

CU-014 *X* ASC 13036
SOUTH OF ENTRANCE TO HIDDEN BAY

ACE 1369535



FILE COPY

FILE COPY

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 _____



ADW
Pre-ANADSCAT-90

ADF&G MULTI-ASSESSMENT DATA FORM

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

2 REGION: PWS KP, CI K, AP

METHOD: Aerial Ground Boat

3 DATE: 4-13-90

15 HIGH TIDE TIMES: 1

21 TEAM RECORDER: R. Gusten

4 START TIME: 1047

16 HIGH TIDE HTS: 1

22 OBSERVERS: B. Lemon

5 STOP TIME: 1052

17 LOW TIDE TIMES: 1

23 AGENCY: EXXON, ADP + C

6 SEGMENT #: CU 014

18 LOW TIDE HTS: 1

24 PHOTOS TAKEN: Y (N)

7 STATION #:

19 TIDE HT AT SURVEY:

Roll #: Frame:

8 K-UNIT:

Ebb Slack Flood Slack

25 VIDEO TAKEN: Y (N) TAPE#:

9 STAT AREA:

20 USCG QUAD:

Start: End:

10 LAT:

11 LONG:

26 SAMPLES TAKEN? Y (N) Number

12 SOURCE: Map Loran

13 LOCATION: Culross Is.

14 DESCRIPTION: East Coast

EXTENT OF OIL

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

30 OVERALL OIL IMPACT: N VL L M H

31 OIL TYPE: Pooled Mousse Tar Asphalt Sticky Stain

32 OILED DEBRIS? Y N

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

34 WAVE EXPOSURE: High Moderate Low

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

36 CATALOGED ANAD. FISH STREAM? (Y) N

37 CATALOG #: 334-20-13036 ADW

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: Upper inter-tidal C

43 ANADROMOUS FISH PRESENT? Y N

44 ANADROMOUS FISH OBSERVATION

Species Aerial Ground

COMMENTS:

band of mousse in upper inter-tidal zone

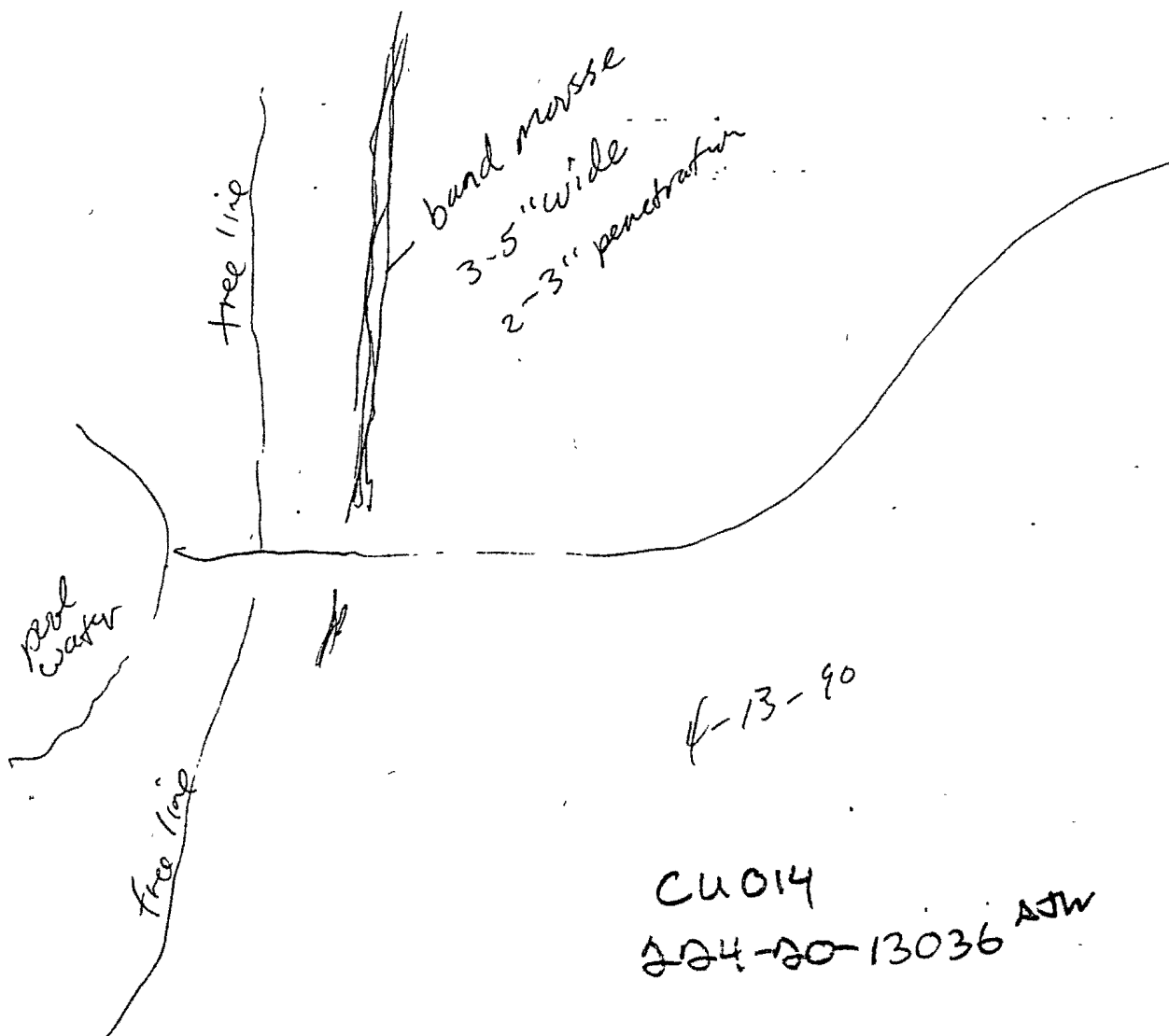
2-3" penetration

shovel removal

ACE 7237044+15

FRAME(S)

DESCRIPTION

48 OIL DISTRIBUTION DIAGRAM

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: 224-20-13036
 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		.4				5-7	MS
SITE 2							
SITE 3							
SITE 4							
SITE 5							

OVERALL OIL IMPACT: MED

OIL IN STREAM CHANNEL?

OIL ON BEACH WITHIN 50M OF STREAM MOUTH? Y

SUBSTRATE

Bedrock	Granule
Boulder	Sand
Cobble	Silt
Pebble	Veget.

SPECIES					
COUNT					

COMMENTS:



ADF&G MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS SS CS TS AVS SCHA MMS PTA2 REGION: PWS KP, CI K, APMETHOD: Aerial Ground Boat3 DATE: 4-25-9015 HIGH TIDE TIMES: 121 TEAM RECORDER: Aimee Weseman4 START TIME: 093016 HIGH TIDE HTS: 122 OBSERVERS: Rick Gustin5 STOP TIME: 095017 LOW TIDE TIMES: 123 AGENCY: ADF+G6 SEGMENT #: C401418 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#: 90-AJW-002-S

9 STAT AREA: _____

20 USCG QUAD: SC3Start: 585 End: 644

10 LAT: _____

11 LONG: _____

26 SAMPLES TAKEN? Y N Number12 SOURCE: Map Loran

Oil _____

13 LOCATION: Se Calross I coastline-south

Sediment _____

14 DESCRIPTION: of hidden bay

Biological _____

EXTENT OF OIL

Water _____

	SHORELINE				STREAM			
	L	W	M ²	%	L	W	M ²	%
27 SURFACE COVERAGE								

36 CATALOGED ANAD. FISH SKEAK? Y N37 CATALOG #: 224-20-13036

38 STREAM NAME: _____

28 SURFACE THICKNESS 2cm-in tar mats39 OIL IN STREAM BED? Y N29 PENETRATION 040 OIL ON STREAM BANKS? Y N30 OVERALL OIL IMPACT: N VL L M H41 OIL ON BEACH ADJACENT TO MOUTH? Y N
(within 50 meters)31 OIL TYPE: Pooled Mousse Tar Asphalt Sticky Stain42 OIL WITHIN 1 MILE OF STREAM? Y N32 OILED DEBRIS? Y N

Where: _____

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

43 ANADROMOUS FISH PRESENT? Y N

34 WAVE EXPOSURE: High Moderate Low44 ANADROMOUS FISH OBSERVATION
Species Aerial Ground35 SUBSTRATE TYPE: Bedrock 10 Boulder 10 Cobble 30Gravel 45 Sand 15 Mud/silt _____

Species	Aerial	Ground

COMMENTS: visible oiling on this beach occurs in the URTZ's on north & south sides of the stream & is restricted to tar mats and patties.

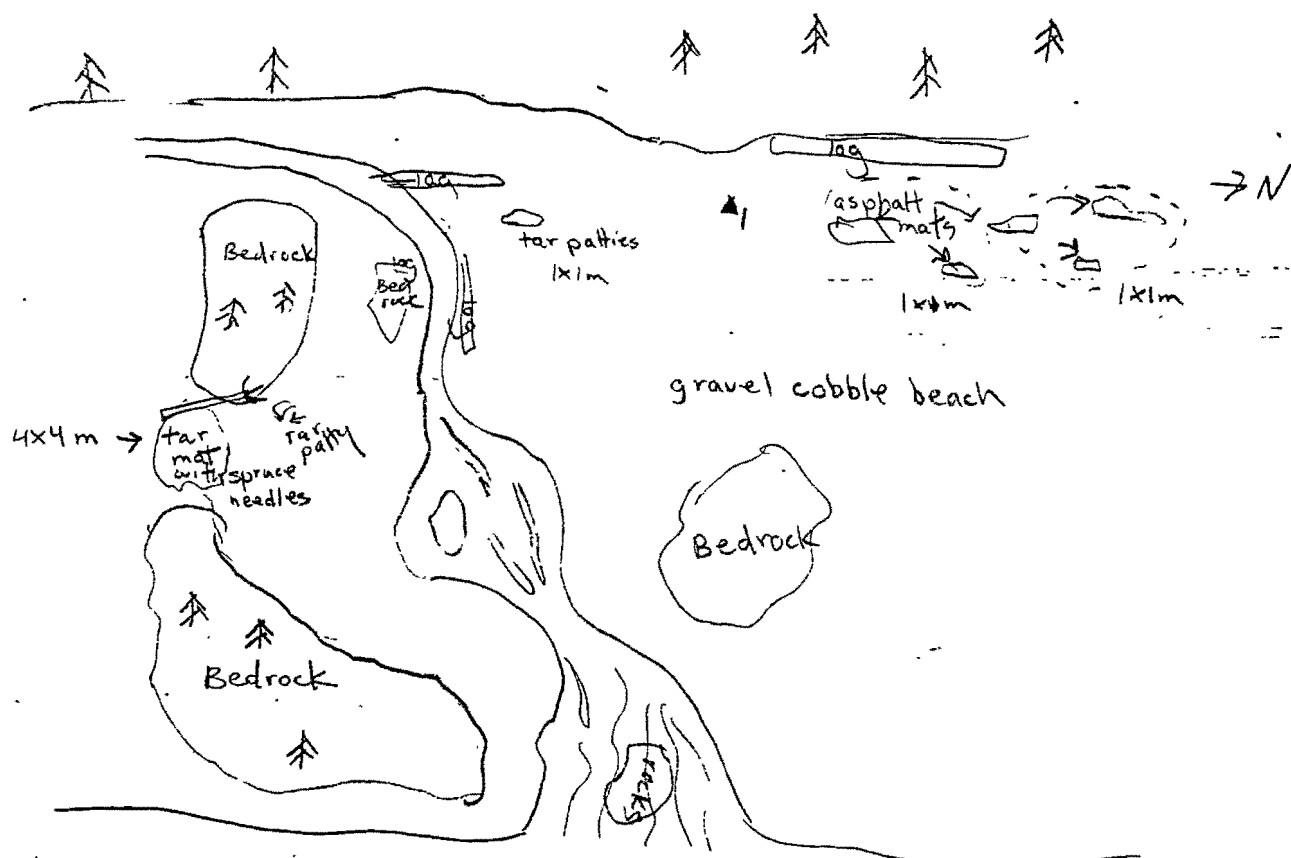
CU 014

224-20-13036

45 PHOTOLOG

DESCRIPTION

pit 1 - 22cm - no oil visible

46 OIL DISTRIBUTION DIAGRAM

Treatment recommendations -

Remove tar mat patches in UITZ on north side of stream

2 - 1x1m areas where encounter

Remove 4x4m tar mat in UITZ on south side of stream between bedrock outcrops.

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

ASC NUMBER: 224-20-13036
 SURVEY TYPE:
 METHOD:
 DATE: 4/25/90
 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	4	4					AP
SITE 2	1	1					AP
SITE 3	1	1					AP
SITE 4	1	1					PT
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:

Treatment recommendation:
 Remove tarpaulin patches in UITS on north
 side of stream 2 - 1x1 m areas & where encountered.
 Remove 4x4 m tarpaulin in UITS on south side
 of stream between bedrock outcrops.

ADF&G MULTI-ASSESSMENT DATA FORM

- 1) SURVEY TYPE: BS SS 2) REGION: PWS KP, CI K, AP
- 3) METHOD: Aerial Ground Boat
- 4) DATE: 5-14/91 16) HIGH TIDE TIME: _____ 22) TEAM RECORDER: Tom Ceowe
- 5) START TIME: 1700 17) HIGH TIDE HTS: _____ 23) OBSERVERS: _____
- 6) STOP TIME: 1746 18) LOW TIDE TIMES: 2000 24) AGENCY: ADF&G
- 7) SEGMENT #: CUL14A 19) LOW TIDE HTS: +2 25) PHOTOS TAKEN: Y N
- 8) K-UNIT: _____ 20) TIDE HT AT SURVEY: +7.5 to +5 ROLL #: _____ FRAMES: _____
- 9) LAT: _____ Ebb Slack Flood Slack 26) VIDEO TAKEN: Y N
- 10) LONG: _____ 21) USCG QUAD: _____ TAPE # _____
- 11) ASC #: 224-20-13036 START: _____ STOP: _____
- 12) STREAM NAME: _____ 27) SAMPLES TAKEN? Y N
- 13) LOCATION: Culross Is EAST SIDE SAMPLE I.D. _____
- 14) WAVE EXPOSURE: High Moderate Low
- 15) SHORELINE TYPE: Headland Low-lying Rocks Beach
- Cove Lagoon Marsh

28) EXTENT OF OIL

	LENGTH m	WIDTH m	M2	%	THICK cm	PEN cm	OIL TYPE
SITE 1	20	1		<1	5 cm		AP
SITE 2	2	2		<1	5 cm		AP
SITE 3	Depth?			thick?	2cm	2cm	TR/LOR
SITE 4					Depth?		
SITE 5					Two		

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

VI = ≤10% oil coverage regardless of band width

N = No oil observed

30) OIL IN STREAMBED: Y N

31) OIL ON BEACH ADJACENT TO MOUTH: Y N

32) SUBSTRATE TYPE (PERCENT):

Bedrock 10 Boulder 10 Gravel 80 Sand _____ Cobble _____ Mud/Silt _____

35) COMMENTS: Very little oiling left at this site. All visible AP/SUR was removed during survey. N/T recommended eagle nesting area in close proximity to stream. Also salmon fry were observed milling in shallow protected areas in this cove.

33) ANADROMOUS FISH PRESENT: Y N

34) WILDLIFE OBSERVATION

Species Number

Juvenile Salmon fry
milling at tide pool
and mouth of stream
visibility was poor and
a count was not possible

rest in
comments

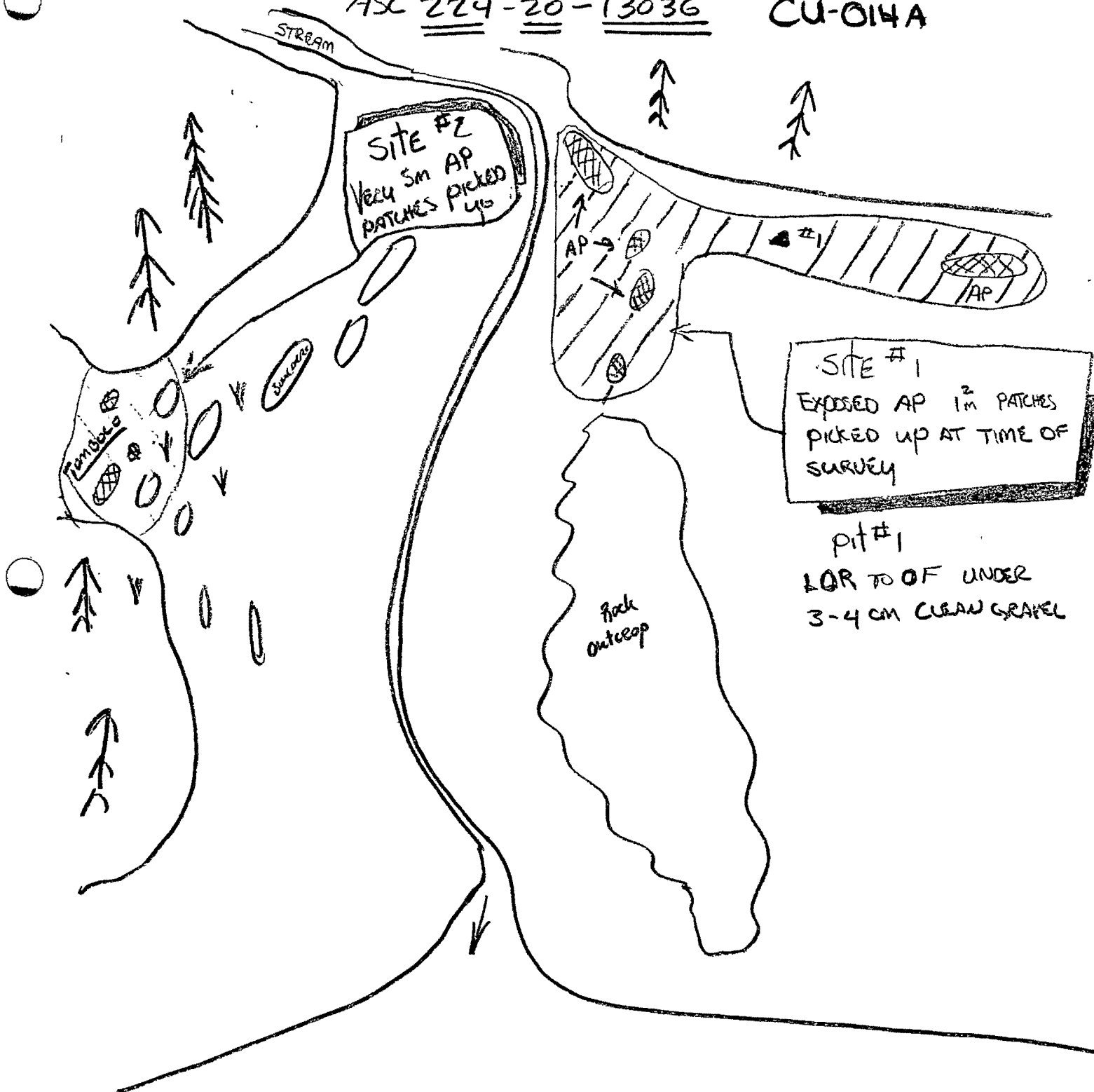
5/14/90

CULROSS Is

MAY SAP

ASC 224-20-13036

CU-014A

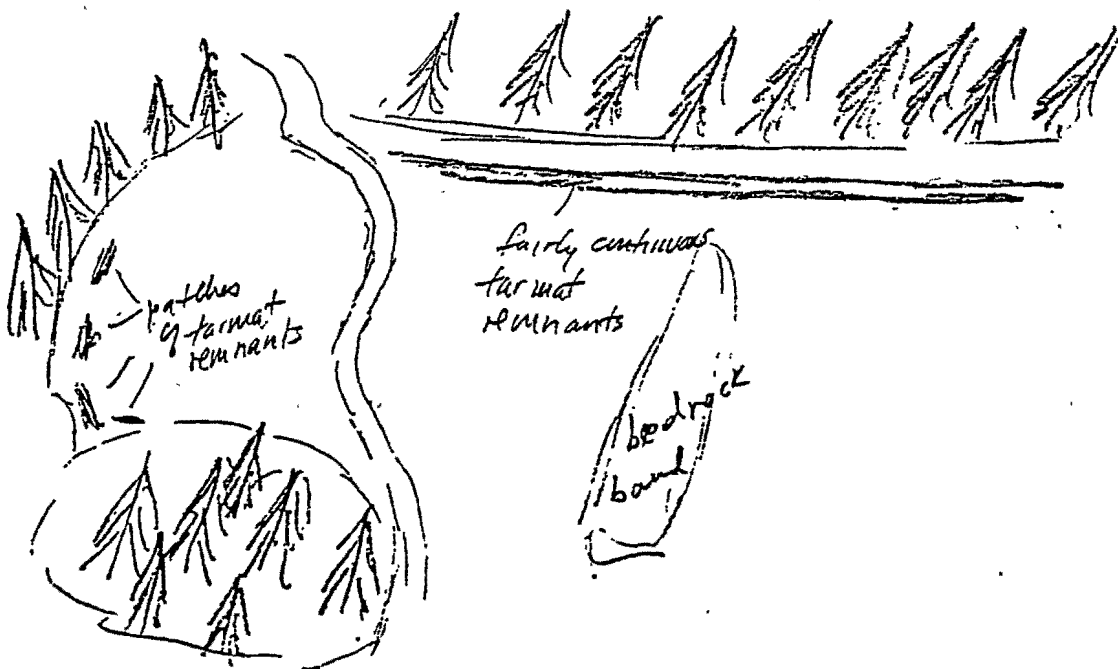


ANADROMOUS FISH STREAMS/OILING CONDITION
PWS

Segment # C2 014 ASC# 224-D-13076 Location Culross Is.
Date 8-14-90 Recorder/Observer R. Gustin / T. Crowe
Oil in streambed NO Oil on streambanks Yes
Oil within 50m of mouth Yes Anadromous Fish present No

Description of oil and comments Oiling condition represented
by scattered remnants of tar mat / some med. or submed.
This oil is primarily in the Upper T.T.Z. Recommend
assessment Spring 1990

Oil Distribution Diagram



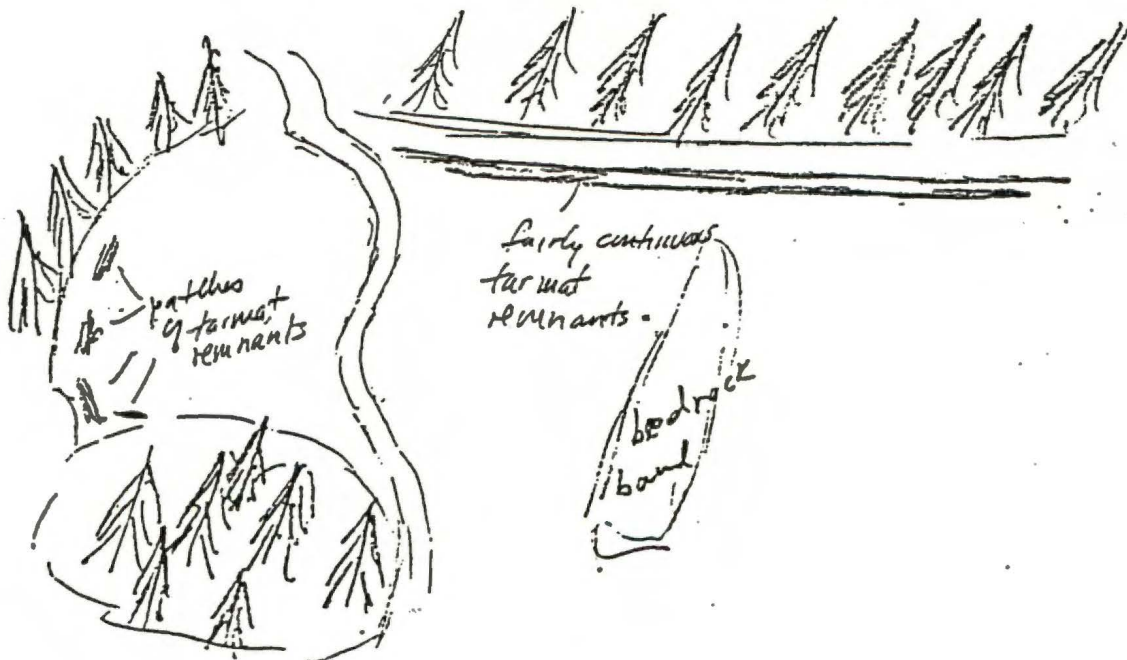


ANADROMOUS FISH STREAMS/OILING CONDITION
PWS

Segment # CL 014 ASC# 224-2-13076 Location Culross Is.
Date 8-14-90 Recorder/Observer R. Gustin / T. Crowe
Oil in streambed NO Oil on streambanks Yes
Oil within 50m of mouth Yes Anadromous Fish present No

Description of oil and comments Oiling condition represented
by scattered remnants of tar mat / some med. OR sediments.
This oil is primarily in the Upper T.T.E. Recommend
assessment Spring 1990

Oil Distribution Diagram



CATALOG NUMBER: 2242013036		SEGMENT#: CU014 A		LOCATION: CULROSS ISLAND, HIDDEN BAY, SOUTH OF ENTRANCE			
DATE	SURVEY	SITE	W x L (m) SITE TYPE	PERCENT OIL	THICKNESS & PENETR. (cm)	OIL TYPES, DEPTH INTERVAL (cm)	SITE SPECIFIC COMMENTS
04/25/90	ANADSCAT	1	1 x 1 SURFACE	51-90	2	AP	NORTH SIDE: BROKEN AP IN UITZ.
04/25/90	ANADSCAT	2	1 x 1 SURFACE	51-90	2	AP	NORTH SIDE: BROKEN AP IN UITZ.
04/25/90	ANADSCAT	3	1 x 1 SURFACE		2	PT	NORTH SIDE: IN UITZ.
04/25/90	ANADSCAT	4	4 x 4 SURFACE		2	AP	SOUTH SIDE: IN UITZ.

MAD vs. OG:
COMMENTS:
VISIBLE OILING ON THIS BEACH OCCURS IN THE UITZ ON NORTH AND SOUTH SIDES OF THE STREAM AND IS RESTRICTED TO TARMATS AND PATTIES. RECOMMENDATIONS: REMOVE TARMAT PATCHES IN UITZ ON NORTH SIDE OF STREAM 2 - 1X1 METER AREAS AND WHERE ENCOUNTERED. REMOVE 4X4 METER TARMAT IN UITZ ON SOUTH SIDE OF STREAM BETWEEN BEDROCK OUTCROPS.

CATALOG NUMBER: 2242013036 SEGMENT#: CU014 A LOCATION: CULROSS ISLAND, HIDDEN BAY, SOUTH OF ENTRANCE							
DATE	SURVEY	SITE	W x L (m) SITE TYPE	PERCENT OIL	THICKNESS & PENETR. (cm)	OIL TYPES, DEPTH INTERVAL(cm)	SITE SPECIFIC COMMENTS
04/25/90	OG'S ANADSCAT	1	1 x 1 SURFACE	11-50	3	AP PT	NORTH SIDE: PATCHY AP AND PT IN UITZ.
04/25/90	OG'S ANADSCAT	2	1 x 1 SURFACE	11-50	3	AP PT	NORTH SIDE: PATCHY AP AND PT IN UITZ.
04/25/90	OG'S ANADSCAT	3	1 x 1 SURFACE	11-50		PT	NORTH SIDE: PATCHY PT IN UITZ.
04/25/90	OG'S ANADSCAT	4	4 x 4 SURFACE	11-50	3	AP PT	SOUTH SIDE: PATCHY AP AND TB IN UITZ.
04/25/90	OG'S ANADSCAT	5	SUBSURF			NONE	1 PIT DUG IN UITZ: NO OIL ENCOUNTERED.

MAD vs. OG: MAD GIVES HIGHER PERCENTAGE OIL COVERAGE THAN OG.
COMMENTS:

CATALOG NUMBER: 2242013036 SEGMENT#: CU014 A LOCATION: CULROSS ISLAND, HIDDEN BAY, SOUTH OF ENTRANCE							
DATE	SURVEY	SITE	W x L (m) SITE TYPE	PERCENT OIL	THICKNESS & PENETR. (cm)	OIL TYPES, DEPTH INTERVAL(cm)	SITE SPECIFIC COMMENTS
08/14/90	PRE-ASAP	1	SURFACE			AP REMNANTS	NO DIMENSIONS PROVIDED. SCATTERED REMNANTS OF TARMAT, SOME MODERATE 'OR' SEDIMENTS ON EITHER SIDE OF STREAM, PRIMARILY IN UITZ.

MAD vs. OG:
COMMENTS:
RECOMMEND ASSESSMENT SPRING 1991. OIL OBSERVED ON STREAM BANKS.

CATALOG NUMBER: 2242013036		SEGMENT#: CU014 A		LOCATION: CULROSS ISLAND, HIDDEN BAY, SOUTH OF ENTRANCE			
DATE	SURVEY	SITE	W x L (m) SITE TYPE	PERCENT OIL	THICKNESS & PENETR. (cm)	OIL TYPES, DEPTH INTERVAL(cm)	SITE SPECIFIC COMMENTS
05/14/91	MAYSAP	1	1 x 20 BOTH	<1	5	LOR OF	NORTH SIDE: 5-1M2 PATCHES AP.
05/14/91	MAYSAP	1A	 PIT		2	OF LOR 3-4	1 PIT LOR OF UNDER 3-4CM CLEAN GRAVEL ADJACENT TO STREAM BANK IN AREA 1.
05/14/91	MAYSAP	2	2 x 2 SURFACE	<1	5	AP	SOUTH SIDE: ON TOMBOLO - VERY SMALL AP PATCHES.

MAD vs. OG:
 COMMENTS:
 VERY LITTLE OILING LEFT AT THIS SITE. ALL VISIBLE 'AP/SOR' WAS REMOVED DURING SURVEY. N/T RECOMMENDED. EAGLE NESTING AREA IN CLOSE PROXIMITY TO STREAM. SALMON FRY WERE OBSERVED MILLING IN SHALLOW PROTECTED AREAS IN THIS COVE. (SALMON FRY MILLING AT TIDE POOL AND MOUTH OF STREAM, VISIBILITY WAS POOR AND A COUNT WAS NOT POSSIBLE).

CATALOG NUMBER: 2242013036			SEGMENT#: CU014 A		LOCATION: CULROSS ISLAND, HIDDEN BAY, SOUTH OF ENTRANCE		SEQ:
DATE	SURVEY	SITE	W x L (m) SITE TYPE	PERCENT OIL	THICKNESS & PENETR. (cm)	OIL TYPES, DEPTH INTERVAL(cm)	SITE SPECIFIC COMMENTS
04/13/90	PRE-ANADS CAT	1	.4 SURFACE		5-7	MS	NORTH OF STREAM: BAND OF MOUSSE IN UITZ.
04/13/90	PRE-ANADS CAT	2	.4 SURFACE		5-7	MS	SOUTH OF STREAM: BAND OF MOUSSE IN UITZ.

MAD vs. OG:
COMMENTS:
BAND OF MOUSSE IN UPPER INTERTIDAL ZONE. 2-3" PENETRATION. SHOVEL REMOVE.

CATALOG NUMBER: 2242013036		SEGMENT#: CU014 A		LOCATION: CULROSS ISLAND, HIDDEN BAY, SOUTH OF ENTRANCE			SEQ:
DATE	SURVEY	SITE	W x L (m) SITE TYPE	PERCENT OIL	THICKNESS & PENETR. (cm)	OIL TYPES, DEPTH INTERVAL(cm)	SITE SPECIFIC COMMENTS
04/25/90	ANADSCAT	1	1 x 1 SURFACE	51-90	2	AP	NORTH SIDE: BROKEN AP <u>in UITZ</u>
04/25/90	ANADSCAT	2	1 x 1 SURFACE	51-90	2	AP	NORTH SIDE: BROKEN AP <u>in UITZ</u>
04/25/90	ANADSCAT	3	1 x 1 SURFACE		2	PT	NORTH SIDE <u>in UITZ</u>
04/25/90	ANADSCAT	4	4 x 4 SURFACE		2	AP	SOUTH SIDE <u>in UITZ</u>

MAD vs. OG:
COMMENTS:
VISIBLE OILING ON THIS BEACH OCCURS IN THE UITS ON NORTH AND SOUTH SIDES OF THE STREAM AND IS RESTRICTED TO TARMATS AND PATTIES. RECOMMENDATIONS: REMOVE TARMAT PATCHES IN UITS ON NORTH SIDE OF STREAM 2 - 1X1 METER AREAS AND WHERE ENCOUNTERED. REMOVE 4X4 METER TARMAT IN UITS ON SOUTH SIDE OF STREAM BETWEEN BEDROCK OUTCROPS.

CATALOG NUMBER: 2242013036 SEGMENT#: CU014 A LOCATION: CULROSS ISLAND, HIDDEN BAY, SOUTH OF ENTRANCE							SEQ:
DATE	SURVEY	SITE	W x L (m) SITE TYPE	PERCENT OIL	THICKNESS & PENETR. (cm)	OIL TYPES, DEPTH INTERVAL (cm)	SITE SPECIFIC COMMENTS
04/25/90	OG'S ANADSCAT	1	1 x 1 SURFACE	11-50	3	AP PT	NORTH SIDE OF STREAM - UITZ - PATCHY AP AND PT. <i>in UITZ</i>
04/25/90	OG'S ANADSCAT	2	1 x 1 SURFACE	11-50	3	AP PT	NORTH SIDE OF STREAM - UITZ - PATCHY AP AND PT. <i>in UITZ</i>
04/25/90	OG'S ANADSCAT	3	1 x 1 SURFACE	11-50		PT	NORTH SIDE OF STREAM - UITZ - PATCHY PT. <i>in UITZ</i>
04/25/90	OG'S ANADSCAT	4	4 x 4 SURFACE	11-50	3	AP PT	SOUTH SIDE OF STREAM - UITZ - PATCHY AP AND TB. <i>in UITZ</i>
04/25/90	OG'S ANADSCAT	5	<u>SUBSURFACE</u>			NONE	1 PIT DUG <i>in</i> UITZ : NO OIL ENCOUNTERED.

MAD vs. OG: NO CONFLICTS *MAD gives higher percentage oil coverage than OG*
COMMENTS:

CATALOG NUMBER: 2242013036 SEGMENT#: CU014 A LOCATION: CULROSS ISLAND, HIDDEN BAY, SOUTH OF ENTRANCE							SEQ:
DATE	SURVEY	SITE	W x L (m) SITE TYPE	PERCENT OIL	THICKNESS & PENETR. (cm)	OIL TYPES, DEPTH INTERVAL (cm)	SITE SPECIFIC COMMENTS
08/14/90	PRE-ASAP	1	SURFACE			AP REMNANTS	NO DIMENSIONS PROVIDED. SCATTERED REMNANTS OF TAR MAT, SOME MODERATE 'OR' SEDIMENTS ON EITHER SIDE OF STREAM, PRIMARILY IN UITZ.

MAD vs. OG:
COMMENTS:
~~OILING CONDITION REPRESENTED BY SCATTERED REMNANTS OF TARMAT, SOME MODERATE 'OR' SEDIMENTS. THIS OIL IS PRIMARILY IN THE UPPER ITZ. RECOMMEND ASSESSMENT SPRING 1991. OIL OBSERVED ON STREAM BANKS.~~

CATALOG NUMBER: 2242013036

SEGMENT#: CU014 A

LOCATION: CULROSS ISLAND, HIDDEN BAY, SOUTH OF ENTRANCE

SEQ:

DATE	SURVEY	SITE	W x L (m) SITE TYPE	PERCENT OIL	THICKNESS & PENETR. (cm)	OIL TYPES, DEPTH INTERVAL (cm)	SITE SPECIFIC COMMENTS
05/14/91	MAYSAP	1A	PIT	2	2	TR LOR OF 3-4	1 pit LOR OF UNDER 34 cm clean gravel adjacent to streambank in Area 1.
05/14/91	MAYSAP	1	1 x 20 SURFACE SURF/ SUB	<1	5	AP LOR / OF	North side of stream - UTZ - 5-1 m ² patches AP. 1 pit with LOR / OF under 34 cm clean gravel Adjacent to streambank
05/14/91	MAYSAP	2	2 x 2 SURFACE	<1	5	AP	South side of stream - on tombolo - Very small AP patches

MAD vs. OG:

COMMENTS:

VERY LITTLE OILING LEFT AT THIS SITE. ALL VISIBLE 'AP/SOR' WAS REMOVED DURING SURVEY. N/T RECOMMENDED. EAGLE NESTING AREA IN CLOSE PROXIMITY TO STREAM. ALSO SALMON FRY WERE OBSERVED MILLING IN SHALLOW PROTECTED AREAS IN THIS COVE. (SALMON FRY MILLING AT TIDE POOL AND MOUTH OF STREAM, VISIBILITY WAS POOR AND A COUNT WAS NOT POSSIBLE).

OG SUPPLEMENTAL INFO TO MAD

RECORDER: Weseman RED-DATE: 10/4/91

PAGE

CATALOG NUMBER: 224-20-13036

STREAM NAME:

LOCATION: E Culross I

SEGMENT NUMBER: CUB14

SHORELINE TYPE:

DATE: 4/25/90 TIME:

OG vs. MAD: no conflicts

[illegible]

CATALOG NUMBER: 2242013036

SEGMENT NUMBER: CU014 A

STREAM NAME:

SHORELINE TYPE:

LOCATION: CULROSS ISLAND, HIDDEN BAY, SOUTH OF ENTRANCE

DATE: 04/13/90 TIME: BEACH-1052

SITE	WIDTH (m)	LENGTH (m)	AREA (sqm)	PERCENT OIL	THICKNESS (cm)	PENETRATION (cm)	SURFACE SUBSURF	OIL TYPES	COMMENTS
1	.4					5-7	SURFACE	MS	- north of stream - band of mousse UTZ

COMMENTS:

BAND OF MOUSSE IN UPPER INTERTIDAL ZONE. 2-3" PENETRATION. SHOVEL REMOVE.

CATALOG NUMBER: 2242013036

SEGMENT NUMBER: CU014 A

STREAM NAME:

SHORELINE TYPE:

LOCATION: CULROSS ISLAND, HIDDEN BAY, SOUTH OF ENTRANCE

DATE: 04/25/90 TIME: BEACH-0950

SITE	WIDTH (m)	LENGTH (m)	AREA (sqm)	PERCENT OIL	THICKNESS (cm)	PENETRATION (cm)	SURFACE SUBSURF	OIL TYPES	COMMENTS
4	4	4			2cm		SURFACE	AP	- south side of stream
2	1	1		51-90	2cm		SURFACE	AP	- north " " " - Broken AP
1	1	1		51-90	2cm		SURFACE	AP	- north " " " - Broken AP
3	1	1			2cm		SURFACE	PT	- north " " " "

COMMENTS:

VISIBLE OILING ON THIS BEACH OCCURS IN THE UITZ ON NORTH AND SOUTH SIDES OF THE STREAM AND IS RESTRICTED TO TARMATS AND PATTIES.

RECOMMENDATIONS: REMOVE TARMAT PATCHES IN UITZ ON NORTH SIDE OF STREAM 2 - 1X1 METER AREAS AND WHERE ENCOUNTERED. REMOVE 4X4 METER TARMAT IN UITZ ON SOUTH SIDE OF STREAM BETWEEN BEDROCK OUTCROPS.

CATALOG NUMBER: 2242013036

SEGMENT NUMBER: CU014 A

STREAM NAME:

SHORELINE TYPE:

LOCATION: CULROSS ISLAND, HIDDEN BAY, SOUTH OF ENTRANCE

DATE: 05/14/91 TIME: BEACH-1746

SITE	WIDTH (m)	LENGTH (m)	AREA (sqm)	PERCENT OIL	THICKNESS (cm)	PENETRATION (cm)	SURFACE SUBSURF	OIL TYPES	COMMENTS
1						2	PIT	TR LOR	
1	1	20		<1	5		SURFACE	AP	
2	2	2		<1	5		SURFACE	AP	

COMMENTS:

VERY LITTLE OILING LEFT AT THIS SITE. ALL VISIBLE 'AP/SOR' WAS REMOVED DURING SURVEY. N/T RECOMMENDED. EAGLE NESTING AREA IN CLOSE PORXIMITY TO STREAM. ALSO SALMON FRY WERE OBSERVED MILLING IN SHALLOW PROTECTED AREAS IN THIS COVE. (SALMON FRY MILLING AT TIDE POOL AND MOUTH OF STREAM, VISIBILITY WAS POOR AND A COUNT WAS NOT POSSIBLE).

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: 4-13-90 15 HIGH TIDE TIMES: 1 21 TEAM RECORDER: R. Gustin
4 START TIME: 1047 16 HIGH TIDE HTS: 1 22 OBSERVERS: B. Lemon
5 STOP TIME: 1052 17 LOW TIDE TIMES: 1 23 AGENCY: EXXON
6 SEGMENT #: CU 014 18 LOW TIDE HTS: 1 24 PHOTOS TAKEN: Y (N)
7 STATION #: _____ 19 TIDE HT AT SURVEY: _____ Roll #: _____ Frame: _____
8 K-UNIT: _____ Ebb Slack Flood Slack 25 VIDEO TAKEN: Y (N) TAPE#: _____
9 STAT AREA: _____ 20 USCG QUAD: _____ Start: _____ End: _____
10 LAT: _____ 11 LONG: _____ 26 SAMPLES TAKEN? Y (N) Number
12 SOURCE: Map Loran
13 LOCATION: Cutross Is.
14 DESCRIPTION: East Coast

EXTENT OF OIL

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

30 OVERALL OIL IMPACT: N VL L M H
31 OIL TYPE: Pooled Mousse Tar Asphalt Sticky Stain
32 OILED DEBRIS? Y N
33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cove
Lagoon Marsh
34 WAVE EXPOSURE: High Moderate Low
35 SUBSTRATE TYPE: Bedrock _____ Boulder _____ Cobble /
Gravel / Sand _____ Mud/silt _____

36 CATALOGED ANAD. FISH SREAM? (Y) N
37 CATALOG #: 284-20-13036 ADW
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: Upper inter tidal

43 ANADROMOUS FISH PRESENT? Y N

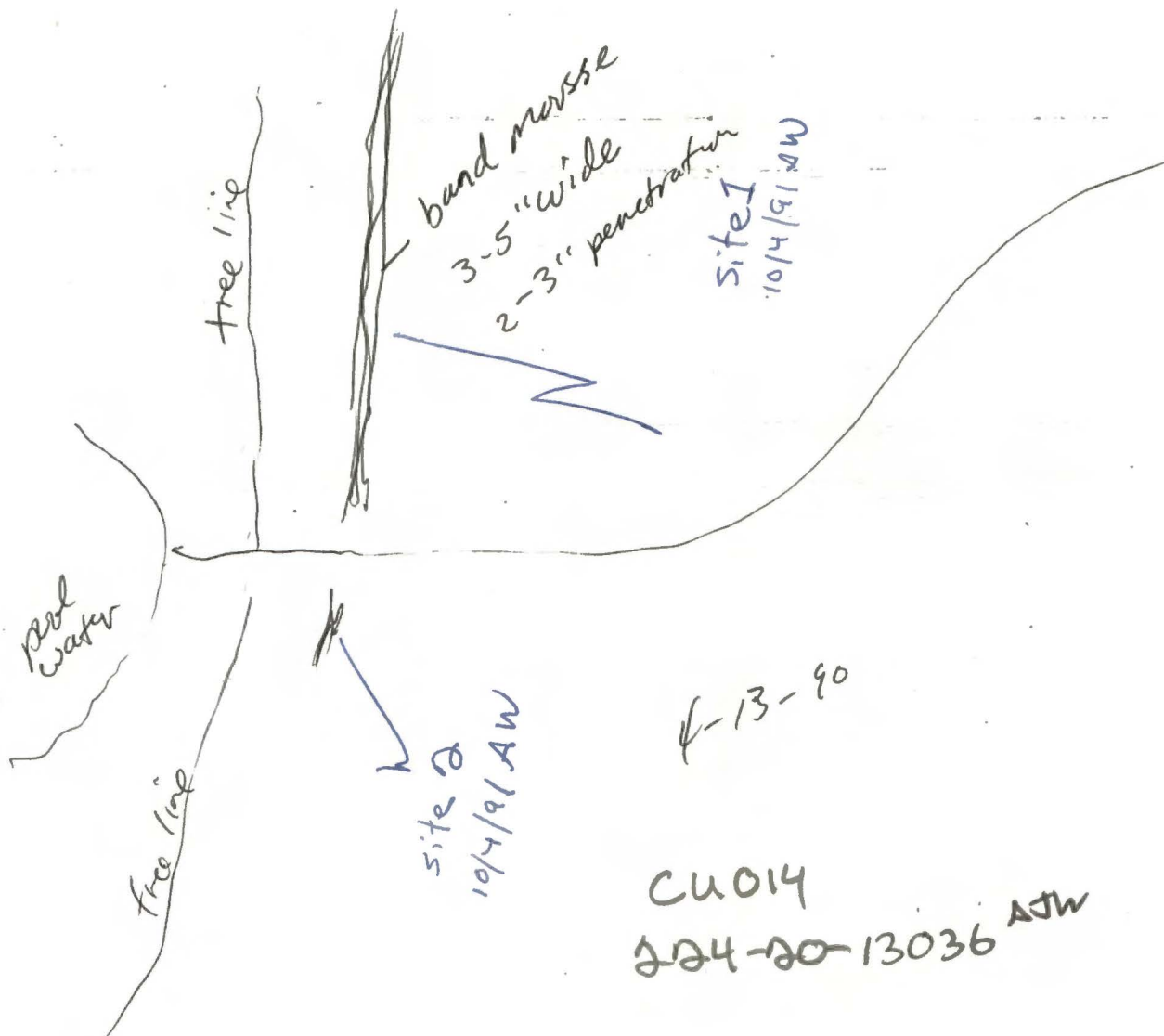
44 ANADROMOUS FISH OBSERVATION
Species Aerial Ground

COMMENTS: band of mousse in upper inter tidal zone

2-3" penetration

shovel removal

FRAME(S)	DESCRIPTION

46 OIL DISTRIBUTION DIAGRAM

Sample taken
Photo frame # and
shot direction.

