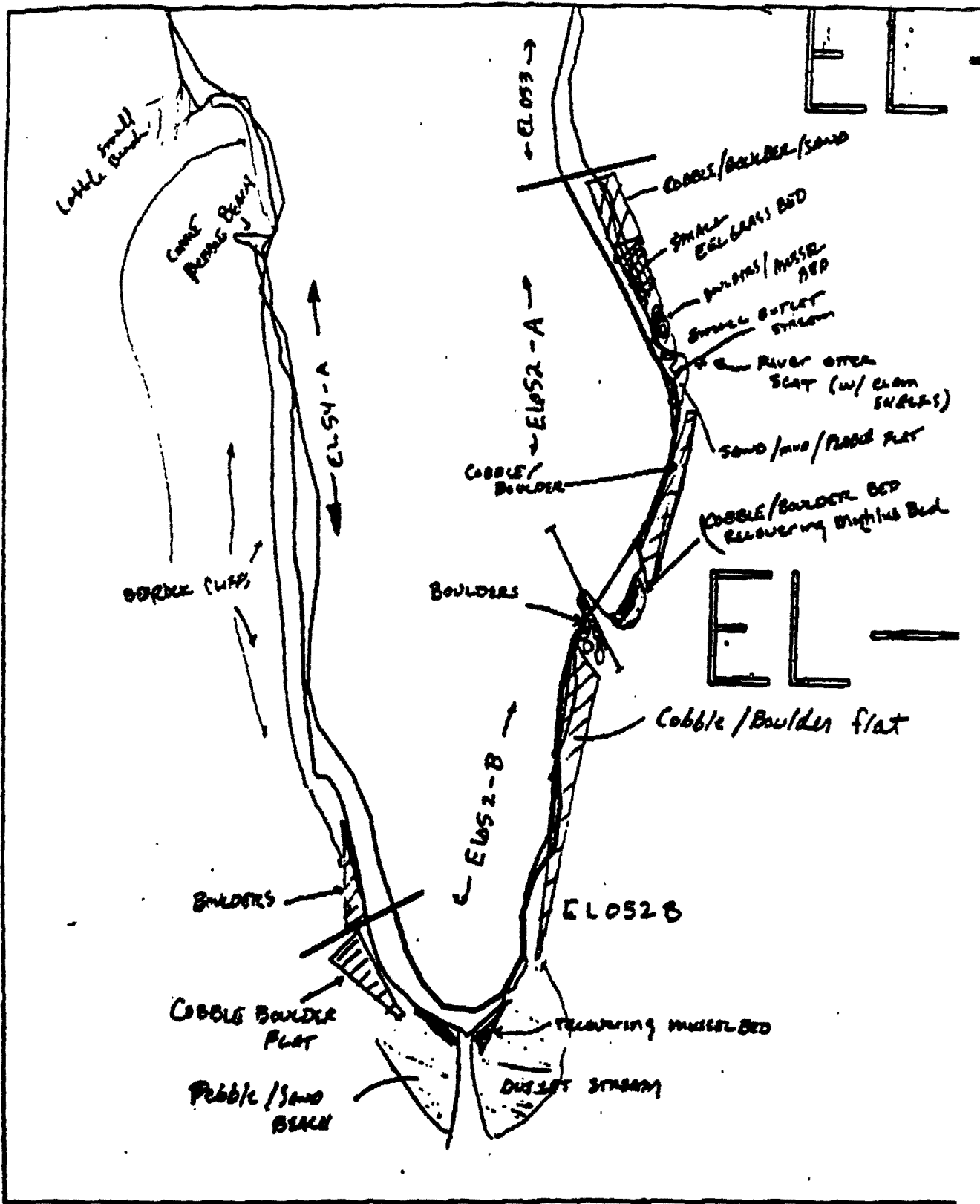
Map Key: PWS-133

Name: _____

Date: _____

Date Entered: _____

ACE 7237235



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-52

AGE Segment Length: 222m



Map Key: PUS-135

Name: EL-52

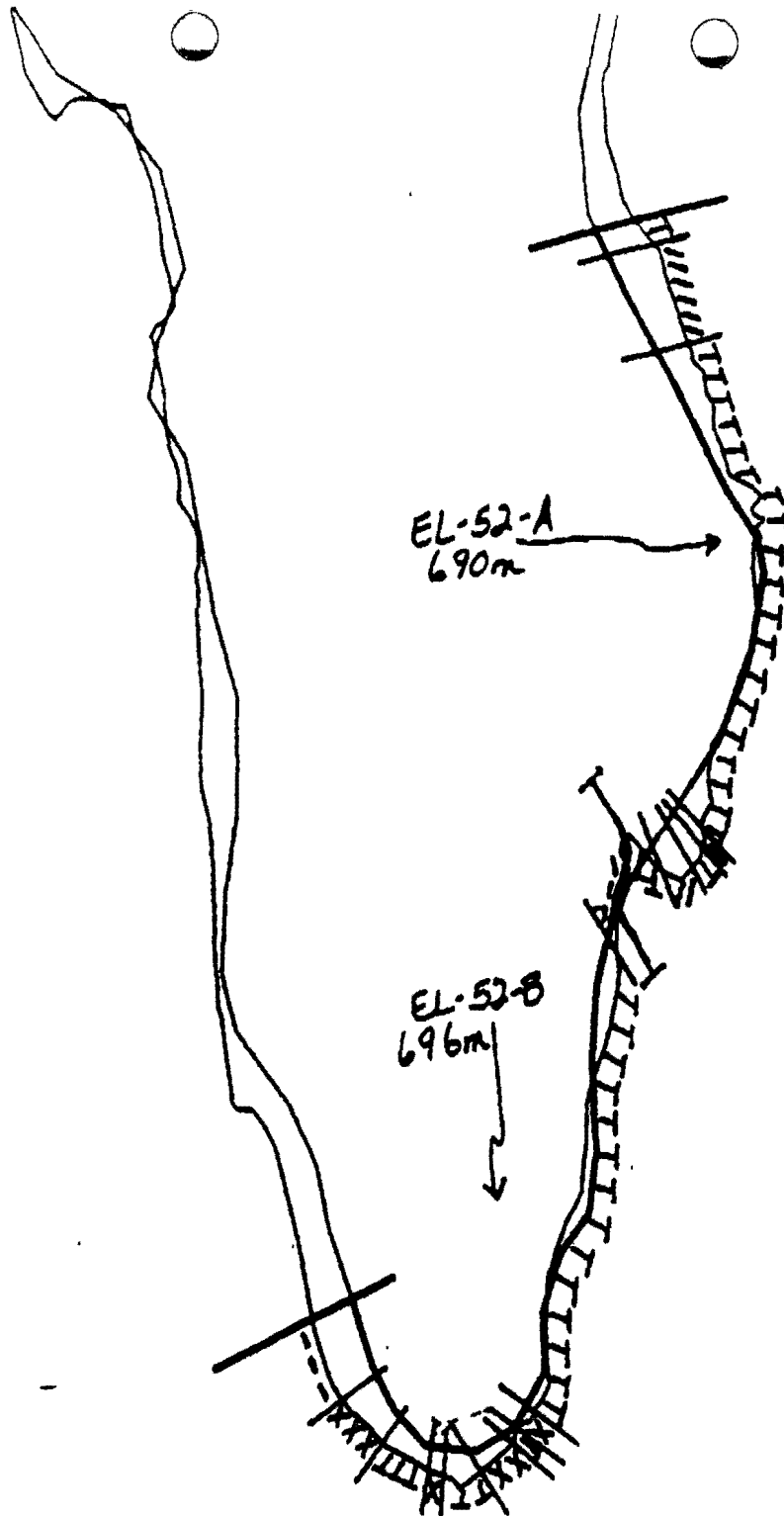
Date: 12/1/82

Date Entered: 12/1/82

ACE 7237236

EL-

page 3 of 3



EL-

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EL-52

ADEC Segment Length: 1224m



Map Key: PWS-135

Name: C. DILLON

Date: EL-52-A 3/21/90

Date: EL-52-B 4/4/90

Date Entered:

ACE 7237237 -/S

(version 4/28/89)

SHORELINE CLEANUP PROGRAM

DATE: April 28, 1989

SHORELINE SEGMENT EL-52

LOCATION: (see enclosed map) Northwest Bay - Eleanor Island

ADEC NO. 5 SHORELINE ASSESSMENT DATE: 4-22-89

Recommended Cleanup Activity(ies):

High volume flushing on the beach areas.
High pressure on unvegetated rocky areas.
Hot water on unvegetated rocky areas.

Priorities Considerations:

Ensure booms are in place to contain oil run-off as progress towards head of cove proceeds.

Ecological Constraints (from site survey):

Do not dislodge rockweed holdfasts or mussel clumps, unless dead.

Archeological Constraints (from site survey):

Keep people away from large wooden structural remains on the east side near the head of the cove. If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon archaeologist C. Mobley and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Judith S. Butten
State Historic Preservation Officer *

Date: 5/1/89

EXXON: _____

Date: _____

FOSC: _____

Date: _____

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

ACE 7237240+15

DOCUMENTATION:

MAP/Aerial photo marking segment boundaries attached

VTR: Y/N Tape Number(s) _____

PHOTOGRAPHY: Y/N Roll Number(s) _____

SAMPLE NUMBERS COLLECTED: None

Two independent
observations
(2 forms)

C:\WP\DATA\SHOREVAL.1

ACE 7237241

[revised 17 Apr 89]

SHORELINE OIL EVALUATION

Date: 11/4 / 82 / 89

Observer: [Signature]

Time: 7:30 h m

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION Shannon Is.

SITE 1100

LOCATION PREFIX EL

SEGMENT NUMBER 52

LATITUDE: 6 d m s

LONGITUDE: 147 d m s

LENGTH OF SHORELINE SEGMENT: 400 m

ACCESS: Foot/Vehicle/BOat/BARGE/HELIO/Float Plane

SHORELINE:

SHORELINE CHARACTER:

BEach/SPit/Cove/ / /

Wave Exposure: High/Med/Low

Rock Y/N % 20 VERTICAL/High Angle/Low Angle

SEdiment Y/N % 80 Types: B / C / P / G / S / M / R

Strand Line Y/N Algae/Debris/Logs

OIL

LOCATION OF OIL: SU / SP / H / M / L

CONTINUOUS: Y/N WIDTH OF BAND: 20-30 m % of Segment 100

PATCHY: 10/20/30/40/50/60/70/80/90% coverage % of Segment

EST. OIL THICKNESS: cm EST. OIL PENETRATION: 2 cm in 8" C

POOLED OIL: Y/N "FREE" OIL: Y/N WEATHERED: Y/N

STRAND LINE CLEAN/OILED Some oil on beach. Most of oil seems to be adhered to rock or in sediment.

