

OIL SPILL PUBLIC INFO. CENTER



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v.2

[Shoreline evaluations, 1991].

Kenai CB-03 to GP-1001

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ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT CB-3 SUBDIVISION B (2 of 3)

WORK WINDOW	
Manual Pickup	OPEN
Spot Washing	WORK BEFORE 7/1

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	NO CONSTRAINT. ADF&G catalogued anadromous stream (242-20-10190) is more than 100m from work area.
1J	Purse Seine Area	Closed to spot washing after 7/1. No constraint to manual pickup.
7JJ	Subsistence: Invertebrate Harvesting	NO CONSTRAINT. Per contacts with Mark Kuwada/ADF&G 5/22/90 and Pat Norman/Port Graham Village Corporation 5/20/90 by Rex Coulter/Exxon.
5T	Bald Eagle Nest	NO CONSTRAINT. Work site is more than 400m from nest.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

TAG APPROVAL DATE 5/29/90
ADEC Art Weiner Art Weiner
EXXON Andy Teal Andy Teal
NOAA Burt Wescott Burt Wescott
USCG G.A. Reiter G.A. Reiter

FOSC

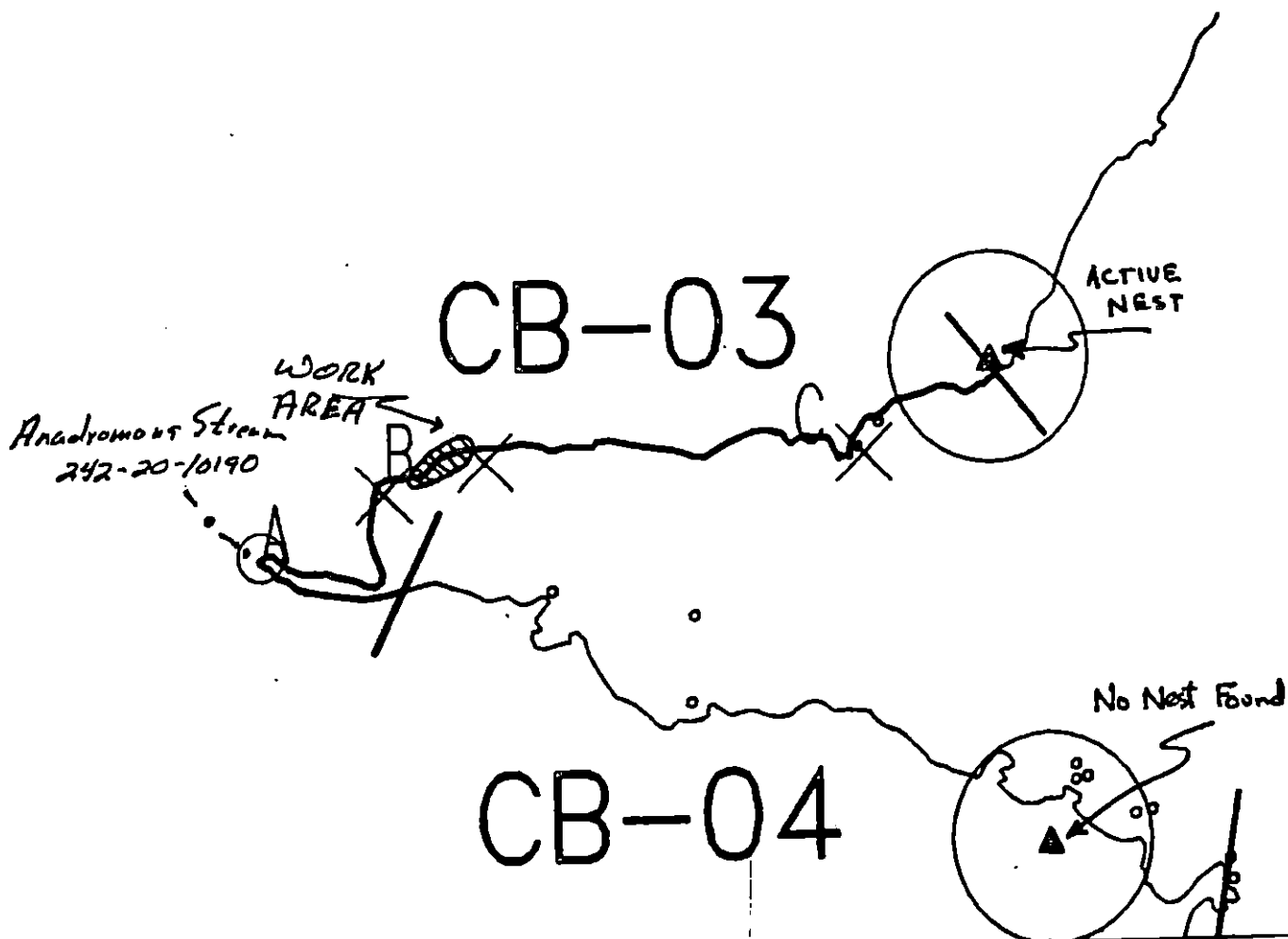
DATE

Prepared By: Anders Meyer REX

Date

5/28/90

Incorporates information from
USFWS Bald Eagle Survey
on 5/20/90



Exxon Company, USA



ECOLOGY MAP
SEGMENT CB-3
SUBDIVISION B (2 of 3)



Seabird Colony



Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ CB-003 SUBDIVISION B (2 OF 3) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Susistence area - Invertebrate harvesting (7JJ) - contact Port Graham Native Association for exact date; Salmon stream mouth - fry out migrating (1A) - 3/1 to 5/15; Salmon stream mouth spawning (1B) - 7/10 to 8/31; Possible bald eagle nest area contact ADF&G and USFS to verify eagle nest location map.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-oiled biota and substrate.

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

SHPO SIGNATURE: Charles J. Hume DATE: April 12, 1990

OILING CATEGORIZATION:

Wide 87 m: Medium 25 m: Narrow 30 m: V.Light 477 m: No Oil 301m
Subsurface Oil Observed: Yes ___ No X Maximum Depth ___

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick-up of asphalt pavement and trowling up mousse between cobbles. Work should be conducted 5/15 to 7/10 due to above constraints.

IF TROWLING OF MOUSSE IS NOT EFFECTIVE - SPOT WASH AS REQUIRED.

WHERE APPROPRIATE MOVEMENT OF COBBLES TO RECALL MOUSSE

SEE CONSTRAINT ADDENDUM DATED 5/28/90 REXC.

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/12/90

DEC JOHN BAUER
EXXON ANDY TETZ
NOAA Burt Wierhoff
USCG M. J. HALL

FOSC: WJL

DATE: 5-8-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT CB-3 SUBDIVISION C (3 of 3)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

No constraint to manual pickup and tarmat removal. ADF&G catalogued anadromous stream (242020-10190) is located in Subdivision A, more than 100m from recommended treatment areas.

1J Purse Seine Area

No constraint to manual pickup and tarmat removal.

7JJ Subsistence: Invertebrate Harvesting

No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to unrolled blots and substrate.

TAG ADDENDUM DATE 5/18/90
ADEC Art Weiner
EXXON Art Weiner
NOAA Joseph Talbot
USCG G.A. Reiter

FOSC W L

DATE 5-18-90

Prepared by: Anda Thum WTK

Date: 5/17/90

CB-03

242-20-10190
Anadromous Stream

WORK AREAS

CB-04



Exxon Company USA



ECOLOGY MAP
SEGMENT CB-3

SUBDIVISION C (3 of 3)



Seabird Colony



Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ CB-003 SUBDIVISION C (3 OF 3) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Subsistence area - invertebrate harvesting (7JJ) - Contact Port Graham Native Association for exact dates; Salmon stream mouth - fry out migrating (1A) - 3/1 to 5/15; Salmon stream mouth - spawning (1B) - 7/10 to 8/31. Contact ADF&G Habitat Division prior to treatment for permit.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-oiled biota and substrate.

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

SHPO SIGNATURE: Charles J. Homan DATE: April 12, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 73 m: Narrow 0 m: V.Light 1459 m: No Oil 227 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u> </u> Bioremediation	<u> </u> Spot Washing: <u> </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: Manual removal of asphalt, mousse, and oiled trash and debris.

TAG COMMENTS:

TAG APPROVAL DATE: 4/12/90

ADEC John Bano

EXXON Andy Gier

NOAA Burt Wessett

USCG M. J. Hall

FOSC: ML

DATE: 5-8-90

SHORELINE EVALUATION

SEGMENT ST/ CB-003 SUBDIVISION A (1 OF 3) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Subsistence area - invertebrate harvesting (7JJ) - Contact Port Graham Native Association for exact dates; Salmon stream mouth - fry out migrating (1A) - 3/1 to 5/15; Salmon stream mouth - spawning (1B) - 7/10 to 8/31. Contact ADF&G Habitat Division prior to treatment for permit.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-oiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS: Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time.

SHPO SIGNATURE: Charles J. Holmes DATE: April 12, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 19 m: Narrow 0 m: V.Light 586m: No Oil 925 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Manual pick-up of tar patties and balls and trowl up mousse between cobble. Recommend working between 5/15 and 7/10, due to above constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/12/90
ADEC JOHN BAUER
EXXON ANDY TEAL
NOAA Burt Wescott
USCG M. J. Hall
FOSC: DATE: 5-8-90

DATE 3 / 29 90

CHECKLIST

___ N Axis
 ___ Apprx. Scale
 ___ Day/Date Entry
 ___ OS Dist.
 ___ Width
 ___ Length
 ___ % Cover
 ___ Substrate Character
 ___ Est. HPL/LML
 ___ SSI
 ___ Profile Location(s)
 ___ Profile(s)
 ___ Pit Location(s)

LEGEND

1 Δ

Fit - No Subsurface Oil

24

PM - Substructure On

CT/C

Continuing Education

CT/O

Broken Distribution

CT/P

Pending Distribution

CT/9

Estimated Distribution

Other Vegetation

2

50 notes.

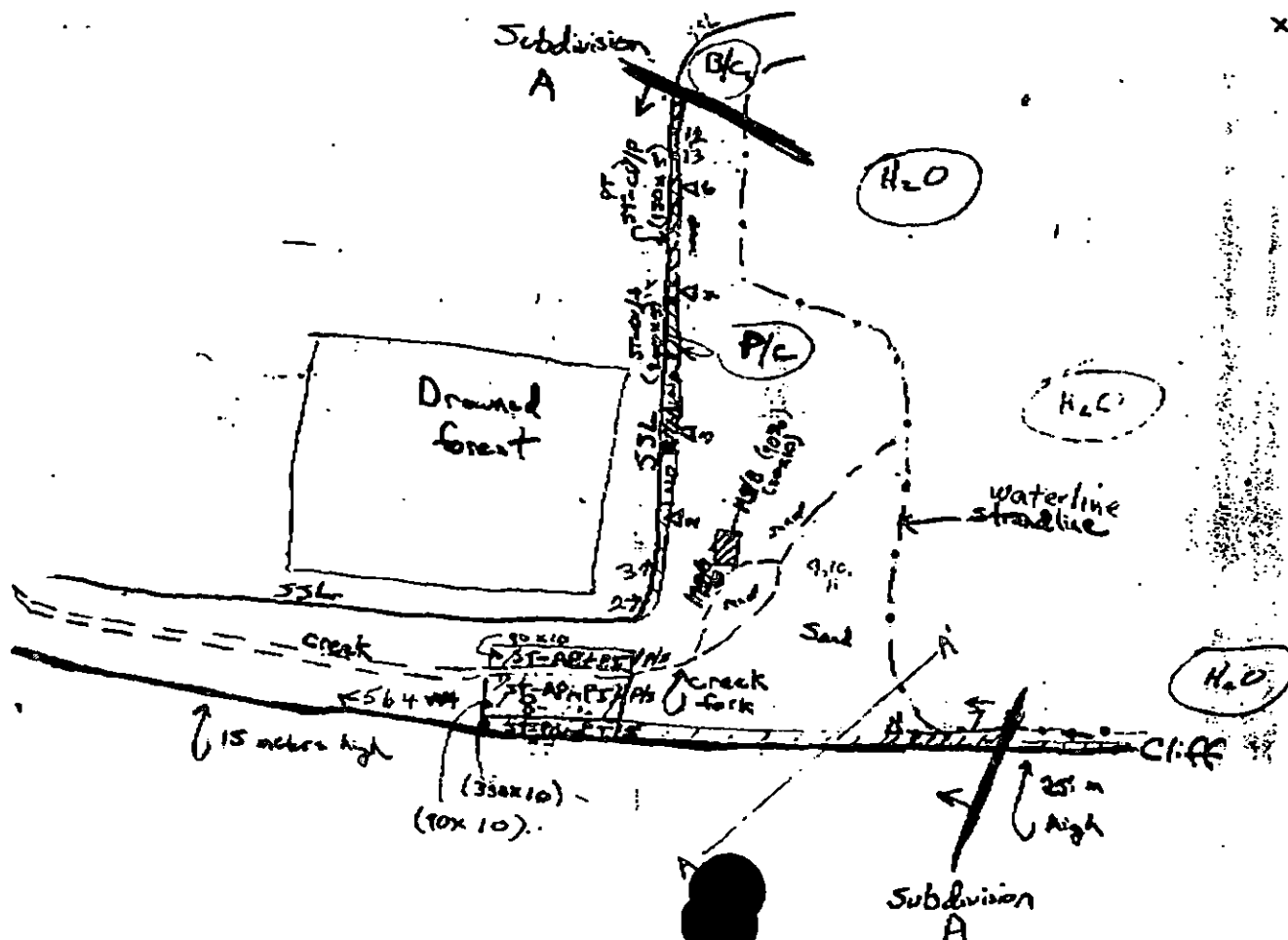
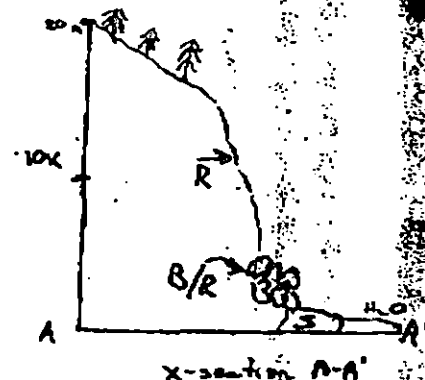
3/29/90

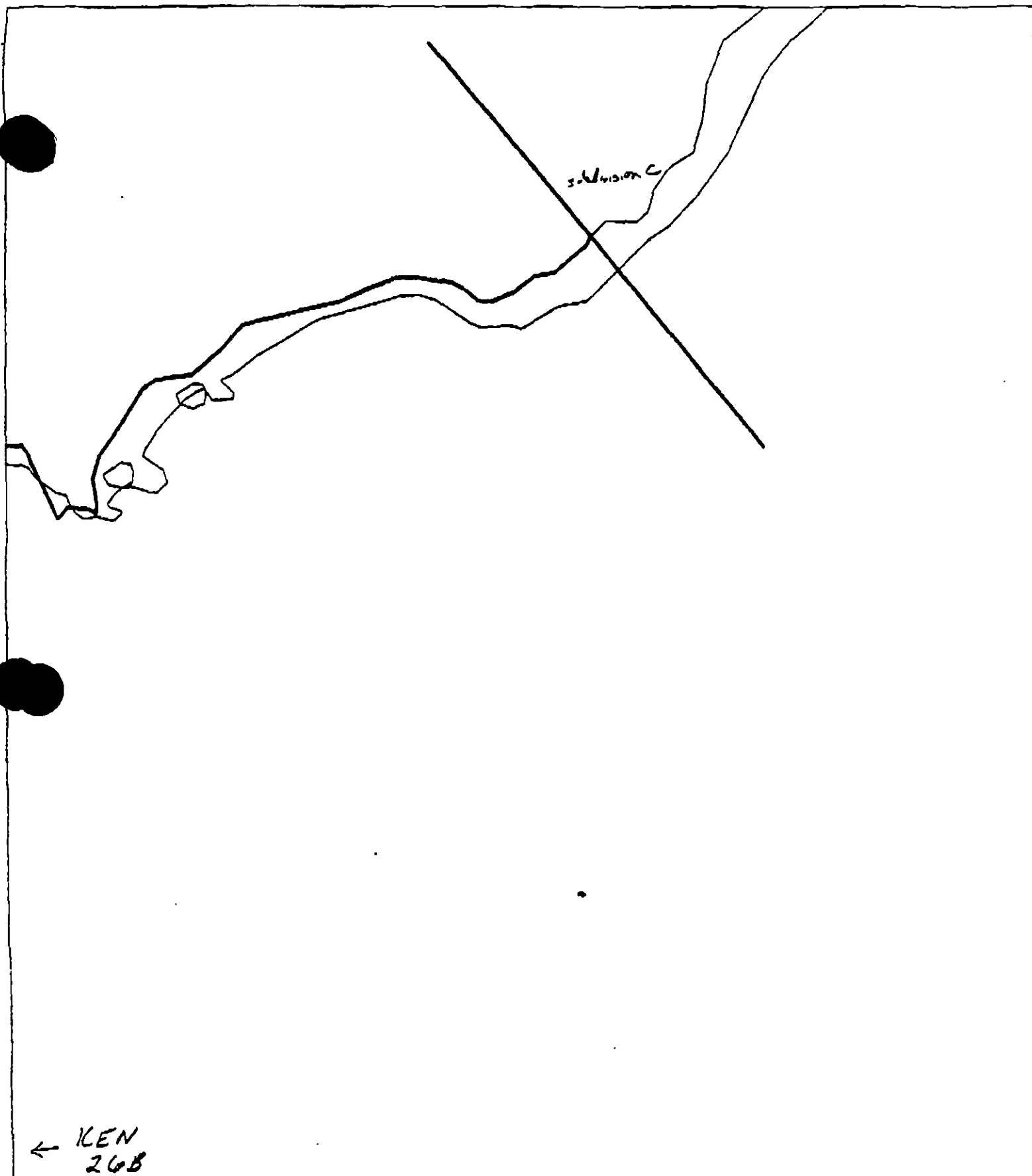
Photographer M. Fawcett
ST-17-1

(Numbers = frame no.)

(arrow = view direction, no arrow means closeup or vertical view)

SKETCH MAP





XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

OOOO H - 0.1

CB-3

ADEC Segment Length: 4347m

0 100 200 300

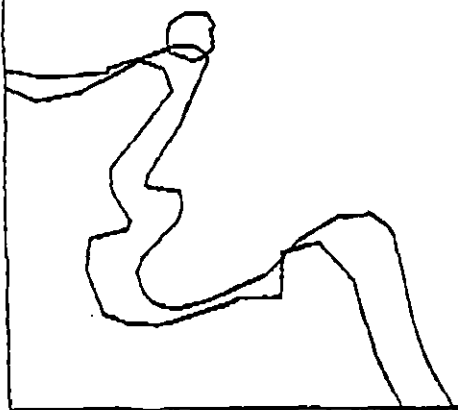


Map Key: KEN-26c

Name: SIEGELDate: 29 Mar 90



← KEN 26A

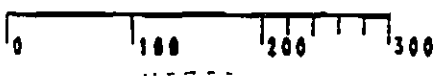


KEN 26C →

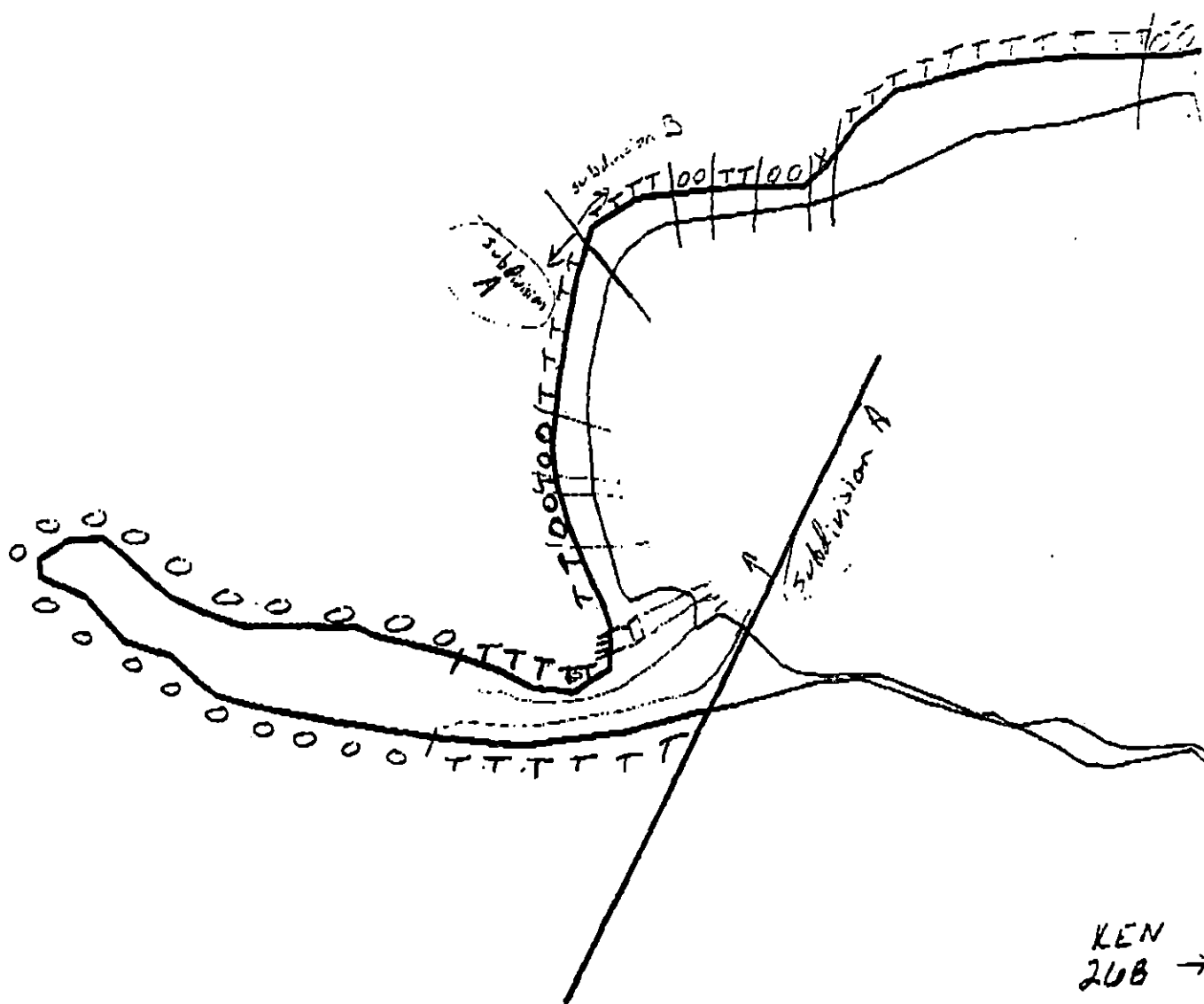
- XXXX Wide
- /// Medium
- Narrow
- TTTT Very Light
- OOOO No Oil

CB-3

ADEC Segment Length: 4347m



Map Key: KEN-26b
 Name: SEEGAL
 Date: 29 Mar 90
 Data Colored:



XXXX Wide

// Medium

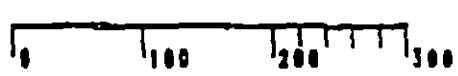
--- Narrow

TTTT Very Light

OOOO No Oil

CB-3

ADEC Segment Length: 4347m



Map Key: KEN-26a

Name: Randy Siegel

Date: 29 Mar 90

Not to Scale

SHORELINE EVALUATION

SEGMENT ST/ CB-003 SUBDIVISION B (2 OF 3) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Susistence area - Invertebrate harvesting (7JJ) - contact Port Graham Native Association for exact date; Salmon stream mouth - fry out migrating (1A) - 3/1 to 5/15; Salmon stream mouth spawning (1B) - 7/10 to 8/31; Possible bald eagle nest area contact ADF&G and USFS to verify eagle nest location map.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-oiled biota and substrate.

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

SHPO SIGNATURE: Charles Z. Hume DATE: April 12, 1990

OILING CATEGORIZATION:

Wide 87 m: Medium 25 m: Narrow 30 m: V.Light 477 m: No Oil 301m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick-up of asphalt pavement and trowling up mousse between cobbles. Work should be conducted 5/15 to 7/10 due to above constraints.

IF TROWLING OF MOUSSE IS NOT EFFECTIVE - SPOT WASH AS REQUIRED WHERE APPROPRIATE MOVEMENT OF COBBLES TO RECESS MOUSSE.

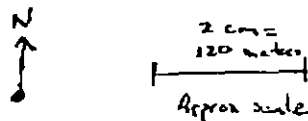
TAG COMMENTS:

TAG APPROVAL DATE: 4/12/90
ADEC JOHN BAUER
EXXON ANDY TAT
NOAA Burt Wierhoff
USCG M. J. HALL

FOSC: W L DATE: 5-8-90

OG Randy Siegel
 SEGMENT ST/ CB-003
 SUBDIVISION B
 DATE 3/29/90

SKETCH MAP



CHECKLIST

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

LEGEND



PT - No Subsurface Oil



PT - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

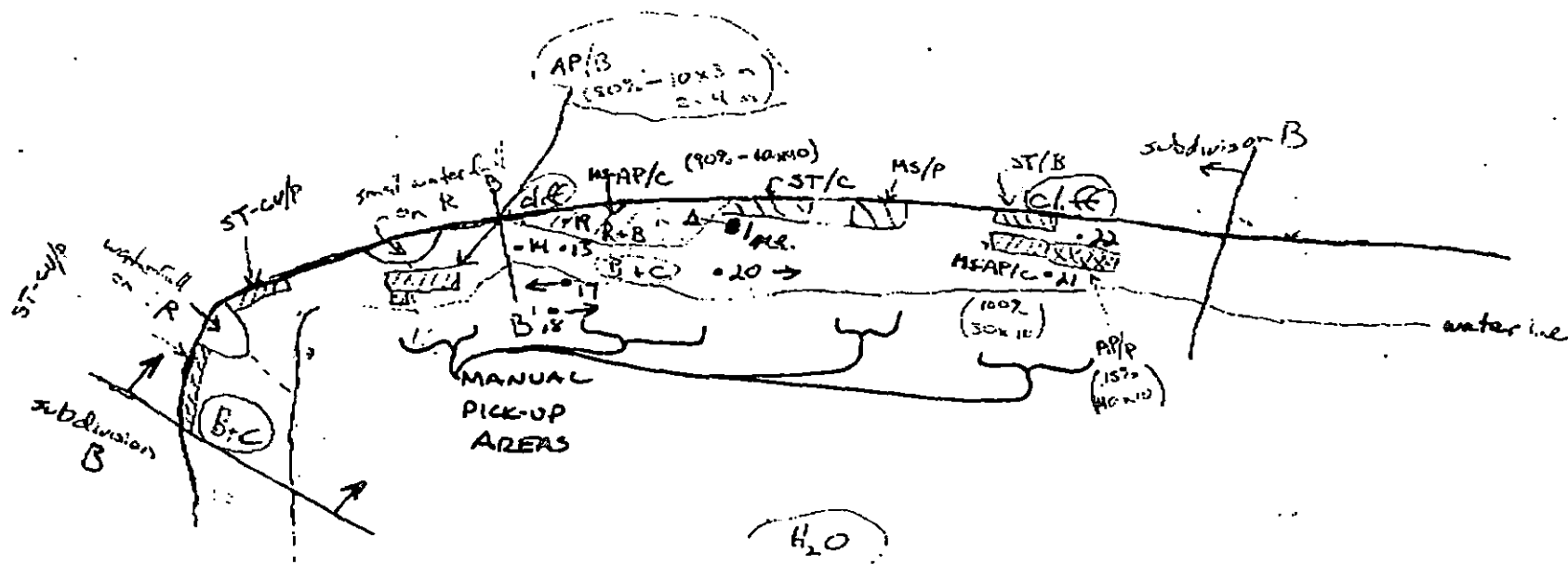
CT/P

Patchy Distribution

CT/S

Splashed Distribution

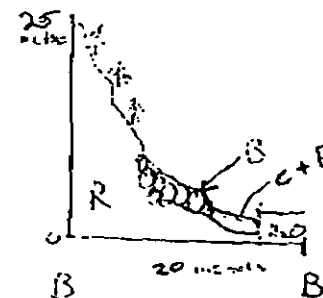
Oiled Vegetation



al character length

AP 100 PO 5 CH 150 CT 200 ST 500 MS 75

PT 50 TR 50 FL 10 NO 325



DATE 3/29/90

CHECKLIST

11. Aspen
 12. Aspen State
 13. Aspen Valley
 14. Aspen
 15. Aspen
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 99. Aspen
 100. Aspen

Legend



 H - H Subsurface Oil



 H - Subsurface Oil

 CT/C

 Distribution

 CT/B

Blacken Distribution

CT/P

Policy Distribution

CT18

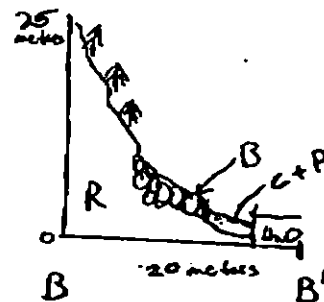
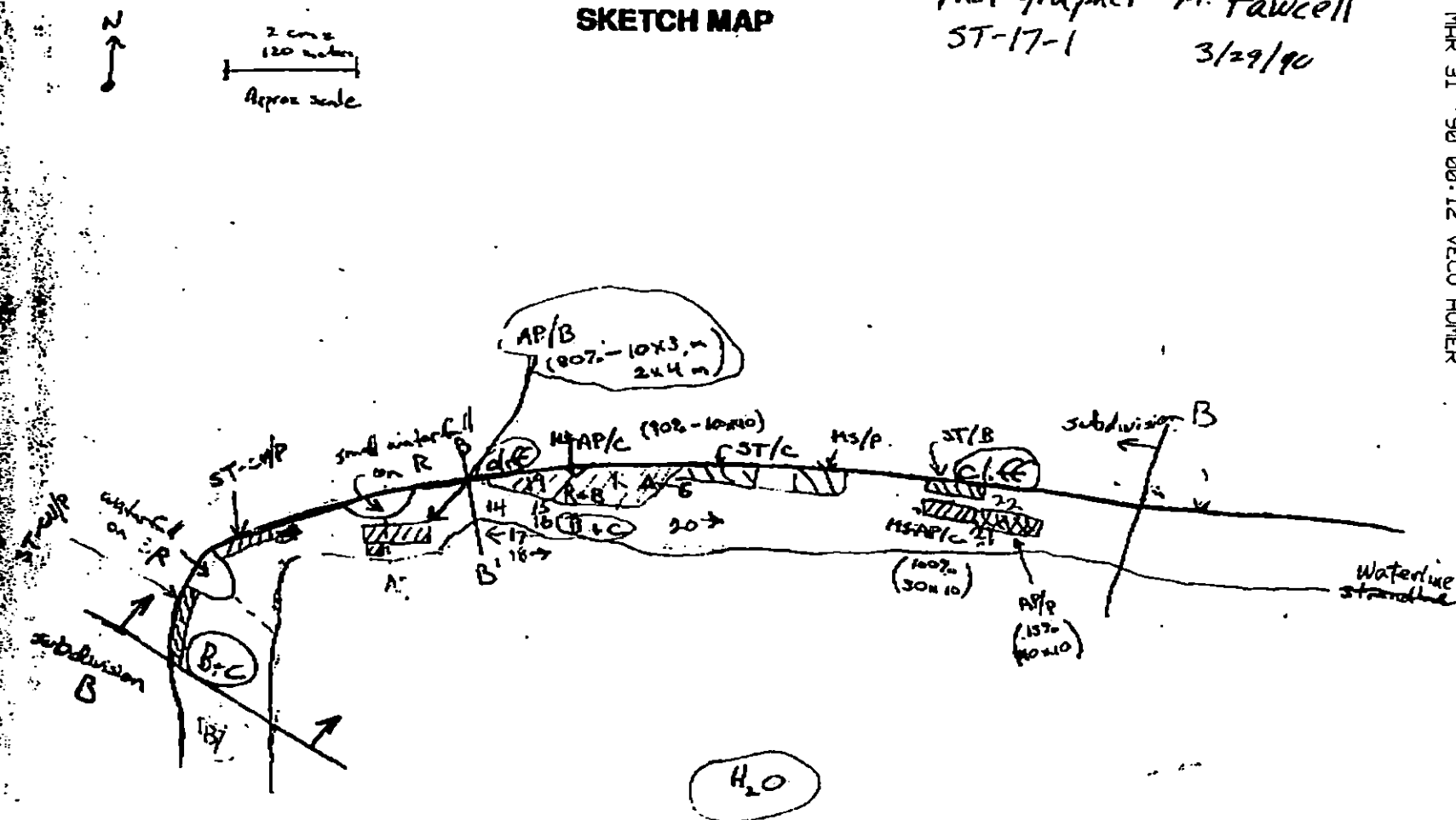
Impaired Distribution

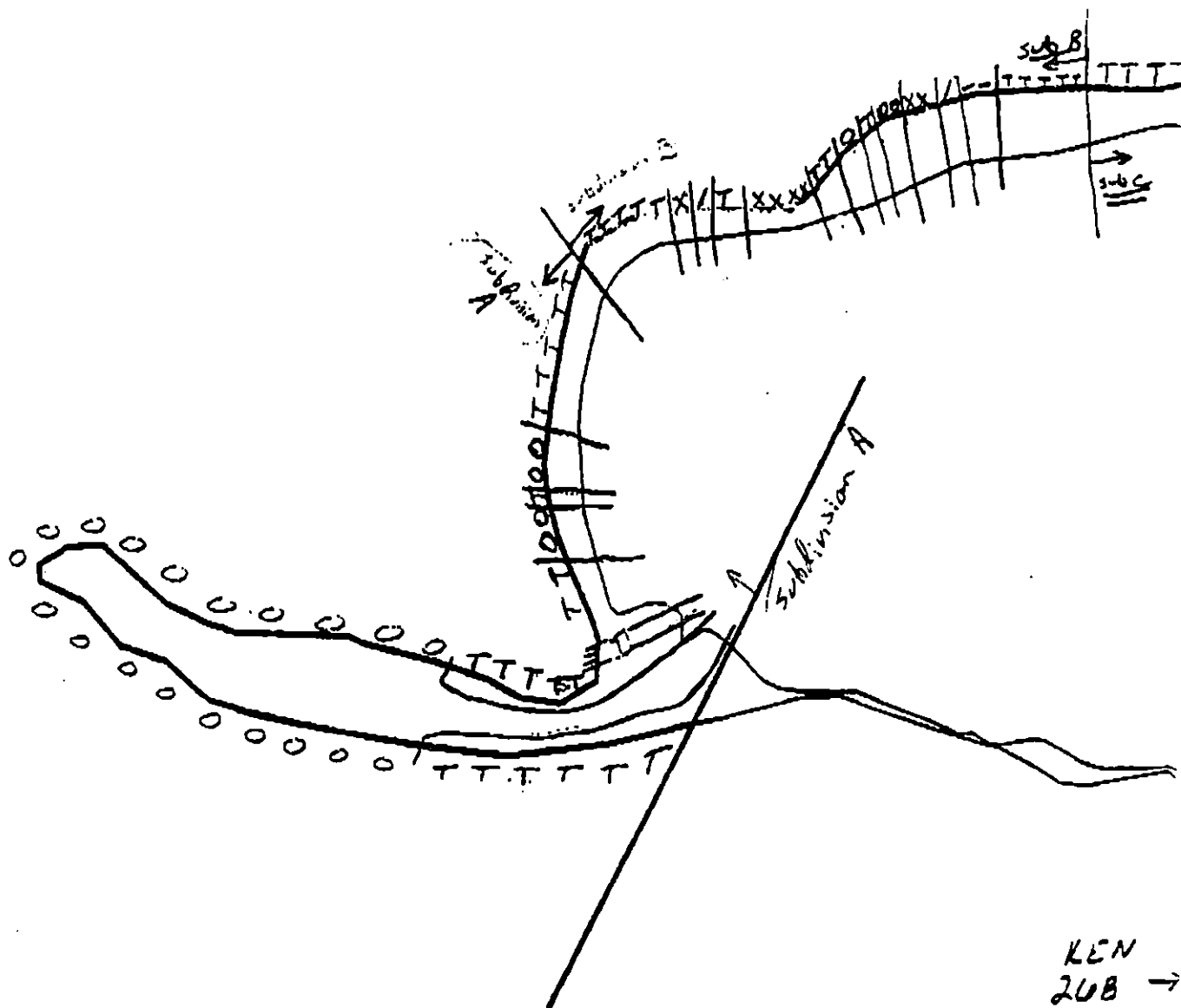
Ölöl Váratlanul 145

SKETCH MAP

Photographer M. Fawcett
ST-17-1 3/29/90

MIK 31 '50 00:12 VECU HOMER





XXXX Wide

/// Medium

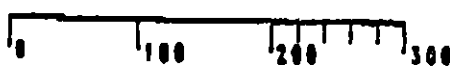
--- Narrow

TTTT Very Light

OOOO No Oil

CB-3

ADEC Segment Length: 4347m



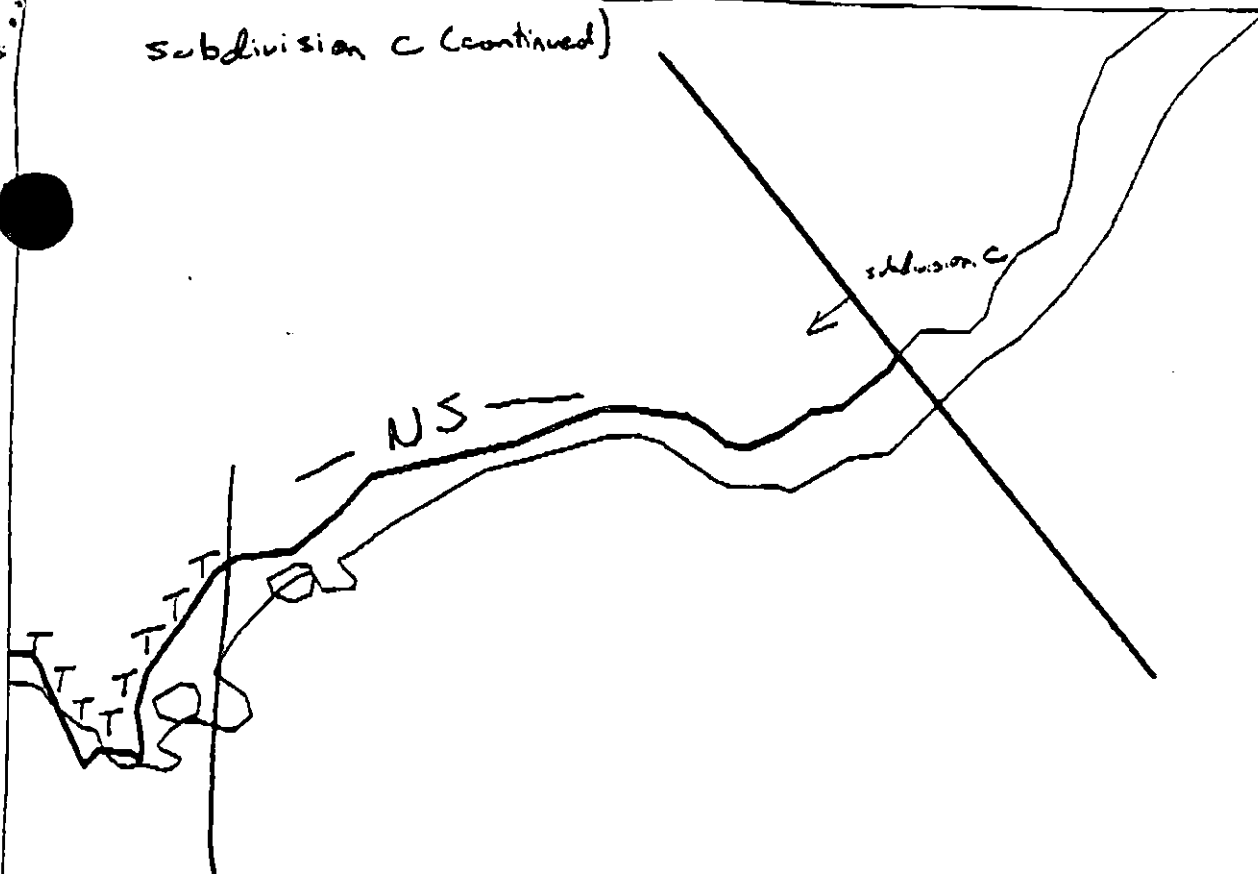
Map Key: KEN-26a

Name: Randy Singel

Date: 3/31/90

Note: ...

subdivision C (continued)



← KEN
26B

CB-3

XXXX Wide

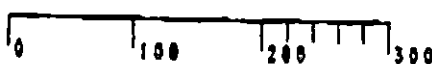
/// Medium

--- Narrow

TTTT Very Light

OOOO N A O : 1

ADEC Segment Length: 4347m



Map Key: KEN-26c

Name: Randy Sigel

Date: 3/31/90

SHORELINE EVALUATION

SEGMENT ST/ CB-003 SUBDIVISION C (3 OF 3) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Subsistence area - invertebrate harvesting (7JJ) - Contact Port Graham Native Association for exact dates; Salmon stream mouth - fry out migrating (1A) - 3/1 to 5/15; Salmon stream mouth - spawning (1B) - 7/10 to 8/31. Contact ADF&G Habitat Division prior to treatment for permit.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-oiled biota and substrate.

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

SHPO SIGNATURE Charles J. Homan DATE: April 12, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 73 m: Narrow 0 m: V.Light 1459 m: No Oil 227 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u> </u> Bioremediation	<u> </u> Spot Washing: <u> </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: Manual removal of asphalt, mousse, and oiled trash and debris.

TAG COMMENTS:

TAG APPROVAL DATE: 4/12/90

ADEC JOAN BAKER
EXXON ANDY GIL
NOAA Burt Wescott
USCG M. J. HALL

FOSC:

DATE: 5-8-90

OG Randy Seal
 SEGMENT ST 15-3
 SUBDIVISION C

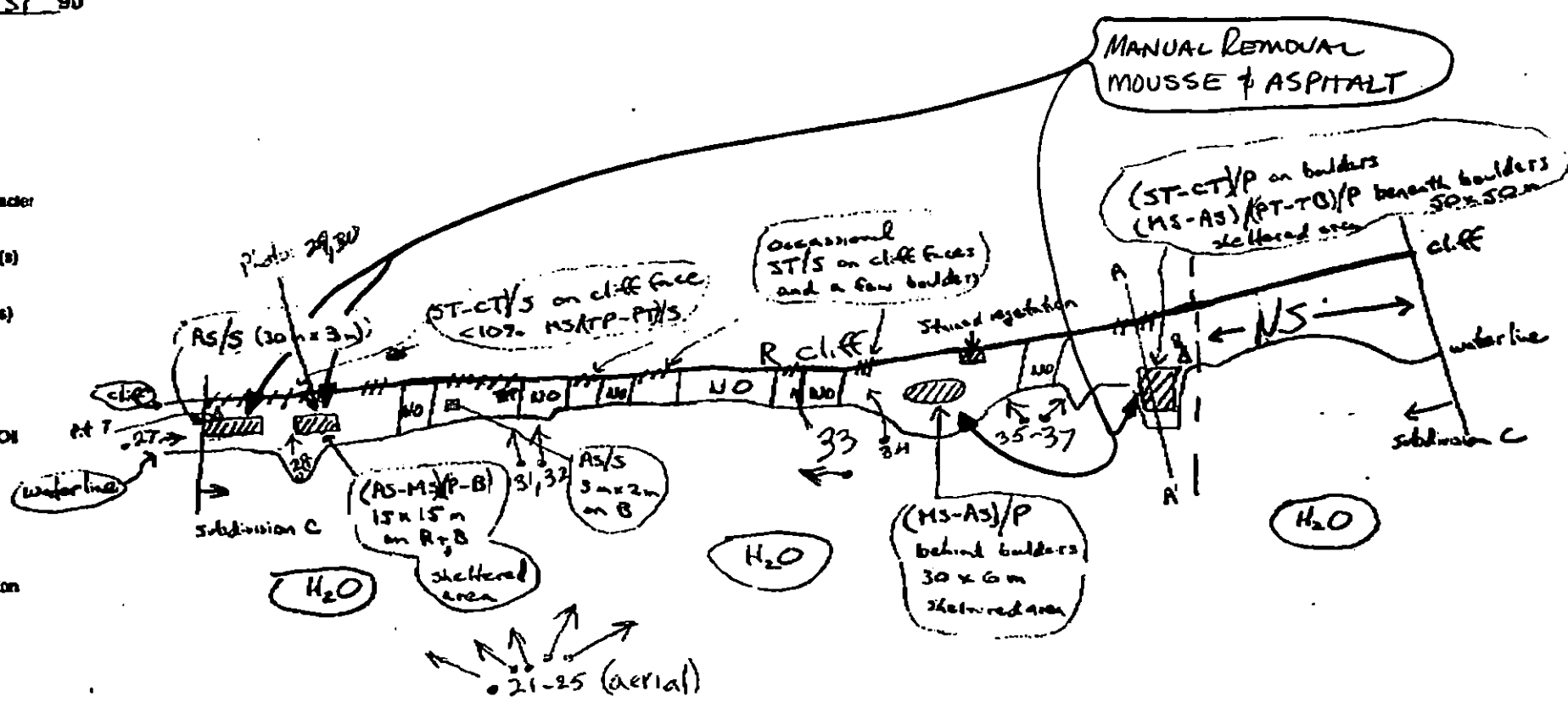
DATE 3/31/90

- CHECKLIST**
- ☐ N Arrow
 - ☐ Approx. Scale
 - ☐ Sep/Sub Entry
 - ☐ Oil Dist.
 - ☐ Width
 - ☐ Length
 - ☐ % Cover
 - ☐ Substrate Character
 - ☐ Est. H₂O/L₂W
 - ☐ SSL
 - ☐ Profile Location(s)
 - ☐ Profile(s)
 - ☐ Pt Location(s)
 - ☐ Photo Location(s)

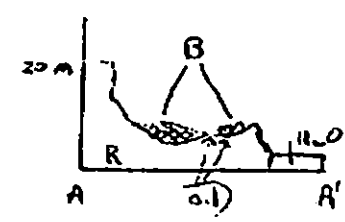
- LEGEND**
- 1 Δ
PII - No Subsurface Oil
 - 2 Δ
PII - Subsurface Oil
 - $\square$ CT/C
Continuous Distribution
 - $\square$ CT/B
Broken Distribution
 - $\square$ CT/P
Patchy Distribution
 - $\square$ CT/S
Splashed Distribution
 - 1 $\Rightarrow$
Oiled Vegetation
 - Photo location, direction, and number

$\uparrow$ N
 2 cm = 150'
 Approximate Scale

SEARCH MAP
 (Photo Locations)
 MRE

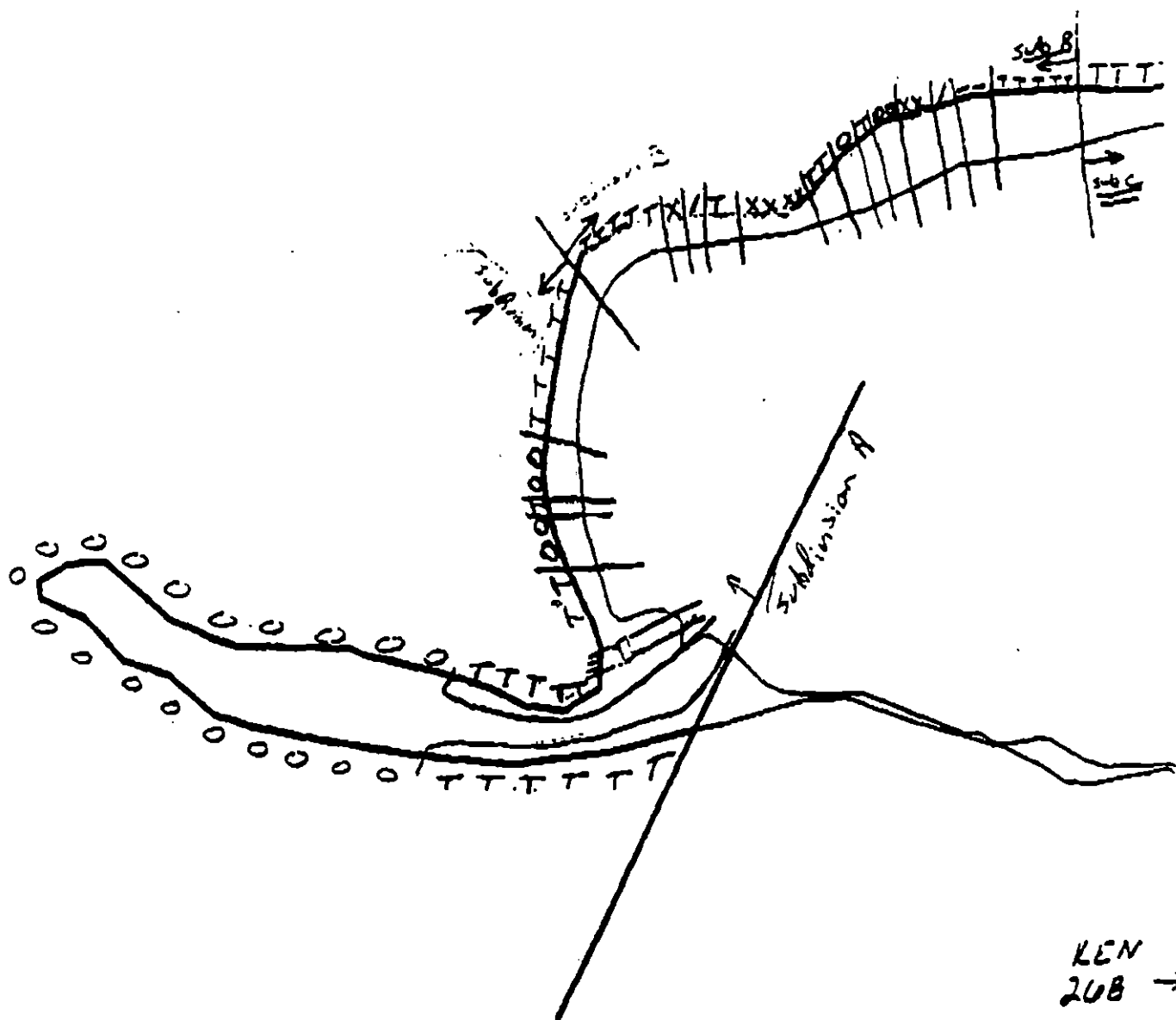


photos
 ST-17-2
 frames 21-37

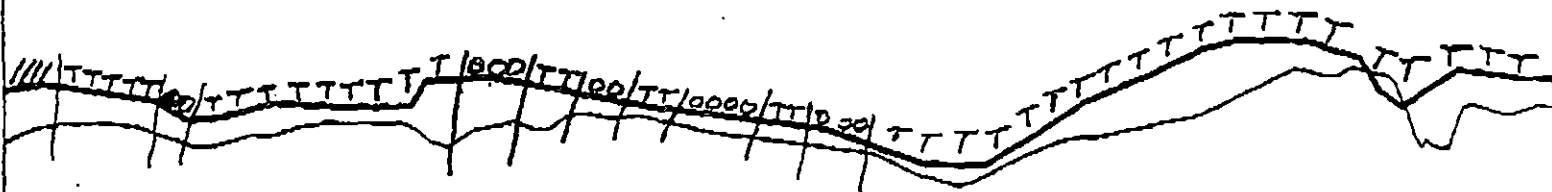


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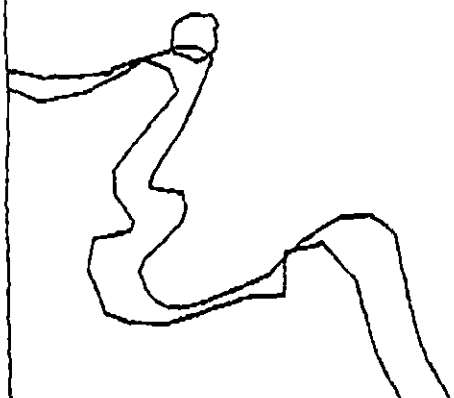
REVISION: 03/24/00



Subdivision C (continued)



← KEN 26A



KEN
26C →

XXXX Wide

/// Medium

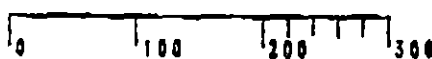
--- Narrow

TTTT Very Light

0000 No Oil

CB-3

ADEC Segment Length: 4347m



MFTSBC



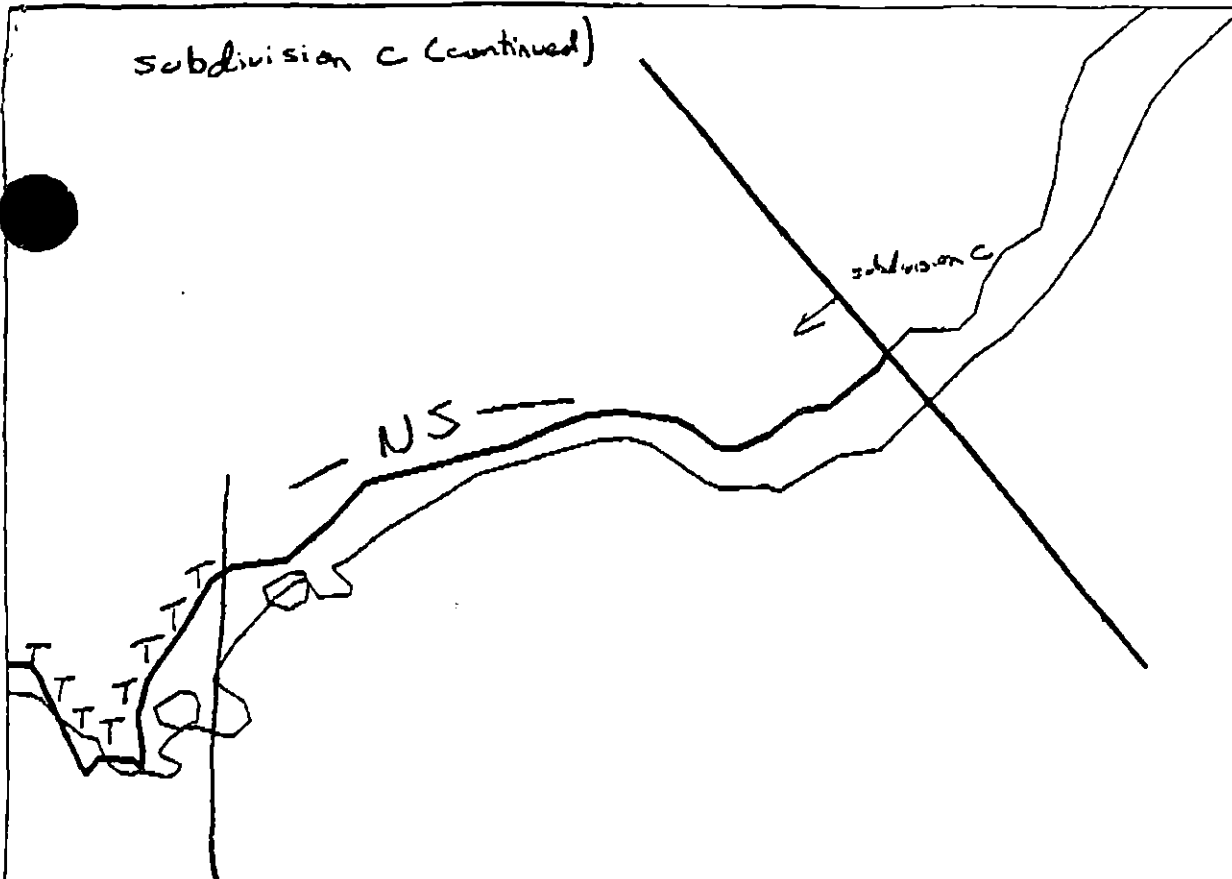
Map Key: KEN-26b

Name: Andy Wright

Date: 3/31/90

Data Entered:

subdivision C (continued)



← KEN
26B

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

CB-3

ADEC Segment Length: 4347m



METERS



Map Key: KEN-26c

Name: Randy Siegel

Date: 3/31/90

Data Entered:

WORK PLAN ADDENDUM

Segment CB-003B

Subdivision B

Dated 6/20/90

MODIFICATION

1. REASON FOR MODIFICATION

NEWLY DISCOVERED LENSE OF "OR" OIL NOT IDENTIFIED DURING SSAT.

2. ADJUSTMENT TO WORK PLAN

- MANUAL TILL + CUSTOMER OF THE BURIED OIL LENSE

SHPO APPROVAL NEEDED YES X
NO

SHPO SIGNATURE Charles E. [Signature] 6/22/90

TAG APPROVAL DATE 6/20/90

ADEC Sam Morris R. [Signature]

EXXON Andy [Signature]

NOAA Joseph [Signature]

USCG G.A. REITER G.A. Reiter

FOSC [Signature] DATE 2/5/90

1991 MAYSAP EVALUATION

SEGMENT: CB 003 SUB: A REGION: KEN SURVEY DATE: 5/15/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 7/10 - 9/15

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Rachel Jan Doe Date: 5/24/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

N

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 24 1991

FOSC APPROVAL DATE: 6/1/91

ADEC

FOSC

EXXON

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

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

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

TEAM NO. 6 NeloSEGMENT CB-003SUBDIVISION ADATE 5/15/91

ADEC

NAME Doug Hill - ADFGSIGNATURE Douglas Hill*

☒ NTR A small amount of oiled sediment exists on the bank of the stream approximately 450m upstream of the creek mouth. I presume more oil would be found by further exploration among the grass, cobbles and boulders. AP also exists among the cobbles and boulders on the south shore at the mouth of the stream. If work is carried out in adjacent segments I recommend manual removal of the AP at the creek mouth.

EXXON

NAME Rex CoulterSIGNATURE Rex R. Coulter

☒ NTR AS NOTED, ADDITIONAL TOUCHUP WORK WAS DONE HERE BY REMOVAL/BREAK UP OF SOR AREAS. AREA C1 IS THE ONLY LOCATION THAT HAS OILING WORTHY OF COMMENT. THE SOR IS NOT EASILY ACCESSIBLE, VERY SMALL IN AREA AND COVERAGE PERCENTAGE IS VERY SMALL. RECOVERY WOULD REQUIRE ROLLING LARGE BOULGERS WHICH WOULD BE VERY DIFFICULT. THE AMOUNT OF RECOVERABLE SOR WOULD BE VERY SMALL. ADF&G (LEE GRANN) SAID THAT THE CLEANUP CREWS HAD DONE A GOOD JOB AT THIS LOCATION. PROTECTED AREAS OF THIS BEACH HAVE ABUNDANT NUMBERS OF CRITTERS.

LANDMANAGER

NAME Seraphim Megranick of Port GrahamSIGNATURE Seraphim Megranick

Chugach Bay

☐ NTR ☒ TREATMENT
Coats and stains along CLIFF and small pocket of mousse crossed the stream and found M/LAN 200 METERS wide and 25 METERS LONG ALSO up on the UPPER TIDAL ZONE SOR 1X20 METERS SOR AND 4X15 SOR UPLANDS 1X20 METER SOR AND CROSSED THE UPLANDS STREAM 1X20 METERS SOR SUM TIDAL ZONE around the grassy area 200 METER SOR THEN OUT BY THE END OF THE SEGMENT BY THE ROCK WITH THE HOLE IN THE CLIFF MOUSE IN KNOWING THE COATS AND ROCKS AND AREA OF 20 X 22 METERS THAT CAN BE MANUALLY PICKED UP AND THAT IS WHAT I RECOMMEND.

USCG/NOAA

NAME Chief Jensen / G. ShigenakaSIGNATURE G. Shigenaka

☒ NTR 1/2 bag removed. Very little oil of any significance was observed for any treatment on this segment. Cleanup measures would be excessively costly in view of their insignificant contribution to minimizing a threat to the public health or welfare, or the environment.

SURVEYED PORTION OF THE SEGMENT CONSISTED OF A COBBLE-PEBBLE BEACH, ROCKY SUBSTRATE AROUND ITS PERIMETER, AND AN ANADROMOUS STREAM THAT FLOWED DOWN THE SOUTH SIDE OF THE BEACH, TURNING TO THE WEST FARTHER UPSTREAM. LITTORINA SITANA PERIWINKLES WERE ABUNDANT IN BOULDER COBBLE SUBSTRATE, PARTICULARLY ALONG THE SOUTH SIDE OF THE BEACH. THE ONLY OILING OBSERVED NORTH OF THE STREAM WAS IN THE FORM OF COAT ON ROCK FACES ABOVE THE BEACH. SOUTH OF THE STREAM, ON THE SOUTHEASTERN END OF THE SURVEYED PART OF THE SEGMENT, OIL AND COAT WERE FOUND ON ROCK FACES, AND SOR WAS COMMONLY SIGHTED AND REMOVED (OR BROKEN UP) IN BOULDER COBBLE SUBSTRATE. TRAVERSING TO THE SOUTHWEST ALONG STEEP, RUGGED TERRAIN ALONG THE STREAM TOOK US TO A BEACH SECTION OF THE STREAM THAT CURVED TO THE WEST. ADF&G REPS SURVEYED FARTHER UPSTREAM AND FOUND AN ISOLATED PATCH OF SOR ON THE NORTH (EAST) BANK. ANOTHER SMALL SOR HIT WAS RECORDED ON THE NORTH BANK JUST WEST OF THE BEND IN DIRECTION. A PIT WAS DUG IN A MID-STREAM BAR UPSTREAM FROM THE BEND, NO OIL WAS FOUND. PINK SALMON FRY WERE OBSERVED IN THE STREAM ADJACENT TO THE BAR.

TEAM NO. 6-HeloOG D. FitzgeraldBIO T. SchnöederSEGMENT CB-03ADEC Doug Hill of ADFGLANDMANAGER S. MEGRANICK for Port GrahamSUBDIVISION AEXXON R. CoulterUSCG/NOAA Chief JENSEN / G. ShigenakaDATE 15 May 1991TIME 6:55 to 8:07TIDE LEVEL .7 ft. to -2.6 ft.ENERGY LEVEL: ☐ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 1529 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W — m M — m N — m VL 90 m NO 1439 m US — m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE V H M L	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A						T	T				BR	m	1	3					Vent. bedrock face
B						T	T				BR	m	2	10					Vent. bedrock face
C ₁		T		T							B-BR-C	m	3	25					Light, 1/4 bedrock + boulders
C ₂						T	T				BR	m	2	20					Vent. bedrock face
D ₁				T		T					B-C-BR	L	1	10					Light, IN cracks of BR + cle.
D ₂				T		T					B-C-BR	L	4	15					
E		T		T		T					BR-B-C	L	1	20					
F				T							V-grass	L	1	2					along grassy channel
G				T							V-grass	L	2	5					

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

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

PHOTO ROLL # MAYSAP-

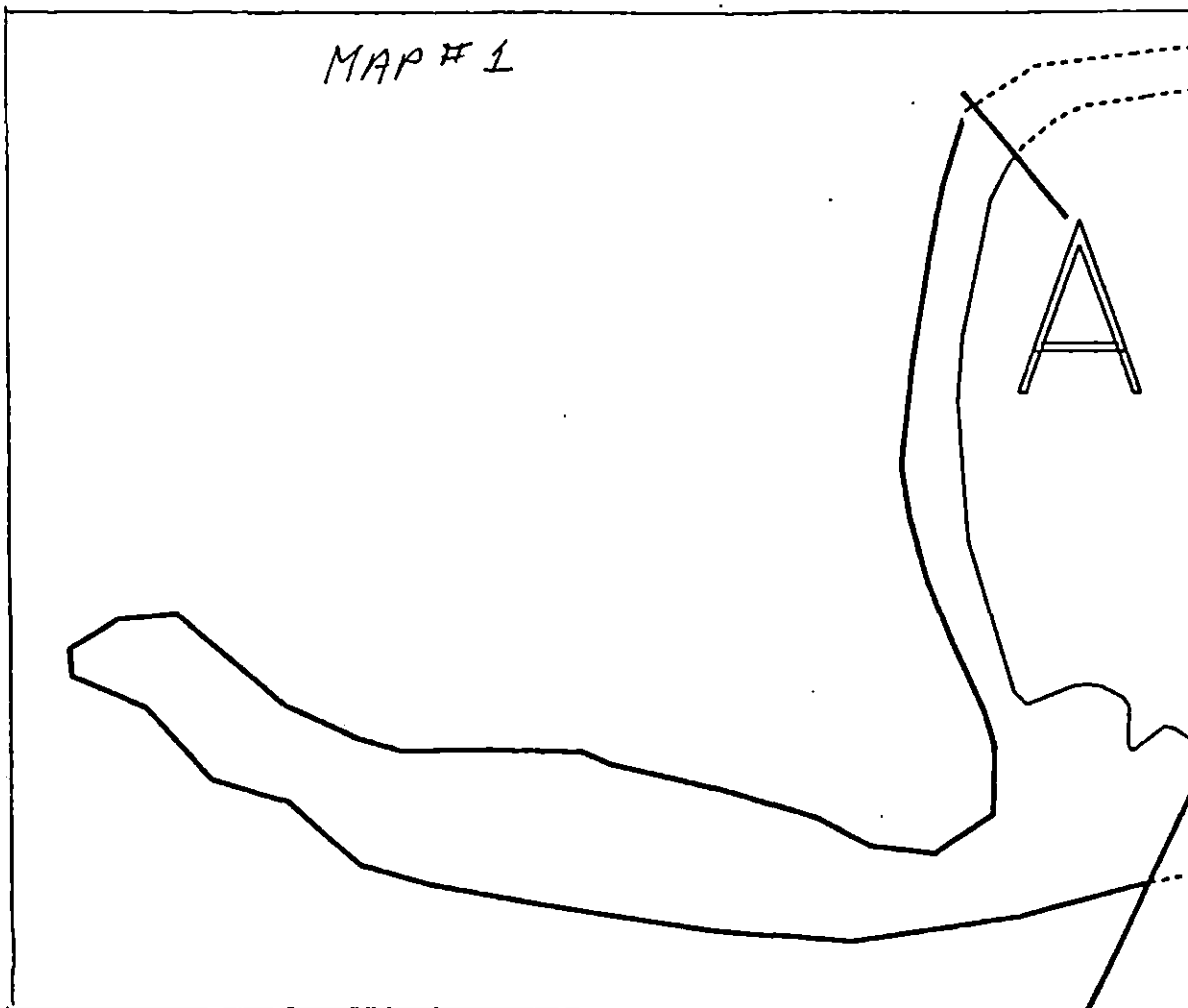
6-15 FRAMES 1-5

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
									-									
									-									
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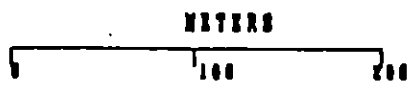
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS: This segment consists of a Pocket Beach and ANAD. Stream at the western end and head of Chugach Bay. Trace oiling conditions were found at this site, occurring as CT and ST on bedrock outcrops at the northern end of the beach and southern end at the entrance to the stream. Also, at this location the heaviest oiling conditions occur, consisting of MS and SDK IN between and under the boulders and cobbles along a 25m length of shoreline (width = 2-4m). Veco Workers removed 1/2 bag of oiled sediments and mousse from this area. Landward up the stream SDK, CT, and minor, highly weathered mousse were found along the bank IN the cracks of bedrock and boulders. Large amounts of trash (cans, bouys rope etc) occur along the SUTZ of the beach

reviewed 5.17.91 gy
 ES reviewed 5/17



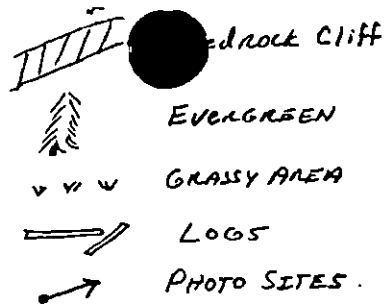
CB003 A



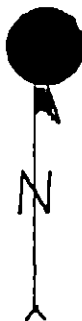
AK State Plane Zone 4
NAD83

Subdivision Field Map
Map Key: KENC003Ab
Name: D. Fitzgerald
Date: 15 MAY 1991

Reviewed 5.17.91 94
EG reviewed 5/17



0 200
METERS

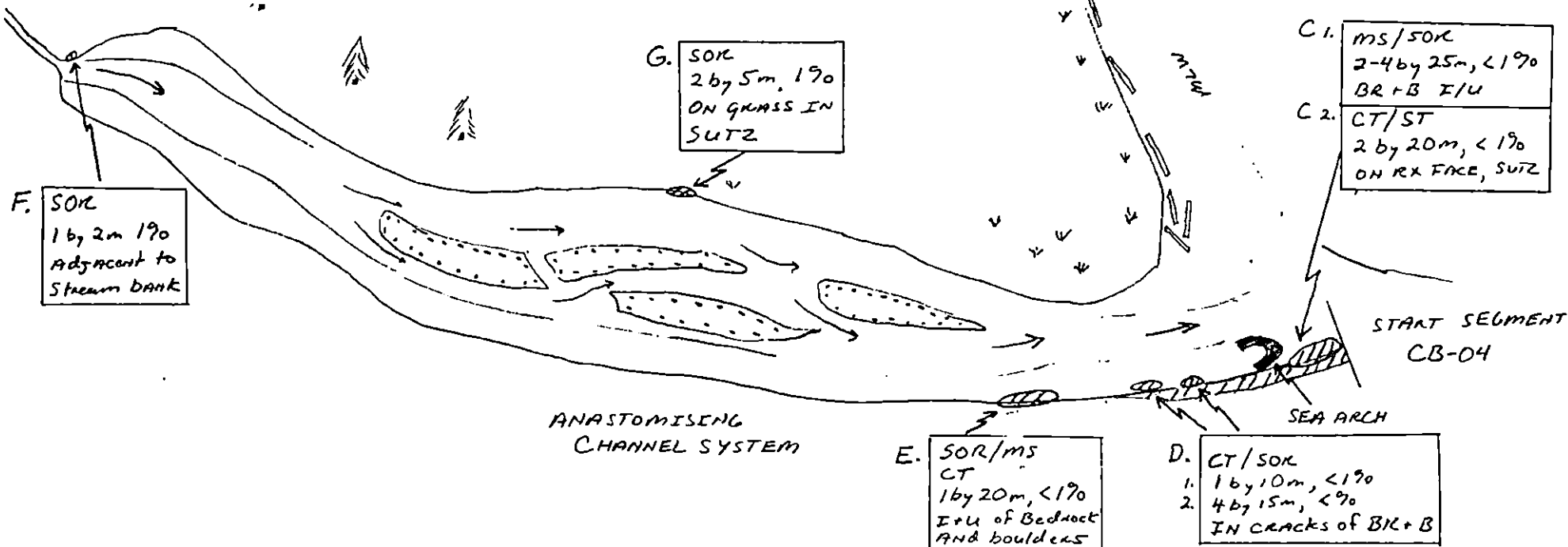


SEGMENT
CB-02

Sketch MAP (06)
CB-02
D FITZGERALD
15 MAY 1991
6:55 - 8:07 AM

PU * VECO WORKERS
REMOVED 1/2 bag of
mouse and oiled
sediments from this
segment.

ANAD. STREAM
242-20-10190



Reviewed 5.17.91 gfg

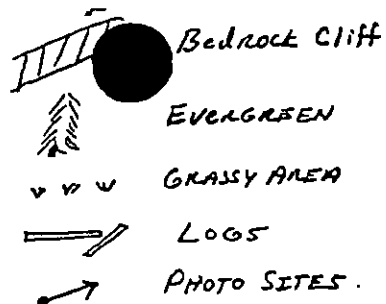


PHOTO SITES, CB-3A
ROLL 6-15, FRAMES 1 THROUGH 15

0 200
METERS

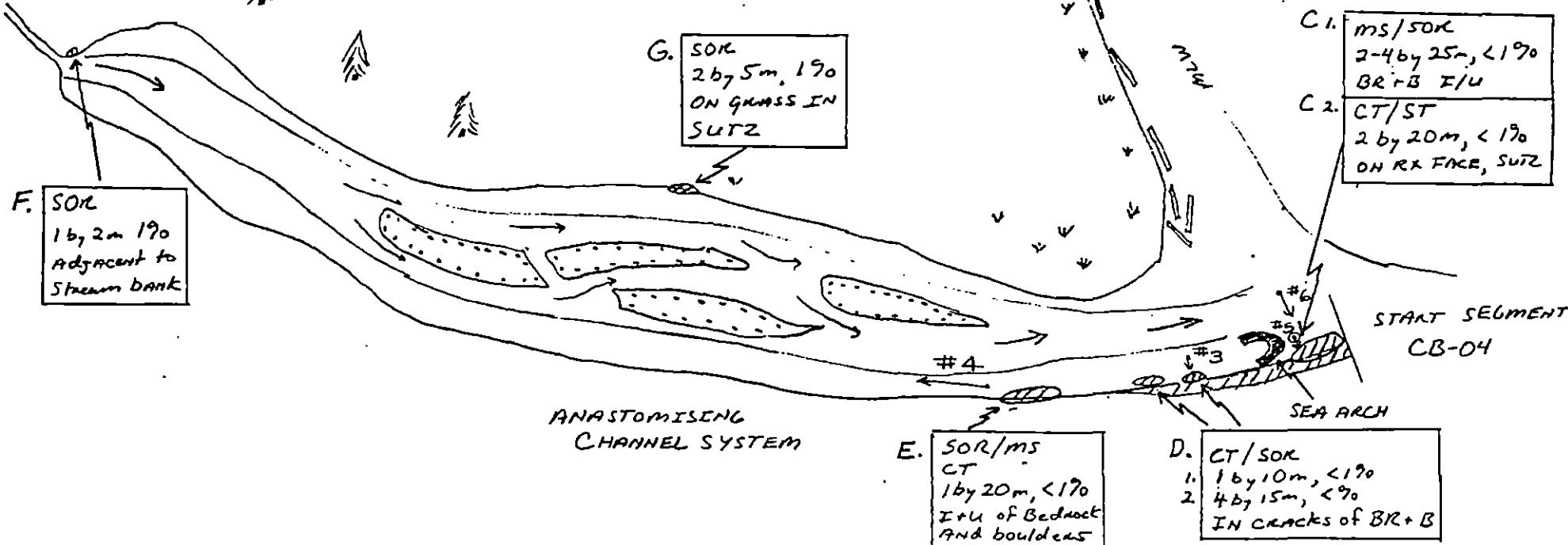


SEGMENT
CB-02

Sketch MAP (06)
CB-3A
D. FITZGERALD
15 MAY 1991
6:55 - 8:07 AM

P.U. * VECO WORKERS
REMOVED 1/2 bag of
mouse and oiled
settlements from this
segment.

ANAD. STREAM
242-20-10190



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6
 SEGMENT # CB-003
 SUBDIVISION A
 SEA STATE calm
 PHOTOGRAPHS: ROLL #
 DATE 5/15/91
 TIDAL HEIGHT(Range) 0 to -3 1/4 ft.
 BIOLOGIST T.R. Schroeder
 WIND SPEED/DIRECTION West 5-10 mph
 FRAME #

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

- (A & B) = beach north of anadromous stream is very high energy and is exposed to SE storms. Extensive quantities of debris (garbage) along storm berm along entire beach. Beach is very low in productivity except for a rock outcropping which was covered w/ fucus, kelp, barnacles, young mussels, sugar kelp and several other red brown algae present. Tide pools had green algae, limpets, littorine snail, coralline algae and gummy alga present.
- (C, D & E) = South shore of lagoon was covered with littorine snails. Snail egg masses were found under some of the rocks. Lagoon area had a thick dense growth of sea lettuce with littorine snails very abundant on algae. Sand fleas were abundant along entire south shore of lagoon.
- (F) = Only one small patch of SCR/MS was observed but not picked up near the anadromous stream. There appears to be no effect of the oil on salmon production as fish were very plentiful in the intertidal grass of the stream. While this stream was a major pink salmon producer prior to the spill, large spawning escapements have occurred since 1989 but the salmon run is healthier than at anytime since the 1964 earthquake.

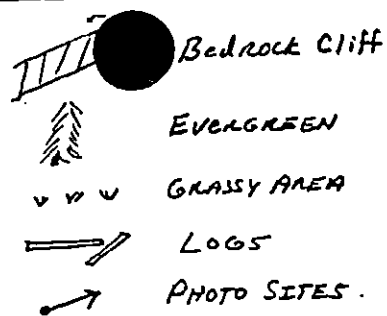
WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			100+ pink salmon
Seabirds			fray.
Waterfowl	4 Harlequin, widgeon Mallards, merganser	60	
Gulls/Kittiwakes	2 glaucous, kittiwake	16	
Shorebirds	1 sandpiper	20	
Corvids			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/17/91



BIO. Map CB-003-A
5/15/91 T.R. Schroeder

0 200
METERS



SEGMENT
CB-02

Sketch MAP (06)
CB-003-A
D. FITZGERALD
15 MAY 1991
6:55 - 8:07 AM

Lagoon area

PU * VECO WORKERS
removed 1/2 bag of
mousse and oiled
sediments from this
segment.

Reef covered w/
fucus barnacles
and young mussels.
Sea anemones, limpets,
littorine snails, chitons,
and coralline algae
present in tide pools.

ANAD. STREAM
242-20-10190

F. SOR
1 by 2m 190
Adjacent to
Stream bank

G. SOR
2 by 5m, 190
ON GRASS IN
SUTZ

Very abundant
littorine snail
concentrations
along entire
shore.

C.1. ms/SOR
2-4 by 25m, <190
BR+B I/U

C.2. CT/ST
2 by 20m, <190
ON RX FACE, SUTZ

Light fucus help
growth.

START SEGMENT
CB-04

Pink salmon fry
present in gravel.

ANASTOMOSING
CHANNEL SYSTEM
Sugar wrack and
shells and littorine
snails very abundant
in lagoon area.

E. SOR/MS
CT
1 by 20m, <190
I+U of Bedrock
and boulders

D. CT/SOR
1. 1 by 10m, <190
2. 4 by 15m, <90
IN CRACKS OF BR+B

Reviewed M.B. 5/17/91



T(2m)

T(5m)

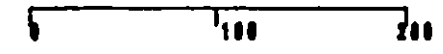


XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

CB003 A

ADEC Subsegment Length: 1529m

METERS



AK State Plane Zone 4
acsb003a



Subdivision Field Map
Map Key: KENC003A
Name: D. Fitzgerald
Date: 15 MAY 1991
Data Entered:

revised 5.17.91 qy
Reviewed 5/17

1991 MAYSAP EVALUATION

SEGMENT: CB 003 SUB: A REGION: KEN SURVEY DATE: 5/15/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 7/10 - 9/15

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

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

TEAM NO. 6 HeloSEGMENT CB-003SUBDIVISION ADATE 5/15/91

ADEC

NAME Doug Hill - ADFAGSIGNATURE Douglas Hill*

☒ NTR A small amount of oiled sediment exists on the bank of the stream approximately 450 m upstream of the creek mouth. I presume more oil would be found by further exploration among the grass, cobbles and boulders. AP also exists among the cobbles and boulders on the south shore at the mouth of the stream. If work is carried out in adjacent segments I recommend manual removal of the AP at the creek mouth.

EXXON

NAME Rex CoulterSIGNATURE Rex R. Coulter

☒ NTR AS NOTED, ADDITIONAL TOUCHUP WORK WAS DONE HERE BY REMOVAL/BREAK UP OF SOR AREAS. AREA C1 IS THE ONLY LOCATION THAT HAS OILING WORTHY OF COMMENT. THE SOR IS NOT EASILY ACCESSIBLE, VERY SMALL IN AREA AND COVERAGE PERCENTAGE IS VERY SMALL. RECOVERY WOULD REQUIRE ROLLING LARGE BOULDERS WHICH WOULD BE VERY DIFFICULT. THE AMOUNT OF RECOVERABLE SOR WOULD BE VERY SMALL. ADFAG (LEE GLENN) SAID THAT THE CLEANUP CREW HAD DONE A GOOD JOB AT THIS LOCATION. PROTECTED AREAS OF THIS BEACH HAVE ABUNDANT NUMBERS OF CRITTERS.

LANDMANAGER

NAME Seraphim Megrawick OF Port GrahamSIGNATURE Seraphim Megrawick

Chugach Bay

☐ NTR ☒ TREATMENT
Coats and stains along CLIP and small pocket of floussie crossed the stream and found NO/ER 200 meters wide and 25 meters long also up on the upper tidal zone SOR 1x10 meters SOR and 4x15 SOR uplands 1x20 meters SOR and crossed the uplands stream 1x20 meters SOR sum tidal zone around the grassy area 2x3 meters SOR then out by the end of the segment by the rock with the tide in the CLIP mouse in showing the coasts and rocks and area of 20x20 meters flat can be manually picked up and that is what I recommend.

USCG/NOAA

NAME Chief Jensen / G. ShigenakaSIGNATURE G. Shigenaka

☒ NTR 1/2 bag removed. Very little oil of any significance was observed for any treatment on this segment. Cleanup measures would be excessively costly in view of their insignificant contribution to minimizing a threat to the public health or welfare, or the environment.

SURVEYED PORTION OF THE SEGMENT CONSISTED OF A COBBLE-PEBBLE BEACH, ROCKY SUBSTRATE AROUND ITS PERIMETER, AND AN ANADROMOUS STREAM THAT FLOWED DOWN THE SOUTH SIDE OF THE BEACH, TURNING TO THE WEST FARTHER UPSTREAM. LITTORINA SITANA PERIWINKLES WERE ABUNDANT IN BOULDER COBBLE SUBSTRATE PARTICULARLY ALONG THE SOUTH SIDE OF THE BEACH. THE ONLY OILING OBSERVED NORTH OF THE STREAM WAS IN THE FORM OF COAT ON ROCK FACES ABOVE THE BEACH SOUTH OF THE STREAM, ON THE SOUTHEASTERN END OF THE SURVEYED PART OF THE SEGMENT. OIL AND COAT WERE FOUND ON ROCK FACES, AND SOR WAS COMMONLY SIGHTED AND REMOVED (OR BROKEN UP) IN BOULDER-BOBBLE SUBSTRATE. TRAVERSING TO THE SOUTHWEST ALONG STEEP, RUGGED TERRAIN ALONG THE STREAM TOOK US TO A WIDER SECTION OF THE STREAM THAT CURVED TO THE WEST. ADFAG REPS SURVEYED FARTHER UPSTREAM AND FOUND AN ISOLATED PATCH OF SOR ON THE NORTH (EAST) BANK. ANOTHER SMALL SOR HIT WAS RECORDED ON THE NORTH BANK JUST WEST OF THE BEND IN DIRECTION. A PIT WAS DUG IN A MID-STREAM BAR UPSTREAM FROM THE BEND, NO OIL WAS FOUND. PINK SALMON FRY WERE OBSERVED IN THE STREAM ADJACENT TO THE BAR.

TEAM NO. 12-H-10OG: D. FitzgeraldBIO T. SchnöederSEGMENT CB-03ADEC Doug Hill of ADFGLANDMANAGER S. McGRANICK for Port GrahamSUBDIVISION AEXXON R. CoulterUSCG/NOAA Chief JENSEN / G. ShigenakaDATE 15 May 191TIME 6:55 to 8:07TIDE LEVEL .7 ft. to 2.6 ft.ENERGY LEVEL: ☐ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 1529 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W — m M — m N — m VL 90 m NO 1439 m US — m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	BOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A						T	T				BR	M	1	3					Vent. bedrock face
B						T	T				BR	M	2	10					Vent. bedrock face
C ₁		T		T							B-BR-C	M	3	25					Light, 1/4 bedrock + boulders
C ₂						T	T				BR	M	2	20					Vent. bedrock face
D ₁				T		T					B-C-BR	L	1	10					Light, IN cracks of BR + c/c
D ₂				T		T					B-C-BR	L	4	15					
E		T		T		T					BR-B-C	L	1	20					
F				T							V-grass	L	1	2					along grassy channel
G				T							V-grass	L	2	5					

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

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

PHOTO ROLL # MAYSAP-

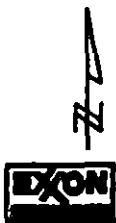
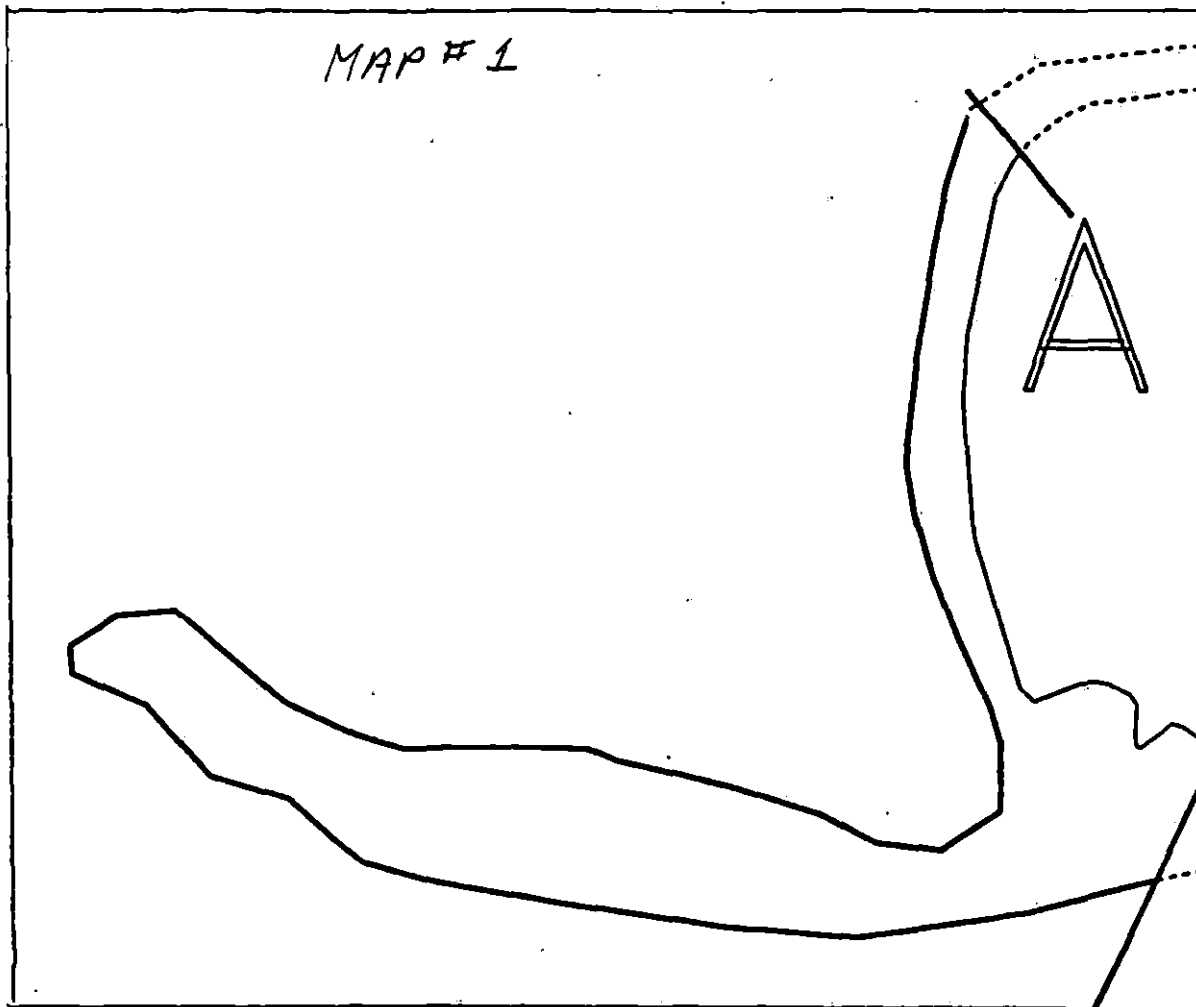
6-15 FRAMES 1-5

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER								OILED ZONE	CLEAN BELOW	H ₂ O LEVEL	SHEEN COLOR	PIT ZONE				SURFACE- SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO	cm-cm					S	UI	MI	LI		
									-										
									-										
									-										
									-										
									-										
									-										
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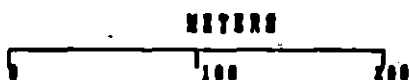
SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS: This segment consists of a Pocket Beach and ANAD. Stream at the western end and head of Chugach Bay. Trace oiling conditions were found at this site, occurring as CT and ST on bedrock outcrops at the northern end of the beach and southern end at the entrance to the stream. Also, at this location the heaviest oiling conditions occur, consisting of MS and SDK in between and under the boulders and cobbles along a 25m length of shoreline (width = 2-4m). Veco Workers removed 1/2 bag of oiled sediments and mousse from this area. Landward up the stream SDK, CT, and minor, highly weathered mousse were found along the bank in the cracks of bedrock and boulders. Large amounts of trash (cans, bottle rope etc) occur along the SUTZ of the beach

reviewed 5.17.91 94
Reviewed 5/17



CB003 A



AK State Plane Zone 4
6300306

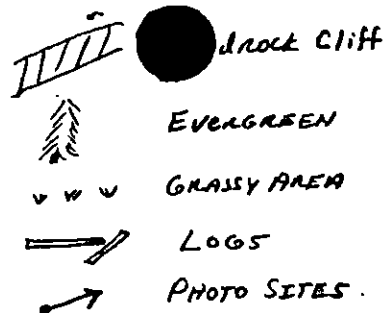
Subdivision Field Map

Map Key: KENC003A6

Name: D. Fitzgerald

Date: 15 MAY 1991

Reviewed 5.17.91 gk
E6 reviewed 5/17



0 200
METERS



SEGMENT
CB-02

Sketch Map (06)
CB-03-A
D Fitzgerald
15 MAY 1991
6:55 - 8:07 AM

PLANT WORKERS
 removed 1/2 bag of
 mouse and oiled
 sediments from this
 segment.

ANAD. STREAM
242-20-10190

F. SOR
 1 by 2m 190
 Adjacent to
 Stream bank

G. SOR
 2 by 5m, 190
 ON GRASS IN
 SUTZ

C.1. MS/SOR
 2-4 by 25m, <190
 BR + B F/U
 C.2. CT/ST
 2 by 20m, <190
 ON RK FACE, SUTZ

ANASTOMOSING
CHANNEL SYSTEM

E. SOR/MS
 CT
 1 by 20m, <190
 I+U of Bedrock
 and boulders

D. CT/SOR
 1. 1 by 10m, <190
 2. 4 by 15m, <90
 IN CRACKS OF BR + B

START SEGMENT
CB-04

SEA ARCH

reviewed S.17.91 99



PHOTO SITES, CB-3A
ROLL 6-15, FRAMES 1 THRU 5

0 200
METERS



SEGMENT
CB-02

Sketch MAP (06)
CB-03-A
D. FITZGERALD
15 MAY 1991
6:55 - 8:07 AM

P.U. * VECO WORKERS
REMOVED 1/2 bag of
mouse and oiled
settlements from this
segment.

ANAD. STREAM
242-20-10190

G. SOR
2 by 5m, 190
ON GRASS IN
SUTZ

F. SOR
1 by 2m 190
ADJACENT TO
STREAM BANK

A. CT/ST
1 by 3m, < 190
ON VERTICAL
BEDROCK FACE

B. CT/ST
1-2 by 10m, < 190
ON VERTICAL BR
FACE

C.1. MS/SOR
2-4 by 25m, < 190
BR + B F/U
C.2. CT/ST
2 by 20m, < 190
ON RX FACE, SUTZ

START SEGMENT
CB-04

ANASTOMOSING
CHANNEL SYSTEM

E. SOR/MS
CT
1 by 20m, < 190
F+U of Bedrock
AND boulders

D. CT/SOR
1. 1 by 10m, < 190
2. 4 by 15m, < 90
IN CRACKS OF BR + B

SEA ARCH

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6 DATE 5/15/91
 SEGMENT # CB-003 TIDAL HEIGHT(Range) 0 to -3 1/4 ft.
 SUBDIVISION A BIOLOGIST T.A. Schroeder
 SEA STATE calm WIND SPEED/DIRECTION West 5-10 mph
 PHOTOGRAPHS: ROLL # FRAME #

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

- (A & B) = beach north of anadromous stream is very high energy and is exposed to SE storms. Extensive quantities of debris (garbage) along storm berm along entire beach. Beach is very low in productivity except for a rock outcropping which was covered w/ fucus, barnacles, young mussels, sea urchins and several other sea urchins present. Tide pools had anemones, limpets, littorine snails, coralline algae and gummata chitons present.
- (C, D & E) = South shore of lagoon was covered with littorine snails. Small egg masses were found under some of the rocks. Lagoon area had a thick dense growth of sea lettuce with littorine snails very abundant on algae. Sand fleas were abundant along entire south shore of lagoon.
- (F) = Only one small patch of SCR/MG was observed but not picked up near the anadromous stream. There appears to be no effect of the oil on salmon production as fish were very plentiful in the intertidal areas of the stream. Would this stream was a mixed pink salmon producer prior to the spill. Large spawning excavations have occurred since 1989 but the salmon then is healthier than at anytime since the 1964 earthquake.

WILDLIFE OBSERVATIONS

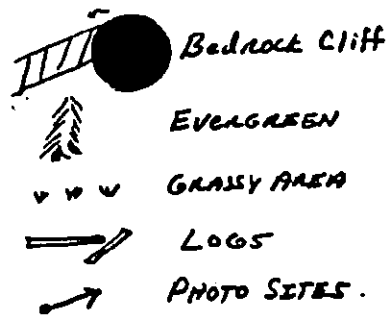
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			100+ pink salmon
Seabirds			fray.
Waterfowl	4 Harlequin, Widgeon Mallards, merganser	60	
Gulls/Kittiwakes	2 glaucous, kittiwake	16	
Shorebirds	1 sandpiper	20	
Corvids			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/17/91



Bio. Map CB-003-A
5/19/91 T.R. Schroeder

0 200
METERS



SEGMENT
CB-02

Sketch MAP (06)
CB-003-A
D. FITZGERALD
15 MAY 1991
6:55 - 8:07 AM

Lagoon area

PU * VECO WORKERS
removed 1/2 bag of
mousse and oiled
sediments from this
segment.

Roof covered w/
fucus, barnacles
and young mussels.
Sea anemones, limpets,
littorine snails, chitons
and coralling algae
present in tide pools.

ANAD. STREAM
242-20-10190

F. SOR
1 by 2m 170
Adjacent to
Stream bank

G. SOR
2 by 5m, 170
ON GRASS IN
SUTZ

Very abundant
littorine snail
concentrations
along entire
shore.

C.1. MS/SOR
2-4 by 25m, <170
BR+B E/U

C.2. CT/ST
2 by 20m, <170
ON RR FACE, SUTZ

Light fucus help
growth.

START SEGMENT
CB-04

Pink salmon fry
present in gravel.

ANASTOMOSING
CHANNEL SYSTEM
Sugar wrack and
algae and littorine
snails very abundant
in lagoon area.

E. SOR/MS
CT
1 by 20m, <170
E+U of Bedrock
and boulders

D. CT/SOR
1. 1 by 10m, <170
2. 4 by 15m, <90
IN CRACKS OF BR+B

SEA ARCH

Pebble-Cobble-Sand

BR

Reviews M.B. 5/17/91



T(2m)

T(5m)

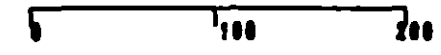


XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

CB003 A

ADEC Subsegment Length: 1528m

METERS



AK State Plane Zone 4
ac003a



Subdivision Field Map
Map Key: KENC003A
Name: D. Fitzgerald
Date: 15 MAY 1991
Date Entered:

revised 5-17-91 ty
Reviewed 5/17

1991 MAYSAP EVALUATION

SEGMENT: CB 003 SUB: B REGION: KEN SURVEY DATE: 5/28/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) Fish harvest area

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC

FOSC

EXXON

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT C3003 SUBDIVISION B DATE May 28 / 91

DEC

NAME STEVE FERGUSONSIGNATURE [Signature]☒ NTR☐ TREATMENT RECOMMENDED

SUBSURFACE LENS OF OIL IS STILL PRESENT ABOVE SITE C. THIS OIL LENS WAS DOCUMENTED LAST YEAR DURING CLEAN-UP AND AN ADDENDUM WAS SENT IN FOR PICK UP. UNLESS SUBSURFACE LENS WILL BE CLEANED, THE REMAINING WORKABLE OIL FOR CLEAN UP PURPOSES IS SPORADIC AND YOU WOULD SPEND ALOT MORE TIME HUNTING IT DOWN THAN PICKING IT UP. NO TREATMENT RECOMMENDED

EXXON

NAME George P. StilesSIGNATURE [Signature] 5/30/91☒ NTR

very little AP & MS found while surveying. Survey team retrieved 5 bags while walking the segment. I concur with ADEC more time would be spent looking for oil than picking it up.

LANDMANAGER

NAME Pat NormanOF Port GrahamSIGNATURE [Signature]☒ NTR

exposed AP/MS was picked up during survey subsurface layer still remains, recommend additional work while working EB 4-B.

USCG/NOAA

NAME Joe McManSIGNATURE [Signature]☒ NTR

very little AP & MS located - picked up at site.

[Signature]

PAGE 1 OF 1

SEGMENT CB003

SUBDIVISION B

DATE MAY / 28 / 91

ENERGY LEVEL: ☒ H ☒ M ☐ L

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

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

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 35 m NO 13 m US 0 m

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP-4(172) 13 FRAMES 21-23

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

* OIL < 5 cm DEEP NOT SUBSURFACE

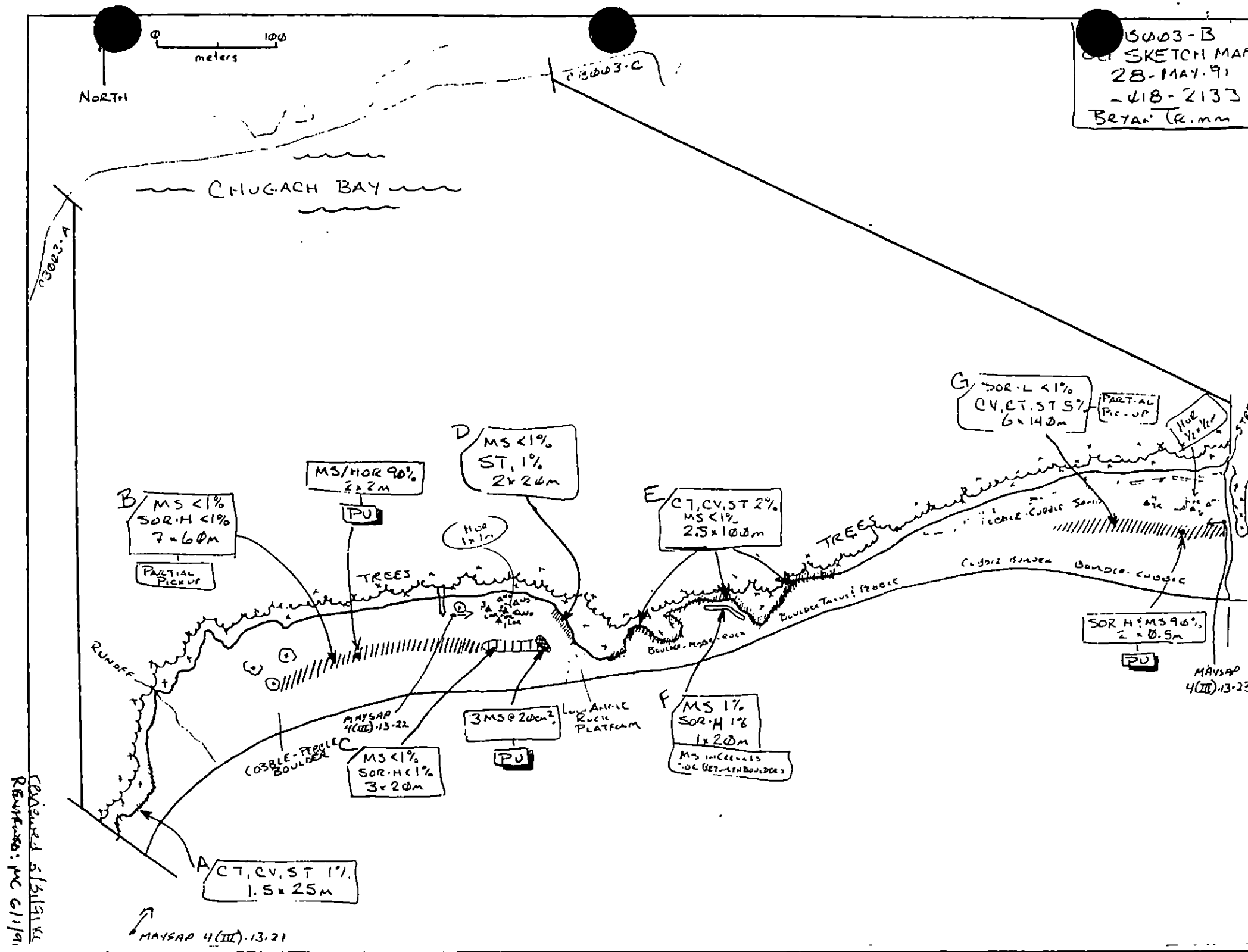
3 COMMENTS:
SDR: MOUSSE LOCATED UNDER 1 BETWEEN SURFACE VENEER (LOCATIONS B, C, F & G)

MOUSE LOCATED IN CREVICES AT LOCATIONS D, E, F
STAIN, CAT & COVER OCCASIONALLY FOUND ON ROCK FACES OR BOULDER-Cobble VENEER (LOCATION G)

revised 5/31/91 KC

REMOVED: MC 6/1/91

UW03-B
GET SKETCH MAP
28-MAY-91
-418-2133
BRYAN TR. mm



Received 5/31/91
Revised: 6/1/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 28 May '91
 SEGMENT # CB003 TIDAL HEIGHT(Range) +3.36 to +4.24
 SUBDIVISION B BIOLOGIST Jim ROTH
 SEA STATE G WIND SPEED/DIRECTION
 PHOTOGRAPHS: ROLL # FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
A. BEDROCK FACE W/ MODERATELY DENSE BARNACLES (SOME OIL-STAINED AND DEAD, MOST ALIVE, INCLUDING MANY OIL-STAINED) LIMPETS, AND LITTORINES; SCARCE MUSSELS.
B, C. BOULDERS/COBBLE W/ MODERATELY DENSE BARNACLES; DENSE LIMPETS, LITTORINES; AMPHIPODS UNDER COBBLES.
D. BEDROCK W/ MODERATELY DENSE BARNACLES (MOST ALIVE, THOUGH MANY ARE OIL-STAINED) LITTORINES; SCARCE MUSSELS.
E. BEDROCK W/ MODERATELY DENSE BARNACLES, LITTORINES.
F. BOULDERS W/ DENSE BARNACLES, MUSSELS, LITTORINES.
G. BOULDERS/COBBLE W/ DENSE BARNACLES, MUSSELS, LIMPETS, LITTORINES.