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: 4-25-90 15 HIGH TIDE TIMES: / 21 TEAM RECORDER: Aimee Weseman4 START TIME: 0930 16 HIGH TIDE HTS: / 22 OBSERVERS: Rick Gustin5 STOP TIME: 0950 17 LOW TIDE TIMES: / 23 AGENCY: ADF&G6 SEGMENT #: CU014 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#: 90-AJW-003-SSS9 STAT AREA: _____ 20 USCG QUAD: SC3 Start: 585 End: 64410 LAT: _____ 11 LONG: _____ 26 SAMPLES TAKEN? Y N Number12 SOURCE: Map Loran13 LOCATION: se Calross I coastline-south14 DESCRIPTION: of hidden bay

EXTENT OF OIL

	SHORELINE				STREAM			
	L	W	M ²	%	L	W	M ²	%
27 SURFACE COVERAGE								
28 SURFACE THICKNESS	<u>2cm-tar mats</u>							
29 PENETRATION	<u>0</u>							
30 OVERALL OIL IMPACT:	N	VL	<u>L</u>	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 10 Boulder 10 Cobble 30
Gravel 45 Sand 15 Mud/silt _____36 CATALOGED ANAD. FISH STREAM? Y N37 CATALOG #: 224-20-13036

38 STREAM NAME: _____

39 OIL IN STREAM BED? Y N40 OIL ON STREAM BANKS? Y N41 OIL ON BEACH ADJACENT TO MOUTH? Y N
(within 50 meters)42 OIL WITHIN 1 MILE OF STREAM? Y N

Where: _____

43 ANADROMOUS FISH PRESENT? Y N

44 ANADROMOUS FISH OBSERVATION
Species Aerial Ground

COMMENTS: visible oiling on this beach occurs in the UITZ's on north & south sides of the stream & is restricted to tar mats and patties.

ACE 7237034 +15

CU 014
224-20-13036

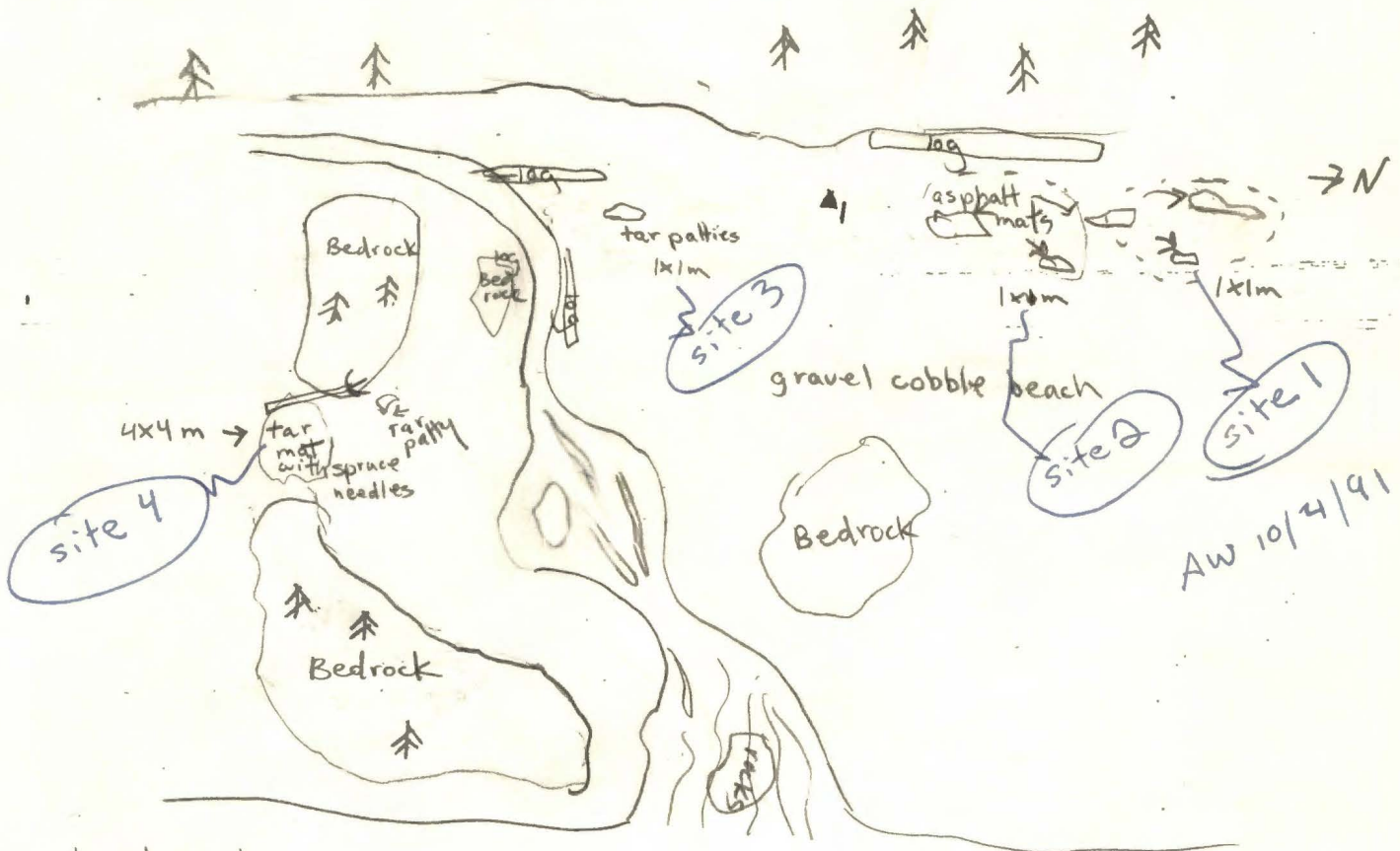
45 PHOTOLOG

FRAME(S)

DESCRIPTION

pit 1 - 22cm - no oil visible

46 OIL DISTRIBUTION DIAGRAM



Treatment recommendations -

Remove tar mat patches in UITZ on north side of stream

2 - 1x1m areas where encounter

Remove 4x4m tar mat in UITZ on south side of stream between bedrock outcrops.

SEGMENT ST/ CO0145

STREAM ZZA-2013036

DATE 4/25/90

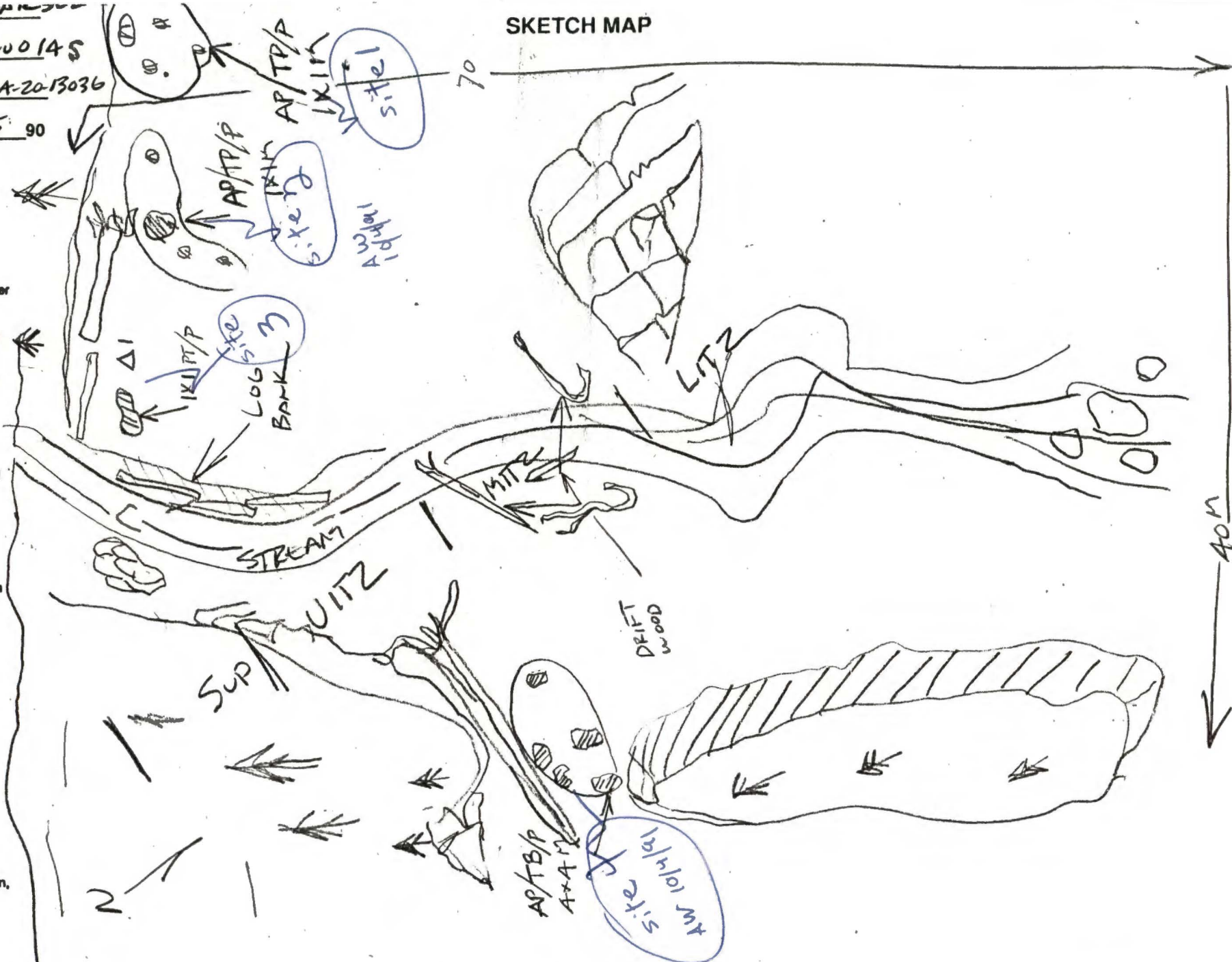
CHECKLIST

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

LEGEND

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

SKETCH MAP



Oil Character Length (m): AP 4 PO CV CT ST MS PT 2 TB 1 FL NO

REVISION: 93/24/90

Seg ID: CU-014

Subdiv: 224-20-13036

Survey Date: 4/25/90

Comments by: Ken Critchlow

Oiling on this stream site was limited essentially to three small areas of patchily distributed asphalt pavement, patties and tarballs in the UITZ on both sides of the stream.

Oiled sediments can be readily removed by a small crew using shovels and trowels. No additional treatment should be required as subsurface oil wasn't evident in the one pit excavated in the UITZ.

KR Critchlow

OPERATIONS FIELD NOTES

See Back for Instructions

SEGMENT ID ANAD CJ-014
 STREAM ID # 224-20-13036
 ANNOTATED MAP INCLUDED Y/N

DATE 4-25-90
 NAME DARREL YOGES
 TEAM # 14

SURFACE OIL	Quantities in Meters			Treatment Recommendation						
	Length	Width	Area	None	Y/N	% Treat	Y/N	% Treat	Y/N	% Treat
Wide Band	SEE BELOW									
Medium Band										
Narrow Band										
Very Light										
TOTAL MANDAYS										

SUBSURFACE OIL

Other (Describe)?	NO SUBSURFACE OIL FOUND									

TARMATS	Quantities in Meters			Treatment Rec			# of Bags	Mandays Required	
	Length	Width	Thick(cm)	None	Breakup	Remove		Breakup	Remove
Area #1 ✓							30	—	1
Area #2									
Area #3									
Area #4									
Sporadic Mats									

MANUAL PICKUP	Type of Debris			In Meters		# of Bags	Pickup Y/N	Manday Estimate
	Mousse Poms Falls	Oiled Veget	Cleanup Debris	Length	Width			
"Pocket" #1 ✓						5	Y	1
"Pocket" #2								
"Pocket" #3								
Random/Continuous								

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

Is there Other Debris on the Beach? Y/N How Many Bags? 2 COGS Is it mingled with the Oiled Debris Y/N

GENERAL
 Wave Exposure H/M/L Snow covering 0 % of the Supratidal Zone?
 Access Limitations: VERY NARROW ACCESS NEAR STREAM MOUTH
 Snare Boom/Pom Poms Recommended? NO ROCKS OFFSHORE (EXPOSED AT LOW TIDE)
 Would the production Craft have to be relocated to complete work on this subdivision? Y/N, # of Times

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / CU-014 SUBDIVISION: ^{ASC#} 224-20-13036 DATE 25 APR 90

USCG

NAME Kerwin L. Drcher SIGNATURE CWO K. L. Drcher

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

ADEC → ADF & G

NAME RICK GUSTIN SIGNATURE Richard J. Gustin

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Remove tar mat patches in Upper I.T.Z on north side
of stream. 2 → 1x1 meter areas were encountered.

Remove 4x4 meter tar mat in Upper ITZ on south
side of stream between bedrock outcrops.

LAND MANAGER → NONE

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY (ANAD)

REVISION NO. 04/13/90

OG CAL LARSON USCG DREHER, CWE ELEMENT ST/ CU 01A 5
 BIO KEN CRITCHLOW LAND REP STREAM 22A-20-13036 (OF)
 EXXON DARRYL YOE ADFG ELK GUSTIN-AIMEE WESEMAN TIME 09:30 to 9:45
 TEAM NO. 14 TIDE LEVEL DATE 4 / 25 / 90
 EST. SUBDIVISION LENGTH: 40 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 10 % B 36 % C 20 % P 30 % G 5 % S 5 % M % V %
 SLOPE: Long 100 % Hang % Vert % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W m M m N m VL 7 m NO 33 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	IC	IB	IP	IS	SL	BR	FW	GY	SL	DR	TL	LR	SU	UI	ME	LI
ASPHALT PAVEMENT			✓				✓							✓		
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES			✓				✓							✓		
TARBALLS			✓				✓							✓		
FILM																
NO OIL													✓	✓	✓	

PAVEMENT H F (S) 7 sq. m by .3 cmPATTIES / TARBALLS BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

Did you COLLECT DEBRIS
☐ YES ☒ NO

TYPE #BAGS

Photographs:

Roll No. 8Frames 1-10

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SL	BR	FW	GY	SL	DR	TL	LR	SU	UI	ME	LI			
1	22					✓	.											✓					N	GR, SD, PB / GR, SD, PB
							.																	
							.																	
							.																	
							.																	
							.																	
							.																	

COMMENTS LONG BEACH FETCH. LITTLE OILING. NO OIL IN STREAMREVIEWED DATE

ACE 7237040

ANAD
SSAT DATA ENTRY FORM

PAGE 1 OF 2

GENERAL DATA

SEG ID: CU-014 SUBDIV: 224-20 TEAM: 14 SURVEY DATE: 4/25/90
PAVEMENT: CHAR S AREA 7 THICKNESS 3 TARBALLS X
OILED: LGS - VEG - TRH - DBR - WAVE EXP: LW - MD - HG X
FAX RCVD: DT: AGENCY DISAGREE:
EST SUBDIV LGTH: 40 OIL CATEGORY: W - M - N - VL 7 NO 33 U -

SURFACE DATA

SURFACE SEDIMENT: BRK 10 BLD 30 COB 20 PEB 30 GRN 5 SAN 5 MUD - VEG -

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

CHAR #: 2 OIL CHAR: PT OIL DIST: CONT - BRKN - PTCH X SPLH -
OIL CLR: DBL FILM CLR: RW TIDAL ZONE: SU - UI X MI - LI -

CHAR #: 3 OIL CHAR: TB OIL DIST: CONT - BRKN - PTCH X SPLH -
OIL CLR: DBL FILM CLR: RW TIDAL ZONE: SU - UI X 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

ANAD
SSAT DATA ENTRY FORM

SUBSURFACE DATA

PAGE 2 OF 2

SEGMENT ID: CU-014 SUBDIV: 224-20
13036

PIT # 1 PIT DEPTH 22 OIL CHARACTER NO OIL INTVAL: FROM — TO —
QUANT: — OIL CLR: — FLM CLR: — ZONE: SU — UI X MI — LI —
SUBSURF SEDIMENT: BRK — BLD — COB — PEB X GRN X SAN X MUD — VEG —

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

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

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

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

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

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

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

PROBLEMS: —
—
—

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 224-20-13036

SEGMENT CU-14 SUBDIVISION A

WORK WINDOW

Tarmat Removal

OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous streams (224-20-13036 and 224-20-13034) are present in Subdivision A. No constraint to tarmat removal.
1I	Gill Net Area	No constraint to tarmat removal.
1J	Purse Seine Area	No constraint to tarmat removal.
1K	Purse Seine Hook-off	No constraint to tarmat removal.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Restrict boat and air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to unloiled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM CU-14A
FOR ADDITIONAL CONSTRAINT INFORMATION

TAG APPROVAL DATE _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC _____

Date 6-8-90

Prepared by _____

Date _____

ACE 7236950 +15

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ CU-14 STREAM NO: 224-20-13036 DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Subject stream and additional stream 224-20-13034

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

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

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

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

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unholed biota and substrate. Subject stream exists within Subdivision A (1 of 1).

ARCHAEOLOGICAL CONSTRAINTS:

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

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

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

 Manual Pickup

 Bioremediation

X Tarmat Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommended treatment includes removal of tarmats in areas
indicated on sketch map. Work should be conducted between 6/1 and 6/7
with approval of USFWS regarding eagle nest.

TAG COMMENTS:

TAG APPROVAL DATE: 5/10/90

ADEC Art Wagon [Signature]

EXXON [Signature] [Signature]

NOAA B. J. Wescoff [Signature]

FOSC: [Signature]

DATE: 5-18-90

(ACE 7236951)

1/4/11 SEGMENT ST/COO 145

STREAM 22A-20-13036

DATE 4/25/90

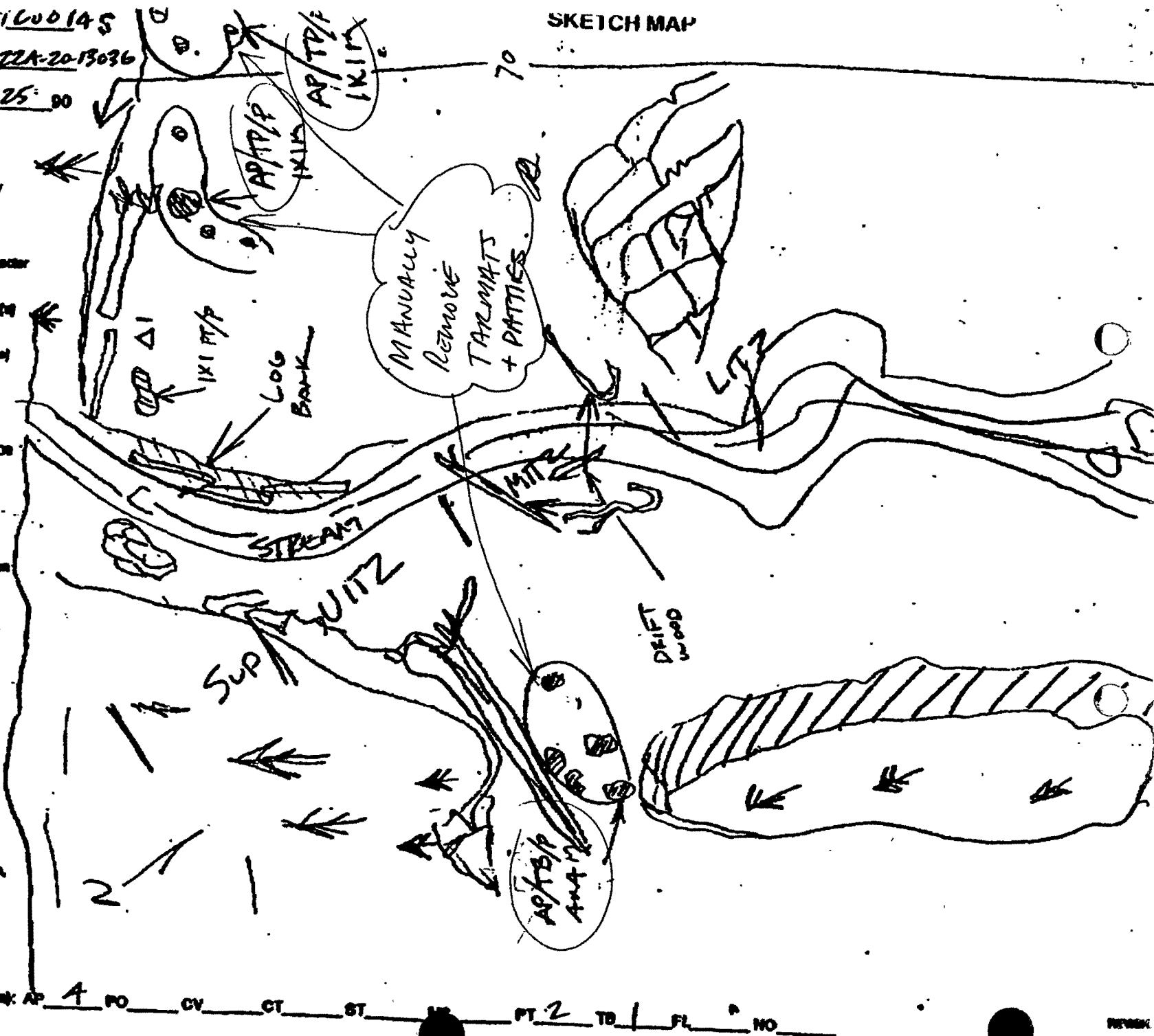
SKETCH MAP

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. PHYL. & V.
- ☐ SSI
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ P/L Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 Δ
- PT - No Subsurface Oil
- 2 Δ
- PT - Subsurface Oil
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Spotted Distribution
- eee
- Old Vegetation
- 1 →
- Photo location, direction, and number



ACE 7236952-15

11/11/11 11:11:11 11/11/11 11:11:11

STREAM TREATMENT REPORT
Alaska Department of Fish and Game
Tom Crowe

June 21, 1990

ASC # 255-10-13036

Segment CU014

Observations

This stream mouth consists of a small pocket cove that is moderately protected by rock off shore. Oiling consists of a tar mats in the UITZ on both sides of the channel. On the right bank tar splatters occur in rubble/cobble. On the left bank a larger tar mat occurs sporadically and end at a cliff outcrop.

June 21, 1990

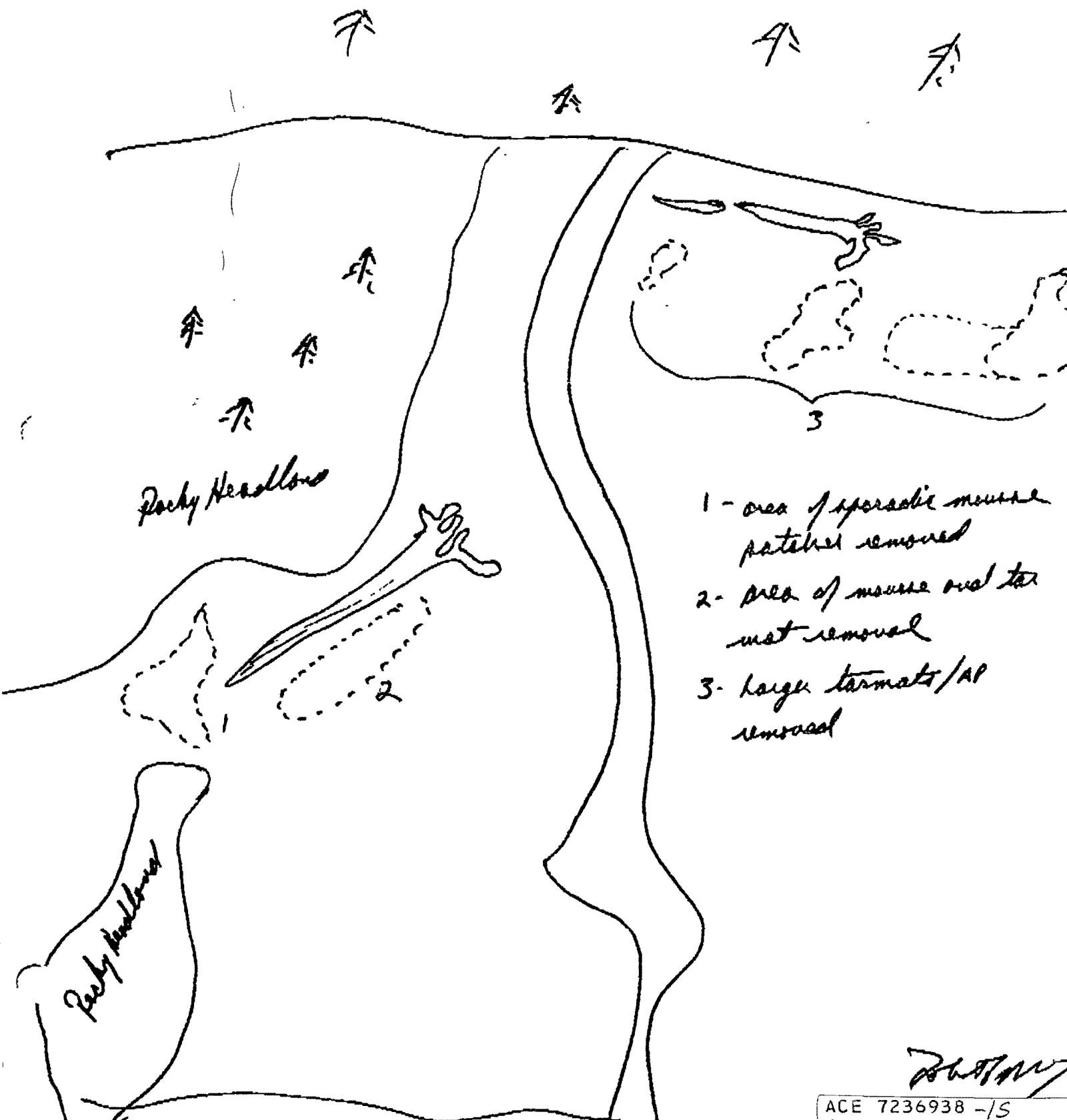
1626 Rick Gustin and I arrived at the BEULAH CANDIES and met with Bob McCready (DEC) and Randy Boyer (EXXON). We then went to the stream site where the crew was just finishing the work. As we were looking over the site the crews left for the next stream site. After the crew left Randy Boyer, Bob McCready, Rick Gustin and I spread cusomblen over the worked areas and raked it into the OR oiled gravel and raked it in.

The work at this site was done according to the work order and to the satisfaction of the ADF&G monitors.

One supersack of oiled sediments were removed at this site.

Bob McCready
6/24/90

Demo Map
CU-14A-226-20-13036



- 1 - area of sporadic mouse patches removed
- 2 - area of mouse and tar mat removal
- 3 - large tar mats/AP removed

File Ace
1199710
4.2.5.11

STREAM TREATMENT REPORT
Alaska Department of Fish and Game
Tom Crowe

June 21, 1990

ASC # 255-10-13036

Segment CU014

Observations

This stream mouth consists of a small pocket cove that is moderately protected by rock off shore. Oiling consists of a tar mats in the UITZ on both sides of the channel. On the right bank tar splatters occur in rubble/cobble. On the left bank a larger tar mat occurs sporadically and end at a cliff outcrop.

June 21, 1990

1626 Rick Gustin and I arrived at the BEULAH CANDIES and met with Bob McCreedy (DEC) and Randy Boyer (EXXON). We then went to the stream site where the crew was just finishing the work. As we were looking over the site the crews left for the next stream site. After the crew left Randy Boyer, Bob McCreedy, Rick Gustin and I spread cusomblen over the worked areas and raked it into the OR oiled gravel and raked it in.

The work at this site was done according to the work order and to the satisfaction of the ADF&G monitors.

One supersack of oiled sediments were removed at this site.

CU14A

ASL 224-20-1303L

SEGMENT AS / CU-14 SUBDIVISION: A SITE: 1 DATE 8-22-90

USCG NOAA REPRESENTS USCG & USFS

NAME DONALD W. CLINE SIGNATURE [Signature]☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Manually remove AP (sporadic). Apply bio to stain, SOR
and CV. Reassess in '91.

ADEC

NAME Bob McCreary SIGNATURE [Signature]☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

P/AP remains with associated surfscum oil. The
area appears to have been remediated but not manually
worked. Recommend manual removal of remaining AP and
surfscum oil. Reassess in '91.

LAND MANAGER

NAME _____ SIGNATURE _____

☐ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

EXXON

NAME Al Snook SIGNATURE [Signature]☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

CONTINUE BIO TREATMENTS THRU THIS SUMMER. RAKE OILED
AREAS PRIOR TO BIO. REASSESS IN 1991. BEACHES FACE EAST,
NORTHEAST & NORTH & ALL ARE MEDIUM TO HIGH ENERGY.

SEGMENT AS / CU-14 SUBDIVISION: A SITE: 2 DATE 8-22-90

USCG NOAA REPRESENTS USCG & USFS

NAME DONALD W. CLINE SIGNATURE [Signature]☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:

Rake SOR and apply bio. Remove sporadic tar patties, & apply bio to 8x2m stain area. Reassess in '91.

ADEC
NAME Bob McCreedy SIGNATURE [Signature]☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:

Very small amounts of SOR remain. Oiling remaining does not warrant further '90 treatment. Reassess in '91.

LAND MANAGER

NAME _____ SIGNATURE _____

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

EXXON

NAME Al Snook SIGNATURE [Signature]☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:

VERY FEW SMALL TAR PATTIES OBSERVED IN UPPER ITC ~~AREA~~
NORTH ~~END~~ OF ^{ANAD STREAM} ~~A SUBDIVISION~~ - REMOVE THESE WHEN BIOING
NORTH END OF SUBDIVISION. CONTINUE BIO TREATMENTS ON
NORTH END OF SUBDIVISION THRU SUMMER. REASSESS IN 1991.

SEGMENT AS / C4-14 SUBDIVISION: A SITE: 3 DATE 8-22-90

USCG NOAA REPRESENTS USCG & USFS

NAME DONALD W CLINE SIGNATURE [Signature]☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Uncertain if correct segment was located Area surveyed contained coat and mousse below very large boulders. Recoverability is 0. Reassess in '91, particularly to confirm location

ADEC

NAME Bob McCreedy SIGNATURE [Signature]☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Very difficult to locate segment using segment maps. Area located with small amounts of CT and MS under huge boulders. No recoverable oil. Reassess in '91 to determine, if possible, exact location of work area

LAND MANAGER

NAME _____ SIGNATURE _____

☐ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

EXXON

NAME Al Snook SIGNATURE [Signature]☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

SPORADIC
~~Small~~ AMOUNTS OF COAT & MOUSSE FOUND ~~ON~~ ~~SMALLER~~ ~~BOULDER/CUBICLES~~
 THAT WERE LOCATED 8 FOOT UNDER 10 FOOT DIAMETER BOULDERS.
 TWO SPOTS OBSERVED; ONE AREA WAS 1 FT X 1 FT & THE OTHER
 AREA WAS 1 M X 1 M. SHORELINE FACES SOUTHEAST & IS VERY HIGH
 ENERGY. EXTREMELY LOW PRIORITY FOR WORK THIS YEAR.
 REASSESS IN 1991.

REVISION NO. 7/26/90

ACE 7237009

SURFACE OIL					SITE 1				SITE 2				SITE 3				
EN	DISTRIBUTION				OILED ZONES				DISTRIBUTION				OILED ZONES				
	C	B	P	S	SU	UI	MI	LI	C	B	P	S	SU	UI	MI	LI	
TOTAL				X		X											
SH		X		X		X					I			X			
POOLED																	
COVER		X				X											
COAT																	
STAIN				X		X					X			X			
MOUSSE																	
PARTICLES/TB											I			X			
FILM																	
NO OIL					X		X	X					X		X	X	
EST SITE LENGTH					120									40			

[illegible]

COMMENTS SITE 1 CONSISTED OF A CURVILINEAR BAND/AREA OF SP/SL/ST - S. IT THE HEAD OF A POCKET BEACH. TWO OTHER AREAS CONTAINED SORB (5x3m AND 4x10m) WITHIN BOULDER.

SITE 2 CONSISTED OF AN INTERSTITIAL BAND OF ST/S + SPORADIC TAR PARTICLES IN AN 8x2m AREA. A SECOND AREA CONSISTED OF A 5x1m AREA OF SOL/S-I

SITE 3 WAS DIFFICULT TO LOCATE WITH THE MAP BASE. THE INFERR'D AREA CONSISTED OF BEDROCK + MASSIVE + 2M BOULDER S. OIL AMOUNTED TO 12 LITRI-UBI Z MS/CT. L S. 1111' 111' NO SKETCH *P

SKETCH MAP

SECT/ST/14A
SUBDIVISION A SITE 1
DATE 8/2/90

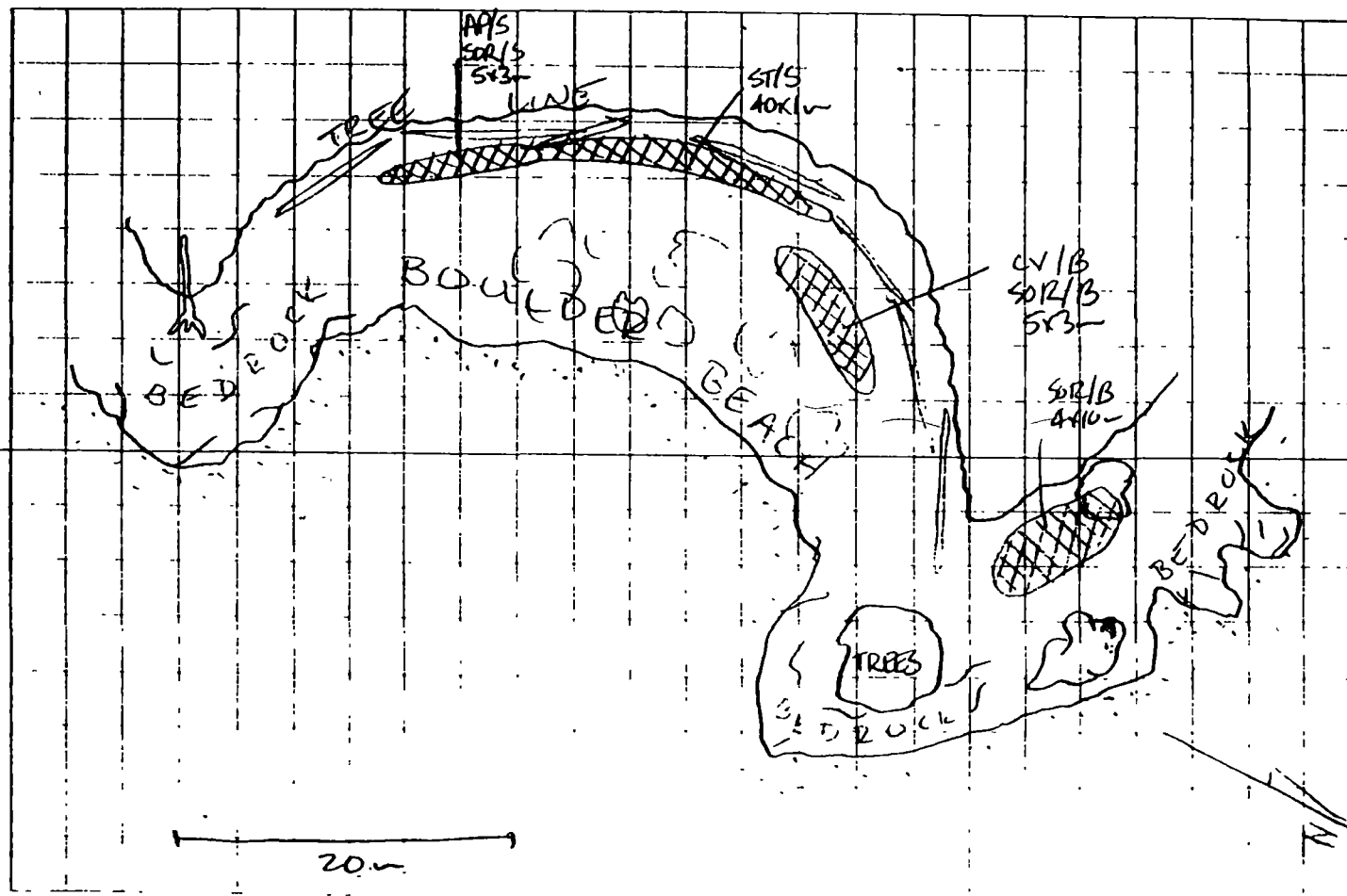
CHECKLIST

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

LEGEND

- △
Ph. N. Subsurface Oil
- ▲
Ph. Subsurface Oil
- C1/C
Continuous Distribution
- C1/B
Broken Distribution
- Patched Distribution
- Splashed Distribution
- Other Vegetation

Photo location, direction, and number



Oil (dist. & length (m) AP PO CV CT ST MS PT TB FI NI

CL. E '90
REVISION 20/2/90

ACE 7237011

SKETCH MAP

STATION: ST/ 0114A

SUBDIVISION: SITE 2

DATE: 8/22/90

CHECKLIST

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

LEGEND

△
Photo: Subsurface Oil

▲
Photo: Subsurface Oil

□
Continuous Distribution

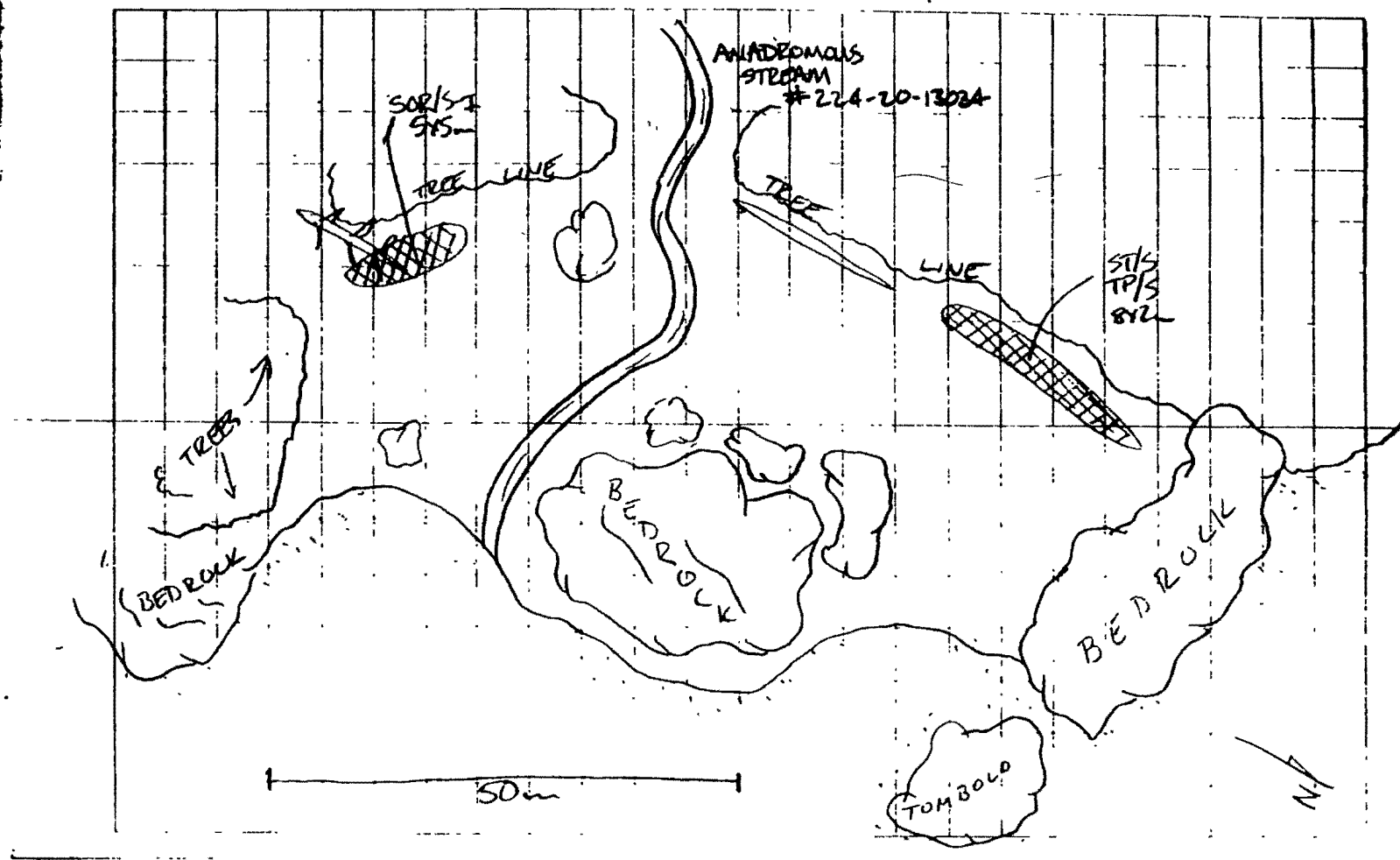
□
Broken Distribution

□
Patch Distribution

□
Scattered Distribution

□
No. of photos

Photo: likely direction
and number



ACE 7237012

Oil: ... length (m) AP

PO

CV

CT

ST

MS

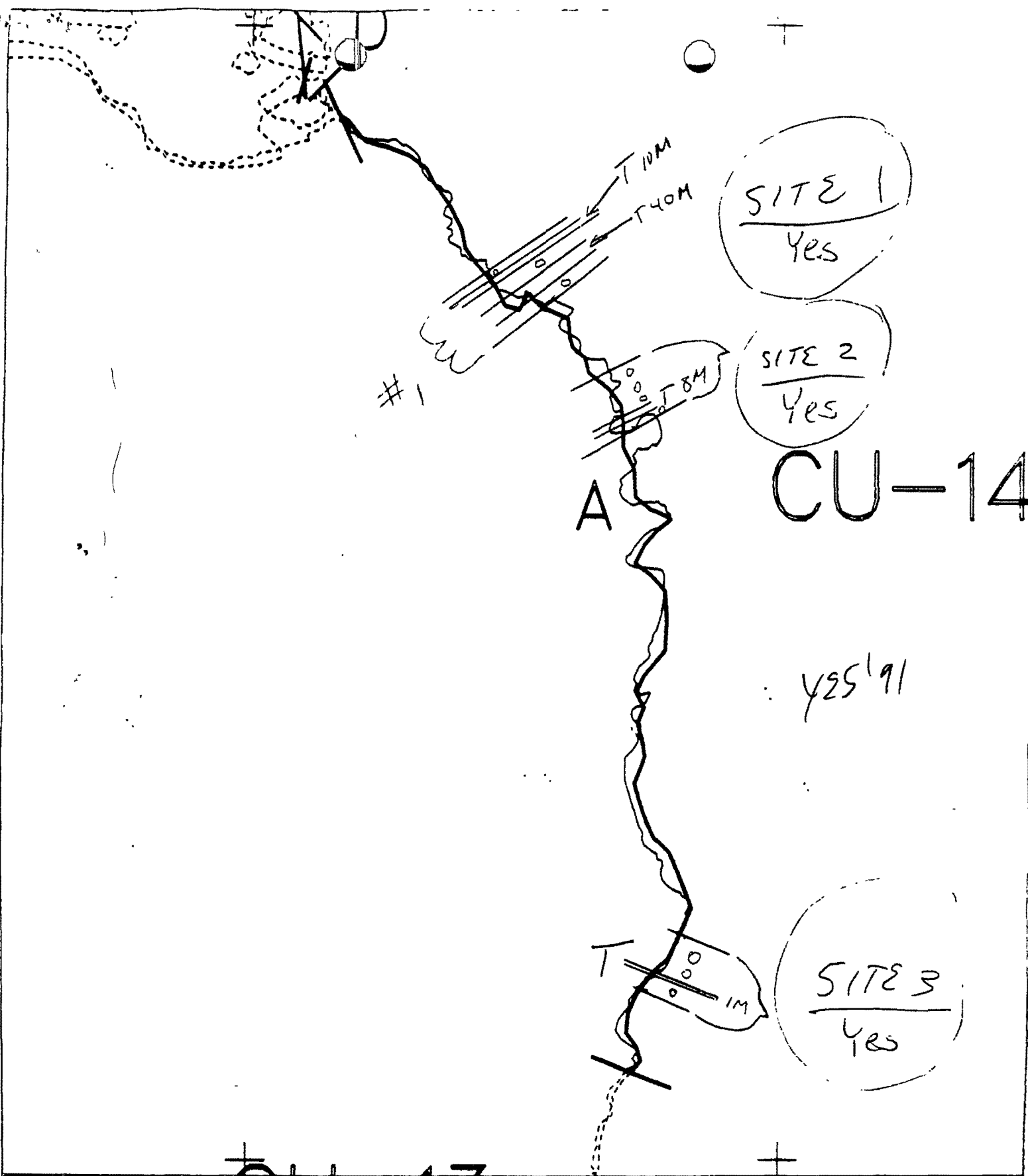
PT

TR

FL

NI

CLINE 40
REVISION 22/2/90



SITE 1
Yes

SITE 2
Yes

CU-14

425'91

SITE 3
Yes

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

CU-14 A
 ADEC Subsegment Length: 2293m
 METERS
 0 241 482
 AK State Plane Zone 4 1:9480
 pcu-14a



Subdivision Field Map
 Map Key: PWSCU-14A
 Name: NAKASIMMA
 Date: 8/22/92
 Date Entered:

ACE 7237013

A

CU-14

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

CU-14 A

ADEC Subsegment Length: 2293m

METERS

0 241 482

AK State Plane Zone 4 1:9480
pcu-14a



Subdivision Field Map

Map Key: PWSCU-14A

Name: ACE 7237014

Date: -/S

Date Entered:

ADEC EXXON VALDEZ POST-TREATMENT SURVEY REPORT

SEGMENT#: CU014
LOCATION: E CULROSS ISLAND

DATE: 09/14/89
TIME: 10:40

Survey Type: Boat, Ground
Team: C. Robinson, M. Ebel, D. Zobrist

WEATHER AND SEA CONDITIONS

Weather: Cloudy, Rain
Sea State: Calm

Wind Direction: NE
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
(H=headland, LR=low-lying rock, B=beach, C=cove, L=lagoon, M=marsh)
Wave Exposure: H,M (H=high, M=moderate, L=low)
Shoreline Composition: R,B,C
(R=bedrock, B=boulder, C=cobble, G=gravel, S=sand, M=silt)

OIL CHARACTERISTICS

Degree of Oiling: N,VL,L,M
(N=none, VL=very light, L=Light, M=moderate, H=heavy)
Area of Impact: H
(S=supratidal, H=high intertidal, M=mid tidal, L=low intertidal)
Max. Oil Thickness: 1 mm (1 = 1 mm or less, 0 = no oil)
Max. Oil Penetration: 30 cm (35 = 35 cm or greater)
Percent Segment Categorized as Oiled: 50%
Presence of Oiled Driftwood (y/n): y
Oil Types: M
(P=pooled, M=mousse, SY=sticky, T=tar, A=asphalt, ST=stain)
Samples: none / none / none / none

DAMAGED OR OILED ORGANISMS

Fucus (y/n): n Barnacles (y/n): n Mussels (y/n): n
Dead Mammals: 0 Dead Birds: 1

SOLID WASTE FOUND

Type: Boom
Bags Collected: 0

Draft

Printed: 12/12/89 11:06

Walk-a-thon

ACE 7236994

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.R.