SUMMARY OILING: Amount High/Med/Low
Coverage Extensive/Moderate/Light

COMMENTS:

Wash - possibly to be done
to see if there is any effect. red rich bottom in
shallow areas, maybe low flushing

C:\WP\DATA\SHOREVAL.1

ACE 7237242

ECOLOGICAL EVALUATION

LOCATION NW Bay - Cleaner SITE head of bay OBSERVER R. L. Hill

DATE 04 / 22 / 1989 TIME (HHMM) 1730 TIDE HT. (m)

OILED ZONE: SPLASH HIGH MED LOW

SUBSTRATUM: ROCKS BOULDER COBBLE GRAVEL SAND MUD

LIVE BIOTA / DENSITY (#/m² or %cover-algae):

Fucus dense in small patches on larger boulders Mytilus few, small Balanus patchy Littorina few, line
Nucella Pagurus Limpets few, line Halosaccion

Gelidium Other

3 streams, then sand, - volcanic streams?

Oil Damaged Biota All biota is intact, but a few specimens are OK, even after cleaning. Fucus in stream is OK, streams to rd. clean. No obvious dead mollusks.

Clean-up Precautions Rel. lower pressure where Fucus is dense.

OILED ZONE: SPLASH HIGH MED LOW

SUBSTRATUM: ROCKS BOULDER COBBLE GRAVEL SAND MUD

LIVE BIOTA / DENSITY (#/m² or %cover-algae):

Fucus Dense Mytilus mod. dense Balanus mod. dense Littorina few
Nucella Pagurus Limpets few Halosaccion

Gelidium Other

also slow; littorines close together. OK.

Oil Damaged Biota limpets attached, but not feeding.

Clean-up Precautions Low pressure at NE end of bay

low pressure at NE end of bay

MAMMALS (#): OTTERS 1 dead HARBOR DALL OTHER

OTHER

BIRDS: 3 gulls seen all day

GENERAL OBSERVATIONS: Two independent observations

ECOLOGICAL EVALUATION

LOCATION Eleanor Island SITE West Cove Head OBSERVER C. DILLON

DATE 4 / 22 / 1989 TIME (HHMM) 1500-1730 TIDE HT. (m) 2-3

OILED ZONE: SPLASH HIGH MED LOW
 SUBSTRATUM: 10% ROCKS 10% BOULDER 70% COBBLE 10% GRAVEL SAND MUD

LIVE BIOTA / DENSITY (#/m² or %cover-algae):

Fucus 5% Mytilus 0 Balanus 0 Littorina 0
 Nucella 0 Pagurus 0 Limpets 0 Halosaccion 5%
 Gelidium 0 Other None on beach and oiled areas. Many dead Mytilus, Alveolaria SMR

Oil Damaged Biota Some Fucus on oiled bedrock outcrops at innermost cove and knob rock outcrop near North extent of segment

Clean-up Precautions Just beyond (inland) of oil band is woods and beach grass which are healthy + clean. Stay clear of those areas. Some living ~~but not~~ Fucus on bedrock outcrops - don't use hot water or high pressure

OILED ZONE: SPLASH HIGH MED LOW
 SUBSTRATUM: ROCKS BOULDER COBBLE GRAVEL SAND MUD

LIVE BIOTA / DENSITY (#/m² or %cover-algae):

Fucus _____ Mytilus _____ Balanus _____ Littorina _____
 Nucella _____ Pagurus _____ Limpets _____ Halosaccion _____
 Gelidium _____ Other _____

Oil Damaged Biota _____

Clean-up Precautions _____

MAMMALS (#): OTTERS 1 (dead) HARBOR _____ DALL _____ OTHER _____

OTHER Dead sea otter collected from Beach area at extrem N. segment

BIRDS: None found dead or on land. Eagle + seagulls flying around cove.

GENERAL OBSERVATIONS: _____

CULTURAL RESOURCE EVALUATION FOR OILED SHORELINE

Date 4/22/89 Location Elmer Island Site West Cove head
Location Prefix EL Segment # EL32 Length 500 m

Survey Method: Air (A - indicate on map)

Ground ✓ (G - indicate on map)

Known cultural resources (AHRS #) None Data Source None

Oil conditions/beach visibility Continuous mostly light to moderate

Width of beach zone surveyed 2-6 m m Tree fringe surveyed 10 m

Cultural resources observed in beach zone (AHRS code) CBN

Cultural resources observed in tree fringe (AHRS code) None

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

Shore Profile moderate beach slope

Fresh Water Sources at least xix

Sea Exposure north but deep in the cave

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 # CW-4 Frames 3,4

B/W Roll # Frames

Observer(s) C. Wilson

Time survey started 1500 Time survey ended 1730

Cultural resource considerations/restraints:

If any last type undiscovered cultural resources are
uncovered contact Exxon archaeologist, C Hobley,
immediately

C:\WP\DATA\CULTURED.SHO

SHORELINE CLEANUP PROGRAM

DATE: 04-22-89

Shoreline Segment: EL 52 - West Arm of NW Bay

Shoreline Assessment Date: 04-22-89

Recommended Cleanup Activity(ies):

1. Cleanup on beach at head of West Arm began ~1300; we arrived ~1700.
2. Use vigorous mod-high pressure + high volume washing to remove oil from sediment (to reduce potential long term release of hydrocarbons in mod. productive, but low energy environment).

Priorities Considerations

Ecological Constraints (from site survey)

Focus in local, dense patches on rocks at M-L tide. Use low pressure if practical and minimize walking on or dragging hoses over large boulders.
Avoid streams across beach

Archeological Constraints (from site survey)

EXXON: _____

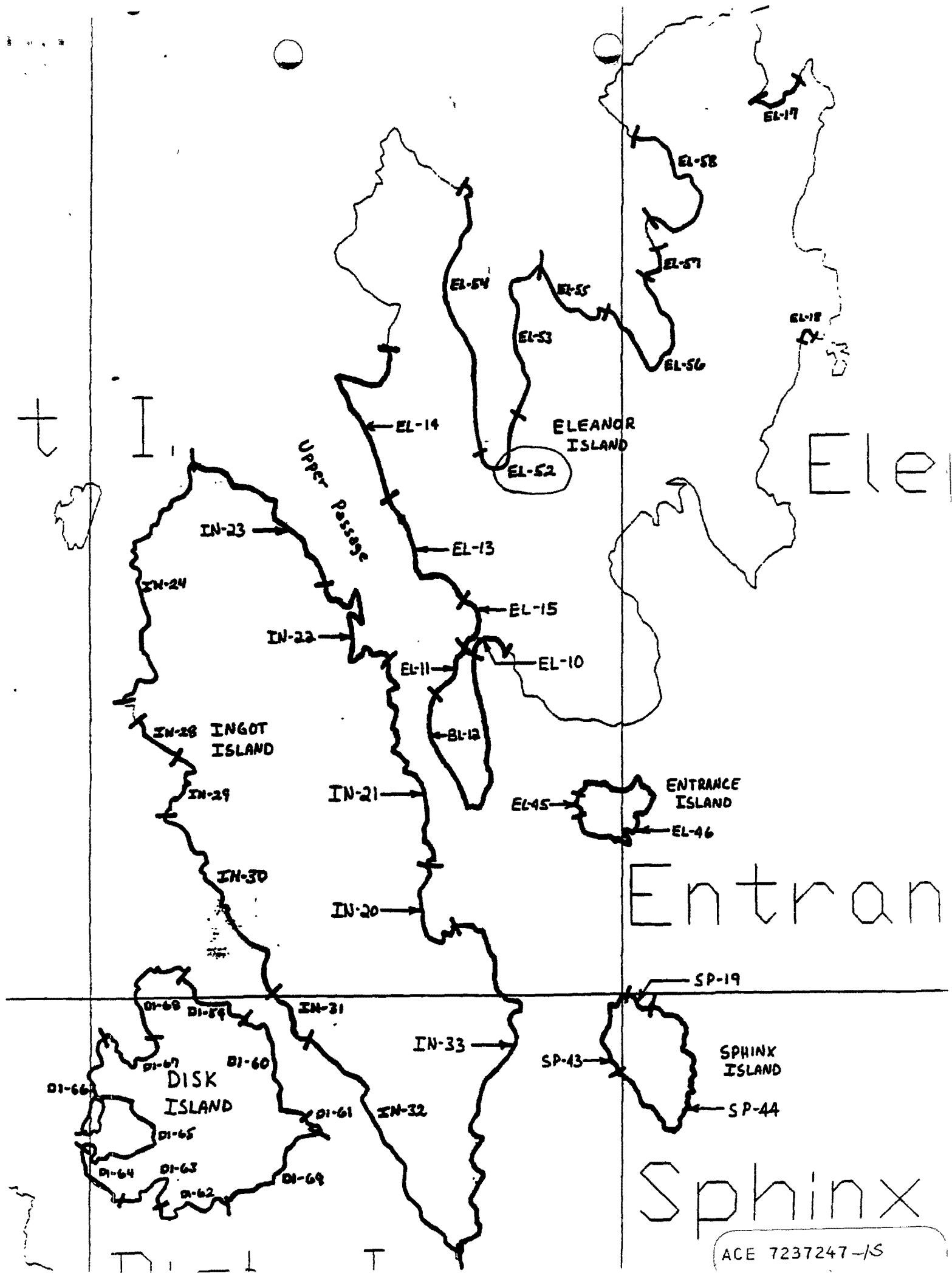
Date: _____

USC: _____

Date: _____

C:\WP\DATA\SHOREVAL.1

ACE 7237246



Shoreline Segment No: EL-52 Stream Catalog No: ASC16902
Geographic Location: NORTHWEST BAY

Date: 1-4-90 Start Time: _____ End Time: _____
Observers: _____

Low Tide: (time and height) 1243 PM
High Tide: 7:03 PM

Intertidal Zone: 50 METERS

Area to Right of Stream: 25 METERS

Area to Left of Stream: 60 METERS

Wave Exposure: HIGH MEDIUM low X

Steep Bedrock _____ Low Angle Bedrock _____ Gravel (0.1 to 2 inch
dia) X Cobble (2 to 10 inch) _____ Boulder(>10 inches) _____
Other MIXED WITH INTERMITTENT COBBLE

Length through Intertidal Zone: 70 METERS

Average Width: 1 METER

Channel/Bed Configuration:

Single Channel ☒	Multiple Channels	Number
--	-------------------	--------

Note: (see diagram attached)

DEER TRACKS ON THE BEACH

.....

.....

.....

.....

.....

.....