GENERAL COMMENTS: THIS SUBDIVISION CONTAINS A SERIES OF BOULDER-COBBLE-PEBBLE BEACHES SEPARATED BY BEDROCK OUTCROPPINGS. IT HAS A HEALTHY AND THRIVING INTERTIDAL BIOTA, WITH EVIDENCE OF RECENT RECRUITMENT IN LITTORINES, BARNACLES, AND MUSSELS. NO OBSERVATIONS ON THE LOWER INTERTIDAL ZONE WERE POSSIBLE.

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/Petrels			
Shorebirds			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

0 100
meters

NORTH

CB003-B
SKETCH MAP
28-MAY-91
2018-2133

Bio MAP
Roth

CHUGACH BAY

B.
MODERATELY DENSE
BARNACLES;
DENSE LIMPETS,
LITTORINES;
AMPHIPODS UNDER
COBBLE

D.
MODERATELY DENSE
BARNACLES,
LITTORINES;
SCARCE MUSSELS

E.
MODERATELY
DENSE BARNACLES,
LITTORINES

G.
DENSE
BARNACLES,
MUSSELS,
LIMPETS,
LITTORINES

Runoff
TREES
COBBLE-PEBBLE-BOULDER

Low Angle
Rock
Platform

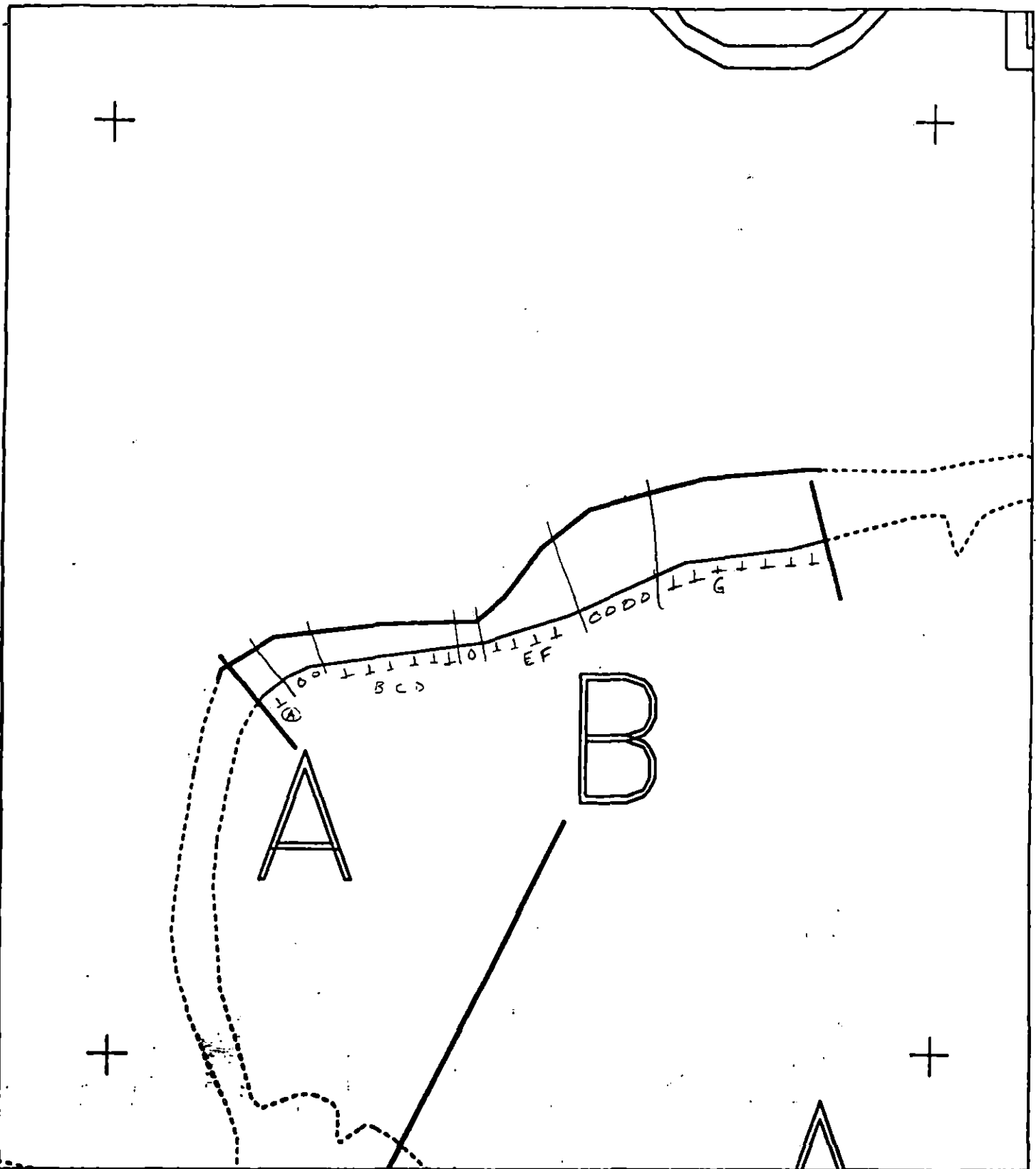
TREES
Boulder-Traust Pebble

PEBBLE-COBBLE-SAND
COBBLE-BOULDER BOULDER-COBBLE

A.
MODERATELY DENSE
BARNACLES,
LIMPETS, LITTORINES;
SCARCE MUSSELS

C.
MODERATELY DENSE
BARNACLES;
DENSE LIMPETS,
LITTORINES;
AMPHIPODS UNDER
COBBLE

F.
DENSE
BARNACLES,
MUSSELS,
LITTORINES



XXXX	Wide	CB003 B ADEC Subsegment Length: 480m METERS 5 100 200 AK State Plane Zone 4 8450036	Subdivision Field Map Map Key: KENC003B Name: <u>TRIMM</u> Date: <u>28-MAY-91</u> Date Entered:
////	Medium		
----	Narrow		
TTTT	Very Light		
0000	No Oil		



- SURFACE OIL CATEGORY MAP -

Reviewed: MC 6/1/91
Reviewed 5/31/91 KG

1991 MAYSAP EVALUATION

SEGMENT: CB 003 SUB: C REGION: KEN SURVEY DATE: 5/28/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC

FOSC

EXXON

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

TEAM NO.

4

SEGMENT

CB003

SUBDIVISION

C

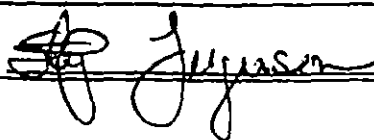
DATE MAY 29 / 91

ADEC

NAME

Steve Ferguson

SIGNATURE

☒ NTR☐ TREATMENT RECOMMENDED

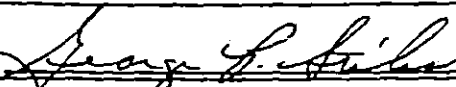
TRACE OIL INH LOCATED ACROSS SUBDIVISION OF AREAS SURVEYED.

EXXON

NAME

George P. Stiles

SIGNATURE

☒ NTR

No appreciable oil found.

NDMANAGER

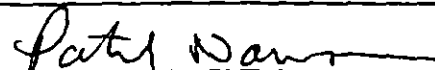
NAME

Pat Norman

OF

Port Graham

SIGNATURE

☒ NTR

Remaining oil should be pounded out or eroded away eventually.

USCG/NOAA

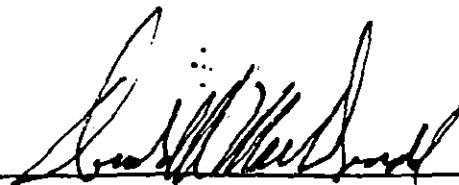
NAME

McMahon / McDonald

SIGNATURE

☒ NTR

Weathered residue in billock & boulders small amounts, inaccessible for clean-up



TEAM NO. 4 PAGE 1 OF 1
 OG B TRIMM BIO J ROTH SEGMENT C3443
 ADEC S. FERGUSON LANDMANAGER P NORMAN for P GRAHAM SUBDIVISION C
 EXXON G. STILES USCG/NOAA McMANNON / McDONALD DATE MAY 1, 29 /91

TIME 20:21 to 07:47 TIDE LEVEL 4.29 ft. to -0.11 ft. ENERGY LEVEL: ☒ H ☐ M ☐ L
 SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO WEATHER: ☐ SUN ☐ CLOUDS ☐ FOG ☒ RAIN ☐ SNOW
 TOTAL LENGTH SHORELINE SURVEYED: 084 m NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE
 EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 1 m VL 155 m NO 928 m US 675 m

L O C	SURFACE OIL CHARACTER										SURFACE BEDIMENT 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		S	S				R	H	2	20	x	x			
B						T	T				R	H	2	15	x				
C				T		S	S				BSPR	M	2	5		x			SOR-H
D		T				T	T				BSPR	M	2	3		x			
E				T	S	S	S				RS	H	2	70	x	x			SOR-H
F						T	T				RPR	M	2	6		x			
G							T				R	H	1	10		x			
H		T		T							RS	M	2	10		x			
I		T					T				RS	M	6	15		x			PARTRM P/U
J		S									RS	M	1	1		x			PARTRM P/U
K					S						R	M	2	3		x			
L		T			T						RS	M	1	4		x			
M				T		T	T				RS	M	1	10		x			SOR-H

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-4(M)-14 FRAMES 2-6

NO R/S

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER								OILED ZONE	CLEAN BELOW	H2O LEVEL	SHEEN COLOR	PIT ZONE				SURFACE- SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO	cm-cm	Y/N		(cm)	B R S N	S	UI	MI	LI		

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

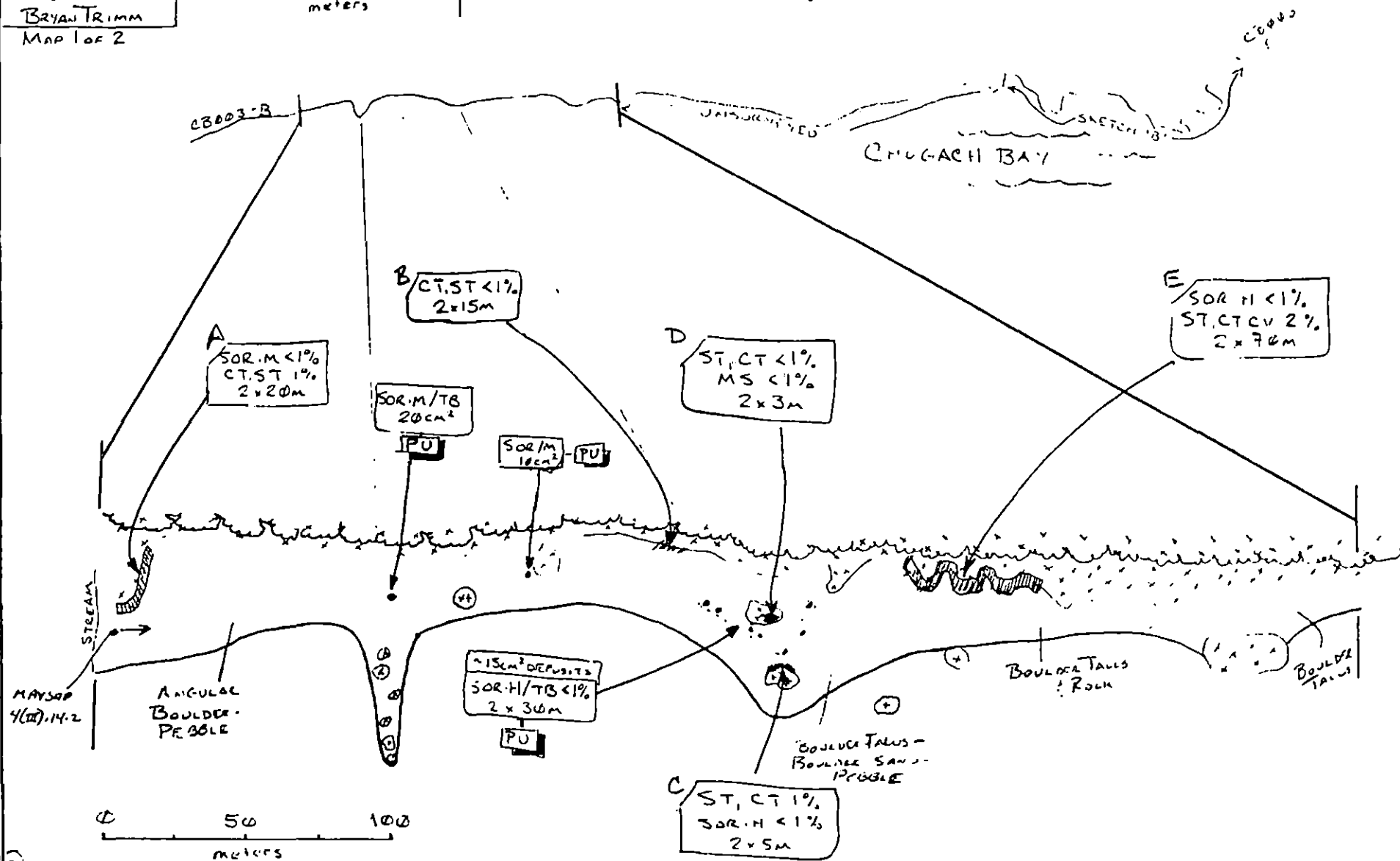
OG COMMENTS:
 MOUSSE & SOR FOUND UNDER ARMOR & IN ROCK CREVICES.
REVIEWED: MC 6/1/91
 revised 5/31/91 KG

C.B. OG SKE
29-MAY-91
0621-0743
BRYAN TRIMM
MAP 1 OF 2

0 235
meters

North

KENAI PENINSULA



Reviewed 5/13/91
Reviewed: PL 6/1/91

NORTH

0 235
meters

CB003-C
7 SKETCH MAP 'C'
29-MAY-91
0621-0747
BRIAN TRIMM
MAP 2 of 2

SKETCH 'A' → ←

UNSURVEYED

SKETCH 'B'

CHUGACH BAY

TREES

SAND-PEBBLE

G ST < 1%
1 x 10m

H SOR + MS < 1%
2 x 10m
MS IN CREEVES

M ST < 1%
SOR + H < 1%
1 x 10m

TREES

L CV MS < 1%
1 x 4m
MS IN CREEVES

P.S.B

P.B

P.B

F ST, CT < 1%
2 x 6m

MS
41 - 20 cm²
PU

I MS < 1%, ST < 1%
6 x 15m
MS IN CREEVES
PARTIAL
PICKUP

K CV 1%
2 x 3m

WAVE CUT
PLATFORM

WAVE CUT PLATFORM

CHUGACH BAY

MAY 3RD
4 (III) 14.3-6

REVISOR: MC 6/1/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 29 May '91
 SEGMENT # CB 003 TIDAL HEIGHT(Range) +4.40 to +0.08
 SUBDIVISION C BIOLOGIST Jim ROTH
 SEA STATE 1 FT. WIND SPEED/DIRECTION
 PHOTOGRAPHS: ROLL # FRAME #

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

- A. BEDROCK/BOULDERS W/ SPARSE LITTORINES, LIMPETS, BEACH HOPPERS.
 B. BEDROCK W/ VERRUCARIA
 C. BOULDERS W/ DENSE BARNACLES; MODERATELY DENSE LITTORINES, MUSSELS, LIMPETS.
 D. BOULDERS W/ MODERATELY DENSE MUSSELS, LITTORINES, LIMPETS; SPARSE BARNACLES.
 E. BEDROCK/BOULDERS W/ MODERATELY DENSE BARNACLES, LITTORINES, LIMPETS; VERRUCARIA
 F. BEDROCK/BOULDERS W/ MODERATELY DENSE MUSSELS, BARNACLES, LIMPETS, LITTORINES.
 G. BEDROCK W/ VERRUCARIA
 H. BEDROCK W/ MODERATELY DENSE BARNACLES, FUCUS, LITTORINES, LIMPETS; SPARSE MUSSELS.
 I. BEDROCK W/ MODERATELY DENSE BARNACLES, FUCUS, MUSSELS.
 J. BEDROCK W/ MODERATELY DENSE FUCUS, LITTORINES, MUSSELS.
 K., L. BEDROCK W/ DENSE LITTORINES, MUSSELS; MODERATELY DENSE FUCUS.
 M. BEDROCK W/ SPARSE MUSSELS, MODERATELY DENSE LITTORINES, AND LIMPETS.

GENERAL COMMENTS: (SEE ATTACHED SHEET)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds		20	
Waterfowl			
Gulls/Kittiwake			
Shorebirds			
Cormorants			
Other Birds			

LAND MAMMALS

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

Shoreline subdivision map showing important biological features attached.

B. J. ROTH

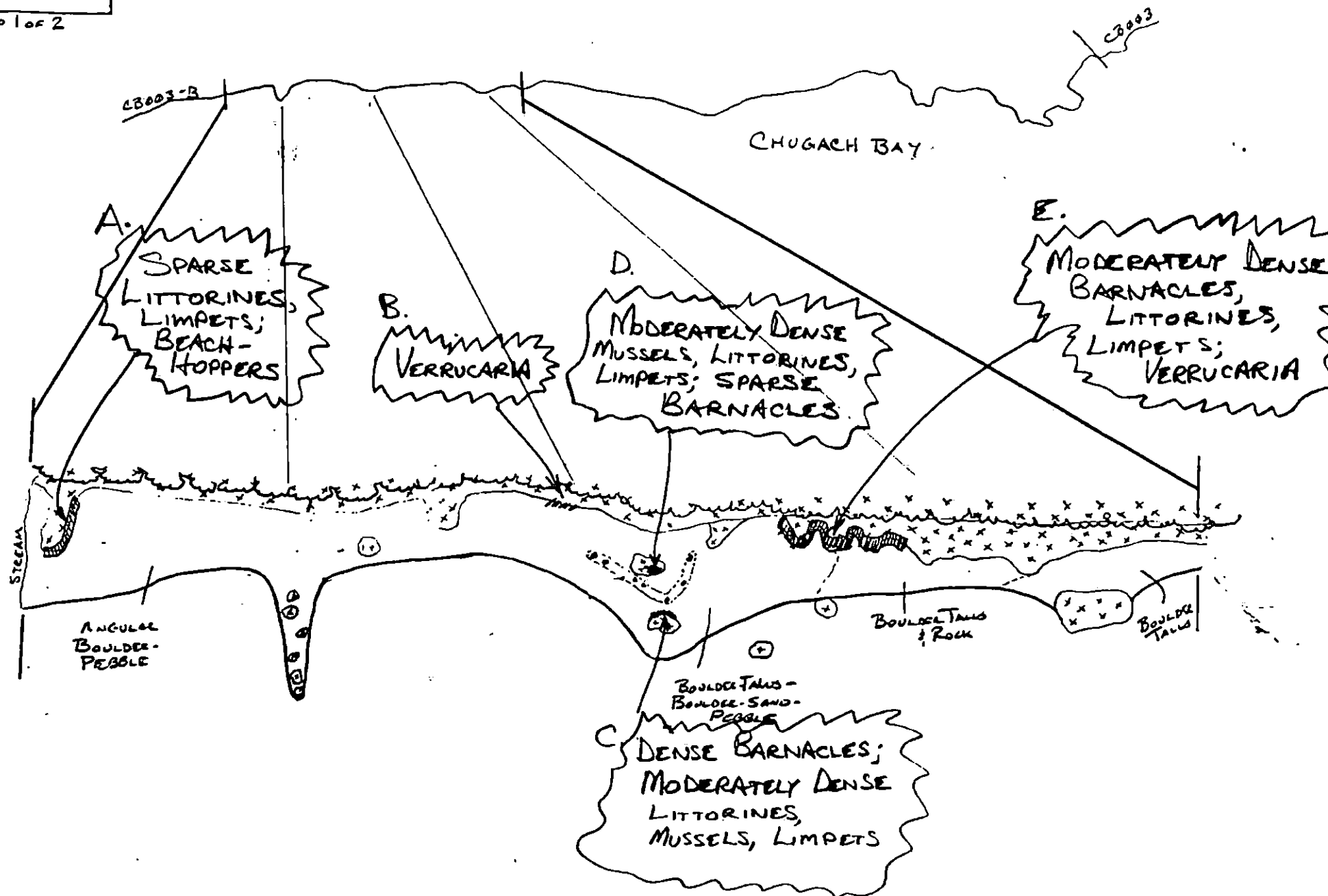
GENERAL COMMENTS: THIS SUBDIVISION CONTAINS A HEALTHY AND THRIVING INTERTIDAL BIOTA WHICH IS MOST LUXURIANT ON MIDDLE - AND LOWER ZONE BEDROCK OUTCROPPINGS. IT IS A RELATIVELY EXPOSED SITE, INCREASINGLY SO TOWARD THE EAST END WHERE THE INTERTIDAL BIOTA IS LARGELY LIMITED BY STORM ENERGY TO EXPOSED BEDROCK. AS IS OFTEN THE CASE WITH EXPOSED SITES, THE INTERTIDAL BIOTA IS SHIFTED SOMEWHAT UP THE SHORELINE. THUS ALTHOUGH MOST OF THE OBSERVED OIL WAS LOCATED IN THE HIGH INTERTIDAL ZONE, IN THIS SUBDIVISION THAT ZONE WAS OFTEN OCCUPIED BY ORGANISMS MORE FREQUENTLY ASSOCIATED WITH THE MIDDLE ZONE ON SHELTERED SHORES. EXAMPLES ARE FOCUS, MUSSELS, BARNACLES, LITTORINES AND LIMPETS, ALL OF WHICH OCCURRED AT OILED SITES IN THE HITZ. THE OCCURRENCE OF OIL HAD NO OBVIOUS EFFECT ON THE DISTRIBUTION OF THE INTERTIDAL BIOTA.

CB 8-C
MAPA
29-MAY-91
0621-0747

BIO MAP ROTH

KENAI PENINSULA

MAP 1 of 2



CB003-C
SKETCH MAP 'B'
29-MAY-91
0621-0747

map 2 of 2
Bio Map
ROTH

NORTH

0 235
meters

SKETCH 'A'

UNSURVEYED

CHUGACH BAY

SKETCH 'B'

J. MODERATELY
DENSE FUCUS,
LITTORINES,
MUSSELS

H. MODERATELY
DENSE BARNACLES,
FUCUS, LITTORINES,
LIMPETS;
SPARSE MUSSELS

G. VERRUCARIA

TREES

SAND-PEBBLES

M. SPARSE
MUSSELS,
MODERATELY
DENSE LITTORINES,
LIMPETS

L. DENSE
LITTORINES,
MUSSELS;
MODERATELY
DENSE FUCUS

TREES

P.S.B

P.B

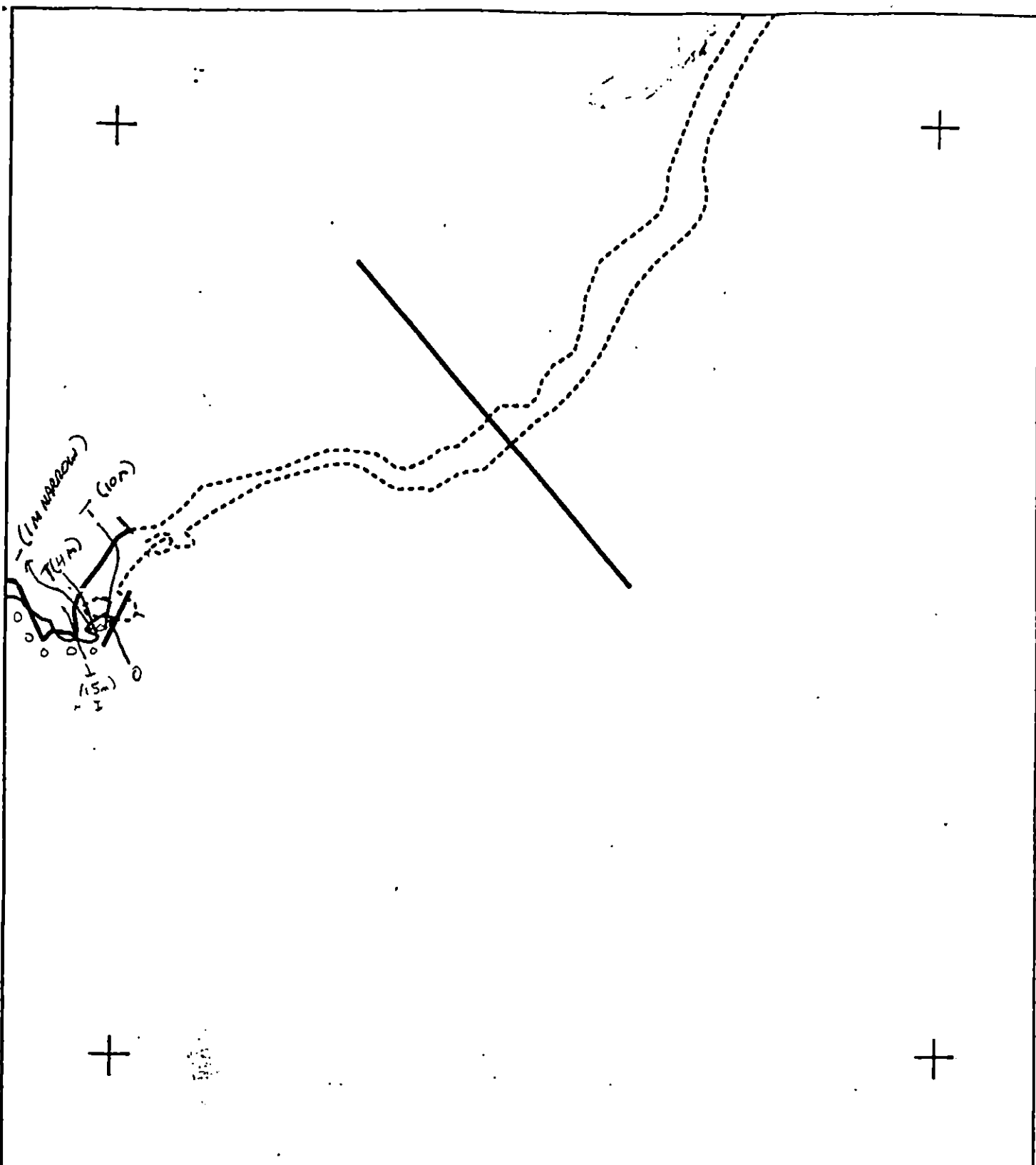
P.B

WAVE CUT
PLATFORM

WAVE CUT PLATFORM

F. MODERATELY
DENSE MUSSELS,
BARNACLES,
LIMPETS,
LITTORINES

I. MODERATELY
DENSE BARNACLES,
FUCUS, MUSSELS



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

CB003 C

ADEC Subsegment Length: 1750m

METERS

0 200 400

AK State Plane Zone 4
 903003cb



Subdivision Field Map

Map Key: KENC003Cb

Name: TRIMM

Date: 29-MAY-91

Date Entered:

- SURFACE OIL CATEGORY MAP -

REVISED: MC 6/1/9
 revised 5/31/91 XG

C

A

B

CB003 C
ADEC Subsegment Length: 1750m
METERS

AK State Plane Zone 4
rcb00\$eq

Subdivision Field Map
Map Key: KENC003Ca
Name: TRIMM

Date: 29-MAY-91
Date Entered:

• SURFACE OIL CATEGORY MAP -

REVIEWED: MC 6/1/91
reviewed 5/31/91 KG

1991 MAYSAP EVALUATION

SEGMENT: CB 003 SUB: C REGION: KEN SURVEY DATE: 5/28/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Timothy J. Smith Date: 6/07/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: JUNE 7 1991

ADEC [Signature]

EXXON [Signature]

USCG [Signature]

NOAA [Signature]

FOSC APPROVAL DATE: 6/14/91

FOSC [Signature]

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

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT C3003 SUBDIVISION C DATE MAY 29 / 91

ADEC

NAME Steve Ferguson

SIGNATURE [Signature]

☒ NTR ☐ TREATMENT RECOMMENDED

TRACE OIL IN⁴ LOCATED ACROSS SUBDIVISION OF AREAS SURVEYED.

EXXON

NAME George P. Stiles

SIGNATURE [Signature]

☒ NTR No appreciable oil found.

LANDMANAGER

NAME Pat Norman

OF Port Graham

SIGNATURE [Signature]

☒ NTR Remaining oil should be pounded out or eroded away eventually.

USCG/NOAA

NAME McMahon/McDonald

SIGNATURE [Signature]

☒ NTR Weathered mouse in bullock + barrels small amounts, inaccessible for clean-up

[Signature]

PAGE 1 OF 1

REMOVED: MC 6/11/91
revised 5/31/91 KG

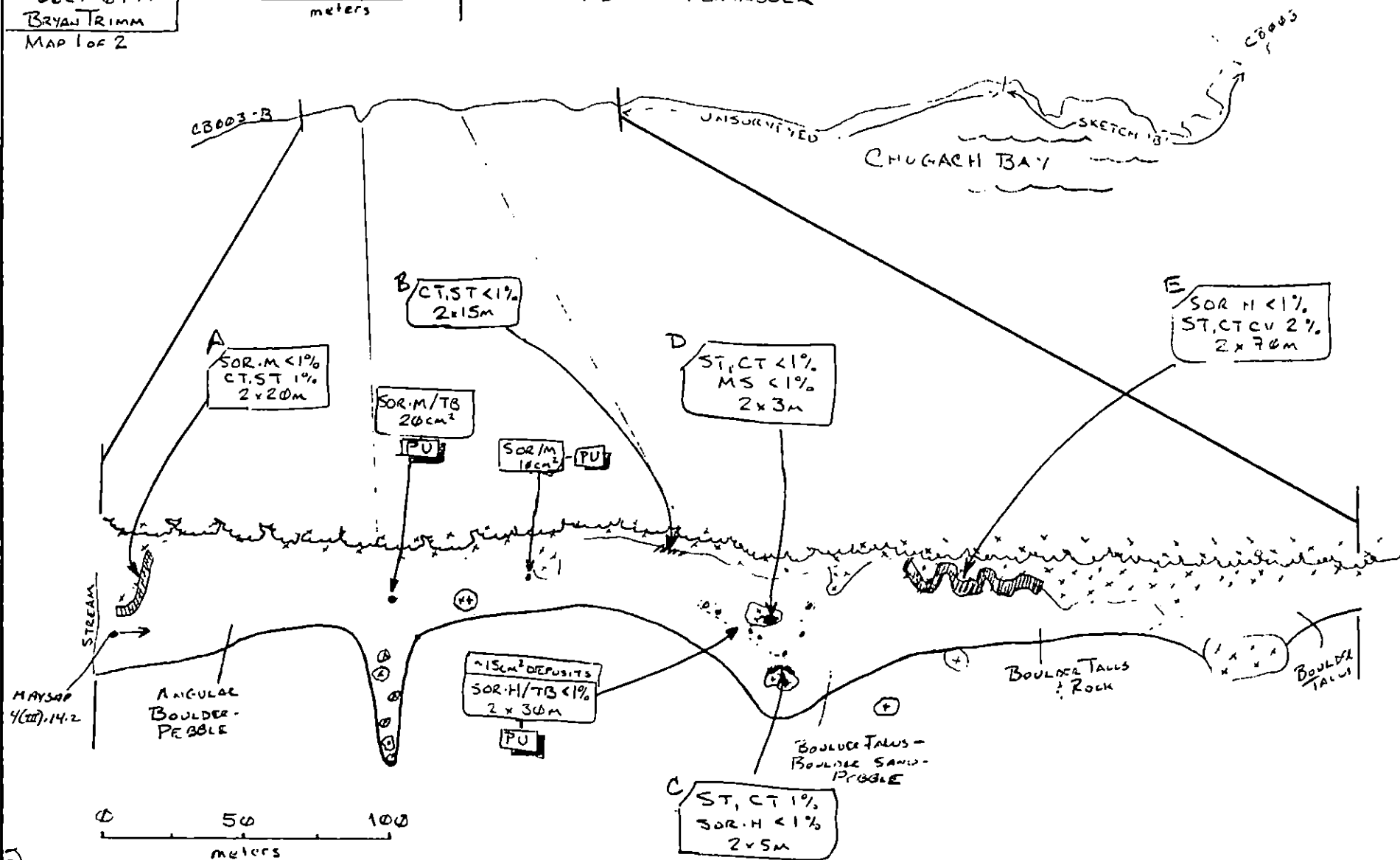
C'BO
 OG SKETCH PA
 29-MAY-11
 0621-0743
 BRYAN TRIMM
 MAP 1 OF 2

North

0 235

meters

KENAI PENINSULA

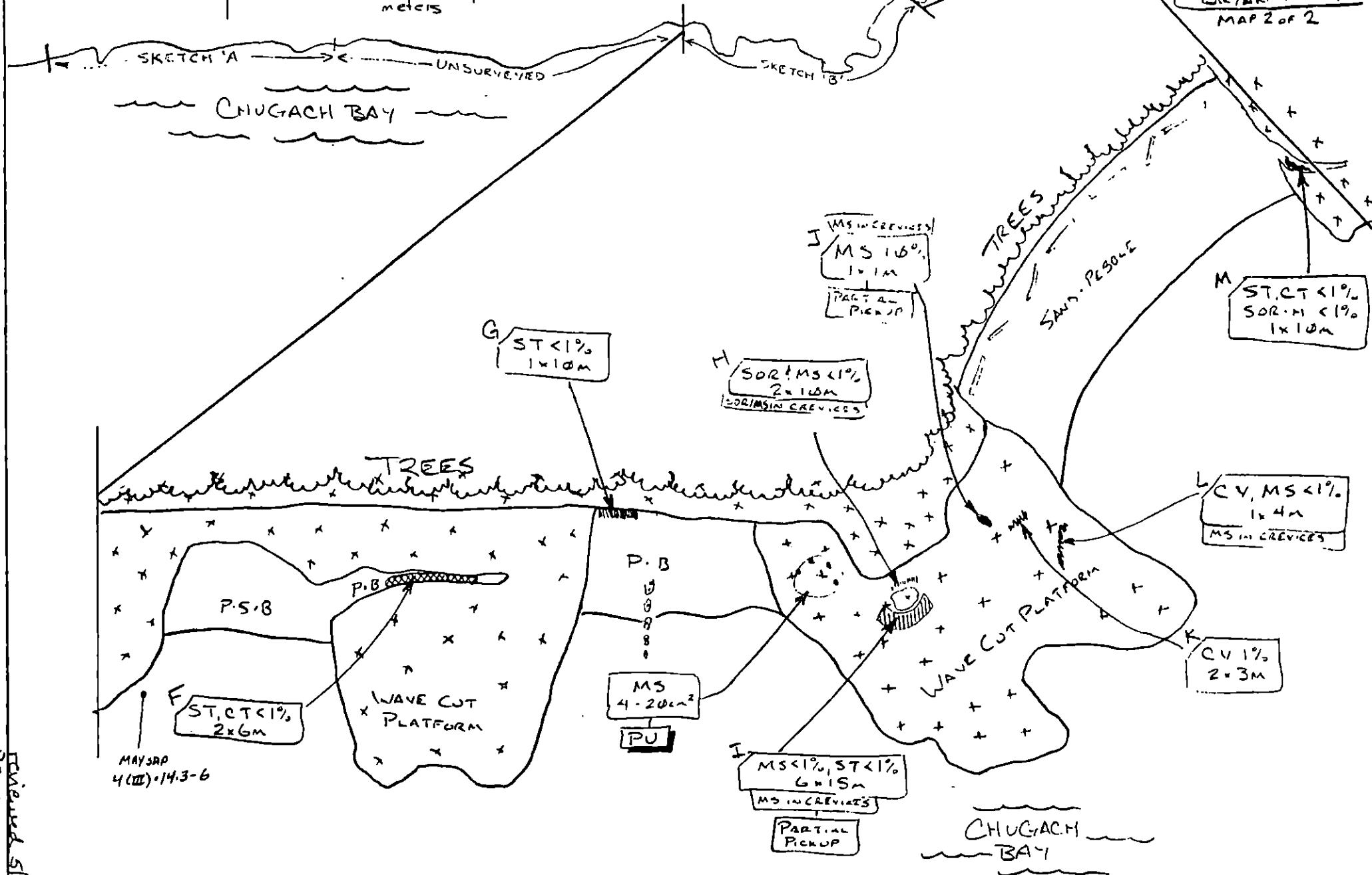


Reviewed 5/31/91 kb
Reviewed: mc 6/1/91

NORTH

0 235
meters

8003-C
SKETCH MAP 'B'
29-MAY-91
0621-0747
BRIAN TRIMM
MAP 2 of 2



Reviewed 5/15/91
Reviewed: MC 6/1/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 29 May '91
 SEGMENT # CB 003 TIDAL HEIGHT (Range) +4.40 to +0.08
 SUBDIVISION C BIOLOGIST Jim Roth
 SEA STATE 1 FT. WIND SPEED/DIRECTION
 PHOTOGRAPHS: ROLL # FRAME #

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

- A. BEDROCK/BOULDERS W/ SPARSE LITTORINES, LIMPETS, BEACH HOPPERS.
 B. BEDROCK W/ VERRUCARIA
 C. BOULDERS W/ DENSE BARNACLES; MODERATELY DENSE LITTORINES
 MUSSELS, LIMPETS.
 D. BOULDERS W/ MODERATELY DENSE MUSSELS, LITTORINES,
 LIMPETS; SPARSE BARNACLES.
 E. BEDROCK/BOULDERS W/ MODERATELY DENSE BARNACLES, LITTORINES,
 LIMPETS; VERRUCARIA
 F. BEDROCK/BOULDERS W/ MODERATELY DENSE MUSSELS, BARNACLES,
 LIMPETS, LITTORINES.
 G. BEDROCK W/ VERRUCARIA
 H. BEDROCK W/ MODERATELY DENSE BARNACLES, FUCUS, LITTORINES,
 LIMPETS; SPARSE MUSSELS.
 I. BEDROCK W/ MODERATELY DENSE BARNACLES, FUCUS, MUSSELS.
 J. BEDROCK W/ MODERATELY DENSE FUCUS, LITTORINES, MUSSELS.
 K, L. BEDROCK W/ DENSE LITTORINES, MUSSELS; MODERATELY DENSE
 FUCUS.
 M. BEDROCK W/ SPARSE MUSSELS, MODERATELY DENSE LITTORINES,
 AND LIMPETS.

GENERAL COMMENTS: (SEE ATTACHED SHEET)

WILDLIFE OBSERVATIONS
 TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds		20	
Waterfowl			
Gulls/Kittiwakes			
Shorebirds			
Cormorants			
Other Birds			

LAND MAMMALS

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

Shoreline subdivision map showing important biological features attached.

P. J. H. M.

CB003-C 29 MAY 91 Jim ROTH

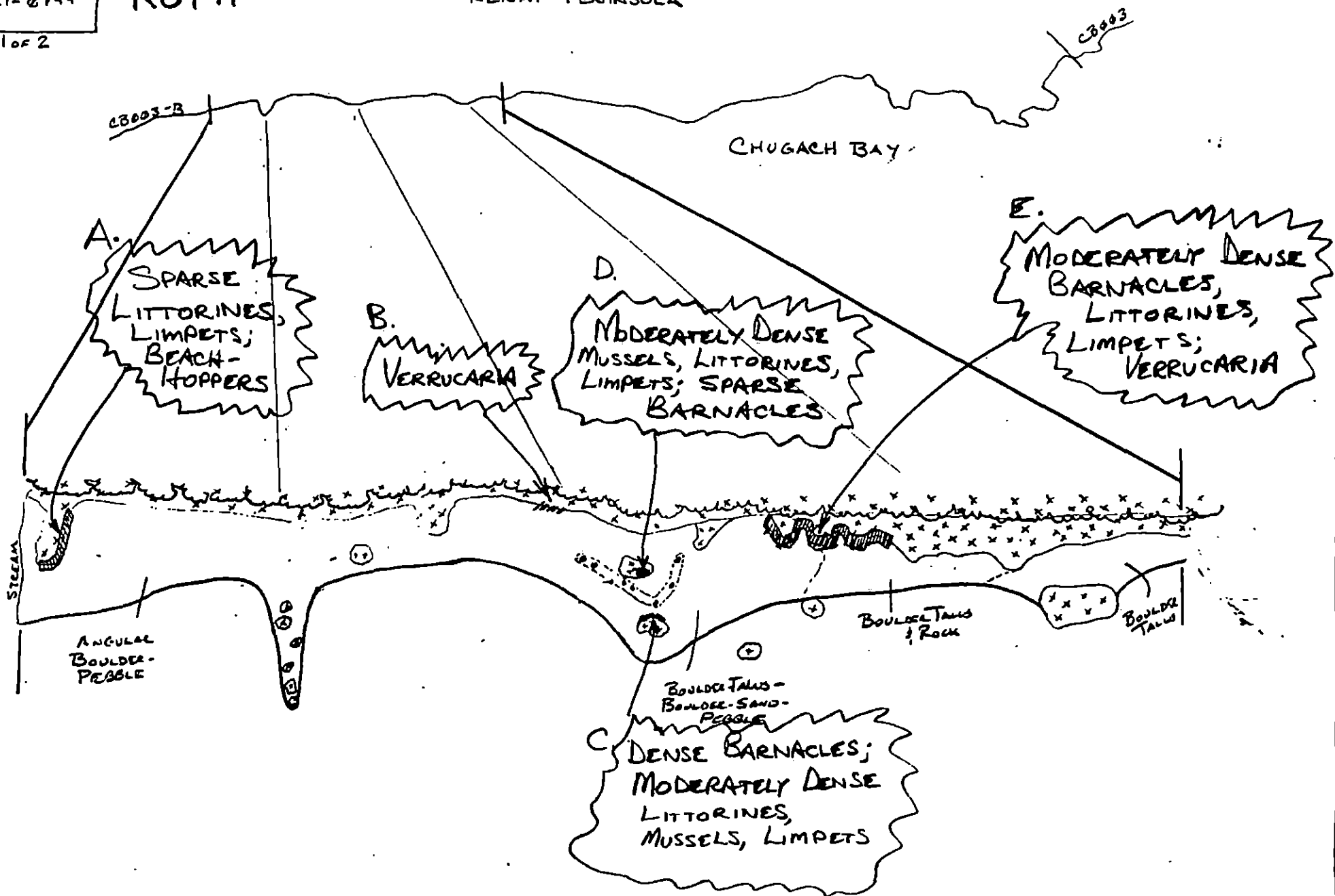
GENERAL COMMENTS: THIS SUBDIVISION CONTAINS A HEALTHY AND THRIVING INTERTIDAL BIOTA WHICH IS MOST LUXURIANT ON MIDDLE - AND LOWER ZONE BEDROCK OUTCROPPINGS. IT IS A RELATIVELY EXPOSED SITE, INCREASINGLY SO TOWARD THE EAST END WHERE THE INTERTIDAL BIOTA IS LARGELY LIMITED BY STORM ENERGY TO EXPOSED BEDROCK. AS IS OFTEN THE CASE WITH EXPOSED SITES, THE INTERTIDAL BIOTA IS SHIFTED SOMEWHAT UP THE SHORELINE. THUS ALTHOUGH MOST OF THE OBSERVED OIL WAS LOCATED IN THE HIGH INTERTIDAL ZONE, IN THIS SUBDIVISION THAT ZONE WAS OFTEN OCCUPIED BY ORGANISMS MORE FREQUENTLY ASSOCIATED WITH THE MIDDLE ZONE ON SHELTERED SHORES. EXAMPLES ARE FOCUS, MUSSELS, BARNACLES, LITTORINES AND LIMPETS, ALL OF WHICH OCCURRED AT OILED SITES IN THE HITZ. THE OCCURRENCE OF OIL HAD NO OBVIOUS EFFECT ON THE DISTRIBUTION OF THE INTERTIDAL BIOTA.

CB003
SKETCH MAP
29-MAY-91
0621-0747

BIO MAP ROTH

KENAI PENINSULA

MAP 1 of 2

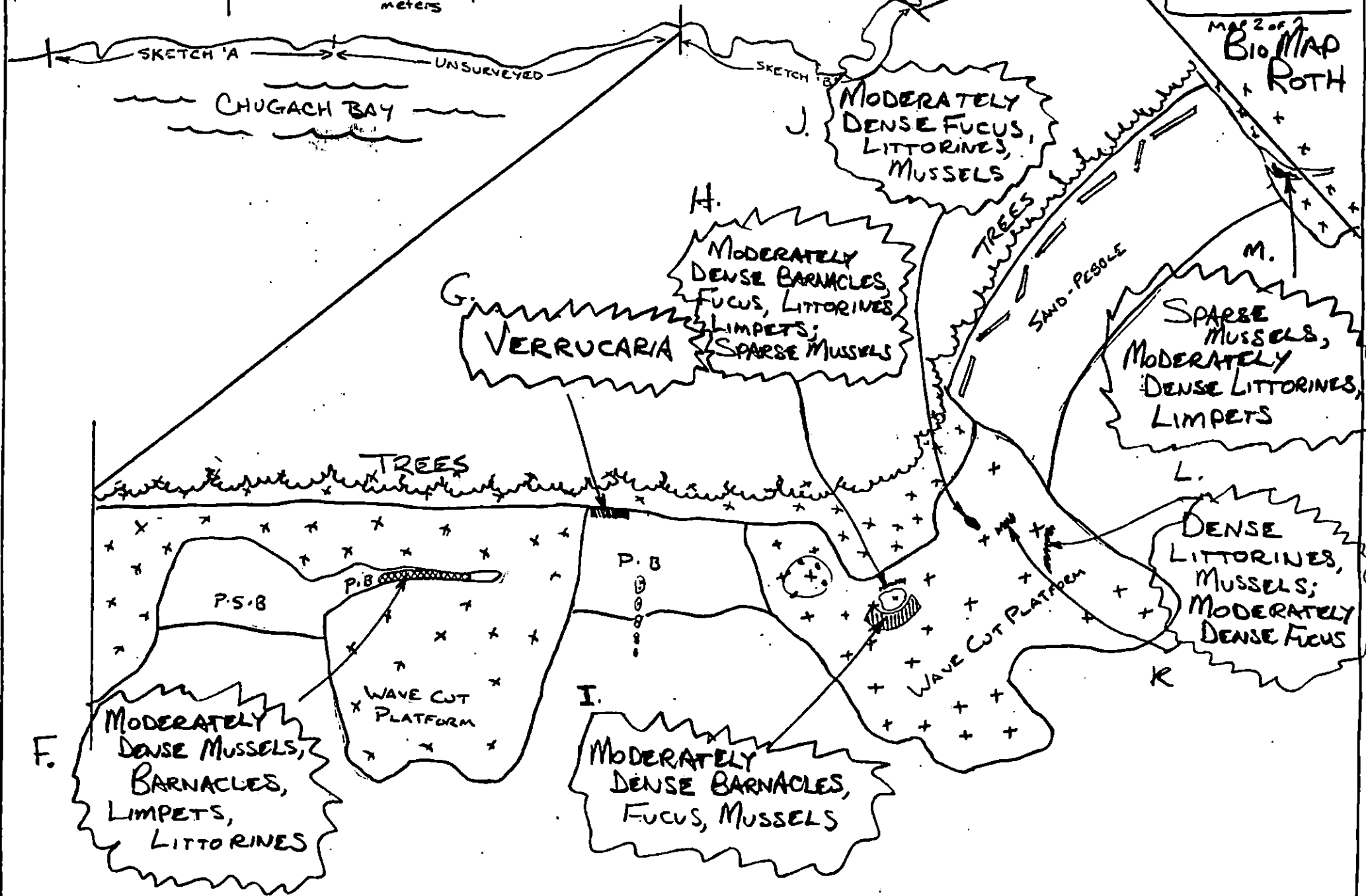


NORTH

0 235
meters

3003-C
SKETCH MAP 'B'
29-MAY-91
0621-0747

MAP 2 of 2
Bio MAP
ROTH



(1M narrow)
T(4m)
T(10m)
15m
1.2

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

CB003 C

ADEC Subsegment Length: 1750m

METERS

0 200 400

AK State Plane Zone 4
 8060030b



Subdivision Field Map

Map Key: KENC003Cb

Name: Trimn

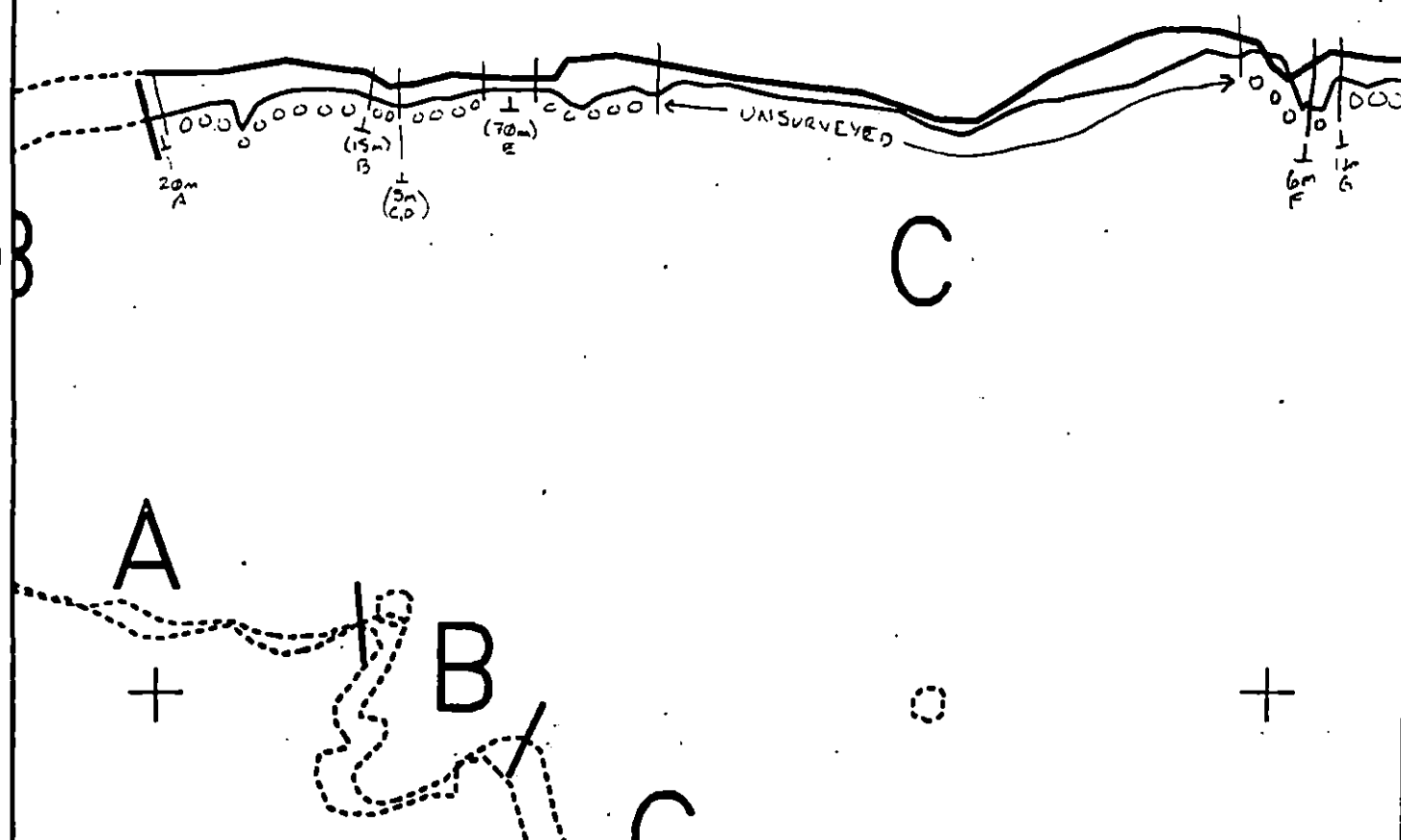
Date: 29-MAY-91

Date Entered:

- SURFACE OIL CATEGORY MAP -

REVISED: MC 6/1/91
 revised 5/31/91 XG

CB-03



XXXX	Wide	CB003 C ADEC Subsegment Length: 1758m METERS AK State Plane Zone 4 80300300	Subdivision Field Map Map Key: KENC8003C0 Name: <u>TRIMM</u> Date: <u>29-MAY-91</u> Date Entered:
////	Medium		
----	Narrow		
TTTT	Very Light		
0000	No Oil		

1991 MAYSAP EVALUATION

SEGMENT: CB 003 SUB: B REGION: KEN SURVEY DATE: 5/28/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) Fish harvest area

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Timothy A Smith

Date: 6/07/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

N

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: JUNE 7 1991

FOSC APPROVAL DATE: 6/14/91

ADEC

FOSC

EXXON

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

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT C3003 SUBDIVISION B DATE Nov 28 / 91

DEC NAME STEVE FERGUSON SIGNATURE [Signature]

☒ NTR ☐ TREATMENT RECOMMENDED

SUBSURFACE LENS OF OIL IS STILL PRESENT ABOVE SITE C. THIS OIL LENS WAS DOCUMENTED LAST YEAR DURING CLEAN-UP AND AN ADDENDUM WAS SENT IN FOR PICK UP. UNLESS SUBSURFACE LENS WILL BE CLEANED, THE REMAINING WORKABLE OIL FOR CLEAN UP PURPOSES IS SPORADIC AND YOU WOULD SPEND ALOT MORE TIME HUNTING IT DOWN THAN PICKING IT UP. NO TREATMENT RECOMMENDED

EXXON NAME George P. Stiles SIGNATURE [Signature] 5/30/91

☒ NTR. very little AP + MS found while surveying. Survey team retrieved 5 bags while walking the segment. I concur with ADEC more time would be spent looking for oil than picking it up.

LANDMANAGER NAME Pat Norman OF Port Graham SIGNATURE [Signature]

☒ NTR exposed AP/MS was picked up during survey subsurface layer still remains, recommend additional work while working EB 4-B.

USCG/NOAA NAME Bob McNamee SIGNATURE [Signature]

☒ NTR very little AP + MS located - picked up at site.

[Signature]

PAGE 1 OF 1

revised 5/31/91 KG
REVIEWED: JMC 6/1/91

NORTH

0 100
meters

3003-B
OG SKETCH MAP
28-MAY-91
418-2133
Bryan Trimm

CHUGACH BAY

3003-A

3003-C

B MS < 1%
SOR.H < 1%
7 x 60m

PARTIAL
PICKUP

MS/HOR 90%
2 x 2m

PU

D MS < 1%
ST, 1%
2 x 24m

HOR
1 x 1m

E CT, CV, ST 2%
MS < 1%
2.5 x 100m

G SOR.L < 1%
CV, CT, ST 5%
6 x 140m

PARTIAL
PICKUP

SOR.H & MS 90%
2 x 0.5m

PU

MAYSAP
4(III).13-23

F MS 1%
SOR.H 1%
1 x 20m
MS INCREASES
70% BETWEEN BOULDERS

3 MS @ 20cm²

PU

C MS < 1%
SOR.H < 1%
3 x 20m

A CT, CV, ST 1%
1.5 x 25m

MAYSAP 4(III).13-21

Revised 5/31/91
Reviewed: MC 6/1/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 28 MAY '91
 SEGMENT # CB003 TIDAL HEIGHT(Range) +3.36 TO +4.24
 SUBDIVISION B BIOLOGIST Jim ROTH
 SEA STATE G WIND SPEED/DIRECTION _____
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

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

A. BEDROCK FACE W/ MODERATELY DENSE BARNACLES (SOME OIL-STAINED AND DEAD, MOST ALIVE, INCLUDING MANY OIL-STAINED), LIMPETS, AND LITTORINES; SCARCE MUSSELS.
 B, C. BOULDERS/COBBLE W/ MODERATELY DENSE BARNACLES; DENSE LIMPETS, LITTORINES; AMPHIPODS UNDER COBBLES.
 D. BEDROCK W/ MODERATELY DENSE BARNACLES (MOST ALIVE, THOUGH MANY ARE OIL-STAINED) LITTORINES; SCARCE MUSSELS.
 E. BEDROCK W/ MODERATELY DENSE BARNACLES, LITTORINES.
 F. BOULDERS W/ DENSE BARNACLES, MUSSELS, LITTORINES.
 G. BOULDERS/COBBLE W/ DENSE BARNACLES, MUSSELS, LIMPETS, LITTORINES.

GENERAL COMMENTS: THIS SUBDIVISION CONTAINS A SERIES OF BOULDER-COBBLE-PEBBLE BEACHES SEPARATED BY BEDROCK OUTCROPPINGS. IT HAS A HEALTHY AND THRIVING INTERTIDAL BIOTA, WITH EVIDENCE OF RECENT RECRUITMENT IN LITTORINES, BARNACLES, AND MUSSELS. NO OBSERVATIONS ON THE LOWER INTERTIDAL ZONE WERE POSSIBLE.

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/Kittiwakes			
Shorebirds			
Cormorants			
Other Birds			

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

Shoreline subdivision map showing important biological features attached.

Printed 12/1/91

CB003-B
SKETCH MAP
28-MAY-91
2018-2133

Bio Map
Roth

NORTH

0 100
meters

CHUGACH BAY

B.

MODERATELY DENSE
BARNACLES;
DENSE LIMPETS,
LITTORINES;
AMPHIPODS UNDER
COBBLE

D.

MODERATELY DENSE
BARNACLES,
LITTORINES;
SCARCE MUSSELS

E.

MODERATELY
DENSE BARNACLES,
LITTORINES

G.

DENSE
BARNACLES,
MUSSELS,
LIMPETS,
LITTORINES

RUNOFF

COBBLE-PEBBLE
BOULDER

LOW ANGLE
ROCK
PLATFORM

TREES

BOULDER-TAUNT PEBBLE

COBBLE-BOULDER / BOULDER-COBBLE

F.

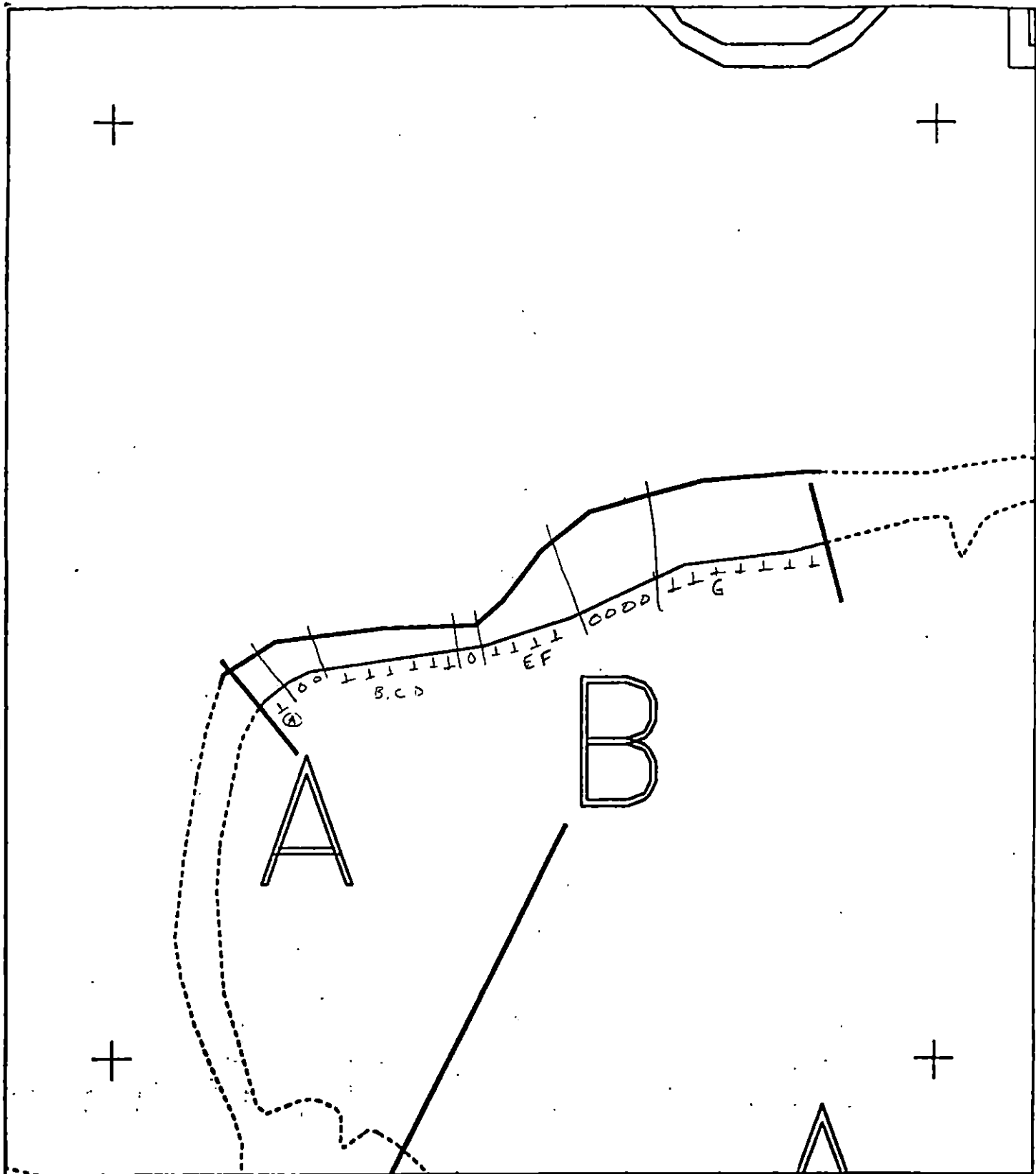
DENSE
BARNACLES,
MUSSELS,
LITTORINES

A.

MODERATELY DENSE
BARNACLES,
LIMPETS, LITTORINES;
SCARCE MUSSELS

C.

MODERATELY DENSE
BARNACLES;
DENSE LIMPETS,
LITTORINES;
AMPHIPODS UNDER
COBBLE



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

CB003 B
 ADEC Subsegment Length: 480m
 METERS
 0 100 200
 AK State Plane Zone 4
 480035

Subdivision Field Map
 Map Key: KENC0038
 Name: TRIMM
 Date: 28-MAY-91
 Date Entered:



— SURFACE OIL CATEGORY MAP —

Reviewed: MC 6/1/91
 reviewed 5/31/91 KG

WORK PLAN ADDENDUM

Segment CB-03

Subdivision B

Dated 07/24/90

MODIFICATION

1. REASON FOR MODIFICATION

SECOND RECOMMENDATION BY THE FIELD

2. ADJUSTMENT TO WORK PLAN

MANUAL REMOVAL OF SURFACE OIL (TARMATS/MOUSSE)
INIPOL ~~SEA~~ REMAINING SURFACE OILING CONDITIONS AS REQUIRED.
CUSTOMER THE AREA CONTAINING THE SUBSURFACE LENSE.

SHPO APPROVAL NEEDED YES _____
NO X

SHPO SIGNATURE _____

TAG APPROVAL DATE 7-24-90

ADEC JOHN BAUER

EXXON AMY TEAL

NOAA Paul Westcott

USCG G.A. REITER

FOSC W L DATE 7-26-90

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 242-~~20~~-10190

SEGMENT CB-003 SUBDIVISION A

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

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (242-²⁰~~20~~-10190) is in Subdivision A. This subdivision is closed to bioremediation and spot washing less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation and spot washing are permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation and spot washing more than 100m from stream. No constraint to manual pickup and tarmat removal.

5T Bald Eagle Nest

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

OTHER ECOLOGICAL CONSIDERATIONS

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

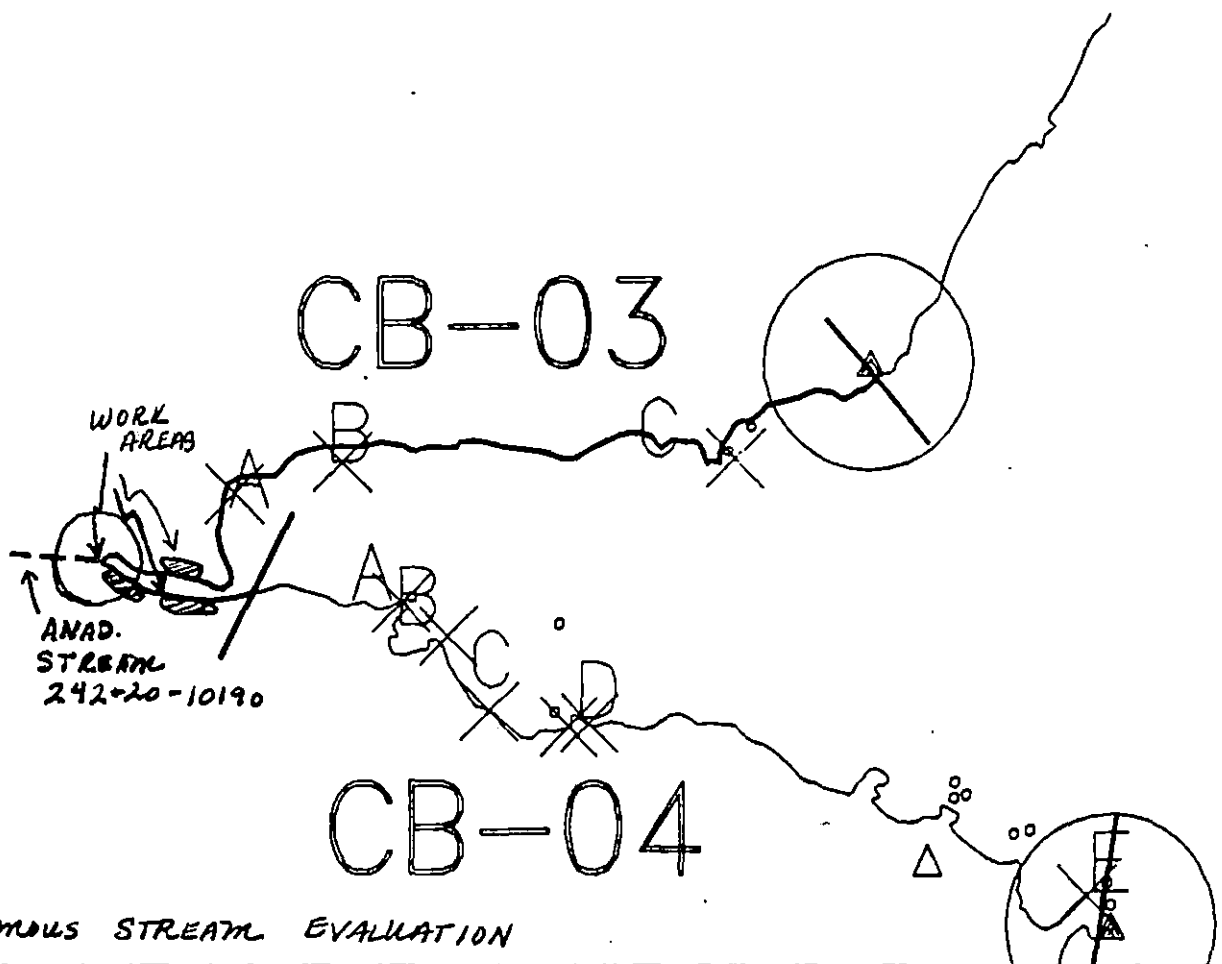
SEE SUBDIVISION CONSTRAINT ADDENDUM CB-003A
FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC

Date

Prepared by

Date



Exxon Company, USA

Map Key: KEN-CB-3

June 10, 1990



ECOLOGY MAP
SEGMENT CB-3
SUBDIVISION A (1 of 3)

METERS

0 731 1461

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ CB-003 STREAM NO: 242-20-10190 A DATE 4/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-1 All bald eagle nests (3/1 to 6/1)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Subject stream exists within subdivision A (1 of 3). No additional ecological constraints.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3276 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: Rachel Jean Durr DATE: 5/22/90

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

+ TARBALLS

COMMENTS: Recommend manual removal of pavement and oiled vegetation as indicated on attached sketch map. Contact ADF&G and USFWS for work window dates

 SEE CONSTRAINTS ADDENDUM DATED 6/16/90.

TAG COMMENTS: BIOREMEDIATION (CUSTOMER) IF REQUIRED FOLLOWING TARMAT REMOVAL

MANUAL REMOVAL OR SPOT WASH OF CONTAMINATED COVER AS INDICATED ON SKETCH

TAG APPROVAL DATE: 5/18/90.

ADEC ART WENGER Art Wenger

EXXON ANDY TAN Andy Tan

NOAA GARY PETRAE Gary Petrae

USCG G.A. REITER G.A. Reiter

FOSC: DATE: 6 Jun 90

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ CB-003 STREAM NO: 242-20-10190 A DATE 4/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-1 All bald eagle nests (3/1 to 6/1)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Subject stream exists within subdivision A (1 of 3). No additional ecological constraints.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3276 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: Rachel Jean Durr DATE: 5/22/90

Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommend manual removal of pavement and oiled vegetation as indicated on attached sketch map. Contact ADF&G and USFWS for work window dates

TAG COMMENTS: BIOREMEDIATION (CUSTOMER) IF REQUIRED FOLLOWING TARMAT REMOVAL

MANUAL REMOVAL OF SPOT WASH OF CONTAMINATED COVER AS INDICATED ON SKETCH

TAG APPROVAL DATE: 5/18/90.

ADEC Art Weimer Art Weimer

EXXON Andy Carl Andy Carl

NOAA Gary Petrac Gary Petrac

USCG G.A. REITER G.A. Reiter

FOSC: W L DATE: 6 Jun 90

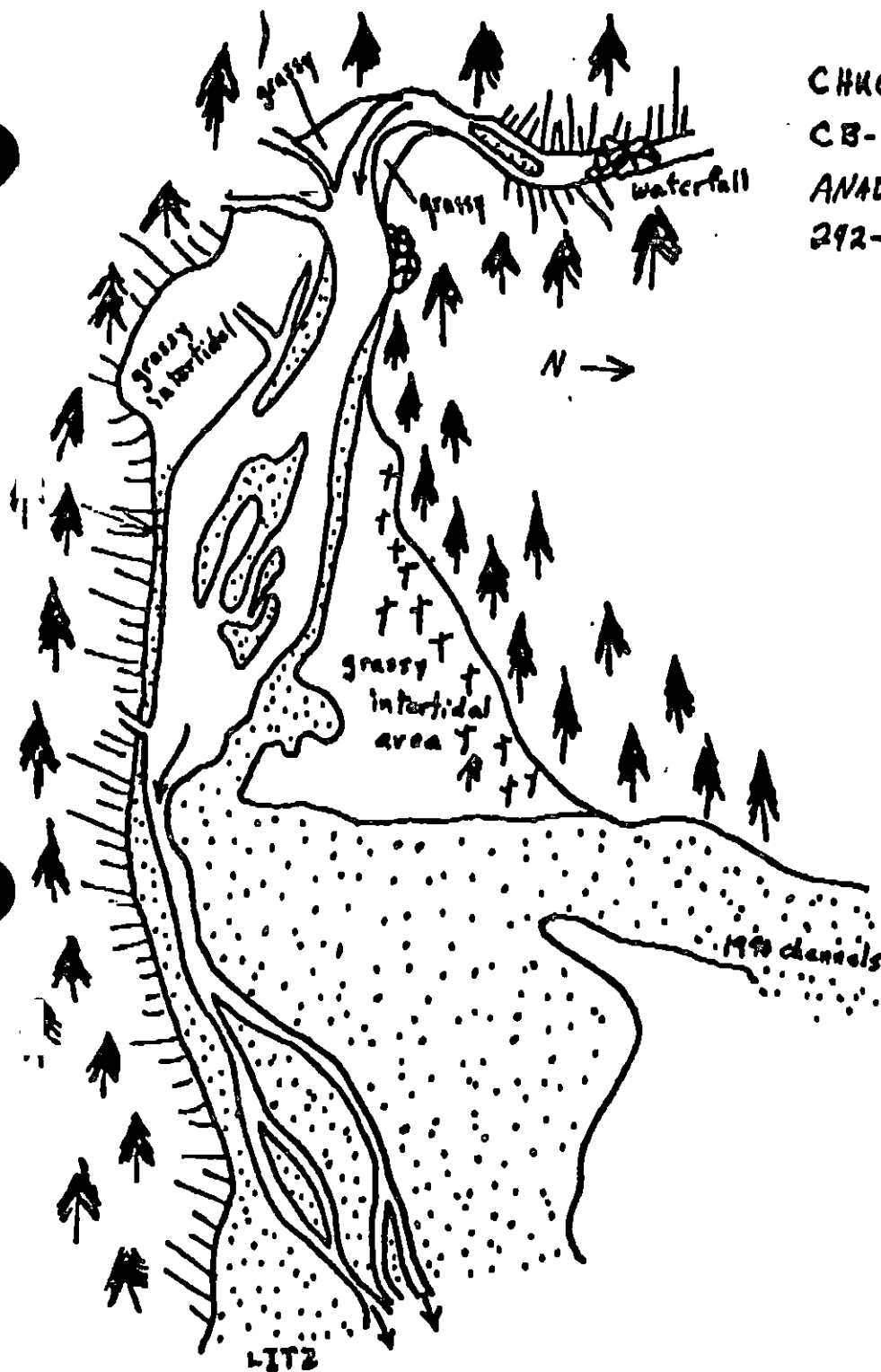


CHUGACH BAY, HEAD

CB-03

ANAD. CAT. #

292-20-10190



FRAME(S)

DESCRIPTION

71, 22, 23, 24 } Roll out
 3, 24
 1
 2, 3, 4
 5
 6, 7

Aerials of Chugach Bay Creek mouth lagoon
 South shore - mouth / Tar Mat, 4 2" thick
 Mussels found beneath rocky water layer - (15' from Ocean Hooking St.)
 Algae growing on tar mat - black surface + kind mossy.
 Algae growing on black crusty layer of oil
 Aerials of Chugach Bay Creek Mouth

CHUGACH BAY, HEAD

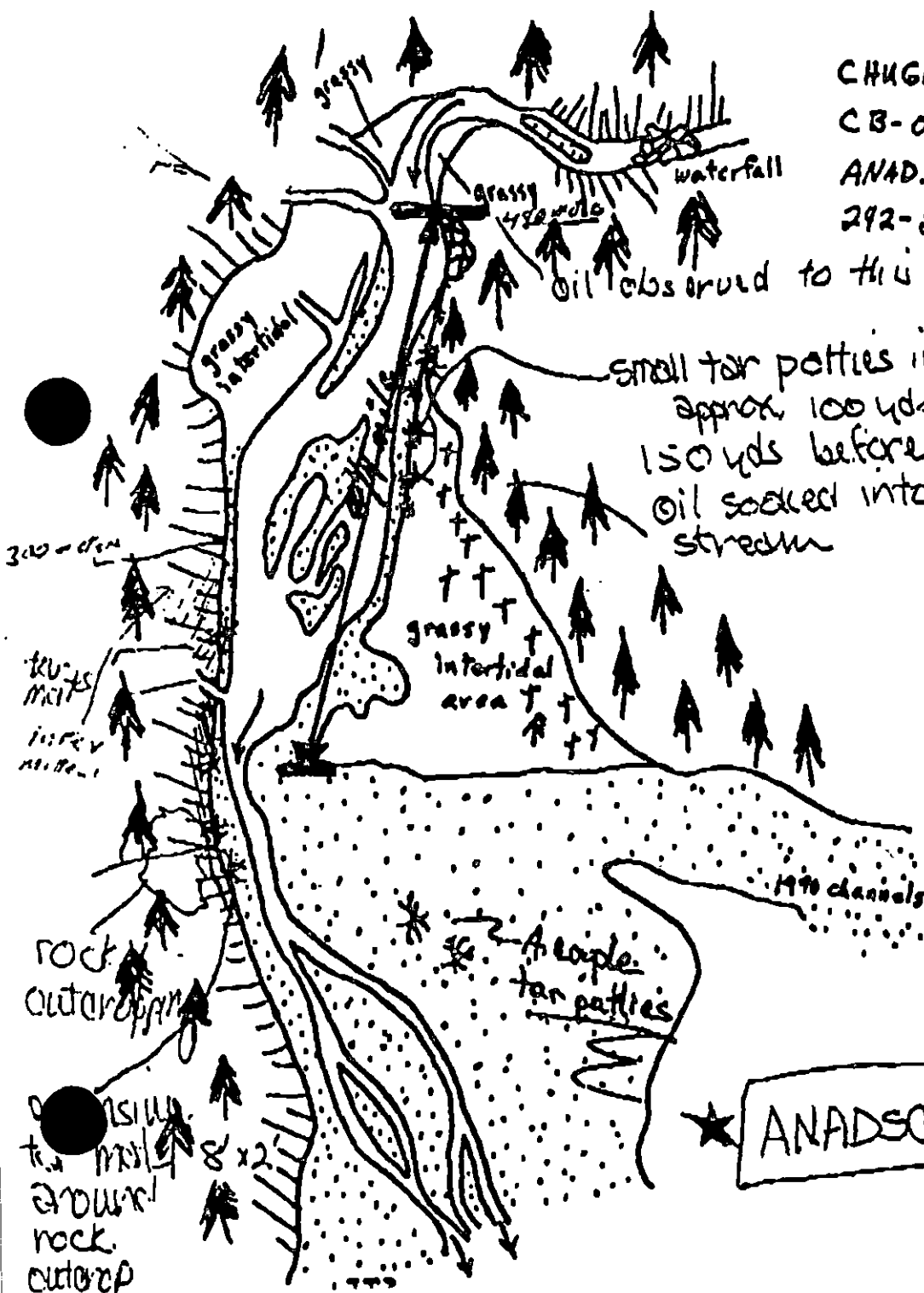
CB-03

ANAD. CAT. #

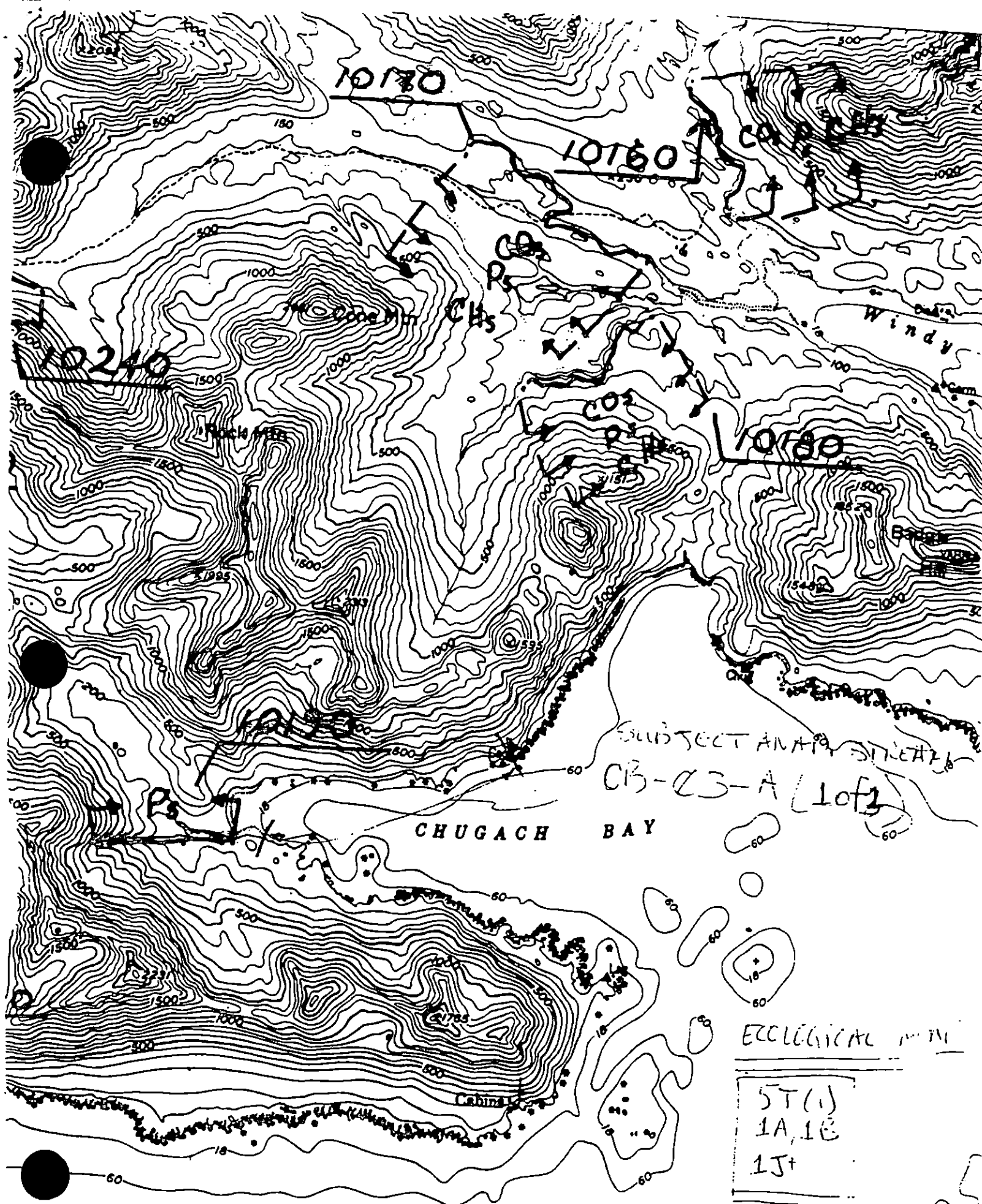
292-20:10190

Oil observed to this point

small tar patties in broken line beginning
 approx 100 yds from mouth and end
 150 yds before waterfall
 oil soaked into grasses along edge of
 stream



★ ANADSCAT RECOMMENDED



SUBJECT AREA DIRECTLY
CB-23-A (1 of 2)

ECOLOGICAL DATA

ST(1)
1A, 1B
1J+

ANADROMOUS FISH STREAM ASSESSMENT

REGION: KENAI

SEGMENT: CB003

SUBDIVISION: A

STREAM NO: 242-20-10190

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ CB-003 STREAM NO: 242-20-10190 A DATE 4/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-1 All bald eagle nests (3/1 to 6/1)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Subject stream exists within subdivision A (1 of 3). No additional ecological constraints.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3276 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: _____ DATE: _____

Subsurface Oil Observed: Yes _____ 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: Recommend manual removal of pavement and oiled vegetation as indicated on attached sketch map. Contact ADF&G and USFWS for work window dates

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/15)
 1E Main Bay Hatchery release (4/20 to 6/15)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 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
 7U Deer harvesting (8/15 to 2/28)
 7J Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / 2E-003 SUBDIVISION: ^{ASC*} 242-20-10190 DATE 29 APR 90

USCG

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

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Type A manual removals

~~ADEC~~ → ADFG

NAME LGE GLENN

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Type A. manual removal

1. Pick up patties and tarballs scattered 480 meters up the north side of the stream and 300 meters up the south side.
2. Remove tarballs located in the intertidal area below the storm drain.
3. Remove oil from the rock outcropping along the south side of the stream near the mouth in the intertidal area.

4. Contact LGE Glenn prior to work so an A.D.F.G. observer can be placed at site. The attached A.D.F.G. assessment completed on 7/89 has not changed from the 4/89-90 A.D.F.G. survey.

LAND MANAGER

NAME

SIGNATURE

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

OG CAL ARSON
 SEGMENTS 2-003
 STREAM 2A2-20-10190

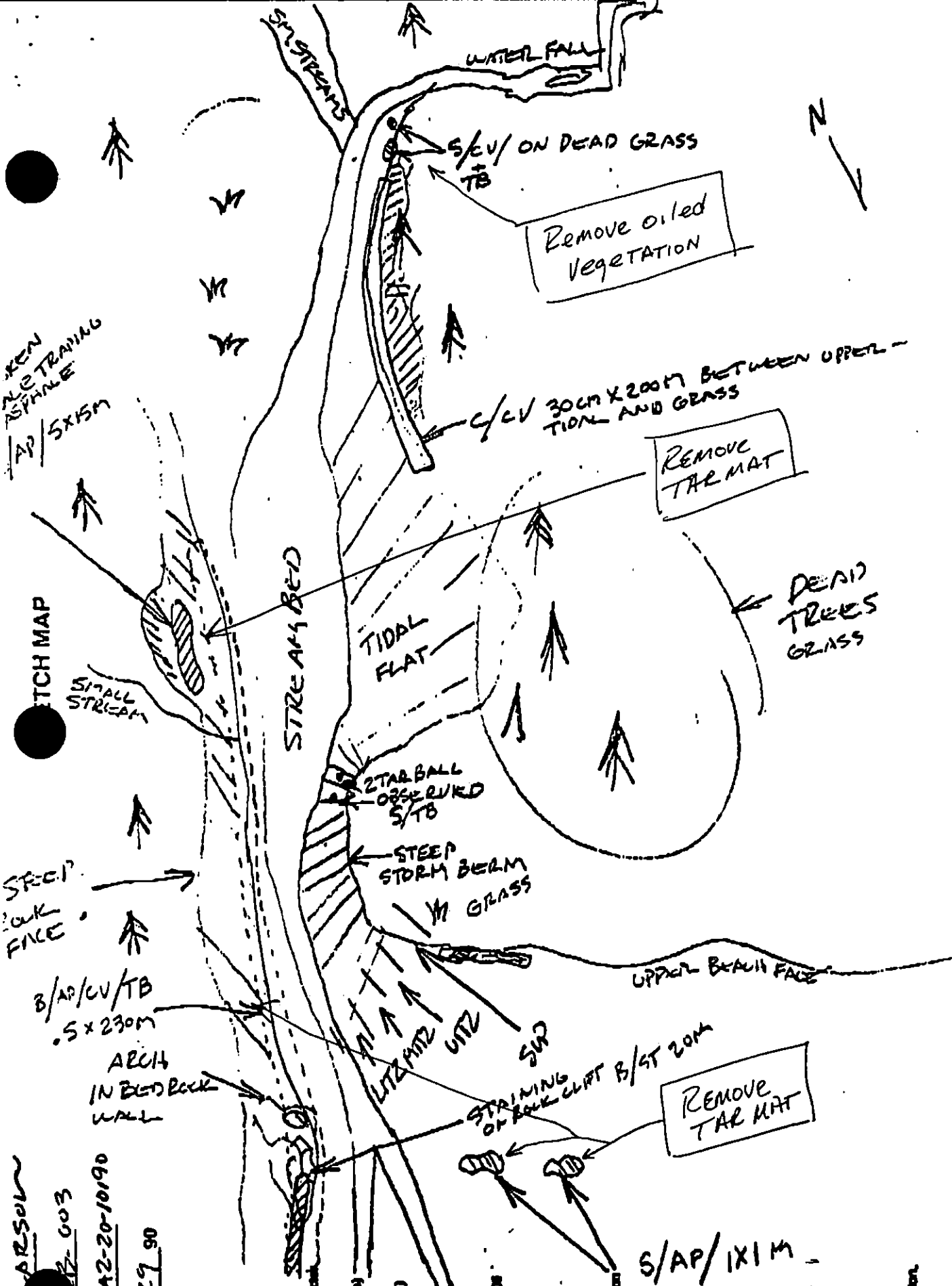
DATE 4 129 90

CHECKLIST

- ☐ N Arrows
- ☐ Approx. Scale
- ☐ Soap/Sab Brnly
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. H2O/A/W/L
- ☐ SSL
- ☐ Part No Location(s)
- ☐ Part No(s)
- ☐ Part No 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 Spashed Distribution
- Oil Vegetation
- Photo location, direction, and number

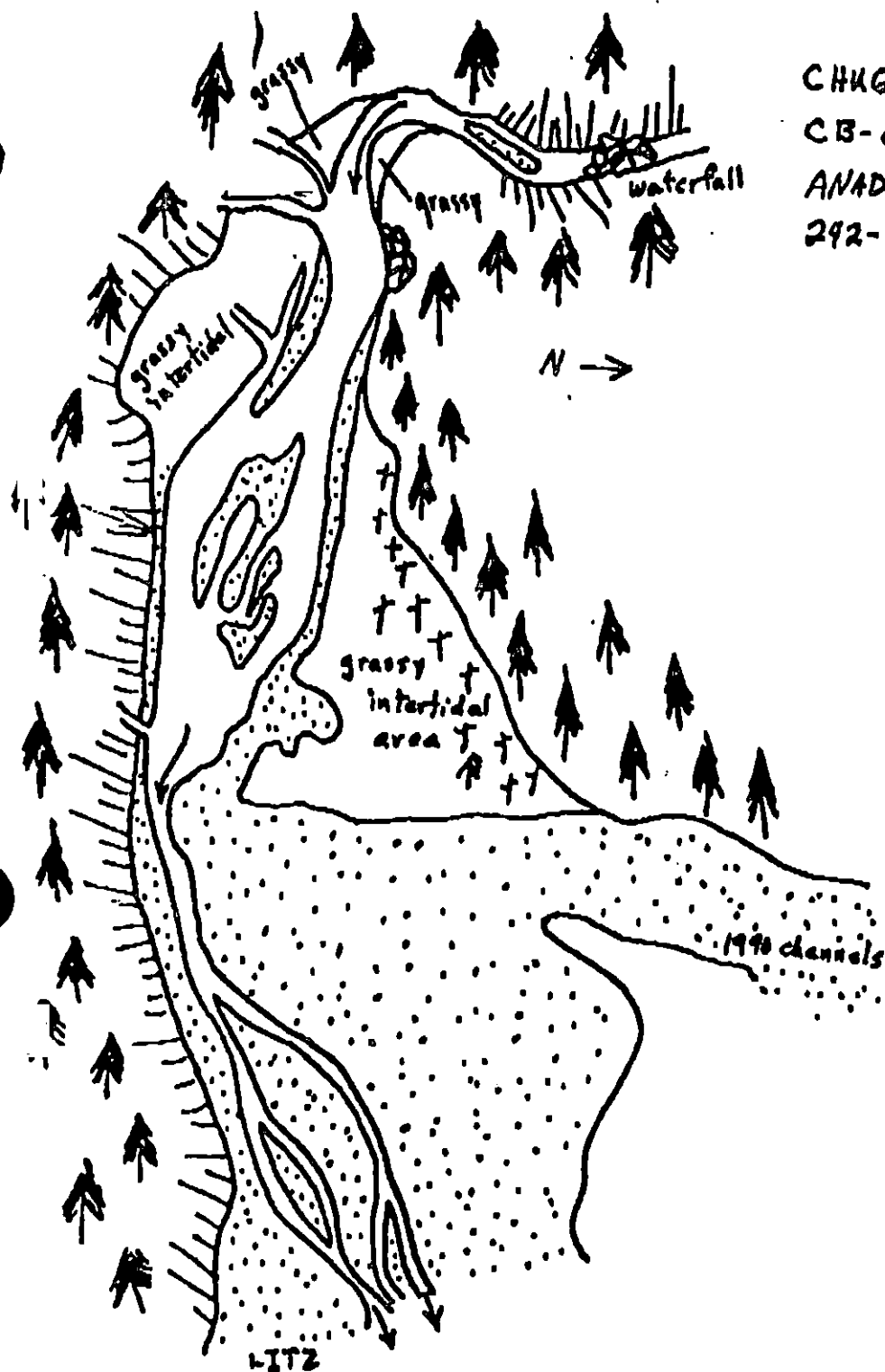


CHUGACH BAY, HEAD

CB-03

ANAD. CAT. #

292-20-10190



Group A

ADFG MULTI-ASSESSMENT DATA FORM

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

2 REGION: PWS KP, CI K, AP

METHOD: Aerial Ground Boat Cordova

3 DATE: 4-16-90

15 HIGH TIDE TIMES: 0513

21 TEAM RECORDER: Doug Hill

4 START TIME: 1348

16 HIGH TIDE HTS: 11.2

22 OBSERVERS: Suzanne Melone

5 STOP TIME: 1510

17 LOW TIDE TIMES: 1229

23 AGENCY: ADF & G

6 SEGMENT #: C3-3

18 LOW TIDE HTS: 1.5

24 PHOTOS TAKEN: (Y) N

7 STATION #:

19 TIDE HT AT SURVEY: LOW

Roll 90-44405-H Frames 8-3411-00-14

8 K-UNIT:

Ebb Slack Flood Slack

25 VIDEO TAKEN: (Y) (H) TAPE#:

9 STAT AREA: 242-20

20 USCG QUAD: Seldovia A-5

Starts: Ends:

10 LAT: 59° 11' 10

11 LONG: 151° 38' 00

26 SAMPLES TAKEN (Y) N Number:

12 SOURCE: Map Loran

13 LOCATION: AFS 242-20-10190 Chugach Cr.

14 DESCRIPTION: S.W. head of Chugach Bay

OIL
SM/DPH-4/16/90-1420
SM/DPH-4/16/90-1405

Biological

Water

EXTENT OF OIL

	SHORELINE				STREAM			
	L	M	H	S	L	M	H	S
27 SURFACE COVERAGE								
28 SURFACE THICKNESS								
29 PENETRATION								

30 OVERALL OIL IMPACT: M VL L M M

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 10% Boulder 20% Cobble 20%
Gravel 60% Sand 20% Mud/silt

36 CATALOGED ANAD. FISH STREAM? (Y) N

37 CATALOG # 242-20-10190

38 STREAM NAME: Chugach Cr.

39 OIL IN STREAM BED? (Y) N

40 OIL ON STREAM BANKS? (Y) N

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

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

Where:

43 ANADROMOUS FISH PRESENT? Y N

44 ANADROMOUS FISH OBSERVATION
Species Aerial Ground

Species	Aerial	Ground

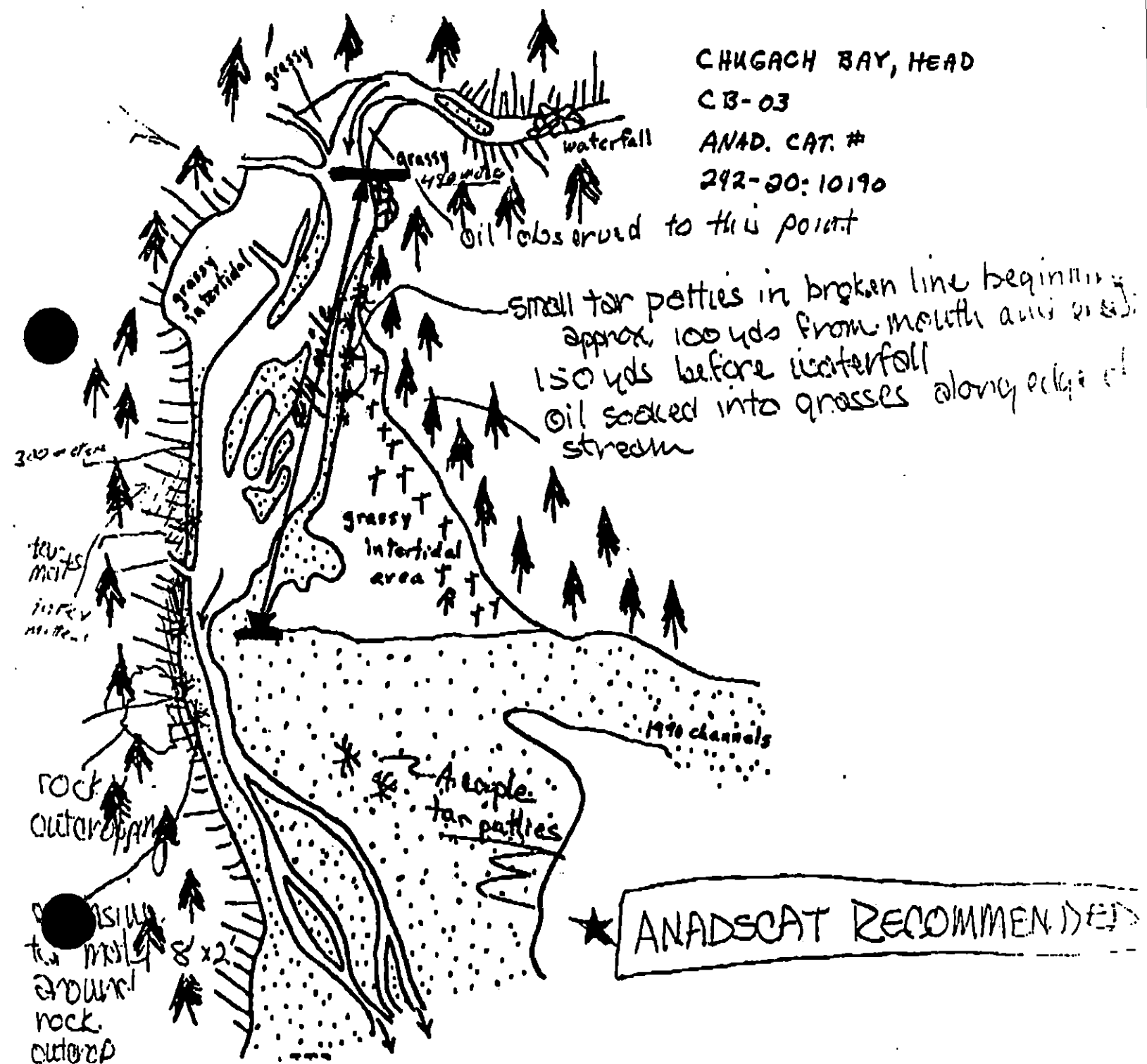
COMMENTS: The south side of the mouth of Chugach Stream has significant tar mats. This side of the stream also contains tar patties w/ algae growing on them. (This was common at Black Lagoon also). The north side of the stream had small tar mats and a broken winch of oiled gear upstream almost to the waterfall.