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 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 CU14 SUBSEGMENT NUMBER A

ADEC REP Rouann Hudnall USCG REP Dan Kearcy

EXXON REP Frank Cox BOAT NAME/SQUAD NUMBER Don Bollinger
Squad 3

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

see Daily report + 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. Tarmats in UITZ removed prior to bio

Describe the amount of oil remaining (type, size of area and location). SOR in between cobbles +

boulders 5 x 30m^{band} broken distribution
UITZ.

Additional Comments (keep objective)

area should be checked for reforming
tarmats

signature Rouann T. Hudnall
Date and time of demobilization from segment 8/28/90
Shoremon\Demob.bio 55/30/90

ACE 7236998+AC

ADEC BIOREMEDIATION DAILY REPORT

DATE: 8/28/90ADEC Monitor: Rowann Hudnall

TIDES: TIME: HEIGHT:
 Low — —
 High 05:58 10.6
 Low 12:13 0.2
 High 19:01 11.3

WEATHER: Cloudy Rain Fog
 TEMP: 60°F SEA COND: chop
 WIND DIR: N-NE-E-SE-S-SW-W-NW
 WIND SPEED 0-15 16-30 30+

(Sun)

USCG Dan Percy
 OOPS James Byars

Exxon Frank Boy
 Other _____

OGS Dan Mann, John Wardrop

Segment	Sub	No. Sites	Inipol (gal)	Custom (lbs.)	Comments
MA02	A	4	0	60	
AE05	B	5	9	12	
<u>CU 14</u>	A	5	23	11	
CU17	A	6	0	6	

\shorelin\rowann\biorept 8/7/90

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

Attn: John Bauer
FAX 265-4666

From: Steven Blank (please print)

RE: SEGMENT NUMBER C4-14 SUBSEGMENT NUMBER A

ADEC REP Steven Blank

USCG REP Mike Zenone

EXXON REP Al Snook

BOAT NAME/SQUAD NUMBER Don Bollinger

Site #	Length (along shore ft)	Area sq ft	Inipol (gallons)	Customblen (lbs.)
1	30	150	12	6
2	20	80	6	3
3	40	240	19	10
4	50	75	6	3

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, work has been completed as stated on the work order to the best of my knowledge.

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

The oiling was in a Cont form in the UTR2

Additional Comments (keep objective)

This segment did not appear on my copy of the Squad report.

Signature Steven Blank

Date and time of demobilization from segment 8-2-90

Shoremon/Deob. Lto 55/30/90

ACE 7237000+15

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 C11-14

SUBSEGMENT NUMBER A

DEC REP Bob McCreary

USCG REP Henry Raymond

EXXON REP Randy Boyer

BOAT NAME/SQUAD NUMBER Built #8

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.

No

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

Additional Comments (keep objective)

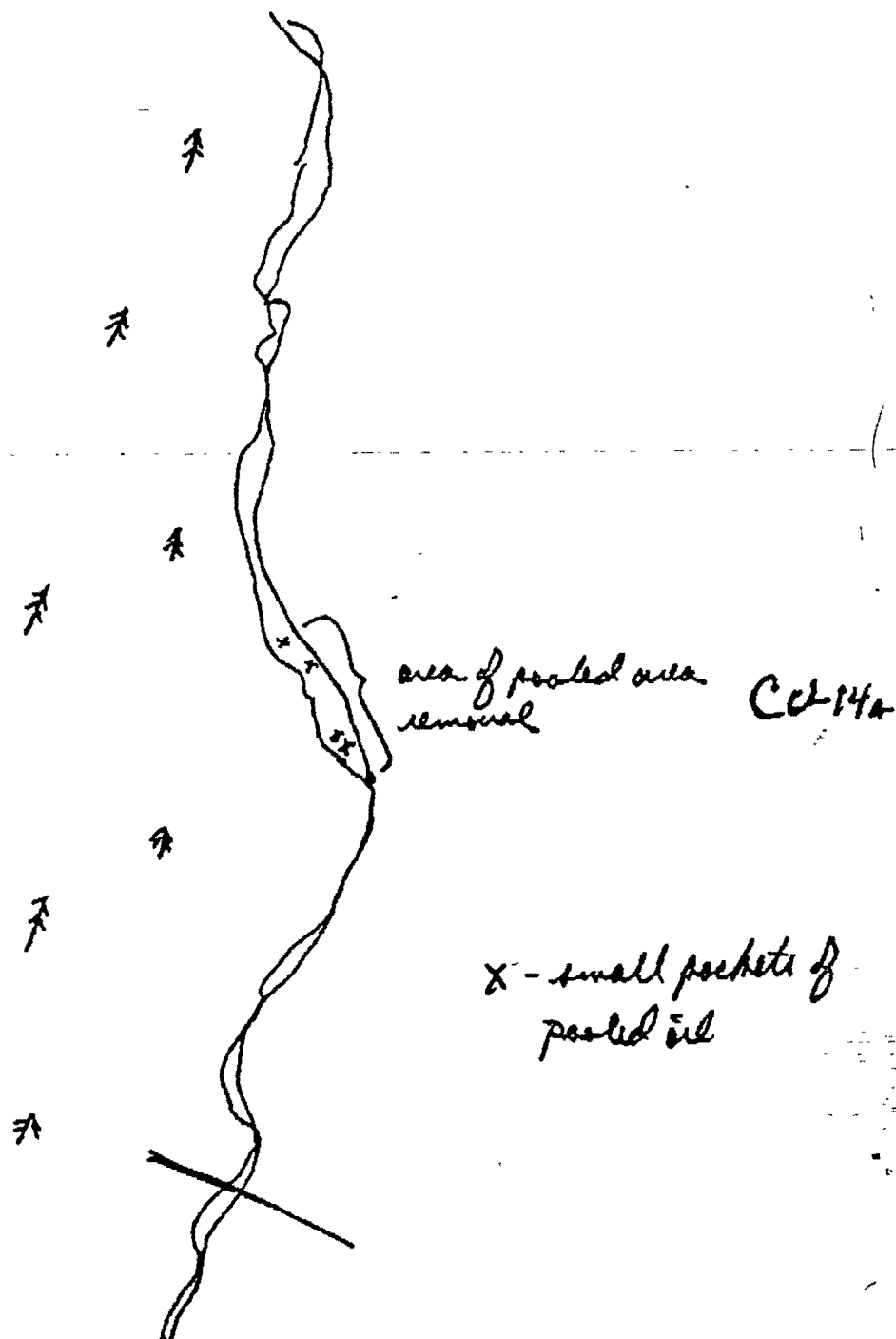
signature Robert G. McCreary

Date and time of demobilization from segment 6/22/90 1530
Shoremon\55 5-12-90

ACE 7237001

B. B. McReady
6/22/90

Demo. Map
CV-14a



B. B. McReady

ADEC DEMOBILIZATION REPORT
FOR PHYSICAL/MECHANICAL TREATMENT AND CUSTOMBLEN

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

RE: SEGMENT NUMBER CU-14 SUBSEGMENT NUMBER 22A-20-13054

DEC REP Bob McCready USCG REP Larry Raymond

EXXON REP Randy Beyer BOAT NAME/SQUAD NUMBER Beulah #6

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.

*No. Bioremediation was not recommended ~~by~~ on work order but
Customblend was applied to areas of tar/mat/mess/patty removal.
Tom Gross ADF-6 and Rick Easter ADF-6 were present and provided
Customblend application.*

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

Additional Comments (keep objective)

signature

Robert B. McCready
Date and time of demobilization from segment 6/21/90-1820

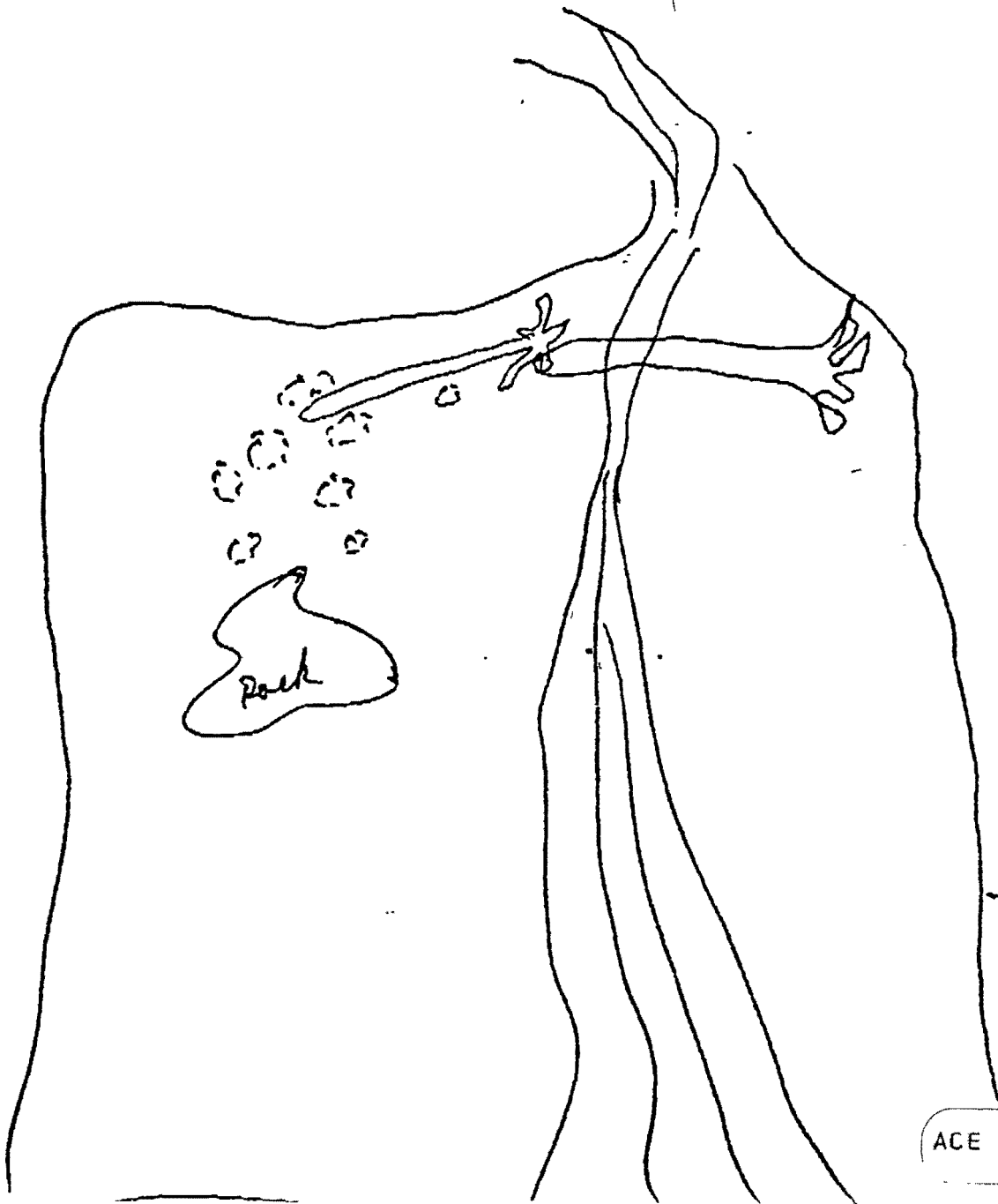
Shoremon\55 5-12-90

ACE 7237003

Bob McLeary
6/21/90

Demo. Maps
CU-14A 224-20-13036

() Areas of tarant and mouse paths
removed and customblend
application



Robert McLeary

ADEC DEMOBILIZATION REPORT
FOR PHYSICAL/MECHANICAL TREATMENT AND CUSTOMBLEND

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

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

RE: SEGMENT NUMBER CU-14

SUBSEGMENT NUMBER 1 (224-20-13036)

DEC REP Bob McCready

USCG REP Larry Raymond

EXXON REP Ronny Bayer

BOAT NAME/SQUAD NUMBER Bush - #6

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.

No. Bioremediation was not recommended on work order but Customblend was applied to areas of tar mat and tar patches that were manually removed. Tom Brown and Rick Buster ADF-6 were present and were anxious to see Customblend used on this segment.

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

Additional Comments (keep objective)

signature Robert G. McCready

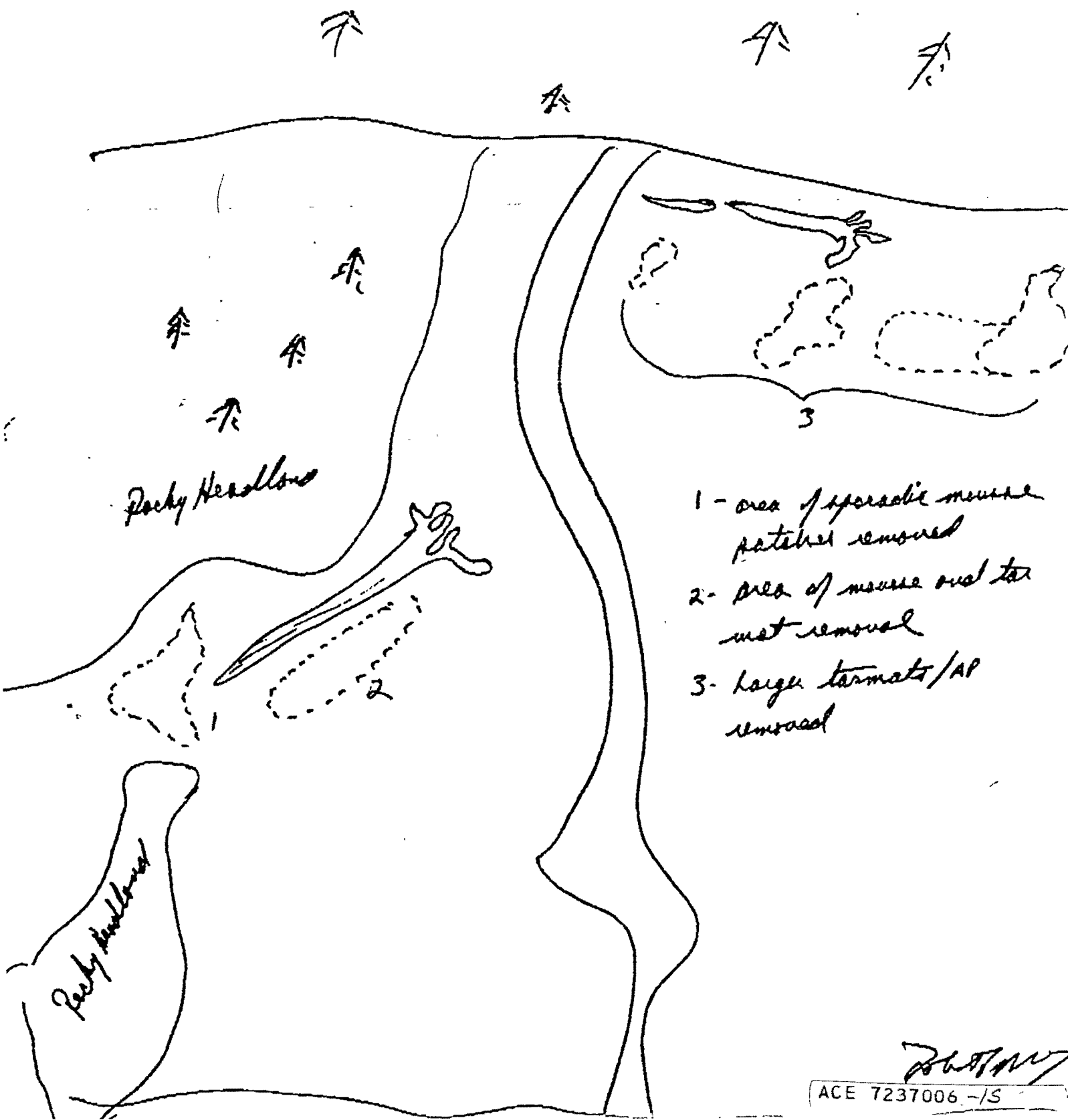
Date and time of demobilization from segment 6/21/90 1645
Shoremon\55 5-12-90

Bob McCreedy

6/21/90

Demo Map

CU-14A-226-20-13036

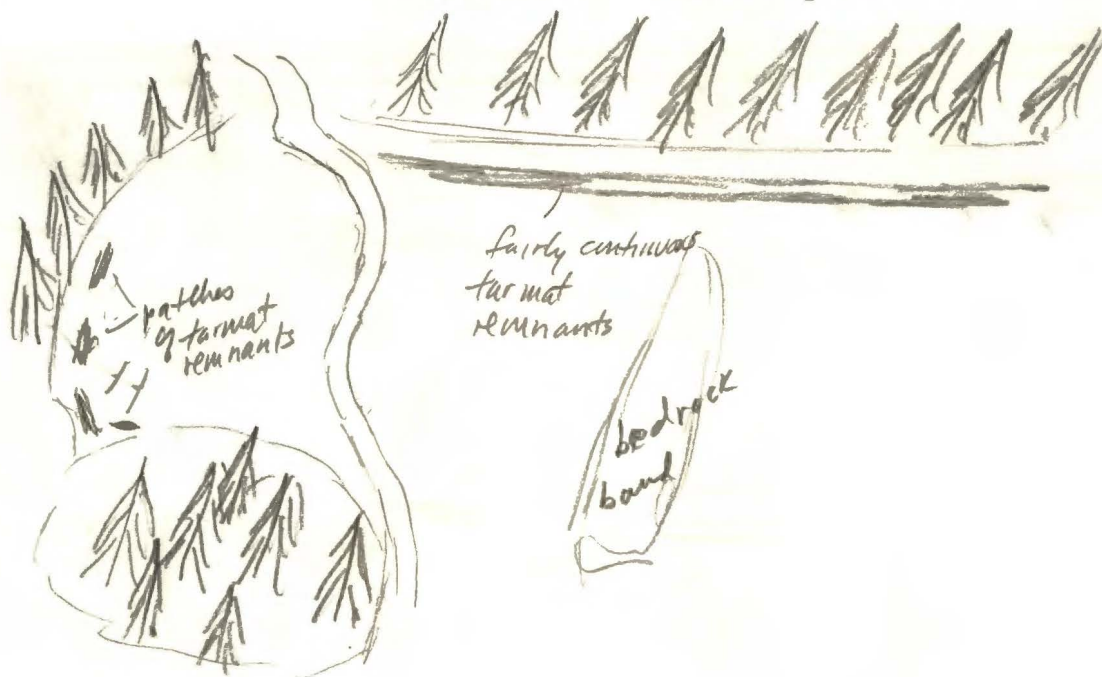


ANADROMOUS FISH STREAMS/OILING CONDITION
PWS

Segment # CU 014 ASC# 224-20-13036 Location Culross Fa.
Date 8-14-90 Recorder/Observer R. Gusten / T. Crowe
Oil in streambed NO Oil on streambanks Yes
Oil within 50m of mouth Yes Anadromous Fish present No

Description of oil and comments Oiling condition represented
by scattered remnants of tar mat / some med. or sediment.
This oil is primarily in the Upper ITZ. Recommend
assessment Spring 1990

Oil Distribution Diagram



STREAM TREATMENT REPORT
Alaska Department of Fish and Game
Tom Crowe

June 21, 1990

ASC # 255-10-13036

Segment CU014

Observations

This stream mouth consists of a small pocket cove that is moderately protected by rock off shore. Oiling consists of a tar mats in the UITZ on both sides of the channel. On the right bank tar splatters occur in rubble/cobble. On the left bank a larger tar mat occurs sporadically and end at a cliff outcrop.

June 21, 1990

1626 Rick Gustin and I arrived at the BEULAH CANDIES and met with Bob McCready (DEC) and Randy Boyer (EXXON). We then went to the stream site where the crew was just finishing the work. As we were looking over the site the crews left for the next stream site. After the crew left Randy Boyer, Bob McCready, Rick Gustin and I spread cusomblen over the worked areas and raked it into the OR oiled gravel and raked it in.

The work at this site was done according to the work order and to the satisfaction of the ADF&G monitors.

One supersack of oiled sediments were removed at this site.

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 CH-14 SUBSEGMENT NUMBER A-226-20-16255

DEC REP Bob McCreedy USCG REP Larry Raymond

EXXON REP Pandy Boyer BOAT NAME/SQUAD NUMBER Adale #6

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.

No. Boiled. is not recommended

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

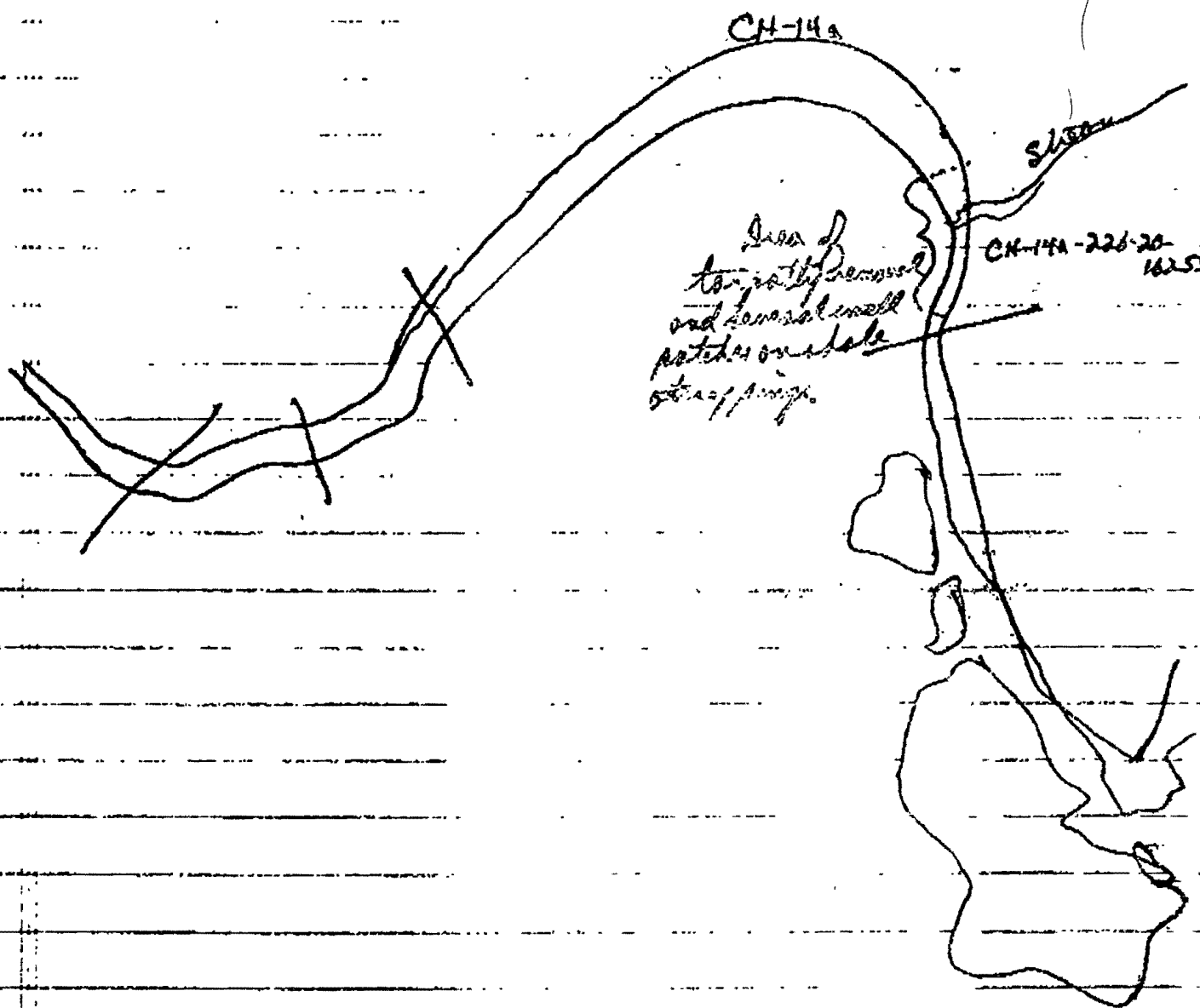
Additional Comments (keep objective)

signature _____
Date and time of demobilization from segment 4/20/90 - 1440
Shoremon\55 5-12-90

Bob McCready
6/20/90

Demo. map
CH-14a 226-20-16255

 Chenequa (old) Schoolhouse



Bob McCready

ACE 7237018
-15

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 224-20-13036

SEGMENT CU-14 SUBDIVISION A

WORK WINDOW

Tarmat Removal

OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous streams (224-20-13036 and 224-20-13034) are present in Subdivision A. No constraint to tarmat removal.
1I	Gill Net Area	No constraint to tarmat removal.
1J	Purse Seine Area	No constraint to tarmat removal.
1K	Purse Seine Hook-off	No constraint to tarmat removal.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Restrict boat and air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to unloiled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM CU-14A
FOR ADDITIONAL CONSTRAINT INFORMATION

TAG APPROVAL DATE _____

ADEC

EXXON

NOAA

USCG

FOSC

Date 6-8-90

Prepared by _____

Date _____

ACE 7237019 +15

ANADROMOUS FISH STREAM EVAL.

(224-20-13036)

CU-15

INACTIVE NEST

TREATMENT AREA

ANADROMOUS STREAM 100m ZONE

INACTIVE NEST

CU-14

ANADROMOUS STREAM
(224-20-13036)

Anadromous Stream
(224-20-13034)

ACTIVE NEST

400m EAGLE NEST ZONE

CU-13

ANADROMOUS STREAM
(224-20-13034)

CU-12

INCORPORATES USFWS 6/1/90
MAP OF ACTIVE EAGLE NESTS.



Exxon Company, USA
Map Key: PWS-CU-14



ECOLOGY MAP
SEGMENT CU-14
SUBDIVISION A (1 of 1)
METERS

- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1307 feet

ACE 7237020

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ CU-14 STREAM NO: 224-20-13036 DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Subject stream and additional stream 224-20-13034

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

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

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

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

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unholed biota and substrate. Subject stream exists within Subdivision A (1 of 1).

ARCHAEOLOGICAL CONSTRAINTS:

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

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

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

 Manual Pickup

 Bioremediation

X Tarmat Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommended treatment includes removal of tarmats in areas
indicated on sketch map. Work should be conducted between 6/1 and 6/7
with approval of USFWS regarding eagle nest.

TAG COMMENTS:

TAG APPROVAL DATE: 5/10/90

ADEC Art Weissen
EXXON [Signature]

FOSC: HL

ACE 7237021

DATE: 5-18-90

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ CU-14 STREAM NO: 224-20-13036 DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Subject stream and additional stream 224-20-13034

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

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

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

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

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. Subject stream exists within Subdivision A (1 of 1).

ARCHAEOLOGICAL CONSTRAINTS:

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

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

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

 Manual Pickup

 Bioremediation

X Tarmat Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommended treatment includes removal of tarmats in areas indicated on sketch map. Work should be conducted between 6/1 and 6/7 with approval of USFWS regarding eagle nest.

TAG COMMENTS:

TAG APPROVAL DATE: 5/10/90

ADEC Art Weimer [Signature]

EXXON Andy Goe [Signature]

NOAA Barl Wescott [Signature]

USCG D.D. Rome [Signature]

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

NOTIFY CUC 24 HRS PRIOR TO WORK.

ACE 7237022

SEGMENT ST/000145

SKETCH MAP

STREAM 22A-2013036

DATE 4/25/90

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

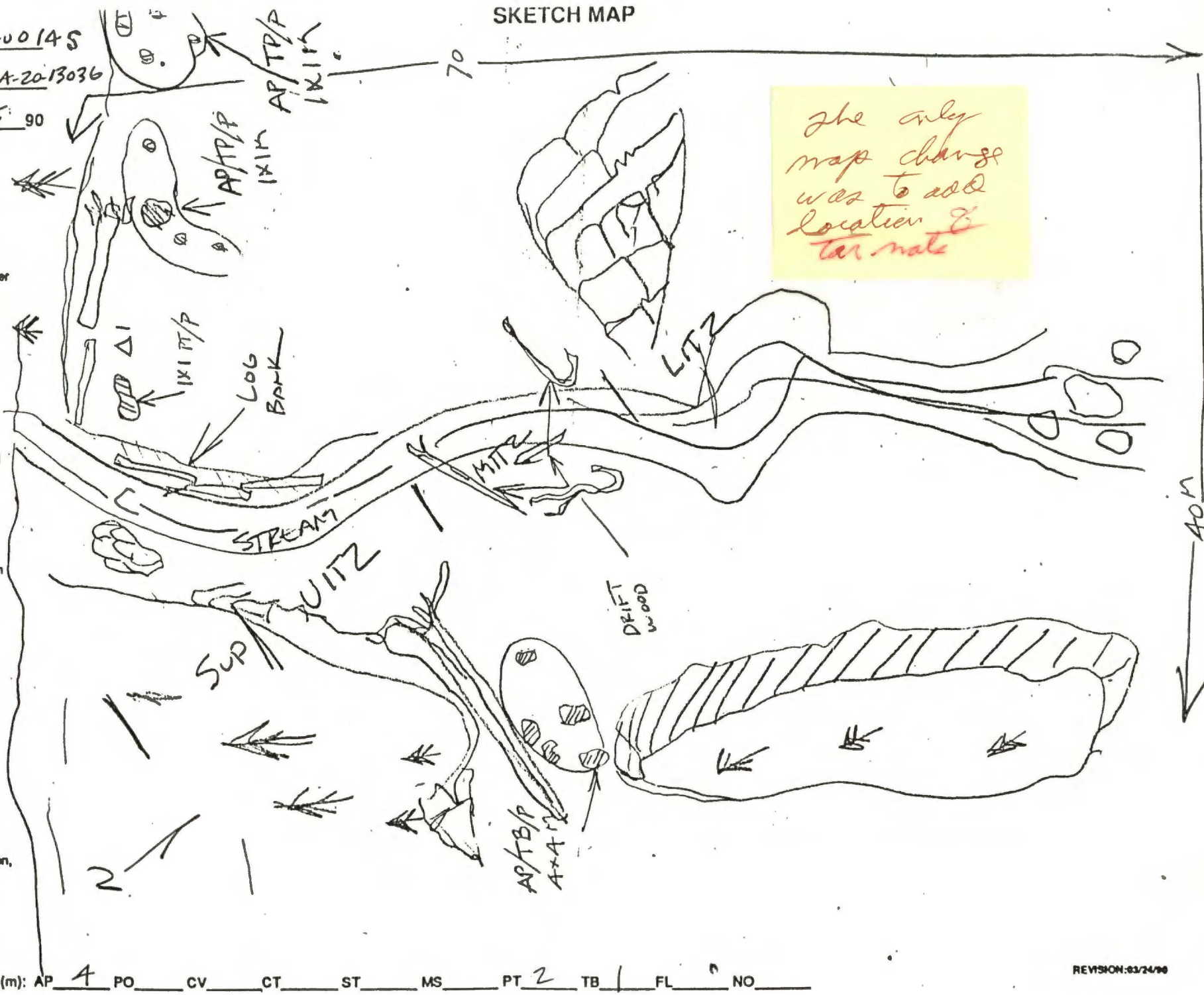
CT/P
Patchy Distribution

CT/S
Splashed Distribution

lll
Oiled Vegetation

1 ●
Photo location, direction, and number

The only map change was to add location of tar mats



Vector Length (m): AP 4 PO CV CT ST MS PT 2 TB FL NO

REVISION: 03/24/90

ACE 7237023

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ CU-14 STREAM NO: 224-20-13036 DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Subject stream and additional stream 224-20-13034

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

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

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

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

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

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. Subject stream exists within Subdivision A (1 of 1).

ARCHAEOLOGICAL CONSTRAINTS:

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

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

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

 Manual Pickup

 Bioremediation

X Tarmat Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommended treatment includes removal of tarmats in areas indicated on sketch map. Work should be conducted between 6/1 and 6/7 with approval of USFWS regarding eagle nest.

TAG COMMENTS:

TAG APPROVAL DATE: 5/10/90

ADEC Art Weimer [Signature]

EXXON Andy Goe [Signature]

NOAA Barl Wescoff [Signature]

USCG D.D. Rome [Signature]

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

NOTIFY CUC 24 HRS PRIOR TO WORK.

ACE 7237043

RECEIVED
MAY 07 1990

DEPT. OF
ENVIRONMENTAL CONSERVATION

ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND

SEGMENT: CU-14 B

STREAM NO: 224-20-13036

CONCUR

ORIGINAL DATA
MAP ALTERED

OK

ACE 7237024 +HS

ANADOMOUS FISH STREAM EVALUATION

SEGMENT ST/ CU-14 STREAM NO: 224-20-13036 DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Subject stream and additional stream 224-20-13034

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
- 1B Salmon stream mouth - spawning (7/10 to 8/31)
- 1I Gill net area (6/7 to 8/31)
- 1J Purse seine area (7/20 to 9/30)
- 5T-3 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
- 6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unopened biota and substrate. Subject stream exists within Subdivision A (1 of 1).

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 _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes removal of tarmats in areas indicated on sketch map. Work should be conducted between 6/1 and 6/7 with approval of USFWS regarding eagle nest.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
 EXXON _____
 NOAA _____
 USCG _____

FOSC: _____ DATE: _____

ACE 7237025

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- ✓ 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 ✓ 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/15)
 1E Main Bay Hatchery release (4/20 to 6/15)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- ✓ 1J Gill net area (6/7 to 8/31)
 ✓ 1K 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
- 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
 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 7237026

FIELD SHORELINE COMMENT SHEET

28/28

SEGMENT ST / CV-014 SUBDIVISION: ^{ASC#} 224-20-13036 DATE 25 APR 90**USCG**NAME Kerwin L. Dreher SIGNATURE CWO K. L. Dreher☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED**ADEC** → **ADF & G**NAME RICK GUSTIN SIGNATURE Richard Gustin☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Remove tar mat patches in Upper I.T.Z on north side
of stream. 2 → 1x1 meter areas were encountered.

Remove 4x4 meter tar mat in Upper I.T.Z on south
side of stream between bed rock outcrops.

LAND MANAGER → **NONS**

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

ACE 7237027

OG CAL LARSON USCG DREMER, CWE SEGMENT ST/ CU 01A 5 11/22
 BIO REN CRITCHLOW LAND REP STREAM 22A-20-130% OF
 EXXON DAZHL YVES ADFG RA KANTON-AIMEE WESEMAN TIME 09:30 to 09:45
 TEAM NO. 14 TIDE LEVEL DATE 4/25/90
 EST. SUBDIVISION LENGTH: 40 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 10 % B 3 % C 20 % P 30 % G 5 % S 5 % M 5 % V 5
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 7 m NO 33

SURFACE OIL

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

PAVEMENT H F 27 sq. m by .3

PATTIES / TARBALLS 5 BA

NEAR SHORE SHEEN? NO BR RW SL :

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

Did you Collect DEBRIS
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. 8

Frames 1-10

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE SUBSURFACE SEDIMENT
		OP	OR	OL	OF	NO		NO	NO	1	2	3	4	5	SU	M	U					
1	22					✓	.								✓					N		62,50%
							.															
							.															
							.															
							.															
							.															

COMMENTS LONG BEACH FETCH. LITTLE OILING. NO OIL IN STREAM

REVIEWED JW DATE 4-28-9

ACE 7237028

STREAM ZZA-20-13036

DATE 4 125 90

CHECKLIST

- ___ N Arrow
- ___ Approx. Scale
- ___ Sag/Tab Body
- ___ OS Dist.
- ___ Width
- ___ Length
- ___ % Cover
- ___ Substrate Character
- ___ Est. HML/LVL
- ___ SSI
- ___ Profile Location(s)
- ___ Profile(s)
- ___ PH Location(s)
- ___ Photo Location(s)

LEGEND

PA - No Subscriptions On

2 ▲ Fr - Subsurface Oil

CT/C
Controlled Distribution

CT/D
Broken Distribution

CT/P
Early Distribution

CT/S
Spashed Distribution

Old Vegetation

Photo location, direction,
and number

Oil Character Length (in): AP 4 PO CV CT ST MS PT 2 TB 1 FL ^R NO

800-451-2299

1/28

Seg ID: CU-014

Subdiv: 224-20-13036

Survey Date: 4/25/90

Comments by: Ken Critchlow

Oiling on this stream site was limited essentially to three small areas of patchily distributed asphalt pavement, patties and tarballs in the UITZ on both sides of the stream.

Oiled sediments can be readily removed by a small crew using shovels and trowels. No additional treatment should be required as subsurface oil wasn't evident in the one pit excavated in the UITZ.

KR Critchlow

26/28

ADP&C MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS ☒ DS TS AVS SCHM MMS PTA2 REGION: ☒ FNS KP,CI KAPMETHOD: ☒ Aerial ☒ Ground ☐ Boat

3 DATE: 4-25-90

15 HIGH TIDE TIMES: 1

21 TEAM RECORDER: Aimee Wesema

4 START TIME: 0930

16 HIGH TIDE HTS: 1

22 OBSERVERS: Rick Gustin

5 STOP TIME: 0950

17 LOW TIDE TIMES: 1

23 AGENCY: ADF+G

6 SEGMENT #: CU014

18 LOW TIDE HTS: 1

24 PHOTOS TAKEN: Y ☒

7 STATION #:

19 TIDE HT AT SURVEY:

Roll #: Frame:

8 K-UNIT:

Ebb Slack Flood Slack

25 VIDEO TAKEN: ☒ N TAPES: 90-AJW-α

9 STAT AREA:

20 USCG QUAD: SC3

Start: 585 End: 644

10 LAT:

11 LONG:

26 SAMPLES TAKEN: Y ☒ Number12 SOURCE: ☒ NRP Loren

Oil

13 LOCATION: Se Culross I coastline-south

Sediment

14 DESCRIPTION: of hidden bay

Biological

EXTENT OF OIL

Water

	SHORELINE				STREAM			
	L	Y	N		L	Y	N	
27 SURFACE COVERAGE								

36 CATALOGED ANAD. FISH SKEIN? ☒ Y ☐ N

	SHORELINE				STREAM			
	L	Y	N		L	Y	N	
28 SURFACE THICKNESS	2cm-intar mats							
29 PENETRATION	☒							

37 CATALOG #: 224-20-1 3036

38 STREAM NAME:

30 OVERALL OIL IMPACT: N VL ☒ L N H39 OIL IN STREAM BED? Y ☒ N31 OIL TYPE: Pooled Mousse Tar ☒ Asphalt Sticky Stain40 OIL ON STREAM BANKS? Y ☒ N32 OILED DEBRIS? Y ☒ N41 OIL ON BEACH ADJACENT TO MOUTH? ☒ Y ☐ N
(within 50 meters)42 OIL WITHIN 1 MILE OF STREAM? ☒ Y ☐ N33 SHORELINE TYPE: Headland Low-lying Rocks ☒ Beach Cove
Lagoon Marsh

Where:

43 ANADROMOUS FISH PRESENT? Y ☐ N34 WAVE EXPOSURE: ☒ High Moderate Low44 ANADROMOUS FISH OBSERVATION
Species Aerial Ground35 SUBSTRATE TYPE: Bedrock 10 Boulder 10 Cobble 30
Gravel 45 Sand 15 Mud/silt

Species	Aerial	Ground

COMMENTS: visible oiling on this beach occurs in the LITZ's on north & south sides of the stream & is restricted to tar mats and patties.

27/28

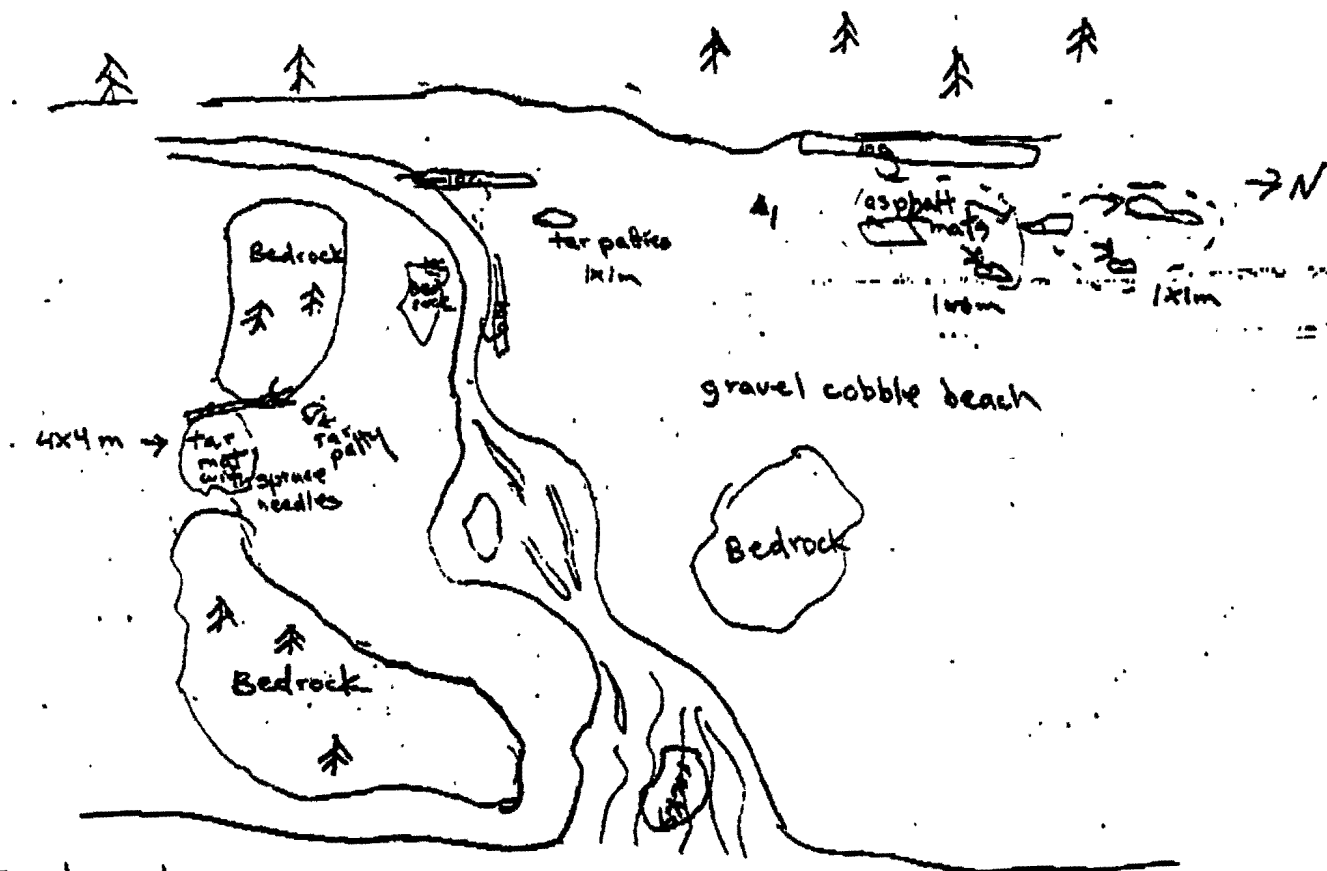
45 PHOTOLOG

FRAME(S)

DESCRIPTION

pic 1-22cm - no oil visible

46 OIL DISTRIBUTION DIAGRAM



Treatment recommendations -

Remove tar mat patches in UITZ on north side of stream

2 - 1x1m areas & where enc

Remove 4x4m tar mat in UITZ on south side of stream between bedrock outcrops.