CHARACTERISTICS OF OIL DEPOSITS

DEPOSIT A

Distance from Stream ADJACENT
 Surface Area _____
 Thickness SURFACE
 Penetration Depth ?
 Tar X Asphalt _____
 Mousse _____ Stain X
 % Coverage of Deposit 50%
 Tidal Zone UPPER
 Comments: COVERAGE IS LIGHT TO MODERATE

DEPOSIT B

Distance from Stream ADJACENT
 Surface Area _____
 Thickness NONE
 Penetration Depth ?
 Tar _____ Asphalt _____
 Mousse _____ Stain _____
 % Coverage of Deposit _____
 Tidal Zone LOWER
 Comments: LIGHT TO NO OIL

DEPOSIT C

Distance from Stream _____
 Surface Area _____
 Thickness _____
 Penetration Depth _____
 Tar _____ Asphalt _____
 Mousse _____ Stain _____
 % Coverage of Deposit _____
 Tidal Zone _____
 Comments: _____

DEPOSIT D

Distance from Stream _____
 Surface Area _____
 Thickness _____
 Penetration Depth _____
 Tar _____ Asphalt _____
 Mousse _____ Stain _____
 % Coverage of Deposit _____
 Tidal Zone _____
 Comments: _____

DEPOSIT E

Distance from Stream _____
 Surface Area _____
 Thickness _____
 Penetration Depth _____
 Tar _____ Asphalt _____
 Mousse _____ Stain _____
 % Coverage of Deposit _____
 Tidal Zone _____
 Comments: _____

DEPOSIT F

Distance from Stream _____
 Surface Area _____
 Thickness _____
 Penetration Depth _____
 Tar _____ Asphalt _____
 Mousse _____ Stain _____
 % Coverage of Deposit _____
 Tidal Zone _____
 Comments: _____

PHOTOGRAPHIC EVIDENCE

VIDEO

Cassette No. WTC01VHS
 Beginning Footage 701

Photographer TOM CROWE
 Ending Footage 975

35 MM

Roll Number _____
 Frame Numbers _____

Photographer _____

Polaroid

Number of Prints _____

Photographer _____

ACE 7237239-15

A → MODERATE

C → BLUE (SNOW)

EL-52

ASC 16902

1-4-90

NORTHWEST BAY

B → LIGHT

TAPE # WTG01VHS

FRAME # 0943

ACE 7237248



A → MODERATE

C → BLUE (SNOW)

EL-52

ASC 16902

1-4-90

NORTHWEST BAY

B → LIGHT

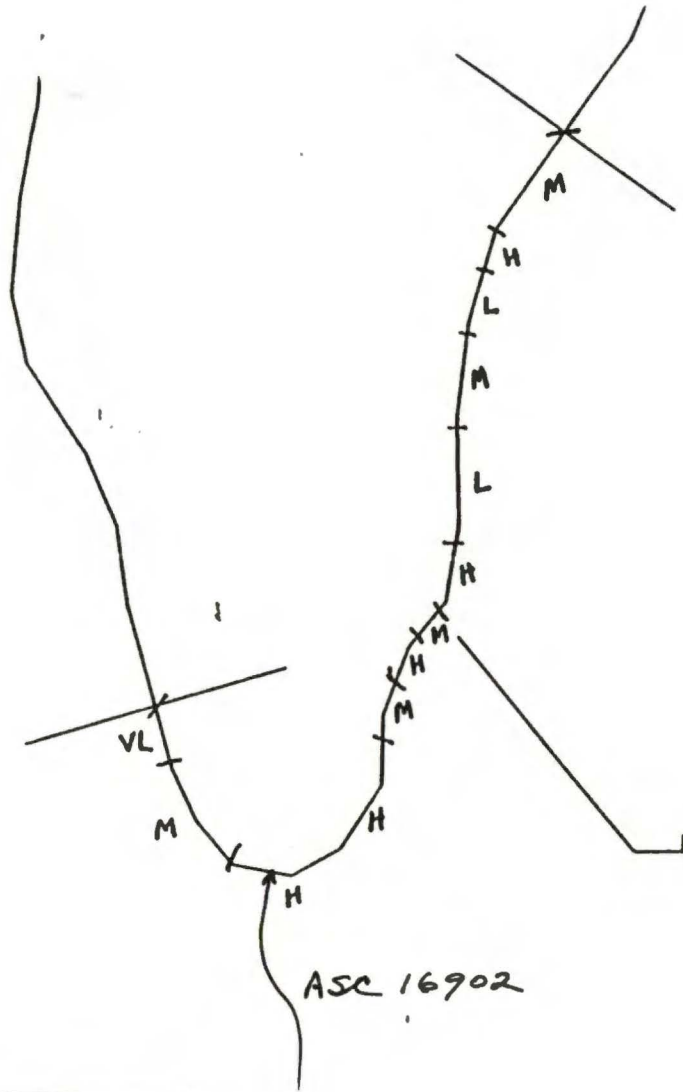
TAPE # WTG01VHS

FRAME # 0943



SCALE

0 10 20 30 40 50 METERS



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

ADEC Sep/Oct 1989 Survey

EL052

500.0

Heavy

CO

CO

ACE 7237249

1991 MAYSAP EVALUATION

SEGMENT: EL 052 SUB: B REGION: PWS SURVEY DATE: 4/30/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN 5/1 - 7/10 (EXCEPT STREAM BED); RESTRICTED 7/10 - 9/15

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

ARCHAEOLOGICAL CONSTRAINTS:

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

Exxon One

5/14/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: EXXON DOES NOT AGREE THAT THIS TREATMENT
IS REQUIRED BASED ON A NET ENVIRONMENTAL BENEFIT
ANALYSIS. HOWEVER AT THE REQUEST OF ADF+G + USCG
TREATMENT WAS RECOMMENDED BY TAG.

TAG: MANUAL PICKUP OF HSOR AT LOCATION A, MANUAL
RAKE/TILL AT PITS 4 + 5 + 8 + 9.

FOSC:

TAG APPROVAL DATE: MAY 14 1991

FOSC APPROVAL DATE: 5/20/91

ADEC *[Signature]*

FOSC *[Signature]*

EXXON *[Signature]*

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

USCG *[Signature]*

NOAA *[Signature]*

ADF&G OIL SPILL RESPONSE MONITORING

ASC# 226-10-16902

Date: 5/28/91

Stream Name: _____

Observer: A. Weseman

Segment-Sub Unit EL052B

Location: NW Bay, Eleanor I

Anad. Stream Permit Issued? ☒ Y ☐ N

Date: 5/28/91

Work Order Issued: ☒ Y ☐ N

Date: 5/20/91

Demob Date: 5/28/91

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 *tilling to depth*
 Spot Wash *of oil*
 Other _____
 Bioremediation & Type
 Mechanical Tilling
 Header Flood (Hot/Cold)

Crew Size: 4 - same as agency Reps. - no RECCO workers

Lbs. or Bags of Oil/Sediment Removed 0

Other Agency Reps, and Names:

Bob Jensen USCG, Scott Abumant & Randy Boyer-Exxon

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

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

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).

HOR sediments near pits 8, 9 & 4 were degraded to LOR.

SOR sed. in location A were raked, weathering well.

Area of MOR at pit 5 was not located.

L SOR & OF sediments were not addressed in work order.

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

The work order was satisfactorily completed, however we were unable to locate HOR sed. near pit 5.

Area of pits 8 & 9 received a very thorough tilling with a natural water flush assisting the process.

Pit 4 was tilled with rainbow & silver sheen released

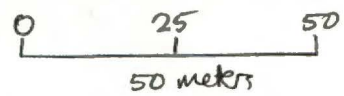
Area A was raked, being so weathered that it did not warrant removal. No oil recovery was attempted.

Stream is in good shape now, but warrants a final assessment by ADF & 6 in Aug to determine remaining oil & apply any final treatment.

A:OPRESP
April 2, 1991

EL-052-B 04/27/91
 OG map D.I. Little
 2015-2045

continued 04/30/91
 1130-1250



- Bedrock
- Trees
- Study Marker Signs

- PA 15 OF 0-10 cm pred
- (19) 15 OF " wt 10 pgs
- (20) 15 OF " wt 10 "
- (21) NO 30cm 20cm wt
- (22) 25cm NO oil

NORTHWEST BAY

AP 0.2x0.2
 PU
 Tombo

EL-52-A

end of subdivision

Bent tree

(D) SOR 1x5
 5% over sand

rand new shoes
 black beads

EL-54A

start of subdivision

mobile Swash ridges

could not locate

stream

Bedrock

areas addressed by 91 work order

ANADROMOUS

STREAM

pit (7) 25cm-30cm TR (1cm of rock) Y
 -D 40cm

plus (10)-(12) 15cm C P 9 NO OIL

pit (8) HOR 0-10cm (N) oil below TD 30 W/T at 15cm
 pit (9) HOR 0-10 " TD 30

(13) NO 25cm P 9
 (14) ?
 (15) 30cm NO. ? wt - 25cm

(5)

EXXON Valdez Oilspill Cleanup
Anadromous Fish Stream Authorization

Date 5/28/91

EXXON Authorized Representative Scott Nauman

Shoreline Segment EL 052B

Anadromous Fish Stream Number(s) 226-10-16902

Approved Cleanup Techniques Manual Removal

Manual Rake and Till

Approved Cleanup Period May 15 - July 10, 1991

Alaska Department of Fish and Game

Dianne W. Lerman
Authorized Officer

Scott Nauman
Permittee's Signature

EXXON Valdez Oilspill Cleanup

Anadromous Fish Stream Authorization

Date 5/18/91

EXXON Authorized Representative Scott Nauman

Shoreline Segment EL 052B

Anadromous Fish Stream Number(s) 226-10-16902

Approved Cleanup Techniques Manual Removal
Manual Rake and T.II

Approved Cleanup Period May 15 - July 10, 1991

Alaska Department of Fish and Game

James W. [Signature]
Authorized Officer

Scott Nauman
Permittee's Signature

EXXON Valdez Oilspill Cleanup
Anadromous Fish Stream Authorization

Date 7/2/91

EXXON Authorized Representative Scott H. Homan

Shoreline Segment EL 052B

Anadromous Fish Stream Number(s) 226-10-16902

Approved Cleanup Techniques Manual Removal

Manual Rake and Till

Approved Cleanup Period May 15 - July 10, 1991

Alaska Department of Fish and Game

Authorized Officer [Signature]

Permittee's Signature [Signature]

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: 4/27/91 16) HIGH TIDE TIME: _____ 22) TEAM RECORDER: TOM CROW
- 5) START TIME: 1910 17) HIGH TIDE HTS: _____ 23) OBSERVERS: AIMEE WESEMAN
- 6) STOP TIME: 2035 18) LOW TIDE TIMES: 1900-1930 24) AGENCY: ADF&G
- 7) SEGMENT #: RL52B 19) LOW TIDE HTS: +1.5 25) PHOTOS TAKEN: Y (N)
- 8) K-UNIT: _____ 20) TIDE HT AT SURVEY: +1.5 to 2.5 ROLL #: _____ FRAMES: _____
- 9) LAT: _____ Ebb (Slack) Flood Slack 26) VIDEO TAKEN: Y (N)
- 10) LONG: _____ 21) USCG QUAD: _____ TAPE # _____
- 11) ASC #: 226-10-16402 START: _____ STOP: _____
- 12) STREAM NAME: _____ 27) SAMPLES TAKEN? Y (N)
- 13) LOCATION: NW. BAY ELANOR IS SAMPLE I.D. _____
- 14) WAVE EXPOSURE: High Moderate (Low) _____
- 15) SHORELINE TYPE: Headland Low-lying Rocks (Beach) _____
- (Cove) Lagoon Marsh _____

28) EXTENT OF OIL

	DEPTH LENGTH ^{cm} m	WIDTH m	M2	%	THICK cm	PEN cm	OIL TYPE
^{PIT} SITE 1	5 cm						HOR
^{PIT} SITE 2	20 cm						NO OIL
^{PIT} SITE 3	5 cm						HOR
SITE 4	5 m	1 m	5	<10	2 cm		LSOR
SITE 5							