FRAME(S)

DESCRIPTION

7, 1, 2, 3, 4, 5, 6, 7 } Roll 005
 2, 3, 4
 1
 2, 3, 4
 5
 6, 7

Aerials of Chugach Bay Creek mouth lagoon
 South shore - mouth / Tar mat, 4 2" thick
 Mussel found beneath rocky outer layer of 15' from Creek Mouth
 Algae growing on tar mat - black crust + kind mossy
 Algae growing on black crust layer of oil
 Aerials of Chugach Bay Creek Mouth



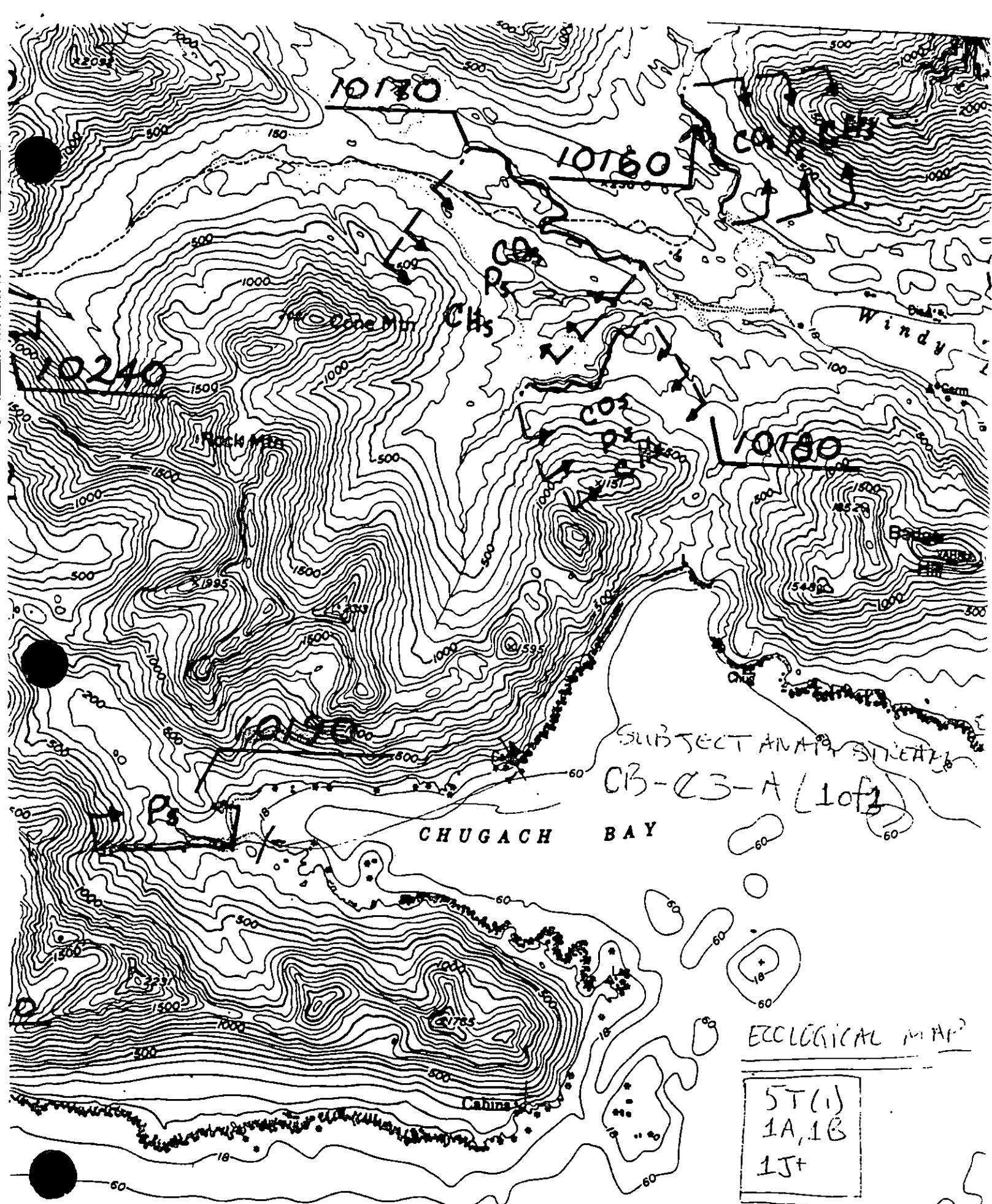
Seg ID: CB-003 Subdiv: 242-20-10190
Survey Date: 4/29/90
Comments by: Ken Critchlow

Oil in several forms was observed, most of which was distributed along the left or west bank of the stream. Oil on the east bank was restricted to cover well upstream and to a couple of patches of small tarballs.

The MITZ along the west bank was characterized by moderate densities of juv/adult barnacles, large numbers of which were dead or more commonly represented by scars on the rock. The abundance of barnacle scars was the highest I have observed in GOA or Pu's. This mortality doesn't appear to have been due to oiling since there was generally no evidence of oil throughout most of the area in which scars were observed. I am guessing that mortality resulting in barnacle removal was the result of ice scour.

I recommend that asphalt pavement and tarballs be removed by shovel. Areas of bedrock with oil cover should be scraped and the oil collected for disposal. Bioremediation isn't recommended.

KA P. T. L. L.



SUBJECT AREA SHEET
CB-C3-A (1 of 2)

CHUGACH BAY

ECOLOGICAL MAP?

5T(1)
1A, 1B
1J+

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT CB-3 SUBDIVISION A (1 of 3)

WORK WINDOW	
Manual Pickup	OPEN

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

>>> PHONE 564-3274 (Anchorage) OR 229-1508 (24 hrs.) <<<

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (242-20-10190) is present in Subdivision A. No constraint to Manual Pickup.

1J Purse Seine Area

No constraint to Manual Pickup.

7JJ Subsistence: Invertebrate Harvesting

No constraint to Manual Pickup.

OTHER ECOLOGICAL CONSTRAINTS

Restrict boat and air traffic to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to unrolled blots and substrate.

TAG APPROVAL DATE 5/18/90
ADEC Alex Weimer Alex Weimer
EXXON Andy Tetz Andy Tetz
NOAA Joseph Gilbert Joseph Gilbert
USCG C. A. Reiter

FOSC

DATE 5-15-90

Prepared by: Anders Maye WKK

Date: 5/17/90

CB-03

242-20-10190
Anadromous
Stream

WORK
SITE 4

CB-04



Exxon Company, USA



ECOLOGY MAP
SEGMENT CB-3
SUBDIVISION A (1 of 3)

- | | |
|---|----------------|
| ★ | Seabird Colony |
| ▲ | Eagle Nest |

SHORELINE EVALUATION

SEGMENT ST/ CB-003 SUBDIVISION A (1 OF 3) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Subsistence area - invertebrate harvesting (7JJ) - Contact Port Graham Native Association for exact dates; Salmon stream mouth - fry out migrating (1A) - 3/1 to 5/15; Salmon stream mouth - spawning (1B) - 7/10 to 8/31. Contact ADF&G Habitat Division prior to treatment for permit.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-oiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS: Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time.

SHPO SIGNATURE: Charles J. Holmes DATE: April 12, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 19 m: Narrow 0 m: V.Light 586m: No Oil 925 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Manual pick-up of tar patties and balls and trowl up mousse between cobble. Recommend working between (5/15) and (7/10) due to above constraints.

✓ Dates Revised, See Addendum dated 5/17/90 WMS

TAG COMMENTS:

TAG APPROVAL DATE: 4/12/90

ADEC John P. Huer

EXXON ANDY TEAL

NOAA Barl Wescoff

USCG M. J. Hall

FOSC:

DATE: 5-8-90

REGION: KENAI

SEGMENT: ST/CB-04

SUBDIVISIONS: A (1 OF 5)

SHORELINE EVALUATION

SEGMENT ST/ CB-04 SUBDIVISION A (1 OF 5) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 45 m: Narrow 118 m: V. Light 433 m: No Oil 0 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmat, 2) manual pick up of mousse patties, tarballs and pooled oil, 3) bioremediation of surface oil in areas shown on attached sketch map. Work should be conducted after consulting ADF&G to avoid periods of invertebrate harvesting.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ CB-4 SUBDIVISION: A DATE 4/9/90

USCG
NAME R. Bryan Hirtle SIGNATURE R. Bryan Hirtle DCI

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

I agree with the findings of The Shoreline
Oiling Summary Sheet for this Segment

ADEC
NAME Russell Kunibe SIGNATURE Russell Kunibe

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Most of this segment had only very light oiling remaining. The first pocket
back to the east of the head of the bay had asphalt and mousse saturated
sediments between the cobbles and boulders. There was stain cover and coat with
a small amount of pooling mousse in the cracks of the rocks on the bedrock.
Recommended treatment: Manual pick-ups of the mousse and asphalt.

LAND MANAGER
NAME Patrick Norman SIGNATURE Patrick Norman

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Manual pickup of exposed asphalt and mousse concentrations
should help in cleaning subdivision A of CB-4. This will not clean
the majority of oil in this area so other alternatives along with
manual pickup should be looked into. Vel worn or hot water
flushing.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Randy Siegel USCG Bryan Hirtle SEGMENT ST/ CB-4 (5 subdivisions)
 BIO Mike Fawcett LAND REP Pat Norman (PGUC) SUBDIVISION A
 EXXON John Dean ADEC Russell Knibe TIME 08:20 10:00 10:10
 TEAM NO.: 17 TIDE LEVEL: 0.0 to +2.9 DATE 4/9/90
 EST. SUBDIVISION LENGTH: 500 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 30 % B 40 % C 10 % P 10 % G 5 % S 5 % M 0 % V 0 %
 SLOPE: Lang 30 % Hang 70 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W N/A m M 60 m N 160 m VL 80 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	IC	IB	IP	IS	SBL BR	OBL RW	GY SL	OBR TL	LBR		SU	UI	ME	LI
ASPHALT PAVEMENT			X	✓				X				X		
POOLED		X		✓				X				X	X	
COVER				X		X						X		
COAT		+	✓	X		X						X		
STAIN		+	✓	X		X						X		
MOUSSE			X	✓					X			X		
PATTIES			X						X			X		
TARBALLS				X				X				X		
FILM				X			X					X		
NO OIL											✓			✓

PAVEMENT: H F S 80 sq. m by 2 cmPATTIES / TARBALLS 100 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE -#BAGS 0Photographs: - None -Roll No. ST-17-6Frames 1-5

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		UD	UC	SBL BR	OBL RW	GY SL	OBR TL	LBR		SU	UI	ME	LI		
1	15					X	0-0		X							X					S

COMMENTS

This subdivision is north-facing shoreline composed of rocks and boulders with a number of ~~small~~ pocket beaches along it. Various oiling zones were observed on the beaches and on the rocks separating the beaches.

* Some sheen on pooled water observed.

OG Pa Siguel

SEGMENT ST CB-4

SUBDIVISION A

DATE 4/9 90

N

ETCH MAP

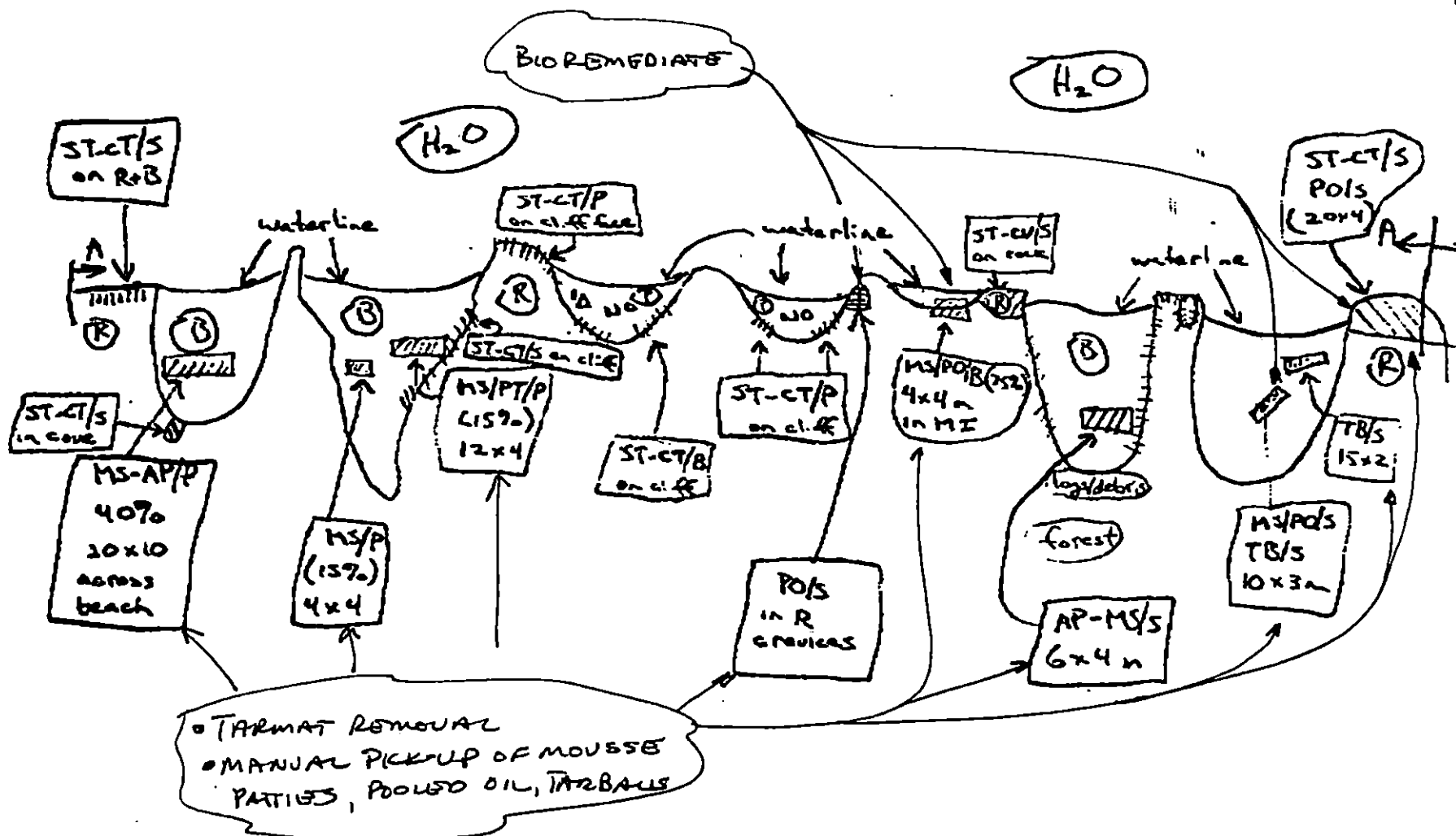
450 meters

CHECKLIST

☐ H Area
☐ Approx. Scale
☐ Seg/Sub Entry
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Ext. HML/AM
☐ SSL
☐ Profile Location(s)
☐ Photo(s)
☐ PI Location(s)
☐ Photo Location(s)

LEGEND

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



SHORELINE ECOLOGICAL SUMMARY

REVISION: 02-75-10

Segment ST/ CB 4 Subdivision A Date (mo / day / yr) 4/9/90

Time (24 hr) 0820-0940 Biologist M. H. Fawcett

(A) Substrate type and % of segments:
(1) Bedrock 30 (2) Boulder 40 (3) Cobble 10 (4) Pebble 10 (5) Sand 10 (6) Silt 0 (incl. gravel)

(B) Overall % cover of biota (% of segment): Dense 1 Moderate 1 Low 1

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

Photographs:
Roll No. ST 1/1

Frames 1-5

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	XL	1U	1M	XL	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 attached sheet

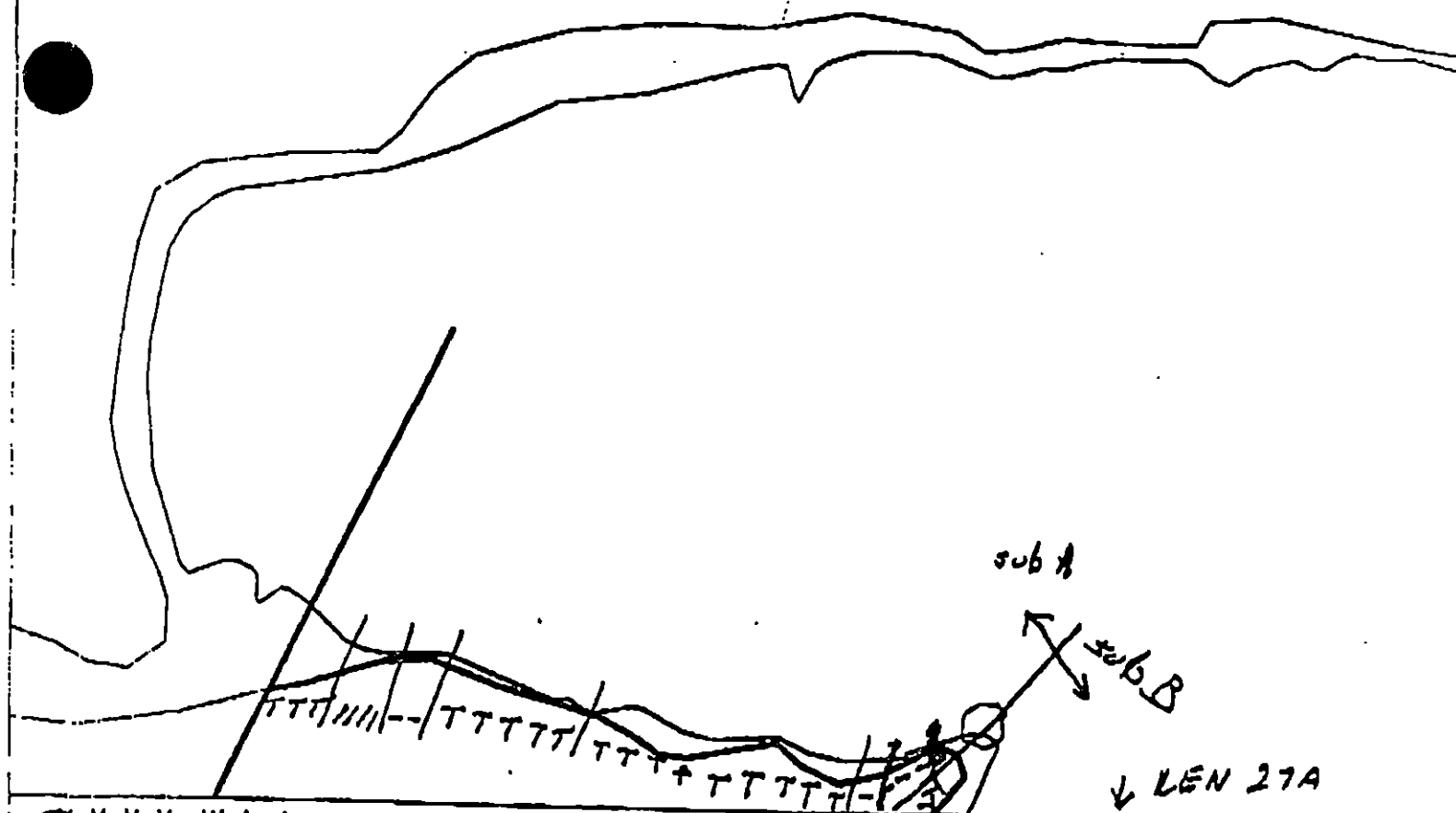
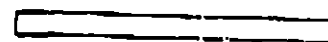
Ecological Considerations:

invertebrate harvesting

KODIAK ECOLOGICAL CONSTRAINTS

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

CB



XXX Wide

/// Medium

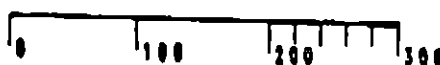
--- Narrow

TTTT Very Light

OOOO No Data

CB-4

ADEC Segment Length: 4795m



Map Key: KEN-27a.

Name: Randy Siegel

Date: 4/8/90

REGION: KENAI

SEGMENT: ST/CB-04

SUBDIVISIONS: B (2 OF 5)

SHORELINE EVALUATION

SEGMENT ST/ CB-04 SUBDIVISION B (2 OF 5) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 53 m: Medium 0 m: Narrow 0 m: V.Light 377 m: No Oil 49 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmat, 2) manual pick up of mousse and pooled oil, 3) manual pick up of oiled debris and logs with greater than 10% coverage, 4) bioremediation of surface oil in areas shown on attached sketch map. Work should be conducted after consulting ADF&G to avoid periods of invertebrate harvesting.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / CB-4 SUBDIVISION: B DATE 4/7/90USCG
NAME OR. Bryan HIRTE SIGNATURE OR. Bryan HIRTE☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

I agree with the findings of the shoreline
oiling Summary Report for Segment CB-004 sub. B

ADEC
NAME Russell Kunibe SIGNATURE Russell Kunibe☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

This subdivision included a small cove on the south shore of Ch. 10. The lowest oiling was between the cobbles and boulders on a long wide beach on the west side of the cove. This beach was protected from waves by a rock ridge to the east.
Recommended treatment: Manual pick up of the mousse and asphalt. Washing may be effective in the large oiled area and should be considered.

LAND MANAGER
NAME Patrick Norman SIGNATURE Patrick Norman☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Manual pick up of exposed Asphalt and mousse patterns should help to clean up the Area. also recommend additional work on hot water washing of this subsection, last year we washed it on the sides and because of time constraints did not do a very good job.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Randy Siegel USCG Bryan Hittle SEGMENT ST/ CB-4 (5 subdivisions)
 BIO Mike Lawcett LAND REP Pat Norman (PGVC) SUBDIVISION B
 EXXON John Dean ADEC Russell Runbe TIME 10:10 to 11:00
 TEAM NO.: 17 TIDE LEVEL: +2.9 to +5.4 DATE 4/9/90
 EST. SUBDIVISION LENGTH: 510 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 15 % B 40 % C 15 % P 10 % G 10 % S 10 % M 0 % V 0 %
 SLOPE: Lang 50 % Hang 50 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 60 m M N/A m N N/A m VL 330 m NO 120 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	IC	IB	IP	IS	SBL BR	DBL RW	GL SL	DBL TL	LBL	SU	U	M	U			
ASPHALT PAVEMENT		✓		X				X			X					
POOLED			✓	X				X			X					
COVER				X				X			X	X				
COAT			✓	X		X					X	X				
STAIN			✓	X		X					X	X	X			
MOUSSE			✓	X					X		X					
PATTIES																
TARBALLS				X				X			X					
FILM				X			X				X					
NO OIL										X					X	

PAVEMENT: H (F) S 300 sq. m by 2 cmPATTIES / TARBALLS 150 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

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

DEBRIS COLLECTED
☐ YES ☒ NOTYPE -#BAGS 0

Photographs:

Roll No. ST-17-6Frames 6-12

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	SB BR	DB RW	GY SL	DBR TL	LB R	SU	U	M			LI
1	25					X	0-0		X						X						S
2	25					X	0-0		X						X						S
3	25					X	0-0		X						X						G
4	25					X	0-0		X						X						P
							.														
							.														

COMMENTS

This subdivision consists primarily of a large beach. The beach is surrounded by hi-angle cliffs to the east + west and a low-angle SSL to the south. The western half of the beach contained significant oiling while little oiling was observed on the eastern half.

* Sheen on some pooled water.

OG Randy Siegel

SEGMENT 34

SUBDIVISION B

DATE 4/9/90

SKETCH MAP



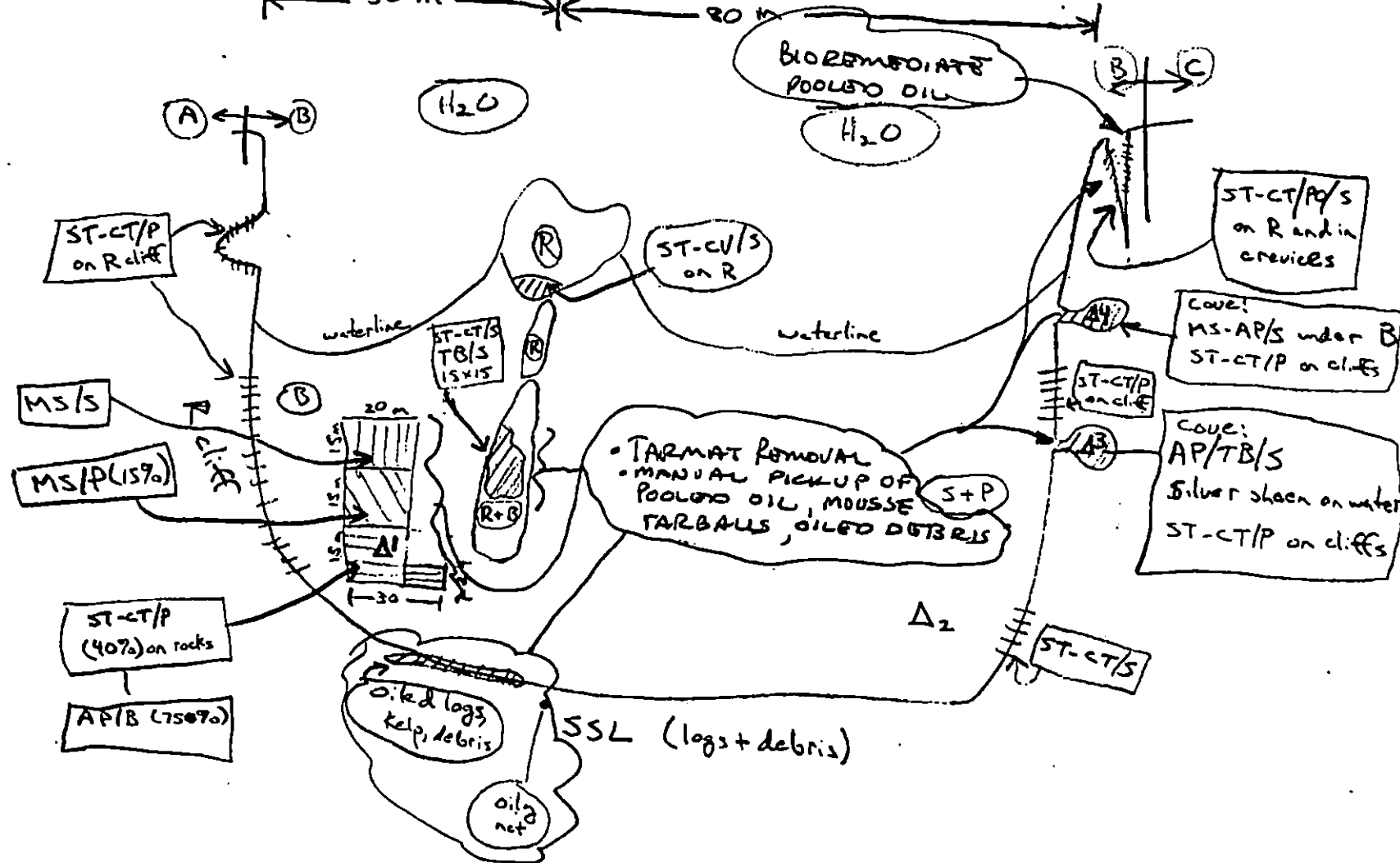
50 m 20 m

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
- Oiled Vegetation
- 1 →
- Photo location, direction, and number



Oil Character Length (m): AP 50 PO 10 CV 30 CT 250 ST 250 MS 50 PT 30 TB 30 FL N/A NO 120

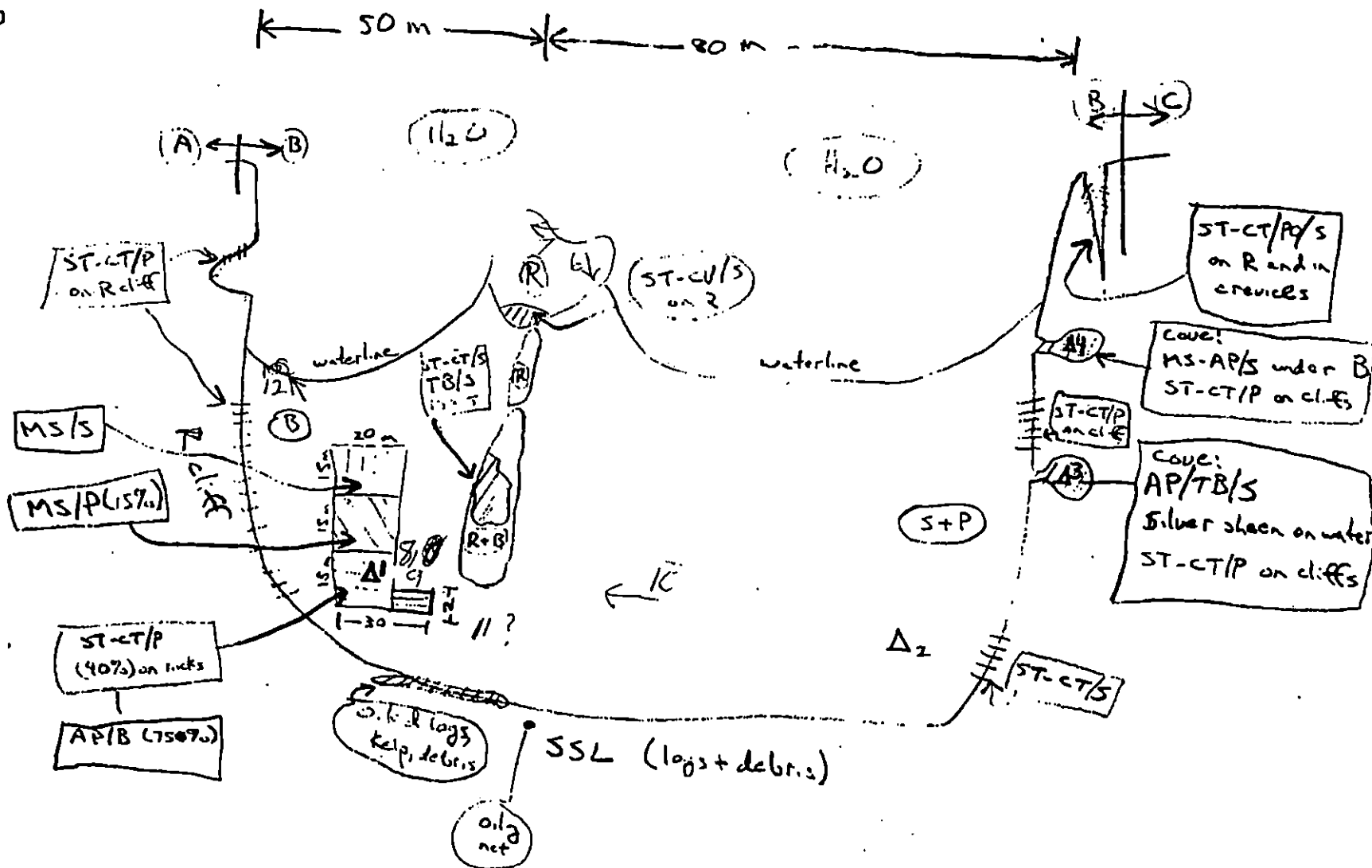
REVISION: 03/24/90

CHECKLIST

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

LEGEND

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



Oil Character Length (m): AP 50 PO 10 CV 30 CT 250 ST 250 MS 50 PT 30 TB 30 FL N/A NO 120

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/ CB4 Subdivision B Date (mo / day / yr) 4/9/90Time (24 hr) 0940-1120 Biologist M.H. Fawcett(A) Substrate type and % of segments:
(1) Bedrock 15 (2) Boulder 40 (3) Cobble 15 (4) Pebble 10 (5) Sand 20 (6) Silt 0 (incl. gravel)(B) Overall % cover of biota (% of segment): Dense _____ Moderate ✓ Low _____

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

Photographs:
Roll No. ST-17-6Frames 6-11

BARNACLES

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

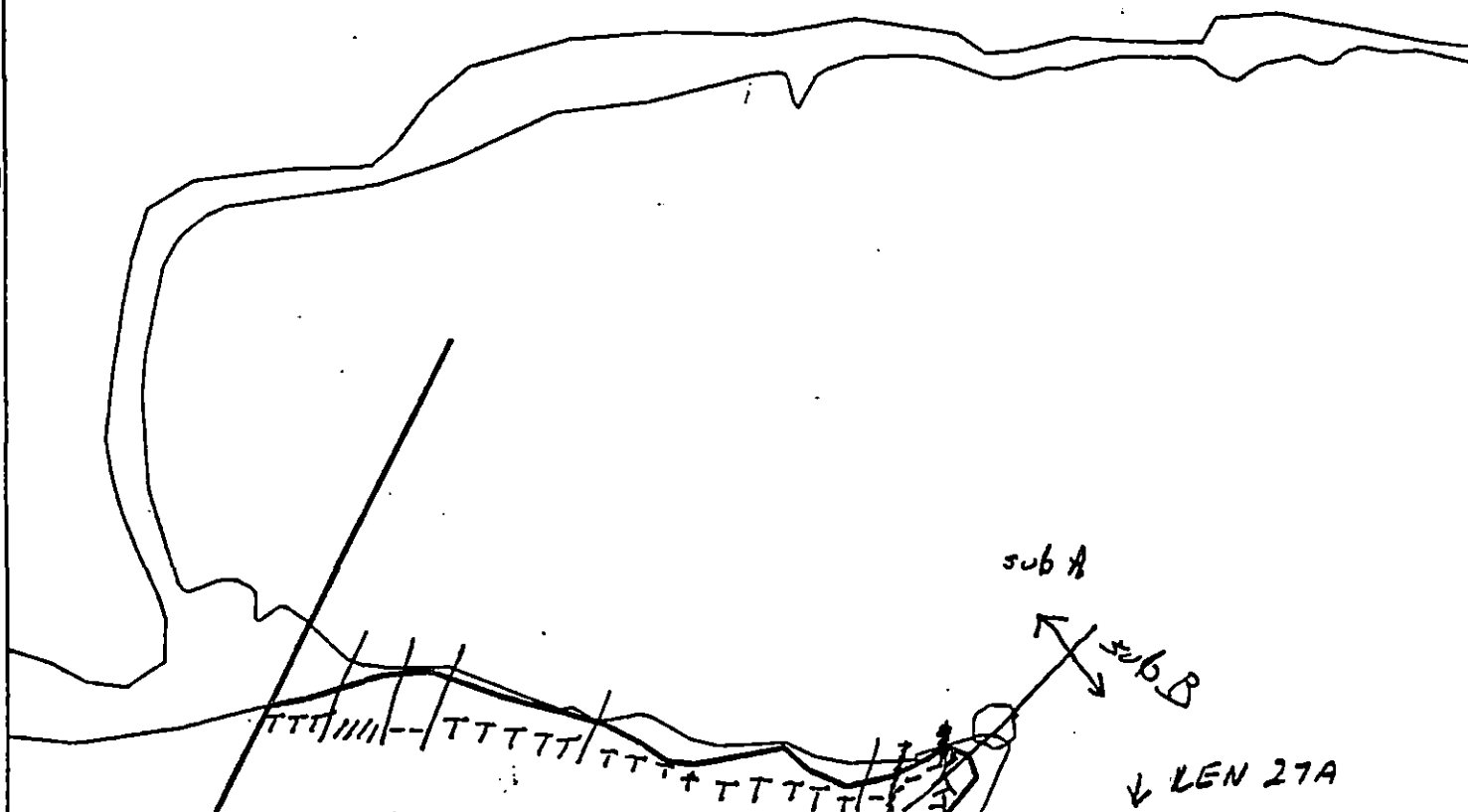
4 river otters left beach and climbed up small non-anadromous stream
the bedrock outcrops and pocket boulder beaches in this subject
support a rich community very similar to the one described in the
Ecological Considerations: attachment to CB4A

755

KODIAK ECOLOGICAL CONSTRAINTS

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

CB



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

CB-4

ADEC Segment Length: 4795m



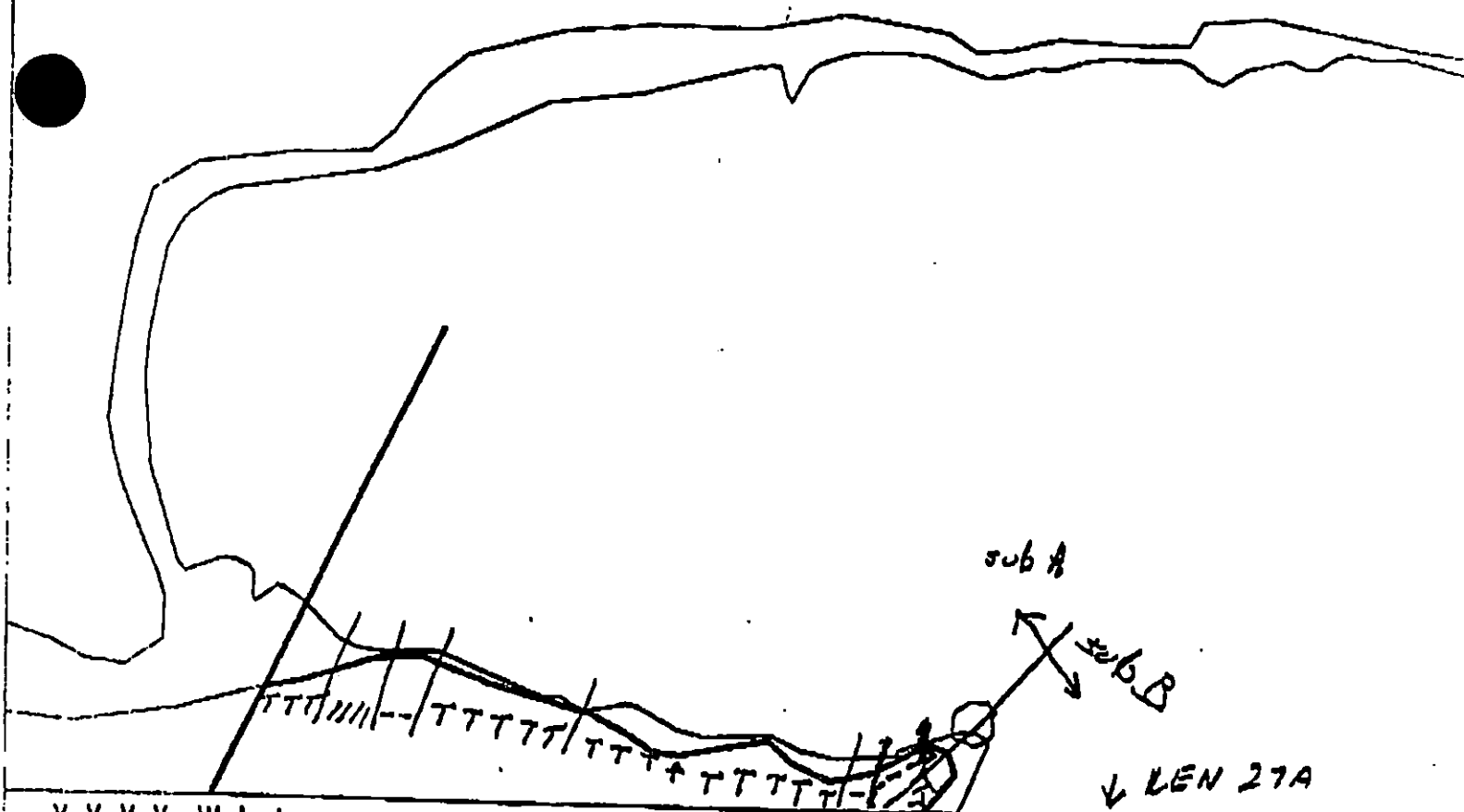
Map Key: KEN-27a,

Name: Randy Siegel

Date: 4/9/90

Data Entered:

CB



XXXX Wide

/// Medium

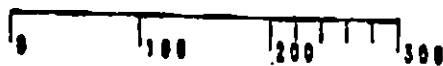
--- Narrow

TTTTT Very Light

0000 No Oil

CB-4

ADEC Segment Length: 4795m

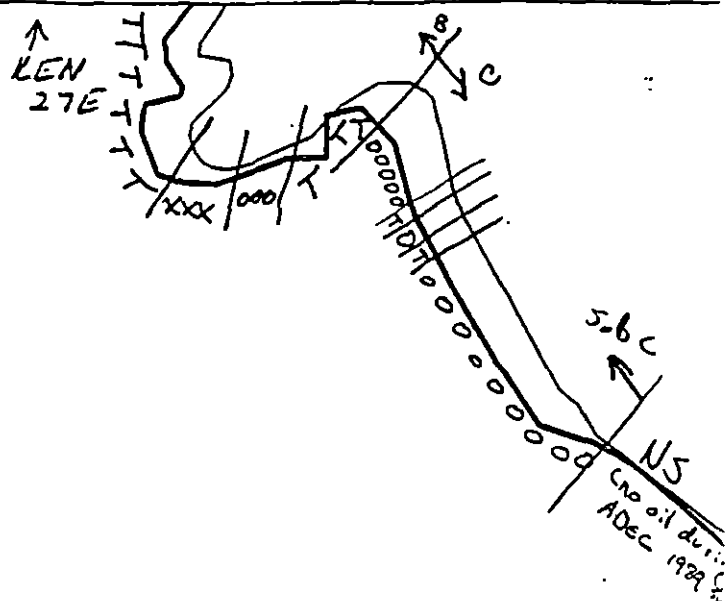


Map Key: KEN-270.

Name: Randy Siegel

Date: 4/8/90

Not a map.



CB

KEN
27B →

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

CB-4

ADEC Segment Length: 4795m



Map Key: KEN-27a.

Name: Barry Seagel

Date: 4/9/90

Data Entered:

REGION: KENAI

SEGMENT: ST/CB-04

SUBDIVISIONS: C (3 OF 5)

SHORELINE EVALUATION

SEGMENT ST/ CB-04 SUBDIVISION C (3 OF 5) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 30 m: No Oil 300 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 25+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pick up of oiled debris and logs if greater than 10% coverage, 2) bioremediation of subsurface oil in areas shown on attached sketch map. Work should be conducted after consulting ADF&G to avoid periods of invertebrate harvesting.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ CB-4 SUBDIVISION: C DATE 4/9/90

USCG

NAME R. Bryan HIRZLE SIGNATURE R. Bryan HIRZLE

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

I agree with the findings of the shoreline
Oiling Summary Report for this segment

ADEC

NAME Russell Kanibe SIGNATURE Russell Kanibe

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Manual Pick up of mouse and oiled debris

LAND MANAGER

NAME Patrick Noernsen SIGNATURE Patrick Noernsen

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Manual pick up of any surface and subsurface mouse in
the area noted on the map of subsection C of CB-4 should clean
a majority of oil remaining in this subsection.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Randy Siegel USCG Bryan Hirtle SEGMENT ST/ CB-4 (5 subdivisions)
 BIO Mike Lawcat LAND REP Pat Norman SUBDIVISION C
 EXXON John Dean ADEC Russell Kunze TIME 11:00 to 11:30
 TEAM NO.: 1 TIDE LEVEL: +S.4 to +6.3 DATE 4/9/90
 EST. SUBDIVISION LENGTH: 300 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 40 % B 40 % C 5 % P 5 % G 15 % S 5 % M 0 % V 0 %
 SLOPE: Lang 10 % Hang 60 % Vert 30 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W N/A m M N/A m N N/A m VL 25 m NO 275 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	B	P	S	SBL BR	DBL RW	GY	SL	DBR TL	LGR	SU	UI	M	U		
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT				X		X						X				
STAIN				X		X						X				
MOUSSE																
PATTIES																
TARBALLS				X						X		X				
FILM																
NO OIL											X		X	X		

PAVEMENT: H (F) S 0.5 sq. m by 2 cmPATTIES / TARBALLS 1 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

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

DEBRIS COLLECTED
☐ YES ☒ NOTYPE ---#BAGS 0

Photographs:

Roll No. ST-17-6Frames 13

SUBSURFACE OIL * Discrete mousse tarballs were observed in the pit, rather than a continuous layer.

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	SBL	BR	DBL	RW	GY	SL	DBL	TL	LB	SU	UI	M	U	
1	25	X					5-25	X								X			X				P, G
2	25	X					5-25	X								X			X				P, G
3	25					X	0-0		X										X				P
4	25					X	0-0		X										X				P

COMMENTS

This subdivision consists of a stretch of bedrock cliff and a large gravel and pebble beach (80 m x 30 m). To the southeast of the beach, there is about 500 meters of shoreline that we didn't survey, as no oiling was observed during ADEC's Sep/Oct 1989 survey. Oiling was generally light within the surveyed section, although a possible buried oil lense may have been present in a portion of the gravel and pebble beach.

DATE 4-19 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 ▲

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

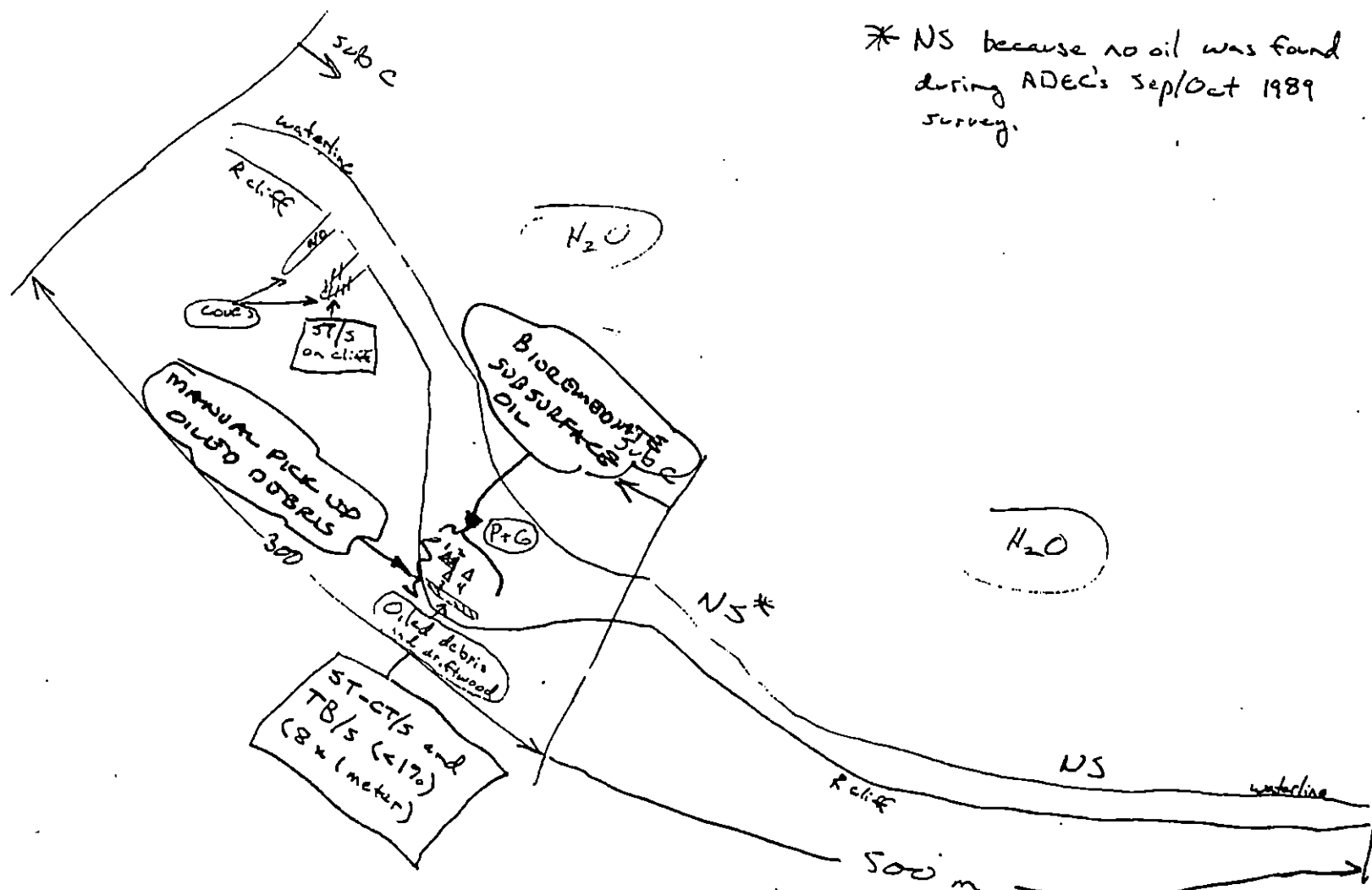
CT/S

Splashed Distribution

Oiled Vegetation

1. Photo location, direction,
and number

SKETCH MAP



* NS because no oil was found during ADEC's Sep/Oct 1989 survey.

Oil Character Length (m): AP N/A PO N/A CV N/A CT 25 ST 25 MS N/A PT N/A TB 8 FL N/A NO 375

REVISION: 03/24/70

OG Randy Siegel

SEGMENT ST/ CB-4

SUBDIVISION C

DATE 4/9/90

CHECKLIST

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

LEGEND

1 Δ

Pli - No Subsurface Oil

2 Δ

Pli - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

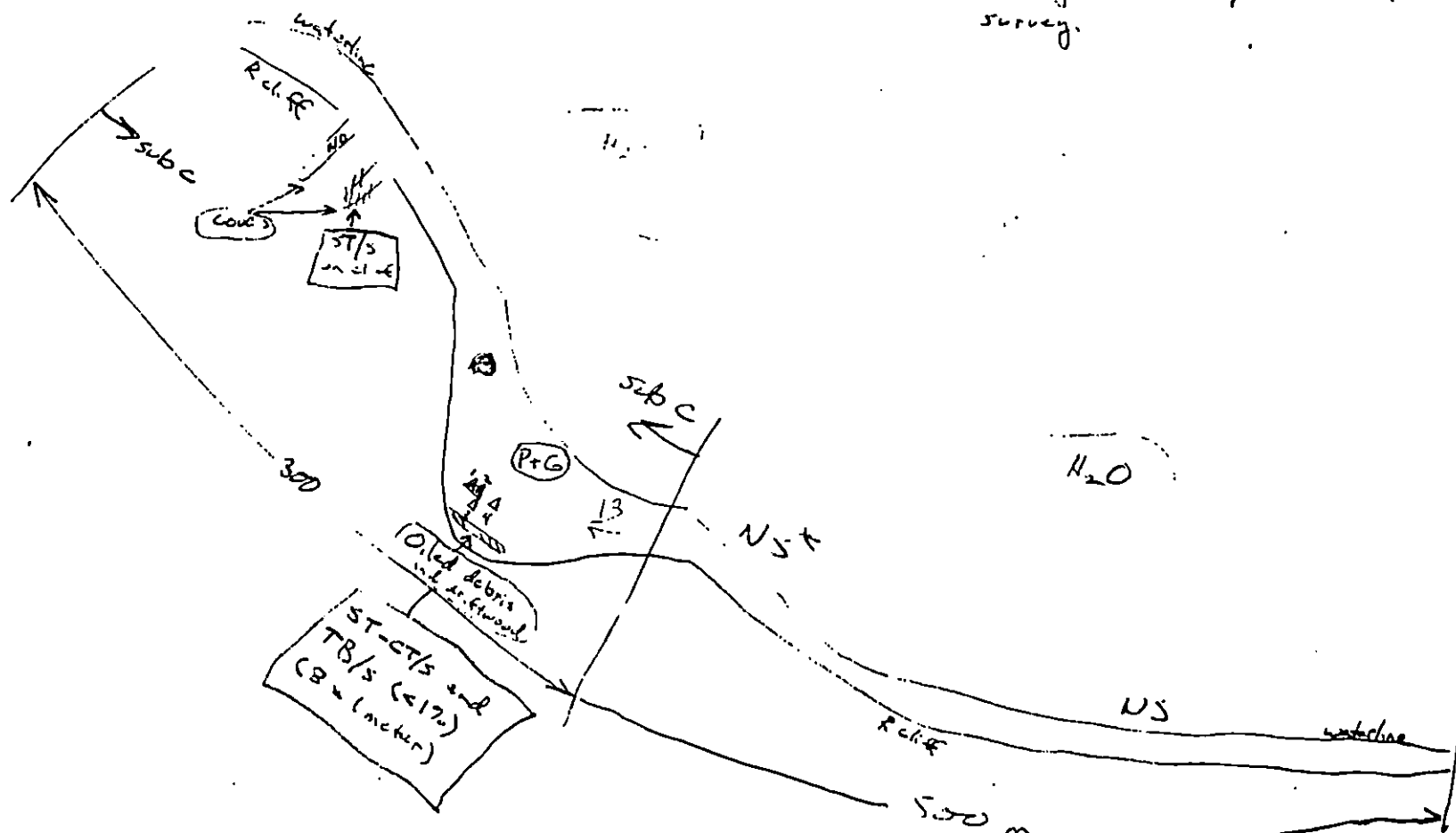
1 $\rightarrow$

Photo location, direction,
and number

SKETCH MAP

Photos
ST-17-6

* NS because no oil was found
during ADEC's Sep/Oct 1989
survey.



Oil Character Length (m): AP N/A PO N/A CV N/A CT 25 ST 25 MS N/A PT N/A TB 8 FL N/A NO 275

REVISION: 03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/77

Segment ST/ CB4 Subdivision C Date (mo / day / yr) 4/9/90Time (24 hr) 1120-1150 Biologist M.H. Fawcett(A) Substrate type and % of segments:
(1) Bedrock 40 (2) Boulder 40 (3) Cobble 5 (4) Pebble 5 (5) Sand 10 (6) Silt 0 (incl. gravel)(B) Overall % cover of biota (% of segment): Dense ✓ Moderate Low

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

Photographs:
Roll No. ST-17-6Frames 13

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:

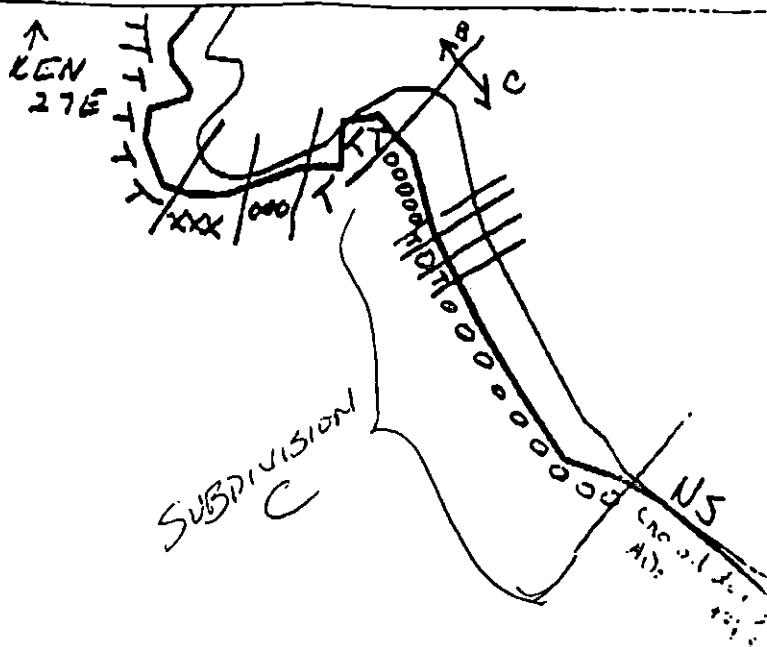
Most of the subsection is vertical bedrock. Young mussels (1989, 90) dense in crev.
Pebble beach unstable, no macro-biota

Ecological Considerations:

7 J J

KODIAK ECOLOGICAL CONSTRAINTS

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



CB

KEN 27B →

XXX Wide

//// Medium

--- Narrow

TTTT Very Light

CB-4

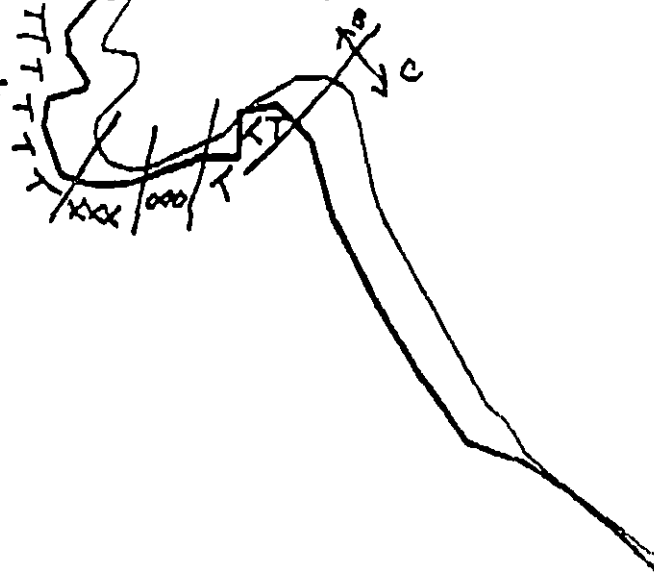
ADEC Segment Length: 4795m

Map Key: KEN-27a

Name: Barry Seagel

Date: 4/9/90

↑
KEN
27E



CB

KEN
27S →

XXXX Wide

/// Medium

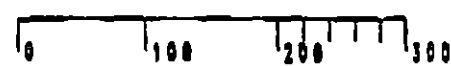
--- Narrow

TTTT Very Light

0000 No Oil

CB-4

ADEC Segment Length: 4795m



Map Key: KEN-270

Name: Barry Seegal

Date: 4/9/90

REGION: KENAI

SEGMENT: ST/CB-04

SUBDIVISIONS: D (4 OF 5)

SHORELINE EVALUATION

SEGMENT ST/ CB-04 SUBDIVISION D (4 OF 5) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 8 m: Medium 0 m: Narrow 0 m: V.Light 47 m: No Oil 64 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 9+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pick up of mousse and pooled oil, 2) bioremediation of areas shown on attached sketch map. Work should be conducted after consulting ADF&G to avoid periods of invertebrate harvestings.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / CB4 SUBDIVISION: 0 DATE 4/9/90

USCG

NAME R. Byn Harte SIGNATURE R. Byn Harte Del

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

I agree with the shoreline summary report
For CB-004, D

ADEC

NAME Russell Kunibe SIGNATURE Russell Kunibe

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

The heaviest oily was in an area 10m wide long and 15m wide in the UITZ
Near the upper part of the oiled zone the mouse saturated sediments were
under a thin layer of gravel. Much of the
Recommended treatment: Manual Pick up of mouse and mouse saturated sediments

LAND MANAGER

NAME Patrick Naman SIGNATURE Patrick Naman

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

manual pick up of exposed Asphalt and mouse patches
should work in this area.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Randy Siegel USCG Bryan Hirtle SEGMENT ST/ CB-4 (5 subdivisions)
 BIO Mike Swartz LAND REP Pat Norman (prev) SUBDIVISION 0
 EXXON John Dean ADEC Russell Kunitz TIME 17:40 to 18:40
 TEAM NO.: 17 TIDE LEVEL: +6.1 to +1.8 DATE 4/9/90
 EST. SUBDIVISION LENGTH: 1070 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 15 % B 40 % C 10 % P 5 % G 25 % S 5 % M 0 % V 0 %
 SLOPE: Long 25 % Hang 75 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 15 m M N/A m N N/A m VL 45 m NO 40 m

SURFACE OIL

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

PAVEMENT: H F (S) 60 sq. m by 2 cmPATTIES / TARBALLS 50 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE —#BAGS 0Photographs: NONERoll No. ST-17-6Frames 15-22

SUBSURFACE OIL* oil/w interval < 5 cm in pit*1 does not constitute 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	SB/BR	DBL/RW	GY/SL	DBR/TL	LR	SU	UI	M	U				
1	15	X					0-5		X					X	X							G
2	15	X					5-9		X					X	X							G
3	15					X	0-0		X						X							G,P
4	13					X	0-0		X						X							G,R
							.															
							.															

COMMENTS This subdivision consists of a gravelly beach behind a bedrock point, about 100 meters long. The remaining 1990 meters of the subdivision were not surveyed, either because of inaccessibility (rock cliffs)—about 1200 meters, or No Oiling observed during ADEC's Sp/Oct 1989 survey—about 790 meters. A patch of oiling, about 30 x 15, was observed on the ~~beach~~ currently surveyed beach.

OG Randy Siegel

SEGMENT ST/ CB-4

SUBDIVISION D

DATE 4 / 9 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

Oiled Vegetation

1 $\rightarrow$

Photo location, direction,
and number

SKETCH MAP

N
 $\uparrow$

10 m
App. Scale



OG Randy Siegel

SEGMENT ST/ CB-4

SUBDIVISION D

DATE 4 / 9 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

Oiled Vegetation

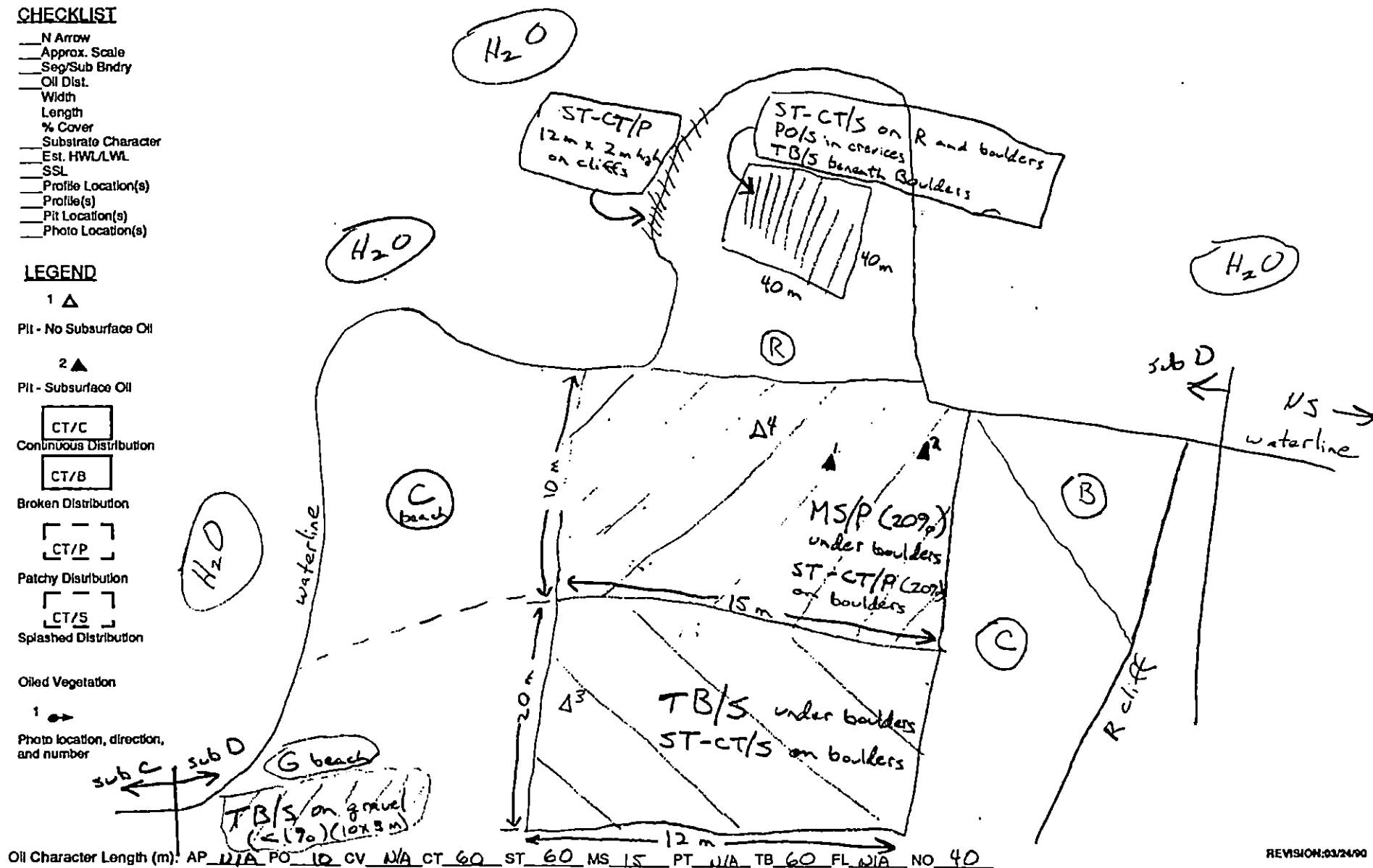
1 $\rightarrow$

Photo location, direction, and number



10 m
App Scale

SKETCH MAP



Oil Character Length (m): AP N/A PO 10 CV N/A CT 60 ST 60 MS 15 PT N/A TB 60 FL N/A NO 40

REVISION: 03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 0322

Segment ST C B 4 Subdivision D Date (mo / day / yr) 4/9/90

Time (24 hr) 1745-1820 Biologist M. H. Fawcett

(A) Substrate type and % of segments:
(1) Bedrock 15 (2) Boulder 40 (3) Cobble 10 (4) Pebble 5 (5) Sand 30 (6) Silt 0 (incl. gravel)

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

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

Photographs: Roll No. ST-17-6

Frames 15-22

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:

1 mature bald eagle
see attached sheet

Ecological Considerations:

7 JJ

C B 4 D Chugach Bay

4/9/90

Wildlife Observations/Comments

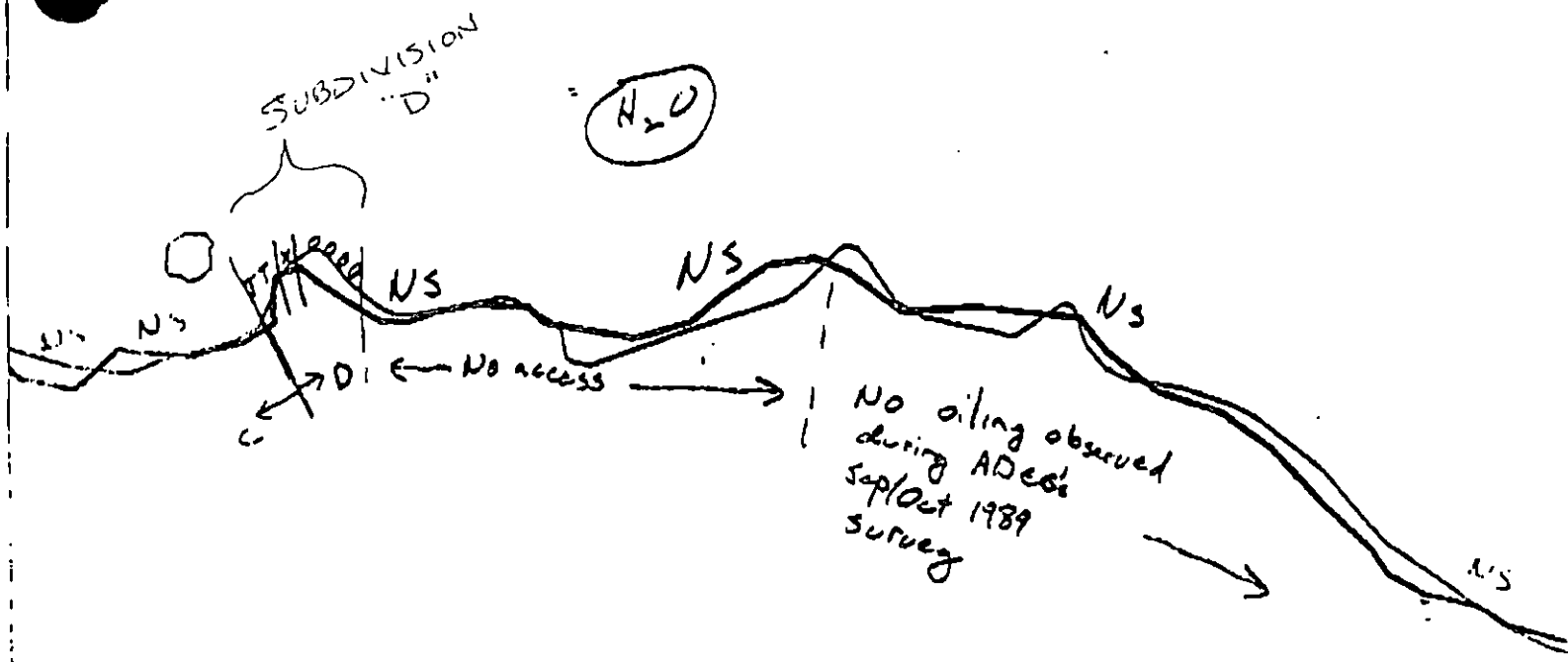
M.H. Fawcett

The area of interest here is a bedrock outcrop with a small sand/cobble neck behind it, and a boulderfield on the lee side (west) of the point. The remaining oil is mostly restricted to the sand neck, part of the boulderfield, and part of the VTZ bedrock on the west side of the outcrop. On the coated bedrock nearly all barnacles have oil on them, but most ($>75\%$) are alive. Numerous littorines were observed on the hardened oil. The oiled boulders in the boulderfield are mainly in the VTZ, where animals and plants are normally scarce. In the MTZ boulders immediately below, littorine snails ranging in size from 2mm (this year's hatch) to 10mm are moderately abundant, and barnacles (Balanus glandula and Chthamalus) are sparse.

The exposed side of the outcrop has typical healthy tide pools lined with Lithothamnion and containing large Katharina, limpets (Notoacmaea scut. Acmaea mitra and Collisella pelta), Balanus cariosus, anemones (Anthopleura and Tealia).

KODIAK ECOLOGICAL CONSTRAINTS

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



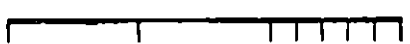
← KEN 27A

KEN 27C →

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

CB-4

ADEC Segment Length: 4795m



Map Key: KEN-27b

Name: Ruby Langer

Date: 4/7/10

REGION: KENAI

SEGMENT: ST/CB-04

SUBDIVISIONS: E (5 OF 5)

SHORELINE EVALUATION

SEGMENT ST/ CB-04 SUBDIVISION E (5 OF 5) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 66 m: Medium 69 m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmat, 2) manual pick up of pooled, coated, covered and stained areas, 3) bio-remediation of areas shown on attached sketch map. Work should be conducted after consulting ADF&G to avoid periods of invertebrate harvesting.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / CB-4 SUBDIVISION: E DATE 4/9/90

USCG

NAME R. Bryson Hirst SIGNATURE R. Bryson Hirst

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

I agree with the shore line Oiling Summary report for CB-004, E

ADEC

NAME Russell Kunibe SIGNATURE Russell Kunibe

☐ NO TREATMENT RECOMMENDED
COMMENTS CB-4 E.

☒ TREATMENT SUGGESTED

Manual pick up and break up of asphalt and mouse,

LAND MANAGER

NAME Derrick Norman SIGNATURE Derrick Norman

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Manual pickup of exposed Asphalt and any mouse should help the natural cleaning process on this. subsequent It would be very unnecessary to get to to do warm or hot water washing to remove weathered skins.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Randy Siegel USCG Bryan Hirtle SEGMENT ST/ CB-4 (5 subdivisions)
 BIO Mike Fawcett LAND REP Pat Vorman (PGUC) SUBDIVISION E
 EXXON John Deere ADEC Russell Kunitz TIME 18:45 to 19:45
 TEAM NO.: 17 TIDE LEVEL: +1.8 to +1.5 DATE 4/9/90
 EST. SUBDIVISION LENGTH: 280 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 40 % B 40 % C 10 % P 5 % G 3 % S 2 % M 0 % V 0 %
 SLOPE: Lang 90 % Hang 10 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 130 m M 150 m N N/A m VL N/A m NO N/A m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	R	B	C	P	SB	BR	DEL	RW	GY	SL	DBR	TL	SU	UI	M	U
ASPHALT PAVEMENT	X	✓		+			✓						X	+		
POOLED				X		X							X			
COVER		+	X	✓		X	+						+	X	X	✓
COAT		X	+	✓		X	✓						X	X	X	✓
STAIN		X	+	✓		X	✓						X	X	X	✓
MOUSSE																
PATTIES																
TARBALLS																
FILM				X			X						X			
NO OIL																✓

PAVEMENT: (H) F S 100 sq. m by 2 cmPATTIES / TARBALLS 150 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE —#BAGS 0Photographs: NoneRoll No. ST-17-6Frames 23-27

SUBSURFACE OIL

* Gla Silver sheen on large supratidal pool.
No pits dug due to presence of boulders and bedrock.

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	SB	BR	DEL	RW	GY	SL	DBR	TL	SU	UI	M	U		
0							.																
							.																
							.																
							.																
							.																
							.																

COMMENTS

This subdivision consists of a bedrock point with areas of boulders on cobbles and boulders. Various types of oiling were observed across most of the subdivision. Bands of asphalt were observed beneath boulders in one area and staining-coating of rock faces (cliffs and boulders) were observed in several areas. The area is irregular lithologically and quite rugged.

SKETCH MAP

OG Randy Siegel

SEGMENT ST/ CB-4

SUBDIVISION E

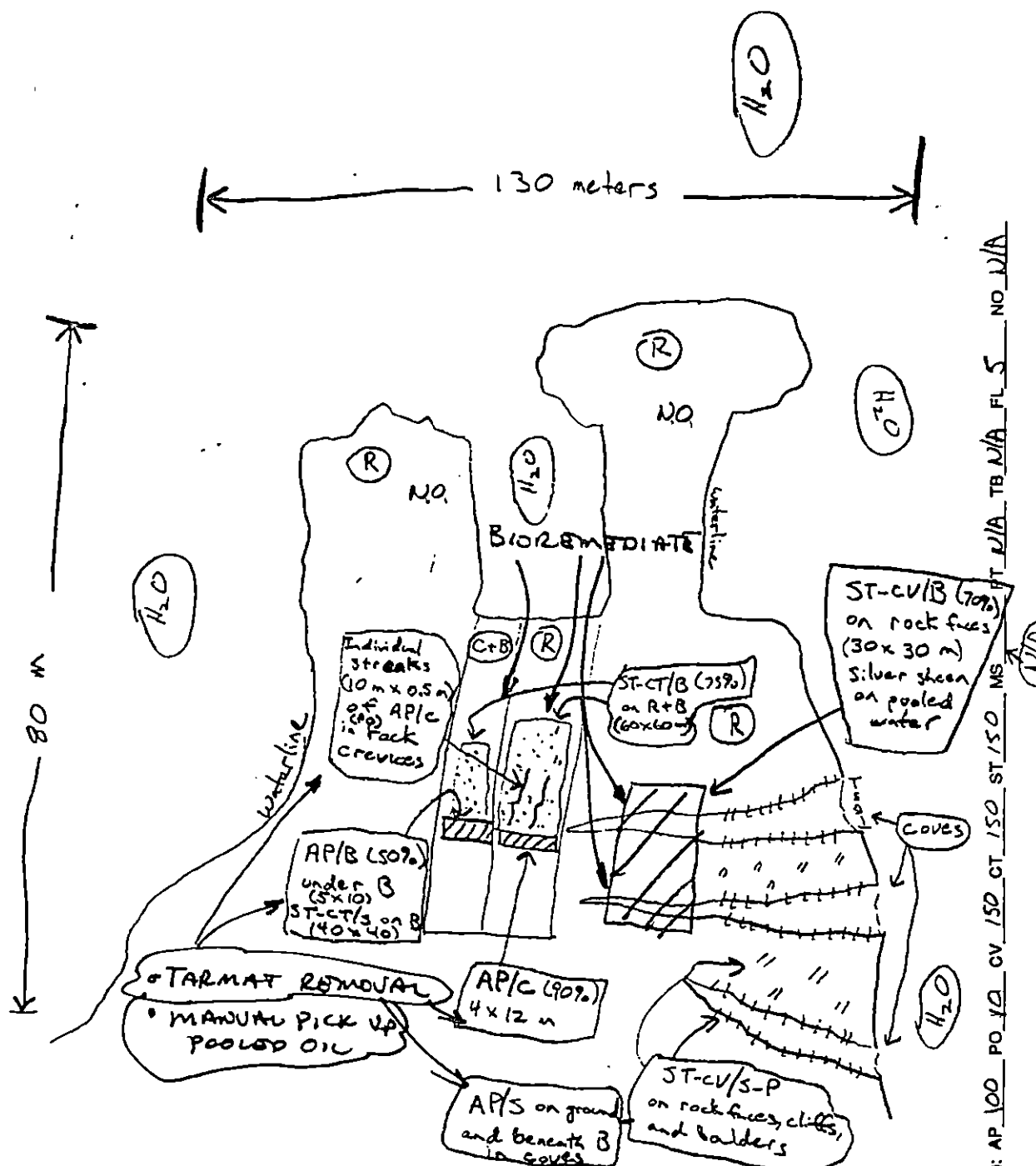
DATE 4/9/90

CHECKLIST

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

LEGEND

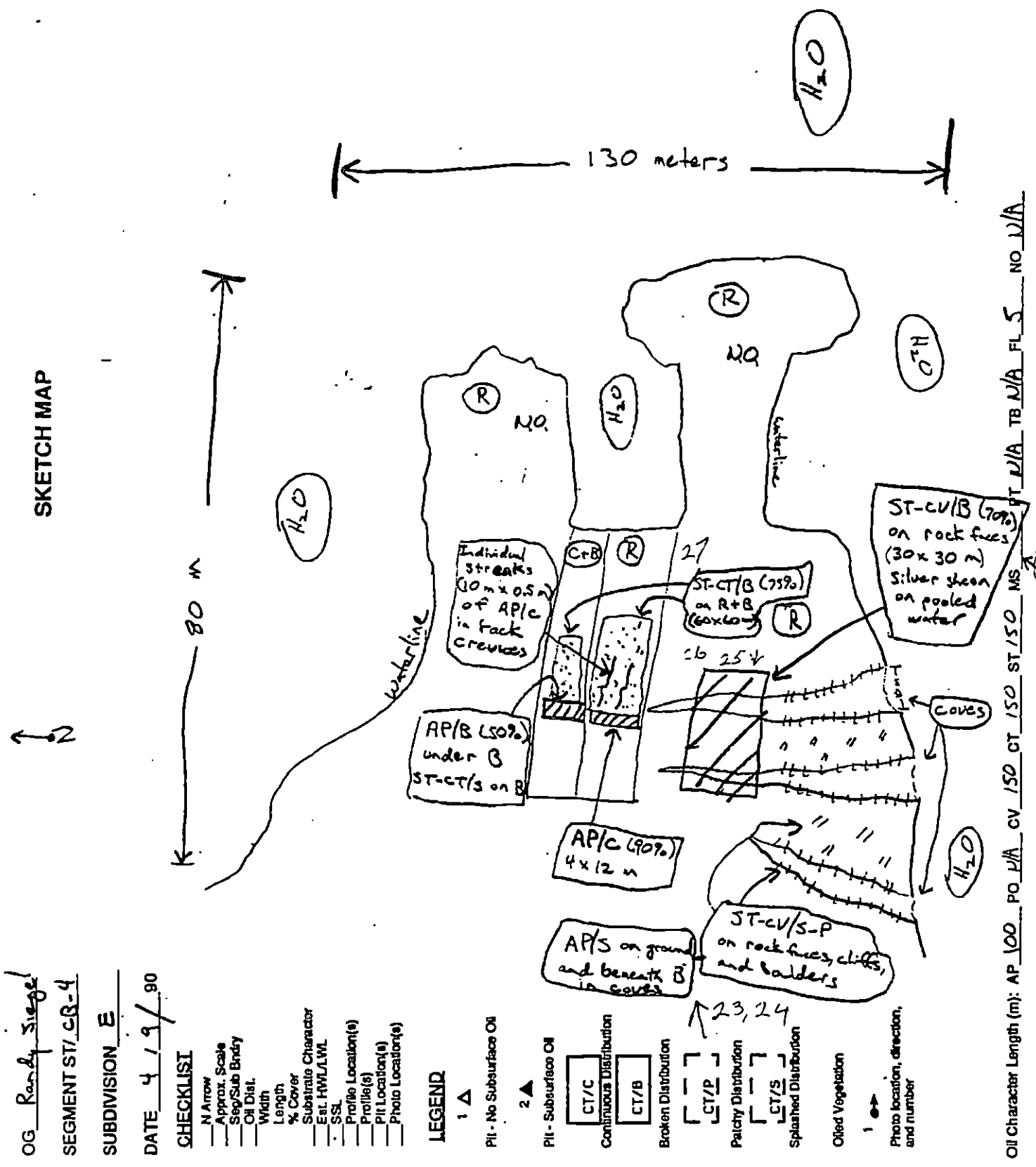
- 1 Δ Plt - No Subsurface Oil
- 2 Δ Plt - Subsurface Oil
- CT/C Continuous Distribution
- CT/B Broken Distribution
- CT/P Patchy Distribution
- CT/S Splashed Distribution
- Oiled Vegetation
- 1 $\rightarrow$ Photo location, direction, and number



Oil Character Length (m): AP 100 PO 10 CV 150 CT 150 ST 150 MS 170 TB N/A FL 5 NO N/A

Photos ST-17-6

SKETCH MAP



OG Randy Siegel

SEGMENT ST/CR-4

SUBDIVISION E

DATE 4/9/90

CHECKLIST

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

LEGEND

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

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/91

Segment ST/CB4 Subdivision E Date (mo / day / yr) 4/9/90Time (24 hr) 1845-2000 Biologist M. H. Fawcett(A) Substrate type and % of segments:
(1) Bedrock 40 (2) Boulder 40 (3) Cobble 10 (4) Pebble 5 (5) Sand 5 (6) Silt 0 (incl. gravel)(B) Overall % cover of biota (% of segment): Dense ✓ Moderate Low

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

Photographs:
Roll No. ST-17-6Frames 23-27

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 attached sheet

Ecological Considerations:

755

CB4E Chugach Bay

P 1 of 2
4/9/90

M.H. Fawcett

Wildlife Observations & Comments

The main feature of this subsegment is a large, wave exposed rocky headland containing vertical faces, deep crevices, and large and small pools at all tide levels. Large pools even at the supra-tidal level are densely populated with organisms. One supra-tidal pool in a heavily coated area (photos ST-17-6-25, 26) has oil coating rock at the waterline and some sheen on the water, yet is filled with algae (Endocladia and diatoms) and thousands of littorines, including many newly hatched (1-2mm). Most of the oil-coated rock is in the upper and supra-tidal areas, where flora and fauna are sparse (except in pools, and except for barnacles on some vertical faces). The pools are all lined with Lithothamnion (pink encrusting coralline algae) overlain with articulated corallines, miscellaneous leafy and filamentous red and green algae, plus some kelps in LTZ pools. The pools contain many large, old chitons (Katharina) and limpets (Acaea mitra and Notoacmaea scutum) and barnacles (Balanus cariosus); plus numerous others: chitons (Tonic lineata, T. insignis, Nopalia lignosa, Lepidozona sp

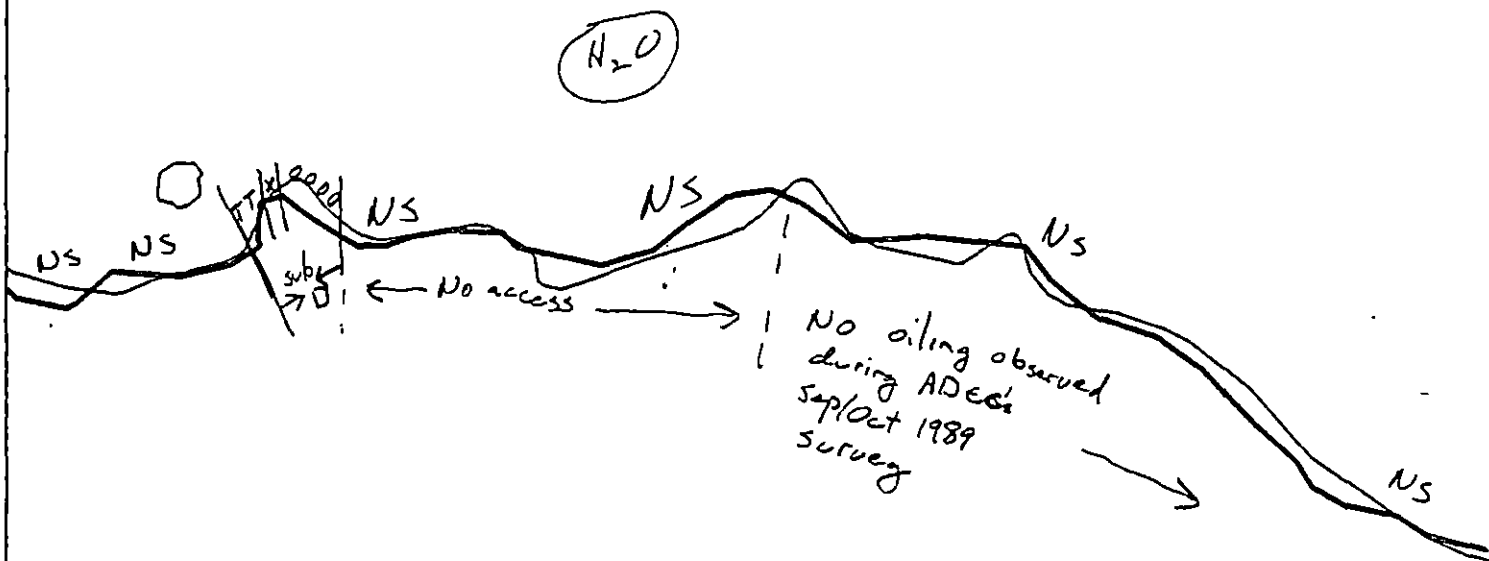
CB4E

limpets (collisella pelta), starfish (Leptasterias), nudibranchs, littorines, sabellid worms, sponges, ascidians, isopods, etc. In general, this is a healthy, mature intertidal community.

The presence of 3 separate piles of bird feathers and breastbones near trees above the intertidal zone suggests that some raptor has been feeding there.

KODIAK ECOLOGICAL CONSTRAINTS

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



← KEN 27A

KEN
27C →

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

CB-4

ADEC Segment Length: 4795m

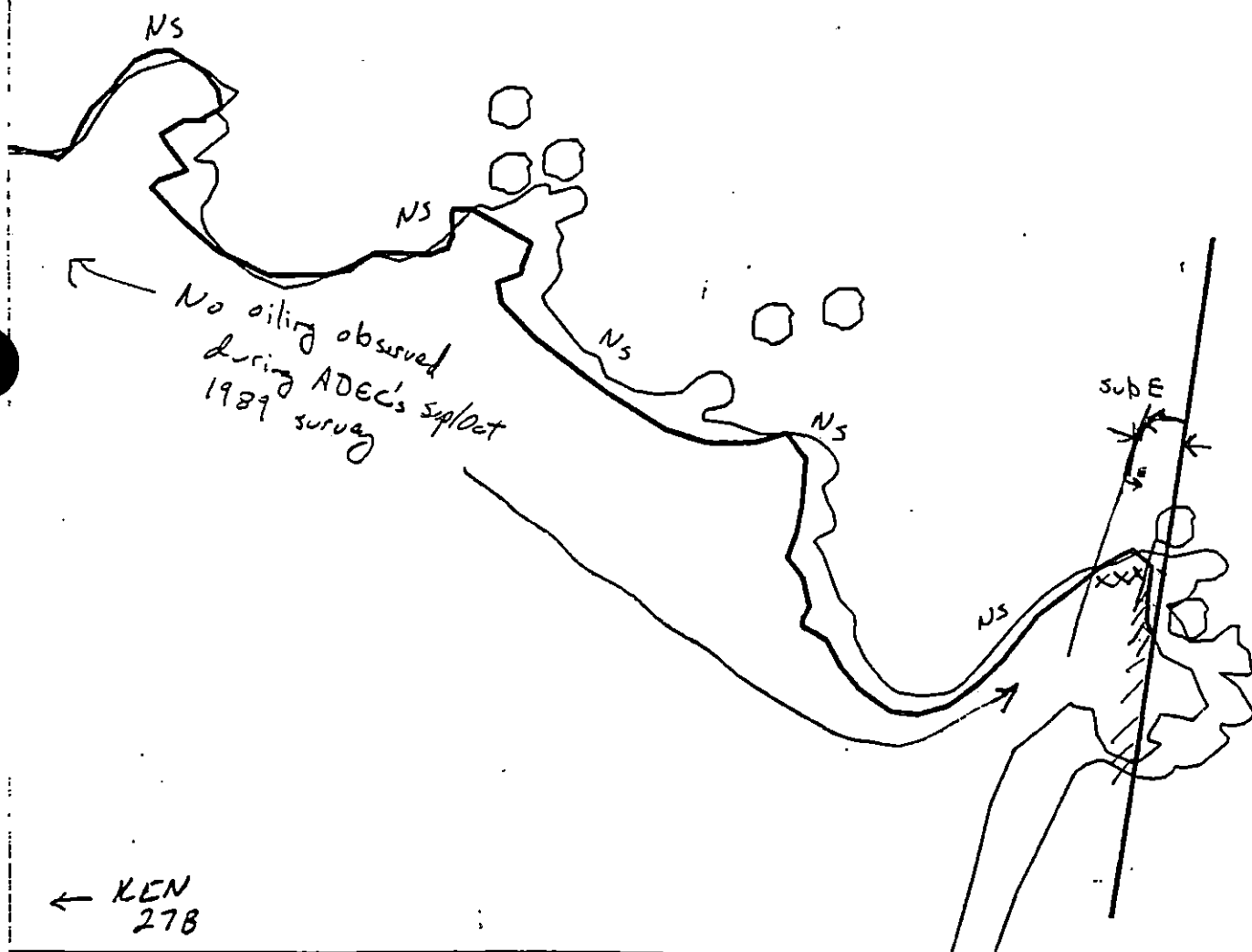


Map Key: KEN-27b

Name: Randy Bryant

Date: 4/9/90

Data Entered:



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

CB-4

ADEC Segment Length: 4795m



Map Key: KEN-27c

Name: Randy Siegel

Date: 4/2/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT CB-4 SUBDIVISION A (1 of 5)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation	WORK PRIOR TO 7/1

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1J Purse Seine Area

No constraint to manual pickup and tarmat removal; closed to bioremediation after 7/1.

7JJ Subsistence: Invertebrate Harvesting

No constraint. Per contacts with Mark Kuwada/ADF&G (5/22/90) and Pat Norman/Port Graham Village Corporation (5/20/90) by Rex Coulter/Exxon.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

TAG ADDENDUM DATE 5/24/90
ADEC ART Weimer Det Weimer
EXXON Amy Tate
NOAA B. Warcott
USCG M. J. Hall

FOSC my L

DATE 5-24-90

Prepared by: Anda Myer Rex C.

Date: 5/23/90

CB-03

CB-03-1
Active

TREATMENT
AREA

CB-04

CB-04-2
No nest found

No helicopter
landings or approach

New Nest
CB-04-1
Active



Exxon Company, USA
Map Key: KEN-CB-4



ECOLOGY MAP
SEGMENT CB-4
SUBDIVISION A (1.0-1.5)
METERS

- | | |
|---|----------------|
| ★ | Seabird Colony |
| ▲ | Eagle Nest |

SHORELINE EVALUATION

SEGMENT ST/ CB-04 SUBDIVISION A (1 OF 5) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles H. H. H. DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 45 m: Narrow 118 m: V. Light 433 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmat, 2) manual pick up of mousse patties, tarballs and pooled oil, 3) bioremediation of surface oil in areas shown on attached sketch map. Work should be conducted after consulting ADF&G to avoid periods of invertebrate harvesting.

SEE CONSTRAINT ADDENDUM
DATED 5/23/90 Rex C.

TAG COMMENTS:

TAG APPROVAL DATE: 4/24/90
ADFC Art Weiner
EXXON Andy Gatz
NOAA Joseph Elliott
USCG M. J. Hall

FOSC: my L DATE: 5-12-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT CB-4 SUBDIVISION B (2 of 5)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation	WORK PRIOR TO 7/1

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1J Purse Seine Area

No constraint to manual pickup and tarmat removal; closed to bioremediation after 7/1.

7JJ Subsistence: Invertebrate Harvesting

No constraint. Per contacts with Mark Kuwada/ADF&G (5/22/90) and Pat Norman/Port Graham Village Corporation (5/20/90) by Rex Coulter/Exxon.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

TAG ADDENDUM DATE 5/24/90
ADEC Art Weiner
EXXON Angy Tenk
NOAA Baker
USCG W. J. Hall

FOSC My L

DATE 5-24-90

Prepared by: Andre May - Rex Co.

Date: 5/23/90

CB-03

CB-03-1
Active

TREATMENT
AREAS

CB-04

CB-04-2
No nest found

No helicopter
landings or approach

New Nest
CB-04-1
Active



Exxon Company, USA
Map Key: KEN-03-4



ECOLOGY MAP
SEGMENT CB-4
SUBDIVISION B (2 of 5)
METERS



Seabird Colony



Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ CB-04 SUBDIVISION B (2 OF 5) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature]

DATE: 4/25/90

OILING CATEGORIZATION:

Wide 53 m: Medium 0 m: Narrow 0 m: V. Light 377 m: No Oil 49 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmat, 2) manual pick up of mousse and pooled oil, 3) manual pick up of oiled debris and logs with greater than 10% coverage, 4) bioremediation of surface oil in areas shown on attached sketch map. Work should be conducted after consulting ADF&G to avoid periods of invertebrate harvesting.
SEE CONSTRAINT APPENDUM DATED 5/23/90 RWC.

TAG COMMENTS:

TAG APPROVAL DATE: 4/24/90

DEC ART WELCH
EXXON ANDY LEAH
NOAA Joseph T. [Signature]
USCG M. J. HALL

FOSC: [Signature]

DATE: 5-12-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT CB-4 SUBDIVISION C (3 of 5)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation Manual Raking	WORK PRIOR TO 7/1

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1J Purse Seine Hook-off

No constraint to manual pickup; closed to bioremediation and manual raking after 7/1.

7JJ Subsistence: Invertebrate Harvesting

NO CONSTRAINT. Per contacts with Mark Kuwada/ADF&G (5/22/90) and Pat Norman/Port Graham Village Corporation (5/20/90) by Rex Coulter/Exxon.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to unrolled blots and substrate.

TAG ADDENDUM DATE 5/24/90.
ADEC Art Winger
EXXON Andy Tetr
NOAA B. Wascott
USCG M. J. Hall

FOSC W L

DATE 5-24-90

Prepared by: Anden Meyer Rex C.

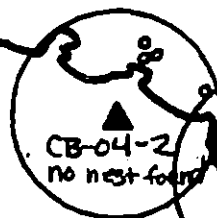
Date: 5/23/90

CB-03

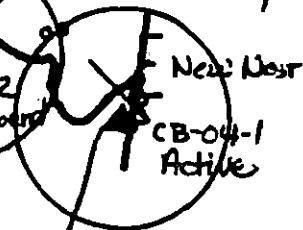


TREATMENT
AREA

CB-04



No helicopter
landings or approach



Exxon Company, USA
File No: KEN-CB-4



ECOLOGY MAP
SEGMENT CB-4
SUBDIVISION C (3 of 5)
METERS



Seabird Colony



Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ CB-04 SUBDIVISION C (3 OF 5) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Adams

DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 30 m: No Oil 300 m
Subsurface Oil Observed: Yes X No Maximum Depth 25+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pick up of oiled debris and logs if greater than 10% coverage, 2) bioremediation of subsurface oil in areas shown on attached sketch map. Work should be conducted after consulting ADF&G to avoid periods of invertebrate harvesting.

SEE APPENDUM DATED 5/23/90
Rey C.

TAG COMMENTS:

TAG APPROVAL DATE: 4/24/90

ADEC Art Warner
EXXON Art Warner
NOAA Art Warner
USCG M. J. Hall

FOSC: W L

DATE: 5-12-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT CB-4 SUBDIVISION D (4 of 5)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation	WORK PRIOR TO 7/1

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1J Purse Seine Hook-off

No constraint to manual pickup; closed to bioremediation after 7/1.

7JJ Subsistence: Invertebrate Harvesting

NO CONSTRAINT. Per contacts with Mark Kuwada/ADF&G (5/22/90) and Pat Norman/Port Graham Village Corporation (5/20/90) by Rex Coulter/Exxon.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

TAG ADDENDUM DATE 5/24/90.
ADEC Art Weiner Det Leinen
EXXON Amey Tera
NOAA B. Wescott
USCG W. J. Hall

FOSC W L

DATE 5-24-90

Prepared by: Anden Meyer Rex Coulter

Date: 5/22/90

CB-03

CB-03-1
Active

CB-04

UNSURVEYED

No helicopter
landings or approach

CB-04-2
No nest found

Near Nest
CB-04-1
Active

TREATMENT
AREA



Exxon Company, USA
Maa Kaut KEN-CB-4



ECOLOGY MAP
SEGMENT CB-4
SUBDIVISION D (4 of 5)
METERS



Seabird Colony



Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ CB-04 SUBDIVISION D (4 OF 5) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 8 m: Medium 0 m: Narrow 0 m: V.Light 47 m: No Oil 64 m
Subsurface Oil Observed: Yes X No Maximum Depth 9+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pick up of mousse and pooled oil, 2) bioremediation of areas shown on attached sketch map. Work should be conducted after consulting ADF&G to avoid periods of invertebrate harvestings.

SEE ADDENDUM DATED 5/22/90
REX C.

TAG COMMENTS:

TAG APPROVAL DATE: 4/27/90
ADEC [Signature]
EXXON [Signature]
NOAA [Signature]
USCG M. J. Hall [Signature]

FOSC: [Signature] DATE: 5-12-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT CB-4 SUBDIVISION E (5 of 5)

WORK WINDOW	
Manual Pickup Tarmat Removal	CLOSED
Bioremediation	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1J	Purse Seine Area	No constraint to manual pickup and tarmat removal; closed to bioremediation after 7/1.
7JJ	Subsistence: Invertebrate Harvesting	No constraint. Per contacts with Mark Kuwada/ADF&G (5/22/90) and Pat Norman/Port Graham Village Corporation (5/20/90) by Rex Coulter/Exxon.
5T	Bald Eagle Nest	USFWS bald eagle impact assessment completed on 5/19/90 by Mary Portner indicates an active nest within 400m of the work area. Closed to manual pickup, tarmat removal, and bioremediation until 9/1.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

TAG ADDENDUM DATE 5/24/90
ADEC Art Weiner
EXXON Ann Tera
NOAA B. Warcott
USCG M. J. Hall

FOSC W L

DATE 5-24-90

Prepared by: Anders Myer Rex C.

Date: 5/23/90

CB-03

CB-03-1
Active

CB-04

CB-04-2
no nest found

NO helicopter
landings or approach

New Nest
CB-04-1
Active



Exxon Company, USA
Map Key: KEN-CB-4



ECOLOGY MAP
SEGMENT CB-4
SUBDIVISION E (5 of 5)
METERS

- | | |
|---|----------------|
| ★ | Seabird Colony |
| ▲ | Eagle Nest |

SHORELINE EVALUATION

SEGMENT ST/ CB-04 SUBDIVISION E (5 OF 5) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Jones

DATE: 4/25/90

OILING CATEGORIZATION:

Wide 66 m: Medium 69 m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmat, 2) manual pick up of pooled, coated, covered and stained areas, 3) bio-remediation of areas shown on attached sketch map. Work should be conducted after consulting ADF&G to avoid periods of invertebrate harvesting.

SEE CONSTRAINT ADDENDUM
DATED 5/23/90 Ray C

TAG COMMENTS:

TAG APPROVAL DATE: 4/24/90

ADDEC Art Weimer
EXXON Andy TGM
NOAA Gary Petric
USCG M.J. Hall

FOSC:

DATE: 5-12-90

SHORELINE EVALUATION

SEGMENT ST/ CB-04 SUBDIVISION A (1 OF 5) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. H. Munn DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 45 m: Narrow 118 m: V.Light 433 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmat,
2) manual pick up of mousse patties, tarballs and pooled oil, 3) biore-
mediation of surface oil in areas shown on attached sketch map. Work
should be conducted after consulting ADF&G to avoid periods of invert-
ebrate harvesting.