148°07'30" 139000m E
60°45'

85° 10 FEET, ZONE 4

148°

6735000m N.

2 460 000 FEET
(ZONE 4)

13042

224
A(151)

SUBJECT ANOMALOUS
STREAM:
224-20-13036
(PS, 2/90)

ADJACENT STREAM
224-20-13034

RECEIVED
APR 10 1966

DEPT. OF
INTERIOR CONSERVATION

REGION: PRINCE WILLIAM SOUND

SEGMENT: CU-14

SUBDIVISIONS: A (1 OF 1)

Avoid bio remediation. Manual treatment
(pickup) O.K. May-July near stream
w/ concurrence of ADF & G monitor. Salmon
fry rearing area and commercial fishing
area

agree

add. file + bio Pit 2-6
if appropriate

SHORELINE EVALUATION

SEGMENT ST/ CU-14 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Salmon stream mouth (no. 13036, 13034) Salmon fry outmigration (1A) - 3/1 to 5/15 and spawning (1B) - 7/10 to 8/31; Bald eagle nest (5T) - 3/1 to 6/1; Gill net area (1I) - 6/1 to 8/31 (contact ADF&G for exact dates and locations); Purse seine area (1J) - 7/20 to 9/30 (contact ADF&G for exact dates and locations). Special use designation (6Y) - 6/1 to 9/15. Restrict boat and air traffic to a minimum essential. Air approach and takeoff from and to seaward only.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Do not disturb stream bed or banks unless authorized by ADF&G. Contact ADF&G prior to treatment for permit and USFWS re: eagle nests. Avoid unnecessary disturbance /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 0 m: Medium 580 m: Narrow 64 m: V.Light 0 m: No Oil 1649 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 20 cm

RECOMMENDATIONS:

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

COMMENTS: Spot wash area where pooled mousse found with wands and absorbents. Manual pickup of any debris. Tarmat removal as indicated on sketch map. Bioremediation of areas where cover and coat found. Work between 6/1 and 7/10 based on constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

ACE 7237047

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / CU-14 SUBDIVISION: A-1 of 1 DATE 4/2/90

USCG

NAME David S. Thomas SIGNATURE Bm' [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

Agree with Below comments

ADEC

NAME Clara S. Crosby SIGNATURE Clara S. Crosby

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

SITE #1 - MODERATE OILING - BEDROCK BASE - SHALLOW BEDIMENTS - SUGGEST WASH/FLUSH -

SITE #2 - ANADROMOUS FISH STREAM - RECOMMEND MANUAL REMOVAL OF ASPHALT MATS -

SITE #3 - SUGGEST TREATMENT AFT SITE - BEDROCK. BASE - DISAGREE W/H /S DISTRIBUTION FOR CT CV. CONSIDER COVERAGE CT/P, CV/P.

LAND MANAGER

NAME MARSHA MARTIN / DVR SIGNATURE Marsha Martin

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

SEE comments FROM ADEC FOR SITE #2 AND SITE #3.

SHORELINE OILING SUMMARY

REVISION NO 2072/90

OG RICK GILLIE USCG BM 1 Thomas SEGMENT ST/ CU-14
 BIO DAVE LOHIE LAND REP Marsha Martin SUBDIVISION A 1 of 1
 EXXON FRANK DRY ADEC Clara Crosby TIME 1330 to 1500
 TEAM NO 13 TIDE LEVEL +1 to +2 DATE 4 / 2 / 90
 EST SUBDIVISION LENGTH: 2,883 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock SNOW
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS R 40 % B 30 % C 20 % P 10 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 10 % Hang 60 % Vert 30 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 700 m N 83 m VL 0 m NO 2,000 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	B	P	S	BR	BL	GR	OR	TR	TL	LR	LR	SU	UI	MI	U
ASPHALT PAVEMENT				X	X	X								X		
POOLED				X						X				X		
COVER		*	X	✓				X	*					X	*	
COAT		X	*	✓				X	✓					X	✓	
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X		X	X

PAVEMENT: H F (S) 20 sq. m by 5 cm

PATTIES / TARBALLS N/A BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris			

DEBRIS COLLECTED

☐ YES ☒ NO

TYPE T

#BAGS 1

Photographs:

Roll No. ST-13-2

Frames 1-10

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM/CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	BR	BL	GR	OR	TR	TL	LR	LR	SU	UI	MI	U		
1	10					X	.											X					P
2	10	X					5-10	X					X					X					P
* 3	10	X					2-5	X					X					X					P
* 4	10	X					2-5	X					X					X					P
5	20		X				5-15	X					X					X					P/S
6	20		X				10-20	X					X					X					P

COMMENTS * OILED INTERVAL < 5cm IN PIT NOS. 3 AND 4 DOES NOT CONSTITUTE
 SUBSURFACE OIL

SHORELINE ECOLOGICAL SUMMARY

REVISION 11/22/78

Segment ST CU 014 Subdivision A Date (mo / day / yr) 4-2-90

Time (24 hr) 13:30 Biologist David Lohr

(A) Substrate type and % of segments:
 (1) Bedrock 40 (2) Boulder 30 (3) Cobble 20 (4) Pebble 10 (5) Sand (6) Silt

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

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

Photographs. Roll No ST-13-2

Frames 1-10

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:

See page 2

Ecological Considerations:

1I, 1J, 64 - no comment

1B - One running stream found in segment, O.I. is present in the area of the stream mouth

ST - 1 mature bald eagle was observed

1. There are dense barnacles and mussels in mid-intertidal at site 1 (see OG map), and dense Fucus beds in low intertidal at sites 1 and 3 (see OG map) which

ACE 7237050

Shoreline Ecological Summary

60-6

Segment ST-CW014

Subdivision A

4-2-90

Biologist David Lohse

Wildlife Observations/General Comments

1. present in low intertidal - Scytosiphon, coralline algae, Halosaccion, Ulva, Enteromorpha, Ectocarpus, Ceramium, unidentified red algal "blob", unidentified "branching" red algae
mid intertidal - Ectocarpus, Enteromorpha, Ulva, Scytosiphon, Endocladia, Katharina tunicata, coralline algae, Nuella, Ralfsia
2. In some areas of mid-intertidal on bedrock there were patches of byssal ~~threads~~ threads where mussels were previously attached.
3. Some of this segment was surveyed by boat due to the impassability of the cliff faces. The abundances of Fuus and Mytilus (the only obvious species from the boat) appeared comparable to those areas visited on foot.

OG RICK GILLIE

SEGMENT ST/ CU-14

SUBDIVISION A of 1

DATE 4, 2/90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Bdry
- ☐ Oil Dist
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. H/W/L/WL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Photo Location(s)
- ☐ Pti Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
Pti - No Subsurface Oil

2 Δ
Pti - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

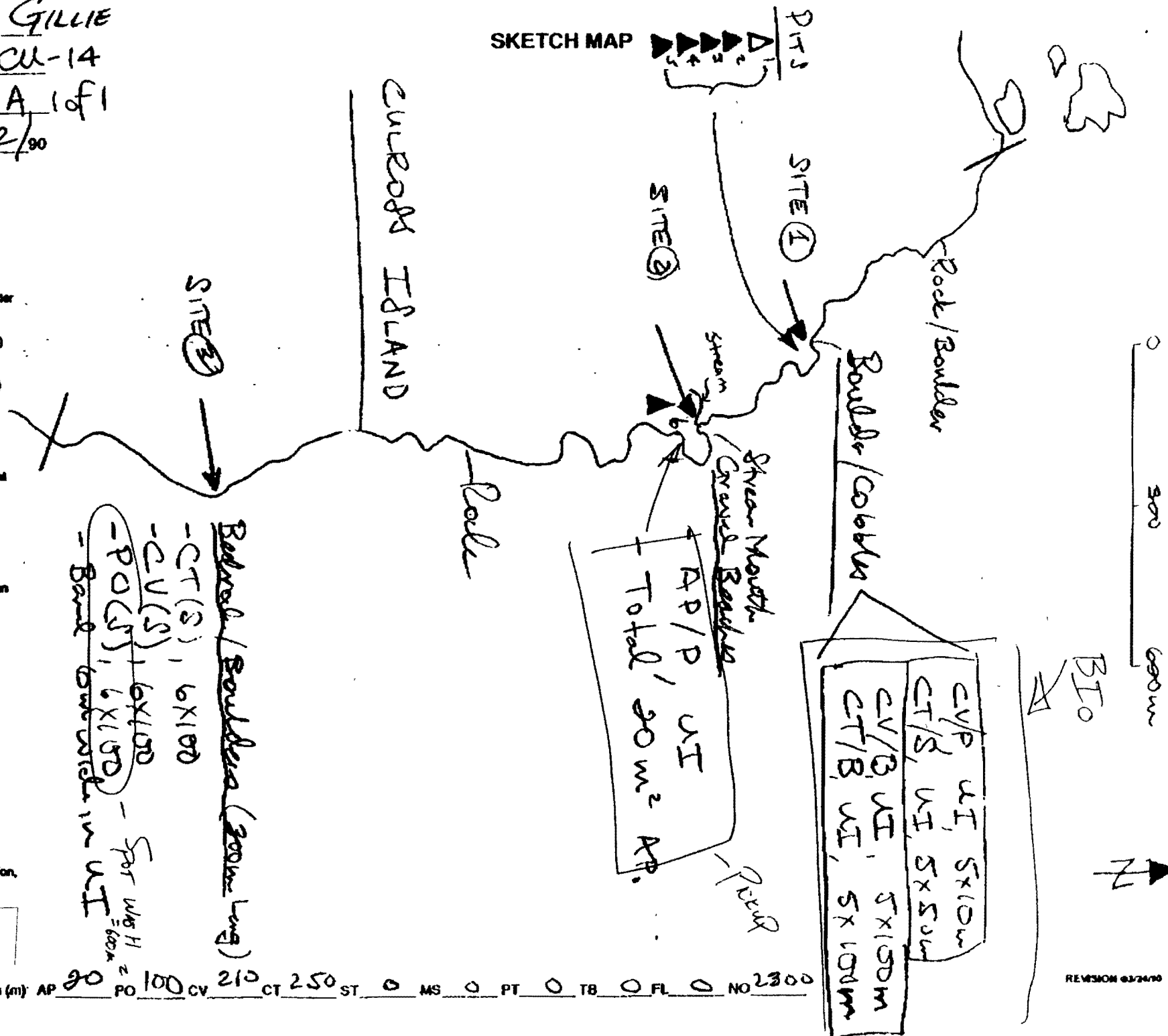
CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oiled Vegetation

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

SKETCH MAP

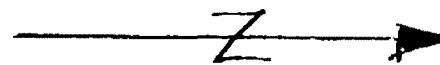


OG RICK GILLIE
 SEGMENT ST/ CU-014
 SUBDIVISION A, 1 of 1
 DATE 4/2/90

SKETCH MAP

SITE 1

50m



CHECKLIST

- ☒ A Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Bdry
- ☒ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☒ Substrate Character
- ☐ Est. HWW/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

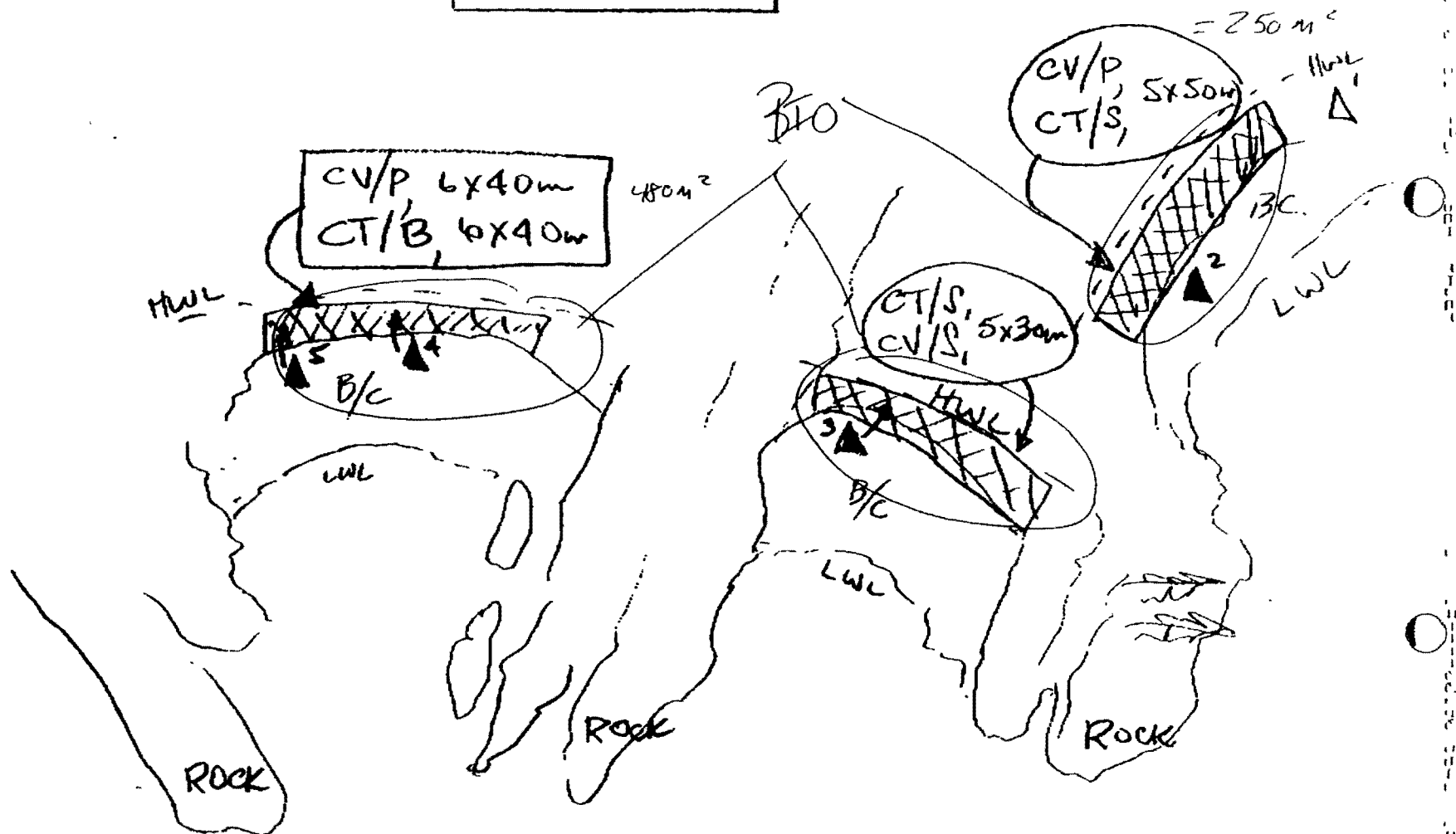
CT/B
 Broken Distribution

CT/P
 Patchy Distribution

CT/S
 Splashed Distribution

Cilled Vegetation

1 ➡
 Photo location, direction,
 and number



ACE 7237053

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

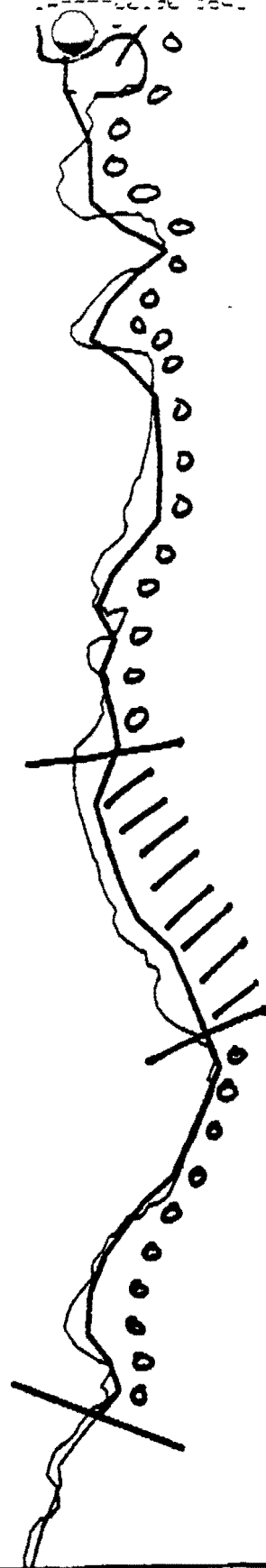
REVISION: 02/24/99

SITE (2)

205
728

SEGMENT: ST/CU-14
SOUTH PART

SITE (3)



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

CU-14

ADEC Segment Length: 2295m



Map Key: PWS-72a

Name: GILLIE

Date: 4-2-90

Date Entered:

ACE 7237054

~~CU-15~~

ST/
SEGMENT : CU-14.
NORTH PART

LINE ①

↓ PWS
72 A

CU-14

ADEC Segment Length: 2293m

Map Key: PWS-72b

Name: GILLIE

Date: 4-2-90

Data Entered:

ACE 7237055-1S

(version 5/02/89)

SHORELINE CLEANUP PROGRAM

DATE 8/16/89

SHORELINE SEGMENT CU-14

LOCATION: (see enclosed map) CULROSS ISLAND-EAST SIDE
(CULROSS ISLAND EAST BLOCK)

ADEC NO. _____ SHORELINE ASSESSMENT DATE: 8/9/89

Recommended Cleanup Activity(ies):

- manual removal of oiled seaweed and debris from location #2 and #3.
- manual removal of patches of asphalt from location #4.

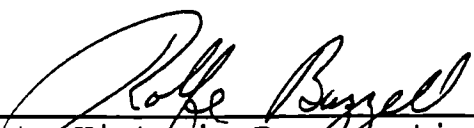
Priorities Considerations:

3-4 B

Ecological Constraints (from site survey):
Crews should avoid trampling mussel beds.

Archeological Constraints (from site survey):

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

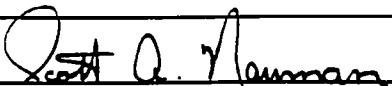


State Historic Preservation Officer *

Date: 8/18/89

ISCC: _____

Date: _____

EXXON:  _____

Date: 8/18/89

FOSC: _____

Date: _____

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

ACE 7237056+15

The shore zone consists of rocky headlands with pocket boulder / cobble beaches. Beaches contain pebble storm berms in the supra intertidal zone.

There is a continuous light oil/tar band 0.5 meters wide located in the SUPRA intertidal zone through most of the rocky shore zone. There is generally light oiling with some moderate oiling on some of the pocket boulder cobble beaches (see map).

Given the exposure of this site, wave action can be expected to eventually remove any residual oil contamination especially along the exposed rocky headlands, therefore no cleanup activities ~~for lightly~~ are recommended at this time for lightly oiled areas.

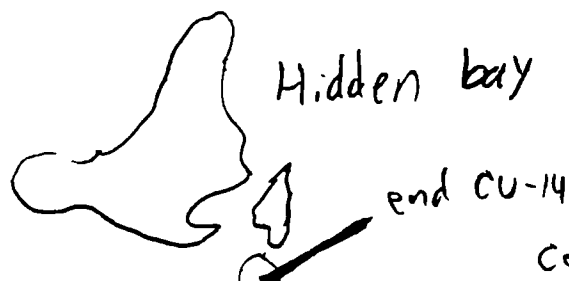
0.1 in areas of moderately contaminated cobble and boulders in the area shown (map 1) should be removed. Moderate to high pressure hot water will likely be required to remove tar deposits with deluge flushing if appropriate. Moderate contaminated pebble storm berms (indicated on map 1) should be cleaned using approved methods as deemed appropriate. Contaminated drift logs and seaweed (fucus) should be manually removed. This volume of material is however, small.

Culross Is.
Team #4

CU-14
Mike Foget

6/6/89

map 1



1) Pocket Boulder cobble beach with discontinuous 6 meter band of light to moderate oiling-tar in the upper HITZ with some localized pooling (3cm deep).

A continuous 0.5 meter light tar band on the rock face in the supra ITZ, some oil sheen observed in HITZ tidepools.

Continuous 0.5 meter light oil/tar band in the supra ITZ

2) Small boulder / Cobble

pocket beach with light to moderate oiling in the HITZ. North end of beach contains oiled seaweed (fucus) and light/moderate tarring in the high ITZ, light

oil - 0.5 meter oil band in the supra ITZ on the rock face.

3) Discontinuous light oiling in the supra ITZ and some oiled fucus.

4) Pocket cobble/gravel beach with some tar/asphalt balls in the supra ITZ. North end of beach contains light to moderate tar-oil in a 14 meter wide band. North end also contains a 20m' x 4m area with moderate oiling and some pooling (3cm deep). Gravel storm berm in the supra ITZ is lightly oiled with a small amount of lightly oiled drift fucus (seaweed).

CV 1)

5/6

boulder cobble beach
with light oiling in 2 m band

CV 14 9:30

rock walls

B/C Pocke beach dissection

local oil 1.5-2 m mod oiling in 2 m band
some pooling 2 m thickness 6 m band
30 cm^{1m} or more in 1 m band
2-3 some o. spots in 2 m band

AX: near 2 small B/C pocke beach
mod oiling in 2 m band
oil focus in end on boulders light/mod
oil in 2 m band oiled focus
Rock core 1/2 m or more light oil in

Pocke beach 3 dissection

light o. in 2 m band
oiled focus with a stream

Pocke beach 4 dissection

Pocke beach - some tar/pavement road
+ 1 m 2 m band beach light/mod oiling
4 m band with a 4 m x 2 m section
moderate oiling with some pooling 2-3 m
oil along of gravel in storm berm + in
small mound light/mod oil focus
Located in town at

Finished 12:05

Photo 12 N end CV4 facing

5) N end Segment next to mouth
of cross hidden bay, but boulder
w/ moderate oiling/tar some pooling
pooling 10 m band

ACE 7237059

ACE 7237060

ECOLOGICAL EVALUATION

Patty Crank (B)
Mike Foget (C)
Bob Belts (Arche)

LOCATION: Culross Island SITE: on East shore of Culross
South of Hidden Beach OBSERVER: Bob Belts (Arche)

LOCATION PREFIX: CU SEG. NO.: CU 14 LENGTH: 2400 (M)

DATE: 6/6/89 TIME (HHMM): 0930 TIDE HT.: LOW (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

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

Low population with moderate to dense concentrations

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

Frequent dense patches, noticeable on rocky headland south of beach

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

Dominant from exposed

Littorina

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

Low population with moderate to dense concentrations

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

Low population with moderate to dense concentrations

OTHER OBSERVATIONS: several small crabs seen near LITZ

several small crabs seen near LITZ

CLEANUP PRECAUTIONS: no cleanup required

no cleanup required

MAMMALS: Otters — Harbor Seals — Sea Lions — Whales —
Other —

BIRDS: 2 Murrelets

GENERAL OBSERVATIONS: beach is very quiet

(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

SECOAST CULROSS SOUTH OF

Date 6-6-89 Location CULROSS ISLAND Site HIDDEN BAY

Location Prefix CLL Segment # 14 Length 2400 M

Survey Method:

Air _____ (A - indicate on map) Boat X (95%) (A - indicate on map)

Ground X (5%) (G - indicate on map)

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

Oil conditions/beach visibility light oiling - discontinuous - good beach visibility

Width of beach zone surveyed 10-15 m Tree fringe surveyed 10 M

Cultural resources observed in beach zone (AHRS code) NONE

Cultural resources observed in tree fringe (AHRS code) NONE

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

Shore Profile 95% Vertical or high angle rock - 2 pocket beaches, cobbles and boulder beaches

Fresh Water Sources Beach #2 has a small creek - Several very small creeks along segment

Sea Exposure highly exposed coastline - coves offer little protection

Access/Safety Safe access by boat only in calm seas. Numerous rocks and shoals off

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

Monitoring during cleanup needed yes (no) Collection yes (no)

Photos: Color Roll # NONE Frames _____

B/W Roll # NONE Frames _____

Observer(s) Bob Bitt

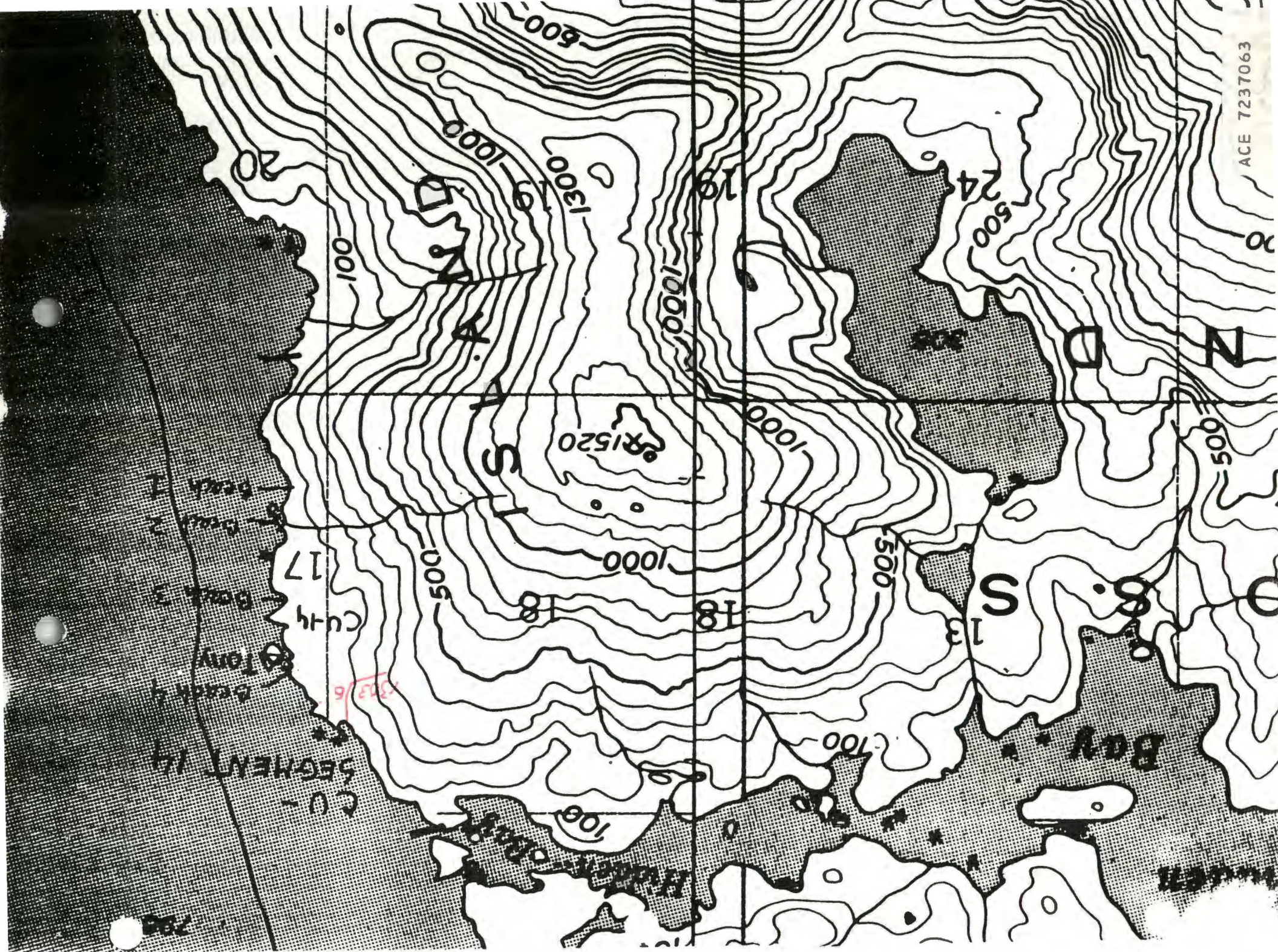
Time survey started C939 Time survey ended 1027

Cultural resource considerations/restraints:

Standard Statement. No Archaeology monitor

required.

ACE 7237062



CU-14

EXXON COMPANY, U.S.A.

POST OFFICE BOX 670 • VALDEZ, ALASKA 99686-0670

O R HARRISON
GENERAL MANAGER

July 6, 1989

Prince William Sound Salmon Harvest Task Force
P. O. Box 1351
Cordova, Alaska 99574

RE: CULROSS ISLAND OILING

ATTN: Floyd Hutchins (PWSSA)
James Brady (ADFG)

We have given careful consideration to your June 30 letter requesting that the lightly oiled shoreline areas between Culross Light and Hidden Bay be treated prior to the Esther Hatchery Pink Salmon run in late July.

We dispatched a team to resurvey the oiled areas in question and have attached their report which is self explanatory. Given the findings of this survey and the commitment of facilities and personnel to heavily oiled high priority areas defined by the Shoreline Committee, we don't believe that redeployment of resources to clean Culross Island at this time is appropriate.

Also, even though no loose oiled debris such as popweed was found, the popweed retrieval and a cleanup operation, operating out of West Twin Bay on Perry Island, is routinely patrolling Perry Passage to keep it clear of oily debris.

Sincerely,

HC Williams
for ORH

ORH/mm/522

cc: R. L. Mastracchio
W. L. Rainey
A. Teal
M. N. Silbert

June 30, 1989

Otto Harrison
General Manager
Exxon Company USA
P.O. Box 670
Valdez Ak. 99686-0670

Dear Otto,

The P.W.S.S.H.T.F. strongly recommends that Exxon immediately begin cleaning areas in the Perry Passage area that under our interpretation of zero tolerance do not meet the criteria for being clean. There are several small areas of light oiling between Culross Lt. and Hidden Bay that if cleaned would lessen the potential conflicts between gear types in the Esther Subdistrict. We feel that your immediate attention to this problem could justify some extension of the Purse Seine area and lessen these conflicts. We also feel that time is of the essence as these conflicts will arise during the forecast 10 million pink salmon return to the Esther Hatchery starting in late July.

Blayne J. Hotaling President P.W.S.S.A.
James A. Brady Area Biol. - A.D.F.G.
H. James Hurl Gillnetter
R.M. Dwyer P.W.S.S.A.
Malcolm Brown Trawl - P.W.S.
Kathy Halgren
Ken C. Lane COFV
Jimmy McCune President Cedar Net Fishermen United
Stuart L. Dool Gillnetter

Survey of CU-14

The area was also lightly to moderately oiled and consisted of extremely rocky headlands with a pocket beach. There was evidence of prior oil contamination but no free oil was found. All the oil seen was extremely weathered and located above the supra tide line. Cleanup activities are not warranted for this area. Figure 3 notes the area surveyed.

General Observations

1. The Scat Team reports were generally accurate with the exception that the cleanup recommendations were not warranted.
2. There are no signs of any free oil on the water.
3. All the oil present on the shoreline is located at the supra tide line indicating that the oil was deposited during a spring high tide.
4. The oil was extremely weathered and generally located in crevices and underneath rocks. There were no indications of any subsurface oil. No oiled fucus was observed.
5. The oil observed is not mobile and should not pose any hazard to the fishery. It is also unlikely that any further impact on wildlife can be measured.
6. Due to the nature of these areas, cleanup would be difficult and pose numerous safety hazards. Additionally, passive cleanup would do little to remove any oil and warm water washing would contaminate areas below the supra tide line.

FIGURE 1
Area MAP

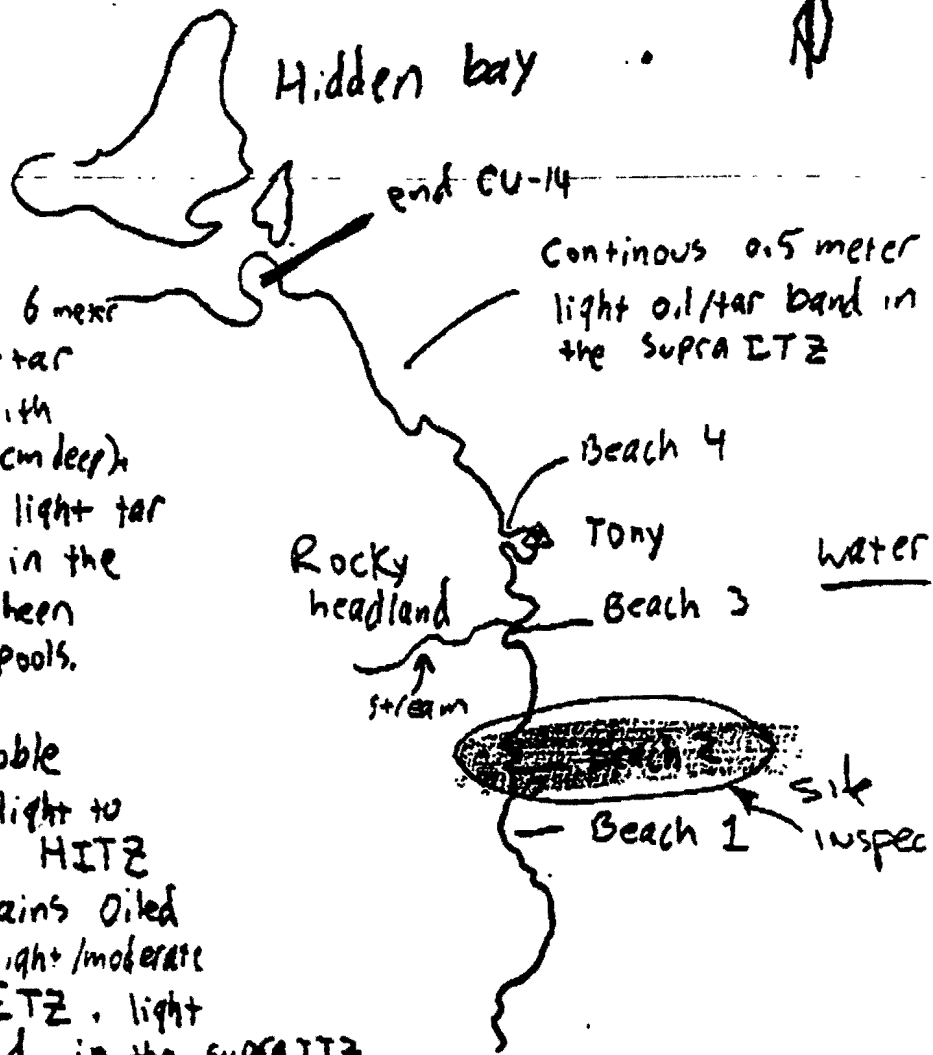


Culross Is.
Team #4

CV-14
Mike Foget

6/6/84

map 1



1) Pocket Boulder cobble beach with discontinuous 6 meter band of light to moderate oiling - tar in the upper HITZ with some localized pooling (3cm deep). A continuous 0.5 meter light tar band on the rock face in the Supra ITZ, some oil sheen observed in HITZ tide pools.

2) Small boulder / Cobble pocket beach with light to moderate oiling in the HITZ. North end of beach contains oiled seaweed (fucus) and light/moderate tarring in the high ITZ. light oil 0.5 meter oil band in the supra ITZ... on the rock face.

3) Discontinuous light oiling in the supra ITZ and some oiled fucus.

4) Pocket cobble / gravel beach with some tar / asphalt balls in the supra ITZ. North end of beach contains light to moderate tar - c in a 14 meter wide band. North end also contains a 20m x 4m area with moderate oiling and some pooling (3cm deep). Gravel storm ber. in the supra ITZ is lightly oiled with a small amount of light / oiled drift fucus (seaweed).

ADF&G MULTI-ASSESSMENT DATA FORM

- 1) SURVEY TYPE: BS SS 2) REGION: PWS KP, CI K, AP
- 3) METHOD: Aerial Ground Boat
- 4) DATE: 5/14/91 16) HIGH TIDE TIME: _____ 22) TEAM RECORDER: Tom Ceowe
- 5) START TIME: 1700 17) HIGH TIDE HTS: _____ 23) OBSERVERS: _____
- 6) STOP TIME: 1746 18) LOW TIDE TIMES: 2000 24) AGENCY: ADF&G
- 7) SEGMENT #: CW14A 19) LOW TIDE HTS: +2 25) PHOTOS TAKEN: Y N
- 8) K-UNIT: _____ 20) TIDE HT AT SURVEY: +2.5 to +5 ROLL #: _____ FRAMES: _____
- 9) LAT: _____ Ebb Slack Flood Slack 26) VIDEO TAKEN: Y N
- 10) LONG: _____ 21) USCG QUAD: _____ TAPE #: _____
- 11) ASC #: 224-20-13036 START: _____ STOP: _____
- 12) STREAM NAME: _____ 27) SAMPLES TAKEN? Y N
- 13) LOCATION: CULEBBS IS EAST SIDE SAMPLE I.D. _____
- 14) WAVE EXPOSURE: High Moderate Low _____
- 15) SHORELINE TYPE: Headland Low-lying Rocks Beach _____
- Cove Lagoon Marsh _____

28) EXTENT OF OIL

	LENGTH m	WIDTH m	M2	%	THICK cm	PEN cm	OIL TYPE
SITE 1	<u>20</u>	<u>1</u>		<u><1</u>	<u>5 cm</u>		<u>AP</u>
SITE 2	<u>2</u>	<u>2</u>		<u><1</u>	<u>5 cm</u>		<u>AP</u>
SITE 3					<u>2 cm</u>	<u>2 cm</u>	<u>TR/LOR</u>
SITE 4							
SITE 5							

- 29) OVERALL OIL IMPACT:
- H = >6m band with $\geq 50\%$ oil coverage
- M = >6m band with $\leq 50\%$ oil coverage or $\geq 3m$ to $\leq 6m$ with $\geq 10\%$ oil coverage
- L = <3m band with $> 10\%$ oil coverage
- VI = $\leq 10\%$ oil coverage regardless of band width
- N = No oil observed
- 30) OIL IN STREAMBED: Y N
- 31) OIL ON BEACH ADJACENT TO MOUTH: Y N
- 32) SUBSTRATE TYPE (PERCENT):
- Bedrock 10 Boulder 10 Gravel 80 Sand _____ Cobble _____ Mud/Silt _____
- 33) ANADROMOUS FISH PRESENT: Y N
- 34) WILDLIFE OBSERVATION
- Species _____ Number _____
- JUVENILE SALMON FRY
- MILLING AT TIDE POOL
- AND MOUTH OF STREAM
- VISIBILITY WAS POOR AND
- A COUNT WAS NOT POSSIBLE
- 35) COMMENTS: VERY LITTLE OILING LEFT AT THIS SITE. ALL
- VISIBLE AP/SUR WAS REMOVED DURING SURVEY. N/T RECOMMENDED
- EAGLE NESTING AREA IN CLOSE PROXIMITY TO STREAM. ALSO SALMON
- FRY WERE OBSERVED MILLING IN SHALLOW PROTECTED AREAS IN THIS
- COVE.

36) PHOTOLOG

FRAME(S)

DESCRIPTION

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

A:EDDATEC
 April 3, 1997

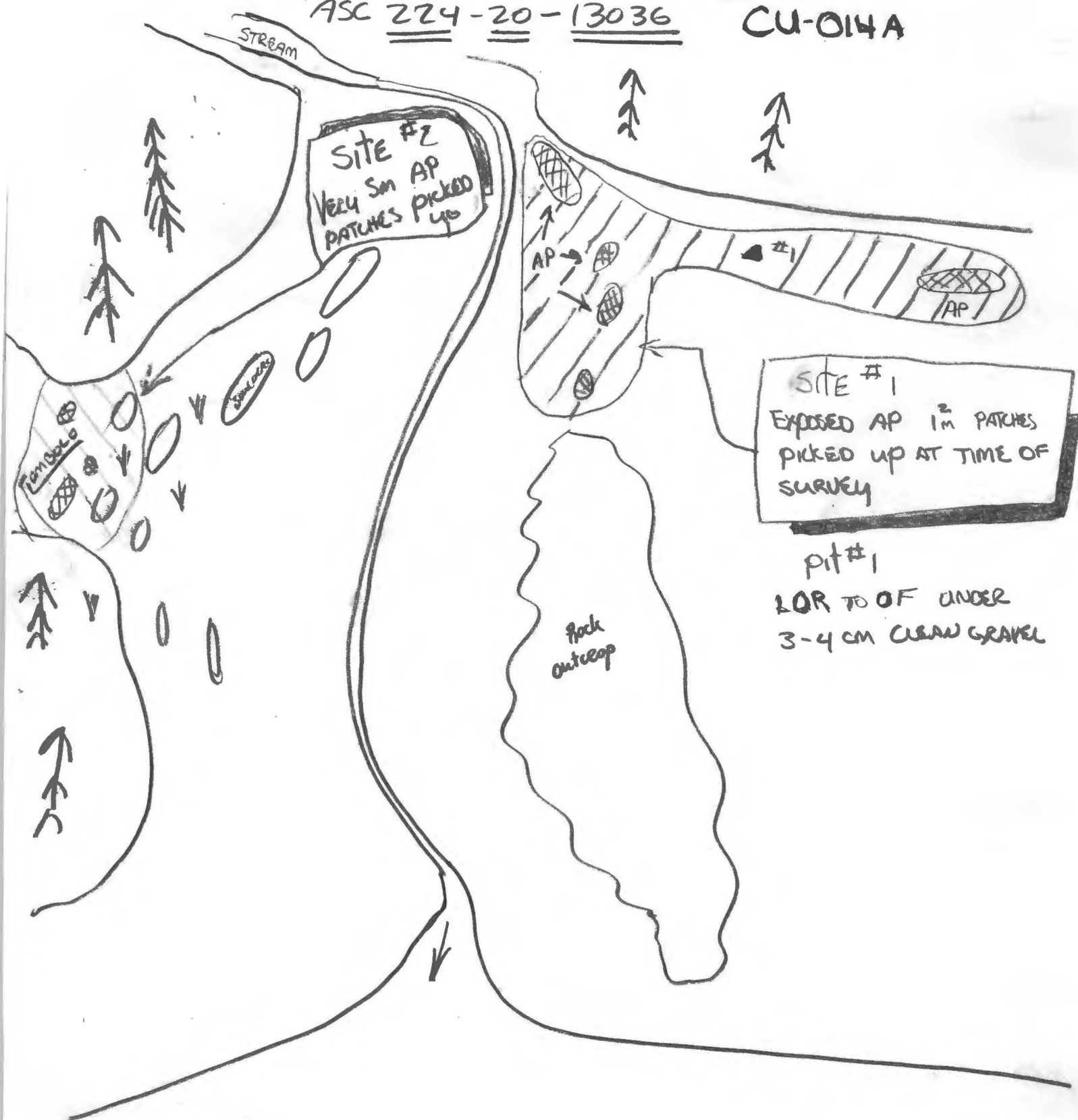
5/14/90

CULROSS IS

MAY SAP

ASC 224-20-13036

CU-014A



MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 2

TEAM NO. 1

OG G. MACDONALD

BIO M. FAWCETT

SEGMENT CU-14

ADEC J. G. HAWAS

LANDMANAGER M. HALL for DNR

SUBDIVISION A

EXXON R. BOYER

USCG/NOAA SCHULTZ/CHINA

DATE 5 / 14 / 91

TIME 17:15 to 19:45

TIDE LEVEL +6.2 ft. to +2.0 ft.