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 10% Gravel 90% Sand _____ Cobble _____ Mud/Silt _____

34) WILDLIFE OBSERVATION

Species Number

Bald Eagle 1

Gulls 12

Harbor Seal 1

35) COMMENTS: RECOMMEND MANUAL TILLING OF FURIED HOR IN SEEP ALONG
WITH MAPPING OIL WITH POM POMS. RETURN TO THIS SEGMENT 4/28/90
TO FINISH OG MAPPING. VERY MINUTE AMOUNTS OF SURFACE OIL WAS
VISIBLE. RETURN 4/30/91 TUES. 1130 START

36) PHOTOLOG

FRAME(S)

DESCRIPTION

A = Sample Taken
2/ = Photo Frame # and
Shot Direction

A:EDDATFO
April 3, 1991

4/27/91

EL 52

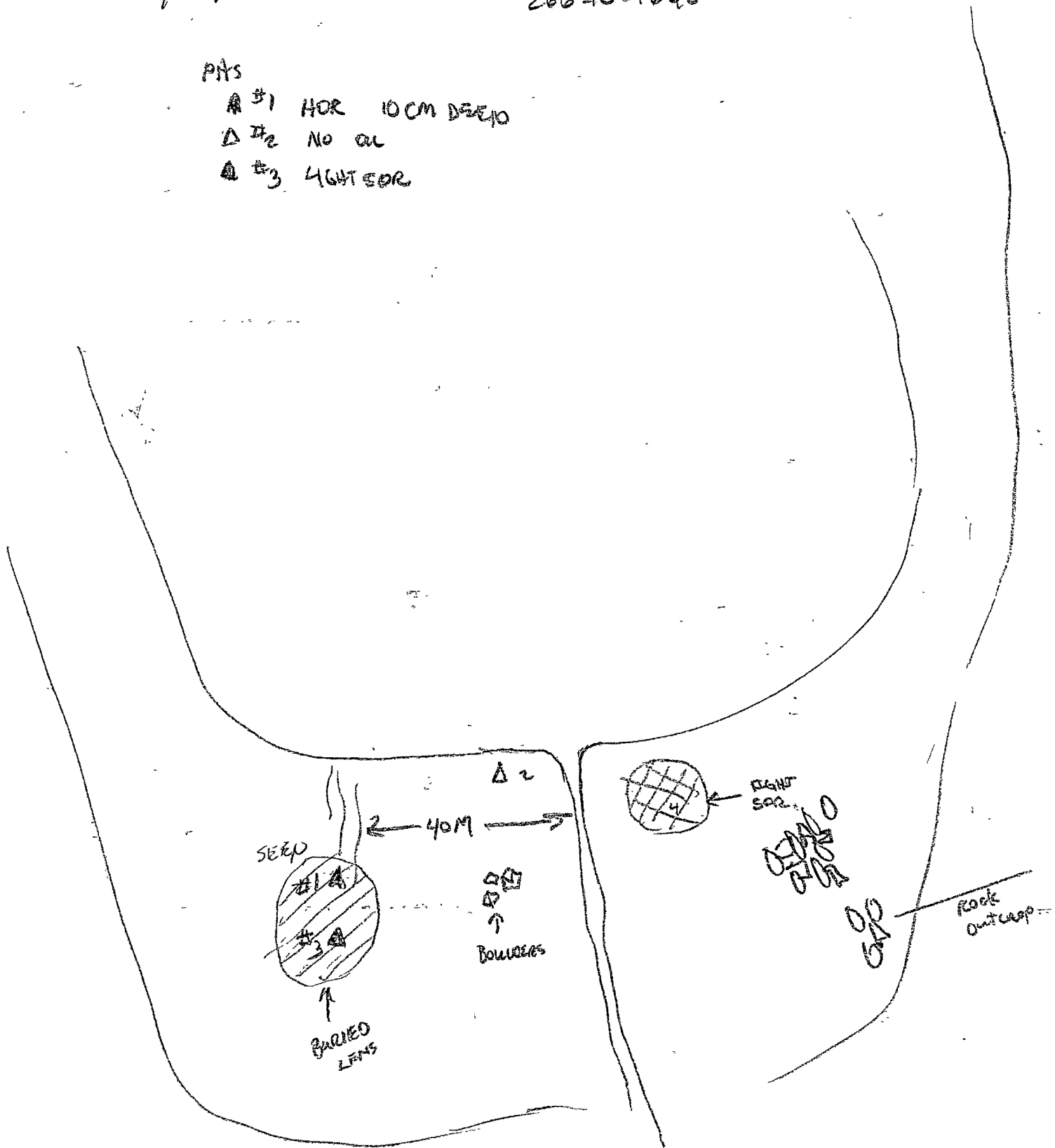
266-10-16402

PHS

#1 HOR 10CM DEEP

#2 NO OL

#3 46HT SOR



MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 6 SEGMENT EL-052 SUBDIVISION B DATE 04/30/91 04 27

ADEC & U.S.F.S.

NAME Aimee Weseman

SIGNATURE Aimee Weseman

☐ NTR ☒ Treatment Recommended

Commercial Fishing, Commercial Tourism & Recreation, Anchorage
This popular Anadromous fish stream area warrants a final manual
tilling to expose heavy OR sediments in area A & pits #5,8,9

EXXON

NAME Scott A. Nauman

SIGNATURE Scott A. Nauman

☒ NTR

The vast majority of this segment shows no surface or subsurface oil. where it
does occur, surface oiling is very patch and limited in extent (SOR). Subsurface
oil has been reduced since last year and is now extremely limited. This
subdivision has areas of good fucus and barnacle growth. Wildlife is also
evident at this location (eagle, seal). Having watch this site improve over the
past two years, I don't feel that additional treatments would be of a net. environ.
benefit

LANDMANAGER

NAME TOM CROW

OF ADFTG

SIGNATURE for Crow

☐ NTR ☒ TREATMENT RECOMMENDED

MANUAL TILLING OF HOR AND SOR SEDIMENTS NEAR ANADROMOUS
STREAM. A SMALL CREW CAN TAKE CARE OF THIS TASK EASILY IN 1/2 DAY
USING PICKS + SHOVELS TO EXPOSE THE OIL GRAVEL SEDIMENTS

USCG/NOAA

NAME CWO R. SPURR / Rebecca Hoff

SIGNATURE R.P. Spur / Rebecca Hoff

☐ NTR

Remaining surface oil could potentially provide a source of oil to stream
but the risk does not seem great. lower intertidal areas are recovering
well, mussel ^{algae} growth is extensive, so these areas should not be disturbed.
If any tilling is recommended for area B, it should be restricted to mid + upper
zones & care should be taken to not impact areas with biota. Only light
manual activity should be done, if indeed any treatment is deemed necessary

PAGE 1 OF 2

③

PAGE 2 OF 2

DATE 4 / 30 / 91

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

Note pgs 17 and 18 are in 2h-052-A.

④

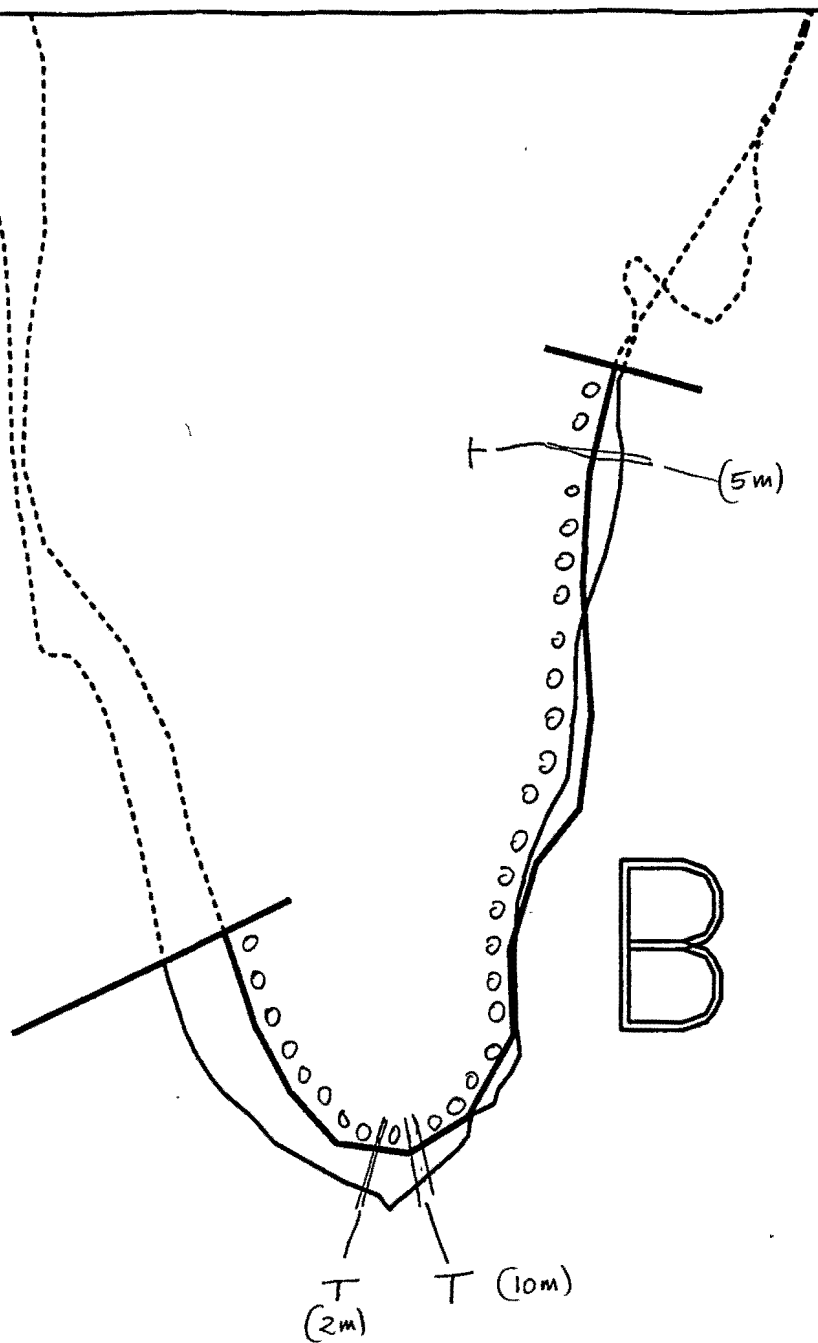
5

+

4

+

E



+

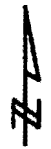
+

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

EL052 B

ADEC Subsegment Length: 627m
 METERS

0 100 200
 AK State Plane Zone 4
 401052b



Subdivision Field Map

Map Key: KNIEL052B

Name: D.I. LITTLE

Date: 04/27/91

Date Entered:

EL-52-B

4/27/91

Bio. Map

T.R. Schroeder

2015-2045

Continued 4/30/91

1530-1520

0 25 50
meters

North west
Bay

AP
0.25x0.2
P.R.