TAG COMMENTS:

TAG APPROVAL DATE: 4/24/90
ADEC ART WENIGZ
EXXON AMY GATZ
NOAA Joseph Elliott
USCG M. J. HALL

FOSC: My L DATE: 5-12-90

OG Segei

SEGMENT ST/ CB-4

SUBDIVISION A

DATE 4/9 90

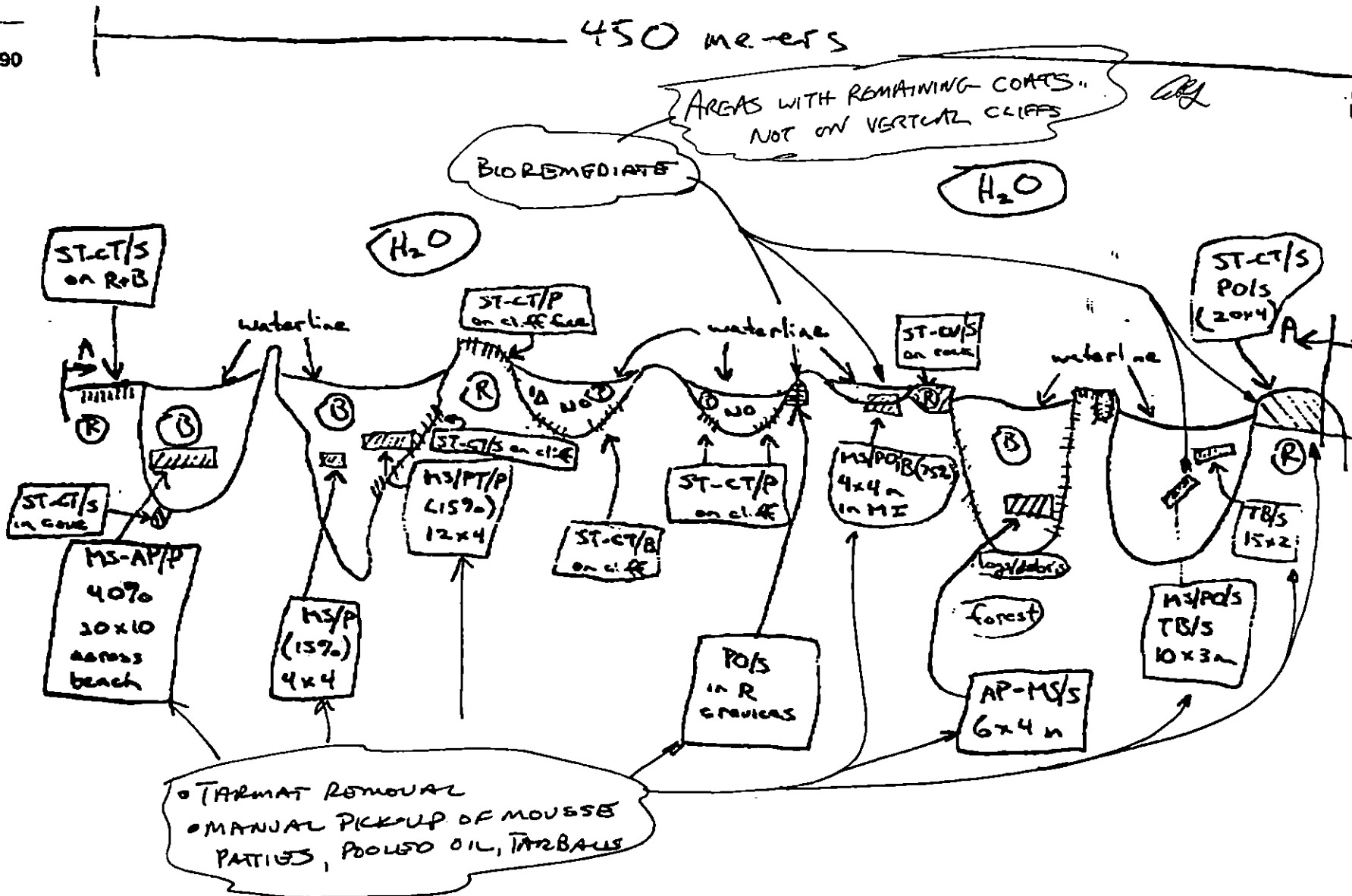
SKETCH MAP

CHECKLIST

- ☐ H Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HMA/VA
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

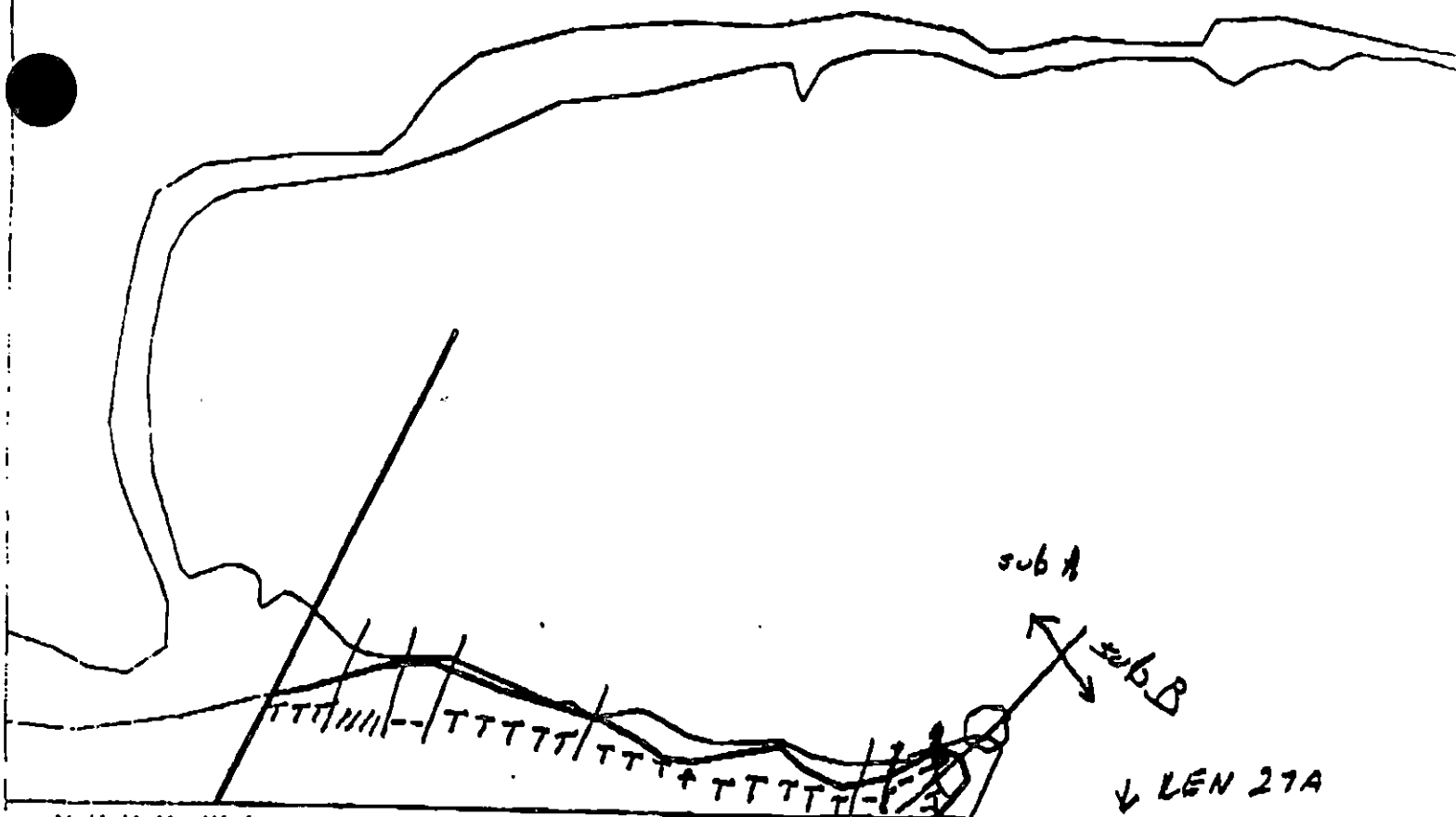
- 1 Δ
- Pit - No Subsurface Oil
- 2 Δ
- Pit - Subsurface Oil
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Spashed Distribution
- Oiled Vegetation
- 1 $\Rightarrow$
- Photo location, direction, and number





Data Entered:

CB



XXXX Wide

/// Medium

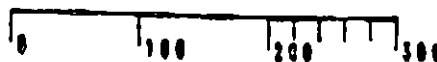
--- Narrow

TTTT Very Light

0000 No Oil

CB-4

ADEC Segment Length: 4795m



Map Key: KEN-27a.

Name: Andy Siegel

Date: 4/8/90

Notes: _____

SHORELINE EVALUATION

SEGMENT ST/ CB-04 SUBDIVISION B (2 OF 5) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature] DATE: 4/25/90

OILING CATEGORIZATION:

Wide 53 m: Medium 0 m: Narrow 0 m: V.Light 377 m: No Oil 49 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmat,
2) manual pick up of mousse and pooled oil, 3) manual pick up of oiled
debris and logs with greater than 10% coverage, 4) bioremediation of
surface oil in areas shown on attached sketch map. Work should be
conducted after consulting ADF&G to avoid periods of invertebrate
harvesting.

TAG COMMENTS:

TAG APPROVAL DATE: 4/24/90

ADEC [Signature]

EXXON [Signature]

NOAA [Signature]

USCG M. J. HALL

FOSC: [Signature] DATE: 5-12-90

OG Randy Siegel
 SEGMENT S 4
 SUBDIVISION B

DATE 4/9/90

CHECKLIST

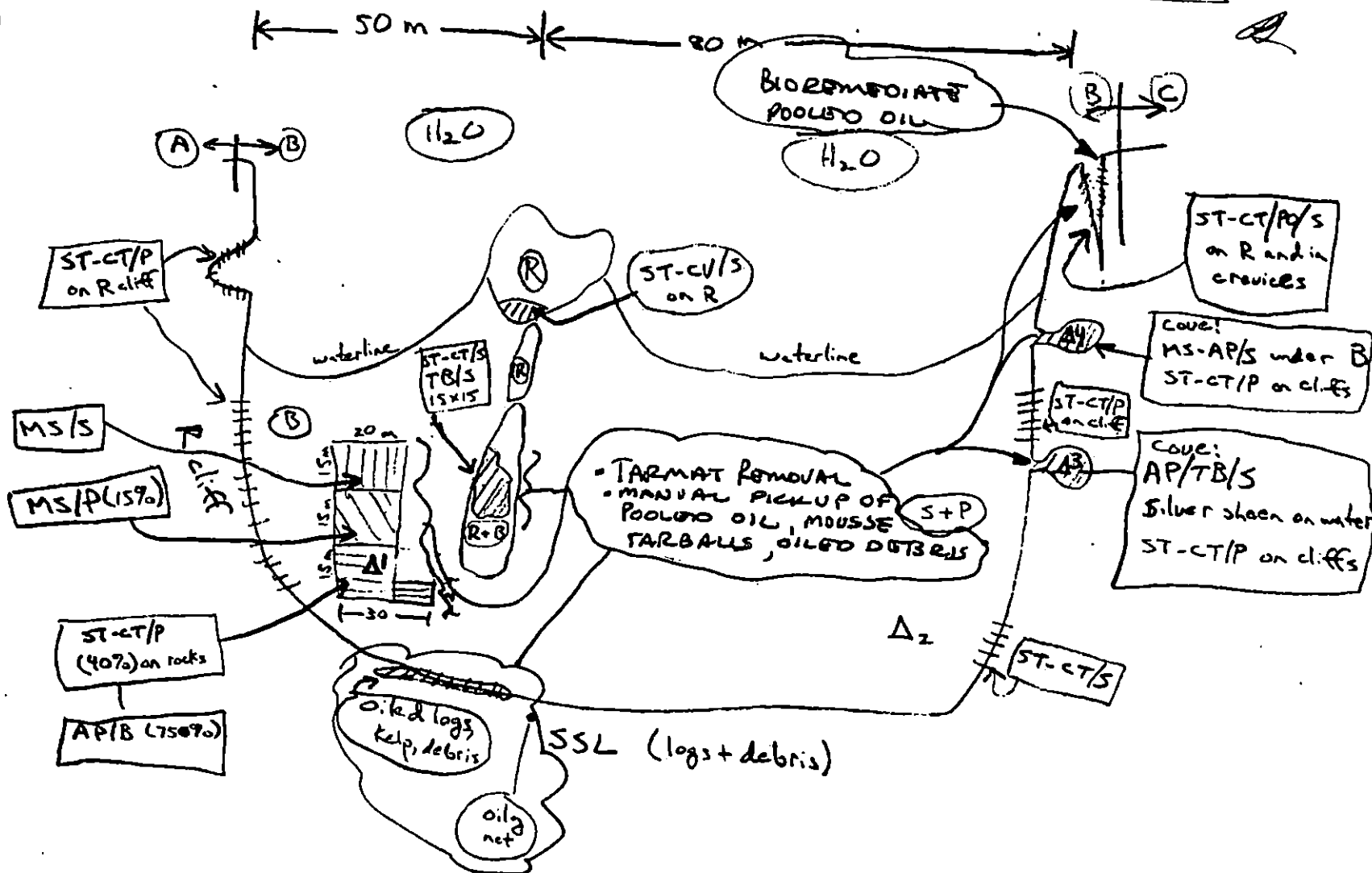
☐ N Arrow
☐ Approx. Scale
☐ Seg/Sub Bndry
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HWL/LWL
☐ SSL
☐ Profile Location(s)
☐ Profile(s)
☐ Pht Location(s)
☐ Photo Location(s)

LEGEND

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

SKETCH MAP

BIOREMEDIATION COATS NOT ON VERTICAL CLIFFS



Oil Character Length (m): AP 50 PO 10 CV 30 CT 250 ST 250 MS 50 PT 30 TB 30 FL N/A NO 120

REVISION: 03/24/90

UG Kandy Siegel

SEGMENT ST 4

SUBDIVISION B

DATE 4/9/90

CHECKLIST

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

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

$\square$ CT/C
Continuous Distribution

$\square$ CT/B
Broken Distribution

$\square$ CT/P
Patchy Distribution

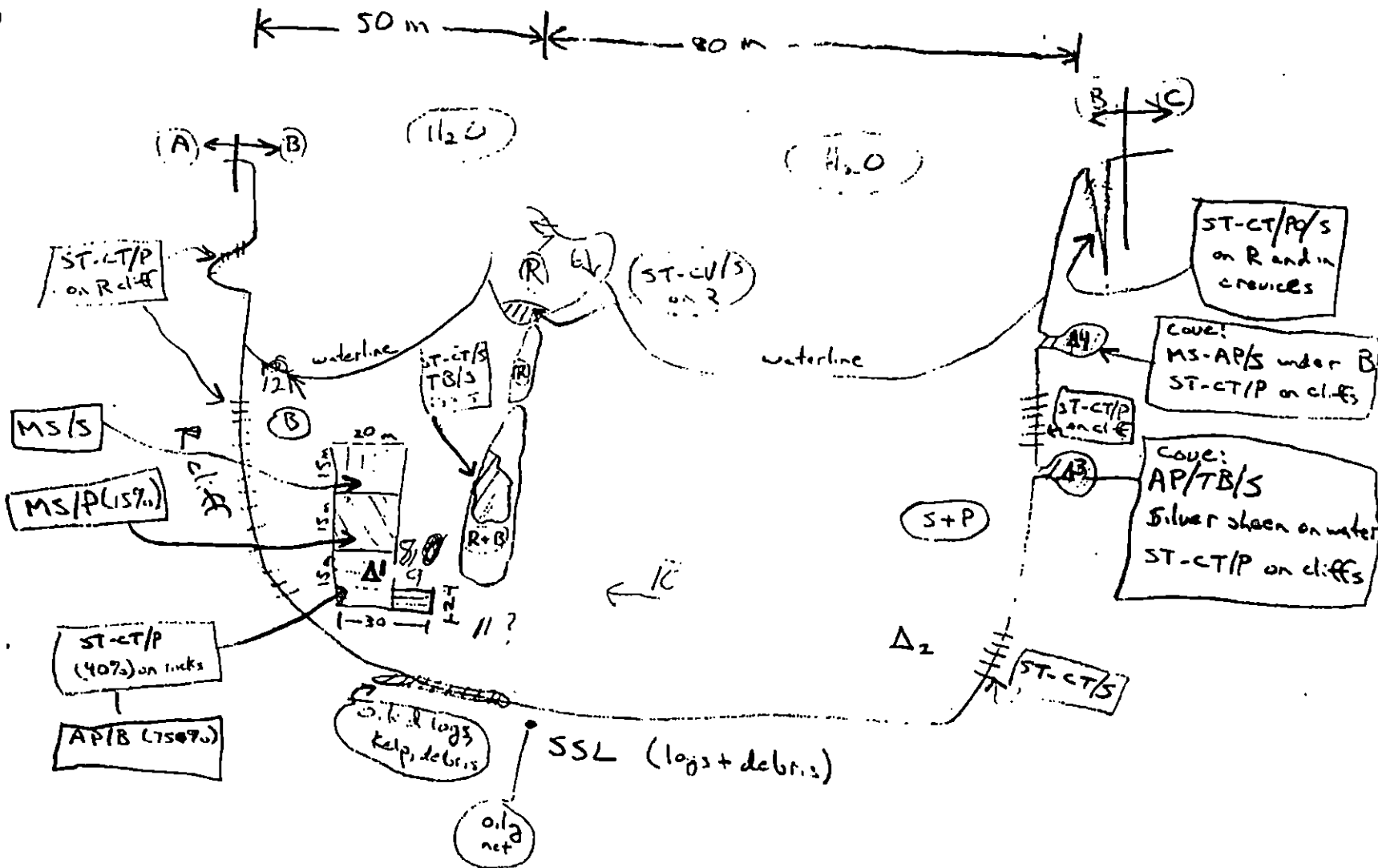
$\square$ CT/S
Splashed Distribution

Oiled Vegetation

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

SKETCH MAP

1/10/95 ST-17-6



Oil Character Length (m): AP 50 PO 10 CV 30 CT 250 ST 250 MS 50 PT 30 TB 30 FL N/A NO 120

REVISION: 03/24/90

CB



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

CB-4

ADEC Segment Length: 4795m



Map Key: KEN-270.

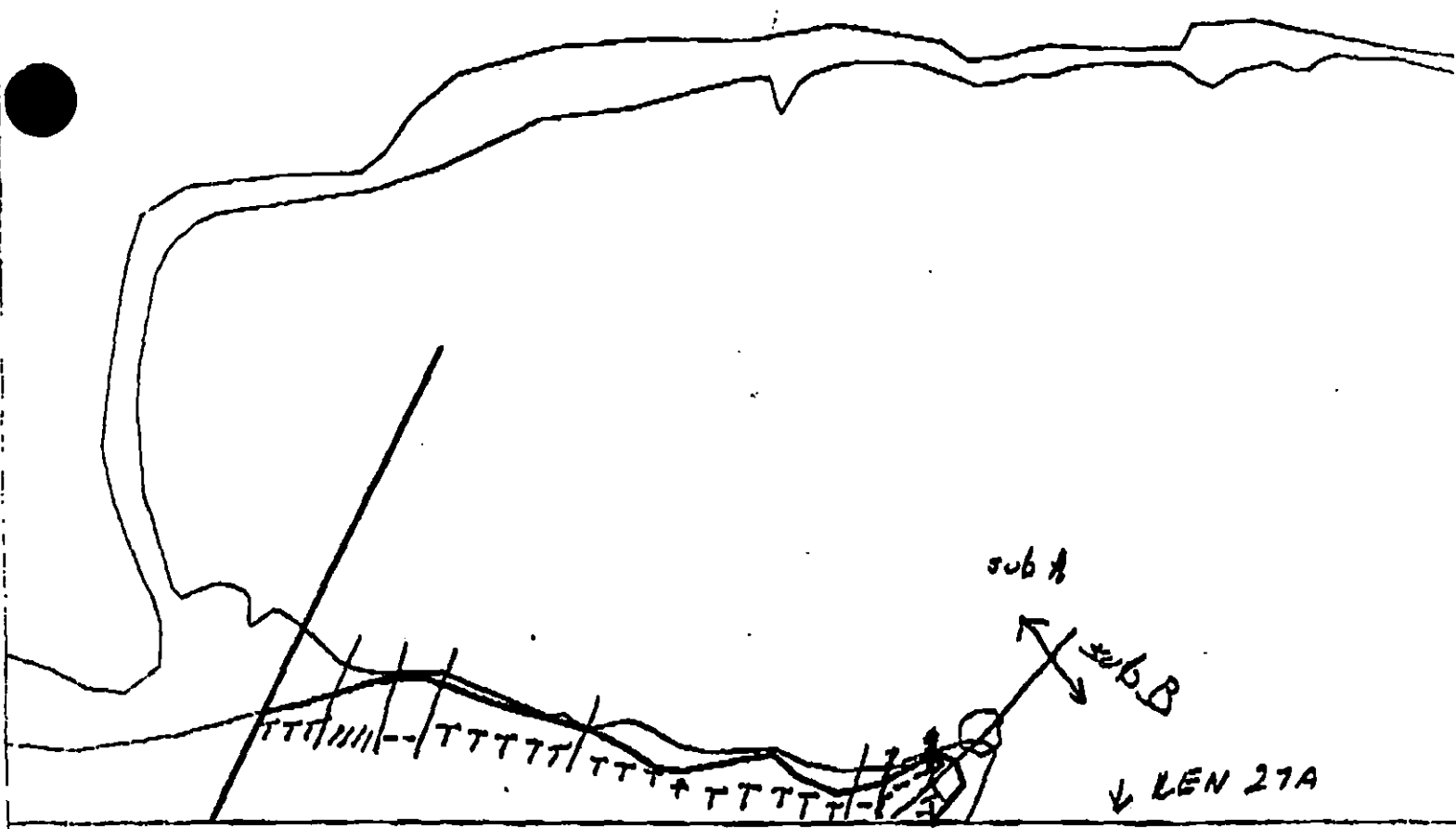
Name: Randy Siegel

Date: 4/9/90

Data Entered:

CB

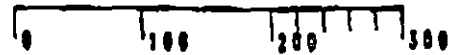
—



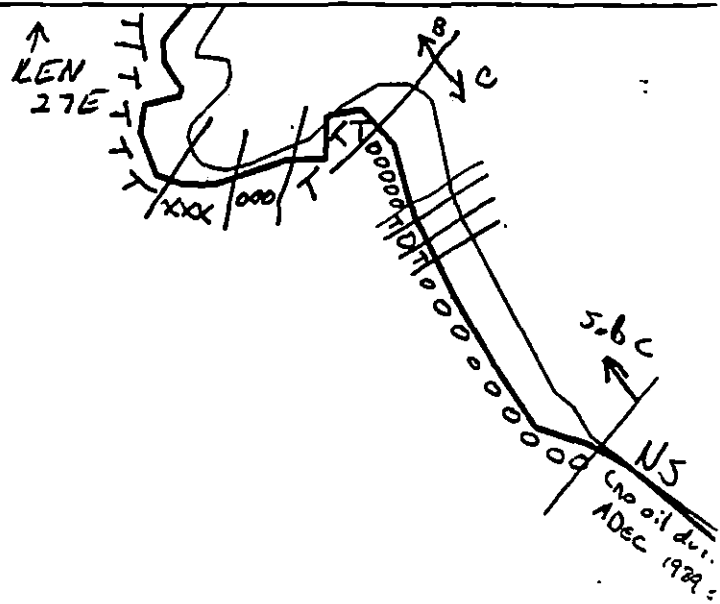
● XXX Wide
/// Medium
--- Narrow
TTTT Very Light
OOOO No Oil

CB-4

ADEC Segment Length: 4795m



Map Key: KEN-270.
Name: Randy Siegel
Date: 4/8/90



CB

KEN 27B →

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

CB-4

ADEC Segment Length: 4795m



Map Key: KEN-27a.
 Name: Barry Seagull
 Date: 4/8/20
 Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ CB-04 SUBDIVISION C (3 OF 5) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Johnson DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 30 m: No Oil 300 m
Subsurface Oil Observed: Yes X No Maximum Depth 25+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pick up of oiled debris and logs if greater than 10% coverage, 2) bioremediation of subsurface oil in areas shown on attached sketch map. Work should be conducted after consulting ADF&G to avoid periods of invertebrate harvesting.

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/24/00
 ADEC ART WERNER Between
 EXXON ANITA TEAL Deal
 NOAA Ray Brown & Petrac
 USCG M. J. HALL Wife

FOSC: WML DATE: 5-12-90

DATE 4/9 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
Plt - No Subsurface Oil

- 2 ▲
P11 - Subsurface Oil

- CT/C**
Continuous Distribution

- CT/B**
Broken Distribution

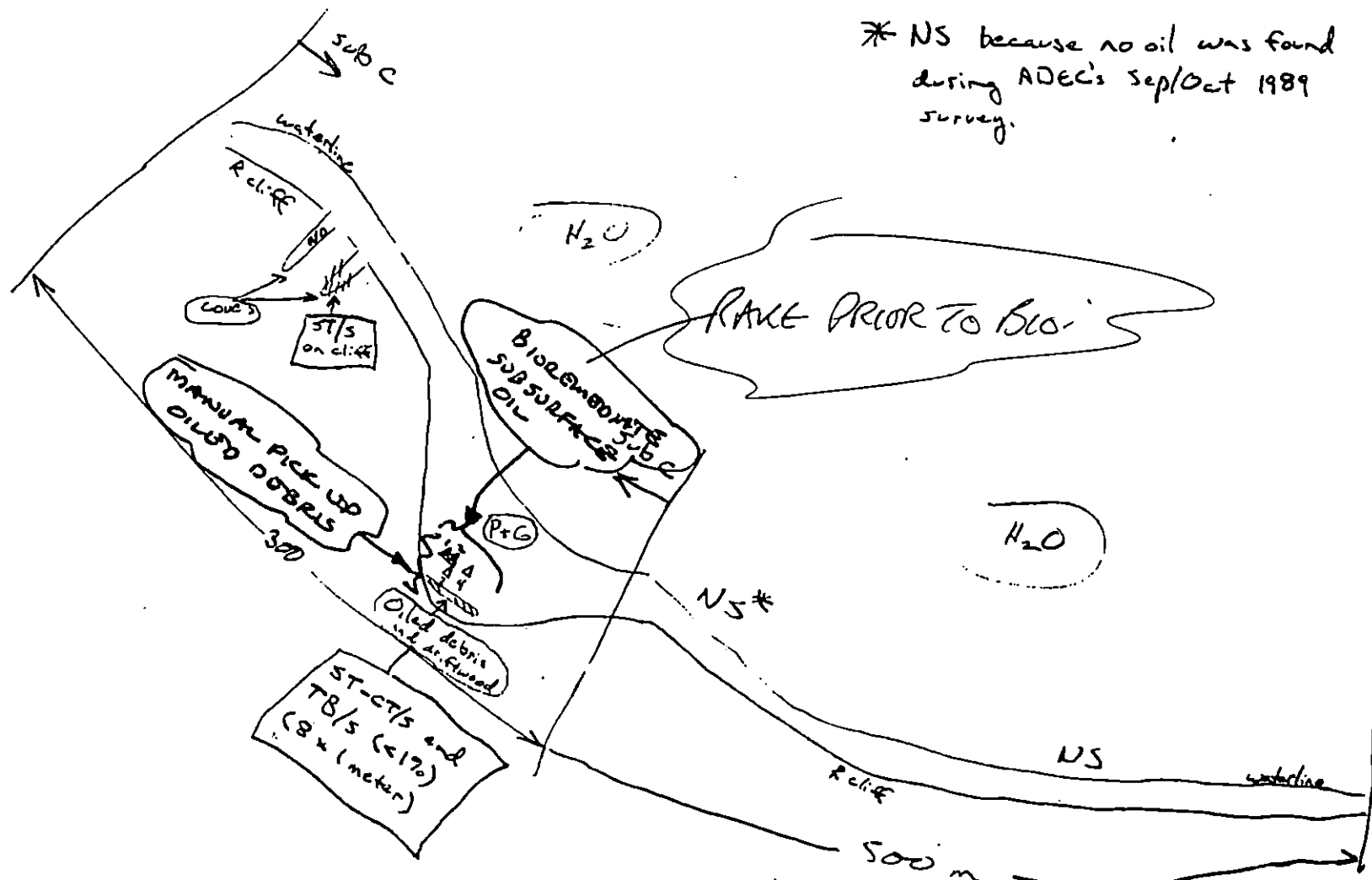
- CT/P**
Patchy Distribution

- CT/S**
Splashed Distribution

- ### Oiled Vegetation

- 1 
- Photo location, direction,
and number

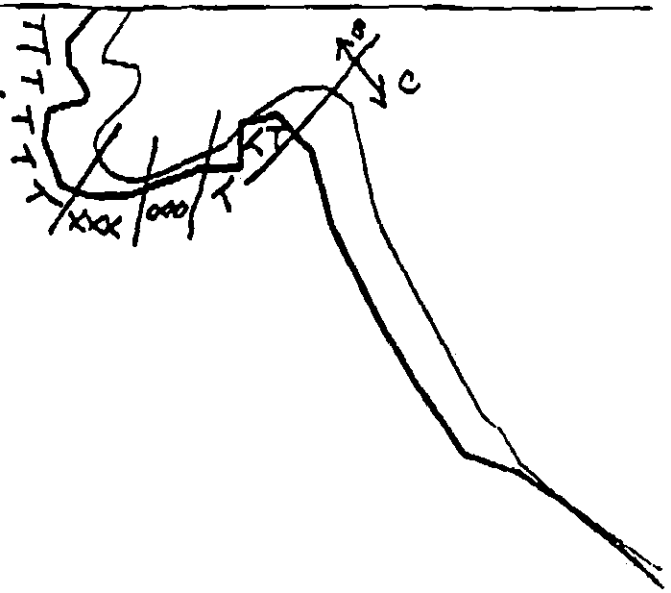
SKETCH MAP



Oil Character Length (m): AP N/A PO N/A CV N/A CT 25 ST 25 MS N/A PT N/A TB 8 FL N/A NO 375

REVISION: 01/24/70

↑
KEN
27E

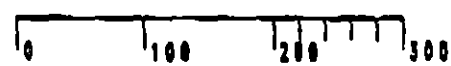


CB

KEN
27E →

CB-4

ADEC Segment Length: 4795m



Map Key: KEN-27a

Name: Barry Seagel

Date: 4/8/90

XXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No

SHORELINE EVALUATION

SEGMENT ST/ CB-04 SUBDIVISION D (4 OF 5) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles J. Hume

DATE: 4/25/90

OILING CATEGORIZATION:

Wide 8 m: Medium 0 m: Narrow 0 m: V.Light 47 m: No Oil 64 m
Subsurface Oil Observed: Yes X No Maximum Depth 9+ cm

RECOMMENDATIONS:

 No Treatment Recommended
X Treatment Recommended
X Manual Pickup
X Bioremediation
 Tarmat: Breakup
 Removal

 Snare/Absorbent Booms
 Oil Snares (pom poms)
 Absorbents (pads, rolls, etc)
 Spot Washing: Wands
 Beach Cleaner
 Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pick up of mousse and pooled oil, 2) bioremediation of areas shown on attached sketch map. Work should be conducted after consulting ADF&G to avoid periods of invertebrate harvestings.

TAG COMMENTS:

TAG APPROVAL DATE: 4/24/90

ADEC ART WEINER
EXXON ANNY TGAZ
NOAA SPETRO
USCG M. J. Hall

FOSC: WJL

DATE: 5-12-90

OG Randy Siegel

SEGMENT ST/ CB-4

SUBDIVISION D

DATE 4 / 9 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)
- ☐ Plt Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

Plt - No Subsurface Oil

2 Δ

Plt - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

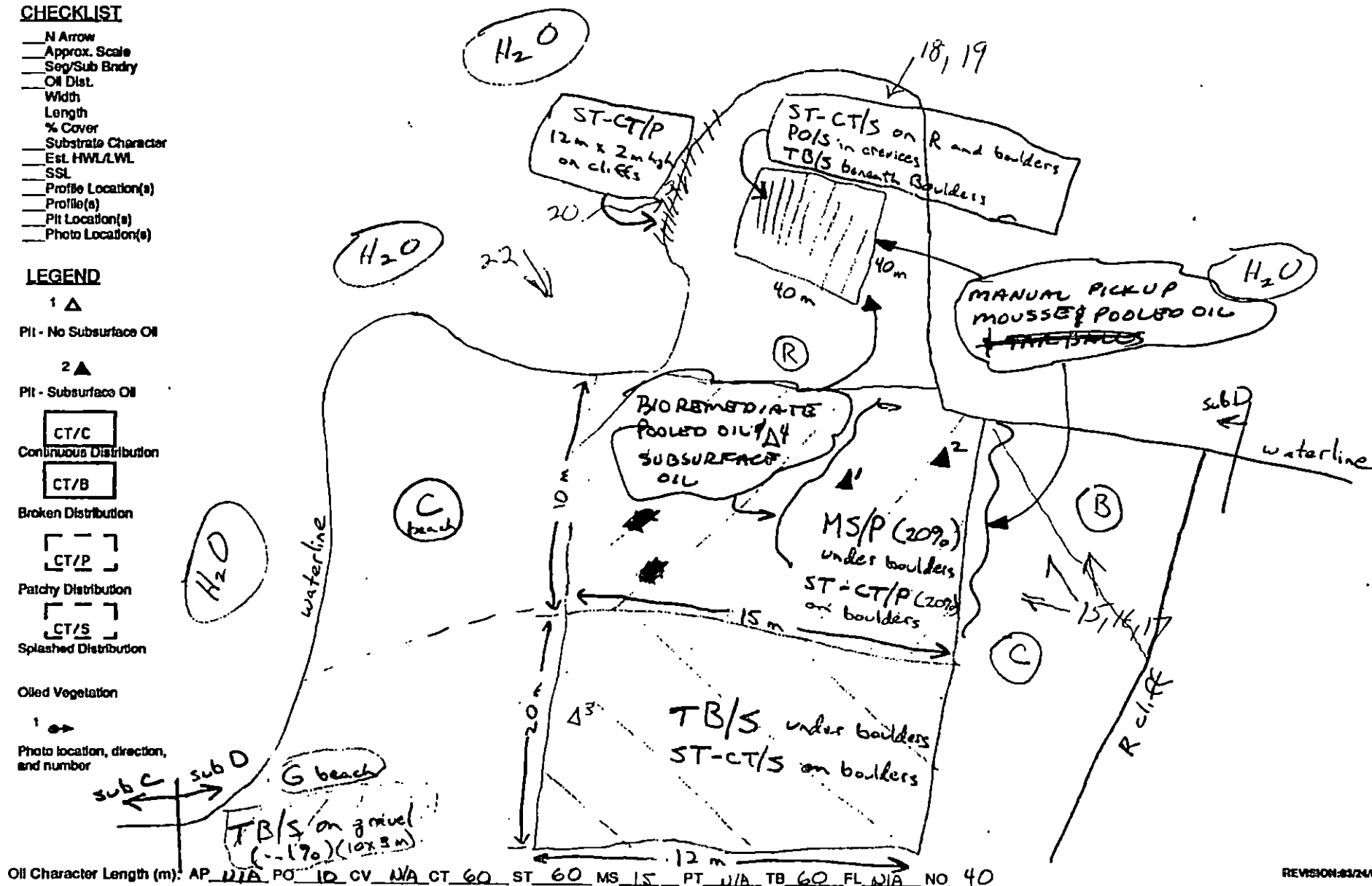
1 $\rightarrow$

Photo location, direction, and number

N

10 m
App. Scale

SKETCH MAP



Oil Character Length (m): AP N/A PO 10 CV N/A CT 60 ST 60 MS 15 PT N/A TB 60 FL N/A NO 40

REVISION: 03/24/90

OG Randy Siegel

SEGMENT ST/ CB-4

SUBDIVISION D

DATE 4 / 9 90

CHECKLIST

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

LEGEND

1 ▲

Pit - No Subsurface Oil

2 ▲

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

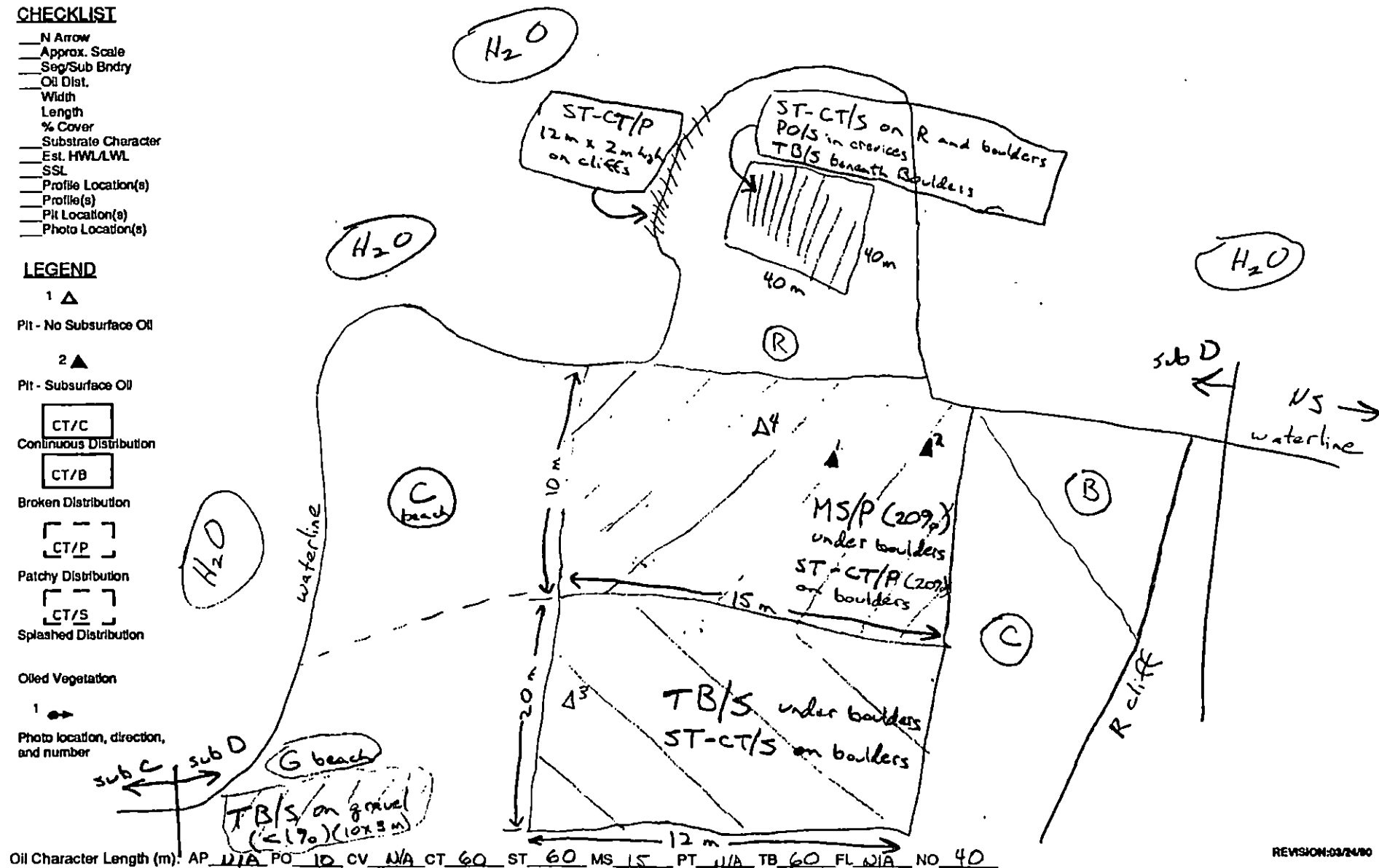
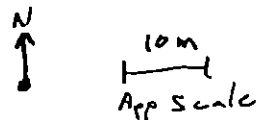
Splashed Distribution

Oiled Vegetation

1 ●

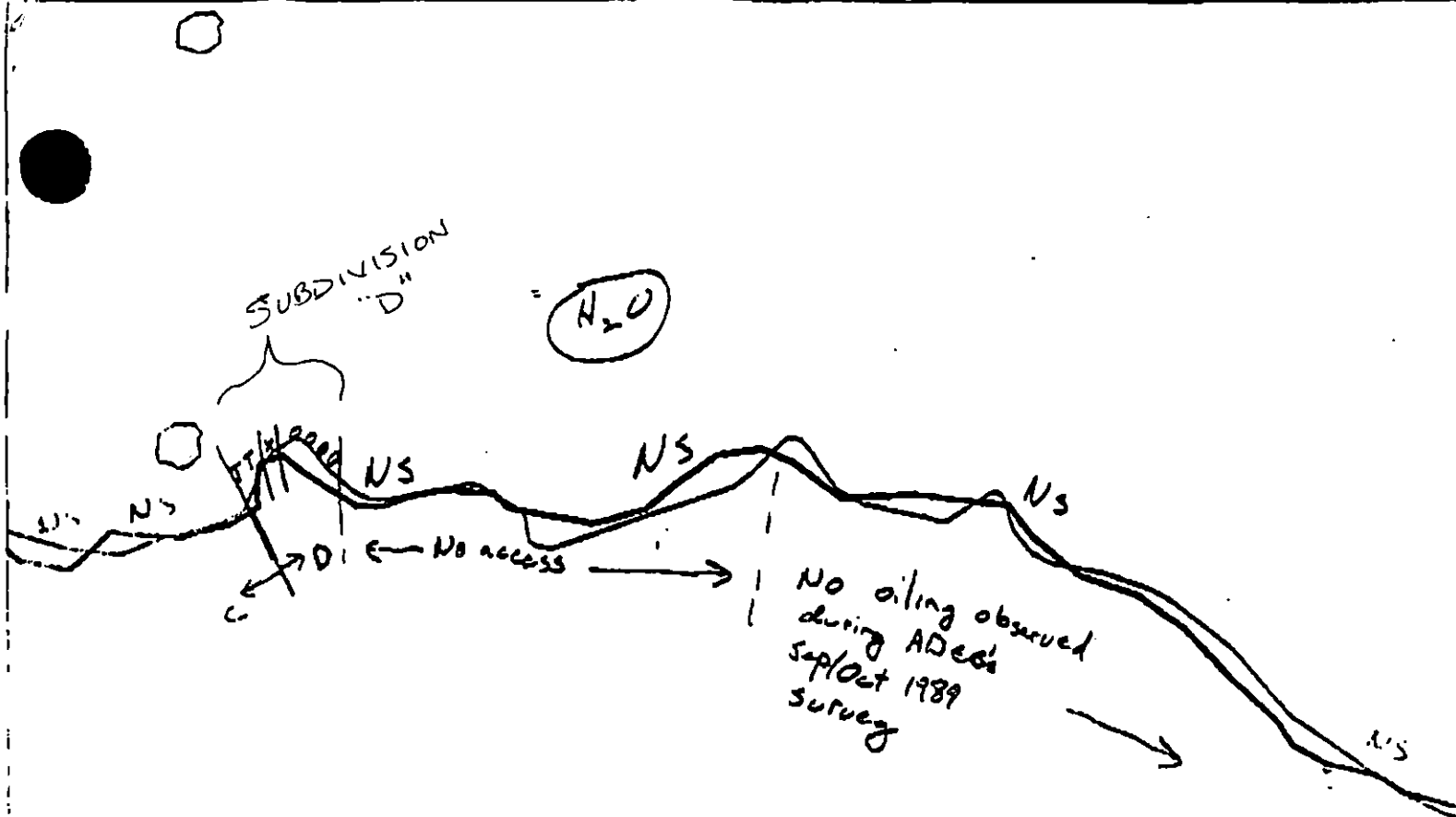
Photo location, direction,
and number

SKETCH MAP



Oil Character Length (m): AP 11A PO 1D CV 1A CT 60 ST 60 MS 15 PT 11A TB 60 FL 11A NO 40

REVISION: 03/24/90



← KEN 27A

KEN
27C →

XXXX Wide

//// Medium

--- Narrow

TTTT Very light

CB-4

ADEC Segment Length: 4795m

Map Key: KEN-27b

Name: Rudy Lange

Date: 4/9/10

SHORELINE EVALUATION

SEGMENT ST/ CB-04 SUBDIVISION E (5 OF 5) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Homan DATE: 4/29/90

OILING CATEGORIZATION:

Wide 66 m: Medium 69 m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmat, 2) manual pick up of pooled, coated, covered and stained areas, 3) bio-remediation of areas shown on attached sketch map. Work should be conducted after consulting ADF&G to avoid periods of invertebrate harvesting.

TAG COMMENTS:

TAG APPROVAL DATE: 4/24/90
ADEC Art Weimer
EXXON Andy Tott
NOAA Gary Petrage
USCG M.J. Hall

FOSC: DATE: 5-12-90

SKETCH MAP

OG Randy Siegel

SEGMENT ST/CR-4

SUBDIVISION E

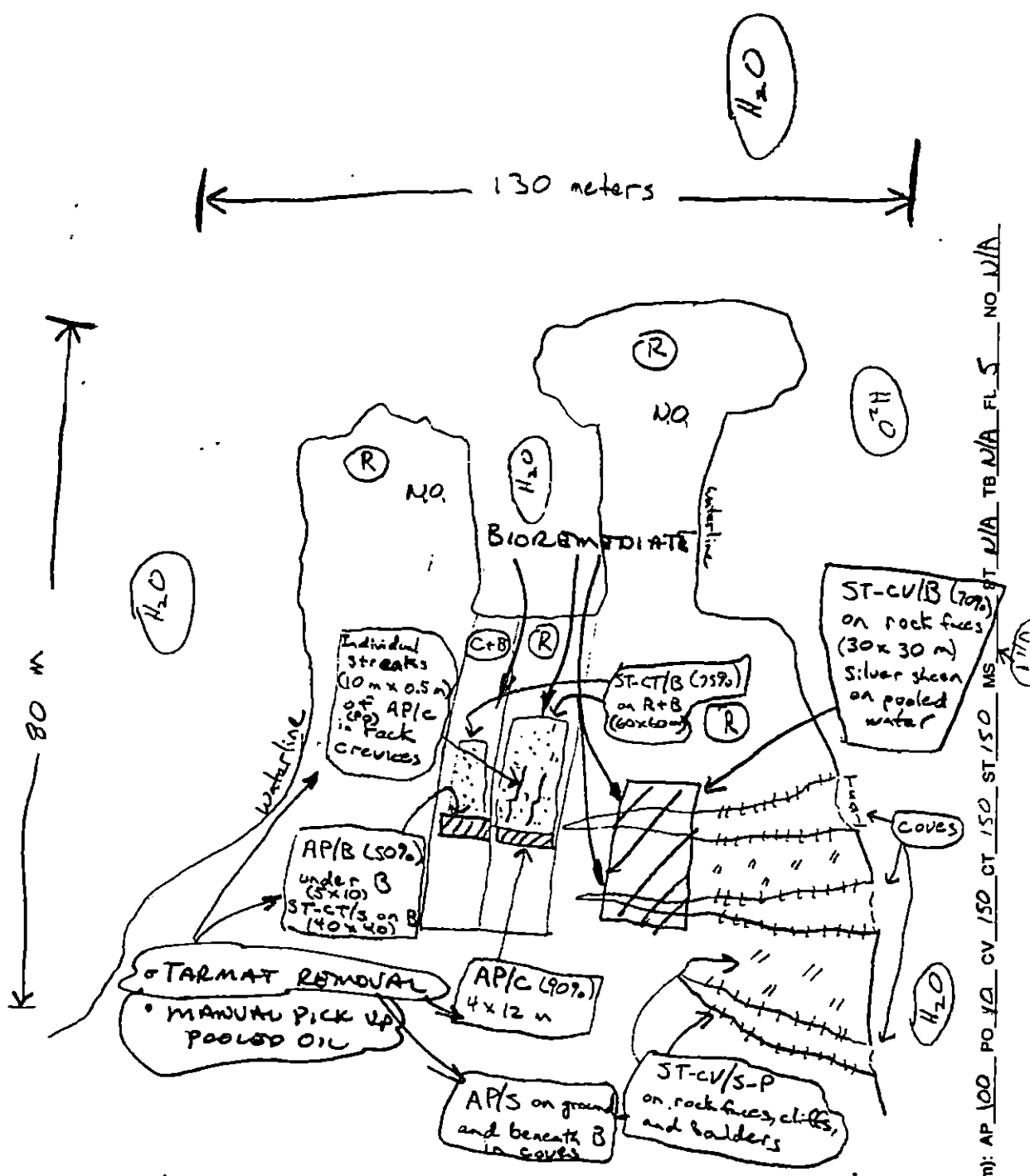
DATE 4/9/90

CHECKLIST

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

LEGEND

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



Oil Character Length (m): AP 100 PO 40 CV 150 CT 150 ST 150 MS 170 TB N/A FL 5 NO N/A

Photos ST-17-6

SKETCH MAP

OG Randy Siegel

SEGMENT ST/ CR-4

SUBDIVISION E

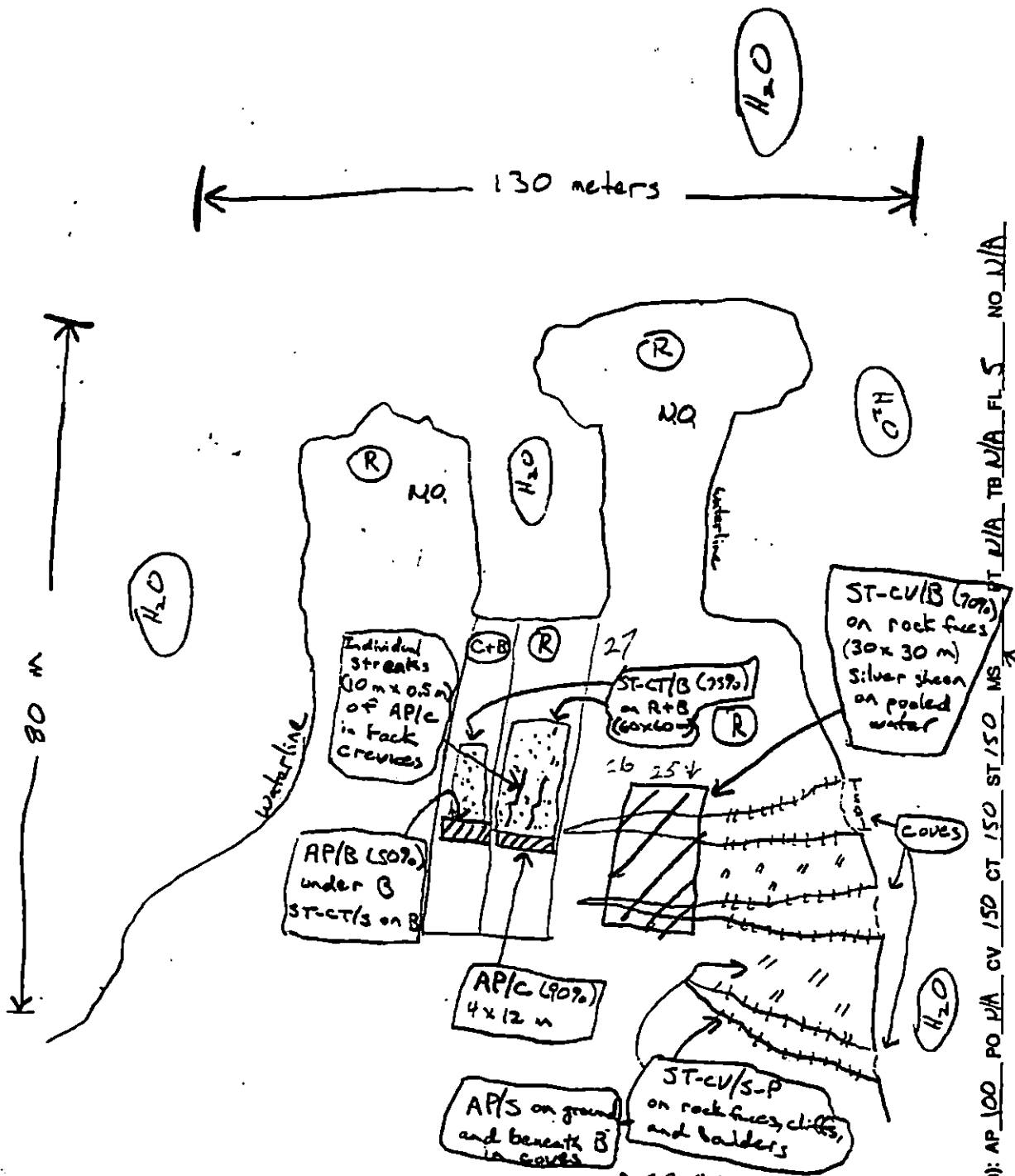
DATE 4/9/90

CHECKLIST

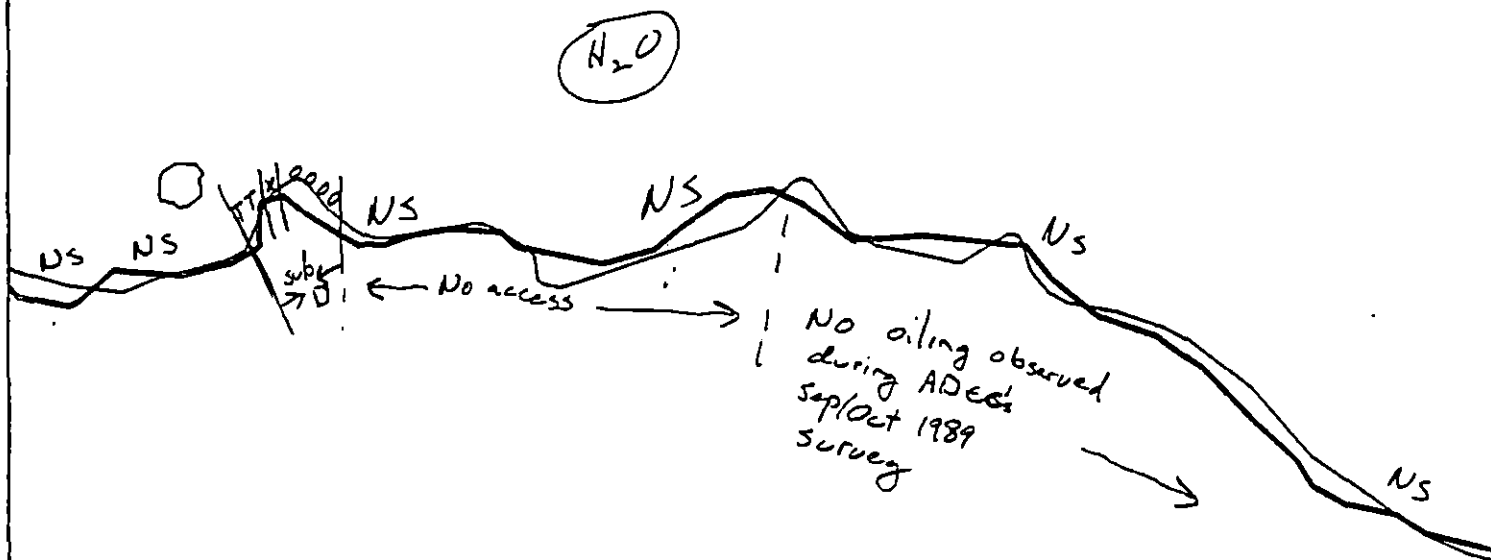
- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bdry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HW/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

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



Oil Character Length (m): AP 100 PO N/A CV 150 CT 150 ST 150 MS 1 ST N/A TB N/A FL 5 NO N/A



← KEN 27A

KEN
27C →

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

CB-4

ADEC Segment Length: 4795m

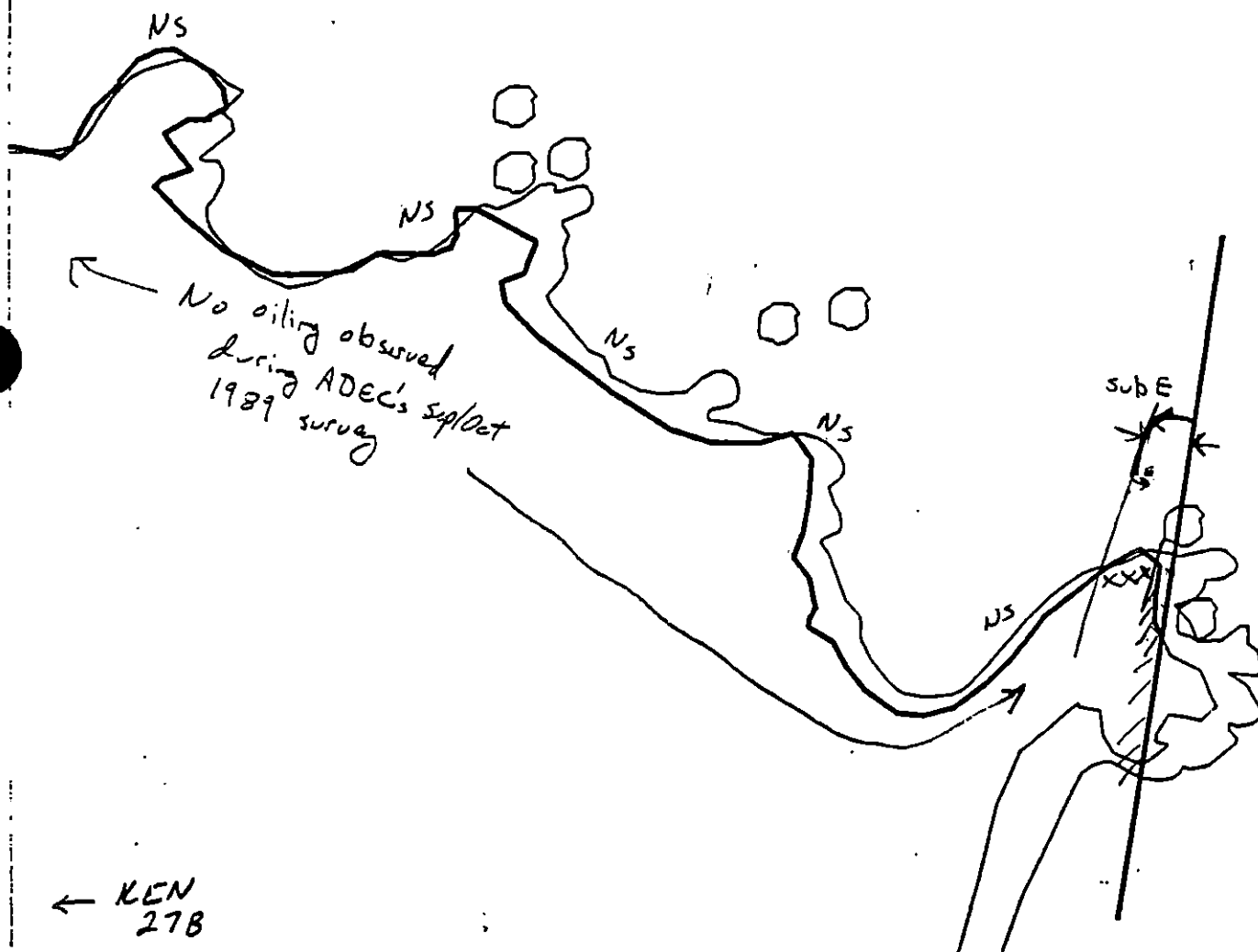


Map Key: KEN-27b

Name: Larry Seigel

Date: 4/9/90

Data Entered:



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

CB-4

ADEC Segment Length: 4795m



Map Key: KEN-27c

Name: Randy Siegel

Date: 4/3/90

Data Entered:

1991 MAYSAP EVALUATION

SEGMENT: CB 004 SUB: A REGION: KEN SURVEY DATE: 5/28/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) Fish harvest area

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT C3004 SUBDIVISION A DATE MAY 28/91

ADEC

E Steve Ferguson SIGNATURE _____☒ NTR ☐ TREATMENT RECOMMENDED

BEACH POCKET JUST BEFORE SEA ARCH HAD MS/HOR CONTAINED WITHIN SOR.H AREA OF SITE B. THE 1m X 1m MS/HOR WAS PICKED UP WITH A PARTIAL PICK-UP OF THE SOR.H OF SITE B.

EXXON

NAME George P. Stiles SIGNATURE George P. Stiles 5/29/91☒ NTR No appreciable oil remaining.

LANDMANAGER

NAME Pet Norman OF Port Graham SIGNATURE Pet Norman☒ NTR we checked eastern portion of this segment oil found was picked up. There still will be remaining sor in this portion.

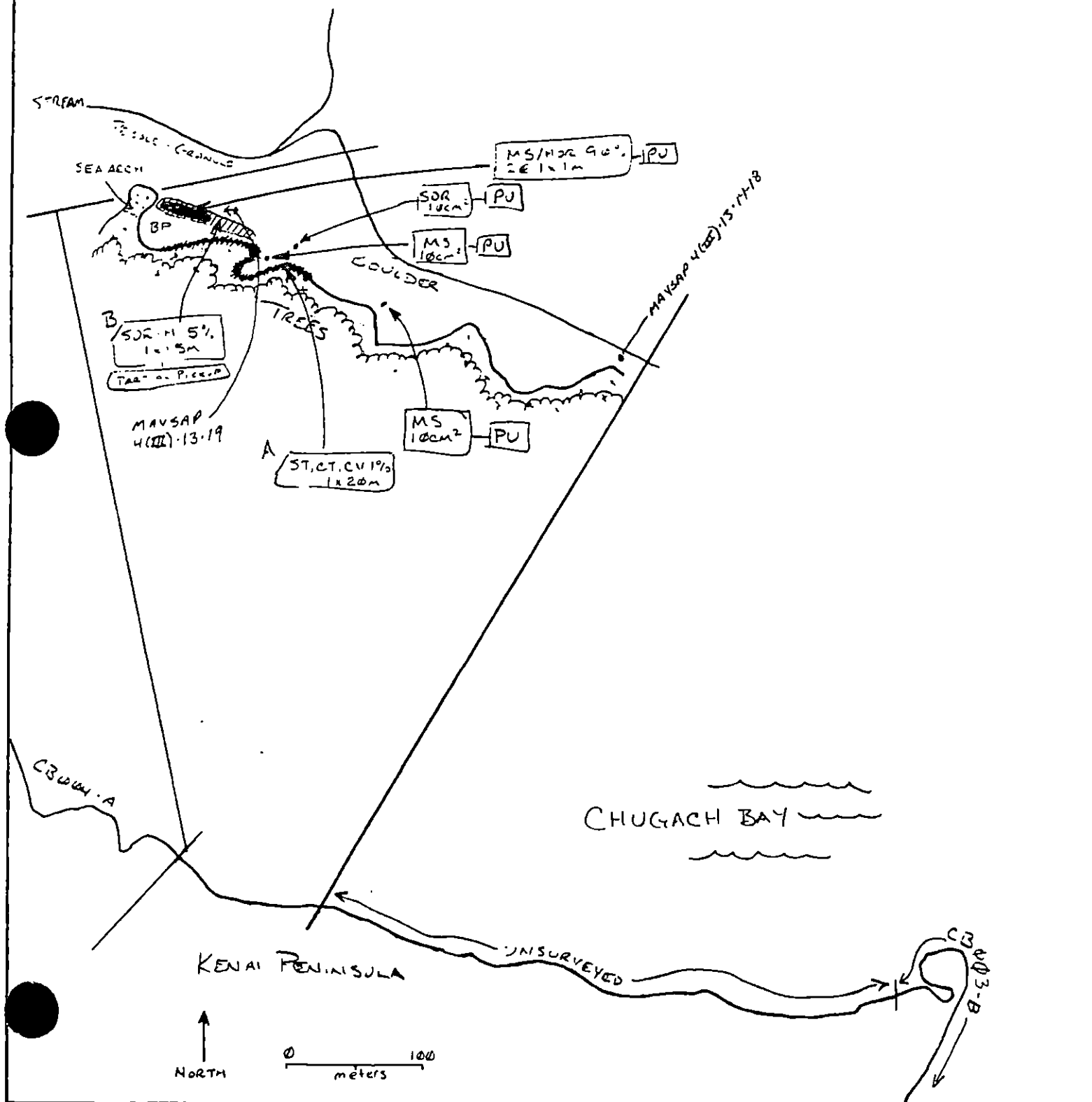
USCG/NOAA

NAME McMahon/McDonald SIGNATURE Joe McMahon☒ NTR

Some mussels in large boulders, cables picked-up at site

Reviews: 6/1/91 MC
reviewed 5/31/91 KC

C3B4-A
 OG SKETCH MAP
 28-MAY-91
 1935 - 2000
 BRYAN TRIMM



REVIEWED: 6/1/91 MC reviewed 5/31/91 KG

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 28 May '91
 SEGMENT # CB004 TIDAL HEIGHT(Range) +3.95 to 3.39
 SUBDIVISION A BIOLOGIST Jim Roth
 SEA STATE 6 WIND SPEED/DIRECTION
 PHOTOGRAPHS: ROLL # FRAME #

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

- A. BEDROCK CLIFF W/ DENSE LITTORINES; LIMPETS, BARNACLES.
 B. BOULDERS W/ DENSE LITTORINES; MODERATELY DENSE BARNACLES, LIMPETS; SCARCE MUSSELS.

GENERAL COMMENTS: THIS IS A BOULDER/COBBLE BANK WITH BEDROCK CLIFFS BEHIND. BARNACLES ARE DENSE ON CLIFF AND LARGER BOULDERS, ALONG WITH MUSSELS, LITTORINES AND LIMPETS. MOST OF THE FOCUS ZONE COULD NOT BE SEEN AT THIS TIDE. A HEALTHY AND THRIVING INTERTIDAL COMMUNITY WITH EVIDENCE OF RECENT RECRUITMENT IN MUSSELS AND LITTORINES.

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS # OF SPECIES TOTAL BIRDS FISH OBSERVED SPECIES PRESENT

Eagles			
Seabirds			
Waterfowl			
Gulls/Kittiwakes			
Shorebirds			
Cormorants			
Other Birds			

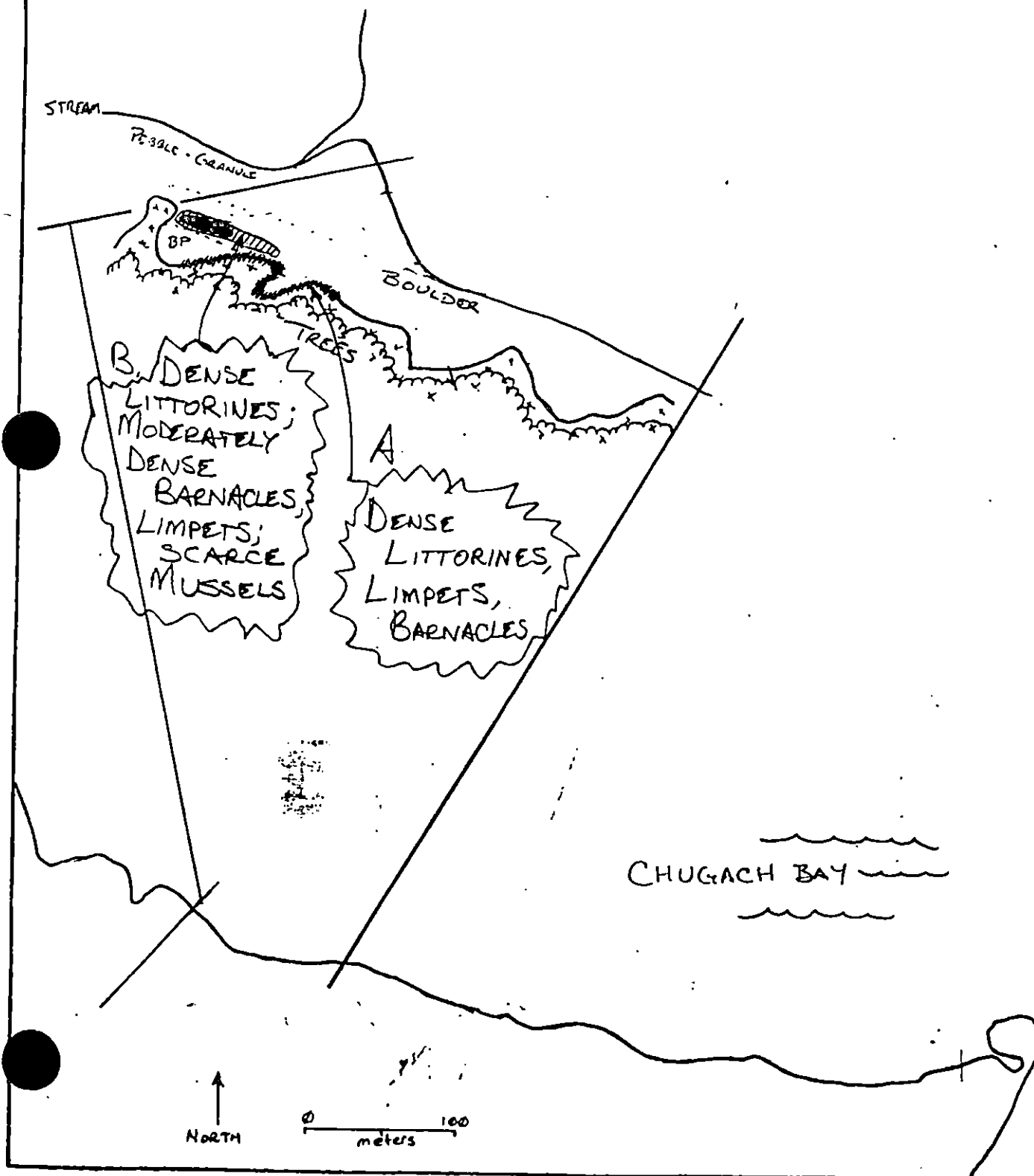
MARINE MAMMALS # OBSERVED SPECIES LAND MAMMALS # OBSERVED

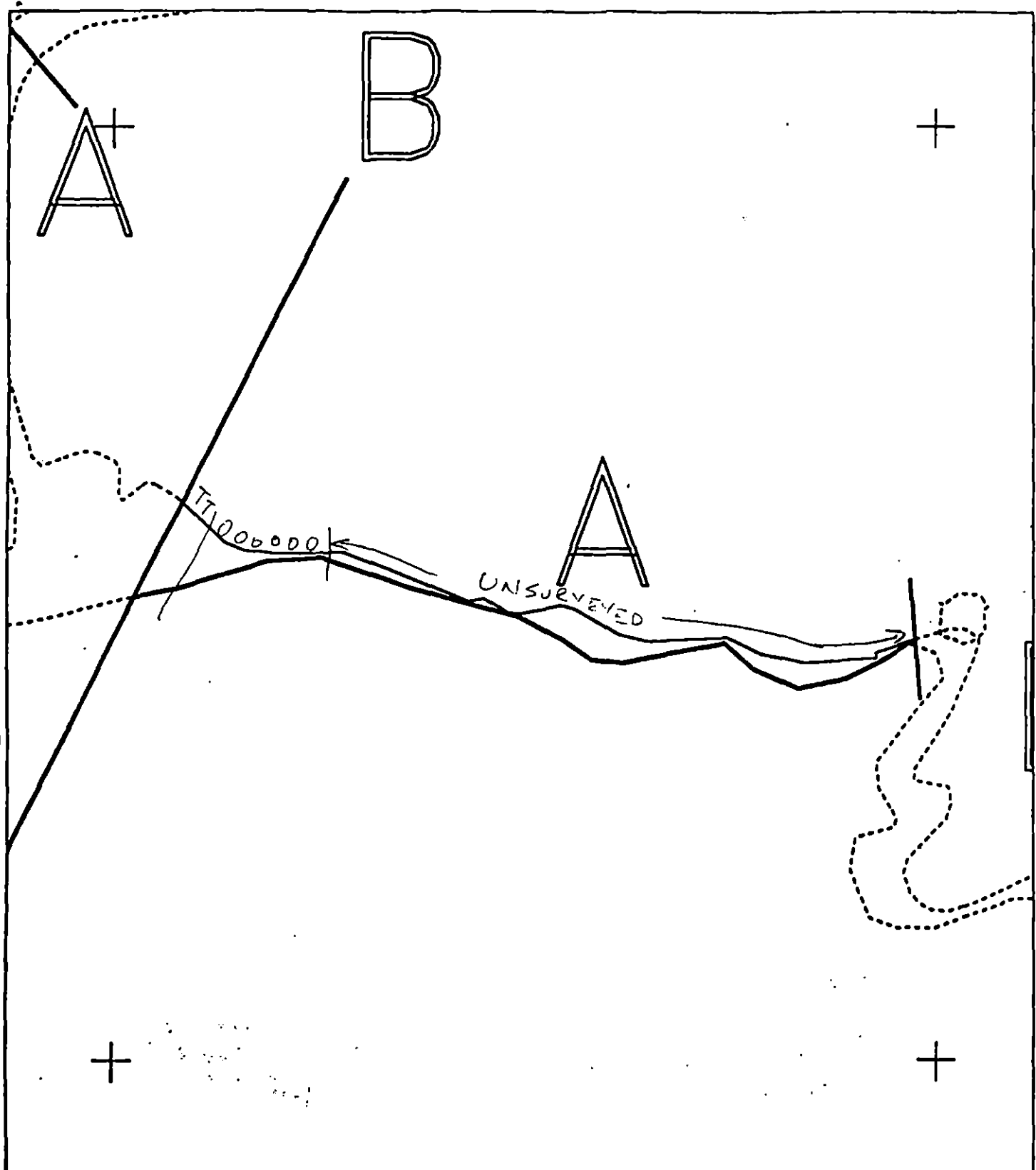
Sea Otters			
Pinnipeds (specify)			
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

CB 004-A
SKETCH MAP
28-MAY-91
1935-2000

Bio Map ROTH





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

CB004 A
 ADEC Subsegment Length: 595m
 METERS
 0 100 200
 AK State Plane Zone 4
 860000



Subdivision Field Map
 Map Key: KENC004A
 Name: Trim
 Date: 28-May-91
 Date Entered:

- SURFACE OIL CATEGORY Map -

Reviewed by: MC 611/91
 reviewed 5/31/91 KG

1991 MAYSAP EVALUATION

SEGMENT: CB 004 SUB: D REGION: KEN SURVEY DATE: 5/27/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) Fish harvest area

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC

FOSC

EXXON

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

MAYSAP FIELD SHORELINE COMMENT SHEET

51

TEAM NO. 4 SEGMENT CB-004 SUBDIVISION D DATE 5/22/91

ADEC

NAME

Steve Ferguson

SIGNATURE

[Signature]☒ NTR ☐ TREATMENT RECOMMENDED

AP/MS/SOR FOUND IN SEAMS AND CREVISES OF VERTICAL AND HORIZONTAL BEDROCK. SOR DEPOSITED IN INTERSTITIAL AREAS OF COBBLES AND BOULDERS LOCATED NEAR BASE OF VERTICAL BEDROCK. GREATEST PERCENTAGE OF OILING IS CT/ST.

EXXON

NAME

George P. Stiles

SIGNATURE

[Signature]

☒ NTR No appreciable oil found. Couple MS patches and some CT+S. Looked good.

LANDMANAGER

NAME

Pat Norman

OF

Port Graham

SIGNATURE

[Signature]☒ NTR

USCG/NOAA

NAME

[Signature]

SIGNATURE

[Signature]☒ NTR

Some mounds in deep bedrock crevices - inaccessible, little appreciable oil.

[Signature]

PAGE 1 OF 1

SEGMENT CR-004

SUBDIVISION D

DATE MAY 1 37 / 91

ENERGY LEVEL: ☒ H ☒ M ☐

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

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

EST. OIL CATEGORY LENGTH: W - m M - m N - m VL 95 m NO 75 m US - m

[illegible]

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP-4 (IV) - 12 FRAMES 10-13

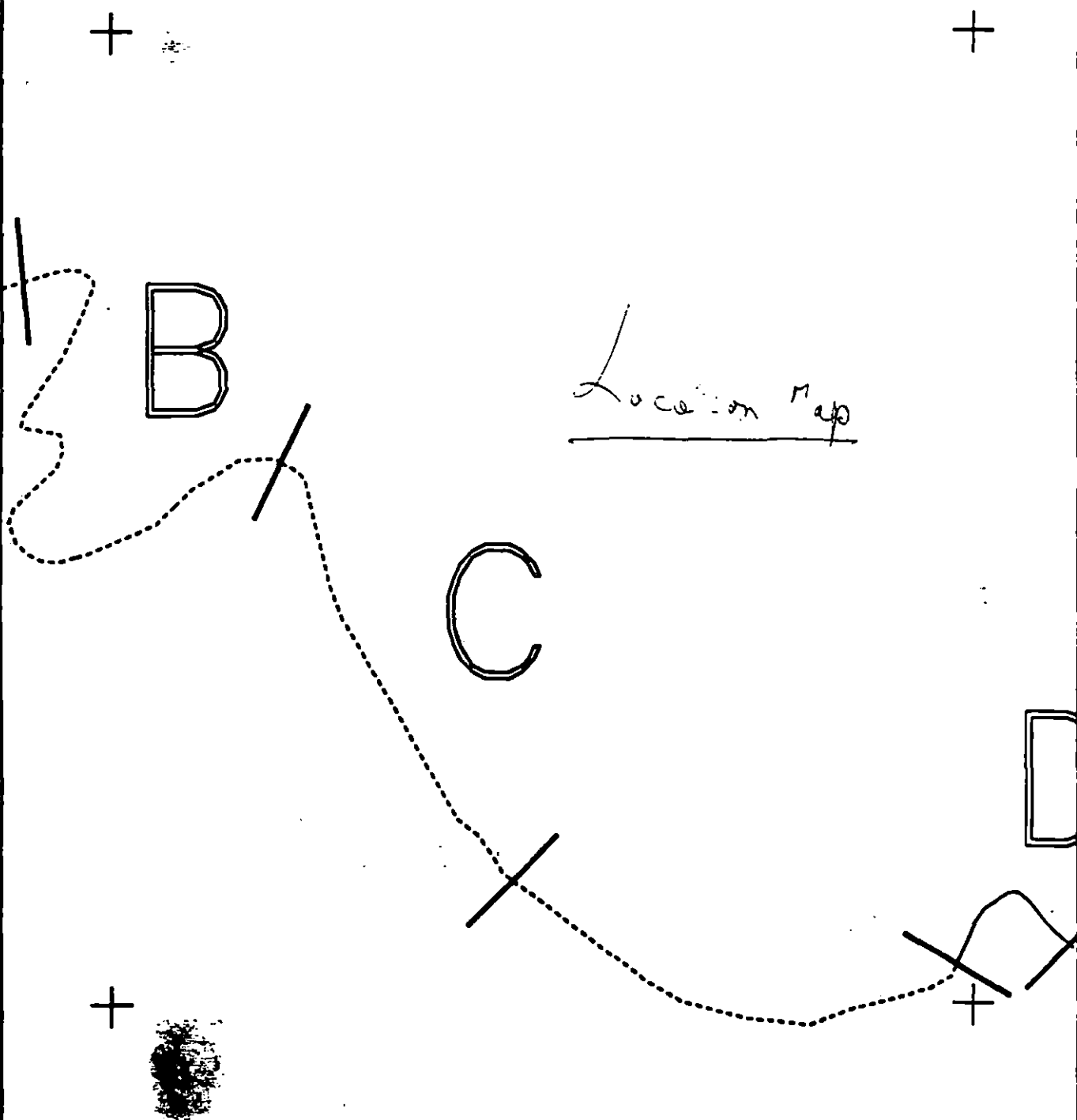
[illegible]

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

OG COMMENTS:

See map 5.

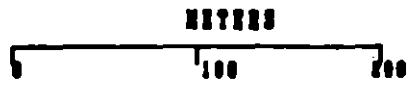
Revised: 5/31/91 MC
revised 5/30/91 KG



Location Map



CB004 D



AK State Plane Zone 4
8608440

Subdivision Field Map
Map Key: KENC004Dc
Name: JM Sempich
Date: MAY 27/9.

09 St. Ap

CB-004-D

JM SENEELS

MAY 27/91

0928-0955

Legend

[] Bedrock Bluffs

[] cb veneer over
cb/pb/ga.

CB-004-D Location

View 1 ← View 2



VIEW 1

A1

intentional Ap, ct, st
5x8 <10% 30cm max dia
5cm max thickness
MAY 28 4 (10) - 12-14

MAY 28 4 (10) - 12-14

ct, st, cv 2x8, <10%
Hson in fractured bedrock
<10cm dia <9cm thick

A2



VIEW 2

A3

st. ct, very weathered
1x8 <10%
Hson in fractures <1cm
thick cv

Boulders/cobbles
on and between
bedrock
outcrops

reviewed 5/30/91 KLG

Reviewed 5/31/91 mc.

HAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 27 MAY '91
 SEGMENT # CB004 TIDAL HEIGHT(Range) 0.0 TO +1.6
 SUBDIVISION D BIOLOGIST Jim Roth
 SEA STATE -1.5' WIND SPEED/DIRECTION
 PHOTOGRAPHS: ROLL # FRAME #

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

A1 - UPPER MITZ w/ LITTORINES, BARNACLES, SMALL MUSSELS ABUNDANT IN BOULDER + BEDROCK CREVICES, LITTORINES, LIMPS UNDER COBBLES.
 A2 - MITE BEDROCK w/ VERRUCARIA, BARNACLES, LITTORINES, IN CREVICES.
 A3 - UPPER MITZ: LITTORINES, BARNACLES, SMALL MUSSELS ABUNDANT IN CREVICES IN BOULDER + BEDROCK.

GENERAL COMMENTS: LESS EXPOSED THAN CB9E. A HEALTHY INTERTIDAL COMMUNITY. MORE SHELTERED EAST END HAS MODERATELY DENSE FUCUS + OTHER KELP, ALONG WITH MUSSELS, BARNACLES, LITTORINES, LIMPS. MORE EXPOSED EAST END HAS SLIGHTLY MORE SPARSE BIOTA. POOLS IN MITZ HAD ANEMONES, (2 spp.), CORALLINE ALGAE, HERMIT CRABS, AND CHITONS (KATHARINA).

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

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

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

Shoreline subdivision map showing important biological features attached.

Reviewed MB 5/30/91

00 SKETCH MAP

CB-004-D

JM SEPPELS

MAY 27/91

0928-0955

CB-004-D LOCATION MAP

View 1 ← View 2

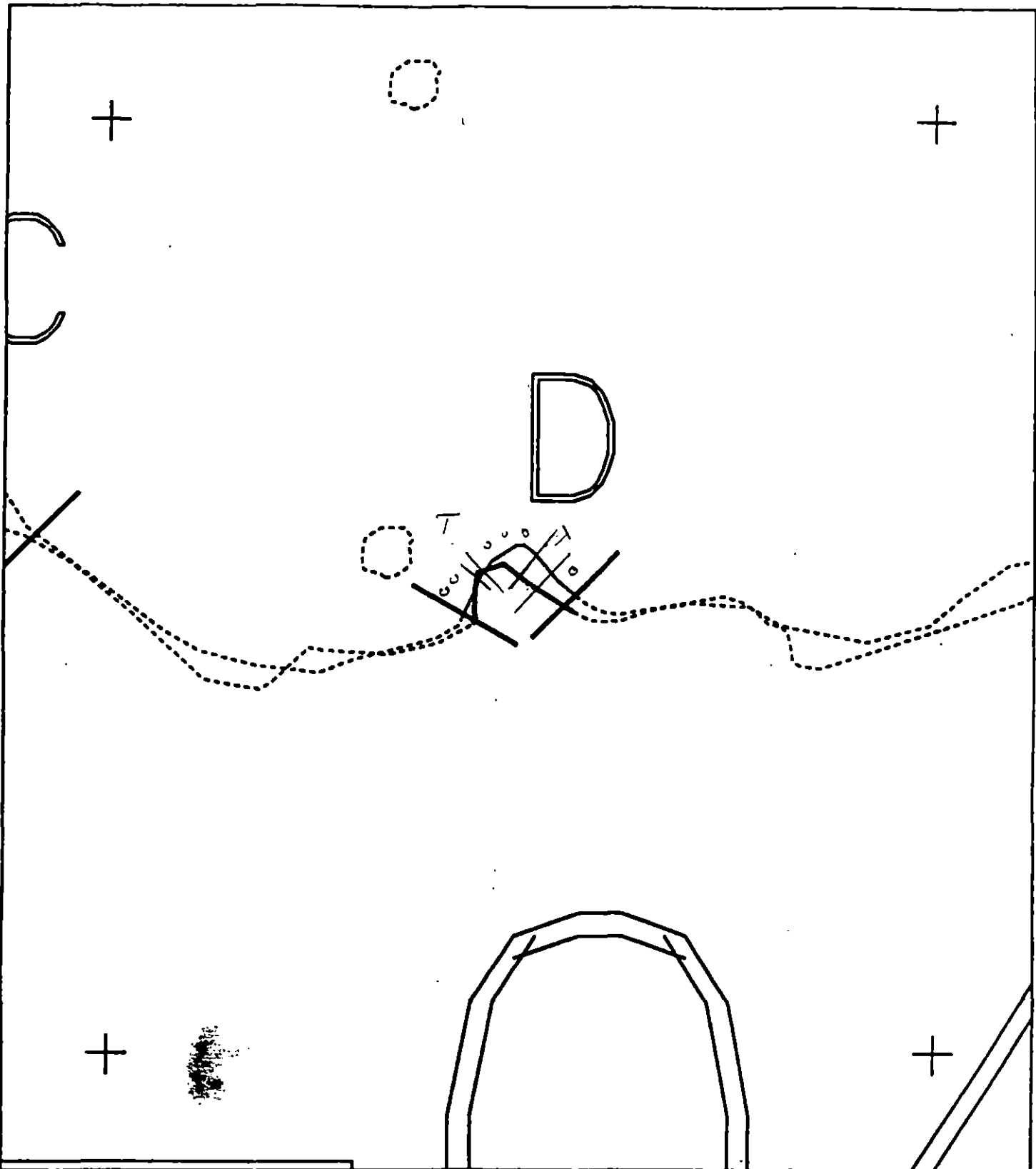
Legend

[E] Bedrock Bluffs

[O] cb veneer over
ch/pb/ga.

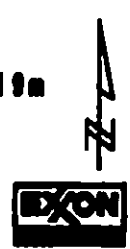


Reviewed MS
5/30/91



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

CB004 D
 ADEC Subsegment Length: 119m
 METERS
 0 100 200
 AK State Plane Zone 4
 acb004d



Subdivision Field Map
 Map Key: KENC004D
 Name: for Sample
 Date: May 9-1991
 Date Entered:

REVIEWED: MC 5/31/91
 revised 5/30/91 KG

1991 MAYSAP EVALUATION

SEGMENT: CB 004 SUB: B REGION: KEN SURVEY DATE: 5/28/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) Fish harvest area

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC

FOSC

EXXON

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

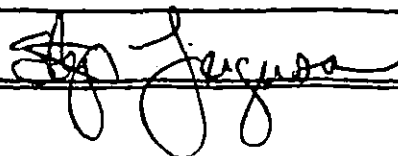
MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT CB004 SUBDIVISION B DATE MAY 28 / 91

ADEC

NAME Steve Ferguson

SIGNATURE


☐ NTR☒ TREATMENT RECOMMENDED

MANUAL TREATMENT. RECOMMENDED FOR SITES H AND 4 OF MS AND SOR-H (SEE SKETCH MAP). BOTH OF THESE SITES ARE PROTECTED BY HORIZONTAL BEDROCK BUNKERS THAT EXTEND DOWN TOWARDS THE SHORELINE. DUE TO THIS FACT, NATURAL DISPLACEMENT OF THE MS/SOR-H WILL OCCUR OVER A LONG PERIOD OF TIME. THUS ADDITIONAL CLEAN-UP WILL ENHANCE THE TOTAL RECOVERY TIME OF THESE AREAS. ALSO SPOT CHECK SITES E AND C (ONLY PARTIAL PICKUP WAS DONE) FOR ANY REMAINING MS AND SOR-H WHICH COULD BE REMOVED.

EXXON

NAME George P. Stiles

SIGNATURE

 5/29/91
☐ NTR

Hvy. SOR & MS found in crevices, between boulders and beneath the armor layer at areas G & H.

LANDMANAGER

NAME JAT NORMANOF Port Graham

SIGNATURE


☐ NTR

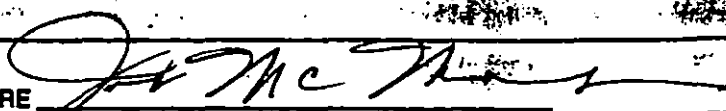
~~A~~ treatment recommended.

manual pick up of MS/SOR in H, G, E, C on OG sketch map. I think there is more oil here than what we actually mapped.

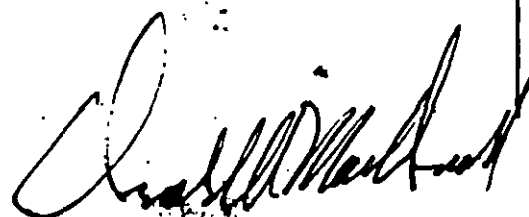
USCG/NOAA

NAME JOHN L. MC NATION

SIGNATURE


☒ NTR

spider mouse (small) found, picked-up at site.



SEGMENT CB004 -

SUBDIVISION B

DATE May 128 / 91

ENERGY LEVEL: ☐ H ☒ M ☐ L

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

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

EST. OIL CATEGORY LENGTH: W 0 m M 34 m N 0 m VL 60 m NO 279 m US 110 m

[illegible]

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 4111 - 13 FRAMES 6-12

[illegible]

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

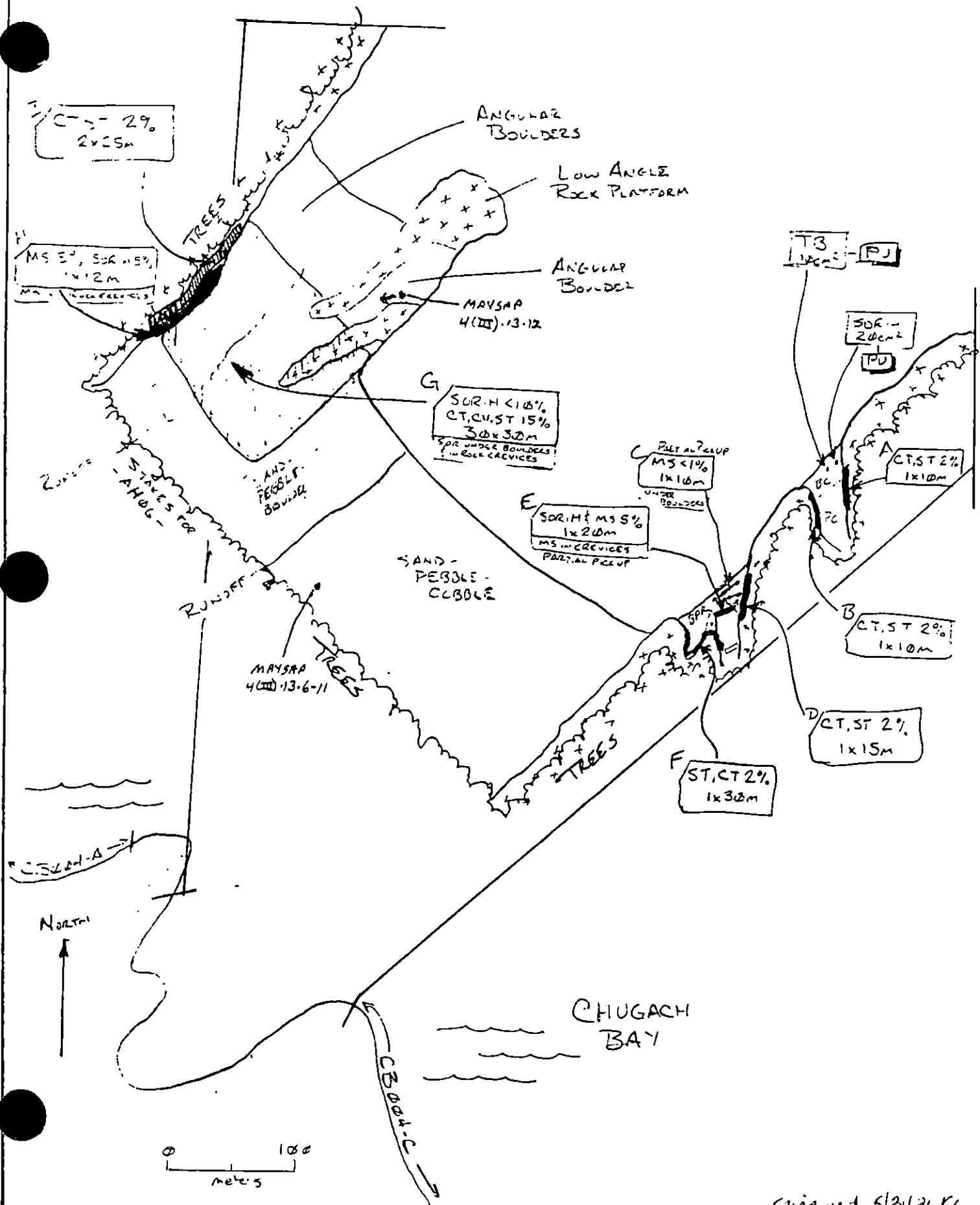
OG COMMENTS:

DURING '89

- OG COMMENTS:**
- LAND MANAGER STATED THAT OILING EXISTED ^{DURING ET} IN THE LITZ OF THE BEACH WHERE LOCATIONS A & B ARE FOUND.
 - FAP STUDY SITE AH06
 - SOI & MS FOUND IN CREVICES OR BETWEEN/BENEATH BOULDER ARMOR

Reviewed: MC 6/1/01
revised 5/31/21 KG

0022-3
 OG SKETCH MAP
 28-MAY-61
 1931-1926
 BRYAN ZIMIN



reviewed 5/31/91 K6
 Reviewed: MC 6/1/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 28 MAY 91
 SEGMENT # C B 004 TIDAL HEIGHT (Range) +6.0 TO +4.1 FT
 SUBDIVISION B BIOLOGIST Jim Roth
 AREA STATE G" WIND SPEED/DIRECTION
 PHOTOGRAPHS: ROLL # FRAME #

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

- A. BEDROCK FACE W/ MODERATELY DENSE BARNACLES; SPARSE MUSSELS, LITTORINES.
 B. BEDROCK FACE W/ SPARSE BARNACLES, LITTORINES, LIMPETS.
 C. BOULDERS, COBBLE IN MITE, W/ SPARSE FUCUS; DENSE MUSSELS, BARNACLES, LITTORINES, LIMPETS.
 D. BEDROCK FACE W/ MODERATELY DENSE BARNACLES, LITTORINES; SPARSE MUSSELS.
 E. BOULDERS, COBBLE, BEDROCK CREVICES W/ DENSE LITTORINES, MODERATELY DENSE BARNACLES, MUSSELS, LIMPETS.
 F. BEDROCK FACE W/ SPARSE BARNACLES, LITTORINES, LIMPETS.
 G. BOULDER, COBBLE, BEDROCK CREVICES
 G1 - FUCUS, LITTORINES, LIMPETS, BARNACLES; SPARSE MUSSELS.
 G2 - SPARSE BARNACLES, LITTORINES
 G3 - NO INTERTIDAL BIOTA
 H. BOULDER, COBBLE, BEDROCK CREVICES W/ NO INTERTIDAL BIOTA AT SOUTHWEST END OF OILED INTERVAL AND SPARSE BARNACLES, LITTORINES TOWARD NORTHEAST.
 I. BOULDER, COBBLE, BEDROCK CREVICES W/ DENSE LITTORINES, LIMPETS, SPARSE BARNACLES.

GENERAL COMMENTS: (SEE ATTACHED SHEET)

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	NO. OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Seagulls			
Seabirds			
Waterfowl			
Gulls/Kittiwake			
Shorebirds			
Cormorants			
Other Birds			

LAND MAMMALS

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

Shoreline subdivision map showing important biological features attached.

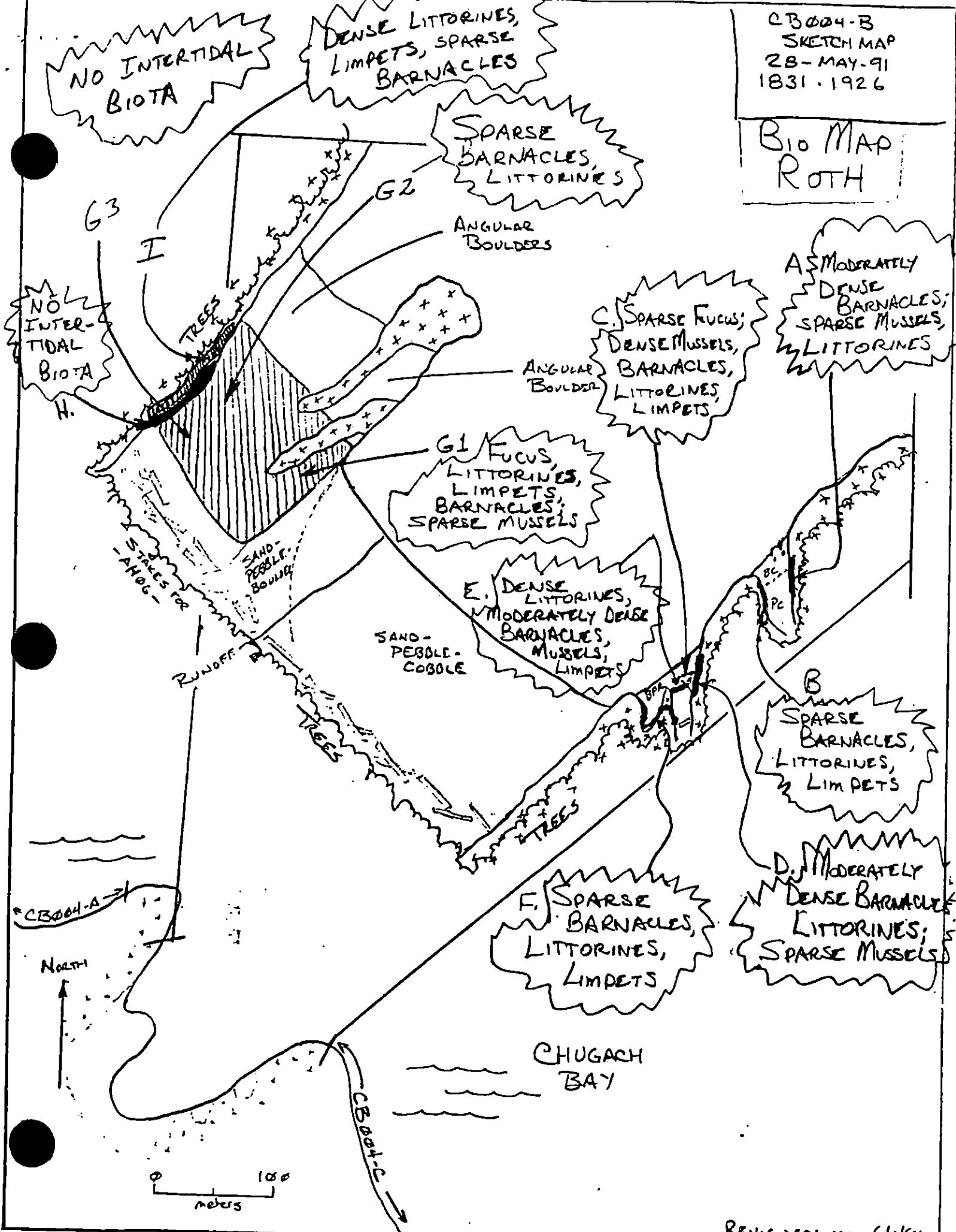
Reviewed: MC 61

CB004-B 28 MAY '91 Jim ROTH

GENERAL COMMENTS: A FAIRLY EXPOSED, CLEAN SAND-PEBBLE-COBBLE BEACH WITH A WELL-DEVELOPED INTER-TIDAL BIOTA ON ADJACENT BEDROCK OUTCROPPINGS. NO OBSERVATIONS COULD BE MADE IN THE LOWER INTERTIDAL ZONE. BIOTA APPEARS HEALTHY AND THRIVING. EVIDENCE OF RECENT RECRUITMENT WAS NOTED IN LITTORINES, BARNACLES, AND MUSSELS

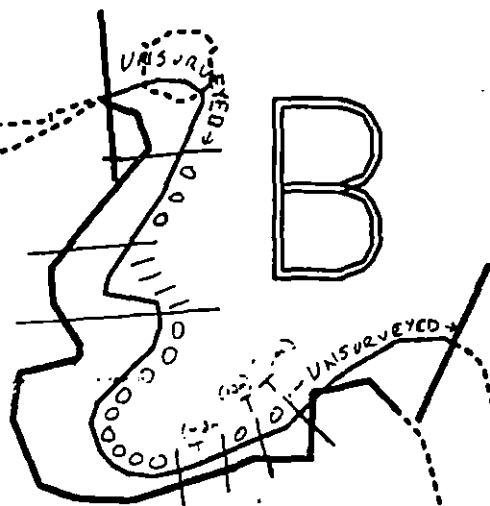
CB004-B
SKETCH MAP
28-MAY-91
1831-1926

Bio Map ROTH



REVIEWED: MC 6/1/91

A



B

C

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

CB004 B
 ADEC Subsegment Length: 479m
 METERS



Subdivision Field Map
 Map Key: KENC004B
 Name: Trim
 Date: 28-MAY-91
 Date Entered:

— SURFACE OIL CATEGORY MAP —

REVIEWED: MC 6/1/91
 REVISED 8/31/91 KG

1991 MAYSAP EVALUATION

SEGMENT: CB 004 SUB: C REGION: KEN SURVEY DATE: 5/28/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) Fish harvest area

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

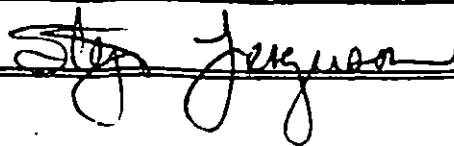
MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT CB004 SUBDIVISION C DATE MAY 28/91

ADEC

NAME STEVE FERGUSON

SIGNATURE

☐ NTR ☐ TREATMENT RECOMMENDED

TRACE OILING IN THE FORM OF STAIN, (ONE) TAR BALL AND 2 OIL SPLATTERED BOTTLES WERE OBSERVED. EVERYTHING EXCEPT THE STAIN WERE PICKED UP. NO TREATMENT RECOMMENDED

EXXON

NAME George P. Stiles

SIGNATURE

George P. Stiles 5/30/91☒ NTR

Trace mouse patches were picked up while surveying. No appreciable oil remaining.

LANDMANAGER

NAME JAT NORMAN OF Port Graham

SIGNATURE

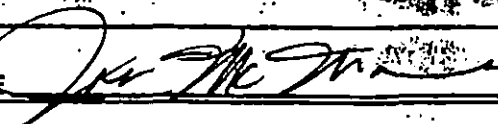
☒ NTR

remaining subsurface oil from ASAP was apparently washed out over the winter.