ENERGY LEVEL: ☐ H ☒ M ☒ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: ~1100 m

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

EST. OIL CATEGORY LENGTH: W 1 m M 30 m N 1 m VL 310 m NO ~750 m US ~1200 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE V H M L	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A				T							PC	L	1	100		X			after PU. 10 SOR
B1		S											1/2	1	X				interstices
B2				S							BCV	L	5	10	X				
C1						S					RV	M	1/2	3	X				on log
C2						T					RB	H	5	10		X			
C3		T									R	H	0.1	0.1	X				
I		S				S	T				BGR	H	1 1/2	65	X	X			surveyed 5.15.91
D			T			T					RB	H	1	50		X			
E				T		T					CPB	M	8	5	X	X	X		10 SOR
F1		B									CPG	L	5	20		X			
F2		P		P		P					RBC	M	3	10	X	X			hi sol
G		S									CPB	M	1	6					partly treated - PU
H				S		T					RBC	H	6	15	X	X			hi sol

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

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

PHOTO ROLL # MAYSAP-

1 - 22 FRAMES 17-25

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	15				X				10-12	Y	-			X			CG-GPMV	
2	15						X		10-13	Y	-			X			" "	
3	20						X		12-15	Y	-			X			PCB-GPM	
4	15							X	-		-				X		BC-GC	
5	15							X	-		-			X			PC-GP	
6	15						X		8-10	Y	-			X			CP-GPMV	
7	12							X	-		-			X			BC-GCP	
8	10							X	-		-			X			" "	
9	15							X	-		10	N				X	BC-PG	

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

OG COMMENTS:

Steep rocky shore w/ some coarse-grained beaches on breacher in the rock wall. Two ANAD. fish streams were surveyed w/ TOM CRAWLE - ADFSG. Sketches 1 & 2 show remnant low SOR & traces of CT & MS associated w/ post AL. A thin, sporadic layer of subsurface cl

SEGMENT

CV-14

SUBDIVISION

A

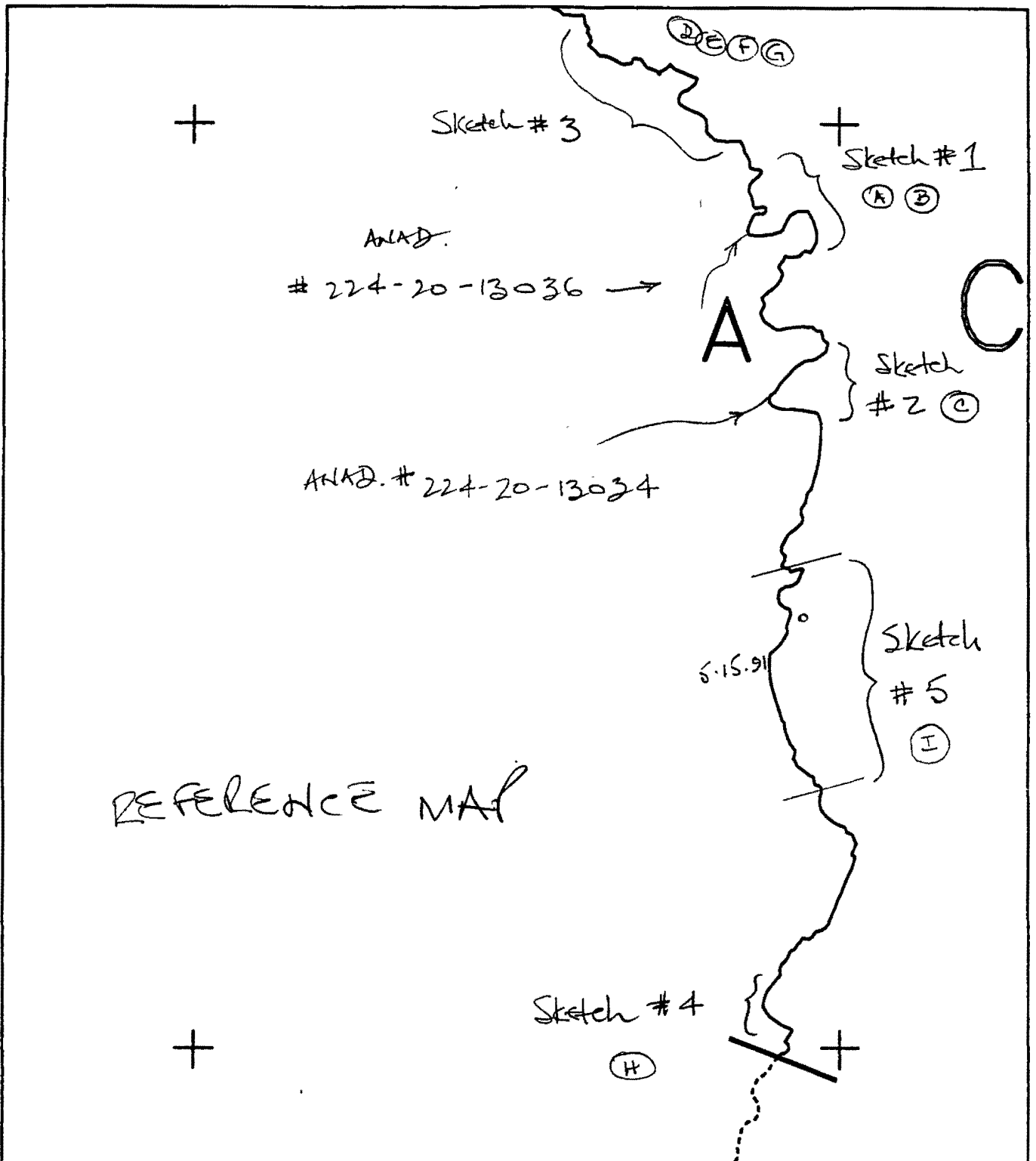
DATE 5 / 14 / 91

OG COMMENTS: remains on N end @ sketch 1 stream (-13036),
trapped under PG, over a Ppeat layer.
Oil locations for remaining sites were poorly located by SSAT '90
& subsequent visits by ASAT '90 missed 2 out of 3 oiled sites.
Sketch #3 illustrates oiling identified by SSAT '90 survey sketch.
MS & hi sor bands to 20 m long, under CB armor typifying
these sites.
Sketch #4 illustrates remnant oiling @ rocky pocket, thought
to be location of pooled oil (SSAT '90); Boyer confirmed
that site lying ~ 1/4 mile N. - surveyed 5.18.91.
Sketch #5 illustrates site of 5.15: it had MS/I under massive B
and some associated CT.

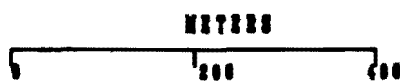
[illegible]

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

2



CU014 A



AK State Plane Zone 4
published

Subdivision Field Map

Map Key: PVSCU014Aa

Name: GM

Date: 5.14.91

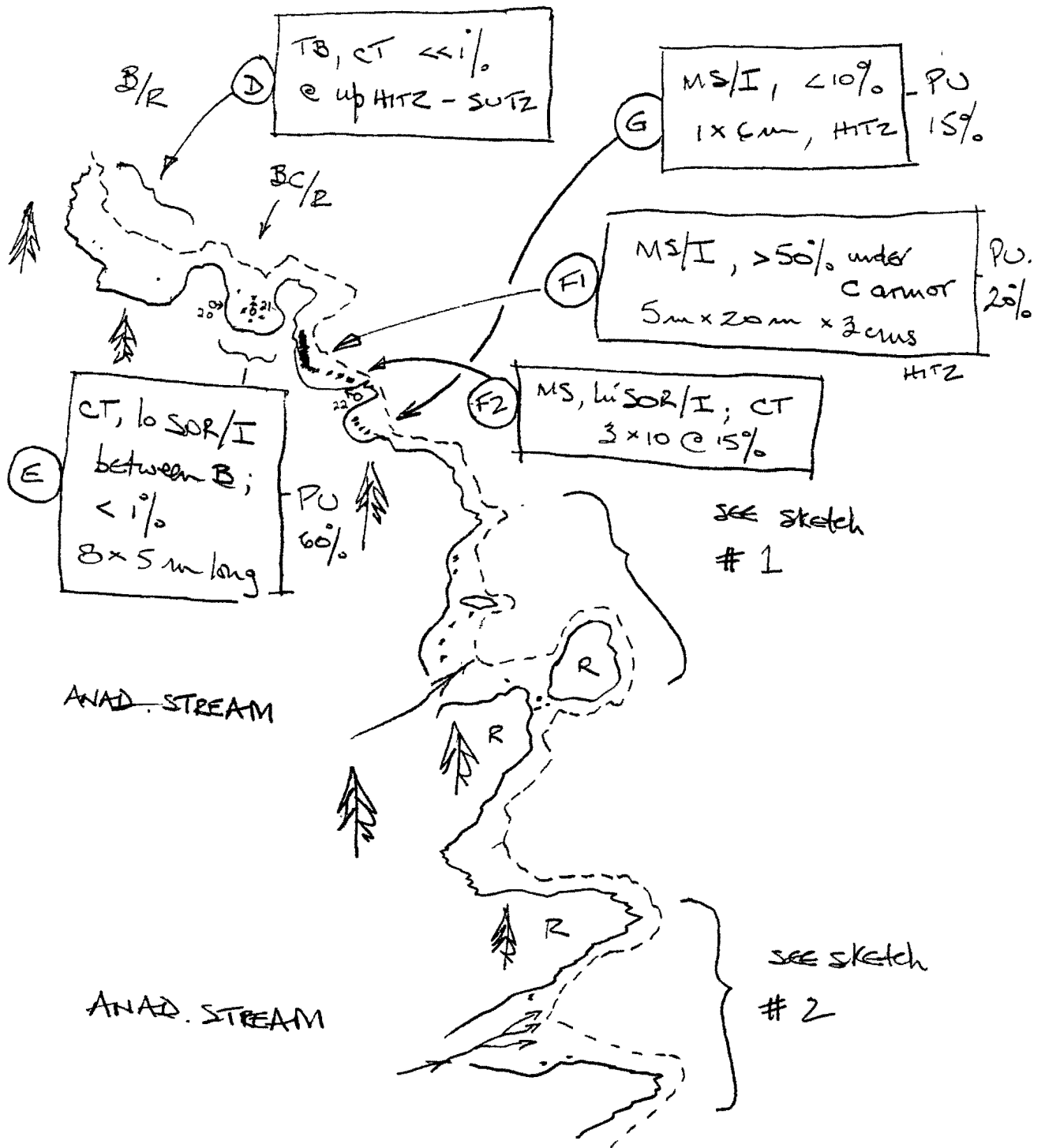
CU-14 A

Sketch #3

G. MACDONALD

5-14-91

approx.
0 100m



H-V. R. c1975

(H)

hi sor/I, biodegraded in part
below & between B. <3%
CT/T on R, B. <1%
6m x 15m

massive B
over R

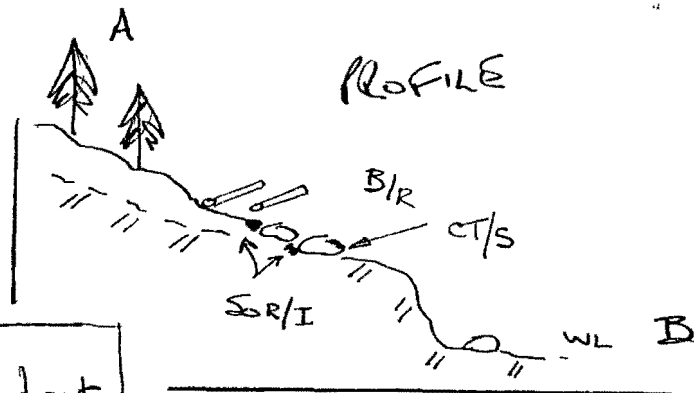
Bedrock bench
w/ massive B.

CU-14A
G. MACDONALD
S. 14.91

Sketch #4

0 20 m
approx.

PROFILE

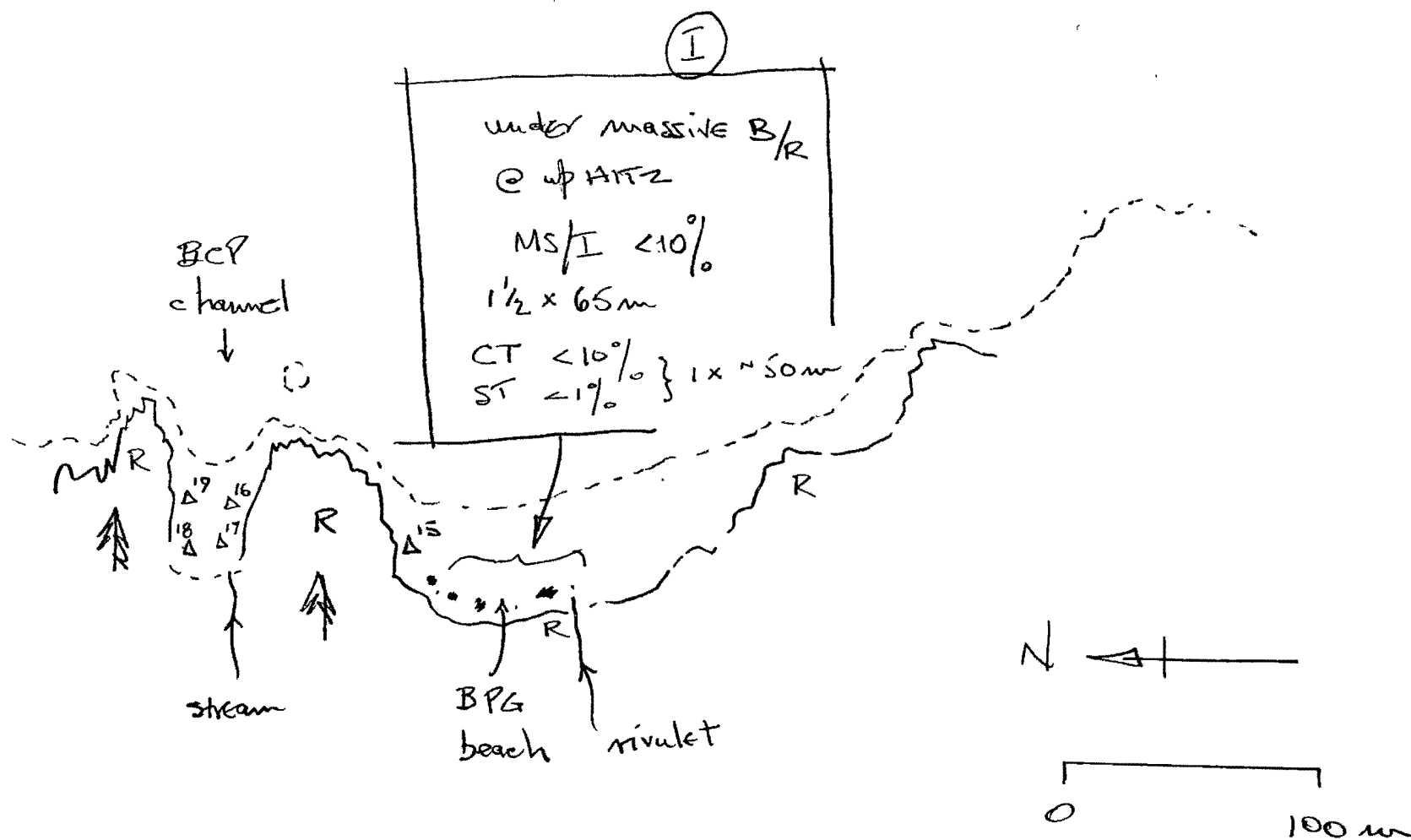


CU-14A

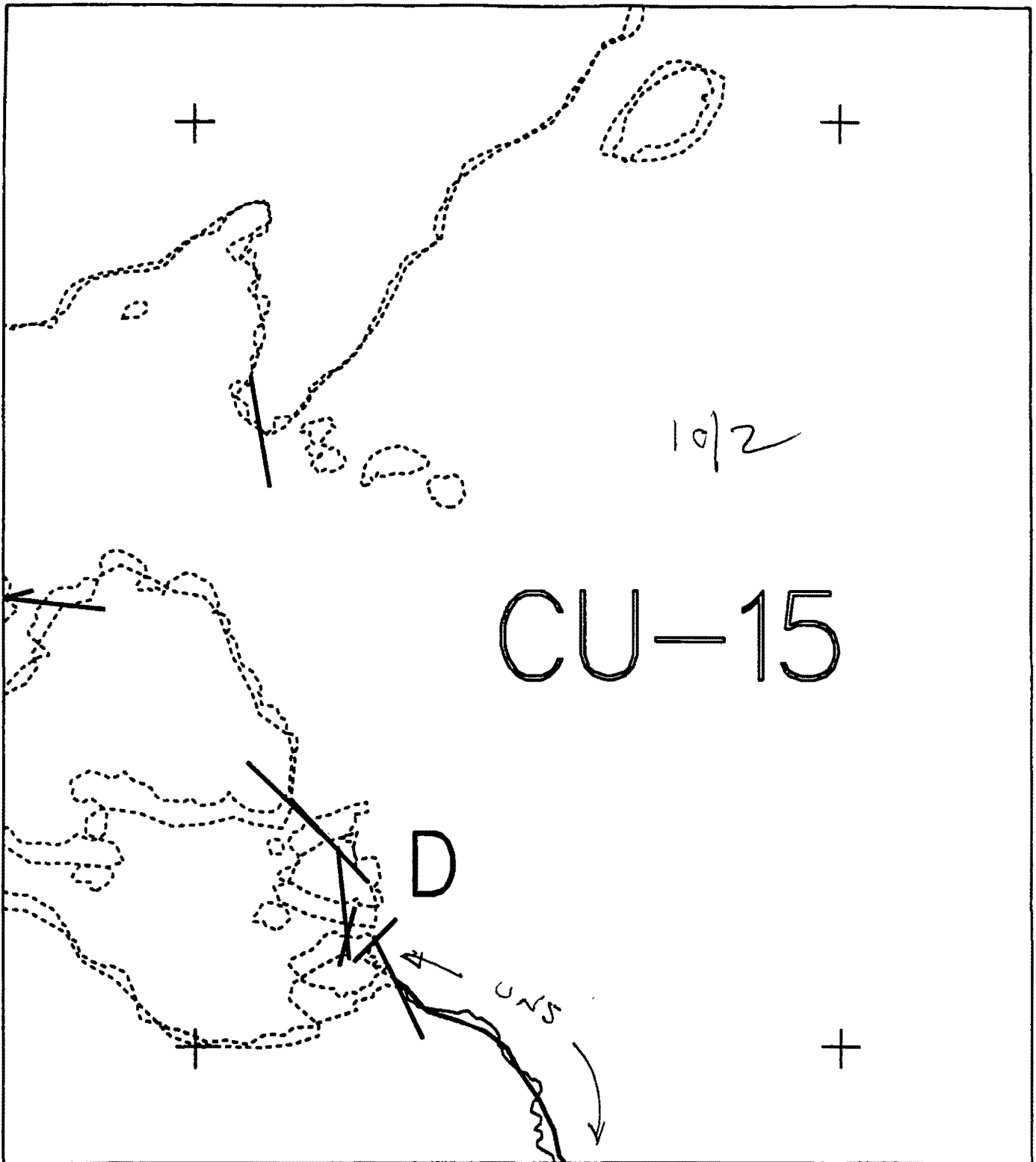
G. MACDONALD

5.15.91

Sketch #5.



11.45 - 12.15 H28
+ 4.0' - + 5 1/2' tide



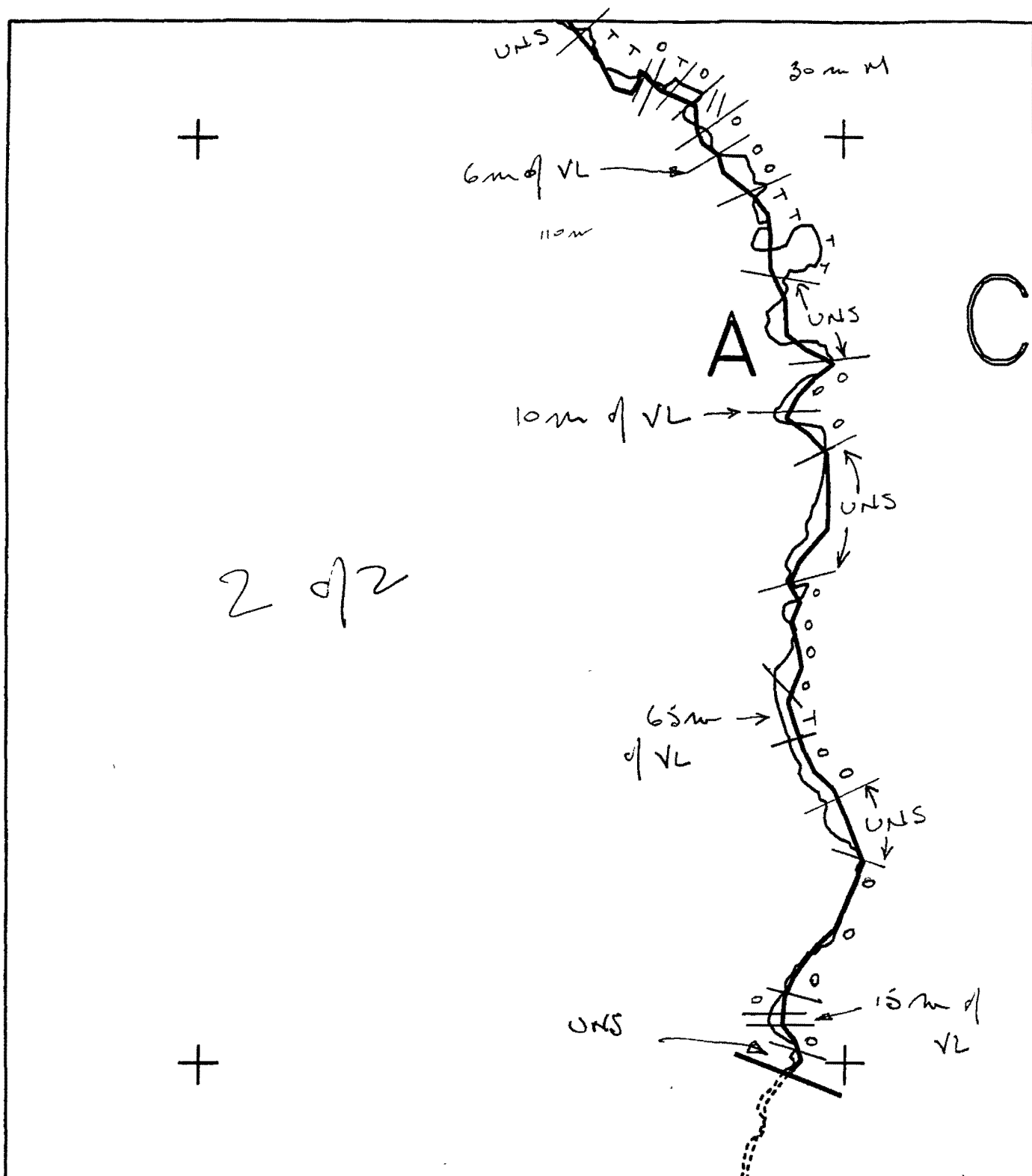
XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

CU014 A
 ADEC Subsegment Length: 2293m
 METERS

0 200 400
 AK State Plane Zone 4
 pcu014ab



Subdivision Field Map
 Map Key: PWSCU014Ab
 Name: GM
 Date: 5-15-91
 Data Entered:

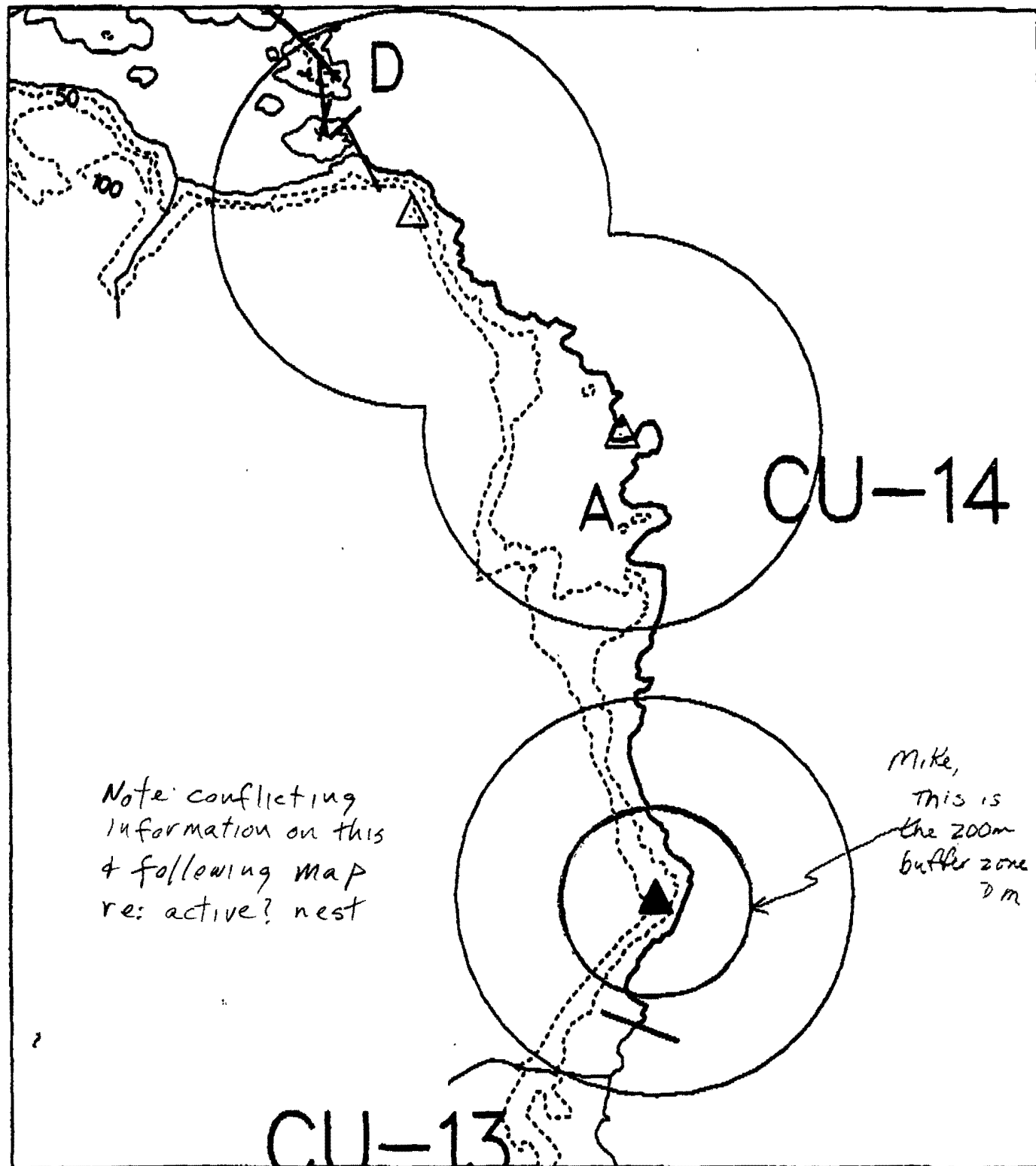


XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

CU014 A
 ADEC Subsegment Length: 2293m
 METERS
 0 200 400
 AK State Plane Zone 4
 psu014aa



Subdivision Field Map
 Map Key: PWSCU014Aa
 Name: GM
 Date: 5-15-91
 Data Entered:



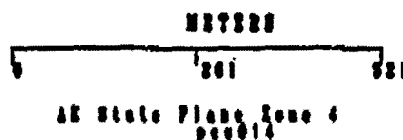
Note: conflicting
information on this
& following map
re: active? nest

Mike,
This is
the 200m
buffer zone
7m

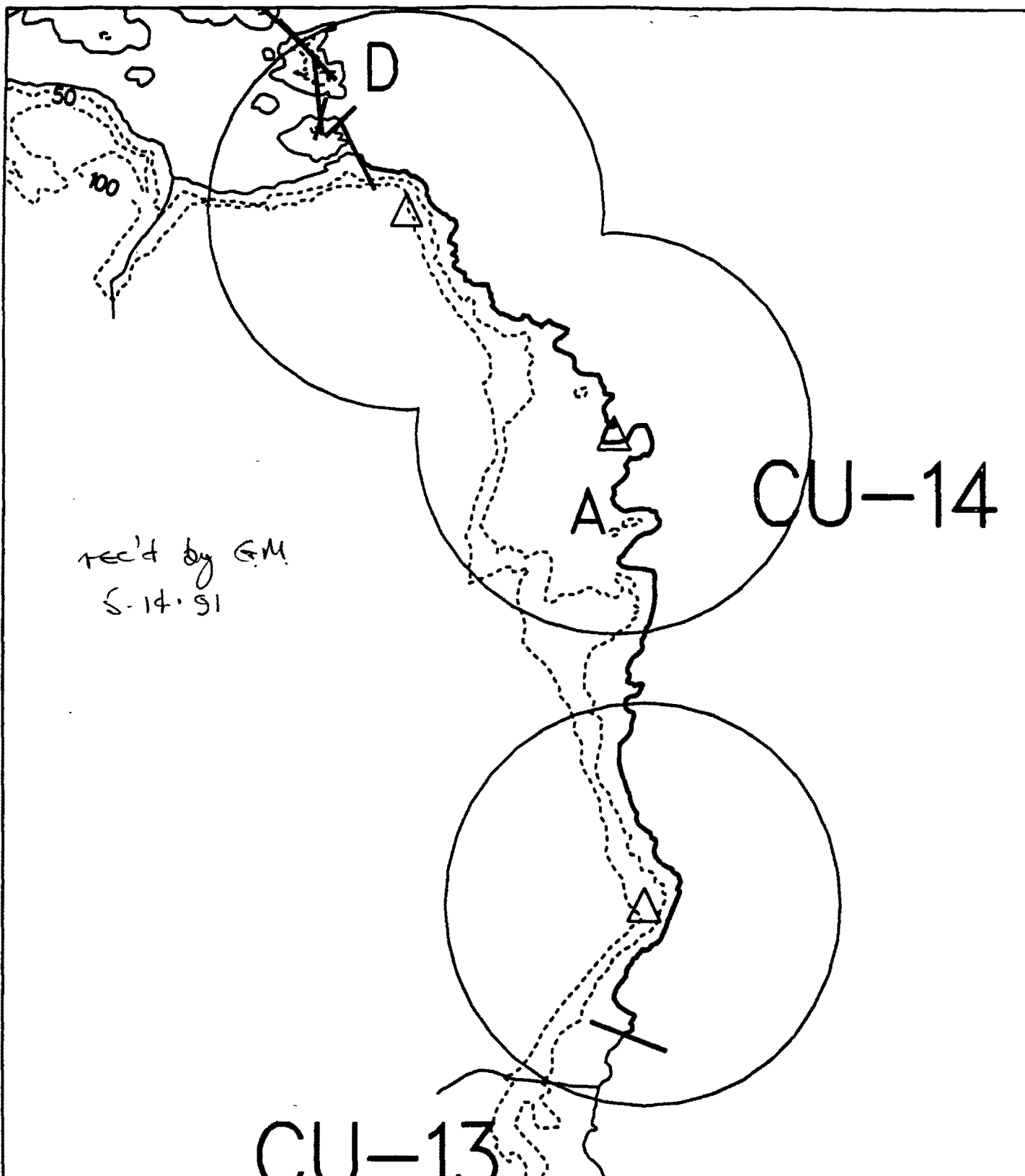
CU-13

CU014

Segment Reference Map
Map Key: PV8CU014

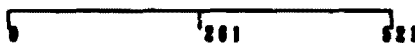


EAGLE NEST



CU014

METERS



AK State Plane Zone 4
psu014

Segment Reference Map
Map Key: PWSCU014



EAGLE NEST

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 1

DATE 14 & 15 May 91

SEGMENT # CV 014

TIDAL HEIGHT(Range) 2.0-+7ft, 3.0-4.2 ft

SUBDIVISION A

BIOLOGIST Michael Fawcett

SEA STATE 1 ft swell

WIND SPEED/DIRECTION NE 10-15 knots

PHOTOGRAPHS: ROLL #

FRAME #

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

Completed anadromous stream sites and two other sites with Tom Crowe (ADF&G monitor) on May 14; returned May 15 to survey 5th site (Sketch #5). See sketches 1-5 for descriptions of biota near each oiled site. Salmon fry were observed in the intertidal zone near the mouth of the smaller stream (#224-20-13034). SOR & CT Typically found in VTZ-SUTZ areas at +10-12ft MLLW, above most biota except lichen, limpets, Amphipods & oligochaete worms. MTZ areas below oil typically have dense Rockweed and barnacle spat, and variable densities of littorinids, mussels, limpets, Rhodomele, etc. Whelks (*Nucella emarginata*) are abundant in MTZ-LTZ throughout the subdivision, *N. lamellosa* sparse.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	Salmon fry
Seabirds			black prickleback
Waterfowl			
Gulls/Kittiwakes	1 (G-W Gull)	3	
Shorebirds			
Corvids			
Other Birds			

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

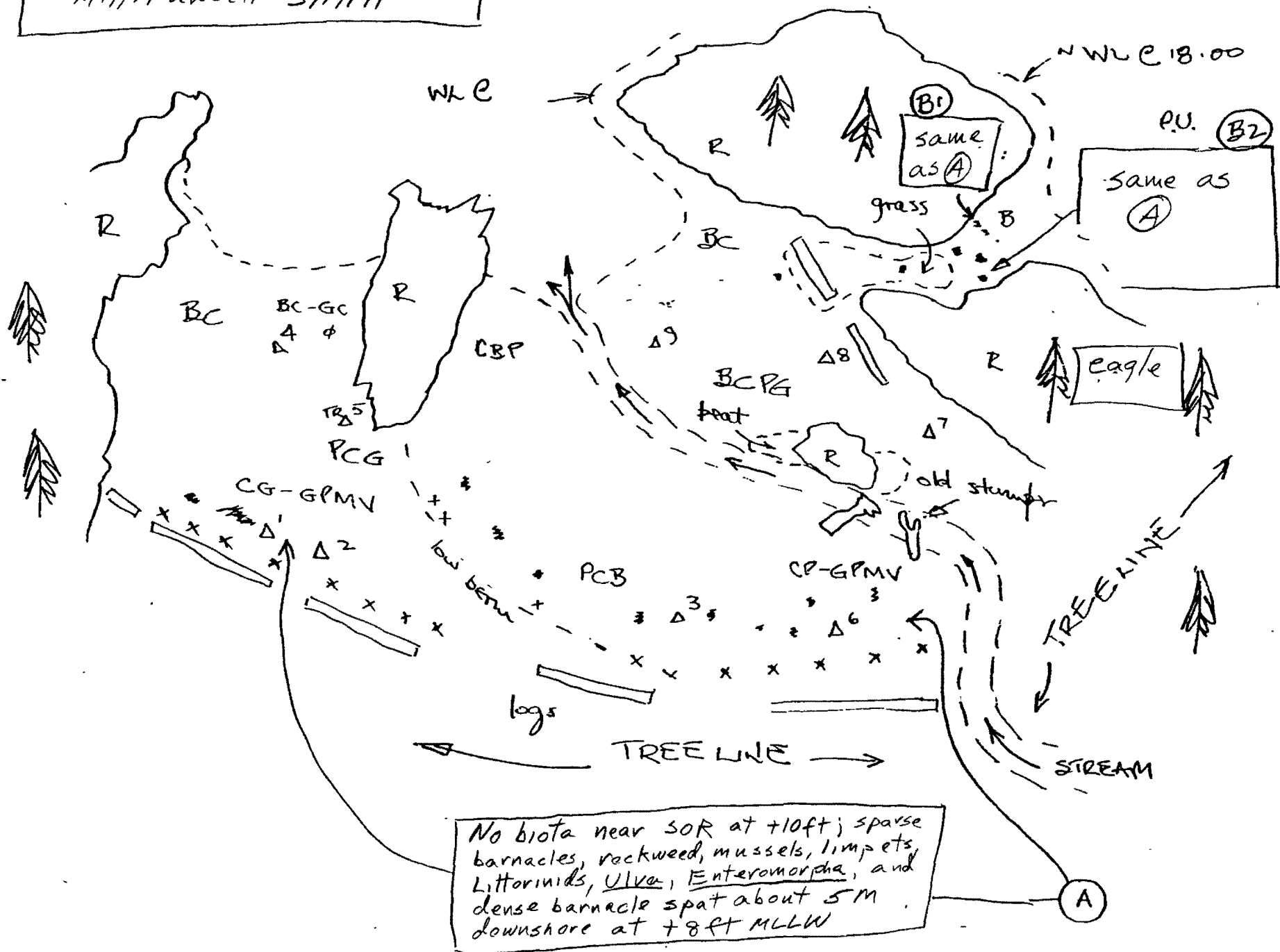
Shoreline subdivision map showing important biological features attached.

CU 014A
Bio Sketch Map
ASC # 2242013036
M.H. Fawcett 5/14/91



Sketch #1

14



2 

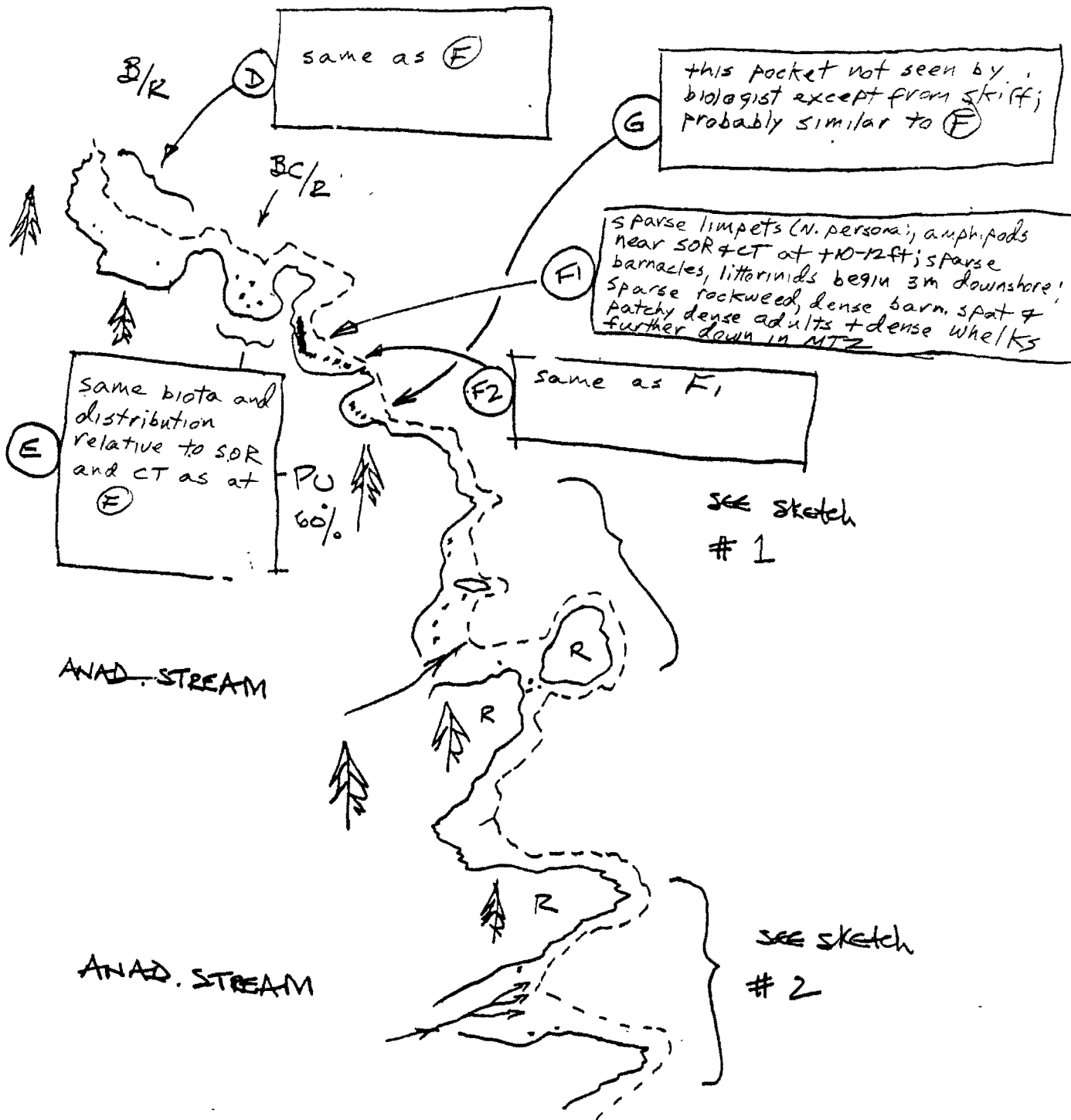
0 10 m
approx.



BIO. sketch Map
CU-14 A
14 May 91
M. Fawcett

Sketch #3

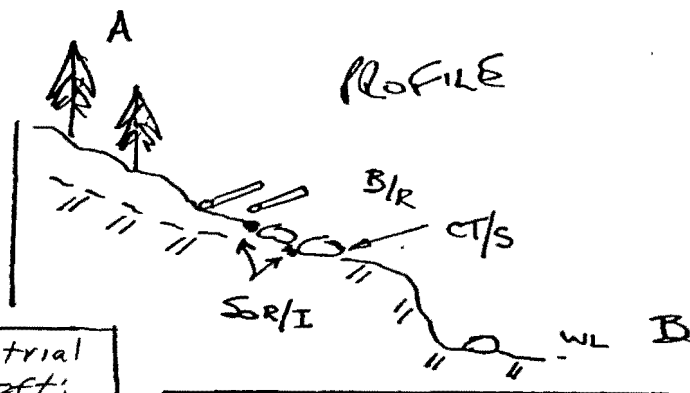
approx.
0 100m



H-V. R clefts

(H)

No biota except lichen, terrestrial grass near SOR + CT at 10-12ft;
Tidepools 2m downshore with dense littorinids, plus hermit crabs, and coralline algae; rockweed, limpets, littorinids, sparse barnacles around pools on BR; LTZ-MTZ tidepools with typical diverse biota



massive B
over R

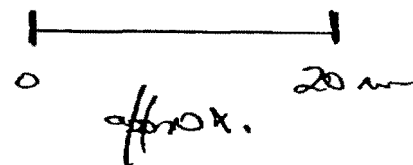
steep
R

Beach bench

w/ massive B

Sketch #4

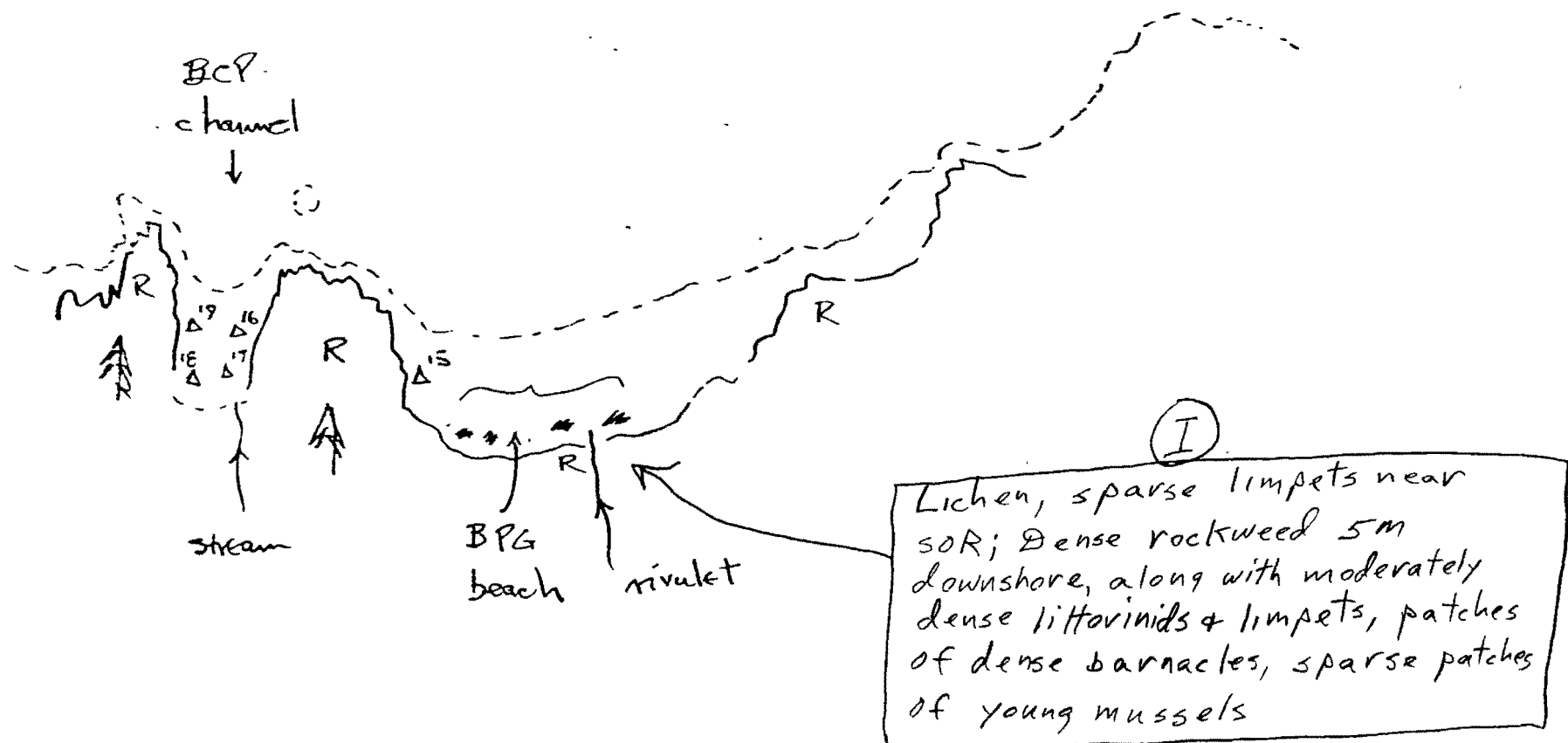
Bio Sketch Map
CU 14A, 14 May 91
M.H. Fawcett



BIO Sketch Map
CU-14A
15 May 91
M. Fawcett

Sketch #5.