Dense mussel bed
throughout rocks.
Fucus and brown
algae present.

SOR 1x5
5% cover

Fucus, barnacles and
spat and hermit crabs
present along entire
shoreline MITZ to
LITZ. Pile worms
present and littorine
snails abundant

Good fucus regrowth in
LITZ. Barnacles thriving
on rocks. Limpets and
littorine snails very plentiful
on barnacled rocks.

Good fucus kelp
regrowth and mussel
regrowth.

Swash
ridges

Stream

Subsurface
809

Stream

A SOR(L)
1x2 15%

B SOR(L)
20x10
2%

anad.
Stream

7

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6
 SEGMENT # E1-52
 SUBDIVISION B
 SEA STATE Calm to choppy
 PHOTOGRAPHS: ROLL #
 DATE 4/27/91 & 4/30/91
 TIDAL HEIGHT (Range) +2 to +3 ft and
 BIOLOGIST TR Schroeder
 WIND SPEED/DIRECTION NE 10 and NE 25
 FRAME #

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

(A+B) = Central portion of beach near anadromous stream appears very sterile and unproductive. Part of this appears to be due to shifting small gravel and stream. One large area paralleling the outside of the stream has good regrowth of fucus and mussels.

Subsurface 3 & 9 = Fucus belt and mussel regrowth is excellent in intertidal area. Helix pits with HOB. Does not appear to be affecting life. Any removal efforts would greatly impact these communities.

Subsurface 4 = MOR located in generally non-productive area.

Subsurface 5 = MOR located in and adjacent to very productive intertidal area. Fucus belt, periwinkle, limpet, hermit crabs, littorine snails extremely abundant.

(D) = Located in a very dense mussel bed with fucus belt and red/brown algae present.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	
Seabirds			
Waterfowl	1	4	
Gulls/kittiwakes	1	12	
Shorebirds			
Corvids			
Other Birds	1	1	

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)	1 Harker Seal		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

Segment No ELOS2 Subdivision B
Date 4/27/91 Log Frame No 1
Photographer Rebecca Hoff
Location _____
Comments Capeview looking downstream

Roll No MAYSAP- 602 Neg. No _____
Control No _____ (Office Use Only)

Segment No ELOS2 Subdivision B
Date 4/27/91 Log Frame No 3
Photographer Rebecca Hoff
Location _____
Comments SDE in mid tidal area

Roll No MAYSAP- 602 Neg. No _____
Control No _____ (Office Use Only)

Segment No _____ Subdivision _____
Date _____ Log Frame No _____
Photographer _____
Location _____
Comments _____

Roll No MAYSAP- Neg. No _____
Control No _____ (Office Use Only)

Segment No _____ Subdivision _____
Date _____ Log Frame No _____
Photographer _____
Location _____
Comments _____

Roll No MAYSAP- Neg. No _____
Control No _____ (Office Use Only)

Segment No _____ Subdivision _____
Date _____ Log Frame No _____
Photographer _____
Location _____
Comments _____

Roll No MAYSAP- Neg. No _____

Segment No ELOS2 Subdivision B
Date 4/27/91 Log Frame No 2
Photographer Rebecca Hoff
Location _____
Comments close up of mussels on rock

Roll No MAYSAP- 602 Neg. No _____
Control No _____ (Office Use Only)

Segment No ELOS2 Subdivision B
Date 4/27/91 Log Frame No 4
Photographer Rebecca Hoff
Location _____
Comments Pit #5

Roll No MAYSAP- 602 Neg. No _____
Control No _____ (Office Use Only)

Segment No _____ Subdivision _____
Date _____ Log Frame No _____
Photographer _____
Location _____
Comments _____

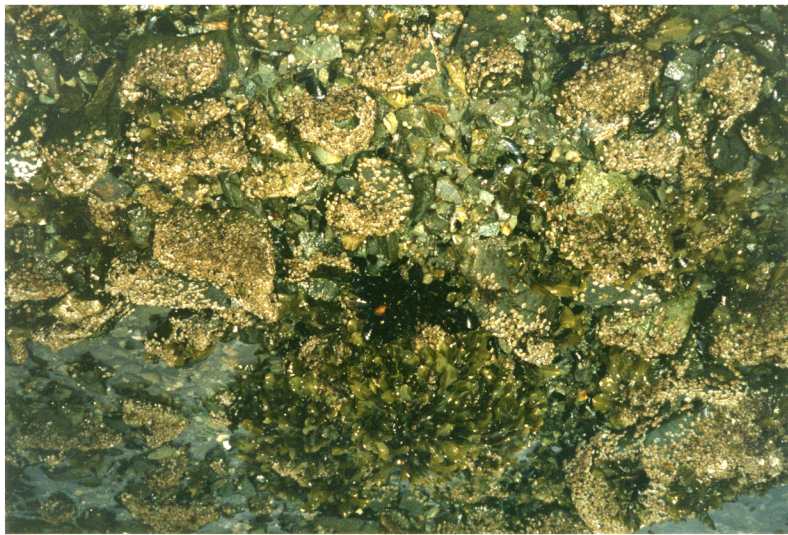
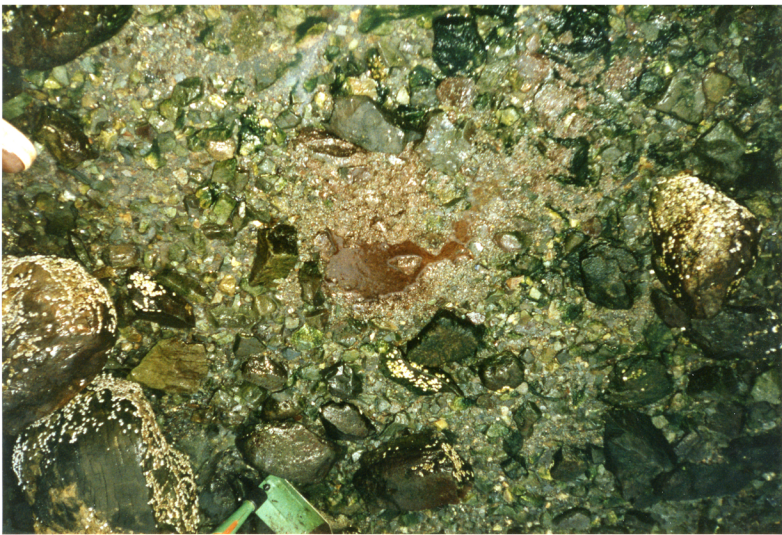
Roll No MAYSAP- Neg. No _____
Control No _____ (Office Use Only)

Segment No _____ Subdivision _____
Date _____ Log Frame No _____
Photographer _____
Location _____
Comments _____

Roll No MAYSAP- Neg. No _____
Control No _____ (Office Use Only)

Segment No _____ Subdivision _____
Date _____ Log Frame No _____
Photographer _____
Location _____
Comments _____

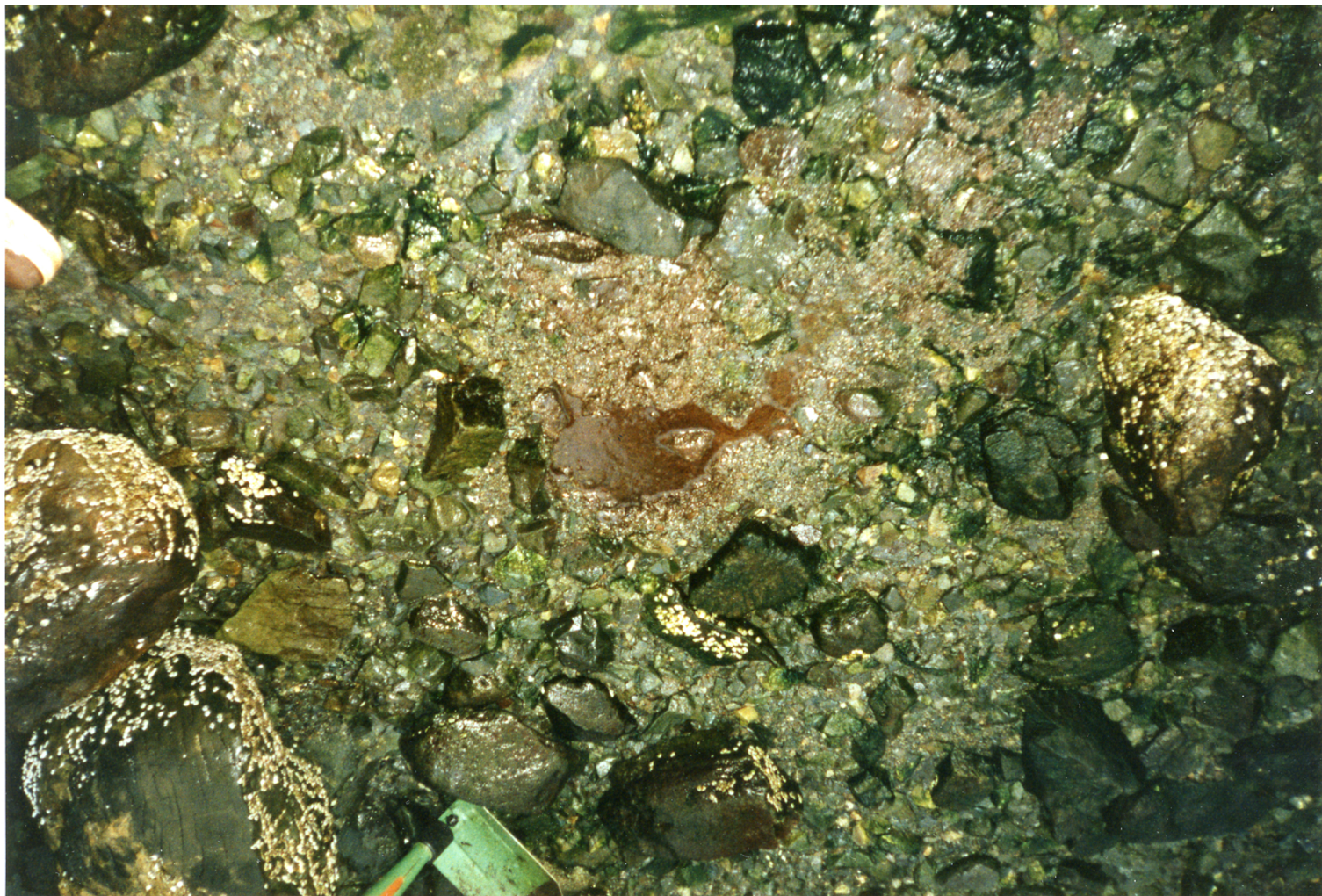
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Date: 4/27/91 No. 818