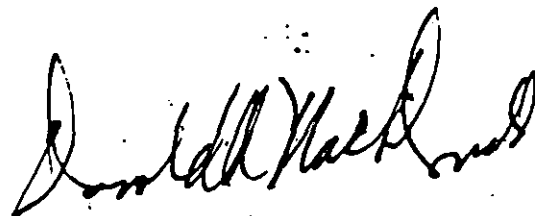
USCG/NOAA

NAME CUTL MC NATION

SIGNATURE

☒ NTR

Some mouse patches, picked up at site



PAGE 1 OF 1

SEGMENT CB004

SUBDIVISION C

DATE MAY 1 28 191

ENERGY LEVEL: ☒ H ☐ M ☐ L

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

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

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 1 m NO 129 m US 200 m

[illegible]

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

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

PHOTO ROLL # MAYSAP-4(III) - 13 FRAMES 2-4

[illegible]

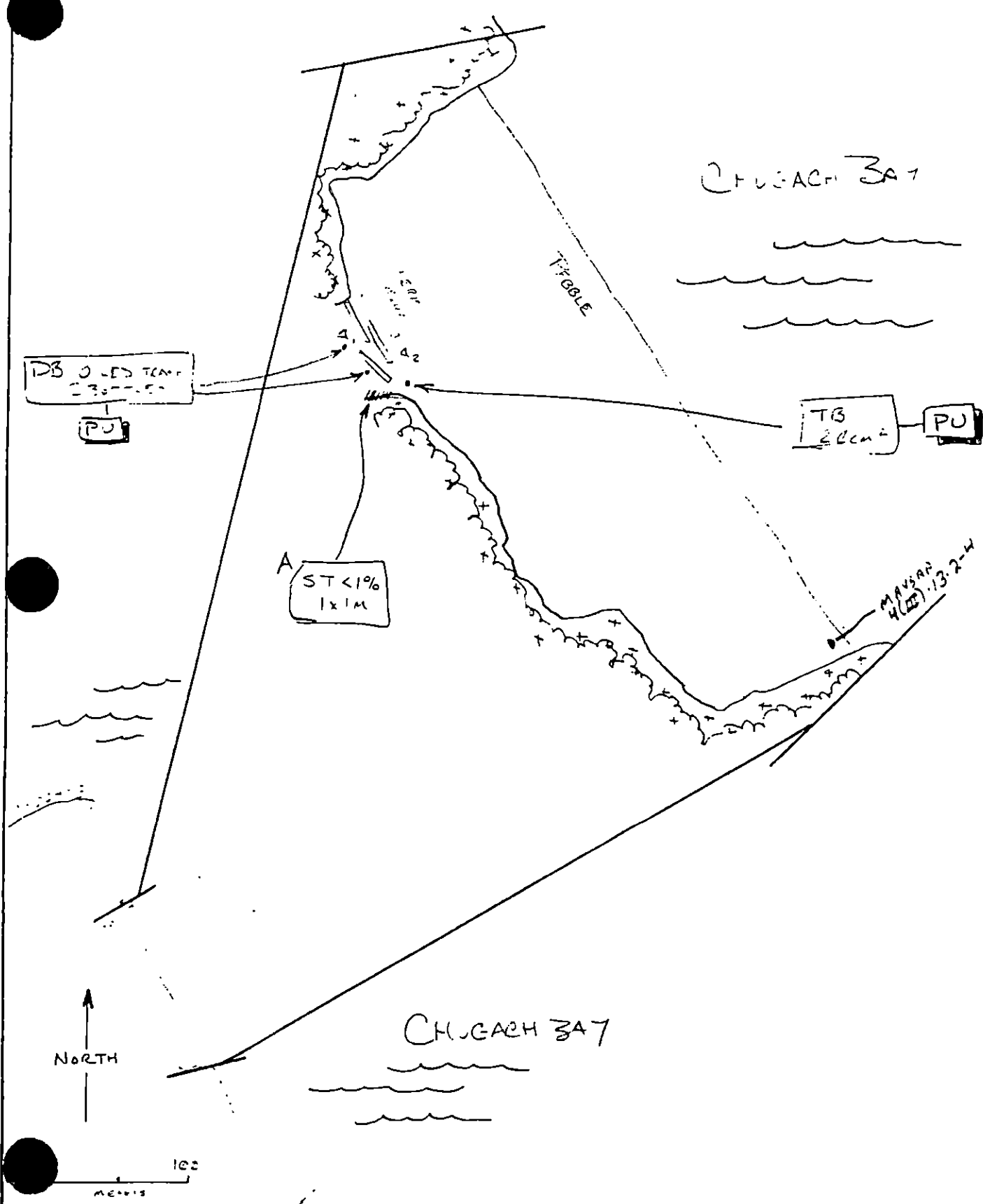
SHEEN COLOR: B = BROWN: R = RAINBOW: S = SILVER: N = NONE

OG COMMENTS:

ONLY A 1x1M TRACE OF STAIN ON A ROCK FACE!

REVIEWED: MS 6/1/91
revised 5/31/91 LG

5-54-2
 2- SKETCH MAP
 28-MAR-91
 513-183
 06 APR 1991



REVISOR: MC 611/91
 reviewed 5/31/91 KG

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 28 MAY 91
 SEGMENT # CB004 TIDAL HEIGHT(Range) +6.75 to +6.0
 SUBDIVISION C BIOLOGIST Jim ROTH
 AREA STATE 6" WIND SPEED/DIRECTION
 PHOTOGRAPHS: ROLL # FRAME #

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

A. HITE/SUPRA BEDROCK W/ MOSS, BEACHGRASS - NO
INTERTIDAL FAUNA.

GENERAL COMMENTS: A SMALL BEACH OF CLEAN GRAVEL AND SAND WITH BEDROCK FACES ON THE SIDES. IT IS A FAIRLY EXPOSED SITE AND HAS LITTLE INTERTIDAL BIOTA, EXCEPT ON THE BEDROCK FACES, WHICH HAVE A SPARSE GROWTH OF EUCUS, PATCHES OF MUSSELS, AND A NARROW BAND OF BARNACLES. NO OBSERVATIONS WERE MADE OF THE LOWER INTERTIDAL ZONE.

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS OF SPECIES TOTAL BIRDS FISH OBSERVED SPECIES PRESENT

Eagles			
Seabirds			
Wading Birds			
Gulls/Loons			
Shorebirds			
Other Birds			

LAND MAMMALS

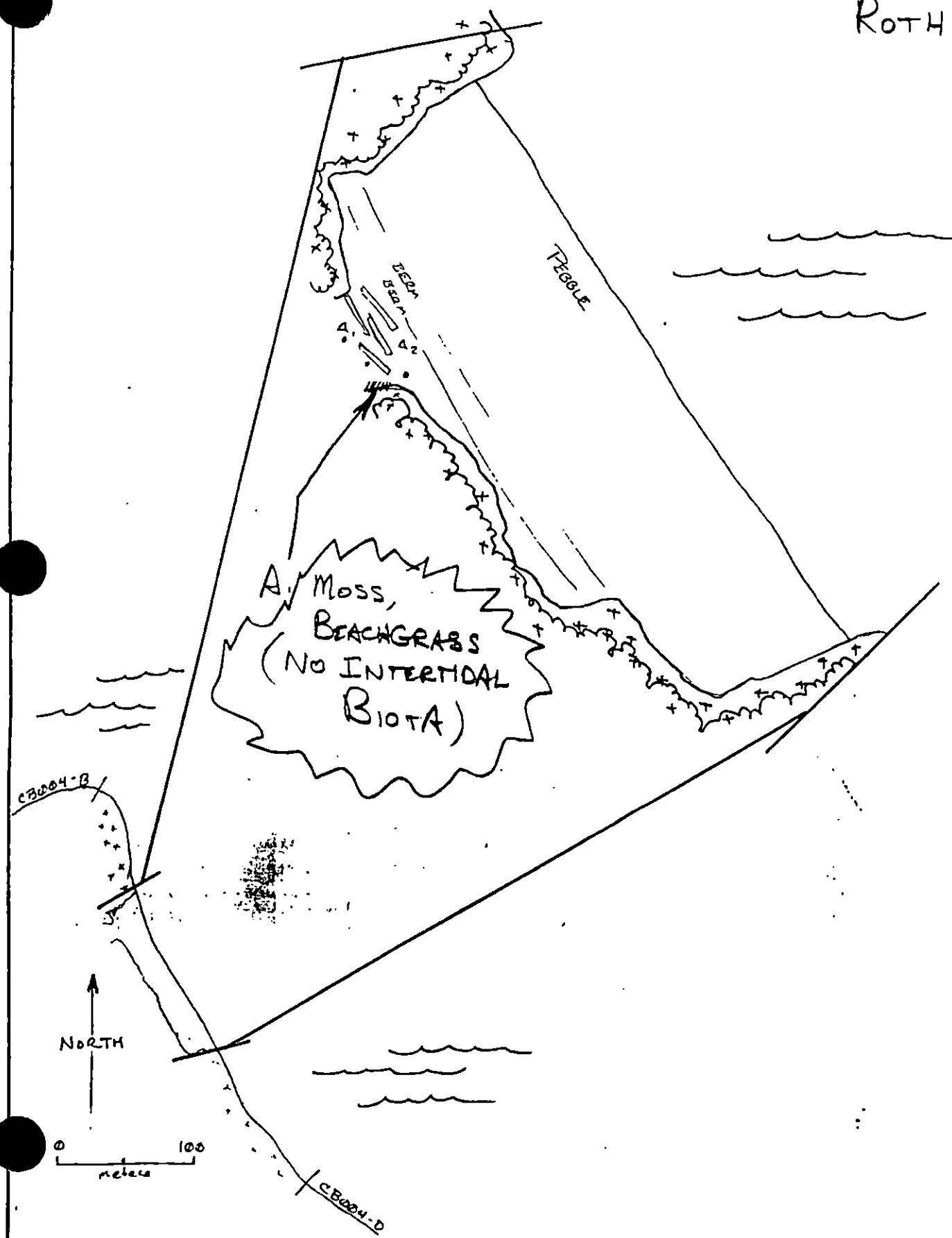
MARINE MAMMALS OBSERVED SPECIES OBSERVED

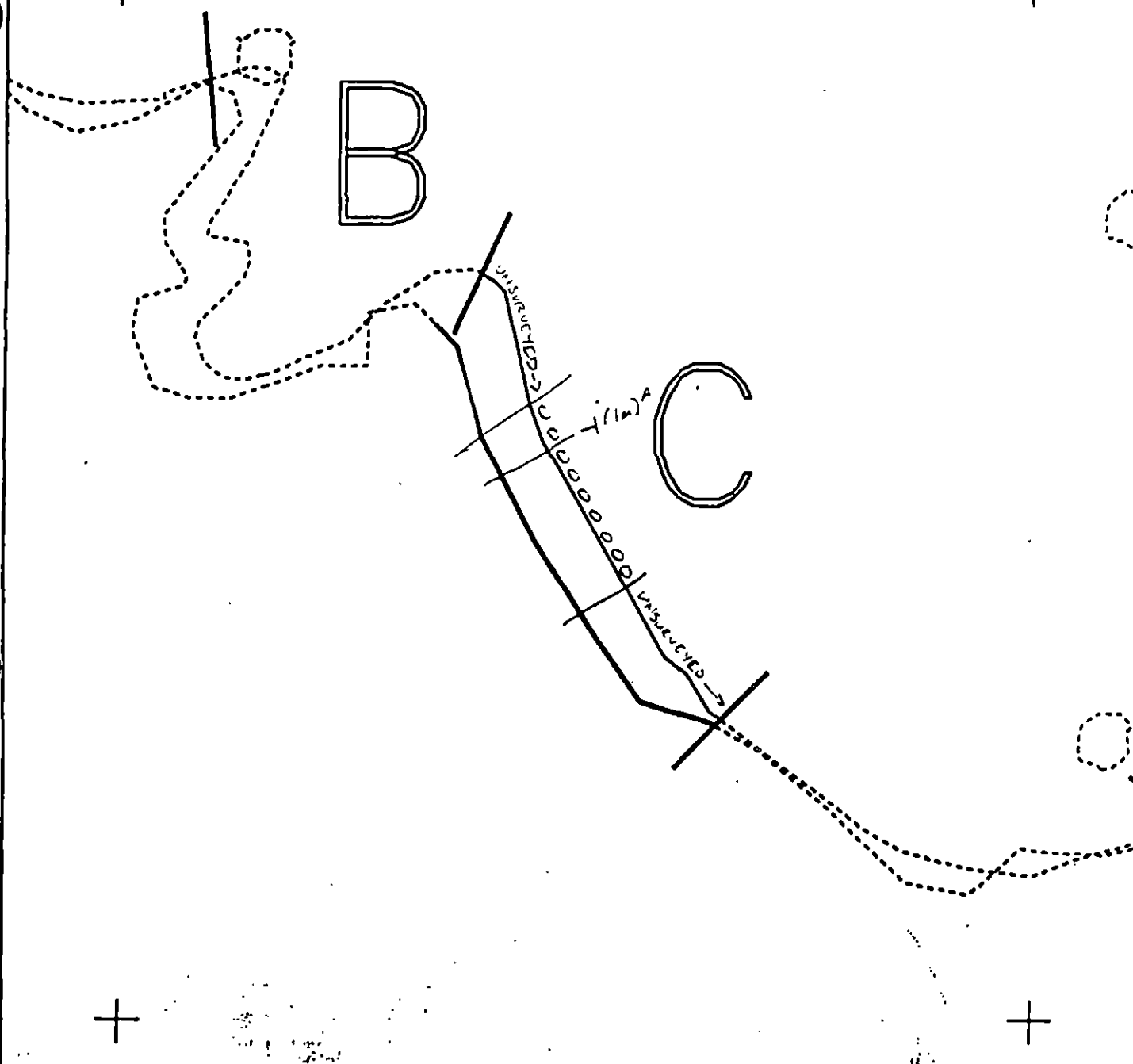
Sea Otters		
Pinnipeds (specify)		
Whales (specify)		

Shoreline subdivision map showing important biological features attached.

CB004-C
SKETCH MAP
28-MAY-91
1813-1831

Bio MAP
ROTH





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

CB004 C
 ADEC Subsegment Length: 330m
 METERS
 0 100 200
 AK State Plane Zone 4
 860804c

Subdivision Field Map
 Map Key: KENC004C
 Name: TRIMM
 Date: 28 MAY 91
 Date Entered:



1991 MAYSAP EVALUATION

SEGMENT: CB 004 SUB: E REGION: KEN SURVEY DATE: 5/27/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) Fish harvest area

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC

FOSC

EXXON

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

TEAM NO. 4 SEGMENT CB-004 SUBDIVISION IE DATE 5/27/91

ADEC
NAME Steve Ferguson SIGNATURE [Signature]

☒ NTR ☐ TREATMENT RECOMMENDED
AT SITE ~~A2~~ AP FOUND BENEATH LARGE BOULDERS AND COBBLE ALONG WITH COAT AND STAINS, (ALL OF IT) LOCATED ATOP HORIZONTAL BEDROCK. AP OIL PERCENTAGE WAS HARD TO GAGE DUE TO THE BOULDER ARMOUR OVER WHERE AP IS LOCATED.

EXXON
NAME George P. Stilos SIGNATURE George P. Stilos 5/27/91

☒ NTR Some oiling remains under the large boulders but recovery would be impossible due to the size of the boulders and the low percentage remaining.

NDMANAGER
NAME Pat Noeman OF Port Beach SIGNATURE Pat Noeman

☒ NTR Its hard to determine how much oil remains under the large boulder and cobble. However the AP that we did see on the edges and in between some of the cobble indicates to me that there is more here than what we were able to see.

USCG/NOAA
NAME [Signature] SIGNATURE [Signature]

☒ NTR very weathered AP mouse under very large boulders, highly impractical to clean.

[Signature]

OG J. R. Sempel
ADEC S. Ferguson
EXON G. Stiles

LANDMANAGER P. Norman for Pent. Cadman
USCG/NOAA Mahem / D McDonald

SUBDIVISION 5

DATE May 127 191

TIME 08:30 to 09:07

TIDE LEVEL -1 ft. to 0 ft.

ENERGY LEVEL: ☒ H ☐ M ☐ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 134 m

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

EST. OIL CATEGORY LENGTH: W m M m N m VL 41 m NO 9.3 m US m

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP-4(III) - 12 FRAMES 2-8

[illegible]

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

OG COMMENTS:

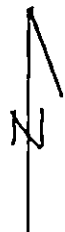
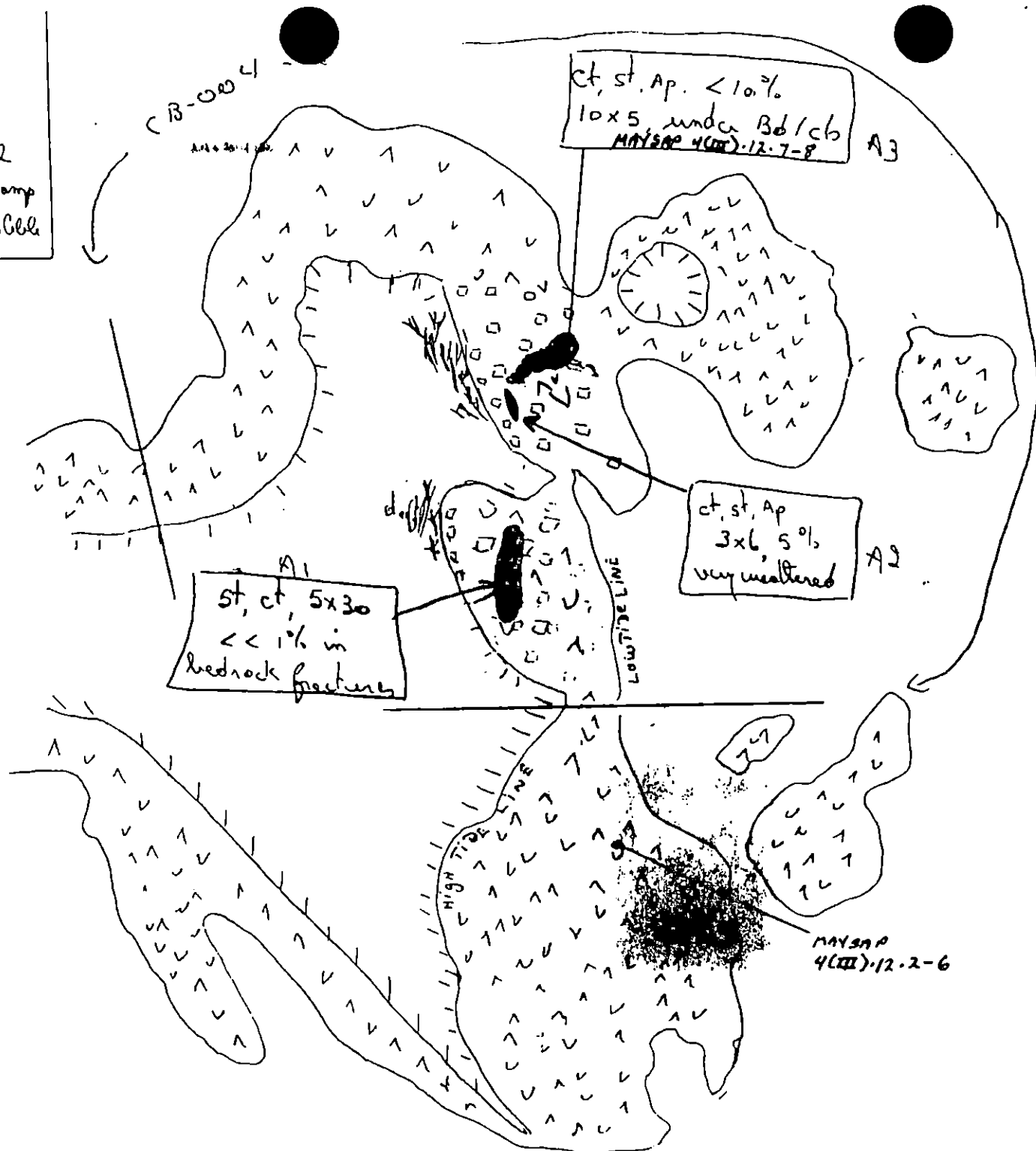
See map.

Revised: MC 5/31/91
revised 5/30/91 RG

SK Map
 CB-004-E
 17 Samples
 May 27/91
 0830 - 0907

Legend
 [hatched] Bedrock
 [wavy] Intertidal
 Bedrock ramp
 [square] Boulder/cobble

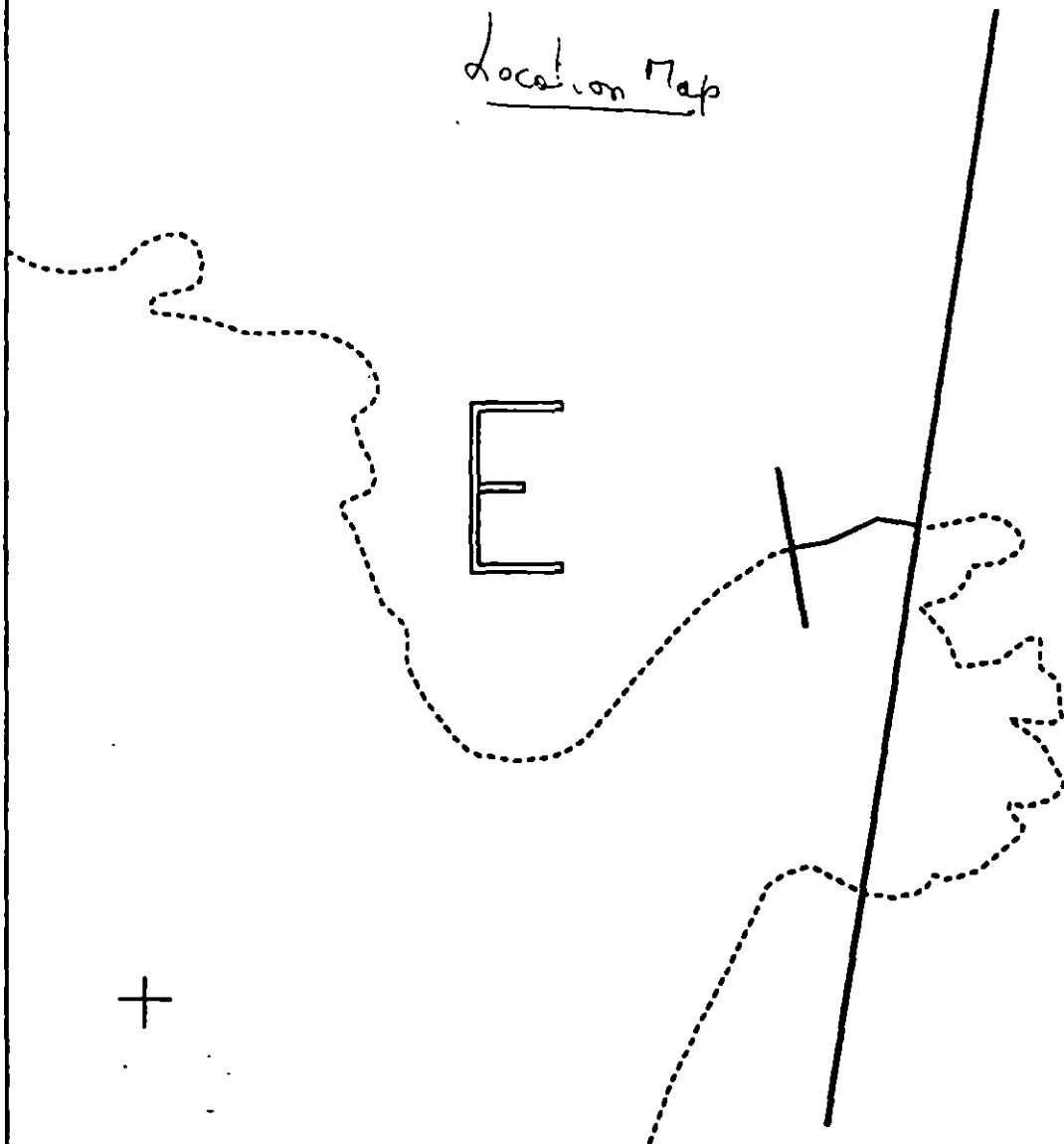
Bedrock Reelband
 partly as an intertidal
 ramp. with vertical
 abundant fractures
 and jagged topography
 Includes 2 areas with
 rounded cobbles / boulders /
 pebbles with ois as
 indicated →



0 20
 meters

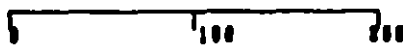
Reviewed 5/20/91
 Revisited 5/20/91

Location Map



CB004 E

METERS



AK State Plane Zone 4
60000400

Subdivision Field Map

Map Key: KENC004Ee

Name: J. M. Seampus

Date: May 22 / 91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 27 May 91
 SEGMENT # CB 004 TIDAL HEIGHT(Range) -1.20 TO -0.35
 SUBDIVISION E BIOLOGIST Jim Roth
 SEA STATE 1 ft WIND SPEED/DIRECTION
 PHOTOGRAPHS: ROLL # FRAME #

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

A1 - HITE BEDROCK W/ VERRUCARIA, OTHER LICHENS
 A2 - BOULDERS/COBBLE IN HITE W/ BEACH GRASS, VERRUCARIA.
 A3 - LOCALLY DENSE MUSSELS, MODERATE BARNACLES AND LITTORINES IN PROTECTED CRACKS + CREVICES.

GENERAL COMMENTS: AN EXPOSED SITE. MOST OF THE INTERTIDAL BIOTA IS LIMITED TO PROTECTED MICROHABITATS. IN THE MIDDLE ZONE LITTORINES AND LIMPETS ARE ABUNDANT WITHIN THE SPARSE FUCUS HOLDFASTS, BUT SCARCER ELSEWHERE ON BOULDERS AND COBBLES. AS IS THE CASE WITH SHORELINES EXPOSED TO STRONG WAVE ENERGY, THE INTERTIDAL BIOTA IS SHIFTED UPWARD SOMEWHAT AS IN THE CASE OF SITE A1 ON MAP, WHERE MUSSELS, BARNACLES AND LITTORINES OCCUPY THE HIGHER INTERTIDAL ZONE.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

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

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

Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 3/31/91

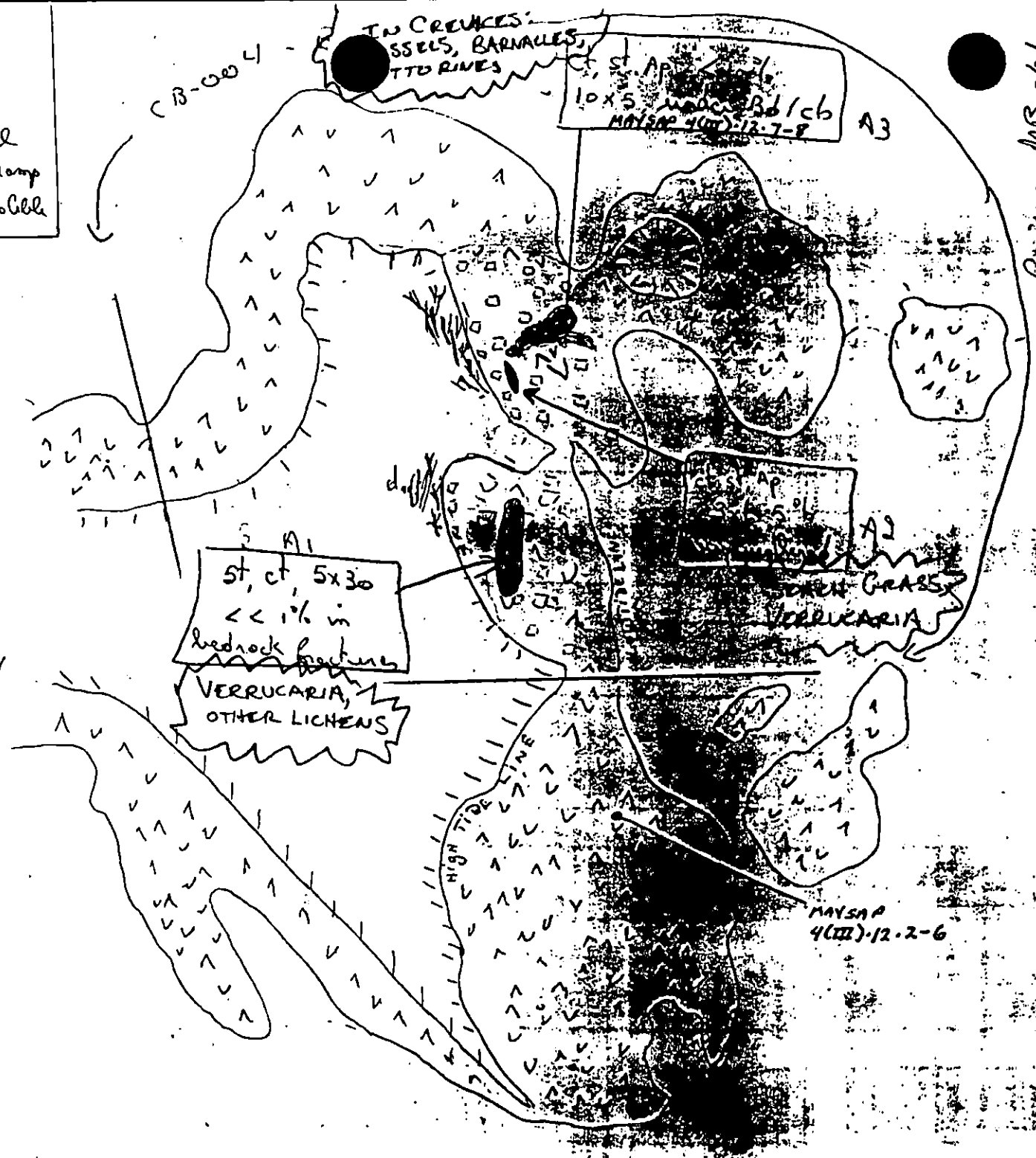
09 SKETCH MAP

CB-004-1
 71 Samples
 7 Aug 27/91
 0830 - 0907

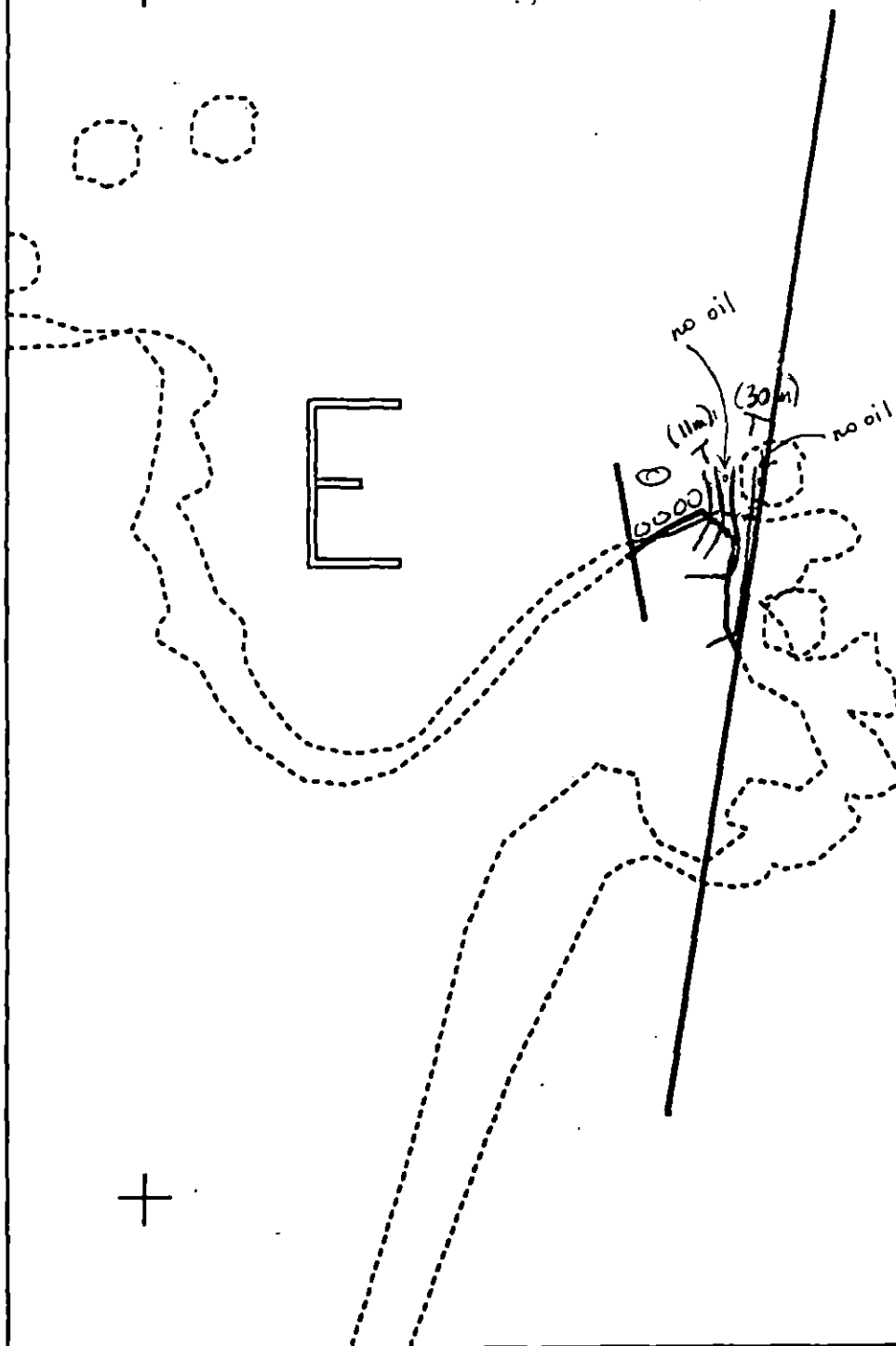
Legend

-  Bedrock
-  Intertidal Bedrock ramp
-  Boulder/Cobble

Bedrock Reeland
 partly as an intertidal
 ramp, with vertical
 abundant fractures
 and jagged topography
 Includes 2 areas with
 rounded cobbles / boulders /
 pebbles with ool as
 indicated ->



Reiniger MB 5/31/91



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

CB004 E

ADEC Subsegment Length: 134m

METERS

0 100 200

AK State Plane Zone 4
NAD83



Subdivision Field Map

Map Key: KENC004E

Name: J M Sempel

Date: May 31/91

Date Entered:

Revises: MC 5131/91
 Revised 5/30/91 EG

1991 MAYSAP EVALUATION

SEGMENT: CB 004 SUB: B REGION: KEN SURVEY DATE: 5/28/91**ENVIRONMENTAL SENSITIVITIES:**Work Window(s) OPENEcological/Constraints (see page two for details) Fish harvest area**ARCHAEOLOGICAL CONSTRAINTS:**

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

SHPO Signature: Timothy A. Smith Date: 6/07/91**RECOMMENDATIONS:**

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

NNN

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: JUNE 7 1991FOSC APPROVAL DATE: 6/14/91

ADEC

FOSC

EXXON

USCG

NOAA

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

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT CB004 SUBDIVISION B DATE MAY 28 1991

EC

NAME Steve FergusonSIGNATURE [Signature]☐ NTR☒ TREATMENT RECOMMENDED

MANUAL TREATMENT. RECOMMENDED FOR SITES H AND h OF MS AND SOR.H (SEE SKETCH MAP). BOTH OF THESE SITES ARE PROTECTED BY HORIZONTAL BEDROCK BUNKERS THAT EXTEND DOWN TOWARDS THE SHORELINE. DUE TO THIS FACT, NATURAL DISPLACEMENT OF THE MS/SOR.H WILL OCCUR OVER A LONG PERIOD OF TIME. THUS ADDITIONAL CLEAN-UP WILL ENHANCE THE TOTAL RECOVERY TIME OF THESE AREAS. ALSO SPOT CHECK SITES E AND C (ONLY PARTIAL PICKUP WAS DONE) FOR ANY REMAINING MS AND SOR.H WHICH COULD BE REMOVED.

EXXON

NAME George P. StilesSIGNATURE George P. Stiles 5/29/91☐ NTR

Hvy. SOR & MS found in crevices, between boulders and beneath the arrow layer at areas G & H.

LANDMANAGER

NAME Pat Norman OF Port GrahamSIGNATURE Pat Norman☐ NTR☒ treatment recommended.

manual pick up of MS/SOR in H, G, E, C on OG sketch map. I think there is more oil here than what we actually mapped

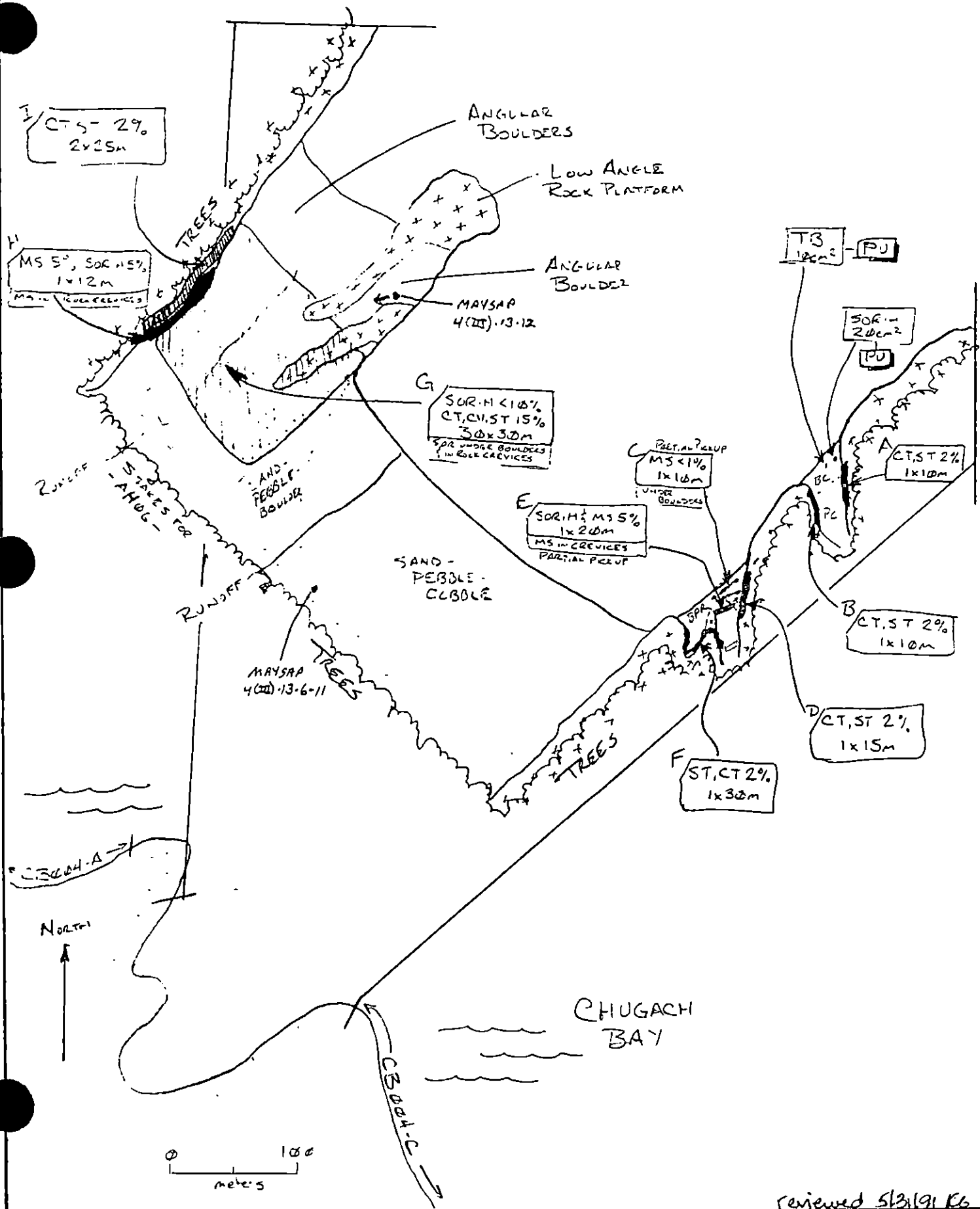
USCG/NOAA

NAME W. J. Mc MathonSIGNATURE [Signature]☒ NTR

spading mouse (small) found; picked-up at site.

[Signature]

2B204-B
 OG SKETCH MAP
 28-MAY-91
 1831-1726
 BRYAN IZIMIN



reviewed 5/31/91 K6
 REVIEWED: MC 6/1/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 28 MAY 91
 SEGMENT # C B 004 TIDAL HEIGHT (Range) +6.0 to +4.1 FT
 SUBDIVISION B BIOLOGIST Jim Roth
 SEA STATE 6" WIND SPEED/DIRECTION _____
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

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

- A. BEDROCK FACE W/ MODERATELY DENSE BARNACLES; SPARSE MUSSELS, LITTORINES.
 B. BEDROCK FACE W/ SPARSE BARNACLES, LITTORINES, LIMPETS.
 C. BOULDERS, COBBLE IN MITE, W/ SPARSE FUCUS; DENSE MUSSELS, BARNACLES, LITTORINES, LIMPETS.
 D. BEDROCK FACE W/ MODERATELY DENSE BARNACLES, LITTORINES; SPARSE MUSSELS.
 E. BOULDERS, COBBLE, BEDROCK CREVICES W/ DENSE LITTORINES, MODERATELY DENSE BARNACLES, MUSSELS, LIMPETS.
 F. BEDROCK FACE W/ SPARSE BARNACLES, LITTORINES, LIMPETS.
 G. BOULDER, COBBLE BEDROCK CREVICES
 G1 - FUCUS, LITTORINES, LIMPETS, BARNACLES; SPARSE MUSSELS.
 G2 - SPARSE BARNACLES, LITTORINES
 G3 - NO INTERTIDAL BIOTA
 H. BOULDER COBBLE, BEDROCK CREVICES W/ NO INTERTIDAL BIOTA AT SOUTHWEST END OF OILED INTERVAL, AND SPARSE BARNACLES, LITTORINES TOWARD NORTH EAST.
 I. BOULDER, COBBLE, BEDROCK CREVICES W/ DENSE LITTORINES, LIMPETS, SPARSE BARNACLES.

GENERAL COMMENTS: (SEE ATTACHED SHEET)

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/Kittiwakes			
Shorebirds			
Cormorants			
Other Birds			

LAND MAMMALS

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

Shoreline subdivision map showing important biological features attached.

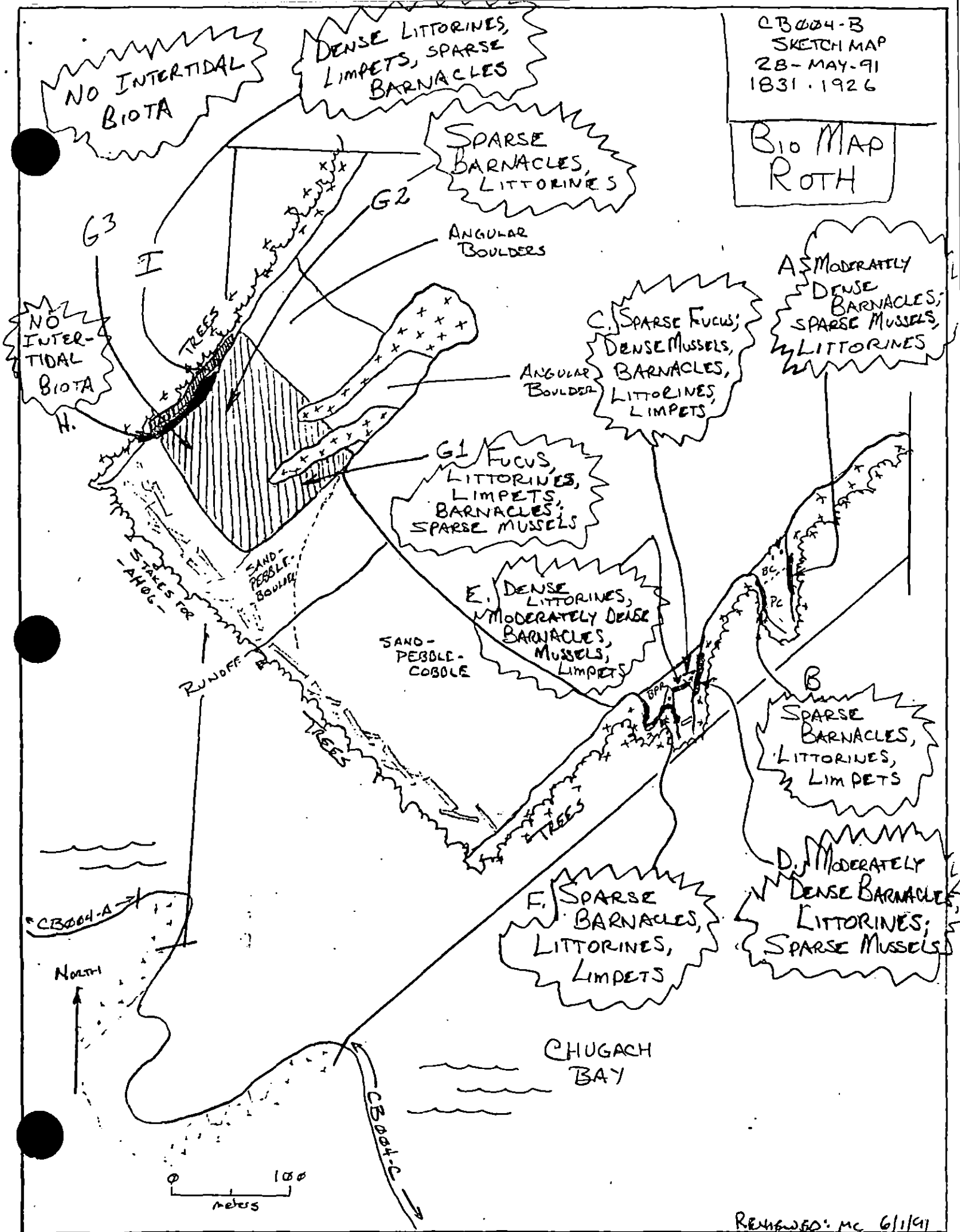
Reviewed: MC 6/11
 101-8 101191 No

CB004-B 28 MAY '91 Jim ROTH

GENERAL COMMENTS: A FAIRLY EXPOSED, CLEAN SAND-PEBBLE-COBBLE BEACH WITH A WELL-DEVELOPED INTER-TIDAL BIOTA ON ADJACENT BEDROCK OUTCROPPINGS. NO OBSERVATIONS COULD BE MADE IN THE LOWER INTERTIDAL ZONE. BIOTA APPEARS HEALTHY AND THRIVING. EVIDENCE OF RECENT RECRUITMENT WAS NOTED IN LITTORINES, BARNACLES, AND MUSSELS

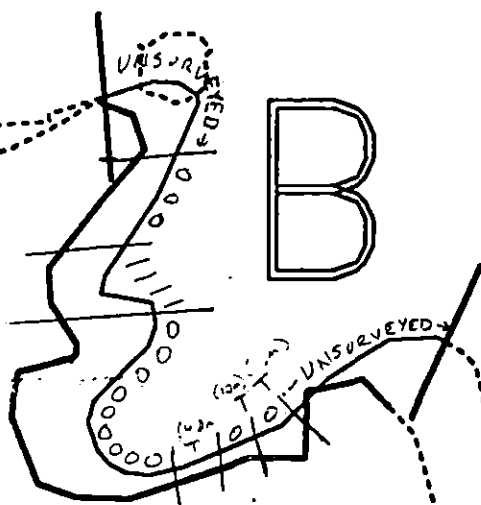
CB004-B
SKETCH MAP
28-MAY-91
1831-1926

Bio Map
ROTH



REVIEWED: MC 6/1/91

A



B

C

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

CB004 B
 ADEC Subsegment Length: 479m
 METERS

AK State Plane Zone 4
 8250845



Subdivision Field Map
 Map Key: KENC004B
 Name: TRIMM
 Date: 28-MAY-91
 Date Entered:

- SURFACE OIL CATEGORY MAP -

REVIEWED: MG 6/1/91
 revised 5/31/91 KG

1991 MAYSAP EVALUATION

SEGMENT: CB 004 **SUB:** A **REGION:** KEN **SURVEY DATE:** 5/28/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) Fish harvest area

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Timothy A. Smith

Date: 6/07/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

N

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: JUNE 7 1991

FOSC APPROVAL DATE: 6/14/91

ADEC

FOSC

EXXON

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

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT C3004 SUBDIVISION A DATE MAY 28/91

ADEC

NAME Steve Ferguson

SIGNATURE

☒ NTR ☐ TREATMENT RECOMMENDED

BEACH POCKET JUST BEFORE SEA ARCH HAD MS/HOR CONTAINED WITHIN SOR-H AREA OF SITE B. THE 1m X 1m MS/HOR WAS PICKED UP WITH A PARTIAL PICK-UP OF THE SOR-H OF SITE B.

EXXON

NAME George P. Stiles

SIGNATURE

George P. Stiles 5/29/91

☒ NTR No appreciable oil remaining.

LANDMANAGER

NAME Pat Norman OF Port Graham

SIGNATURE

Pat Norman

☒ NTR we checked eastern portion of this segment oil found was picked up. There still will be remaining sor in this portion.

USCG/NOAA

NAME McMahon/McDonald

SIGNATURE

Joe McMahon

☒ NTR

Some murre in large boulders, cattle posted - up at site

PAGE 1 OF 1

OG B. Trimm

BIO. J ROTH

SEGMENT CB004

MADEC S Ferguson

LANDMANAGER P. Noeman: for PT Graham

SUBDIVISION A

EXXON G STILES

USCG/NOAA McMahon/McDonald

DATE May, 28, 191

TIME 19:35 to 20:00

TIDE LEVEL 3.77 ft. to 3.39 ft.

ENERGY LEVEL: ☒ H ☐ M ☐ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 100 m

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

EST. OIL CATEGORY LENGTH: W Ø m M Ø m N Ø m VL 35 m NO 65 m US 495 m

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 4(III) - 13 FRAMES 19

№ 02.75

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

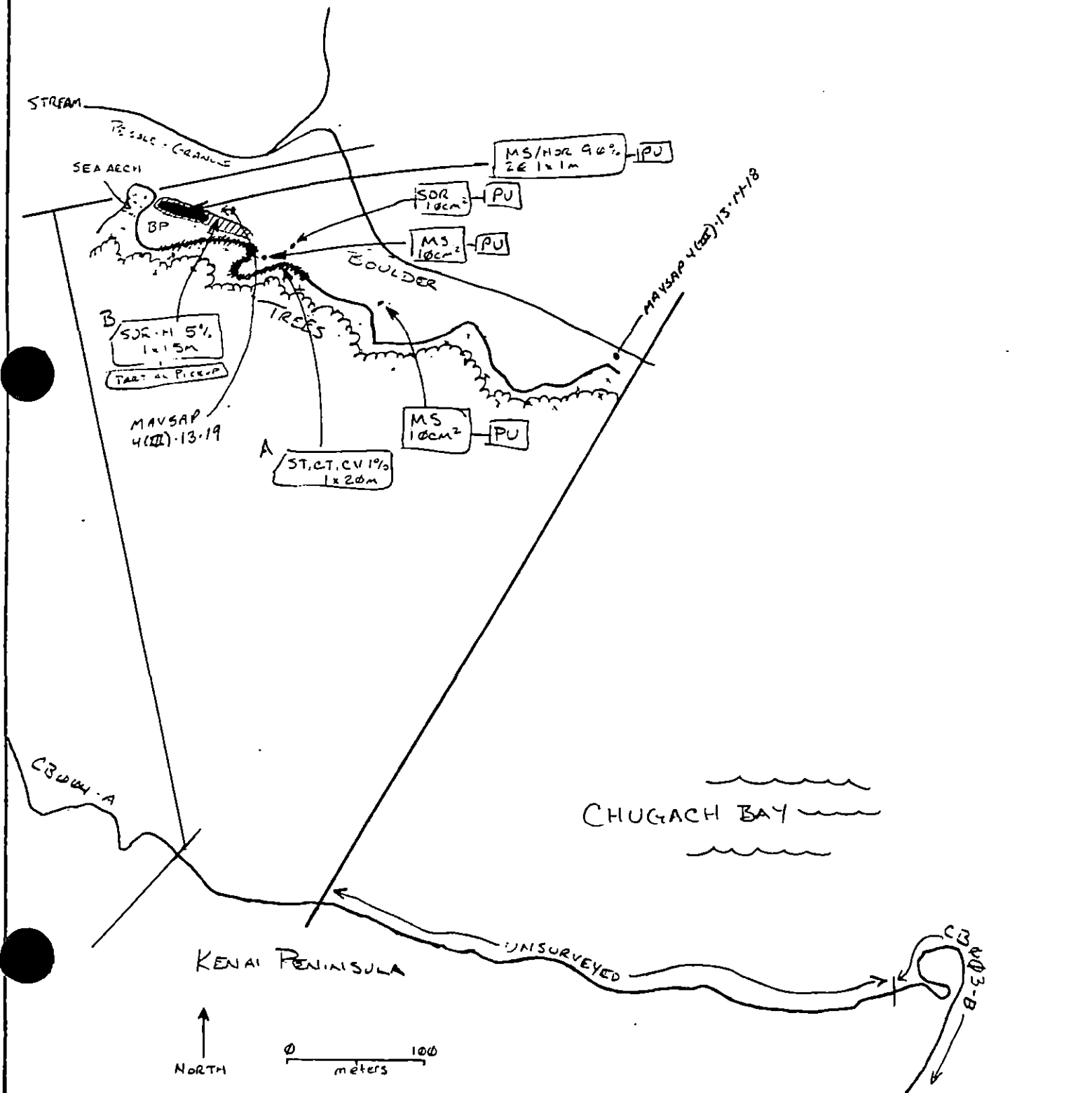
LOG COMMENTS:

- HOK FOUND WHEN MOUSSE WAS UNDER BOULDER VENTIL

- SITE AT STREAM MOUTH $\frac{1}{2}$ ADJACENT TO SEA ARCH

REVIEWED: 6/1/91 MC
reviewed 5/31/91 KG

CB004-A
 OG SKETCH MAP
 28 MAY 91
 1935 - 2000
 BRYAN TRIMM



REVIEWED: 6/1/91 MC reviewed 5/31/91 KC

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #

4

DATE

28 MAY 91

SEGMENT #

CB 004

TIDAL HEIGHT(Range)

+3.95 to 3.39

SUBDIVISION

A

BIOLOGIST

Jim ROTH

SEA STATE

6^A

WIND SPEED/DIRECTION

PHOTOGRAPHS: ROLL #

FRAME #

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

- A. BEDROCK CLIFF W/ DENSE LITTORINES; LIMPETS, BARNACLES.
B. BOULDERS W/ DENSE LITTORINES; MODERATELY DENSE BARNACLES, LIMPETS; SCARCE MUSSELS.

GENERAL COMMENTS: THIS IS A BOULDER/COBBLE BANK WITH BEDROCK CLIFFS BEHIND. BARNACLES ARE DENSE ON CLIFF AND LARGER BOULDERS, ALONG WITH MUSSELS, LITTORINES AND LIMPETS. MOST OF THE FOCUS ZONE COULD NOT BE SEEN AT THIS TIDE. A HEALTHY AND THRIVING INTERTIDAL COMMUNITY WITH EVIDENCE OF RECENT RECRUITMENT IN MUSSELS AND LITTORINES.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

OF SPECIES

TOTAL BIRDS

FISH OBSERVED
SPECIES PRESENT

Eagles			
Seabirds			
Waterfowl			
Gulls/Kittiwakes			
Shorebirds			
Cormorants			
Other Birds			

MARINE MAMMALS

OBSERVED

LAND MAMMALS

SPECIES

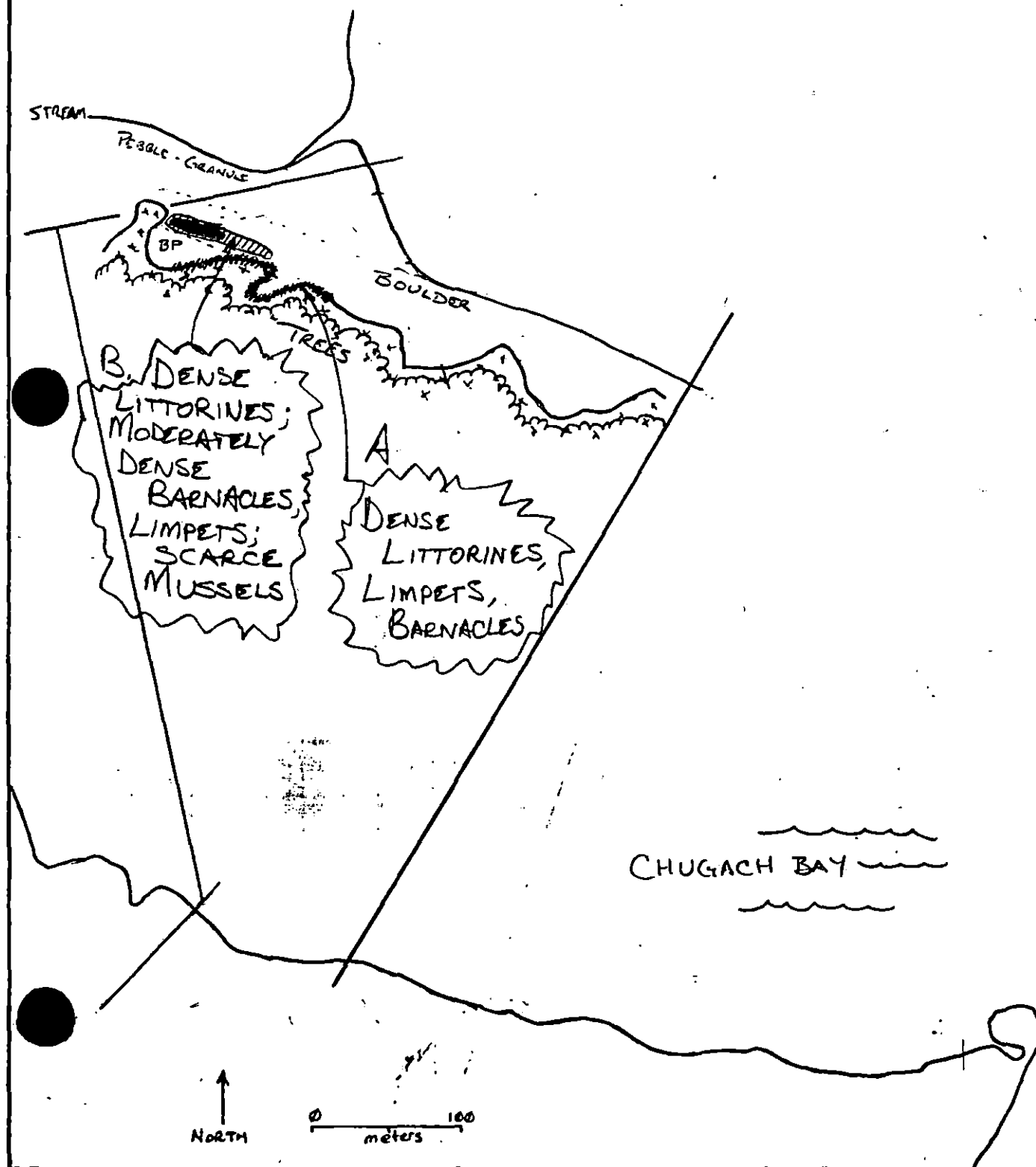
OBSERVED

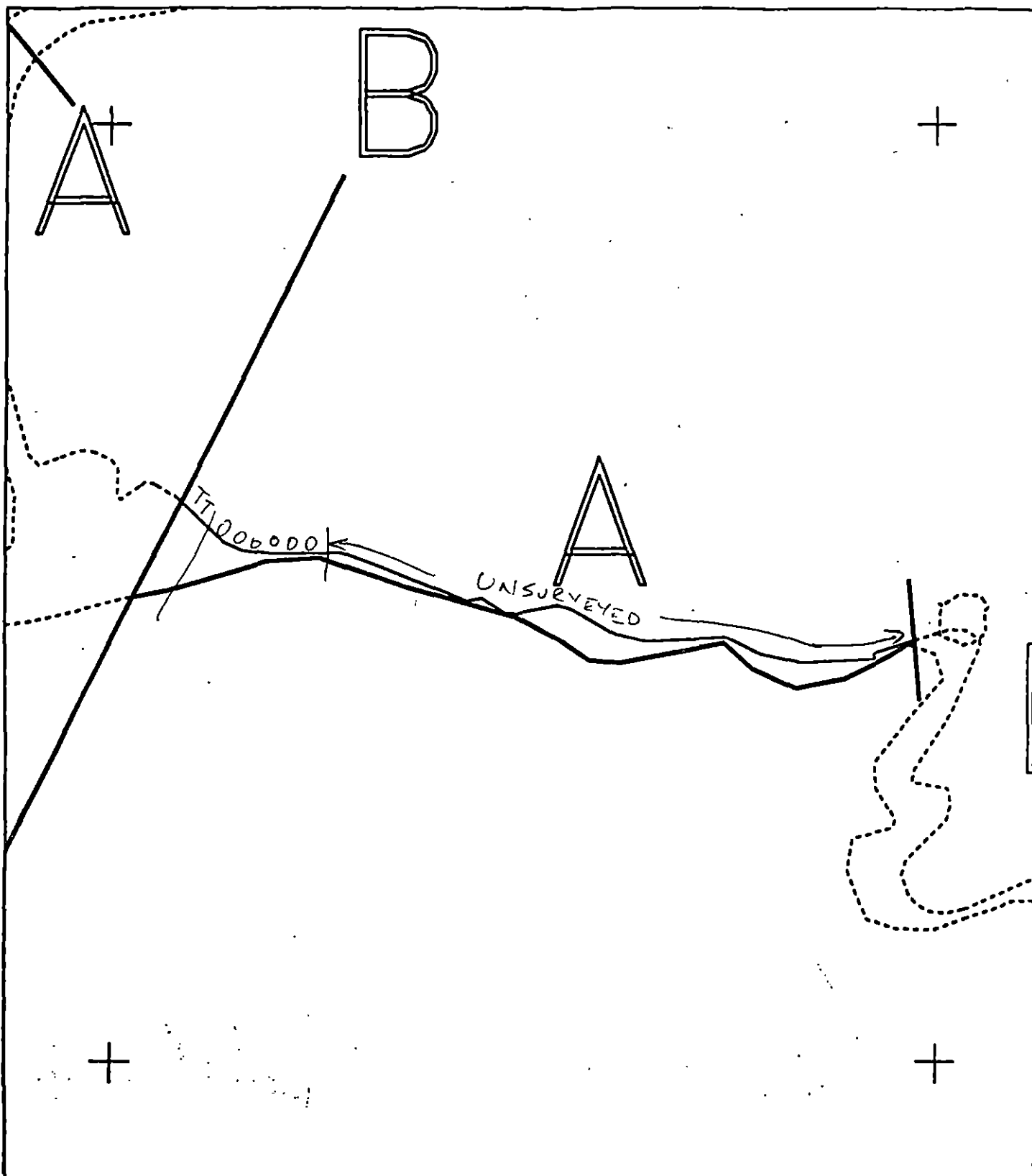
Sea Otters			
Pinnipeds (specify)			
Cetaceans (specify)			

Shoreline subdivision map showing important biological features attached.

CB004-A
SKETCH MAP
28-MAY-91
1935-2000

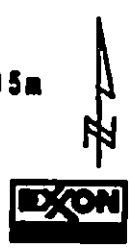
Bio Map ROTH





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

CB004 A
 ADEC Subsegment Length: 595m
 METERS
 0 100 200
 AK State Plane Zone 4
 860846



Subdivision Field Map
 Map Key: KENC004A
 Name: Trimn
 Date: 28-May-91
 Date Entered:

- SURFACE OIL CATEGORY Map -

REVIEWED: MC 6/1/91
 reviewed 5/31/91 RG

1991 MAYSAP EVALUATION

SEGMENT: CB 004 SUB: E REGION: KEN SURVEY DATE: 5/27/91ENVIRONMENTAL SENSITIVITIES:Work Window(s) OPENEcological/Constraints (see page two for details) Fish harvest areaARCHAEOLOGICAL CONSTRAINTS:If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.SHPO Signature: Timothy SmithDate: 6/07/91RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

NNN

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: JUNE 7 1991FOSC APPROVAL DATE: 6/14/91

ADEC

FOSC

EXXON

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

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

MAYSAP FIELD SHORELINE COMMENT SHEET

57

TEAM NO. 4 SEGMENT CB-004 SUBDIVISION IE DATE 5/27/91

ADEC

NAME Steve FergusonSIGNATURE [Signature]☒ NTR☐ TREATMENT RECOMMENDED

AT SITE #2 AP FOUND BENEATH LARGE BOULDERS AND COBBLE ALONG WITH COAT AND STAINS, (ALL OF IT) LOCATED ATOP HORIZONTAL BEDROCK. AP OIL PERCENTAGE WAS HARD TO GAGE DUE TO THE BOULDER ARMOUR OVER WHERE AP IS LOCATED.

EXXON

NAME George P. StilesSIGNATURE [Signature] 5/27/91☒ NTR

Some oiling remains under the large boulders but recovery would be impossible due to the size of the boulders and the low percentage remaining.

LANDMANAGER

NAME Pat NormanOF Port BeckonSIGNATURE [Signature]☒ NTR

Its hard to determine how much oil remains under the large boulder and cobble. However the AP that we did see on the edges and in between some of the cobble indicates to me that there is more here than what we were able to see.

USCG/NOAA

NAME Mr. Michael McDonaldSIGNATURE [Signature]☒ NTR

very weathered AP mouse under very large boulders, highly impractical to clean.

[Signature]

log SKETCH Map

CB-004-E

7 Samples

May 27/91

0830 - 0907

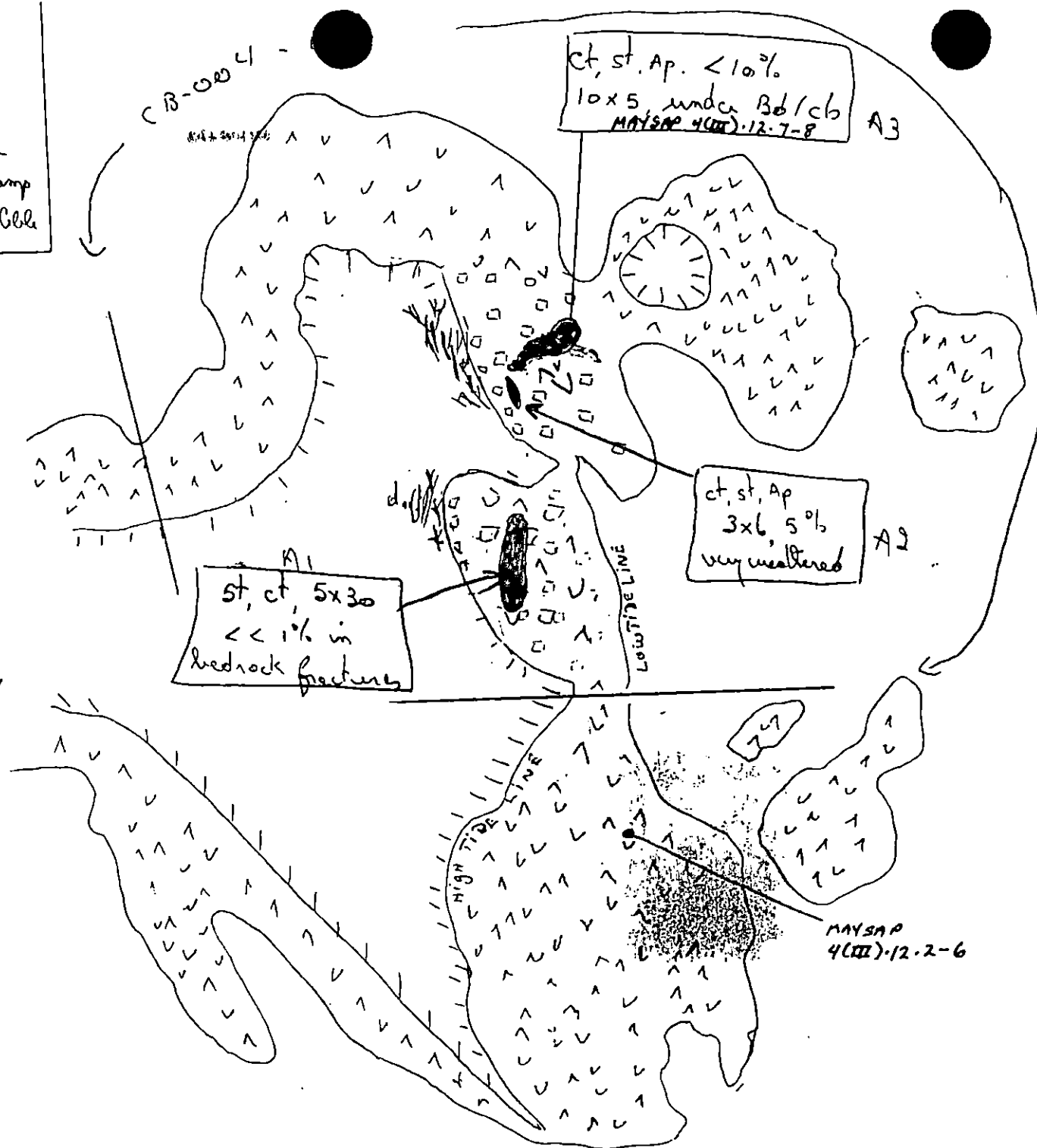
Legend

[---] Bedrock

[v] Intertidal
Bedrock ramp

[□] Boulder/Cobble

Bedrock Reeland,
partly as an intertidal
ramp. with vertical i
abundant fractures
and jagged topography
Includes 2 areas with
rounded cobbles / boulders /
pebbles with ois as
indicated ->



Revised 5/30/91
Reviewed 5/30/91
Reviewed 5/30/91

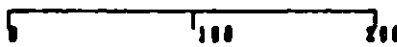
Location Map

E



CB004 E

METERS



AK State Plane Zone 4
8000400

Subdivision Field Map

Map Key: KENC004E

Name: JM Semple

Date: May 22 / 91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 27 May 91
 SEGMENT # CB 004 TIDAL HEIGHT(Range) -1.20 to -0.35
 SUBDIVISION E BIOLOGIST Jim Roth
 SEA STATE 1 ft WIND SPEED/DIRECTION
 PHOTOGRAPHS: ROLL # FRAME #

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

A1 - HITE BEDROCK W/ VERRUCARIA, OTHER LICHENS
 A2 - BOULDERS/COBBLE IN HITE W/ BEACH GRASS, VERRUCARIA.
 A3 - LOCALLY DENSE MUSSELS, MODERATE BARNACLES AND LITTORINES IN PROTECTED CRACKS + CREVICES.

GENERAL COMMENTS: AN EXPOSED SITE. MOST OF THE INTERTIDAL BIOTA IS LIMITED TO PROTECTED MICROHABITATS. IN THE MIDDLE ZONE LITTORINES AND LIMPETS ARE ABUNDANT WITHIN THE SPARSE EUCUS HOLDFASTS, BUT SCARCE ELSEWHERE ON BOULGERS AND COBBLES. AS IS THE CASE WITH SHORELINES EXPOSED TO STRONG WAVE ENERGY, THE INTERTIDAL BIOTA IS SHIFTED UPWARD SOMEWHAT, AS IN THE CASE OF SITE A1 ON MAP, WHERE MUSSELS, BARNACLES AND LITTORINES OCCUPY THE HIGHER INTERTIDAL ZONE.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

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

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

Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/31/91

09 SKETCH MAP

CB-004-E

77 Samples

7 Aug 27/91

0830 - 0907

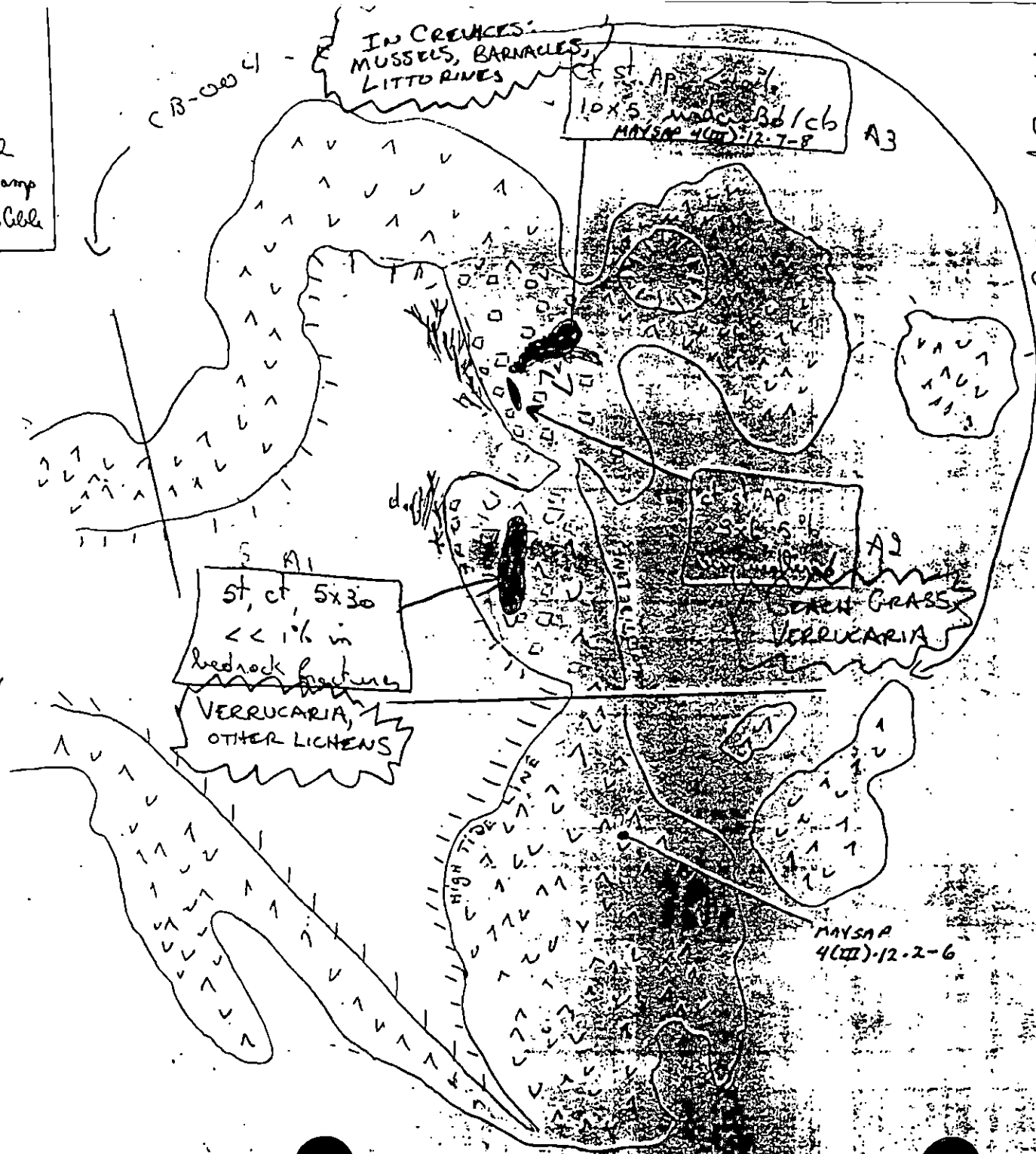
Legend

 Bedrock

 Intertidal
Bedrock ramp

 Boulder/Cobble

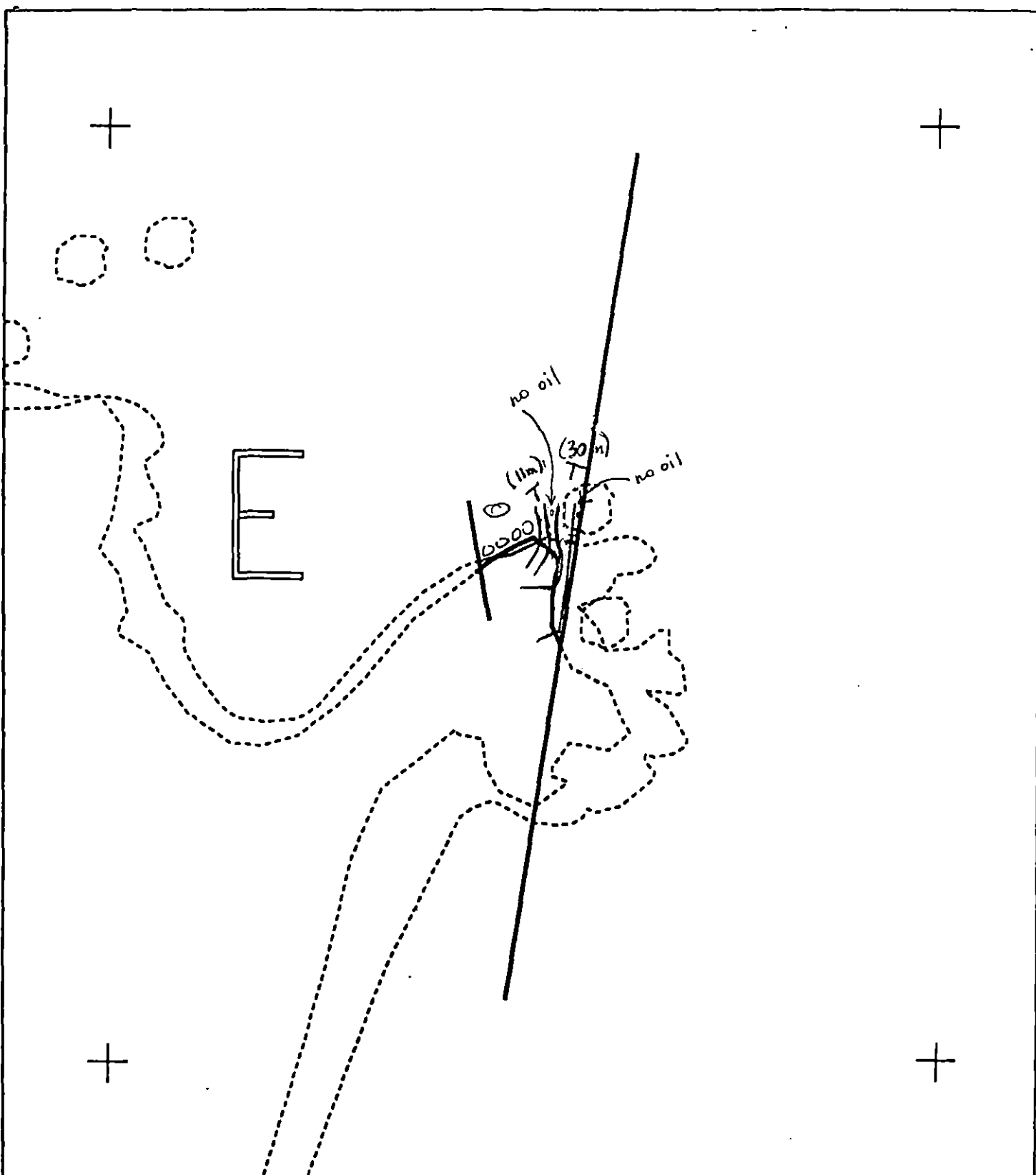
Bedrock headland
partly as an intertidal
ramp. with vertical
abundant fractures
and jagged topography
Includes 2 areas with
rounded cobbles/boulders/
pebbles with ool as
indicated ->



Revised MBS 5/1/91



0 20
Meters



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

CB004 E

ADEC Subsegment Length: 134m

METERS

AK State Plane Zone 4
 480040



Subdivision Field Map

Map Key: KENC004E

Name: JM Sempel

Date: May 27/91

Date Entered:

Revised: MC 5/31/91
 raised 5/30/91 KG

1991 MAYSAP EVALUATION

SEGMENT: CB 004 SUB: D REGION: KEN SURVEY DATE: 5/27/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) Fish harvest area

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Timothy A Smith Date: 6/17/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: JUNE 6 1991 FOSC APPROVAL DATE: 6/14/91

ADEC [Signature] FOSC [Signature]

EXXON [Signature] E. E. PAGE, CDR, USCG
CHIEF OF STAFF, FOSC

USCG [Signature]

NOAA [Signature]

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

MAYSAP FIELD SHORELINE COMMENT SHEET

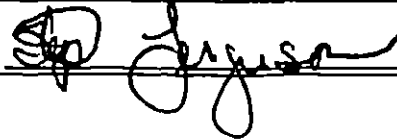
58

TEAM NO. 4 SEGMENT CB-004 SUBDIVISION D DATE 5/22/91

ADEC

NAME Steve Ferguson

SIGNATURE

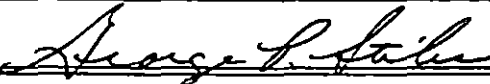
☒ NTR ☐ TREATMENT RECOMMENDED

AP/MS/SOR FOUND IN SEAMS AND CREVICES OF VERTICAL AND HORIZONTAL BEDROCK. SOR DEPOSITED IN INTERSTITIAL AREAS OF COBBLES AND BOULDERS LOCATED NEAR BASE OF VERTICAL BEDROCK. GREATEST PERCENTAGE OF OILING IS CT/ST.

EXXON

NAME George P. Stiles

SIGNATURE

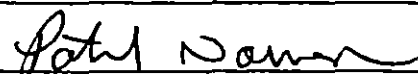


☒ NTR No appreciable oil found. Couple MS patches and some CT+S. Looked good.

LANDMANAGER

NAME Pat NormanOF Port Graham

SIGNATURE

☒ NTR

USCG/NOAA

NAME McMahan

SIGNATURE

☒ NTR

Some mounds in deep bedrock crevices - inaccessible, little appreciable oil.

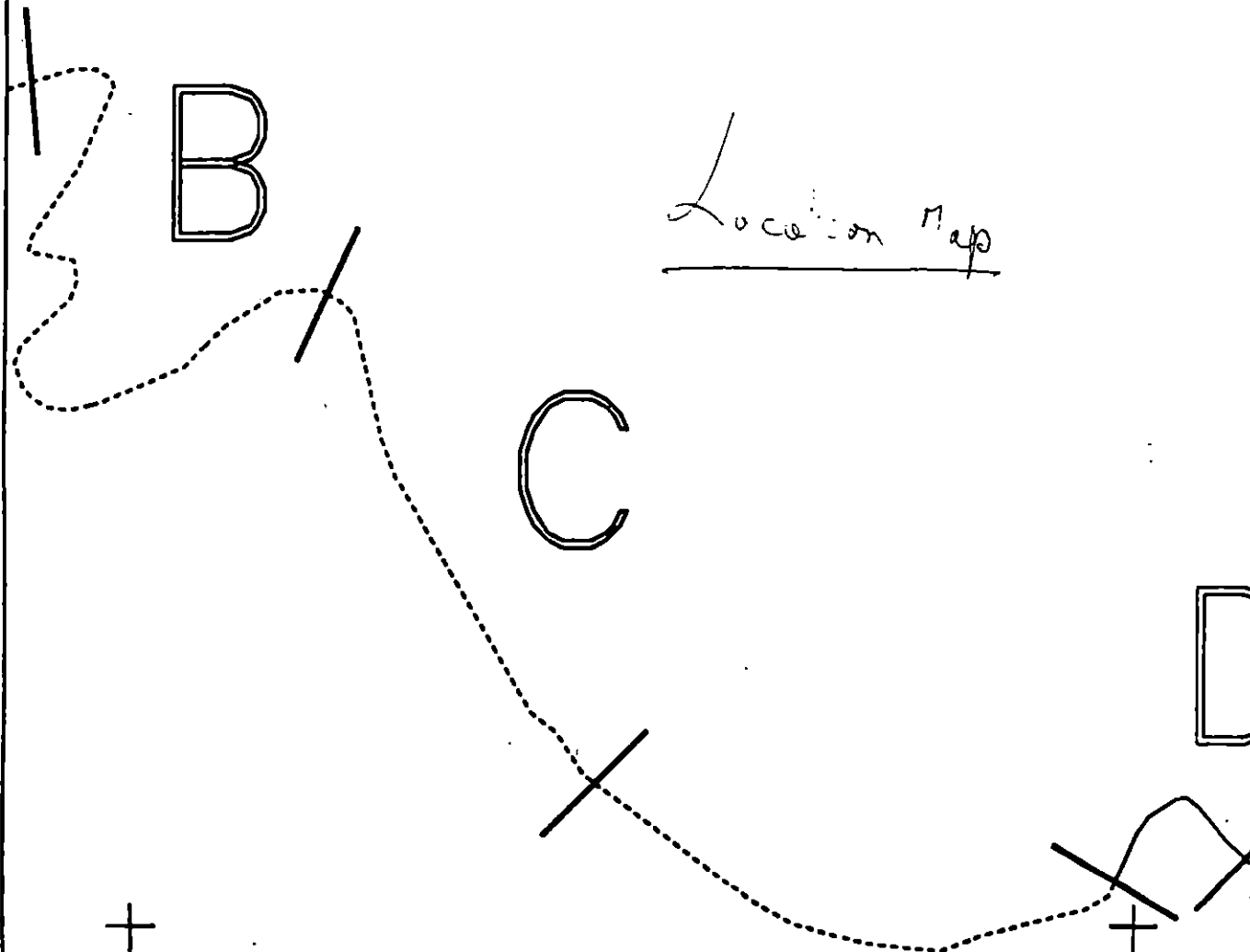


PAGE 7 OF 8

EST. OIL CATEGORY LENGTH: W - m M - m N - m VL - m NO - m US - m

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

Revised: 5/31/91 MC
revised 5/30/91 KG



Location Map



CB004 D

METERS



AK State Plane Zone 4
8000420

Subdivision Field Map

Map Key: KENC004Dc

Name: JM Semper

Date: May 27/91

Og Skt. Map

CB-004-D

JM SEMPERS

MAY 27/91

0928-0955

Legend

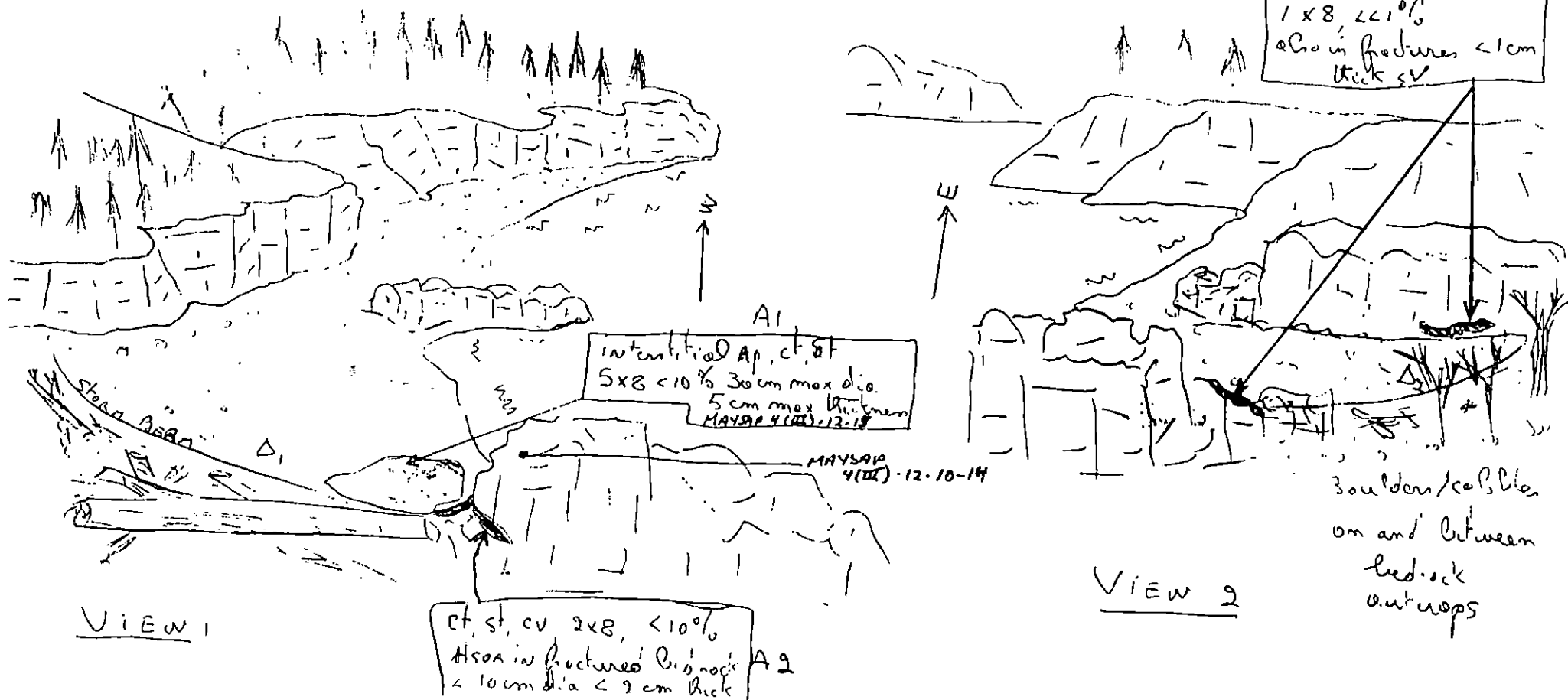
[] Bedrock Bluffs

[oo] cb veneer over
ch/pb/ga.

CB-004-D Location

View 1 ← View 2

reviewed 5/30/91 KLG
Reviewed: 5/31/91 me



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #

4

DATE

27 MAY '91

SEGMENT #

CB004

TIDAL HEIGHT(Range)

0.0 TO +1.6

SUBDIVISION

D

BIOLOGIST

Jim ROTH

SEA STATE

-1.5'

WIND SPEED/DIRECTION

PHOTOGRAPHS: ROLL #

FRAME #

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

A1 - UPPER MITZ w/ LITTORINES, BARNACLES, SMALL MUSSELS
ABUNDANT IN BOULDER + BEDROCK CREVICES, LITTORINES,
LIMACS UNDER COBBLES.

A2 - MITE BEDROCK w/ VERRUCARIA, BARNACLES, LITTORINES, IN
CREVICES.

A3 - UPPER MITZ: LITTORINES, BARNACLES, SMALL MUSSELS ABUNDANT
IN CREVICES IN BOULDER + BEDROCK.

GENERAL COMMENTS: LESS EXPOSED THAN CB9E. A HEALTHY
INTERTIDAL COMMUNITY. MORE SHELTERED EAST END HAS
MODERATELY DENSE FUCUS + OTHER KERP, ALONG WITH
MUSSELS, BARNACLES, LITTORINES, LIMACS. MORE EXPOSED EAST
END HAS SLIGHTLY MORE SPARSE BIOTA. POOLS IN
MITZ HAVE ANEMONES, (2 spp.), CORALLINE ALGAE, HERMIT
CRABS, AND CHITONS (KATHARINA).

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

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

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

Shoreline subdivision map showing important biological features attached.

Reviewed MB 5/30/91

Sketch Map

CB-004-D Location Map

CB-004-D

JM SENNELS

MAY 27/91

0928-0955

Legend

- [H] Bedrock Bluffs
- [O] cl veneers over ch. pl. / ga.

View 1 View 2

LITTORINES,
BARNACLES,
SMALL MUSSELS
IN CREVICES
A3

st, ct, very weathered
1x8, <10%
60 in features <1cm
thick st

LITTORINES,
BARNACLES,
SMALL MUSSELS,
LIMPETS
A1

Intertidal Ap, ct, st
5x8 <10% 30cm max dia
5cm max thickness
MAY 27/91 12-17

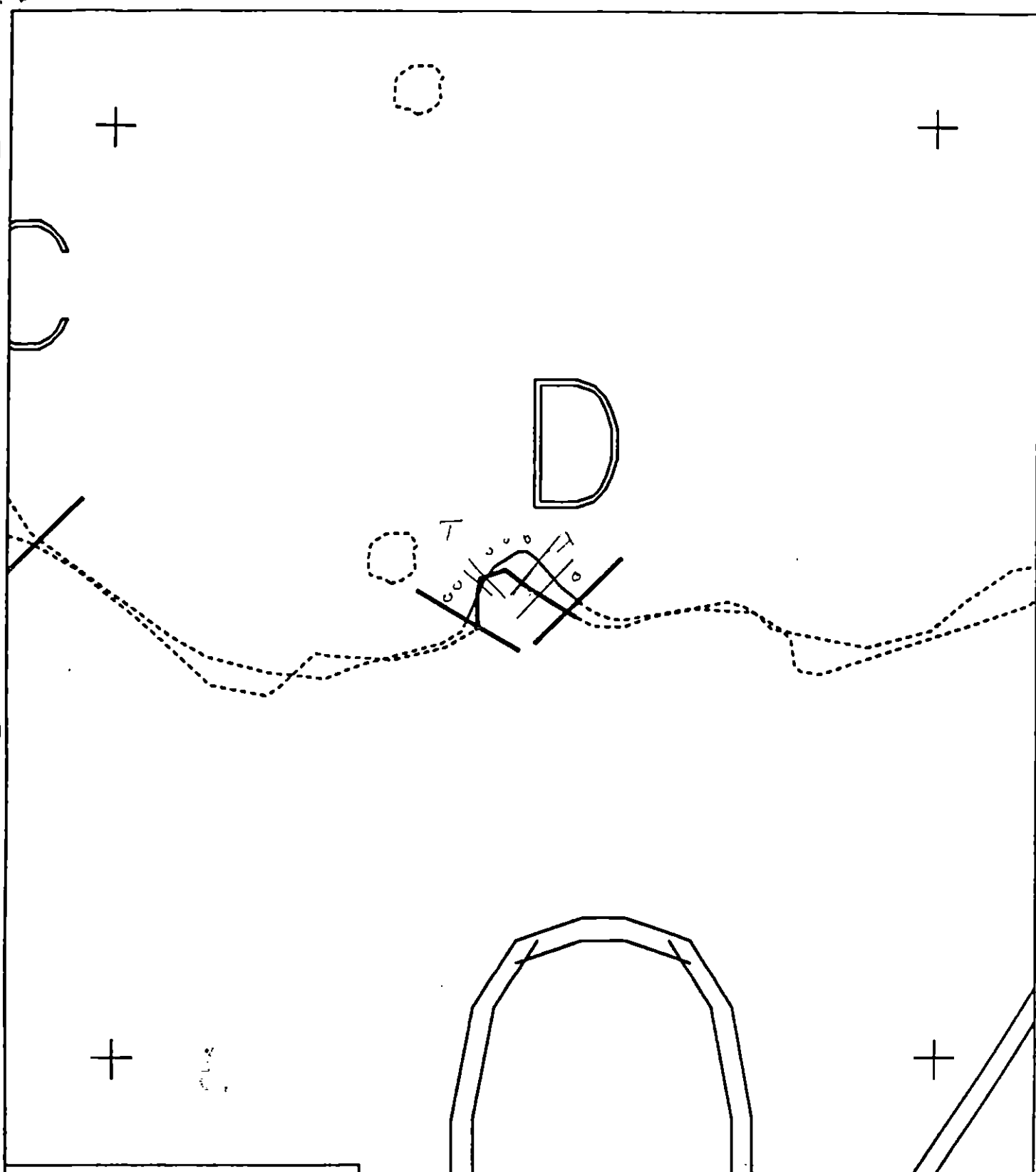
MAY 27/91 12-10-16

Boulders / s. b. b.
on and between
bedrock
outcrops

ct, st, cv 2x8, <10%
Hson in fractured bedrock
<10cm dia <2cm thick

VERUCARIA,
BARNACLES,
LITTORINES

Reviewed: MS
5/30/91



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

CB004 D
 ADEC Subsegment Length: 119m
 METERS

0 100 200
 AK State Plane Zone 4
 acb004d



Subdivision Field Map
 Map Key: KENC004D
 Name: for Sample
 Date: May 97 91
 Date Entered:

REVIEWED: MC 5/31/91
 revised 5/30/91 KG

1991 MAYSAP EVALUATION

SEGMENT: CB 004 SUB: C REGION: KEN SURVEY DATE: 5/28/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) Fish harvest area

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Timothy Smith Date: 6/07/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: JUNE 7 1991

FOSC APPROVAL DATE: 6/14/91

ADEC [Signature]

FOSC [Signature]

EXXON [Signature]

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

USCG [Signature]

NOAA [Signature]

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT C3004 SUBDIVISION C DATE MAY 28/91

DEC NAME STEVE FERGUSON SIGNATURE Steve Ferguson

☐ NTR ☐ TREATMENT RECOMMENDED

TRACE OILING IN THE FORM OF STAIN, (ONE) TAR BALL AND 2 OIL SPATTERED BOTTLES WERE OBSERVED. EVERYTHING EXCEPT THE STAIN WERE PICKED UP. NO TREATMENT RECOMMENDED

EXXON NAME George P. Stiles SIGNATURE George P. Stiles 5/30/91

☒ NTR Trace mouse patties were picked up while surveying. No appreciable oil remaining.

LANDMANAGER NAME JAT NORMAN OF Port Graham SIGNATURE Peter Norman

☒ NTR remaining subsurface oil from ASAP was apparently washed out over the winter.

USCG/NOAA NAME CUTL MC MAHON SIGNATURE Cutl Mc Mahon

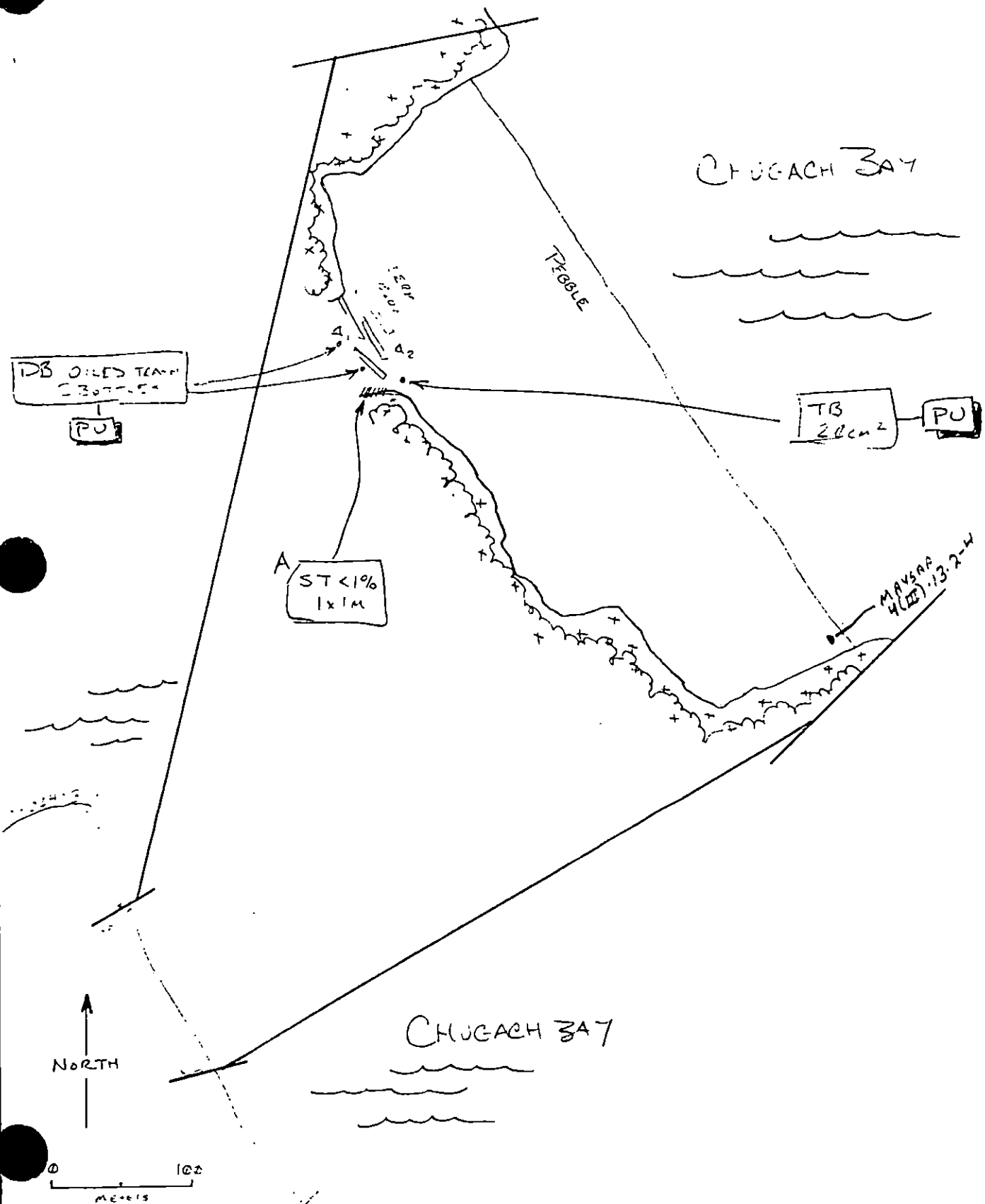
☒ NTR Some mouse patties, picked up at site

Donald MacLeod

PAGE 1 OF 1

REVIEWED: MS 6/1/91
reviewed 5/31/91 KG

23004-C
2- SKETCH MAP
28-MAR-91
'813-183'
30' 4" 0.11M



REVIEWED: MC 6/1/91
reviewed 5/31/91 KC

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 28 MAY 91
 SEGMENT # C8004 TIDAL HEIGHT (Range) +6.75 to +6.0
 SUBDIVISION 5 BIOLOGIST Jim ROTH
 SEA STATE 6" WIND SPEED/DIRECTION
 PHOTOGRAPHS: ROLL # FRAME #

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

A. HITE/SUPRA BEDROCK W/ MOSS, BEACHGRASS - NO
 INTERTIDAL FAUNA.

GENERAL COMMENTS: A SMALL BEACH OF CLEAN GRAVEL AND
 SAND WITH BEDROCK FACES ON THE SIDES. IT IS A
 FAIRLY EXPOSED SITE AND HAS LITTLE INTERTIDAL BIOTA,
 EXCEPT ON THE BEDROCK FACES, WHICH HAVE A SPARSE
 GROWTH OF FUCUS, PATCHES OF MUSSELS, AND A
 NARROW BAND OF BARNACLES. NO OBSERVATIONS
 WERE MADE OF THE LOWER INTERTIDAL ZONE.