81

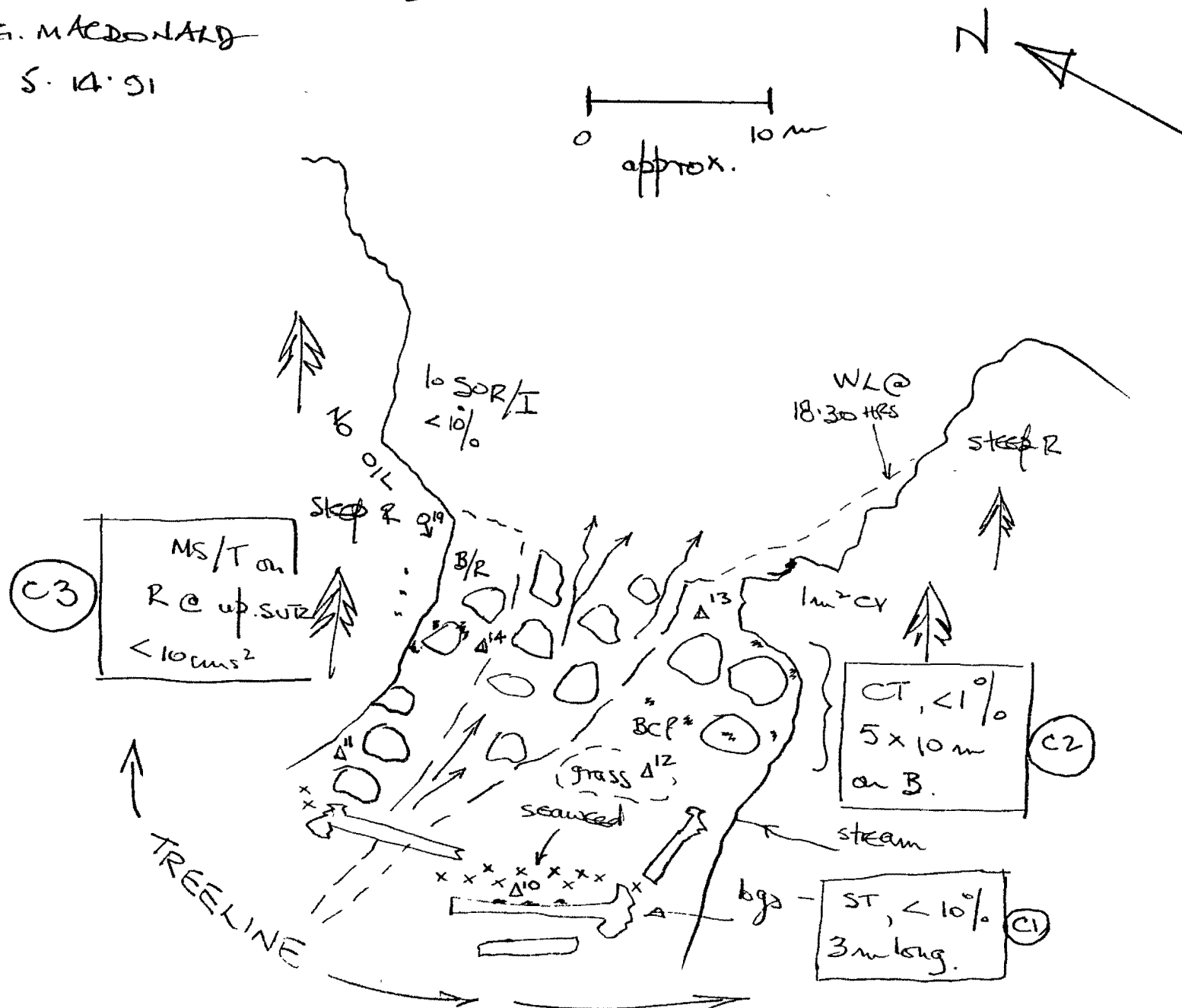


ASC # 2242013034

Sketch # 2

G. MACDONALD

S. 14.91



CU 14A Arr 1715 Fawcett
5/14/91 wind NE 5-10, rain

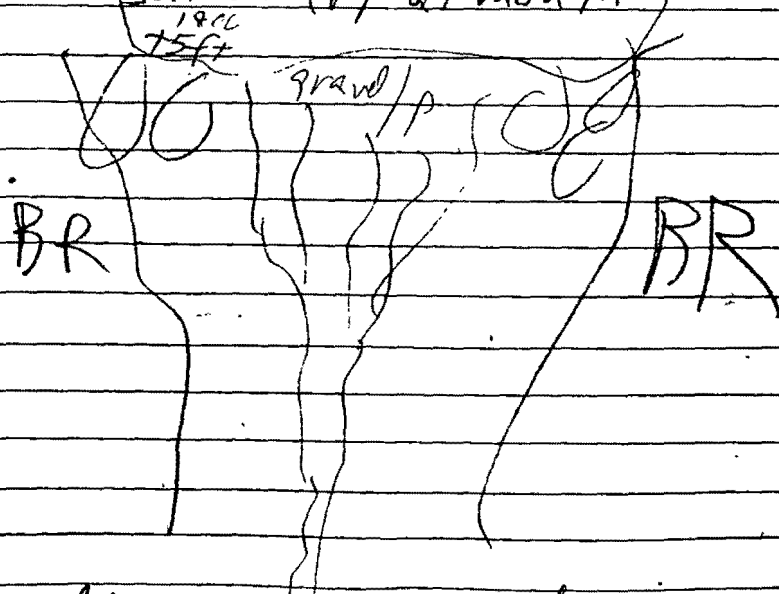
Sub A / PINK salmon stream
1 eagle flew over
1 gull

Site 1800 hrs

- smaller tan stream (a)
sleep shore, no

5 paces road + 4-8 ft on boulders
& BR - very dense barn, which
no birds in stream

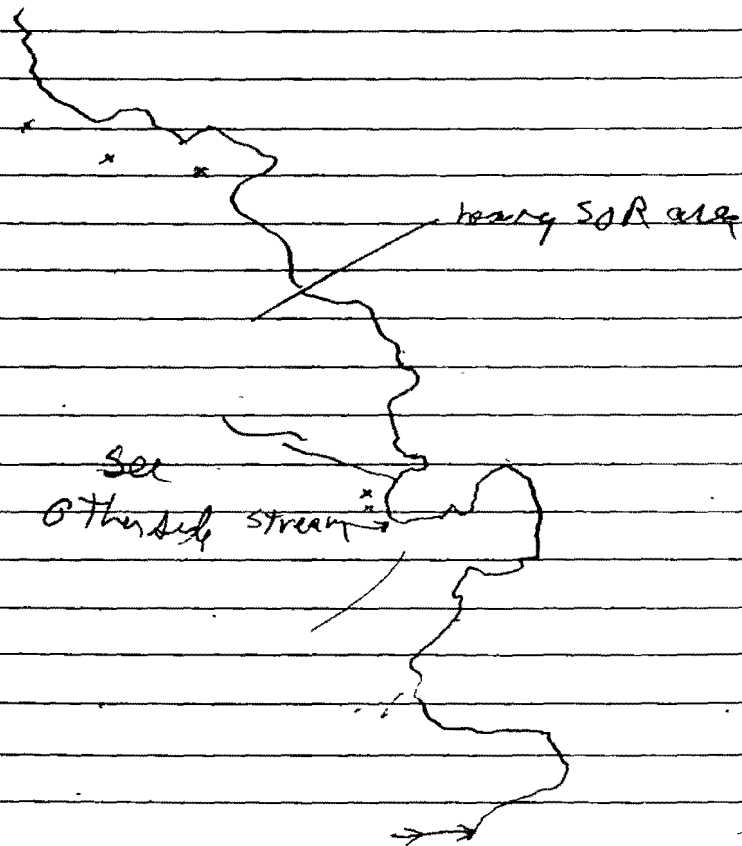
- salmon fry at mouth



depart 1820, went north

CU 14A

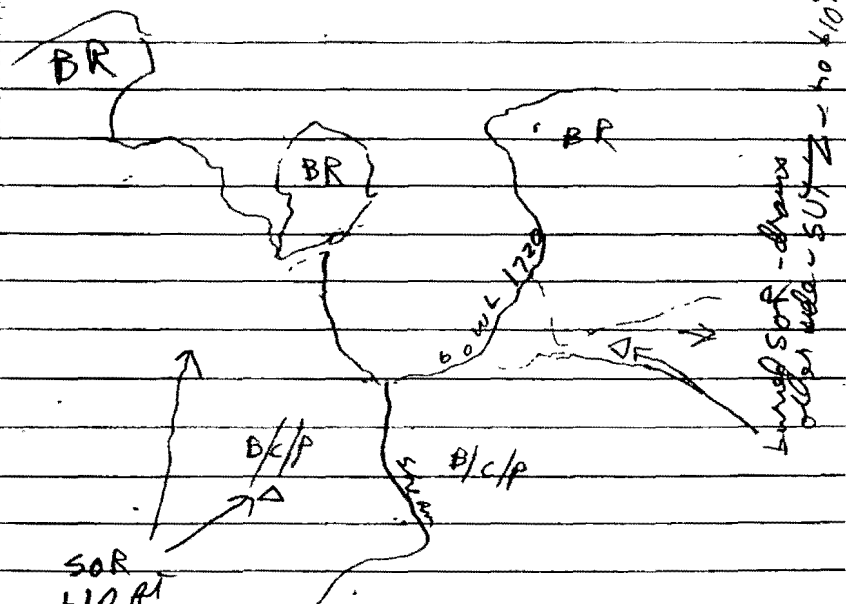
N
↑



over →

CU 14a (cont) 5/14/91 Fawcett

Site (A) 1715



SOR
+10 ft

no biola

spare barn, limf, litt, ulva, Entero
moss, Fucus downshore - also dense spa +
5m at +8 ft

14 May (cont)

site C - no SOR

plates SOR + CT UTZ +10-14 ft in
lee of outcrop - B/C/P - no biola
near upper end in SUTZ, but
sparse Fucus & limps near
SOR (picked up) at +10 ft,
dense Fucus, barn, fil. reds
whelks, etc downshore, sloping
2m below at +8-9 ft - walked
north to end of subdivision -
same rel. dist. of biola &
traces of CT at 10 ft -
of *N. lamellosa* breeding under
ledge at +3 ft. near end of segment

1900 hrs - nearest SOR side / see

Graham's map - 50% cover 14

UTZ - SUTZ +10-12 feet - only
biola are sparse *N. personi*, amph,
worms

- sparse barnacles, Litt begin 3m
downshore ~~more~~ sparse
Fucus further down at +4-5 ft
w/ dense barn spot, pale dense
corals, dense *N. lamellosa*
a few *N. lamellosa*

CU 14A (cont) 14 May, Fauget
12:30 hrs

last site, south end of
Segment - SOR, CT in VTZ-SUTZ
10-12 ft boulders above biota - 2m

down shore on BR bench are
pools w/ Litho, hermits, Litt
but sparse algae ^(too many Littorinids) mod
dense Fucus on BR around pools -
Litt, limp, sparse barn

- pools in LTZ-MTZ w/ rich
biota - very dense N among
all over the subdivision

* gulls

Finish 1945

15 May 91 Returned to CU 14A

11:45 hrs - area missed
yesterday -

- shallow B/c core - SOR SUTZ
in crevices of core - no biota except
sparse limp 5m down shore at ~8 ft - dense

Fucus - sparse barn (some dense
patches, mod Litt, limp,
sparse mussels

21
sparse Rhodo, Ulvospira, Ulva
LTZ - purple backs, breeding
Litt, dense spat

Band of SOR just at edge of ^{up}
N personae & Litt. - limpets
very dense (10-20 per boulder)
just below ord (+8-10 ft)

Finish 1215 hrs

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 1 SEGMENT CU 014 SUBDIVISION A DATE 05/14/91

ADEC

NAME JEFF GUALIAS SIGNATURE [Signature] Tom Crowe ADF16

☐ NTR ADFTG VERY LITTLE OILING REMAINING AT STREAM SITE 224-20-1303.
ALL REMAINING VISIBLE AP/SOR LING WAS PICKED UP AND REMOVED.
AT THE TIME OF THE SURVEY, RECOMMEND NO TREATMENT FOR THIS STREAM. ONLY
TRACE CV/CT DEPOSITS FOUND AT STREAM # 224-20-13034 IN BOULDER BEDROCK AREAS
TREATMENT HERE IS NOT RECOMMENDED.

☒ TREATMENT RECOMMENDED AT ON MAP SITES F₁, F₂, & G. MOUSSE/HIGH SOR LOCATED JUST BELOW SURFACE ARMOR. WILL REQUIRE MANUAL WORK, ROCK & ROLL BOULDERS. EASY ACCESS BY SKIFF. FULL CREW, ONE DAY. SITE LOOKS LIKE TREATMENT MISSED LAST YEAR, ALTHOUGH CUSTOMER OBSERVED IN OIL. AT HEAVY IMPACT AREA (F₁) OIL COVERAGE EXCEEDS 50% OF 5'x20' AREA
AREA IN VICINITY OF FISHING SETS, KAYAKERS (PER KEN MILLER, WHITTIER LOCAL RESIDENT)

EXXON

NAME RANDALL K. BOYER SIGNATURE [Signature]

☐ NTR AREA F₁, F₂ & G CONTAINED A BAND OF TREATABLE OILING
IN THE UPPER INTERTIDAL ZONE. IN THE SMALLER SEDIMENTS
AP CONSISTENCY OF 1m² PATCHES WERE PRESENT. THE SURVEY
TEAM DID NOT HAVE THE TIME TO PICK UP ALL THE TREATABLE OIL.
AREAS SURROUNDING THE ANADROMOUS FISH STREAMS LOOKED IN GOOD
SHAPE WITH NO FURTHER TREATMENT RECOMMENDED. IN AREA F₁,
F₂ AND G, I WOULD NOT RECOMMEND REMOVING THE BOULDER ARMOR TO ACCESS OIL.

LANDMANAGER

NAME MARSHA HALL OF DNR SIGNATURE [Signature]

☐ NTR ☒ Treatment Stream sites are fine.
MANUAL labor → remove surface cobble boulder
take out lens, leave treated area exposed for tide
come back in to put armor layer back at site
F₁. Manual removal of MS at location F₂ and G.
Attempted to remove oil at F₁ but too much there
for this team to deal with.

USCG/NOAA

NAME SCHULTZ / CHILDS SIGNATURE [Signature]

☐ NTR TREATABLE OILING EXISTED IN F₁-F₂-G (SEE MAP) AND SHOULD BE ADDRESSED
HOWEVER NO TREATMENT AT ANY OTHER LOCATION

High Angle BEDROCK OUTCROP SHORELINE W/ ISOLATED POCKET TRENCHES.
BEACHES CONSIST OF SUBANGULAR TO SUB-ROUNDED POORLY SORTED BCP'S - MUCH FINE
UNDERLAY BCP'S IN SEVERAL LOCATIONS TWO ANAD. STREAMS IN SUBDIV. OILING OBSERVED W/
TYPICAL REMINENTS - LOW SOR VERY DEGRADED, CT & AS IN PROTECTED SPOTS. A NON
CONTINUOUS LAYER OF SUBSURFACE OIL OBSERVED IN FULLY PART SITE "A".

ADEC DAILY SHORELINE ASSESSMENT (rvsc 4-15-91)

LOCATION CULROSS ISLAND SEGMENT CU 14 SUBSEG A
 DATE 06/03/91 TIME: Begin 0920 End 1450 SITE F & G
 WEATHER: Cloudy Rain Fog Snow (Sunny) Other _____
 MONITOR(S) DEBORAH HALTERS
 ENVIRONMENTAL CONSTRAINTS EAGLE NEST, ANADROMOUS
STREAM, FISH HARVEST AREA

DESCRIPTION OF TREATMENT SITE:

SHORE COMPOSITION

Surface sediments: R _____ % B 2 % C 85 % P 10 % G 3 % S _____ %

Subsurface sdmnts: R _____ % B 1 % C 55 % P 10 % G 14 % S 10 %

Wave Exposure: (Low Moderate High)

OIL CHARACTERISTICS Before Treatment

Surface: Mousse Tarball/Patty Pavement Cover Coat Stain

Subsurface: OP (HOR MOR LOR OF) Depth: _____ Thickness: _____

Across Tidal Zone: Low (Mid Upper) Supra

TREATMENT PERFORMED:

(MANUAL REMOVAL) Type: (MS TB AP SOR) OP OR OF

MANUAL RAKING MECHANICAL TILLING - WITH/WITHOUT TIDAL FLUSH

BERM RELOCATION (BIOREMEDIATION) granular 50 lbs Inipol _____ gal

OTHER _____

EQUIPMENT USED Shovels, Trowels

WORKERS ON SITE: # ORTS 10 OTHER 1 (Bill BALE - VECO SUPR)

OTHER REPRESENTATIVES: EXXON Jon CZYRNECKI

USCG KERWIN DREHER

OTHER _____

METHOD TO CONTAIN/COLLECT OIL DONE

NUMBER OF BAGS COLLECTED: Oiled Sediments .75 Oiled Debris _____
 Oiled Vegetation _____ Unooled Debris _____ Oiled Logs Present _____

SEGMENT CUKIA MONITOR DS WALTERS DATE 06/03/91

PHOTOGRAPHS: Roll # NIA Frames _____ Reason _____

VIDEO: TAPE # NIA Reason _____

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

STRAIGHT FORWARD CLEAN UP NO PROBLEMS.

DS

OIL CHARACTERISTICS After Treatment

Surface: Mousse Tarball/Patty Pavement Cover Coat Stain

Subsurface: OP HOR MOR LOR OP Depth: 0-2 Thickness: 0-2

TAG WORK ORDER COMPLETED? NO YES COMMENTS STATE WORK

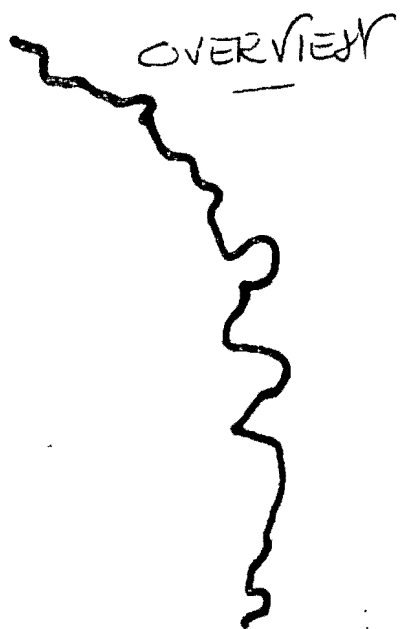
ORDER COMPLETED

WORK ORDER MODIFICATION REQUESTED? NO YES DATE _____

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

SIGNATURE

Deborah Walters



MS/SW/AD HCU 2000-03
FROM/END/ 4000-03
DISCONTINUOUS BARS - 1000-03
REMA 1000-03

MS/SW/AD HCU 2000-03
FROM/END/ 4000-03
DISCONTINUOUS BARS - 1000-03
REMA 1000-03

TREATMENT DATE: 06 03 91
TREATMENT TYPE: MANUAL
CUSTOMER

ANAD
STREAM

ROCK

EXPANDED
SITE MAP

CU 14 A

ESTH



Date: 5/14/91 No. 898

Title: CU014A





Segment No Cu 14 Subdivision A
Date 14 MAY 91 Log Frame No 19
Photographer CHILDS
Location SKETCH #2 - SW'ly OVERVIEW
Comments _____

Roll No MAYSAP-1-22 Neg. No 18
Control No 898 (Office Use Only)



Segment No Cu 14 Subdivision A
Date 14 MAY 91 Log Frame No 17
Photographer CHILDS
Location SKETCH # 1 W'ly OVERVIEW
Comments _____

Roll No MAYSAP- 1-22 Neg. No 16
Control No 898 (Office Use Only)



Segment No Cu 14 Subdivision A
Date 14/MAY 91 Log Frame No 20
Photographer CHILDS
Location SKETCH #3 E'ly OVERVIEW
Comments _____

Roll No MAYSAP- 1-22 Neg. No 19
Control No 898 (Office Use Only)



Segment No Cu14 Subdivision A
Date 14 MAY 91 Log Frame No 18
Photographer CHILDS
Location SKETCH #1 S'ly VIEW - UI-
Comments OVERVIEW OF CLEAN UP AREA
SOR PATTIES, < 10% - N/m x 100m

Roll No MAYSAP-1-22 Neg. No 17
Control No 898 (Office Use Only)



Date: 5/14/91 No. 898

Title: CU014A





Segment No Cu14 Subdivision A
Date 14 MAY 91 Log Frame No 23
Photographer CHILDS
Location SKETCH #4 - E'ly VIEW
Comments BEDROCK BENCH w/ massive Boulders
H. Sor / I - DEGRADED - below: between B
Armor < 300 CT/T on R, B < 100
6m x 15m

Roll No MAYSAP- 1-22 Neg. No 22
Control No 898 (Office Use Only)



Segment No CU 14 Subdivision A
Date 14 MAY 91 Log Frame No 21
Photographer CHILDS
Location SKETCH #3 - N'ly VIEW
Comments CLEAN UP - Lo SOR / I
BETWEEN B < 10' ~ 8x5m

Roll No MAYSAP-1-22 Neg. No 20
Control No 898 (Office Use Only)



Segment No CU14 Subdivision A
Date 14 MAY 91 Log Frame No 24
Photographer CHILDS
Location SKETCH # 4
Comments SENIC OVERVIEW

Roll No MAYSAP-1-22 Neg. No 23
Control No 998 (Office Use Only)



Segment No Cu 14 Subdivision A
Date 14 MAY 91 Log Frame No 22
Photographer CHILDS
Location SKETCH #3 - NE'ly VIEW
Comments BL/R POCKET - CLEAN UP
OF MS/I, >50% UNDER CARMOR -
~ 5m x 20m ~ 3cm THICK

Roll No MAYSAP- 1-22 Neg. No 21
Control No 898 (Office Use Only)



Segment No CU14 Subdivision A
Date 14 MAY 91 Log Frame No 25
Photographer CHILDS
Location SKETCH #4
Comments SCENIC OVERVIEW

Roll No MAYSAP- 1-22 Neg. No 24
Control No 898 (Office Use Only)

Date: 5/14/91 No. 898

Title: CU014A



maysap-4

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

2242613034

13036

PRINCE WILLIAM SOUND

SEGMENT: CU014 SUBDIVISION: A SITE:
anadromous fish stream, commercial fishing area, recreation
area

RECOMMENDED TREATMENT:

In areas F1, F2, and G:
- Manually remove MS/HSOR.

ENVIRONMENTAL SENSITIVITIES:

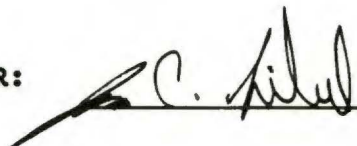
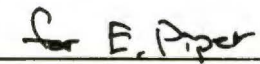
Eagle nest must be cleared prior to work.
anadromous fish stream

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

CLEANUP PLAN AND COST ESTIMATE DUE:

DATE SUBMITTED: 05/29/91

STATE ON SCENE COORDINATOR:

Discrepancy comments Cu#14 A 224-20-13036

HAB

OG

site 1: 20 * 1 m
 < 1%
 5 cm thick
 AP
 my outlines subsurface

A - 1 * 100 m
 < 100%
 50% patties
 my mentions subsurface oil

site 2: 2 * 2 m
 < 1%
 5 cm thick
 AP

B1 - 1/2 * 1 m
 Mousse
 10% } no counterpart on the b.
 B2 - 1/10 m²
 10% 50% patties
 5 * 10 m

Review. OG lists more oiling

pit 1
 2 cm thick
 2 cm penetration
 TR/Lon

pit 3
 12 - 15 cm
 TR

ADF&G MULTI-ASSESSMENT DATA FORM

- 1) SURVEY TYPE: BS SS 2) REGION: PWS KP, CI K, AP
- 3) METHOD: Aerial Ground BAT
- 4) DATE: 5/14/91 16) HIGH TIDE TIME: _____ 22) TEAM RECORDER: Tom George
- 5) START TIME: 1700 17) HIGH TIDE HTS: _____ 23) OBSERVERS: _____
- 6) STOP TIME: 1746 18) LOW TIDE TIMES: 2000 24) AGENCY: ADF&G
- 7) SEGMENT #: CW14A 19) LOW TIDE HTS: +2 25) PHOTOS TAKEN: Y W
- 8) K-UNIT: _____ 20) TIDE HT AT SURVEY: +2.5 to +5 ROLL #: _____ FRAMES: _____
- 9) LAT: _____ Ebb Slack Flood Slack 26) VIDEO TAKEN: Y W
- 10) LONG: _____ 21) USCG QUAD: _____ TAPE # _____
- 11) ASC #: 224-20-13036 START: _____ STOP: _____
- 12) STREAM NAME: _____ 27) SAMPLES TAKEN? Y W
- 13) LOCATION: Culross Is EAST SIDE SAMPLE I.D. _____
- 14) WAVE EXPOSURE: High Moderate Low _____
- 15) SHORELINE TYPE: Headland Low-lying Rocks Beach _____
- Cove Lagoon Marsh _____

28) EXTENT OF OIL

	LENGTH m	WIDTH m	M2	%	THICK cm	PEN cm	OIL TYPE
SITE 1	20	1		<1	5 cm		AP
SITE 2	2	2		<1	5 cm		AP
SITE 3					2 cm	2 cm	TR/LOR
SITE 4							
SITE 5							

29) OVERALL OIL IMPACT:

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

N = No oil observed

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

32) SUBSTRATE TYPE (PERCENT):

Bedrock 10 Boulder 10 Gravel 80 Sand _____ Cobble _____ Mud/Silt _____

35) COMMENTS: Very little oiling left at this site. All visible AP/SOR was removed during survey. N/T recommended eagle nesting area in close proximity to stream. Also salmon fry were observed milling in shallow protected areas in this cove.

33) ANADROMOUS FISH PRESENT: Y N

34) WILDLIFE OBSERVATION

Species _____ Number _____

JUVENILE SALMON fry
MILLING AT TIDE POOL
AND MOUTH OF STREAM
VISIBILITY WAS POOR AND
A COUNT WAS NOT POSSIBLE

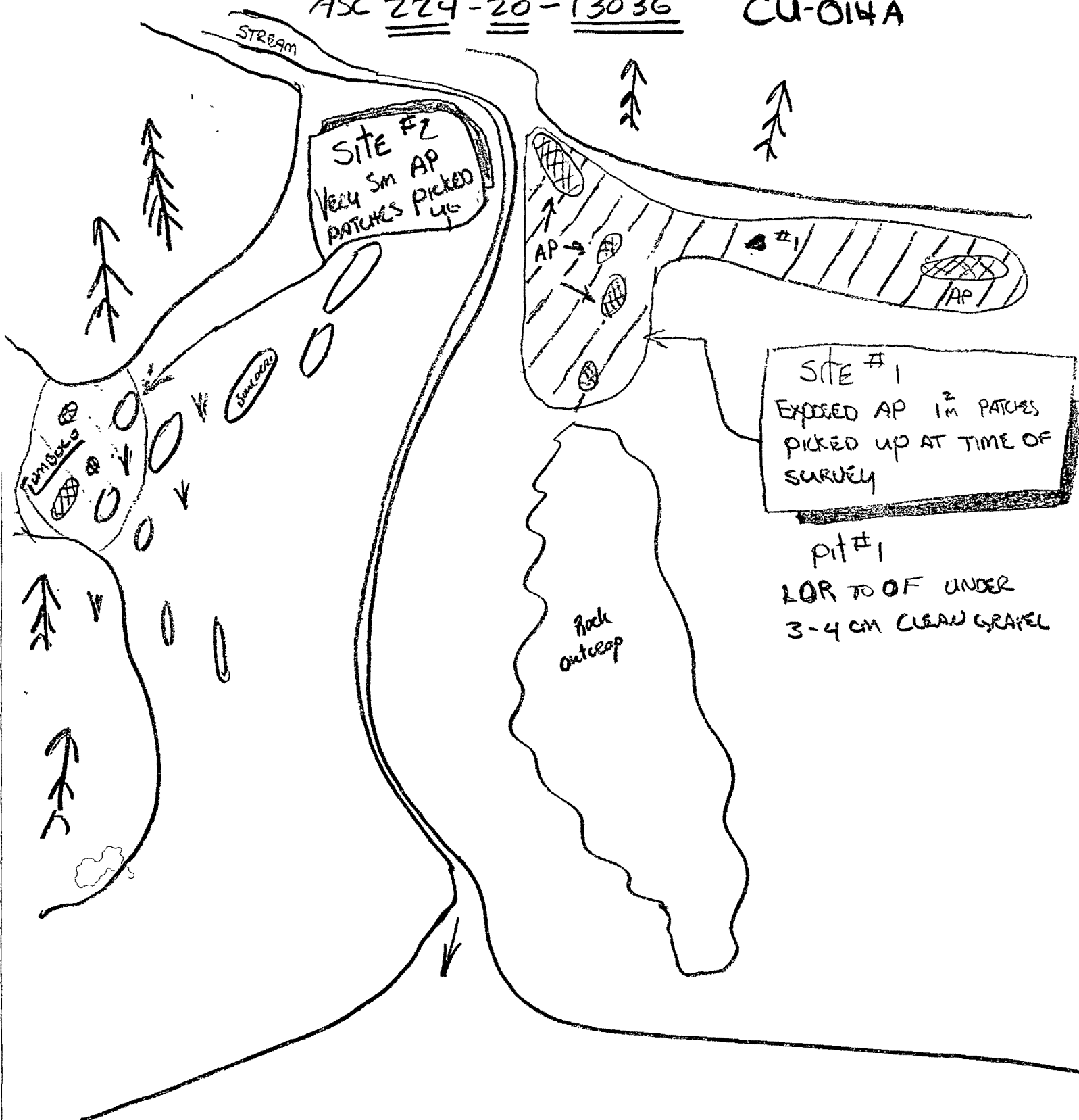
5/14/90

CULROSS IS

MAY SAP

ASC 224-20-13036

CU-014A



MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 2

TEAM NO. 1

OG G. MACDONALD

BIO M. FAWCETT

SEGMENT CU-14

ADEC J. G. HALAS

LANDMANAGER M. HALL for DNR

SUBDIVISION A

EXXON R. BOYER

USCG/NOAA SCHULTZ/CHILD

DATE 5/14/91

TIME 17:15 to 19:45

TIDE LEVEL +6.2 ft. to +2.0 ft.

ENERGY LEVEL: ☐ H ☒ M ☐ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: ~1100 m

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

EST. OIL CATEGORY LENGTH: W 1 m M 30 m N 1 m VL 310 m NO ~750 m US ~1200 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A				T							PC	L	1	100		X			after PU. 10 SOR
B1		S									BCV	L	1/2	1	X				interstices
B2				S									5	10	X				
C1							S				RV	M	1/2	3	X				on log
C2						T					RB	H	5	10		X			
C3		T									R	H	0.1	0.1	X				
I		S				S	T				BGR	H	1/2	65	X	X			surveyed 5.15.91
D			T			T					RB	H	<1	50		X			
E				T		T					CPB	M	8	5	X	X	X		10 SOR
F1		B									CPG	L	5	20		X			
F2		P		P		P					RBC	M	3	10	X	X			hi sol
G		S									CPB	M	1	6					partly treated - PU
H				S		T					RBC	H	6	15	X	X			hi sol

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 1-22 FRAMES 17-25

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	15				X				10-12	Y	-			X			CG-GPMV	
2	15						X		10-13	Y	-			X			" "	
3	20						X		12-15	Y	-			X			PCB-GPM	
4	15							X	-		-				X		BC-GC	
5	15							X	-		-		X				PC-GP	
6	15						X		8-10	Y	-			X			CL-GPMV	
7	12							X	-		-			X			BC-GCP	
8	10							X	-		-			X			" "	
9	15							X	-		-	10	2			X	BC-PG	

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

OG COMMENTS:

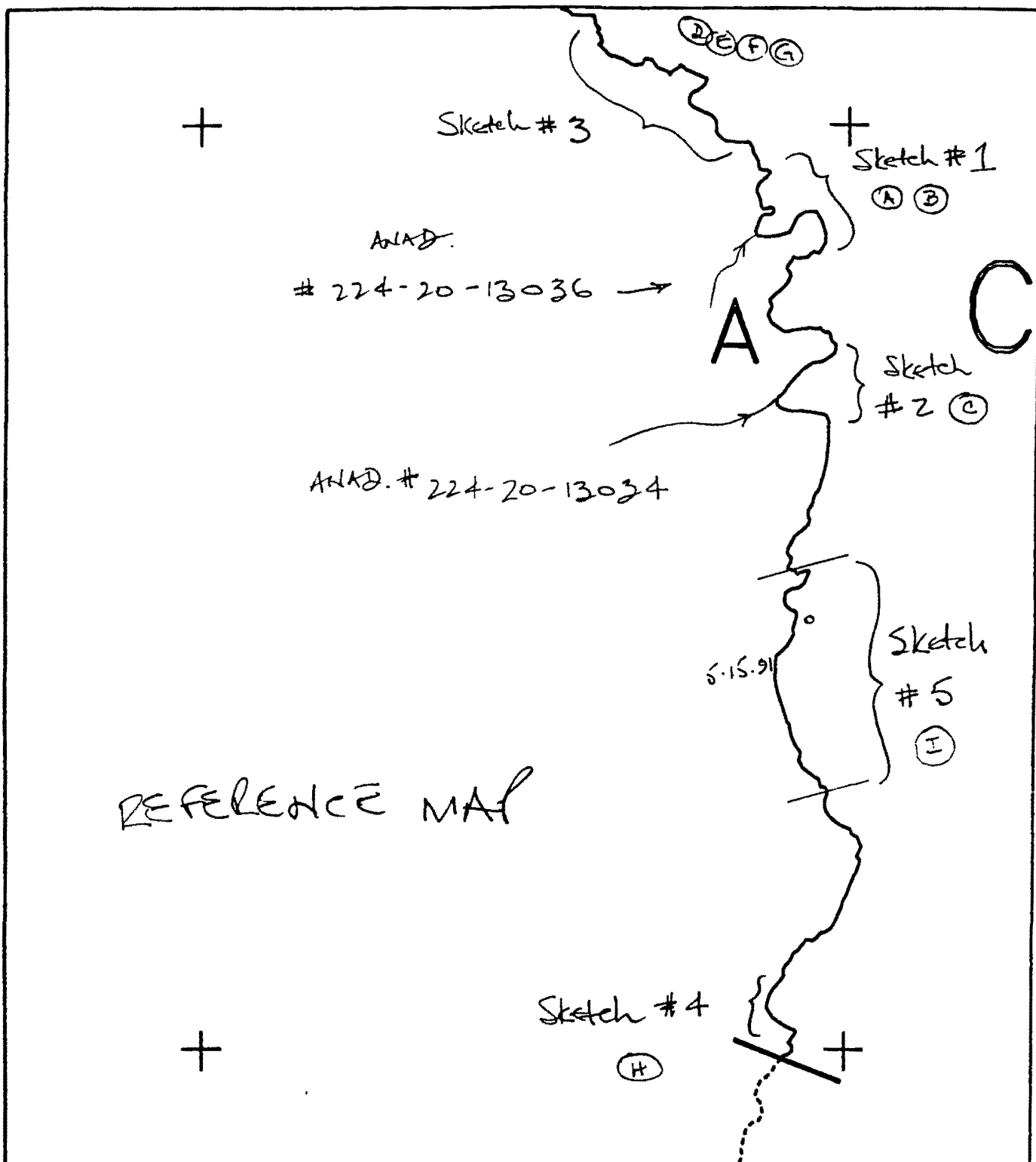
Steep rocky shore w/ some coarse-grained beaches on breacher in the rock wall. Two ANAD. fish streams were surveyed w/ TOM CROWE - ADF&G. Sketches 1 & 2 show remnant low SOR & traces of CT & MS associated w/ past AL. A thin, sporadic layer of subsurface cl

DATE 5, 14 / 91

Sketch #5 illustrates site of S.15: it had MS/I under massive B and some associated CT.

[illegible]

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



CU014 A

METERS



AK State Plane Zone 4
psnbt400

Subdivision Field Map

Map Key: PWSCU014Aa

Name: GM

Date: 5.14.91

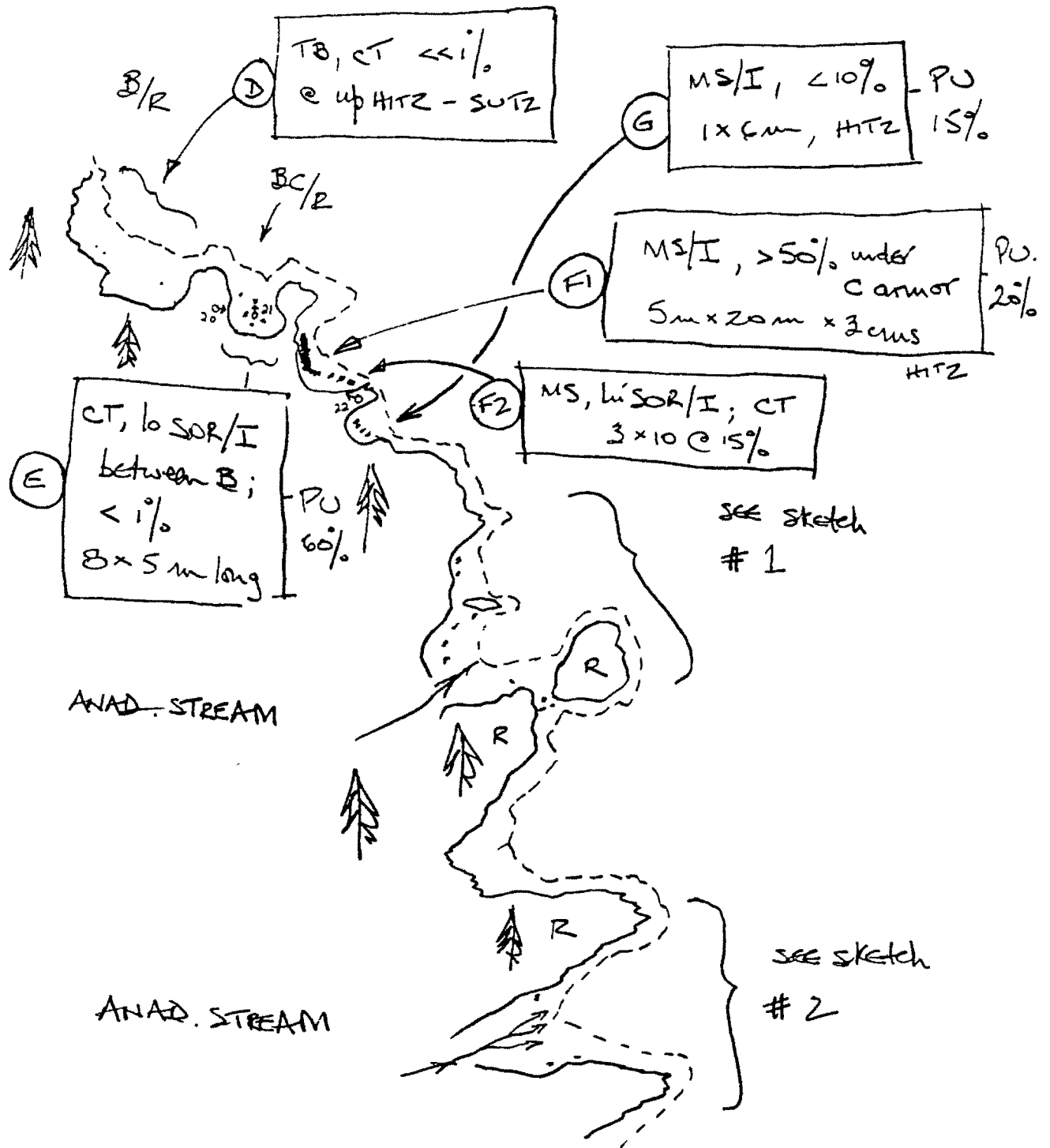
CU-14 A

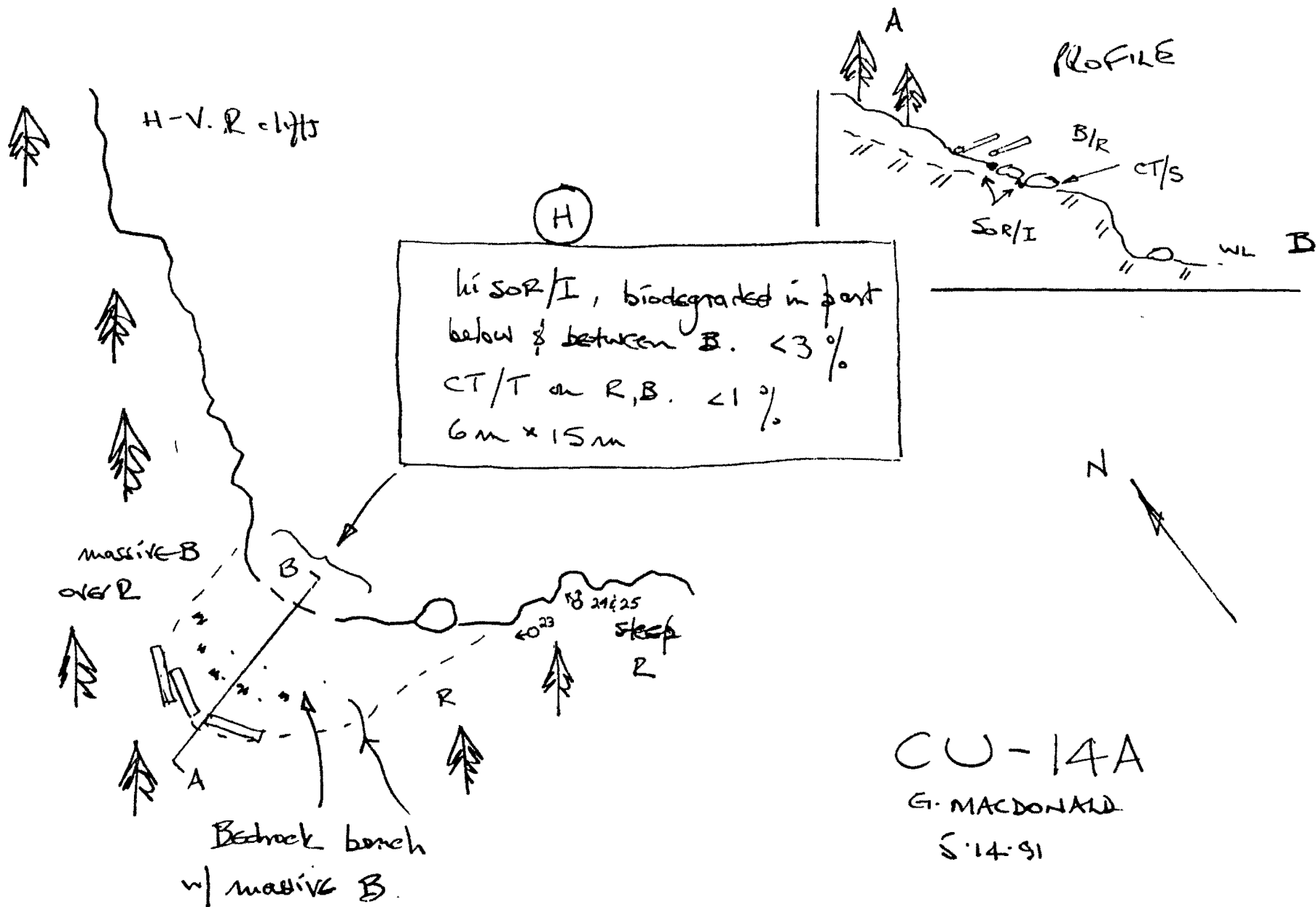
Sketch #3

G. MACDONALD

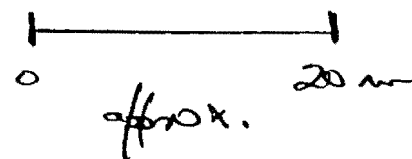
5-14-91

approx.
0 100m





Sketch # 4

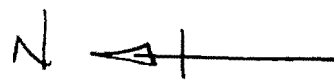
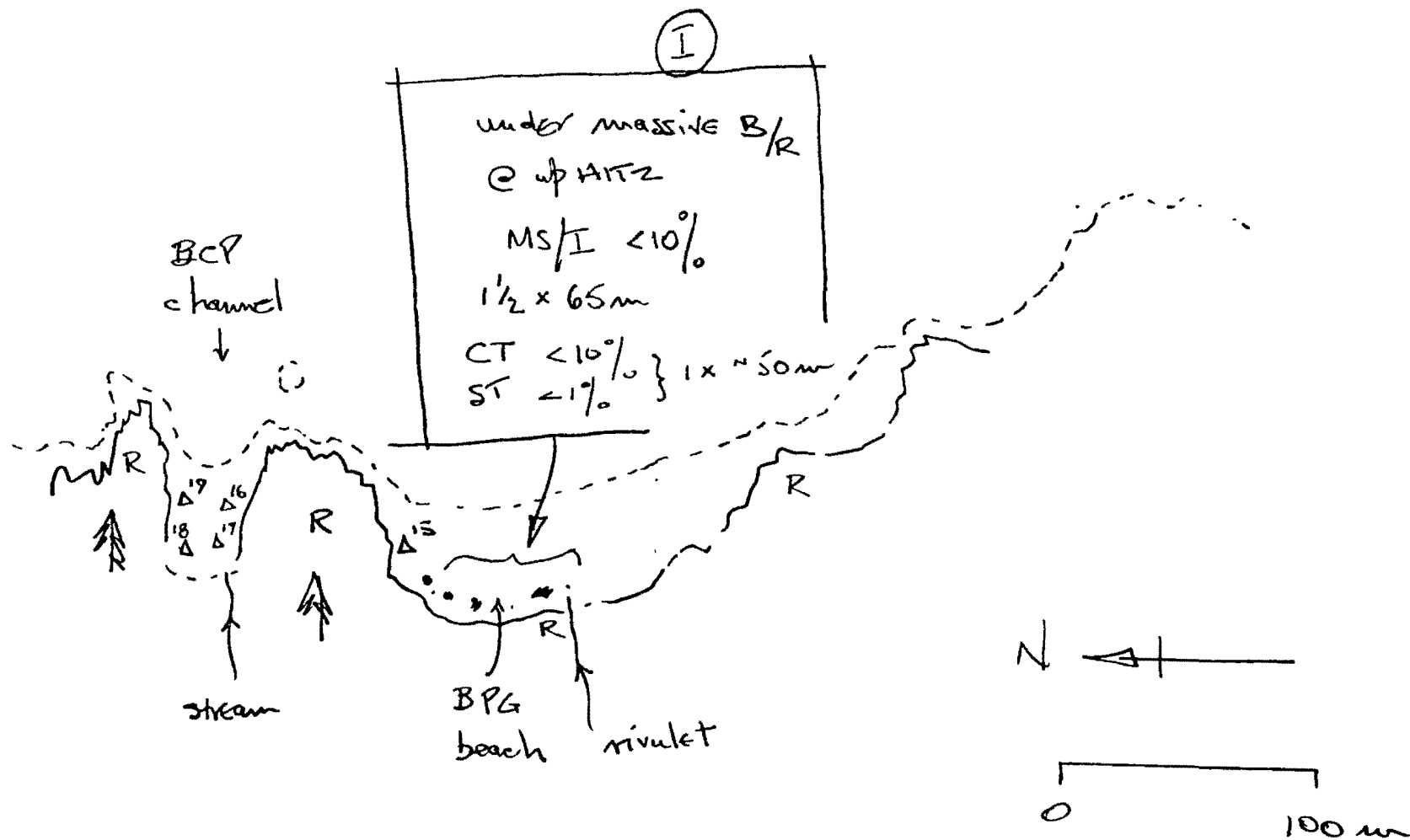


CU-14A

Sketch #5.