Title: EL052B

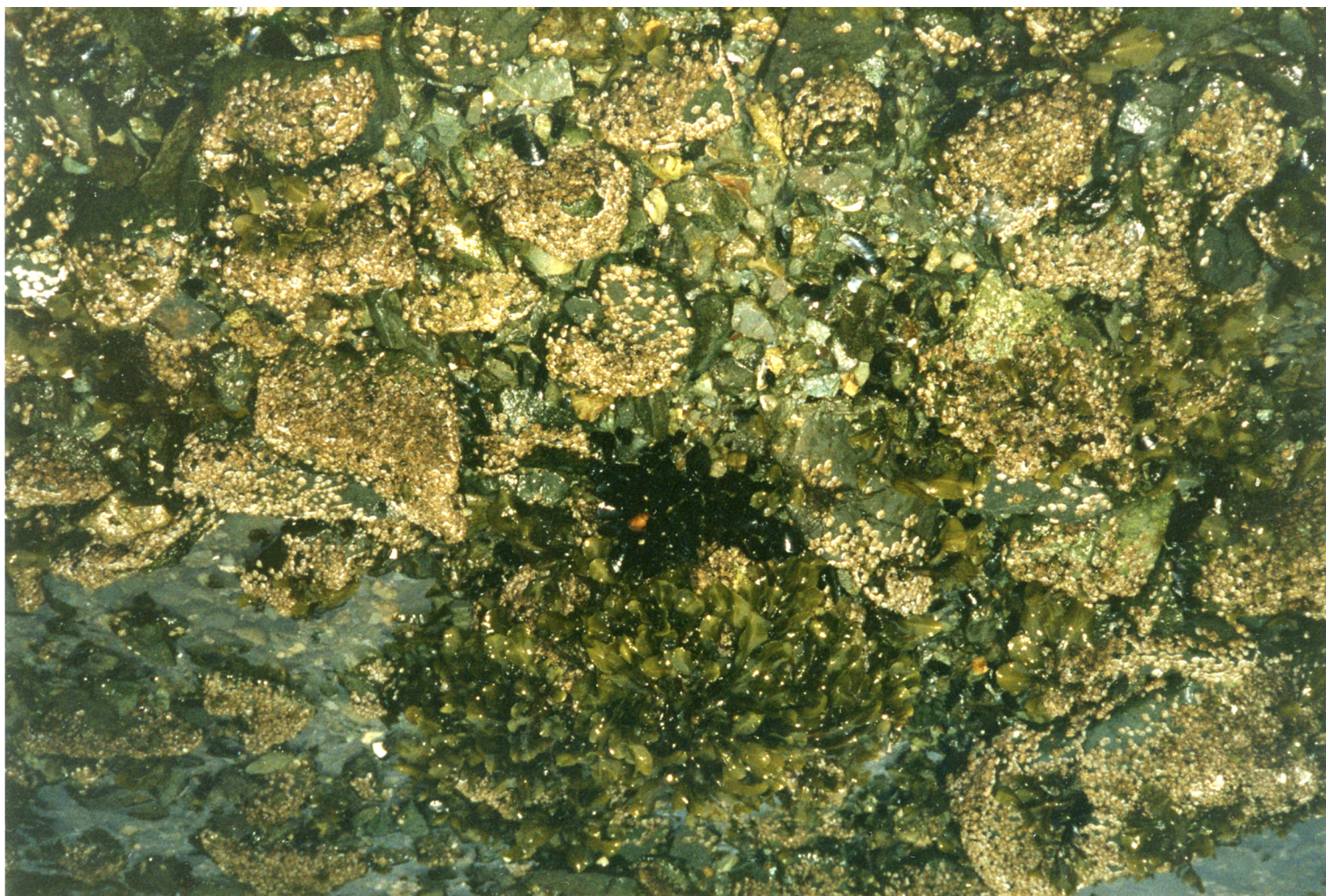




2

Segment No EL052 Subdivision B
Date 4/27/91 Log Frame No 3
Photographer Rebecca J. Hoff
Location _____
Comments SOR in mid tidal area

Roll No MAYSAP- 602 Neg. No 2
Control No 818 (Office Use Only)



Segment No ELOS 2 Subdivision B
Date 4/27/91 Log Frame No 2
Photographer Rebecca Hoff
Location _____
Comments close up of mussels on rock

Roll No MAYSAP- 6-02 Neg. No 1
Control No 818 (Office Use Only)



3

Segment No ELOS2 Subdivision B
Date 4/27/91 Log Frame No 4
Photographer Rebecca Hoff
Location _____
Comments Pit #5

Roll No MAYSAP- 6-02 Neg. No 3
Control No 818 (Office Use Only)



Segment No E6052 Subdivision B
Date 4/27/91 Log Frame No 1
Photographer Rebecca Hoff
Location _____
Comments Overview looking downstream

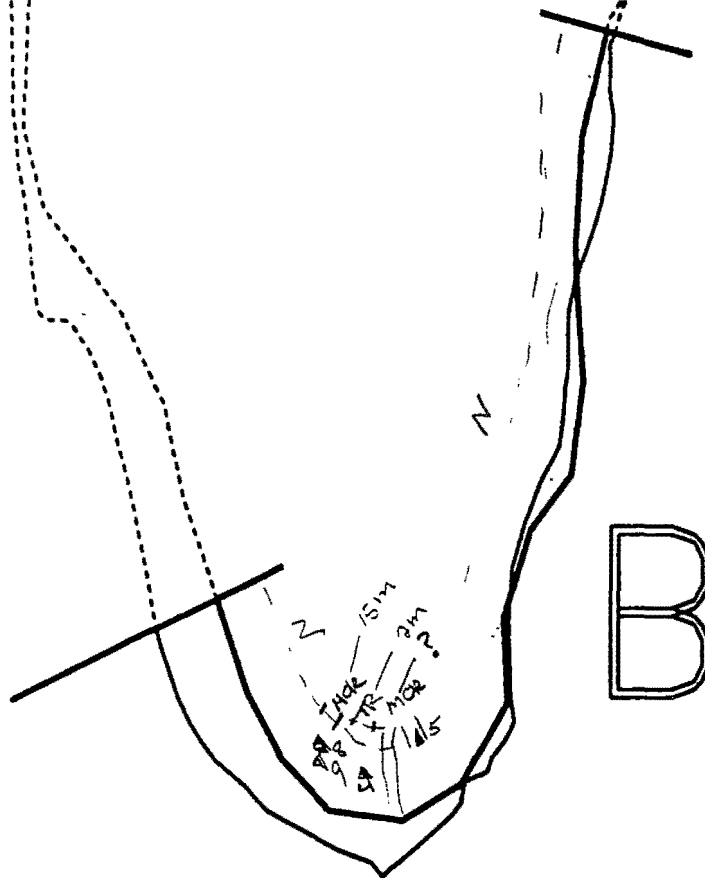
Roll No MAYSAP- 1002 Neg. No 0
Control No 818 (Office Use Only)

ADEC comments cont..

EL52B

4

E

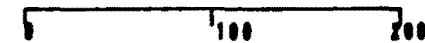


XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

EL052 B

ADEC Subsegment Length: 627m

METERS



AK State Plane Zone 4
 841052b



Subdivision Field Map

Map Key: KNIEL052B

Name: Aimee Weseman

Date: 4/30/91

Date Entered:



ADF&G OIL SPILL RESPONSE MONITORING

ASC# 226-10-16902Date: 5/28/91

Stream Name: _____

Observer: A. WesemanSegment-Sub Unit EL052BLocation: NW Bay, Eleanor IAnad. Stream Permit Issued? ☒ Y ☐ NDate: 5/28/91Work Order Issued: ☒ Y ☐ NDate: 5/20/91Demob Date: 5/28/91Oil Characteristics (circle appropriate ones)Surface: AP, MS, TB, ☒ SOR, CV, CT, ST, FL, DB, None
Subsurface: OP, ☒ HOR, ☒ MOR, ☒ LOR, ☒ OF, TR, NoneTreatment Techniques:

Manual Removal	Bioremediation & Type
☒ Manual Raking tilling to depth	Mechanical Tilling
Spot Wash of oil	Header Flood (Hot/Cold)
Other	

Crew Size: 4 - same as agency Reps. - no RECCO workersLbs. or Bags of Oil/Sediment Removed 0Other Agency Reps, and Names:Bob Jensen USCG, Scott Newman & Randy Boyer-Exxon.PhotosY ☒ NRoll #Frames_____

_____VideoTape #StartEndN

_____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).

HOR sediments near pits 8, 9 & 4 were degraded to LOR.

SOR sed. in location A were raked, weathering well.

Area of MOR at pit 5 was not located.

L SOR & OF sediments were not addressed in work order.

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

The work order was satisfactorily completed, however we were unable to locate HOR sed. near pit 5.

Area of pits 8 & 9 received a very thorough tilling with a natural water flush assisting the process.

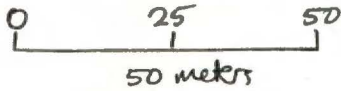
Pit 4 was tilled with rainbow & silver sheen released

Area A was raked, being so weathered that it did not warrant removal. No oil recovery was attempted.

Stream is in good shape now, but warrants a final assessment by ADF & G in Aug to determine remaining oil & apply any final treatment.

EL-052-B 04/27/91
 OG map D.I. Little
 2015-2045

continued 04/30/91
 1130-1250



- Bedrock
- Trees
- Study Marker Signs

- (15) 15 OF 0-10 cm depth
- (20) 15 OF " w/ 10 pgs
- (21) NO 30cm 30cm w/
- (22) 25cm NO oil

NORTHWEST BAY

(D) SOR 1x5
 5% oversand

rough new shell
 head beads

AP 0.2x0.2
 PU Tombole

EL-52-A
 end of subdivision

Bent tree

(18) Δ NO
 (17) Δ NO

(16) Δ NO

grass

(22) Δ NO

(15) Δ NO 25cm g

(14) Δ NO 25cm g

stream

Bedrock

EL-54-A
 start of subdivision

(12) Δ NO

HOR 10x15m

B/c (11) Δ NO OIL

(10) Δ NO

(2) NO

(1) NO

B/c

NO Δ

funny stream

DEM

A: SOR(H) 1x2 15%

NO OIL

mobile swash ridges

could not locate

(5) HOR 25cm

(B) SOR(L) 20x10 2%

(7) NO

(4) SOR

8x15m OF

B/c

NOAA



areas addressed by 91 work order

ANADROMOUS

STREAM

pit (1) 25cm-30cm TR (1cm from) Y
 -D 4cm

pit (2) HOR 0-10cm: (N) w/ 10 pgs
 pit (3) HOR 0-10 " " " " " " " "

pus (10) - (12) 15cm C P G NO OIL

(8) NO 25cm P G

(14) ?

(15) 30cm NO. ? w/ - 25cm

(5)

1991 MAYSAP EVALUATION



SEGMENT: EL 052 SUB: B REGION: PWS SURVEY DATE: 4/30/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN 5/1 - 7/10 (EXCEPT STREAM BED); RESTRICTED 7/10 - 9/15

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

ARCHAEOLOGICAL CONSTRAINTS:

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

Exxon does not

5/14/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: EXXON DOES NOT AGREE THAT THIS TREATMENT
IS REQUIRED BASED ON A NET ENVIRONMENTAL BENEFIT
ANALYSIS. HOWEVER AT THE REQUEST OF ADF+G + USCG
TREATMENT WAS RECOMMENDED BY TAG.