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

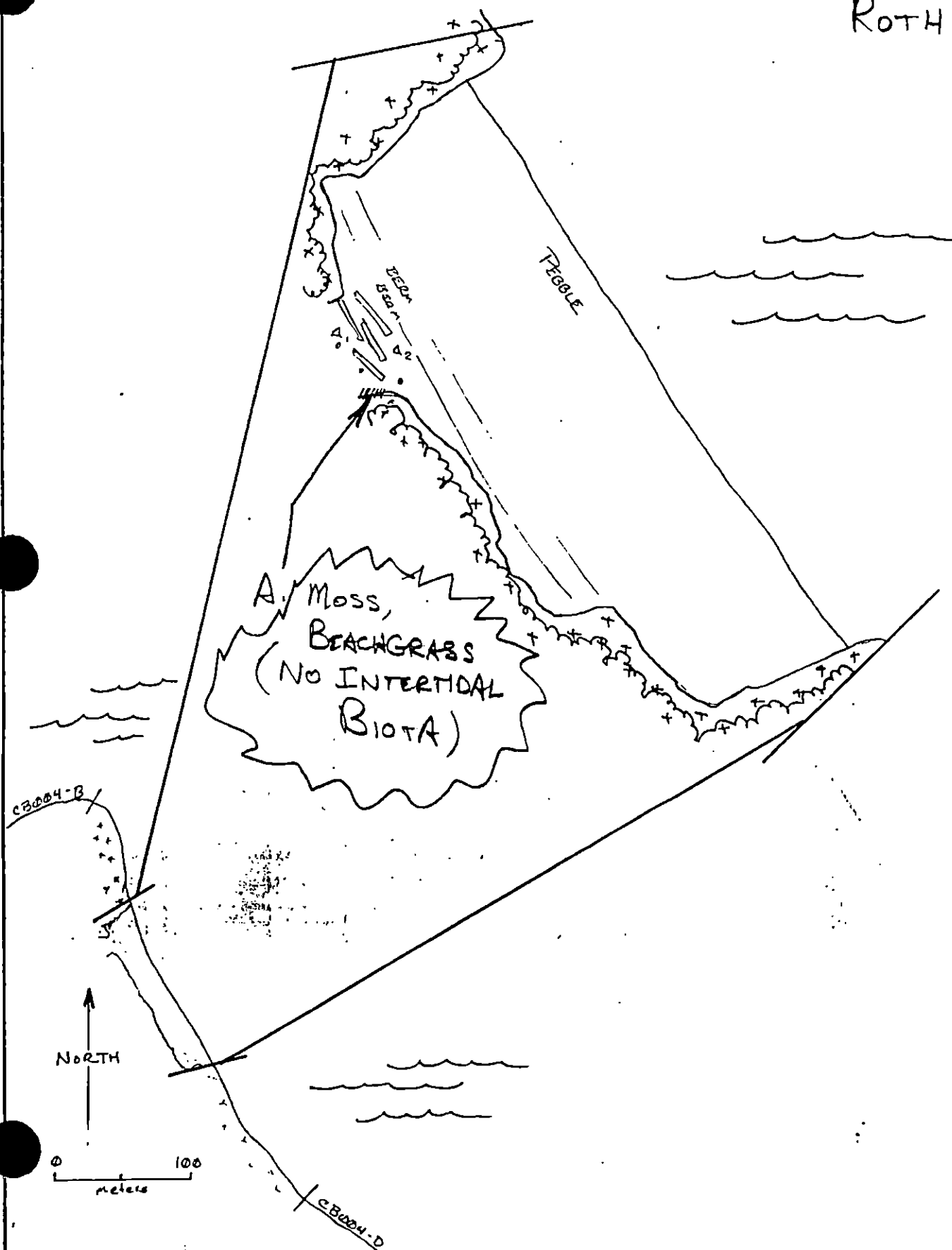
BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Seagulls			
Seabirds			
Waterfowl			
Gulls/Petrels			
Shorebirds			
Cowbirds			
Other Birds			

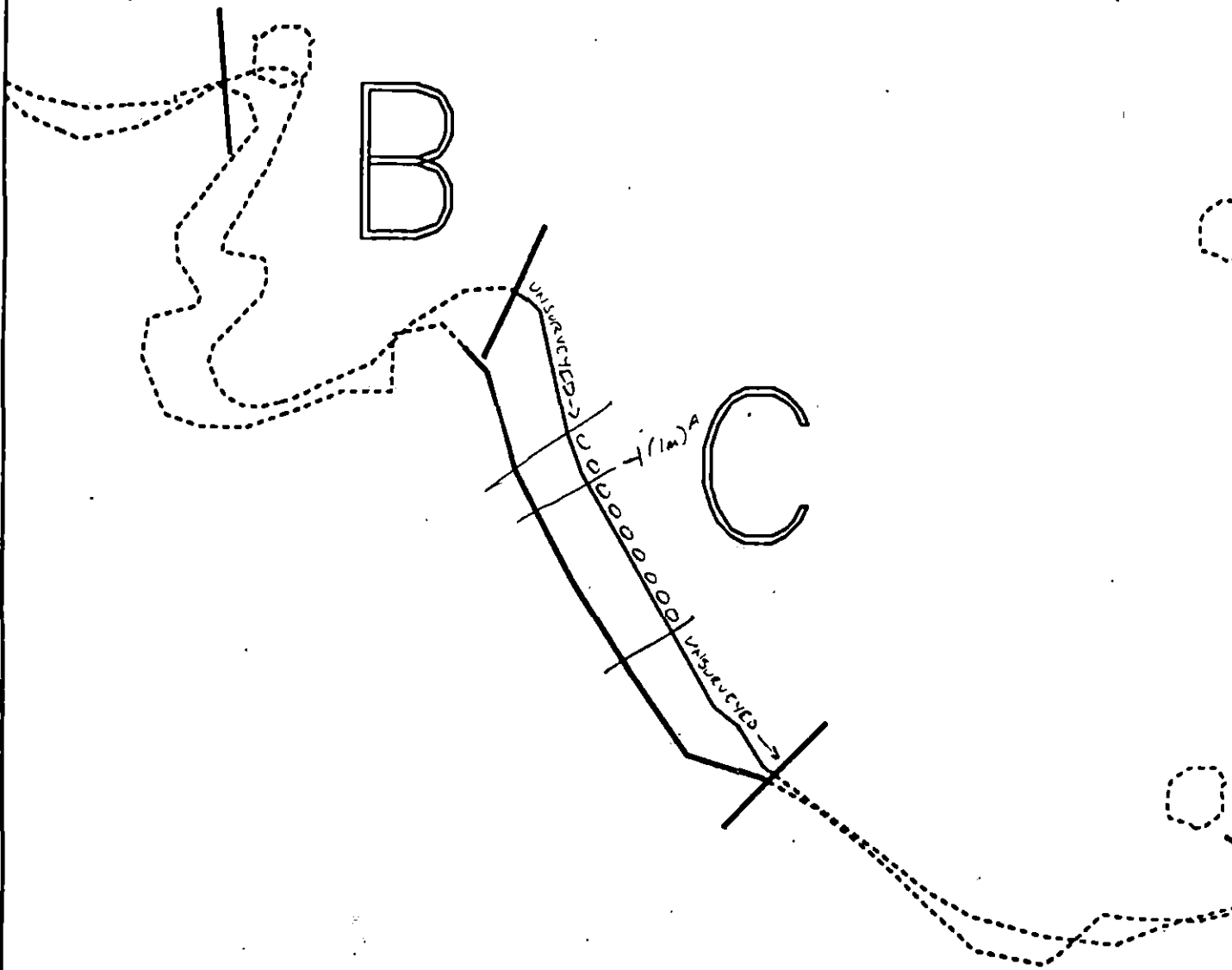
MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
les (specify)			

Shoreline subdivision map showing important biological features attached.

CB004-C
SKETCH MAP
28-MAY-91
1813-1831

Bio MAP
ROTH



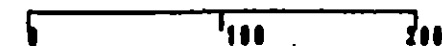


XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

CB004 C

ADEC Subsegment Length: 330m

METERS



AK State Plane Zone 4
NAD83



Subdivision Field Map

Map Key: KENC004C

Name: TRIMM

Date: 28-MAY-91

Date Entered:

- SURFACE OIL CATEGORY MAP -

Reviewed: MC 6/1/91
 revised 5/31/91 KG

1991 MAYSAP EVALUATION

SEGMENT: CB 905 SUB: M REGION: KEN SURVEY DATE: 5/30/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Timothy O. Smith Date: 6/8/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: June 7 1991

FOSC APPROVAL DATE: 6/14/91

ADEC Whitaker

FOSC EE Page

EXXON Edma

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

USCG Edma

NOAA John

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT CB 905 SUBDIVISION M DATE 5/30/91

ADEC

NAME STEVE FERGUSON

SIGNATURE [Signature]

☒ NTR ☐ TREATMENT RECOMMENDED

THIS BEACH (ANDERSON) IS NEW TO SUBDIVISION LIST. ITS A HIGH ENERGY BEACH WITH SOR AND AP DEPOSITED IN THE INTERSTITIAL AREAS OF BOULDER/CORALS. SURVEYED THIS IN APRIL 1991, FOUND THAT A LARGE AMOUNT OF GRANULAR HAS BEEN TRANSPORTED DOWN INTO BOULDERS/CORALS WHERE SOR AND AP ARE LOCATED. DUE TO THE COST TO ACCESS THIS BEACH, MAN HOURS ETC. DON'T FEEL NOW THAT ITS A REASONABLE CLEANUP SITE.

EXXON

NAME George P. Stiles

SIGNATURE [Signature] 5/30/91

☒ NTR

The area and amount of oiling has reduced from 100% coverage to less than 5% AP & SOR from 1989 to present per conversation with ADEC Rep. Steve Ferguson. This is a high energy beach and hazardous to work due to wave action and rock out crops. I feel we should leave this one to Mother Nature.

LANDMANAGER

NAME _____

OF _____

SIGNATURE _____

☐ NTR

No land rep. available.

USCG/NOAA

NAME CWO2 J. MCMAHON

SIGNATURE [Signature]

☒ NTR

Scattered SOR among boulders.
2-5%
very minor subsurf. Donald (N) Westlund

PAGE 1 OF 1

REVISOR: 6/1/91 MC
revised 5/31/91 KCG

105-M
 C/S SKETCH MAP.
 30-MAY-91
 1228-1301
 BRYAN TRIMM

North

0 100
 meters

CHUGACH PASSAGE

A
 CV, CT, ST 15%
 SOR-M/L 7%
 15 x 10 m

HOR
 1 x 4 m

B
 AP 2%, SOR-M 2%
 CT, CV, ST 5%
 2 x 20 m

TREES

TREES

GRANULE - SAND - BOULDER

SAND-
 PEBBLE-
 COBBLE-
 BOULDER

27, 25
 2
 12, 22

BOULDER : BOULDER TALUS

WAVE-CUT PLATFORM

C
 SOR H < 1%
 CT, CV, ST 3%
 4 x 30 m

Reviewed 5/31/91 RG
 Reviewed: MC 6/24/91

WAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 30 May '91
 SEGMENT # CB 905 TIDAL HEIGHT(Range) +3.64 to +5.14
 SUBDIVISION M BIOLOGIST Jim Roth
 SEA STATE 1 ft WIND SPEED/DIRECTION _____
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

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

A. BEDROCK / BOULDERS w/ VERUCARIA; SPARSE TO MODERATELY DENSE LITTORINES; LIMPETS; SPARSE BARNACLES, INCL. SPAT.
 B, C. BOULDERS w/ DENSE TO MODERATELY DENSE LITTORINES; MODERATELY DENSE LIMPETS; VERUCARIA.

GENERAL COMMENTS: THIS IS A HIGH-ENERGY BEACH PROTECTED BY AN OFFSHORE BEDROCK PLATFORM. A HEALTHY, THRIVING INTERTIDAL BIOTA EXISTS ON THE BEDROCK PLATFORM. SHOREWARD, THE HIGH-INTER-TIDAL ZONE CONTAINS ORGANISMS (E.G., LITTORINES, LIMPETS) THAT ON MORE SHELTERED SHORES WOULD BE MOST ABUNDANT IN THE MIDDLE-INTERTIDAL ZONE. THUS GASTROPODS (LIMPETS, LITTORINES) ARE QUITE NUMEROUS IN THE VERUCARIA ZONE. THIS ALSO WAS THE ZONE WHERE OIL WAS FOUND. OIL HAD NO OBVIOUS EFFECT ON THE DISTRIBUTION OR ABUNDANCE OF BIOTA. LITTORINE AND LIMPET ABUNDANCES INCREASED FROM THE MARGIN OF THE SANDY BEACH DOWNWARD.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

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

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

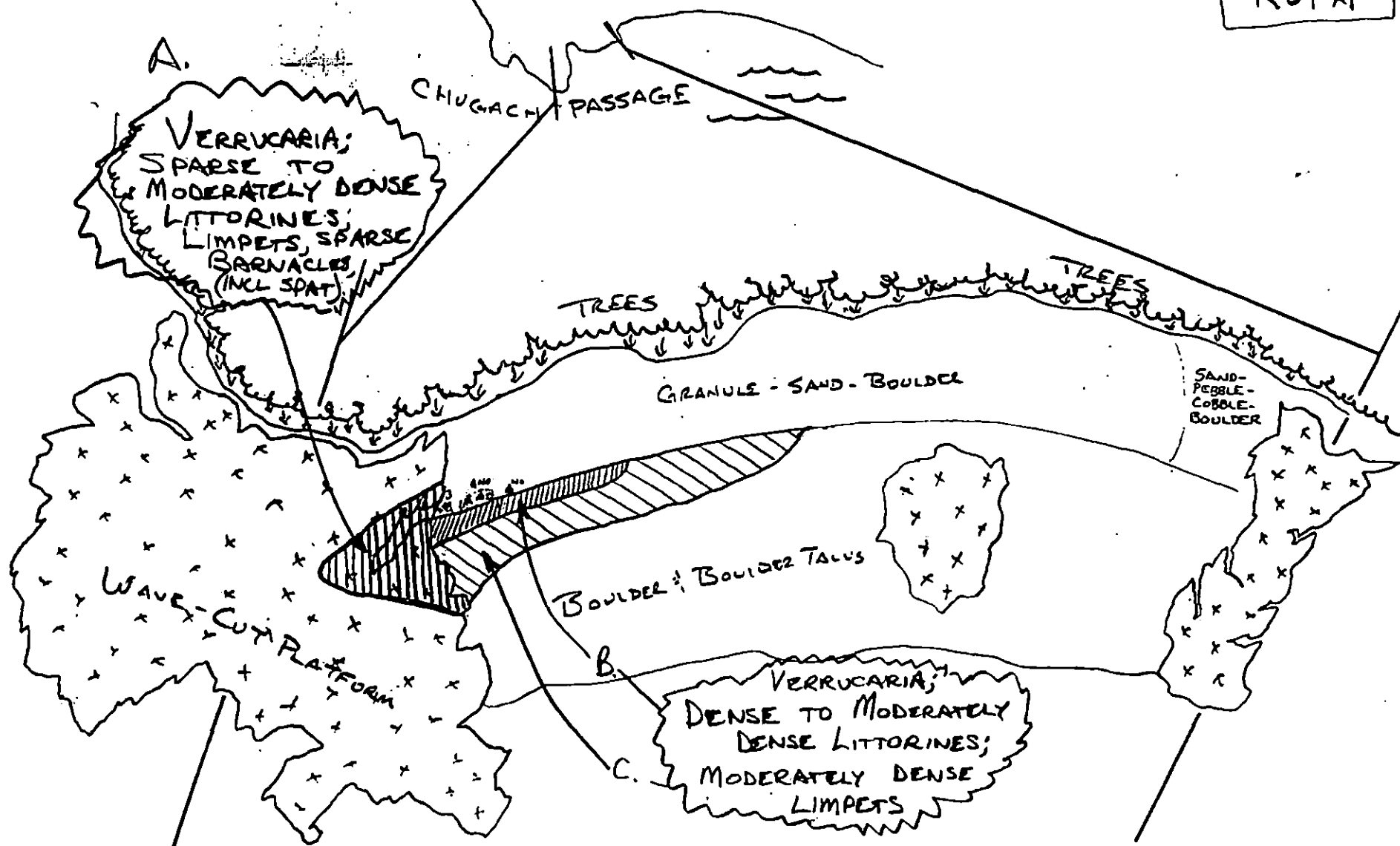
Shoreline subdivision map showing important biological features attached.

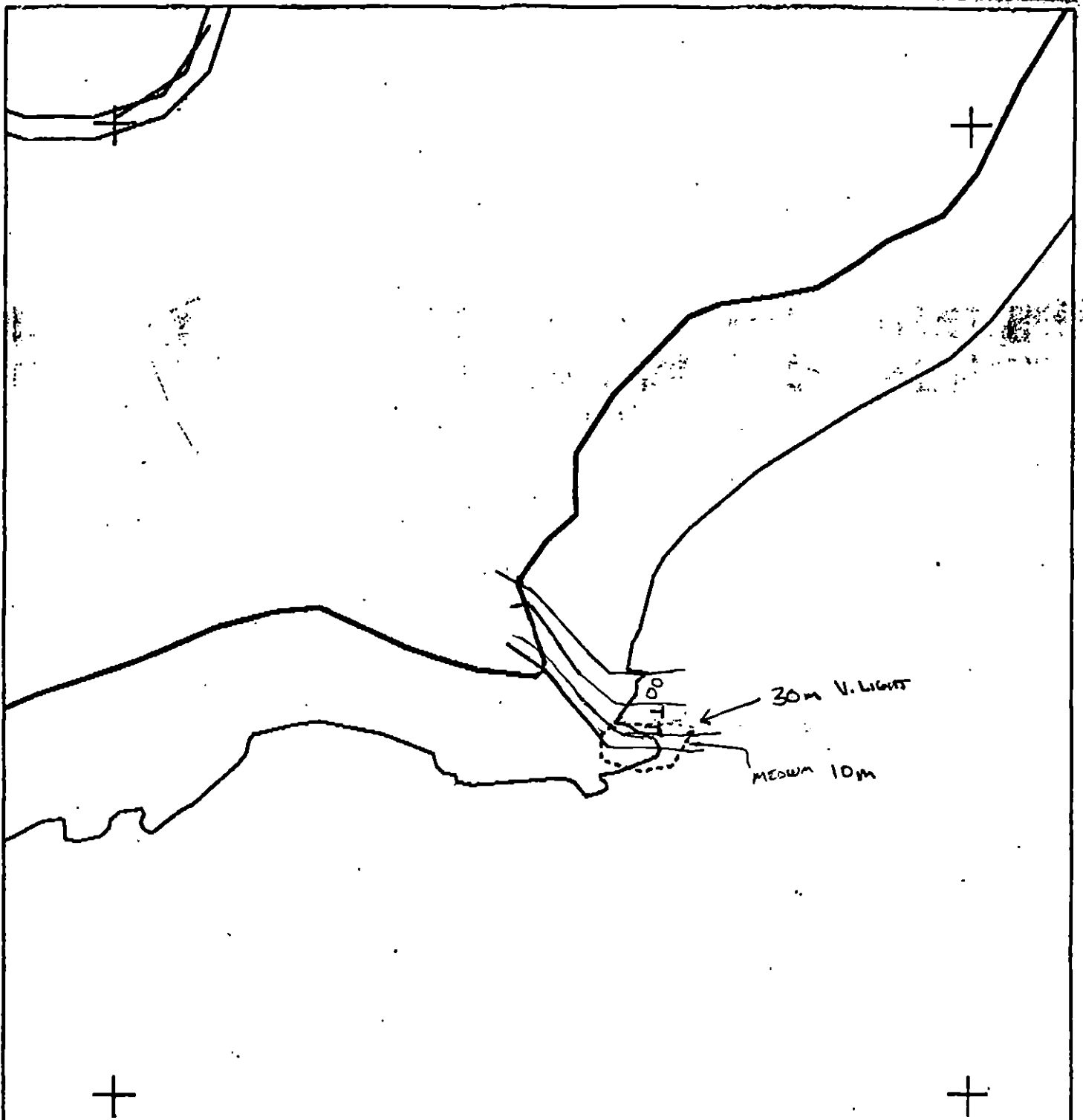
905-M
SKETCH MAP
30-MAY-91
1228-1301

BIO MAP
ROTH

0 100
meters

North





NOTE: 5/28/91: Subsegment will be determined by extent of oiling.

XXXX	Wide	Anderson Beach on CB 905	Subdivision Field Map
////	Medium	ADEC Subsegment Length: 0m	Map Key: KENC905
----	Narrow	METERS	Name: TRIMM
TTTT	Very Light	0 100 200	Date: 30-MAY-91
0000	No Oil	AK State Plane Zone 4 848905	Date Entered:



SURFACE OIL CATEGORY MAP - Revised: MC 6/2/91
revised 5/31/91 KG

1991 MAYSAP EVALUATION

SEGMENT: CB 905 SUB: M REGION: KEN SURVEY DATE: 5/30/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO.

4

SEGMENT

CB 905

SUBDIVISION

M

DATE 5/30/91

ADEC

NAME STEVE FERGUSON

SIGNATURE

[Signature]

☒ NTR ☐ TREATMENT RECOMMENDED

THIS BEACH (ANDERSON) IS NEW TO SUBDIVISION LIST. IT'S A HIGH ENERGY BEACH WITH SOR AND AP DEPOSITED IN THE INTERSTITIAL AREAS OF BOULDER/CORBLES. SURVEYED THIS IN April 1991, FOUND THAT A LARGE AMOUNT OF GRAVEL HAS BEEN TRANSPORTED DOWN INTO BOULDERS/CORBLE WHERE SOR AND AP ARE LOCATED. DUE TO THE COST TO ACCESS THIS BEACH, MAN HOURS ETC. DON'T FEEL NOW THAT ITS' A REASONABLE CLEANUP SITE.

EXXON

NAME George P. 541/45

SIGNATURE

[Signature] 5/30/91

☒ NTR The area and amount of oiling has reduced from 100% coverage to less than 5% AP & SOR from 1989 to present per conversation with ADEC Rep. Steve Ferguson. This is a high energy beach and hazardous to work due to wave action and rock out crops. I feel we should leave this one to Mother Nature.

LANDMANAGER

NAME

OF

SIGNATURE

☐ NTR

No land rep. available.

USCG/NOAA

NAME CWO2 J. MCMAHON

SIGNATURE

[Signature]

☒ NTR

Scarcely SOR among boulders.
25%
very minor subsurf. Don't (1) West End

PAGE 1 OF 1

DATE MAY 1 30 191

ENERGY LEVEL: ☒ H ☐ M ☐ L

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

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

EST. OIL CATEGORY LENGTH: W 0 m M 10 m N - m VL 30 m NO 30 m US 0 m

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

SLOPE: V = VERTICAL: H = HIGH ANGLE: M = MEDIUM ANGLE: L = LOW ANGLE PHOTO ROLL # MAYSAP-4(III) - 14 FRAMES 24.25

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

LOG COMMENTS:
 • AP & SOR FOUND BETWEEN BOULDER & BOULDER TALUS ARMOR. PITS 1 & 2 VERIFY THAT THE GRANULE UPPER SHOREFACE MATERIAL HAS BEEN TRANSPORTED DOWN INTO THE LOWER BOULDER TALUS ZONE. THIS PROCESS CAN INCREASE THE EROSION OF OIL DURING STORM EVENTS, AS IN SAND BLASTING. ALSO, THE GRANULE SEDIMENTS MAY COVER SOME OF THE OIL DEPOSITS (PITS 1 & 2)

- VERY HIGH WAVE ENERGY BEACH

REVISED: 6/1/91 MC
revised 5/31/91 KG

8905-M
 CG SKETCH MAP
 30-MAY-91
 1228-1301
 BRYAN TRIMM

NORTH

0 100
 meters

CHUGACH PASSAGE

A
 CV, CT, ST 15%
 SOR-M 47%
 15 x 10 m

HOR
 1 x 4 m

B
 AP 2%, SOR-M 2%
 CT, CV, ST 5%
 2 x 20 m

TREES

TREES

GRANULE - SAND - BOULDER

SAND-
 PEGGLE-
 COBBLE-
 BOULDER

27, 25
 2
 40
 24

BOULDER : BOULDER TAILS

WAVE-CUT PLATFORM

C
 SOR H 1%
 CT, CV, ST 3%
 4 x 30 m

REVIEWED 5/31/91 KC
 REVISOR: MC 6/1/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 30 May '91
 SEGMENT # CB 905 TIDAL HEIGHT (Range) +3.64 to +5.14
 SUBDIVISION M BIOLOGIST JIM ROTH
 SEA STATE 1 FT WIND SPEED/DIRECTION _____
 PHOTOGRAPHS: ROLL # _____ FRAME # _____

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

A. BEDROCK / BOULDERS w/ VERBUCARIA; SPARSE TO MODERATELY DENSE LITTORINES, LIMPETS; SPARSE BARNACLES, INCL. SPAT.
 B, C. BOULDERS w/ DENSE TO MODERATELY DENSE LITTORINES; MODERATELY DENSE LIMPETS; VERBUCARIA.

GENERAL COMMENTS: THIS IS A HIGH-ENERGY BEACH PROTECTED BY AN OFFSHORE BEDROCK PLATFORM. A HEALTHY, THRIVING INTERTIDAL BIOTA EXISTS ON THE BEDROCK PLATFORM. SHOREWARD, THE HIGH-INTERTIDAL ZONE CONTAINS ORGANISMS (E.G., LITTORINES, LIMPETS) THAT ON MORE SHELTERED SHORES WOULD BE MOST ABUNDANT IN THE MIDDLE-INTERTIDAL ZONE. THUS GASTROPODS (LIMPETS, LITTORINES) ARE QUITE NUMEROUS IN THE VERBUCARIA ZONE. THIS ALSO WAS THE ZONE WHERE OIL WAS FOUND. OIL HAD NO OBVIOUS EFFECT ON THE DISTRIBUTION OR ABUNDANCE OF BIOTA. LITTORINE AND LIMPET ABUNDANCES INCREASED FROM THE MARGIN OF THE SANDY BEACH DOWNWARD.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

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

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

Shoreline subdivision map showing important biological features attached.

Page 2 of 2

8905-M
SKETCH MAP
30-MAY-91
1228-1301

Bio Map
ROTH

North

0 100
meters

CHUGACH PASSAGE

A.

VERRUCARIA;
SPARSE TO MODERATELY DENSE
LITTORINES;
LIMPETS, SPARSE
BARNACLES
(INCL SPAT)

TREES

TREES

GRANULE - SAND - BOULDER

SAND-
PEBBLE-
COBBLE-
BOULDER

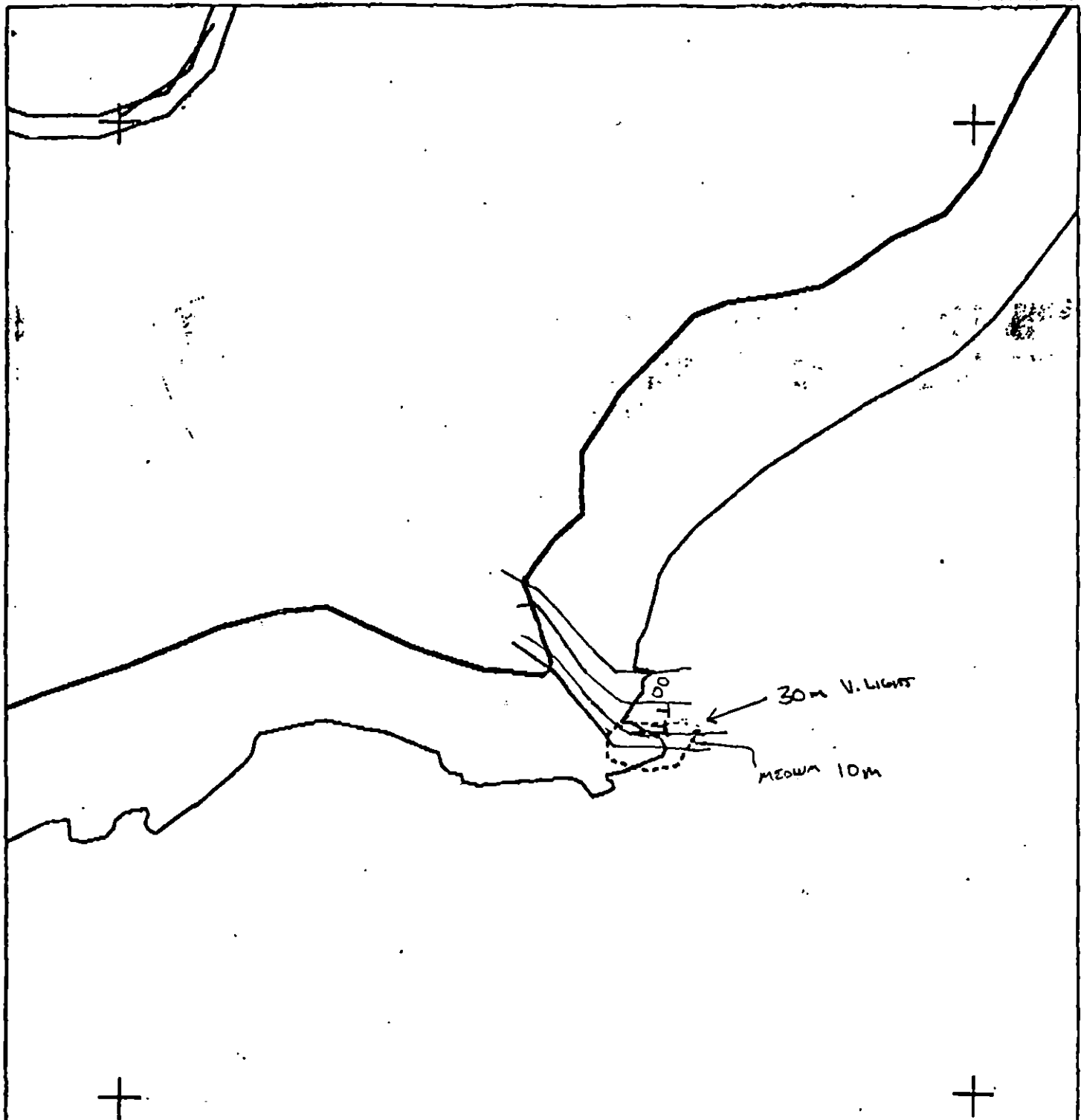
BOULDER; BOULDER TALUS

WAVE-COMPACTED
PLATFORM

B.

VERRUCARIA;
DENSE TO MODERATELY
DENSE LITTORINES;
MODERATELY DENSE
LIMPETS

C.



NOTE: 5/28/91: Subsegment will be determined by extent of oiling.

XXXX Wide Anderson Beach on CB905
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

ADEC Subsegment Length: 0m
 METERS

5 100 200
 AK State Plane Zone 4
 96005



Subdivision Field Map
 Map Key: KENC005
 Name: TRIMM
 Date: 30-MAY-91
 Date Entered:

SURFACE OIL CATEGORY MAP - Revised: MC 6/2/91
 revised 5/31/91 KG

REGION: KENAI

SEGMENT: ST/CI-001

SUBDIVISIONS: A (1 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ CI-001 SUBDIVISION A (1 OF 2) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5R Seabird colony (5/1 to 9/1)
5T All Bald Eagle nests (3/1 to 6/1)
5T Active Bald Eagle nests (3/1 to 9/1)
3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and seal lion molting (8/15 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 99 m: Medium 306 m: Narrow 47 m: V.Light 109 m: No Oil 433 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes: 1) Manual pickup of tar patties where shown on attached sketch map. Approval of USFWS regarding eagle nest and seabird colony required before working. Work between 7/1 and 8/15 due to pinniped constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____
ADEC _____
EXXON _____
NOAA _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/15)
 1E Main Bay Hatchery release (4/20 to 6/15)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I Gill net area (8/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (8/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to 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 Roth 267-2205
- 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 (8/1 to 9/15)
 6V Anchorages (8/1 to 9/15)
 6W Forest Service cabins (8/1 to 9/15)
 6X Lodge (8/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 Finfish harvesting
 Deer harvesting (8/15 to 2/28)
 Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

SEGMENT ST/ C I-1SUBDIVISION: ADATE 29 April 1990

USCG NOAA

NAME Miles D. HayesSIGNATURE Miles D. Hayes☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

The continuous to broken asphalt pavement, which is 200m x 5/10m, should be treated by:

- 1) turning over oiled cobble with motorized equipment
- 2) wash area with cold water (as needed)
- 3) bioremediate

The sediment is probably too coarse to apply "rock washing" technique

ADEC

NAME Russell KurbieSIGNATURE Russell Kurbie☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

There is an extensive moussy asphalt mat at the top of the wave crest platform. The oiled area was 282 m. long and 3m to 10m wide. The mat was in a boulder, rubble, pebble area just above the beach platform.

Recommended treatment: Manual pick up and break up of the asphalt and mousse. The use of cold water high pressure flushing to further break up the asphalt. The flushing should be done in conjunction with manually turning over the small boulders. Snow blowers should be used to pick up any liberated oil. For break up a large rubber tired piece of heavy equipment may be appropriate. Bioremediate after the completion of the break up with water.

LAND MANAGER

NAME PAT NORMANSIGNATURE Pat Norman☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Manual pick up of Asphalt and mousse patties also cold water ^{or warm} flushing to break up the majority of the oil remaining in C1-1 A subdivision. Manual pick up will be very time consuming in this area, that's why I recommend cold or warm water flushing to break up and collect the oil.

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

OG: N. BIG CAVE USGG: MILES HAYES SEGMENT ST: CI-001
 BIO: DAN RABER LAND REP: Gerry Nugent (F.W.) SUBDIVISION: A (1 OF 2)
 EXXON: JOHN DEAN ADEC: RUSSELL KUNIG TIME: 6:50 to 10:15
 TEAM NO.: 17 TIDE LEVEL: +2 to -3 DATE: 4/26/90
 EST. SUBDIVISION LENGTH: 1175 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 5 % B 55 % C 15 % P 15 % G 10 % S 0 % M 0 % V 0 %
 SLOPE: Lang 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 75 m M 213 m N 14 m VL 150 m NO 723 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	R	P	B	SL	BR	FW	GY	SL	TR	LR	LR	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES			X	O	Z											
TARBALLS																
FILM																
NO OIL													X	X		X

PAVEMENT H F S _____ sq. m by _____ cm

PATTIES/TARBALLS 56 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. 4Frames 27-29

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-DM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS	
		OP	OR	OL	OF	NO		UO	UC	SL BR	DBL FW	GY SL	DBR TL	LR	SU	U	M	L								
1	40					X	-		X											X						g, 159op
2	64					X	-		X										X							pg/s
3	28					X	-		X												X					sg, p
							-																			

COMMENTS

The oil on this beach is concentrated in a fat mat between the base of the beach angle and (commonly) a ~~planch~~ ^{planch} bedrock (see profile in sketch map). The surface sediments in this area include angular boulders (small), cobbles and pebbles and granules. The mat is preserved between and underneath the larger clasts. The mat has a dull black form outer surface, and is a dark brown "binder" of the surface and subsurface materials. The western end of the continuous mat is

REVIEWED _____ DATE _____

SUBSURFACE OIL (CONTINUED)

[illegible]

covered by seaweed, and therefore may extend for a longer distance to the west, than is shown on the figure.

At low tide, the water is far to the north due to the extensive wave cut platform developed offshore of the beach.

The segment of the beach that trends SE is high energy with lots of boulders thrown into the drift logs and the storm berm.

REVIEWED _____ DATE _____

5/20/68

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03-25-78

Segment ST / CT001 Subdivision A Date (mo / day / yr) 4 / 26 / 90

Time (24 hr) 7:00 Biologist DANIEL RAIDER

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

(B) Overall % cover of biota (% of segment): Dense 65 Moderate 10 Low 25
→ to none

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

Photographs:
Roll No. 4

Frames 24-27

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 attached sheet for wildlife listings

Large intertidal area; very sensitive organisms; minimize foot traffic and keep the soil from entering NZE + LZE when using clean up techniques

Ecological Considerations:

5R

W, U, P, Q

SI (Needs to be added to data base)

WILDLIFE OBSERVATIONS - CI 001 A

14

	<u>Name</u>	<u>amount</u>	<u>Comments</u>
1)	Bald Eagle	2 (a pair)	Near nest
2)	Song Sparrow	10±	Males singing
3)	Cormorant sp.	4	
4)	Black Oyster Catcher	2	
5)	Common Raven	3	
6)	Hermit Thrush	3	(First Siting)
7)	Varied Thrush	10±	Feeding at high tide
8)	Glaucous-Winged Gull	21	
9)	Harbor Seal	1	

DANIEL RAIDER

TEAM 17 26 APRIL 1990

This Subdivision Consists of a very extensive wave ... bedrock platform with intermittent boulders and rich, dense tidal pools for its entire length. The tidal pools occur in great abundance and are located from the upper Mid Intertidal Zone to the Lower Intertidal Zone. The total subdivision has been broken into two biological areas (refer to map) and will be commented on here.

AREA 1

- Moderate to Dense Fucus on bedrock in MIZ + LIZ
- Dense Littorina sitkana in MIZ; moderate new settlement (recruitment) in MIZ on bedrock and boulders
- Tidal pools densely matted with Laminaria spp. and Ulva spp. (particularly U. marginata).
- The tidal pools here tend to be larger and deeper than that found in the next section - Area 2. Consequently there is a greater abundance of kelps and red algae, as well as Zostera marina.

AREA 2

- Found here is an area, roughly 100 meters by 30 meters of dense Littorina sitkana, mostly adults and juveniles. They tend to stay within the pools themselves.

Bio Comments CI-001A 2 of 3

and on the kelp washed up in the MTZ (Nereocystis) on dry rocks and within pools (for feeding)

- Evidence of *L. sitkana* embedded in wide, long band of mousse/pavement; dead
- Sparse Semi-balanus cariosus on bedrock and boulders in MTZ; one 30 meter section of moderate to dense population (adults) on bedrock + boulders but overall count will remain sparse.
- Green filamentous algae is distributed profusely throughout these pools, which tend to be small and tightly packed in as compared to those tidal pools found in Area 1.
- Dense mat of brown algae (*Nereocystis*, *Alaria* sp., *Ulva*, *Porphyra* sp., *Halosaccion glandiforme*, *Costaria* spp., etc.) in LTZ.

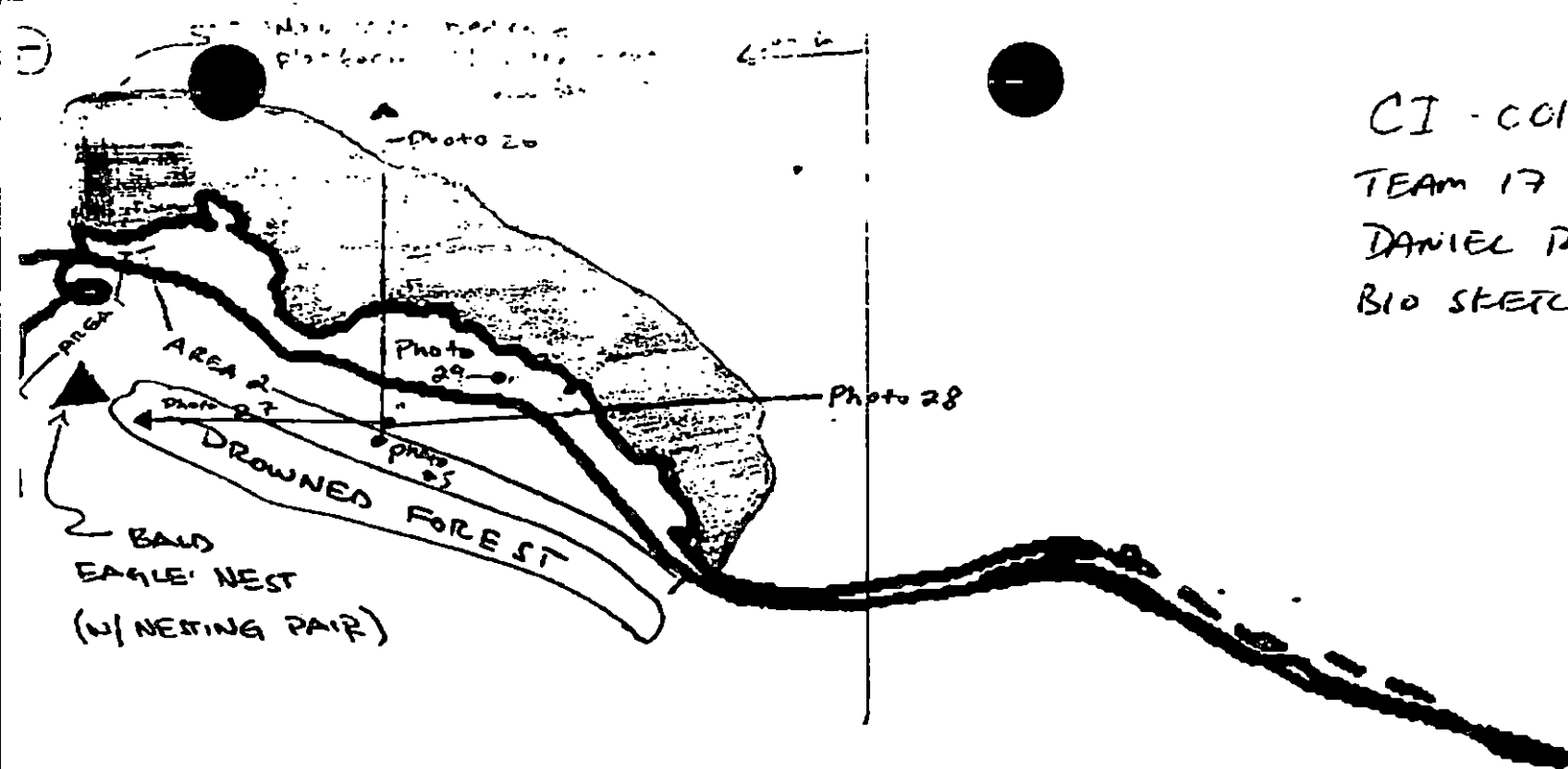
Both of these sets of tidal pools are very extensive and productive and warrant careful observation, monitoring and protection during potential clean-up of extensive pavement/mousse in Upper MTZ. Efforts should be taken to contain oil from entering MTZ and especially LTZ if break up and spreading of oil takes place during clean up. In addition, I believe the faster the clean up takes place (i.e. the more intensive) the oil will leave the area quicker. Not acting on the oil?

Bro Comments CI-001A 3 of 3

will simply allow it to remain in the food chain for a longer period of time. The decision must be made whether or not the impact from clean up will be large, but over a short period, or in smaller intervals for a much longer period of time. I believe that the former, a short intensive clean-up, will allow for a quicker, healthier recovery.

Note: There is an active bald eagle nest here, as indicated on provided Bro sketch map and should be included on data base.

Also note the drowned forest just above the storm berm / high tide line. It is extensive and runs almost the entire Subdivision.



CI - CCI A

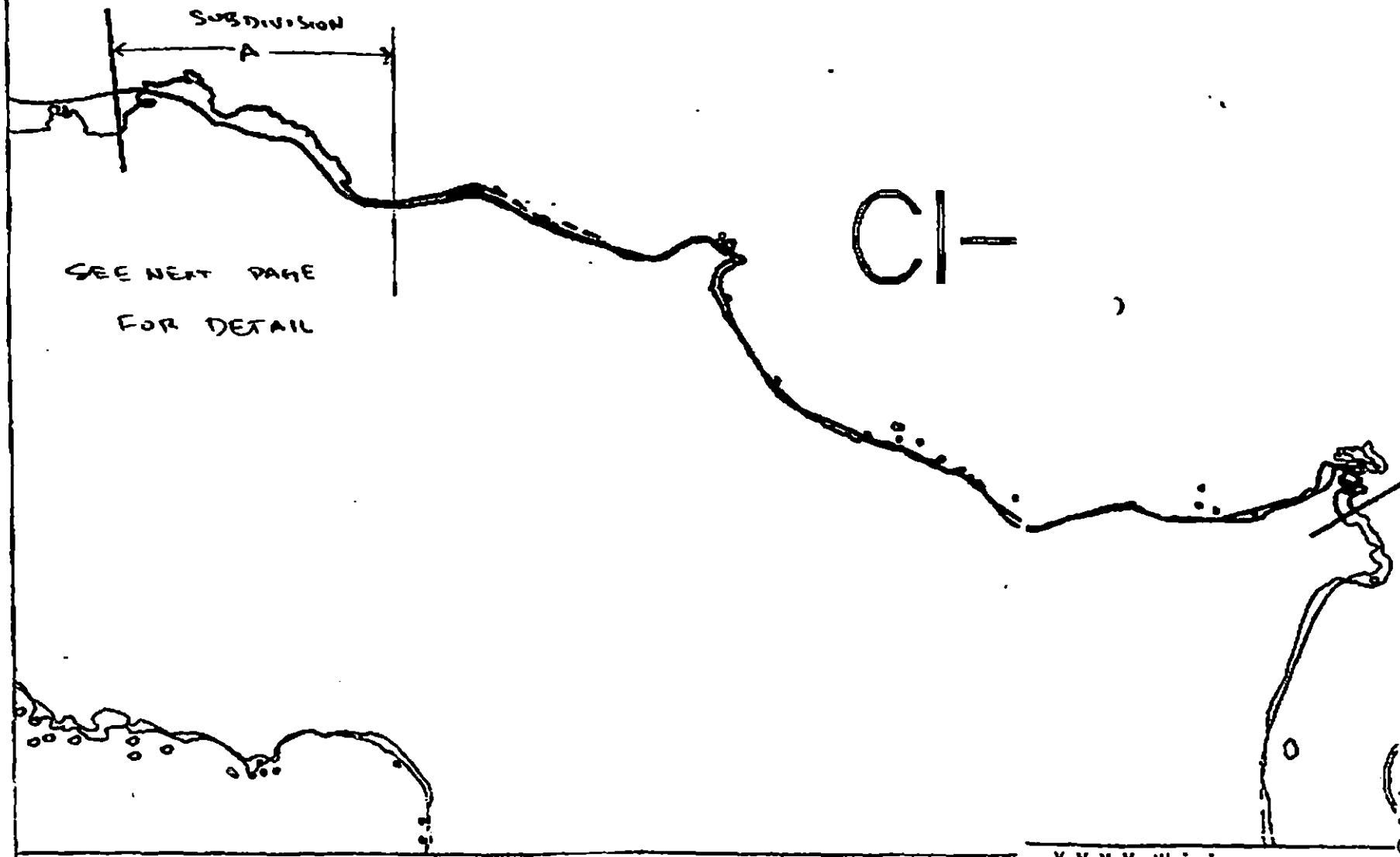
TEAM 17 26 APRIL 1990

DANIEL RAIDER

BIO SKETCH

APR-29-1990 SUN 17:50

P. 00

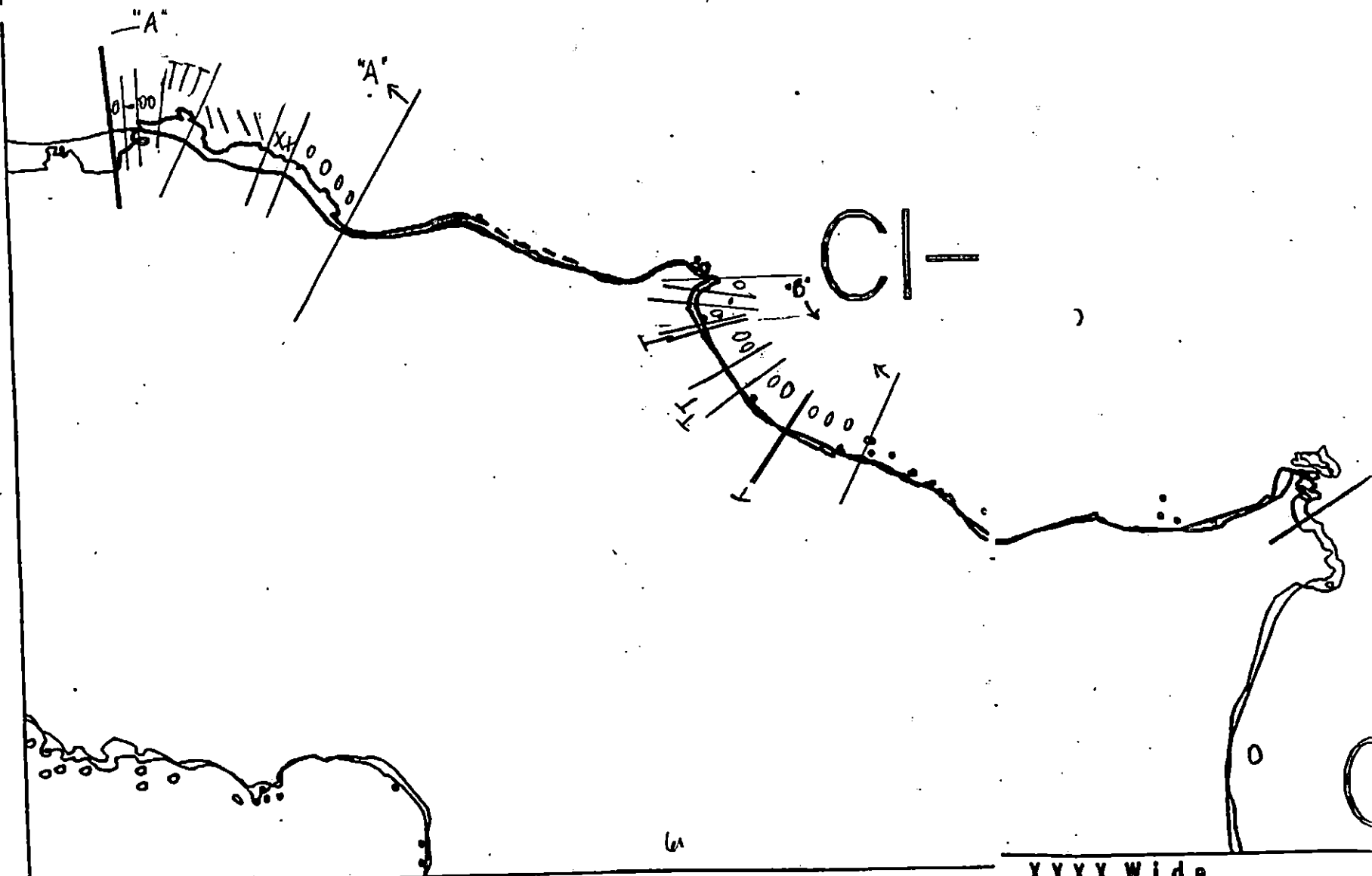


XXXX Wide
//// Medium

CI-1

Map Key. KEN-CI-1a

XXXX Wide
//// Medium



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

CI-1

Approx. Segment Length: 6303m



Map Key: KEN-CI-1a
 Name: N. BIGGAR
 Date: 4/28/90

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

Approx.

1. 02/04/80

REGION: KENAI

SEGMENT: ST/CI-001

SUBDIVISIONS: B (2 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ CI-001 SUBDIVISION B (2 OF 2) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5R Seabird colony (5/1 to 9/1)
3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and seal lion molting (8/15 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 51 m: V.Light 149 m: No Oil 834 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ E

*High human use -
- mangroves -
- ecol constraints
- best to leave alone
- birds + seals
disturbance*

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

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

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

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

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

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

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

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

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

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

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

1H Remote release site

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

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

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

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

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

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

1L Set net sites (8/11 to 7/25)

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

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

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

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to 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

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

30, 32 Harbor seal and sea lion molting (8/15 to 9/15)

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

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

ADF&G Don Calkins 267-2403

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Roth 267-2206

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

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation:

Tent sites (8/1 to 9/15)

6V Anchorages (8/1 to 9/15)

6W Forest Service cabins (8/1 to 9/15)

6X Lodge (8/1 to 9/15)

6Y Special use destination

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

7HH Finfish harvesting

Deer harvesting (8/15 to 2/28)

Invertebrate harvesting

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

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2356

SEGMENT ST/CI-001

SUBDIVISION:

B

DATE 4/23/97

NOAASIGNATURE

Miles. D. Hayes

M. D. Hayes

11-

☒ Treatment suggested

The only oiling is mouse between the boulders in the easternmost part of the segment. Because this is a subsistence area where plants are collected, the mouse should be removed by manual pickup.

☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

There was mouse ~~in~~ ^{found} between the boulders at the N. west end of this subdivision.

Recommended treatment: Manual pick up of the mouse

LAND MANAGERNAME Patrick Norman SIGNATURE *Patrick Norman*☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Spot washing and some manual pickup will improve the appearance of this area. The majority is under large boulders on the west end of this segment.

OG NORMA BIGGAR ^{NDA} USCG MILES HAYES SEGMENT ST/ CI-001
 BIO DAN RAIDER LAND REP PAT NORMAN SUBDIVISION B (2 OF 2)
 EXXON JOHN DEAN ADEC RUSSELL KUNIOE TIME 10:30 to 11:30
 TEAM NO. 17 TIDE LEVEL -4 to -3 DATE 4/26/90
 EST. SUBDIVISION LENGTH: 950 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 5 % B 10 % C 10 % P 20 % G 20 % S 35 % M — % V —
 SLOPE Long 90 % Hang 10 % Vert — % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W — m M — m N 20 m VL 125 m NO 805 m

SURFACE OIL

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

PAVEMENT H F S — sq. m by —PATTIES / TARBALLS 30 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. 4Frames 33

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	VO	1	2	3	4	5	SU	U	M	V			
1	52					X	.		X							X					P-3/c-p.
2	30					X	.		X							X					P-2
3	61					X	.		X							X					P-2/P-3/P-4
4	45					X	.		X								X				P-2/P-3/P-4
							.														
							.														

COMMENTS

Oil was observed only in boulder talus on North of segment, in the form of patches between and under boulders; and as a drizzle and spatter on the rock, also on the North of the segment. Very local spatter was seen on boulders in the phyllitic rock (S half of beach) - see sketch.

The beach is another classic, present beach with relatively light exposure. The rock talus where the mousse patches occur consists of large (6 1/2 m - diameter) boulders.

REVIEWED BA DATE 1 MAY 90

DATE 4 / 26 90

CHECKLIST

___ N Arrow
 ___ Approx. Scale
 ___ Seg/Sub Body
 ___ Oil Out
 ___ Width
 ___ Length
 ___ % Cover
 ___ Substrate Character
 ___ Ed. NAME/AML
 ___ SOL
 ___ Profile Location(s)
 ___ Profile(s)
 ___ Fil Location(s)
 ___ Photo Location(s)

LEGEND

Fig - No Substitution On

2 ▲
 21 - Suburban One

CT/C
Control Distribution

CT/O

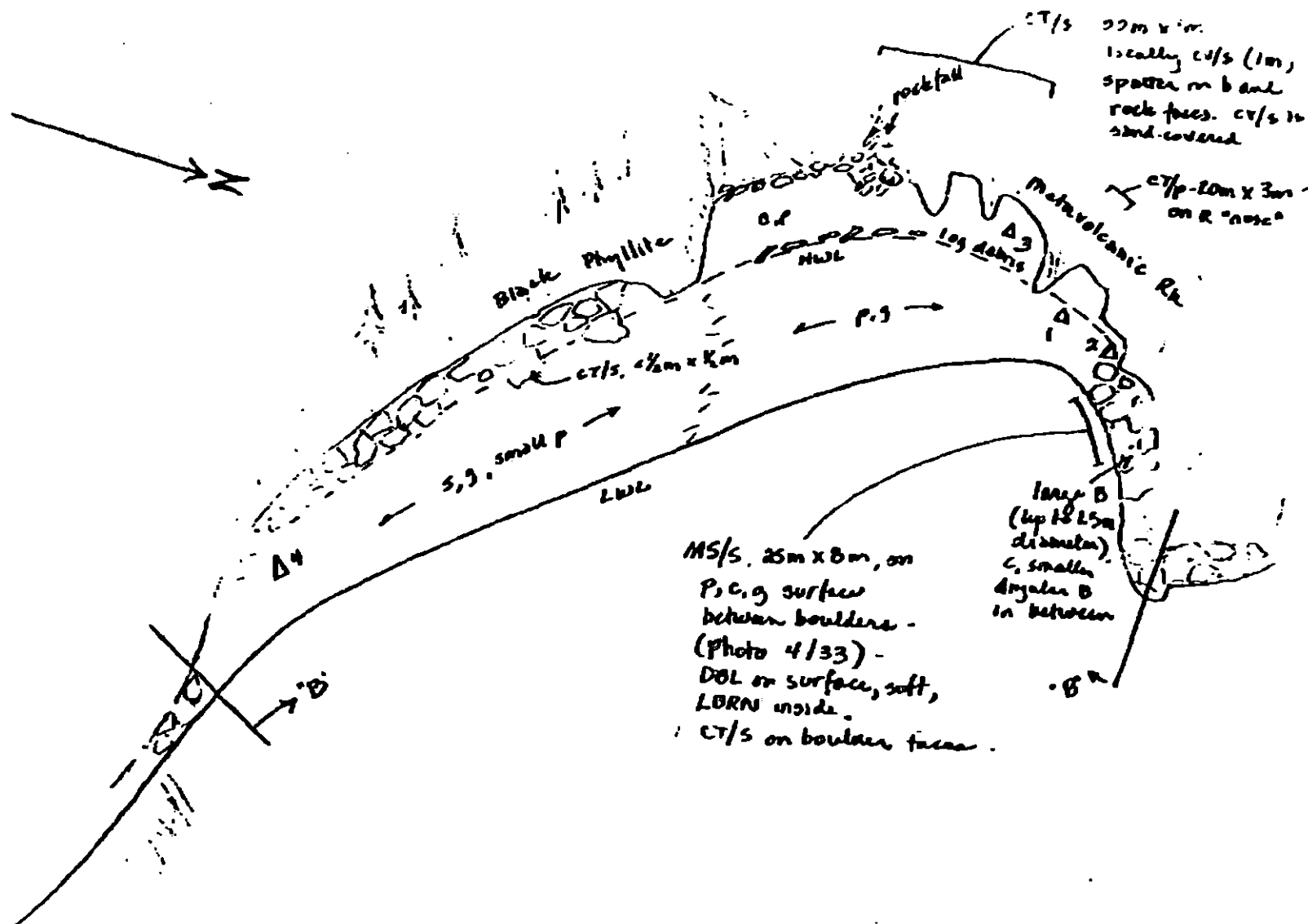
CT/P
Patchy Distribution

CT/S
Selected Distribution

llk
Chief Inspector

Photo location, direction,
and number

KETCH MAP



SHORELINE ECOLOGICAL SUMMARY

REVISION: 0572 70

Segment ST / CI-001 Subdivision B Date (mo / day / yr) 4/26/90

Time (24 hr) 10:45 Biologist DANIEL RAIDER

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

(B) Overall % cover of biota (% of segment): Dense 1 Moderate 1 Low 98
to none

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

Photographs: Roll No. ST-17-4

Frames 30-31

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:

Glaucous-winged Gull - 6

Common Merganser - 4

Ecological Considerations: is for a very small area of the total beach but is the most sensitive area.

SR

5/1, 5/2, 5/3, 5/4

BIO COMMENTS

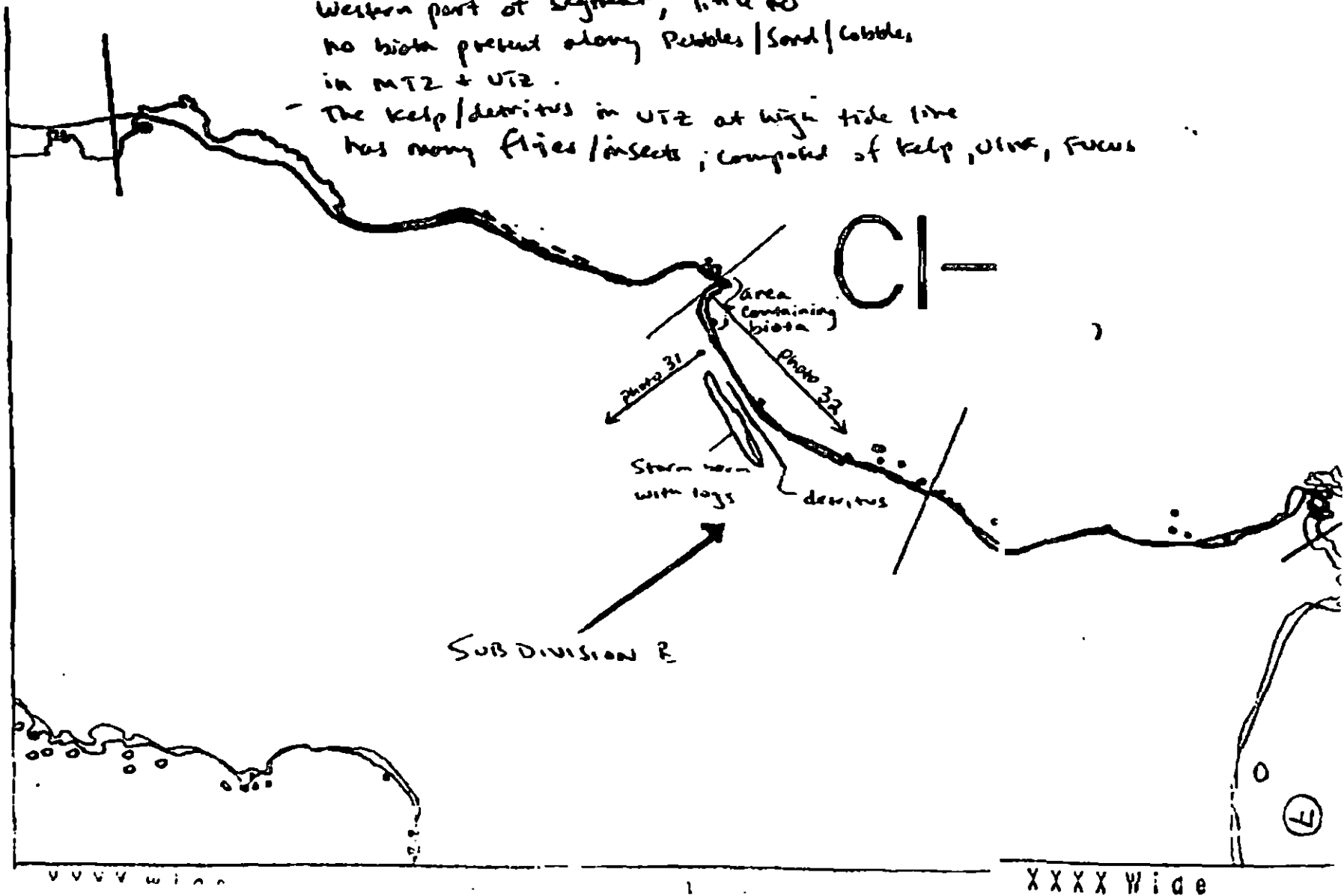
- This a high energy beach with biota concentrated on bedrock in western part of segment; little to no biota present along Pebbles/Sand/Cobbles in MTZ + UTZ.
- The kelp/detritus in UTZ at high tide line has many flies/insects; composed of kelp, ulva, fucus

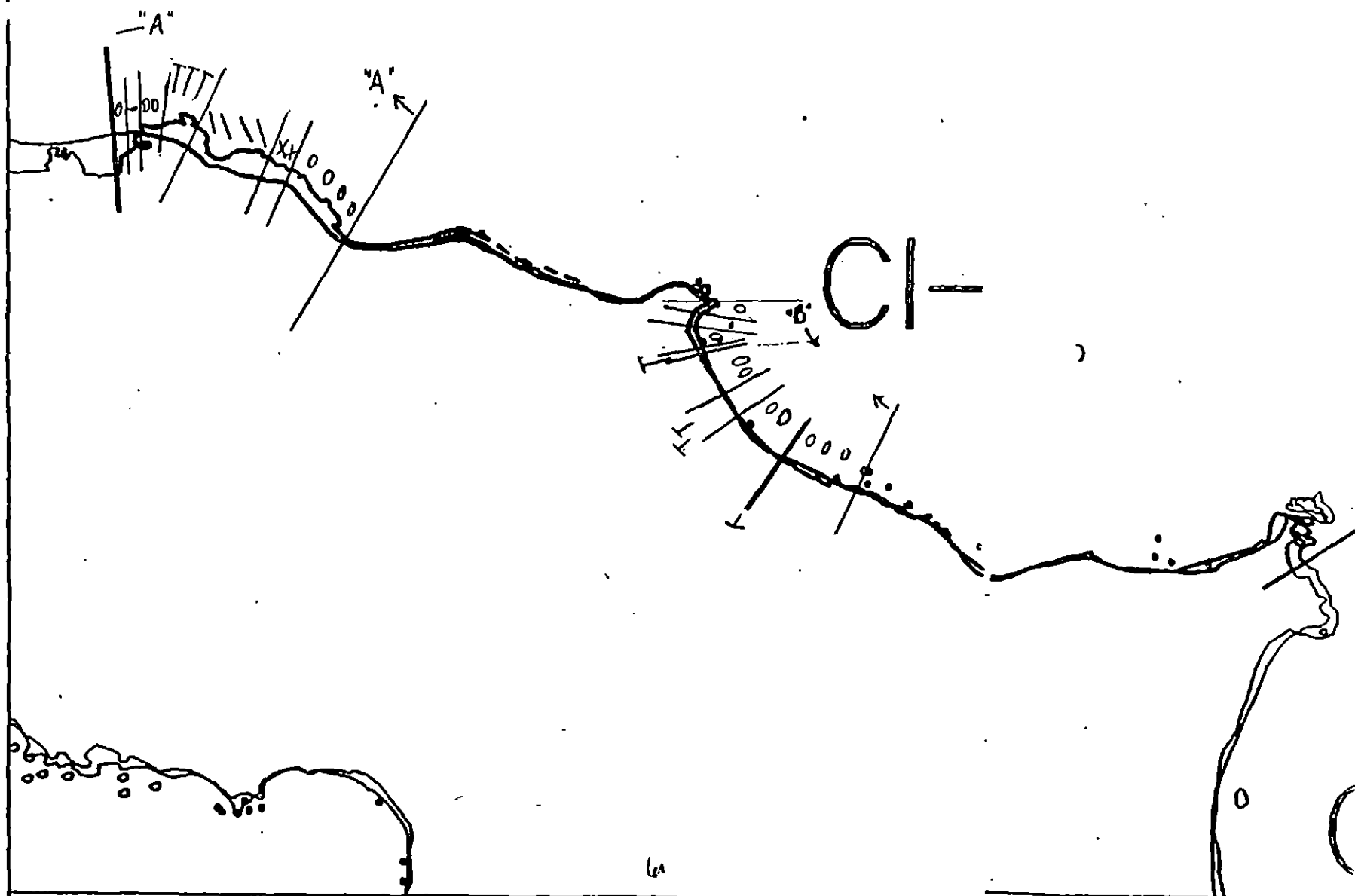
CI-001B

TEAM 17 26 APRIL 1998

DANIEL RINDER

BIO SKETCH





XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

CI-1

Approx. Segment Length: 6303m

1,000 2,000 3,000

Map Key: KEN-CI-1a

Name: N. BIGGAR

Date: 4/28/80

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

(2)

Approx

SHORELINE EVALUATION

SEGMENT ST/ CI-001 SUBDIVISION B (2 OF 2) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

R Seabird colony (5/1 to 9/1)
3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and seal lion molting (8/15 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

SHPO SIGNATURE: Rachel Jean Dale DATE: 5/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 51 m: V.Light 149 m: No Oil 834 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/23/80.
ADEC ART WEINER Art Weiner
EXXON AMY BA AMY FOS
NOAA Burt Wasscott Burt Wasscott
USCG G. A. REITER G. A. Reiter

FOSC: DATE: 6 June 90
 clear mouse as indicated on O6 map
 in conjunction with cleanup on CI 001A.

OG 1. 2100/1-1

SEGMENT 1-001

SUBDIVISION 3

DATE 4/26/90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Sep/Sub Body
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. MWL/LWL
- ☐ SBL
- ☐ Profile Location(s)
- ☐ Photo Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
PH - No Subsurface Oil

2 Δ
PH - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

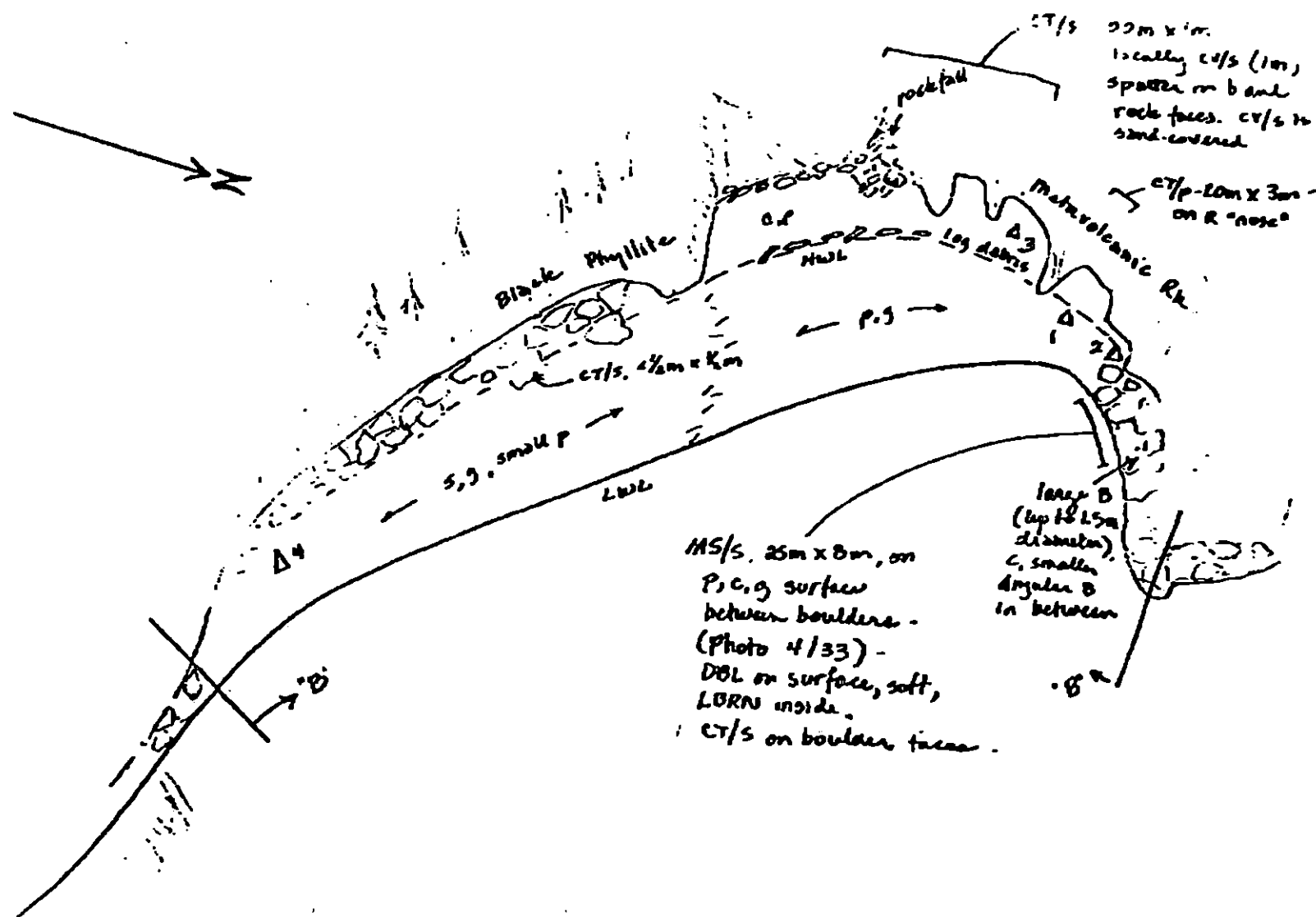
CT/P
Patchy Distribution

CT/S
Splashed Distribution

ell
Oiled Vegetation

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

SKETCH MAP



Oil Character Length (m) AP 0 PO 0 CV 0 CT 120 ST 0 MS 0 PT 0 TB 0 FL 0 NO 0

REVISION 0000

BIO COMMENTS

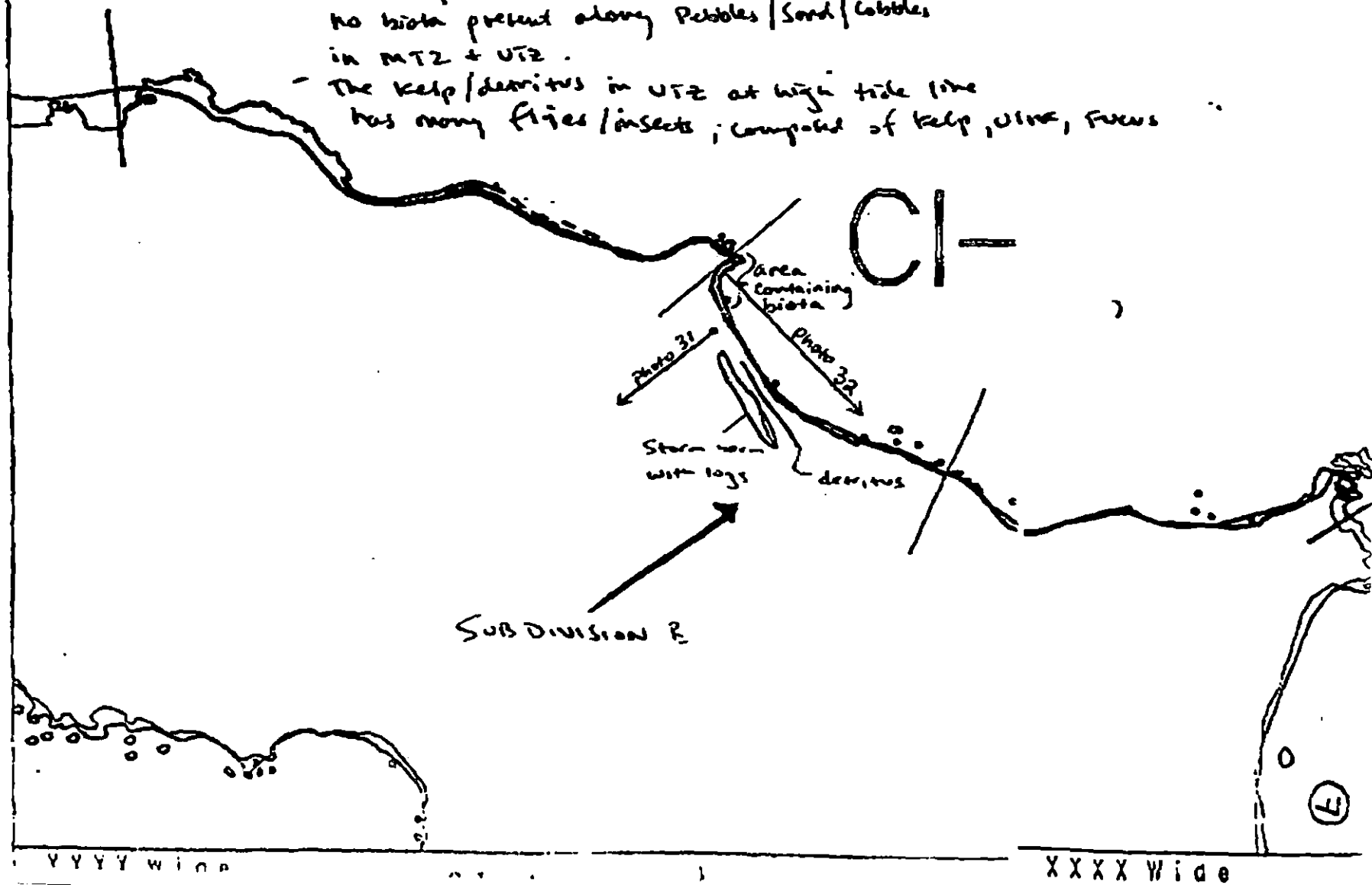
- This a high energy beach with biota concentrated on bedrock in Western part of segment; little to no biota present along Pebbles/Sand/Cobbles in MTZ + UTZ.
- The kelp/debris in UTZ at high tide line has many flies/insects; composed of kelp, urine, feces

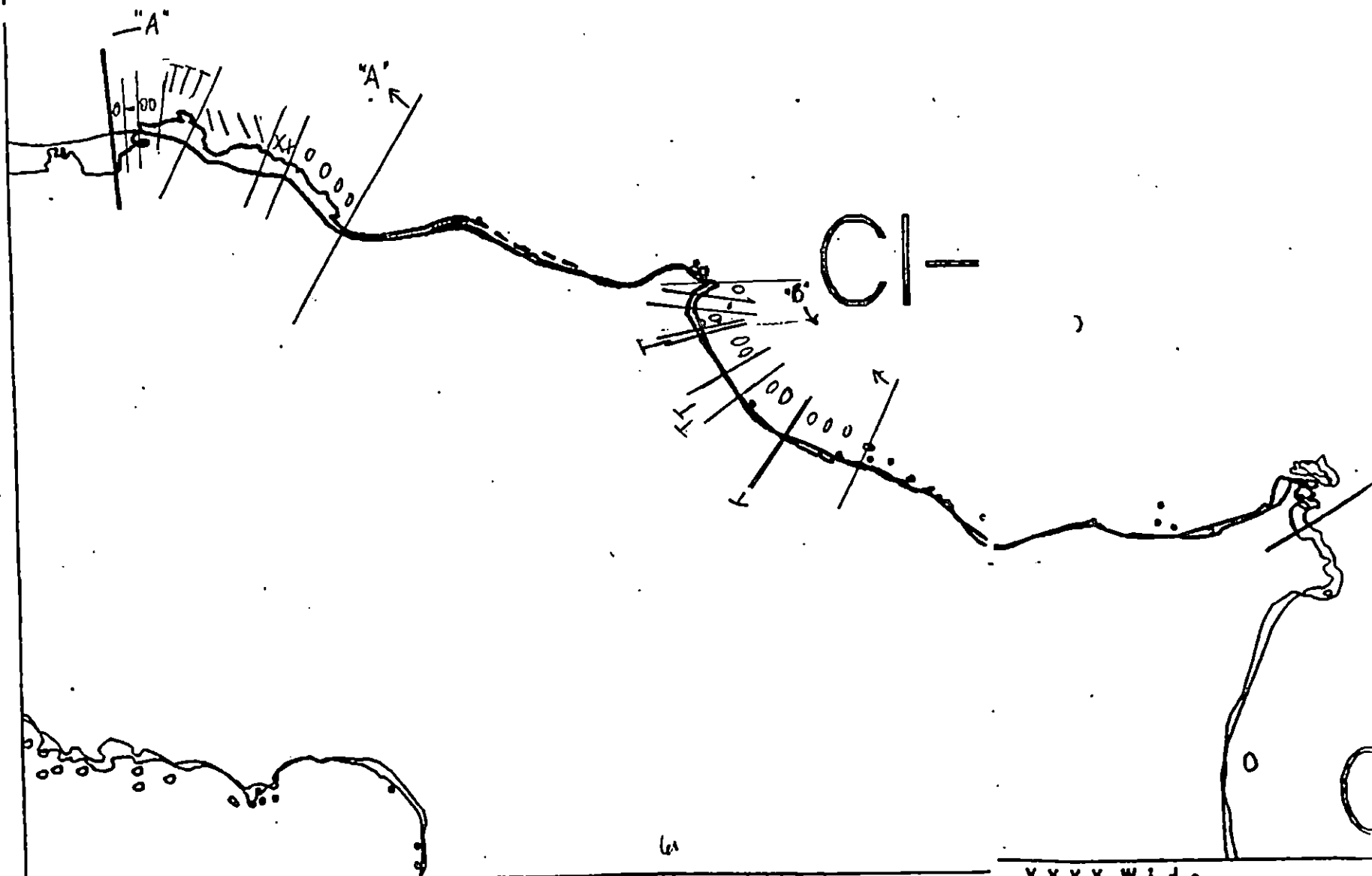
CI-001B

TEAM 17 26 APRIL 1990

DANIEL RAIDER

BIO SKETCH





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

CI-1

Approx. Segment Length: 6303m



Map Key: KEN-CI-1a

Name: N. BIGGAR

Date: 4/28/90

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

Approx.

SHORELINE EVALUATION

SEGMENT ST/ CI-001 SUBDIVISION B (2 OF 2) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

SR Seabird colony (5/1 to 9/1)
3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
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SHPO SIGNATURE: Rachel Scott Dale DATE: 5/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 51 m: V.Light 149 m: No Oil 834 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/23/90

ADEC ART WEINER Art Weiner
EXXON AMY ISA
NOAA Bruce Prescott
USCG G.A. REITER G.A. Reiter

FOSC: DATE: 6 June 90
clean mussel as indicated on OG map in conjunction with cleanup on CI 001A.

SEGMENT 21-001

SUBDIVISION 3

DATE 4 / 26 90.

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Backy
- ☐ Off Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. FFW/L/WL
- ☐ STL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pin Location(s)
- ☐ Photo Location(s)

LEGEND

**PH - No Subsurface On**

24

PM - Submission OK**CTAC**

Continuous Distribution

CT/O

Expected Outcomes

CT/P

Patchy Distribution

CT/S

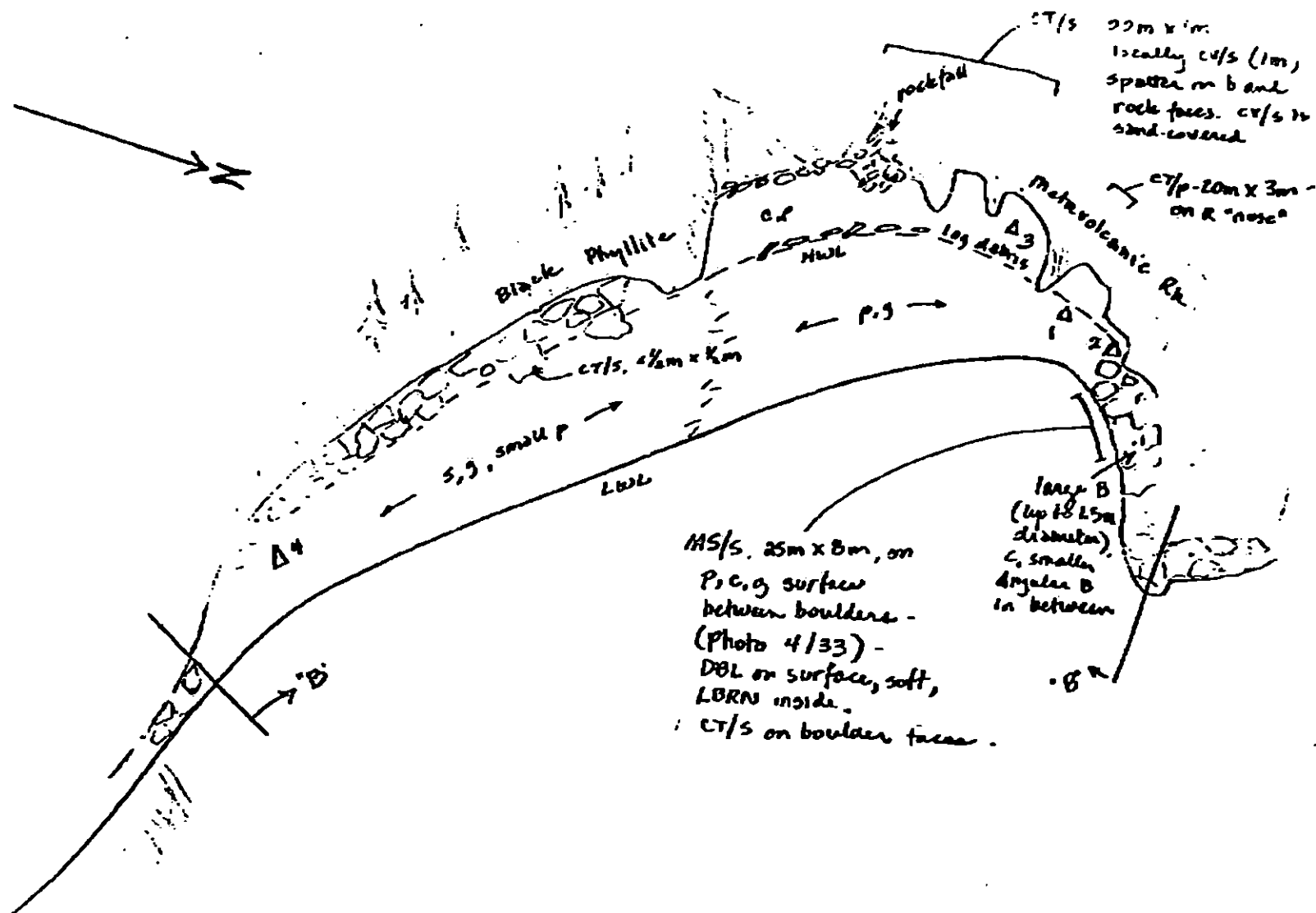
Selected Distribution

Child Vaccinations

1.

**Photo location, direction,
and number**

KETCH MAP



Oil Character Length (m) AP 0 PO 0 CV 0 CT 120 ST 0 MS 0 PT 35 TB 0 FL 0 NO 200

THE VISIONARY STATE

BIO COMMENTS

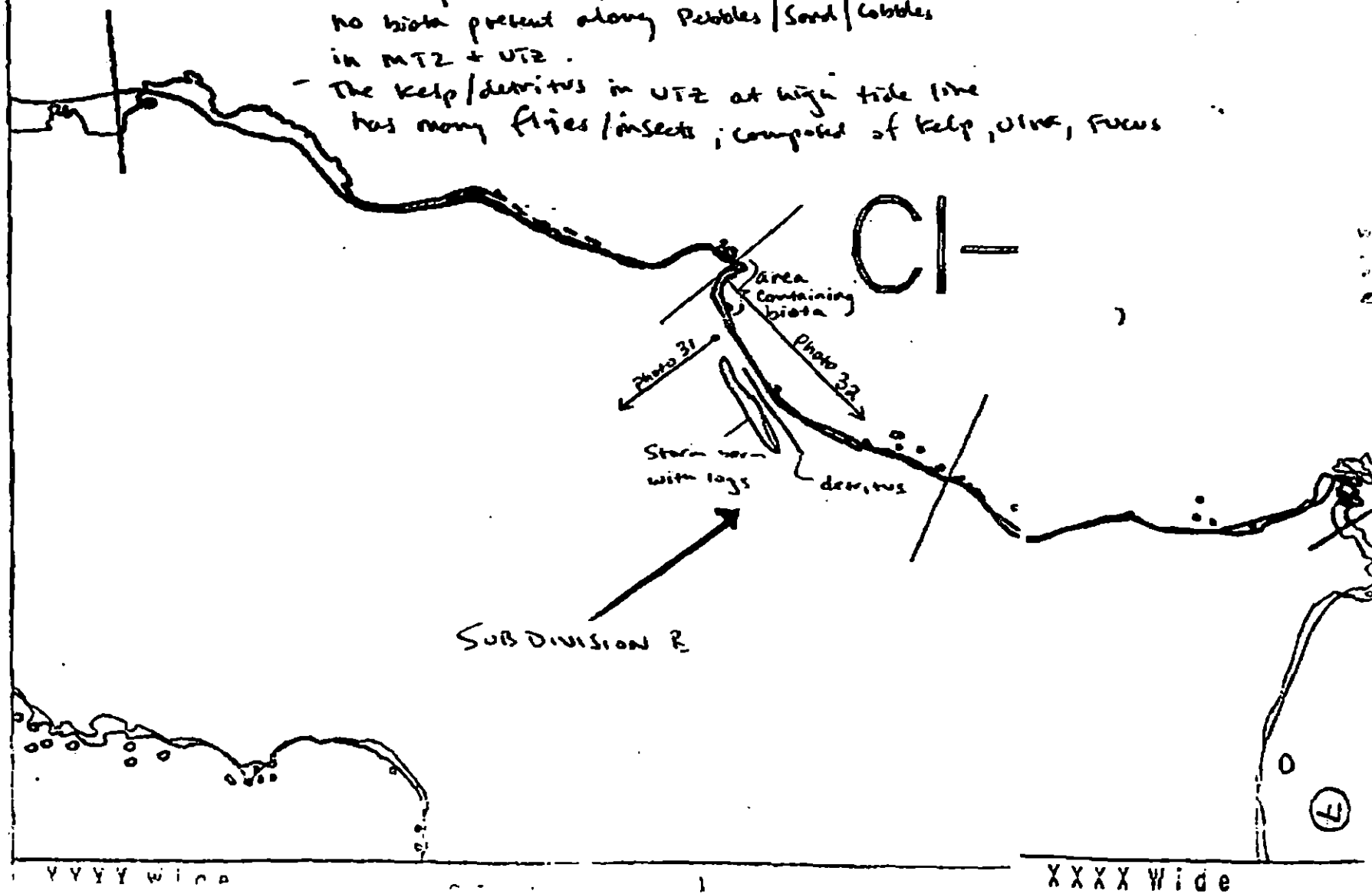
- This a high energy beach with biota concentrated on bedrock in Western part of segment; little to no biota present along Pebbles/Sand/Cobbles in MTZ + UTZ.
- The kelp/detritus in UTZ at high tide line has many flies/insects; composed of kelp, Ulva, Fucus

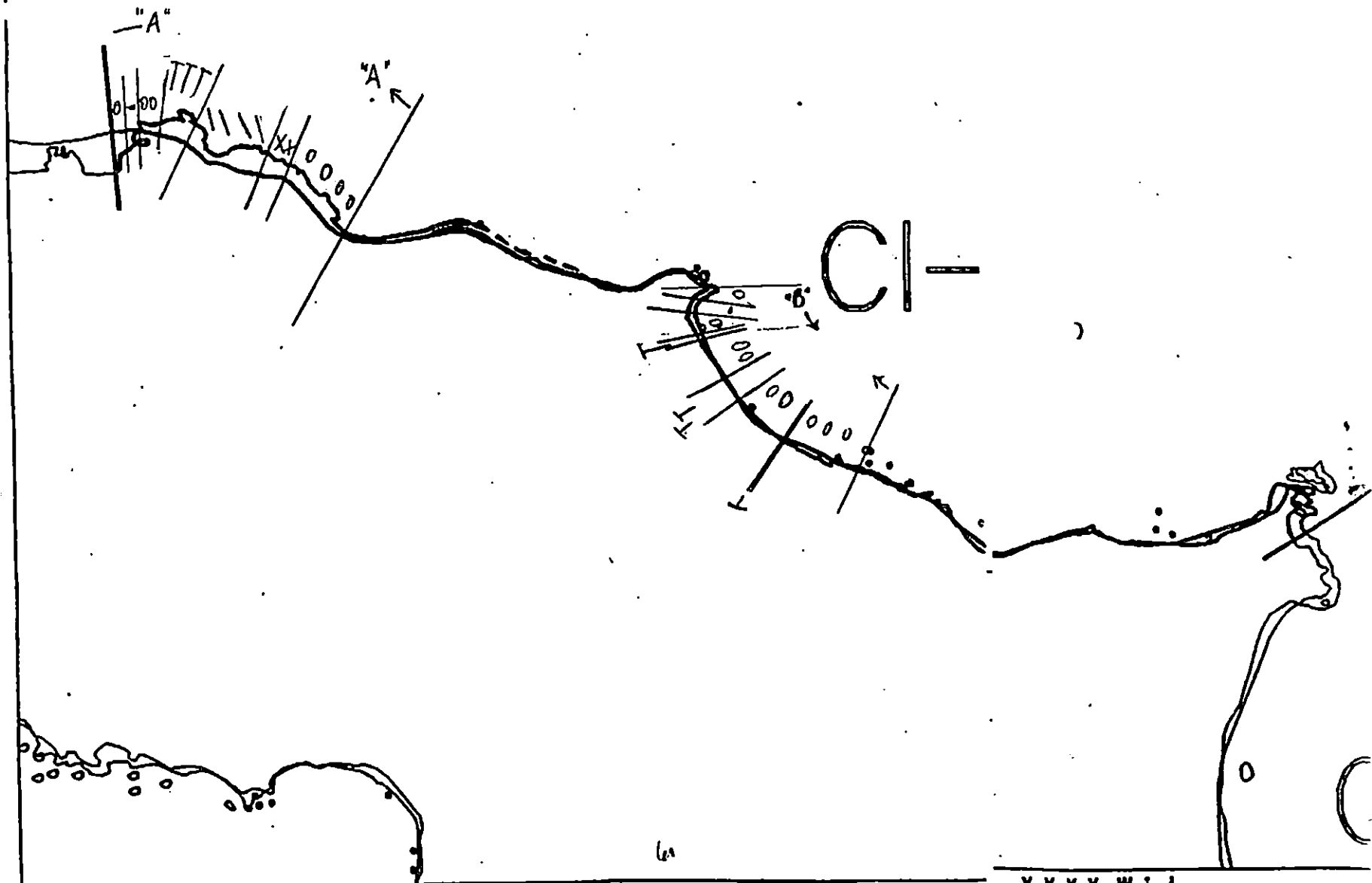
CI - 001 B

TEAM 17 26 APRIL 1990

DANIEL RANIER

BIO SKETCH

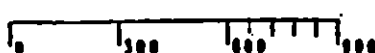




XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light

CI-1

Approx. Segment Length: 6303m



Map Key: KEN-CI-1a

Name: N. BIGGAR

Date: 4/28/90

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

2

1991 MAYSAP EVALUATION

SEGMENT: CI 001 SUB: A REGION: KEN SURVEY DATE: 5/28/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Timothy L. Smith

Date: 6/07/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

N

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: JUNE 7 1991

FOSC APPROVAL DATE: 6/14/91

ADEC

FOSC

EXXON

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

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

c:\wp\segment\ci001a.seg

MOUSSE IS LOCATED IN SMALL CREVICE
BOULDERS.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO 4 SEGMENT C-1421 SUBDIVISION A DATE 11/1/91

ADEC

NAME Steve Ferguson

SIGNATURE Steve Ferguson

☒ NTR ☐ TREATMENT RECOMMENDED

A LARGE AREA OF ASPHALT EXISTED HERE PRIOR TO 1990 CLEAN-UP (SEE SSAT REPORT) THE AMOUNT OF ASPHALT LEFT IS IN THE FORM OF SMALL MATS WITH A 1%-5% AREA OF TOTAL COVERAGE. THE WAVECUT PLATFORM HAS A VARIABLE HEIGHT DIFFERENCE TOWARDS THE WATERLINE EVEN THOUGH THIS IS CONSIDERED A HIGH ENERGY BEACH DOUBT VERY MUCH WHETHER INTERMITTANT WAVE EXPOSURE WILL ADD TO THE BREAK UP OF THESE ASPHALT MATS. 3 BAGS OF DEBRIS COLLECTED AT SITE OVERALL.

EXXON

NAME George P. Stiles

SIGNATURE George P. Stiles 5/29/91

☒ NTR This area was worked heavily in 1990 and showed drastic improvement. Small patches of sor, m > 1% were found with a lot of sand gains ~~mixed~~ in (very weathered). No further treatment recommended.

LANDMANAGER

NAME Pat Norman

OF Port Graham

SIGNATURE Pat Norman

☒ NTR High energy beach; remaining sor should be pounded out by wave action.

USCG/NOAA

NAME John L. McRatton

SIGNATURE John L. McRatton

☒ NTR

Sparsely patches of mouse among cobbles, picked-up as much as possible very little remaining

PAGE 1 OF 1

W $\emptyset$ m M $\emptyset$ m N $\emptyset$ m VL 718 m NO $\emptyset$ m US 275 m

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

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

- A VERY SMALL ($\sim 10 \text{ cm}^2$) SILVER SHEEN WAS FOUND IN AN INTERTIDAL POOL WITHIN LOCATION B. SOR WAS NEARBY, HOWEVER, I COULD NOT DETERMINE IF THE SHEEN WAS FROM THE SOR OR FROM THE BIOTA.
- SHORELINE IS A ROCK PLATFORM COVERED BY A THIN VENEER OF BOULDERS & COBBLES. THE REMAINING MOUSSE IS LOCATED IN SMALL CREVICES OF THE ROCK. THE SOR IS FOUND BETWEEN BEDROCK & BOULDERS.

Reviewed me 6/1/91
reviewed 5/31/91 KG

21001-A
 OG SKETCH MAP
 28-MAY-91
 0940-1039
 BRYAN TRIMM

WAVE CUT PLATFORM (BEDROCK EXPOSED)
 WITH BOULDER-COBBLE
 VENUEER

B
 SOR-M 1%,
 MS < 1%,
 25 x 110m
 MS Edge in LIVES
 SUR BETWEEN BOULDERS

WAVE CUT PLATFORM (BEDROCK EXPOSED)
 WITH BOULDER-COBBLE
 VENUEER

C
 SOR-M 5%,
 3 x 40m
 SUR BETWEEN BOULDERS

A
 SOR-M 1%,
 4 x 350m
 SUR BETWEEN BOULDERS

100
 meters

NOT SURVEYED

ITP - INTERTIDAL
 POOL

NORTH

CHUGACH
 ISLAND

200
 meters

revised 5/31/91 KG
 RAN:WRO:MC 6/1/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 28 MAY '91
 SEGMENT # C I 001 TIDAL HEIGHT(Range) -0.65 TO +1.75
 SUBDIVISION A BIOLOGIST Jim Roth
 SEA STATE 2 Ft WIND SPEED/DIRECTION
 PHOTOGRAPHS: ROLL # FRAME #

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

A. LOWER HITZ BOULDERS/COBBLE W/ SPARSE FOCUS, MODERATELY DENSE MUSSELS, LITTORINES, AND LIMPETS; SPARSE BARNACLES.
 B. LOWER HITZ / UPPER MITZ EXPOSED BEDROCK CREVICES W/ DENSE LITTORINES, LIMPETS, SPARSE MUSSELS; IN SMALL POOLS: MODERATELY DENSE FOCUS, VERY DENSE LITTORINES; MODERATELY DENSE MUSSELS, LIMPETS, BARNACLES.
 C. LOWER HITZ BOULDERS/COBBLE W/ MODERATELY DENSE FOCUS, DENSE LITTORINES, LIMPETS, SPARSE MUSSELS.

GENERAL COMMENTS: AN EXPOSED SITE WHICH IS SOMEWHAT PROTECTED FROM STORM ENERGY BY THE EXPOSED BEDROCK PLATFORM OFFSHORE. THE SURVEYED AREA CONTAINS A HEALTHY AND THRIVING INTERTIDAL BIOTA, DISTINGUISHED BY VERY DENSE LITTORINES, INCLUDING BOTH LITTORINA SITKANA AND L. SCUTULATA. THE OFFSHORE BEDROCK PLATFORM WAS NOT EXAMINED AS CLOSELY, BUT IT CONTAINS A RICH INTERTIDAL COMMUNITY.

AN EAGLE NEST WAS OBSERVED IN THE SUBDIVISION (SEE MAP), AND A BALD EAGLE WAS OBSERVED PERCHED IN A NEARBY TREE. REMAINS OF A BALD EAGLE (SEVERAL WING FEATHERS ATTACHED TO REMAINS OF WING) WAS OBSERVED ON THE SHORE.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles BALD EAGLE	1	1	
Seabirds MURRE	1	10	
Waterfowl CORMORANT	1	2	
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds OYSTERCATCHER	1	1	

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters			
Pinnipeds(specify)			
SEA LION	1		
ales(specify)			

Shoreline subdivision map showing important biological features attached.