G. MACDONALD

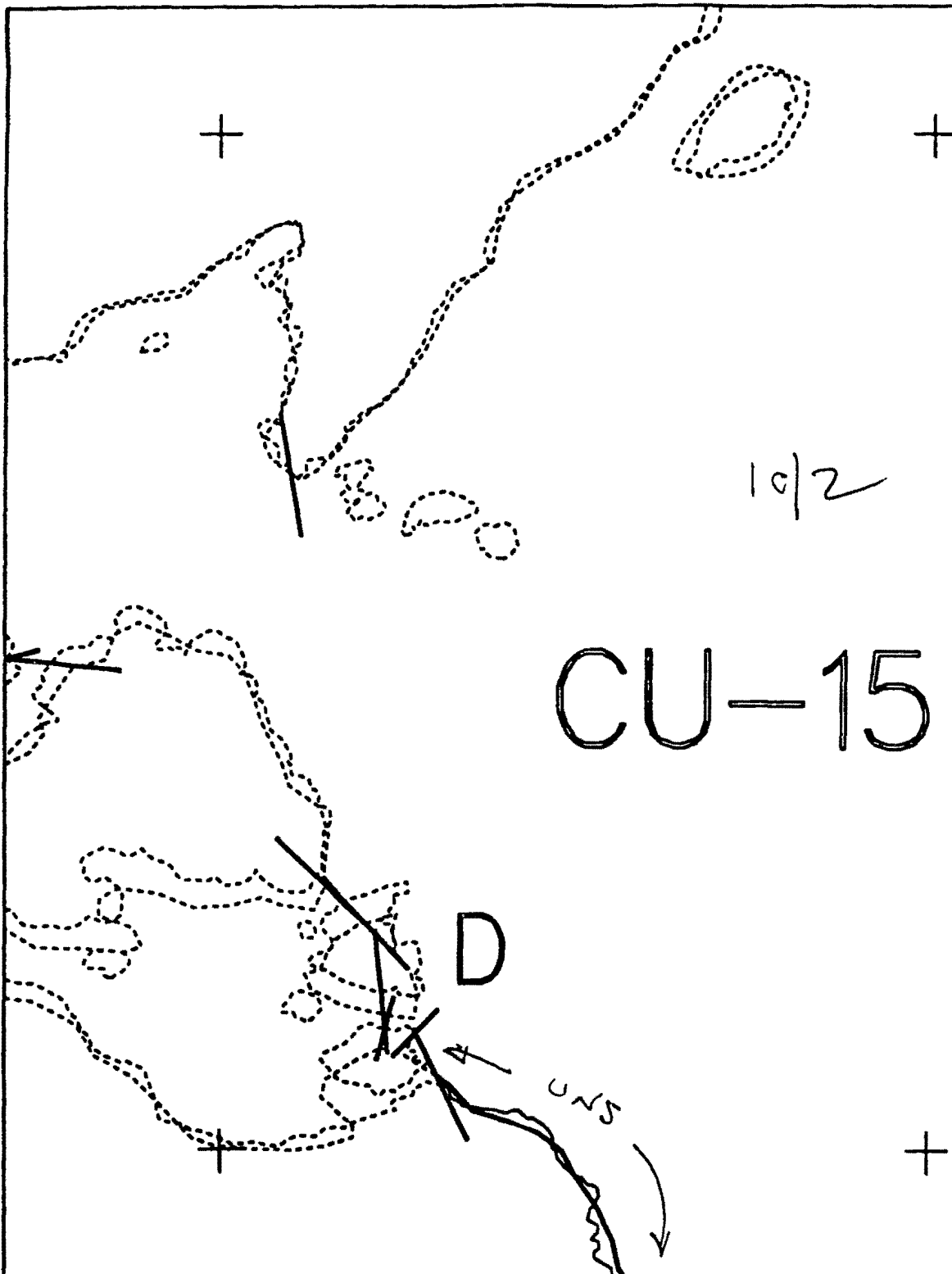
5.15.91



0 100 m

11.45 - 12.15 HLG

+4.0' - +5 1/2' tide.

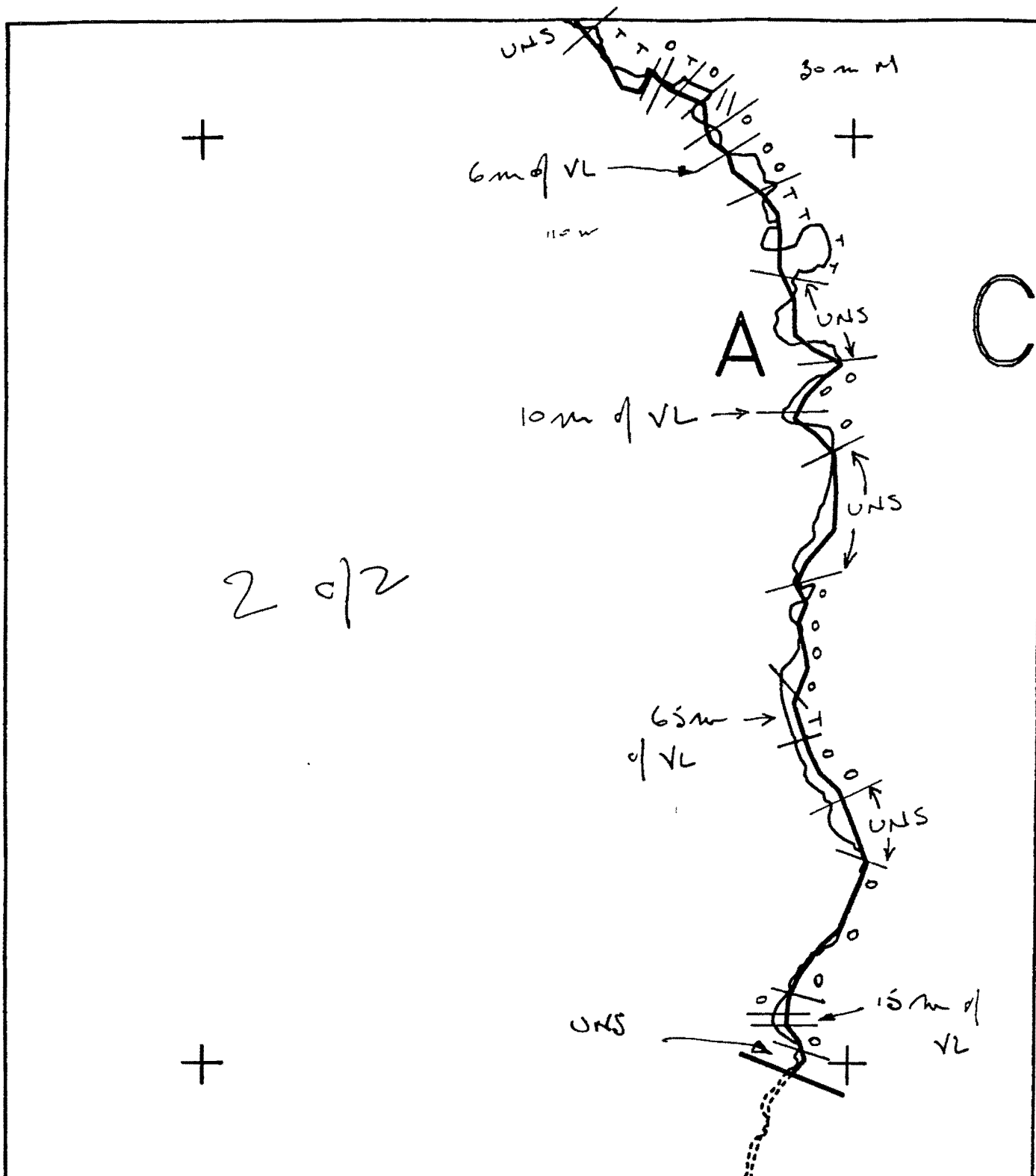


XXXX Wide
 //// Medium
 --- Narrow
 TTTT Very Light
 0000 No Oil

CU014 A
 ADEC Subsegment Length: 2293m
 METERS
 0 200 400
 AK State Plane Zone 4
 pcu014ab

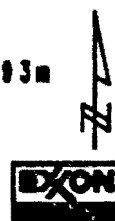


Subdivision Field Map
 Map Key: PWSCU014Ab
 Name: GM
 Date: 5-15-91
 Date Entered:

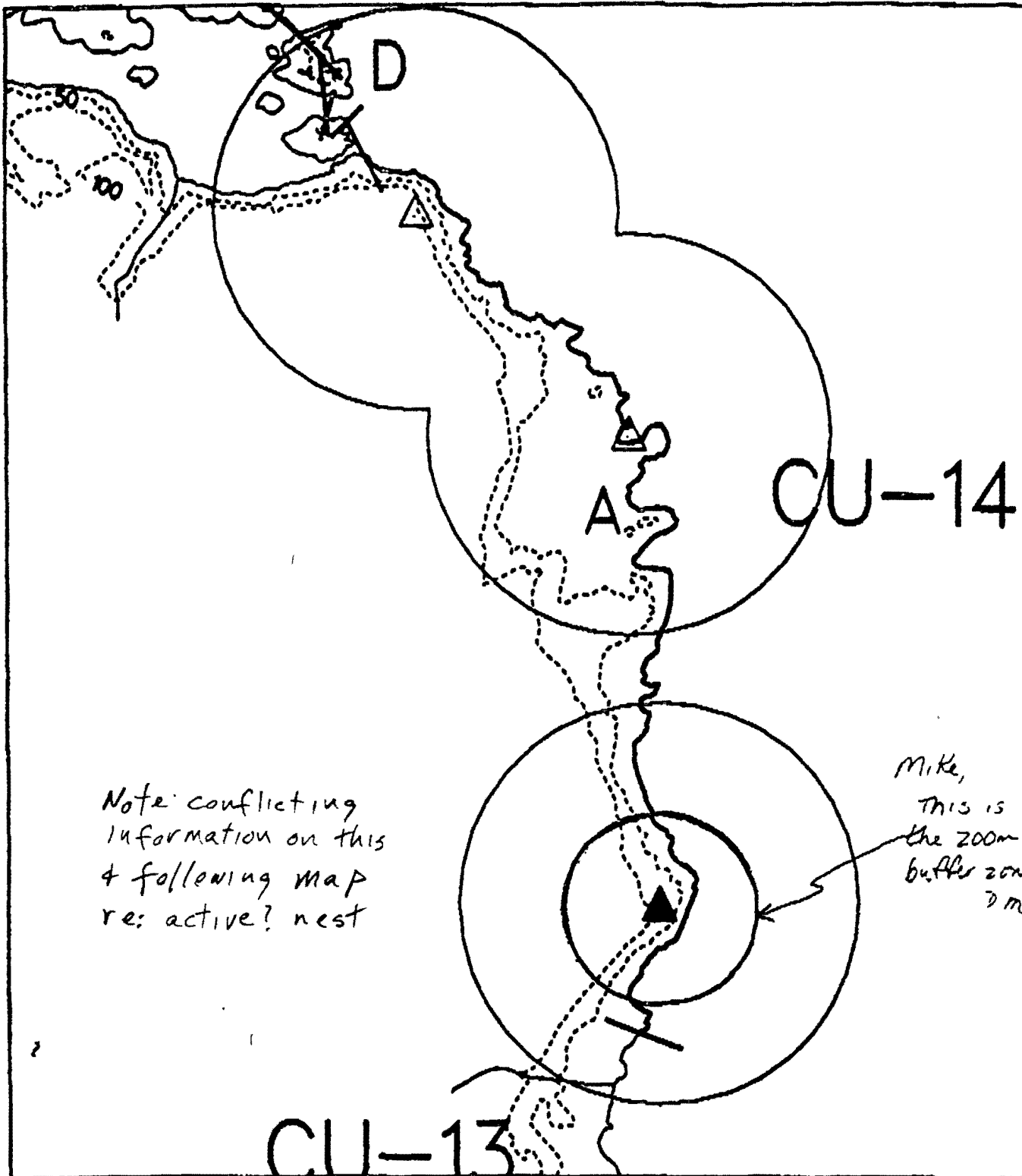


XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

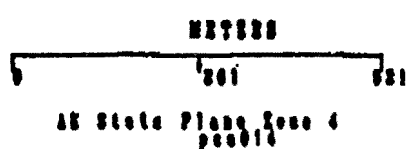
CU014 A
 ADEC Subsegment Length: 2293m
 METERS
 0 200 400
 AK State Plane Zone 4
 psn81400



Subdivision Field Map
 Map Key: PWSCU014Aa
 Name: GM
 Date: 5-15-91
 Date Entered:



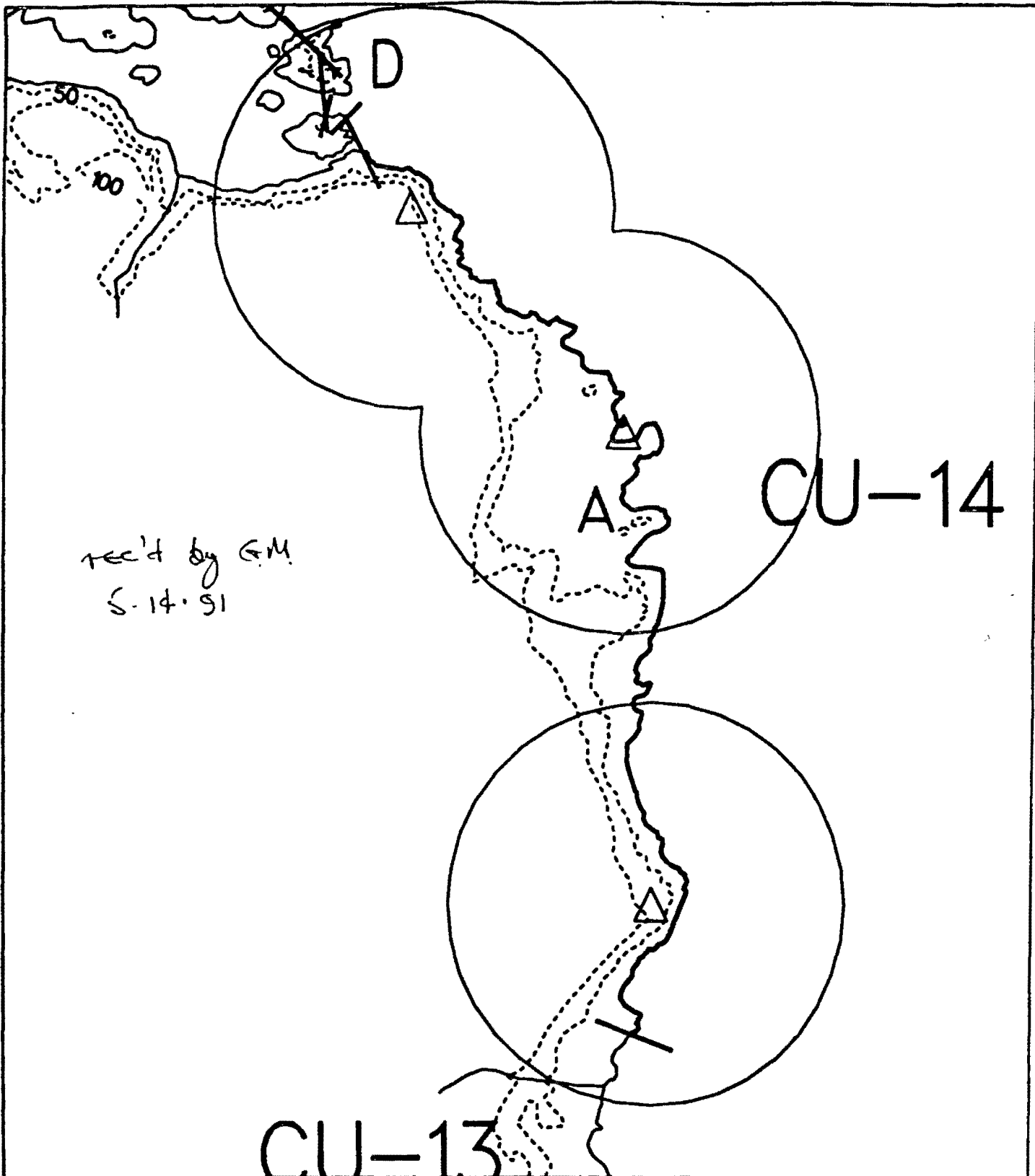
CU014



Segment Reference Map
Map Key: PUSCU014



EAGLE NEST



CU014

METERS



AT State Plane Zone 4
psu014

Segment Reference Map
Map Key: PUSCU014



EAGLE NEST

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 1 DATE 14 & 15 May 91
 SEGMENT # CV 014 TIDAL HEIGHT (Range) 2.0-+7ft, 3.0-4.2 ft
 SUBDIVISION A BIOLOGIST Michael Fawcett
 SEA STATE 1 ft swell WIND SPEED/DIRECTION NE 10-15 knots
 PHOTOGRAPHS: ROLL # FRAME #

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

Completed anadromous stream sites and two other sites with Tom Crowe (ADF&G monitor) on May 14; returned May 15 to survey 5th site (Sketch #5). See sketches 1-5 for descriptions of biota near each oiled site. Salmon fry were observed in the intertidal zone near the mouth of the smaller stream (#224-20-13034). SOR & CT Typically found in VTZ-SVTZ areas at +10-12ft MLLW, above most biota except lichens, limpets, Amphipods & oligochaete worms. MTZ areas below oil typically have dense Rockweed and barnacle spat, and variable densities of Littorinids, mussels, limpets, Rhodomele, etc. Whelks (*Nucella emarginata*) are abundant in MTZ-LTZ throughout the subdivision, *N. lamellosa* sparse.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	Salmon fry
Seabirds			Black pricklesback
Waterfowl			
Gulls/Kittiwakes	1 (G-W Gull)	3	
Shorebirds			
Corvids			
Other Birds			

LAND MAMMALS

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

Shoreline subdivision map showing important biological features attached.

CU 14A Arr 1715 Fawcett
5/14/91 wind NE 5-10, rain

Sub A Pink salmon stream

1 eagle flew over

1 gull

Site 9 1800 hrs

- smaller than stream (9)

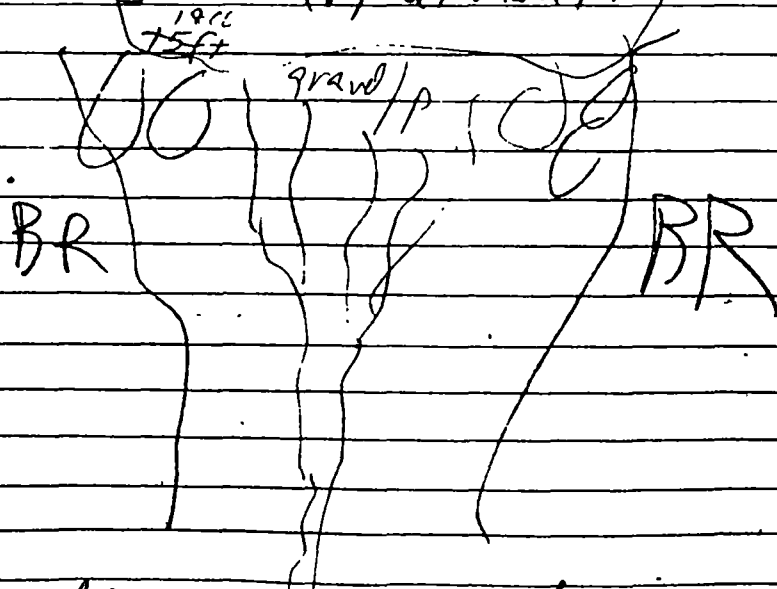
steep shore, no

sparse vegetation + 4-8 ft on boulders

4 BR - very dense barn, which

no idea in stream

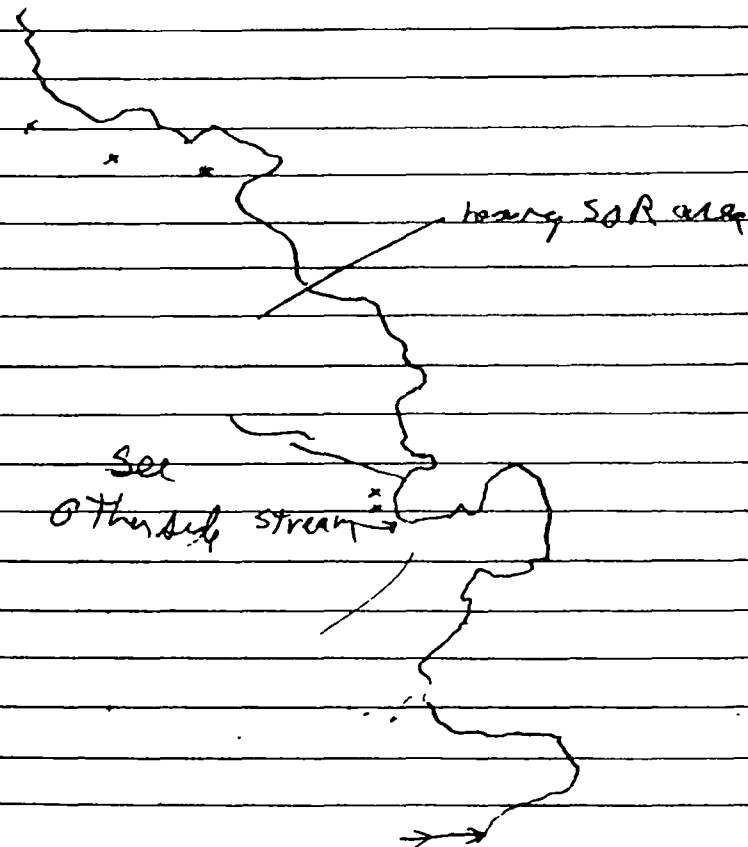
- salmon fry at mouth



defeat 1820, went north

CU 14A

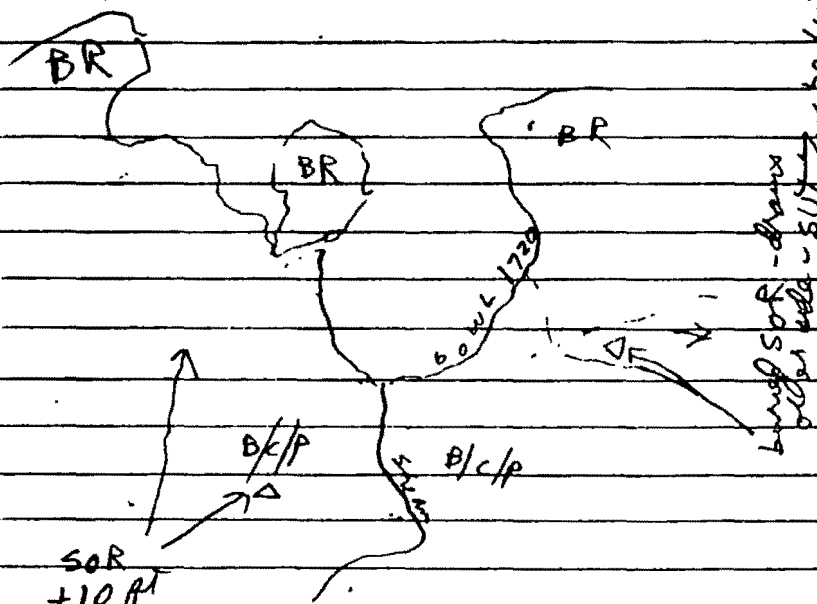
N
↑



over →

CV 14a (cont) 5/14/91 Fawcett

Sub (A) 1715



no birds
spans large, limp, lth, ultra, Entry
moss, Fucus downshore - also dense spat
5m at 18 p

14. May (cont)

$\text{site} \in \text{no'sh eqn}$

3 plates SOR + CT U1Z + 10-14 ft in lee of outcrop - B/dp - no birds near upper end in SU1Z, but 3 fuscous Fucus & dumps near SOR (picked up) at +10 ft, dense Fucus, barn, fil. reds, whelks, etc down to, starting 2m below at +8-9 ft - walked north to end of subdivision - some red dist. of birds & traces of CT at 10 ft - *M. lamellosa* breeding under ledge at +3 ft. near end of segment

1900 hrs - heaviest SOR side / ~~see~~
Graham's map - 50% cover 14

UTZ-SUTZ + 10-12 feet - only
brachiopods, *N. personata*, a small
U. personata

- sparse barnacles, Litt bcrs 3m
fairly shore ~~mod dense~~ sparse
Fucus full down at +4-5 ft
w/ dense barn spot, patches of
adults, dense N. lmare,
a few N. limellora

CU 14A (cont) 14 May Fawcett

12:30 hrs

last one, south end of

Segment - SOR, CT in VTZ-SUTZ

10-12 ft boulders above biota - 2m

down shore on BR bench are

pools w/ Litho, hermits, Litt.

but sparse algae ^(mostly Litho, hermits) - mod

dense Fucus on BR around pools -

Litt, lump, - sparse barn

- pools in LTZ-MTZ w/ rich

biota - very dense N among

all over the subdivisions

gulls

Finish 1945

15 May 91 Returned to CU 14A

11:45 hrs - area missed

yesterday -

- shallow B/c cave - SOR SUTZ

in crevices of cave - no biota except

^{sponges} Limp 5m down shore at ~10 ft - dense

Fucus - sparse barn (some dense

patches, mod Litt, lump,

sparse mussels

21
sparse Rhodo, Uraspira, U/14

LTZ - purple backs, breeding

Litt, dense spat

Band of SOR just at edge of ^{up}

N periwinkle & Litt. - limpets

very dense (10-20 per boulders)

just below and (+8-10 ft)

Finish 1215 hrs

CU 14A (cont) 14 May, Faurst
125 1930 hrs

last mile, south end of
Segment - SOR, CT in VTZ-SUTZ
10-12 ft boulders above biota - 2m

downshore on BR bench are
pools w/ Litho, hermits, Litt,
but sparse algae ^(mostly Littorines) - ~~mod~~
dense Fucus on BR around pools -
Litt, lump, - sparse barn
- pools in LTZ-MTZ w/ rich
biota - very dense N among
all over the subdorsum

gulls

Finish 1945

15 May 91 Returned to CU 14A
11:45 hrs - area missed
yesterday -

- shallow B/c core - SOR SUTZ
in crevices of core - no biota except
^{sparse} Litt 5m downshore at ~8 ft - dense
Fucus - sparse barn (some dense
patches), mod Litt, lump,
sparse mussels

21
sparse Rhoda, Urosalpinx, U. 1/4
LTZ - purple backs, breeding
Litt, dense spat

Band of SOR just at edge of ^{up}
N persons & Litt. - Limpets
very dense (10-20 per boulders)
just below and (+8-10 ft)

Finish 1215 hrs

TEAM NO. 1 SEGMENT CU 014 SUBDIVISION A DATE 05/14/91

ADEC
NAME JEFF GINALAS SIGNATURE [Signature] Tom Crowe ADF16
(ANADROMOUS STREAM SEGMENT)
☐ NTR ADF16 VERY LITTLE OILING REMAINING AT STREAM SITE 224-20-13036. ALL REMAINING VISIBLE AP/SOR OILING WAS PICKED UP AND REMOVED AT THE TIME OF THE SURVEY. RECOMMEND NO TREATMENT FOR THIS STREAM. ONLY TRACE CV/CT DEPOSITS FOUND AT STREAM # 224-20-13034 IN BOULDER BEDROCK AREAS. TREATMENT HERE IS NOT RECOMMENDED. Tom Crowe

☒ TREATMENT RECOMMENDED AT OG MAP SITES F₁, F₂, & G. MOUSSE/HIGH SOR LOCATED JUST BELOW SURFACE ARMOR. WILL REQUIRE MANUAL WORK, ROCK & ROLL BOULDERS. EASY ACCESS BY SKIFF. FULL CREW, ONE DAY. ~~SITE~~ SITE LOOKS LIKE TREATMENT MISSED LAST YEAR, ALTHOUGH CUSTOMER OBSERVED IN OIL. AT HEAVY IMPACT AREA (F₁) OIL COVERAGE EXCEEDS 50% OF 5x20m AREA. AREA IN VICINITY OF FISHING SETS, KAYAKERS (PER KEN MILLER, WHITTIER LOCAL RESIDENT)

EXXON
NAME RANDALL K. BOYER SIGNATURE [Signature]

☐ NTR AREA F₁, F₂ & G CONTAINED A BAND OF TREATABLE OILING IN THE UPPER INTER TIDE ZONE. IN THE SMALLER SEDIMENTS AP CONSISTENCY OF 1m² PATCHES WERE PRESENT. THE SURVEY TEAM DID NOT HAVE THE TIME TO PICK UP ALL THE TREATABLE OIL. AREAS SURROUNDING THE ANADROMOUS FISH STREAMS LOOKED IN GOOD SHAPE WITH NO FURTHER TREATMENT RECOMMENDED. IN AREA F₁, F₂ AND G, I WOULD NOT RECOMMEND REMOVING THE BOLDER ARMOR TO ACCESS OIL.

LANDMANAGER
NAME MARSHA HALL OF DNR SIGNATURE [Signature]

☐ NTR ☒ Treatment Stream sites are fine.
Manual labor → remove surface cobble boulder take out lens, leave treated area exposed for tide come back in to put armor layer back at site F₁. Manual removal of MS at location F₂ and G. Attempted to remove oil at F₁ but too much there for this team to deal with.

USCG/NOAA
NAME SCHULTZ / CHICOS SIGNATURE [Signature]

☐ NTR TREATABLE OILING EXISTED IN F₁, F₂, & G (SEE MAP) AND SHOULD BE ADDRESSED HOWEVER NO TREATMENT AT ANY OTHER LOCATION

High Angle BEDROCK OUTCROP & SHORELINE w/ ISOLATED POCKET BEACHES. BEACHES CONSIST OF SUBANGULAR TO SUB-ROUNDED POORLY SORTED BCP'S - AND FINE PEAT UNDERLAY BCP'S IN SEVERAL LOCATIONS. TWO ANAD. STREAMS IN SUBDIV. OILING OBSERVED WAS TYPICAL REMINANTS - LOW SOR VERY DEGRADED, CT & AS IN PROTECTED SPOTS. A NON CONTINUOUS LAYER OF SUB-SURFACE OIL OBSERVED IN N.14 PART SITE "A".

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 2

TEAM NO. 1

OG G. MACDONALD

BIO M. FAWCETT

SEGMENT CU-14

ADEC J. G. NAWAS

LANDMANAGER M. HALL for DNR

SUBDIVISION A

EXXON R. BOYER

USCG/NOAA SCHULTZ/CHILD

DATE 5/14/91

TIME 17:15 to 19:45

TIDE LEVEL +6.2 ft. to +2.0 ft.

ENERGY LEVEL: ☐ H ☒ M ☐ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: ~1100 m

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

EST. OIL CATEGORY LENGTH: W 1 m M 30 m N 1 m VL 310 m NO ~750 m US ~1200 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A				T							PC	L	1	100		X			after PU. 10 SOR
B1		S											1/2	1	X				interstices
B2				S							BCV	L	5	10	X				
C1							S				RV	M	<1/2	3	X				on log
C2						T					RB	H	5	10		X			
C3		T									R	H	0.1	0.1	X				
I		S				S	T				BGR	H	1 1/2	65	X	X			surveyed 5.15.91
D			T			T					RB	H	<1	50		X			
E				T		T					CPB	M	8	5	X	X	X		10 SOR
F1		B									CPG	L	5	20		X			
F2		P		P		P					RBC	M	3	10	X	X			hi sol
G		S									CPB	M	1	6					partly treated - PU
H				S		T					RBC	H	6	15	X	X			hi sol

DISTRIBUTION: C = 91-100%; B = 61-90%; P = 11-60%; S = 1-10%; T = <1%

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 1-22 FRAMES 17-25

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE- SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	15					X			10-12	Y	-			X			CG-GPMV	
2	15							X	10-13	Y	-			X			" "	
3	20							X	12-15	Y	-			X			PCB-GPM	
4	15							X	-		-				X		BC-GC	
5	15							X	-		-		X				PC-GP	
6	15							X	8-10	Y	-			X			CP-GPMV	
7	12							X	-		-			X			BC-GCP	
8	10							X	-		-			X			" "	
9	15							X	-		10	N			X		BC-PG	

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

OG COMMENTS:

Steep rocky shore w/ some coarse-grained beaches on breacher in the rock wall. Two ANAD. fish streams were surveyed w/ TOM CRAWLE - ADF's G. Sketches 1 & 2 show remnant low SOR & traces of CT & MS associated w/ past AL. A thin, sporadic layer of subsurface oil

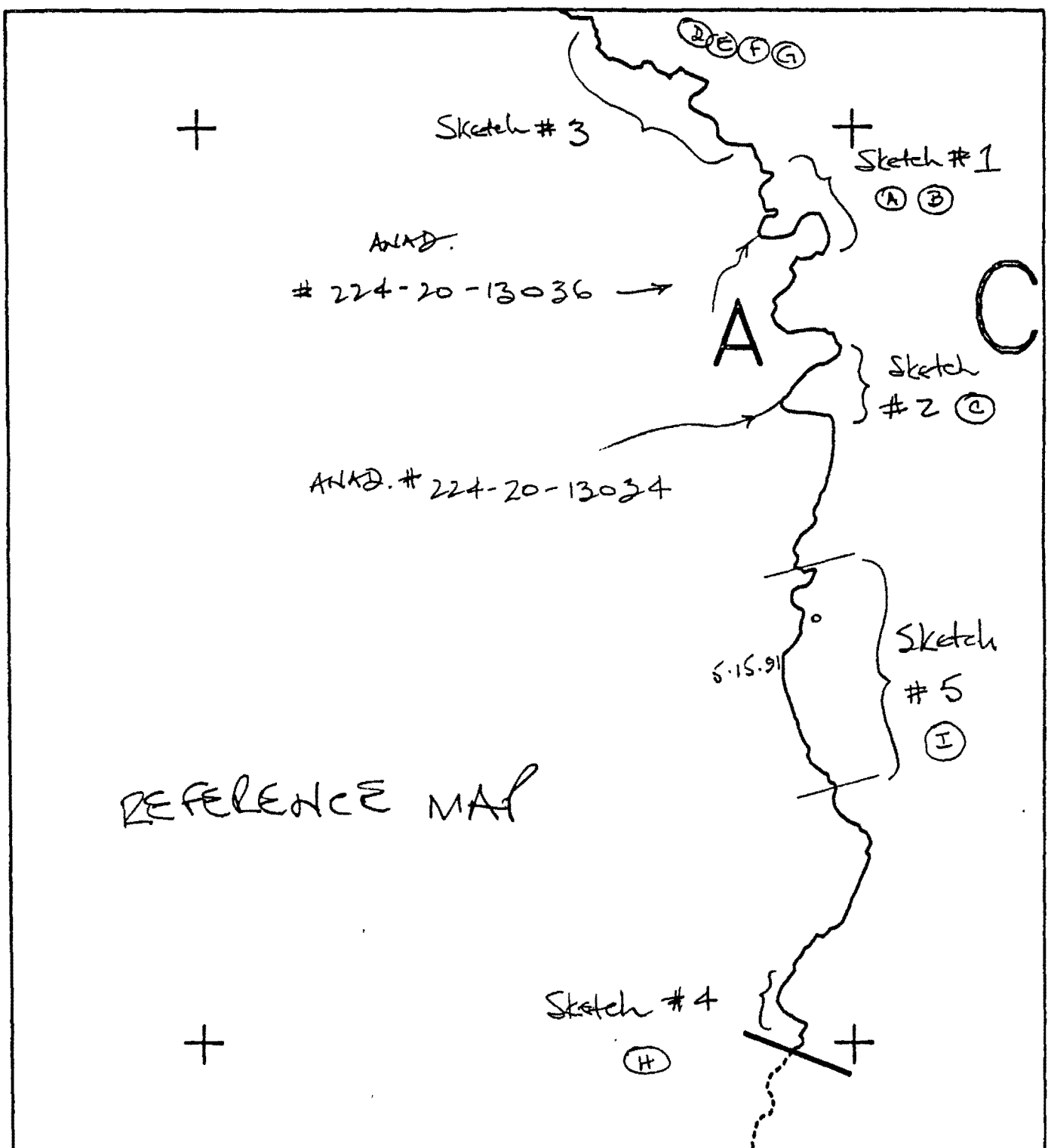
DATE 5, 14, 1981

OG COMMENTS: remains on N end @ sketch 1 stream (-13036),
trapped under PG, over a Ppeat layer.
Oil locations for remaining sites were poorly located by SSAT '90
& subsequent visits by ASAT '90 missed 2 out of 3 oiled sites.
Sketch #3 illustrates oiling identified by SSAT '90 survey sketch.
MS & hi sor bands to 20 m long, under CB armor typifying
these sites.
Sketch #4 illustrates remnant oiling @ rocky pocket, thought
to be location of pooled oil (SSAT '90); Boyer confirmed
that site lying ~ 1/4 mile N. - surveyed 5.15.91.
Sketch #5 illustrates site of 5.15: it had MS/I under massive B
and some associated CT.

[illegible]

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

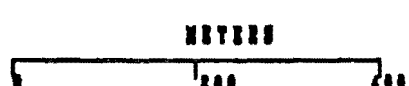
2



REFERENCE MAP



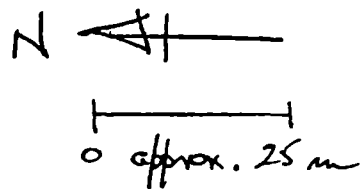
CU014 A



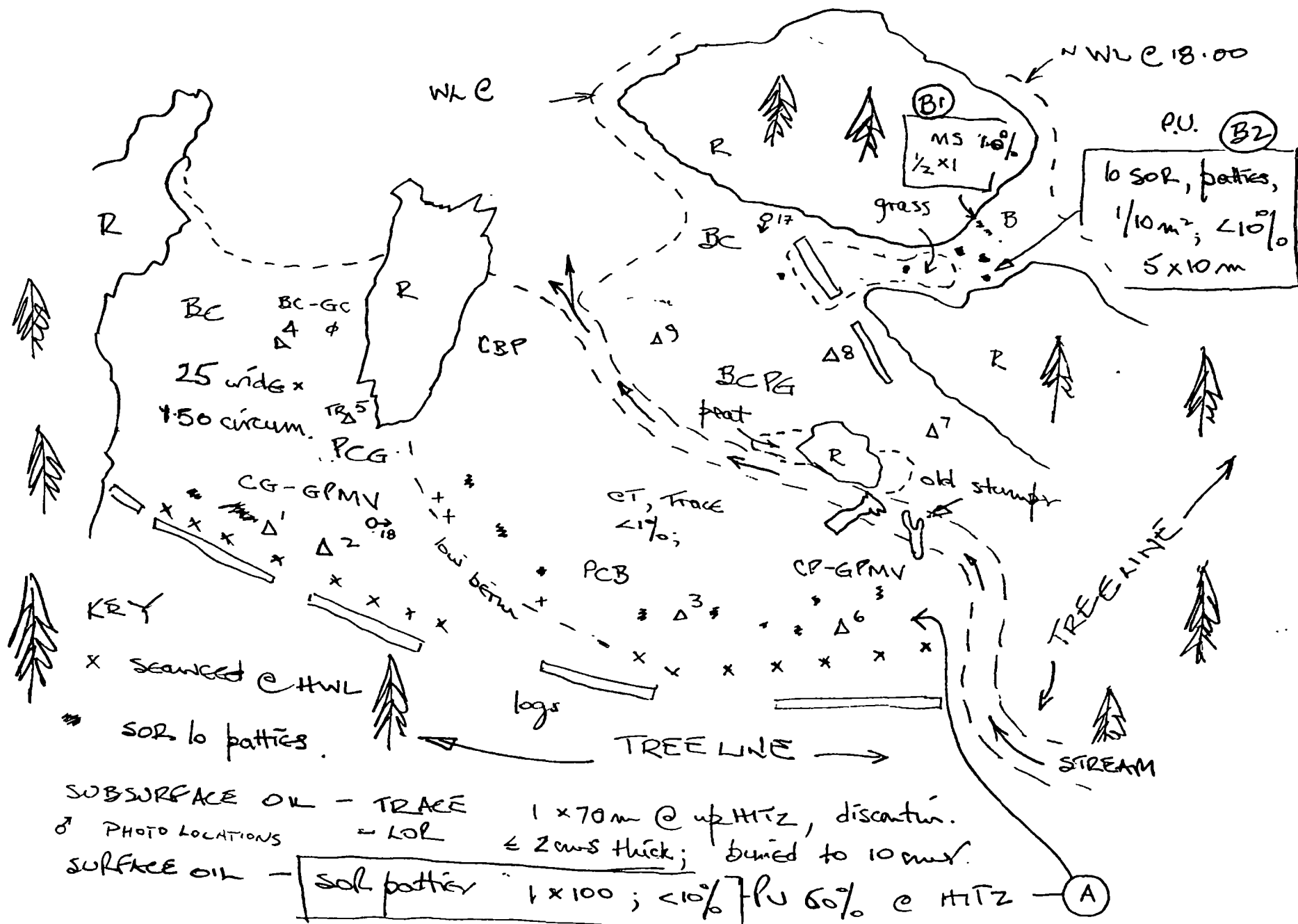
AK State Plane Zone 4
published

Subdivision Field Map
Map Key: PUSCU014Aa
Name: GM
Date: 5.14.91

G. MACDONALD S. 14.91
ASC # 2242013036



Sketch # 1

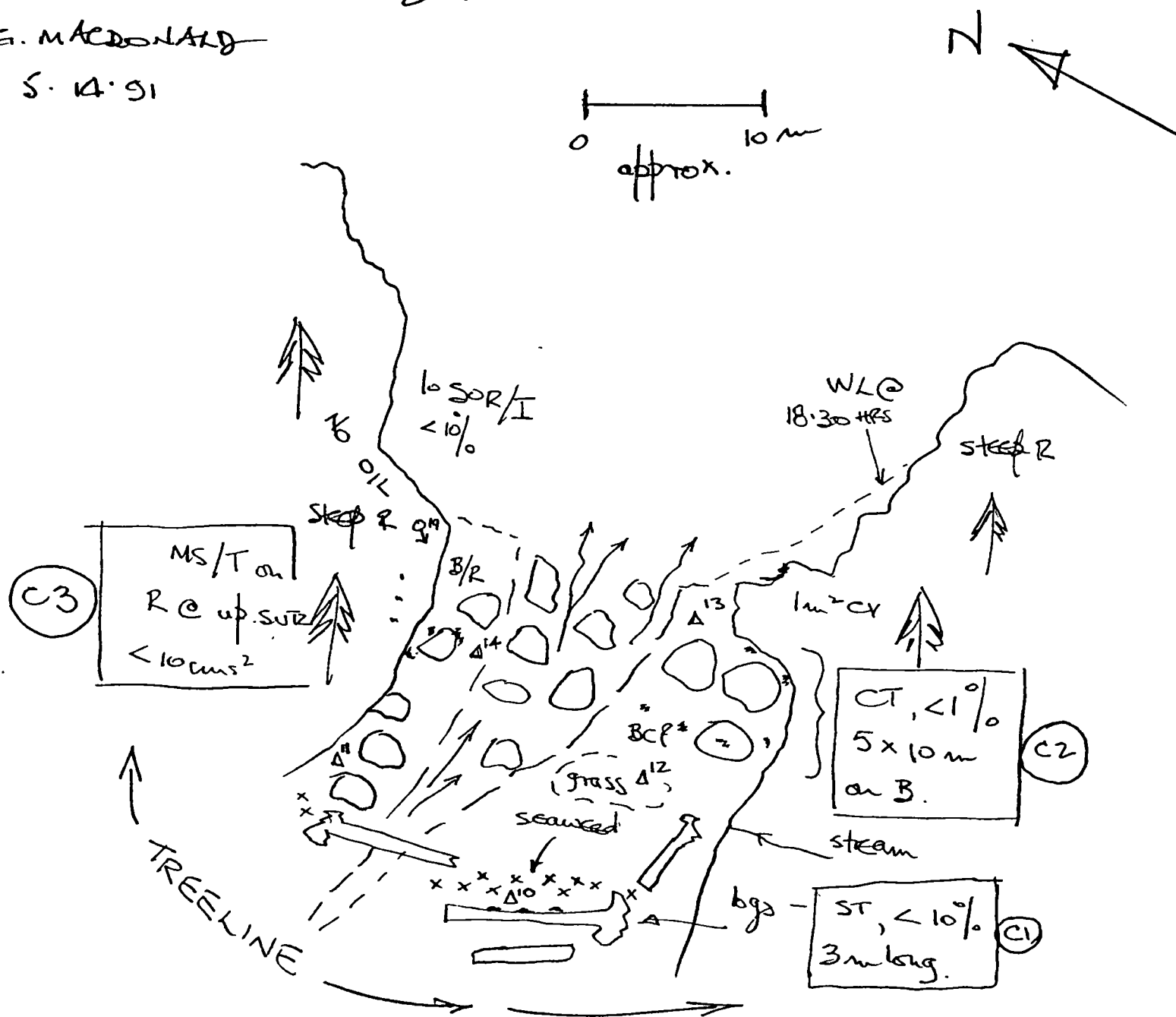


ASC # 2242013034

Sketch #2

G. MACDONALD

S. 14.91



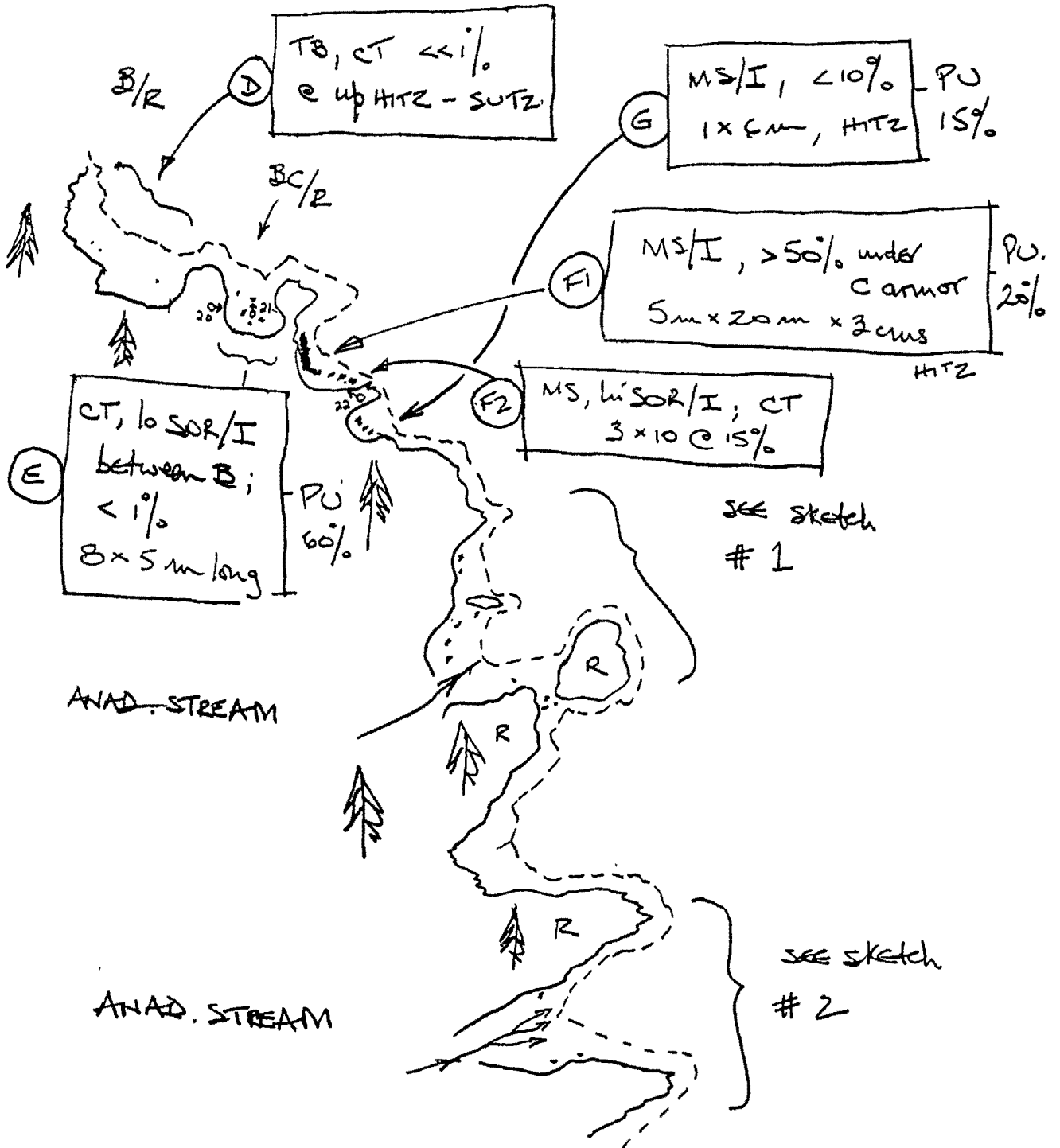
CU-14 A

Sketch #3

G. MACDONALD

5.14.91

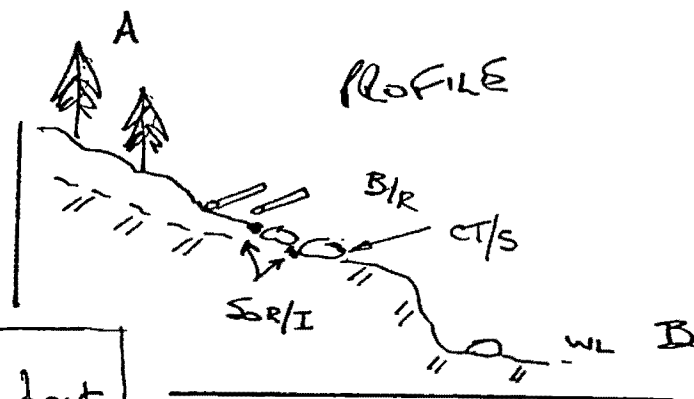
approx.
0 100m



H-V. R. clefts

(H)

hi SOR/I, biodegraded in part
below & between B. $< 3\%$.
CT/T on R, B. $< 1\%$
6m x 15m



massive B
over R

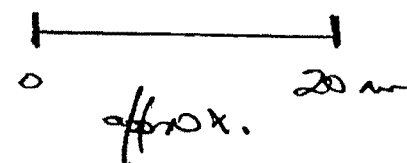


Beckrock bench
w/ massive B.