TAG: MANUAL PICKUP OF HSOR AT LOCATION A, MANUAL
RAKE/TILL AT PITS 4 + 5 + 8 + 9.

FOSC:

TAG APPROVAL DATE: MAY 14 1991

FOSC APPROVAL DATE: 5/20/91

ADEC *[Signature]*

FOSC *[Signature]*

EXXON *[Signature]*

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

USCG *[Signature]*

NOAA *[Signature]*

1991 MAYSAP EVALUATION

SEGMENT: EL 052 SUB: B REGION: PWS SURVEY DATE: 4/30/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN 5/1 - 7/10 (EXCEPT STREAM BED); RESTRICTED 7/10 - 9/15

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: Manual till pits 4,5,8,9, Remove
soil in Area A

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

USCG _____

NOAA _____

Ben found a lot more here than we did in our cursory survey. Looks like area W. of stream qualifies for work on HOR in pits 8 & 9 area - dig out, spread & sort with tide? might vent pit 5 area since tide prevented complete survey of HOR found here

1991 MAYSAP EVALUATION

SEGMENT: EL 052 **SUB:** B **REGION:** PWS **SURVEY DATE:** 4/30/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN 5/1 - 7/10 (EXCEPT STREAM BED); RESTRICTED 7/10 - 9/15

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: Manual till pits 4,5,8,9, Remove
soil in Area A

TAG: _____

FOSC: _____

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

ADEC _____ FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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 STATE WORK ORDER
EXXON VALDEZ OIL SPILL PROJECT
STATE OF ALASKA



PRINCE WILLIAM SOUND

SEGMENT: EL0052 SUBDIVISION: B SITE:
anadromous fish stream, recreation area, subsistence use
area, commercial tourism area

RECOMMENDED TREATMENT:

In area A:

- Manually remove SOR.

In areas of pits 4, 5, 8, and 9:

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

ENVIRONMENTAL SENSITIVITIES:

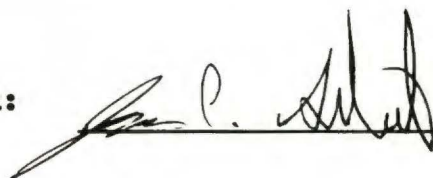
anadromous stream
intertidal communities

WORK WINDOW: 05/15/91 - 07/10/91

CLEANUP PLAN AND COST ESTIMATE DUE:

DATE SUBMITTED: 05/14/91

STATE ON SCENE COORDINATOR:

 P. Piper
For E. Piper

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: 4/27/91 16) HIGH TIDE TIME: 22) TEAM RECORDER: Tom Cress
- 5) START TIME: 1910 17) HIGH TIDE HTS: 23) OBSERVERS: AIMEE WISEMAN
- 6) STOP TIME: 2035 18) LOW TIDE TIMES: 1900-1930 24) AGENCY: ADFIG
- 7) SEGMENT #: EL528 19) LOW TIDE HTS: +1.5 25) PHOTOS TAKEN: Y (N)
- 8) K-UNIT: 20) TIDE HT AT SURVEY: +1.5 to +2.5 ROLL #: FRAMES:
- 9) LAT: Ebb (Slack) Flood Slack 26) VIDEO TAKEN: Y (N)
- 10) LONG: 21) USCG QUAD: TAPE #
- 11) ASC #: 226-10-16902 START: STOP:
- 12) STREAM NAME: 27) SAMPLES TAKEN? Y (N)
- 13) LOCATION: NW BAY E. LAGOON 15
- 14) WAVE EXPOSURE: High Moderate Low
- 15) SHORELINE TYPE: Headland Low-lying Rocks (Beach)
- (Cove) Lagoon Marsh

28) EXTENT OF OIL

	DEPTH LENGTH m	WIDTH m	M2	%	THICK cm	PEN cm	OIL TYPE
P.T. SITE 1	5 cm						HOR
P.T. SITE 2	20 cm						NO OIL
P.T. SITE 3	5 cm						HOR
SITE 4	5 m	1 m	5	<10	2 cm		LSOR
SITE 5							

- 29) OVERALL OIL IMPACT: 33) ANADROMOUS FISH PRESENT: Y (N)
- H = >6m band with $\geq 50\%$ oil coverage
- M = >6m band with $\leq 50\%$ oil coverage or $\geq 3m$ to $\leq 6m$ with $\geq 10\%$ oil coverage
- L = <3m band with $> 10\%$ oil coverage
- (VL) = $\leq 10\%$ oil coverage regardless of band width
- N = No oil observed
- 30) OIL IN STREAMBED: Y (N)
- 31) OIL ON BEACH ADJACENT TO MOUTH: Y N
- 32) SUBSTRATE TYPE (PERCENT):
- Bedrock _____ Boulder 10% Gravel 90% Sand _____ Cobble _____ Mud/Silt _____
- 34) WILDLIFE OBSERVATION
- | Species | Number |
|------------|--------|
| Bald Eagle | 1 |
| Gulls | 12 |

35) COMMENTS: RECOMMEND MANUAL TILLING OF FURIED HOR IN SEEP ALONG WITH MAPPING OIL WITH POM POMS. RETURN TO THIS SEGMENT 4/28/90 TO FINISH OG MAPPING. VERY MINUTE AMOUNTS OF SURFACE OIL W/ VISIBLE. RETURN 4/30/91 TUES. 1150 START

4/27/91

EL 52

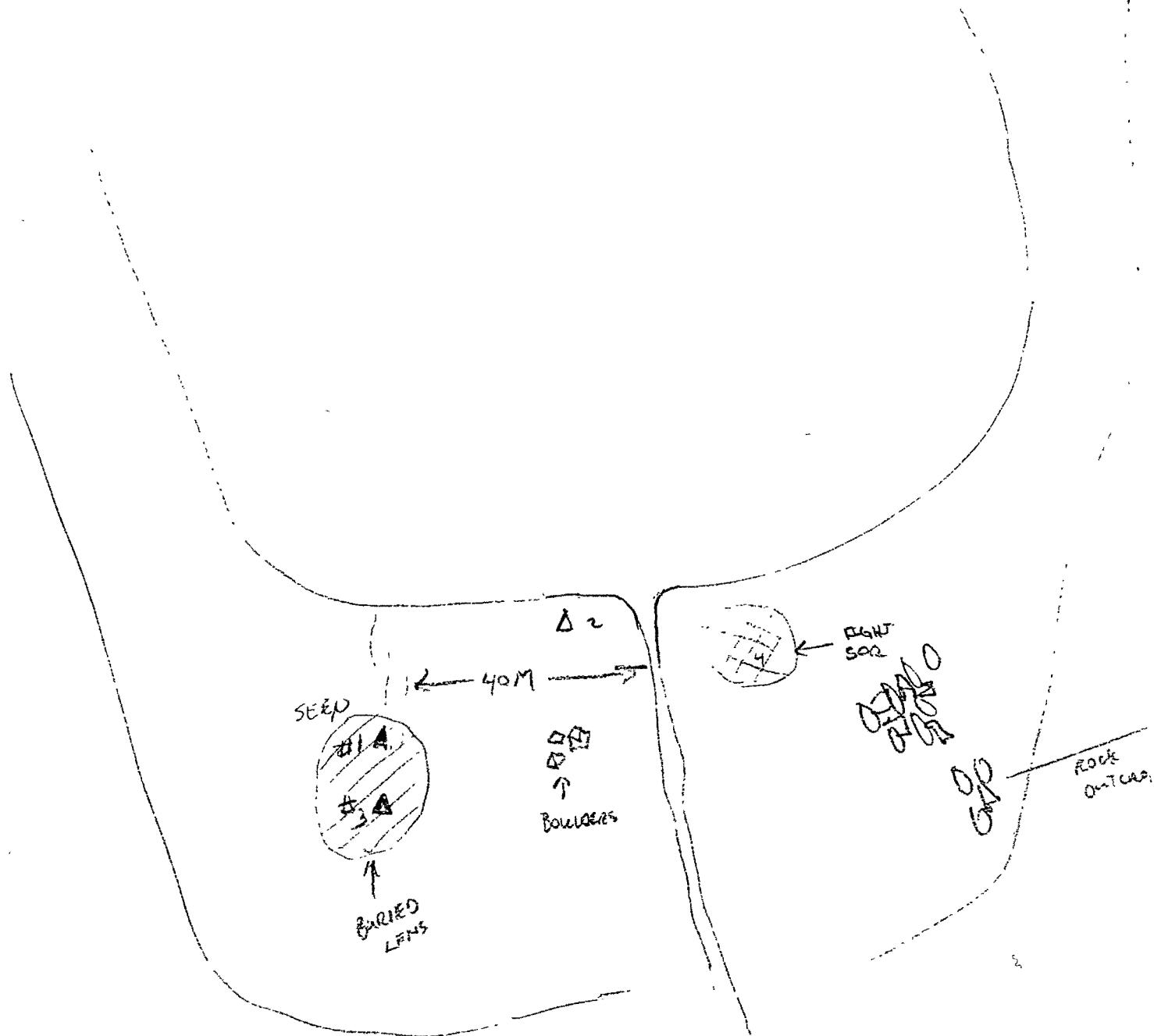
266-10-0402

PHS

#1 HOR 10CM DEEP

#2 NO AL

#3 LIGHT SPR



reviewed 7/1

DATE 4 / 30 / 91

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

Note pgs 17 and 18 are in Eh-052-A.

reviewed 7¹/₂ - 1.

MAVSAP BIOLOGICAL SUMMARY FORM

TEAM # 6

DATE 4/27/91 & 4/30/91

SEGMENT # EL-52

TIDAL HEIGHT (Range) +2.5 to +3 ft and

SUBDIVISION B

BIOLOGIST TR Schroeder

SEA STATE Calm to choppy

WIND SPEED/DIRECTION NE 10 and NE 25

PHOTOGRAPHS: ROLL #

FRAME #

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

(A & B) = Central portion of beach near anadromous stream appears very sterile and unproductive. Part of this appears to be due to shifting small gravels and stream. In large area paralleling the outside of the stream bed good regrowth of fucus and mussels.

Subsurface 8 & 9 = Fucus belt and mussel regrowth is evident in intertidal area. Release pits with HOB. Does not appear to be affecting high. Any removal efforts would greatly impact these communities.

Subsurface 4 = MDR located in generally non-productive area.

Subsurface 5 = MDR located in and adjacent to very productive intertidal area. Fucus belt, forams, spot, hermit crabs, littorine snails extremely abundant.

(D) = Located in a very dense mussel bed with fucus belt and red/brown algae present.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	
Seabirds			
Waterfowl	1	4	
Gulls/Kittiwakes	1	12	
Shorebirds			
Corvids			
Other Birds	1	1	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)	1 Harbor Seal		
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

REVIEWED: MC 5/2/91

EL-52-B

4/27/91

Bio. Map

T.R. Schroeder

2019-2045

Continued 4/30/91

1530-1290

North west
Bay

0 25 50
meters

AP
0.2-0.2
PC

Dense mussel beds
throughout rocks.
Fucus and brown
algae present.