C1001-A
SKETCH MAP
28-MAY-91
0940-1039

IN SMALL POOLS:
MODERATELY DENSE FUCUS;
VERY DENSE LITTORINES;
MODERATELY DENSE
MUSSELS,
LIMPETS,
BARNACLES

Bio MAP
ROTH
DENSE
LITTORINES,
LIMPETS;
SPARSE MUSSELS

WAVE CUT PLATFORM (BEDROCK EXPOSED)
WITH BOULDER-COBBLE
VENEEER

WAVE CUT PLATFORM (BEDROCK EXPOSED)
WITH BOULDER-COBBLE
VENEEER

BOULDER

COBBLE-PEBBLE

PEBBLE

TREES

BALD EAGLE
NEST

TREES

MODERATELY DENSE
FUCUS; DENSE
LITTORINES,
LIMPETS; SPARSE
MUSSELS

TREES

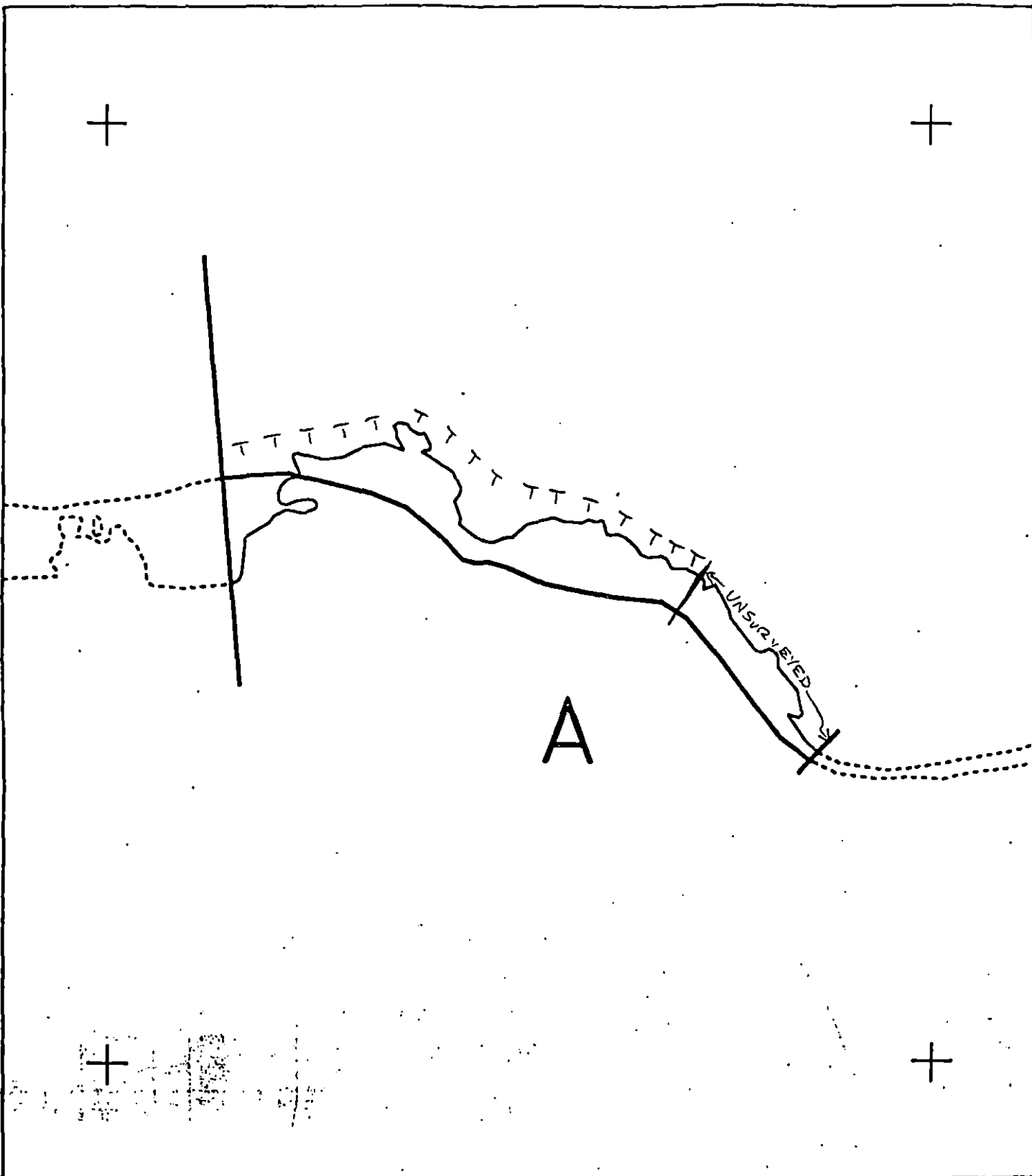
SPARSE FUCUS;
MODERATELY DENSE
MUSSELS, LITTORINES,
AND LIMPETS;
SPARSE BARNACLES

0 100
meters

NORTH

CHUGACH
ISLAND

0 200
meters



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

CI001 - A
 ADEC Subsegment Length: 993m
 METERS
 0 200 200
 AK State Plane Zone 4
 801001a

Subdivision Field Map
 Map Key: KENC1001A
 Name: TRIMM
 Date: 28-MAY-91
 Date Entered:



- SURFACE OIL CATEGORY MAP -

Reviewed: MC 6/1/91
 renewed 5/31/91 kg

1991 MAYSAP EVALUATION

SEGMENT: CI 001 SUB: B REGION: KEN SURVEY DATE: 5/28/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) NONE

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Timothy A. Smith Date: 6/07/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: JUNE 7 1991 FOSC APPROVAL DATE: 6/14/91

ADEC [Signature] FOSC [Signature]

EXXON [Signature] E. E. PAGE, CDR, USCG
CHIEF OF STAFF, FOSC

USCG [Signature]

NOAA [Signature]

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT C-1001 SUBDIVISION 2 DATE MAY 28/91

ADEC

NAME

Steve Ferguson

SIGNATURE

Steve Ferguson☒ NTR ☐ TREATMENT RECOMMENDED

SITE A OF THE SKETCH MAP HAD MS/SOR DEPOSITED IN COLLECTION POINTS UNDER BOULDERS. OILING AT SITES B, C AND D WERE IN SEAMS AND CREVISES LOCATED ON THE LEeward SIDES OF VERTICAL AND HORIZONTAL BEDROCK. CREW WAS UNABLE TO RECOVER VERY LITTLE OF THE MS/SOR AT SITE A DUE TO LOCATION OF IT UNDER BOULDERS.

EXXON

NAME

George P. Stiles

SIGNATURE

George P. Stiles 5/29/91☒ NTR

Very high energy area. Had some SOR in the bed rock cracks and some CT+S. The area of large boulders has some residual oil underneath that would be very difficult to get at and very little oil would be recovered.

LANDMANAGER

NAME

Pat NormanOF Port Graham

SIGNATURE

Pat Norman☒ NTR

The oil remaining on this segment was under large boulders in "A" portion of O & sketch map.

USCG/NOAA

NAME

AW02 MC NATION

SIGNATURE

AW02 MC NATION☒ NTR

Some small patches of mounds found with very large boulders, picked-up as much as possible, little remaining

PAGE 1 OF 1

SEGMENT CI 0001

SUBDIVISION B

DATE MAY 1 28 / 91

ENERGY LEVEL: ☒ H ☐ M ☐ L

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

EST. OIL CATEGORY LENGTH: W $\emptyset$ m M $\emptyset$ m N $\emptyset$ m VL 7 $\emptyset$ m NO 514 m US 45 $\emptyset$ m

DISTRIBUTION: C = 91-100%; B = 81-90%; P = 11-50%; S = 1-10%; T = <1%

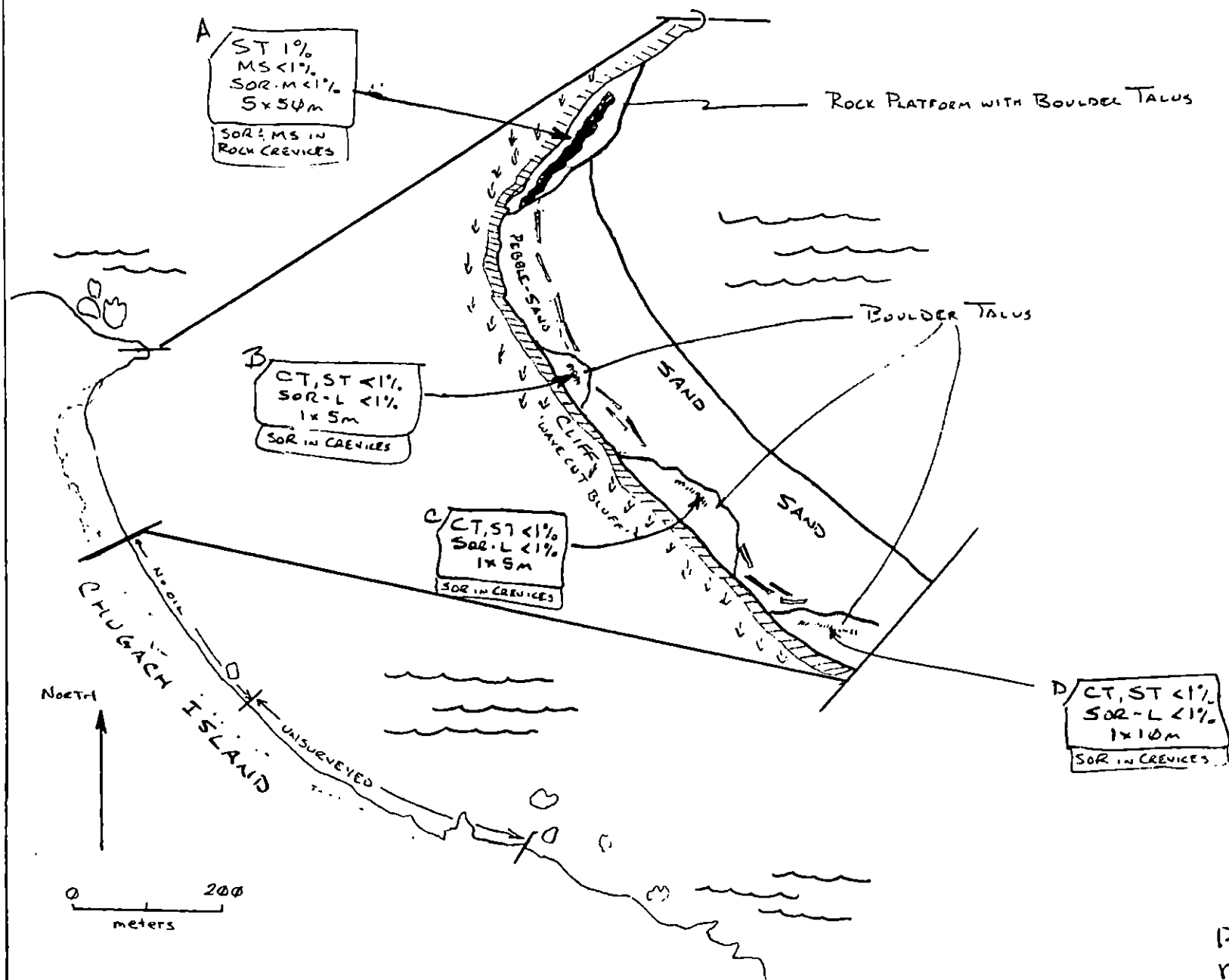
SLOPE: V = VERTICAL: H = HIGH ANGLE: M = MEDIUM ANGLE: L = LOW ANGLE PHOTO ROLL # MAYSAP-_____ -_____ FRAMES

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

COMMENTS:
STAIN¹ COAT FOUND ON BOULDER TALUS² & ROCK FACES. SOR¹ MOUSSE FOUND IN
CREVICES OF ROCK PLATFORM¹ & PROTECTED AREAS UNDERNEATH THE BOULDER TALUS.

Reviewed: MC 6/24/91
reviewed 5.31.94

CI-B
 04 SKETCH MAP
 28-MAY-91
 0839-0925
 BRYAN TRIMM



REVIEWED: MC 6/2/91
 reviewed S.31 9/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 28 MAY '91
 SEGMENT # C I 001 TIDAL HEIGHT(Range) -1.72 to -1.10
 SUBDIVISION B BIOLOGIST Jim ROTH
 SEA STATE 2 FT WIND SPEED/DIRECTION
 PHOTOGRAPHS: ROLL # FRAME #

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

A - HITE BOULDERS w/ SPARSE FUCUS, BARNACLES, LIMPETS, LITTORINES
IN CREVICES AND SHELTERED OVERHANGS
B, C - HITE/SUPRA BOULDERS - VERY SPARSE BIOTA, ONLY IN PROTECTED
CREVICES OF BOULDERS: FUCUS SPORLINGS, MUSSELS, LITTORINES
D - HITE/SUPRA BOULDERS - VERY SPARSE BIOTA, ONLY IN
PROTECTED CREVICES OF BOULDERS: TINY MUSSELS, LITTORINES

GENERAL COMMENTS: A VERY HIGH ENERGY BEACH, LARGELY
DEVOID OF INTERTIDAL BIOTA. A VERY SPARSE BIOTA
OCCURS IN PROTECTED CREVICES IN BOULDERS IN THE HITE/
SUPRA ZONE. AT THE NORTH END, BEDROCK OUTCROPS INTO
THE LITE/MITE AND HERE A MORE WELL DEVELOPED INTERTIDAL
BIOTA IS ESTABLISHED, WITH A VARIETY OF MACROALGAE IN
THE LITE, AND FUCUS/MUSSELS/BARNACLES/LIMPETS/LITTORINES
IN THE MITE.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

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

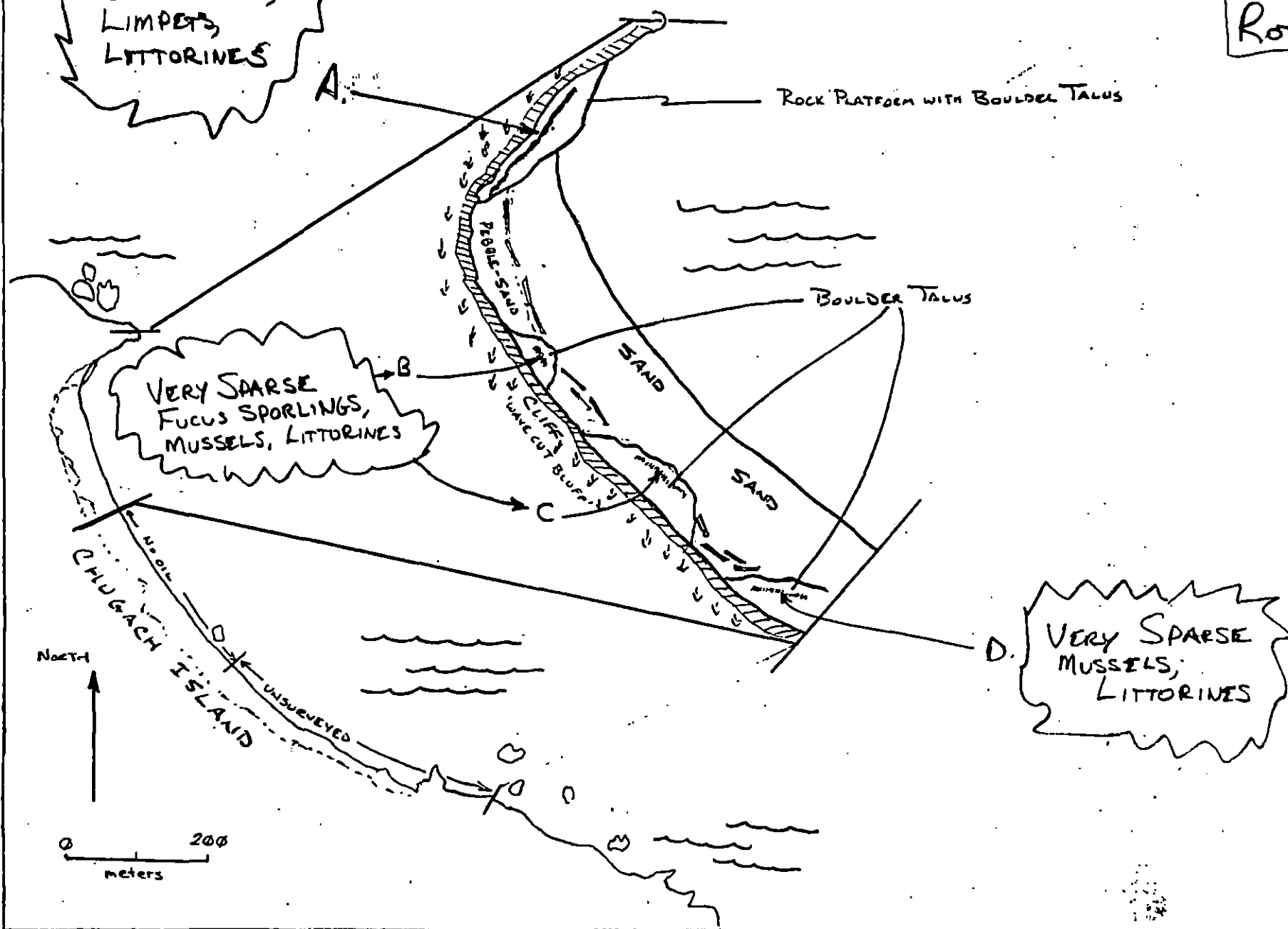
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds(specify)			
les(specify)			

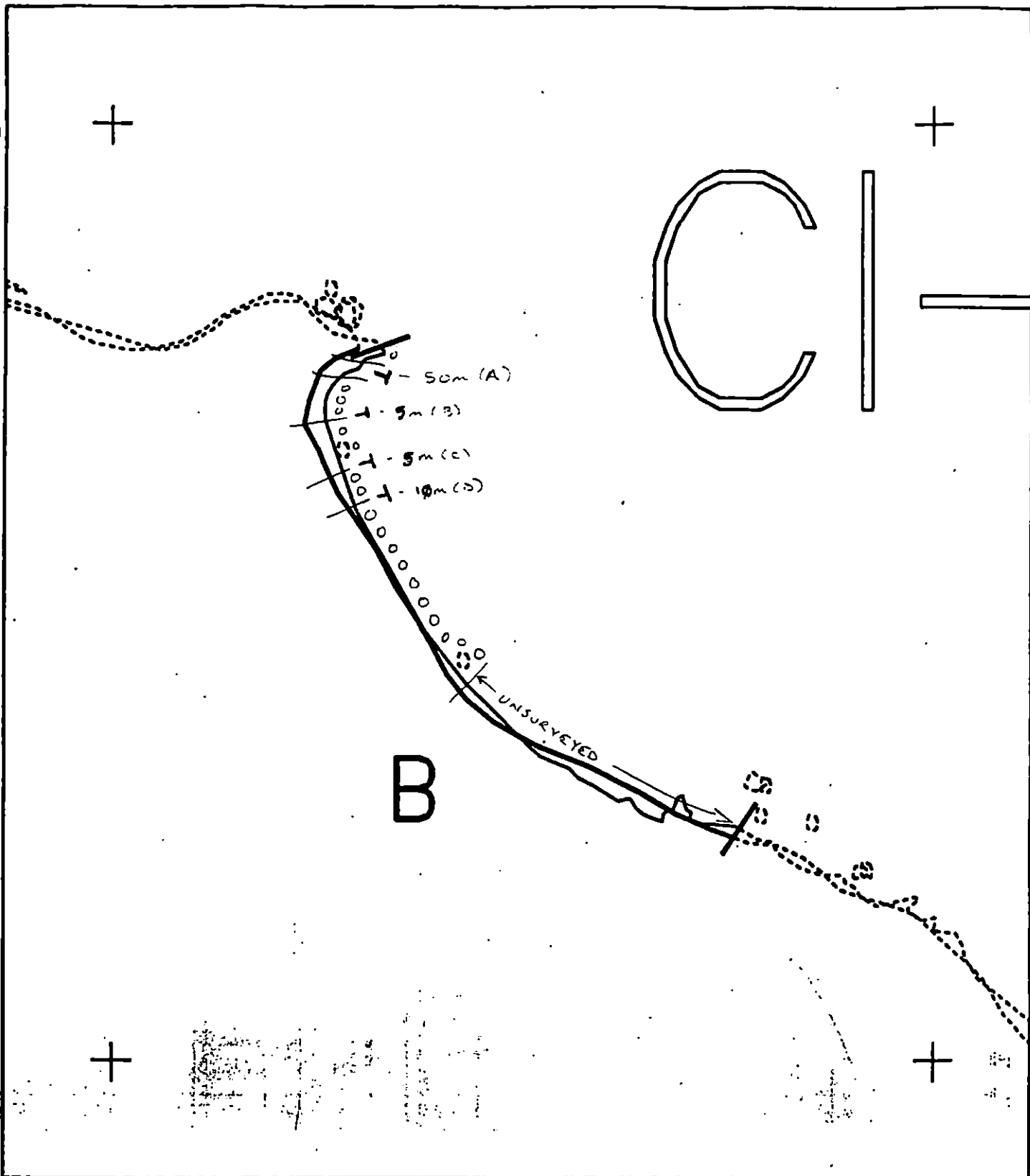
Shoreline subdivision map showing important biological features attached.

P. ... 1/1/91 ...

CI-B
SKETCH MAP
28-MAY-91
0839-0925

Bio Map
ROTH





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

C1001 B
 ADEC Subsegment Length: 1034m
 METERS
 0 200 400
 AK State Plane Zone 4
 NAD83

Subdivision Field Map
 Map Key: KENC1001B
 Name: TRIMM
 Date: 28-May-91
 Date Entered:



- SURFACE OIL CATEGORY MAP -

Reviewed: MC 6/2/91
 reviewed: 5.31 94

1991 MAYSAP EVALUATION

SEGMENT: CI 001 SUB: B REGION: KEN SURVEY DATE: 5/28/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) NONE

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC

FOSC

EXXON

USCG

NOAA

TEAM NO. 4 SEGMENT C-2-D-1 SUBDIVISION 2 DATE MAY 28 / 91

ADEC

NAME Steve FergusonSIGNATURE Steve Ferguson☒ NTR ☐ TREATMENT RECOMMENDED

SITE A OF THE SKETCH MAP HAD MS/SOR. DEPOSITED IN COLLECTION POINTS UNDER BOULDERS. OILING AT SITES B, C AND D WERE IN SEAMS AND CREVISES LOCATED ON THE LEeward SIDES OF VERTICAL AND HORIZONTAL BEDROCK. CREW WAS UNABLE TO RECOVER VERY LITTLE OF THE MS/SOR AT SITE A DUE TO LOCATION OF IT UNDER BOULDERS.

EXXON

NAME George P. StilasSIGNATURE George P. Stilas 5/29/91

☒ NTR Very high energy area. Had some SOR in the bed rock cracks and some CT+S. The area of large boulders has some residual oil underneath that would be very difficult to get at and very little oil would be recovered.

LANDMANAGER

NAME Pat NormanOF Port GrahamSIGNATURE Pat Norman

☒ NTR The oil remaining on this segment was under large boulders in "A" portion of O & sketch map.

USCG/NOAA

NAME WOB McRATONSIGNATURE WOB McRaton

☐ NTR Some small patches of mounds found with very large boulders, picked up as much as possible, little remaining

SEGMENT CI 441

SUBDIVISION B3

DATE MAY 1 26 191

ENERGY LEVEL: ☒ H ☐ M ☐ L

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

TOTAL LENGTH SHORELINE SURVEYED: 584 m NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 70 m NO 514 m US 450 m

[illegible]

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

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

[illegible]

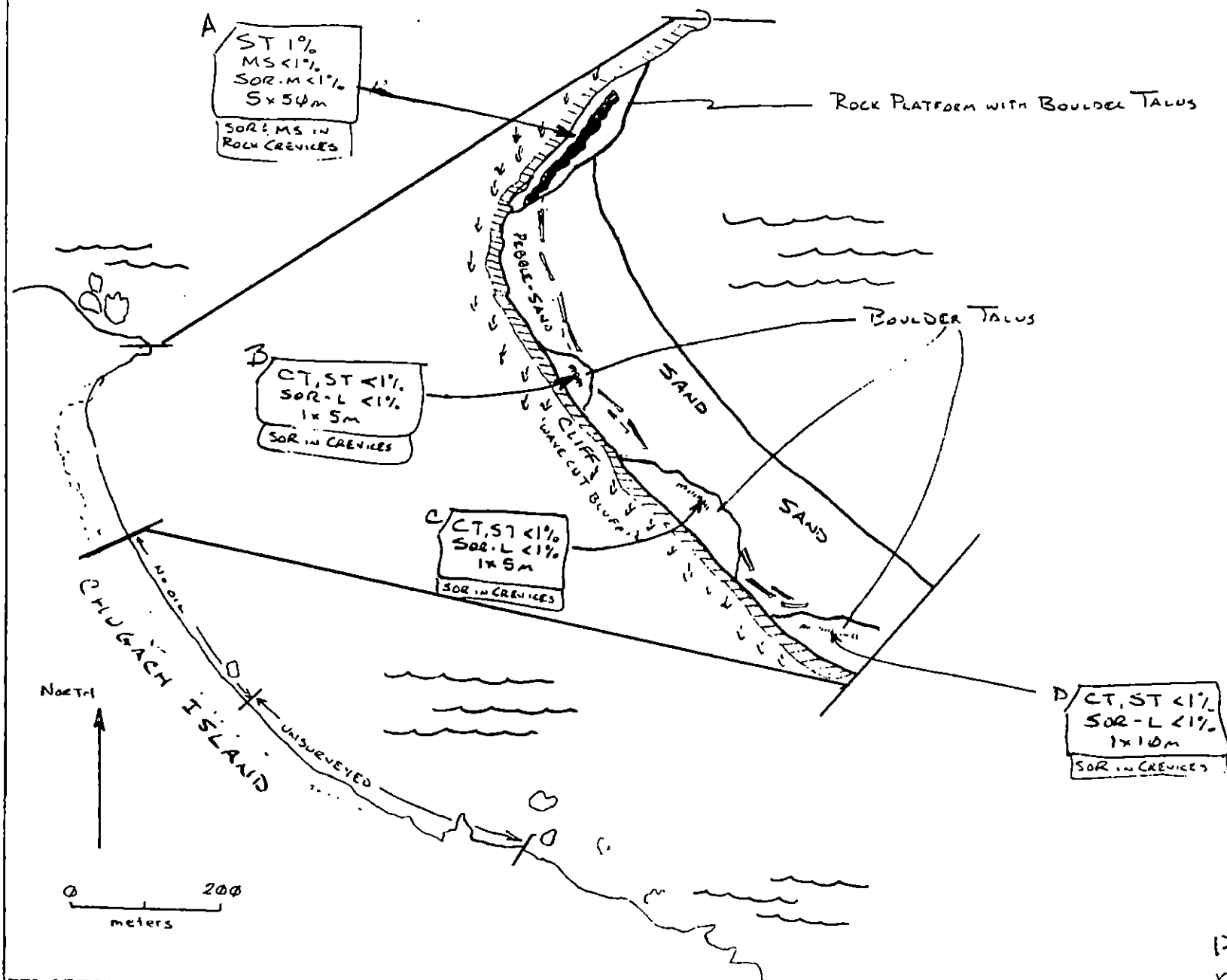
SHED COLOR: B = BROWN: R = RAINBOW: S = SILVER: N = NONE

OG COMMENTS:

COMMENTS:
STAIN¹ COAT FOUND ON BOULDER TALUS & ROCK FACES. SOR¹ MOUSSE FOUND IN
CREVICES OF ROCK PLATFORM & PROTECTED AREAS UNDERNEATH THE BOULDER TALUS.

Reviewed: MC 6/24/91
reviewed 5.31.94

01-B
 04 SKETCH MAP
 28-MAY-91
 0839-0925
 BRYAN TRIMM



Reviewed: MC 6/4/91
 Reviewed: S. 31 Oct.

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #

4

DATE

28 MAY '91

SEGMENT #

CI 001

TIDAL HEIGHT(Range) -1.72 to -1.10

SUBDIVISION

B

BIOLOGIST

Jim Roth

SEA STATE

2 FT

WIND SPEED/DIRECTION

PHOTOGRAPHS: ROLL #

FRAME #

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

A - HITE BOULDERS w/ SPARSE FUCUS, BARNACLES, LIMPETS, LITTORINES
IN CREVICES AND SHELTERED OVERHANGS

B, C - HITE/SUPRA BOULDERS - VERY SPARSE BIOTA, ONLY IN PROTECTED
CREVICES OF BOULDERS: FUCUS SPORLINGS, MUSSELS, LITTORINES

D - HITE/SUPRA BOULDERS - VERY SPARSE BIOTA, ONLY IN
PROTECTED CREVICES OF BOULDERS: TINY MUSSELS, LITTORINES

GENERAL COMMENTS: A VERY HIGH ENERGY BEACH, LARGELY
DEVOID OF INTERTIDAL BIOTA. A VERY SPARSE BIOTA
OCCURS IN PROTECTED CREVICES IN BOULDERS IN THE HITE/
SUPRA ZONE. AT THE NORTH END, BEDROCK OUTCROPS INTO
THE LITE/MITE AND HERE A MORE WELL DEVELOPED INTERTIDAL
BIOTA IS ESTABLISHED, WITH A VARIETY OF MACROALGAE IN
THE LITE, AND FUCUS/MUSSELS/BARNACLES/LIMPETS/LITTORINES
IN THE MITE.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

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

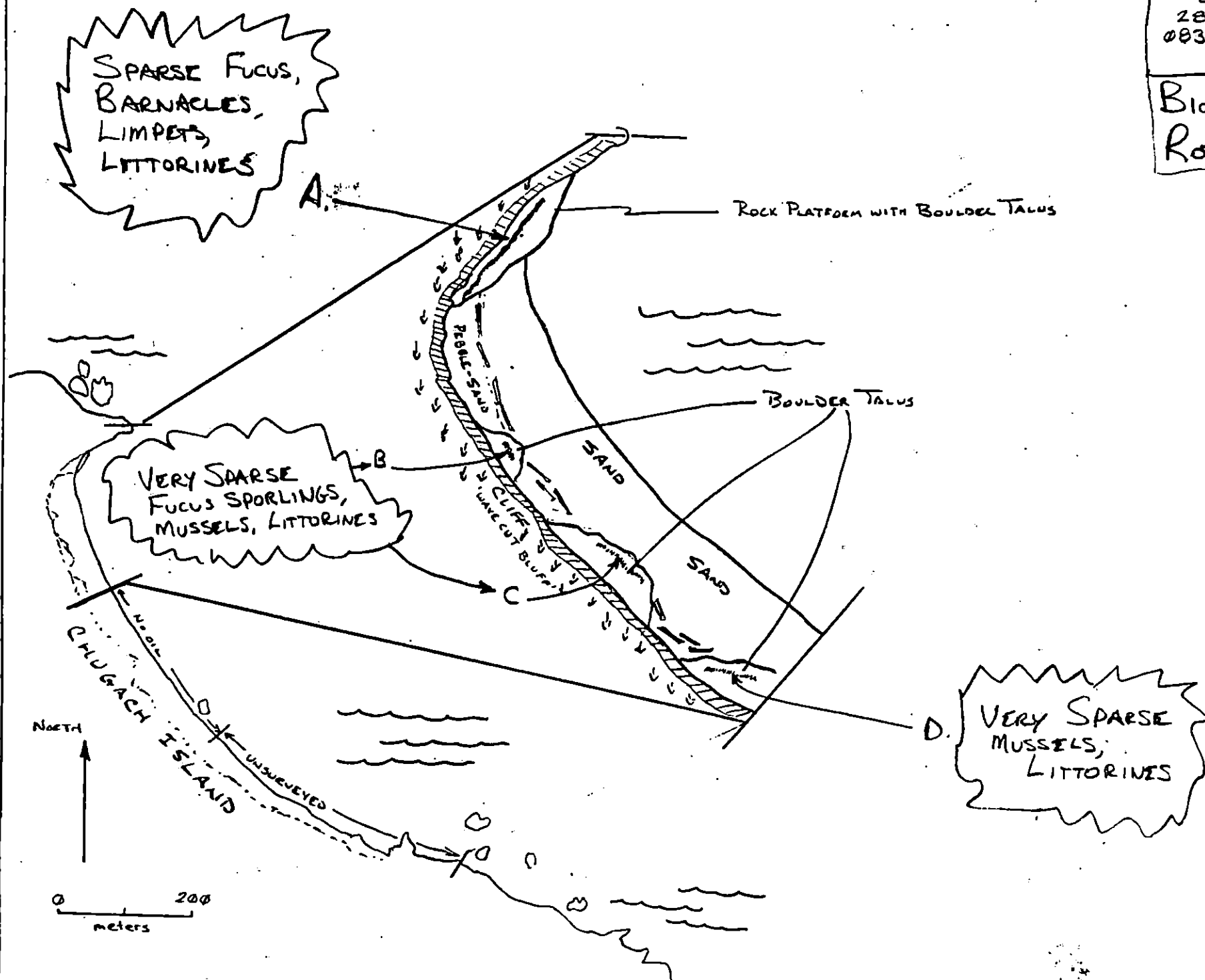
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds(specify)			
Whales(specify)			

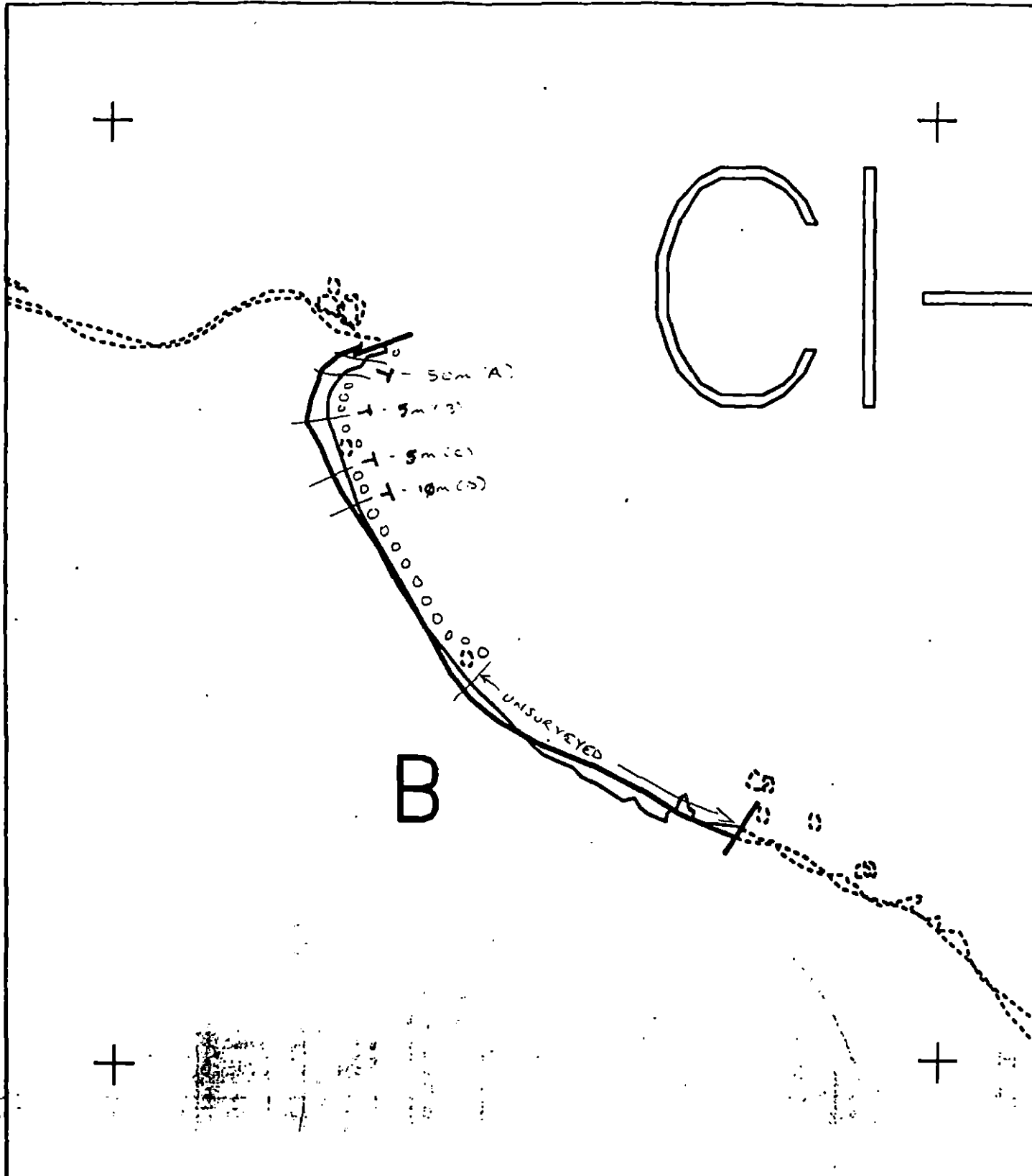
Shoreline subdivision map showing important biological features attached.

Ruth Hill, Jm

CS 01-B
SKETCH MAP
28-MAY-91
0839-0925

BIO MAP
ROTH





XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

C1001.B

ADEC Subsegment Length: 1034m

METERS

0 200 400
AK State Plane Zone 4
NAD83



Subdivision Field Map

Map Key: KENC1001B

Name: TRIMM

Date: 28-MAY-91

Date Entered:

- SURFACE OIL CATEGORY MAP -

Reviewed: MC 6/2/91
reviewed: 5.31 94

1991 MAYSAP EVALUATION

SEGMENT: CI 001 SUB: A REGION: KEN SURVEY DATE: 5/28/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

TEAM NO. 4 SEGMENT C-241 SUBDIVISION A DATE 12/22/91

ADEC

NAME Steve FergusonSIGNATURE Steve Ferguson☒ NTR ☐ TREATMENT RECOMMENDED

A LARGE AREA OF ASPHALT EXISTED HERE PRIOR TO 1990 CLEAN-UP (SEE SSAT REPORT). THE AMOUNT OF ASPHALT LEFT IS IN THE FORM OF SMALL MATS WITH A 1%-5% AREA OF TOTAL COVERAGE. THE WAECUT PLATFORM HAS A VARIABLE HEIGHT DIFFERENCE TOWARDS THE WATERLINE. EVEN THOUGH THIS IS CONSIDERED A HIGH ENERGY BEACH DOUBT VERY MUCH WHETHER INTERMITTANT WAVE EXPOSURE WILL ADD TO THE BREAK UP OF THESE ASPHALT MATS. 3 BAGS OF DEBRIS COLLECTED AT SITE OVERALL.

EXXON

NAME George P. StilesSIGNATURE George P. Stiles 5/29/91

☒ NTR This area was worked heavily in 1990 and showed drastic improvement. Small patches of SOR, $> 1\%$ were found with a lot of sand grains ~~mixed~~ in (very weathered). No further treatment recommended.

LANDMANAGER

NAME Pat NormanOF Port GrahamSIGNATURE Pat Norman

☒ NTR High energy beach; remaining sor should be pounded out by wave action.

USCG/NOAA

NAME WILLIAM McKEITHENSIGNATURE W. McKeithen☒ NTR

Sparsic patches of mousse among cobbles, fished-up as much as possible very little remaining

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 1

TEAM NO. 4

OG B TRIMM

BIO J. ROTH

SEGMENT C1401

ADEC S. Ferguson

LANDMANAGER P. Noeman for P. Graham

SUBDIVISION A

EXXON G STILES

USCG/NOAA McMahon/McDonald

DATE MAY 1 28 /91

TIME 09:40 to 10:39

TIDE LEVEL -0.58 ft. to 1.75 ft.

ENERGY LEVEL: ☒ H ☐ M ☐ L

SURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 718 m

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

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 718 m NO 0 m US 275 m

[illegible]

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

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

[illegible]

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

OG COMMENTS:

- A VERY SMALL (210 CM²) SILVER SHEEN WAS FOUND IN AN INTERTIDAL POOL WITHIN LOCATION B. SOR WAS NEARBY, HOWEVER, I COULD NOT DETERMINE IF THE SHEEN WAS FROM THE SOR OR FROM THE BIOTA.
- SHORELINE IS A ROCK PLATFORM COVERED BY A THIN VENEER OF BOULDERS & COBBLES. THE REMAINING MOUSSE IS LOCATED IN SMALL CREVICES OF THE ROCK, THE SOR IS FOUND BETWEEN BEDROCK & BOULDERS.

Reviewed: MC 6/1/91
reviewed 5/31/91 CG

21001-1
OG SKETCH MAP
28-MAY-91
0940-1039
BRYAN TRIMM

WAVE CUT PLATFORM (BEDROCK EXPOSED)
WITH BOULDER-COBBLE
VENEE

B
SOR-M 1 1/2
MS < 1%
25 x 110m
MS 150k - 400k
50k between boulders

WAVE CUT PLATFORM (BEDROCK EXPOSED)
WITH BOULDER-COBBLE
VENEE

C
SOR-M 5'
3 x 4.5m
SOR 30k - 100k

A
SOR-M 1 1/2
4 x 350m
SOR 10k - 200k

100
meters

NOT SURVEYED

NORTH

CHUGACH
ISLAND

200
meters

ITP - INTERTIDAL
POOL

reviewed 5/31/91 KG
Reviewed: MC 6/1/91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 28 MAY '91
 SEGMENT # C I 001 TIDAL HEIGHT(Range) -0.65 TO +1.75
 SUBDIVISION A BIOLOGIST Jim Roth
 SEA STATE 2 Ft WIND SPEED/DIRECTION
 PHOTOGRAPHS: ROLL # FRAME #

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

A. LOWER MITZ BOULDERS/COBBLE w/ SPARSE FOCUS, MODERATELY DENSE MUSSELS, LITTORINES, AND LIMPETS; SPARSE BARNACLES.
 B. LOWER MITZ / UPPER MITZ EXPOSED BEDROCK CREVICES w/ DENSE LITTORINES, LIMPETS, SPARSE MUSSELS; IN SMALL POOLS: MODERATELY DENSE FOCUS, VERY DENSE LITTORINES; MODERATELY DENSE MUSSELS, LIMPETS, BARNACLES.
 C. LOWER MITZ BOULDERS/COBBLE w/ MODERATELY DENSE FOCUS, DENSE LITTORINES, LIMPETS, SPARSE MUSSELS.

GENERAL COMMENTS: AN EXPOSED SITE WHICH IS SOMEWHAT PROTECTED FROM STORM ENERGY BY THE EXPOSED BEDROCK PLATFORM OFFSHORE. THE SURVEYED AREA CONTAINS A HEALTHY AND THRIVING INTERTIDAL BIOTA, DISTINGUISHED BY VERY DENSE LITTORINES, INCLUDING BOTH *LITTORINA SITKANA* AND *L. SCUTULATA*. THE OFFSHORE BEDROCK PLATFORM WAS NOT EXAMINED AS CLOSELY, BUT IT CONTAINS A RICH INTERTIDAL COMMUNITY.

AN EAGLE NEST WAS OBSERVED IN THE SUBDIVISION (SEE MAP), AND A BALD EAGLE WAS OBSERVED PERCHED IN A NEARBY TREE. REMAINS OF A BALD EAGLE (SEVERAL WING FEATHERS ATTACHED TO REMAINS OF WING) WAS OBSERVED ON THE SHORE.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles BALD EAGLE	1	1	
Seabirds MURRE	1	10	
Waterfowl CORMORANT	1	2	
Gulls/kittiwakes			
Shorebirds	←	←	
Corvids			
Other Birds OYSTERCATCHER	1	1	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds(specify)			
SEA LION	1		
Whales(specify)			

Shoreline subdivision map showing important biological features attached.

P. A. O. L. I. N. G.

CI001-A
SKETCH MAP
28-MAY-91
0940-1039

BIO MAP
ROTH

WAVE CUT PLATFORM (BEDROCK EXPOSED)
WITH BOULDER-COBBLE
VENUEER

IN SMALL POOLS:
MODERATELY DENSE FOCUS;
VERY DENSE LITTORINES;
MODERATELY DENSE
MUSSELS,
LIMPETS,
BARNACLES

DENSE
LITTORINES,
LIMPETS;
SPARSE MUSSELS

WAVE CUT PLATFORM (BEDROCK EXPOSED)
WITH BOULDER-COBBLE
VENUEER

MODERATELY DENSE
FOCUS; DENSE
LITTORINES,
LIMPETS; SPARSE
MUSSELS

SPARSE FOCUS;
MODERATELY DENSE
MUSSELS, LITTORINES,
AND LIMPETS;
SPARSE BARNACLES

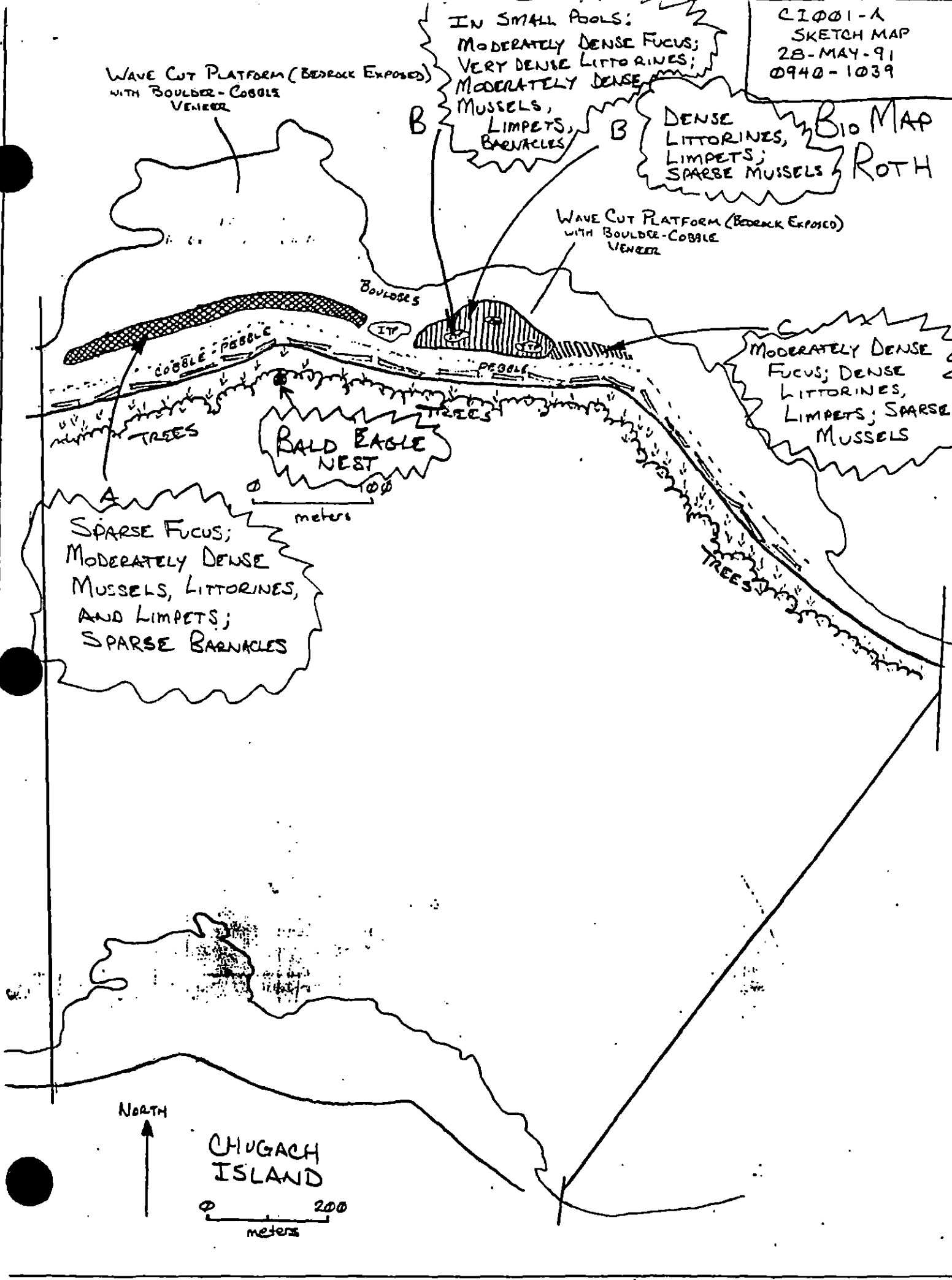
BALD EAGLE
NEST

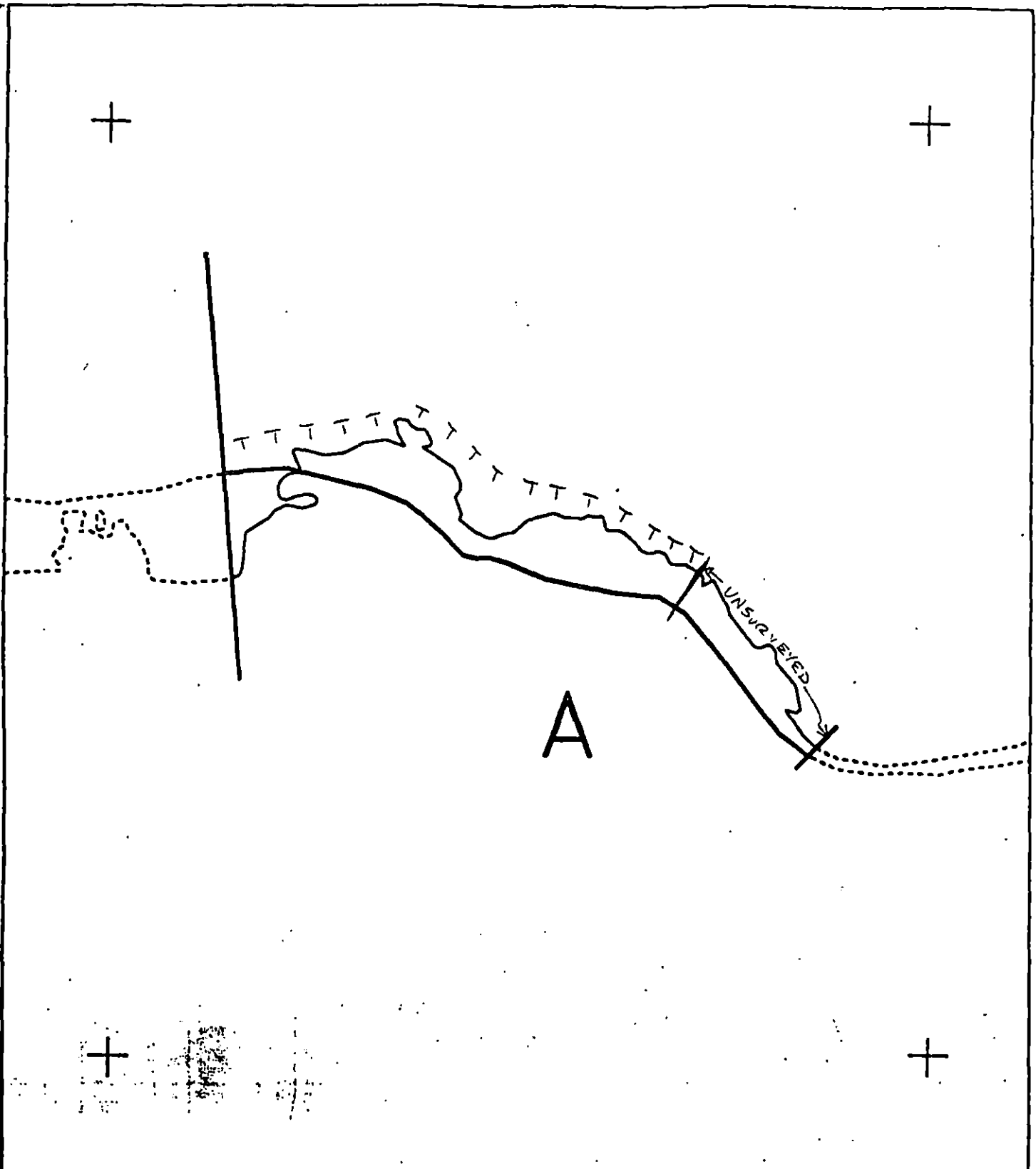
0 100
meters

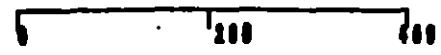
NORTH

CHUGACH
ISLAND

0 200
meters





XXXX	Wide	CI001 - A ADEC Subsegment Length: 003m METERS  AK State Plane Zone 4 801001a	 	Subdivision Field Map
////	Medium			Map Key: KENC1001A
----	Narrow			Name: <u>TRIMM</u>
TTTT	Very Light			Date: <u>28-MAY-91</u>
0000	No Oil			Date Entered:

- SURFACE OIL CATEGORY MAP -

Reviewed: mc 6/1/91
 reviewed 5/31/91 kw

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT CI-001 SUBDIVISION B (2 of 2)

WORK WINDOW	
Manual Pickup	WORK 7/1 - 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

Cultural Resource Evaluation Required

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Molting	Closed to manual pickup prior to 7/1 and after 8/15.
5R	Seabird Colony	NO CONSTRAINT. Work site is more than 800m from seabird colony.

OTHER ECOLOGICAL CONSIDERATIONS

Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

FOSC

D.D. Rome

Date

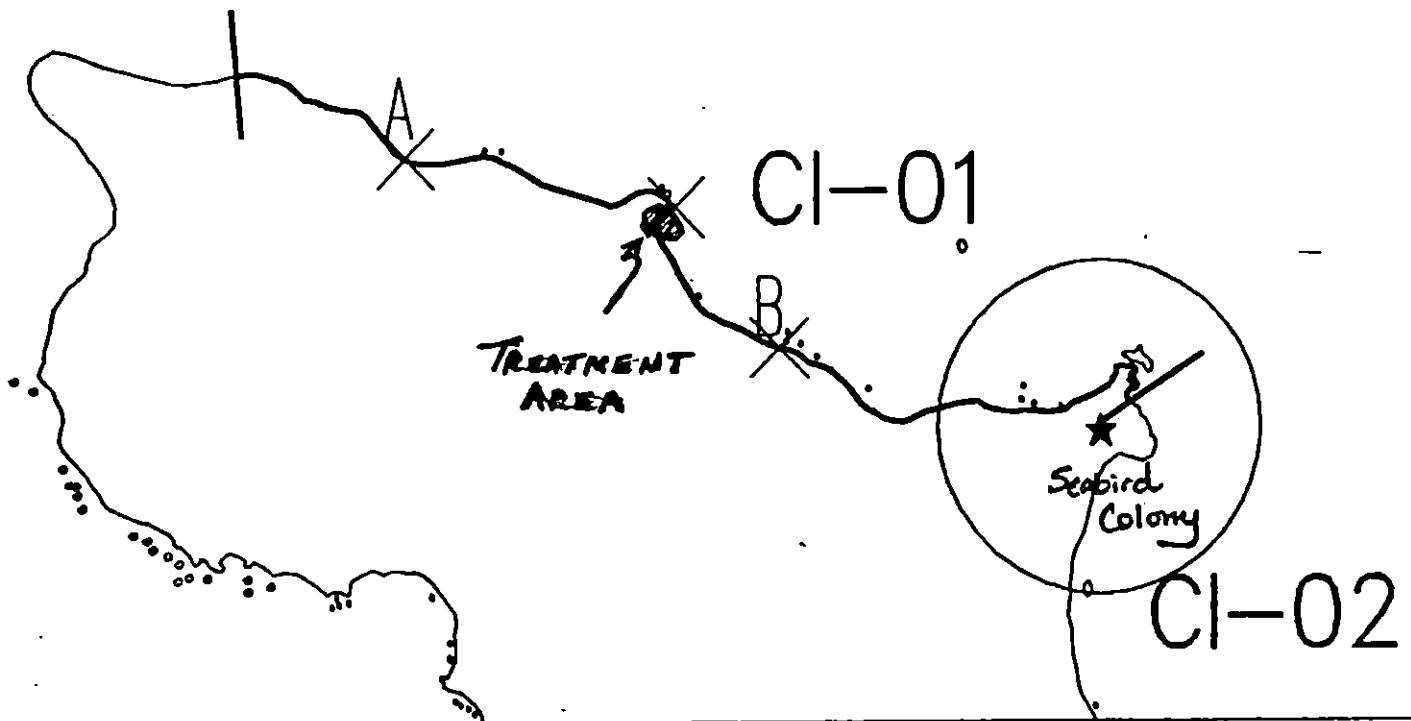
6/24/90

Prepared by

J.P. Phillips

Date

6/22/90



Exxon Company, USA
Map Key: KEN-CI-1



ECOLOGY MAP
SEGMENT CI-1
SUBDIVISION B (2 of 2)
METERS

★	Seabird Colony
△	Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ CI-001 SUBDIVISION B (2 OF 2) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5R Seabird colony (5/1 to 9/1)
3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and seal lion molting (8/15 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

I: **ARCHAEOLOGICAL CONSTRAINT:** If treatment is planned, a
i) cultural resource evaluation is required prior to shoreline
C) treatment.
(i)

SHPO SIGNATURE: Rachel Scanlon DATE: 5/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 51 m: V.Light 149 m: No Oil 834 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: SEE CONSTRAINTS ADDENDUM DATED 6/22/90

TAG COMMENTS:

TAG APPROVAL DATE: 5/23/90

ADEC Art Weiner
EXXON Art Weiner
NOAA Buck Garrett
USCG G.A. RETER

FOSC: DATE: 6 June 90

clean mussel as indicated on 06 map
in conjunction with cleanup on CI 001A.

SHORELINE EVALUATION

SEGMENT ST/ CI-001 SUBDIVISION A (1 OF 2) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5R Seabird colony (5/1 to 9/1)
5T All Bald Eagle nests (3/1 to 6/1)
5T Active Bald Eagle nests (3/1 to 9/1)
3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and seal lion molting (8/15 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Rachel Jean Oram DATE: 5/18/90

OILING CATEGORIZATION:

Wide 99 m: Medium 306 m: Narrow 47 m: V.Light 109 m: No Oil 433 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes: 1) Manual pickup of tar patties where shown on attached sketch map. Approval of USFWS regarding eagle nest and seabird colony required before working. Work between 7/1 and 8/15 due to pinniped constraints.

TAG COMMENTS: BIOREMEDIATE (CUSTOMER) AS REQUIRED FOLLOWING
TARMAT REMOVAL

TAG APPROVAL DATE: 5/17/90.

ADEC ART WEINER Art Weiner
EXXON ANDY TEAL Andy Teal
NOAA Gary Petros Gary Petros
USCG G.A. REITER G.A. Reiter

FOSC: [Signature] DATE: 6 June 90

DATE 4 12 6 / 90

CHECKLIST

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

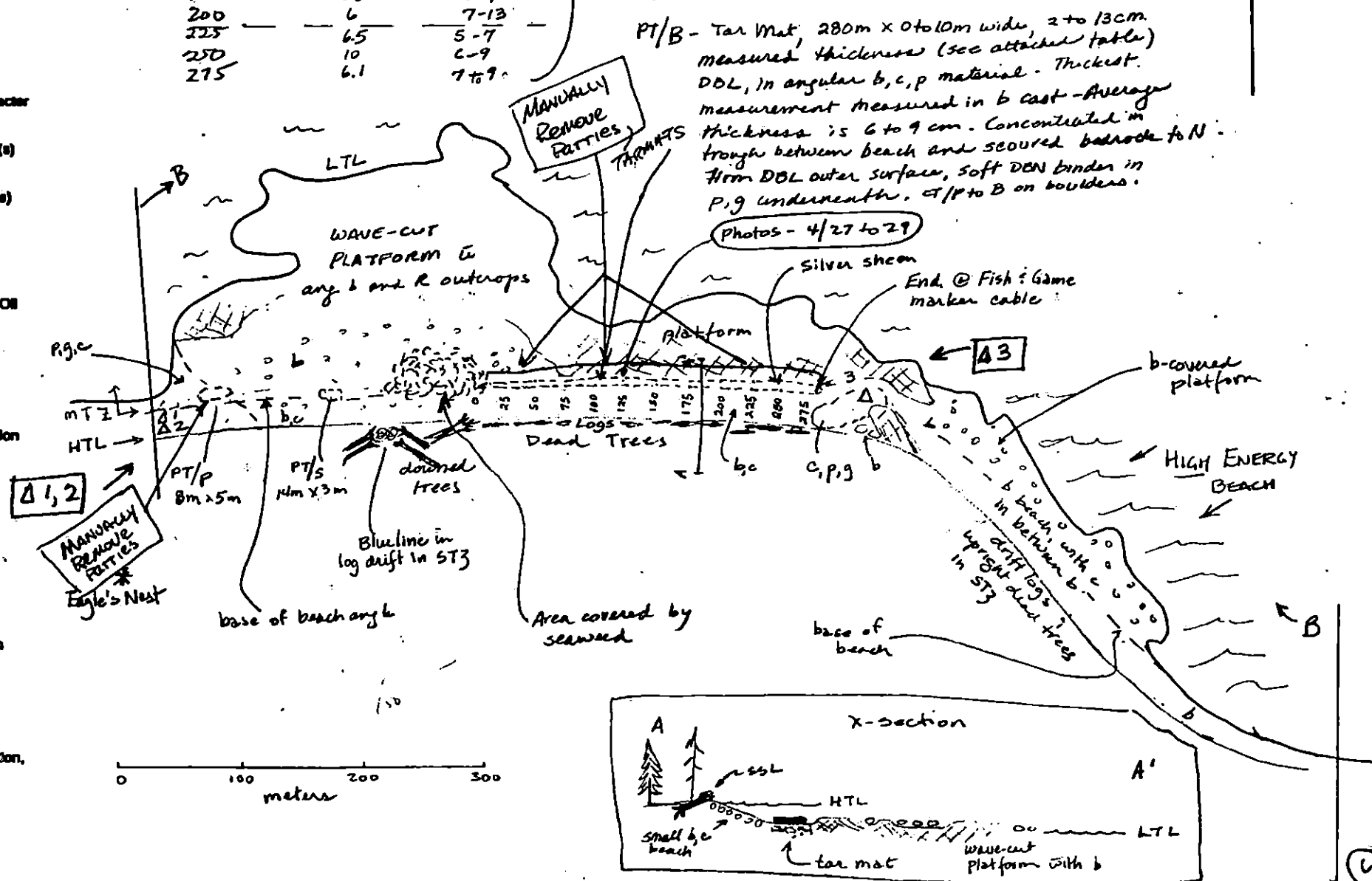
LEGEND

- 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

Station	Width (m)	Thickness (cm)
0	1.3	5-6
25	3.1	4-6
50	5.1	2-6
75	4.4	5-7
100	6	5-8
125	6.7	4-7
150	4.7	5-7
175	3.5	8-9
200	6	7-13
225	6.5	5-7
250	10	6-9
275	6.1	7-9

ETCH MAP

Measurements / stationi



Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 0 MS 0 PT 302 TB 0 FL 0 NO 755

REVISION-02/24/78

OG 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

SEGMENT ST/ 32-001

SUBDIVISION HDATE 4/26/90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Grid
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HMT/A.M.L.
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ PH Location(s)
- ☒ Photo Location(s)

LEGEND

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

 $\Delta 1, 2$

* Eagle's Nest

base of beach on 6

Blue line in log drift to ST3

dead trees

Area covered by seaweed

0 100 200 300
meters

SKETCH MA

- 3 measurements

PT/B - T2

ma
DB
ma
PH
T2
T1
P

Plat:fo

logs

Dead Trees

175

150

125

100

75

50

25

0

A

A

A

A

A

A

A

A

A

A

A

A

A

A

A

A

A

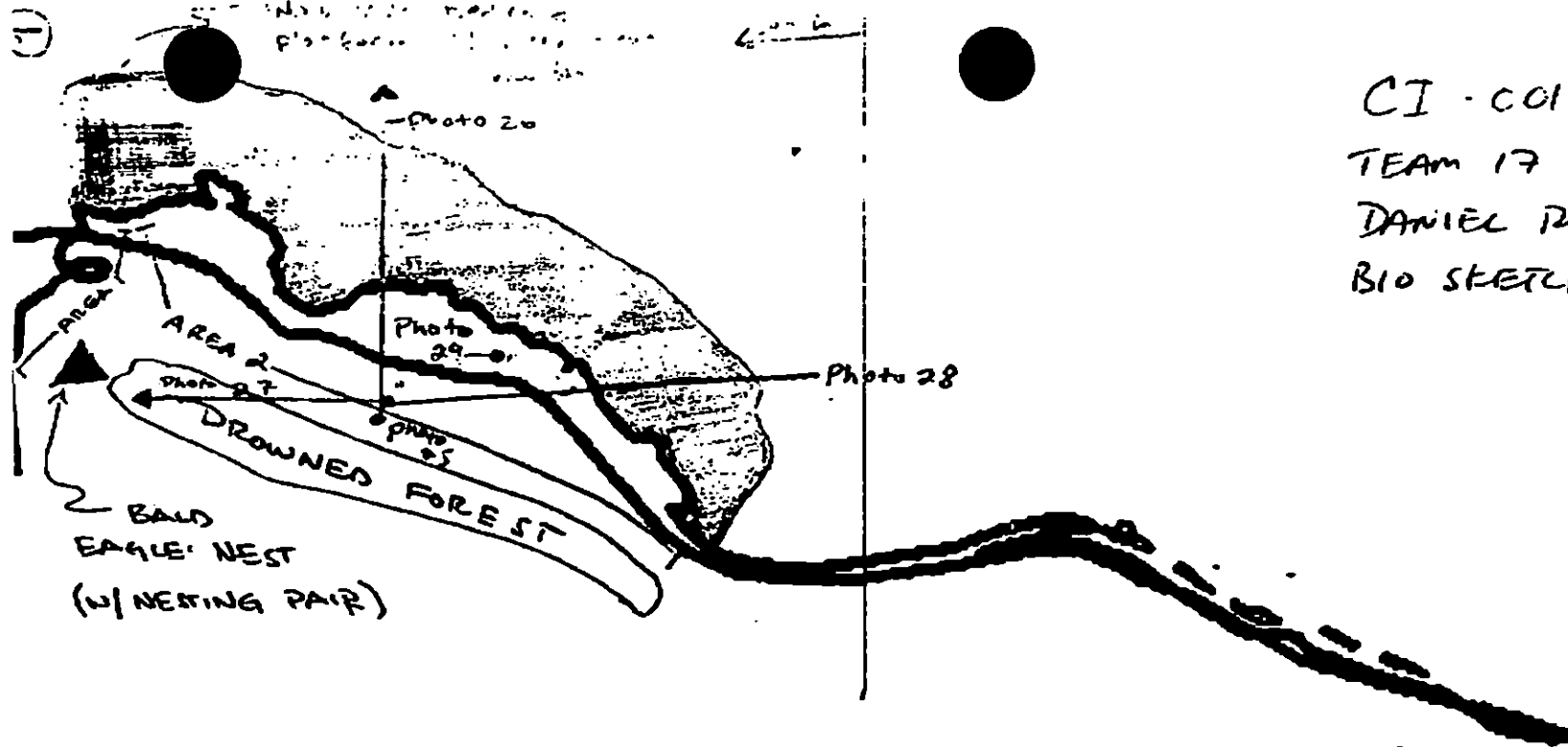
A

A

Oil Character Length (m): AP 2 PO 1 CV 2 CT 2 ST 2 MS 2 PT 302 TB 2

APR-29-90 SUN 17:29

①

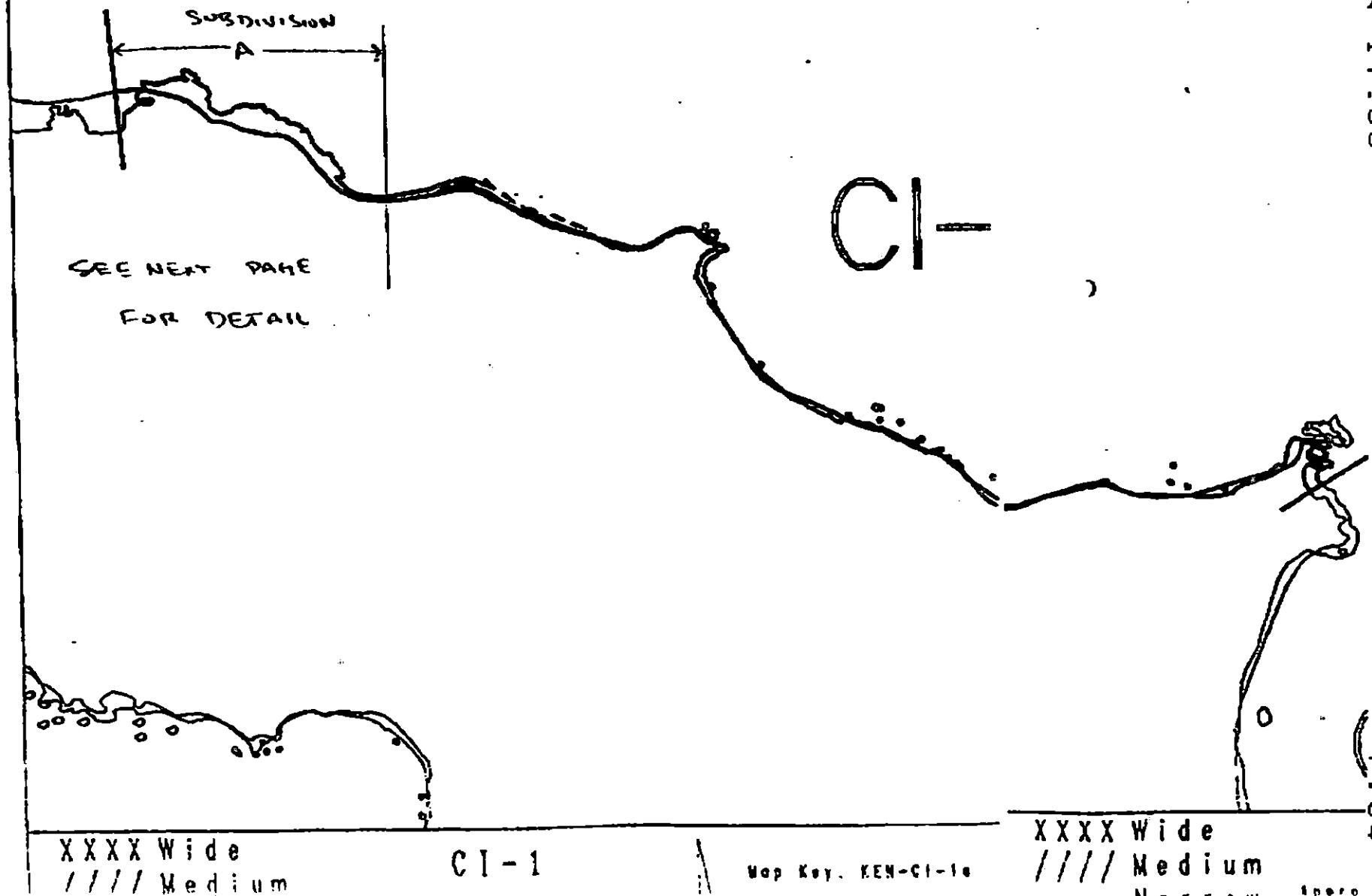


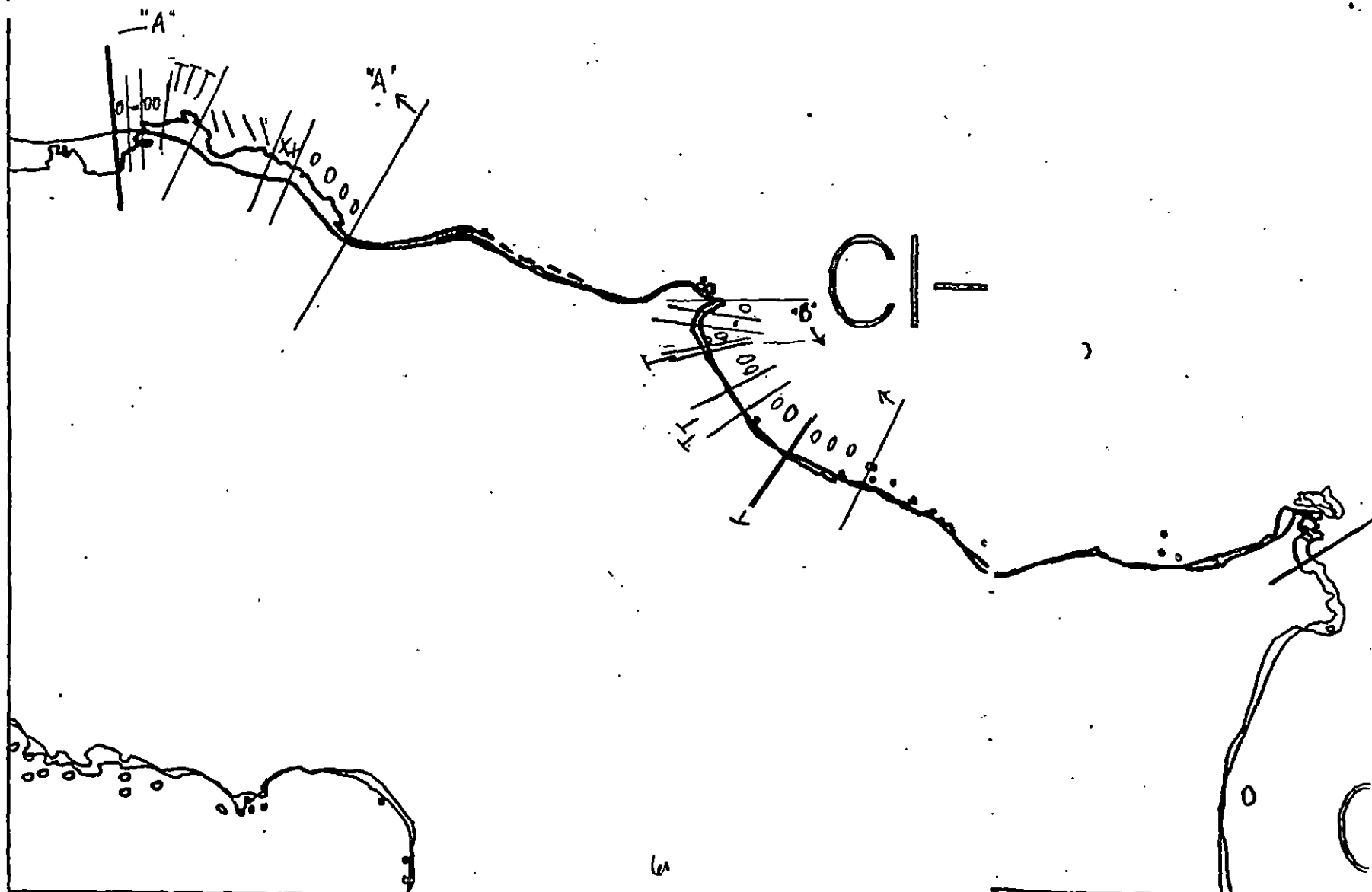
CI - COI A

TEAM 17 26 APRIL 1990

DANIEL RAIDER

BIO SKETCH





XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

CI-1

Approx. Segment Length: 6303m

0 500 1000 1500



Map Key: KEN-CI-1a

Name: N. BIGGAR

Date: 4/28/90

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

(2)

Approx.

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT CI-001 SUBDIVISION A (1 of 2)

WORK WINDOW	
Manual Pickup Tarmat Removal	WORK 7/1 to 8/15
Bioremediation	WORK 7/1 to 7/31

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5R	Seabird Colony	NO CONSTRAINT. Work site is more than 800m from seabird colony.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.
3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Molting	Closed to manual pickup, and tarmat removal prior to 7/1 and after 8/15. Closed to bioremediation prior to 7/1 and after 7/31.

OTHER ECOLOGICAL CONSIDERATIONS

Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. Avoid any unnecessary disturbance or damage to unloiled biota and substrate.

FOSC

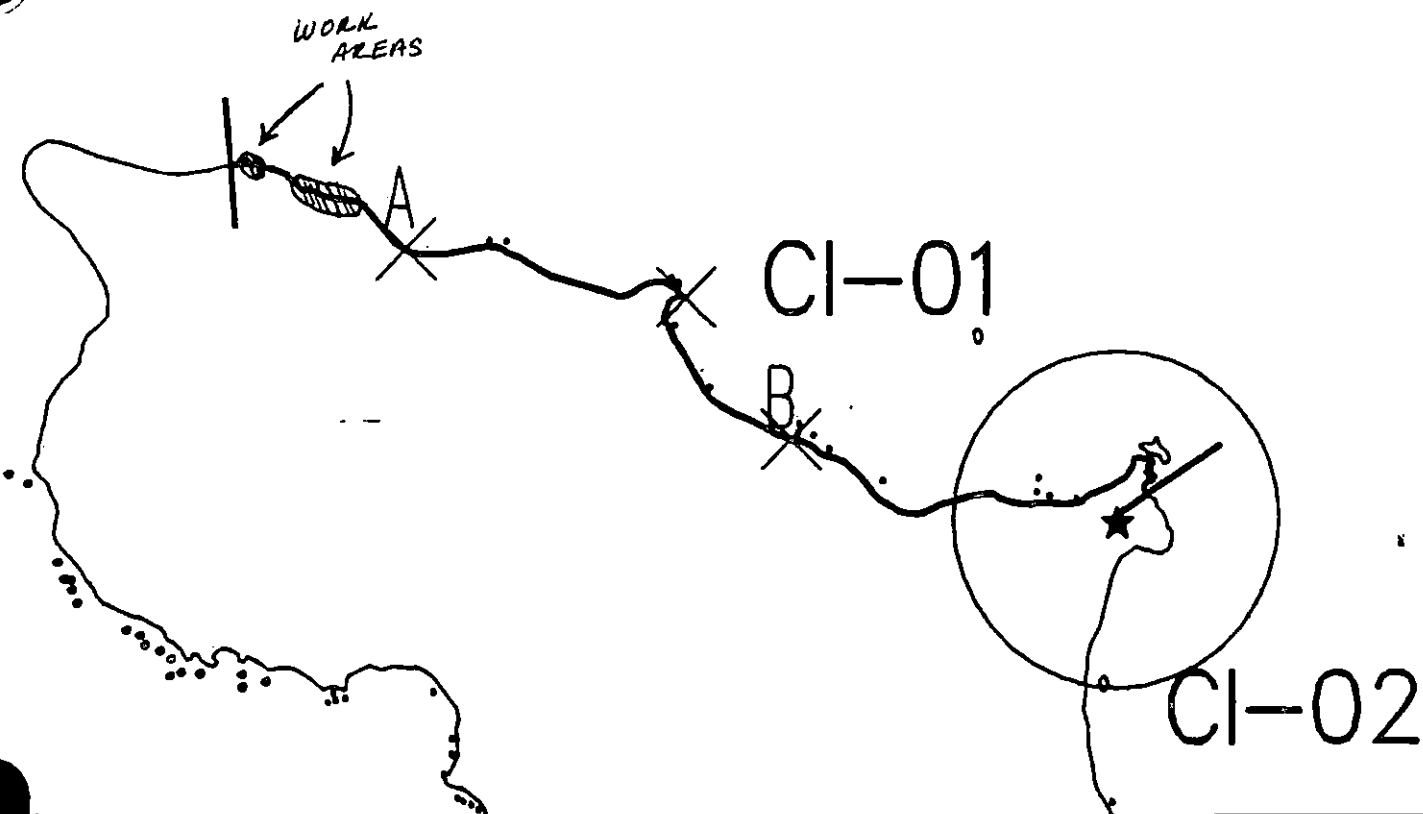
Date

6-19-90

Prepared by

Date

6/16/90



Exxon Company, USA



ECOLOGY MAP SEGMENT CI-1

SUBDIVISION A (1 of 2)



Seabird Colony



Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ CI-001 SUBDIVISION A (1 OF 2) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5R Seabird colony (5/1 to 9/1)
5T All Bald Eagle nests (3/1 to 6/1)
5T Active Bald Eagle nests (3/1 to 9/1)
3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and seal lion molting (8/15 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Rachel Jean Oam DATE: 5/18/90

OILING CATEGORIZATION:

Wide 99 m: Medium 306 m: Narrow 47 m: V.Light 109 m: No Oil 433 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes: 1) Manual pickup of tar patties where shown on attached sketch map. Approval of USFWS regarding eagle nest and seabird colony required before working. Work between 7/1 and 8/15 due to pinniped constraints.

SEE CONSTRAINTS ADDENDUM DATED 6/16/90. PP

TAG COMMENTS: BIOREMEDIATION (CUSTOMER) AS REQUIRED FOLLOWING
TARMAT REMOVAL

TAG APPROVAL DATE: 5/17/90.

ADEC ART WEINER Art Weiner

EXXON ANDY TEAL Andy Teal

NOAA Gary Petros Gary Petros

USCG G.A. REITER G.A. Reiter

FOSC:

DATE: 6 June 90

REGION: KENAI

SEGMENT: ST/CS-01

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ CS-01 SUBDIVISION A (1 OF 1) DATE 4/27/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1C Salmon fry nursery area (4/31 to 7/31)
1J Purse seine area (7/1 to 8/31)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 416 m: No Oil 4897 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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

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

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

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

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

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

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

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

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

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

1H Remote release site

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

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

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

✓ 1I Gill net area (6/7 to 8/31)

✓ 1J Purse seine area (7/20 to 9/30)

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

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

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

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

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

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

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

30, 3Q Harbor seal and sea lion pupping (5/15 to 7/1)

Harbor seal and sea lion molting (8/15 to 9/15)

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

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

ADF&G Don Calkins 267-2403

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Roth 267-2206

✓ 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)

Finfish harvesting

✓ 7HH Deer harvesting (8/15 to 2/28)

7U Invertebrate harvesting

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

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / CS-01 SUBDIVISION: A-1 of 1 DATE 04/27/90

USCG

NAME

David S. Thomas

SIGNATURE

[Signature]☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

ADEC

NAME

Clara J. Crosby

SIGNATURE

[Signature]☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Oil recovery within this segment would
be minimal -

LAND MANAGER

NAME

John J. Merwin

SIGNATURE

[Signature]☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 04-13-90

OG RICK GILLIE USCG DAVE THOMAS SEGMENT ST/ CS-01
 BIO DAVE LOHSE LAND REP JOHN MOONIN (EB) SUBDIVISION A (1 OF 1)
 EXXON FRANK BOX ADEC CLARA CROSBY TIME 19:10 to 20:50
 TEAM NO. 13 TIDE LEVEL +6 to +4 DATE 04/27/90
 ST. SUBDIVISION LENGTH: 6250 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 30 % B 20 % C 15 % P 15 % G 5 % S 5 % M 5 % V 5 %
 SLOPE: Lang 70 % Hang 20 % Vert 10 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 120 m NO 6,130 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR							IMPACTED ZONES			
	/C	/B	/P	/S	SBL	DBL	GY	SL	TL	LBR		SU	U	M	U
ASPHALT PAVEMENT				X		X							X		
POOLED															
COVER				X		X							X		
COAT				X		X							X		
STAIN															
MOUSSE															
PATTIES															
TARBALLS															
FILM															
NO OIL												X		X	X

PAVEMENT H F (S) 5 sq. m by 3 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris	X		

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE AP/S#BAGS 11/2Photographs: (NOT OILED)Roll No. ST-13-05Frames 30, 31, 32

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR							PIT ZONE				A N A	SHEEN (Y/N)	▽	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	SBL	DBL	GY	SL	TL	LBR		SU	U	M	U				
1	20					X	.		X								X							P-P
2	20					X	.		X								X							P-P
3	30					X	.		X								X							P-PG
4	40					X	.		X								X							S-G, S
5	30					X	.		X									X						C-C, G
6	20					X	.		X								X							C-P, S

COMMENTS

- ① SURVEY FROM 12:30 to 13:50 AND 19:10 to 20:50
- ② GEOMORPHOLOGY: LAGOON, COBBLE PIT, BOUNDER/ROCK BAY
- ③ OILING: NO OIL TO VERY LIGHT. AN OILY MATERIAL RECOVERED.

REVIEWED BAT DATE 1 MAY 90

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 06.12.90

SEGMENT ST/ CS-01 SUBDIVISION A- (1 OF 1)

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	S T E E N (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	BRN	GRY	BLK	WH	LT	DK	SU	U	M	L				
7	30					X	.		X									X					Bk-P.S
8	20					X	.		X								X						C-P.S
9	25					X	.		X								X						C-P.S
10	40					X	.		X								X						P-G.S
11	30					X	.		X								X						P-P.S
							.																
							.																
							.																
							.																
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COMMENTS

- ① PREVIOUS SURVEY (ADEL WALKATHON) SHOWED NO OIL ON EXPOSED OUTER COAST OF SEGMENT.
- ② ALL VISIBLE OILY MATERIAL RECOVERED FROM SHORELINE. TOTAL = 60 LBS OILED SEDIMENTS (1 1/2 BAGS)
- ③ 2950 M OF ORIGINAL SEGMENT LENGTH NOT SURVEYED.

REVIEWED BAT DATE 1 MAY 90

REVISED 6/24/99

Character Length (in): AP 10 PO 0 CV 0 CT. 10 ST 0 MS 0 PT 1 TB 0 FL 0 NO 6130

NOT SURVEYED

NOTE: ALL AP/S RECOVERED FROM SEGMENT
TOTAL ~ 60 LBS OILED PEBBLES/SAND
(1 1/2 BAGS)

Port Chatham

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/23/90

Segment ST / CS001 Subdivision A Date (mo / day / yr) 4-27-90Time (24 hr) 19:00 Biologist David Lohse

(A) Substrate type and % of segments:

(1) Bedrock 30 (2) Boulder 70 (3) Cobble 15 (4) Pebble 15 (5) Sand 10 (6) Silt 5(B) Overall % cover of biota (% of segment): Dense 70 Moderate 70 Low 60

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

Photographs:

Roll No. ST-13-5Frames 30-32

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:

Bald eagle nest found in segment. It was occupied by a mature bald eagle. See OG map for location.

Other ecological sensitivities/considerations are unknown.

Shoreline Ecological Summary

Z of 2

Segment ST-CS001

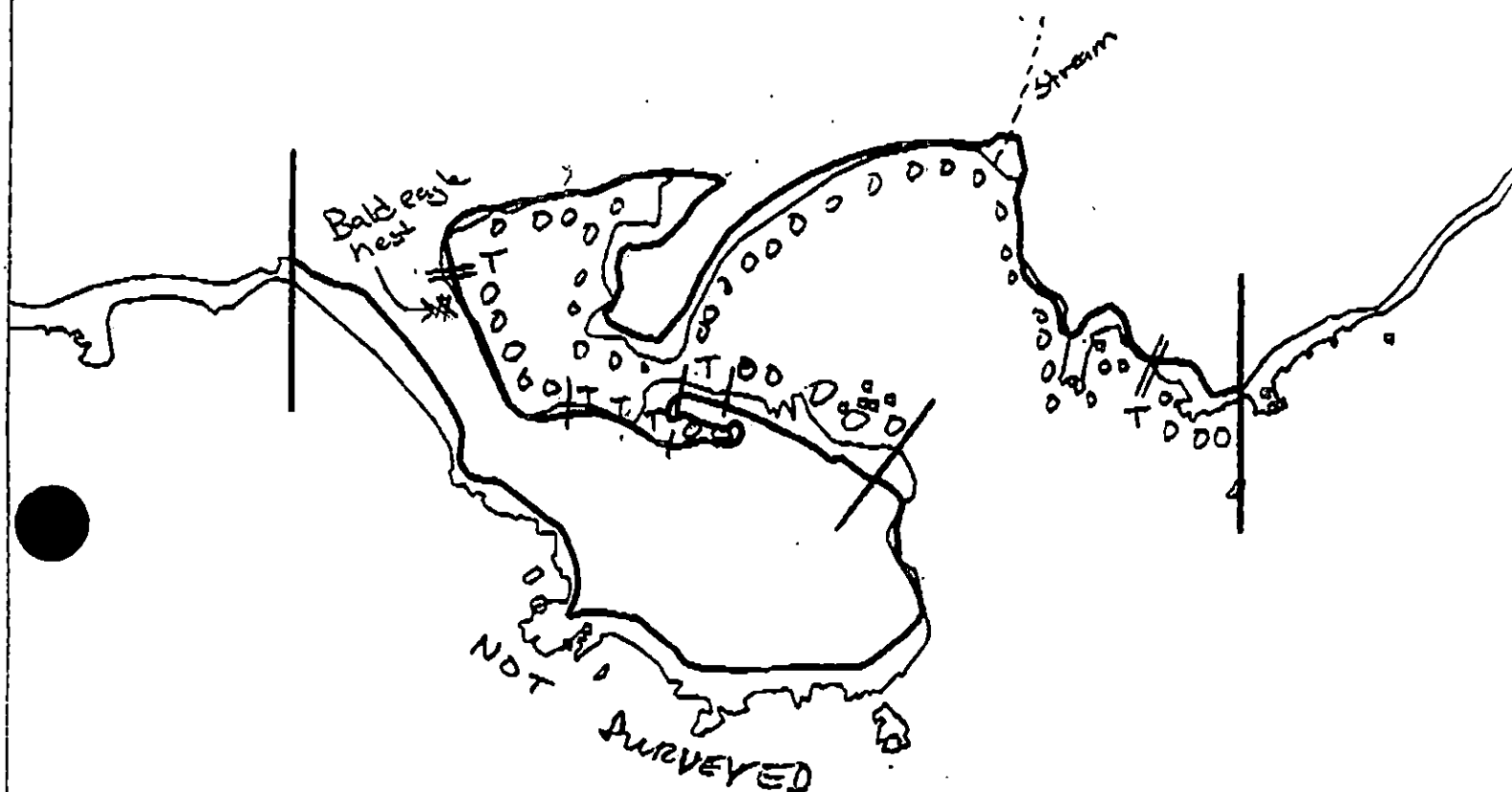
Subdivision A

4-27-90

Biologist: David Cohen

Wildlife Observations/General Comments

- Present in low intertidal: Halosaccus, Entomorphus, Ulva, Alaria, Porphyra, unknown yellow sponge, coralline algae, Epiactus, Katharina tunicata, Tealia, Laminaria, Analipus, unknown red algal "blade", unknown red algal "branch" (Rhodomenia?)
mid intertidal: Analipus, Halosaccus, Entomorphus, Porphyra, Endocladia, Scytosiphon, Epiactus, unknown red algal "branch" (Rhodomenia?), coralline algae, Pagurus, Nucella, Sculpins, Alaria (in tide pools), Cladophora, Ectocarpus
high intertidal: Ulva, Scytosiphon (in tide pools)
- Algal cover was ~75% on low intertidal bedrock ~~area~~ (one site estimated) and between 60-75% on low intertidal boulders (2 sites estimated).
- Barnacle mortality on mid-intertidal bedrock was ~20% (estimate of one site).
- One stream located in segment. Unknown whether or not it is anadromous.
- Virtually all of the species listed in observation #1 above were found in the section of the segment between the easternmost ~~the~~ segment boundary and the stream. This section was primarily composed of bedrock and boulders. Most of the rest of the segment (at least what was surveyed) was composed of cobble → mud beaches (with some boulders) and was actually quite ~~low~~ low in diversity.



CS-01

XXX Wide
 /// Medium
 --- Narrow

CS-1

ADEC Segment Length: 7814m

TTTT Very Little



Map Key: KEN-29

Name: Rick Gillie

Date: 04/27/90

SHORELINE EVALUATION

SEGMENT ST/ CS-01 SUBDIVISION A (1 OF 1) DATE 4/27/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1C Salmon fry nursery area (4/31 to 7/31)
1J Purse seine area (7/1 to 8/31)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature]

DATE: 5/8/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 416 m: No Oil 4897 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/8/90

ADEC Art Womer

EXXON Andy [Signature]

NOAA Gary Petro

USCG G.A. Reiter

FOSC: [Signature]

DATE: 7-10-90

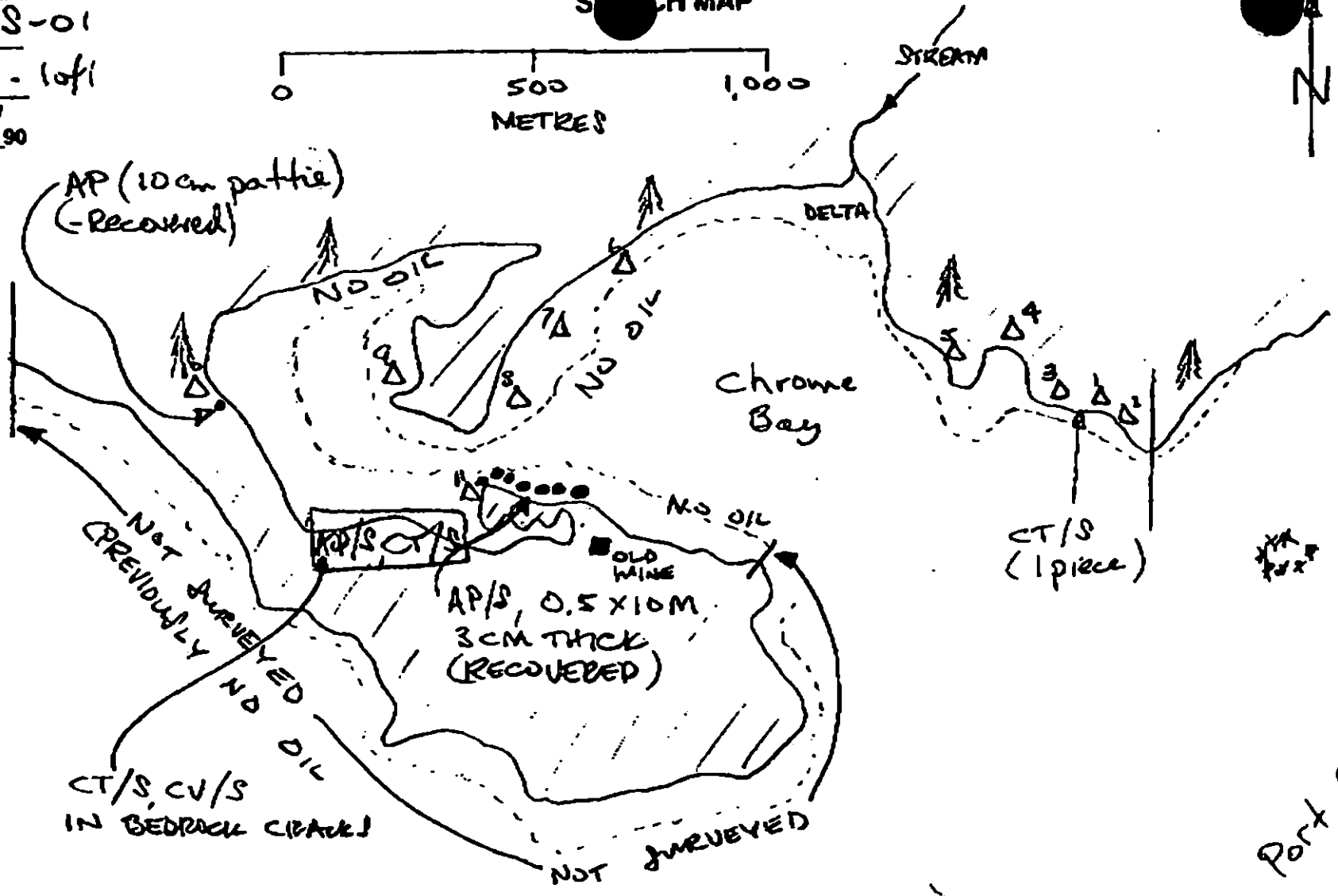
OG KICK GALLIE
 SEGMENT ST. S-01
 SUBDIVISION A-10f1
 DATE 04/27/90

SEARCH MAP



- CHECKLIST**
- ☒ N Arrow
 - ☒ Approx. Scale
 - ☒ Sec/Sub Entry
 - ☒ Oil Dist.
 - ☒ Width
 - ☒ Length
 - ☒ % Cover
 - ☒ Substrate Character
 - ☒ Est. HW/LWL
 - ☒ SSL
 - ☒ Profile Location(s)
 - ☒ Profile(s)
 - ☒ Pit Location(s)
 - ☒ Photo Location(s)

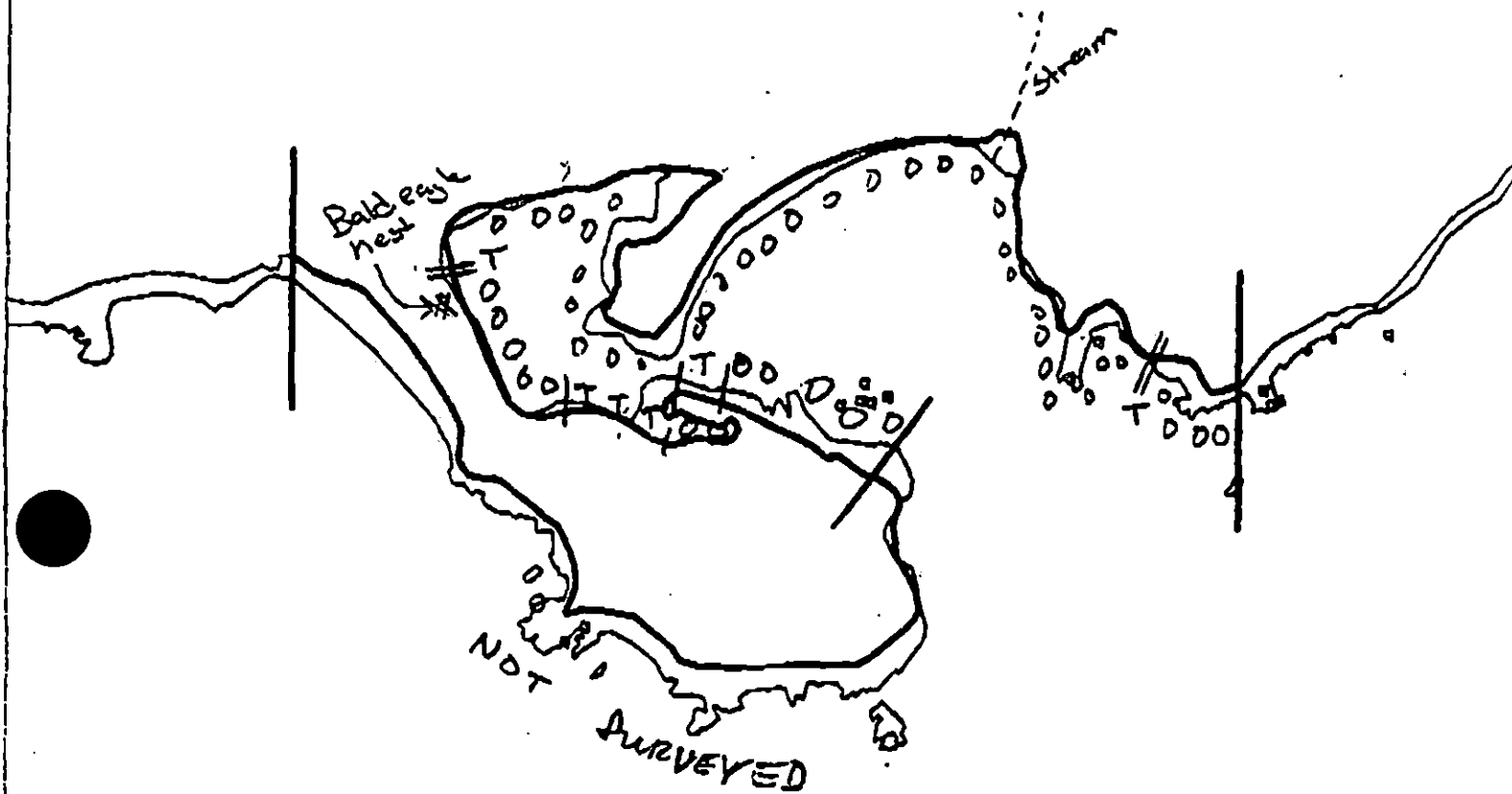
- LEGEND**
- 1 Δ
 - Pit - No Subsurface Oil
 - 2 Δ
 - Pit - Subsurface Oil
 - CT/C
 - Continuous Distribution
 - CT/B
 - Broken Distribution
 - [CT/P]
 - Patchy Distribution
 - [CT/S]
 - Splashed Distribution
 - Oiled Vegetation
 - 1 →
 - Photo location, direction, and number



NOTE: ALL AP/S RECOVERED FROM SEGMENT
 TOTAL ~ 60 LBS OILED PEBBLES/SAND
 (1 1/2 BAGS)

Oil Character Length (m): AP 10 PO 0 CV 0 CT 10 ST 0 MS 0 PT 1 TB 0 FL 0 NO 6130

Port Chatham



CS-01

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

CS-1

ADEC Segment Length: 7814m



Map Key: KEN-29
 Name: Rick Gillie
 Date: 04/27/90

REGION: KENAI

SEGMENT: ST/EA-01

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ EA-01 SUBDIVISION A (1 OF 1) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

Cultural resource survey in progress. Shoreline treatment cannot proceed until field data have been assessed and a formal archaeological constraint entered on the shoreline evaluation form.