18 24 & 25
step
R

CU-14A
G. MACDONALD
S. 14.91

Sketch #4



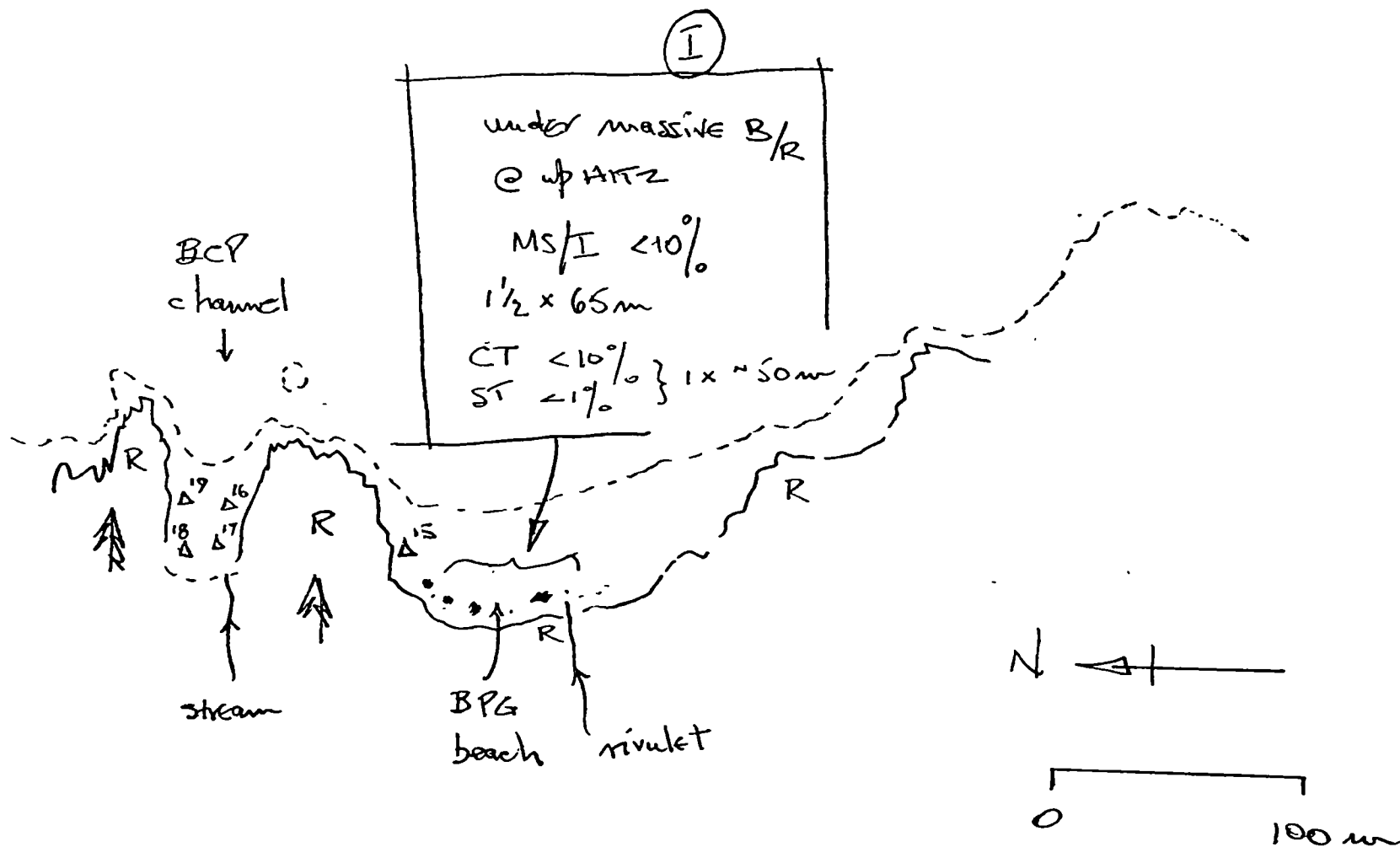
CU-14A

G. Macdonald

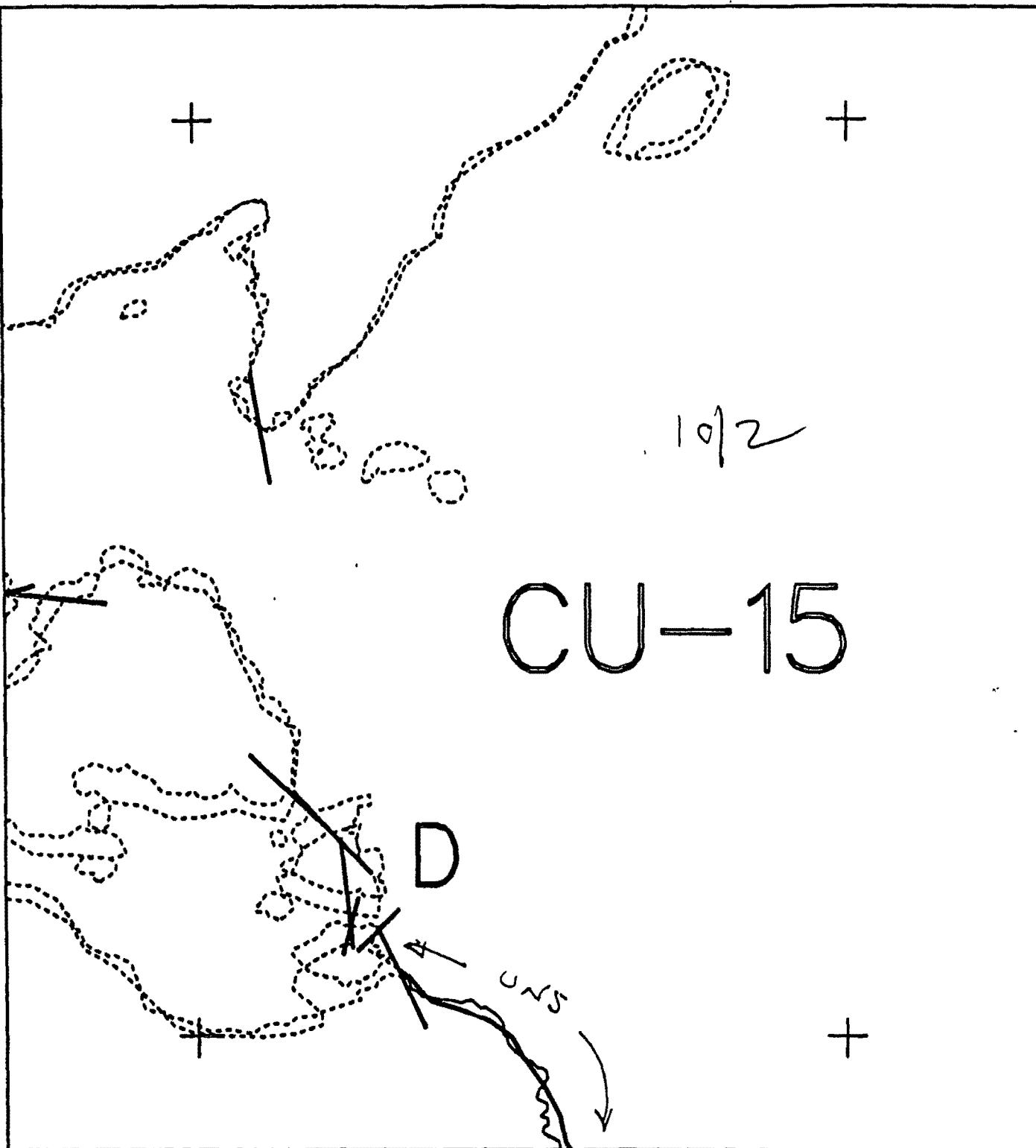
5.15.91

Sketch #5.

8



11.45 - 12.15 HRTZ
+ 4.0' - + 5 1/2' tide.



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

CU014 A
 ADEC Subsegment Length: 2293m
 METERS
 0 200 400
 AK State Plane Zone 4
 pcu014ab



Subdivision Field Map
 Map Key: PWSCU014Ab
 Name: GM
 Date: 5.15.91
 Date Entered:

+

+

UNSL 30 m M

6 m of VL
110 m

A

C

10 m of VL → UNS

2 of 2

65 m of VL → UNS

UNSL 15 m of VL

+

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

CU014 A

ADEC Subsegment Length: 2293m

METERS

0 200 400

AK State Plane Zone 4
projection

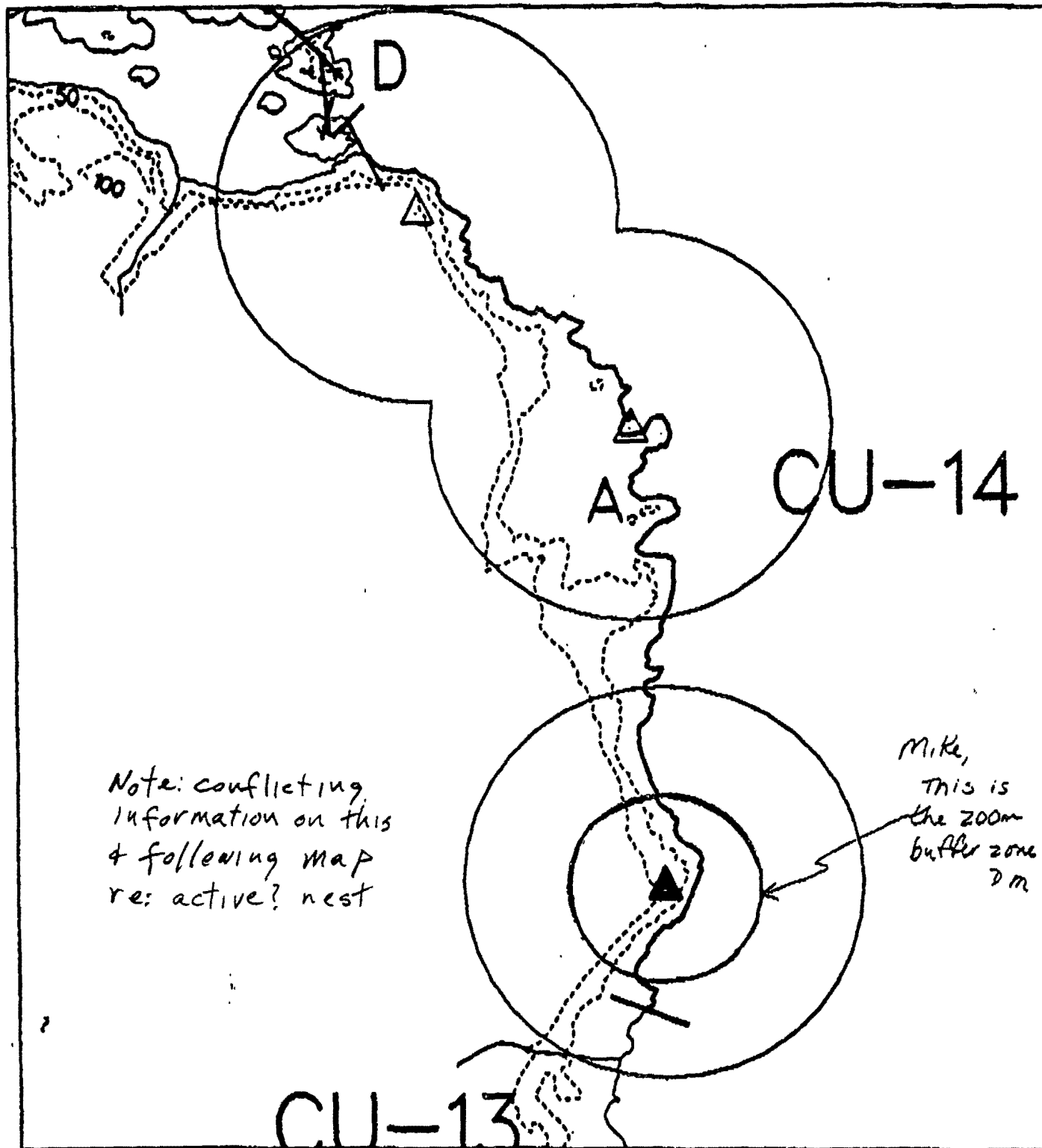
Subdivision Field Map

Map Key: PWSCU014Aa

Name: GM

Date: 5-15-91

Date Entered:



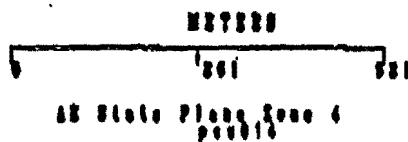
Note: conflicting information on this & following map re: active? nest

Mike,
This is the 200m buffer zone 2m

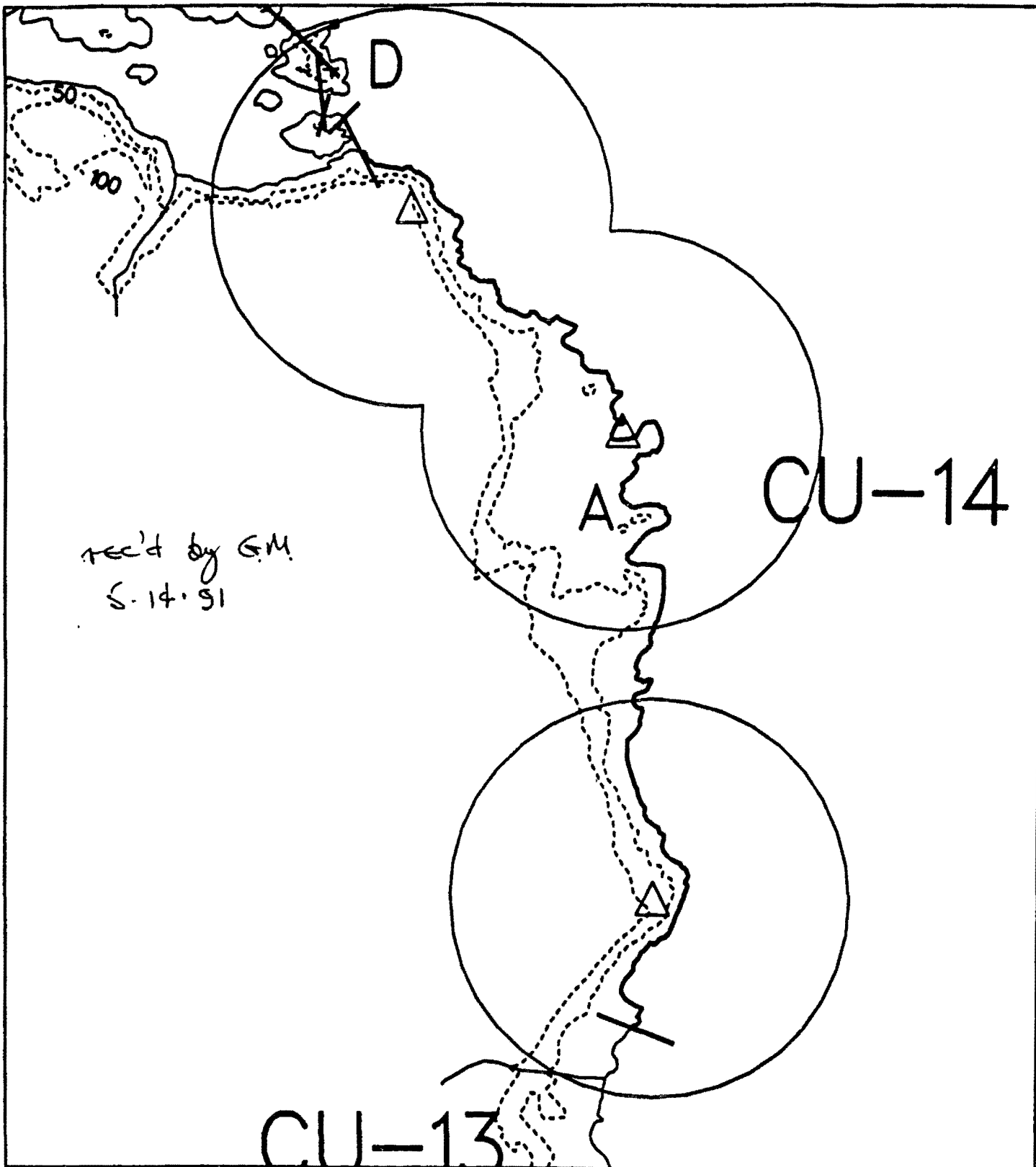
CU-13

CU014

Segment Reference Map
Map Key: PUSCU014

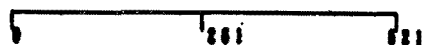


EAGLE NEST



CU014

METERS



AS State Plane Zone 4
ps0014

Segment Reference Map
Map Key: PUSCU014



EAGLE NEST

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 1 DATE 14 & 15 May 91
 SEGMENT # CV 014 TIDAL HEIGHT (Range) 2.0-+7ft, 3.0-4.2 ft
 SUBDIVISION A BIOLOGIST Michael Fawcett
 SEA STATE 1 ft swell WIND SPEED/DIRECTION NE 10-15 knots
 PHOTOGRAPHS: ROLL # FRAME #

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

Completed anadromous stream sites and two other sites with Tom Crowe (ADF&G monitor) on May 14; returned May 15 to survey 5th site (Sketch #5). See sketches 1-5 for descriptions of biota near each oiled site. Salmon fry were observed in the intertidal zone near the mouth of the smaller stream (#224-20-13034). SOR & CT Typically found in VTZ-SVTZ areas at +10-12ft MLLW, above most biota except lichen, limpets, amphipods & oligochaete worms. MTZ areas below oil typically have dense Rockweed and barnacle spat, and variable densities of littorinids, mussels, limpets, Rhodomele, etc. Whelks (*Nucella emarginata*) are abundant in MTZ-LTZ throughout the subdivision, *N. lamellosa* sparse.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	salmon fry
Seabirds			black prickleback
Waterfowl			
Gulls/Kittiwakes	1 (G-W Gull)	3	
Shorebirds			
Corvids			
Other Birds			

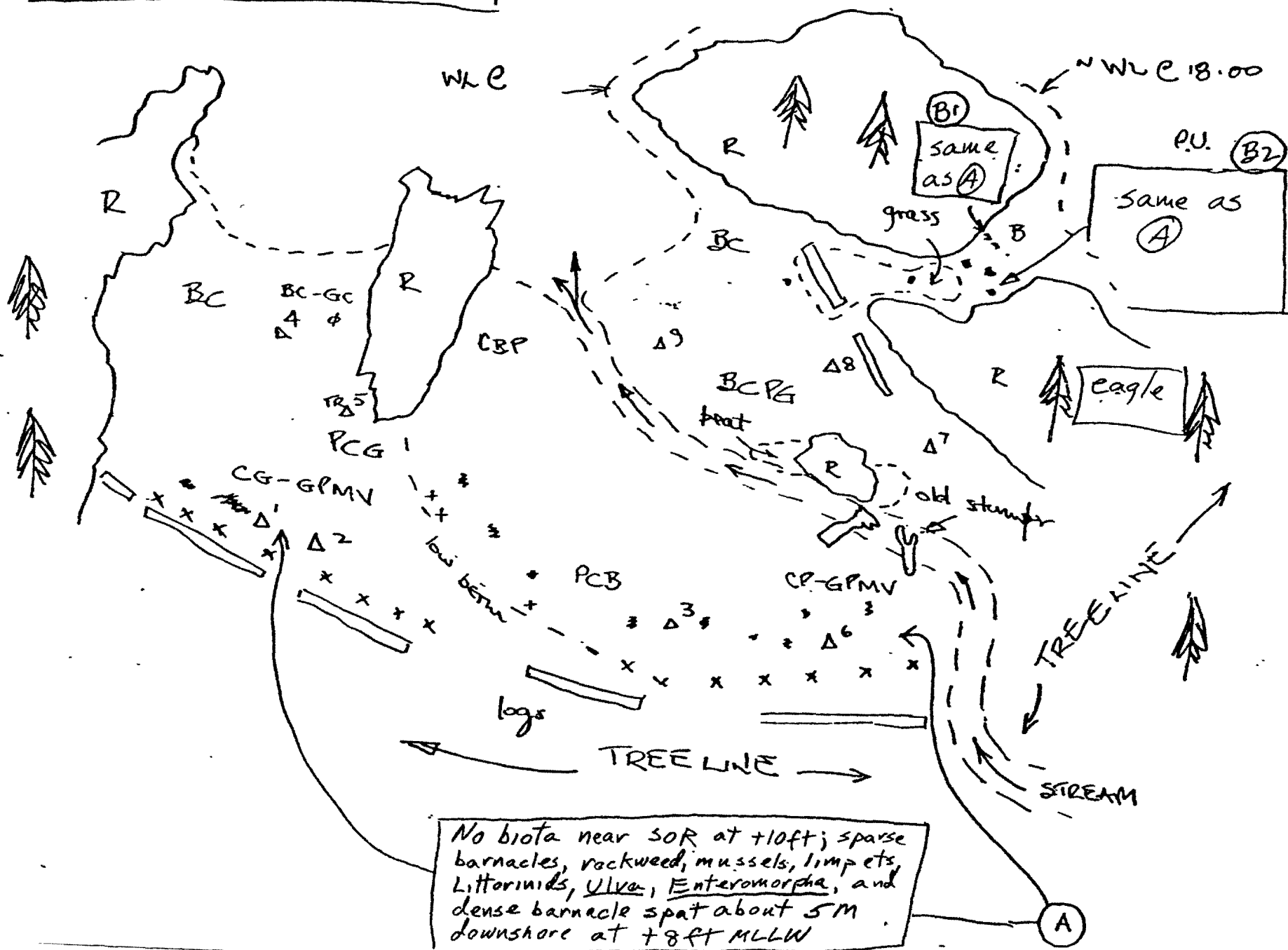
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

CU 0174
Bio Sketch Map
ASC # 2242013036
M.H. Fawcett 5/14/91

N

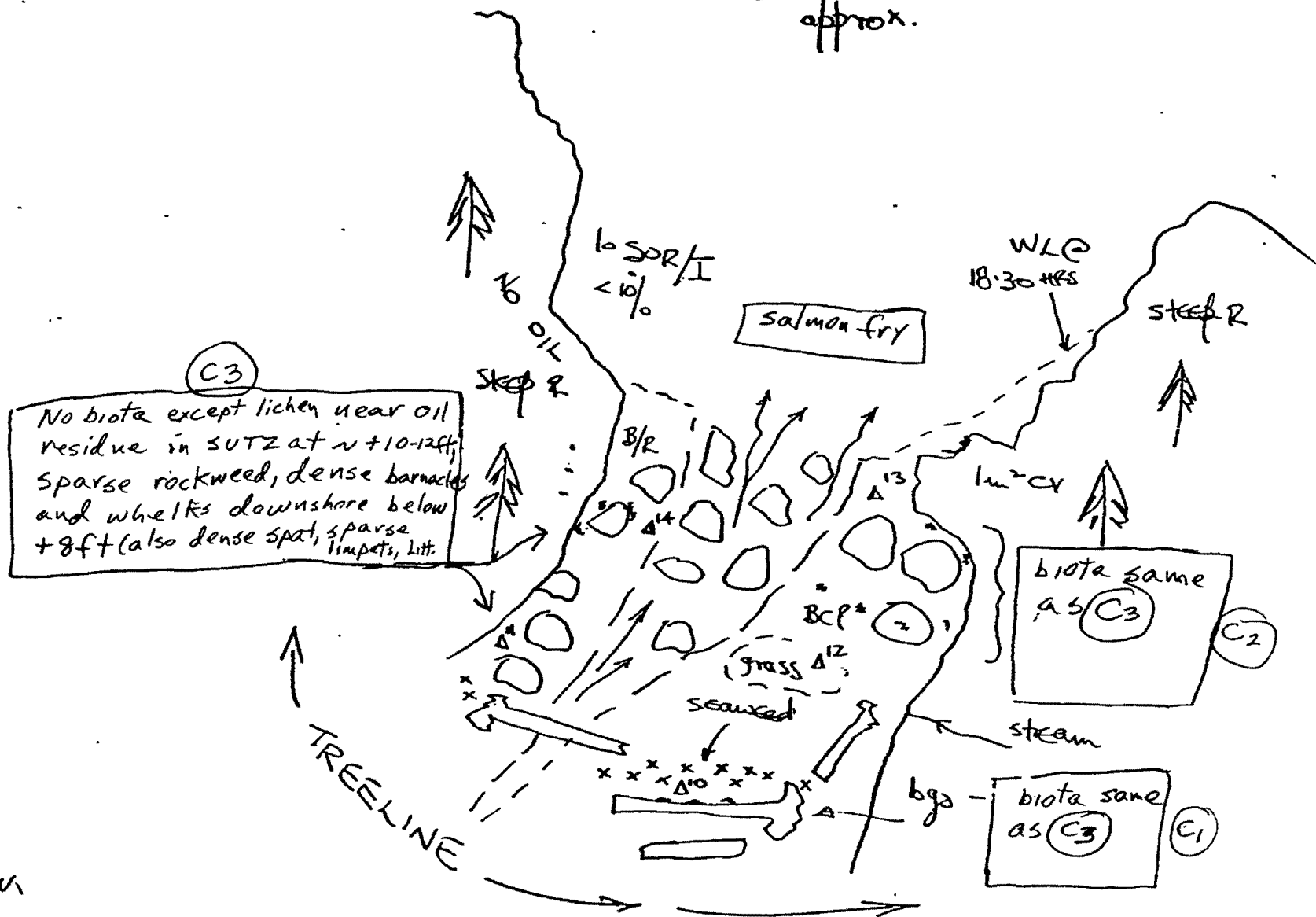
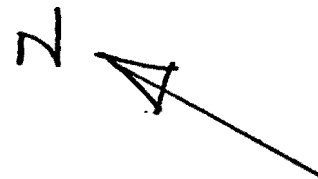
Sketch #1



Bio Sketch Map M. Fawcett
 ASC # 2242013034
 CU 014-A 5/14/91

Sketch #2

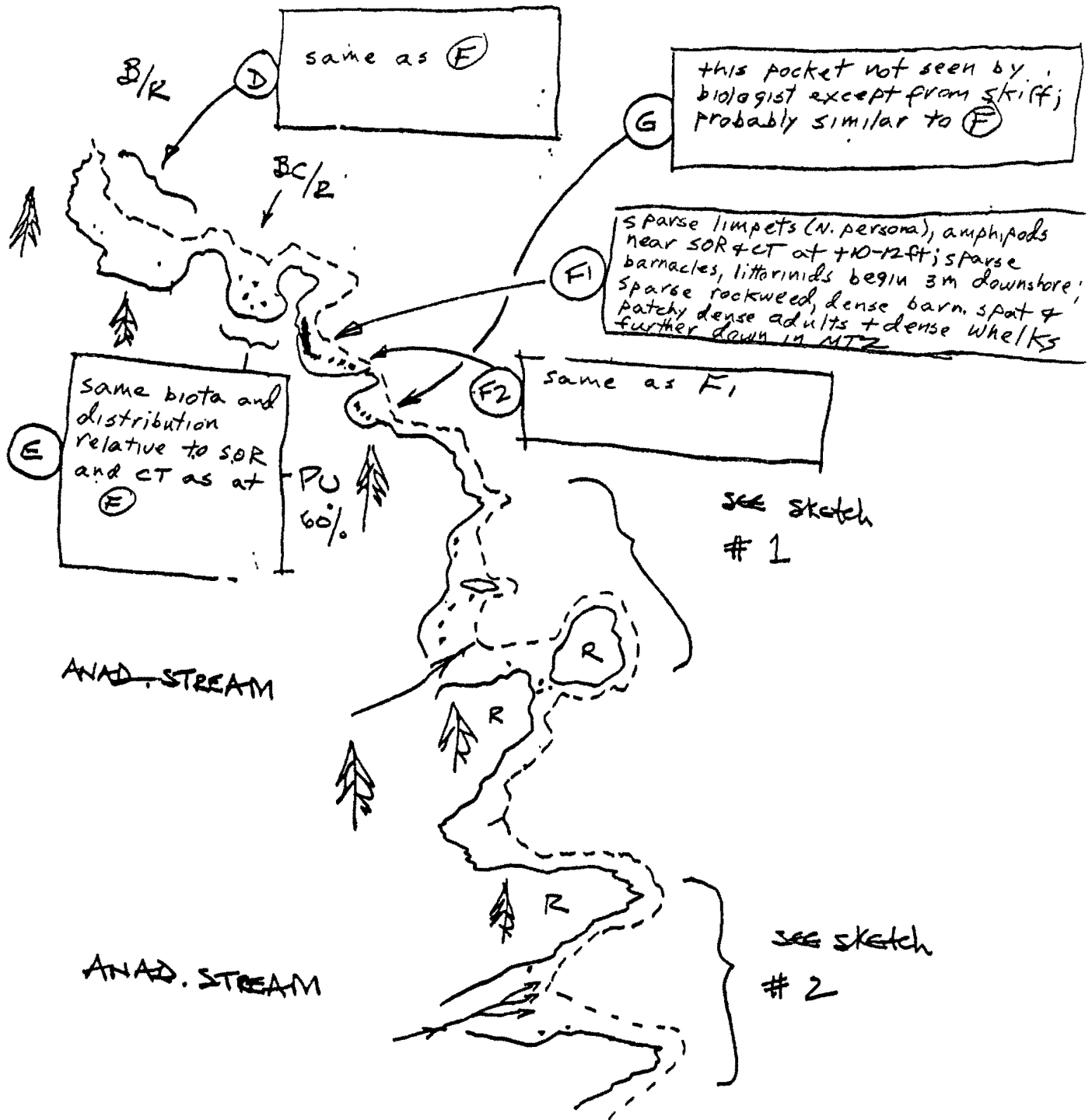
0 10 m
 approx.



BIO. sketch Map
CU-14 A
14 May 91
M. Fawcett

Sketch #3

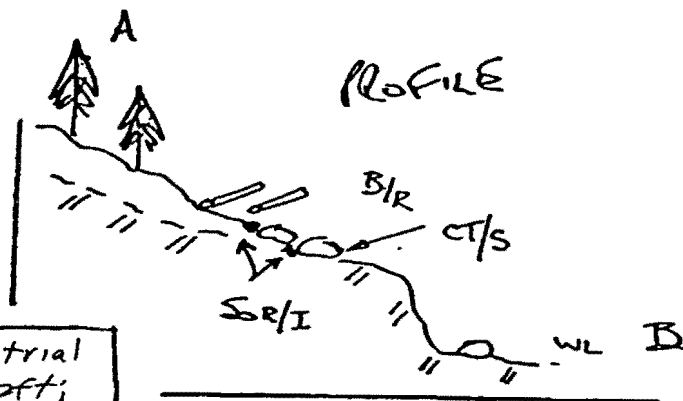
approx.
0 100m



H-V. R cliffs

(H)

No biota except lichen, terrestrial grass near SOR + CT at 10 m ft;
Tidepools 2m downshore with dense littorinids, plus hermit crabs, and coralline algae; rockweed, limpets, littorinids, sparse barnacles around pools on BR; LTZ-MTZ tidepools with typical diverse biota



massive B
over R



Bedrock bench
w/ massive B.

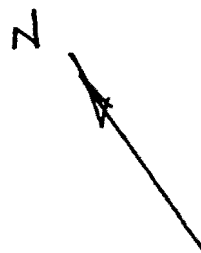
steep
R



Sketch #4

Bio Sketch Map
CU 14A, 14 May 91
M.H. Fauszett

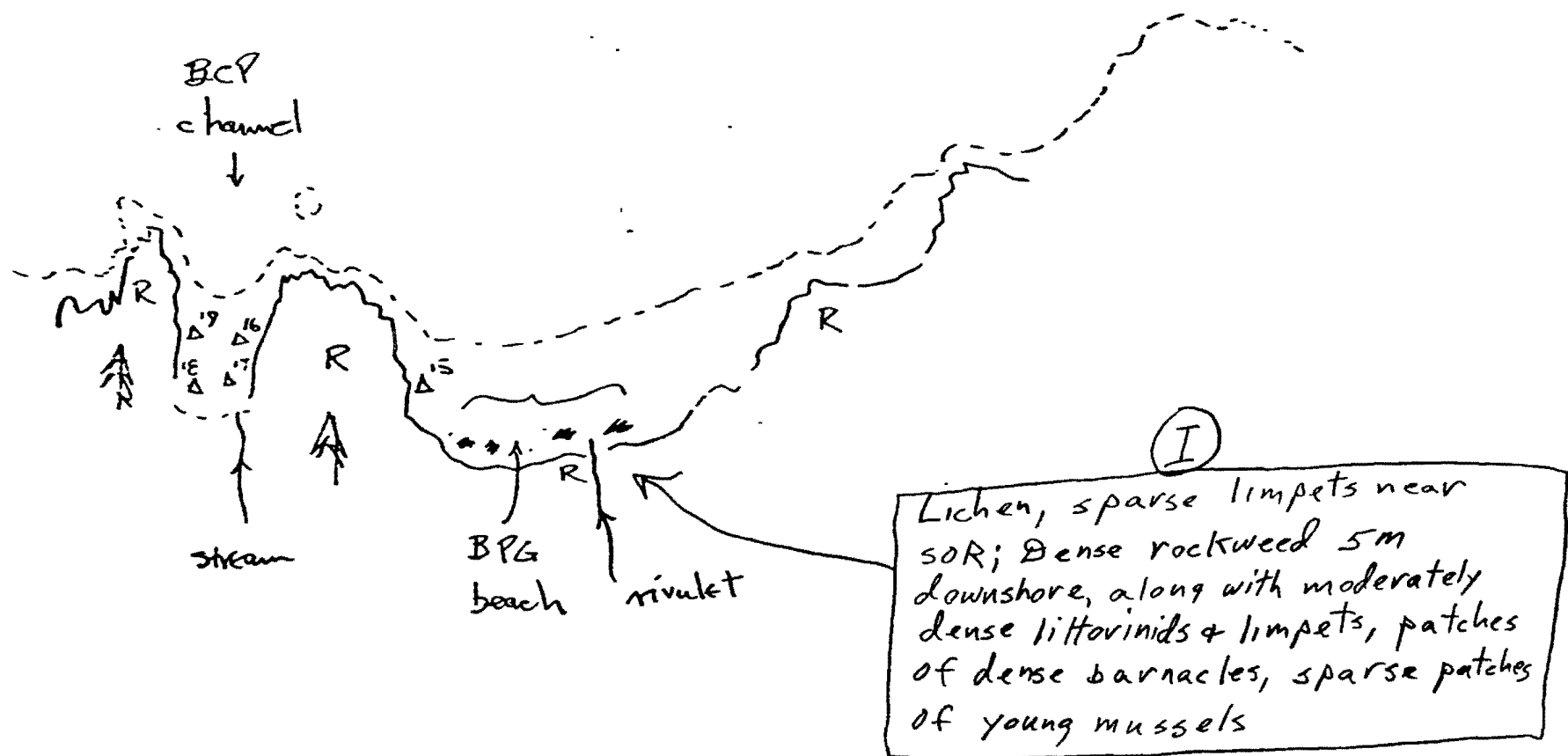
0 20 m
approx.



DIO - Neich map
 CU-14A
 15 May 91
 M. Fawcett

Sketch #5.

18



CU 14A Arr 1715 Fawcett
5/14/91 wind NE 5-10, rain

Sub A Pink salmon stream

1 eagle flew over

1 gull

Site 8 1800 hrs

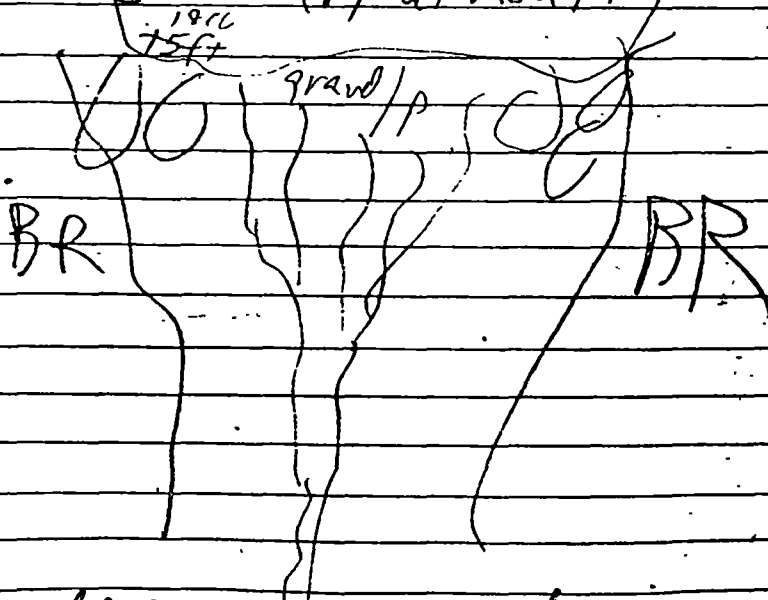
- small tan stream (a)

sleep shore, no

5 pause roadbed + 4.8 ft on boulders

4 BR - very dense barn, which
no hole in stream

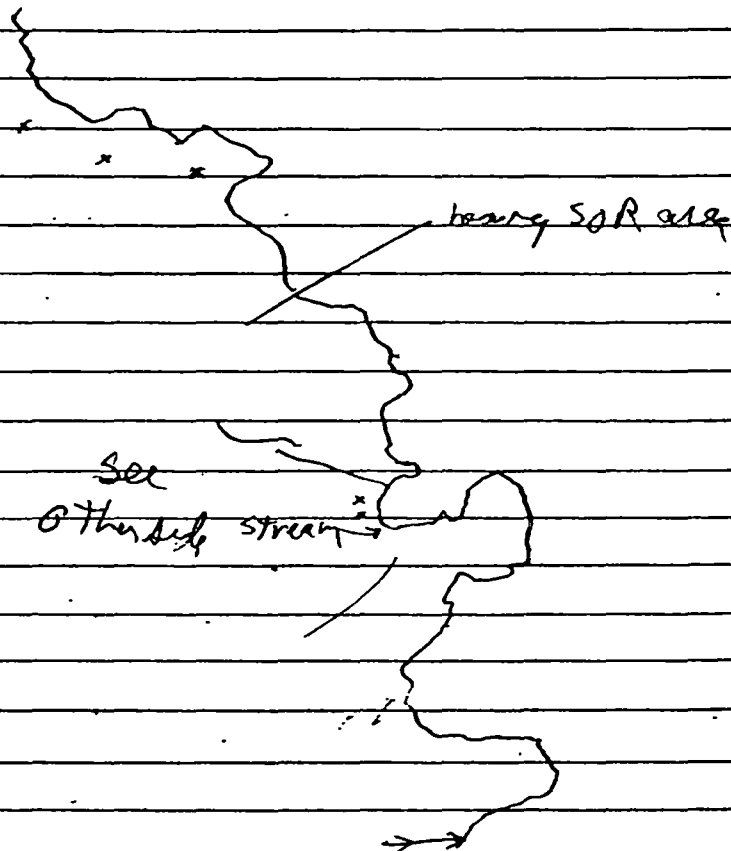
- salmon fry at mouth



defect 1820, went north

CU 14A

N
↑



over →

CU 14A (cont) 14 May, Fauett

12:30 hrs

last one, south end of
Segment - SOR, CT in VTZ-SUTZ
10-12 ft boulders above biota - 2m

down shore on BR bench are
pools w/ Litho, hermits, Litt.
but sparse algae ^(mostly Littorina) mod
dense Fucus on BR around pools -
Litt, limps, sparse barn

- pools in LTZ-MTZ w/ rich
Lida - very dense N smug
all over the subdorsum

gulls

Finish 1945

15 May 91 Returned to CU 14A

11:45 hrs - area missed
yesterday -

- shallow B/c core - SOR SUTZ

in cracks of core - no biota except
sparse limps down at ~8 ft - dense

Fucus - sparse barn (some dense
patches, mod. Litt, limps,
sparse mussels

21
sparse Rhoda, Urosalpinx, U/14
LTZ - purple backs, breeding
Litt, dense spat

Band of SOR just at edge of
N person & Litt. - limpets
very dense (10-20 per boulder)
just below: out (+8 ft)

Finish 1215 hrs

1991 STREAM FILE LOG HABITAT

STREAM CATALOG # : 224-20-13036
STREAM NAME : Culross Island

LOCATION : P.W.S.
SEGMENT : CU 014A

[illegible]