SOR 1x5
5% coral

Fucus, barnacles and
spat and limpets
present along entire
shoreline MITZ to
LITZ. Pile corals
present and littorine
snails abundant

Good fucus regrowth in
LITZ. Barnacles thriving
on rocks. Limpets and
littorine snails very plentiful
on barnacled rocks.

Good fucus help
regrowth and mussel
regrowth.

Swash
ridges

Stream

Subsurface
909

Stream

A SOR(L)
1x2 15%

anad.
Stream

B SOR(L)
20x10
2%

REVIEWED: MC 5/4/91

EL-052-
OG map

04/27/91
D.I. Little
2015-2045

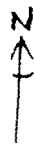
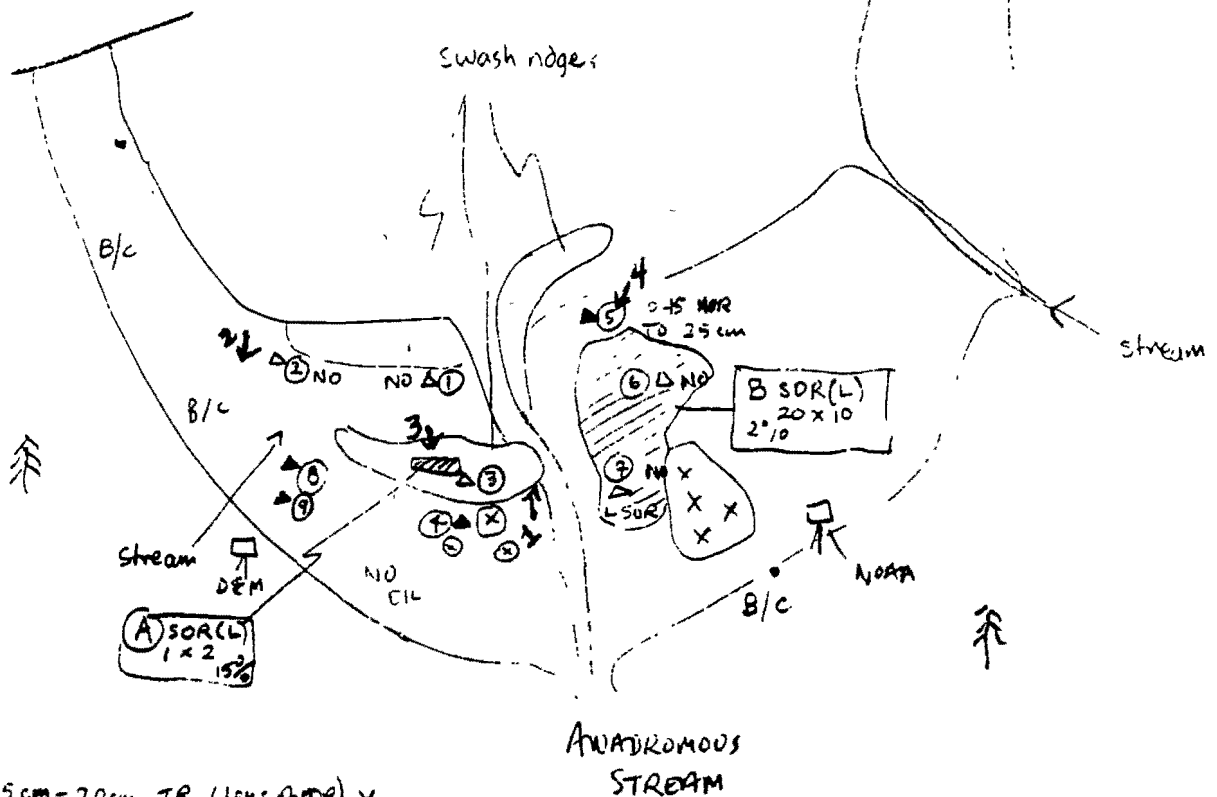


Photo locations

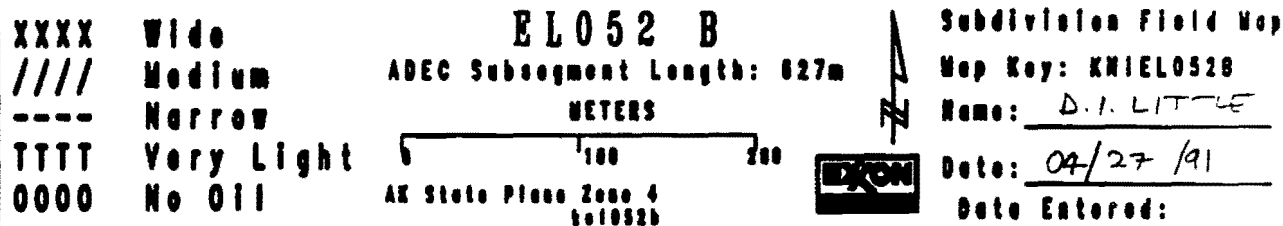
NORTHWEST
BAY



pit ④ 25 cm - 30 cm TR (lent of FOR) Y
TD 40 cm

pit ⑧ HOR 0-10 cm. (N) circle TD 30 } w/t at 15 cm
pit ⑨ HOR 0-10 " TD 20 }

REVIEWED: MC 5/2/91
reviewed

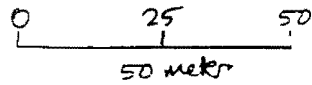


REVIEWED: MC 5/2/91

Revised
5.1.91

EL-052-B 04/27/91
OG Map D.I. LITE
2015-2045

continued 04/30/91
1130-1250



PROGRESS

Trees

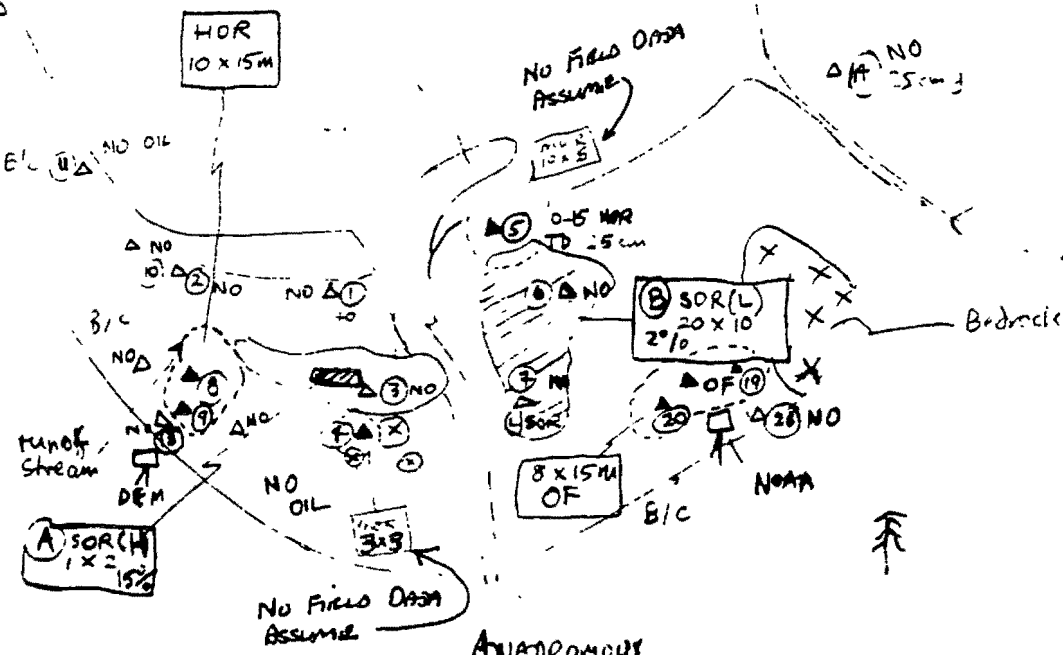
Study Marker Signs

NORTHWEST
SAY

- 15 OF C-10 ...
- 16 OF ...
- 21 NO ...
- 22 25cm NO OIL

EL-54A
start of
subdivision

mobile
swash ridges



- put 17 25cm-30cm TR (1cm of rock) Y
-D 46cm
- put 9 HOR 0-10cm N/A (10cm) -D 50 ... - 2x 15cm
- put 9 HOR 0-0 ... -D 20 ...
- OR mixing in red silt
- put 10-12 15cm C P 9 NO OIL
- 13 NO 25cm P 9
- 14 ?
- 15 30cm NO. ...
- 16
- 17

Revised: MC 5/2/91

TEAM NO. 6 SEGMENT EL-052 SUBDIVISION B DATE 04/30/91

ADEC & USFS

NAME Aimee WesemanSIGNATURE Aimee Weseman☐ NTR ☒ Treatment Recommended

Commercial Fishing, Commercial Tourism & Recreation, Anchorage
 This popular Anadromous fish stream area warrants a final manual
 tilling to expose heavy OR sediments in area A & pits #5, 8, 9

EXXON

NAME Scott A. NaumanSIGNATURE Scott A. Nauman☒ NTR

The vast majority of this segment shows no surface or subsurface oil. Where it does occur, surface oiling is very patch and limited in extent (SOR). Subsurface oil has been reduced since last year and is now extremely limited. This subdivision has areas of good fucus and barnacle growth. Wildlife is also evident at this location (eagle, seal). Having watch this site improve over the past two years, I don't feel that additional treatments would be of a net. environ. benefit

LANDMANAGER

NAME TOM CROWROF ADFGSIGNATURE Tom Crowr☐ NTR ☒ TREATMENT RECOMMENDED

MANUAL TILLING OF MOR AND SOR SEDIMENTS NEAR ANADROMOUS
 STREAM. A SMALL CREW CAN TAKE CARE OF THIS TASK EASILY IN 1/2 DAY
 USING PICKS & SHOVELS TO EXPOSE THE OIL GRAVEL SEDIMENTS

USCG/NOAA

NAME CWO R. SPURR / Rebecca HoffSIGNATURE R. Spurr / Rebecca Hoff☐ NTR

Remaining surface oil could potentially provide a source of oil to stream but the risk does not seem great. Lower intertidal areas are recovering well, mussel ^{algae} growth is extensive, so these areas should not be disturbed. If any tilling is recommended for area B, it should be restricted to mid & upper zones & care should be taken to not impact areas with biota. Only light manual activity should be done, if indeed any treatment is deemed necessary.

42-381	50 SHEETS	5 SQUARE
42-382	100 SHEETS	5 SQUARE
42-389	200 SHEETS	5 SQUARE



226-15-16902

Reviews

НАВ

OG

pit 1	5cm H ₂ O	- Δ -
pit 2	20cm No oil	- Agree -
pit 3	0-10 H ₂ O	- Agree -
Site 4	5*1m $< 10^\circ$ 2cm thick LSOR	- Δ -

pit 8? 0-15cm MOR
pit 1? 30cm No oil
pit 9? 5cm HOR

Area surrounding pit 5?
more 10 * 5 m

1991 STREAM FILE LOG HABITAT

STREAM CATALOG # : 226-10-16902
STREAM NAME : Eleanor Island

LOCATION : P.W.S.
SEGMENT : EL 052B

[illegible]