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 521 m: No Oil 0 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of oiled debris and oiled trash.
Work should be conducted before 5/1 due to seabird constraint. If work
after 5/1 is anticipated, it should be scheduled with permission of
ADF&G and USFWS.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ EA-1 SUBDIVISION: A DATE 4-9-90

AA
USCG

NAME John Naughton SIGNATURE John Naughton

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Only one mouse patten, piece of oil soaked cloth and few stains observed. No clean up recommended since this island will become important sea bird resting site later on and is reported to be an important pinniped haul-out site on a seasonal basis.

ADEC NAME Scott Shelton SIGNATURE Scott Shelton

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS EA-1 EAST AMATULLI 540 meters sea length
Staining observed on Storm Beam drift. Several less than 4cm tar balls observed. Impact found in Supra-tidal areas. 6 pits to 30cm no subsurface oil observed. High energy beach conditions. Access limited to weather conditions and surf.
High SEA'S gullnet observed in Storm Beam. Drift debris plastics etc found in great quantities.

LAND MANAGER NAME LINDA HAGEN SIGNATURE Linda M. Hagen USFWS

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Even though the Burren Island area is an important area for murres (nesting), this area had such little evidence of oil that no clean-up should be needed at this beach area
✓ so no activity should cause no concern at

SHORELINE OILING SUMMARY

REVISION NO. 03/23/90

OG Perland NOAA USCG Naughton SEGMENT ST/ EA 1
 BIO Sparg LAND REP Hagen SUBDIVISION A
 EXXON Byars ADEC Shelton TIME 9 : 37 : 10 : 9 : 11
 TEAM NO.: 19 TIDE LEVEL: 0.0 to 0.0 DATE 4 / 9 / 90
 EST. SUBDIVISION LENGTH: 540 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 10 % B 10 % C 50 % P 15 % G 15 % S 0 % M 0 % V 0 %
 SLOPE: Long 90 % Hang 10 % Vert 10 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 540 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	10	15	20	25	100	100	100	100	100	100	100	100	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN				X		X		X		X						
MOUSSE				X												
PATTIES																
TARBALLS																
FILM																
NO OIL													X	X	X	

PAVEMENT: H F S 0 sq. m by 0 cmPATTIES / TARBALLS 1 BAGSNEAR SHORE SHEEN? ☒ NO BR RW SL TL

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

DEBRIS COLLECTED
☒ YES ☒ NOTYPE NETS/ROPS#BAGS 10

Photographs:

Roll No. ST-19-7Frames ?

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	100	100	100	100	100	100	100	100	SU	U	M	U		
1	30					X	-											X					Gravel
2	30					X	-												X				"
3	30					X	-													X			"
4	30					X	-											X					"
5	30					X	-												X				"
6	30					X	-													X			"

COMMENTS

- stain logs and scattered mousse in the only oil observed.
- scattered tar balls

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / EA-1 Subdivision A Date (mo / day / yr) 4 / 9 / 90

Time (24 hr) 8:38 Biologist SP16HT

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

(B) Overall % cover of biota (% of segment): Dense Moderate Low 100

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

Photographs:
Roll No. _____

Frames _____

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	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

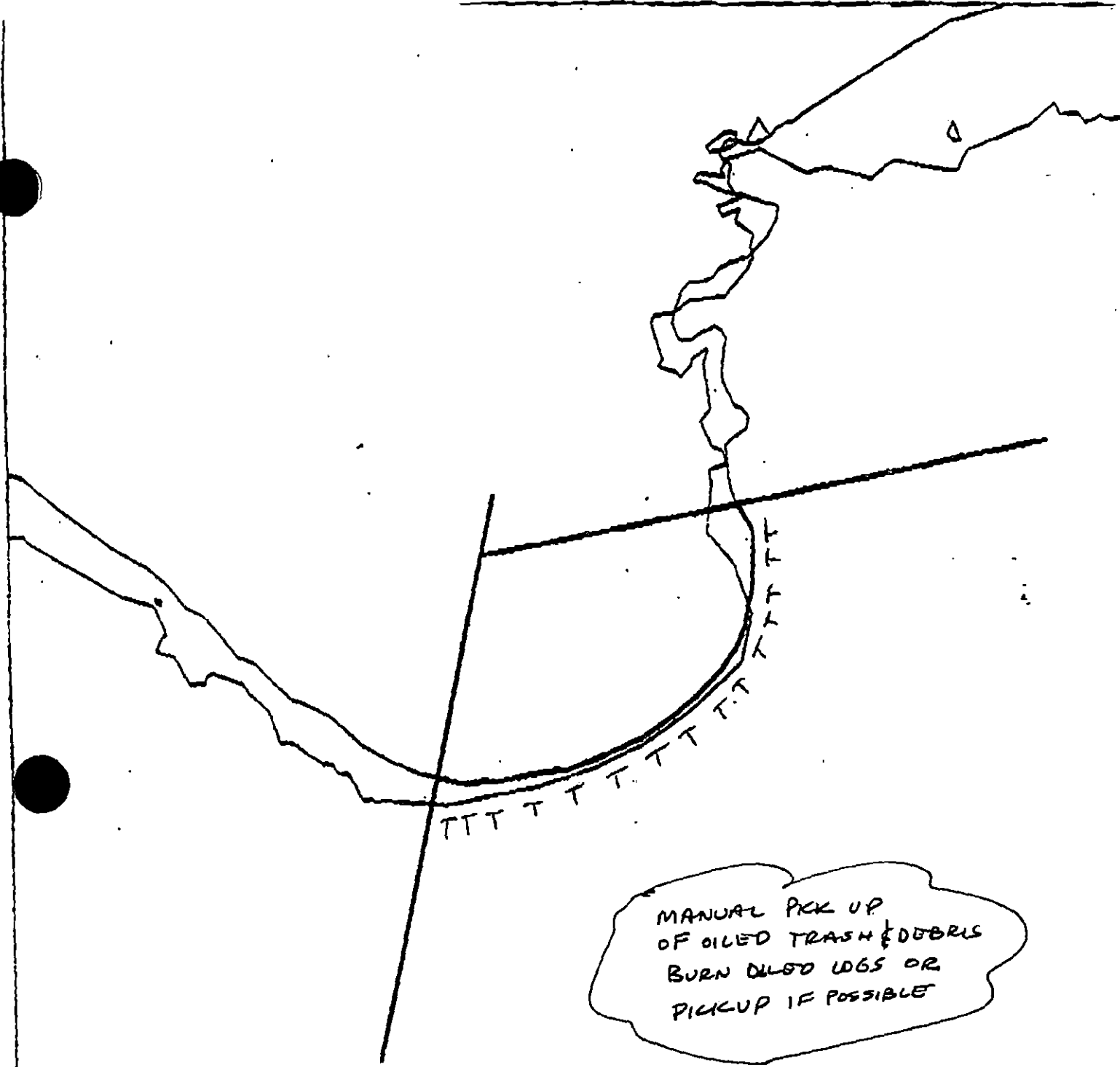
Wildlife Observations/ General Comments:

Ecological Considerations:

Gravel / sand beach; Boulders / outcrops at ends, with leafy red algae

lower, normal Fucus / Balanus higher

Fairly abundant small barnacles, apparently last year's B. cariosus?



MANUAL PICK UP
OF OILED TRASH & DEBRIS
BURN OILED LOGS OR
PICKUP IF POSSIBLE

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

EA-1

ADEC Segment Length: 521m



Map Key: KEN-41
Name: Portland
Date: 4-9-90
Data F-11

SHORELINE EVALUATION

SEGMENT ST/ EA-01 SUBDIVISION A (1 OF 1) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINT: An Exxon archaeological monitor is required on-site during shoreline treatment.

>>> PHONE 564-3274 (Anchorage) OR 229-1508 (24 hrs.) <<<

SHPO SIGNATURE: Charles E. Hoffman DATE: June 12, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 521 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

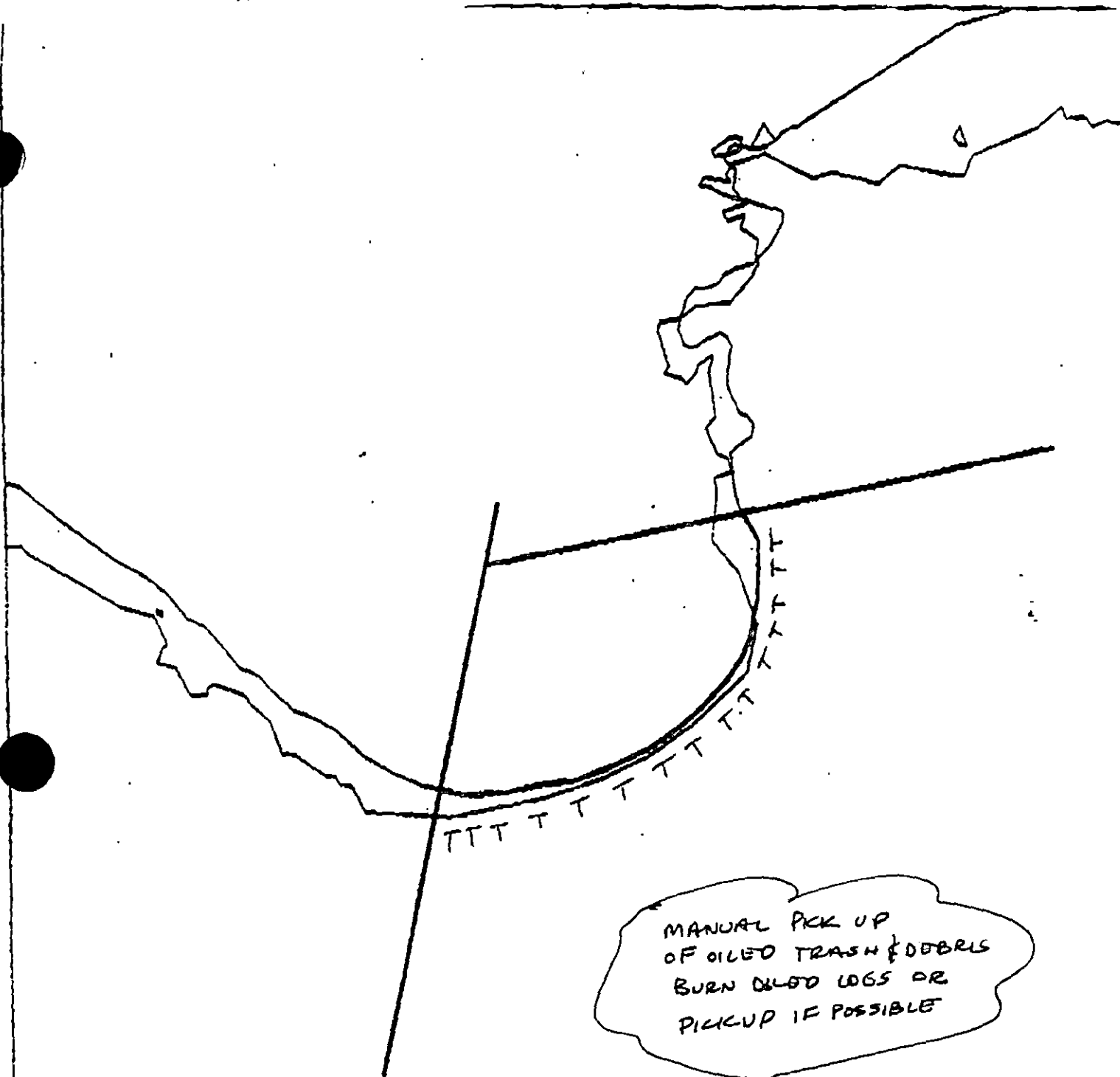
COMMENTS: Recommend manual pick up of oiled debris and oiled trash.
Work should be conducted before 5/1 due to seabird constraint. If work
after 5/1 is anticipated, it should be scheduled with permission of
ADF&G and USFWS.

TAG COMMENTS:

TAG APPROVAL DATE: 4/20/90
ADEC ART WEINER
EXXON ANDY TATE
NOAA Burt Wescott
USCG KENNETH KEANE

FOSC: W L DATE: 6-17-90

Included manual pickup of mouse
patties and tarballs



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

EA-1

ADEC Segment Length: 521m

0 100 1.2.2.1.1.1



Map Key: KEN-41

Name: PortlandDate: 4-9-90

REGION: KENAI

SEGMENT: ST/EI-01

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ EI-01 SUBDIVISION A (1 OF 1) DATE 4/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 242-10-10270

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

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

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

Eagle nest 400M from work area.

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 186 m: V.Light 1452 m: No Oil 0 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of asphalt where indicated, and 2) manual pickup of oiled debris. Work should be conducted between 6/1 and 7/10 based on anadromous stream and eagle constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

✓ 1A
1B

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

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

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

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

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

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

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

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

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

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

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

1H Remote release site

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

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

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

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

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

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

1L Set net sites (8/11 to 7/25)

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

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

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

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

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

Harbor seal and sea lion pupping (5/15 to 7/1)

Harbor seal and sea lion molting (8/15 to 9/15)

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

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

ADF&G Don Calkins 267-2403

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Roth 267-2206

✓ 5T

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

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation:

6V Tent sites (8/1 to 9/15)

6W Anchorages (8/1 to 9/15)

6X Forest Service cabins (8/1 to 9/15)

6Y Lodge (8/1 to 9/15)

Special use destination

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

Finfish harvesting

Deer harvesting (8/15 to 2/28)

Invertebrate harvesting

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

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EI-01 SUBDIVISION: A-1 of 1 DATE 04/29/90

JSCG

NAME David L. Thomas SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME Clara S. Crosby SIGNATURE Clara S. Crosby

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Due to the close proximity of the Anadromous fish stream & the likelihood of clean up within that area - suggest clean up by AP/P & MO at the southern end of segment as well as removal of oiled net at N. end -

Please refer to the Anadromous Survey for clean-up recommendations within that area - (Lake & Stream)

LAND MANAGER

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Note: Comments to be faxed directly by
SHARIE WETHVEN-TONEY, ADNIR

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ EI-01 SUBDIVISION: A DATE 4-30-98**USCG**

NAME _____

SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Post-It™ brand fax transmittal memo 7671		# of pages > 1
To Brian Trimm	From Sharie Methven-Toney	
Co. Exxon	Co. State Parks	
Dept.	Phone # 262-5581	
Fax # 1-564-3771	Fax # 262-3717	

ADEC

NAME _____

SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED**LAND MANAGER**NAME SHARIE METHVEN-TONEYSIGNATURE Sharie Methven-Toney☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

The area within and near Elizabeth Island Segment E I-01 has high fishery values. There is one anadromous stream within the segment. We recommend manual cleanup of mousse patties within and near the anadromous stream, also removal of mousse patties at the southern end of the segment in and near the beach boulders. One oiled fishing net to the north end of the segment needs removed. The ADEC transect stakes will need to be removed at the end of the project. We were unable to survey the southern point in the segment due to the conditions of the sea and winds

SHORELINE OILING SUMMARY

REVISION NO. 04-13-90

OG RICK GILLIE USCG DAVE THOMAS (ADNR) SEGMENT ST/ EI-01
 BIO DAVE LOHVE LAND REPT. RETIVEN-TONEY SUBDIVISION A (1 OF 1)
 EXXON FRANK BOX ADEC CLARA CROSBY TIME 12:00 to 14:30
 TEAM NO. 13 TIDE LEVEL -1 to +4 DATE 04/29/90
 EST. SUBDIVISION LENGTH: 800 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 5 % B 15 % C 20 % P 20 % G 10 % S 30 % M 0 % V 0 %
 SLOPE: Long 85 % Hang 10 % Vert 5 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 150 m VL 65 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	C	B	P	S	SP	BP	OT	TL	SU	U	M	U
ASPHALT PAVEMENT			X		X				X			
POOLED												
COVER				X	X				X	X		
COAT				X	X				X	X	X	
STAIN												
MOUSSE				X				X	X			
PATTIES				X	X				X			
TARBALLS												
FILM				X		X			X			
NO OIL												X

PAVEMENT H F (S) 10 sq. m by 2 cmPATTIES / TARBALLS 1 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

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

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE PLASTIC#BAGS 1

Photographs:

Roll No. ST-13-06

Frames _____

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		SO	SS	SP	BP	OT	TL	SU	U	M	U				
1	30					X	.	X						X							S-P S
2	30					X	.	X						X							S-P S
3	35					X	.	X						X							S-P S
4	30					X	.	X						X							S-S, P
5	30					X	.	X						X							S-S
6	40					X	.	X						X							S-S, P

COMMENTS

GEOGRAPHY: 600 M LONG SAND/PEBBLE/COBBLE BEACH WITH ANADROMOUS STREAM. BOULDER AT EACH END OF SUBDIVISION. REST OF COAST NO FURNISHED

LINE: VERY LIGHT EXCEPT FOR SOUTH END (AP, MB) IN ROCK CREVICES + BETWEEN BOULDERS.

REVIEWED FAF DATE 1 May 90

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 04-13-90

SEGMENT ST/ FI-01 SUBDIVISION A (1 OF 1)

SUBSURFACE OIL (CONTINUED)

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	SP	ST	BP	BY	BL	BR	SU	U	M	L						
7	40					X	.		X								X								S-SP
8	40					X	.		X								X								S-SP
9	40					X	.		X								X								S-SP
10	30					X	.		X								X								S-P
11	30					X	.		X								X								S-P
12	30					X	.		X								X								S-P
13	40					X	.		X								X								S-S
14	40					X	.		X								X								S-S
15	40					X	.		X									X							S-P
16	40					X	.		X									X							S-P
17	30					X	.		X								X								P-SP
							.																		
							.																		
							.																		

COMMENTS

SUBSURFACE: NO SUBSURFACE OIL FOUND ON BEACH. (WITZ to WITZ).

NOTE: CHECK ANADROMOUS STREAM JCAT SURVEY FOR STREAM AND LAKE RESULTS

REVIEWED

BAT

DATE 1 May 90

OG RICH GILLIE
 SEGMENT ST/ EI-01
 SUBDIVISION A-1 of 1
 DATE 04/29/90

ELIZABETH ISLAND (EI-01)

ETCH MAP

CHECKLIST

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

LEGEND

1 Δ
 Pit - No Subsurface Oil

2 Δ
 Pit - Subsurface Oil

CT/C
 Continuous Distribution

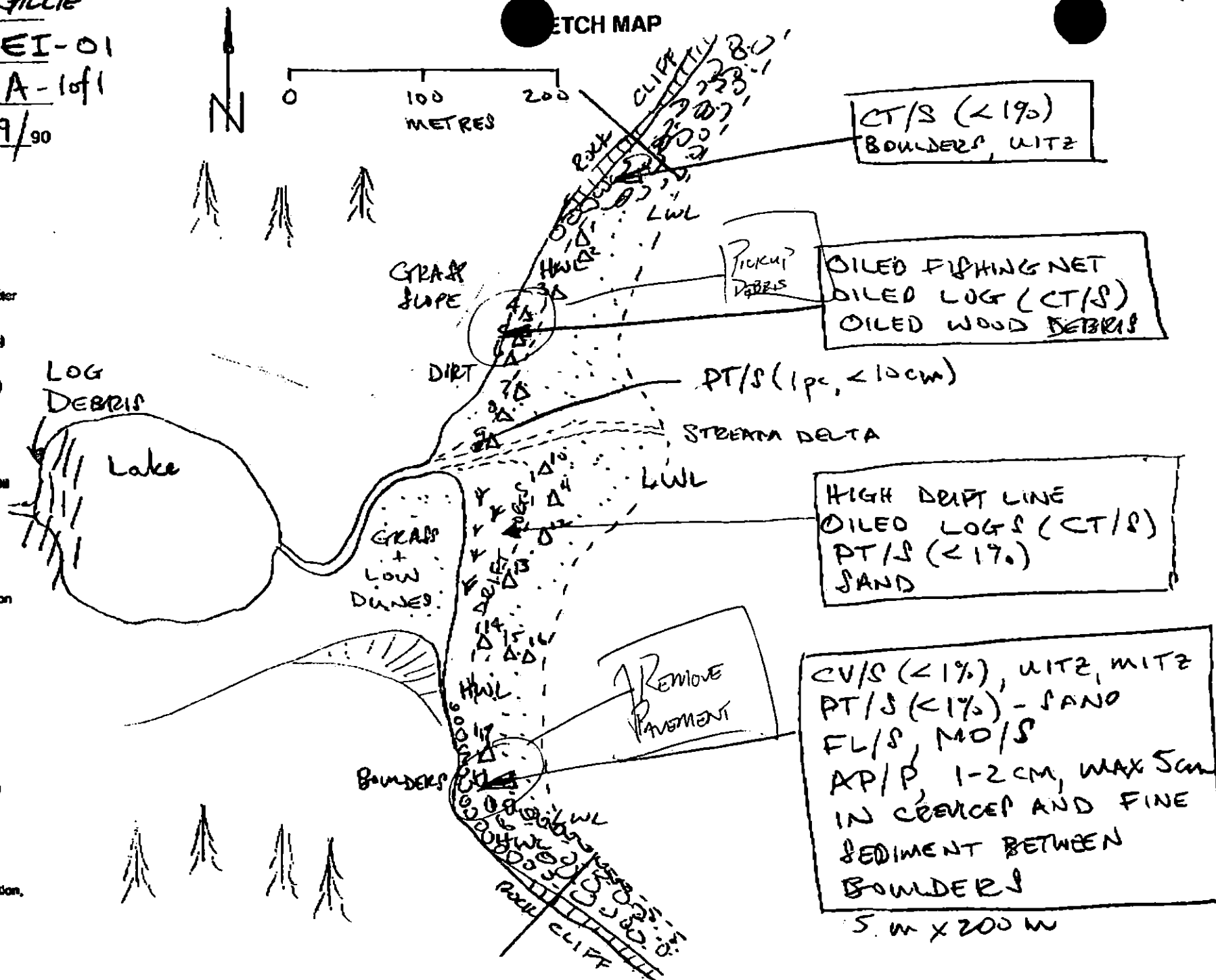
CT/B
 Broken Distribution

CT/P
 Patchy Distribution

CT/S
 Splashed Distribution

Oiled Vegetation

1 →
 Photo location, direction,
 and number



Oil Character Length (m): AP 30 PO 0 CV 10 CT 30 ST 0 MS 20 PT 5 TB 0 FL 5 NO 700

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/7

Segment ST / ET 001 Subdivision A Date (mo / day / yr) 4-29-90

Time (24 hr) 12:00 Biologist David Lohse

(A) Substrate type and % of segments:
(1) Bedrock 5 (2) Boulder 15 (3) Cobble 20 (4) Pebble 20 (5) Sand 40 (6) Silt

(B) Overall % cover of biota (% of segment): Dense 10 Moderate 10 Low 80

(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-13-6

Frames 11-13

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:

A, B - Stream 242-10-10270; oil present - see OG report
ST: next location in part of segment not surveyed. Unable to confirm or deny its presence.
SR - seabird colony in water of island. Unknown how far it is from

Segment ST-EI 001

Subdivision A

4-29-90

Biologist: David Lohse

Wildlife Observations / General Comments

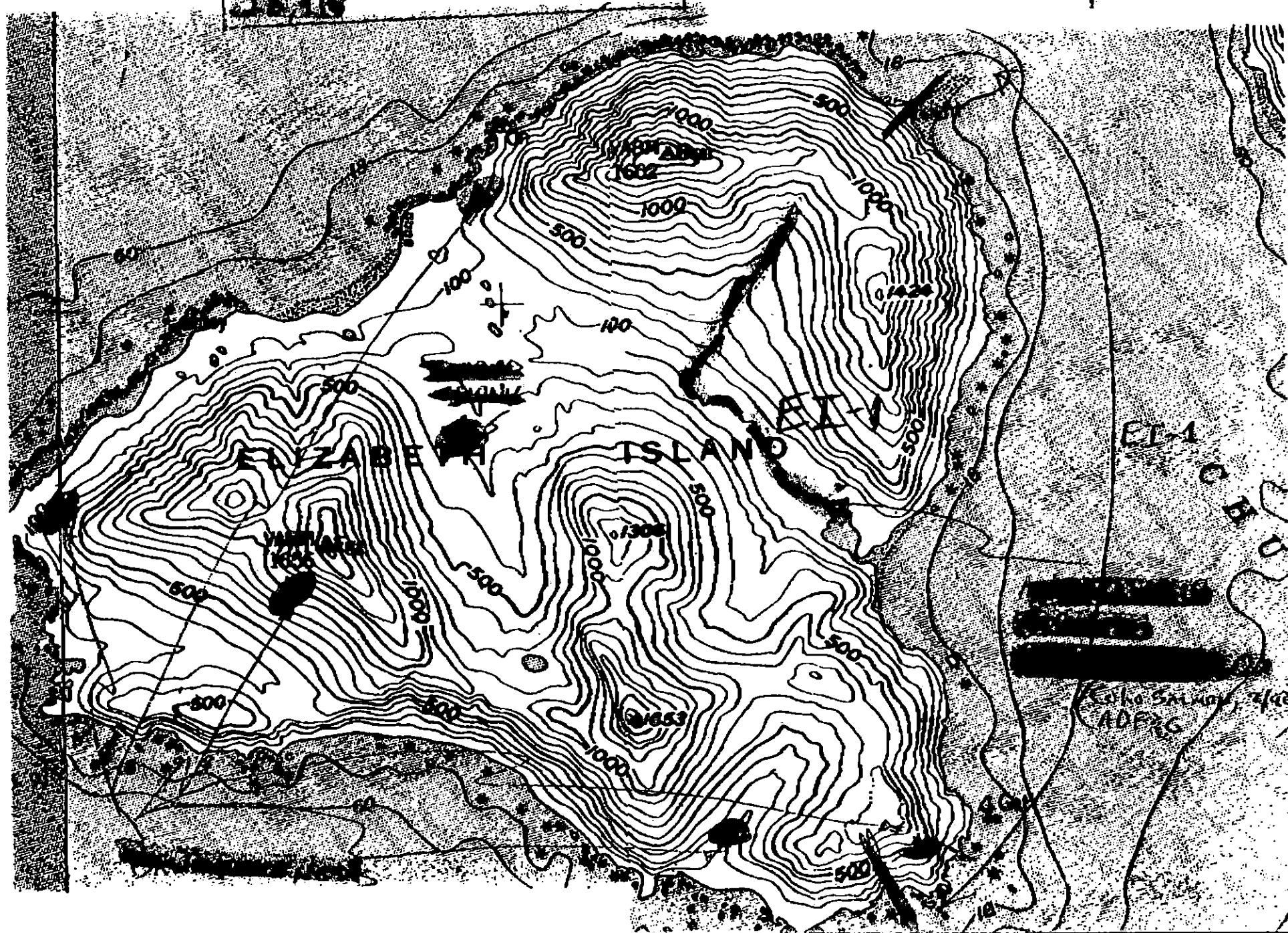
1. Present in low intertidal: *Epiactis*, *Alaria*, unknown red algal "blade" (*Iridaea*?) *Katharina tunicata*, *Ulva*, *Porphyra*, *Enteromorpha*, *Cladophora*, coralline algae, *Rhodomenia*, *Laminaria*, *Pycnopodia*, *Anthropleura*
mid intertidal: *Endocladia*, unknown red algal blade (*Iridaea*?), *Alaria*, *Halosaccus*, unknown red algal "branch" (*Rhodomenia*?), *Katharina tunicata*, *Epiactis*, *Ralfsia*, *Porphyra*, *Pagurus*, coralline algae, sculpins
2. Most of this segment was unsurveyed. Therefore, the abundances listed on page 1 should be considered ^{only} as rough estimates for the entire segment since few sites were actually censused.
3. 1 Land otter and several gulls were spotted in the area.
4. Algal cover in the low intertidal was ~75% on boulders (1 site) and ~90% on bedrock (1 site estimated).
5. Small ~~each~~ section of surveyed portion of segment consisted of boulders in all ³ tidal zones virtually barren of barnacles, mussels, gastropods, and Fucus. Most ^{of those} that were present were found either on the protected sides of the boulders, or in cracks and crevices. *Enteromorpha* and *Porphyra* were abundant on these boulders.

ECOLOGICAL MAP. - ZABETH ISLAND

SECRET

SR IN MIDDLE OF ISLAND

ADAMS

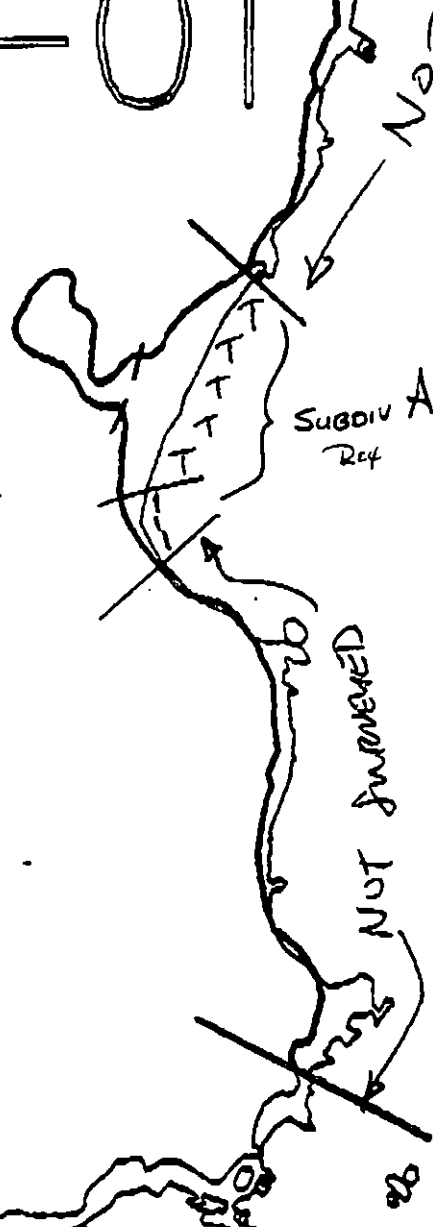


↑
KEN 428

EI-01

NOTE:

Lake and Stream
were surveyed by
ANADROMOUS SSAT
TEAM AT THE SAME
TIME AS THIS SURVEY



SURVEYED

Not

Subdiv A
Ref

NOT SURVEYED

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EI-1

ADEC Segment Length: 5684m



Map Key: KEN-420

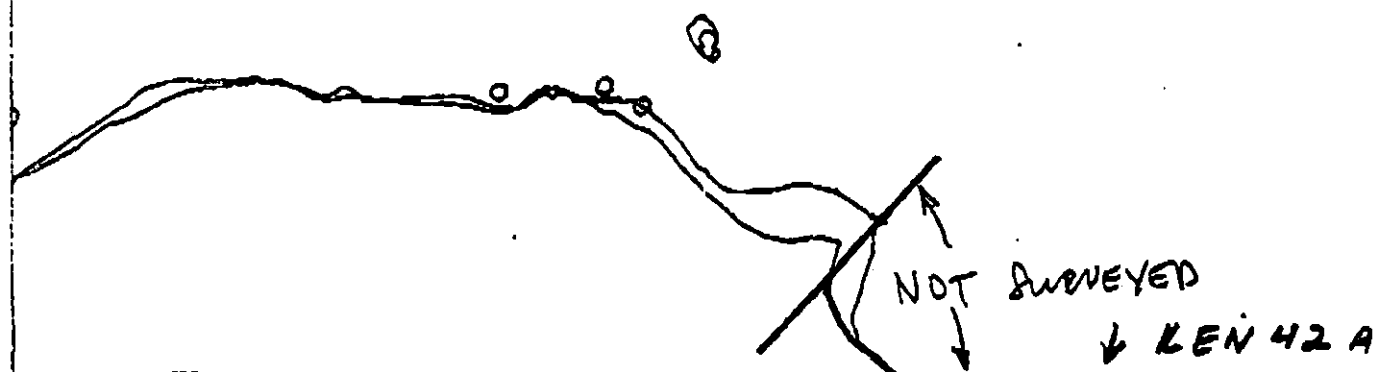
Name: RICK GILME

Date: 04/29/90

Data Entered:



CS-01



XXXX Wide

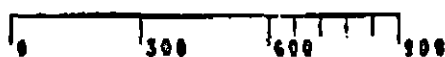
//// Medium

--- Narrow

TTTT Very Light

EI-1

ADEC Segment Length: 5686m



Map Key: KEN-42b

Name: RICK GILLIE

Date: 04/29/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ EI-01 SUBDIVISION A (1 OF 1) DATE 4/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 242-10-10270

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

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

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

Eagle nest 400M from work area.

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: *Charles E. Hume*

DATE: 5/14/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 186 m: V.Light 1452 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

 Bioremediation

X Tarmat Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of asphalt
where indicated, and 2) manual pickup of oiled debris. Work should be
conducted between 6/1 and 7/10 based on anadromous stream and eagle
constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 5/12/90

ADEC *Art Weiden*

EXXON *Ann Y. G. Deal*

NOAA *Gary Petrac*

USCG *D.D. Rome*

FOSC: *W L*

DATE: 5-15-90

OG RICH GILLIE

SEGMENT SI EI-01

SUBDIVISION A-1 of 1

DATE 04/29/90

CHECKLIST

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

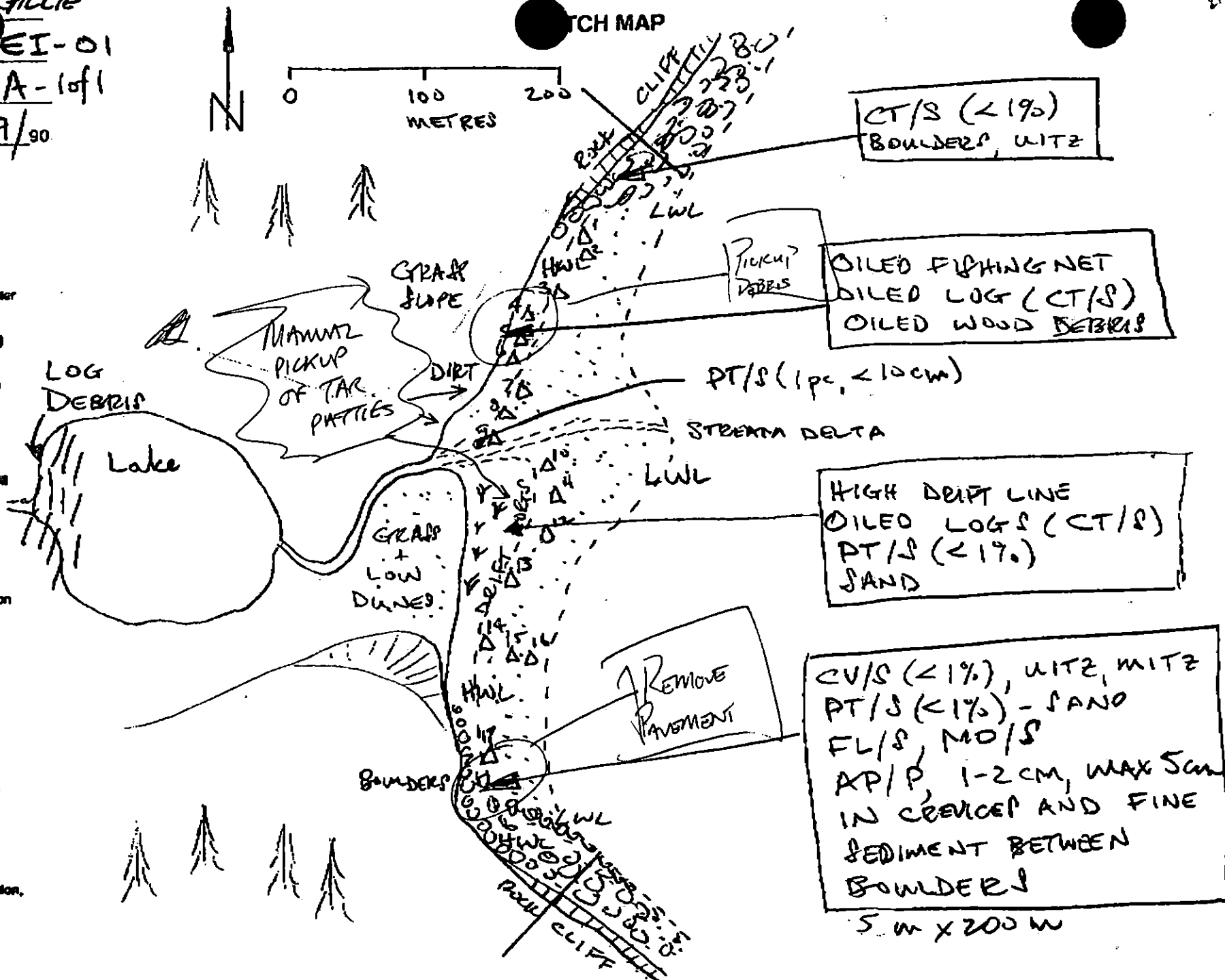
CT/S
Splashed Distribution

Oiled Vegetation

1 →
Photo location, direction, and number

ELIZABETH ISLAND (EI-01)

ATCH MAP



Oil Character Length (m): AP 30 PO 0 CV 10 CT 30 ST 0 MS 20 PT 5 TB 0 FL 5 NO 700

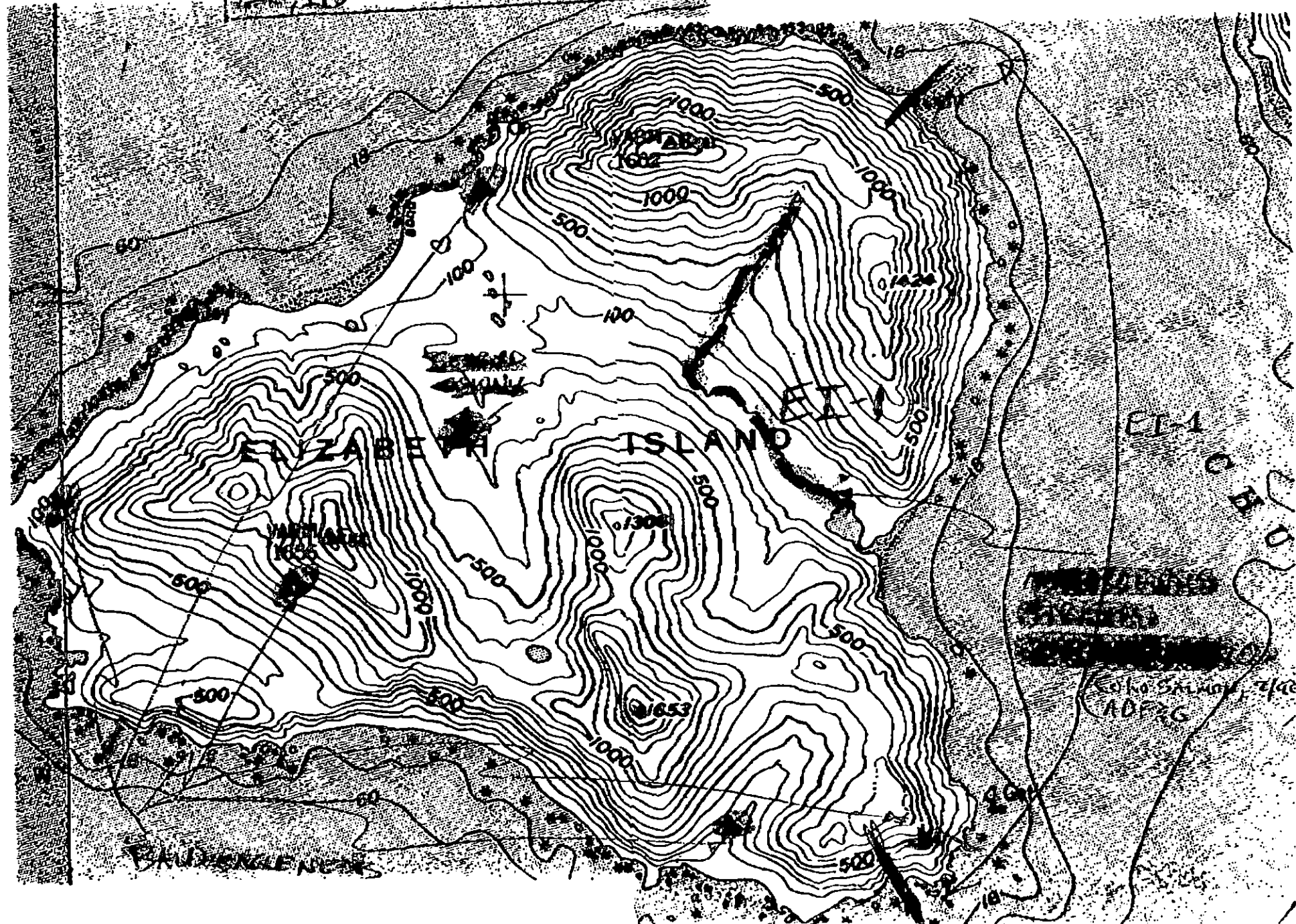
REVISION: 03/24/90

ECOLOGICAL MAP - ELIZABETH ISLAND

ST(5)

SR & IN MIDDLE OF ISLAND

1A, 1B



ELIZABETH ISLAND
CHOCOMA
EL-1
Coko Shima 2/40
10P2G
F. 10

EI-01

NOTE:

LAKE AND STREAM
WERE SURVEYED BY
ANADROMOUS PSAT
AM AT THE SAME
TIME AS THIS SURVEY

↑
KEN 428

SURVEYED

Subdiv A
Ref

NOT SURVEYED

EI-1

ADEC Segment Length: 5684m

XXX Wide

/// Medium

--- Narrow

TTTT Very Light

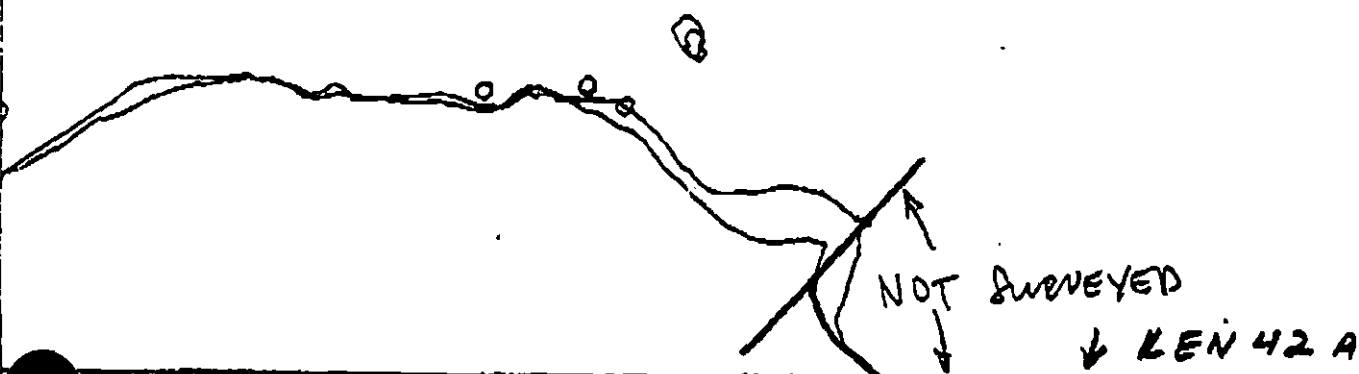
0 500 600 900

Map Key: KEN-420

Name: Rick GilueDate: 04/29/90



CS-01



XXX Wide

//// Medium

--- Narrow

TTTT Verx. Light

EI-1

ADEC Segment Length: 5684m



Map Key: KEN-42b

Name: RICK GILLIEDate: 04/29/90

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ EI-001 STREAM NO: 242-10-10270 DATE 4/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-1 All bald eagle nests (3/1 to 6/1)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Stream is located within subdivision A (1 of 1). No additional ecological constraints.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3276 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: Rachel Jan One DATE: 5/22/90

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: Recommend manual removal of tarballs and oiled vegetation.
Work from 6/2 to 7/10 with approval of USFWS regarding eagle nest.

TAG COMMENTS: NO ~~TO~~ WORK TO BE CONDUCTED WITHIN THE STREAM
CHANNEL PRIOR TO JUNE 1

TAG APPROVAL DATE: 5/18/90

ADEC Art Weiner Art Weiner

EXXON Andy Blair Andy Blair

NOAA Gary Petrac Gary Petrac

USCG G.A. REITER G.A. Reiter

FOSC: [Signature]

DATE: MAY 25 1990

OG CALLARSON

SEGMENT S L 01

STREAM 242-10-10230

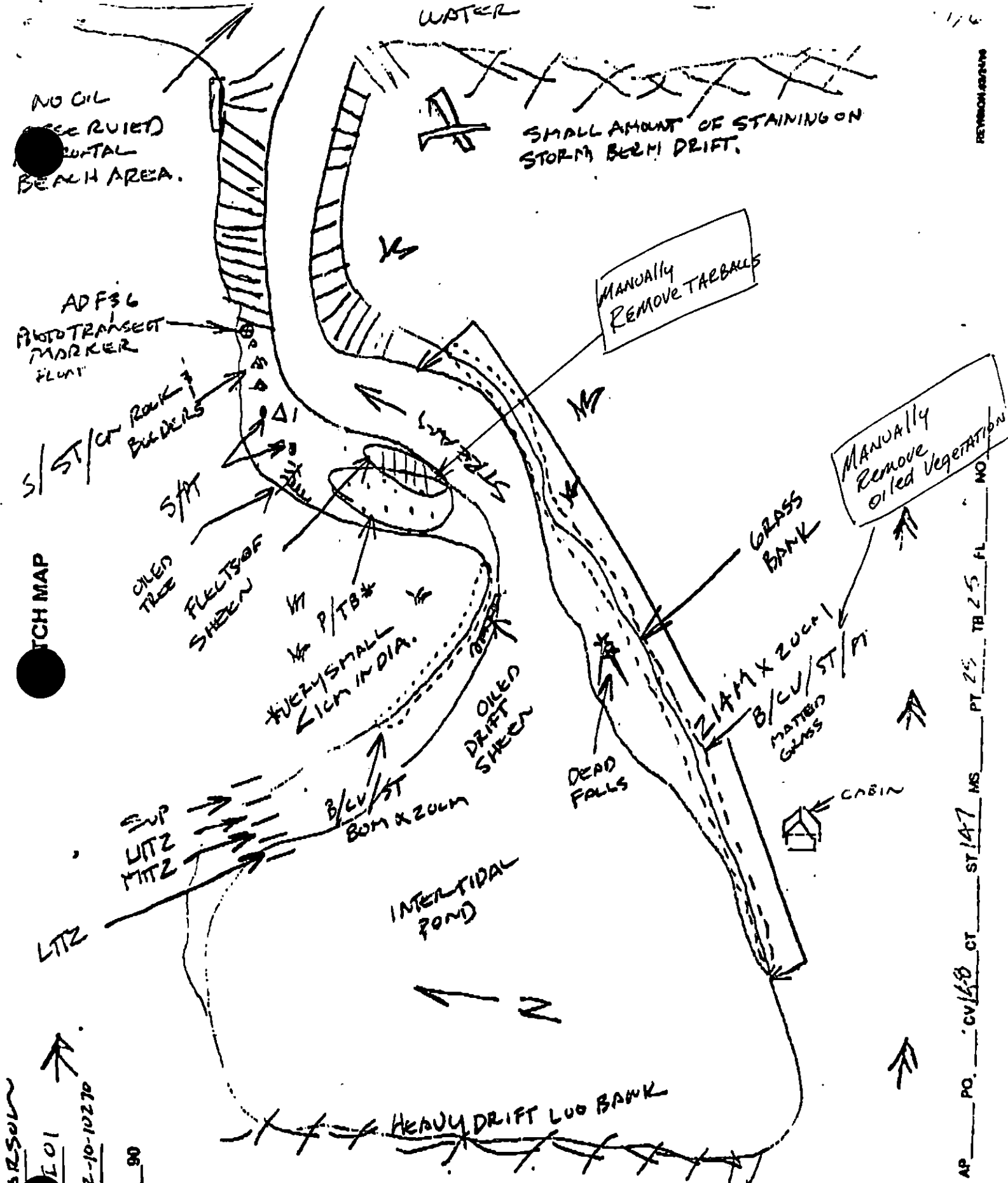
DATE 4/29/90

CHECKLIST

- N Arrow
- Approx. Scale
- Sag Sub Entry
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HTHLAW
- SSI
- Profile Location(s)
- Profile(s)
- PI Location(s)
- Photo Location(s)

LEGEND

- 1 Δ
- 2 Δ
- PI - No Substrate Oil
- PI - Substrate Oil
- CT/C
- Continuous Distribution
- CT/B
- Discrete Distribution
- CT/P
- Patchy Distribution
- CT/S
- Spotted Distribution
- Dead Vegetation
- Photo location, direction, and number



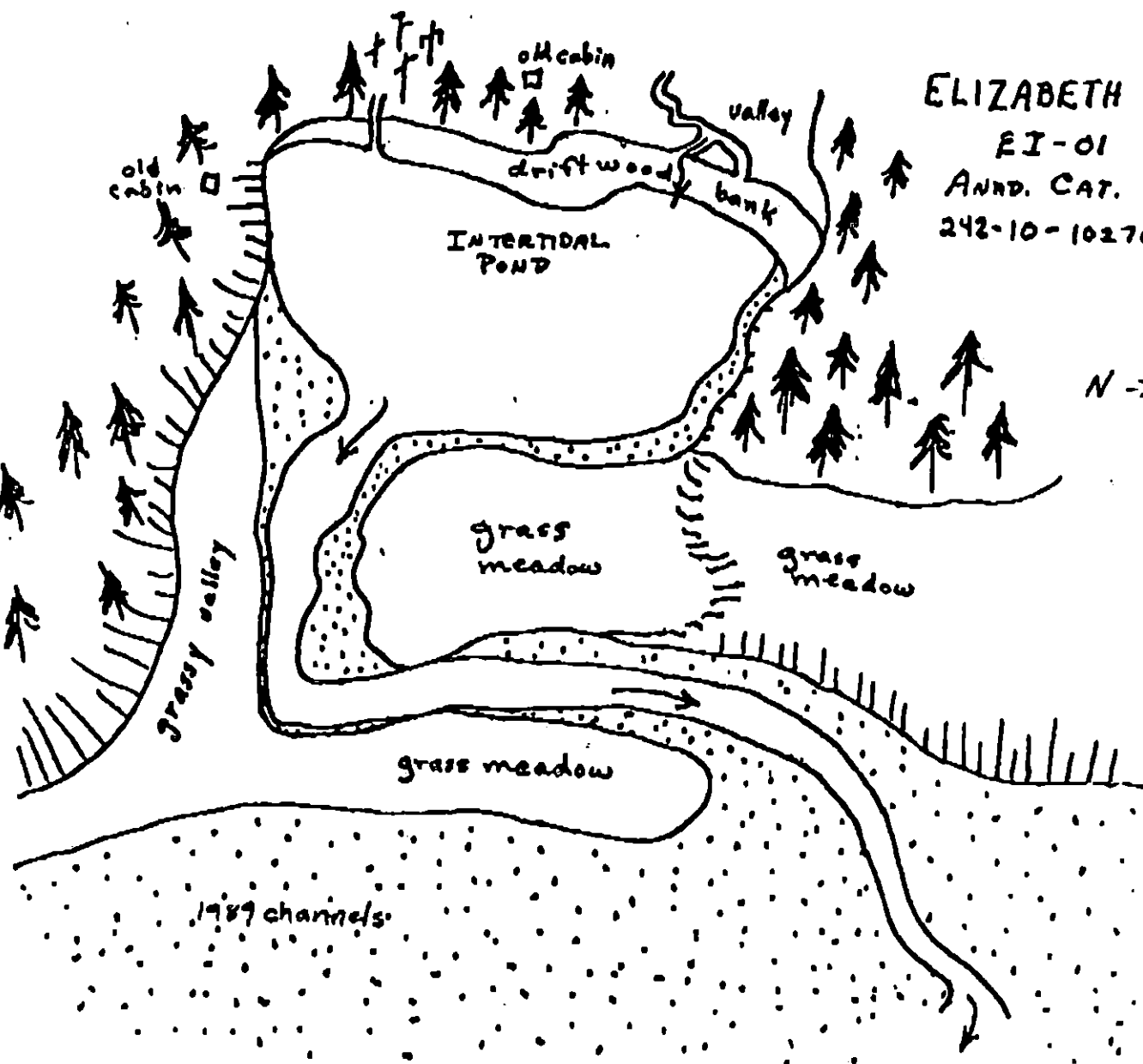
ELIZABETH IS.

EI-01

ANRD. CAT. #:

242-10-10270

N →



LITZ

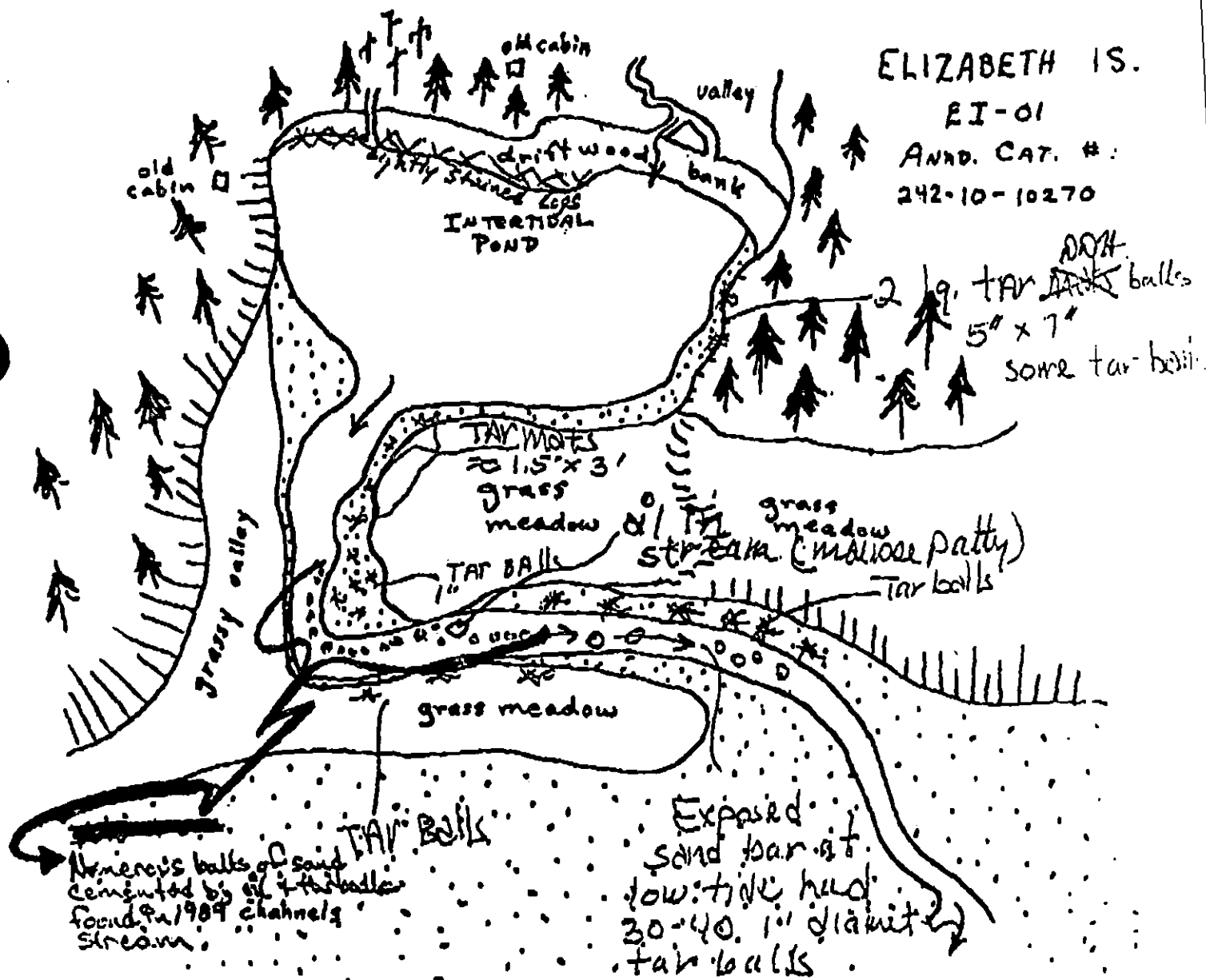
FRAME(S)

18, 19, 22

DESCRIPTION

Depositing Difference in Morphology of stream
outlet dis 1990 vs 1989. Out bank is on South
bank.

48 OIL DISTRIBUTION DIAGRAM



- Sample taken
- Photo frame # and shot direction.
- ★ oil

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 242-10-10270

SEGMENT EI-1 SUBDIVISION A

WORK WINDOW	
Manual Pickup	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream	ADF&G catalogued anadromous stream (224-10-10270) is in Subdivision A. No constraint to manual pickup.
5T Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Avoid any unnecessary disturbance or damage to unloiled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM EI-1A
FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC

[Signature]

Date

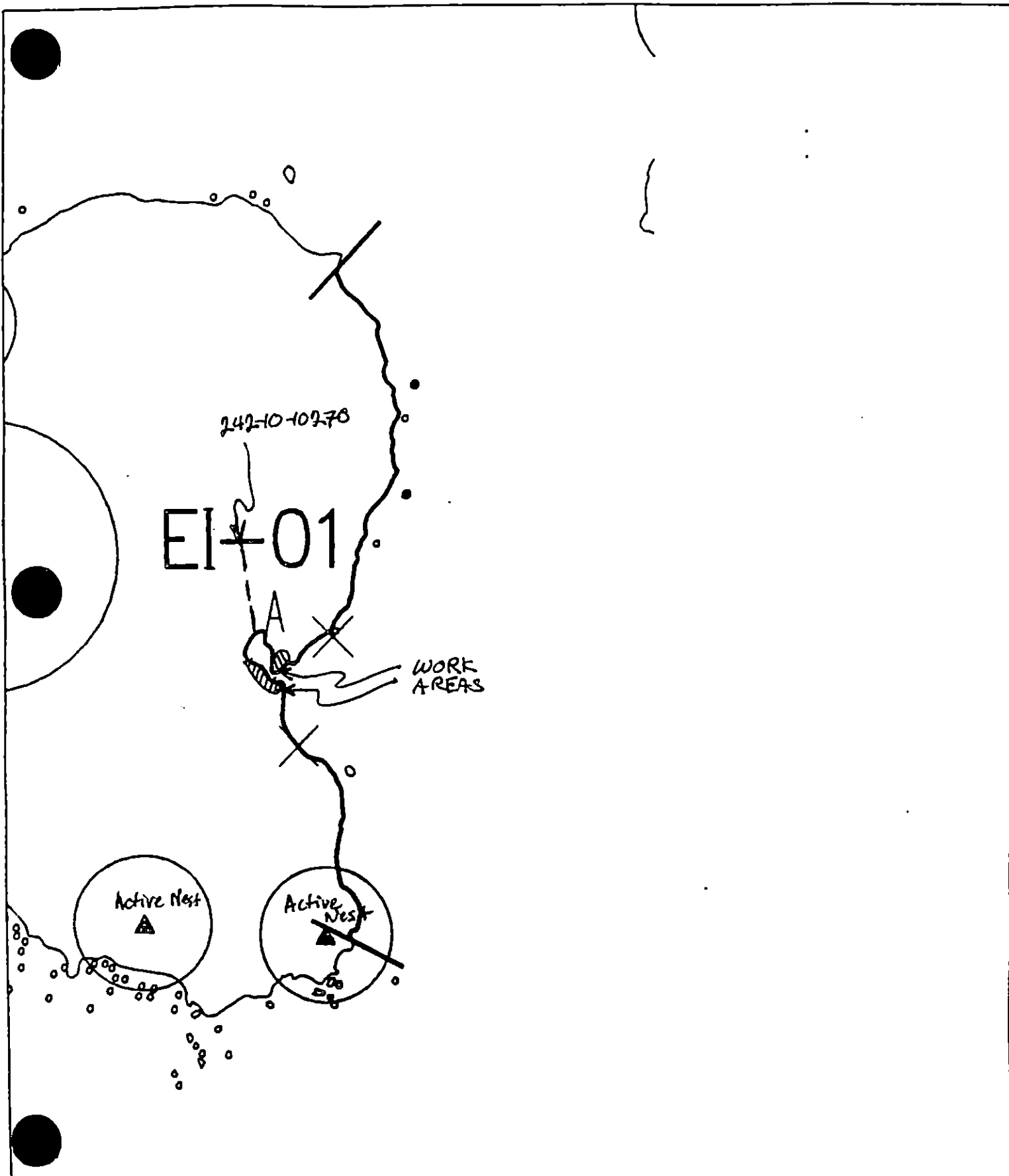
6/14/90

Prepared by

[Signature]

Date

6/14/90



ECOLOGY MAP

SEGMENT EI-1



Seabird Colony



Active Nest

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ EI-001 STREAM NO: 242-10-10270 DATE 4/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
- 1B Salmon stream mouth - spawning (7/10 to 8/31)
- 5T-1 All bald eagle nests (3/1 to 6/1)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Stream is located within subdivision A (1 of 1). No additional ecological constraints.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3276 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: Rachel Jean Orr DATE: 5/22/90

Subsurface Oil Observed: Yes ☐ No ☒ Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommend manual removal of tarballs and oiled vegetation.
Work from 6/2 to 7/10 with approval of USFWS regarding eagle nest.

SEE CONSTRAINTS ADDENDUM dated 6/14/90 JPP

TAG COMMENTS: NO WORK TO BE CONDUCTED WITHIN THE STREAM
CHANNEL PRIOR TO JUNE 1

TAG APPROVAL DATE: 5/18/90

ADEC Art Weiner Art Weiner

EXXON Andy Galt Andy Galt

NOAA Gary Petros Gary Petros

USCG G.A. REITER G.A. Reiter

FOSC: [Signature]

DATE: MAY 20 1990

ANADROMOUS FISH STREAM ASSESSMENT

REGION: KENAI

SEGMENT: EI-001

SUBDIVISION: A

STREAM NO: 242-10-10270

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ EI-001 STREAM NO: 242-10-10270 DATE 4/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-1 All bald eagle nests (3/1 to 6/1)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Stream is located within subdivision A (1 of 1). No additional ecological constraints.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3276 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: _____ DATE: _____

Subsurface Oil Observed: Yes _____ 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: Recommend manual removal of tarballs and oiled vegetation.
Work from 6/2 to 7/10 with approval of USFWS regarding eagle nest.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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

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

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

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

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

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

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

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

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

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

1H Remote release site

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

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

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

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

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

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

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

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

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

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

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncultured 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

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

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

7I Deer harvesting (8/15 to 2/28)

7J Invertebrate harvesting

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

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 EI-001 SUBDIVISION: ^{ASC #} 242-10-10270 DATE 29 APR 90

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

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Type A manual removal

~~ADEC~~ → ADFG
NAME LEE GLENN SIGNATURE Lee Glenn

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Type A - manual removal

1. Clean oil from sandy streamline on both sides of stream.
2. Manually remove moss from the bottom of the stream.
3. Clean oil from rocky/cobble shoreline on both sides of the stream and lake including beneath vegetation overhang.
4. Prior to work contact Lee Glenn so A.D.F.G. can place

an observer on site. The attached A.D.F.G. assessment completed on 4-18-90 has not changed since 12

~~LAND MANAGER~~ → NONG 4-29-90 And Sea Survey
NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

SHORELINE OILING SUMMARY (ANAD)

REVISION NO 04

OG CAL LARSON USCG DREHER, CWE SEGMENT ST/ E. I. OI
 BIO KEN CRITCHLOW LAND REP STREAM 212-10-103.01 OF 1
 EXXON DARLYL YOE ADFG LEE GLEN TIME 12:00 to 1:00
 TEAM NO. 14 TIDE LEVEL -2.2 FT DATE 9/29/90
 EST. SUBDIVISION LENGTH: 220 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 5 % B 5 % C 5 % P 5 % G 5 % S 50 % M 20 % V
 SLOPE: Long 100 % Hang 5 % Vert 5 % WAVE EXPOSURE: ☒ Low ☒ Med ☒ High
 OIL CATEGORY LENGTH: W 214 m M 6 m N 214 m VL 6 m NO 0

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	S	B	P	R	SP	BP	GT	OT	BR	TL	SU	U	M	L
ASPHALT PAVEMENT														
POOLED														
COVER		✓				✓						✓		
COAT														
STAIN		✓		✓		✓					✓	✓		
MOUSSE														
PATTIES		✓		✓		✓		✓			✓	✓		
TARBALLS				✓				✓			✓	✓		
FILM				✓		✓	✓				✓			
NO OIL														✓

PAVEMENT H F S 4 sq. m by 1PATTIES / TARBALLS 4 B.N.

NEAR SHORE SHEEN? NO BR RW (SL) T

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

Did you Coll DEBRIS
☐ YES ☒ NO

TYPE 1
 #BAGS 1

Photographs:

Roll No. 1Frames 1

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		UO	UC	SP	BP	GT	OT	BR	TL	SU	U	M	L				
1	22					✓	.									✓					N		COFFED AS
							.																
							.																
							.																
							.																
							.																
							.																

COMMENTS SMALL FLEETS OF SHEEN WERE NOTED IN LUSH MUD NEXT TO - A.
 IN STREAM BED IN MARKED AREA ON SKETCH MAP.
 BROKEN BAN OF TARRY OIL CUMUL ALONG GRASS/UPPER TIDAL BANK.
 DEAD GRASS HIDING OIL UNDERNEATH.

REVIEWED 710 DATE 5/3/90

OG CAL RESOLV

SEGMENT ST 101

STREAM 242-10-10270

DATE 4 129 90

CHECKLIST

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

LEGEND

1 A

Pt - No Subsurface Oil

2 A

Pt - Subsurface Oil

CT/C

Coastal Distribution

CT/B

Bottom Distribution

CT/P

Patchy Distribution

CT/S

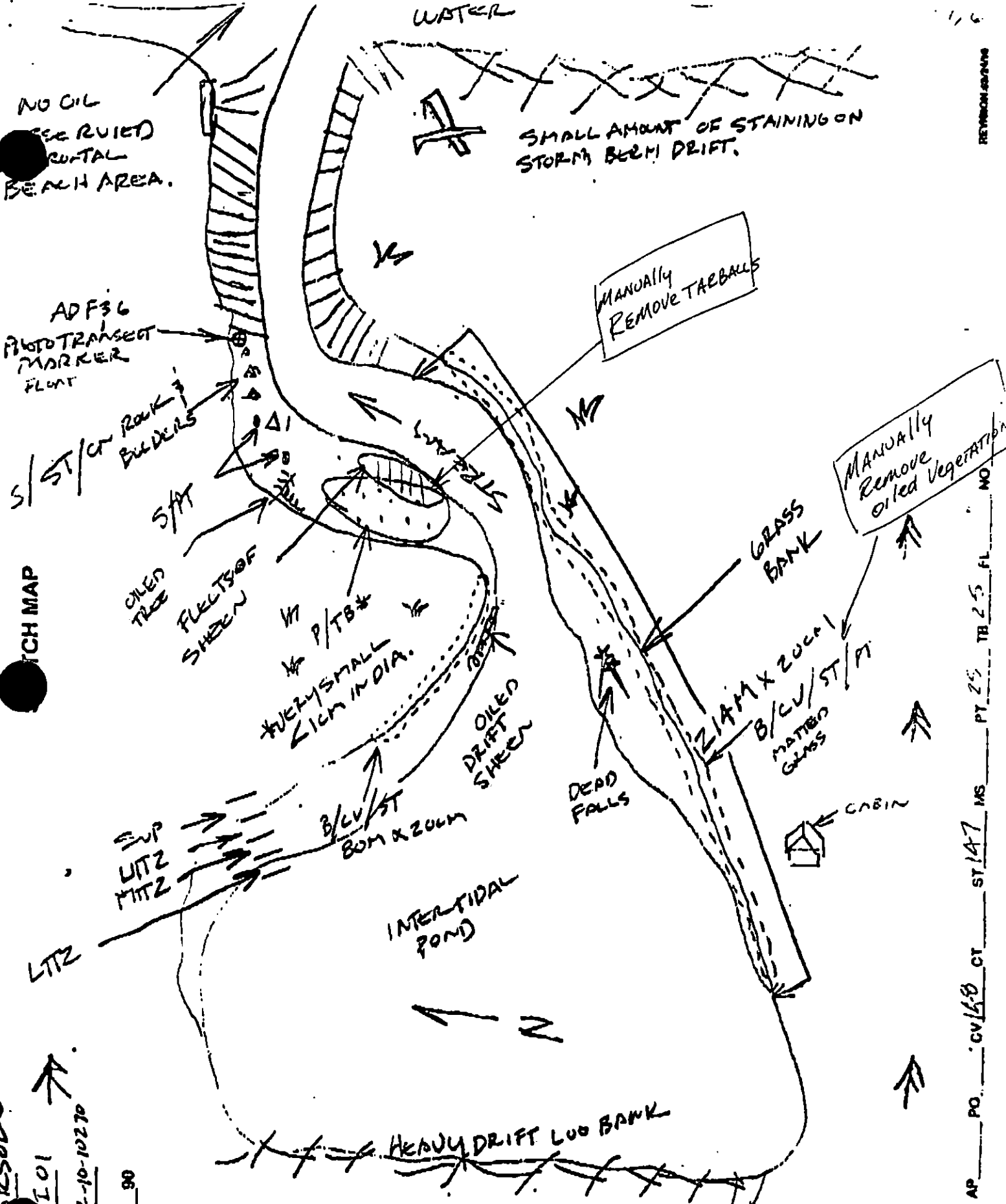
Sparsely Distributed

RR

Dead Vegetation

1 07

Photo location, direction, and number



Character Length (m): AP PO CV 168 CT ST 147 MS PT 25 TB 25 FL NO

OG CALIFORNIA

SEGMENT S I 01

STREAM 242-10-10270

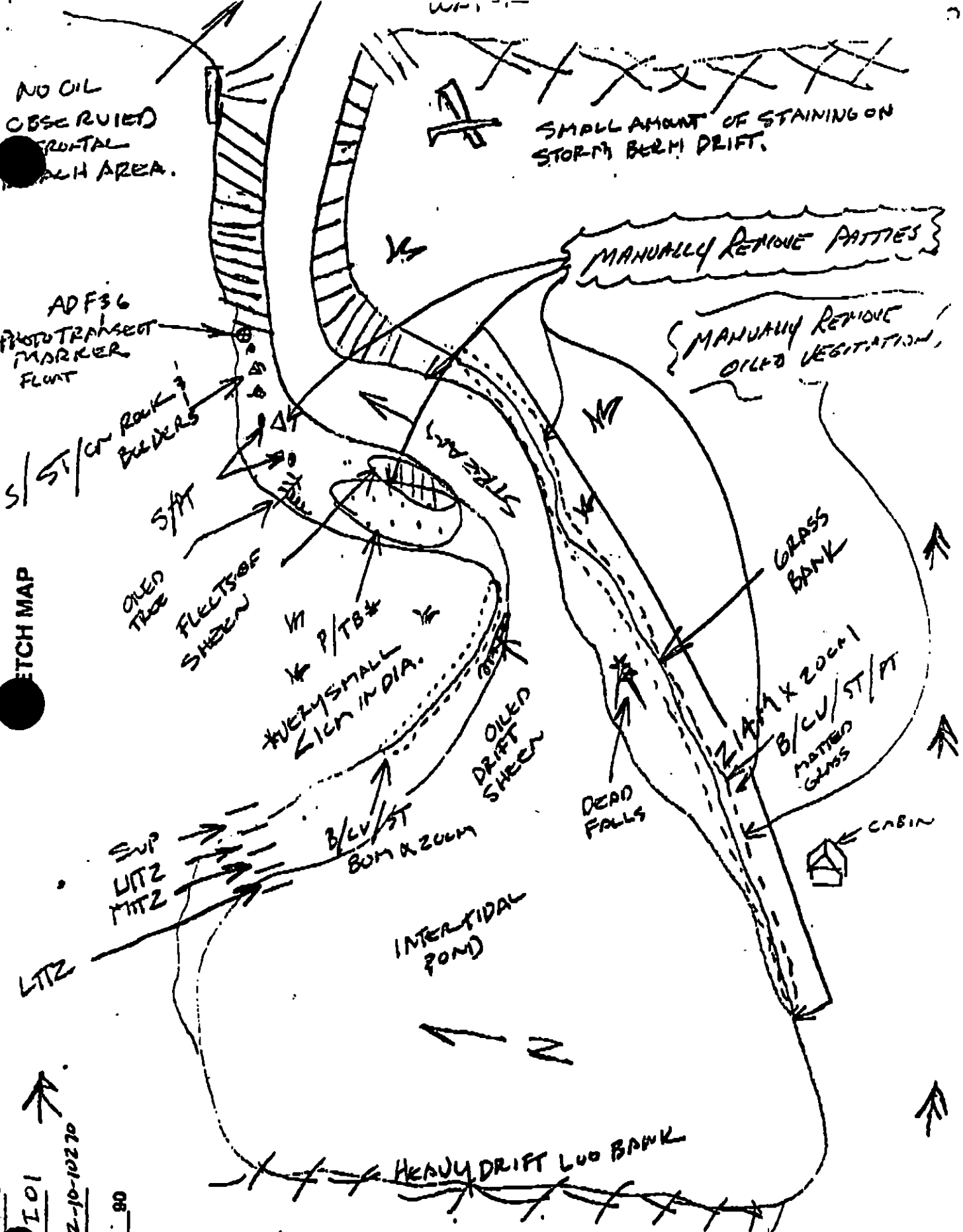
DATE 4 129 80

CHECKLIST

- Map Arrow
- Approx. Scale
- Geographic Grid
- Oil Unit
- Width
- Length
- Substrate Character
- Est. Hb/L/L/L
- SS/L
- Profile Location(s)
- Profile(s)
- Pt Location(s)
- Photo Location(s)

LEGEND

- 1 Δ Pt - No Substrate Oil
- 2 Δ Pt - Substrate Oil
- CT/C Continuous Distribution
- CT/D Discrete Distribution
- CT/P Patchy Distribution
- CT/S Spotted Distribution
- CT/R Rare Vegetation
- 1 0+ New location, direction, and number



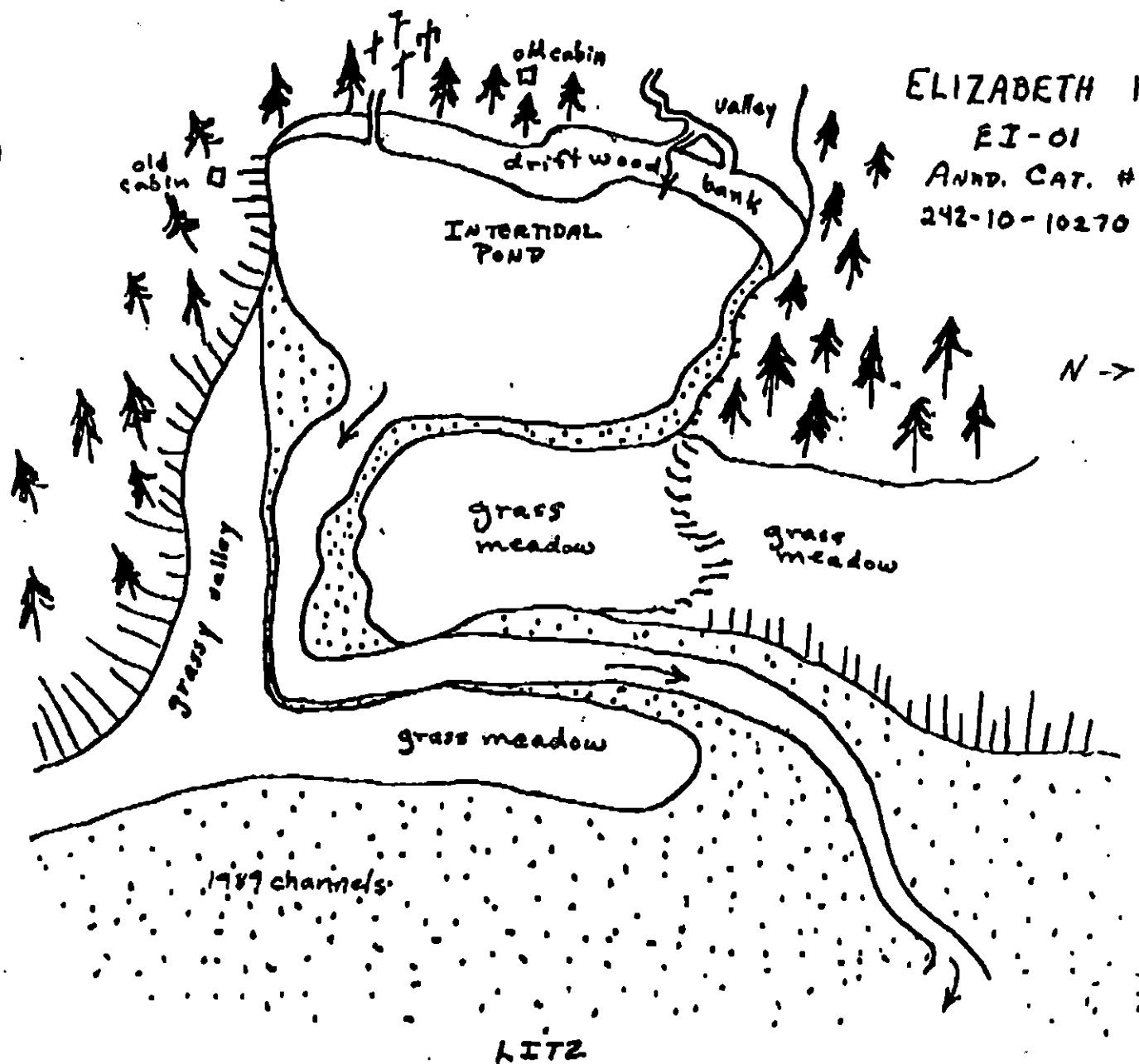
ELIZABETH IS.

EI-01

ANN. CAT. #:

242-10-10270

N →



Group A

4/20/90

Pre-screen

ADF&C MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS SR DS TS AVS SCHV MMS PTA

2 REGION: PWS CP, CI K, AP

METHOD: Aerial Ground Boat

Seldovia Tides

3 DATE: 4-18-90

15 HIGH TIDE TIMES: 0820

21 TEAM RECORDER: Doug Hill

4 START TIME: 1333

16 HIGH TIDE HTS: 13.1

22 OBSERVERS: Susan McLane

5 STOP TIME: 1428

17 LOW TIDE TIMES: 1457

23 AGENCY: ADF&C

6 SEGMENT #: E-1

18 LOW TIDE HTS: 3.9

24 PHOTOS TAKEN: 0

7 STATION #:

19 TIDE HT AT SURVEY: Low

Roll DDH-DDH-M From: 19, 20

8 K-UNIT:

Ebb Slack Flood Slack

25 VIDEO TAKEN: Y N TAPE:

9 STAT AREA: 242-10

20 USCG QUAD: Seldovia A-5

Starts: Ends:

10 LAT: 59° 09' 1

11 LONG: W 151° 44' 6

26 SAMPLES TAKEN: Y N Number

12 SOURCE: Map Loran

011 DDH/LPA-4/7/90

13 LOCATION: Elizabeth Island AFS# 242-10-1027

Sediment

14 DESCRIPTION:

Biological

EXTENT OF OIL

Water

	SHORELINE				STREAM			
	L	M	H	S	L	M	H	S
27 SURFACE COVERAGE								
28 SURFACE THICKNESS								
29 PENETRATION								

36 CATALOGED ANAD. FISH STREAM? Y N

37 CATALOG #: 242-10-10270

38 STREAM NAME: Eliz. Is. Stream

39 OIL IN STREAM BED? Y N

40 OIL ON STREAM BANKS? Y N

30 OVERALL OIL IMPACT: N VL L M H

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

31 OIL TYPE: Pooled Mousse Tar Asphalt Sticky Stain

42 OIL WITHIN 1 MILE OF STREAM? Y N

32 OILED DEBRIS: Y N

Where: At head of Lagoon

33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cove

43 ANADROMOUS FISH PRESENT? Y N

Lagoon Marsh

34 WAVE EXPOSURE: High Moderate Low

44 ANADROMOUS FISH OBSERVATION

35 SUBSTRATE TYPE: Bedrock Boulder Cobble

Species Aerial Ground

Gravel 10% Sand 90% Mud/silt

Species	Aerial	Ground

COMMENTS: Observed less oil on this trip than was observed on 4/7/90. Bulk of
mousse and sand cemented by oil found throughout outlet stream. Oil coverings
still exist on banks of stream above beach - A few tar patties in lake.
Morphology of outlet stream changed significantly over winter - but bank is now on
the south shore. No sign of a subsurface band of oil visible where stream cuts the
beach as it did last year.

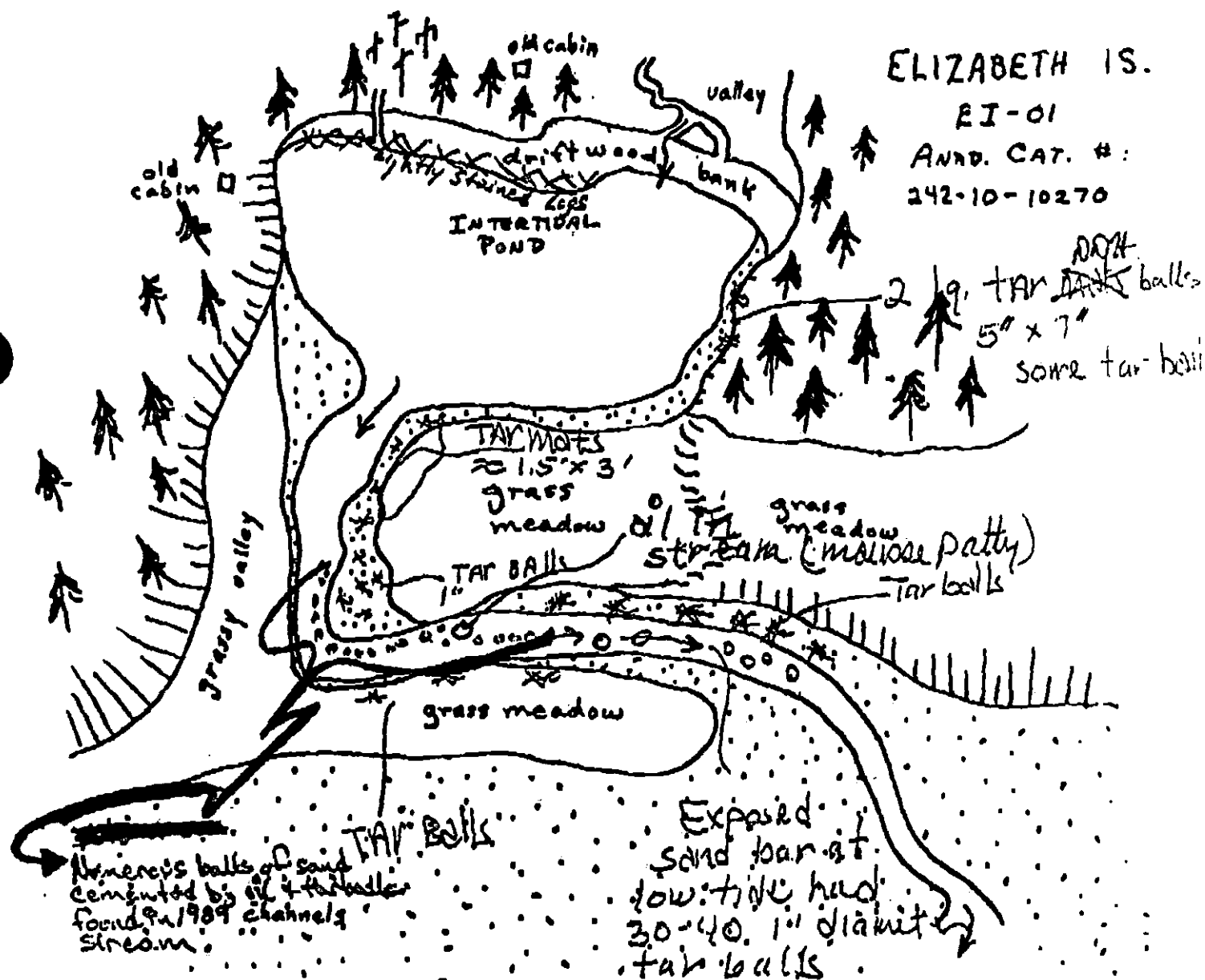
FRAME(S)

18, 19, 20

DESCRIPTION

Documenting Difference in Morphology of stream
outlet in 1990 vs 1989. Cut bank is on South
bank.

48 OIL DISTRIBUTION DIAGRAM



LITZ

- Sample taken
- Photo frame # and shot direction.

13/51

Seg ID: EI-001 Subdiv: 242-10-10270
Survey Date: 4/29/90
Comments by: Ken Critchlow

The portion of the stream that was surveyed was upstream of the storm berm of the beach. Oil was observed mainly at the edge of the UITZ and overhanging dead grass in the STZ along the left or west side of the stream. This oil was in the form of stain and patties; a few tarballs were also seen in this area. On the opposite side of the stream numerous very small tarballs were observed partially buried in fine sediments on the bank and on bars in the channel.

I recommend that oil on the left bank be removed by shovel. This may necessitate trimming dead overhanging grass to clearly observe and remove oil. Tarballs in the sediments could be removed by shovel; the upper surface of the sediment can be raked to uncover tarballs for removal.

KR Critchlow

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EI-1 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup
Tarmat Removal

OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,B	Salmon Stream	ADF&G catalogued anadromous stream (242-10-10210) is in Subdivision A. No constraint to manual pickup and tarmat removal.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

FOSC

[Signature]

Date

7/3/90

Prepared by

Roy R. Coulter

Date

7-3-90

EI-01

ANAD
STREAM
242-10-102.0

WORK
AREAS



Exxon Company, USA
Map Key: KEN-EI-1



ECOLOGY MAP
SEGMENT EI-1
SUBDIVISION A (1 of 1)
METERS

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

SHORELINE EVALUATION

SEGMENT ST/ EI-01 SUBDIVISION A (1 OF 1) DATE 4/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 242-10-10270

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

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

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

Eagle nest 400M from work area.

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature] DATE: 5/14/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 186 m: V.Light 1452 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of asphalt where indicated, and 2) manual pickup of oiled debris. Work should be conducted between 6/1 and 7/10 based on anadromous stream and eagle constraints.

SEE CONSTRAINT ADDENDUM
DATED 7/3/90 REX C.

TAG COMMENTS:

TAG APPROVAL DATE: 5/12/90

ADEC [Signature]

EXXON [Signature]

NOAA [Signature]

USCG [Signature]

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

REGION: KENAI

SEGMENT: ST/GP-1001

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

SEGMENT ST/ GP-1001 SUBDIVISION A (1 OF 1) DATE 4/27/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4GG Alaska State Parks

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 130 m: V.Light 0 m: No Oil 737 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 20 cm

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A** Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C** Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D** Esther Hatchery release (4/15 to 6/15)
1E Main Bay Hatchery release (4/20 to 6/15)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I** Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M** Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to 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
- 3H, 3P** Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R** Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S** Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T** All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / GP-1001 SUBDIVISION: A DATE 4-27-90USCG
NAMEStephen Strom

SIGNATURE

Stephen Strom☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

This segment, located north of Gore Point, is a low angle very fine-grained sand beach w/ sediment derived from glacial outwash along Nuka Passages. A storm berm composed of extremely long and large spruce tree trunks overlying a boulder/cobble berm defines the backshore of this beach. The storm berm varies in height from 6 to 13 feet above mean high water.

Oil was found on the lower part of the storm berm (approx. 6 feet above MHW) beneath the stacked tree limbs/trunks. Oiling extended 100m in length, with approx. 15-30 cm depth of penetration into the sand/pebble/cul substrate. This oiling is not an environ. problem nor a visual eyesore. NO TREATMENT IS NECESSARY.

ADEC

NAME

Wesley Ghormley

SIGNATURE

Wesley Ghormley☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

- This segment consists of a very high energy beach with a massive storm berm rising to 10' in some areas. A large accumulation of spruce logs & fishin' gear is present on the beach. Oil was observed on the western portion of beach that extended for 100m. Subsurface oil was present in the supra. Being that this is a high energy beach & oil is mostly covered by logs & debris I recommend no clean-up but possibly further review later in the summer to make sure the oil doesn't warm up & become mobile. IF it does then action may be necessary.
- Very light oil splashes extended west towards Gore point in the next segment.

LAND MANAGER

NAME

J. David McMahon (ADUR)

SIGNATURE

David McMahon☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Segment GP-1001 is within Kachemak State Wilderness Park. It consists of a long, exposed sand & cobble beach with extensive drift accumulated from the seaward side of the storm berm. A narrow strip of drowned forest gives rise in the upland to a forest dominated by large Sitka spruce. Little oil was noted & ~~not~~ this was at the W. end of the beach. It was composed of small quantities of oiled debris at the seaward point.

SHORELINE OILING SUMMARY

REVISION NO. 04/12/90

OG K. DEBISSCHMERE ^{NAME} STEPHEN STORM SEGMENT ST/ GP-1001
 BIO D. REED LAND REP SUBDIVISION H (1 OF 1)
 EXXON T. 01/02 ADEC Wesley G. Norman TIME 7:40 to 9:30
 TEAM NO. 9 TIDE LEVEL +1 -> -3 DATE 4/27/90
 EST. SUBDIVISION LENGTH: 867 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 1 % B 1 % C 7 % P 1 % G 0 % S 90 % M 0 % V 0 %
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 100 m VL 0 m NO 767 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	10	15	10	5	1	2	3	4	5	SU	U	M	U
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT													
STAIN		X	V		X					X			
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										X	X	X	

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

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

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE PT#BAGS 1

Photographs:

Roll No. ST-9-3 ST-9-4Frames 30 1

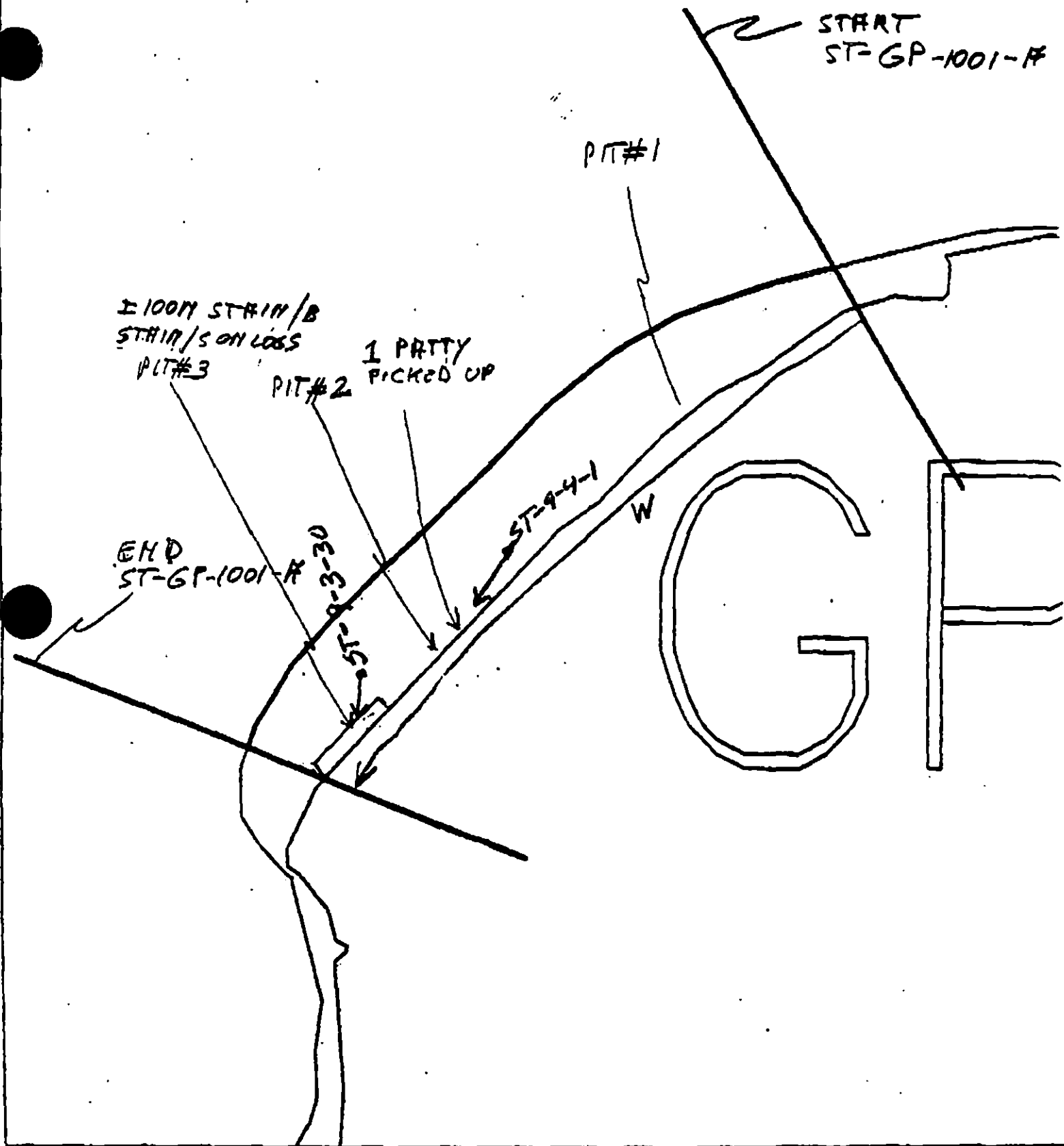
SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UG	1	2	3	4	5	SU	U	M	U				
1	30					X	.									X				N	25	S-S
2	40					X	.									X				N	-	PdL-PdC
3	50	X					10-20	X		X					X					N	-	C-C/P+SLC
							.															
							.															
							.															

COMMENTS

- SEGMENT IS A VERY HIGH ENERGY BEACH. SAND IS DOMINANT FROM LOW- TO HIGH- TIDE ZONE. COBBLES & PEBBLES FORM THE HIGH UPLAND STORM BERM (±4M). LOGS AND DEBRIS ARE ACCUMULATED IN THE SU.
- OILING CONSISTS OF A BROKEN STAIN AT THE WEST- END OF THE SEGMENT (±100 M). SUBSURFACE OIL EXTENDS FROM 10-20 CM IN THE SU. OIL IS VERY WEATHERED.
- SOME OF THE LOGS, VEGETATION AND DEBRIS IN SU HAVE STAIN/S
- 1 PATTY WAS PICKED UP.

REVIEWED YW DATE 4/27/90



XXX Wide

Medium

----- Narrow

TTTT Very Light

1 2 3 4 5

SI- GP-1001-A

ADEC Segment Length: 867m



Map Key: KEN-40

Name: H. DEBUSSCHER

Date: 4-27-90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22

Segment ST / GP-100V Subdivision A Date (mo / day / yr) 04/27/90Time (24 hr) 0740-0930 Biologist P. Reed

- (A) Substrate type and % of segments:
 (1) Bedrock 1 (2) Boulder 1 (3) Cobble 7 (4) Pebble 1 (5) Sand 90 (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 0 Moderate 1 Low 99
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs: ST-9-3 / ST-9
Roll No.Frames 30 / 1

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:

1 EAGLE, 2 GULLS. Highly exposed SAND BEACH. SPARSE BIOTA ON BOULDERS AND BEDROCK AT N end of Beach. BIOTA ABSENT ON SAND AND COBBLE STORM BEACH.

Ecological Considerations: NONE.

SHOULD CLEANING BE RECOMMENDED THERE WOULD BE LITTLE ADVERSE EFFECTS ON THE ECOLOGY OF THIS SEGMENT DUE TO THE NEAR ABSENCE OF INTERSTITIAL BIOTA AND OTHER WILDLIFE.

4/12

OIL MAP

START
ST-GP-1001-A

END
ST-GP-1001-A

ST-GP-1001-A

ADEC Segment Length: 867m

XXX Wide

/// Medium

--- Narrow

TTTT Very Light

0 100 200 300

Map Key: KEN-40

Name: K. DEBUSSCHERE

Date: 4/27/90

SHORELINE EVALUATION

SEGMENT ST/ GP-1001 SUBDIVISION A (1 OF 1) DATE 4/27/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

4GG Alaska State Parks

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Muller & Holmes DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 130 m: V.Light 0 m: No Oil 737 m
Subsurface Oil Observed: Yes X No Maximum Depth 20 cm

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/4/90

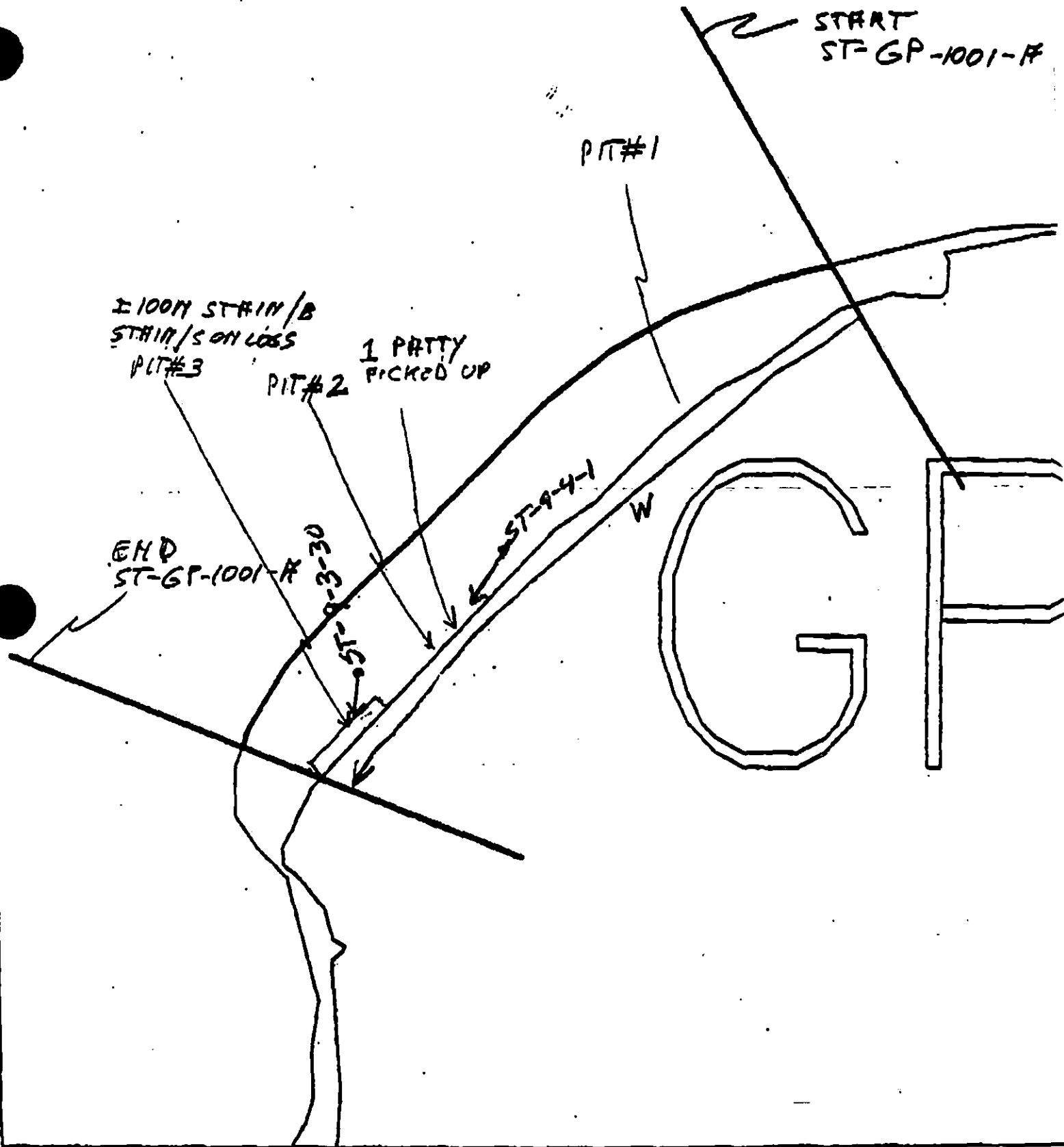
ADEC Art WELNER Dist. Clerk

EXXON ANN TGAZ [Signature]

NOAA Car. Petrus Ann. Petrus

USCG G.A. REITER G.A. Re

FOSC: ML DATE: 5-9-90



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

ST-GP-1001-R

ADEC Segment Length: 887m



Map Key: KEN-40

Name: K. DEBUSSCHER

Date: 4-27-90

OIL MAP

START
ST-GP-1001-A

END
ST-GP-1001-A

G F

XXX Wide

/// Medium

--- Narrow

TTTT Very Light

ST-GP-1001-A

ADEC Segment Length: 867m



Map Key: KEN-40

Name: K. DEBUSCHERE

Date: 4/27/90



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